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09 May 2018

Attention: Mr. Greg Paliouras (gpaliou@sears.ca)  
Company: Sears Canada Inc.  
Address: Department 702 C E Real Estate, 290 Yonge Street  
Toronto, Ontario M5B 2C3

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**2018 Second Quarter Groundwater Monitoring and Sampling Report  
Hounsfeld Heights – Briar Hill Community  
Calgary, Alberta**

**File CG2430.1 E30**

This report documents the second quarter groundwater monitoring and sampling event, which was carried out between 19 March and 06 April 2018. A map of the Site Location and Surrounding Land Use Plan is provided as Figure 1. A map of the Site and Surrounding Properties is provided as Figure 2. A Monitoring Well Location Plan is provided as Figure 3.

### **General Site Description**

The Alberta Township System description of the Site is the northeast corner of Section 20, Township 24, Range 1, West of the 5<sup>th</sup> Meridian (NE ¼ 20-24-1 W5M). The Site occupies approximately 40 hectares (100 acres), and is currently a mixture of operating commercial properties, private residences, and parkland.

The Mall area is the portion of the Site located north of 14<sup>th</sup> Avenue NW, which includes the North Hill Shopping Centre, the former Sears property (now a Kal-Tire Automotive Centre located at 1614 – 14<sup>th</sup> Avenue NW), and a condominium complex. The Hounsfeld Heights area is the portion of the Site south of 14<sup>th</sup> Avenue NW, including Lions Park, to 10<sup>th</sup> Avenue NW.

### **Site History**

The location of the Kal-Tire was originally developed as a service station and automotive centre in 1958. The service station was located at the North Hill Shopping Centre on a property owned by Sears, and operated as a Sears Service Centre from 1958 to 1984. From 1984 to 1995, the location was operated under license as a Sunoco Service Station. An addition to the automotive centre building was constructed in 1982, and a separate gas bar kiosk was added in 1989. The original USTs were replaced in 1984, and in October 1995, fuel storage and dispensing facilities at the gas bar were decommissioned. The former Sears Service Centre continues to operate under license to Kal-Tire.

**Previous Work**

Numerous environmental site assessments characterizing the petroleum hydrocarbon (PHC) impacts have been conducted. A summary of the historic environmental reports is available in the Site Management Plan (SMP) completed by Clifton on 11 July 2014, entitled *Updated Site Management Plan (2014) Final Version Hounsfield Heights – Briar Hill Community, Calgary, Alberta* (Updated SMP).

In 2015, Clifton completed a subsurface investigation, as well as three subsequent quarterly monitoring and sampling reports, which are summarized in the following reports:

- Subsurface Investigation, Mall and Hounsfield Heights Areas Calgary, Alberta (22 January 2016);
- 2015 Second Quarter Monitoring and Sampling Report Hounsfield Heights – Briar Hill Community, Calgary, Alberta (27 January 2016);
- 2015 Third Quarter Monitoring and Sampling Report Hounsfield Heights – Briar Hill Community, Calgary, Alberta (17 February 2016); and,
- 2015 Fourth Quarter Monitoring and Sampling Report Hounsfield Heights – Briar Hill Community, Calgary, Alberta (17 February 2016).

In 2016, Clifton completed quarterly monitoring, semi-annual sampling, and additional drilling on-Site. The results have been summarized in the following reports:

- 2016 Second Quarter Monitoring and Sampling Report Hounsfield Heights – Briar Hill Community, Calgary, Alberta (30 June 2016);
- 2016 Supplementary Drilling Report Hounsfield Heights – Briar Hill Community, Calgary, Alberta (5 July 2016); and,
- 2016 Fourth Quarter Monitoring and Sampling Report Hounsfield Heights – Briar Hill Community, Calgary, Alberta (02 February 2017)

In 2017, Clifton completed quarterly monitoring and semi-annual sampling. The results have been summarized in the following report:

- 2017 Second Quarter Monitoring and Sampling Report Hounsfield Heights – Briar Hill Community, Calgary, Alberta (17 July 2017).

The Fall 2017 event was not completed at the request of Sears Canada.

Previous work identified five distinct stratigraphic units across the Site. Unit 1 (Upper Silty Sand), Unit 2 (Upper Clayey Silt), and Unit 3 (Middle Sandy Silt) have all been historically identified. Unit 4, a lower clayey silt, and Unit 5, a lower silty sand and gravel, were identified during the Subsurface Investigation completed in 2015.

A list of the acronyms mentioned in the text is provided at the end of the report.

### Objectives and Scope of Work

The contaminants of potential concern consist of benzene, naphthalene, and 1,2-dichloroethane. These three constituents will represent BTEX and PHC fractions F1 and F2, PAHs, and VOCs, respectively. The rationale for concentrating on these three constituents is based on the following observations:

- They were the most frequently detected and most commonly exceeded the AEP 2016 Tier 1 Guidelines within their contaminant categories; and
- With few exceptions, the remainder of the constituents detected were associated with a detection of their representative constituent, benzene, naphthalene, or 1,2-dichloroethane, depending on the contaminant category.

The confirmatory groundwater monitoring and sampling program was implemented with quarterly events in 2015, and quarterly monitoring and semi-annual sampling events in 2016. In 2017, quarterly monitoring was completed for Q1, Q2, and Q3; one semi-annual sampling event was completed in Q2. The monitoring events comprised the collection of measurements of groundwater levels and total depths. The objectives of the confirmatory groundwater monitoring and sampling program were to:

- Continue to define the extents of the PHC, PAH, and VOC impacts in groundwater for each identified unit; and
- Determine if the groundwater plume is moving.

### Scope of Work

The scope of work for the 2018 Second Quarter Monitoring and Sampling Program was as follows:

- Measure organic vapour concentrations in all monitoring wells;
- Measure LNAPL thickness (if present) and depth of groundwater in all monitoring wells;
- Collect groundwater samples using the bailer method from 40 monitoring wells on-Site;
- Collect one discrete sample using the HYDRASleeve™ method from 51 monitoring wells on-Site;
- Collect a quality assurance/quality control (QA/QC) sample for every ten samples taken;
- Submit groundwater samples from 86 monitoring wells for laboratory analysis of BTEX, PHC fractions F1 and F2, and VOCs;
- Submit groundwater samples from 48 monitoring wells for laboratory analysis of PAHs; and,
- Compare the results to the Alberta Environment and Parks (AEP), February 2016, *Alberta Tier 1 Soil and Groundwater Remediation Guidelines* (AEP 2016 Tier 1 Guidelines).

### Applicable Guidelines

Laboratory analytical results of groundwater samples were compared to the AEP 2016 Tier 1 Guidelines for either commercial land use or residential/parkland land use for coarse-grained soil, depending on the sampling location. Coarse-grained soil was used for all sampling locations, as it is the more stringent grain size criteria.

### Discrete Groundwater Sampling

Discrete groundwater samples were collected using HYDRASleeves™ (no-purge groundwater samplers) from the 1.5 meter (five foot) interval with the highest concentration identified in previous rounds of

sampling. The HYDRASleeve™ samples were taken to assess the PHC concentration distribution within the primary water-bearing unit, Unit 3.

### **AEP Comparison of Bailer and HYDRASleeve™ Analytical Results**

Five discrete samples collected using HYDRASleeves™ were compared against a purge and bail sample collected with a dedicated, disposable bailer for the same well. For the purposes of this report, the highest concentration between the two samples (bailer or HYDRASleeve™) will be used for discussion of the degree of PHC impacts on-Site.

### **General Monitoring Program Information**

A monitoring event is comprised of collecting measurements of the depth to the groundwater and the total depth of the well. A sampling event is comprised of measurement of groundwater levels and monitoring well depths, and the collection and analysis of groundwater samples.

### **Groundwater Monitoring and Development Methodology**

Clifton personnel returned to the Site at various dates between 19 March and 06 April 2018 to collect field monitoring data and groundwater samples in all groundwater monitoring wells.

### **Organic Vapour Screening**

The ambient organic vapour concentrations in all of the completed monitoring wells were measured using an Eagle 2 combustible gas detector. The Eagle 2 was calibrated prior to use in the field by either Clifton personnel, or if it was a rental unit, by the rental staff prior to the pickup of the unit. A bump test was performed on the Eagle 2 each day prior to use. If the output reading of the Eagle 2 did not correspond to the concentration of gas introduced within an acceptable range of  $\pm 10\%$ , the instrument was then re-calibrated.

To complete organic vapour screening, the J-Plug on the monitoring well was removed and the probe of the Eagle 2 was placed into the well, with the cap or the sampling technician's gloved-hand placed over the top of the exposed PVC pipe. The highest PID and OVA sensor readings were then recorded. The standpipe vapour concentrations are presented in Table 1.

### **Fluid Level Measurements**

Fluid levels, including groundwater and any potential LNAPL, were measured using a Heron oil/water interface meter. The probe is slowly lowered into the monitoring well until the water surface is reached. Once the probe contacts the water, it is moved back and forth to check for LNAPL. If an LNAPL layer is not identified, the probe records the surface water interface to the nearest millimeter. Total depth measurements of the well were collected prior to sampling or monitoring well development. The oil/water interface meter was cleaned between monitoring wells using a solution of Alconox Liquinox™ and de-ionized water, followed by a de-ionized water rinse.

### **Groundwater Sampling**

Clifton deployed HYDRASleeve™ samplers at 1.5 m intervals to collect discrete groundwater samples in 51 monitoring wells on-Site. Samples were collected using dedicated, disposable bailers in 35 monitoring wells on-Site. The laboratory Certificates of Analysis have been included as Appendix A.



Upon completion of the discrete sampling, an additional sample was collected from five monitoring wells using a dedicated, disposable bailer.

<b>Monitoring Program Details</b>	
Current monitoring date	19 March - 06 April 2018
Previous monitoring date	05 - 07 September 2017
Previous sampling date	26 April – 24 May 2017
Monitoring schedule	Quarterly
Next scheduled monitoring date	August 2018
Next scheduled sampling date	November 2018
Number of monitoring wells available to monitor on-Site (Mall area)	23
Number of monitoring wells available to monitor on-Site (Hounsfeld Heights area)	87
Number of damaged monitoring wells	1 (BH1943)
Total number of monitoring wells on-Site	110

<b>Fluid Level Measurements (see Table 1)</b>					
Water level measurement instrument:	Heron Interface Oil/Water Meter				
Groundwater elevation (m above msl)	1086.03 (BH1905)	to	1061.60 (BH1946)		
Apparent local groundwater flow direction	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5
	SW	SW	SE	Not determined	Not determined

Dry monitoring wells	BH1909, BH1920, BH1931, BH1932, BH1938, BH1968, BH1969, BH1970, BH1973, BH1986, BH1987, BH1988, and BH2009
Insufficient water for sampling	BH510A (excluded PAHs)
Unmonitored wells	BH1953, BH1959, BH1960, BH1965

<b>LNAPL</b>	
Monitoring wells indicating LNAPL	BH1704
Previous monitoring wells indicating LNAPL	BH1704
Current LNAPL thickness	0.14 m (20 May 2018)
Previous LNAPL thickness	0.14 m (05 May 2017)
Current Vapour Equivalent LNAPL Removed (DPVE)	1,613.7 L (09 April 2017 – 25 December 2017)
Previous Vapour Equivalent LNAPL Removed (DPVE)	777.3 L (17 January 2017 – 09 April 2017)
Current LNAPL Removal (Bailer)	None since 05 May 2017
Previous LNAPL Removal (Bailer)	0.07 L (05 May 2017)

<b>Standpipe Vapour Screening (see Table 1)</b>	
Vapour measurement instrument	RKI Eagle 2 OVA gas monitor with PID
Current hexane vapour concentrations	0 ppm to >11,100 ppm
Monitoring wells with hexane vapour concentrations >11,100 ppm	BH1907, BH1970, and BH1984
Current isobutylene vapour concentrations	0 ppm to >2,000 ppm

Monitoring wells with isobutylene vapour concentrations >2,000 ppm	BH1907, BH1970, and BH1984
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<b>Monitor Well Purging</b>	
Purging method	Dedicated Disposable Bailer
Monitoring wells purged using a dedicated disposable bailer	BH1905, BH1907 (comparative), BH1914, BH1915 (comparative), BH1916, BH1924 (comparative), BH1928 (comparative), BH1934, BH1935, BH1939, BH1944, BH1945, BH1946, BH1947, BH1951, BH1955A, BH1956 (comparative), BH1962, BH1964, BH1967, BH1972, BH1974, BH1978, BH1980, BH1982, BH2001, BH2002, BH2003, BH2004, BH2006, BH2008, BH912, BH1701, BH1704, EX1, EX2, EX3, EX4, EX6, and EX7
Maximum volume removed	50 L (BH1928)
Minimum volume removed (Dry or Insufficient Water)	BH1704, BH1905, BH1916, BH1935, BH1939, BH1964, BH1970, BH1704, EX1, EX2, EX3, and EX4

<b>QA/QC Results (Table 2 – Table 4)</b>	
Trip Blank Samples	
Reference Table	Trip blank results are below RDL
Table 2	Yes
Equipment Blank Samples	
Reference Table	Equipment blank results are below RDL
N/A	N/A
Field Duplicate Samples	
Reference Tables	Duplicate samples <80% RPD:
Table 3 (BTEX, PHC fractions F1 and F2, PAHs)	Yes
Table 4 (VOCs)	Yes

Sampling Summary	
Groundwater sampling method	Disposable Bailer or HYDRASleeve™
Number of monitoring wells sampled with a dedicated disposable bailer	35 + 5 duplicates + 5 comparative
Number of monitoring wells sampled using the no-purge HYDRASleeve™ method	51 + 6 duplicates
Samples submitted to:	Maxxam Analytics, Calgary, Alberta
Analysis Package	
BTEX and PHC fractions F1 – F2	Table 5
PAHs	Table 6
VOCs	Table 7

**Results**

**Groundwater Flow Direction**

The monitoring results from this event show that the interpreted groundwater flow direction from wells screened in Unit 1 is to the southwest (Figure 4). This is consistent with previous results that indicated groundwater flow was to the south-southwest.

The interpreted groundwater flow direction from wells screened in Unit 2 is to the southwest (Figure 5). Previous results indicated groundwater flow was to the south-southeast.

The interpreted groundwater flow direction from wells screened in Unit 3 is to the southeast (Figure 6), which is consistent with previous results.

Groundwater flow direction was not determined for Unit 4 and Unit 5, as additional characterization of the geology is required to confirm the formation in which the wells are screened.

**Groundwater Samples**

**Quality Assurance/Quality Control**

Various methods of QA/QC were implemented throughout the program including the collection and analysis of trip blanks and duplicate samples. The results of the QA/QC program are represented in Tables 2 to 4.

### BTEX and PHC fractions F1 and F2

Previous environmental work identified the presence of PHC impacts on-Site. A confirmatory groundwater monitoring and sampling program was undertaken to verify that the PHC plume in the groundwater is no longer expanding, and that the contaminant concentrations are below appropriate Site guidelines at the lateral extents of the plume.

Only monitoring wells with detectable concentrations, during this event, or previous events, of the BTEX and PHC fractions F1 and F2 are presented in Table 5. Monitoring wells where no detections of BTEX and PHC fractions F1 and F2 were observed in any of the sampling events are not included in the summary table. A site plan showing unit boundaries and benzene distribution in groundwater is presented in Figure 7.

### PAHs

Only monitoring wells with detectable concentrations, during this event, or previous events, of PAHs are presented in Table 6. Monitoring wells where no detections of PAHs were observed in any of the sampling events are not included in the summary table. A site plan showing unit boundaries and naphthalene distribution in groundwater is presented in Figure 8.

### VOCs

Only monitoring wells with detectable concentrations, during this event, or previous events, of VOCs are presented in Table 7. Monitoring wells where no detections of VOCs were observed in any of the sampling events are not included in the summary table. A site plan showing unit boundaries and 1,2-dichloroethane distribution in groundwater is presented in Figure 9.

## Discussion

### Groundwater Chemistry – Monitoring Wells

#### QA/QC – Field and Laboratory Duplicates

BH1704 varied more than 80% from its laboratory duplicate sample (BH1704 Lab Dup) for PAHs specifically acridine, anthracene, fluoranthene, fluorene, phenanthrene, pyrene, and quinoline, which is outside the acceptable range for organic constituents in water. The remaining field and laboratory duplicates for BTEX, PHC F1 and F2, PAHs, and VOCs were within the acceptable range of relative percent difference.

Maxxam noted that, although the RPD was outside of the acceptable range, the quality control for the sample analysis still meets acceptability criteria based on the proximity of the result to the detection limit. However, the results of the laboratory duplicate analyses for BH1704 will be treated as qualitative. No decisions will be made based on these PAH results, and judgement of the usefulness of this well as a duplicate will be dependent on the results of the next monitoring event in the fourth quarter of 2018.

### BTEX and PHC fractions F1 and F2

Eighty-six samples were submitted for laboratory analysis of BTEX and PHC fractions F1 and F2. Benzene was the most frequently detected and most commonly exceeded the AEP 2016 Tier 1 Guidelines of the BTEX and PHC fractions F1 and F2. Also, with few exceptions, the remainder of the BTEX and PHC F1 and F2 compounds detected were associated with a detection or exceedance of benzene. For these reasons, benzene is considered representative of the BTEX and PHC fractions F1 and F2 throughout this

discussion. For the BTEX and PHC F1 and F2 constituents, the plume margin is defined by the AEP 2016 Tier 1 Guideline for benzene, 0.005 mg/L.

Benzene has been detected in concentrations in excess of the AEP 2016 Tier 1 Guidelines in Units 1, 2, 3, and 4. Concentrations of benzene ranged from below detection (<0.00040 mg/L) to a maximum of 5.9 mg/L in BH1982 (Unit 3). The lateral distribution of benzene is shown in Figure 7 for each stratigraphic unit mapped in the study area.

The Middle Sandy Silt (Unit 3) shows the most extensive distribution of benzene, and the lateral extent of the benzene plume is largely defined in this Unit. The benzene concentrations in BH1928 (3.0 mg/L) and in BH1944 (0.012 mg/L) were above the AEP 2016 Tier 1 Guideline. These wells represent the southernmost exceedances in Unit 3.

Monitoring wells BH1954, BH1981, and BH2003 had benzene concentrations that were below the reportable detection limit or the AEP 2016 Tier 1 Guideline near the downgradient plume margin in Unit 3. Based on a Mann-Kendall Plume Stability Analysis of the available data for BH1954 (Mann, 1945; Kendall, 1975; Gilbert, 1987), the benzene plume appears to be stable at this point (Table 8). There is a declining trend in the benzene concentration in BH1981. The benzene concentration in BH1981 has remained below the analytical detection limit and/or the AEP 2016 Tier 1 Guideline for three consecutive sampling events. BH2003 was installed in 2016, and this is the fourth event in which the concentration of benzene was below the analytical detection limit of 0.0004 mg/L.

Concentrations of benzene in BH1982 have ranged from 2.6 mg/L in November 2016 to 13.8 mg/L in June 2015. Based on a Mann-Kendall Plume Stability Analysis of the available data (Mann, 1945; Kendall, 1975; Gilbert, 1987), the benzene plume has been stable since the second quarter of 2017. A PlumeStop™ pilot study application was implemented in August 2016 approximately 5 metres north of BH1982. Complete results of the PlumeStop application on the Site were discussed in a separate memorandum entitled *PlumeStop™ and Oxygen Release Compound Advanced Pilot Study, Hounsfeld Heights, Calgary, Alberta* (27 March 2017). The overall decrease in concentrations in BH1982 are likely the result of the application.

Benzene has been detected at concentrations above the AEP 2016 Tier 1 Guideline in the underlying lower clayey silt (Unit 4) in the southern portion of the Site. BH1939 represents the southernmost exceedance in Unit 4. Monitoring wells BH1964, BH1980, and BH2002 currently serve as the southernmost downgradient indicators of the plume extent in Unit 4 with concentrations below the reportable detection limit or the AEP 2016 Tier 1 Guideline.

Mann-Kendall analyses for BH1937 and BH1939 indicate the plume is declining. The PlumeStop™ pilot study application, implemented 03 August 2016, is within 5 meters of BH1939. The decreasing trend in benzene concentrations is likely the result of the PlumeStop™ application. BH2002 was installed in 2016 and four samples have been collected thus far. Further sampling will be required to assess trends in this well.

A summary of the Mann-Kendall data for benzene in Units 3 and 4 is presented in Table 8.

### PAHs

Forty-eight samples were submitted for laboratory analysis of PAHs. Naphthalene was the most frequently detected PAHs, and most commonly exceeded the AEP 2016 Tier 1 Guidelines. Also, with few exceptions the remainder of the PAH compounds detected were associated with a detection or exceedance of naphthalene. For these reasons, naphthalene is considered representative of the PAHs throughout this discussion.

The sampling plan for PAHs has been re-evaluated throughout the project as more data has been collected and reviewed. Only 17 monitoring wells have been sampled for PAHs in all six sampling events. Once more data has been collected, an assessment of potential trends in naphthalene concentrations can be completed.

Naphthalene has been detected at concentrations above the AEP 2016 Tier 1 Guidelines in the three uppermost stratigraphic units: Units 1, 2, and 3. Naphthalene is most widespread in Unit 3, the middle sandy silt, and appears to have been laterally delineated. All monitoring wells installed in Unit 4 and Unit 5 had reported concentrations of naphthalene either below the laboratory detection limit or the AEP 2016 Tier 1 Guidelines. The lateral distribution of naphthalene is shown on Figure 8 for each stratigraphic unit mapped in the study area.

### VOCs

Eighty-six samples were submitted for laboratory analysis of 1,2-DCA. 1,2-Dichloroethane (1,2-DCA) was the most frequently detected VOC, and most commonly exceeded the AEP 2016 Tier 1 Guidelines. Also, with few exceptions, the remainder of the VOC compounds detected were associated with a detection or exceedance of 1,2-DCA. For these reasons, 1,2-DCA is considered representative of the VOCs throughout this discussion. The plume margin is defined as the AEP 2016 Tier 1 Guideline for 1,2-DCA of 0.005 mg/L.

1,2-DCA has been detected in concentrations in excess of the AEP 2016 Tier 1 Guidelines in Units 1, 2, 3, and 4. Concentrations were below the analytical detection limits in Unit 5 with the exception of BH2001, which had a detectable concentration of 0.0017 mg/L, below AEP 2016 Tier 1 Guideline. Concentrations of 1,2-DCA on-Site ranged from below detection (<0.001 mg/L) to 0.37 mg/L (BH1928). The lateral distribution of 1,2-DCA is shown on Figure 9 for each stratigraphic unit mapped in the study area.

Monitoring wells BH1928, BH1954, BH1981, and BH2003 serve as useful indicators of the 1,2-DCA concentrations near the downgradient VOC plume margin. A Mann-Kendall analysis of the plume in BH1928 indicated that the plume has been expanding since Spring 2017; it was stable in the fourth quarter of 2016. Concentrations of 1,2-DCA in BH1954 and BH1981 indicate that the plume is expanding at these locations. The plume was stable at BH1954 in the Spring 2017 sampling event. BH1981 represents the southernmost exceedance in Unit 3. Further analysis will be required to determine if the plume will continue to grow at these locations, which represent the south-southwest plume margins. Four samples have been collected in BH2003 since it was installed in 2016. Concentrations of 1,2-DCA have been below detection for every sampling event since installation.

There was an exceedance of 1,2-DCA in monitoring well BH1939 installed in Unit 4, the lower clayey silt. A Mann-Kendall analysis of the 1,2-DCA plume in BH1939 indicated that the plume is stable at this point. The



Mann-Kendall analysis on the adjacent well, BH1937, indicated a fluctuating trend that was generally declining. The downgradient lateral extent of 1,2-DCA in Unit 4 may be delineated by wells BH1980 and BH2002, which have both been non-detect for 1,2-DCA in all monitoring and sampling events. There is some uncertainty as to the extents of the 1,2-DCA plume immediately south and southwest of BH1939.

### **Conclusions**

The data collected during this sampling event is generally consistent with previous sampling events for the majority of the Site. There was a new benzene exceedance observed in monitoring well BH1944, at the southeastern extent of the plume in Unit 3. This point is downgradient of the PlumeStop™ application. Additionally, the Mann-Kendall Plume Stability Analysis of three monitoring wells at the southern extent of the Site indicated that the 1,2-DCA concentrations in this area were increasing.

Data has been collected from eight sampling events, during which time some changes in sampling methods were introduced. More sampling will be required to further assess trends in the groundwater chemistry and the lateral distribution of contaminants.

### **Recommendations**

In order to assess statistical trends in the groundwater samples collected from the monitoring wells installed in the study area, continued groundwater monitoring and sampling will be required as recommended in the Updated SMP (2014). The new exceedance observed in BH1944, located between BH1954 and BH2003, warrants further sampling of these downgradient monitoring wells to assess trends.

Historically dry wells with non-detectable well vapour concentrations (BH1909, BH1920, BH1931, BH1932, BH1938, BH1960, BH1968, BH1969, BH1970, BH1986, BH1987, and BH1988) should be considered for decommissioning and excluded from further monitoring programs.

Wells that could not be located during this sampling event (BH1903, BH1950A, BH1953, BH1959, BH1960, and BH1965) should be assessed for damages during the next monitoring event, and replaced if necessary. BH1943 and BH1979 were damaged, and should be properly abandoned and replaced, given their key location at the downgradient edge of the plume.

### **Closure**

This report was prepared by Clifton Associates Ltd. for the account of Sears Canada Inc. The material in it reflects Clifton Associates Ltd. best judgment available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Clifton Associates Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Our conclusions and recommendations are preliminary and based upon the information obtained from the referenced subsurface exploration. The Site monitoring and associated laboratory testing indicate subsurface, groundwater and chemical conditions only at the specific locations and times investigated, only to the depth penetrated and only for the soil and chemical properties tested. The subsurface conditions may vary between the investigation points and with time. The subsurface interpretation provided is a professional opinion of conditions and not a certification of the site conditions. The nature and extent of

subsurface variation may not become evident until construction or further investigation. If variations or other latent conditions do become evident, Clifton Associates Ltd. should be notified immediately so that we may re-evaluate our conclusions and recommendations.

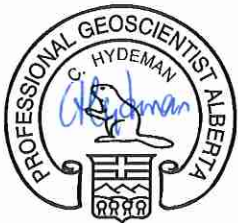
This report has been prepared in accordance with generally accepted engineering practice common to the local area. No other warranty, expressed or implied is made.

No environmental site investigation or remediation can wholly eliminate uncertainty regarding environmental conditions in connection with a property. This investigation is intended to reduce, but not eliminate the uncertainty regarding environmental conditions. Conclusions regarding the condition of the site do not represent a warranty that all areas within the site and beneath structures are of the same quality as those sampled. Further, contamination could also exist in forms not indicated by the investigation. The work was based in part upon the environmental quality guidelines and regulations in effect when the work was begun. Future regulatory changes may require reassessment of the findings of this investigation.

Clifton Associates Ltd.

Prepared by:

Reviewed by:



A handwritten signature in blue ink, appearing to read "T. Kuzyk".

**Cate Hydeman, PGeol  
Project Geologist**

**Terryn Kuzyk, PEng  
Environmental Engineer**



**Acronym List**

AEP	Alberta Environment and Parks
AESRD	Alberta Environment and Sustainable Resource Development
Clifton	Clifton Associates Ltd.
EC	electrical conductivity
ESA	environmental site assessment
BTEX	benzene, toluene, ethylbenzene, and xylenes
LNAPL	light non-aqueous phase liquid
LPH	liquid petroleum hydrocarbon
HSA	hollow stem auger
ID	interior diameter
Msl	mean sea level
N/A	not applicable
ORC	oxygen release compound
OVA	organic vapour analyser
PAH	polycyclic aromatic hydrocarbon
PHC	petroleum hydrocarbon
PID	photo ionization detector
RDL	reportable detection limit
RMP	risk management plan
ROW	right-of-way
RPD	relative percent difference, (difference of concentrations/mean of concentrations x100)
TBD	to be determined
TDS	total dissolved solids
UST	underground storage tank
VOC	volatile organic compound

**Appendices:**

**Figures**

- Figure 1 Site Location and Surrounding Land Use
- Figure 2 Site and Surrounding Properties
- Figure 3 Monitoring Well Location Plan
- Figure 4 Potentiometric Surface – Unit 1
- Figure 5 Potentiometric Surface – Unit 2
- Figure 6 Potentiometric Surface – Unit 3
- Figure 7 Distribution of Benzene in Groundwater, April 2018
- Figure 8 Distribution of Naphthalene in Groundwater, April 2018
- Figure 9 Distribution of 1,2-Dichloroethane in Groundwater, April 2018

**Tables**

- Table 1 Summary of Well Monitoring
- Table 2 Summary of Groundwater Laboratory Analyses – QA/QC – Trip Blank - VOCs
- Table 3 Summary of Groundwater Laboratory Analyses – QA/QC – Field and Laboratory Duplicate – BTEX, PHC fractions F1-F2, and PAHs
- Table 4 Summary of Groundwater Laboratory Analyses – QA/QC – Field and Laboratory Duplicate – VOCs
- Table 5 Summary of Groundwater Laboratory Analyses – BTEX and PHC fractions F1-F2
- Table 6 Summary of Groundwater Laboratory Analyses – PAHs
- Table 7 Summary of Groundwater Laboratory Analyses – VOCs
- Table 8 Summary of Mann-Kendall Plume Stability Analysis for Selected Monitoring Wells

**Appendix A**

Maxxam Certificates of Analysis

**References**

Alberta Environment and Parks. 02 February 2016. Alberta Tier 1 Soil and Groundwater Remediation Guidelines.

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Figures

# Clifton Associates Figures

**Clifton Associates**



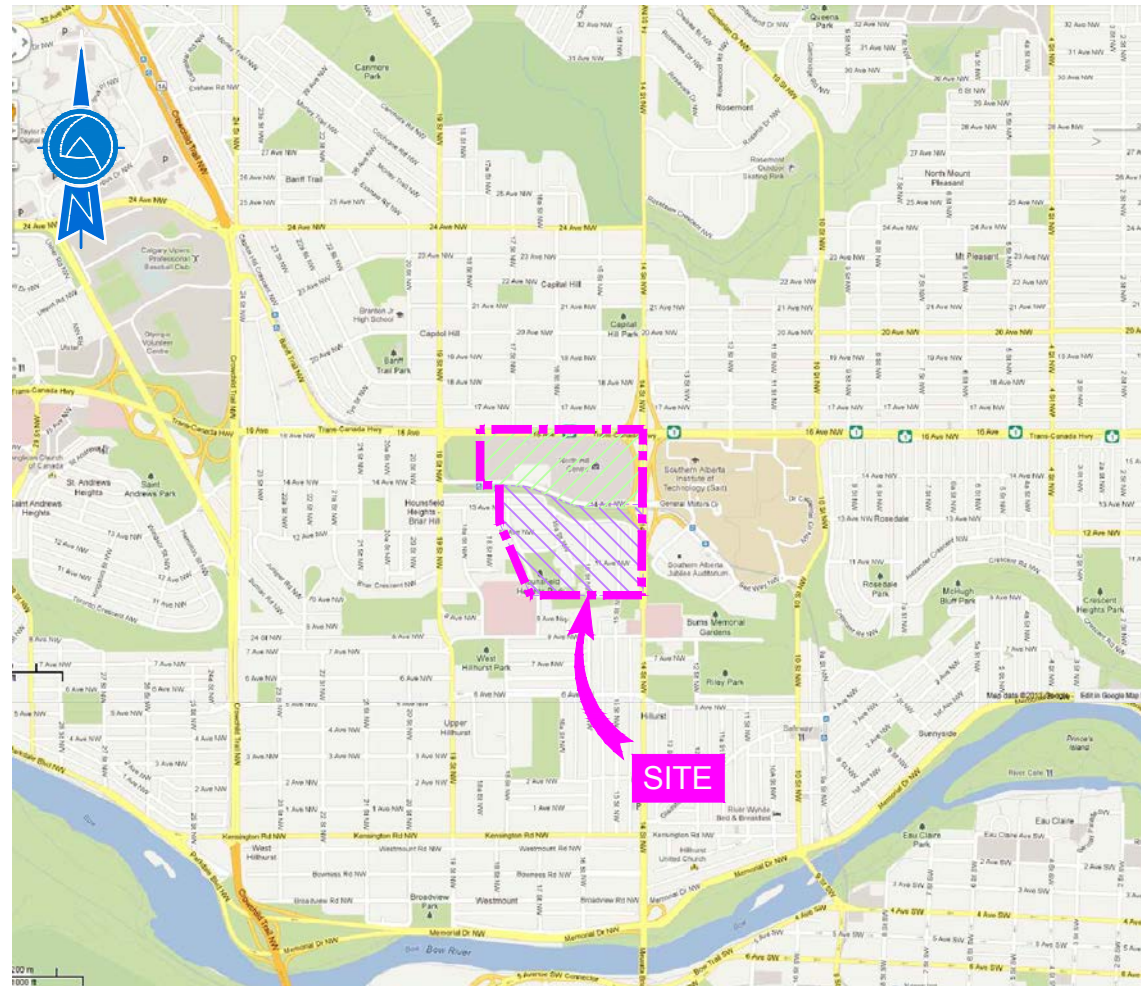
**Calgary Office**

2222 30<sup>th</sup> Avenue NE  
Calgary, Alberta T2E 7K9

T (403) 263 2556  
F (403) 234 9033

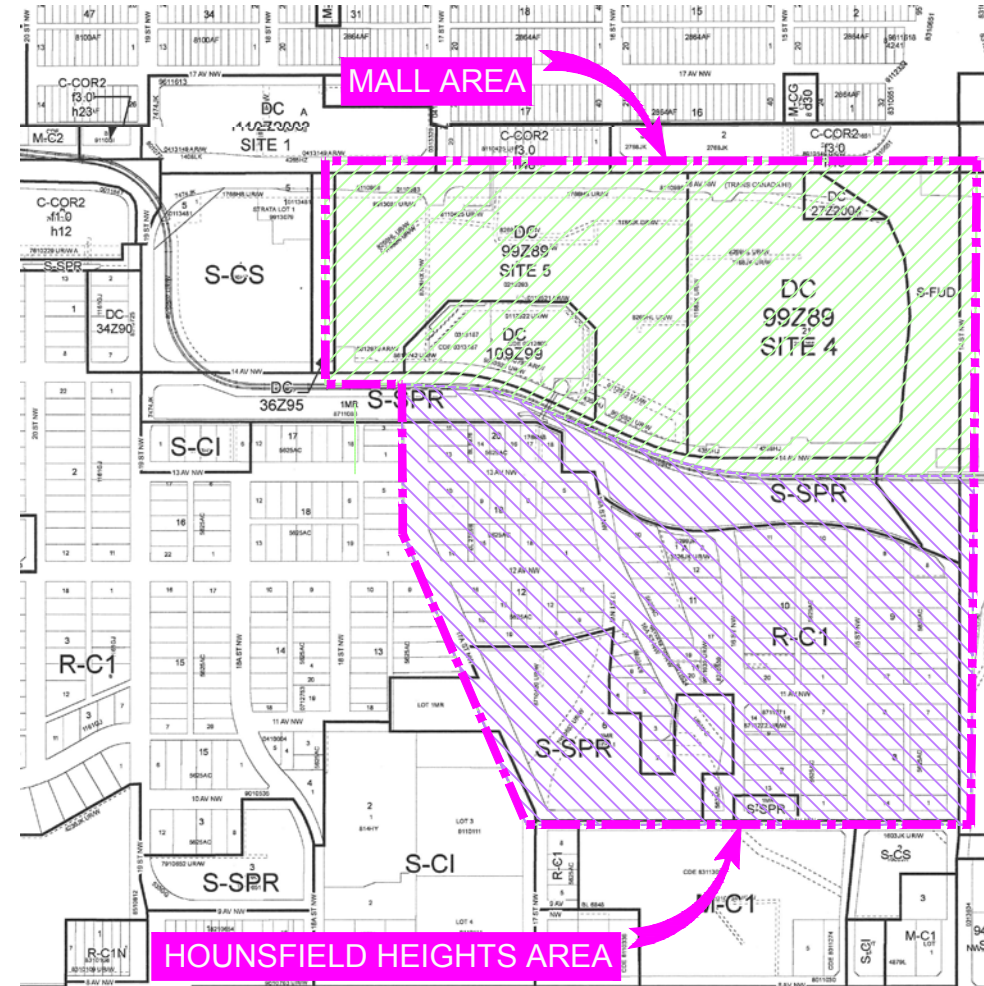
[calgary@clifton.ca](mailto:calgary@clifton.ca)  
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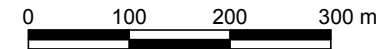
**GENERAL SITE LOCATION**

SCALE 1:30,000



**SURROUNDING LAND USE**

SCALE 1:7,500



**LEGEND:**

- SITE BOUNDARY
- MALL AREA
- HOUSFIELD HEIGHTS AREA
- CITY OF CALGARY BY-LAW ZONING

**LAND USE DISTRICTS:**

- RESIDENTIAL - CONTEXTUAL ONE DWELLING DISTRICT R-C1
- MULTI-RESIDENTIAL - CONTEXTUAL LOW-PROFILE DISTRICT MC-1
- MULTI-RESIDENTIAL - CONTEXTUAL GRADE-ORIENTED DISTRICT MC-G
- COMMERCIAL - CORRIDOR 2 DISTRICT C-COR2
- SPECIAL PURPOSE - SCHOOL, PARK, AND COMMUNITY RESERVE DISTRICT S-SPR
- SPECIAL PURPOSE - COMMUNITY INSTITUTION DISTRICT S-CI
- SPECIAL PURPOSE - COMMUNITY SERVICE DISTRICT S-CS
- SPECIAL PURPOSE - FUTURE URBAN DEVELOPMENT DISTRICT S-FUD
- DIRECT CONTROL DISTRICT DC

**NOTES:**

1. CITY OF CALGARY ROAD MAP PROVIDED BY CANADIAN CARTOGRAPHICS CORPORATION, 2012.
2. LAND USE MAP PROVIDED BY THE CITY OF CALGARY.



CLIENT **SEARS**

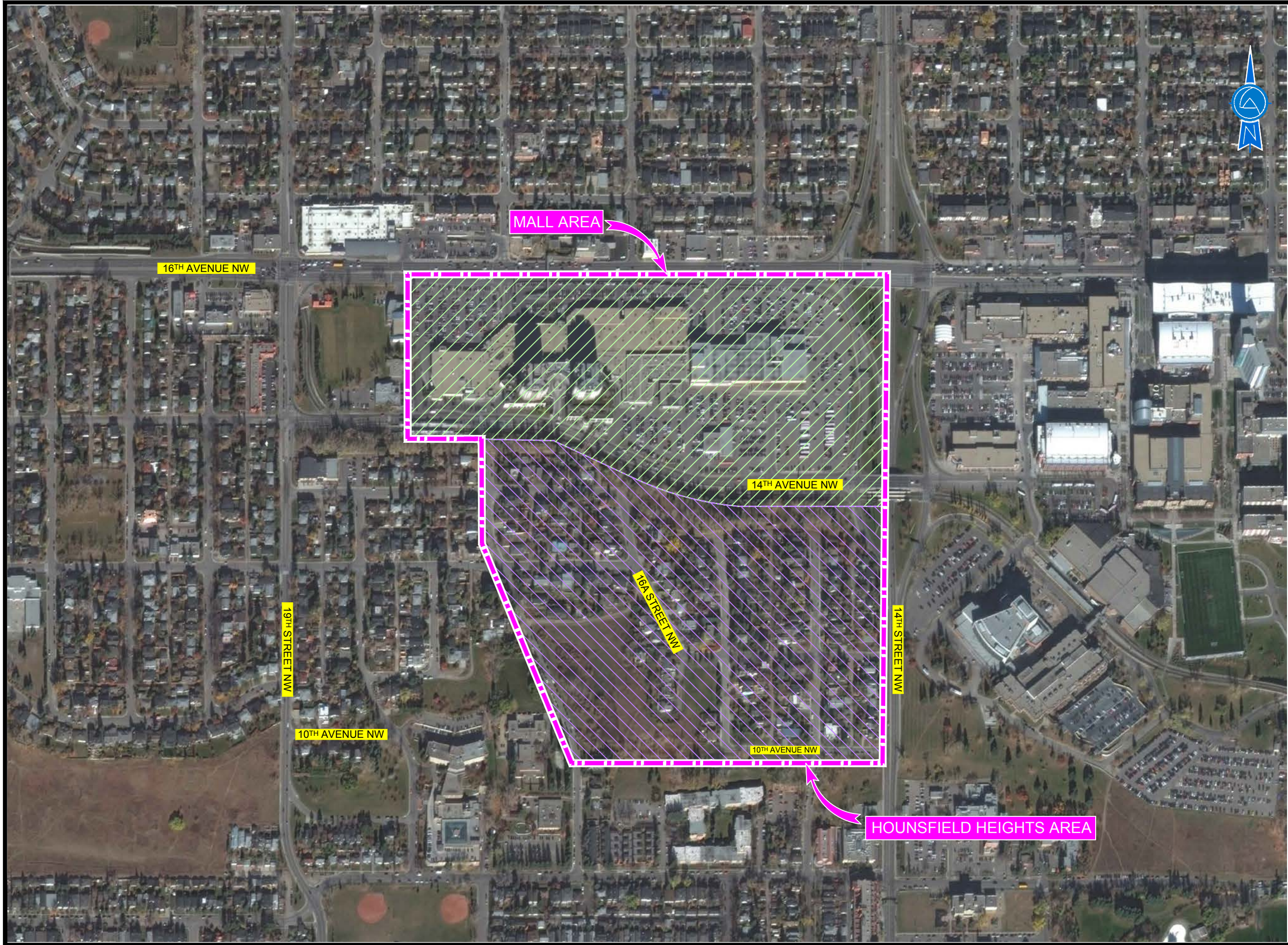
PROJECT Q1 2018 MONITORING AND SAMPLING PROGRAM  
HOUSFIELD HEIGHTS - BRIAR HILL COMMUNITY  
CALGARY, ALBERTA

TITLE **SITE LOCATION AND  
SURROUNDING LAND USE**


DESIGNED	SCALE	AS SHOWN	DATE	2017-06-01	
DRAWN	RD	PROJECT NO.	CG2430.1 E25	FIG.	1
CHECKED		FILE NO.	CG2430.1-E30-01		


W:\CG2430.1\SEARS\CURRENT\CG2430.1-E30-01.dwg, 04/24/2018 12:58:43 PM






**LEGEND:**

SITE BOUNDARY 


MALL AREA 

HOUNSFELD HEIGHTS AREA 

**NOTES:**

1. AERIAL PHOTOGRAPH PROVIDED BY GOOGLE EARTH PRO. AIR PHOTO DATE: OCT 23, 2015.



ENGINEER  **Clifton Associates**

CLIENT **SEARS** 

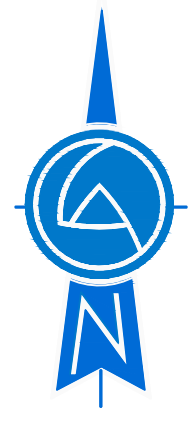
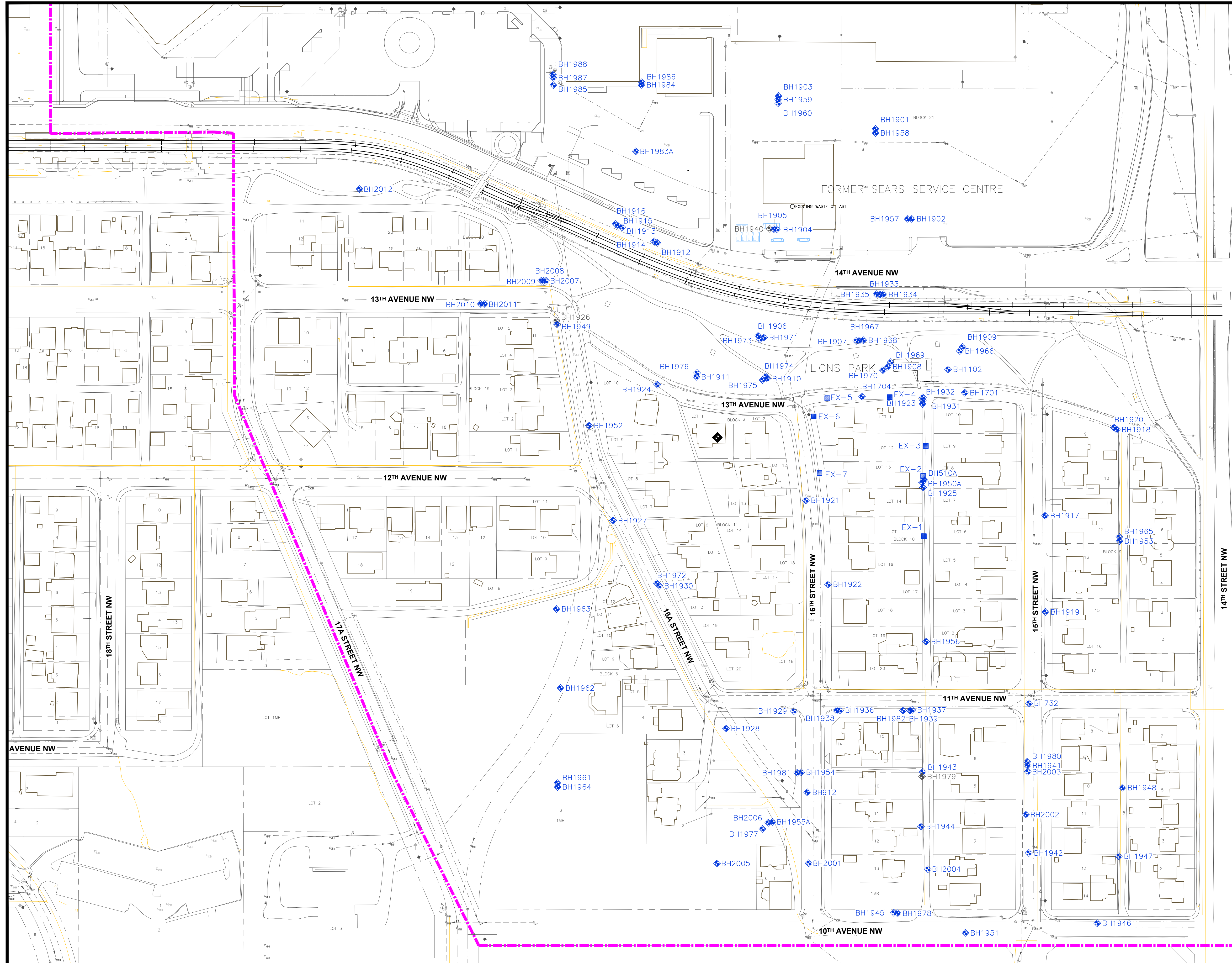
PROJECT Q1 2018 MONITORING AND SAMPLING PROGRAM  
HOUNSFELD HEIGHTS - BRIAR HILL COMMUNITY  
CALGARY, ALBERTA

TITLE **SITE AND SURROUNDING PROPERTIES**

DESIGNED	SCALE	1:5000	DATE	2017-06-01
DRAWN	RD	PROJECT NO. CG2430.1 E25	FIG.	2
CHECKED	FILE NO.	CG2430.1-E30-02		

W:\CG2430.1 SEARS COURSE\1300\CG2430.1-E30-02.dwg, 04/24/2018 12:58:53 PM





**LEGEND**

SITE BOUNDARY	
EXTRACTION WELL	
LRT TRACKS	
FENCE LINE	
LEGAL LINE	
FORMER FACILITY/FEATURE	
BUILDING	
EXISTING GROUNDWATER MONITORING WELL	
MONITORING WELL TO BE DECOMMISSIONED	
DAMAGED MONITORING WELL	

**UTILITY LINES & SYMBOLS**

NATURAL GAS LINE	
SANITARY SEWER	
STORM SEWER	
WATER	
CATCH BASIN	
FIRE HYDRANT	
LIGHT STANDARD	
MANHOLE	
UTILITY POLE	

**NOTES:**  
 1 DRAWING COMPILED FROM PLANIMETRIC FILES SUPPLIED BY THE CITY OF CALGARY (INCLUDING UG UTILITIES) & FROM SITE ASSESSMENT INFORMATION. ADDITIONAL REFERENCES FROM SEACOR ENVIRONMENTAL ENGINEERING INC., DRAWINGS 149-5A11.DWG, 149-5A6.DWG.



ENGINEER Clifton Associates

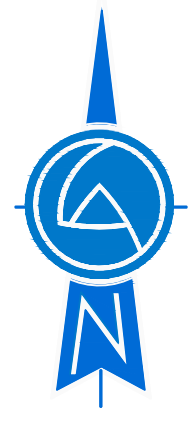
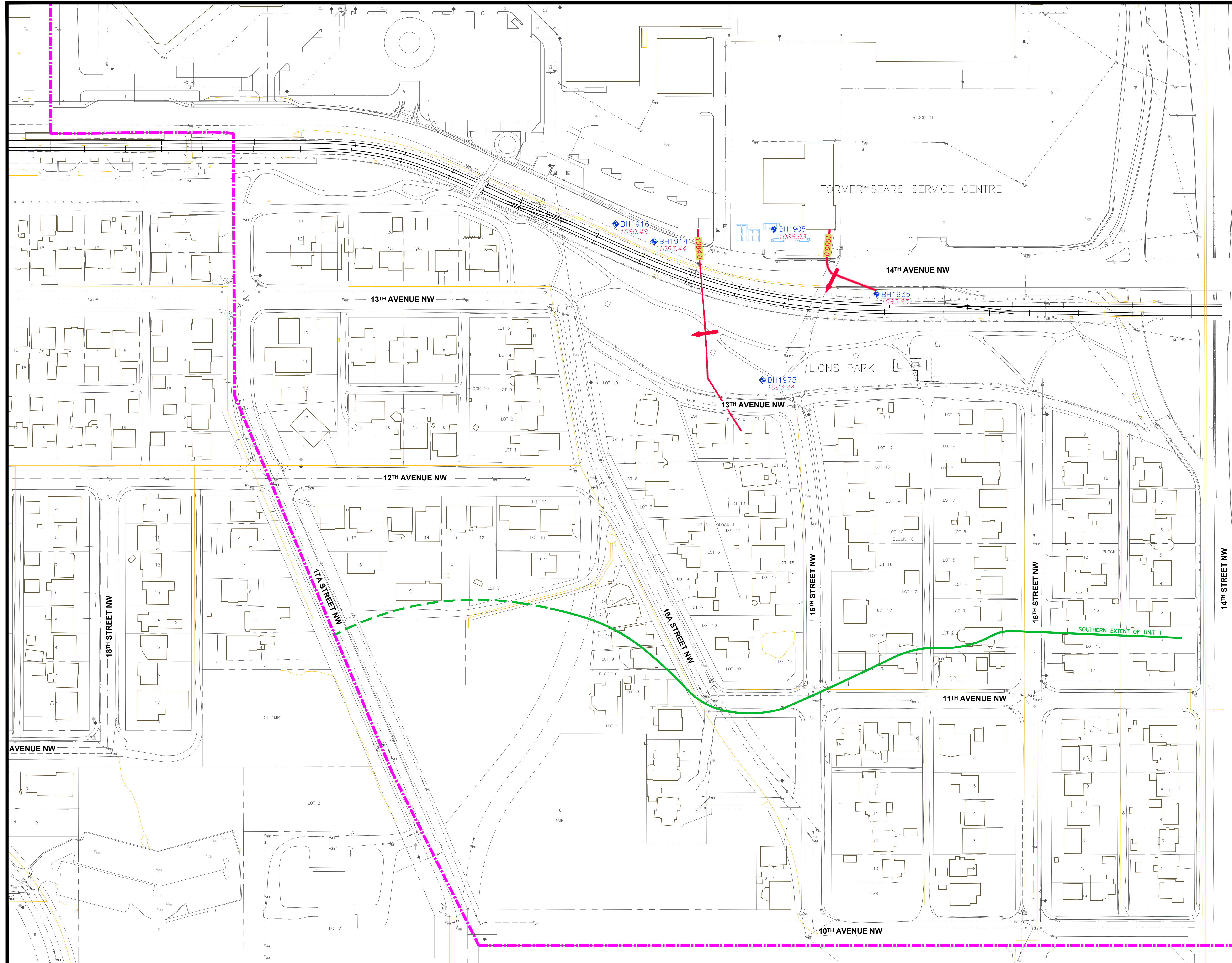
CLIENT **SEARS**

PROJECT Q1 2018 MONITORING AND SAMPLING PROGRAM  
 HOUNSFIELD HEIGHTS - BRIAR HILL COMMUNITY  
 CALGARY, ALBERTA

TITLE **MONITORING WELL LOCATION PLAN**

DESIGNED	SCALE	DATE
DRAWN	PROJECT NO.	2018-04-25
CHECKED	FILE NO.	CG2430.1-E30
TK	CG2430.1-E30-03	3





**LEGEND**

SITE BOUNDARY	
EXTRACTION WELL	
LRT TRACKS	
FENCE LINE	
LEGAL LINE	
FORMER FACILITY/FEATURE	
BUILDING	
EXISTING GROUNDWATER MONITORING WELL	
MONITORING WELL TO BE DECOMMISSIONED	
POTENTIOMETRIC CONTOUR	
POTENTIOMETRIC ELEVATION	
INTERPRETED DIRECTION OF GROUNDWATER FLOW	
GROUNDWATER ELEVATION	
UNIT CONTACT	

**UTILITY LINES & SYMBOLS**

NATURAL GAS LINE	
SANITARY SEWER	
STORM SEWER	
WATER	
CATCH BASIN	
FIRE HYDRANT	
LIGHT STANDARD	
MANHOLE	
UTILITY POLE	

**NOTES:**  
 1 DRAWING COMPILED FROM PLANIMETRIC FILES SUPPLIED BY THE CITY OF CALGARY (INCLUDING UG UTILITIES) & FROM SITE ASSESSMENT INFORMATION. ADDITIONAL REFERENCES FROM SEAR'S ENVIRONMENTAL ENGINEERING INC., DRAWINGS 149-5A11.DWG, 149-5A6.DWG.

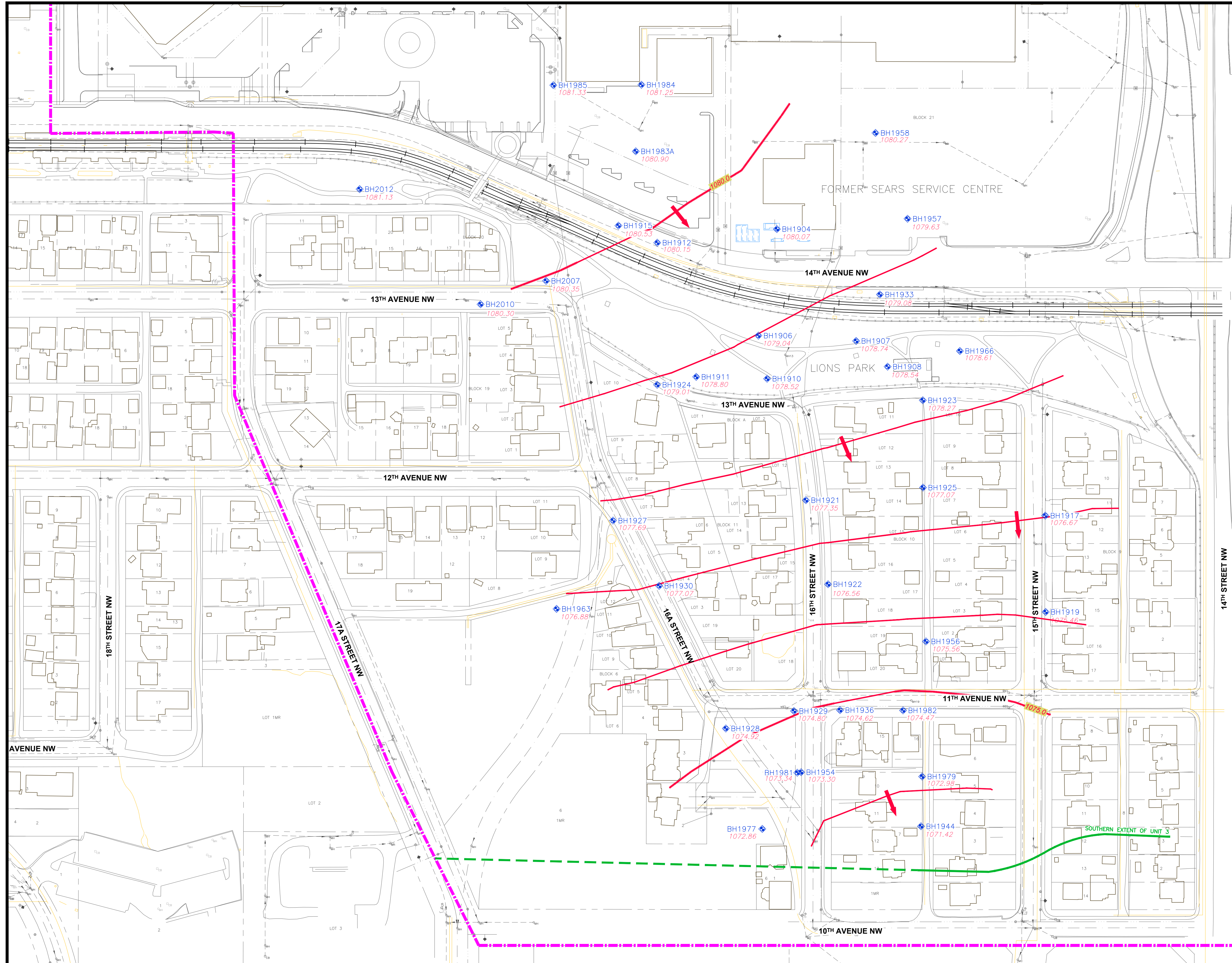


ENGINEER 		
CLIENT <b>SEARS</b>		
PROJECT Q1 2018 MONITORING AND SAMPLING PROGRAM HOUSFIELD HEIGHTS - BRIAR HILL COMMUNITY CALGARY, ALBERTA		
TITLE <b>POTENTIOMETRIC SURFACE UNIT 1</b>		
DESIGNED	SCALE	DATE
DRAWN	PROJECT NO.	FIG.
CHECKED	FILE NO.	
		4









**LEGEND**

- SITE BOUNDARY
- EXTRACTION WELL
- LRT TRACKS
- FENCE LINE
- LEGAL LINE
- FORMER FACILITY/FEATURE
- BUILDING
- EXISTING GROUNDWATER MONITORING WELL
- MONITORING WELL TO BE DECOMMISSIONED
- POTENTIOMETRIC CONTOUR
- POTENTIOMETRIC ELEVATION
- INTERPRETED DIRECTION OF GROUNDWATER FLOW
- GROUNDWATER ELEVATION
- UNIT CONTACT

**UTILITY LINES & SYMBOLS**

- NATURAL GAS LINE
- SANITARY SEWER
- STORM SEWER
- WATER
- CATCH BASIN
- FIRE HYDRANT
- LIGHT STANDARD
- MANHOLE
- UTILITY POLE

**NOTES:**

1 DRAWING COMPILED FROM PLANIMETRIC FILES SUPPLIED BY THE CITY OF CALGARY (INCLUDING UG UTILITIES) & FROM SITE ASSESSMENT INFORMATION. ADDITIONAL REFERENCES FROM SEACOR ENVIRONMENTAL ENGINEERING INC., DRAWINGS 149-5A11.DWG, 149-5A6.DWG.

0 10 20 30 40 50 m  
PLOT SIZE 22x34

ENGINEER  
**Clifton Associates**

CLIENT  
**SEARS**

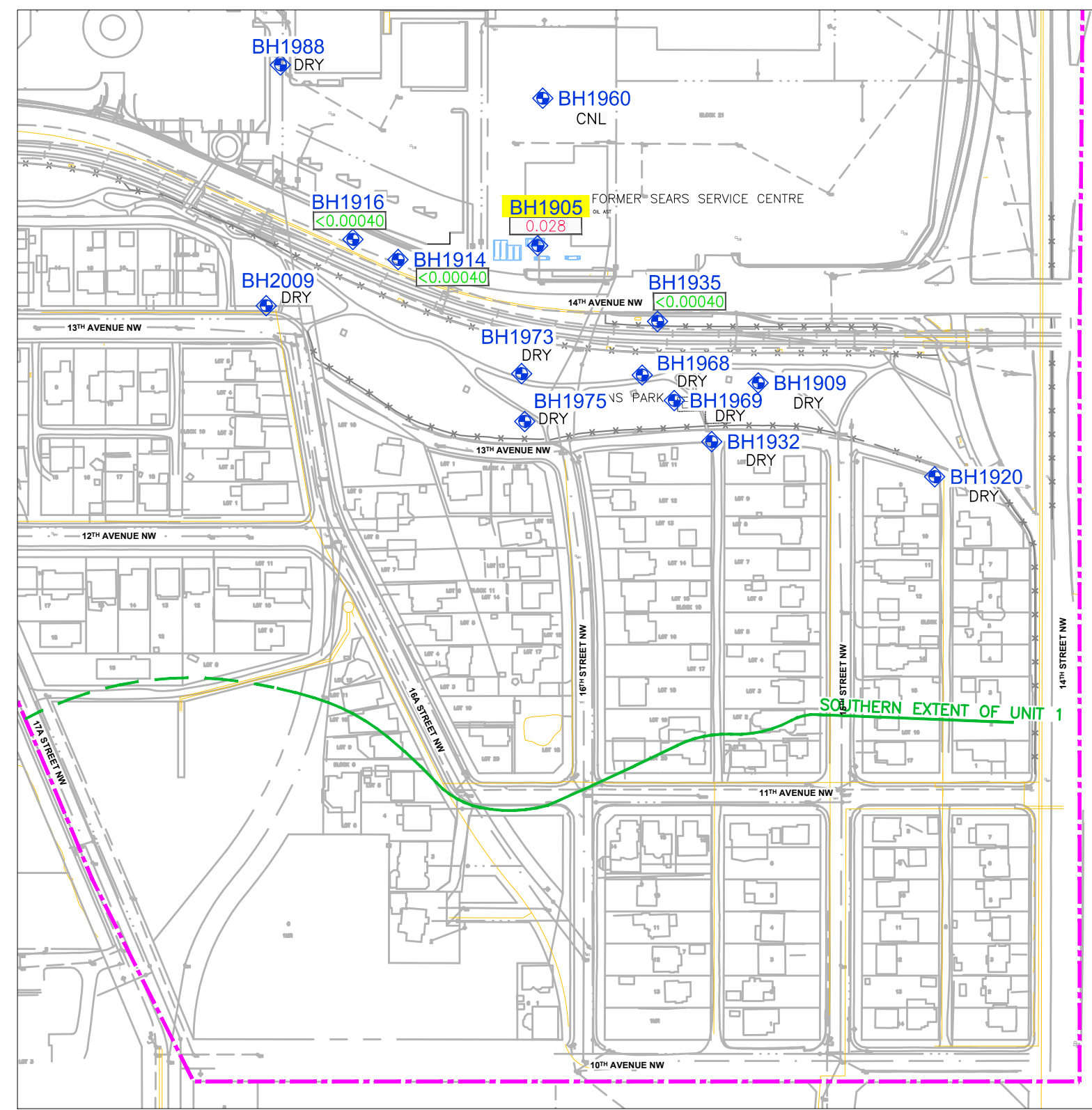
PROJECT  
Q1 2018 MONITORING AND SAMPLING PROGRAM  
HOUSFIELD HEIGHTS - BRIAR HILL COMMUNITY  
CALGARY, ALBERTA

TITLE  
**POTENTIOMETRIC SURFACE UNIT 3**

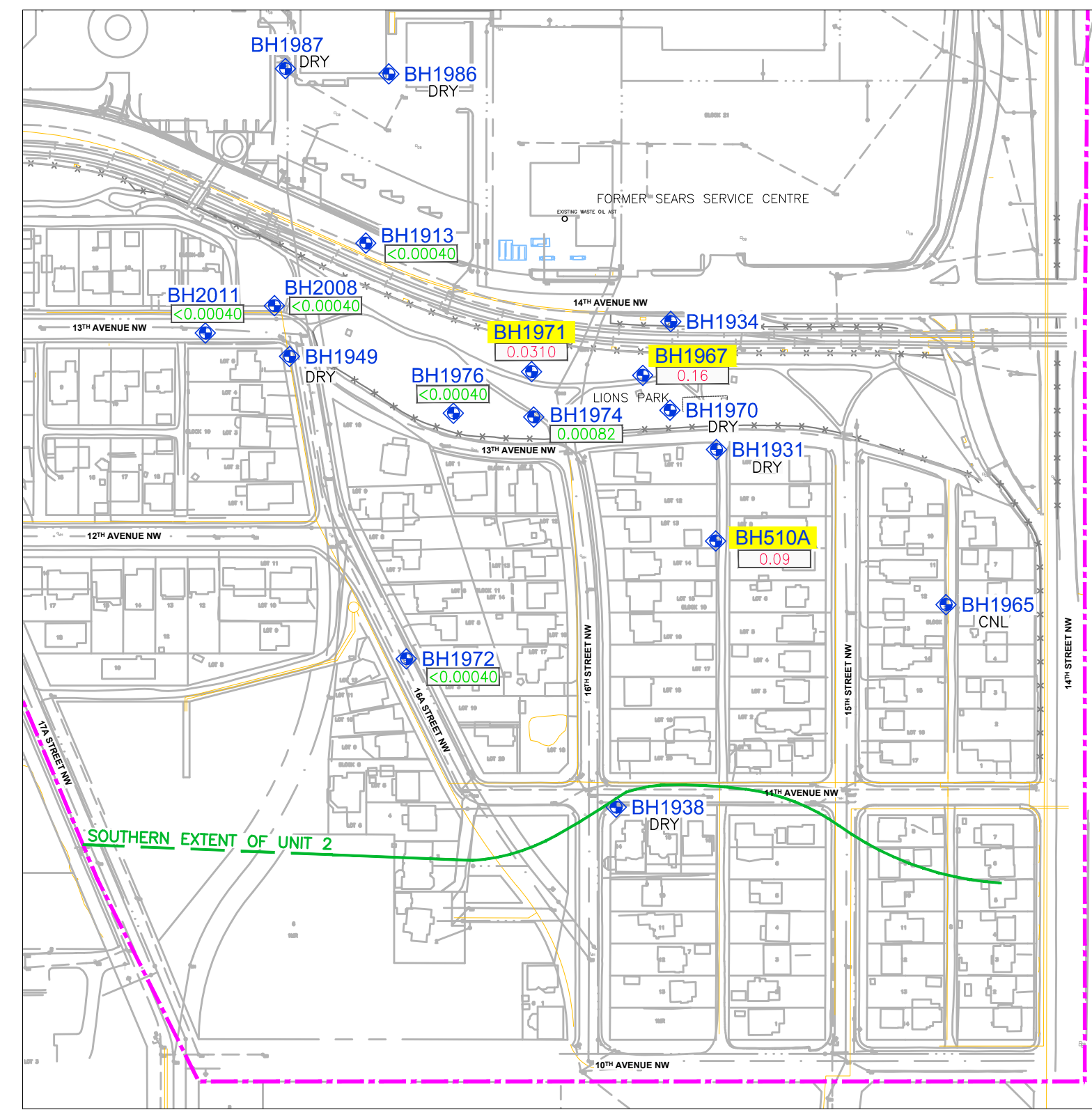
DESIGNED	SCALE	DATE
DRAWN	PROJECT NO.	FIG.
CHECKED	FILE NO.	
TK	CG2430.1-E30-06	6

2018-04-25

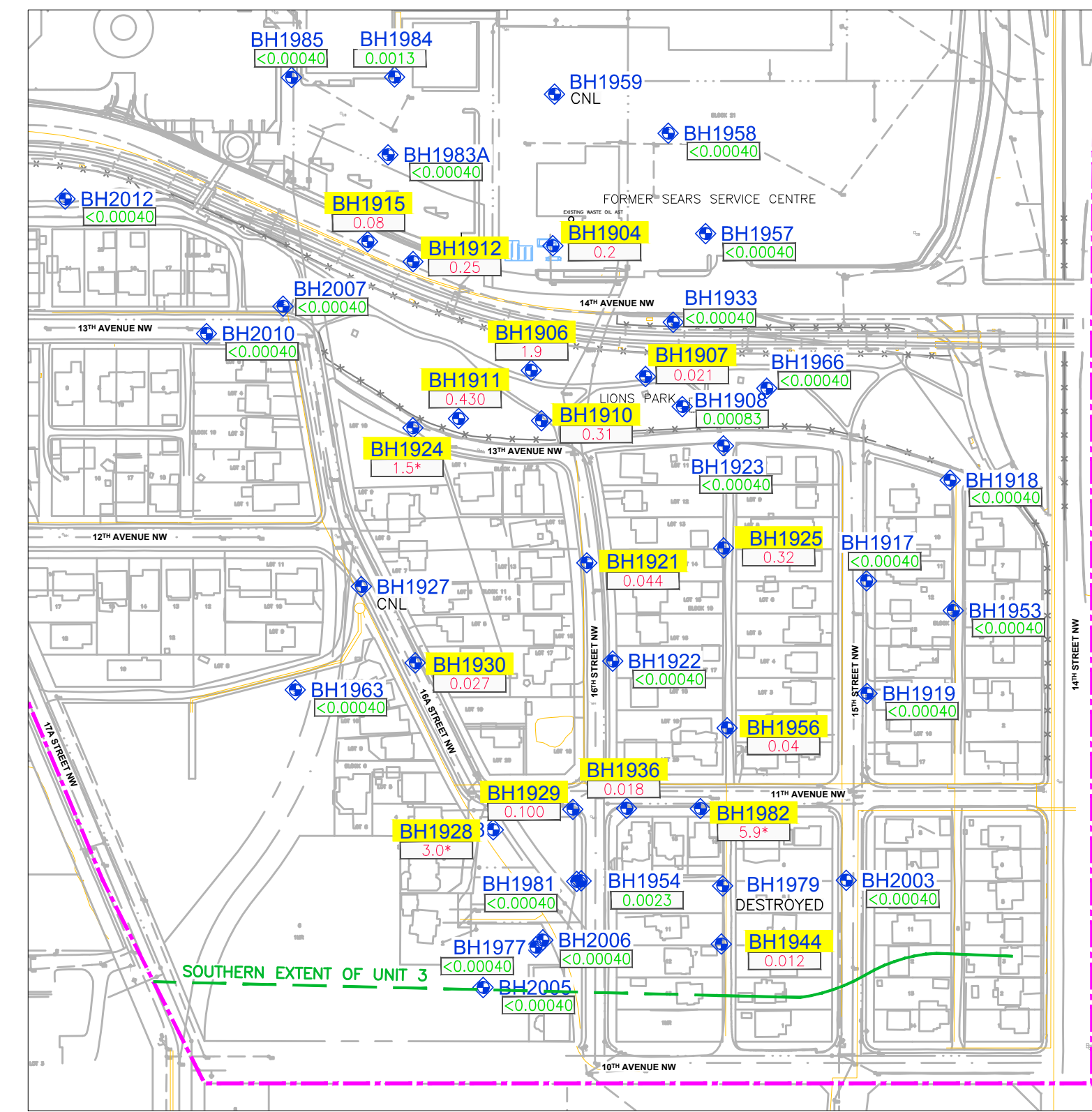




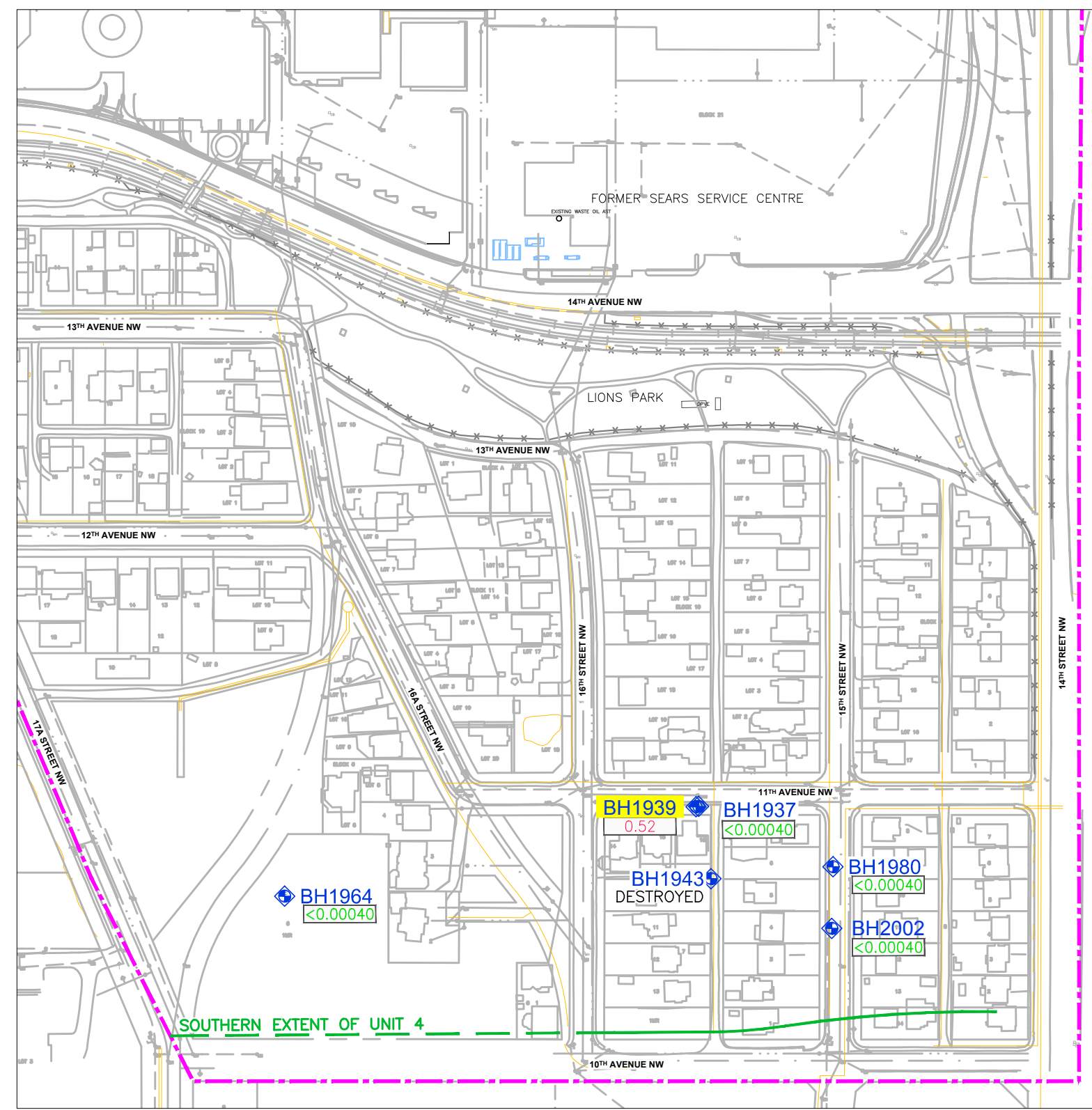
UNIT 1 - UPPER SILTY SAND



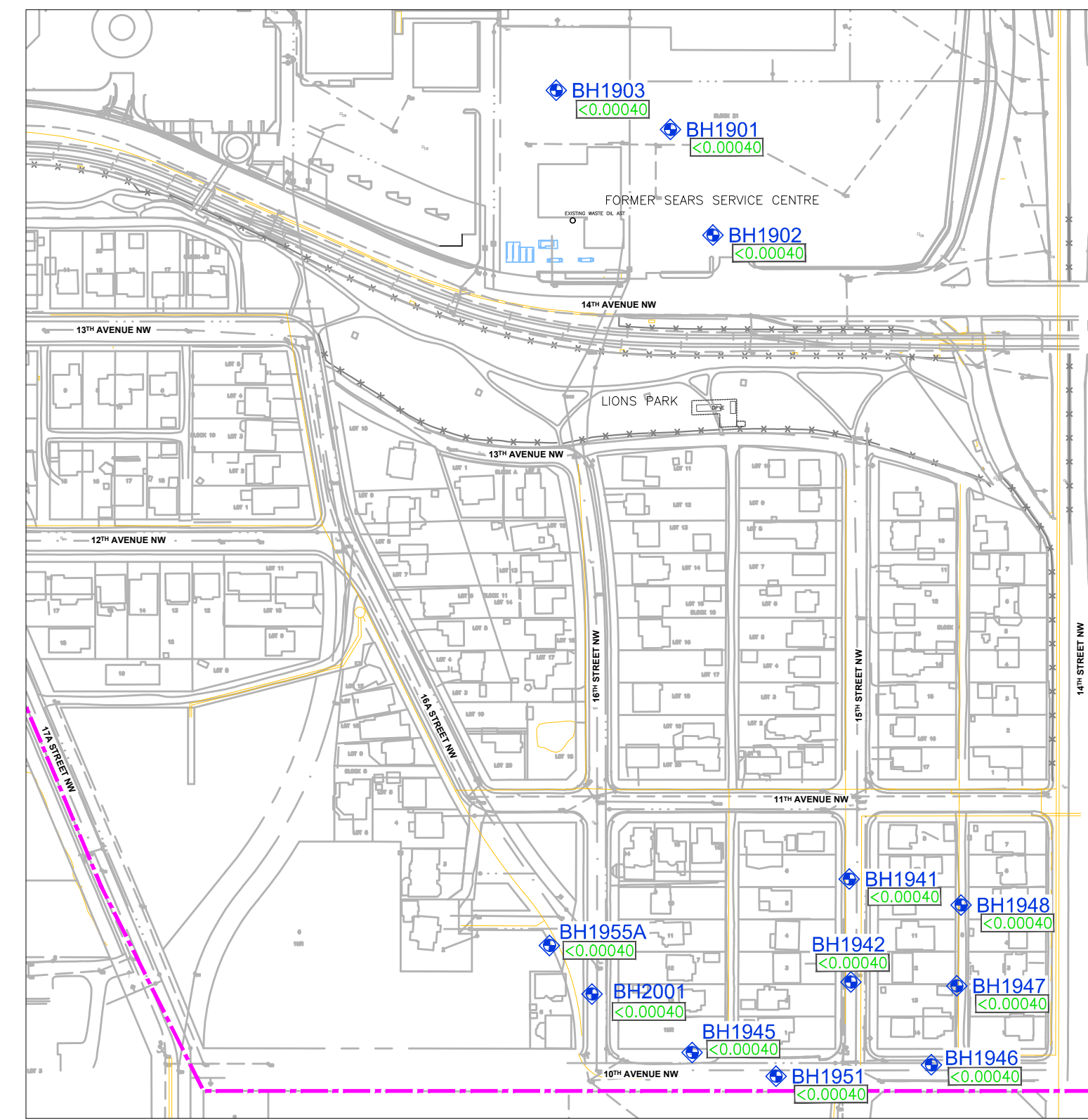
UNIT 2 - UPPER CLAYEY SILT



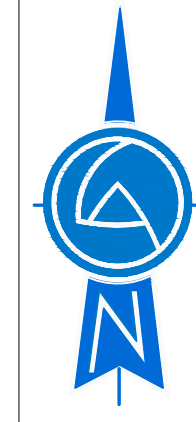
UNIT 3 - MIDDLE SANDY SILT



UNIT 4 - LOWER CLAYEY SILT



UNIT 5 - LOWER SILTY SAND AND GRAVEL

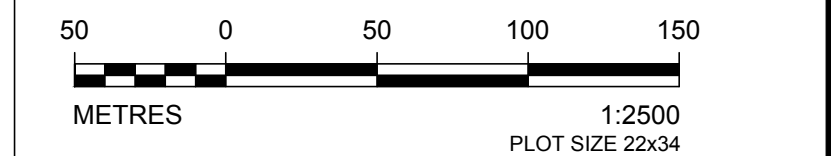


**LEGEND**

- SITE BOUNDARY ---
- EXTRACTION WELL ■
- LRT TRACKS ---
- FENCE LINE ---
- LEGAL LINE ---
- FORMER FACILITY/FEATURE ---
- BUILDING □
- EXISTING GROUNDWATER MONITORING WELL ⬇
- CURRENT MONITORING WELL CONDITIONS ⬇
- EXCEEDS AEP 2016 TIER 1 GUIDELINES ⬇
- UNIT CONTACT ---

ALBERTA ENVIRONMENT AND PARKS 2016 TIER 1 GUIDELINES FOR COARSE-GRAINED SOIL		
AEP CRITERIA CATEGORY	RESIDENTIAL GUIDELINE (mg/L)	COMMERCIAL GUIDELINE (mg/L)
BENZENE	0.005	0.005

**NOTES:**  
 1 DRAWING COMPILED FROM PLANIMETRIC FILES SUPPLIED BY THE CITY OF CALGARY (INCLUDING UG UTILITIES) & FROM SITE ASSESSMENT INFORMATION. ADDITIONAL REFERENCES FROM SEACOR ENVIRONMENTAL ENGINEERING INC., DRAWINGS 149-5A11.DWG, 149-5A6.DWG.



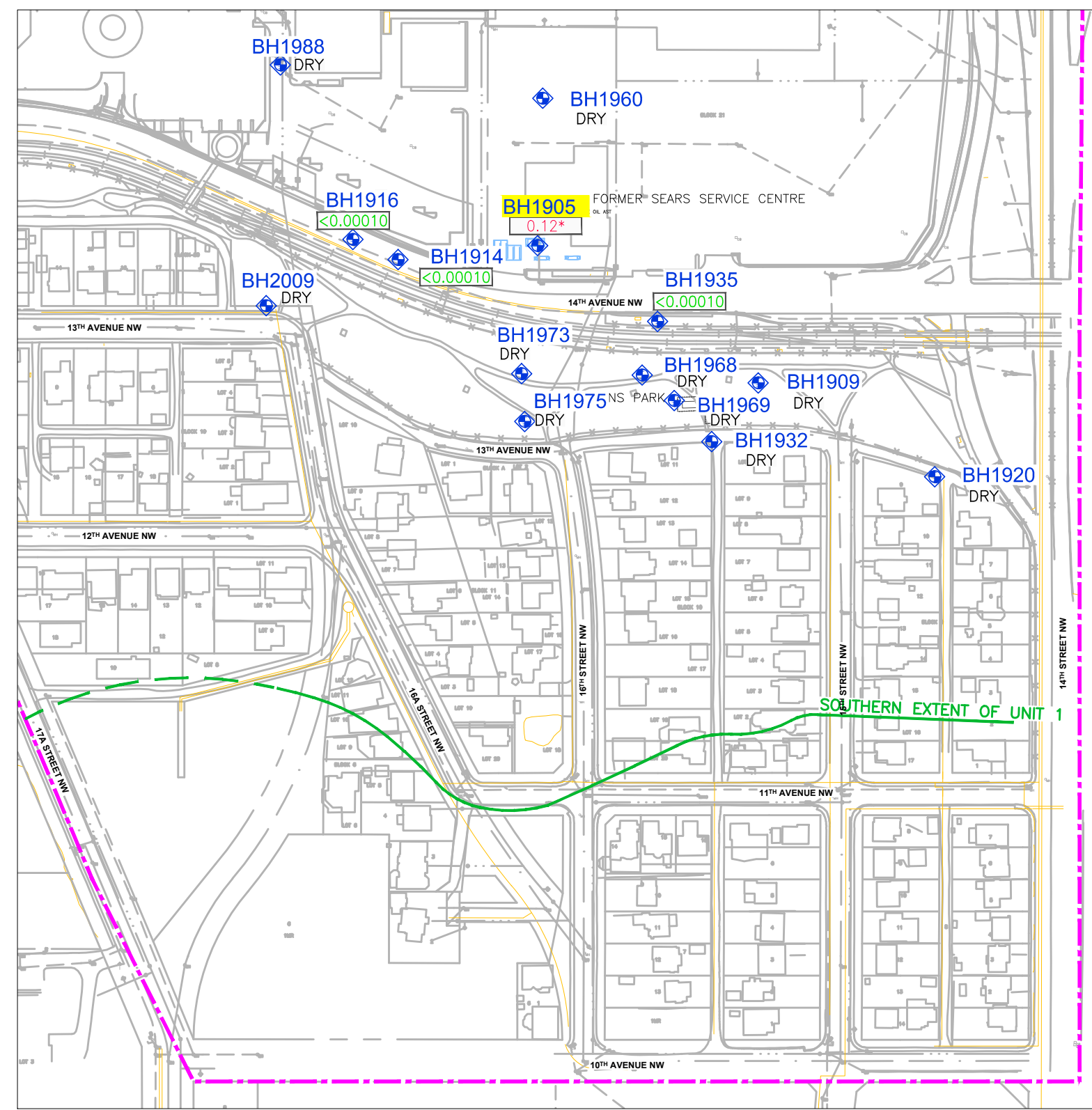
**SEARS**

PROJECT: Q1 2018 MONITORING AND SAMPLING PROGRAM HOUNSFIELD HEIGHTS - BRIAR HILL COMMUNITY CALGARY, ALBERTA

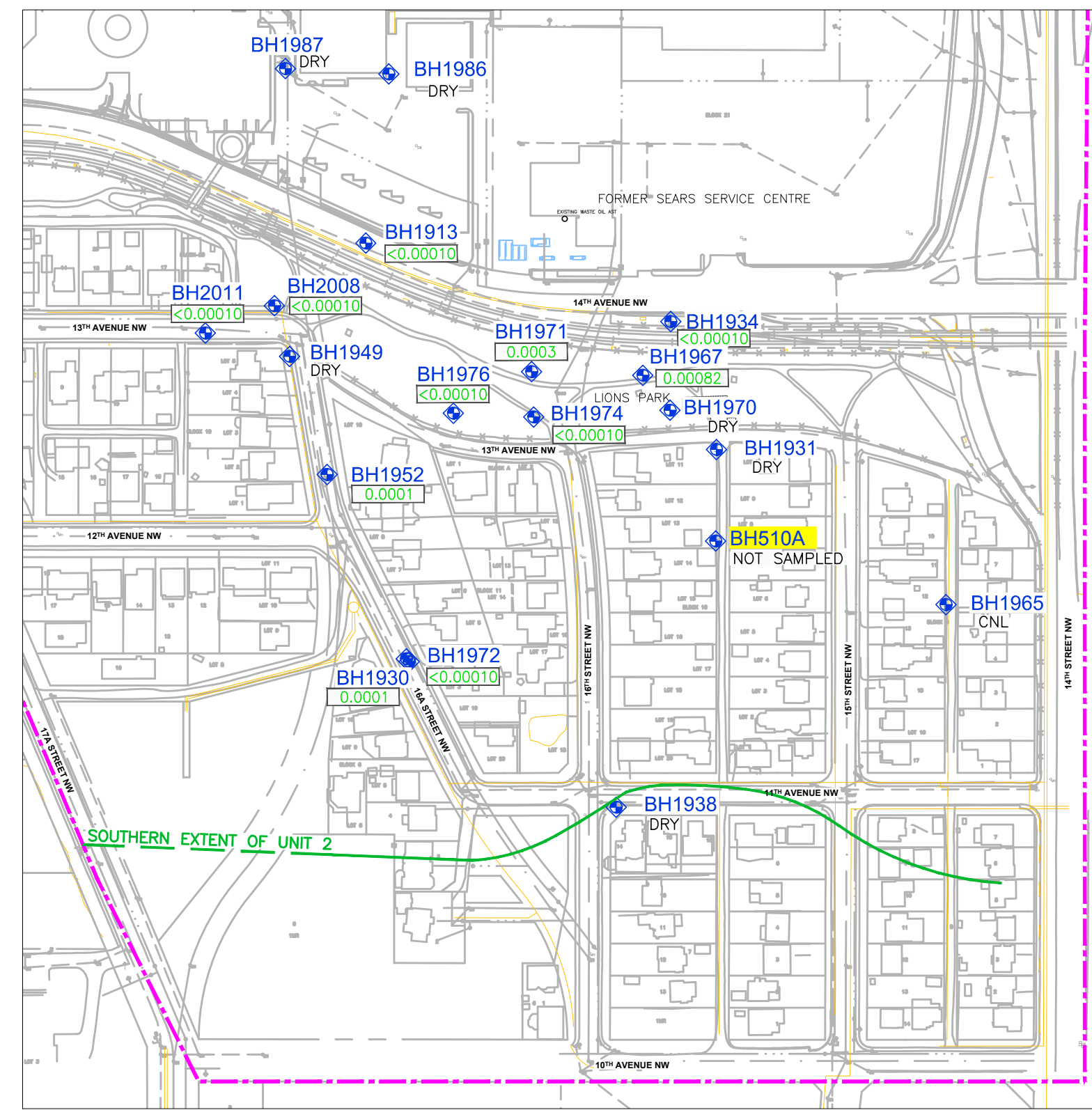
TITLE: DISTRIBUTION OF BENZENE IN GROUNDWATER, APRIL 2018

DESIGNED	SCALE	DATE
DRAWN	PROJECT NO.	2018-04-25
CHECKED	FILE NO.	7
TK	CG2430.1-E30-07	

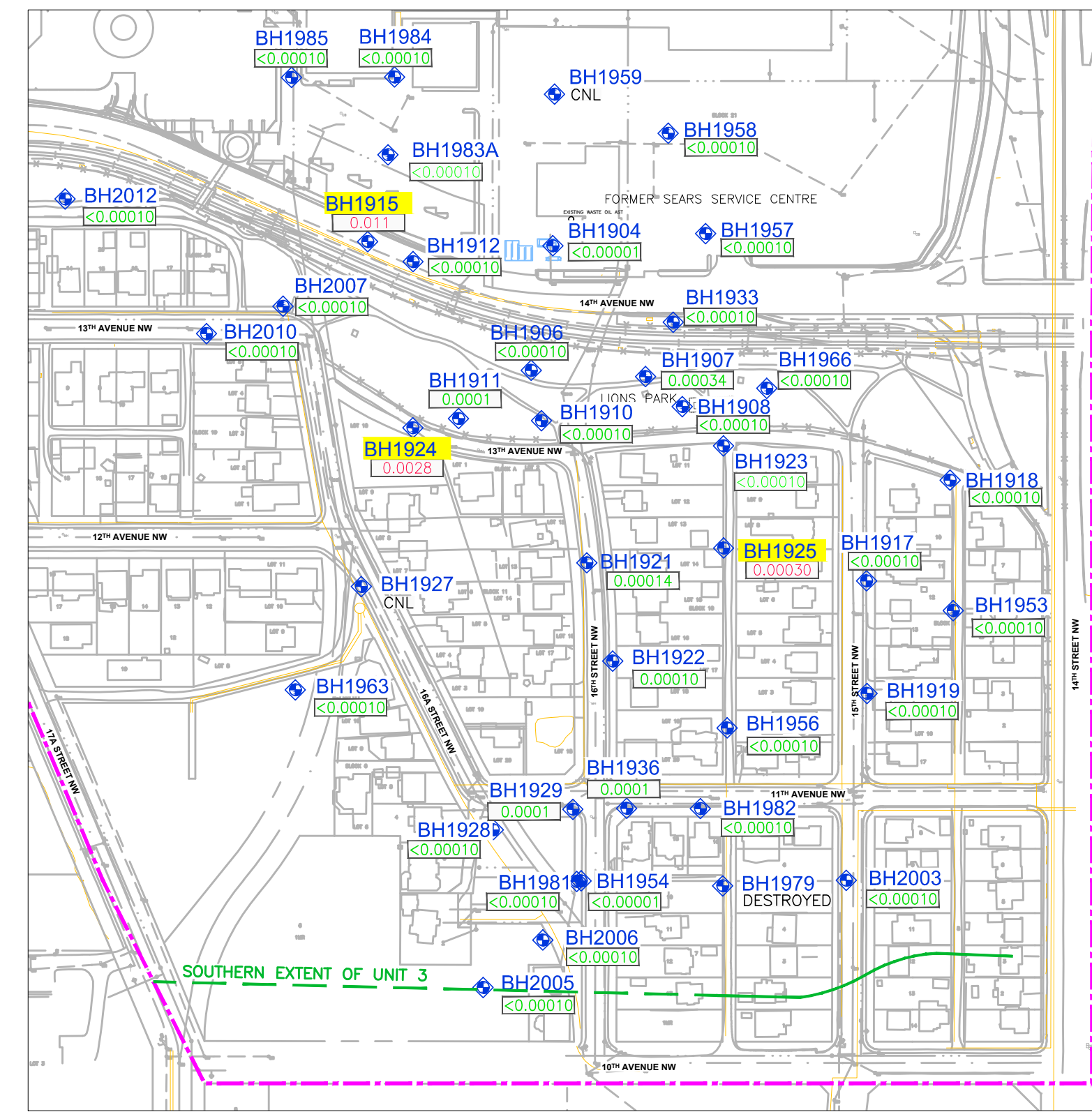




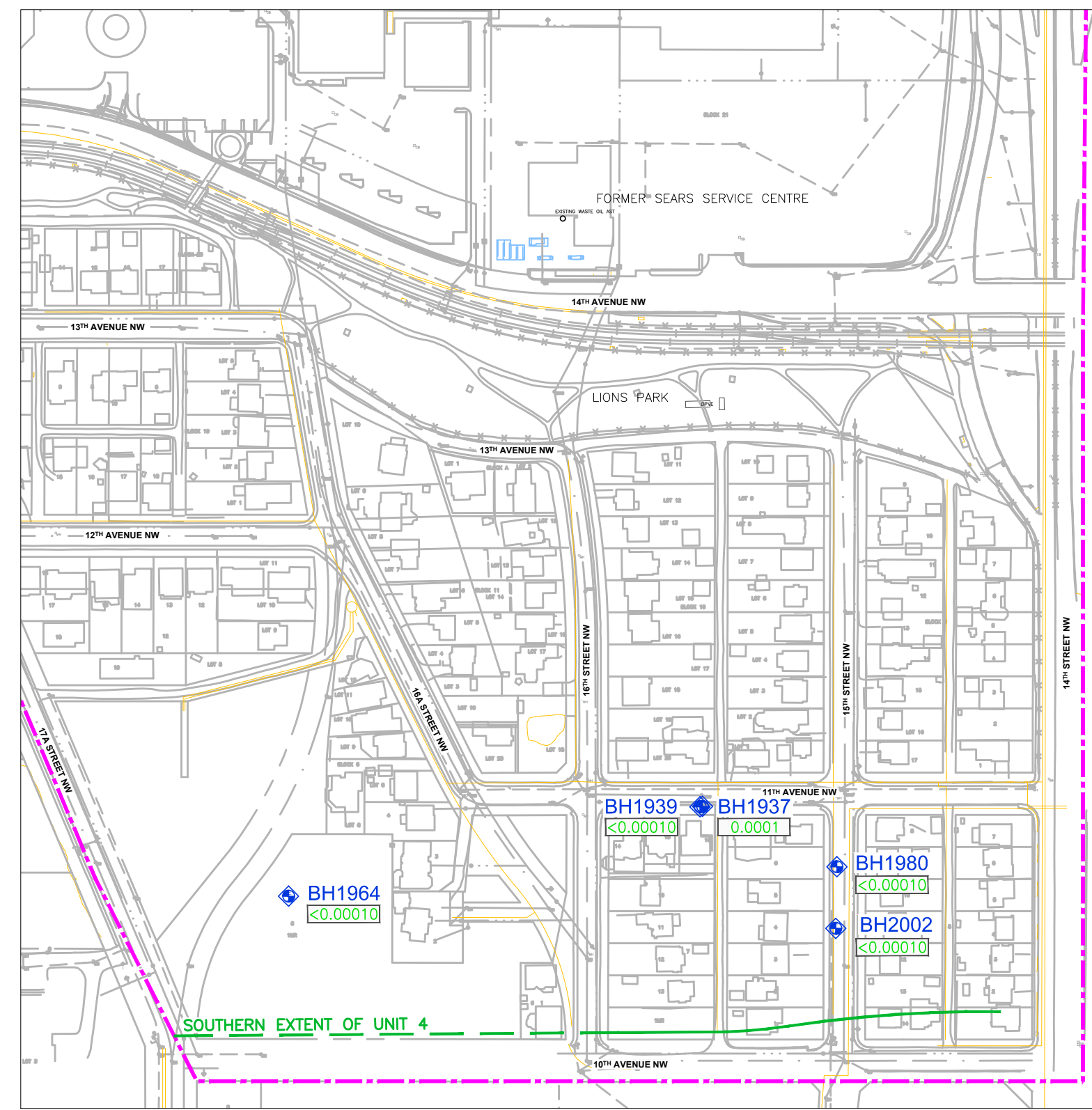
UNIT 1 - UPPER SILTY SAND



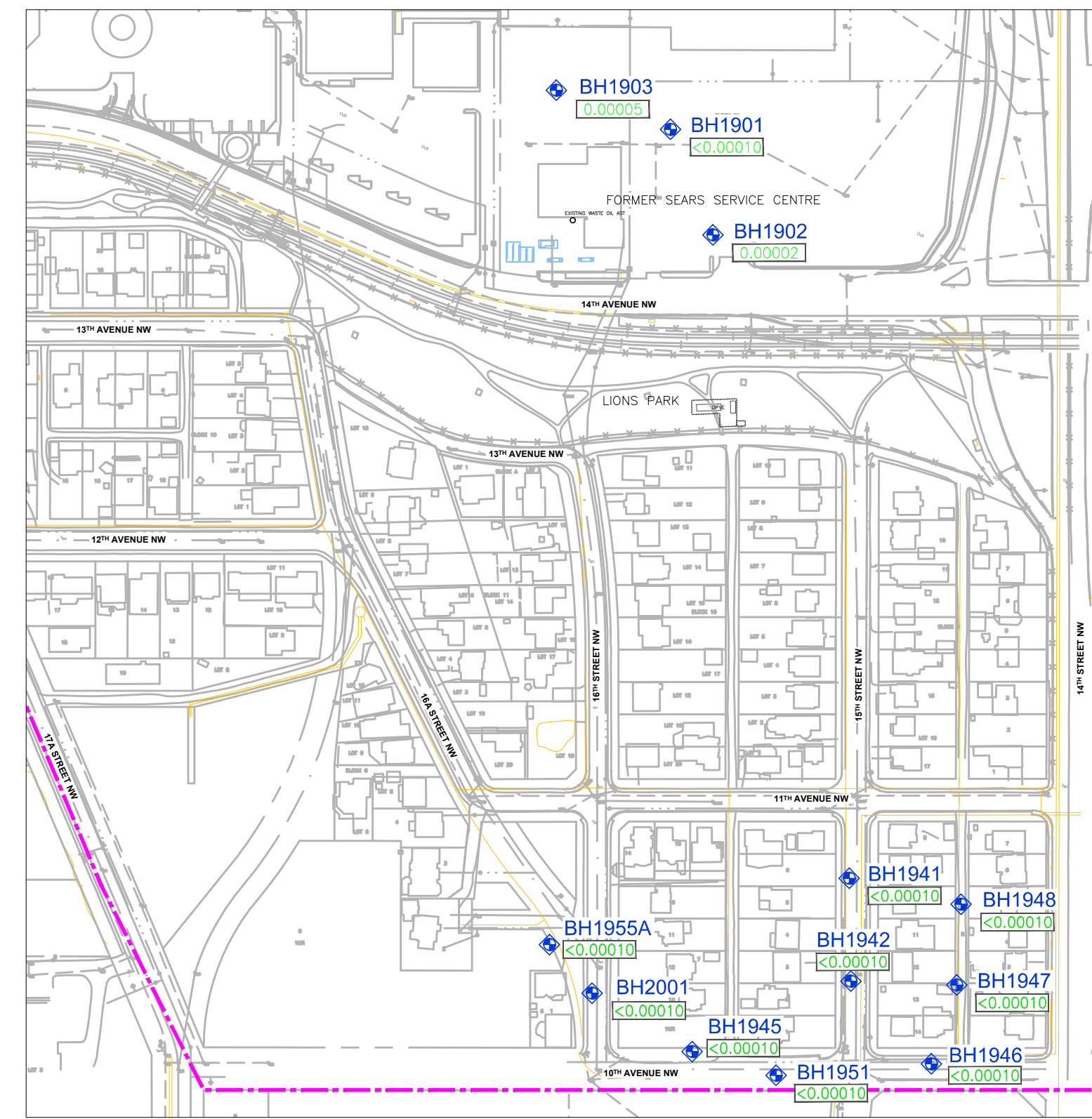
UNIT 2 - UPPER CLAYEY SILT



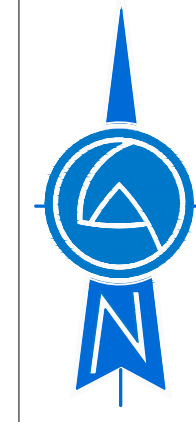
UNIT 3 - MIDDLE SANDY SILT



UNIT 4 - LOWER CLAYEY SILT



UNIT 5 - LOWER SILTY SAND AND GRAVEL

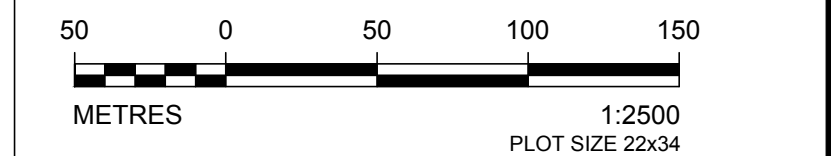


**LEGEND**

- SITE BOUNDARY ---
- EXTRACTION WELL ■
- LRT TRACKS ---
- FENCE LINE ---
- LEGAL LINE ---
- FORMER FACILITY/FEATURE ---
- BUILDING
- EXISTING GROUNDWATER MONITORING WELL ◆
- CURRENT MONITORING WELL CONDITIONS ◆
- EXCEEDS AEP 2016 TIER 1 GUIDELINES ◆
- UNIT CONTACT ---

ALBERTA ENVIRONMENT AND PARKS 2016 TIER 1 GUIDELINES FOR COARSE-GRAINED SOIL		
AEP CRITERIA CATEGORY	RESIDENTIAL GUIDELINE (mg/L)	COMMERCIAL GUIDELINE (mg/L)
NAPHTHALENE	0.001	0.001

**NOTES:**  
 1 DRAWING COMPILED FROM PLANIMETRIC FILES SUPPLIED BY THE CITY OF CALGARY (INCLUDING UG UTILITIES) & FROM SITE ASSESSMENT INFORMATION. ADDITIONAL REFERENCES FROM SEACOR ENVIRONMENTAL ENGINEERING INC., DRAWINGS 149-5A11.DWG, 149-5A6.DWG.



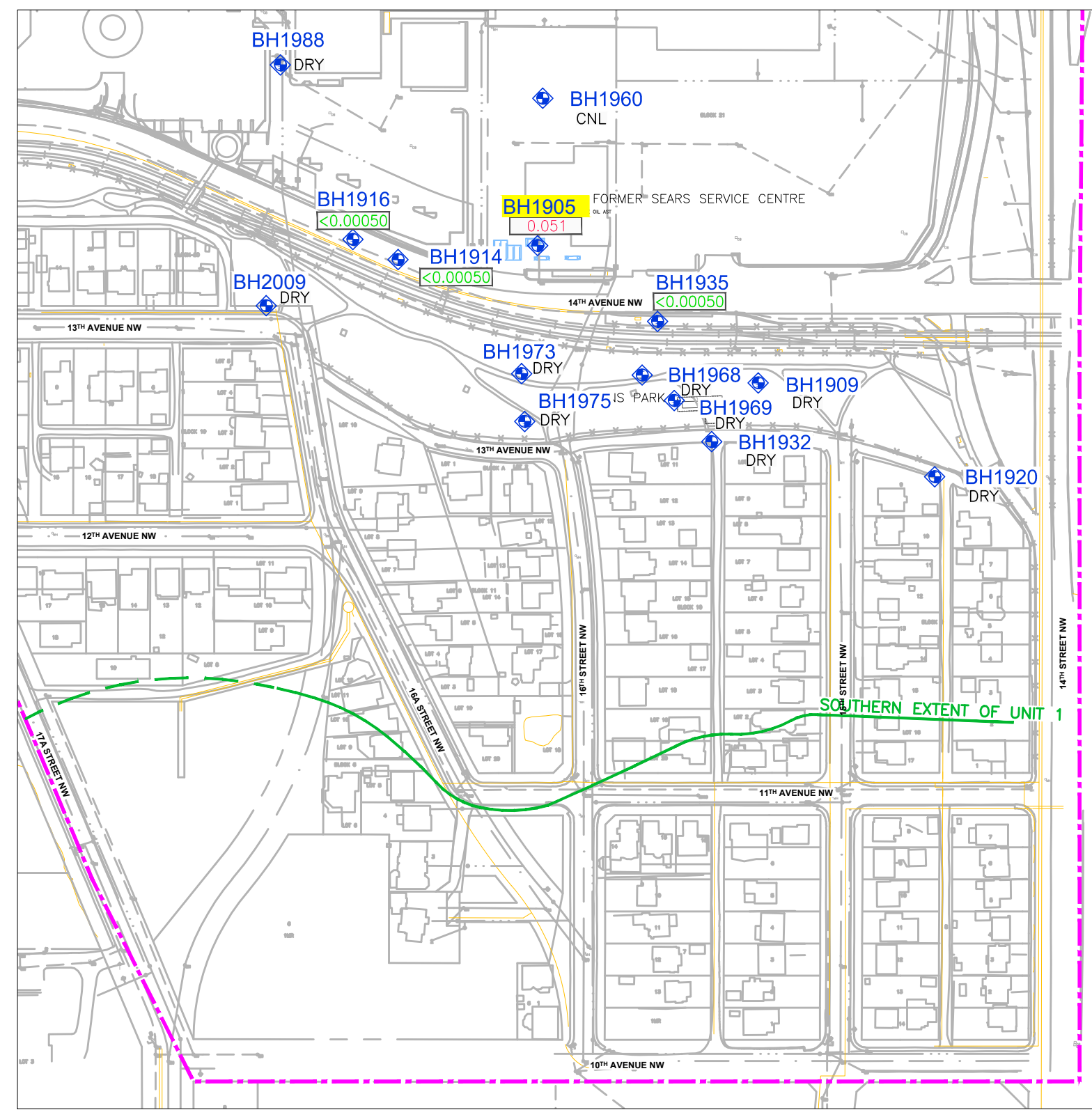
CLIENT  
**SEARS**

PROJECT  
 Q1 2018 MONITORING AND SAMPLING PROGRAM  
 HOUNSFIELD HEIGHTS - BRIAR HILL COMMUNITY  
 CALGARY, ALBERTA

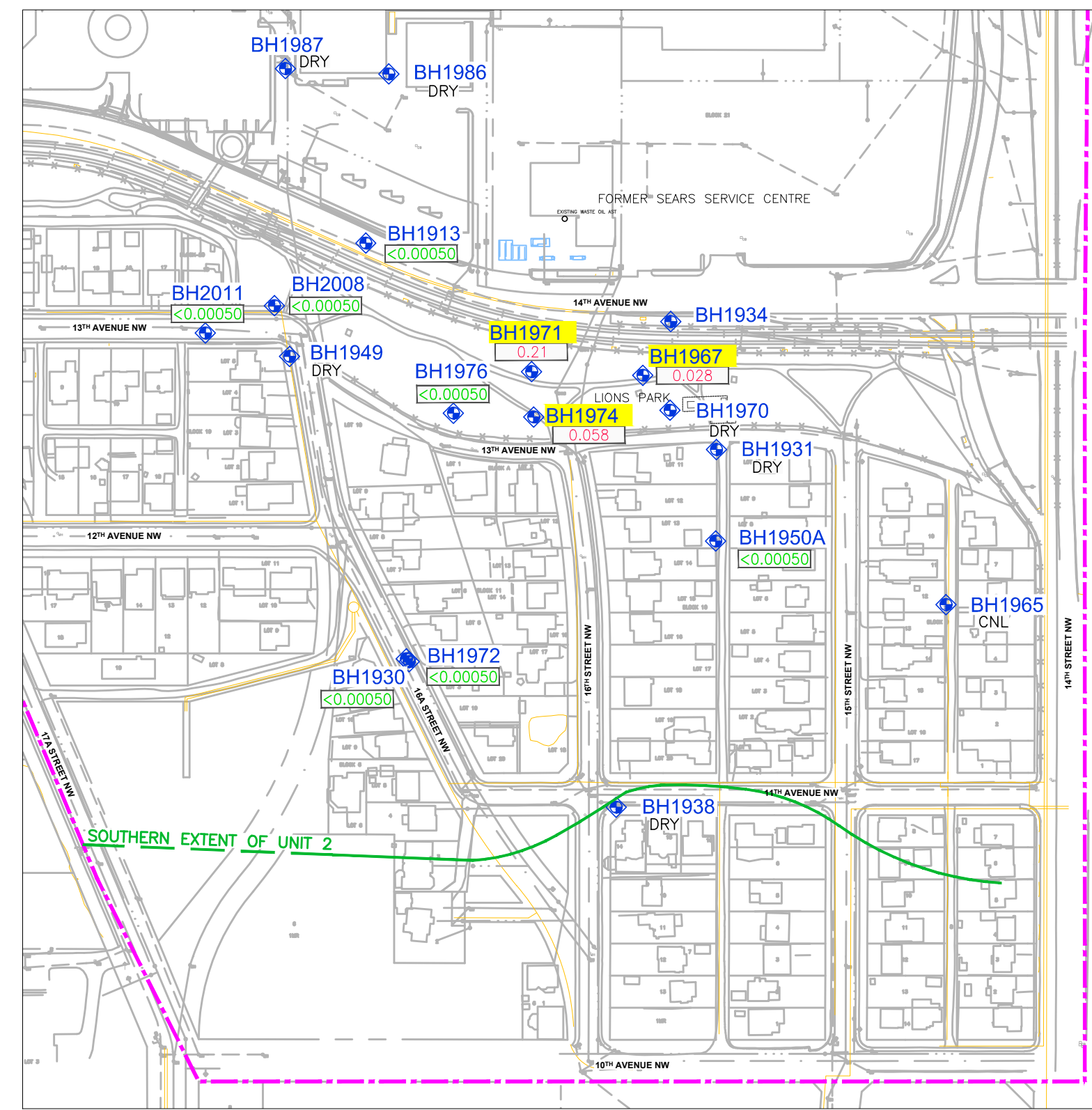
TITLE  
**DISTRIBUTION OF NAPHTHALENE  
 IN GROUNDWATER, APRIL 2018**

DESIGNED	SCALE	DATE
DRAWN	PROJECT NO.	2018-04-25
CHECKED	FILE NO.	FIG.
TK	CG2430.1-E30-08	8

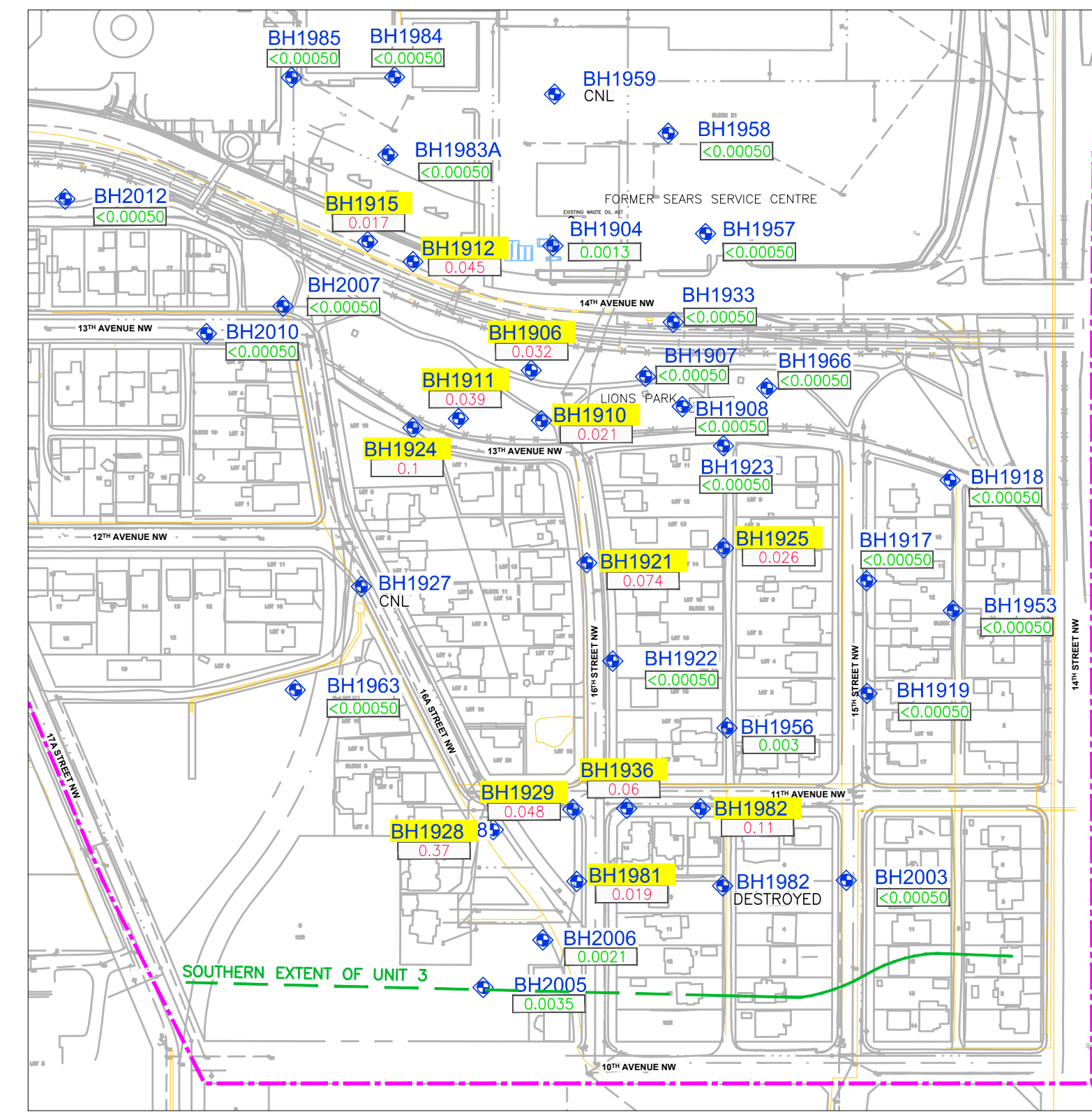




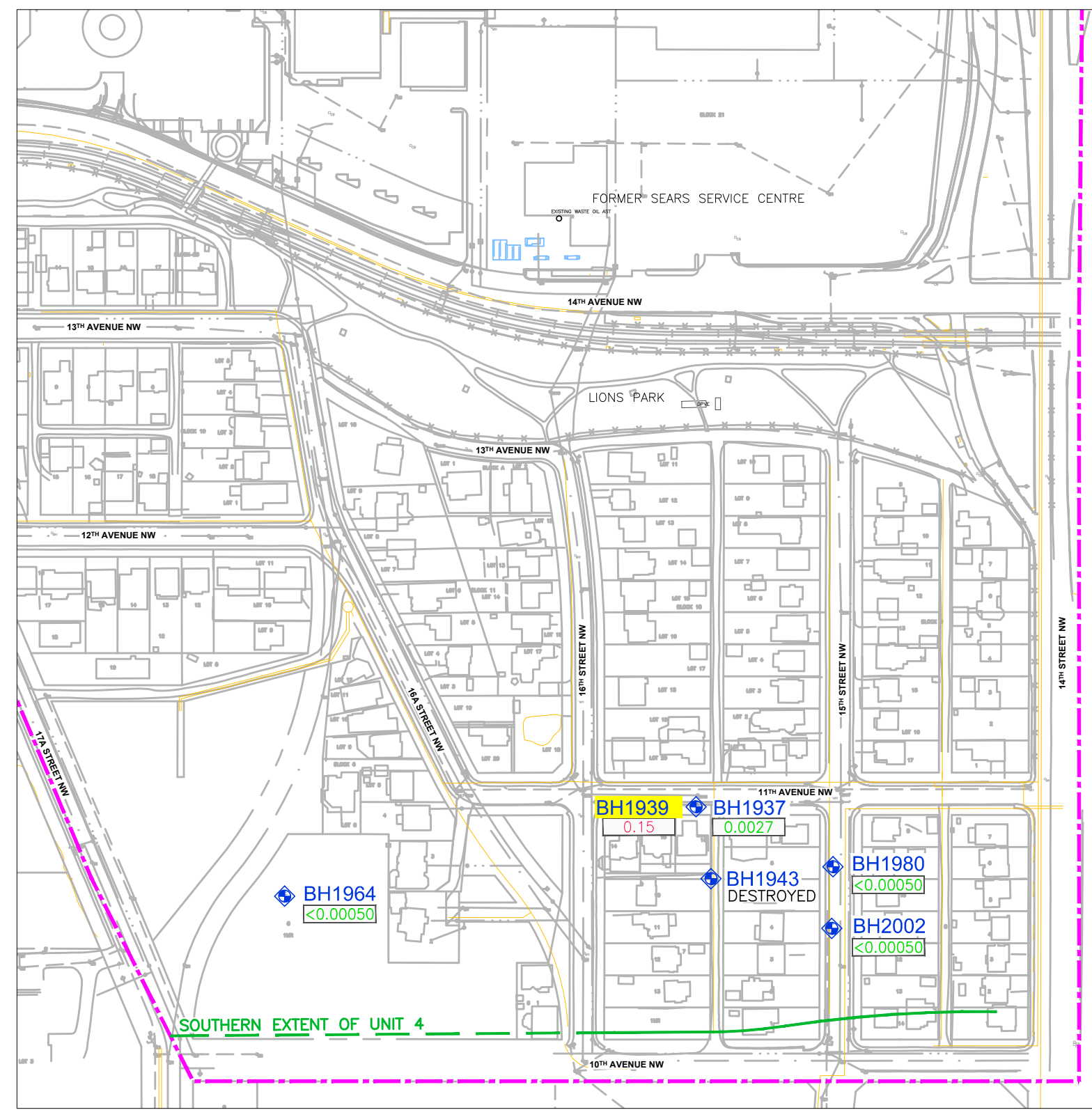
UNIT 1 - UPPER SILTY SAND



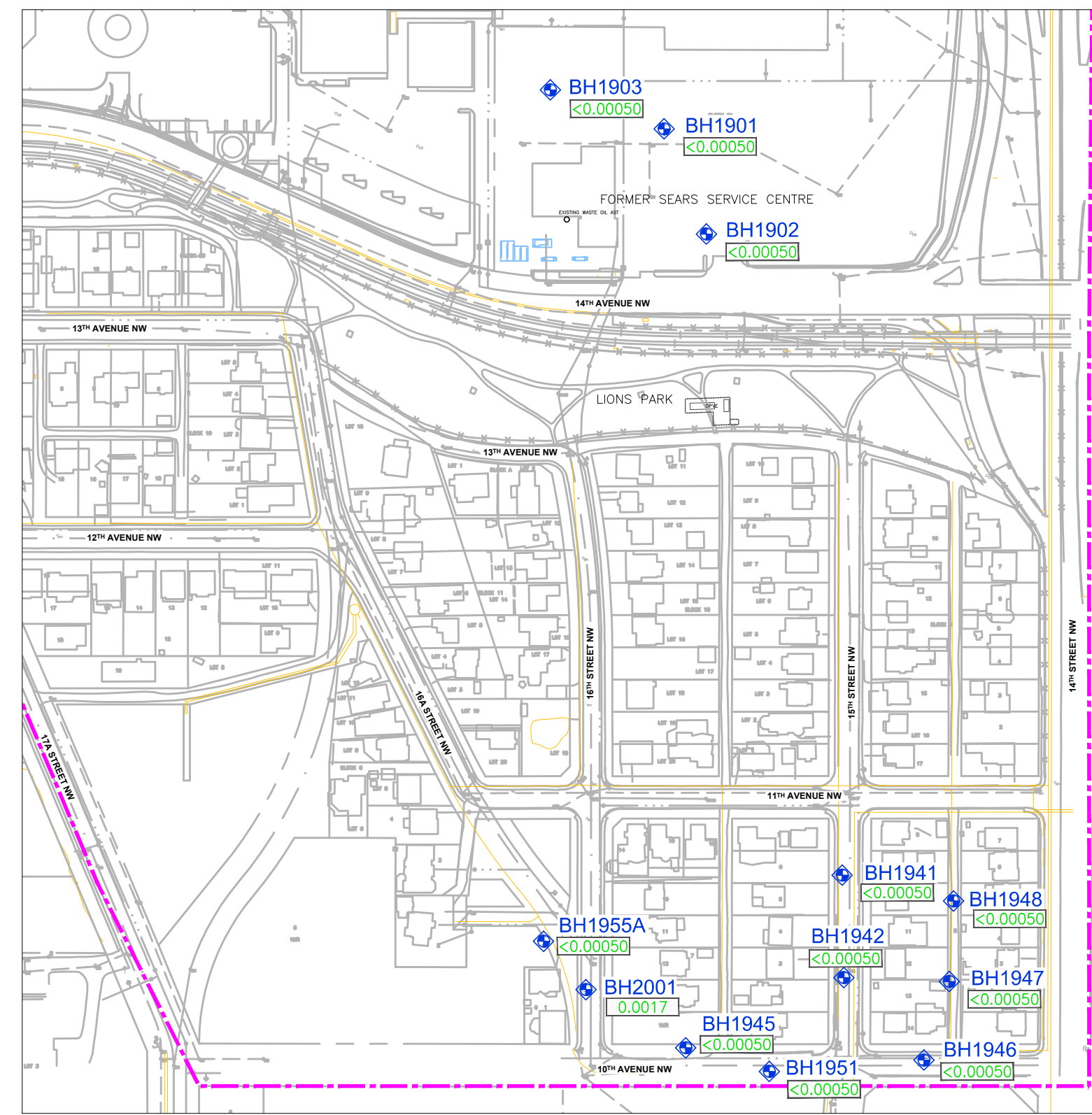
UNIT 2 - UPPER CLAYEY SILT



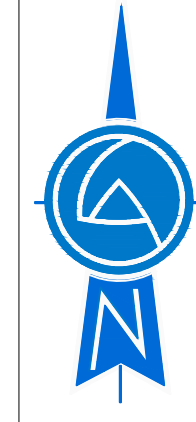
UNIT 3 - MIDDLE SANDY SILT



UNIT 4 - LOWER CLAYEY SILT



UNIT 5 - LOWER SILTY SAND AND GRAVEL



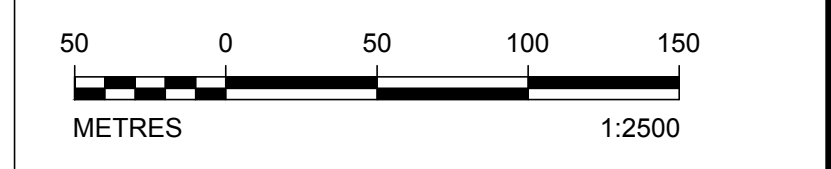
LEGEND

- SITE BOUNDARY
- EXTRACTION WELL
- LRT TRACKS
- FENCE LINE
- LEGAL LINE
- FORMER FACILITY/FEATURE
- BUILDING
- EXISTING GROUNDWATER MONITORING WELL
- CURRENT MONITORING WELL CONDITIONS
- EXCEEDS AEP 2016 TIER 1 GUIDELINES
- UNIT CONTACT

ALBERTA ENVIRONMENT AND PARKS  
2016 TIER 1 GUIDELINES FOR COARSE-GRAINED SOIL

AEP CRITERIA CATEGORY	RESIDENTIAL GUIDELINE (mg/L)	COMMERCIAL GUIDELINE (mg/L)
1,2-DICHLOROETHANE	0.005	0.005

NOTES:  
1 DRAWING COMPILED FROM PLANIMETRIC FILES SUPPLIED BY THE CITY OF CALGARY (INCLUDING UG UTILITIES) & FROM SITE ASSESSMENT INFORMATION. ADDITIONAL REFERENCES FROM SEAROR ENVIRONMENTAL ENGINEERING INC., DRAWINGS 149-5A11.DWG, 149-5A6.DWG.



PROJECT  
Q1 2018 MONITORING AND SAMPLING PROGRAM  
HOUSFIELD HEIGHTS - BRIAR HILL COMMUNITY  
CALGARY, ALBERTA

TITLE  
DISTRIBUTION OF 1,2-DICHLOROETHANE  
IN GROUNDWATER, APRIL 2018

DESIGNED	SCALE	DATE
RD	1:2500	2018-04-25
DRAWN	PROJECT NO.	FIG.
TK	CG2430.1 E30	9
CHECKED	FILE NO.	
TK	CG2430.1-E30-09	



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Tables

# Clifton Associates

## Tables

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**Clifton Associates**



**Calgary Office**

2222 30<sup>th</sup> Avenue NE  
Calgary, Alberta T2E 7K9

T (403) 263 2556  
F (403) 234 9033

[calgary@clifton.ca](mailto:calgary@clifton.ca)  
[www.clifton.ca](http://www.clifton.ca)

Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)		
BH1901	5	19-Mar-18	1090.30	1090.44	23.70	14.26	14.40	1076.05	0/0		
		07-Sep-17	1090.30	1090.44	23.66	14.27	14.41	1076.03	0/0		
		26-Apr-17	1090.30	1090.44	23.70	14.17	14.31	1076.14	0/0		
		24-Feb-17	1090.30	1090.44	23.67	14.22	14.36	1076.07	0/3		
		31-Oct-16	1090.30	1090.44	23.70	14.17	14.31	1076.13	0/1		
		17-Aug-16	1090.30	1090.44	23.67	14.16	14.30	1076.14	20/0		
		04-May-16	1090.30	1090.44	23.92	14.26	14.40	1076.04	0/1		
		16-Feb-16	1090.30	1090.44	23.67	14.26	14.40	1076.04	0/0		
		09-Nov-15	1090.30	1090.44	23.88	14.17	14.31	1076.13	0/0		
		01-Sep-15	1090.30	1090.44	23.67	14.16	14.30	1076.14	0/1		
		09-Jun-15	1090.30	1090.44	24.06	14.23	14.37	1076.07	0/1		
		23-Feb-15	1090.30	1090.44	23.24	14.14	14.28	1076.16	10/2		
		BH1902	5	19-Mar-18	1089.74	1089.92	29.97	14.12	14.30	1075.62	0/0
				07-Sep-17	1089.74	1089.92	29.99	14.14	14.32	1075.61	35/0
26-Apr-17	1089.74			1089.92	29.97	14.02	14.20	1075.72	0/1		
24-Feb-17	1089.74			1089.92	30.01	14.08	14.26	1075.66	0/2		
31-Oct-16	1089.74			1089.92	29.97	14.03	14.21	1075.72	0/1		
17-Aug-16	1089.74			1089.92	29.98	14.06	14.24	1075.68	10/0		
04-May-16	1089.74			1089.92	30.21	14.12	14.30	1075.62	30/0		
16-Feb-16	1089.74			1089.92	30.10	14.04	14.22	1075.70	50/1		
09-Nov-15	1089.74			1089.92	30.27	14.03	14.21	1075.71	1,750/1		
01-Sep-15	1089.74			1089.92	30.33	14.02	14.20	1075.72	>11,100/2		
09-Jun-15	1089.74			1089.92	30.40	14.09	14.27	1075.65	11,100/100		
18-Feb-15	1089.74			1089.92	29.69	14.03	14.21	1075.71	11,100/10		
BH1903*	5			07-Sep-17	1090.32	1090.42	26.46	13.10	13.20	1077.22	25/0
				26-Apr-17	1090.32	1090.42	26.50	12.99	13.09	1077.33	0/1
		24-Feb-17	1090.32	1090.42	26.71	12.99	13.09	1077.33	0/0		
		31-Oct-16	1090.32	1090.42	26.49	13.01	13.11	1077.31	0/0		
		17-Aug-16	1090.32	1090.42	26.50	12.99	13.09	1077.33	30/0		
		04-May-16	1090.32	1090.42	26.81	13.08	13.17	1077.25	5/0		
		16-Feb-16	1090.32	1090.42	26.53	12.98	13.08	1077.34	0/1		
		12-Nov-15	1090.32	1090.42	26.88	12.93	13.03	1077.39	0/1		
		01-Sep-15	1090.32	1090.42	26.83	12.95	13.05	1077.37	20/3		
		09-Jun-15	1090.32	1090.42	26.83	12.99	13.09	1077.33	15/1		
		19-Mar-15	1090.32	1090.42	26.63	12.97	13.07	1077.35	55/4		
		BH1904	3	19-Mar-18	1090.49	1090.58	16.39	10.42	10.51	1080.07	10/1
				07-Sep-17	1090.49	1090.58	16.38	10.36	10.45	1080.13	10/0
				26-Apr-17	1090.49	1090.58	16.39	10.26	10.35	1080.23	25/1
24-Feb-17	1090.49			1090.58	16.40	10.38	10.47	1080.11	0/3		
31-Oct-16	1090.49			1090.58	16.39	10.18	10.27	1080.31	0/1		
17-Aug-16	1090.49			1090.58	16.36	10.36	10.45	1080.13	1/0		
04-May-16	1090.49			1090.58	16.43	10.28	10.38	1080.20	5/1		
16-Feb-16	1090.49			1090.58	16.42	10.22	10.31	1080.26	20/1		
09-Nov-15	1090.49			1090.58	16.60	10.28	10.37	1080.21	0/1		
01-Sep-15	1090.49			1090.58	16.39	10.24	10.33	1080.25	0/2		
09-Jun-15	1090.49			1090.58	16.54	10.32	10.41	1080.16	25/9		
12-Mar-15	1090.49			1090.58	15.90	10.28	10.37	1080.21	-		
24-Feb-15	1090.49			1090.58	15.51	10.18	10.27	1080.31	110/43		
BH1905	1			19-Mar-18	1090.43	1090.57	5.55	4.40	4.54	1086.03	1,060/471
		07-Sep-17	1090.43	1090.57	5.54	4.13	4.27	1086.30	>11,100/>2,000		
		26-Apr-17	1090.43	1090.57	5.59	4.24	4.38	1086.19	1,800/950		
		24-Feb-17	1090.43	1090.57	5.59	4.33	4.47	1086.10	520/350		
		31-Oct-16	1090.43	1090.57	5.75	4.00	4.14	1086.43	650/587		
		17-Aug-16	1090.43	1090.57	5.73	4.12	4.26	1086.31	620/500		
		04-May-16	1090.43	1090.57	5.72	4.37	4.51	1086.06	1,300/1,235		
		16-Feb-16	1090.43	1090.57	5.74	4.23	4.37	1086.21	350/375		
		09-Nov-15	1090.43	1090.57	5.80	4.06	4.20	1086.37	155/210		
		01-Sep-15	1090.43	1090.57	5.83	4.02	4.16	1086.41	590/511		
		09-Jun-15	1090.43	1090.57	5.91	4.29	4.42	1086.15	2,000/>2,000		
		24-Feb-15	1090.43	1090.57	5.93	4.15	4.29	1086.28	570/443		
		BH1906	3	20-Mar-18	1090.95	1091.03	19.23	11.91	11.99	1079.04	330/130
				05-Sep-17	1090.95	1091.03	19.23	11.96	12.04	1078.99	450/231
01-May-17	1090.95			1091.03	19.25	11.85	11.93	1079.10	200/50		
16-Feb-17	1090.95			1091.03	19.24	11.69	11.77	1079.26	350/200		
27-Oct-16	1090.95			1091.03	19.24	11.76	11.84	1079.19	520/310		
16-Aug-16	1090.95			1091.03	19.26	11.83	11.91	1079.12	350/200		
04-May-16	1090.95			1091.03	19.24	11.80	11.88	1079.15	380/257		
16-Feb-16	1090.95			1091.03	19.26	11.80	11.88	1079.15	840/301		
09-Nov-15	1090.95			1091.03	19.43	11.83	11.91	1079.12	320/240		
01-Sep-15	1090.95			1091.03	19.28	11.78	11.86	1079.17	850/329		
09-Jun-15	1090.95			1091.03	19.32	11.85	11.93	1079.10	510/250		
06-Apr-15	1090.95			1091.03	19.39	11.80	11.88	1079.15	-		
25-Feb-15	1090.95			1091.03	18.54	11.95	12.03	1079.00	280/128		
BH1907	3			20-Mar-18	1090.14	1090.22	16.90	11.40	11.48	1078.74	>11,100/>2,000
		05-Sep-17	1090.14	1090.22	16.59	11.36	11.45	1078.78	>11,100/>2,000		
		01-May-17	1090.14	1090.22	16.87	11.31	11.40	1078.83	>11,100/>2,000		
		16-Feb-17	1090.14	1090.22	16.92	11.29	11.38	1078.85	>11,100/>5,000		
		27-Oct-16	1090.14	1090.22	17.18	11.23	11.31	1078.91	>11,000/1,711		
		16-Aug-16	1090.14	1090.22	17.19	11.29	11.38	1078.85	>11,100/>2,000		
		04-May-16	1090.14	1090.22	16.26	11.26	11.34	1078.88	>11,100/>2,000		
		17-Feb-16	1090.14	1090.22	16.28	11.18	11.27	1078.96	>11,100/>2,000		

## Notes:

\* BH1903 could not be located during the Spring 2017 sampling event

Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)		
BH1907	3	09-Nov-15	1090.14	1090.22	16.40	11.26	11.34	1078.88	830/809		
		01-Sep-15	1090.14	1090.22	16.45	11.21	11.30	1078.93	>11,100/>2,000		
		09-Jun-15	1090.14	1090.22	16.78	11.28	11.37	1078.85	>11,100/>2,000		
		28-Apr-15	1090.14	1090.22	18.10	11.21	11.29	1078.93	11,100/2,000		
		25-Feb-15	1090.14	1090.22	17.51	11.22	11.31	1078.91	660/460		
BH1908	3	20-Mar-18	1089.44	1089.55	15.60	10.90	11.01	1078.54	930/380		
		05-Sep-17	1089.44	1089.55	15.57	10.90	11.00	1078.54	390/221		
		01-May-17	1089.44	1089.55	15.59	10.84	10.95	1078.60	300/130		
		16-Feb-17	1089.44	1089.55	15.64	10.84	10.95	1078.60	300/150		
		27-Oct-16	1089.44	1089.55	15.78	10.81	10.92	1078.63	250/200		
		16-Aug-16	1089.44	1089.55	15.73	10.83	10.93	1078.61	188/104		
		04-May-16	1089.44	1089.55	14.98	10.79	10.90	1078.65	1,200/628		
		17-Feb-16	1089.44	1089.55	15.03	10.74	10.85	1078.70	1,800/954		
		09-Nov-15	1089.44	1089.55	15.12	10.79	10.90	1078.65	450/382		
		01-Sep-15	1089.44	1089.55	15.04	10.77	10.88	1078.67	1,600/754		
		09-Jun-15	1089.44	1089.55	15.04	10.85	10.96	1078.59	200/149		
		23-Apr-15	1089.44	1089.55	16.00	10.76	10.87	1078.68	1,450/1,000		
		24-Feb-15	1089.44	1089.55	16.80	10.73	10.84	1078.71	0/1		
		BH1909	1	20-Mar-18	1089.48	1089.56	7.28	-	-	-	0/0 (DRY)
05-Sep-17	1089.48			1089.56	7.27	-	-	-	15/0 (DRY)		
01-May-17	1089.48			1089.56	7.28	-	-	-	30/0 (DRY)		
21-Feb-17	1089.48			1089.56	7.28	-	-	-	30/0 (DRY)		
27-Oct-16	1089.48			1089.56	7.25	-	-	-	50/0 (DRY)		
16-Aug-16	1089.48			1089.56	7.26	-	-	-	0/0 (DRY)		
04-May-16	1089.48			1089.56	7.27	-	-	-	15/0 (DRY)		
1	17-Feb-16		1089.48	1089.56	7.24	-	-	-	0/0 (DRY)		
	09-Nov-15		1089.48	1089.56	7.25	-	-	-	0/1 (DRY)		
	01-Sep-15		1089.48	1089.56	7.25	-	-	-	0/1 (DRY)		
	09-Jun-15		1089.48	1089.56	7.27	-	-	-	10/0 (DRY)		
	24-Feb-15		1089.48	1089.56	7.25	-	-	-	0/0 (DRY)		
	3		20-Mar-18	1090.08	1090.23	17.80	11.56	11.71	1078.52	0/0	
			05-Sep-17	1090.08	1090.23	17.79	11.60	11.74	1078.48	0/1	
01-May-17		1090.08	1090.23	17.80	11.49	11.63	1078.59	0/1			
16-Feb-17		1090.08	1090.23	17.84	11.40	11.55	1078.68	0/1			
27-Oct-16		1090.08	1090.23	17.82	11.42	11.57	1078.62	0/1			
16-Aug-16		1090.08	1090.23	17.87	11.49	11.63	1078.59	40/2			
04-May-16		1090.08	1090.23	17.81	11.47	11.62	1078.61	0/6			
BH1910	3	16-Feb-16	1090.08	1090.23	17.83	11.39	11.54	1078.69	0/1		
		09-Nov-15	1090.08	1090.23	17.87	11.46	11.60	1078.62	25/8		
		01-Sep-15	1090.08	1090.23	17.87	11.42	11.57	1078.66	-		
		09-Jun-15	1090.08	1090.23	17.96	11.49	11.64	1078.59	85/27		
		20-Apr-15	1090.08	1090.23	18.61	11.45	11.60	1078.63	5/1		
		09-Apr-15	1090.08	1090.23	18.60	11.49	11.63	1078.59	0/1		
		26-Feb-15	1090.08	1090.23	17.04	11.47	11.61	1078.61	2/3		
		BH1911	3	20-Mar-18	1092.86	1092.96	18.64	14.06	14.16	1078.80	80/53
				05-Sep-17	1092.86	1092.96	18.20	14.06	14.16	1078.80	10/97
				01-May-17	1092.86	1092.96	18.21	13.93	14.03	1078.93	200/55
				16-Feb-17	1092.86	1092.96	18.20	13.81	13.91	1079.05	400/150
				27-Oct-16	1092.86	1092.96	18.19	13.85	13.95	1079.01	270/130
				16-Aug-16	1092.86	1092.96	18.19	13.90	14.00	1078.96	60/80
				04-May-16	1092.86	1092.96	18.18	13.89	13.99	1078.97	135/73
17-Feb-16	1092.86			1092.96	18.22	13.82	13.92	1079.04	180/57		
09-Nov-15	1092.86			1092.96	18.48	13.91	14.01	1078.95	35/32		
01-Sep-15	1092.86			1092.96	18.22	13.84	13.94	1079.02	0/21		
09-Jun-15	1092.86			1092.96	18.24	13.94	14.04	1078.92	25/15		
08-Apr-15	1092.86			1092.96	17.64	13.90	14.00	1078.96	-		
BH1912	3			05-Apr-18	1091.04	1091.09	21.16	10.89	10.94	1080.15	0/0
				13-Sep-17	1091.04	1091.09	20.89	10.75	10.80	1080.29	10/28
		17-May-17	1091.04	1091.09	20.89	10.76	10.81	1080.28	100/30		
		24-Feb-17	1091.04	1091.09	20.91	10.78	10.83	1080.26	320/100		
		03-Nov-16	1091.04	1091.09	20.92	10.64	10.69	1080.40	130/73		
		17-Aug-16	1091.04	1091.09	20.93	10.70	10.75	1080.34	100/30		
		10-May-16	1091.04	1091.09	20.68	10.78	10.83	1080.26	300/212		
		16-Feb-16	1091.04	1091.09	20.93	10.62	10.67	1080.42	350/124		
		12-Nov-15	1091.04	1091.09	20.69	10.64	10.70	1080.39	360/140		
		08-Sep-15	1091.04	1091.09	21.08	10.64	10.69	1080.40	520/192		
		17-Jun-15	1091.04	1091.09	21.24	9.75	9.80	1081.29	400/250		
		09-Mar-15	1091.04	1091.09	20.21	10.57	10.62	1080.47	310/97		
		BH1913	2	05-Apr-18	1091.05	1091.11	10.24	6.53	6.59	1084.52	0/0
				13-Sep-17	1091.05	1091.11	10.23	6.25	6.31	1084.80	0/0
17-May-17	1091.05			1091.11	10.23	6.25	6.31	1084.80	0/0		
24-Feb-17	1091.05			1091.11	10.23	5.95	6.01	1085.10	10/3		
03-Nov-16	1091.05			1091.11	10.20	5.96	6.01	1085.10	0/0		
17-Aug-16	1091.05			1091.11	10.26	5.87	5.93	1085.18	5/0		
10-May-16	1091.05			1091.11	9.15	6.32	6.38	1084.73	5/0		
16-Feb-16	1091.05			1091.11	9.17	6.07	6.13	1084.98	10/0		
12-Nov-15	1091.05			1091.11	9.15	5.84	5.90	1085.22	15/0		
08-Sep-15	1091.05			1091.11	9.20	5.90	5.96	1085.15	0/5		
17-Jun-15	1091.05			1091.11	9.18	6.22	6.28	1084.83	0/1		
25-Feb-15	1091.05			1091.11	9.71	6.07	6.12	1084.99	0/0		
BH1914	1			05-Apr-18	1091.03	1091.08	7.40	6.21	6.25	1084.83	0/0
				13-Sep-17	1091.03	1091.08	7.42	5.86	5.90	1085.17	0/0
		17-May-17	1091.03	1091.08	7.42	5.94	5.99	1085.09	0/0		

Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)
BH1914	1	24-Feb-17	1091.03	1091.08	7.41	5.61	5.65	1085.43	0/3
		03-Nov-16	1091.03	1091.08	7.42	5.44	5.49	1085.59	0/0
		17-Aug-16	1091.03	1091.08	7.43	5.43	5.47	1085.60	5/0
		10-May-16	1091.03	1091.08	7.44	6.01	6.05	1085.02	5/0
		16-Feb-16	1091.03	1091.08	7.44	5.76	5.80	1085.27	0/0
		12-Nov-15	1091.03	1091.08	7.46	5.48	5.52	1085.55	0/0
		08-Sep-15	1091.03	1091.08	7.55	5.49	5.53	1085.54	0/2
		17-Jun-15	1091.03	1091.08	7.59	5.83	5.87	1085.20	0/1
		25-Feb-15	1091.03	1091.08	7.67	5.56	5.61	1085.47	0/0
		BH1915	3	05-Apr-18	1091.06	1091.10	17.57	10.53	10.57
13-Sep-17	1091.06			1091.10	18.61	10.51	10.55	1080.55	>11,100/>2,000
17-May-17	1091.06			1091.10	18.61	10.51	10.56	1080.54	500/150
24-Feb-17	1091.06			1091.10	17.58	10.51	10.55	1080.55	1,100/620
03-Nov-16	1091.06			1091.10	18.67	10.73	10.78	1080.32	>11,100/1,717
17-Aug-16	1091.06			1091.10	18.72	10.49	10.53	1080.57	>11,100/>2,000
10-May-16	1091.06			1091.10	15.93	10.54	10.58	1080.52	>11,100/>2,000
16-Feb-16	1091.06			1091.10	16.42	10.39	10.43	1080.67	>11,100/1,880
12-Nov-15	1091.06			1091.10	16.65	10.44	10.49	1080.61	>11,100/895
08-Sep-15	1091.06			1091.10	16.91	10.44	10.48	1080.62	>11,100/>2,000
17-Jun-15	1091.06			1091.10	17.70	10.53	10.57	1080.53	>11,100/1,800
25-Feb-15	1091.06			1091.10	18.53	10.51	10.55	1080.55	11,100/1,450
BH1916	1			05-Apr-18	1091.06	1091.12	6.83	6.59	6.64
		13-Sep-17	1091.06	1091.12	6.82	6.31	6.37	1084.75	0/0
		17-May-17	1091.06	1091.12	6.82	6.24	6.29	1084.83	0/0
		24-Feb-17	1091.06	1091.12	6.81	5.33	5.39	1085.73	0/7
		03-Nov-16	1091.06	1091.12	6.79	5.50	5.56	1085.56	0/0
		17-Aug-16	1091.06	1091.12	6.78	5.62	5.67	1085.45	1/0
		10-May-16	1091.06	1091.12	6.79	6.36	6.41	1084.71	0/1
		16-Feb-16	1091.06	1091.12	6.80	5.98	6.03	1085.09	0/0
		12-Nov-15	1091.06	1091.12	6.88	5.64	5.70	1085.42	55/1
		08-Sep-15	1091.06	1091.12	6.77	5.70	5.76	1085.36	0/0
		17-Jun-15	1091.06	1091.12	6.79	6.21	6.27	1084.86	0/0
		23-Feb-15	1091.06	1091.12	6.79	5.82	5.88	1085.24	0/0
		BH1917	3	20-Mar-18	1089.39	1089.55	16.27	12.72	12.88
07-Sep-17	1089.39			1089.55	16.02	12.71	12.86	1076.68	5/0
02-May-17	1089.39			1089.55	16.05	12.72	12.88	1076.67	5/0
24-Feb-17	1089.39			1089.55	16.05	12.76	12.92	1076.62	10/0
27-Oct-16	1089.39			1089.55	16.02	12.72	12.88	1076.67	35/1
18-Aug-16	1089.39			1089.55	16.03	12.78	12.94	1076.61	0/0
03-May-16	1089.39			1089.55	16.06	12.77	12.93	1076.62	15/1
18-Feb-16	1089.39			1089.55	16.09	12.64	12.80	1076.75	0/1
10-Nov-15	1089.39			1089.55	16.15	12.70	12.85	1076.69	5/1
02-Sep-15	1089.39			1089.55	16.33	12.70	12.86	1076.69	0/0
09-Jun-15	1089.39			1089.55	16.16	12.74	12.90	1076.64	0/0
07-May-15	1089.39			1089.55	16.13	12.74	12.89	1076.65	0/0
BH1918	3			22-Mar-18	1087.23	1087.27	13.19	9.55	9.59
		07-Sep-17	1087.23	1087.27	13.03	9.51	9.55	1077.72	0/0
		02-May-17	1087.23	1087.27	13.05	9.53	9.57	1077.70	35/0
		23-Feb-17	1087.23	1087.27	13.04	9.56	9.60	1077.67	70/0
		27-Oct-16	1087.23	1087.27	13.06	9.45	9.49	1077.78	0/0
		16-Aug-16	1087.23	1087.27	13.06	9.48	9.52	1077.75	0/1
		05-May-16	1087.23	1087.27	13.08	9.54	9.58	1077.69	0/0
		18-Feb-16	1087.23	1087.27	13.13	9.36	9.39	1077.88	15/0
		10-Nov-15	1087.23	1087.27	13.13	9.41	9.45	1077.82	10/0
		02-Sep-15	1087.23	1087.27	13.22	9.44	9.48	1077.79	0/0
		09-Jun-15	1087.23	1087.27	13.39	9.45	9.49	1077.78	0/0
		27-Mar-15	1087.23	1087.27	13.40	9.43	9.46	1077.80	0/1
		BH1919	3	22-Mar-18	1085.47	1085.52	15.59	10.01	10.06
07-Sep-17	1085.47			1085.52	15.48	10.00	10.06	1075.46	0/0
02-May-17	1085.47			1085.52	15.47	10.10	10.15	1075.37	15/0
21-Feb-17	1085.47			1085.52	15.49	10.18	10.23	1075.29	0/1
27-Oct-16	1085.47			1085.52	15.51	10.21	10.26	1075.26	45/0
18-Aug-16	1085.47			1085.52	15.48	10.23	10.28	1075.24	0/1
03-May-16	1085.47			1085.52	15.50	10.28	10.33	1075.19	0/0
18-Feb-16	1085.47			1085.52	15.49	10.16	10.21	1075.31	0/1
10-Nov-15	1085.47			1085.52	15.66	10.17	10.22	1075.30	0/1
02-Sep-15	1085.47			1085.52	15.70	10.17	10.22	1075.30	0/0
09-Jun-15	1085.47			1085.52	15.31	10.25	10.30	1075.22	0/0
05-May-15	1085.47			1085.52	15.54	10.19	10.25	1075.27	25/1
BH1920	1			22-Mar-18	1087.16	1087.27	4.81	-	-
		07-Sep-17	1087.16	1087.27	4.83	-	-	-	0/0 (DRY)
		02-May-17	1087.16	1087.27	4.81	-	-	-	25/0 (DRY)
		23-Feb-17	1087.16	1087.27	4.84	-	-	-	30/0 (DRY)
		27-Oct-16	1087.16	1087.27	4.80	-	-	-	25/0 (DRY)
		16-Aug-16	1087.16	1087.27	4.79	-	-	-	0/2 (DRY)
		05-May-16	1087.16	1087.27	4.83	-	-	-	0/0 (DRY)
		18-Feb-16	1087.16	1087.27	4.80	-	-	-	0/0 (DRY)
		10-Nov-15	1087.16	1087.27	4.79	-	-	-	5/0 (DRY)
		02-Sep-15	1087.16	1087.27	4.90	-	-	-	0/10 (DRY)
		09-Jun-15	1087.16	1087.27	4.79	-	-	-	0/0 (DRY)
		27-Mar-15	1087.16	1087.27	4.81	-	-	-	0/0 (DRY)
		BH1921	3	22-Mar-18	1088.92	1089.11	18.96	11.57	11.76
06-Sep-17	1088.92			1089.11	18.73	11.52	11.71	1077.40	20/0

Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)		
BH1921	3	03-May-17	1088.92	1089.11	18.72	11.44	11.63	1077.48	35/0		
		21-Feb-17	1088.92	1089.11	18.72	11.47	11.65	1077.46	0/4		
		31-Oct-16	1088.92	1089.11	18.71	11.42	11.60	1077.51	0/1		
		18-Aug-16	1088.92	1089.11	18.74	11.47	11.66	1077.45	0/1		
		05-May-16	1088.92	1089.11	18.74	11.51	11.70	1077.41	0/0		
		18-Feb-16	1088.92	1089.11	18.76	11.40	11.59	1077.52	0/1		
		10-Nov-15	1088.92	1089.11	18.91	11.41	11.59	1077.52	0/1		
		01-Sep-15	1088.92	1089.11	19.08	11.46	11.65	1077.46	0/1		
		09-Jun-15	1088.92	1089.11	18.85	11.49	11.68	1077.43	15/8		
		28-Apr-15	1088.92	1089.11	18.88	11.43	11.62	1077.49	0/1		
		BH1922	3	22-Mar-18	1087.65	1087.76	18.72	11.09	11.20	1076.56	0/0
				05-Sep-17	1087.65	1087.76	18.50	11.01	11.11	1076.64	0/1
				03-May-17	1087.65	1087.76	18.51	11.02	11.12	1076.63	0/0
21-Feb-17	1087.65			1087.76	18.51	11.06	11.17	1076.59	0/3		
31-Oct-16	1087.65			1087.76	18.52	10.95	11.06	1076.70	40/0		
18-Aug-16	1087.65			1087.76	18.49	11.04	11.15	1076.61	0/0		
05-May-16	1087.65			1087.76	18.55	11.05	11.15	1076.60	0/0		
18-Feb-16	1087.65			1087.76	18.51	10.93	11.04	1076.72	0/1		
10-Nov-15	1087.65			1087.76	18.67	11.05	11.16	1076.60	0/2		
01-Sep-15	1087.65			1087.76	18.57	11.03	11.14	1076.62	0/2		
09-Jun-15	1087.65			1087.76	17.72	11.20	11.31	1076.45	5/0		
05-May-15	1087.65			1087.76	17.72	11.08	11.19	1076.57	0/0		
BH1923	3			22-Mar-18	1088.64	1088.70	15.26	10.38	10.43	1078.27	0/3
		05-Sep-17	1088.64	1088.70	15.25	10.35	10.41	1078.29	25/0		
		02-May-17	1088.64	1088.70	15.26	10.30	10.35	1078.35	0/3		
		23-Feb-17	1088.64	1088.70	15.26	10.34	10.40	1078.30	110/11		
		31-Oct-16	1088.64	1088.70	15.26	10.26	10.31	1078.39	0/3		
		16-Aug-16	1088.64	1088.70	15.23	10.32	10.37	1078.33	5/31		
		05-May-16	1088.64	1088.70	15.23	10.25	10.30	1078.40	45/45		
		17-Feb-16	1088.64	1088.70	15.26	10.21	10.27	1078.43	260/113		
		10-Nov-15	1088.64	1088.70	15.41	10.23	10.29	1078.41	80/85		
		02-Sep-15	1088.64	1088.70	15.19	10.25	10.30	1078.39	0/23		
		09-Jun-15	1088.64	1088.70	15.54	10.30	10.35	1078.35	25/6		
		02-Apr-15	1088.64	1088.70	15.83	10.18	10.23	1078.47	165/8		
		BH1924	3	20-Mar-18	1093.31	1093.39	18.40	14.30	14.38	1079.01	6,700/1,200
				05-Sep-17	1093.31	1093.39	18.15	14.47	14.54	1078.85	>11,100/1,074
				01-May-17	1093.31	1093.39	18.41	14.30	14.38	1079.01	>11,100/>2,000
				21-Feb-17	1093.31	1093.39	18.48	14.30	14.37	1079.02	8,200/520
31-Oct-16	1093.31			1093.39	19.18	14.17	14.25	1079.15	4,100/1,414		
17-Aug-16	1093.31			1093.39	19.21	14.31	14.39	1079.01	>11,100/>2,000		
04-May-16	1093.31			1093.39	18.36	14.28	14.36	1079.04	>11,100/848		
17-Feb-16	1093.31			1093.39	18.39	14.21	14.29	1079.10	6,800/850		
09-Nov-15	1093.31			1093.39	18.62	14.30	14.38	1079.02	8,350/1,305		
01-Sep-15	1093.31			1093.39	18.86	14.22	14.30	1079.09	>11,100/1,130		
09-Jun-15	1093.31			1093.39	17.65	14.31	14.39	1079.01	2,950/508		
06-May-15	1093.31			1093.39	17.60	14.30	14.38	1079.01	2,760/830		
BH1925	3			22-Mar-18	1091.15	1091.24	19.07	13.82	13.91	1077.33	0/0
		05-Sep-17	1091.15	1091.24	18.85	13.82	13.91	1077.33	15/0		
		02-May-17	1091.15	1091.24	18.87	13.76	13.85	1077.39	0/1		
		27-Feb-17	1091.15	1091.24	18.86	13.76	13.85	1077.39	25/5		
		31-Oct-16	1091.15	1091.24	18.90	13.73	13.83	1077.42	150/79		
		16-Aug-16	1091.15	1091.24	18.89	13.77	13.87	1077.38	145/20		
		05-May-16	1091.15	1091.24	18.93	13.82	13.91	1077.33	185/145		
		18-Feb-16	1091.15	1091.24	18.94	13.64	13.73	1077.51	160/110		
		10-Nov-15	1091.15	1091.24	19.08	13.73	13.83	1077.42	520/329		
		02-Sep-15	1091.15	1091.24	19.37	13.73	13.82	1077.42	130/105		
		09-Jun-15	1091.15	1091.24	17.40	13.79	13.88	1077.36	180/119		
		06-May-15	1091.15	1091.24	17.41	13.75	13.84	1077.40	185/73		
		BH1926*	2,3,4	17-Feb-16	1091.01	1091.13	14.49	10.22	10.34	1080.78	0/2
09-Nov-15	1091.01			1091.13	-	10.32	10.44	1080.68	25/1		
01-Sep-15	1091.01			1091.13	-	10.46	10.58	1080.55	0/1		
09-Jun-15	1091.01			1091.13	15.80	10.60	10.72	1080.41	25/2		
29-Apr-15	1091.01			1091.13	16.53	10.08	10.20	1080.92	0/1		
31-Mar-15	1091.01			1091.13	-	9.97	10.09	1081.04	60/1		
BH1927	3			21-Mar-18	-	-	-	-	-	-	Could Not Locate
		06-Sep-17	1090.31	1090.45	21.52	12.79	12.92	1077.52	0/1		
		01-May-17	1090.31	1090.45	21.52	12.62	12.75	1077.69	0/1		
		17-Feb-17	1090.31	1090.45	21.56	12.50	12.63	1077.81	40/2		
		27-Oct-16	1090.31	1090.45	21.51	12.73	12.87	1077.58	30/1		
		18-Aug-16	1090.31	1090.45	21.52	12.65	12.79	1077.66	0/1		
		04-May-16	1090.31	1090.45	21.15	12.57	12.71	1077.74	0/1		
		17-Feb-16	1090.31	1090.45	21.17	12.50	12.64	1077.81	580/5		
		09-Nov-15	1090.31	1090.45	21.46	12.60	12.74	1077.71	180/67		
		01-Sep-15	1090.31	1090.45	21.49	12.52	12.66	1077.79	300/97		
		09-Jun-15	1090.31	1090.45	21.77	12.68	12.81	1077.63	30/27		
		30-Apr-15	1090.31	1090.45	22.35	12.57	12.70	1077.74	270/71		
		BH1928	3,4	21-Mar-18	1083.60	1083.72	16.51	8.68	8.80	1074.92	55/0
06-Sep-17	1083.60			1083.72	16.37	8.78	8.90	1074.82	1,000/314		
03-May-17	1083.60			1083.72	16.51	8.55	8.66	1075.06	140/80		
17-Feb-17	1083.60			1083.72	16.53	8.65	8.76	1074.96	15/2		
27-Oct-16	1083.60			1083.72	16.74	8.52	8.64	1075.08	6,200/520		

## Notes:

\* BH1926 was decommissioned on 14 April 2016.

Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)
BH1928	3,4	17-Aug-16	1083.60	1083.72	16.77	8.52	8.64	1075.08	860/300
		03-May-16	1083.60	1083.72	15.14	8.65	8.77	1074.95	730/212
		17-Feb-16	1083.60	1083.72	15.17	8.61	8.72	1074.99	0/1
		09-Nov-15	1083.60	1083.72	15.30	8.69	8.80	1074.92	260/146
		01-Sep-15	1083.60	1083.72	16.69	8.63	8.75	1074.97	630/235
		09-Jun-15	1083.60	1083.72	14.53	8.70	8.82	1074.90	500/200
		04-May-15	1083.60	1083.72	14.57	8.68	8.79	1074.93	230/52
BH1929	3	21-Mar-18	1082.55	1082.67	14.89	7.75	7.87	1074.80	15/0
		06-Sep-17	1082.55	1082.67	14.88	7.90	8.02	1074.65	0/1
		03-May-17	1082.55	1082.67	14.89	7.68	7.79	1074.88	25/1
		22-Feb-17	1082.55	1082.67	14.92	7.82	7.94	1074.73	60/0
		27-Oct-16	1082.55	1082.67	14.90	7.66	7.77	1074.90	65/0
		17-Aug-16	1082.55	1082.67	14.99	7.66	7.78	1074.89	10/0
		03-May-16	1082.55	1082.67	14.93	7.74	7.86	1074.81	5/0
		17-Feb-16	1082.55	1082.67	14.91	7.73	7.85	1074.83	0/0
		09-Nov-15	1082.55	1082.67	14.88	7.80	7.92	1074.75	5/2
		01-Sep-15	1082.55	1082.67	14.88	7.75	7.87	1074.80	0/2
		09-Jun-15	1082.55	1082.67	14.11	7.77	7.89	1074.78	0/1
		01-May-15	1082.55	1082.67	14.31	7.72	7.84	1074.84	0/0
		BH1930	2,3	19-Mar-18	1088.51	1088.73	17.61	11.44	11.66
06-Sep-17	1088.51			1088.73	17.51	11.95	12.16	1076.57	0/3
01-May-17	1088.51			1088.73	17.50	11.82	12.04	1076.69	0/2
17-Feb-17	1088.51			1088.73	17.51	11.44	11.66	1077.07	60/2
27-Oct-16	1088.51			1088.73	17.49	11.32	11.54	1077.19	55/3
17-Aug-16	1088.51			1088.73	17.47	11.29	11.51	1077.22	0/1
05-May-16	1088.51			1088.73	17.54	11.57	11.79	1076.94	0/2
17-Feb-16	1088.51			1088.73	17.54	11.66	11.88	1076.85	0/3
09-Nov-15	1088.51			1088.73	17.67	11.64	11.85	1076.88	0/2
01-Sep-15	1088.51			1088.73	17.66	11.41	11.63	1077.10	0/4
09-Jun-15	1088.51			1088.73	17.70	11.68	11.90	1076.83	0/2
30-Apr-15	1088.51			1088.73	18.31	11.55	11.77	1076.96	0/2
06-Apr-15	1088.51			1088.73	17.08	11.86	12.07	1076.66	0/8
BH1931	2	22-Mar-18	1088.64	1088.74	7.38	-	-	-	0/0 (DRY)
		05-Sep-17	1088.64	1088.74	7.38	-	-	-	15/0 (DRY)
		02-May-17	1088.64	1088.74	7.36	-	-	-	0/1 (DRY)
		23-Feb-17	1088.64	1088.74	7.38	-	-	-	35/0 (DRY)
		31-Oct-16	1088.64	1088.74	7.36	-	-	-	0/2 (DRY)
		16-Aug-16	1088.64	1088.74	7.36	-	-	-	15/1 (DRY)
		05-May-16	1088.64	1088.74	7.39	-	-	-	0/0 (DRY)
		17-Feb-16	1088.64	1088.74	7.36	-	-	-	5/2 (DRY)
		10-Nov-15	1088.64	1088.74	7.35	-	-	-	0/1 (DRY)
		02-Sep-15	1088.64	1088.74	7.36	-	-	-	0/1 (DRY)
		09-Jun-15	1088.64	1088.74	7.41	-	-	-	10/0 (DRY)
		30-Mar-15	1088.64	1088.74	7.35	-	-	-	0/0 (DRY)
		BH1932	1	22-Mar-18	1088.61	1088.69	4.20	-	-
05-Sep-17	1088.61			1088.69	4.21	-	-	-	10/0 (DRY)
02-May-17	1088.61			1088.69	4.17	-	-	-	0/1 (DRY)
23-Feb-17	1088.61			1088.69	4.21	-	-	-	65/3 (DRY)
31-Oct-16	1088.61			1088.69	4.17	-	-	-	0/1 (DRY)
16-Aug-16	1088.61			1088.69	4.16	-	-	-	5/0 (DRY)
05-May-16	1088.61			1088.69	4.19	-	-	-	0/0 (DRY)
17-Feb-16	1088.61			1088.69	4.18	-	-	-	45/0 (DRY)
10-Nov-15	1088.61			1088.69	4.18	-	-	-	0/1 (DRY)
02-Sep-15	1088.61			1088.69	4.16	-	-	-	0/1 (DRY)
09-Jun-15	1088.61			1088.69	4.21	-	-	-	10/0 (DRY)
30-Mar-15	1088.61			1088.69	4.18	-	-	-	0/0 (DRY)
BH1933	3			23-Mar-18	1090.41	1090.53	17.23	11.33	11.46
		07-Sep-17	1090.41	1090.53	17.23	11.23	11.35	1079.18	380/376
		26-Apr-17	1090.41	1090.53	17.22	11.15	11.28	1079.26	120/107
		27-Feb-17	1090.41	1090.53	17.22	11.16	11.28	1079.25	400/250
		31-Oct-16	1090.41	1090.53	17.19	11.10	11.22	1079.31	250/277
		17-Aug-16	1090.41	1090.53	17.22	11.25	11.37	1079.16	0/5
		04-May-16	1090.41	1090.53	17.23	11.19	11.31	1079.22	1,750/842
		16-Feb-16	1090.41	1090.53	17.30	11.12	11.24	1079.29	1,100/755
		09-Nov-15	1090.41	1090.53	17.45	11.19	11.31	1079.22	15/52
		01-Sep-15	1090.41	1090.53	17.22	11.18	11.30	1079.23	1,650/225
		09-Jun-15	1090.41	1090.53	17.50	11.26	11.38	1079.15	0/14
		06-Mar-15	1090.41	1090.53	17.31	11.13	11.26	1079.28	135/121
		BH1934	2	23-Mar-18	1090.47	1090.55	8.44	6.72	6.80
07-Sep-17	1090.47			1090.55	8.44	6.62	6.70	1083.85	0/1
26-Apr-17	1090.47			1090.55	8.43	6.55	6.63	1083.92	0/1
27-Feb-17	1090.47			1090.55	8.45	6.85	6.93	1083.62	0/3
31-Oct-16	1090.47			1090.55	8.42	6.37	6.45	1084.11	0/2
17-Aug-16	1090.47			1090.55	8.42	6.31	6.39	1084.16	0/1
04-May-16	1090.47			1090.55	8.45	6.74	6.82	1083.73	0/1
16-Feb-16	1090.47			1090.55	8.45	6.88	6.96	1083.60	0/1
09-Nov-15	1090.47			1090.55	8.48	6.11	6.19	1084.36	0/1
01-Sep-15	1090.47			1090.55	8.45	5.91	5.99	1084.56	15/1
09-Jun-15	1090.47			1090.55	8.51	6.25	6.33	1084.22	0/1
20-Feb-15	1090.47			1090.55	8.46	6.19	6.27	1084.28	0/2
BH1935	1			23-Mar-18	1090.48	1090.60	5.16	4.65	4.77
		07-Sep-17	1090.48	1090.60	5.15	4.58	4.70	1085.90	40/1
		26-Apr-17	1090.48	1090.60	5.17	4.71	4.83	1085.77	10/1



Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)
BH1935	1	27-Feb-17	1090.48	1090.60	5.15	4.61	4.73	1085.87	0/2
		31-Oct-16	1090.48	1090.60	5.13	4.35	4.47	1086.13	0/0
		17-Aug-16	1090.48	1090.60	5.12	4.39	4.51	1086.09	0/0
		04-May-16	1090.48	1090.60	5.10	4.77	4.89	1085.71	10/0
		16-Feb-16	1090.48	1090.60	5.11	4.56	4.68	1085.92	0/4
		09-Nov-15	1090.48	1090.60	5.15	4.43	4.55	1086.06	0/1
		01-Sep-15	1090.48	1090.60	5.12	4.44	4.56	1086.04	0/1
		09-Jun-15	1090.48	1090.60	5.16	4.74	4.86	1085.74	0/1
		20-Feb-15	1090.48	1090.60	5.13	4.59	4.71	1085.90	0/0
		BH1936	3	21-Mar-18	1082.18	1082.26	14.88	7.56	7.65
06-Sep-17	1082.18			1082.26	14.69	7.56	7.64	1074.62	5/0
03-May-17	1082.18			1082.26	14.68	7.50	7.59	1074.67	0/0
22-Feb-17	1082.18			1082.26	14.71	7.62	7.71	1074.56	0/0
27-Oct-16	1082.18			1082.26	14.67	7.46	7.55	1074.72	15/1
18-Aug-16	1082.18			1082.26	14.69	7.53	7.62	1074.65	0/0
03-May-16	1082.18			1082.26	14.70	7.57	7.66	1074.61	5/0
17-Feb-16	1082.18			1082.26	14.88	7.55	7.64	1074.62	0/1
10-Nov-15	1082.18			1082.26	14.89	7.59	7.67	1074.59	0/1
01-Sep-15	1082.18			1082.26	14.88	7.59	7.68	1074.59	0/3
09-Jun-15	1082.18			1082.26	13.68	7.60	7.69	1074.57	0/19
01-May-15	1082.18			1082.26	13.92	7.54	7.63	1074.64	0/1
BH1937	4.5			21-Mar-18	1080.60	1080.75	11.75	6.28	6.43
		06-Sep-17	1080.60	1080.75	11.60	6.34	6.49	1074.26	5/0
		03-May-17	1080.60	1080.75	11.63	6.32	6.47	1074.28	0/0
		22-Feb-17	1080.60	1080.75	11.66	6.36	6.51	1074.24	0/1
		27-Oct-16	1080.60	1080.75	11.75	6.31	6.46	1074.30	0/0
		18-Aug-16	1080.60	1080.75	11.85	6.34	6.49	1074.27	0/1
		03-May-16	1080.60	1080.75	11.50	6.41	6.56	1074.19	0/0
		17-Feb-16	1080.60	1080.75	11.63	6.36	6.51	1074.24	0/1
		10-Nov-15	1080.60	1080.75	11.67	6.34	6.50	1074.26	0/1
		02-Sep-15	1080.60	1080.75	11.72	6.38	6.53	1074.22	0/1
		09-Jun-15	1080.60	1080.75	11.73	6.40	6.55	1074.20	0/1
		07-Apr-15	1080.60	1080.75	12.51	6.36	6.51	1074.25	130/1
		BH1938	2	21-Mar-18	1082.20	1082.30	5.10	-	-
06-Sep-17	1082.20			1082.30	5.11	-	-	-	0/0 (DRY)
03-May-17	1082.20			1082.30	5.09	-	-	-	10/0 (DRY)
03-May-17	1082.20			1082.30	5.10	-	-	-	0/1 (DRY)
22-Feb-17	1082.20			1082.30	5.11	-	-	-	0/0 (DRY)
27-Oct-16	1082.20			1082.30	5.09	-	-	-	60/1 (DRY)
18-Aug-16	1082.20			1082.30	5.08	-	-	-	0/0 (DRY)
03-May-16	1082.20			1082.30	5.11	-	-	-	0/0 (DRY)
17-Feb-16	1082.20			1082.30	5.09	-	-	-	0/1 (DRY)
10-Nov-15	1082.20			1082.30	5.08	-	-	-	0/0 (DRY)
01-Sep-15	1082.20			1082.30	5.08	-	-	-	0/1 (DRY)
09-Jun-15	1082.20			1082.30	5.08	-	-	-	0/1 (DRY)
08-Apr-15	1082.20			1082.30	5.07	-	-	-	0/0 (DRY)
BH1939	4	21-Mar-18	1080.66	1080.75	8.73	6.24	6.33	1074.42	0/10
		06-Sep-17	1080.66	1080.75	8.73	6.25	6.35	1074.41	25/18
		03-May-17	1080.66	1080.75	8.73	6.26	6.35	1074.40	250/10
		22-Feb-17	1080.66	1080.75	8.70	6.31	6.40	1074.35	50/38
		27-Oct-16	1080.66	1080.75	8.75	6.52	6.61	1074.14	115/91
		18-Aug-16	1080.66	1080.75	8.70	6.36	6.45	1074.30	200/150
		03-May-16	1080.66	1080.75	8.71	6.39	6.48	1074.27	210/89
		17-Feb-16	1080.66	1080.75	8.70	6.59	6.68	1074.07	165/104
		10-Nov-15	1080.66	1080.75	8.73	6.44	6.54	1074.22	280/136
		02-Sep-15	1080.66	1080.75	8.70	6.41	6.50	1074.25	180/127
		09-Jun-15	1080.66	1080.75	8.70	6.35	6.45	1074.31	230/230
		07-Apr-15	1080.66	1080.75	8.69	6.30	6.39	1074.36	830/110
		31-Mar-15	1080.66	1080.75	8.65	6.38	6.47	1074.28	450/180
BH1940*	3	16-Feb-16	1090.45	1090.58	16.08	10.19	10.32	1080.26	20/8
		09-Nov-15	1090.45	1090.58	-	10.28	10.41	1080.17	70/7
		01-Sep-15	1090.45	1090.58	-	10.20	10.33	1080.25	580/15
		09-Jun-15	1090.45	1090.58	16.08	10.30	10.43	1080.15	720/12
		24-Feb-15	1090.45	1090.58	16.08	10.15	10.27	1080.30	2,700/23
BH1941	5	21-Mar-18	1073.80	1073.95	10.77	2.15	2.29	1071.65	0/1
		07-Sep-17	1073.80	1073.95	10.73	2.21	2.36	1071.59	15/2
		03-May-17	1073.80	1073.95	10.78	2.23	2.38	1071.57	0/1
		21-Feb-17	1073.80	1073.95	10.80	2.24	2.39	1071.56	10/3
		28-Oct-16	1073.80	1073.95	10.82	2.15	2.30	1071.65	0/1
		18-Aug-16	1073.80	1073.95	10.75	2.19	2.34	1071.61	15/1
		03-May-16	1073.80	1073.95	10.17	2.31	2.46	1071.49	25/0
		17-Feb-16	1073.80	1073.95	10.19	2.29	2.43	1071.51	0/1
		10-Nov-15	1073.80	1073.95	10.16	2.24	2.38	1071.56	5/0
		02-Sep-15	1073.80	1073.95	10.37	2.04	2.19	1071.76	0/3
BH1942	5	09-Jun-15	1073.80	1073.95	10.35	2.20	2.35	1071.60	0/1
		10-Apr-15	1073.80	1073.95	11.15	2.35	2.49	1071.45	90/1
		21-Mar-18	1068.37	1068.54	8.31	1.44	1.62	1066.92	0/0
		07-Sep-17	1068.37	1068.54	8.34	1.50	1.68	1066.87	10/2
		03-May-17	1068.37	1068.54	8.34	1.54	1.72	1066.83	5/0
21-Feb-17	1068.37	1068.54	8.34	1.63	1.81	1066.74	0/4		
28-Oct-16	1068.37	1068.54	8.32	1.36	1.54	1067.01	0/1		

## Notes:

\* BH1940 was decommissioned on 13 April 2016.

Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)		
BH1942	5	18-Aug-16	1068.37	1068.54	8.31	1.40	1.57	1066.97	20/0		
		11-May-16	1068.37	1068.54	8.31	1.60	1.78	1066.77	5/0		
		17-Feb-16	1068.37	1068.54	8.31	1.65	1.82	1066.72	0/1		
		10-Nov-15	1068.37	1068.54	8.31	1.52	1.70	1066.85	10/1		
		02-Sep-15	1068.37	1068.54	8.33	1.74	1.92	1066.63	0/1		
		09-Jun-15	1068.37	1068.54	8.34	1.35	1.53	1067.01	70/1		
		30-Mar-15	1068.37	1068.54	8.50	1.30	1.48	1067.07	7,850 Hex		
		22-Mar-18	-	-	-	-	-	-	-	Destroyed	
BH1943*	4,5	06-Sep-17	1078.72	1078.91	13.26	6.32	6.51	1072.40	30/0		
		02-May-17	1078.72	1078.91	13.29	6.04	6.23	1072.68	20/32		
		23-Feb-17	1078.72	1078.91	13.28	6.21	6.40	1072.52	30/2		
		31-Oct-16	1078.72	1078.91	13.28	6.13	6.32	1072.59	0/1		
		19-Aug-16	1078.72	1078.91	13.28	6.07	6.26	1072.65	0/0		
		03-May-16	1078.72	1078.91	13.30	6.27	6.46	1072.46	10/3		
		17-Feb-16	1078.72	1078.91	13.30	6.22	6.41	1072.51	270/1		
		13-Nov-15	1078.72	1078.91	13.36	6.20	6.39	1072.53	0/1		
		02-Sep-15	1078.72	1078.91	13.37	6.21	6.40	1072.51	0/1		
		09-Jun-15	1078.72	1078.91	13.46	6.31	6.50	1072.42	0/2		
		13-Apr-15	1078.72	1078.91	13.06	6.22	6.41	1072.51	70/1		
		BH1944	3	22-Mar-18	1077.12	1077.33	7.35	5.71	5.92	1071.42	0/2
				06-Sep-17	1077.12	1077.33	7.33	5.80	6.02	1071.32	60/0
				02-May-17	1077.12	1077.33	7.34	5.51	5.72	1071.61	0/1
23-Feb-17	1077.12			1077.33	7.34	5.82	6.04	1071.30	0/4		
31-Oct-16	1077.12			1077.33	7.35	5.54	5.75	1071.59	0/1		
18-Aug-16	1077.12			1077.33	7.35	5.47	5.68	1071.65	0/0		
03-May-16	1077.12			1077.33	7.43	6.02	6.23	1071.10	0/0		
17-Feb-16	1077.12			1077.33	7.35	6.25	6.46	1070.88	0/0		
10-Nov-15	1077.12			1077.33	7.38	5.69	5.90	1071.43	10/1		
02-Sep-15	1077.12			1077.33	7.40	5.99	6.20	1071.13	0/2		
09-Jun-15	1077.12			1077.33	7.56	6.23	6.44	1070.89	0/2		
10-Apr-15	1077.12			1077.33	7.47	5.92	6.13	1071.21	10/0		
BH1945	5			21-Mar-18	1069.27	1069.36	5.99	3.00	3.09	1066.27	0/0
		06-Sep-17	1069.27	1069.36	5.99	3.33	3.42	1065.94	40/0		
		03-May-17	1069.27	1069.36	6.09	2.63	2.72	1066.64	20/0		
		21-Feb-17	1069.27	1069.36	6.08	3.03	3.12	1066.24	0/2		
		28-Oct-16	1069.27	1069.36	6.12	2.91	3.00	1066.36	5/1		
		17-Aug-16	1069.27	1069.36	6.12	2.72	2.81	1066.55	0/1		
		03-May-16	1069.27	1069.36	6.21	3.02	3.11	1066.25	0/0		
		17-Feb-16	1069.27	1069.36	6.18	2.92	3.01	1066.35	0/1		
		09-Nov-15	1069.27	1069.36	6.22	2.95	3.04	1066.31	0/0		
		02-Sep-15	1069.27	1069.36	6.28	2.91	3.00	1066.36	0/0		
		09-Jun-15	1069.27	1069.36	6.28	3.11	3.20	1066.16	0/2		
		26-Mar-15	1069.27	1069.36	6.34	2.83	2.92	1066.44	160 Hex		
		BH1946	5	23-Mar-18	1064.57	1064.66	6.18	2.97	3.06	1061.60	0/1
07-Sep-17	1064.57			1064.66	6.16	3.26	3.35	1061.31	15/0		
03-May-17	1064.57			1064.66	6.19	2.28	2.37	1062.29	0/0		
22-Feb-17	1064.57			1064.66	6.18	3.19	3.28	1061.38	0/1		
28-Oct-16	1064.57			1064.66	6.18	2.55	2.64	1062.02	0/0		
18-Aug-16	1064.57			1064.66	6.19	2.58	2.67	1061.99	0/0		
03-May-16	1064.57			1064.66	6.20	2.87	2.97	1061.69	0/1		
17-Feb-16	1064.57			1064.66	6.19	3.02	3.11	1061.55	55/1		
09-Nov-15	1064.57			1064.66	6.23	2.51	2.60	1062.06	10/1		
02-Sep-15	1064.57			1064.66	6.23	2.28	2.37	1062.29	0/1		
09-Jun-15	1064.57			1064.66	6.31	2.84	2.93	1061.73	0/1		
30-Mar-15	1064.57			1064.66	6.33	2.66	2.75	1061.91	35 Hex		
BH1947	5			22-Mar-18	1067.72	1067.83	5.92	1.69	1.79	1066.03	0/1
		07-Sep-17	1067.72	1067.83	5.91	1.83	1.93	1065.89	25/2		
		02-May-17	1067.72	1067.83	5.92	1.36	1.46	1066.36	5,900/1		
		22-Feb-17	1067.72	1067.83	5.90	1.64	1.74	1066.08	66/0		
		28-Oct-16	1067.72	1067.83	5.89	1.72	1.82	1066.01	0/1		
		18-Aug-16	1067.72	1067.83	5.89	1.84	1.94	1065.89	170/1		
		03-May-16	1067.72	1067.83	5.92	1.58	1.68	1066.15	0/1		
		17-Feb-16	1067.72	1067.83	5.89	1.51	1.62	1066.21	0/0		
		09-Nov-15	1067.72	1067.83	5.92	1.39	1.50	1066.33	0/1		
		02-Sep-15	1067.72	1067.83	5.89	1.43	1.53	1066.29	0/1		
		09-Jun-15	1067.72	1067.83	5.93	1.44	1.54	1066.29	45/0		
		09-Apr-15	1067.72	1067.83	5.90	1.50	1.61	1066.22	0/1		
		BH1948	5	22-Mar-18	1072.45	1072.58	7.10	1.78	1.90	1070.68	85/0
07-Sep-17	1072.45			1072.58	7.09	2.01	2.13	1070.45	5/1		
02-May-17	1072.45			1072.58	7.09	1.70	1.82	1070.76	0/1		
22-Feb-17	1072.45			1072.58	7.07	1.87	1.99	1070.59	0/1		
28-Oct-16	1072.45			1072.58	7.08	1.83	1.96	1070.62	0/0		
18-Aug-16	1072.45			1072.58	7.06	1.67	1.80	1070.78	0/1		
03-May-16	1072.45			1072.58	7.69	1.90	2.03	1070.55	0/1		
17-Feb-16	1072.45			1072.58	7.70	1.77	1.90	1070.68	5/1		
09-Nov-15	1072.45			1072.58	7.71	1.79	1.91	1070.67	0/0		
02-Sep-15	1072.45			1072.58	7.71	1.77	1.90	1070.68	0/2		
09-Jun-15	1072.45			1072.58	7.80	1.89	2.02	1070.56	0/1		
09-Apr-15	1072.45			1072.58	7.81	1.68	1.81	1070.77	0/1		
BH1949	2			20-Mar-18	1091.06	1091.10	7.43	-	-	-	0/2 (DRY)
		06-Sep-17	1091.06	1091.10	7.43	7.43	7.46	1083.64	25/19		

## Notes:

\* BH1943 was damaged prior to the 2018 spring sampling event.

Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)		
BH1949	2	26-Apr-17	1091.06	1091.10	7.41	7.37	7.41	1083.69	5/7		
		21-Feb-17	1091.06	1091.10	7.44	-	-	-	0/8 (DRY)		
		27-Oct-16	1091.06	1091.10	7.30	-	-	-	0/9 (DRY)		
		17-Aug-16	1091.06	1091.10	7.41	-	-	-	15/46 (DRY)		
		10-Jun-16	1091.06	1091.10	-	-	-	-	(DRY)		
		04-May-16	1091.06	1091.10	7.43	7.42	7.46	1083.65	30/71		
		17-Feb-16	1091.06	1091.10	7.41	7.05	7.09	1084.01	0/21		
		09-Nov-15	1091.06	1091.10	7.44	6.98	7.01	1084.09	45/49		
		01-Sep-15	1091.06	1091.10	7.40	-	-	-	190/255 (DRY)		
		09-Jun-15	1091.06	1091.10	7.41	-	-	-	600/450 (DRY)		
		31-Mar-15	1091.06	1091.10	7.41	7.00	7.04	1084.06	810/537		
		BH1950A*	2	05-Sep-17	1091.04	1091.15	11.06	10.30	10.41	1080.74	10/1
				02-May-17	1091.04	1091.15	11.07	10.18	10.28	1080.87	0/2
27-Feb-17	1091.04			1091.15	11.03	10.19	10.29	1080.86	35/2		
31-Oct-16	1091.04			1091.15	11.06	10.23	10.33	1080.81	0/1		
16-Aug-16	1091.04			1091.15	11.05	10.49	10.59	1080.56	40/0		
04-May-16	1091.04			1091.15	11.45	10.22	10.32	1080.82	5/0		
18-Feb-16	1091.04			1091.15	11.06	10.00	10.10	1081.04	60/1		
10-Nov-15	1091.04			1091.15	11.11	10.14	10.24	1080.90	0/1		
02-Sep-15	1091.04			1091.15	11.02	10.22	10.32	1080.82	0/1		
09-Jun-15	1091.04			1091.15	11.08	10.31	10.42	1080.73	15/0		
05-May-15	1091.04	1091.15	11.05	10.30	10.40	1080.75	35/0				
BH1951	5	21-Mar-18	1068.02	1068.12	3.82	2.92	3.01	1065.11	0/1		
		06-Sep-17	1068.02	1068.12	3.80	3.12	3.22	1064.90	0/1		
		03-May-17	1068.02	1068.12	3.85	2.08	2.18	1065.94	0/1		
		22-Feb-17	1068.02	1068.12	3.86	1.93	2.03	1066.09	0/1		
		28-Oct-16	1068.02	1068.12	3.84	2.58	2.67	1065.44	0/1		
		18-Aug-16	1068.02	1068.12	3.83	1.87	1.97	1066.15	0/0		
		03-May-16	1068.02	1068.12	3.55	2.78	2.88	1065.24	0/0		
		17-Feb-16	1068.02	1068.12	3.53	2.72	2.82	1065.30	0/1		
		09-Nov-15	1068.02	1068.12	3.58	2.64	2.74	1065.38	20/0		
		02-Sep-15	1068.02	1068.12	3.48	2.12	2.22	1065.90	0/2		
		09-Jun-15	1068.02	1068.12	4.08	2.86	2.96	1065.16	0/1		
		30-Mar-15	1068.02	1068.12	4.10	2.52	2.62	1065.50	0/0		
		BH1952	2,3	19-Mar-18	1090.81	1090.99	18.67	11.93	12.10	1078.89	420/0
06-Sep-17	1090.81			1090.99	18.48	11.95	12.13	1078.86	0/1		
01-May-17	1090.81			1090.99	18.48	11.79	11.97	1079.02	0/1		
17-Feb-17	1090.81			1090.99	18.50	11.73	11.91	1079.08	0/4		
27-Oct-16	1090.81			1090.99	18.49	11.88	12.05	1078.94	0/2		
17-Aug-16	1090.81			1090.99	18.53	11.78	11.96	1079.03	0/2		
04-May-16	1090.81			1090.99	18.58	11.83	12.01	1078.98	0/0		
17-Feb-16	1090.81			1090.99	18.58	11.88	12.05	1078.93	0/2		
09-Nov-15	1090.81			1090.99	18.74	11.85	12.03	1078.96	25/1		
01-Sep-15	1090.81			1090.99	18.89	11.77	11.95	1079.04	0/1		
09-Jun-15	1090.81			1090.99	16.52	11.83	12.01	1078.98	0/1		
04-May-15	1090.81			1090.99	16.86	11.79	11.96	1079.03	35/2		
BH1953**	3			07-Sep-17	1091.28	1091.34	18.67	14.96	15.02	1076.32	0/1
		02-May-17	1091.28	1091.34	18.68	15.01	15.07	1076.28	20/0		
		23-Feb-17	1091.28	1091.34	18.68	15.07	15.13	1076.21	0/1		
		27-Oct-16	1091.28	1091.34	18.68	14.96	15.02	1076.32	20/0		
		16-Aug-16	1091.28	1091.34	18.65	15.01	15.07	1076.27	0/1		
		05-May-16	1091.28	1091.34	18.78	15.05	15.11	1076.24	0/0		
		18-Feb-16	1091.28	1091.34	18.69	14.90	14.96	1076.39	0/1		
		10-Nov-15	1091.28	1091.34	18.77	14.94	15.00	1076.34	0/1		
		02-Sep-15	1091.28	1091.34	19.02	14.94	15.00	1076.34	0/1		
		09-Jun-15	1091.28	1091.34	18.87	14.97	15.03	1076.32	0/1		
		26-Mar-15	1091.28	1091.34	18.90	14.95	15.01	1076.34	0/2		
		BH1954	3,4,5	21-Mar-18	1076.76	1076.90	12.07	3.46	3.59	1073.30	0/0
				06-Sep-17	1076.76	1076.90	12.07	3.58	3.72	1073.18	0/0
03-May-17	1076.76			1076.90	12.16	3.33	3.46	1073.43	0/0		
22-Feb-17	1076.76			1076.90	12.19	3.46	3.59	1073.31	230/3		
28-Oct-16	1076.76			1076.90	12.24	3.36	3.49	1073.40	0/0		
17-Aug-16	1076.76			1076.90	12.24	3.31	3.45	1073.45	0/0		
03-May-16	1076.76			1076.90	9.36	3.25	3.38	1073.51	5/1		
17-Feb-16	1076.76			1076.90	9.36	3.27	3.40	1073.50	0/1		
09-Nov-15	1076.76			1076.90	9.30	3.29	3.42	1073.47	0/0		
01-Sep-15	1076.76			1076.90	9.40	3.23	3.37	1073.53	0/1		
09-Jun-15	1076.76			1076.90	9.43	3.25	3.39	1073.51	0/1		
19-Mar-15	1076.76			1076.90	13.42	3.48	3.62	1073.28	0/0		
BH1955***	5			17-Feb-16	1074.04	1074.15	5.94	2.53	2.63	1071.51	0/1
		09-Nov-15	1074.04	1074.15	-	2.62	2.73	1071.42	0/1		
		01-Sep-15	1074.04	1074.15	-	2.77	2.88	1071.27	0/1		
		09-Jun-15	1074.04	1074.15	7.39	4.44	4.55	1069.60	0/1		
		19-Mar-15	1074.04	1074.15	8.89	2.39	2.49	1071.66	20 Hex		
BH1955A***	5	21-Mar-18	1073.95	1074.13	9.24	2.28	2.47	1071.66	10/1		
		06-Sep-17	1073.95	1074.13	9.23	2.43	2.62	1071.52	15/0		
		03-May-17	1073.95	1074.13	9.69	2.03	2.21	1071.92	0/1		
		22-Feb-17	1073.95	1074.13	9.73	2.18	2.36	1071.77	0/2		
		27-Oct-16	1073.95	1074.13	10.54	2.10	2.28	1071.85	0/1		

## Notes:

\* BH1950A could not be located during the Spring 2018 sampling event

\*\* BH1953 could not be located during the Spring 2018 sampling event

\*\*\* BH1955 was decommissioned on 31 March 2016 and was replaced with BH1955A on 01 April 2016.

Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)
BH1955A	5	17-Aug-16	1073.95	1074.13	10.51	2.06	2.24	1071.89	0/1
		03-May-16	1073.95	1074.13	9.41	2.54	2.72	1071.41	15/1
BH1956	3	22-Mar-18	1084.76	1084.92	14.31	9.20	9.36	1075.56	10/0
		06-Sep-17	1084.76	1084.92	14.06	9.12	9.28	1075.64	10/0
		02-May-17	1084.76	1084.92	14.12	9.21	9.37	1075.55	0/0
		27-Feb-17	1084.76	1084.92	14.13	9.29	9.45	1075.47	0/1
		31-Oct-16	1084.76	1084.92	14.14	9.24	9.40	1075.52	80/0
		16-Aug-16	1084.76	1084.92	14.10	9.33	9.49	1075.43	6/0
		03-May-16	1084.76	1084.92	14.18	9.38	9.54	1075.38	10/1
		18-Feb-16	1084.76	1084.92	14.21	9.30	9.46	1075.46	0/1
		10-Nov-15	1084.76	1084.92	14.33	9.29	9.44	1075.48	0/1
		02-Sep-15	1084.76	1084.92	14.37	9.33	9.49	1075.43	0/1
		09-Jun-15	1084.76	1084.92	13.55	9.38	9.54	1075.38	5/0
		05-May-15	1084.76	1084.92	13.58	9.32	9.48	1075.44	20/0
BH1957	3	19-Mar-18	1089.87	1089.98	14.01	10.24	10.35	1079.63	0/0
		07-Sep-17	1089.87	1089.98	13.97	10.18	10.29	1079.69	0/1
		26-Apr-17	1089.87	1089.98	14.00	10.12	10.23	1079.75	0/1
		24-Feb-17	1089.87	1089.98	13.99	10.18	10.29	1079.69	0/3
		31-Oct-16	1089.87	1089.98	13.97	10.08	10.19	1079.79	0/2
		17-Aug-16	1089.87	1089.98	14.00	10.17	10.28	1079.70	10/0
		04-May-16	1089.87	1089.98	14.02	10.13	10.23	1079.75	15/1
		16-Feb-16	1089.87	1089.98	14.00	10.05	10.16	1079.82	0/1
		09-Nov-15	1089.87	1089.98	13.99	10.09	10.20	1079.78	0/0
		01-Sep-15	1089.87	1089.98	14.05	10.06	10.17	1079.81	15/2
		09-Jun-15	1089.87	1089.98	14.22	10.15	10.25	1079.73	0/1
		17-Mar-15	1089.87	1089.98	13.26	10.04	10.15	1079.83	0/1
BH1958	3	19-Mar-18	1090.26	1090.41	15.26	9.99	10.14	1080.27	50/1
		07-Sep-17	1090.26	1090.41	14.74	9.92	10.07	1080.34	0/0
		26-Apr-17	1090.26	1090.41	15.26	9.87	10.02	1080.39	0/0
		24-Feb-17	1090.26	1090.41	14.77	9.96	10.12	1080.29	0/3
		31-Oct-16	1090.26	1090.41	14.79	9.83	9.98	1080.42	0/1
		17-Aug-16	1090.26	1090.41	14.77	9.93	10.08	1080.33	10/0
		04-May-16	1090.26	1090.41	12.61	9.84	10.00	1080.41	10/1
		16-Feb-16	1090.26	1090.41	12.54	9.75	9.90	1080.50	0/2
		09-Nov-15	1090.26	1090.41	12.57	9.80	9.95	1080.45	0/0
		01-Sep-15	1090.26	1090.41	12.56	9.77	9.92	1080.49	0/2
		09-Jun-15	1090.26	1090.41	12.70	9.89	10.05	1080.36	5/0
		14-Mar-15	1090.26	1090.41	14.90	9.93	10.09	1080.32	0/0
		23-Feb-15	1090.26	1090.41	14.05	9.90	10.05	1080.35	0/2
BH1959*	3	07-Sep-17	1090.27	1090.42	15.25	9.49	9.63	1080.78	25/0
		26-Apr-17	1090.27	1090.42	14.77	9.41	9.56	1080.86	45/1
		24-Feb-17	1090.27	1090.42	15.24	9.48	9.62	1080.79	0/2
		31-Oct-16	1090.27	1090.42	15.26	9.40	9.55	1080.87	90/2
		17-Aug-16	1090.27	1090.42	15.23	9.47	9.62	1080.80	10/0
		04-May-16	1090.27	1090.42	15.29	9.48	9.63	1080.79	15/1
		16-Feb-16	1090.27	1090.42	15.30	9.41	9.55	1080.86	0/0
		12-Nov-15	1090.27	1090.42	15.46	9.44	9.59	1080.83	0/0
		01-Sep-15	1090.27	1090.42	15.43	9.41	9.56	1080.86	25/2
		09-Jun-15	1090.27	1090.42	15.62	9.50	9.65	1080.76	15/0
		19-Mar-15	1090.27	1090.42	15.40	9.48	9.62	1080.79	105/1
BH1960**	1	07-Sep-17	1090.26	1090.42	3.31	-	-	-	25/0 (DRY)
		26-Apr-17	1090.26	1090.42	3.28	-	-	-	0/0 (DRY)
		24-Feb-17	1090.26	1090.42	3.30	-	-	-	0/2 (DRY)
		31-Oct-16	1090.26	1090.42	3.28	-	-	-	0/0 (DRY)
		17-Aug-16	1090.26	1090.42	3.27	-	-	-	20/0 (DRY)
		04-May-16	1090.26	1090.42	3.29	-	-	-	0/1 (DRY)
		16-Feb-16	1090.26	1090.42	3.27	-	-	-	20/0 (DRY)
		12-Nov-15	1090.26	1090.42	3.28	-	-	-	0/0 (DRY)
		01-Sep-15	1090.26	1090.42	3.27	-	-	-	0/1 (DRY)
		09-Jun-15	1090.26	1090.42	3.29	-	-	-	15/0 (DRY)
		19-Mar-15	1090.26	1090.42	3.40	-	-	-	0/0 (DRY)
BH1961	3,4,5	21-Mar-18	1076.67	1076.79	11.52	4.48	4.60	1072.19	0/0
		06-Sep-17	1076.67	1076.79	11.44	4.76	4.88	1071.91	25/0
		01-May-17	1076.67	1076.79	11.51	4.10	4.21	1072.58	0/1
		23-Feb-17	1076.67	1076.79	11.53	4.28	4.39	1072.40	0/4
		27-Oct-16	1076.67	1076.79	11.59	4.55	4.67	1072.12	10/1
		18-Aug-16	1076.67	1076.79	11.61	4.83	4.94	1071.85	0/2
		03-May-16	1076.67	1076.79	10.71	4.22	4.33	1072.46	0/0
		18-Feb-16	1076.67	1076.79	10.73	4.23	4.35	1072.44	0/1
		09-Nov-15	1076.67	1076.79	10.76	4.30	4.42	1072.37	0/1
		01-Sep-15	1076.67	1076.79	10.94	4.40	4.52	1072.27	0/1
		09-Jun-15	1076.67	1076.79	10.94	4.37	4.49	1072.30	0/1
		21-Apr-15	1076.67	1076.79	11.82	4.24	4.35	1072.44	20/1
BH1962	3	21-Mar-18	1078.36	1078.48	9.85	3.17	3.29	1075.19	0/0
		06-Sep-17	1078.36	1078.48	9.82	3.34	3.46	1075.02	20/0
		01-May-17	1078.36	1078.48	10.66	3.01	3.13	1075.35	0/0
		23-Feb-17	1078.36	1078.48	10.68	3.14	3.26	1075.22	0/4
		27-Oct-16	1078.36	1078.48	11.25	3.10	3.22	1075.26	10/1
		18-Aug-16	1078.36	1078.48	11.23	3.03	3.14	1075.34	0/2
		03-May-16	1078.36	1078.48	9.81	3.18	3.30	1075.18	5/0

## Notes:

\* BH1959 could not be located during the Spring 2018 sampling event

\*\* BH1960 could not be located during the Spring 2018 sampling event

Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)		
BH1962	3	18-Feb-16	1078.36	1078.48	9.91	3.02	3.14	1075.34	0/0		
		09-Nov-15	1078.36	1078.48	9.93	3.08	3.20	1075.28	0/1		
		01-Sep-15	1078.36	1078.48	10.42	3.12	3.24	1075.24	0/1		
		09-Jun-15	1078.36	1078.48	12.32	3.19	3.31	1075.17	0/1		
		09-Apr-15	1078.36	1078.48	12.41	3.11	3.23	1075.25	20/0		
BH1963	3	21-Mar-18	1080.84	1080.96	10.98	3.95	4.08	1076.88	0/0		
		06-Sep-17	1080.84	1080.96	10.92	4.04	4.16	1076.80	35/0		
		01-May-17	1080.84	1080.96	10.94	3.74	3.86	1077.10	0/0		
		23-Feb-17	1080.84	1080.96	10.96	3.87	3.99	1076.97	60/4		
		27-Oct-16	1080.84	1080.96	10.95	3.81	3.94	1077.02	10/0		
		18-Aug-16	1080.84	1080.96	10.92	3.30	3.42	1077.54	0/1		
		03-May-16	1080.84	1080.96	10.21	3.88	4.01	1076.95	0/0		
		18-Feb-16	1080.84	1080.96	10.21	3.82	3.94	1077.02	0/1		
		09-Nov-15	1080.84	1080.96	10.24	3.86	3.98	1076.98	0/5		
		01-Sep-15	1080.84	1080.96	10.29	3.79	3.91	1077.05	0/1		
		09-Jun-15	1080.84	1080.96	10.10	3.89	4.01	1076.95	0/1		
		09-Apr-15	1080.84	1080.96	10.90	3.83	3.95	1077.01	0/0		
		BH1964	4	21-Mar-18	1076.77	1076.90	8.46	4.06	4.19	1072.71	0/0
				06-Sep-17	1076.77	1076.90	8.47	4.64	4.77	1072.13	25/0
				01-May-17	1076.77	1076.90	8.46	3.92	4.05	1072.85	0/0
23-Feb-17	1076.77			1076.90	8.48	4.06	4.19	1072.71	0/3		
27-Oct-16	1076.77			1076.90	8.44	4.15	4.28	1072.62	15/0		
18-Aug-16	1076.77			1076.90	8.42	4.14	4.27	1072.63	0/0		
03-May-16	1076.77			1076.90	8.46	4.03	4.16	1072.74	0/0		
18-Feb-16	1076.77			1076.90	8.42	4.04	4.17	1072.73	0/0		
09-Nov-15	1076.77			1076.90	8.44	4.20	4.33	1072.57	0/1		
01-Sep-15	1076.77			1076.90	8.45	4.16	4.29	1072.61	0/0		
09-Jun-15	1076.77			1076.90	8.46	4.23	4.36	1072.54	0/1		
22-Apr-15	1076.77			1076.90	8.46	4.03	4.15	1072.75	1,350/1		
BH1965*	2			07-Sep-17	1091.27	1091.37	10.94	-	-	-	10/1 (DRY)
		02-May-17	1091.27	1091.37	10.90	-	-	-	10/0 (DRY)		
		23-Feb-17	1091.27	1091.37	10.92	-	-	-	0/1 (DRY)		
		27-Oct-16	1091.27	1091.37	10.91	-	-	-	0/1 (DRY)		
		16-Aug-16	1091.27	1091.37	10.90	-	-	-	0/1 (DRY)		
		05-May-16	1091.27	1091.37	10.96	-	-	-	0/1 (DRY)		
		18-Feb-16	1091.27	1091.37	10.91	-	-	-	0/1 (DRY)		
		10-Nov-15	1091.27	1091.37	10.90	-	-	-	0/0 (DRY)		
		02-Sep-15	1091.27	1091.37	10.99	-	-	-	0/0 (DRY)		
		09-Jun-15	1091.27	1091.37	10.88	-	-	-	0/1 (DRY)		
		25-Mar-15	1091.27	1091.37	10.90	-	-	-	0/0 (DRY)		
		BH1966	3	20-Mar-18	1089.42	1089.52	16.52	10.81	10.91	1078.61	0/0
05-Sep-17	1089.42			1089.52	16.54	10.81	10.91	1078.61	5/0		
01-May-17	1089.42			1089.52	16.55	10.78	10.88	1078.64	0/0		
19-Feb-17	1089.42			1089.52	16.57	10.75	10.85	1078.67	0/1		
27-Oct-16	1089.42			1089.52	16.57	10.69	10.79	1078.73	25/0		
16-Aug-16	1089.42			1089.52	16.63	10.77	10.87	1078.65	0/0		
04-May-16	1089.42			1089.52	16.57	10.73	10.83	1078.69	0/0		
17-Feb-16	1089.42			1089.52	16.57	10.66	10.76	1078.76	0/0		
09-Nov-15	1089.42			1089.52	16.79	10.70	10.80	1078.72	0/0		
01-Sep-15	1089.42			1089.52	10.57	10.70	10.80	1078.72	0/0		
09-Jun-15	1089.42			1089.52	16.61	10.74	10.84	1078.68	5/0		
27-Apr-15	1089.42			1089.52	16.69	10.72	10.82	1078.70	0/0		
24-Feb-15	1089.42			1089.52	16.20	10.62	10.72	1078.80	0/1		
BH1967	2			20-Mar-18	1090.10	1090.21	8.62	7.68	7.78	1082.43	0/0
		05-Sep-17	1090.10	1090.21	8.64	7.70	7.80	1082.41	0/0		
		01-May-17	1090.10	1090.21	8.62	7.43	7.54	1082.67	0/0		
		16-Feb-17	1090.10	1090.21	8.62	7.33	7.44	1082.77	0/3		
		27-Oct-16	1090.10	1090.21	8.60	7.05	7.16	1083.05	20/0		
		16-Aug-16	1090.10	1090.21	8.60	7.50	7.61	1082.60	0/0		
		04-May-16	1090.10	1090.21	8.59	7.53	7.63	1082.58	0/1		
		17-Feb-16	1090.10	1090.21	8.58	7.23	7.34	1082.87	20/0		
		09-Nov-15	1090.10	1090.21	8.62	7.07	7.18	1083.03	0/0		
		01-Sep-15	1090.10	1090.21	8.60	7.46	7.57	1082.64	0/2		
		09-Jun-15	1090.10	1090.21	8.59	7.44	7.54	1082.67	5/1		
		25-Feb-15	1090.10	1090.21	8.60	7.83	7.93	1082.28	350/185		
		BH1968	1	20-Mar-18	1090.08	1090.20	5.15	-	-	-	0/0 (DRY)
05-Sep-17	1090.08			1090.20	5.16	-	-	-	40/0 (DRY)		
01-May-17	1090.08			1090.20	5.15	-	-	-	0/0 (DRY)		
16-Feb-17	1090.08			1090.20	5.15	-	-	-	0/8 (DRY)		
27-Oct-16	1090.08			1090.20	5.14	-	-	-	30/0 (DRY)		
16-Aug-16	1090.08			1090.20	5.12	-	-	-	0/0 (DRY)		
04-May-16	1090.08			1090.20	5.16	-	-	-	15/0 (DRY)		
17-Feb-16	1090.08			1090.20	5.12	-	-	-	100/3 (DRY)		
09-Nov-15	1090.08			1090.20	5.12	-	-	-	0/0 (DRY)		
01-Sep-15	1090.08			1090.20	5.12	-	-	-	0/0 (DRY)		
09-Jun-15	1090.08			1090.20	5.15	-	-	-	0/0 (DRY)		
25-Feb-15	1090.08	1090.20	5.12	-	-	-	5/1 (DRY)				
BH1969	1	20-Mar-18	1089.39	1089.47	7.55	-	-	-	15/1 (DRY)		
		05-Sep-17	1089.39	1089.47	7.55	-	-	-	0/0 (DRY)		
		01-May-17	1089.39	1089.47	7.55	-	-	-	40/0 (DRY)		
		16-Feb-17	1089.39	1089.47	7.56	-	-	-	60/0 (DRY)		

## Notes:

\* BH1965 could not be located during the Spring 2018 sampling event

Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)		
BH1969	1	27-Oct-16	1089.39	1089.47	7.54	-	-	-	0/0 (DRY)		
		16-Aug-16	1089.39	1089.47	7.53	-	-	-	0/0 (DRY)		
		04-May-16	1089.39	1089.47	7.55	-	-	-	0/4 (DRY)		
		17-Feb-16	1089.39	1089.47	7.25	-	-	-	0/6 (DRY)		
		09-Nov-15	1089.39	1089.47	7.52	-	-	-	0/1 (DRY)		
		01-Sep-15	1089.39	1089.47	7.46	-	-	-	20/15 (DRY)		
		09-Jun-15	1089.39	1089.47	7.56	-	-	-	0/0 (DRY)		
		24-Feb-15	1089.39	1089.47	7.53	-	-	-	1,200/450 (DRY)		
		BH1970	2	20-Mar-18	1089.22	1089.30	8.57	-	-	-	>11,100/>2,000 (DRY)
05-Sep-17	1089.22			1089.30	8.60	-	-	-	>11,100/>2,000 (DRY)		
01-May-17	1089.22			1089.30	8.57	-	-	-	>11,100/>2,000 (DRY)		
16-Feb-17	1089.22			1089.30	8.59	-	-	-	500/250 (DRY)		
27-Oct-16	1089.22			1089.30	8.57	-	-	-	>11,100/>2,000 (DRY)		
16-Aug-16	1089.22			1089.30	8.57	-	-	-	1,100/430 (DRY)		
04-May-16	1089.22			1089.30	8.59	-	-	-	>11,100/>2,000 (DRY)		
17-Feb-16	1089.22			1089.30	8.56	-	-	-	>11,100/>2,000 (DRY)		
09-Nov-15	1089.22			1089.30	8.56	-	-	-	>11,100/>2,000 (DRY)		
01-Sep-15	1089.22			1089.30	8.56	-	-	-	>11,100/>2,000 (DRY)		
09-Jun-15	1089.22			1089.30	8.59	-	-	-	920/280 (DRY)		
24-Feb-15	1089.22			1089.30	8.57	-	-	-	1,500/1,850 (DRY)		
BH1971	2			20-Mar-18	1090.76	1090.94	11.02	7.84	8.03	1082.92	3,500/2,000
		05-Sep-17	1090.76	1090.94	10.99	8.05	8.24	1082.70	1,400/741		
		01-May-17	1090.76	1090.94	10.97	7.55	7.73	1083.21	300/500		
		16-Feb-17	1090.76	1090.94	11.00	7.61	7.80	1083.14	0/1		
		27-Oct-16	1090.76	1090.94	10.97	7.97	8.15	1082.79	4,150/1,000		
		16-Aug-16	1090.76	1090.94	10.98	8.04	8.23	1082.72	7,000/1,000		
		04-May-16	1090.76	1090.94	10.96	7.71	7.90	1083.05	1,200/698		
		16-Feb-16	1090.76	1090.94	10.95	7.61	7.80	1083.15	4,500/1,313		
		09-Nov-15	1090.76	1090.94	11.00	7.73	7.92	1083.03	8,400/>2,000		
		01-Sep-15	1090.76	1090.94	10.97	7.95	8.14	1082.81	1,350/651		
		09-Jun-15	1090.76	1090.94	10.97	7.80	7.99	1082.95	200/115		
		27-Feb-15	1090.76	1090.94	10.97	7.96	8.15	1082.80	5,000/1,500		
		BH1972	2	19-Mar-18	1088.79	1088.92	10.86	8.81	8.94	1079.98	65/0
				06-Sep-17	1088.79	1088.92	10.87	8.56	8.69	1080.23	0/2
01-May-17	1088.79			1088.92	10.89	8.58	8.71	1080.21	0/1		
17-Feb-17	1088.79			1088.92	10.91	8.36	8.49	1080.43	105/2		
27-Oct-16	1088.79			1088.92	10.90	9.07	9.20	1079.72	60/2		
17-Aug-16	1088.79			1088.92	10.88	8.73	8.86	1080.06	25/1		
04-May-16	1088.79			1088.92	10.90	9.69	9.82	1079.10	0/1		
17-Feb-16	1088.79			1088.92	10.92	9.50	9.63	1079.29	0/1		
09-Nov-15	1088.79			1088.92	10.97	8.14	8.27	1080.65	0/2		
01-Sep-15	1088.79			1088.92	10.98	8.14	8.27	1080.65	0/1		
09-Jun-15	1088.79			1088.92	10.90	8.79	8.92	1080.00	0/2		
06-Apr-15	1088.79			1088.92	10.98	9.61	9.74	1079.18	0/3		
BH1973	1	20-Mar-18	1090.81	1090.93	6.45	-	-	-	0/0 (DRY)		
		05-Sep-17	1090.81	1090.93	6.45	-	-	-	0/0 (DRY)		
		01-May-17	1090.81	1090.93	6.45	6.31	6.43	1084.50	0/0		
		16-Feb-17	1090.81	1090.93	6.26	-	-	-	0/1 (DRY)		
		27-Oct-16	1090.81	1090.93	6.42	-	-	-	0/2 (DRY)		
		16-Aug-16	1090.81	1090.93	6.42	-	-	-	5/0 (DRY)		
		04-May-16	1090.81	1090.93	6.45	6.41	6.53	1084.40	0/0		
		16-Feb-16	1090.81	1090.93	6.42	6.22	6.34	1084.59	0/0		
		09-Nov-15	1090.81	1090.93	6.44	6.17	6.29	1084.64	5/0		
		01-Sep-15	1090.81	1090.93	6.42	-	-	-	0/0 (DRY)		
		09-Jun-15	1090.81	1090.93	6.42	-	-	-	0/0 (DRY)		
27-Feb-15	1090.81	1090.93	6.41	6.21	6.33	1084.60	0/0				
BH1974	2	20-Mar-18	1090.07	1090.24	10.00	7.53	7.70	1082.54	560/314		
		05-Sep-17	1090.07	1090.24	9.98	8.50	8.67	1081.57	100/42		
		01-May-17	1090.07	1090.24	9.99	7.15	7.33	1082.92	180/24		
		16-Feb-17	1090.07	1090.24	10.02	7.12	7.29	1082.96	360/44		
		27-Oct-16	1090.07	1090.24	9.98	7.25	7.42	1082.82	440/180		
		16-Aug-16	1090.07	1090.24	9.98	7.66	7.83	1082.42	1,750/400		
		04-May-16	1090.07	1090.24	9.99	7.28	7.45	1082.79	400/174		
		16-Feb-16	1090.07	1090.24	9.99	7.13	7.30	1082.95	500/222		
		09-Nov-15	1090.07	1090.24	9.99	7.26	7.44	1082.81	2,150/790		
		01-Sep-15	1090.07	1090.24	9.99	7.58	7.75	1082.49	7,800/1,099		
		09-Jun-15	1090.07	1090.24	10.00	7.31	7.48	1082.76	920/280		
		26-Feb-15	1090.07	1090.24	10.00	7.19	7.37	1082.88	3,400/925		
		BH1975	1	20-Mar-18	1090.23	1090.39	7.05	-	-	-	0/1 (DRY)
05-Sep-17	1090.23			1090.39	7.05	-	-	-	0/0 (DRY)		
01-May-17	1090.23			1090.39	7.05	6.79	6.95	1083.44	0/1		
16-Feb-17	1090.23			1090.39	7.06	6.76	6.93	1083.46	0/7		
27-Oct-16	1090.23			1090.39	7.03	6.98	7.14	1083.25	0/0		
16-Aug-16	1090.23			1090.39	7.03	-	-	-	35/0 (DRY)		
04-May-16	1090.23			1090.39	7.02	6.88	7.04	1083.35	0/0		
16-Feb-16	1090.23			1090.39	7.03	6.74	6.90	1083.49	0/0		
09-Nov-15	1090.23			1090.39	7.08	6.93	7.10	1083.29	0/0		
01-Sep-15	1090.23			1090.39	7.02	-	-	-	0/1 (DRY)		
09-Jun-15	1090.23			1090.39	7.03	-	-	-	0/0 (DRY)		
26-Feb-15	1090.23			1090.39	7.03	6.66	6.82	1083.57	450/0		
BH1976	2	20-Mar-18	1092.63	1092.79	13.56	9.72	9.88	1082.91	0/0		
		01-May-17	1092.63	1092.79	13.58	9.564	9.72	1083.07	15/0		
		16-Feb-17	1092.63	1092.79	13.58	9.412	9.57	1083.22	0/0		

Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)
BH1976	2	27-Oct-16	1092.63	1092.79	13.64	9.523	9.68	1083.11	0/1
		16-Aug-16	1092.63	1092.79	13.66	9.755	9.91	1082.88	0/0
		04-May-16	1092.63	1092.79	13.67	9.608	9.76	1083.02	0/1
		17-Feb-16	1092.63	1092.79	13.75	9.514	9.67	1083.12	25/0
		09-Nov-15	1092.63	1092.79	13.87	9.615	9.77	1083.02	0/1
		01-Sep-15	1092.63	1092.79	13.83	9.72	9.88	1082.91	0/1
		09-Jun-15	1092.63	1092.79	13.86	9.707	9.86	1082.93	0/1
		21-Mar-18	1074.04	1074.16	7.13	1.19	1.30	1072.86	30/1
		06-Sep-17	1074.04	1074.16	7.07	1.31	1.42	1072.73	0/1
BH1977	3,4,5	03-May-17	1074.04	1074.16	7.11	1.04	1.16	1073.00	0/1
		22-Feb-17	1074.04	1074.16	7.10	1.16	1.27	1072.88	0/1
		27-Oct-16	1074.04	1074.16	7.11	0.98	1.09	1073.07	5/1
		17-Aug-16	1074.04	1074.16	7.11	0.91	1.03	1073.13	0/1
		03-May-16	1074.04	1074.16	6.30	1.18	1.29	1072.87	0/1
		17-Feb-16	1074.04	1074.16	6.27	1.17	1.28	1072.88	0/1
		09-Nov-15	1074.04	1074.16	6.28	1.08	1.20	1072.96	0/1
		01-Sep-15	1074.04	1074.16	6.30	1.05	1.16	1072.99	0/1
		09-Jun-15	1074.04	1074.16	6.29	1.15	1.27	1072.89	0/1
		18-Mar-15	1074.04	1074.16	7.93	1.14	1.25	1072.91	2,800 Hex
		21-Mar-18	1069.24	1069.42	2.91	0.75	0.93	1068.49	0/0
		06-Sep-17	1069.24	1069.42	2.90	2.68	2.86	1066.56	25/0
		03-May-17	1069.24	1069.42	2.91	1.33	1.51	1067.91	0/0
		21-Feb-17	1069.24	1069.42	2.90	1.70	1.87	1067.55	0/2
		28-Oct-16	1069.24	1069.42	2.88	2.08	2.25	1067.17	0/1
17-Aug-16	1069.24	1069.42	2.88	1.53	1.70	1067.72	0/1		
03-May-16	1069.24	1069.42	2.90	2.07	2.25	1067.17	0/0		
17-Feb-16	1069.24	1069.42	2.89	1.44	1.62	1067.80	0/0		
09-Nov-15	1069.24	1069.42	2.91	2.15	2.33	1067.09	0/0		
02-Sep-15	1069.24	1069.42	2.88	1.90	2.08	1067.34	0/0		
09-Jun-15	1069.24	1069.42	2.91	2.09	2.27	1067.15	0/1		
26-Mar-15	1069.24	1069.42	3.05	1.37	1.55	1067.87	0/0		
BH1979*	3	03-May-16	1078.71	1078.78	6.74	5.74	5.81	1072.98	0/0
		17-Feb-16	1078.71	1078.78	6.75	5.70	5.77	1073.02	0/1
		12-Nov-15	1078.71	1078.78	6.79	5.68	5.75	1073.03	0/1
		02-Sep-15	1078.71	1078.78	6.76	5.73	5.80	1072.98	0/1
		09-Jun-15	1078.71	1078.78	6.82	5.76	5.83	1072.95	0/1
		08-Apr-15	1078.71	1078.78	6.76	5.71	5.78	1073.00	15/0
		21-Mar-18	1074.24	1074.31	6.01	2.71	2.77	1071.54	25/0
		07-Sep-17	1074.24	1074.31	6.01	2.77	2.84	1071.47	10/2
BH1980	4	03-May-17	1074.24	1074.31	5.99	2.79	2.86	1071.45	25/0
		21-Feb-17	1074.24	1074.31	6.00	2.78	2.84	1071.46	340/3
		28-Oct-16	1074.24	1074.31	5.99	2.19	2.25	1072.06	5/1
		18-Aug-16	1074.24	1074.31	5.96	2.83	2.89	1071.41	15/0
		03-May-16	1074.24	1074.31	5.64	2.89	2.95	1071.36	25/0
		17-Feb-16	1074.24	1074.31	5.65	2.94	3.00	1071.31	0/2
		10-Nov-15	1074.24	1074.31	5.62	2.83	2.89	1071.41	15/0
		02-Sep-15	1074.24	1074.31	5.84	2.82	2.88	1071.42	0/2
		09-Jun-15	1074.24	1074.31	5.97	2.92	2.98	1071.33	0/1
		08-Apr-15	1074.24	1074.31	6.01	2.95	2.01	1072.30	0/1
		21-Mar-18	1076.99	1077.06	8.90	3.64	3.72	1073.34	0/0
		06-Sep-17	1076.99	1077.06	8.87	3.71	3.79	1073.27	0/1
		03-May-17	1076.99	1077.06	8.92	3.52	3.59	1073.47	0/1
		22-Feb-17	1076.99	1077.06	8.92	3.62	3.69	1073.37	0/3
		28-Oct-16	1076.99	1077.06	8.94	3.53	3.60	1073.46	0/1
17-Aug-16	1076.99	1077.06	8.90	3.46	3.54	1073.53	0/1		
03-May-16	1076.99	1077.06	7.79	3.63	3.70	1073.36	0/0		
17-Feb-16	1076.99	1077.06	7.75	3.64	3.71	1073.35	0/1		
09-Nov-15	1076.99	1077.06	7.76	3.69	3.77	1073.29	0/1		
01-Sep-15	1076.99	1077.06	7.86	3.68	3.76	1073.31	0/1		
09-Jun-15	1076.99	1077.06	7.83	3.66	3.74	1073.32	0/1		
27-Mar-15	1076.99	1077.06	9.15	3.64	3.72	1073.34	0/0		
BH1982	3	21-Mar-18	1080.85	1080.96	7.59	6.39	6.50	1074.47	0/0
		06-Sep-17	1080.85	1080.96	7.56	6.40	6.51	1074.46	Not Measured
		03-May-17	1080.85	1080.96	7.61	6.40	6.51	1074.46	0/0
		22-Feb-17	1080.85	1080.96	7.64	6.45	6.56	1074.40	0/1
		27-Oct-16	1080.85	1080.96	7.81	6.36	6.47	1074.49	40/0
		18-Aug-16	1080.85	1080.96	7.50	6.42	6.54	1074.43	55/0
		03-May-16	1080.85	1080.96	7.78	6.52	6.63	1074.34	0/0
		17-Feb-16	1080.85	1080.96	7.79	6.45	6.57	1074.40	0/1
		10-Nov-15	1080.85	1080.96	7.81	6.41	6.52	1074.45	0/0
		02-Sep-15	1080.85	1080.96	7.96	6.46	6.57	1074.39	0/1
		09-Jun-15	1080.85	1080.96	7.73	6.48	6.60	1074.37	0/1
31-Mar-15	1080.85	1080.96	7.46	5.43	5.54	1075.42	0/0		
BH1983**	3	17-Feb-16	1090.53	1090.64	15.04	9.64	9.74	1080.90	40/2
		12-Nov-15	1090.53	1090.64	-	9.65	9.75	1080.89	0/5
		15-Sep-15	1090.53	1090.64	14.93	9.67	9.77	1080.86	15/14
		09-Jun-15	1090.53	1090.64	14.48	9.02	9.12	1081.52	20/3
		08-May-15	1090.53	1090.64	17.86	9.82	9.92	1080.71	1,050/60
		24-Feb-17	1090.59	1090.71	17.90	9.75	9.87	1080.84	105/0
BH1983A**	3	23-Mar-18	1090.59	1090.71	17.93	9.78	9.90	1080.81	3500/1
		24-Feb-17	1090.59	1090.71	17.90	9.75	9.87	1080.84	105/0

## Notes:

\* BH1979 was damaged prior to the 2016 summer monitoring event.

\*\* BH1983 was decommissioned and replaced with BH1983A on 12 April 2016.



Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)
BH1983A	3	31-Oct-16	1090.59	1090.71	17.95	9.62	9.74	1080.97	0/1
		17-Aug-16	1090.59	1090.71	17.97	9.68	9.80	1080.90	0/0
		03-May-16	1090.59	1090.71	16.22	9.73	9.85	1080.86	45/21
BH1984	3	23-Mar-18	1090.37	1090.46	15.55	9.12	9.21	1081.25	>11,100/>2,000
		24-Feb-17	1090.37	1090.46	15.35	9.10	9.19	1081.27	220/160
		31-Oct-16	1090.37	1090.46	15.33	8.99	9.08	1081.38	>11,100/>2,000
		18-Aug-16	1090.37	1090.46	15.29	9.10	9.19	1081.27	0/17
		04-May-16	1090.37	1090.46	15.38	9.12	9.21	1081.25	>11,100/>2,000
		16-Feb-16	1090.37	1090.46	15.41	9.04	9.13	1081.33	5,300/1,990
		12-Nov-15	1090.37	1090.46	15.58	9.06	9.15	1081.31	1,600/937
		15-Sep-15	1090.37	1090.46	15.36	9.05	9.14	1081.32	>11,100/>2,000
		09-Jun-15	1090.37	1090.46	15.47	9.12	9.21	1081.25	35/23
		07-May-15	1090.37	1090.46	15.50	9.08	9.17	1081.29	>11,100/>2,500
		BH1985	3	23-Mar-18	1090.21	1090.31	17.44	8.88	8.99
24-Feb-17	1090.21			1090.31	17.19	8.86	8.96	1081.35	70/0
31-Oct-16	1090.21			1090.31	17.17	8.67	8.78	1081.54	160/0
17-Aug-16	1090.21			1090.31	17.20	8.84	8.94	1081.37	0/1
04-May-16	1090.21			1090.31	17.23	8.87	8.97	1081.35	5/0
16-Feb-16	1090.21			1090.31	17.25	8.78	8.88	1081.43	0/0
12-Nov-15	1090.21			1090.31	17.37	8.81	8.91	1081.40	0/1
15-Sep-15	1090.21			1090.31	17.32	8.76	8.86	1081.45	0/0
09-Jun-15	1090.21			1090.31	17.47	8.86	8.96	1081.36	0/0
07-May-15	1090.21			1090.31	17.04	8.81	8.91	1081.40	15/0
BH1986	2			23-Mar-18	1090.31	1090.42	6.69	-	-
		24-Feb-17	1090.31	1090.42	6.66	-	-	-	100/2 (DRY)
		31-Oct-16	1090.31	1090.42	6.69	-	-	-	115/17 (DRY)
		18-Aug-16	1090.31	1090.42	6.67	-	-	-	0/0 (DRY)
		04-May-16	1090.31	1090.42	6.70	-	-	-	15/0 (DRY)
		16-Feb-16	1090.31	1090.42	6.67	-	-	-	0/0 (DRY)
		12-Nov-15	1090.31	1090.42	6.68	-	-	-	0/1 (DRY)
		15-Sep-15	1090.31	1090.42	6.69	-	-	-	5/1 (DRY)
		09-Jun-15	1090.31	1090.42	6.71	-	-	-	10/1 (DRY)
		22-Apr-15	1090.31	1090.42	6.69	-	-	-	10/1 (DRY)
		BH1987	2	23-Mar-18	1090.15	1090.27	6.03	-	-
24-Feb-17	1090.15			1090.27	5.98	-	-	-	110/2 (DRY)
31-Oct-16	1090.15			1090.27	6.00	-	-	-	10/0 (DRY)
17-Aug-16	1090.15			1090.27	6.01	-	-	-	0/1 (DRY)
04-May-16	1090.15			1090.27	6.03	-	-	-	0/0 (DRY)
16-Feb-16	1090.15			1090.27	6.01	-	-	-	0/0 (DRY)
12-Nov-15	1090.15			1090.27	6.01	-	-	-	0/0 (DRY)
15-Sep-15	1090.15			1090.27	6.01	-	-	-	0/1 (DRY)
09-Jun-15	1090.15			1090.27	6.04	-	-	-	0/1 (DRY)
22-Apr-15	1090.15			1090.27	6.00	-	-	-	0/1 (DRY)
BH1988	1			23-Mar-18	1090.16	1090.26	4.53	-	-
		24-Feb-17	1090.16	1090.26	4.48	-	-	-	0/2 (DRY)
		31-Oct-16	1090.16	1090.26	4.49	-	-	-	0/10 (DRY)
		17-Aug-16	1090.16	1090.26	4.50	-	-	-	0/1 (DRY)
		04-May-16	1090.16	1090.26	4.53	-	-	-	0/0 (DRY)
		16-Feb-16	1090.16	1090.26	4.50	-	-	-	0/0 (DRY)
		12-Nov-15	1090.16	1090.26	4.50	-	-	-	0/1 (DRY)
		15-Sep-15	1090.16	1090.26	4.49	-	-	-	0/0 (DRY)
		09-Jun-15	1090.16	1090.26	4.54	-	-	-	0/0 (DRY)
		22-Apr-15	1090.16	1090.26	4.50	-	-	-	0/0 (DRY)
		BH2001	5	21-Mar-18	1069.85	1069.94	4.71	1.11	1.20
06-Sep-17	1069.85			1069.94	4.70	1.11	1.21	1068.74	80/0
03-May-17	1069.85			1069.94	4.72	1.06	1.15	1068.79	0/1
22-Feb-17	1069.85			1069.94	4.71	1.10	1.19	1068.75	0/1
28-Oct-16	1069.85			1069.94	4.60	0.95	1.04	1068.90	25/4
17-Aug-16	1069.85			1069.94	4.60	0.97	1.06	1068.88	0/2
03-May-16	1069.85			1069.94	4.62	1.09	1.18	1068.76	0/1
BH2002	4	21-Mar-18	1070.03	1070.14	3.83	2.43	2.55	1067.60	0/1
		07-Sep-17	1070.03	1070.14	3.83	2.57	2.68	1067.46	0/1
		03-May-17	1070.03	1070.14	3.83	2.33	2.45	1067.70	0/1
		21-Feb-17	1070.03	1070.14	3.83	2.46	2.58	1067.57	0/1
		28-Oct-16	1070.03	1070.14	3.81	2.49	2.60	1067.54	0/1
		18-Aug-16	1070.03	1070.14	3.80	2.40	2.51	1067.63	0/1
		03-May-16	1070.03	1070.14	3.84	2.43	2.55	1067.60	15/1
BH2003	3	21-Mar-18	1073.31	1073.48	4.63	2.72	2.89	1070.59	0/0
		07-Sep-17	1073.31	1073.48	4.60	2.76	2.93	1070.54	10/1
		03-May-17	1073.31	1073.48	4.66	2.70	2.87	1070.61	55/1
		21-Feb-17	1073.31	1073.48	4.66	2.75	2.91	1070.56	0/3
		28-Oct-16	1073.31	1073.48	4.64	2.69	2.86	1070.62	55/1
		18-Aug-16	1073.31	1073.48	4.64	2.64	2.80	1070.67	5/0
		03-May-16	1073.31	1073.48	4.60	2.74	2.91	1070.57	5/1
BH2004	4.5	21-Mar-18	1074.03	1074.18	6.28	5.03	5.18	1069.00	0/4
		06-Sep-17	1074.03	1074.18	6.27	5.04	5.19	1069.00	25/1
		02-May-17	1074.03	1074.18	6.28	4.86	5.01	1069.17	0/0
		23-Feb-17	1074.03	1074.18	6.27	5.06	5.21	1068.97	0/3
		31-Oct-16	1074.03	1074.18	6.26	5.21	5.35	1068.83	0/2
		18-Aug-16	1074.03	1074.18	6.25	5.14	5.29	1068.90	0/1
		03-May-16	1074.03	1074.18	6.28	4.70	4.85	1069.34	15/1



Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)
BH2005	3	21-Mar-18	1076.70	1076.84	6.30	3.17	3.31	1073.53	25/0
		06-Sep-17	1076.70	1076.84	6.36	3.42	3.56	1073.28	10/0
		03-May-17	1076.70	1076.84	6.33	3.08	3.22	1073.62	0/0
		22-Feb-17	1076.70	1076.84	6.33	3.17	3.31	1073.53	0/0
		27-Oct-16	1076.70	1076.84	6.31	3.02	3.16	1073.68	0/1
		17-Aug-16	1076.70	1076.84	6.31	2.66	2.80	1074.04	0/1
		03-May-16	1076.70	1076.84	6.40	3.23	3.37	1073.47	0/0
BH2006	3,4,5	21-Mar-18	1074.10	1074.24	4.84	1.26	1.40	1072.84	15/1
		06-Sep-17	1074.10	1074.24	4.83	1.46	1.60	1072.64	5/0
		03-May-17	1074.10	1074.24	4.85	1.16	1.30	1072.94	0/1
		22-Feb-17	1074.10	1074.24	4.84	1.27	1.41	1072.83	0/4
		27-Oct-16	1074.10	1074.24	4.83	1.30	1.44	1072.80	35/1
		17-Aug-16	1074.10	1074.24	4.81	1.07	1.21	1073.03	0/1
		03-May-16	1074.10	1074.24	4.81	1.28	1.42	1072.82	10/1
BH2007	3	20-Mar-18	1091.72	1091.86	17.38	11.37	11.52	1080.35	0/0
		05-Sep-17	1091.72	1091.86	17.18	11.42	11.57	1080.30	20/1
		26-Apr-17	1091.72	1091.86	17.21	11.15	11.30	1080.57	0/1
		21-Feb-17	1091.72	1091.86	17.25	11.22	11.36	1080.50	0/4
		31-Oct-16	1091.72	1091.86	17.27	9.38	9.52	1082.34	0/1
		17-Aug-16	1091.72	1091.86	17.20	11.24	11.38	1080.48	0/1
		03-May-16	1091.72	1091.86	14.83	11.27	11.41	1080.45	50/1
BH2008	2	20-Mar-18	1091.80	1091.93	12.57	10.08	10.21	1081.72	0/0
		05-Sep-17	1091.80	1091.93	12.59	10.30	10.43	1081.50	25/0
		26-Apr-17	1091.80	1091.93	12.57	9.43	9.57	1082.36	25/0
		21-Feb-17	1091.80	1091.93	12.60	9.55	9.68	1082.25	0/3
		31-Oct-16	1091.80	1091.93	12.58	11.09	11.22	1080.71	0/1
		17-Aug-16	1091.80	1091.93	12.58	9.80	9.93	1082.00	0/0
		10-Jun-16	1091.80	1091.93	-	10.18	10.31	1081.62	-
03-May-16	1091.80	1091.93	12.62	10.16	10.30	1081.64	0/1		
BH2009	1	20-Mar-18	1091.95	1092.02	4.92	-	-	-	0/0 (DRY)
		05-Sep-17	1091.95	1092.02	4.94	-	-	-	5/0 (DRY)
		26-Apr-17	1091.95	1092.02	4.92	-	-	-	5/0 (DRY)
		21-Feb-17	1091.95	1092.02	4.95	-	-	-	0/3 (DRY)
		31-Oct-16	1091.95	1092.02	4.92	-	-	-	15/0 (DRY)
		17-Aug-16	1091.95	1092.02	4.90	-	-	-	0/0 (DRY)
		03-May-16	1091.95	1092.02	4.94	4.92	5.00	1087.02	0/0 (Insufficient Water)
BH2010	3	20-Mar-18	1094.27	1094.38	18.65	13.97	14.07	1080.30	40/1
		05-Sep-17	1094.27	1094.38	18.628	14.10	14.21	1080.17	50/1
		26-Apr-17	1094.27	1094.38	18.645	13.74	13.85	1080.53	0/2
	3	16-Feb-17	1094.27	1094.38	18.66	14.05	14.15	1080.23	0/3
		31-Oct-16	1094.27	1094.38	18.64	13.99	14.10	1080.28	60/2
		17-Aug-16	1094.27	1094.38	18.63	13.84	13.95	1080.43	0/0
		03-May-16	1094.27	1094.38	16.78	13.87	13.98	1080.40	5/1
BH2011	2	20-Mar-18	1094.07	1094.26	13.96	-	-	-	0/1 (DRY)
		05-Sep-17	1094.07	1094.26	13.96	-	-	-	0/2 (DRY)
		26-Apr-17	1094.07	1094.26	13.96	12.59	12.78	1081.48	0/1
		17-Feb-17	1094.07	1094.26	13.97	13.95	14.14	1080.12	0/3 (Insufficient Water)
		31-Oct-16	1094.07	1094.26	13.93	-	-	-	20/1 (DRY)
		17-Aug-16	1094.07	1094.26	13.94	12.50	12.69	1081.57	0/1
		10-Jun-16	1094.07	1094.26	-	13.32	13.51	1080.75	-
03-May-16	1094.07	1094.26	13.94	11.69	11.88	1082.38	0/2		
BH2012	3	20-Mar-18	1094.72	1094.90	17.82	13.60	13.78	1081.13	0/2
		05-Sep-17	1094.72	1094.90	17.86	13.62	13.80	1081.10	5/0
		26-Apr-17	1094.72	1094.90	17.80	13.42	13.60	1081.31	0/0
		22-Feb-17	1094.72	1094.90	17.88	13.55	13.73	1081.18	0/0
		31-Oct-16	1094.72	1094.90	18.00	13.36	13.54	1081.36	10/1
		17-Aug-16	1094.72	1094.90	17.95	13.52	13.70	1081.21	0/1
		03-May-16	1094.72	1094.90	16.08	13.54	13.72	1081.18	65/1
BH510A		22-Mar-18	-	-	17.26	13.70	-	-	0/0
		05-Sep-17	-	-	16.58	13.68	-	-	0/0
		02-May-17	-	-	16.55	13.63	-	-	10/0
		27-Feb-17	-	-	16.54	13.62	-	-	100/12
		31-Oct-16	-	-	16.58	13.58	-	-	0/13
		16-Aug-16	-	-	16.54	13.64	-	-	45/8
		05-May-16	-	-	16.58	13.69	-	-	0/1
		18-Feb-16	-	-	16.65	13.51	-	-	850/307
		10-Nov-15	-	-	17.16	13.62	-	-	5/3
		02-Sep-15	-	-	16.50	13.60	-	-	0/0
09-Jun-15	-	-	17.25	13.66	-	-	10/0		
07-Apr-15	-	-	17.01	13.61	-	-	-		
BH732		21-Mar-18	-	-	11.27	5.63	-	-	0/0
		07-Sep-17	-	-	11.24	5.54	-	-	10/0
		03-May-17	-	-	11.29	5.75	-	-	90/0
		21-Feb-17	-	-	11.33	5.89	-	-	10/0
		27-Oct-16	-	-	11.39	6.23	-	-	5/0
		18-Aug-16	-	-	11.41	6.25	-	-	0/2
		03-May-16	-	-	11.94	6.31	-	-	65/0
		17-Feb-16	-	-	11.93	6.26	-	-	0/0
		10-Nov-15	-	-	12.07	6.19	-	-	0/0
		02-Sep-15	-	-	11.99	6.20	-	-	0/0
09-Jun-15	-	-	12.09	6.30	-	-	0/0		
10-Apr-15	-	-	12.50	6.33	-	-	-		

Table 1 - Summary of Well Monitoring

Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)	
BH912		21-Mar-18	-	-	4.59	2.58	-	-	0/1	
		06-Sep-17	-	-	4.59	2.65	-	-	0/0	
		03-May-17	-	-	4.59	2.42	-	-	15/1	
		22-Feb-17	-	-	4.60	2.55	-	-	0/0	
		28-Oct-16	-	-	4.55	2.43	-	-	40/0	
		18-Aug-16	-	-	4.55	2.30	-	-	123/0	
		03-May-16	-	-	4.47	2.59	-	-	5/0	
		17-Feb-16	-	-	4.47	2.60	-	-	0/1	
		09-Nov-15	-	-	4.48	2.62	-	-	5/1	
		01-Sep-15	-	-	4.34	2.59	-	-	0/1	
		09-Jun-15	-	-	4.45	2.64	-	-	0/1	
		10-Apr-15	-	-	4.25	2.59	-	-	0/3	
	BH1102		20-Mar-18	-	-	13.78	10.58	-	-	0/1
		05-Sep-17	-	-	13.79	10.58	-	-	0/0	
		01-May-17	-	-	13.79	10.56	-	-	15/0	
		16-Feb-17	-	-	13.81	10.55	-	-	0/0	
		27-Oct-16	-	-	13.76	10.48	-	-	0/1	
		16-Aug-16	-	-	13.78	10.55	-	-	10/0	
		04-May-16	-	-	13.77	10.51	-	-	0/0	
		17-Feb-16	-	-	13.77	10.45	-	-	0/0	
		09-Nov-15	-	-	13.90	10.49	-	-	0/0	
		01-Sep-15	-	-	13.77	10.49	-	-	0/2	
		09-Jun-15	-	-	13.77	10.54	-	-	0/0	
		31-Mar-15	-	-	13.77	10.40	-	-	35/1	
BH1701			22-Mar-18	-	-	11.84	9.71	-	-	160/0
		05-Sep-17	-	-	11.84	9.77	-	-	Not Measured	
		02-May-17	-	-	11.82	9.63	-	-	10/0	
		27-Feb-17	-	-	11.83	9.63	-	-	50/0	
		31-Oct-16	-	-	11.81	9.58	-	-	110/0	
		16-Aug-16	-	-	11.81	9.64	-	-	0/0	
		05-May-16	-	-	11.80	9.63	-	-	0/1	
		17-Feb-16	-	-	11.81	9.54	-	-	0/0	
		10-Nov-15	-	-	11.88	9.53	-	-	0/1	
		02-Sep-15	-	-	11.79	9.56	-	-	0/0	
		09-Jun-15	-	-	11.97	9.60	-	-	10/0	
		01-Apr-15	-	-	11.79	9.56	-	-	0/0	
	BH1704		20-Mar-18	-	-	12.22	10.72	-	-	1,000/305
		05-Sep-17	-	-	10.60	12.23	-	-	>11,100/>2,000	
		05-May-17	-	-	12.22	10.61	-	-	75/112	
		27-Feb-17	-	-	12.20	10.51	-	-	6,505/300	
		31-Oct-16	-	-	12.20	10.55	-	-	300/200	
		16-Aug-16	-	-	12.19	10.57	-	-	260/166	
		05-May-16	-	-	12.08	10.55	-	-	>11,100/>2,000	
		18-Feb-16	-	-	12.08	10.46	-	-	>11,100/>2,000	
		10-Nov-15	-	-	12.11	10.56	-	-	>11,100/>2,000	
		02-Sep-15	-	-	11.94	10.45	-	-	5,100/>2,000	
		09-Jun-15	-	-	12.13	10.53	-	-	480/305	
		02-Apr-15	-	-	12.13	10.33	-	-	240/100	
EX1			03-Apr-18	-	-	15.35	13.75	-	-	155/63
		05-May-17	-	-	15.37	13.68	-	-	0/1	
		28-Feb-17	-	-	15.41	13.76	-	-	15/0	
		01-Nov-16	-	-	15.44	13.74	-	-	25/0	
		17-Aug-16	-	-	15.37	13.79	-	-	25/1	
		06-May-16	-	-	15.40	13.80	-	-	0/0	
		18-Feb-16	-	-	15.47	13.56	-	-	280/123	
		10-Nov-15	-	-	16.05	13.74	-	-	0/0	
		02-Sep-15	-	-	15.44	13.69	-	-	0/0	
		09-Jun-15	-	-	15.85	13.72	-	-	0/0	
		17-Apr-15	-	-	15.89	13.71	-	-	10/0	
	EX2		23-Mar-18	-	-	14.12	12.86	-	-	0/1
			05-May-17	-	-	14.13	12.79	-	-	0/4
		28-Feb-17	-	-	14.66	12.90	-	-	80/2	
		01-Nov-16	-	-	14.07	12.35	-	-	0/0	
		16-Aug-16	-	-	14.06	12.84	-	-	0/0	
		05-May-16	-	-	14.00	12.88	-	-	15/0	
		18-Feb-16	-	-	14.35	12.67	-	-	330/129	
		10-Nov-15	-	-	14.48	12.82	-	-	0/0	
		02-Sep-15	-	-	13.95	12.79	-	-	0/0	
		09-Jun-15	-	-	14.36	12.79	-	-	0/1	
		14-Apr-15	-	-	14.06	12.76	-	-	0/5	
EX3			03-Apr-18	-	-	13.34	11.46	-	-	0/0
			05-May-17	-	-	13.29	10.30	-	-	0/1
		28-Feb-17	-	-	13.34	11.45	-	-	100/4	
		01-Nov-16	-	-	15.44	13.74	-	-	0/0	
		17-Aug-16	-	-	13.27	11.40	-	-	25/0	
		06-May-16	-	-	12.29	11.39	-	-	0/0	
		18-Feb-16	-	-	13.26	11.22	-	-	0/1	
		10-Nov-15	-	-	13.42	11.34	-	-	0/0	
		02-Sep-15	-	-	13.29	11.31	-	-	0/1	
		09-Jun-15	-	-	12.50	11.28	-	-	0/0	
		14-Apr-15	-	-	13.25	11.31	-	-	0/1	

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Monitor Well	Screened Unit	Monitor Date (dd-mmm-yy)	Top of PVC Pipe Elevation (masl <sup>1</sup> )	Ground Surface Elevation (masl <sup>2</sup> )	Total Depth bTOP <sup>3</sup> (m)	Depth to Water bTOP (m)	Depth to Water BGS <sup>4</sup> (m)	Water Elevation (masl)	Monitor Well Vapour Concentration <sup>5</sup> HEX/IBL (ppm)	
EX4		23-Mar-18	-	-	10.98	10.04	-	-	105/101	
		08-May-17	-	-	11.10	9.97	-	-	120/40	
		01-Mar-17	-	-	11.22	10.02	-	-	200/50	
		01-Nov-16	-	-	11.13	9.93	-	-	40/11	
		16-Aug-16	-	-	11.50	9.98	-	-	200/155	
		05-May-16	-	-	12.25	10.07	-	-	0/4	
		18-Feb-16	-	-	12.62	9.82	-	-	2,200/591	
		10-Nov-15	-	-	12.44	9.97	-	-	150/148	
		02-Sep-15	-	-	12.32	10.00	-	-	460/225	
		09-Jun-15	-	-	12.64	9.96	-	-	40/73	
		15-Apr-15	-	-	12.22	9.94	-	-	60/20	
	EX5		23-Mar-18	-	-	12.99	10.67	-	-	780/232
			05-May-17	-	-	13.12	10.53	-	-	605/1,150
			01-Mar-17	-	-	13.11	10.66	-	-	320/120
		01-Nov-16	-	-	13.19	10.65	-	-	180/99	
		16-Aug-16	-	-	13.00	10.34	-	-	1,050/478	
		05-May-16	-	-	13.29	10.43	-	-	550/274	
		18-Feb-16	-	-	13.41	10.17	-	-	1,250/513	
		10-Nov-15	-	-	13.51	10.31	-	-	940/422	
		02-Sep-15	-	-	13.25	10.39	-	-	330/138	
		09-Jun-15	-	-	13.57	10.29	-	-	510/230	
		16-Apr-15	-	-	13.75	10.33	-	-	290/198	
EX6		23-Mar-18	-	-	11.70	11.00	-	-	0/2	
		05-May-17	-	-	11.30	10.85	-	-	0/28	
		01-Mar-17	-	-	11.33	11.02	-	-	60/12	
		01-Nov-16	-	-	11.18	10.91	-	-	25/13	
		17-Aug-16	-	-	11.51	10.99	-	-	0/6	
		05-May-16	-	-	12.85	10.98	-	-	0/1	
		18-Feb-16	-	-	12.81	10.75	-	-	165/59	
		10-Nov-15	-	-	12.74	10.86	-	-	0/8	
		02-Sep-15	-	-	12.75	10.90	-	-	290/61	
		09-Jun-15	-	-	12.82	10.88	-	-	0/12	
		17-Apr-15	-	-	12.77	10.92	-	-	5/2	
EX7		23-Mar-18	-	-	12.58	11.34	-	-	0/7	
		05-May-17	-	-	12.63	11.15	-	-	0/7	
		01-Mar-17	-	-	12.66	11.30	-	-	55/2	
		01-Nov-16	-	-	12.63	11.23	-	-	155/102	
		17-Aug-16	-	-	12.73	11.16	-	-	0/1	
		05-May-16	-	-	12.70	11.06	-	-	0/0	
		18-Feb-16	-	-	13.00	10.91	-	-	360/225	
		10-Nov-15	-	-	12.96	10.96	-	-	0/12	
		02-Sep-15	-	-	12.69	10.99	-	-	3,200/1,191	
		09-Jun-15	-	-	13.11	10.99	-	-	0/35	
		18-Apr-15	-	-	13.24	10.97	-	-	45/35	

**Notes:**

- 1 Meter above sea level
  - 2 Ground surface elevation based on survey completed in May 2015 by Clifton Associates Ltd.
  - 3 Below top of pipe
  - 4 Below ground surface
  - 5 Vapour concentrations measured in monitoring wells with an RKI Eagle gas portable monitor with PID.
- HEX/IBL Hexane/Isobutylene  
- not measured

**Table 2 - Summary of Groundwater Laboratory Analyses  
QA/QC - Trip Blank - VOCs**

Sample ID	Reportable Detection Limits <sup>1</sup>	Trip Blank 1	Trip Blank 2	Trip Blank 3	Trip Blank 4	Trip Blank 5
Sample Date		26-Mar-18	27-Mar-18	28-Mar-18	29-Mar-18	03-Apr-18
1,1,1,2-tetrachloroethane	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,1,1-trichloroethane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1,2,2-tetrachloroethane	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
1,1,2-trichloroethane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1-dichloroethane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1-dichloroethene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2,3-trichlorobenzene	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-trichlorobenzene	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-trimethylbenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-dibromoethane	0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
1,2-dichlorobenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-dichloroethane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-dichloropropane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,3,5-trichlorobenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,3,5-trimethylbenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,3-dichlorobenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,4-dichlorobenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Benzene	0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Bromodichloromethane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bromoform	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bromomethane	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Carbon tetrachloride	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorodibromomethane	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chloroethane	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chloromethane	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
cis-1,2-dichloroethene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
cis-1,3-dichloropropene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dichloromethane	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Ethylbenzene	0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
m & p-Xylene	0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Methyl methacrylate	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butylether (MTBE)	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
o-Xylene	0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Styrene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tetrachloroethene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Trihalomethanes	0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
trans-1,2-dichloroethene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
trans-1,3-dichloropropene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Trichloroethene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Trichlorofluoromethane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Vinyl chloride	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Xylenes (Total)	0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080

**Notes:**

<sup>1</sup> Reportable detection limits in mg/L.

**Bold** indicates that the concentration exceeded the reportable detection limits.

All results in mg/L unless otherwise noted.

Testing was conducted by Maxxam Analytics, Calgary, Alberta

**Table 2 - Summary of Groundwater Laboratory Analyses  
QA/QC - Trip Blank - VOCs**

Sample ID	Reportable Detection Limits <sup>1</sup>	Trip Blank 6	Trip Blank 7	Trip Blank 8	Trip Blank 9
Sample Date		04-Apr-18	05-Apr-18	06-Apr-18	10-Apr-18
1,1,1,2-tetrachloroethane	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,1,1-trichloroethane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1,2,2-tetrachloroethane	0.0020	<0.0020	<0.0020	<0.0020	<0.0020
1,1,2-trichloroethane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1-dichloroethane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1-dichloroethene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2,3-trichlorobenzene	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-trichlorobenzene	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-trimethylbenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-dibromoethane	0.00020	<0.00020	<0.00020	<0.00020	<0.00020
1,2-dichlorobenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-dichloroethane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-dichloropropane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,3,5-trichlorobenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,3,5-trimethylbenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,3-dichlorobenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,4-dichlorobenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Benzene	0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Bromodichloromethane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bromoform	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bromomethane	0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Carbon tetrachloride	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorodibromomethane	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chloroethane	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chloroform	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chloromethane	0.0020	<0.0020	<0.0020	<0.0020	<0.0020
cis-1,2-dichloroethene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
cis-1,3-dichloropropene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dichloromethane	0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Ethylbenzene	0.00040	<0.00040	<0.00040	<0.00040	<0.00040
m & p-Xylene	0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Methyl methacrylate	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butylether (MTBE)	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
o-Xylene	0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Styrene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tetrachloroethene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Trihalomethanes	0.0013	<0.0013	<0.0013	<0.0013	<0.0013
trans-1,2-dichloroethene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
trans-1,3-dichloropropene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Trichloroethene	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Trichlorofluoromethane	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Vinyl chloride	0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Xylenes (Total)	0.00080	<0.00080	<0.00080	<0.00080	<0.00080

**Notes:**

<sup>1</sup> Reportable detection limits in mg/L.

**Bold** Indicates that the concentration exceeded the reportable detection limits.

All results in mg/L unless otherwise noted.

Testing was conducted by Maxxam Analytics, Calgary, Alberta

**Table 3 - Summary of Groundwater Laboratory Analyses  
QA/QC - Field and Laboratory Duplicate - BTEX, PHC fractions F1 - F2, and PAHs**

Sample ID	Reportable Detection Limit	BH1905	BH9905	RPD <sup>1</sup> (%)	BH1915	BH9915	RPD <sup>1</sup> (%)	BH1915B	BH9915B	RPD <sup>1</sup> (%)	BH1921	BH9921	RPD <sup>1</sup> (%)	BH1939	BH9939	RPD <sup>1</sup> (%)
Sample Date	Limit	06-Apr-18			05-Apr-18			05-Apr-18			29-Mar-18			10-Apr-18		
<b>BTEX and PHC fractions F1 - F2</b>																
Benzene	0.00040	0.028	0.028	0.0	0.053	0.061	14.0	0.078	0.082	5.0	0.044	0.043	2.3	0.52	0.50	3.9
Toluene	0.00040	0.0028	0.0029	3.5	0.0020	0.0022	9.5	0.0022	0.0016	32	0.0067	0.0066	1.5	0.0020	0.0020	0.0
Ethylbenzene	0.00040	0.36	0.37	2.7	<0.00040	<0.00040	NC	0.00099	0.00059	51	0.028	0.029	3.5	0.057	0.046	21.4
Xylenes (Total)	0.00089	2.3	2.4	4.3	0.12	0.11	8.7	0.13	0.12	8.0	0.0033	0.0032	3.1	0.0058	0.0060	3.4
F1 minus BTEX (C6 - C10)	0.10	4.7	5.0	6.2	1.8	1.8	0.0	1.3	1.3	0.0	0.65	0.57	13.1	0.40	0.57	35.1
F2 (C10 - C16)	0.10	2.7	2.5	7.7	0.33	0.29	12.9	0.49	0.55	12	<0.10	<0.10	NC	<0.10	<0.10	NC
<b>PAHs</b>																
1-Methylnaphthalene	0.00010	0.032	0.029	9.8	0.0089	0.0069	25	0.0084	0.0092	9.1						
2-Methylnaphthalene	0.00010	0.046	0.040	14	0.018	0.014	25	0.018	0.019	5.4						
Acenaphthene	0.00010	0.00033	0.00029	13	<0.00010	<0.00010	NC	<0.00010	<0.00010	NC						
Acenaphthylene	0.00010	<0.00010	<0.00010	NC	<0.00010	<0.00010	NC	<0.00010	<0.00010	NC						
Acridine	0.00020	0.00018	0.0002	11	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC						
Anthracene	0.00010	0.00054	0.00052	3.8	<0.00010	<0.00010	NC	<0.00010	<0.00010	NC						
Benzo(a)anthracene	0.0000085	0.000026	0.000041	45	<0.000085	<0.000085	NC	<0.000085	<0.000085	NC						
Benzo(a)pyrene	0.0000075	0.000016	0.000018	12	<0.000075	<0.000075	NC	<0.000075	<0.000075	NC						
Benzo(b&j)fluoranthene	0.0000085	0.000023	0.000027	16	<0.000085	<0.000085	NC	<0.000085	<0.000085	NC						
Benzo(c)phenanthrene	0.000050	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC						
Benzo(g,h,i)perylene	0.0000085	<0.000085	<0.000085	NC	<0.000085	<0.000085	NC	<0.000085	<0.000085	NC						
Benzo(k)fluoranthene	0.0000085	<0.000085	0.000009	NC	<0.000085	<0.000085	NC	<0.000085	<0.000085	NC						
Benzo(a)pyrene equivalency	0.000010	0.000025	0.00003	18	<0.00010	<0.00010	NC	<0.00010	<0.00010	NC						
Benzo(e)pyrene	0.000050	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC						
Chrysene	0.0000085	0.000034	0.000051	40	<0.000085	<0.000085	NC	<0.000085	<0.000085	NC						
Dibenz(a,h)anthracene	0.0000075	<0.000075	<0.000075	NC	<0.000075	<0.000075	NC	<0.000075	<0.000075	NC						
Fluoranthene	0.000010	0.00024	0.00033	32	<0.00010	<0.00010	NC	<0.00010	<0.00010	NC						
Fluorene	0.000050	0.00032	0.00028	13	0.000086	0.000073	16	0.000078	0.000085	8.6						
Indeno(1,2,3-cd)pyrene	0.0000085	<0.000085	<0.000085	NC	<0.000085	<0.000085	NC	<0.000085	<0.000085	NC						
Naphthalene	0.00010	0.12	0.12	0.0	0.011	0.0088	22	0.011	0.012	8.7						
Perylene	0.000050	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC						
Phenanthrene	0.000050	0.00032	0.00030	6.5	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC						
Pyrene	0.000020	0.00027	0.00038	34	<0.000020	<0.000020	NC	<0.000020	<0.000020	NC						
Quinoline	0.00020	0.0048	0.0041	16	0.00044	0.00034	26	0.00066	0.00080	19						

**Notes:**  
<sup>1</sup> Relative percent difference.  
**Red** RPD exceeds 80% for organic constituents.  
 NC Not calculated.  
 N/A Not applicable.  
 All results in mg/L unless otherwise noted.  
 Testing was conducted by Maxxam Analytics, Calgary, Alberta



**Table 3 - Summary of Groundwater Laboratory Analyses  
QA/QC - Field and Laboratory Duplicate - BTEX, PHC fractions F1 - F2, and PAHs**

Sample ID	Reportable Detection Limit	BH1967	BH9967	RPD <sup>1</sup> (%)	BH1971	BH9971	RPD <sup>1</sup> (%)	BH1982	BH9982	RPD <sup>1</sup> (%)	BH510A	BH9510A	RPD <sup>1</sup> (%)	EX1	EX91	RPD <sup>1</sup> (%)
Sample Date		06-Apr-18			27-Mar-18			10-Apr-18			29-Mar-18			04-Apr-18		
<b>BTEX and PHC fractions F1 - F2</b>																
Benzene	0.00040	0.16	0.16	0.0	0.031	0.031	0.0	5.9	5.8	1.7	0.090	0.073	20.9	0.30	0.29	3.4
Toluene	0.00040	0.018	0.019	5.4	0.0015	0.0015	0.0	0.015	0.015	0.0	0.0017	0.0015	12.5	0.0046	0.0046	0.0
Ethylbenzene	0.00040	0.18	0.19	5.4	0.095	0.11	15	0.092	0.086	6.7	0.047	0.044	6.6	0.040	0.039	2.5
Xylenes (Total)	0.00089	0.0048	0.0046	4.3	<0.00089	<0.00089	NC	0.010	0.010	2.0	0.022	0.020	9.5	0.039	0.037	5.3
F1 minus BTEX (C6 - C10)	0.10	3.0	3.3	10	1.1	1.4	24	<1.0	<1.0	NC	0.19	0.15	24	0.11	0.11	0.0
F2 (C10 - C16)	0.10	0.38	0.3	23.5	0.27	0.21	25	<0.10	<0.10	NC	<0.10	<0.10	NC	<0.10	<0.10	NC
<b>PAHs</b>																
1-Methylnaphthalene	0.00010				0.0010	0.00097	3.0	<0.00010	<0.00010	NC	0.00018	0.00021	15			
2-Methylnaphthalene	0.00010				<0.00010	<0.00010	NC	<0.00010	<0.00010	NC	0.00026	0.00029	11			
Acenaphthene	0.00010				<0.00010	<0.00010	NC	<0.00010	<0.00010	NC	<0.00010	<0.00010	NC			
Acenaphthylene	0.00010				<0.00010	<0.00010	NC	<0.00010	<0.00010	NC	<0.00010	<0.00010	NC			
Acridine	0.00020				<0.000050	<0.000050	NC	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC			
Anthracene	0.00010				<0.000010	<0.000010	NC	<0.000010	<0.000010	NC	<0.000010	<0.000010	NC			
Benzo(a)anthracene	0.0000085				<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC			
Benzo(a)pyrene	0.0000075				<0.0000075	<0.0000075	NC	<0.0000075	<0.0000075	NC	<0.0000075	<0.0000075	NC			
Benzo(b&j)fluoranthene	0.0000085				<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC			
Benzo(c)phenanthrene	0.0000050				<0.000050	<0.000050	NC	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC			
Benzo(g,h,i)perylene	0.0000085				<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC			
Benzo(k)fluoranthene	0.0000085				<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC			
Benzo[a]pyrene equivalency	0.00010		No Duplicate Analyzed		<0.010	<0.010	NC	<0.000010	<0.000010	NC	<0.010	<0.010	NC		No Duplicate Analyzed	
Benzo[e]pyrene	0.000050				<0.000050	<0.000050	NC	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC			
Chrysene	0.0000085				<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC			
Dibenz(a,h)anthracene	0.0000075				<0.0000075	<0.0000075	NC	<0.0000075	<0.0000075	NC	<0.0000075	<0.0000075	NC			
Fluoranthene	0.000010				<0.000010	<0.000010	NC	<0.000010	<0.000010	NC	<0.000010	<0.000010	NC			
Fluorene	0.000050				<0.000050	<0.000050	NC	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC			
Indeno(1,2,3-cd)pyrene	0.0000085				<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC			
Naphthalene	0.00010				0.00057	0.00052	9.2	<0.00010	<0.00010	NC	0.0047	0.0052	10			
Perylene	0.000050				<0.000050	<0.000050	NC	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC			
Phenanthrene	0.000050				<0.000050	<0.000050	NC	<0.000050	<0.000050	NC	<0.000050	<0.000050	NC			
Pyrene	0.000020				<0.000020	<0.000020	NC	<0.000020	<0.000020	NC	<0.000020	<0.000020	NC			
Quinoline	0.00020				0.00031	0.00032	3.2	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC			

**Notes:**

1 Relative percent difference.

Solid RPD exceeds 80% for organic constituents.

NC Not calculated.

N/A Not applicable.

All results in mg/L unless otherwise noted.

Testing was conducted by Maxxam Analytics, Calgary, Alberta

**Table 3 - Summary of Groundwater Laboratory Analyses  
QA/QC - Field and Laboratory Duplicate - BTEX, PHC fractions F1 - F2, and PAHs**

Sample ID	Reportable Detection Limit	EX5	EX95	RPD <sup>1</sup> (%)	BH1905	BH1905 Lab Dup	RPD <sup>1</sup> (%)	BH1911	1911 Lab Dup	RPD <sup>1</sup> (%)	BH1704	BH1704 Lab Dup	RPD <sup>1</sup> (%)	BH2002	BH2002 Lab-Dup	RPD <sup>1</sup> (%)
Sample Date		27-Mar-18			06-Apr-18			27-Mar-18			10-Apr-18			04-Apr-18		
<b>BTEX and PHC fractions F1 - F2</b>																
Benzene	0.00040	2.7	2.8	3.6	0.028	0.027	3.6	0.43	0.41	4.8	0.52	N/A	NC	<0.00040	N/A	NC
Toluene	0.00040	5.5	5.7	3.6	0.0028	0.0028	0.0	<0.00040	<0.00040	NC	1.3	N/A	NC	<0.00040	N/A	NC
Ethylbenzene	0.00040	0.99	0.95	4.1	0.360	0.35	2.8	<0.00040	<0.00040	NC	0.23	N/A	NC	<0.00040	N/A	NC
Xylenes (Total)	0.00089	3.4	3.4	0.0	2.3	N/A	NC	0.0011	0.0010	9.5	12	N/A	NC	<0.00089	N/A	NC
F1 minus BTEX (C6 - C10)	0.10	2.4	3.7	43	4.7	N/A	NC	<0.10	N/A	NC	22	N/A	NC	<0.10	N/A	NC
F2 (C10 - C16)	0.10	0.86	0.92	6.7	2.7	N/A	NC	<0.10	N/A	NC	3.0	3.0	0.0	<0.10	<0.10	NC
<b>PAHs</b>																
1-Methylnaphthalene	0.00010										0.083	0.041	68*	<0.00010	<0.00010	NC
2-Methylnaphthalene	0.00010										0.17	0.093	59*	<0.00010	<0.00010	NC
Acenaphthene	0.00010										0.00099	0.00044	77*	<0.00010	<0.00010	NC
Acenaphthylene	0.00010										0.00023	<0.00010	NC	<0.00010	<0.00010	NC
Acridine	0.00020										0.00088	0.00025	112*	<0.00050	<0.00050	NC
Anthracene	0.00010										0.00015	0.00051	99*	<0.00010	<0.00010	NC
Benzo(a)anthracene	0.0000085										0.00003	<0.00000	NC	<0.0000085	<0.0000085	NC
Benzo(a)pyrene	0.0000075										0.0000088	<0.0000075	NC	<0.0000075	<0.0000075	NC
Benzo(b,j)fluoranthene	0.0000085										0.000023	<0.0000085	NC	<0.0000085	<0.0000085	NC
Benzo(c)phenanthrene	0.000050										<0.000050	<0.000050	NC	<0.000050	<0.000050	NC
Benzo(g,h,i)perylene	0.0000085										0.000025	<0.0000085	NC	<0.0000085	<0.0000085	NC
Benzo(k)fluoranthene	0.0000085										<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC
Benzo[a]pyrene equivalency	0.000010	No Duplicate Analyzed			No Duplicate Analyzed			No Duplicate Analyzed			0.000019	N/A	NC	<0.000010	N/A	NC
Benzo[e]pyrene	0.000050										<0.000050	<0.000050	NC	<0.000050	<0.000050	NC
Chrysene	0.0000085										<0.000028	<0.0000085	NC	<0.0000085	<0.0000085	NC
Dibenz(a,h)anthracene	0.0000075										<0.0000075	<0.0000075	NC	<0.0000075	0.0000082	NC
Fluoranthene	0.000010										0.00017	0.00054	104*	<0.00010	<0.00010	NC
Fluorene	0.000050										0.0012	0.00049	84*	<0.00050	<0.00050	NC
Indeno(1,2,3-cd)pyrene	0.0000085										<0.0000085	<0.0000085	NC	<0.0000085	<0.0000085	NC
Naphthalene	0.00010										0.27	0.22	20	<0.00010	<0.00010	NC
Perylene	0.000050										<0.000050	<0.000050	NC	<0.000050	<0.000050	NC
Phenanthrene	0.000050										0.0013	0.00047	94*	<0.00050	<0.00050	NC
Pyrene	0.000020										0.00040	0.00013	102*	<0.00020	<0.00020	NC
Quinoline	0.00020										0.014	0.0042	108*	<0.00020	<0.00020	NC

Notes:  
<sup>1</sup> Relative percent difference.  
**Bold** RPD exceeds 80% for organic constituents.  
 NC Not calculated.  
 N/A Not applicable.

All results in mg/L unless otherwise noted.  
 Testing was conducted by Maxxam Analytics, Calgary, Alberta  
 \* Maxxam commented "Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria"

**Table 4 - Summary of Groundwater Laboratory Analyses  
QA/QC - Field and Laboratory Duplicate - VOCs**

Sample ID	Reportable Detection Limit	BH1905	BH9905	RPD <sup>1</sup> (%)	BH1915	BH9915	RPD <sup>1</sup> (%)	BH1915B	BH9915B	RPD <sup>1</sup> (%)	BH1921	BH9921	RPD <sup>1</sup> (%)	BH1939	BH9939	RPD <sup>1</sup> (%)
		06-Apr-18			05-Apr-18			05-Apr-18			29-Mar-18			10-Apr-18		
1,1,1,2-tetrachloroethane	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
1,1,1-trichloroethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1,1,2-tetrachloroethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
1,1,2-trichloroethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	0.0025	0.0018	33
1,1-dichloroethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1-dichloroethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,2,3-trichlorobenzene	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
1,2,4-trichlorobenzene	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
1,2,4-trimethylbenzene	0.00050	1.5	1.4	6.9	0.038	0.038	0.0	0.049	0.067	31	0.00065	0.00067	3.0	0.00076	0.00069	9.7
1,2-dibromoethane	0.00020	0.00039	0.00051	27	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC
1,2-dichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,2-dichloroethane	0.00050	0.051	0.057	11	0.0088	0.0086	2.3	0.017	0.016	6.1	0.074	0.072	2.7	0.15	0.14	6.9
1,2-dichloropropane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3,5-trichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3,5-trimethylbenzene	0.00050	0.50	0.56	11	0.0049	0.0050	2.0	0.017	0.024	34	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3-dichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,4-dichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromodichloromethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromoform	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromomethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
Carbon tetrachloride	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chlorobromomethane	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
Chloroethane	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	0.0016	0.0016	0.0
Chloroform	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chloromethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
cis-1,2-dichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
cis-1,3-dichloropropene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Dichloromethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
Methyl methacrylate	0.00076	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Methyl-tert-butylether (MTBE)	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Styrene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Tetrachloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Total Trihalomethanes	0.0013	<0.0013	<0.0013	NC	<0.0013	<0.0013	NC	<0.0013	<0.0013	NC	<0.0013	<0.0013	NC	<0.0013	<0.0013	NC
trans-1,2-dichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
trans-1,3-dichloropropene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Trichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Trichlorofluoromethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Vinyl chloride	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC

Notes:  
<sup>1</sup> Relative percent difference.  
**Red** RPD exceeds 80% for organic constituents.  
**NC** Not calculated.  
 All results in mg/L unless otherwise noted.  
 Testing was conducted by Maxxam Analytics, Calgary, Alberta

**Table 4 - Summary of Groundwater Laboratory Analyses  
QA/QC - Field and Laboratory Duplicate - VOCs**

Sample ID	Reportable Detection Limit	BH1967	BH9967	RPD <sup>1</sup> (%)	BH1971	BH9971	RPD <sup>1</sup> (%)	BH1982	BH9982	RPD <sup>1</sup> (%)	BH510A	BH9510A	RPD <sup>1</sup> (%)	EX1	EX91	RPD <sup>1</sup> (%)
Sample Date		06-Apr-18			27-Mar-18			10-Apr-18			29-Mar-18			04-Apr-18		
1,1,1,2-tetrachloroethane	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
1,1,1-trichloroethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1,2,2-tetrachloroethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
1,1,2-trichloroethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	0.002	0.0021	4.9	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1-dichloroethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1-dichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,2,3-trichlorobenzene	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
1,2,4-trichlorobenzene	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
1,2,4-trimethylbenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	0.0033	0.0027	20	0.0058	0.0056	3.5
1,2-dibromoethane	0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC
1,2-dichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,2-dichloroethane	0.00050	0.028	0.031	10	0.028	0.031	10	0.11	0.11	0.0	0.0027	0.0020	30	0.0061	0.0058	5.0
1,2-dichloropropane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3,5-trichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3,5-trimethylbenzene	0.00050	0.0035	0.0036	2.8	0.0035	0.0036	2.8	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	0.0015	0.0015	0.0
1,3-dichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,4-dichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromodichloromethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromoform	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromomethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
Carbon tetrachloride	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chlorodibromomethane	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
Chloroethane	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
Chloroform	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chloromethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
cis-1,2-dichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
cis-1,3-dichloropropene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Dichloromethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
Methyl methacrylate	0.00076	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Methyl-tert-butylether (MTBE)	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Styrene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Tetrachloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Total Trihalomethanes	0.0013	<0.0013	<0.0013	NC	<0.0013	<0.0013	NC	<0.0013	<0.0013	NC	<0.0013	<0.0013	NC	<0.0013	<0.0013	NC
trans-1,2-dichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
trans-1,3-dichloropropene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Trichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Trichlorofluoromethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Vinyl chloride	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC

Notes:  
<sup>1</sup> Relative percent difference.  
**RPD** RPD exceeds 80% for organic constituents.  
**NC** Not calculated.  
 All results in mg/L unless otherwise noted.  
 Testing was conducted by Maxxam Analytics, Calgary, Alberta

**Table 4 - Summary of Groundwater Laboratory Analyses  
QA/QC - Field and Laboratory Duplicate - VOCs**

Sample ID	Reportable Detection Limit	EX5	EX95	RPD <sup>1</sup> (%)	BH1905	BH1905 Lab-Dup	RPD <sup>1</sup> (%)	BH1911	BH1911 Lab-Dup	RPD <sup>1</sup> (%)	BH1912	BH1912 Lab-Dup	RPD <sup>1</sup> (%)	BH1917	BH1917 Lab-Dup	RPD <sup>1</sup> (%)
		27-Mar-18			06-Apr-18			27-Mar-18			05-Apr-18			29-Mar-18		
1,1,1,2-tetrachloroethane	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
1,1,1-trichloroethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1,1,2-tetrachloroethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
1,1,2-trichloroethane	0.00050	<0.0012	<0.0015	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1-dichloroethane	0.00050	0.0011	0.0014	24.0	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1-dichloroethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,2,3-trichlorobenzene	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
1,2,4-trichlorobenzene	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
1,2,4-trimethylbenzene	0.00050	0.38	0.39	2.6	1.5	1.5	0.0	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,2-dibromoethane	0.00020	<0.00020	<0.00020	NC	0.00039	0.0004	2.5	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC
1,2-dichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,2-dichloroethane	0.00050	0.086	0.097	12.0	0.051	0.054	5.7	0.039	0.038	2.6	0.045	0.039	14	<0.00050	<0.00050	NC
1,2-dichloropropane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3,5-trichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3,5-trimethylbenzene	0.00050	0.15	0.16	6.5	0.5	0.5	0	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3-dichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,4-dichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromodichloromethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromoform	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromomethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
Carbon tetrachloride	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chlorobromomethane	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
Chloroethane	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
Chloroform	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chloromethane	0.0020	0.0072	0.0085	16.6	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
cis-1,2-dichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
cis-1,3-dichloropropene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Dichloromethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
Methyl methacrylate	0.00076	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Methyl-tert-butylether (MTBE)	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Styrene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Tetrachloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Total Trihalomethanes	0.0013	<0.0013	<0.0013	NC	N/A	N/A	NC	<0.0013	N/A	NC	<0.0013	N/A	NC	<0.0013	N/A	NC
trans-1,2-dichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
trans-1,3-dichloropropene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Trichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Trichlorofluoromethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Vinyl chloride	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC

Notes:  
<sup>1</sup> Relative percent difference.  
**RPD** RPD exceeds 80% for organic constituents.  
**NC** Not calculated.  
 All results in mg/L unless otherwise noted.  
 Testing was conducted by Maxxam Analytics, Calgary, Alberta



**Table 4 - Summary of Groundwater Laboratory Analyses  
QA/QC - Field and Laboratory Duplicate - VOCs**

Sample ID	Reportable	BH1928B	BH1928B Lab-Dup	RPD <sup>1</sup> (%)	BH1936	BH1936 Lab-Dup	RPD <sup>1</sup> (%)	BH1946	BH1946 Lab-Dup	RPD <sup>1</sup> (%)	BH1972	BH1972 Lab-Dup	RPD <sup>1</sup> (%)
Sample Date	Detection Limit	03-Apr-18			28-Mar-18			04-Apr-18			10-Apr-18		
1,1,1,2-tetrachloroethane	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
1,1,1-trichloroethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1,2,2-tetrachloroethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
1,1,2-trichloroethane	0.00050	0.0034	0.0031	9.2	0.0060	0.0064	6.5	<0.0050	<0.0050	NC	<0.0050	<0.0050	NC
1,1-dichloroethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1-dichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,2,3-trichlorobenzene	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
1,2,4-trichlorobenzene	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
1,2,4-trimethylbenzene	0.00050	0.0080	0.0075	6.5	<0.0050	<0.0050	NC	<0.0050	<0.0050	NC	<0.0050	<0.0050	NC
1,2-dibromoethane	0.00020	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC
1,2-dichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,2-dichloroethane	0.00050	0.37	0.31	18	0.060	0.061	1.7	<0.0050	<0.0050	NC	<0.0050	<0.0050	NC
1,2-dichloropropane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3,5-trichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3,5-trimethylbenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3-dichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,4-dichlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromodichloromethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromoform	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromomethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
Carbon tetrachloride	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chlorobenzene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chlorobromomethane	0.0010	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
Chloroethane	0.0010	0.0021	0.0021	0.0	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
Chloroform	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chloromethane	0.0020	0.0029	0.0026	11	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
cis-1,2-dichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
cis-1,3-dichloropropene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Dichloromethane	0.0020	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
Methyl methacrylate	0.00076	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Methyl-tert-butylether (MTBE)	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Styrene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Tetrachloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Total Trihalomethanes	0.0013	<0.0013	N/A	NC	<0.0013	N/A	NC	<0.0013	N/A	NC	<0.0013	N/A	NC
trans-1,2-dichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
trans-1,3-dichloropropene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Trichloroethene	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Trichlorofluoromethane	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Vinyl chloride	0.00050	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC

**Notes:**  
<sup>1</sup> Relative percent difference.  
**Bold** RPD exceeds 80% for organic constituents.  
 NC Not calculated.  
 All results in mg/L unless otherwise noted.  
 Testing was conducted by Maxxam Analytics, Calgary, Alberta

**Table 5 - Summary of Groundwater Laboratory Analyses  
BTEX and PHC fractions F1-F2**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	F1 minus BTEX (C6 - C10)	F2 (C10 - C16)
BH1904	C	12.80-14.33	26-Mar-18	3	0.20	0.00061	0.00072	0.0013	0.17	<0.1
	C	12.80-14.33	04-May-17	3	0.21	0.00053**	0.00084	0.0014	0.19	<0.10
	C	12.80-14.33	04-Nov-16	3	0.17	0.00047	<0.00040	<0.00080	0.13	<0.10
	C	12.80-14.33	11-May-16	3	0.19	<0.00040	<0.00040	<0.00080	0.16	<0.10
	C	12.80-14.33	16-Nov-15	3	0.218	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	C	12.80-14.33	15-Sep-15	3	0.246	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	C	12.80-14.33	15-Jun-15	3	0.35	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	C	Bulk	17-Mar-15	3	0.117	<0.0003	<0.0005	<0.0005	<0.1	<0.1
BH1905	C	Bulk	06-Apr-18	1	0.028	0.0028	0.36	2.3	4.7	2.7
	C	Bulk	05-May-17	1	0.042	0.0018	0.29	1.9	2.1	2.4
	C	Bulk	08-Nov-16	1	0.058	0.0025	0.49	3.6*	2.5	2.4
	C	Bulk	12-May-16	1	0.055	0.0024	0.52	3.1	2.2	1.8
	C	Bulk	17-Nov-15	1	0.0938	0.0025	0.438	1.83	1.6	2.2
	C	Bulk	08-Sep-15	1	0.11	0.0038	0.243	1.56	1.4	2.7
	C	Bulk	11-Jun-15	1	0.0714	0.0028	0.787	10.4	0.2	3.9
	C	Bulk	25-Feb-15	1	0.086	0.0110	1.88	26.3	-	7.3
BH1906	R	14.63-16.15	27-Mar-18	3	1.9	0.00040	<0.0004	<0.00089	<0.1	<0.1
	R	14.63-16.15	10-May-17	3	2.0*	<0.00040	<0.00040	0.00089	<0.50*	0.12
	R	14.63-16.15	02-Nov-16	3	1.8*	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	14.63-16.15	09-May-16	3	2.1	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	14.63-16.15	17-Nov-15	3	1.81	0.0005	<0.0005	<0.0005	<0.1	<0.1
	R	14.63-16.15	16-Sep-15	3	2.01	0.0004	<0.0005	<0.0005	<0.1	<0.1
	R	11.58-13.10	15-Jun-15	3	1.92	0.0004	<0.0005	<0.0005	<0.1	<0.1
	R	13.10-14.63	15-Jun-15	3	2.01	0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	14.63-16.15	15-Jun-15	3	2.19	0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	16.15-17.68	15-Jun-15	3	2.05	0.0004	<0.0005	<0.0005	<0.1	<0.1
BH1907	R	Bulk	08-Apr-15	3	1.73	0.0004	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	06-Apr-18	3	0.021	0.045	0.0027	0.062	0.58	<0.10
	R	11.89-13.41	27-Mar-18	3	0.56	2.4	0.28	2.4	7	0.64
	R	Bulk	12-May-17	3	0.42	2.1*	0.055	1.800	5.8	0.35
	R	11.89-13.41	10-May-17	3	0.042	0.014	0.0079	0.040	0.36	0.13
	R	11.89-13.41	02-Nov-16	3	0.036	0.010	0.0059	0.025	0.43	<0.10
	R	Bulk	02-Nov-16	3	0.022	0.037	0.0019	0.054	0.27	<0.10
	R	11.89-13.41	09-May-16	3	0.047	0.044	0.027	0.11	0.57	0.10
	R	11.89-13.41	17-Nov-15	3	0.0909	0.293	0.0399	0.434	1.2	0.10
	R	11.89-13.41	16-Sep-15	3	0.0742	0.248	0.0105	0.157	0.4	<0.1
BH1908	R	11.89-13.41	15-Jun-15	3	0.0572	0.248	0.024	0.31	0.9	<0.1
	R	13.41-14.94	15-Jun-15	3	0.0486	0.188	0.0173	0.214	0.4	<0.1
	R	Bulk	30-Apr-15	3	0.232	0.0197	0.341	0.0101	3.6	0.5
	R	12.19-13.72	27-Mar-18	3	0.0083	0.010	0.00055	0.013	0.11	<0.1
	R	12.19-13.72	10-May-17	3	0.0056	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	12.19-13.72	02-Nov-16	3	0.0097	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	12.19-13.72	09-May-16	3	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	12.19-13.72	17-Nov-15	3	0.0082	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	12.19-13.72	16-Sep-15	3	0.0107	0.0007	<0.0005	0.0006	<0.1	<0.1
	R	12.19-13.72	12-Jun-15	3	0.0160	0.0011	0.0007	0.0026	<0.1	<0.1
BH1910	R	13.72-14.94	12-Jun-15	3	0.0165	0.0010	0.0007	0.0029	<0.1	<0.1
	R	Bulk	28-Apr-15	3	0.0016	0.0003	0.0009	0.0054	<0.1	<0.1
	R	10.97-12.50	27-Mar-18	3	0.31	<0.00040	<0.00040	<0.00089	<0.1	<0.1
	R	10.97-12.50	10-May-17	3	0.42	<0.00040	0.00058	<0.00080	<0.10	<0.10
	R	10.97-12.50	02-Nov-16	3	0.21	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	11.39-12.50	09-May-16	3	0.31	<0.00040	<0.00040	0.0011	<0.10	<0.10
	R	11.43-12.50	16-Nov-15	3	0.154	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	11.43-12.50	16-Sep-15	3	0.118	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	11.49-12.50	15-Jun-15	3	0.324	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	12.50-14.02	15-Jun-15	3	0.324	<0.0003	<0.0005	<0.0005	<0.1	<0.1
BH1910	R	14.02-15.54	15-Jun-15	3	0.296	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	15.54-17.07	15-Jun-15	3	0.267	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	22-Apr-15	3	0.351	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	Residential Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	0.81
Commercial Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	2.2	1.1

**Notes:**

- \* Detection limit raised due to dilution
- \*\* Results are potentially biased high

**Table 5 - Summary of Groundwater Laboratory Analyses  
BTEX and PHC fractions F1-F2**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	F1 minus BTEX (C6 - C10)	F2 (C10 - C16)
BH1911	R	15.54-17.07	27-Mar-18	3	0.430	<0.00040	<0.00040	0.0011	<-0.1	<-0.1
	R	15.54-17.07	10-May-17	3	0.80	<0.00040	<0.00040	0.0017	<-0.10	<-0.10
	R	15.54-17.07	02-Nov-16	3	0.82	<0.00040	<0.00040	0.0016	<-0.10	<-0.10
	R	15.54-17.07	09-May-16	3	1.0	<0.00040	<0.00040	0.0018	<-0.10	<-0.10
	R	15.54-17.07	16-Nov-15	3	0.701	<0.0003	<0.0005	<0.0005	<-0.1	<-0.1
	R	15.54-17.07	16-Sep-15	3	0.509	<0.0003	<0.0005	<0.0005	<-0.1	<-0.1
	R	14.05-15.54	15-Jun-15	3	0.302	<0.0003	<0.0005	<0.0005	<-0.1	<-0.1
	R	15.54-17.07	15-Jun-15	3	0.346	<0.0003	<0.0005	<0.0005	<-0.1	<-0.1
BH1912	R	Bulk	09-Apr-15	3	0.436	<0.0003	<0.0005	<0.0005	<-0.1	<-0.1
	R	13.41-14.94	05-Apr-18	3	0.25	0.00079	<0.00040	<0.00089	<-0.10	<-0.10
	R	13.41-14.94	17-May-17	3	0.43	<0.00040	<0.00040	<0.00080	<-0.10	<-0.10
	R	13.41-14.94	03-Nov-16	3	0.57	<0.00040	<0.00040	<0.00080	<-0.10	<-0.10
	R	13.41-14.94	10-May-16	3	0.54	<0.00040	<0.00040	0.0013	<-0.10	<-0.10
	R	13.41-14.94	12-Nov-15	3	0.688	<0.0003	<0.0005	0.0009	<-0.1	<-0.1
	R	13.41-14.94	08-Sep-15	3	0.727	0.0004	<0.0005	0.0021	<-0.1	<-0.1
	R	13.41-14.94	17-Jun-15	3	0.799	0.0009	<0.0005	0.0176	<-0.1	<-0.1
	R	14.94-16.46	17-Jun-15	3	0.795	0.001	<0.0005	0.0184	<-0.1	<-0.1
	R	16.46-17.98	17-Jun-15	3	0.738	0.0009	<0.0005	0.0172	<-0.1	<-0.1
BH1915	R	17.98-19.51	17-Jun-15	3	0.716	0.0008	<0.0005	0.0196	<-0.1	<-0.1
	R	Bulk	10-Mar-15	3	0.942	0.0021	<0.0005	0.0481	<-0.1	<-0.1
	R	Bulk	05-Apr-18	3	0.078	0.0022	0.00099	0.13	1.3	0.49
	R	14.94-16.46	05-Apr-18	3	0.053	0.0020	<0.00040	0.12	1.8	0.33
	R	14.94-16.46	17-May-17	3	0.20	0.0046	0.0038	0.37	2.2	0.59
	R	Bulk	17-May-17	3	0.21	0.0028	0.0011	0.25	1.1	0.46
	R	14.94-16.46	03-Nov-16	3	0.47	0.0013	<0.00040	0.16	0.59	0.27
	R	Bulk	03-Nov-16	3	0.57	0.011	0.0013	0.47	0.86	0.51
	R	14.94-16.46	10-May-16	3	0.35	0.0088	0.0065	0.59	2.2	0.46
	R	14.94-16.46	12-Nov-15	3	0.466	0.0257	0.0109	0.985	1.5	0.8
BH1921	R	14.94-16.46	08-Sep-15	3	0.510	0.0319	0.0087	1.02	1.8	0.6
	R	10.36-11.89	17-Jun-15	3	1.10	0.183	0.0427	2.33	2.6	0.6
	R	11.89-13.41	17-Jun-15	3	1.14	0.0727	0.0163	1.12	1.6	0.5
	R	13.41-14.94	17-Jun-15	3	1.15	0.0813	0.0214	1.26	1.9	0.6
	R	14.94-16.46	17-Jun-15	3	1.24	0.0817	0.020	1.22	1.5	0.4
	R	Bulk	26-Feb-15	3	1.01	0.0723	0.0411	1.96	3.2	1.1
	R	11.89-13.41	29-Mar-18	3	0.044	0.0067	0.028	0.0033	0.65	<-0.10
	R	11.89-13.41	11-May-17	3	0.10	0.021	0.14	0.0049	1.30	0.12
	R	11.89-13.41	10-Nov-16	3	0.17	0.0099	0.18	0.0067	0.90	<-0.10
	R	11.89-13.41	13-May-16	3	0.12	0.0058	0.12	0.018	1.2	0.18
BH1922	R	11.89-13.41	20-Nov-15	3	0.187	0.0137	0.156	0.0120	0.8	0.2
	R	11.89-13.41	04-Sep-15	3	0.174	0.0175	0.137	0.0092	1.0	0.2
	R	14.94-16.46	22-Jun-15	3	0.330	0.0372	0.225	0.0094	1.1	0.2
	R	10.36-11.89	19-Jun-15	3	0.280	0.0377	0.179	0.0072	1.1	0.2
	R	11.89-13.41	19-Jun-15	3	0.417	0.0461	0.258	0.0104	0.9	0.2
	R	13.41-14.94	19-Jun-15	3	0.334	0.0382	0.184	0.0081	0.8	0.2
	R	Bulk	28-Apr-15	3	0.470	0.0869	0.352	0.0126	1.6	0.3
	R	14.02-15.54	29-Mar-18	3	<0.00040	<0.00040	<0.00040	<0.00089	<-0.10	<-0.10
	R	14.02-15.54	11-May-17	3	<0.00040	<0.00040	<0.00040	<0.00080	<-0.10	<-0.10
	R	14.02-15.54	10-Nov-16	3	<0.00040	<0.00040	<0.00040	<0.00080	<-0.10	<-0.10
BH1923	R	14.02-15.54	13-May-16	3	<0.00040	<0.00040	<0.00040	<0.00080	<-0.10	<-0.10
	R	15.54-17.07	20-Nov-15	3	0.0027	0.0005	<0.0005	<0.0005	<-0.1	<-0.1
	R	14.02-15.54	23-Nov-15	3	0.0281	<0.0003	<0.0005	<0.0005	<-0.1	<-0.1
	R	15.54-17.07	03-Sep-15	3	0.0056	<0.0003	<0.0005	<0.0005	<-0.1	<-0.1
	R	10.97-12.50	19-Jun-15	3	<0.0005	0.0039	0.0046	<0.0005	<-0.1	<-0.1
	R	12.50-14.02	19-Jun-15	3	0.237	0.0055	0.0119	0.0020	<-0.1	<-0.1
	R	14.02-15.54	19-Jun-15	3	0.314	<0.0003	<0.0005	0.0031	<-0.1	<-0.1
	R	Bulk	05-May-15	3	<0.0005	<0.0003	<0.0005	<0.0005	<-0.1	<-0.1
	R	10.67-12.19	27-Mar-18	3	<0.00040	<0.00040	<0.00040	<0.00080	<-0.10	<-0.10
	R	10.67-12.19	15-May-17	3	<0.00040	<0.00040	0.0016**	0.0025	<-0.10	<-0.10
Residential Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	0.81	1.1
					0.005	0.021	0.0016	0.02	2.2	1.1

**Notes:**

- \* Detection limit raised due to dilution
- \*\* Results are potentially biased high

**Table 5 - Summary of Groundwater Laboratory Analyses  
BTEX and PHC fractions F1-F2**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	F1 minus BTEX (C6 - C10)	F2 (C10 - C16)
BH1923	R	10.67-12.19	03-Sep-15	3	0.0014	0.0010	<0.0005	0.0129	<0.1	<0.1
	R	10.67-12.19	12-Jun-15	3	0.0028	0.0007	<0.0005	0.0104	0.1	<0.1
	R	12.19-13.72	12-Jun-15	3	0.0024	0.0006	<0.0005	0.0098	0.1	<0.1
	R	Bulk	02-Apr-15	3	0.0013	<0.0003	<0.0005	0.0075	<0.1	<0.1
BH1924	R	Bulk	06-Apr-18	3	1.5*	0.0042	0.00043	0.16	0.59	<0.10
	R	14.94-16.46	27-Mar-18	3	1.6	0.006	0.00040	0.19	<0.10	0.14
	R	Bulk	12-May-17	3	1.6*	0.0059	<0.00040	0.16	0.63	0.15
	R	14.94-16.46	10-May-17	3	2.6*	0.014	<0.00040	0.28	0.32	0.23
	R	14.94-16.46	02-Nov-16	3	2.8*	0.012	<0.00040	0.27	0.57	0.15
	R	Bulk	02-Nov-16	3	3.1	0.0075	<0.00040	0.19	0.16	<0.10
	R	14.94-16.46	09-May-16	3	2.2	0.015	0.039	0.32	1.1	0.23
	R	14.94-16.46	17-Nov-15	3	2.45	0.0146	0.0007	0.270	<0.1	0.2
	R	14.94-16.46	16-Sep-15	3	3.90	0.0243	0.0005	0.373	<0.1	0.1
	R	14.94-16.46	19-Jun-15	3	6.32	0.0302	0.0008	0.402	<0.1	0.3
BH1925	R	Bulk	07-May-15	3	3.04	0.010	0.001	0.153	1.8	0.2
	R	16.76-18.29	29-Mar-18	3	0.32	0.0037	0.15	0.002	0.4	<0.1
	R	16.76-18.29	08-May-17	3	0.43	0.0097	0.19	0.0040	0.69	<0.10
	R	16.76-18.29	07-Nov-16	3	1.8*	0.025	0.63	0.016	0.81	0.13
	R	16.76-18.29	09-May-16	3	2.1	0.036	0.85	0.030	1.0	0.22
	R	16.76-18.29	20-Nov-15	3	3.28	0.0460	0.540	0.0254	1.8	0.2
	R	16.76-18.29	04-Sep-15	3	2.54	0.137	0.515	0.072	2.0	0.1
	R	16.76-18.29	12-Jun-15	3	1.50	0.0247	0.0145	0.0104	2.2	0.2
BH1927	R	Bulk	07-May-15	3	1.82	0.037	0.542	0.017	0.5	<0.1
	R	15.24-16.76	12-May-17	3	<0.00040	<0.00040	<0.00040	0.0053	<0.10	<0.10
	R	15.24-16.76	08-Nov-16	3	0.00079	<0.00040	<0.00040	0.019	0.11	0.36
	R	15.24-16.76	13-May-16	3	0.0013	<0.00040	<0.00040	0.031	0.23	<0.10
	R	15.24-16.76	20-Nov-15	3	0.0012	<0.0003	<0.0005	0.0178	0.2	<0.1
	R	15.24-16.76	04-Sep-15	3	0.0009	<0.0003	<0.0005	0.0172	<0.1	<0.1
	R	13.72-15.24	16-Jun-15	3	0.0016	<0.0003	<0.0005	0.0152	<0.1	<0.1
	R	15.24-16.76	16-Jun-15	3	0.0018	<0.0003	<0.0005	0.0184	<0.1	<0.1
	R	16.76-18.29	16-Jun-15	3	0.0020	<0.0003	<0.0005	0.0181	<0.1	<0.1
	R	18.29-19.81	16-Jun-15	3	0.0020	<0.0003	<0.0005	0.0173	<0.1	<0.1
BH1928	R	Bulk	01-May-15	3	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	03-Apr-18	3,4	3.0*	0.00055	0.00051	0.098	<0.10	<0.10
	R	9.45-10.97	28-Mar-18	3	2.5	<0.00040	<0.00040	0.12	<0.1	<0.1
	R	Bulk	18-May-17	3,4	4.1*	0.00095	0.00059	0.16	<1.0*	<0.10
	R	9.45-10.97	15-May-17	3	4.2	0.00090	0.00060	0.15	1.3*	<0.10
	R	9.45-10.97	09-Nov-16	3	3.5*	0.00069	<0.00040	0.10	<0.10	<0.10
	R	Bulk	09-Nov-16	3,4	4.0	0.0031	0.0012	0.12	<0.10	<0.10
	R	9.45-10.97	16-May-16	3	2.5	0.0014	<0.00040	0.073	<1.0*	0.11
	R	9.45-10.97	24-Nov-15	3	3.08	0.0018	0.0008	0.0700	<0.1	<0.1
	R	9.45-10.97	24-Sep-15	3	2.57	0.0029	0.0010	0.0518	<0.1	<0.1
BH1929	R	8.63-9.45	18-Sep-15	3	4.72	0.0032	0.0012	0.0783	0.2	<0.1
	R	10.97-12.50	17-Jun-15	3	4.47	0.0041	0.0018	0.0837	0.1	<0.1
	R	9.45-10.97	16-Jun-15	3	4.93	0.0030	0.0015	0.0576	3.0	<0.1
	R	Bulk	05-May-15	3,4	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	8.53-10.06	28-Mar-18	3	0.10	<0.00040	<0.00040	<0.00089	0.1	<0.1
	R	8.53-10.06	15-May-17	3,4	0.22	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.53-10.06	09-Nov-16	3,4	0.31	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.53-10.06	13-May-16	3,4	0.47	0.00070	<0.00040	0.0013	<0.10	<0.10
	R	8.53-10.06	24-Nov-15	3	0.664	0.0015	0.0006	0.0011	<0.1	<0.1
	R	8.53-10.06	03-Sep-15	3	0.770	0.0018	<0.0005	0.0008	<0.1	<0.1
BH1930	R	8.53-10.06	18-Jun-15	3	0.681	0.0021	0.0006	0.0018	<0.1	<0.1
	R	10.06-11.58	18-Jun-15	3	0.654	0.0020	0.0007	0.0017	<0.1	<0.1
	R	11.58-13.11	18-Jun-15	3	0.641	0.0020	0.0005	0.0016	<0.1	<0.1
	R	Bulk	04-May-15	3	0.920	0.0013	0.0013	0.0013	0.1	<0.1
	R	14.02-15.54	28-Mar-18	2,3	0.027	<0.00040	<0.00040	0.038	<0.10	<0.10
	R	14.02-15.54	12-May-17	2,3	0.028	0.00058	<0.00040	0.030	<0.10	<0.10
	R	14.02-15.54	14-Nov-16	2,3	0.026	0.00048	<0.00040	0.036	<0.10	<0.10
	R	14.02-15.54	13-May-16	2,3	0.076	0.0019	<0.00040	0.088	0.18	<0.10
					0.0699	0.0009	<0.0005	0.0484	<0.1	<0.1
Residential Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	0.81	1.1
Commercial Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	2.2	1.1

Notes:  
\* Detection limit raised due to dilution

**Table 5 - Summary of Groundwater Laboratory Analyses  
BTEX and PHC fractions F1-F2**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	F1 minus BTEX (C6 - C10)	F2 (C10 - C16)
BH1930	R	14.02-15.54	22-Sep-15	3	0.0660	0.0018	<0.0005	0.0958	<0.1	<0.1
	R	12.50-14.02	16-Jun-15	3	0.113	0.0024	<0.0005	0.0867	0.2	<0.1
	R	14.02-15.54	16-Jun-15	3	0.113	0.0025	<0.0005	0.0895	0.2	<0.1
	R	Bulk	01-May-15	2,3	0.063	0.0014	<0.0005	0.0492	<0.1	<0.1
BH1933	R	11.89-13.41	06-Apr-18	3	<0.00040	<0.00040	<0.00040	<0.00089	<0.10	<0.10
	R	11.89-13.41	04-May-17	3	0.0096	0.00059	<0.00040	0.0041	<0.10	<0.10
	R	11.89-13.41	14-Nov-16	3	0.0073	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	11.89-13.41	11-May-16	3	0.0082	0.00062	<0.00040	0.0063	0.26	<0.10
	R	11.89-13.41	16-Nov-15	3	0.0056	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	11.89-13.41	15-Sep-15	3	0.0093	0.0026	0.0030	0.0189	<0.1	<0.1
	R	11.89-13.41	16-Jun-15	3	0.0044	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	13.41-14.94	16-Jun-15	3	0.0028	<0.0003	<0.0005	0.0012	<0.1	<0.1
BH1936	R	Bulk	12-Mar-15	3	0.0033	0.0005	<0.0005	0.0115	<0.1	<0.1
	R	8.38-9.91	28-Mar-18	3	0.018	0.00051	<0.00040	0.0014	0.16	<0.10
	R	8.38-9.91	16-May-17	3	0.015	<0.00040	<0.00040	0.0012	0.13	<0.10
	R	8.38-9.91	14-Nov-16	3	0.015	0.00045	<0.00040	0.0013	0.17	<0.10
	R	8.38-9.91	13-May-16	3	0.15	0.0027	0.042	0.0054	0.75	0.11
	R	8.38-9.91	24-Nov-15	3	0.0199	0.0004	0.0037	0.0014	0.3	<0.1
	R	8.38-9.91	03-Sep-15	3	0.0589	0.0011	0.0073	0.0022	0.4	<0.1
	R	8.38-9.91	18-Jun-15	3	0.484	0.0069	0.184	0.0139	0.4	<0.1
BH1937	R	9.91-11.43	18-Jun-15	3	0.423	0.0057	0.132	0.0119	0.5	<0.1
	R	Bulk	04-May-15	3	0.201	0.0028	0.0504	0.0087	0.5	<0.1
	R	8.84-10.36	28-Mar-18	4,5	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.84-10.36	16-May-17	4,5	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.84-10.36	06-Jan-17	4,5	<0.00060**	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.84-10.36	21-Dec-16	4,5	0.038	<0.00040	0.00053	<0.00080	<0.10	<0.10
	R	8.84-10.36	12-Dec-16	4,5	0.026	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.84-10.36	25-Nov-16	4,5	0.042	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.84-10.36	10-Nov-16	4,5	0.036	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.84-10.36	28-Oct-16	4,5	6.0*	0.010	0.26	0.023	1.3*	<0.10
	R	8.84-10.36	13-Oct-16	4,5	0.033	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.84-10.36	10-Oct-16	4,5	0.019	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.84-10.36	16-Sep-16	4,5	0.0089	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.84-10.36	03-Sep-16	4,5	0.034	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.84-10.36	19-Aug-16	4,5	0.011	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	8.84-10.36	05-Aug-16	4,5	0.042	<0.00040	<0.00040	<0.00080	<0.10	<0.10
BH1939	R	8.84-10.36	13-May-16	4,5	0.0031	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	Bulk	08-Apr-16	4,5	0.0118	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	8.84-10.36	19-Nov-15	4,5	0.0052	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	8.84-10.36	22-Sep-15	4,5	0.0026	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	8.84-10.36	18-Jun-15	4,5	0.0031	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	10-Apr-18	4	0.52	0.0020	0.057	0.0058	0.4	<0.10
	R	Bulk	17-May-17	4	5.4*	0.0050	0.067	0.0090	<1.0*	<0.10
	R	Bulk	19-Apr-17	4	4.8*	0.0048	0.16	0.0092	0.58	<0.10
	R	Bulk	09-Mar-17	4	4.8*	0.0053	0.21	0.0094	0.48	<0.10
	R	Bulk	06-Jan-17	4	5.4*	0.0082	0.21	0.016	<0.10	<0.10
	R	Bulk	21-Dec-16	4	6.0*	0.011	0.25	0.019	<0.10	<0.10
	R	Bulk	12-Dec-16	4	5.8*	0.012	0.28	0.022	<2.0*	<0.10
R	Bulk	25-Nov-16	4	7.4*	0.011	0.27	0.022	<1.0*	<0.10	
R	Bulk	10-Nov-16	4	7.1*	0.011	0.29	0.024	<1.0*	<0.10	
R	Bulk	28-Oct-16	4	0.038	<0.00040	<0.00040	<0.00080	<0.10	<0.10	
R	Bulk	13-Oct-16	4	5.9*	0.012	0.29	0.026	0.81	<0.10	
R	Bulk	10-Oct-16	4	7.2*	0.014	0.30	0.024	<2.0*	<0.10	
R	Bulk	16-Sep-16	4	6.8*	0.015	0.32	0.038	0.53	<0.10	
R	Bulk	03-Sep-16	4	7.1*	0.012	0.23	0.027	2.6*	<0.10	
R	Bulk	19-Aug-16	4	7.4*	0.013	0.24	0.035	1.5	<0.10	
R	Bulk	05-Aug-16	4	8.1*	0.016	0.31	0.046	<2.0*	<0.10	
R	Bulk	17-May-16	4	6.6	0.014	0.23	0.029	<1.0*	<0.10	
Residential Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	0.81	1.1
Commercial Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	2.2	1.1

Notes:

\* Detection limit raised due to dilution

\*\* Detection limit raised due to interference

**Table 5 - Summary of Groundwater Laboratory Analyses  
BTEX and PHC fractions F1-F2**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	F1 minus BTEX (C6 - C10)	F2 (C10 - C16)
BH1939	R	Bulk	20-Nov-15	4	8.99	0.0180	0.240	0.0520	1.0	<0.1
	R	Bulk	21-Sep-15	4	8.00	0.0244	0.286	0.0547	1.2	<0.1
	R	Bulk	11-Jun-15	4	8.57	0.0170	0.218	0.0440	0.2	<0.1
	R	Bulk	01-Apr-15	4	9.31	0.0278	0.297	0.166	0.1	0.1
BH1943	R	7.32-8.84	18-May-17	4, 5	1.8*	<0.00040	<0.00040	<0.00080	<1.0*	<0.10
	R	7.32-8.84	14-Nov-16	4, 5	1.7*	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	7.32-8.84	13-May-16	4, 5	1.7	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	7.32-8.84	26-Nov-15	4, 5	2.01	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	7.32-8.84	04-Sep-15	4, 5	1.58	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	7.32-8.84	18-Jun-15	4, 5	1.91	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	8.84-10.36	18-Jun-15	4, 5	1.62	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	10.36-11.89	18-Jun-15	4, 5	1.70	<0.0003	<0.0005	<0.0005	<0.1	<0.1
BH1944	R	Bulk	15-Apr-15	4, 5	1.66	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	05-Apr-18	3	0.012	<0.00040	<0.00040	<0.00089	<0.10	<0.10
	R	Bulk	19-May-17	3	0.0036	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	Bulk	16-Nov-16	3	0.00055	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	Bulk	17-May-16	3	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	Bulk	27-Nov-15	3	0.0008	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	17-Sep-15	3	0.0016	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	11-Jun-15	3	0.0013	<0.0003	<0.0005	<0.0005	<0.1	<0.1
BH1948	R	Bulk	13-Apr-15	3	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	3.96-5.49	29-Mar-18	5	<0.00040	<0.00040	<0.00040	<0.00089	<0.10	<0.10
	R	3.96-5.49	19-May-17	5	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	3.96-5.49	15-Nov-16	5	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	3.96-5.49	13-May-16	5	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	3.96-5.49	27-Nov-15	5	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	3.96-5.49	04-Sep-15	5	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	3.96-5.49	16-Jun-15	5	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
BH1949	R	Bulk	10-Apr-15	5	<0.0005	<0.0003	<0.0005	0.0005	<0.1	<0.1
	R	Bulk	23-Nov-15	2	<0.0005	0.0003	<0.0005	0.0027	<0.1	<0.1
BH1950A	R	Bulk	02-Apr-15	2	0.0058	0.0051	0.0167	0.0579	0.3	-
	R	Bulk	09-May-17	2	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	0.14
BH1954	R	Bulk	09-Nov-16	2	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	Bulk	10-May-16	2	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	Bulk	20-Nov-15	2	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	17-Sep-15	2	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.5
	R	Bulk	11-Jun-15	2	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	06-May-15	2	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	5.49-7.01	29-Mar-18	3	0.0023	<0.00040	<0.00040	<0.00089	<0.1	<0.1
	R	5.49-7.01	15-May-17	3	0.0020	<0.00040	<0.00040	<0.00080	<0.10	<0.10
BH1956	R	5.49-7.01	09-Nov-16	3	0.0063	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	5.49-7.01	13-May-16	3	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	5.49-7.01	24-Nov-15	3	0.0053	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	5.49-7.01	22-Sep-15	3	0.0065	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	5.49-7.01	18-Jun-15	3	0.0025	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	7.01-8.53	18-Jun-15	3	0.0022	<0.0003	<0.0005	0.0005	<0.1	<0.1
	R	Bulk	26-Mar-15	3	0.0013	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	10-Apr-18	3	0.040	<0.00040	<0.00040	<0.00089	<0.10	<0.10
BH1956	R	11.89- 13.41	29-Mar-18	3	0.008	<0.00040	<0.00040	<0.00089	<0.10	<0.10
	R	11.89-13.41	11-May-17	3	0.031	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	11.89-13.41	07-Nov-16	3	0.077	<0.00040	<0.00040	0.0022	<0.10	<0.10
	R	Bulk	07-Nov-16	3	0.22	0.0017	0.00088	0.0057	<0.10	<0.10
	R	11.89-13.41	09-May-16	3	0.41	0.0035	0.00065	0.0099	<0.10	<0.10
	R	11.89-13.41	19-Nov-15	3	1.73	0.0713	0.0071	0.0950	<0.1	<0.1
	R	10.36-11.89	24-Sep-15	3	2.90	0.256	0.0540	0.195	<0.1	<0.1
	R	11.89-13.41	18-Sep-15	3	3.04	0.246	0.0542	0.203	0.1	<0.1
	R	8.84-10.36	18-Jun-15	3	0.0656	0.0050	0.0008	0.0033	<0.1	<0.1
	R	10.36-11.89	18-Jun-15	3	1.43	0.113	0.0180	0.0730	0.3	<0.1
	R	Bulk	06-May-15	3	0.456	0.0549	0.0078	0.0369	<0.1	<0.1
	Residential Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	0.81
Commercial Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	2.2	1.1

**Notes:**

\* Detection limit raised due to dilution

\*\* Detection limit raised due to interference



**Table 5 - Summary of Groundwater Laboratory Analyses  
BTEX and PHC fractions F1-F2**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	F1 minus BTEX (C6 - C10)	F2 (C10 - C16)
BH1958	C	10.36-11.89	26-Mar-18	3	<0.00040	<0.00040	<0.00040	<0.00089	<0.1	<0.1
	C	10.36-11.89	04-May-17	3	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	C	10.36-11.89	04-Nov-16	3	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	C	10.36-11.89	11-May-16	3	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	0.23
	C	10.36-11.89	16-Nov-15	3	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	C	10.36-11.89	15-Sep-15	3	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	C	10.36-11.89	16-Jun-15	3	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
BH1967	Bulk	Bulk	19-Mar-15	3	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	06-Apr-18	2	0.16	0.018	0.18	0.0048	3.0	0.38
	R	Bulk	16-May-17	2	0.20	0.020	0.33	0.0056	4.7	0.39
	R	Bulk	02-Nov-16	2	0.21	0.021	0.34	0.0051	3.4	0.40
	R	Bulk	10-May-16	2	0.24	0.022	0.36	0.0056	2.9	0.34
	R	Bulk	18-Nov-15	2	0.275	0.0236	0.441	0.0073	3.6	0.5
	R	Bulk	16-Sep-15	2	0.225	0.0191	0.270	0.0080	2.3	0.3
	R	Bulk	11-Jun-15	2	0.276	0.0224	0.342	0.0097	3.1	0.4
BH1971	R	Bulk	26-Feb-15	2	0.291	0.0251	0.438	0.0111	1.8	0.3
	R	7.77-9.30	27-Mar-18	2	0.0310	0.0015	0.095	<0.00089	1.1	0.27
	R	7.77-9.30	10-May-17	2	0.034	0.0021	0.21	0.0010	1.5	0.42
	R	7.77-9.30	02-Nov-16	2	0.050	0.0031	0.21	0.0014	2.0	0.29
	R	7.77-9.30	09-May-16	2	0.042	0.0026	0.28	0.0015	2.0	0.38
	R	7.77-9.31	17-Nov-15	2	0.108	0.0049	0.621	0.0074	2.2	0.3
	R	7.77-9.32	16-Sep-15	2	0.0795	0.0047	0.463	0.0086	1.4	0.3
	R	7.77-9.33	15-Jun-15	2	0.0474	0.0035	0.256	0.0091	1.4	0.3
BH1973	Bulk	Bulk	02-Mar-15	2	0.0670	0.0041	0.361	0.0291	2.2	0.6
	R	Bulk	18-Nov-15	1	0.0178	0.0026	0.156	0.0192	0.7	0.5
	R	Bulk	04-Mar-15	1	0.0198	0.0036	0.153	0.2660	1.1	0.7
BH1974	R	Bulk	06-Apr-18	1	0.00082	<0.00040	0.00048	0.0012	0.14	<0.10
	R	Bulk	11-May-17	1	0.0029	<0.00040	0.00082	0.0020	0.59	<0.10
	R	Bulk	02-Nov-16	1	0.0032	0.00060	0.0016	0.0019	0.39	<0.10
	R	Bulk	10-May-16	1	0.0079	0.0010	0.0030	0.0017	0.72	<0.10
	R	Bulk	18-Nov-15	1	0.0077	0.0008	0.0023	0.0011	0.2	0.1
	R	Bulk	16-Sep-15	1	0.0098	0.0016	0.0034	0.0032	0.4	<0.1
	R	Bulk	11-Jun-15	1	0.0095	0.0012	0.0033	0.0017	0.5	<0.1
	R	Bulk	27-Feb-15	1	0.0172	0.0019	0.0085	0.0027	0.4	<0.1
BH1975	R	Bulk	11-May-17	1	<0.00040	<0.00040	0.0011	<0.00080	<0.10	<0.10
	R	Bulk	10-May-16	1	<0.00040	<0.00040	<0.00040	0.0025	<0.10	<0.10
	R	Bulk	18-Nov-15	1	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.5
	R	Bulk	27-Feb-15	1	<0.0005	<0.0003	0.0006	0.0029	0.1	<0.1
BH1976	R	11.28-12.80	27-Mar-18	2	<0.00040	<0.00040	<0.00040	<0.00089	<0.1	<0.1
	R	11.28-12.80	10-May-17	2	<0.00040	<0.00040	0.00065	<0.00080	<0.10	<0.10
	R	11.28-12.80	02-Nov-16	2	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	11.28-12.80	09-May-16	2	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	11.28-12.80	17-Nov-15	2	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	11.28-12.80	16-Sep-15	2	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	9.75-11.28	15-Jun-15	2	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	11.28-12.80	15-Jun-15	2	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
BH1977	Bulk	Bulk	01-Apr-15	2	<0.0005	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	3.05-4.57	28-Mar-18	3,4,5	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	3.05-4.57	15-May-17	3,4,5	<0.00050**	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	3.05-4.57	16-Nov-16	3,4,5	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	3.05-4.57	13-May-16	3,4,5	0.0017	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	3.05-4.57	24-Nov-15	3	0.0013	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	3.05-4.57	22-Sep-15	3	0.0028	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	3.05-4.57	18-Jun-15	3	0.0076	<0.0003	<0.0005	<0.0005	<0.1	<0.1
					0.0024	<0.0003	<0.0005	<0.0005	<0.1	<0.1
					0.005	0.021	0.0016	0.02	0.81	1.1
					0.005	0.021	0.0016	0.02	2.2	1.1

**Notes:**

- \* Detection limit raised due to dilution
- \*\* Detection limit raised due to matrix interference

**Table 5 - Summary of Groundwater Laboratory Analyses  
BTEX and PHC fractions F1-F2**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	F1 minus BTEX (C6 - C10)	F2 (C10 - C16)
BH1979	R	Bulk	17-May-16	3	1.60	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	Bulk	27-Nov-15	3	1.35	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	17-Sep-15	3	1.37	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	11-Jun-15	3	1.22	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	09-Apr-15	3	1.07	<0.0003	<0.0005	<0.0005	<0.1	<0.1
BH1981	R	4.57-6.10	28-Mar-18	1	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	4.57-6.10	15-May-17	1	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	4.57-6.10	09-Nov-16	1	<0.00060**	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	4.57-6.10	13-May-16	1	0.055	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	4.57-6.10	24-Nov-15	1	0.0064	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	4.57-6.10	22-Sep-15	1	0.0018	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	3.05-4.57	18-Jun-15	1	0.0052	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	4.57-6.10	18-Jun-15	1	0.0061	0.0003	<0.0005	<0.0005	<0.1	<0.1
BH1982	R	Bulk	27-Mar-15	1	0.0864	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	10-Apr-18	3	5.9 *	0.015	0.092	0.010	<1.0*	<0.10
	R	Bulk	17-May-17	3	6.6*	0.019	0.070	0.028	<1.0*	<0.10
	R	Bulk	19-Apr-17	3	4.7*	0.016	0.069	0.026	0.28	<0.10
	R	Bulk	09-Mar-17	3	5.0*	0.018	0.076	0.028	0.63	<0.10
	R	Bulk	06-Jan-17	3	4.2*	0.0094	0.074	0.015	<0.10	<0.10
	R	Bulk	21-Dec-16	3	2.6*	0.0067	0.040	0.011	<0.10	<0.10
	R	Bulk	12-Dec-16	3	2.7*	0.0079	0.047	0.014	<0.10	<0.10
	R	Bulk	25-Nov-16	3	3.1*	0.0066	0.059	0.018	<1.0*	<0.10
	R	Bulk	10-Nov-16	3	5.2*	0.017	0.18	0.041	<1.0*	<0.10
	R	Bulk	28-Oct-16	3	4.4*	0.017	0.18	0.038	0.72	<0.10
	R	Bulk	13-Oct-16	3	2.8*	0.013	0.12	0.018	0.42	<0.10
	R	Bulk	03-Oct-16	3	5.3*	0.022	0.22	0.029	<1.0*	<0.10
	R	Bulk	16-Sep-16	3	6.3*	0.028	0.24	0.050	0.32	<0.10
	R	Bulk	03-Sep-16	3	6.9*	0.029	0.21	0.063	1.9*	<0.10
	R	Bulk	19-Aug-16	3	9.6*	0.033	0.22	0.079	1.2	<0.10
	R	Bulk	05-Aug-16	3	5.7*	0.022	0.17	0.073	<1.0*	<0.10
	R	Bulk	17-May-16	3	12	0.049	0.41	0.16	<0.10	<0.10
	R	Bulk	20-Nov-15	3	11.6	0.036	0.278	0.243	0.9	<0.1
	R	Bulk	21-Sep-15	3	10.7	0.281	0.438	1.00	0.3	<0.1
R	Bulk	11-Jun-15	3	13.8	0.412	0.286	0.984	<0.1	<0.1	
R	Bulk	01-Apr-15	3	13.1	0.483	0.353	1.56	0.5	<0.1	
BH1984	C	12.19-13.72	06-Apr-18	3	0.0013	<0.00040	<0.00040	<0.00089	<0.10	<0.10
	C	12.19-13.72	03-Nov-16	3	0.0076	0.00072	<0.00040	0.0042	<0.10	<0.10
	C	12.19-13.72	11-May-16	3	0.0076	0.0022	<0.00040	0.0079	0.29	<0.10
	C	12.19-13.72	12-Nov-15	3	0.0054	0.0027	<0.0005	0.0063	<0.1	<0.1
	C	12.19-13.72	15-Sep-15	3	0.0064	0.0047	<0.0005	0.0103	0.2	<0.1
	C	9.14-10.67	15-Jun-15	3	0.0034	0.0025	<0.0005	0.0033	<0.1	<0.1
	C	10.67-12.19	15-Jun-15	3	0.0033	0.0022	<0.0005	0.0035	<0.1	<0.1
	C	12.19-13.72	15-Jun-15	3	0.004	0.0024	<0.0005	0.0034	<0.1	<0.1
BH2001	R	Bulk	08-May-15	3	0.0017	0.0026	<0.0005	0.0051	0.1	<0.1
	R	Bulk	03-Apr-18	5	<0.00040	<0.00040	<0.00040	<0.00089	<0.10	<0.10
	R	Bulk	19-May-17	5	<0.00070**	<0.00040	<0.00040	<0.00090	<0.10	<0.10
	R	Bulk	17-Nov-16	5	0.0012	<0.00040	<0.00040	0.00089	<0.10	<0.10
BH2002	R	Bulk	31-May-16	5	0.00074	0.00045	<0.00040	0.00093	<0.10	<0.10
	R	Bulk	04-Apr-18	4	<0.00040	<0.00040	<0.00040	<0.00089	<0.10	<0.10
	R	Bulk	24-May-17	4	<0.00060**	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	Bulk	16-Nov-16	4	0.00088	<0.00040	<0.00040	<0.00080	<0.10	<0.10
BH510A	R	Bulk	31-May-16	4	0.031	0.00062	<0.00040	<0.00080	<0.10	<0.10
	R	14.33-15.85	29-Mar-18	3	0.090	0.0017	0.047	0.02	0.19	<0.10
	R	14.33-15.85	08-May-17	3	1.6*	0.035	0.73	0.29	1.8	<0.10
	R	14.33-15.85	07-Nov-16	3	2.6*	0.097	0.87	0.94	1.3	0.29
	R	14.33-15.85	09-May-16	3	1.3	0.20	0.95	0.50	2.2	0.46
	R	14.33-15.86	19-Nov-15	3	2.07	0.383	1.16	1.12	<0.1	0.3
	R	14.33-15.87	04-Sep-15	3	1.70	0.259	0.742	0.532	3.2	0.3
	R	14.33-15.88	19-Jun-15	3	3.61	1.97	1.16	1.81	3.2	0.2
R	Bulk	08-Apr-15	3	3.52	1.33	0.779	1.81	3.1	0.2	
Residential Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	0.81	1.1
Commercial Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	2.2	1.1

Notes:

- \* Detection limit raised due to dilution
- \*\* Detection limit raised due to matrix interference

**Table 5 - Summary of Groundwater Laboratory Analyses  
BTEX and PHC fractions F1-F2**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bos)	Sample Date	Unit	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	F1 minus BTEX (C6 - C10)	F2 (C10 - C16)
BH1704	R	Bulk	10-Apr-18	3	0.52	1.3*	0.23	12	22	3
	R	Bulk	09-May-17	3	0.96*	5.2*	0.75*	15*	37*	1.9
	R	Bulk	08-Nov-16	3	1.2	5.9	1.0	11	15	2.3
	R	Bulk	17-May-16	3	1.2	16	2.0	14	16	6.2
	R	Bulk	19-Nov-15	3	0.731	7.00	1.22	9.59	11.0	2.4
	R	Bulk	08-Sep-15	3	1.92	47.8	7.97	69.0	424	20.8
	R	Bulk	12-Jun-15	3	1.26	5.49	0.381	2.67	0.3	<0.5
	R	Bulk	02-Apr-15	3	0.806	0.284	0.179	0.317	0.5	0.2
EX1	R	Bulk	04-Apr-18	-	0.3	0.0046	0.040	0.039	0.11	<0.10
	R	Bulk	05-May-17	-	0.058	0.0011	0.0090	0.0095	<0.10	<0.10
	R	Bulk	01-Nov-16	-	6.3 *	0.35	0.34	0.59	<0.10	0.10
	R	Bulk	06-May-16	-	9.3	2.7	0.55	1.4	<0.10	0.38
	R	Bulk	20-Nov-15	-	7.97	2.55	0.386	0.932	0.1	0.2
	R	Bulk	17-Sep-15	-	7.66	2.10	0.330	0.891	0.2	0.2
	R	Bulk	11-Jun-15	-	10.2	3.05	0.445	1.06	3.6	0.3
	R	Bulk	15-Apr-15	-	10.0	3.61	0.478	1.26	0.2	0.2
EX2	R	Bulk	04-Apr-18	-	0.47	0.013	0.19	0.12	0.42	<0.10
	R	Bulk	09-May-17	-	0.19	0.0044	0.031	0.070	0.28	<0.10
	R	Bulk	01-Nov-16	-	0.97	0.023	0.57	0.27	0.81	0.11
	R	Bulk	10-May-16	-	1.1	0.022	0.56	0.32	0.68	<0.10
	R	Bulk	20-Nov-15	-	1.75	0.0372	0.832	0.393	0.2	<0.1
	R	Bulk	17-Sep-15	-	1.95	0.0399	0.867	0.635	0.2	0.1
	R	Bulk	11-Jun-15	-	2.01	0.031	0.791	0.758	0.1	0.2
	R	Bulk	15-Apr-15	-	1.56	0.0254	0.609	0.501	0.2	0.2
EX3	R	Bulk	04-Apr-18	-	<0.00040	<0.00040	<0.00040	<0.00089	<0.1	<0.1
	R	Bulk	05-May-17	-	<0.00045 **	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	Bulk	01-Nov-16	-	<0.00040	<0.00040	<0.00040	<0.00080	<0.10	<0.10
	R	Bulk	06-May-16	-	0.019	0.00087	0.0017	<0.00080	<0.10	<0.10
	R	Bulk	17-Nov-15	-	0.0032	0.0004	0.0006	<0.0005	<0.1	<0.1
	R	Bulk	03-Sep-15	-	0.0015	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	11-Jun-15	-	0.0016	<0.0003	<0.0005	<0.0005	<0.1	<0.1
	R	Bulk	15-Apr-15	-	0.078	<0.0003	<0.0005	<0.0005	<0.1	<0.1
EX4	R	Bulk	04-Apr-18	-	0.47	0.021	0.53	1.4	2.2	0.74
	R	Bulk	09-May-17	-	0.70	0.050	0.48	3.5*	2.0	0.66
	R	Bulk	01-Nov-16	-	1.3	1.0	0.84	4.6	4.5	0.84
	R	Bulk	18-May-16	-	2.5	1.1	1.2	7.0	7.2	1.3
	R	Bulk	19-Nov-15	-	2.17	0.335	0.922	5.9	6.1	0.8
	R	10.36-11.89	17-Sep-15	-	3.36	1.6	1.06	8.6	5.3	0.9
	R	10.36-11.89	19-Jun-15	-	3.95	2.17	0.828	7.2	5.2	0.8
	R	Bulk	16-Apr-15	-	2.21	0.684	0.591	6.9	3.8	0.8
EX5	R	10.67-12.19	27-Mar-18	-	2.7	5.7	0.99	3.4	2.4	0.9
	R	10.67-12.19	08-May-17	-	3.7*	9.3*	1.5*	4.7*	4.4*	0.55
	R	10.67-12.19	01-Nov-16	-	2.6	5.4	1.1	3.7	3.8	0.84
	R	10.67-12.19	17-May-16	-	7.4	16	1.6	7.1	8.8	0.92
	R	10.67-12.20	18-Nov-15	-	4.17	8.62	1.38	4.85	5.3	1.0
	R	10.67-12.21	17-Sep-15	-	2.57	5.62	1.09	3.69	5.4	0.8
	R	10.67-12.22	19-Jun-15	-	3.61	7.64	1.36	4.35	4.6	0.6
	R	Bulk	17-Apr-15	-	2.72	7.29	1.38	5.24	4.0	1.0
EX6	R	Bulk	04-Apr-18	-	0.13	0.10	0.71	0.68	2.3	0.58
	R	Bulk	10-May-17	-	0.32	0.37	1.5*	2.5*	5.8	0.96
	R	Bulk	02-Nov-16	-	0.35	0.32	1.4*	2.2*	4.2	0.66
	R	Bulk	18-May-16	-	0.42	0.15	0.65	0.95	2.7	0.44
	R	Bulk	23-Nov-15	-	0.414	0.137	0.562	0.75	4.8	0.3
	R	Bulk	17-Sep-15	-	0.497	0.17	0.79	0.971	1.6	0.4
	R	Bulk	11-Jun-15	-	0.426	0.156	0.664	0.939	1.6	0.5
	R	Bulk	17-Apr-15	-	0.389	0.148	0.674	1.01	2.1	0.5
Residential Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	0.81	1.1
Commercial Guideline <sup>2</sup>					0.005	0.021	0.0016	0.02	2.2	1.1

**Notes:**

\* Detection limit raised due to dilution

\*\* Detection limit raised due to interferent

**Table 5 - Summary of Groundwater Laboratory Analyses  
BTEX and PHC fractions F1-F2**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	F1 minus BTEX (C6 - C10)	F2 (C10 - C16)	
EX7	R	Bulk	04-Apr-18	-	2.8*	0.055	0.50	0.21	1.5	0.27	
	R	Bulk	10-May-17	-	2.5*	0.18	0.66	1.4	2.9	0.64	
	R	Bulk	01-Nov-16	-	2.8*	0.22	0.75	1.9	1.8	0.75	
	R	Bulk	18-May-16	-	2.6	0.084	0.79	0.71	2.5	0.61	
	R	Bulk	23-Nov-15	-	3.86	0.123	0.680	0.992	3.1	0.4	
	R	11.58-13.11	17-Sep-15	-	2.45	0.118	0.778	1.50	0.6	0.6	
	R	11.58-13.11	19-Jun-15	-	1.49	0.246	1.18	3.23	2.9	1.2	
	R	Bulk	17-Apr-15	-	3.08	0.155	1.01	1.83	2.8	0.7	
	R	Bulk	17-Apr-15	-	3.08	0.155	1.01	1.83	2.8	0.7	
	<b>Residential Guideline<sup>2</sup></b>					0.005	0.021	0.0016	0.02	0.81	1.1
	<b>Commercial Guideline<sup>2</sup></b>					0.005	0.021	0.0016	0.02	2.2	1.1

**Notes:**

\* Detection limit raised due to dilution

\*\* Detection limit raised due to interferent

1 Land Use abbreviations: C=Commercial; R=Residential; I=Industrial; N=Natural.

2 AEP 2016 Tier 1 Guidelines for coarse-grained soil

**Bold** Indicates that the concentration did not meet the applicable guideline.

Bulk Bulk sample collected using a dedicated, disposable bailer.

m bgs Meters below ground surface

All results in mg/L unless otherwise noted.

Only compounds with detectable concentrations in at least one sample are presented.

Testing was conducted by Maxxam Analytics, Calgary, Alberta in 2016 and by AGAT Laboratories, Calgary, Alberta in 2015.

Table 6 - Summary of Groundwater Laboratory Analyses PAHs

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Acridine	Anthracene	Benz(a)pyrene equivalency	Benz(a)anthracene	Benz(a)pyrene	Benz(b+g)fluoranthene	Benz(g,h,i)perylene	Benz(k)fluoranthene	Chrysene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Quinoline
BH1901	C	Bulk	06-Mar-15	5	-	<0.00001	<0.00001	<0.0001	<0.00001	0.00001	<0.00001	<0.000008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001
BH1902	C	Bulk	23-Feb-15	5	-	<0.00001	<0.00001	<0.0001	<0.00001	0.00001	<0.00001	<0.000008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002	<0.00001	<0.00001	<0.0001
BH1903	C	Bulk	26-Mar-15	5	-	<0.00001	<0.00001	<0.0001	<0.00001	0.00001	<0.00001	<0.000008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00005	<0.00001	<0.00001	<0.0001
BH1904	C	Bulk	17-Mar-15	3	-	<0.00001	<0.00001	<0.0001	<0.00001	0.00001	<0.00001	<0.000008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001
BH1905	C	Bulk	06-Apr-18	1	0.046	0.00033	<0.00010	0.00018	0.00054	0.00025	0.00026	0.00016	0.00023	<0.000085	<0.000085	0.00034	0.00024	0.00032	<0.000085	0.12*	0.00032	0.00027	0.00048
	C	Bulk	05-May-17	1	0.031	0.00025	<0.00010	0.00020	0.00053	0.00023	0.00027	0.00013	0.00022	0.000097	0.000098	0.00028	0.00017	0.00016	<0.000085	0.11*	0.00028	0.00021	0.00039
	C	Bulk	08-Nov-16	1	0.049	0.00031	<0.00010	0.00012	0.00042	0.00010	<0.000085	<0.000075	<0.000085	<0.000085	<0.000085	0.00075	0.00075	0.00023	<0.000085	0.20*	0.00027	0.00077	0.00086
	C	Bulk	12-May-16	1	0.024	0.00019	<0.00010	<0.00020	0.00042	0.00010	0.000088	<0.000075	<0.000085	<0.000085	0.000098	0.00012	0.00015	0.00015	<0.000085	0.14	0.00023	0.00013	0.00034
	C	Bulk	17-Nov-15	1	0.0207	0.00024	<0.00001	<0.00005	0.00005	0.00010	<0.000010	<0.000007	<0.00001	<0.00001	<0.00001	0.00005	0.00017	0.00017	<0.00001	0.0970	0.00027	0.00006	<0.0001
	C	Bulk	08-Sep-15	1	0.0416	<0.00001	<0.00001	<0.00005	0.00016	0.00013	0.00020	0.00006	<0.00001	<0.00001	0.00010	0.00015	0.00040	0.00054	<0.00001	0.10	0.00091	0.00062	<0.0001
	C	Bulk	11-Jun-15	1	0.104	<0.00001	<0.00001	<0.0001	0.00007	0.00010	<0.000010	<0.000028	<0.00001	<0.00001	<0.00001	<0.00001	0.00008	0.00045	<0.00001	0.214	0.00051	0.00010	<0.0001
	C	Bulk	25-Feb-15	1	-	0.00107	<0.00001	<0.0001	0.00016	0.00007	0.00016	0.0000405	0.00006	0.00002	0.00002	0.00009	0.00038	0.00086	0.00002	0.00494	0.00101	0.00047	<0.0001
BH1906	R	14.63-16.15	10-May-17	3	<0.00010	<0.00010	<0.00010	<0.00050	<0.00010	<0.010	<0.000085	<0.000075	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.00010	<0.00050	<0.00020	<0.00020
	R	14.63-16.15	02-Nov-16	3	<0.00010	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	<0.000085	<0.000075	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.00010	<0.00050	<0.00020	<0.00020
	R	14.63-16.15	09-May-16	3	<0.00010	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	<0.000085	<0.000075	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.00010	<0.00050	<0.00020	<0.00020
	R	14.63-16.15	17-Nov-15	3	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	0.000096	<0.00001	<0.00007	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002	<0.00001	<0.00001
	R	14.63-16.15	16-Sep-15	3	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	0.000096	<0.00001	<0.00007	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001
	R	11.58-13.10	15-Jun-15	3	0.00001	<0.00001	<0.00001	<0.0001	<0.00010	0.00001	<0.00001	<0.00008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.0001
	R	13.10-14.63	15-Jun-15	3	0.00001	<0.00001	<0.00001	<0.0001	<0.00010	0.00001	<0.00001	<0.00008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002	<0.00001	<0.00001	<0.0001
	R	14.63-16.15	15-Jun-15	3	<0.00001	<0.00001	<0.00001	<0.0001	<0.00010	<0.00001	<0.00010	<0.00008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001
	R	16.15-17.68	15-Jun-15	3	0.00001	<0.00001	<0.00001	<0.0001	<0.00010	<0.00001	<0.00010	<0.00008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001
	R	Bulk	08-Apr-15	3	-	<0.00001	<0.00001	<0.0001	<0.00010	0.00001	<0.00001	<0.00008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001
BH1907	R	Bulk	06-Apr-18	3	0.00011	<0.00010	<0.00010	<0.00050	<0.00010	<0.00010	<0.000085	<0.000075	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.00010	<0.00050	0.00034	<0.00020
	R	11.89-13.41	27-Mar-18	3	0.0074	<0.00010	<0.00010	<0.00050	<0.00010	<0.00001	<0.00010	<0.00008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.02	<0.00050	<0.00020
	R	Bulk	12-May-17	3	0.0015	<0.00010	<0.00010	<0.00050	<0.00010	<0.00010	<0.000085	<0.000075	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.00010	<0.00050	0.00033	<0.00020
	R	11.89-13.41	10-May-17	3	0.00059	<0.00010	<0.00010	<0.00050	<0.00010	<0.010	<0.000085	<0.000075	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.00010	0.0011	<0.00050	<0.00020
	R	11.89-13.41	02-Nov-16	3	0.00025	<0.00010	<0.00010	<0.00050	<0.00010	<0.00010	<0.000085	<0.000075	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.00010	0.0014	<0.00050	<0.00020
	R	Bulk	02-Nov-16	3	0.00014	<0.00010	<0.00010	<0.00050	<0.00010	<0.00010	<0.000085	<0.000075	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.00010	0.0011	<0.00050	<0.00020
	R	11.89-13.41	09-May-16	3	0.00082	<0.00010	<0.00010	<0.00050	<0.00010	<0.00010	<0.000085	<0.000075	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.00010	0.0052	<0.00050	<0.00020
	R	11.89-13.41	17-Nov-15	3	0.00083	<0.00001	<0.00001	<0.00005	<0.00001	0.000096	<0.00001	<0.00007	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00574	<0.00001	<0.00001
	R	11.89-13.41	16-Sep-15	3	0.00017	<0.00001	<0.00001	<0.00005	<0.00001	0.000096	<0.00001	<0.00007	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0250	<0.00001	<0.00001
	R	11.89-13.41	15-Jun-15	3	0.00062	<0.00001	<0.00001	<0.0001	<0.00010	0.00001	<0.00008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00631	<0.00001	<0.00001
	R	13.41-14.94	15-Jun-15	3	0.00036	<0.00001	<0.00001	<0.0001	<0.00010	0.00001	<0.00010	<0.00008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00380	<0.00001	<0.00001
	R	Bulk	30-Apr-15	3	0.00009	<0.00001	<0.00001	<0.0001	<0.00010	0.00001	<0.00010	<0.00008	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00121	<0.00001	<0.00001
BH1908	R	12.19-13.72	10-May-17	3	<0.00010	<0.00010	<0.00010	<0.00050	<0.00010	<0.010	<0.000085	<0.000075	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.00010	<0.00050	<0.00020	<0.00020
	R	12.19-13.72	02-Nov-16	3	<0.00010	<0.00010	<0.00010	<0.00050	<0.00010	<0.00010	<0.000085	<0.000075	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.00010	<0.00050	<0.00020	<0.00020
	R	12.19-13.72	09-May-16	3	<0.00010	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	<0.000085	<0.000075	<0.000085										













**Table 7 - Summary of Groundwater Laboratory Analyses  
VOCs**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	1,1,2-Trichloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dibromoethane	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	Bromochloromethane	Chloroethane	Chloroform	Chloromethane	Methyl methacrylate	Methyl-tert-butylether (MTBE)	Methylene Chloride	Styrene	Tetrachloroethane	Total Trihalomethanes	Trichloroethane	trans-1,2-Dichloroethylene	Vinyl Chloride	
BH1904	C	12.80-14.33	26-Mar-18	3	<0.0050	<0.0050	-	<0.0020	0.0013	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	-	<0.0050	
	C	12.80-14.33	04-May-17	3	<0.0050	<0.0050	<0.0050	<0.0020	0.0020	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	0.0017*	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	C	12.80-14.33	04-Nov-16	3	<0.0050	<0.0050	<0.0050	<0.0020	0.0021	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	C	12.80-14.33	11-May-16	3	<0.0050	<0.0050	<0.0050	<0.0020	0.0017	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	0.00089	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	C	12.80-14.33	16-Nov-15	3	<0.001	<0.001	-	-	0.002	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	C	12.80-14.33	15-Sep-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
BH1905	C	12.80-14.33	15-Jun-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	C	12.80-14.33	15-Jun-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	C	12.80-14.33	17-Mar-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	Bulk	06-Apr-18	1	<0.0050	<0.0050	1.5*	0.00039	0.051	<0.0050	0.5	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	Bulk	05-May-17	1	0.074*	<0.0050	1.1**	<0.0020	0.083	<0.0050	0.33	<0.0050	<0.0010	<0.0050	0.0041	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	Bulk	08-Nov-16	1	0.0039*	<0.0050	1.4**	0.00090*	0.064	<0.0050	0.41	<0.0050	<0.0010	<0.0050	<0.0040***	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
BH1906	R	14.63-16.15	27-Mar-18	3	0.00060	0.0023	<0.0050	<0.0020	0.032	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050		
	R	14.63-16.15	10-May-17	3	0.00092	<0.0050	<0.0050	<0.0020	0.050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	14.63-16.15	02-Nov-16	3	0.00077	<0.0050	<0.0050	<0.0020	0.049	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050		
	R	14.63-16.15	09-May-16	3	0.00070	<0.0050	<0.0050	<0.0020	0.040	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	14.63-16.15	17-Nov-15	3	<0.001	<0.001	-	-	0.042	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	R	14.63-16.15	16-Sep-15	3	<0.001	<0.001	-	-	0.042	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
BH1907	R	11.89-13.41	15-Jun-15	3	<0.001	<0.001	-	-	0.032	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	R	13.10-14.63	15-Jun-15	3	<0.001	<0.001	-	-	0.034	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	R	14.63-16.15	15-Jun-15	3	<0.001	<0.001	-	-	0.037	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	R	16.15-17.68	15-Jun-15	3	<0.001	<0.001	-	-	0.032	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	R	16.15-17.68	15-Jun-15	3	<0.001	<0.001	-	-	0.040	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	Bulk	08-Apr-15	3	<0.001	<0.001	-	-	0.040	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
BH1908	R	11.89-13.41	06-Apr-18	3	<0.0050	<0.0050	0.0061	<0.0020	<0.0050	0.0023	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	11.89-13.41	27-Mar-18	3	<0.0050	0.0023	0.34	<0.0020	0.009	0.13	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	11.89-13.41	12-May-17	3	0.059*	0.0017*	0.12	0.0013*	0.0049	0.052	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	11.89-13.41	10-May-17	3	<0.0020***	<0.0050	0.0090	<0.0020	0.0084	0.0033	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0020	<0.0070***	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	11.89-13.41	02-Nov-16	3	<0.0050	<0.0050	0.0077	<0.0020	0.0013	0.0029	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	
	R	11.89-13.41	02-Nov-16	3	<0.0050	<0.0050	0.0067	<0.0020	0.0090	0.0036	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0020	<0.0085	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	
BH1909	R	11.89-13.41	09-May-16	3	<0.0050	<0.0050	0.026	<0.0020	0.0058	0.0093	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	11.89-13.41	17-Nov-15	3	<0.001	<0.001	-	-	0.002	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	R	11.89-13.41	16-Sep-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	R	11.89-13.41	15-Jun-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	R	13.41-14.94	15-Jun-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	Bulk	30-Apr-15	3	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
BH1910	R	12.19-13.72	27-Mar-18	3	<0.0050	<0.0050	0.0014	<0.0020	<0.0050	0.0009	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	<0.0050	
	R	12.19-13.72	10-May-17	3	<0.0050	<0.0050	<0.0050	<0.0020	0.0015	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	12.19-13.72	02-Nov-16	3	<0.0050	<0.0050	<0.0050	<0.0020	0.0014	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	12.19-13.72	09																						





**Table 7 - Summary of Groundwater Laboratory Analyses VOCs**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	1,1,2-Trichloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dibromoethane	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	Bromodichloromethane	Chloroethane	Chloroform	Chloromethane	Methyl methacrylate	Methyl-tert-butylether (MTBE)	Methylene Chloride	Styrene	Tetrachloroethane	Total Trihalomethanes	Trichloroethene	trans-1,2-Dichloroethylene	Vinyl Chloride
BH1922	R	14.02-15.54	29-Mar-18	3	<0.0050	<0.0050	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	14.02-15.54	11-May-17	3	<0.0050	<0.0050	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	14.02-15.54	13-May-16	3	<0.001	<0.001	.	.	0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008
	R	15.54-17.07	20-Nov-15	3	<0.001	<0.001	.	.	0.007	<0.001	.	<0.001	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008
	R	14.02-15.54	23-Nov-15	3	<0.001	<0.001	.	.	0.003	<0.001	.	<0.001	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008
	R	15.54-17.07	03-Sep-15	3	<0.001	<0.001	.	.	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008
	R	10.97-12.50	19-Jun-15	3	<0.001	<0.001	.	.	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008
BH1923	R	12.50-14.02	19-Jun-15	3	<0.001	<0.001	.	.	0.033	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008	
	R	14.02-15.54	19-Jun-15	3	<0.001	<0.001	.	.	0.040	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008	
	R	Bulk	05-May-15	3	<0.001	<0.001	.	.	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008	
	R	10.67-12.19	27-Mar-18	3	<0.0050	<0.0050	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	10.67-12.19	15-May-17	3	<0.0050	<0.0050	0.00059	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	10.67-12.19	07-Nov-16	3	<0.0050	<0.0050	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	10.67-12.19	09-May-16	3	<0.0050	<0.0050	0.0017	<0.0020	<0.0050	<0.0050	<0.0050	0.0011	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050
BH1924	R	10.67-12.19	17-Nov-15	3	<0.001	<0.001	.	.	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008	
	R	10.67-12.19	03-Sep-15	3	<0.001	<0.001	.	.	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008	
	R	10.67-12.19	12-Jun-15	3	<0.001	<0.001	.	.	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008	
	R	12.19-13.72	12-Jun-15	3	<0.001	<0.001	.	.	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008	
	R	Bulk	02-Apr-15	3	<0.0020	<0.001	.	.	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008	
	R	Bulk	06-Apr-18	3	0.0015	<0.0050	0.0017	<0.0020	0.1	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	14.94-16.46	27-Mar-18	3	0.002	<0.0050	0.0019	<0.0020	0.14	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
BH1925	R	14.94-16.46	10-May-17	3	0.0037**	<0.0050	0.0066	0.00033	0.18	<0.0050	0.00061	<0.0050	0.0011**	<0.0050	0.0052	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	14.94-16.46	02-Nov-16	3	0.0019	<0.0050	0.0087	0.00029**	0.20	<0.0050	0.00088	<0.0050	0.0011	<0.0050	<0.0060	<0.0025	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	14.94-16.46	02-Nov-16	3	0.0021	<0.0050	0.0050	<0.0020	0.23	<0.0050	<0.0050	0.0011	<0.0010	<0.0045	0.0013	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	14.94-16.46	09-May-16	3	0.0015	<0.0050	0.014	<0.0020	0.13	<0.0050	0.0025	<0.0050	<0.0010	<0.0020	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	14.94-16.46	17-Nov-15	3	0.001	<0.001	.	.	0.129	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008
	R	14.94-16.46	16-Sep-15	3	<0.001	<0.001	.	.	0.199	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008
	R	14.94-16.46	19-Jun-15	3	<0.001	<0.001	.	.	0.271	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008
BH1926	R	14.94-16.46	07-May-15	3	<0.001	<0.001	.	.	0.144	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008	
	R	16.76-18.29	29-Mar-18	3	<0.0050	<0.0050	<0.0050	<0.0020	0.026	<0.0050	0.0017	<0.0050	<0.0010	<0.0050	<0.0030	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	16.76-18.29	08-May-17	3	0.0022**	<0.0050	<0.0050	<0.0020	0.042	<0.0050	0.0049	<0.0050	<0.0010	<0.0050	0.0034	0.0014**	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	0.00055
	R	16.76-18.29	07-Nov-16	3	<0.0050	<0.0050	0.00081	<0.0020	0.060	<0.0050	0.0071	<0.0050	<0.0010	<0.0050	<0.0060*	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	16.76-18.29	09-May-16	3	<0.0050	<0.0050	0.00061	<0.0020	0.053	<0.0050	0.0074	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	0.00052
	R	16.76-18.29	20-Nov-15	3	<0.001	<0.001	.	.	0.079	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008
	R	16.76-18.29	04-Sep-15	3	<0.001	<0.001	.	.	0.055	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008
BH1928	R	16.76-18.29	12-Jun-15	3	<0.001	<0.001	.	.	0.041	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008	
	R	16.76-18.29	07-May-15	3	<0.001	<0.001	.	.	0.040	<0.001	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.008	
	R	Bulk	03-Apr-18	3.4	0.0034	<0.0050	0.0008	<0.0020	0.37	<0.0050	<0.0050	<0.0050	0.0021	<0.0050	0.0029	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	9.45-10.97	28-Mar-18	3	0.0023	<0.0050	<0.0050	<0.0020	0.26	<0.0050	<0.0050	<0.0050	0.0012	<0.0050	<0.0050	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	9.45-10.97	15-May-17	3	0.0024	<0.0050	0.00051	<0.0020	0.27	<0.0050	<0.0050	<0.0050	0.0018	<0.0050	0.0045	<0.0050	<0.0050	.	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	Bulk	18-May-17	3.4	0.0030	<0.0050	0.00075	<0.0020	0.32	<0.0050	<0.0050	<0.0050	0.0019	<0.0050	0.0033	<0.0050	<0.0050	.	<0.0050*	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050
	R	9.45-10.97	09-Nov-16	3	0.0023	<0.0050	0.00053	<0.0020	0.30	<0.0050	<0.0050	<0.0050	0.0014	<0										



**Table 7 - Summary of Groundwater Laboratory Analyses VOCs**

Sample ID	Land Use	Sampling Depth (m bgs)	Sample Date	Unit	1,1,2-Trichloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dibromoethane	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	Bromoethane	Chloroethane	Chloroform	Chloromethane	Methyl methacrylate	Methyl-tert-butylether (MTBE)	Methylene Chloride	Styrene	Tetrachloroethane	Total Trihalomethanes	Trichloroethane	Trans-1,2-Dichloroethylene	Vinyl Chloride	
BH1939	R	Bulk	10-Apr-18	4	0.0025	<0.00050	0.00076	<0.00020	0.15	<0.00050	<0.00050	0.0016	<0.00050	<0.0020	<0.00050	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050	
	R	Bulk	17-May-17	4	0.0028	<0.00050	0.00076	<0.00020	0.17	<0.00050	0.00069	0.0023	0.0016	<0.00050	<0.0020	<0.00050	0.0065	0.00065	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	19-Apr-17	4	0.0022	<0.00050	0.00055	<0.00020	0.14	<0.00050	0.00058	0.0016	0.0016	<0.00050	<0.0020	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050	
	R	Bulk	09-Mar-17	4	0.0033	<0.00050	0.00076	<0.00020	0.18	<0.00050	<0.00050	0.0023	0.0016	<0.00050	<0.0020	<0.00050	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	06-Jan-17	4	0.0025	<0.00050	0.0010	<0.00020	0.17	<0.00050	0.00071	0.0019	0.0019	<0.00050	<0.0035*	<0.00050	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	21-Dec-16	4	0.0021	<0.00050	0.00086	<0.00020	0.19	<0.00050	0.00063	0.0014	0.0014	<0.00050	<0.0020	<0.00050	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	12-Dec-16	4	0.0021	<0.00050	0.0010	<0.00020	0.13	<0.00050	0.00080	0.0019	0.0019	<0.00050	<0.0030*	<0.0023*	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	25-Nov-16	4	0.0029	<0.00050	0.0010	<0.00020	0.21	<0.00050	0.00078	0.0021	0.0021	<0.00050	<0.0030*	<0.0020*	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	10-Nov-16	4	0.0027	<0.00050	0.0012	<0.00020	0.17	<0.00050	0.00093	0.0021	0.0021	<0.00050	<0.0045*	<0.00050	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	28-Oct-16	4	<0.00050	<0.00050	<0.00050	<0.00020	0.10	<0.00050	<0.00050	<0.0010	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	13-Oct-16	4	0.0024	<0.00050	0.00089	<0.00020	0.18	<0.00050	0.00071	0.0015	0.0015	<0.00050	<0.0040*	<0.00050	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	03-Oct-16	4	0.0025	<0.00050	0.0012	<0.00020	0.16	<0.00050	0.00097	0.0017	0.0017	<0.00050	<0.0028*	<0.00090*	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	16-Sep-16	4	0.0031	<0.00050	0.0017	<0.00020	0.18	<0.00050	<0.00050	0.0017	0.0017	<0.00050	<0.0035*	<0.00050	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	03-Sep-16	4	0.0027	<0.00050	0.0012	<0.00020	0.17	<0.00050	0.00010	0.0017	0.0017	<0.00050	0.0029*	<0.00050	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	19-Aug-16	4	0.0037	<0.00050	0.0014	<0.00020	0.21	<0.00050	0.0011	0.0024	0.0024	<0.00050	<0.0062*	<0.0040	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	05-Aug-16	4	0.0031	<0.00050	0.0015	<0.00020	0.22	<0.00050	0.0011	0.0017	0.0017	<0.00050	<0.0045*	<0.0030*	<0.00050	*	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	17-May-16	4	<0.001	<0.00050	-	-	<0.00050	<0.001	-	<0.00050	<0.001	<0.001	<0.001	<0.00050	<0.00050	*	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	20-Nov-15	4	<0.001	<0.001	-	-	0.160	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050
R	Bulk	21-Sep-15	4	0.002	<0.001	-	-	0.167	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	
R	Bulk	11-Jun-15	4	<0.001	<0.001	-	-	0.154	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	
R	Bulk	01-Apr-15	4	<0.001	<0.001	-	-	0.124	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	
BH1943	R	7.32-8.84	18-May-17	4, 5	0.00057	<0.00050	<0.00050	<0.00020	0.029	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050	
	R	7.32-8.84	14-Nov-16	4, 5	<0.00050	<0.00050	<0.00050	<0.00020	0.021	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050	
	R	7.32-8.84	13-May-16	4, 5	<0.001	<0.00050	-	-	0.018	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.00050	-	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050	
	R	7.32-8.84	26-Nov-15	4, 5	<0.001	<0.001	-	-	0.011	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050
	R	7.32-8.84	04-Sep-15	4, 5	<0.001	<0.001	-	-	0.016	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050
	R	7.32-8.84	18-Jun-15	4, 5	<0.001	<0.001	-	-	0.011	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050
	R	8.84-10.36	18-Jun-15	4, 5	<0.001	<0.001	-	-	0.011	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050
	R	10.36-11.89	18-Jun-15	4, 5	<0.001	<0.001	-	-	0.023	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050
R	Bulk	15-Apr-15	4, 5	<0.001	<0.001	-	-	0.017	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	
BH1949	R	Bulk	23-Nov-15	2	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050
	R	Bulk	02-Apr-15	2	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.00050
BH1954	R	5.49-7.01	29-Mar-18	3	<0.00050	<0.00050	<0.00050	<0.00020	0.0013	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050	
	R	5.49-7.01	15-May-17	3, 4, 5	<0.00050	<0.00050	<0.00050	<0.00020	0.0010	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050	
	R	5.49-7.01	09-Nov-16	3, 4, 5	<0.00050	<0.00050	<0.00050	<0.00020	0.0013	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050	
	R	5.49-7.01	13-May-16	3, 4, 5	<0.00050	<0.00050	<0.00050	<0.00020	0.002	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050	
	R	5.49-7.01	24-Nov-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050
	R	5.49-7.01	22-Sep-15	3	<0.001	<0.001	-	-	0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050
	R	5.49-7.01	18-Jun-15	3	<0.001	<0.0																			

**Table 7 - Summary of Groundwater Laboratory Analyses VOCs**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	1,1,2-Trichloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dibromoethane	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	Bromodichloromethane	Chloroethane	Chloroform	Chloromethane	Methyl methacrylate	Methyl-tert-butyl ether (MTBE)	Methylene Chloride	Styrene	Tetrachloroethene	Total Trihalomethanes	Trichloroethene	trans-1,2-Dichloroethylene	Vinyl Chloride
BH1967	R	Bulk	06-Apr-18	2	<0.00050	<0.00050	<0.00050	<0.00020	0.028	<0.00050	0.0035	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	16-May-17	2	0.017**	0.0015**	<0.00050	<0.00020	0.041	<0.00050	0.0055	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	02-Nov-16	2	<0.0031*	<0.00050	<0.00050	<0.00020	0.040	<0.00050	0.0059	<0.0020*	<0.0010	<0.00050	<0.0020	<0.0030*	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	10-May-16	2	<0.00050	<0.00050	<0.00050	<0.00020	0.046	0.00086	0.0056	<0.00050	<0.0010	<0.00050	<0.0020	<0.0070	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	18-Nov-15	2	<0.001	<0.001	-	-	0.036	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	16-Sep-15	2	<0.001	<0.001	-	-	0.035	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	11-Jun-15	2	<0.001	<0.001	-	-	0.032	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
BH1971	R	Bulk	26-Feb-15	2	<0.001	<0.001	-	-	0.029	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	0.002	-	<0.001	0.001	<0.0008
	R	7.77-9.30	27-Mar-18	3	<0.00050	<0.00050	<0.00050	<0.00020	0.21	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	7.77-9.30	10-May-17	2	<0.015*	<0.00050	<0.00050	<0.00020	0.11	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.0030*	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	7.77-9.30	02-Nov-16	2	<0.0025*	<0.00050	0.00053	<0.00020	0.19	<0.00050	<0.00050	<0.00093*	<0.0010	<0.00050	<0.0020	<0.0040*	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	0.00057
	R	7.77-9.30	09-May-16	2	<0.00050	<0.00050	0.0013	<0.00020	0.10	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.0050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	7.77-9.31	17-Nov-15	2	<0.001	<0.001	-	-	0.124	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	7.77-9.32	16-Sep-15	2	<0.001	<0.001	-	-	0.142	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
BH1973	R	7.77-9.33	15-Jun-15	2	<0.001	<0.001	-	-	0.076	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	02-Mar-15	2	<0.001	<0.001	-	-	0.148	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	18-Nov-15	1	<0.001	<0.001	-	-	0.026	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	04-Mar-15	1	<0.001	<0.001	-	-	0.025	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	06-Apr-18	2	<0.00050	<0.00050	<0.00050	<0.00020	0.058	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	11-May-17	2	0.0015**	<0.00050	0.0010	<0.00020	0.032	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	0.00059**	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	02-Nov-16	2	0.00094	<0.00050	0.00091	<0.00020	0.098	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.0020	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
BH1974	R	Bulk	10-May-16	2	0.00056	<0.00050	<0.00050	<0.00020	0.051	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	
	R	Bulk	18-Nov-15	2	0.001	<0.001	-	-	0.083	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	16-Sep-15	2	<0.001	<0.001	-	-	0.081	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	11-Jun-15	2	<0.001	<0.001	-	-	0.041	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	27-Feb-15	2	0.001	<0.001	-	-	0.092	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	11-May-17	1	<0.00050	<0.00050	<0.00050	<0.00020	0.0014	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	10-May-16	1	<0.00050	<0.00050	0.0014	<0.00020	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
BH1975	R	Bulk	18-Nov-15	1	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	27-Feb-15	1	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	28-Mar-18	3	<0.00050	<0.00050	<0.00050	<0.00020	0.0014	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	15-May-17	3	<0.00050	<0.00050	<0.00050	<0.00020	0.0010	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	16-Nov-16	3	<0.00050	<0.00050	<0.00050	<0.00020	0.0019	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	13-May-16	3	<0.00050	<0.00050	<0.00050	<0.00020	0.0013	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	24-Nov-15	3	<0.001	<0.001	-	-	0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
BH1977	R	Bulk	22-Sep-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	18-Jun-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	19-Mar-15	3,4,5	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	17-May-16	3	<0.00050	<0.00050	<0.00050	<0.00020	0.0066	<0.00050	<0.00050	<0.0010	<0.00050	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	27-Nov-15	3	<0.001	<0.001	-	-	0.002	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0008
	R	Bulk	17-Sep-15	3	<0.001	<0.001	-	-	0.005	<0.001	-	<0.001	<0.001	<0.001	<0.001									

**Table 7 - Summary of Groundwater Laboratory Analyses VOCs**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	1,1,2-Trichloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dibromoethane	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	Bromodichloromethane	Chloroethane	Chloroform	Chloromethane	Methyl methacrylate	Methyl-tert-butyl-ether (MTBE)	Methylene Chloride	Styrene	Tetrachloroethane	Total Trihalomethanes	Trichloroethene	trans-1,2-Dichloroethylene	Vinyl Chloride	
BH1982	R	Bulk	10-Apr-18	3	0.002	<0.0050	<0.0050	<0.0020	0.11	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	17-May-17	3	0.0026	<0.0050	<0.0050	<0.0020	0.13	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	0.0038	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	19-Apr-17	3	0.0018	<0.0050	<0.0050	<0.0020	0.087	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0030	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	09-Mar-17	3	0.0028	<0.0050	<0.0050	<0.0020	0.11	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	0.0034	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	06-Jan-17	3	0.0015	<0.0050	<0.0050	<0.0020	0.091	<0.0050	<0.0050	<0.0050	<0.0010	<0.0011**	<0.0035**	<0.0090**	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	21-Dec-16	3	0.00074	<0.0050	<0.0050	<0.0020	0.056	<0.0050	0.00080	<0.0050	<0.0010	0.00090	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	12-Dec-16	3	0.0012	<0.0050	<0.0050	<0.0020	0.065	<0.0050	0.00080	<0.0050	<0.0010	0.00091**	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	25-Nov-16	3	0.0010	<0.0050	<0.0050	<0.0020	0.073	<0.0050	<0.0050	<0.0050	<0.0010	0.0012	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	10-Nov-16	3	0.0016	<0.0050	<0.0050	<0.0020	0.099	<0.0050	<0.0050	<0.0050	<0.0010	0.0010*	<0.0040**	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	28-Oct-16	3	0.0015	<0.0050	<0.0050	<0.0020	0.095	<0.0050	<0.0050	<0.0050	<0.0010	<0.0040**	<0.0050	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	13-Oct-16	3	0.0012	<0.0050	<0.0050	<0.0020	0.072	<0.0050	<0.0050	<0.0050	<0.0010	<0.0060**	<0.0030**	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	03-Oct-16	3	0.0017	<0.0050	<0.0050	<0.0020	0.090	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0028**	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	16-Sep-16	3	0.0024	<0.0050	<0.0050	<0.0020	0.12	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0052**	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	03-Sep-16	3	0.0024	<0.0050	0.00053	<0.0020	0.12	<0.0050	<0.0050	<0.0050	<0.0010	<0.0012**	<0.0035**	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	19-Aug-16	3	0.0037	<0.0050	0.00082	<0.0020	0.18	<0.0050	<0.0050	<0.0050	<0.0010	<0.0012**	0.0061	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	05-Aug-16	3	0.0020	<0.0050	0.00054	<0.0020	0.092	<0.0050	<0.0050	<0.0050	<0.0010	0.0021*	<0.0035**	<0.0014**	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	17-May-16	3	0.0043	<0.0050	0.0013	<0.0020	0.21	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	
	R	Bulk	20-Nov-15	3	<0.001	<0.001	-	-	0.150	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.008	
	R	Bulk	21-Sep-15	3	0.003	<0.001	-	-	0.177	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.008	
	R	Bulk	11-Jun-15	3	<0.001	<0.001	-	-	0.159	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.008	
R	Bulk	01-Apr-15	3	<0.001	<0.001	-	-	0.124	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.008		
BH1984	C	12.19-13.72	06-Apr-18	3	<0.0050	<0.0050	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	<0.0050	
	C	12.19-13.72	03-Nov-16	3	<0.0050	<0.0050	0.00055	<0.0020	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	<0.0050	
	C	12.19-13.72	11-May-16	3	<0.0050	<0.0050	0.00093	<0.0020	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	<0.0050	
	C	12.19-13.72	12-Nov-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.008	<0.008
	C	12.19-13.72	15-Sep-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.008	<0.008
	C	9.14-10.67	15-Jun-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.008	<0.008
	C	10.67-12.19	15-Jun-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.008	<0.008
C	12.19-13.72	15-Jun-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.008	<0.008	
C	Bulk	08-May-15	3	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.008	<0.008	
BH2001	R	Bulk	03-Apr-18	5	<0.0050	<0.0050	<0.0050	<0.0020	0.0017	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	<0.0050	
	R	Bulk	19-May-17	5	<0.0050	<0.0050	<0.0050	<0.0020	0.0017	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	<0.0050	
	R	Bulk	17-Nov-16	5	<0.0050	<0.0050	<0.0050	<0.0040*	0.0011	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0011	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	<0.0050	
	R	Bulk	31-May-16	5	<0.0050	<0.0050	0.00054	<0.0020	0.00094	<0.0050	<0.0050	<0.0010	<0.0050	<0.0020	<0.0011	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	<0.0050	
BH2005	R	3.96-5.49	28-Mar-18	3	<0.0050	<0.0050	<0.0050	<0.0020	0.0035	<0.0050	<0.0050	<0.0010	0.00092	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	<0.0050	
	R	3.96-5.49	15-May-17	3	<0.0050	<0.0050	<0.0050	<0.0020	0.0030	<0.0050	<0.0050	<0.0010	0.00070	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	<0.0050	
	R	3.96-5.49	16-Nov-16	3	<0.0050	<0.0050	<0.0050	<0.0020	0.0042	<0.0050	<0.0050	<0.0010	0.0010	<0.0020	<0.0011	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	<0.0050	
	R	3.35-4.88	25-May-16	3	<0.0050	<0.0050	<0.0050	<0.0020	0.0024	<0.0050	<0.0050	<0.0010	0.00068	<0.0020	<0.0011	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	<0.0050	<0.0050	<0.0050	
BH2006	R	3.96-5.49	28-Mar-18	3	<0.0050	0.0005	<0.0050	<0.0020	0.0035	<0.0050	<0.0050	0.00092	<0.0020	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0013	<0.0050	-	-	<0.0050	<0.0050	
	R	Bulk	03-Apr-18	4	<0.0050	<0.0050	<0.0050	<0.0020	0.0021	<0.0050	<0.0050														

Table 7 - Summary of Groundwater Laboratory Analyses  
VOCs

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	1,1,2-Trichloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dibromomethane	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	Bromodichloromethane	Chloroethane	Chloroform	Chloromethane	Methyl methacrylate	Methyl-tert-butylether (MTBE)	Methylene Chloride	Styrene	Tetrachloroethene	Total Trihalomethanes	Trichloroethene	trans-1,2-Dichloroethylene	Vinyl Chloride
BH510A	R	14.33-15.85	29-Mar-18	-	<0.00050	<0.00050	0.0033	<0.0020	0.0027	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	-	<0.00050
	R	14.33-15.85	08-May-17	-	0.0045*	<0.00050	0.056	<0.0020	0.056	<0.00050	0.019	<0.00050	<0.0010	<0.00050	0.0066	0.0026*	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	0.00075
	R	14.33-15.85	07-Nov-16	-	<0.00050	<0.00050	0.070	<0.0045*	0.058	<0.00050	0.025	<0.00050	<0.0010	<0.0011*	<0.0060*	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	14.33-15.85	09-May-16	-	<0.00050	<0.00050	0.030	0.00073	0.039	<0.00050	0.032	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	14.33-15.86	19-Nov-15	-	<0.001	<0.001	-	-	0.037	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	14.33-15.87	04-Sep-15	-	<0.001	<0.001	-	-	0.037	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
BH732	R	7.32-8.84	28-Mar-18	-	<0.00050	<0.00050	<0.00050	<0.0020	<0.00050	<0.00050	<0.00050	0.00088	<0.0010	0.0067	<0.0020	<0.00050	-	<0.00050	<0.00050	0.0076	<0.00050	<0.00050	<0.00050	<0.00050
	R	7.32-8.84	19-May-17	-	<0.00050	<0.00050	<0.00050	<0.0020	<0.00050	<0.00050	0.0016	<0.0010	0.013	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	0.014	<0.00050	<0.00050	<0.00050	<0.00050
	R	7.32-8.84	15-Nov-16	-	<0.00050	<0.00050	<0.0010	<0.0020	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	7.32-8.84	18-May-16	-	<0.00050	<0.00050	<0.0010	<0.0020	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	7.32-8.84	27-Nov-15	-	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	7.32-8.84	03-Sep-15	-	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
BH1704*	R	5.79-7.32	19-Jun-15	-	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	7.32-8.84	19-Jun-15	-	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	7.32-8.84	19-Jun-15	-	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	8.84-10.36	19-Jun-15	-	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	8.84-10.36	19-Jun-15	-	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	13-Apr-15	-	<0.001	<0.001	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
EX1	R	Bulk	10-Apr-18	-	<0.00050	0.00057*	2.0**	0.0010*	0.049	<0.00050	0.61**	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	09-May-17	-	0.071*	0.0016*	2.8***	0.00096*	0.048	<0.00050	0.91***	<0.00050	<0.0010	<0.00050	0.0025	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	08-Nov-16	-	0.0084**	<0.00050	2.2***	0.0028**	0.049	0.0017**	0.71***	0.0020**	<0.0010	<0.00050	<0.0030*	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	17-May-16	-	<0.00050	<0.00050	1.4	0.0019	0.069	<0.00050	0.31	<0.001	<0.0010	<0.0020	<0.00050	<0.00050	-	0.0047	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	19-Nov-15	-	<0.001	<0.001	-	-	0.040	<0.001	-	<0.001	<0.0010	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	08-Sep-15	-	<0.1	<0.1	-	-	<0.1	<0.1	-	<0.001	<0.1	<0.1	<0.1	-	<0.001	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
EX2	R	Bulk	12-Jun-15	-	<0.001	<0.001	-	-	0.058	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	02-Apr-15	-	<0.001	<0.001	-	-	0.042	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	04-Apr-18	-	<0.00050	<0.00050	0.0058	<0.0020	0.0061	<0.00050	0.0015	<0.00050	<0.0010	<0.00050	<0.0020	0.0006	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	05-May-17	-	<0.00050	<0.00050	0.0018	<0.0020	0.0025	<0.00050	0.00057	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	01-Nov-16	-	<0.00050	<0.00050	0.040	<0.0020	0.11	<0.00050	0.012	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	06-May-16	-	<0.00050	<0.00050	0.073	<0.0020	0.13	<0.00050	0.023	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	0.019	<0.00050	<0.0013	<0.00050	<0.00050	0.00096
EX3	R	Bulk	20-Nov-15	-	<0.001	<0.001	-	-	0.106	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	17-Sep-15	-	<0.001	<0.001	-	-	0.086	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	11-Jun-15	-	<0.001	<0.001	-	-	0.11	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	15-Apr-15	-	<0.001	<0.001	-	-	0.136	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	04-Apr-18	-	<0.00050	<0.00050	0.0063	<0.0020	0.050	<0.00050	0.0033	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	09-May-17	-	0.00096*	<0.00050	0.0044	<0.0020	0.020	<0.00050	0.0051	<0.00050	<0.0010	<0.00050	<0.0020	0.00053*	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
EX1	R	Bulk	01-Nov-16	-	0.0011*	<0.00050	0.023	<0.0020	0.062	<0.00050	0.011	<0.00050	<0.0010	<0.00050	0.0030	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	10-May-16	-	0.00063	<0.00050	0.029	<0.0020	0.045	<0.00050	0.015	<0.00050	<0.0010	<0.00050	<0.0020	<0.0011	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	20-Nov-15	-	<0.001	<0.001	-	-	0.053	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	17-Sep-15	-	0.001	<0.001	-	-	0.048	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	&					



**Table 7 - Summary of Groundwater Laboratory Analyses  
VOCs**

Sample ID	Land Use <sup>1</sup>	Sampling Depth (m bgs)	Sample Date	Unit	1,1,2-Trichloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dibromoethane	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	Bromodichloromethane	Chloroethane	Chloroform	Chloromethane	Methyl methacrylate	Methyl-tert-butylether (MTBE)	Methylene Chloride	Styrene	Tetrachloroethane	Total Trihalomethanes	Trichloroethane	Trans-1,2-Dichloroethylene	Vinyl Chloride
EX4	R	Bulk	04-Apr-18	-	<0.00050	<0.00050	0.22	0.00043	<b>0.015</b>	<0.00050	0.034	<0.00050	<0.0010	<0.00050	<0.0020	<0.0038	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	-	<0.00050
	R	Bulk	09-May-17	-	<b>0.0076*</b>	<b>0.00096*</b>	0.49	<0.00020	<b>0.031</b>	<0.00050	0.096	<0.00050	<0.0010	<0.00050	<0.0020	<b>0.0077*</b>	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<b>0.00097</b>
	R	Bulk	01-Nov-16	-	<0.00050	<0.00050	0.50	<b>0.0012*</b>	<b>0.024</b>	<0.00050**	0.14	<0.00050	<0.0010	<0.0015**	<0.0020	<0.00050	<0.00050	-	<b>0.00064</b>	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	18-May-16	-	<0.00050	<0.00050	0.66	<b>0.00086*</b>	<b>0.038</b>	<0.00050	0.21	<0.00050	<0.0010	<0.00050	<0.0020	<0.0011	<0.00050	-	<b>0.00011</b>	<0.00050	<0.0013	<0.00050	<0.00050	<b>0.00051</b>
	R	Bulk	19-Nov-15	-	<0.001	<0.001	-	-	<b>0.027</b>	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
	R	10.36-11.89	Bulk	17-Sep-15	-	<0.001	<0.001	-	-	<b>0.033</b>	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EX5	R	10.36-11.89	19-Jun-15	-	<0.001	<0.001	-	-	<b>0.037</b>	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
	R	Bulk	16-Apr-15	-	<0.001	<0.001	-	-	<b>0.032</b>	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
	R	10.67-12.19	27-Mar-18	-	<b>0.0012*</b>	<b>0.0011</b>	0.38	<0.00020	<b>0.086</b>	<0.00050	0.15	<0.00050	<0.0010	<0.00050	<b>0.0072</b>	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	10.67-12.19	08-May-17	-	<b>0.049*</b>	<0.00050	0.40	<0.00020	<b>0.11</b>	<0.00050	0.20	<0.00050	<b>0.0011*</b>	<0.00050	<b>0.014</b>	<b>0.015*</b>	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	10.67-12.19	01-Nov-16	-	<b>0.0033*</b>	<0.00050	0.34	<b>0.00082*</b>	<b>0.10</b>	<b>0.0013*</b>	0.16	<0.00050	<0.00050	<0.0020	<0.00050	<0.00050	-	<b>0.0013</b>	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	10.67-12.19	17-May-16	-	<b>0.0063</b>	<0.00050	0.49	<b>0.00082</b>	<b>0.25</b>	<0.00050	0.20	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050	<0.00050	-	<b>0.0018</b>	<0.00050	<0.0013	<0.00050	<0.00050	<b>0.00058</b>
EX6	R	10.67-12.20	18-Nov-15	-	<0.001	<0.001	-	-	<b>0.120</b>	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
	R	10.67-12.21	17-Sep-15	-	<0.001	<0.001	-	-	<b>0.074</b>	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
	R	10.67-12.22	19-Jun-15	-	<0.001	<0.001	-	-	<b>0.084</b>	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
	R	Bulk	17-Apr-15	-	<0.001	<0.001	-	-	<b>0.075</b>	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
	R	Bulk	04-Apr-18	-	<0.00050	<b>0.00066*</b>	0.0091	<0.00020	<b>0.021</b>	<0.00050	0.088	<0.00050	<0.0010	<0.00050	<0.0020	<0.00050**	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	-	<0.00050
	R	Bulk	10-May-17	-	<0.010**	<b>0.0020*</b>	0.056	<0.00020	<b>0.051</b>	<0.00090**	0.27	<0.00050	<0.0010	<0.00050	<b>0.0052</b>	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
EX7	R	Bulk	02-Nov-16	-	<0.00050	<0.00050	0.069	<b>0.00048*</b>	<b>0.054</b>	<b>0.0011*</b>	0.25	<0.0015**	<0.0010	<0.00050	<0.0060**	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050	<0.00050
	R	Bulk	18-May-16	-	<0.00050	<0.00050	0.045	<0.00020	<b>0.056</b>	<0.00050	0.093	<0.00050	<0.0010	<0.00050	<0.0020	<0.0011	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	23-Nov-15	-	<0.001	<0.001	-	-	<b>0.040</b>	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
	R	Bulk	17-Sep-15	-	<0.001	<0.001	-	-	<b>0.047</b>	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
	R	Bulk	11-Jun-15	-	<0.001	<0.001	-	-	<b>0.056</b>	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
	R	Bulk	17-Apr-15	-	<0.001	<0.001	-	-	<b>0.050</b>	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
EX7	R	Bulk	04-Apr-18	-	<b>0.0053</b>	<b>0.00059*</b>	0.026	<b>0.00022</b>	<b>0.25</b>	<0.00050	0.024	<0.00050	<0.0010	<0.00050	<b>0.0080</b>	<0.0023**	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	-	<0.00050
	R	Bulk	10-May-17	-	<0.00050**	<b>0.0011*</b>	0.24	<0.00020	<b>0.24</b>	<0.00050	0.13	<0.00050	<b>0.0010*</b>	<0.00050	<b>0.011</b>	<0.00050**	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	01-Nov-16	-	<b>0.0035</b>	<0.00050	0.32	<b>0.00041*</b>	<b>0.23</b>	<b>0.00055*</b>	0.15	<0.00050	<0.0010	<0.0015**	<b>0.0097</b>	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	18-May-16	-	<b>0.0037</b>	<0.00050	0.10	<0.00020	<b>0.21</b>	<0.00050	0.11	<0.00050	<0.0010	<0.00050	<0.0020	<0.0011	<0.00050	-	<0.00050	<0.00050	<0.0013	<0.00050	<0.00050	<0.00050
	R	Bulk	23-Nov-15	-	<0.001	<0.001	-	-	<b>0.0250</b>	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008
	R	11.58-13.11	Bulk	17-Sep-15	-	<b>0.002</b>	<0.001	-	-	<b>0.158</b>	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Residential Guideline <sup>2</sup>					NG	NG	NG	NG	0.005	NG	NG	NG	NG	0.0018	NG	0.47	0.015	0.05	0.072	0.010	0.1	0.005	NG	0.0011
					Commercial Guideline <sup>2</sup>	NG	NG	NG	NG	0.005	NG	NG	NG	NG	0.0018	NG	0.47	0.015	0.05	0.072	0.010	0.1	0.005	NG

**Notes:**

<sup>1</sup> Land Use abbreviations: C=Commercial; R=Residential; I=Industrial; N=Natural.

<sup>2</sup> AEP 2016 Tier 1 Guidelines

**Bold** Indicates that the concentration did not meet the applicable guideline.

Bulk Bulk sample collected using a dedicated, disposable bailer.

m bgs Meters below ground surface

\* Results are potentially biased high

\*\* Detection limit raised due to matrix interference

- Not analyzed.

All results in mg/L unless otherwise noted.

Only compounds with detectable concentrations in at least one sample are presented.

Testing was conducted by Maxxam Analytics, Calgary, Alberta

**Table 8 - Summary of Mann-Kendall Plume Stability Analysis for Selected Monitoring Wells**

Sample ID	Parameter	Trend at 90% Confidence Limit			Fluctuating (no trend)	S-Statistic	CV	Number of Events	Number of Non- Detects	Maximum Concentration (mg/L)
		Declining	Stable	Expanding						
BH1928	Benzene		X			-8	0.45	10	1	4.93
BH1937	Benzene	X				-18	3.05	10	0	6.0
BH1939	Benzene	X				-17	0.53	10	0	7.4
BH1954	Benzene		X			4	0.71	9	1	0.0065
BH1981	Benzene	X				-21	1.73	9	2	0.0864
BH1982	Benzene		X			15	0.30	10	0	6.6
BH1928	1,2-DCA			X		19	0.19	9	0	0.3
BH1937	1,2-DCA				X	-13	2.10	10	0	0.18
BH1939	1,2-DCA		X			0	0.36	10	0	0.21
BH1954	1,2-DCA			X		18	0.54	9	4	0.002
BH1981	1,2-DCA			X		14	0.64	9	2	0.032
BH1982	1,2-DCA		X			12	0.25	10	0	0.13

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Appendix A

# Clifton Associates

## Appendix A

**Clifton Associates**



**Calgary Office**

2222 30<sup>th</sup> Avenue NE  
Calgary, Alberta T2E 7K9

T (403) 263 2556  
F (403) 234 9033

[calgary@clifton.ca](mailto:calgary@clifton.ca)  
[www.clifton.ca](http://www.clifton.ca)

Your Project #: CG2430.1 E30  
Your C.O.C. #: m070634

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/03**

Report #: R2535862

Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B822823**

**Received: 2018/03/27, 17:41**

Sample Matrix: GROUND WATER  
# Samples Received: 7

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 in Water by HS GC/MS/FID	7	N/A	2018/03/28	AB SOP-00039	CCME CWS/EPA 8260c m
F1-BTEX	7	N/A	2018/03/29	AB SOP-00039	Auto Calc
CCME Hydrocarbons in Water (F2; C10-C16) (1)	7	2018/03/28	2018/03/28	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Benzo[a]pyrene Equivalency (2)	2	N/A	2018/03/29	AB SOP-00003	Auto Calc
PAH in Water by GC/MS	2	2018/03/28	2018/03/29	AB SOP-00037 / AB SOP-00003	EPA 3510C/8270D m
Total Trihalomethanes Calculation	7	N/A	2018/03/29	AB SOP-00056	Auto Calc
VOCs in Water by HS GC/MS (Std List)	7	N/A	2018/03/28	AB SOP-00056	EPA 5021a/8260c m

Sample Matrix: Water  
# Samples Received: 1

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Total Trihalomethanes Calculation	1	N/A	2018/03/29	AB SOP-00056	Auto Calc
VOCs in Water by HS GC/MS (Std List)	1	N/A	2018/03/28	AB SOP-00056	EPA 5021a/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.

Your Project #: CG2430.1 E30  
Your C.O.C. #: m070634

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/03**  
Report #: R2535862  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B822823**

**Received: 2018/03/27, 17:41**

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) Silica gel clean up employed.
- (2) B[a]P TPE is calculated using 1/2 of the RDL for non detect results as per Alberta Environment instructions. This protocol may not apply in other jurisdictions.

**Encryption Key**

Please direct all questions regarding this Certificate of Analysis to your Project Manager.  
Jennifer Stephenson, B.Sc, Technical Specialist  
Email: jstephenson@maxxam.ca  
Phone# (403) 291-3077  
=====

This report has been generated and distributed using a secure automated process.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (GROUND WATER)**

Maxxam ID		TE3889	TE3890	TE3891	TE3892	TE3893	TE3894		
Sampling Date		2018/03/26 13:40	2018/03/26 14:10	2018/03/26 15:15	2018/03/26 14:30	2018/03/26 13:50	2018/03/26 15:50		
COC Number		m070634	m070634	m070634	m070634	m070634	m070634		
	<b>UNITS</b>	<b>1901</b>	<b>1902</b>	<b>1904</b>	<b>1957</b>	<b>1958</b>	<b>2010</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Ext. Pet. Hydrocarbon</b>									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8946259
<b>Volatiles</b>									
Benzene	mg/L	<0.00040	<0.00040	0.20	<0.00040	<0.00040	<0.00040	0.00040	8946251
Toluene	mg/L	<0.00040	<0.00040	0.00061	<0.00040	<0.00040	<0.00040	0.00040	8946251
Ethylbenzene	mg/L	<0.00040	<0.00040	0.00072	<0.00040	<0.00040	<0.00040	0.00040	8946251
m & p-Xylene	mg/L	<0.00080	<0.00080	0.00087	<0.00080	<0.00080	<0.00080	0.00080	8946251
o-Xylene	mg/L	<0.00040	<0.00040	0.00042	<0.00040	<0.00040	<0.00040	0.00040	8946251
Xylenes (Total)	mg/L	<0.00089	<0.00089	0.0013	<0.00089	<0.00089	<0.00089	0.00089	8946584
F1 (C6-C10) - BTEX	mg/L	<0.10	<0.10	0.17	<0.10	<0.10	<0.10	0.10	8946584
F1 (C6-C10)	mg/L	<0.10	<0.10	0.38	<0.10	<0.10	<0.10	0.10	8946251
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene (sur.)	%	100	100	97	99	99	100	N/A	8946251
4-Bromofluorobenzene (sur.)	%	93	93	94	93	94	94	N/A	8946251
D4-1,2-Dichloroethane (sur.)	%	86	88	89	87	87	89	N/A	8946251
O-TERPHENYL (sur.)	%	93	96	95	90	88	96	N/A	8946259

RDL = Reportable Detection Limit  
N/A = Not Applicable



Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (GROUND WATER)**

<b>Maxxam ID</b>		TE3895		
<b>Sampling Date</b>		2018/03/26 15:30		
<b>COC Number</b>		m070634		
	<b>UNITS</b>	<b>2012</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Ext. Pet. Hydrocarbon</b>				
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	0.10	8946259
<b>Volatiles</b>				
Benzene	mg/L	<0.00040	0.00040	8946251
Toluene	mg/L	<0.00040	0.00040	8946251
Ethylbenzene	mg/L	<0.00040	0.00040	8946251
m & p-Xylene	mg/L	<0.00080	0.00080	8946251
o-Xylene	mg/L	<0.00040	0.00040	8946251
Xylenes (Total)	mg/L	<0.00089	0.00089	8946584
F1 (C6-C10) - BTEX	mg/L	<0.10	0.10	8946584
F1 (C6-C10)	mg/L	<0.10	0.10	8946251
<b>Surrogate Recovery (%)</b>				
1,4-Difluorobenzene (sur.)	%	100	N/A	8946251
4-Bromofluorobenzene (sur.)	%	92	N/A	8946251
D4-1,2-Dichloroethane (sur.)	%	87	N/A	8946251
O-TERPHENYL (sur.)	%	89	N/A	8946259
RDL = Reportable Detection Limit N/A = Not Applicable				

Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**SEMIVOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TE3894	TE3895		
Sampling Date		2018/03/26 15:50	2018/03/26 15:30		
COC Number		m070634	m070634		
	UNITS	2010	2012	RDL	QC Batch
<b>Polycyclic Aromatics</b>					
Benzo[a]pyrene equivalency	mg/L	<0.000010	<0.000010	0.000010	8946586
Acenaphthene	mg/L	<0.00010	<0.00010	0.00010	8946252
Acenaphthylene	mg/L	<0.00010	<0.00010	0.00010	8946252
Acridine	mg/L	<0.000050	<0.000050	0.000050	8946252
Anthracene	mg/L	<0.000010	<0.000010	0.000010	8946252
Benzo(a)anthracene	mg/L	<0.0000085	<0.0000085	0.0000085	8946252
Benzo(b&j)fluoranthene	mg/L	<0.0000085	<0.0000085	0.0000085	8946252
Benzo(k)fluoranthene	mg/L	<0.0000085	<0.0000085	0.0000085	8946252
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	0.0000085	8946252
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	0.000050	8946252
Benzo(a)pyrene	mg/L	<0.0000075	<0.0000075	0.0000075	8946252
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	0.000050	8946252
Chrysene	mg/L	<0.0000085	<0.0000085	0.0000085	8946252
Dibenz(a,h)anthracene	mg/L	<0.0000075	<0.0000075	0.0000075	8946252
Fluoranthene	mg/L	<0.000010	<0.000010	0.000010	8946252
Fluorene	mg/L	<0.000050	<0.000050	0.000050	8946252
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	0.0000085	8946252
1-Methylnaphthalene	mg/L	<0.00010	<0.00010	0.00010	8946252
2-Methylnaphthalene	mg/L	<0.00010	<0.00010	0.00010	8946252
Naphthalene	mg/L	<0.00010	<0.00010	0.00010	8946252
Phenanthrene	mg/L	<0.000050	<0.000050	0.000050	8946252
Perylene	mg/L	<0.000050	<0.000050	0.000050	8946252
Pyrene	mg/L	<0.000020	<0.000020	0.000020	8946252
Quinoline	mg/L	<0.00020	<0.00020	0.00020	8946252
<b>Surrogate Recovery (%)</b>					
D10-ANTHRACENE (sur.)	%	104	103	N/A	8946252
D8-ACENAPHTHYLENE (sur.)	%	102	94	N/A	8946252
D8-NAPHTHALENE (sur.)	%	70	62	N/A	8946252
TERPHENYL-D14 (sur.)	%	116	116	N/A	8946252
RDL = Reportable Detection Limit N/A = Not Applicable					

Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TE3889	TE3890	TE3891	TE3892	TE3893		
Sampling Date		2018/03/26 13:40	2018/03/26 14:10	2018/03/26 15:15	2018/03/26 14:30	2018/03/26 13:50		
COC Number		m070634	m070634	m070634	m070634	m070634		
	UNITS	1901	1902	1904	1957	1958	RDL	QC Batch
<b>Volatiles</b>								
Total Trihalomethanes	mg/L	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0013	8946575
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8945331
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8945331
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8945331
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8945331
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8945331
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
1,2-dichloroethane	mg/L	<0.00050	<0.00050	0.0013	<0.00050	<0.00050	0.00050	8945331
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8945331
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8945331
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8945331
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8945331
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8945331
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
RDL = Reportable Detection Limit								

Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TE3889	TE3890	TE3891	TE3892	TE3893		
Sampling Date		2018/03/26 13:40	2018/03/26 14:10	2018/03/26 15:15	2018/03/26 14:30	2018/03/26 13:50		
COC Number		m070634	m070634	m070634	m070634	m070634		
	UNITS	1901	1902	1904	1957	1958	RDL	QC Batch
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8945331
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	103	102	101	101	102	N/A	8945331
4-Bromofluorobenzene (sur.)	%	95	95	96	94	95	N/A	8945331
D4-1,2-Dichloroethane (sur.)	%	100	101	99	99	101	N/A	8945331
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TE3894	TE3895		
Sampling Date		2018/03/26 15:50	2018/03/26 15:30		
COC Number		m070634	m070634		
	UNITS	2010	2012	RDL	QC Batch
<b>Volatiles</b>					
Total Trihalomethanes	mg/L	<0.0013	<0.0013	0.0013	8946575
Bromodichloromethane	mg/L	<0.00050	<0.00050	0.00050	8945331
Bromoform	mg/L	<0.00050	<0.00050	0.00050	8945331
Bromomethane	mg/L	<0.0020	<0.0020	0.0020	8945331
Carbon tetrachloride	mg/L	<0.00050	<0.00050	0.00050	8945331
Chlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8945331
Chlorodibromomethane	mg/L	<0.0010	<0.0010	0.0010	8945331
Chloroethane	mg/L	<0.0010	<0.0010	0.0010	8945331
Chloroform	mg/L	<0.00050	<0.00050	0.00050	8945331
Chloromethane	mg/L	<0.0020	<0.0020	0.0020	8945331
1,2-dibromoethane	mg/L	<0.00020	<0.00020	0.00020	8945331
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8945331
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8945331
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8945331
1,1-dichloroethane	mg/L	<0.00050	<0.00050	0.00050	8945331
1,2-dichloroethane	mg/L	<0.00050	<0.00050	0.00050	8945331
1,1-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	8945331
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	8945331
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	8945331
Dichloromethane	mg/L	<0.0020	<0.0020	0.0020	8945331
1,2-dichloropropane	mg/L	<0.00050	<0.00050	0.00050	8945331
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	0.00050	8945331
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	0.00050	8945331
Methyl methacrylate	mg/L	<0.00050	<0.00050	0.00050	8945331
Methyl-tert-butylether (MTBE)	mg/L	0.0012	<0.00050	0.00050	8945331
Styrene	mg/L	<0.00050	<0.00050	0.00050	8945331
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	0.0010	8945331
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	0.0020	8945331
Tetrachloroethene	mg/L	<0.00050	<0.00050	0.00050	8945331
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	0.0010	8945331
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	0.0010	8945331
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8945331
RDL = Reportable Detection Limit					

Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TE3894	TE3895		
Sampling Date		2018/03/26 15:50	2018/03/26 15:30		
COC Number		m070634	m070634		
	UNITS	2010	2012	RDL	QC Batch
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	0.00050	8945331
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	0.00050	8945331
Trichloroethene	mg/L	<0.00050	<0.00050	0.00050	8945331
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	0.00050	8945331
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	0.00050	8945331
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	0.00050	8945331
Vinyl chloride	mg/L	<0.00050	<0.00050	0.00050	8945331
Surrogate Recovery (%)					
1,4-Difluorobenzene (sur.)	%	103	103	N/A	8945331
4-Bromofluorobenzene (sur.)	%	95	95	N/A	8945331
D4-1,2-Dichloroethane (sur.)	%	100	100	N/A	8945331
RDL = Reportable Detection Limit N/A = Not Applicable					

Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE3896		
Sampling Date		2018/03/26		
COC Number		m070634		
	UNITS	TRIP BLANK 1	RDL	QC Batch
<b>Volatiles</b>				
Total Trihalomethanes	mg/L	<0.0013	0.0013	8946575
Benzene	mg/L	<0.00040	0.00040	8945331
Bromodichloromethane	mg/L	<0.00050	0.00050	8945331
Bromoform	mg/L	<0.00050	0.00050	8945331
Bromomethane	mg/L	<0.0020	0.0020	8945331
Carbon tetrachloride	mg/L	<0.00050	0.00050	8945331
Chlorobenzene	mg/L	<0.00050	0.00050	8945331
Chlorodibromomethane	mg/L	<0.0010	0.0010	8945331
Chloroethane	mg/L	<0.0010	0.0010	8945331
Chloroform	mg/L	<0.00050	0.00050	8945331
Chloromethane	mg/L	<0.0020	0.0020	8945331
1,2-dibromoethane	mg/L	<0.00020	0.00020	8945331
1,2-dichlorobenzene	mg/L	<0.00050	0.00050	8945331
1,3-dichlorobenzene	mg/L	<0.00050	0.00050	8945331
1,4-dichlorobenzene	mg/L	<0.00050	0.00050	8945331
1,1-dichloroethane	mg/L	<0.00050	0.00050	8945331
1,2-dichloroethane	mg/L	<0.00050	0.00050	8945331
1,1-dichloroethene	mg/L	<0.00050	0.00050	8945331
cis-1,2-dichloroethene	mg/L	<0.00050	0.00050	8945331
trans-1,2-dichloroethene	mg/L	<0.00050	0.00050	8945331
Dichloromethane	mg/L	<0.0020	0.0020	8945331
1,2-dichloropropane	mg/L	<0.00050	0.00050	8945331
cis-1,3-dichloropropene	mg/L	<0.00050	0.00050	8945331
trans-1,3-dichloropropene	mg/L	<0.00050	0.00050	8945331
Ethylbenzene	mg/L	<0.00040	0.00040	8945331
Methyl methacrylate	mg/L	<0.00050	0.00050	8945331
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	0.00050	8945331
Styrene	mg/L	<0.00050	0.00050	8945331
1,1,1,2-tetrachloroethane	mg/L	<0.0010	0.0010	8945331
1,1,2,2-tetrachloroethane	mg/L	<0.0020	0.0020	8945331
Tetrachloroethene	mg/L	<0.00050	0.00050	8945331
Toluene	mg/L	<0.00040	0.00040	8945331
RDL = Reportable Detection Limit				



Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE3896		
Sampling Date		2018/03/26		
COC Number		m070634		
	UNITS	TRIP BLANK 1	RDL	QC Batch
1,2,3-trichlorobenzene	mg/L	<0.0010	0.0010	8945331
1,2,4-trichlorobenzene	mg/L	<0.0010	0.0010	8945331
1,3,5-trichlorobenzene	mg/L	<0.00050	0.00050	8945331
1,1,1-trichloroethane	mg/L	<0.00050	0.00050	8945331
1,1,2-trichloroethane	mg/L	<0.00050	0.00050	8945331
Trichloroethene	mg/L	<0.00050	0.00050	8945331
Trichlorofluoromethane	mg/L	<0.00050	0.00050	8945331
1,2,4-trimethylbenzene	mg/L	<0.00050	0.00050	8945331
1,3,5-trimethylbenzene	mg/L	<0.00050	0.00050	8945331
Vinyl chloride	mg/L	<0.00050	0.00050	8945331
Xylenes (Total)	mg/L	<0.00080	0.00080	8945331
m & p-Xylene	mg/L	<0.00080	0.00080	8945331
o-Xylene	mg/L	<0.00040	0.00040	8945331
<b>Surrogate Recovery (%)</b>				
1,4-Difluorobenzene (sur.)	%	102	N/A	8945331
4-Bromofluorobenzene (sur.)	%	94	N/A	8945331
D4-1,2-Dichloroethane (sur.)	%	98	N/A	8945331
RDL = Reportable Detection Limit N/A = Not Applicable				

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### GENERAL COMMENTS

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

Package 1	4.3°C
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**Results relate only to the items tested.**

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**QUALITY ASSURANCE REPORT**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	8945331	MJ0	Matrix Spike	1,4-Difluorobenzene (sur.)	2018/03/28		101	%	70 - 130
				4-Bromofluorobenzene (sur.)	2018/03/28		98	%	70 - 130
				D4-1,2-Dichloroethane (sur.)	2018/03/28		100	%	70 - 130
				Benzene	2018/03/28		88	%	70 - 130
				Bromodichloromethane	2018/03/28		94	%	70 - 130
				Bromoform	2018/03/28		104	%	70 - 130
				Bromomethane	2018/03/28		67 (1)	%	70 - 130
				Carbon tetrachloride	2018/03/28		89	%	70 - 130
				Chlorobenzene	2018/03/28		97	%	70 - 130
				Chlorodibromomethane	2018/03/28		100	%	70 - 130
				Chloroethane	2018/03/28		78	%	70 - 130
				Chloroform	2018/03/28		90	%	70 - 130
				Chloromethane	2018/03/28		67 (1)	%	70 - 130
				1,2-dibromoethane	2018/03/28		104	%	70 - 130
				1,2-dichlorobenzene	2018/03/28		96	%	70 - 130
				1,3-dichlorobenzene	2018/03/28		92	%	70 - 130
				1,4-dichlorobenzene	2018/03/28		92	%	70 - 130
				1,1-dichloroethane	2018/03/28		86	%	70 - 130
				1,2-dichloroethane	2018/03/28		96	%	70 - 130
				1,1-dichloroethene	2018/03/28		88	%	70 - 130
				cis-1,2-dichloroethene	2018/03/28		94	%	70 - 130
				trans-1,2-dichloroethene	2018/03/28		90	%	70 - 130
				Dichloromethane	2018/03/28		80	%	70 - 130
				1,2-dichloropropane	2018/03/28		93	%	70 - 130
				cis-1,3-dichloropropene	2018/03/28		99	%	70 - 130
				trans-1,3-dichloropropene	2018/03/28		111	%	70 - 130
				Ethylbenzene	2018/03/28		94	%	70 - 130
				Methyl methacrylate	2018/03/28		108	%	70 - 130
				Methyl-tert-butylether (MTBE)	2018/03/28		94	%	70 - 130
				Styrene	2018/03/28		98	%	70 - 130
				1,1,1,2-tetrachloroethane	2018/03/28		97	%	70 - 130
				1,1,2,2-tetrachloroethane	2018/03/28		96	%	70 - 130
				Tetrachloroethene	2018/03/28		94	%	70 - 130
				Toluene	2018/03/28		95	%	70 - 130
				1,2,3-trichlorobenzene	2018/03/28		98	%	70 - 130
				1,2,4-trichlorobenzene	2018/03/28		97	%	70 - 130
				1,3,5-trichlorobenzene	2018/03/28		95	%	70 - 130
				1,1,1-trichloroethane	2018/03/28		91	%	70 - 130
				1,1,2-trichloroethane	2018/03/28		95	%	70 - 130
				Trichloroethene	2018/03/28		93	%	70 - 130
				Trichlorofluoromethane	2018/03/28		86	%	70 - 130
				1,2,4-trimethylbenzene	2018/03/28		95	%	70 - 130
				1,3,5-trimethylbenzene	2018/03/28		92	%	70 - 130
				Vinyl chloride	2018/03/28		78	%	70 - 130
				m & p-Xylene	2018/03/28		96	%	70 - 130
				o-Xylene	2018/03/28		96	%	70 - 130
	8945331	MJ0	Spiked Blank	1,4-Difluorobenzene (sur.)	2018/03/28		102	%	70 - 130
				4-Bromofluorobenzene (sur.)	2018/03/28		98	%	70 - 130
				D4-1,2-Dichloroethane (sur.)	2018/03/28		93	%	70 - 130
				Benzene	2018/03/28		86	%	70 - 130
				Bromodichloromethane	2018/03/28		89	%	70 - 130
				Bromoform	2018/03/28		93	%	70 - 130
				Bromomethane	2018/03/28		68 (1)	%	70 - 130
				Carbon tetrachloride	2018/03/28		90	%	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
			Chlorobenzene	2018/03/28		95	%	70 - 130
			Chlorodibromomethane	2018/03/28		92	%	70 - 130
			Chloroethane	2018/03/28		78	%	70 - 130
			Chloroform	2018/03/28		87	%	70 - 130
			Chloromethane	2018/03/28		67 (1)	%	70 - 130
			1,2-dibromoethane	2018/03/28		92	%	70 - 130
			1,2-dichlorobenzene	2018/03/28		91	%	70 - 130
			1,3-dichlorobenzene	2018/03/28		90	%	70 - 130
			1,4-dichlorobenzene	2018/03/28		89	%	70 - 130
			1,1-dichloroethane	2018/03/28		84	%	70 - 130
			1,2-dichloroethane	2018/03/28		87	%	70 - 130
			1,1-dichloroethene	2018/03/28		89	%	70 - 130
			cis-1,2-dichloroethene	2018/03/28		90	%	70 - 130
			trans-1,2-dichloroethene	2018/03/28		89	%	70 - 130
			Dichloromethane	2018/03/28		76	%	70 - 130
			1,2-dichloropropane	2018/03/28		88	%	70 - 130
			cis-1,3-dichloropropene	2018/03/28		93	%	70 - 130
			trans-1,3-dichloropropene	2018/03/28		104	%	70 - 130
			Ethylbenzene	2018/03/28		95	%	70 - 130
			Methyl methacrylate	2018/03/28		93	%	70 - 130
			Methyl-tert-butylether (MTBE)	2018/03/28		89	%	70 - 130
			Styrene	2018/03/28		95	%	70 - 130
			1,1,1,2-tetrachloroethane	2018/03/28		93	%	70 - 130
			1,1,2,2-tetrachloroethane	2018/03/28		84	%	70 - 130
			Tetrachloroethene	2018/03/28		94	%	70 - 130
			Toluene	2018/03/28		94	%	70 - 130
			1,2,3-trichlorobenzene	2018/03/28		90	%	70 - 130
			1,2,4-trichlorobenzene	2018/03/28		91	%	70 - 130
			1,3,5-trichlorobenzene	2018/03/28		92	%	70 - 130
			1,1,1-trichloroethane	2018/03/28		92	%	70 - 130
			1,1,2-trichloroethane	2018/03/28		85	%	70 - 130
			Trichloroethene	2018/03/28		92	%	70 - 130
			Trichlorofluoromethane	2018/03/28		87	%	70 - 130
			1,2,4-trimethylbenzene	2018/03/28		94	%	70 - 130
			1,3,5-trimethylbenzene	2018/03/28		93	%	70 - 130
			Vinyl chloride	2018/03/28		80	%	70 - 130
			m & p-Xylene	2018/03/28		96	%	70 - 130
			o-Xylene	2018/03/28		96	%	70 - 130
8945331	MJO	Method Blank	1,4-Difluorobenzene (sur.)	2018/03/28		101	%	70 - 130
			4-Bromofluorobenzene (sur.)	2018/03/28		95	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2018/03/28		96	%	70 - 130
			Benzene	2018/03/28	<0.00040		mg/L	
			Bromodichloromethane	2018/03/28	<0.00050		mg/L	
			Bromoform	2018/03/28	<0.00050		mg/L	
			Bromomethane	2018/03/28	<0.0020		mg/L	
			Carbon tetrachloride	2018/03/28	<0.00050		mg/L	
			Chlorobenzene	2018/03/28	<0.00050		mg/L	
			Chlorodibromomethane	2018/03/28	<0.0010		mg/L	
			Chloroethane	2018/03/28	<0.0010		mg/L	
			Chloroform	2018/03/28	<0.00050		mg/L	
			Chloromethane	2018/03/28	<0.0020		mg/L	
			1,2-dibromoethane	2018/03/28	<0.00020		mg/L	
			1,2-dichlorobenzene	2018/03/28	<0.00050		mg/L	
			1,3-dichlorobenzene	2018/03/28	<0.00050		mg/L	

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**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,4-dichlorobenzene	2018/03/28	<0.00050		mg/L	
				1,1-dichloroethane	2018/03/28	<0.00050		mg/L	
				1,2-dichloroethane	2018/03/28	<0.00050		mg/L	
				1,1-dichloroethene	2018/03/28	<0.00050		mg/L	
				cis-1,2-dichloroethene	2018/03/28	<0.00050		mg/L	
				trans-1,2-dichloroethene	2018/03/28	<0.00050		mg/L	
				Dichloromethane	2018/03/28	<0.0020		mg/L	
				1,2-dichloropropane	2018/03/28	<0.00050		mg/L	
				cis-1,3-dichloropropene	2018/03/28	<0.00050		mg/L	
				trans-1,3-dichloropropene	2018/03/28	<0.00050		mg/L	
				Ethylbenzene	2018/03/28	<0.00040		mg/L	
				Methyl methacrylate	2018/03/28	<0.00050		mg/L	
				Methyl-tert-butylether (MTBE)	2018/03/28	<0.00050		mg/L	
				Styrene	2018/03/28	<0.00050		mg/L	
				1,1,1,2-tetrachloroethane	2018/03/28	<0.0010		mg/L	
				1,1,2,2-tetrachloroethane	2018/03/28	<0.0020		mg/L	
				Tetrachloroethene	2018/03/28	<0.00050		mg/L	
				Toluene	2018/03/28	<0.00040		mg/L	
				1,2,3-trichlorobenzene	2018/03/28	<0.0010		mg/L	
				1,2,4-trichlorobenzene	2018/03/28	<0.0010		mg/L	
				1,3,5-trichlorobenzene	2018/03/28	<0.00050		mg/L	
				1,1,1-trichloroethane	2018/03/28	<0.00050		mg/L	
				1,1,2-trichloroethane	2018/03/28	<0.00050		mg/L	
				Trichloroethene	2018/03/28	<0.00050		mg/L	
				Trichlorofluoromethane	2018/03/28	<0.00050		mg/L	
				1,2,4-trimethylbenzene	2018/03/28	<0.00050		mg/L	
				1,3,5-trimethylbenzene	2018/03/28	<0.00050		mg/L	
				Vinyl chloride	2018/03/28	<0.00050		mg/L	
				Xylenes (Total)	2018/03/28	<0.00080		mg/L	
				m & p-Xylene	2018/03/28	<0.00080		mg/L	
				o-Xylene	2018/03/28	<0.00040		mg/L	
8945331		MJO	RPD	Bromodichloromethane	2018/03/28	NC		%	30
				Bromoform	2018/03/28	NC		%	30
				Bromomethane	2018/03/28	NC		%	30
				Carbon tetrachloride	2018/03/28	NC		%	30
				Chlorobenzene	2018/03/28	NC		%	30
				Chlorodibromomethane	2018/03/28	NC		%	30
				Chloroethane	2018/03/28	NC		%	30
				Chloroform	2018/03/28	NC		%	30
				Chloromethane	2018/03/28	NC		%	30
				1,2-dibromoethane	2018/03/28	NC		%	30
				1,2-dichlorobenzene	2018/03/28	NC		%	30
				1,3-dichlorobenzene	2018/03/28	NC		%	30
				1,4-dichlorobenzene	2018/03/28	NC		%	30
				1,1-dichloroethane	2018/03/28	NC		%	30
				1,2-dichloroethane	2018/03/28	NC		%	30
				1,1-dichloroethene	2018/03/28	NC		%	30
				cis-1,2-dichloroethene	2018/03/28	NC		%	30
				trans-1,2-dichloroethene	2018/03/28	NC		%	30
				Dichloromethane	2018/03/28	NC		%	30
				1,2-dichloropropane	2018/03/28	NC		%	30
				cis-1,3-dichloropropene	2018/03/28	NC		%	30
				trans-1,3-dichloropropene	2018/03/28	NC		%	30
				Methyl methacrylate	2018/03/28	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
			Methyl-tert-butylether (MTBE)	2018/03/28	NC		%	30
			Styrene	2018/03/28	NC		%	30
			1,1,1,2-tetrachloroethane	2018/03/28	NC		%	30
			1,1,2,2-tetrachloroethane	2018/03/28	NC		%	30
			Tetrachloroethene	2018/03/28	NC		%	30
			1,2,3-trichlorobenzene	2018/03/28	NC		%	30
			1,2,4-trichlorobenzene	2018/03/28	NC		%	30
			1,3,5-trichlorobenzene	2018/03/28	NC		%	30
			1,1,1-trichloroethane	2018/03/28	NC		%	30
			1,1,2-trichloroethane	2018/03/28	NC		%	30
			Trichloroethene	2018/03/28	NC		%	30
			Trichlorofluoromethane	2018/03/28	NC		%	30
			1,2,4-trimethylbenzene	2018/03/28	NC		%	30
			1,3,5-trimethylbenzene	2018/03/28	NC		%	30
			Vinyl chloride	2018/03/28	NC		%	30
8946251	DO1	Matrix Spike	1,4-Difluorobenzene (sur.)	2018/03/28		95	%	50 - 140
			4-Bromofluorobenzene (sur.)	2018/03/28		96	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2018/03/28		91	%	50 - 140
			Benzene	2018/03/28		79	%	50 - 140
			Toluene	2018/03/28		76	%	50 - 140
			Ethylbenzene	2018/03/28		78	%	50 - 140
			m & p-Xylene	2018/03/28		76	%	50 - 140
			o-Xylene	2018/03/28		80	%	50 - 140
			F1 (C6-C10)	2018/03/28		90	%	60 - 140
8946251	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2018/03/28		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2018/03/28		95	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2018/03/28		99	%	50 - 140
			Benzene	2018/03/28		77	%	60 - 130
			Toluene	2018/03/28		74	%	60 - 130
			Ethylbenzene	2018/03/28		76	%	60 - 130
			m & p-Xylene	2018/03/28		74	%	60 - 130
			o-Xylene	2018/03/28		77	%	60 - 130
			F1 (C6-C10)	2018/03/28		99	%	60 - 140
8946251	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2018/03/28		99	%	50 - 140
			4-Bromofluorobenzene (sur.)	2018/03/28		94	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2018/03/28		87	%	50 - 140
			Benzene	2018/03/28	<0.00040		mg/L	
			Toluene	2018/03/28	<0.00040		mg/L	
			Ethylbenzene	2018/03/28	<0.00040		mg/L	
			m & p-Xylene	2018/03/28	<0.00080		mg/L	
			o-Xylene	2018/03/28	<0.00040		mg/L	
			F1 (C6-C10)	2018/03/28	<0.10		mg/L	
8946251	DO1	RPD	Benzene	2018/03/28	NC		%	30
			Toluene	2018/03/28	NC		%	30
			Ethylbenzene	2018/03/28	NC		%	30
			m & p-Xylene	2018/03/28	NC		%	30
			o-Xylene	2018/03/28	NC		%	30
			F1 (C6-C10)	2018/03/28	NC		%	30
8946252	LZ3	Matrix Spike	D10-ANTHRACENE (sur.)	2018/03/29		113	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2018/03/29		108	%	50 - 130
			D8-NAPHTHALENE (sur.)	2018/03/29		67	%	50 - 130
			TERPHENYL-D14 (sur.)	2018/03/29		129	%	50 - 130
			Acenaphthene	2018/03/29		106	%	50 - 130
			Acenaphthylene	2018/03/29		106	%	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
			Acridine	2018/03/29		81	%	50 - 130
			Anthracene	2018/03/29		89	%	50 - 130
			Benzo(a)anthracene	2018/03/29		130	%	50 - 130
			Benzo(b&j)fluoranthene	2018/03/29		118	%	50 - 130
			Benzo(k)fluoranthene	2018/03/29		111	%	50 - 130
			Benzo(g,h,i)perylene	2018/03/29		90	%	50 - 130
			Benzo(c)phenanthrene	2018/03/29		125	%	50 - 130
			Benzo(a)pyrene	2018/03/29		111	%	50 - 130
			Benzo[e]pyrene	2018/03/29		105	%	50 - 130
			Chrysene	2018/03/29		130	%	50 - 130
			Dibenz(a,h)anthracene	2018/03/29		101	%	50 - 130
			Fluoranthene	2018/03/29		111	%	50 - 130
			Fluorene	2018/03/29		114	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2018/03/29		107	%	50 - 130
			1-Methylnaphthalene	2018/03/29		101	%	50 - 130
			2-Methylnaphthalene	2018/03/29		90	%	50 - 130
			Naphthalene	2018/03/29		98	%	50 - 130
			Phenanthrene	2018/03/29		109	%	50 - 130
			Perylene	2018/03/29		96	%	50 - 130
			Pyrene	2018/03/29		106	%	50 - 130
			Quinoline	2018/03/29		106	%	50 - 130
8946252	LZ3	Spiked Blank	D10-ANTHRACENE (sur.)	2018/03/29		101	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2018/03/29		96	%	50 - 130
			D8-NAPHTHALENE (sur.)	2018/03/29		69	%	50 - 130
			TERPHENYL-D14 (sur.)	2018/03/29		121	%	50 - 130
			Acenaphthene	2018/03/29		88	%	50 - 130
			Acenaphthylene	2018/03/29		95	%	50 - 130
			Acridine	2018/03/29		92	%	50 - 130
			Anthracene	2018/03/29		85	%	50 - 130
			Benzo(a)anthracene	2018/03/29		126	%	50 - 130
			Benzo(b&j)fluoranthene	2018/03/29		122	%	50 - 130
			Benzo(k)fluoranthene	2018/03/29		126	%	50 - 130
			Benzo(g,h,i)perylene	2018/03/29		101	%	50 - 130
			Benzo(c)phenanthrene	2018/03/29		128	%	50 - 130
			Benzo(a)pyrene	2018/03/29		108	%	50 - 130
			Benzo[e]pyrene	2018/03/29		111	%	50 - 130
			Chrysene	2018/03/29		124	%	50 - 130
			Dibenz(a,h)anthracene	2018/03/29		105	%	50 - 130
			Fluoranthene	2018/03/29		115	%	50 - 130
			Fluorene	2018/03/29		96	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2018/03/29		108	%	50 - 130
			1-Methylnaphthalene	2018/03/29		81	%	50 - 130
			2-Methylnaphthalene	2018/03/29		73	%	50 - 130
			Naphthalene	2018/03/29		82	%	50 - 130
			Phenanthrene	2018/03/29		100	%	50 - 130
			Perylene	2018/03/29		98	%	50 - 130
			Pyrene	2018/03/29		107	%	50 - 130
			Quinoline	2018/03/29		109	%	50 - 130
8946252	LZ3	Method Blank	D10-ANTHRACENE (sur.)	2018/03/29		100	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2018/03/29		93	%	50 - 130
			D8-NAPHTHALENE (sur.)	2018/03/29		62	%	50 - 130
			TERPHENYL-D14 (sur.)	2018/03/29		118	%	50 - 130
			Acenaphthene	2018/03/29	<0.00010		mg/L	
			Acenaphthylene	2018/03/29	<0.00010		mg/L	



Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Acridine	2018/03/29	<0.000050		mg/L	
				Anthracene	2018/03/29	<0.000010		mg/L	
				Benzo(a)anthracene	2018/03/29	<0.0000085		mg/L	
				Benzo(b&j)fluoranthene	2018/03/29	<0.0000085		mg/L	
				Benzo(k)fluoranthene	2018/03/29	<0.0000085		mg/L	
				Benzo(g,h,i)perylene	2018/03/29	<0.0000085		mg/L	
				Benzo(c)phenanthrene	2018/03/29	<0.000050		mg/L	
				Benzo(a)pyrene	2018/03/29	<0.0000075		mg/L	
				Benzo[e]pyrene	2018/03/29	<0.000050		mg/L	
				Chrysene	2018/03/29	<0.0000085		mg/L	
				Dibenz(a,h)anthracene	2018/03/29	<0.0000075		mg/L	
				Fluoranthene	2018/03/29	<0.000010		mg/L	
				Fluorene	2018/03/29	<0.000050		mg/L	
				Indeno(1,2,3-cd)pyrene	2018/03/29	<0.0000085		mg/L	
				1-Methylnaphthalene	2018/03/29	<0.00010		mg/L	
				2-Methylnaphthalene	2018/03/29	<0.00010		mg/L	
				Naphthalene	2018/03/29	<0.00010		mg/L	
				Phenanthrene	2018/03/29	<0.000050		mg/L	
				Perylene	2018/03/29	<0.000050		mg/L	
				Pyrene	2018/03/29	<0.000020		mg/L	
				Quinoline	2018/03/29	<0.00020		mg/L	
8946252	LZ3	RPD		Acenaphthene	2018/03/29	NC		%	30
				Acenaphthylene	2018/03/29	NC		%	30
				Acridine	2018/03/29	NC		%	30
				Anthracene	2018/03/29	NC		%	30
				Benzo(a)anthracene	2018/03/29	NC		%	30
				Benzo(b&j)fluoranthene	2018/03/29	NC		%	30
				Benzo(k)fluoranthene	2018/03/29	NC		%	30
				Benzo(g,h,i)perylene	2018/03/29	NC		%	30
				Benzo(c)phenanthrene	2018/03/29	NC		%	30
				Benzo(a)pyrene	2018/03/29	NC		%	30
				Benzo[e]pyrene	2018/03/29	NC		%	30
				Chrysene	2018/03/29	NC		%	30
				Dibenz(a,h)anthracene	2018/03/29	NC		%	30
				Fluoranthene	2018/03/29	2.2		%	30
				Fluorene	2018/03/29	NC		%	30
				Indeno(1,2,3-cd)pyrene	2018/03/29	NC		%	30
				2-Methylnaphthalene	2018/03/29	NC		%	30
				Naphthalene	2018/03/29	NC		%	30
				Phenanthrene	2018/03/29	NC		%	30
				Perylene	2018/03/29	NC		%	30
				Pyrene	2018/03/29	7.1		%	30
				Quinoline	2018/03/29	NC		%	30
8946259	LSH	Matrix Spike		O-TERPHENYL (sur.)	2018/03/28		100	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2018/03/28		103	%	60 - 130
8946259	LSH	Spiked Blank		O-TERPHENYL (sur.)	2018/03/28		105	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2018/03/28		103	%	70 - 130
8946259	LSH	Method Blank		O-TERPHENYL (sur.)	2018/03/28		96	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2018/03/28	<0.10		mg/L	

Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC									
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits	
8946259	LSH	RPD	F2 (C10-C16 Hydrocarbons)	2018/03/28	23		%	30	
<p>Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.</p> <p>Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.</p> <p>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.</p> <p>Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.</p> <p>Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.</p> <p>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 &lt;= 2x RDL).</p> <p>(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.</p>									

Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**NOTIFICATION LOG**

No Reportable Regulation Exceedences Noted.

Maxxam Job #: B822823  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

### VALIDATION SIGNATURE PAGE

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



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Dennis Ngundu, B.Sc., P.Chem., QP, Supervisor, Organics



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Janet Gao, B.Sc., QP, Supervisor, Organics



---

Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

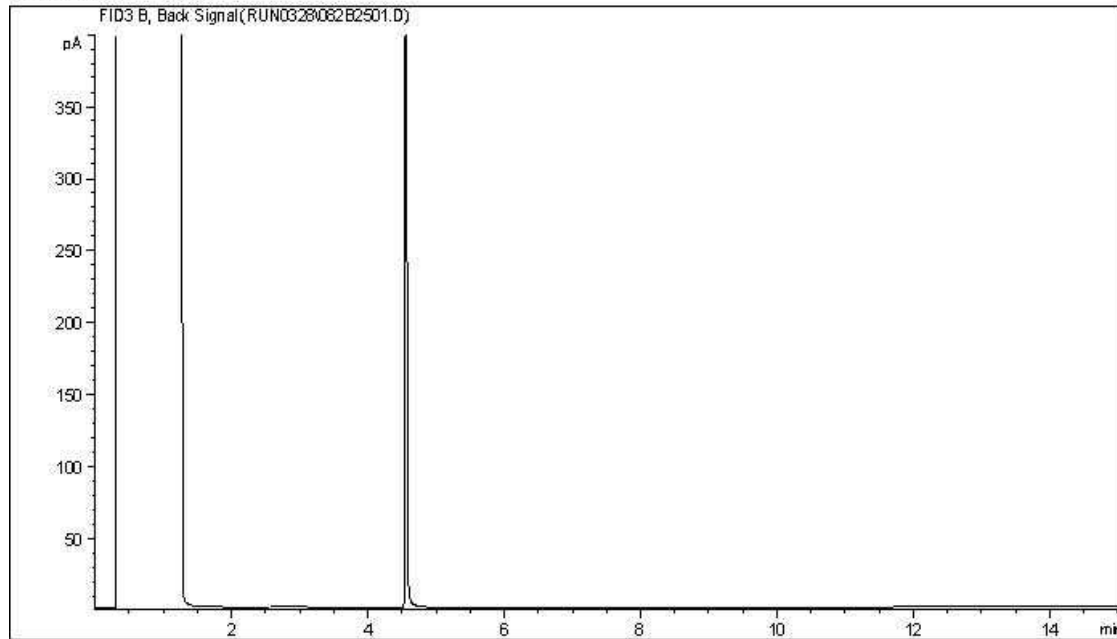
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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

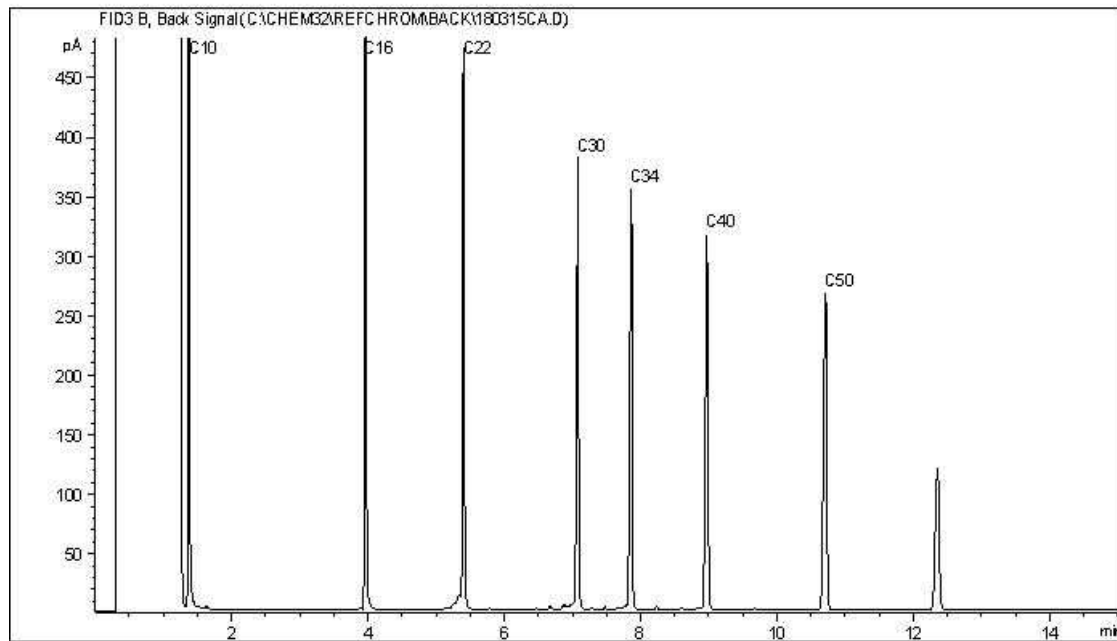


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



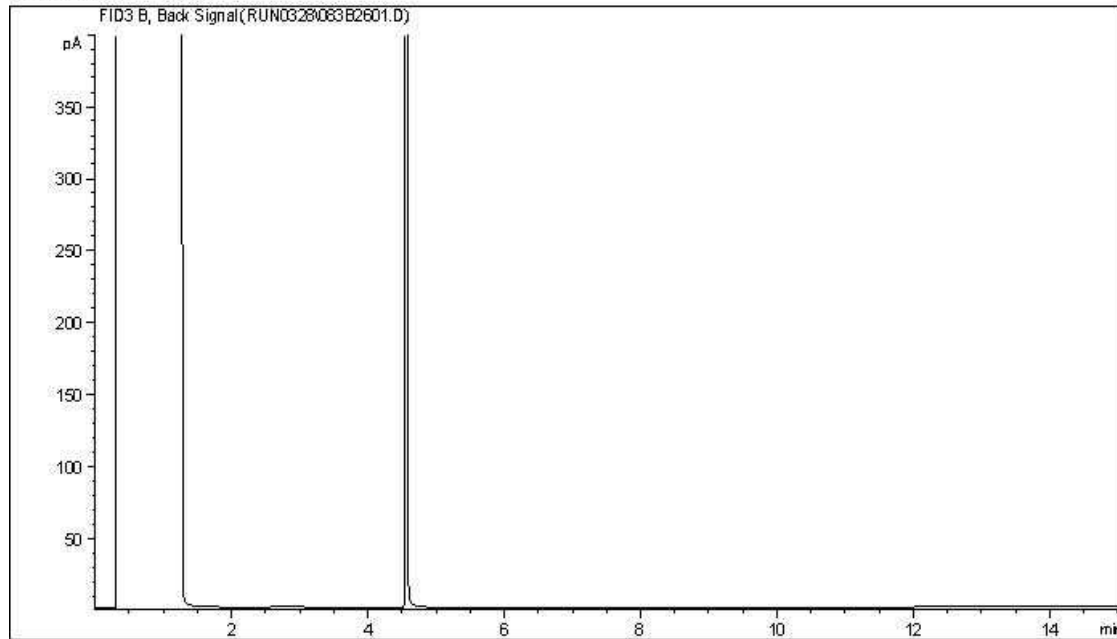
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

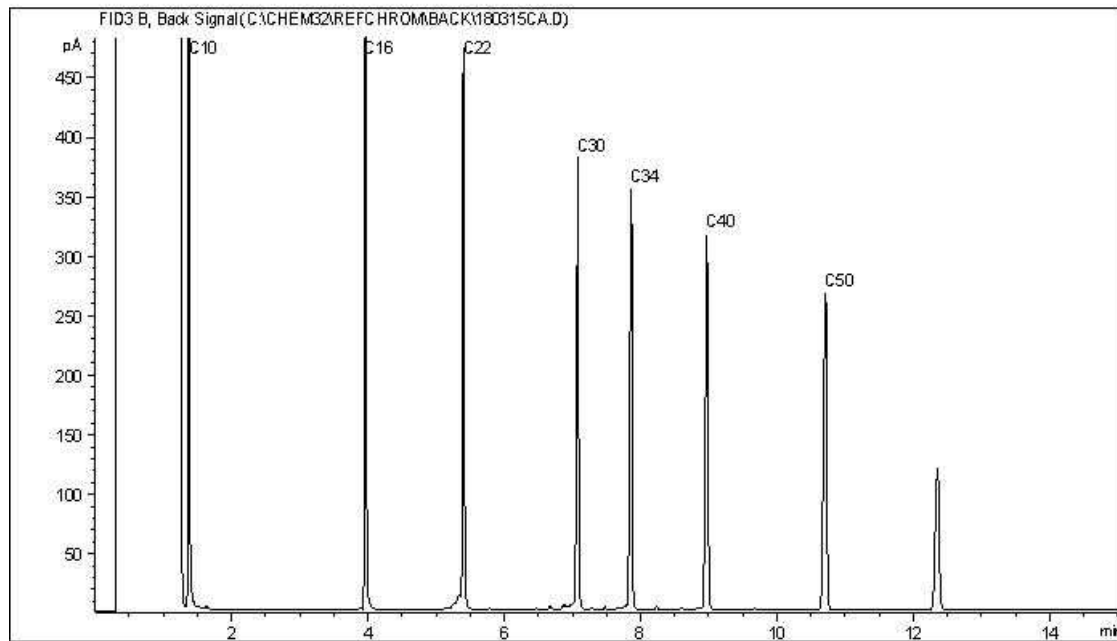
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

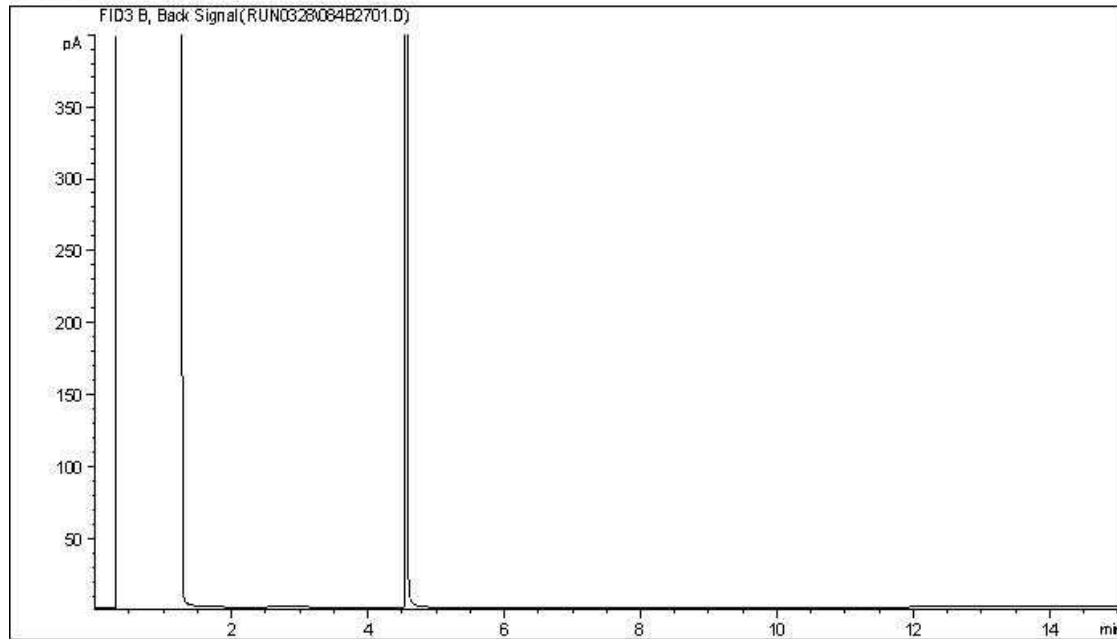
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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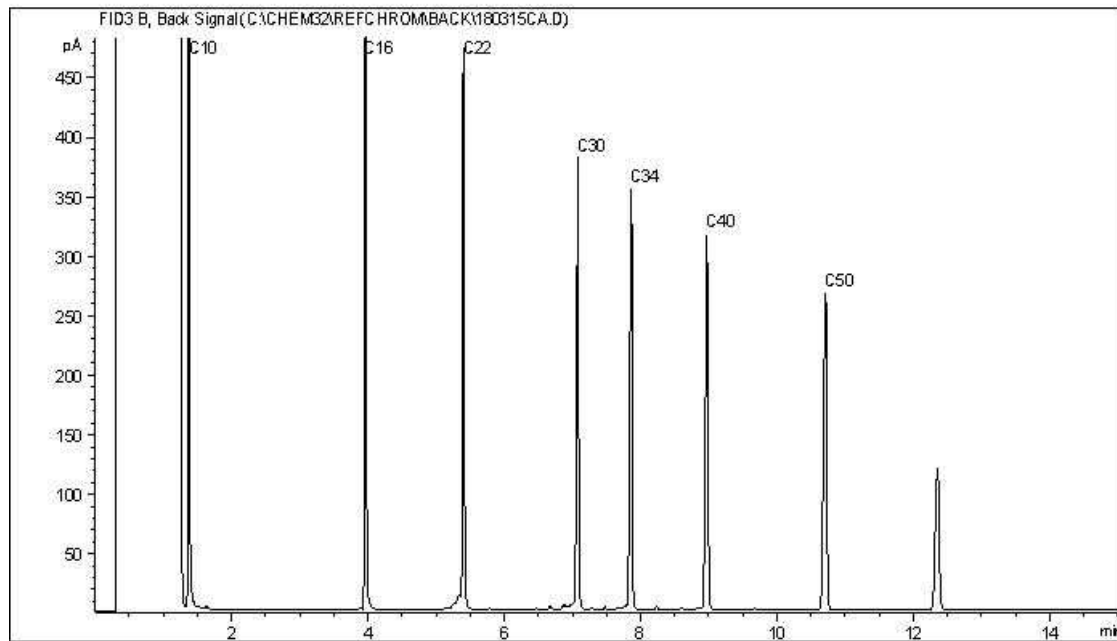


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



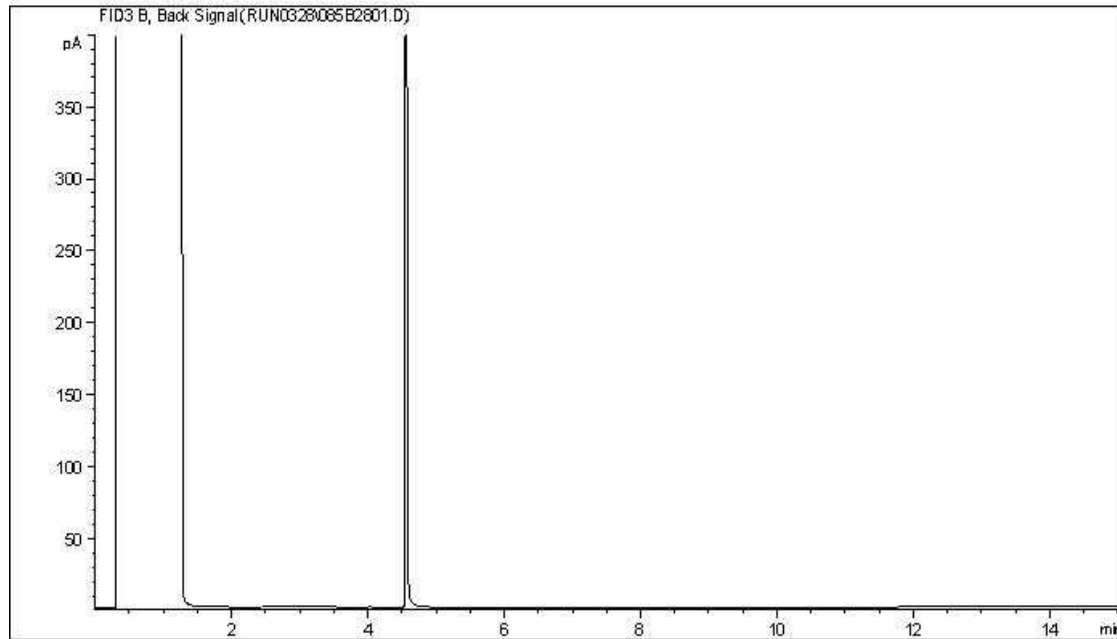
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

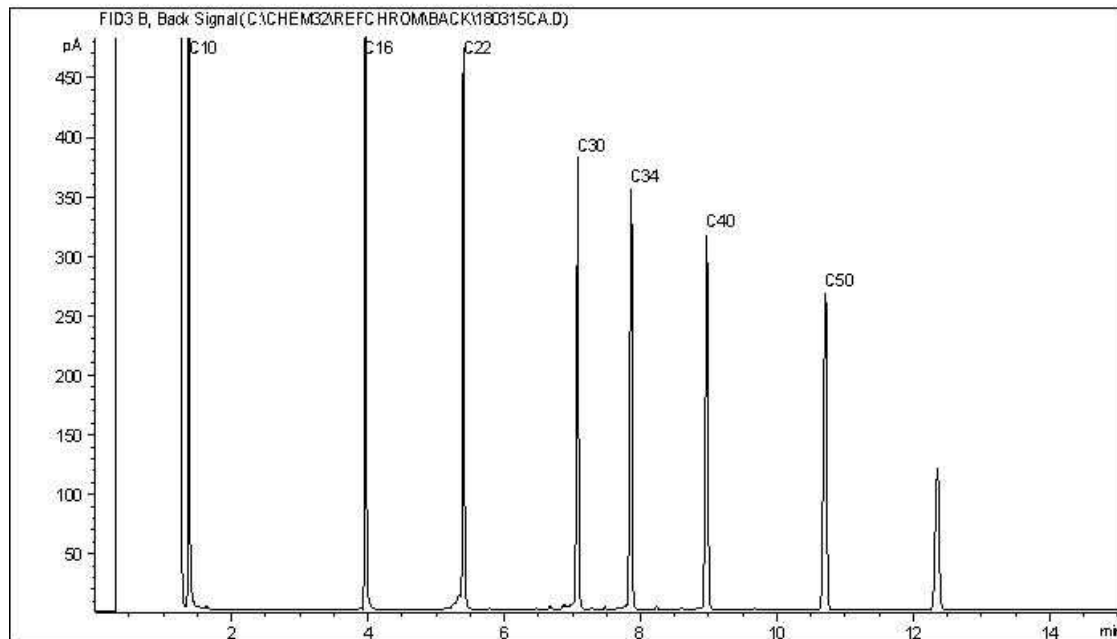
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



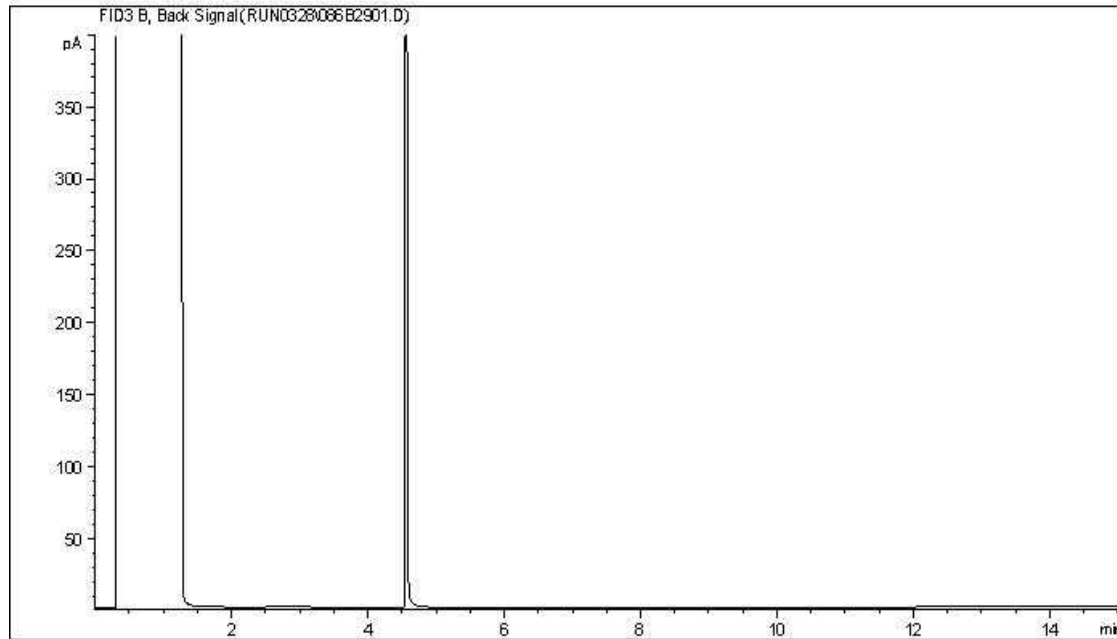
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

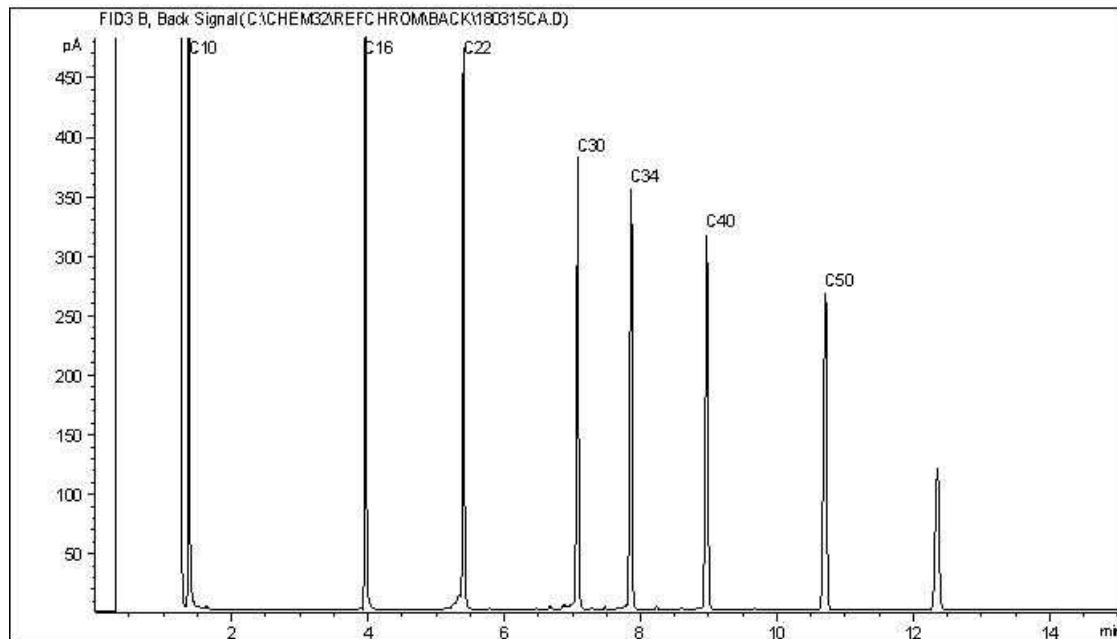
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



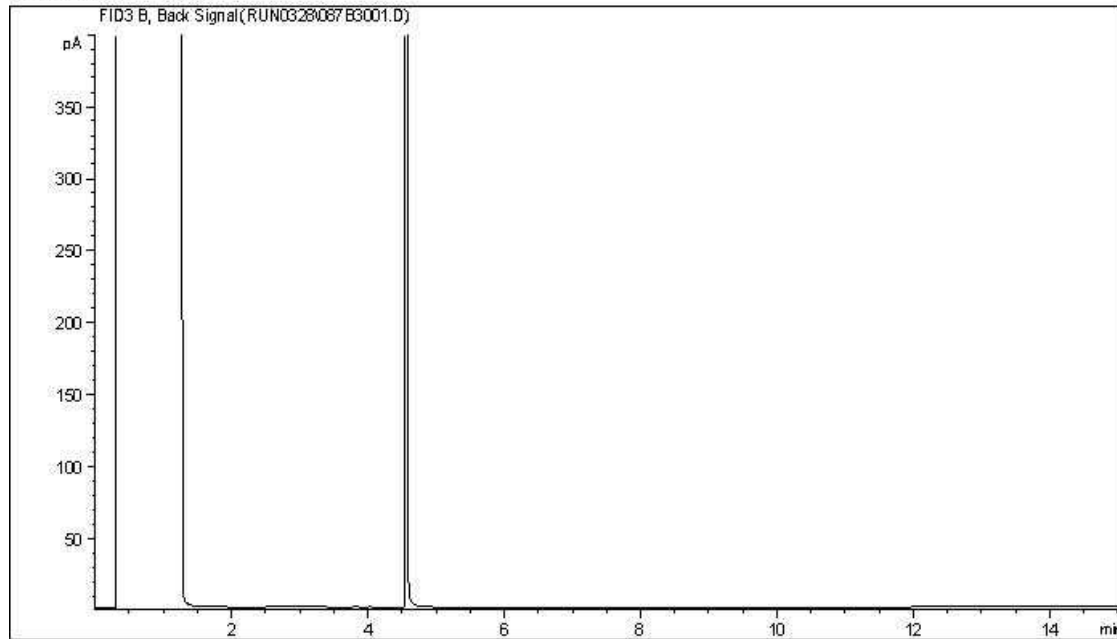
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

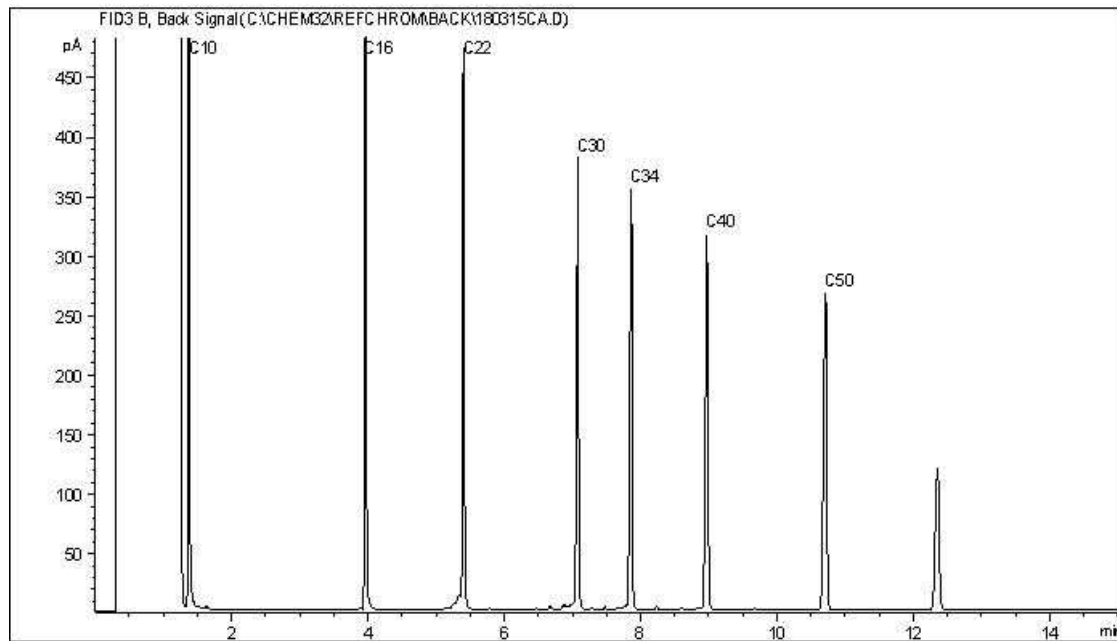
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



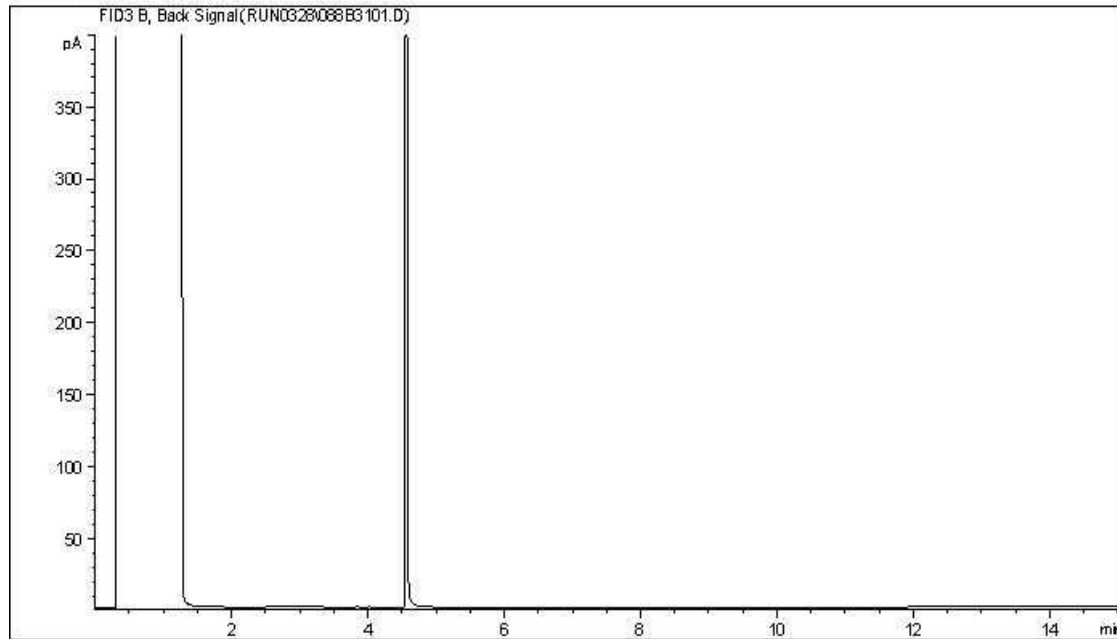
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

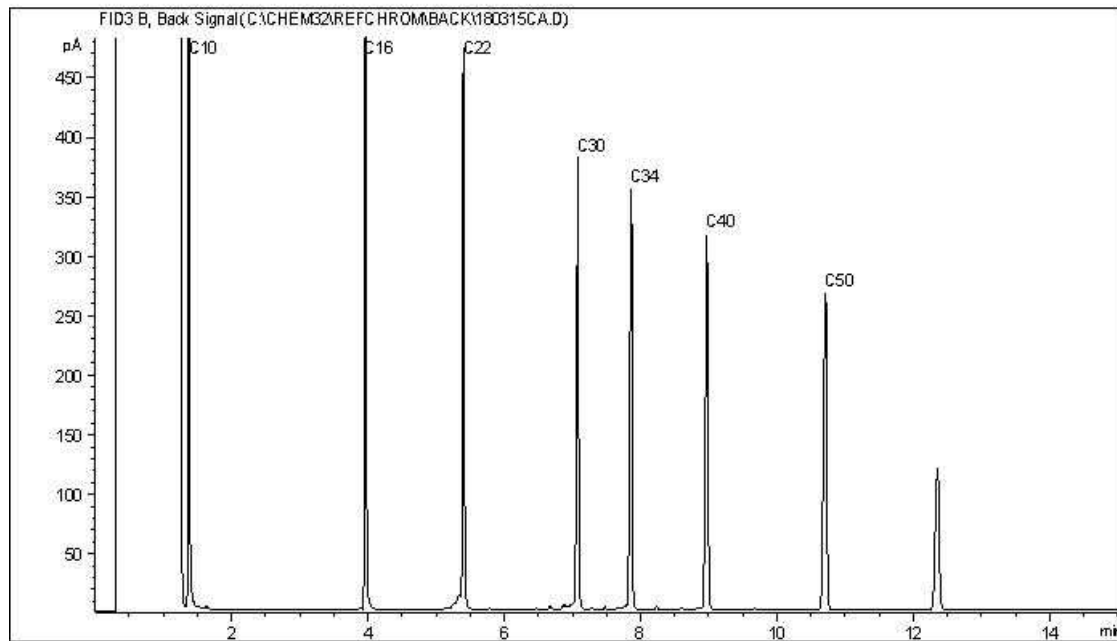
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

Your Project #: CG2430.1 E 30  
Your C.O.C. #: M070635, M021481

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/03**

Report #: R2535863

Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B822891**

**Received: 2018/03/28, 08:49**

Sample Matrix: Water  
# Samples Received: 16

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 in Water by HS GC/MS/FID	10	N/A	2018/03/28	AB SOP-00039	CCME CWS/EPA 8260c m
BTEX/F1 in Water by HS GC/MS/FID	5	N/A	2018/03/29	AB SOP-00039	CCME CWS/EPA 8260c m
F1-BTEX	15	N/A	2018/03/29	AB SOP-00039	Auto Calc
CCME Hydrocarbons in Water (F2; C10-C16) (1)	15	2018/03/29	2018/03/29	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Benzo[a]pyrene Equivalency (2)	13	N/A	2018/04/03	AB SOP-00003	Auto Calc
PAH in Water by GC/MS	13	2018/03/29	2018/04/02	AB SOP-00037 / AB SOP-00003	EPA 3510C/8270D m
Total Trihalomethanes Calculation	16	N/A	2018/04/02	AB SOP-00056	Auto Calc
VOCs in Water by HS GC/MS (Std List)	15	N/A	2018/03/30	AB SOP-00056	EPA 5021a/8260c m
VOCs in Water by HS GC/MS (Std List)	1	N/A	2018/03/31	AB SOP-00056	EPA 5021a/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) Silica gel clean up employed.

(2) B[a]P TPE is calculated using 1/2 of the RDL for non detect results as per Alberta Environment instructions. This protocol may not apply in other jurisdictions.

Your Project #: CG2430.1 E 30  
Your C.O.C. #: M070635, M021481

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/03**  
Report #: R2535863  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B822891**

**Received: 2018/03/28, 08:49**

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.  
Jennifer Stephenson, B.Sc, Technical Specialist  
Email: [jstephenson@maxxam.ca](mailto:jstephenson@maxxam.ca)  
Phone# (403) 291-3077

=====  
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Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

<b>Maxxam ID</b>		TE4196	TE4196	TE4197	TE4198		TE4199		
<b>Sampling Date</b>		2018/03/27 13:15	2018/03/27 13:15	2018/03/27 14:15	2018/03/27 14:30		2018/03/27 14:50		
<b>COC Number</b>		M070635	M070635	M070635	M070635		M070635		
	<b>UNITS</b>	<b>1911</b>	<b>1911 Lab-Dup</b>	<b>1976</b>	<b>2007</b>	<b>RDL</b>	<b>1924</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Ext. Pet. Hydrocarbon</b>									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	<0.10	0.10	0.14	0.10	8946841
<b>Volatiles</b>									
Benzene	mg/L	0.43	0.41	<0.00040	<0.00040	0.00040	1.6 (1)	0.0040	8946784
Toluene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	0.0058	0.00040	8946784
Ethylbenzene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	<0.00040	0.00040	8946784
m & p-Xylene	mg/L	<0.00080	<0.00080	<0.00080	<0.00080	0.00080	0.0054	0.00080	8946784
o-Xylene	mg/L	0.0011	0.0010	<0.00040	<0.00040	0.00040	0.19	0.00040	8946784
Xylenes (Total)	mg/L	0.0011	N/A	<0.00089	<0.00089	0.00089	0.19	0.00089	8946584
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	<0.10	0.10	<0.10	0.10	8946584
F1 (C6-C10)	mg/L	0.37	0.35	<0.10	<0.10	0.10	1.7	0.10	8946784
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene (sur.)	%	105	104	104	104	N/A	105	N/A	8946784
4-Bromofluorobenzene (sur.)	%	100	101	99	100	N/A	100	N/A	8946784
D4-1,2-Dichloroethane (sur.)	%	105	106	103	102	N/A	130	N/A	8946784
O-TERPHENYL (sur.)	%	99	N/A	98	101	N/A	100	N/A	8946841

RDL = Reportable Detection Limit  
 Lab-Dup = Laboratory Initiated Duplicate  
 N/A = Not Applicable  
 (1) Detection limits raised due to dilution to bring analyte within the calibrated range.

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

Maxxam ID		TE4200		TE4201		TE4202	TE4203		
Sampling Date		2018/03/27 15:00		2018/03/27 15:30		2018/03/27 15:50	2018/03/27 15:50		
COC Number		M070635		M070635		M070635	M070635		
	<b>UNITS</b>	<b>1910</b>	<b>RDL</b>	<b>1906</b>	<b>RDL</b>	<b>1971</b>	<b>9971</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Ext. Pet. Hydrocarbon</b>									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	0.10	<0.10	0.10	0.27	0.21	0.10	8946841
<b>Volatiles</b>									
Benzene	mg/L	0.31	0.00040	1.9 (1)	0.0040	0.031	0.031	0.00040	8946784
Toluene	mg/L	<0.00040	0.00040	<0.00040	0.00040	0.0015	0.0015	0.00040	8946784
Ethylbenzene	mg/L	<0.00040	0.00040	<0.00040	0.00040	0.095	0.11	0.00040	8946784
m & p-Xylene	mg/L	<0.00080	0.00080	<0.00080	0.00080	<0.00080	<0.00080	0.00080	8946784
o-Xylene	mg/L	<0.00040	0.00040	<0.00040	0.00040	<0.00040	<0.00040	0.00040	8946784
Xylenes (Total)	mg/L	<0.00089	0.00089	<0.00089	0.00089	<0.00089	<0.00089	0.00089	8946584
F1 (C6-C10) - BTEX	mg/L	<0.10	0.10	<0.10	0.10	1.1	1.4	0.10	8946584
F1 (C6-C10)	mg/L	0.24	0.10	1.5	0.10	1.2	1.5	0.10	8946784
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene (sur.)	%	106	N/A	107	N/A	105	106	N/A	8946784
4-Bromofluorobenzene (sur.)	%	98	N/A	98	N/A	98	99	N/A	8946784
D4-1,2-Dichloroethane (sur.)	%	102	N/A	104	N/A	133	130	N/A	8946784
O-TERPHENYL (sur.)	%	95	N/A	99	N/A	99	99	N/A	8946841
RDL = Reportable Detection Limit N/A = Not Applicable (1) Detection limits raised due to dilution to bring analyte within the calibrated range.									

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

<b>Maxxam ID</b>		TE4204		TE4205	TE4207	TE4208	TE4209		
<b>Sampling Date</b>		2018/03/27 15:20		2018/03/27 15:30	2018/03/27 16:10	2018/03/27 12:00	2018/03/27 15:50		
<b>COC Number</b>		M070635		M070635	M021481	M021481	M021481		
	<b>UNITS</b>	<b>1907</b>	<b>RDL</b>	<b>1908</b>	<b>1966</b>	<b>1923</b>	<b>1102</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Ext. Pet. Hydrocarbon</b>									
F2 (C10-C16 Hydrocarbons)	mg/L	0.64	0.10	<0.10	<0.10	<0.10	<0.10	0.10	8946841
<b>Volatiles</b>									
Benzene	mg/L	0.56	0.00040	0.00083	<0.00040	<0.00040	<0.00040	0.00040	8946784
Toluene	mg/L	2.4 (1)	0.0040	0.010	<0.00040	<0.00040	<0.00040	0.00040	8946784
Ethylbenzene	mg/L	0.28	0.00040	0.00055	<0.00040	<0.00040	<0.00040	0.00040	8946784
m & p-Xylene	mg/L	1.9	0.00080	0.0099	<0.00080	<0.00080	<0.00080	0.00080	8946784
o-Xylene	mg/L	0.53	0.00040	0.0033	<0.00040	<0.00040	<0.00040	0.00040	8946784
Xylenes (Total)	mg/L	2.4	0.00089	0.013	<0.00089	<0.00089	<0.00089	0.00089	8946584
F1 (C6-C10) - BTEX	mg/L	7.0	0.10	0.11	<0.10	<0.10	<0.10	0.10	8946584
F1 (C6-C10)	mg/L	13	0.10	0.13	<0.10	<0.10	<0.10	0.10	8946784
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene (sur.)	%	106	N/A	105	106	106	106	N/A	8946784
4-Bromofluorobenzene (sur.)	%	101	N/A	99	99	99	98	N/A	8946784
D4-1,2-Dichloroethane (sur.)	%	82	N/A	98	102	101	100	N/A	8946784
O-TERPHENYL (sur.)	%	98	N/A	98	98	94	96	N/A	8946841

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

Maxxam ID		TE4210	TE4211		
Sampling Date		2018/03/27 14:00	2018/03/27 14:00		
COC Number		M021481	M021481		
	UNITS	EX5	EX95	RDL	QC Batch
<b>Ext. Pet. Hydrocarbon</b>					
F2 (C10-C16 Hydrocarbons)	mg/L	0.86	0.92	0.10	8946841
<b>Volatiles</b>					
Benzene	mg/L	2.7 (1)	2.8 (1)	0.0040	8946784
Toluene	mg/L	5.5 (1)	5.7 (1)	0.0040	8946784
Ethylbenzene	mg/L	0.99	0.95	0.00040	8946784
m & p-Xylene	mg/L	3.0 (1)	3.1 (1)	0.0080	8946784
o-Xylene	mg/L	0.30	0.30	0.00040	8946784
Xylenes (Total)	mg/L	3.4	3.4	0.0080	8946584
F1 (C6-C10) - BTEX	mg/L	2.4	3.7	0.10	8946584
F1 (C6-C10)	mg/L	15	17	0.10	8946784
<b>Surrogate Recovery (%)</b>					
1,4-Difluorobenzene (sur.)	%	106	106	N/A	8946784
4-Bromofluorobenzene (sur.)	%	99	100	N/A	8946784
D4-1,2-Dichloroethane (sur.)	%	78	73	N/A	8946784
O-TERPHENYL (sur.)	%	97	92	N/A	8946841
RDL = Reportable Detection Limit N/A = Not Applicable (1) Detection limits raised due to dilution to bring analyte within the calibrated range.					

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE4196	TE4197	TE4198	TE4199	TE4200		
Sampling Date		2018/03/27 13:15	2018/03/27 14:15	2018/03/27 14:30	2018/03/27 14:50	2018/03/27 15:00		
COC Number		M070635	M070635	M070635	M070635	M070635		
	<b>UNITS</b>	<b>1911</b>	<b>1976</b>	<b>2007</b>	<b>1924</b>	<b>1910</b>	<b>RDL</b>	<b>QC Batch</b>

Polycyclic Aromatics								
Benzo[a]pyrene equivalency	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8946586
Acenaphthene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8946847
Acenaphthylene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8946847
Acridine	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8946847
Anthracene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8946847
Benzo(a)anthracene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Benzo(b&j)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Benzo(k)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8946847
Benzo(a)pyrene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8946847
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8946847
Chrysene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Dibenz(a,h)anthracene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8946847
Fluoranthene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8946847
Fluorene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8946847
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
1-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8946847
2-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8946847
Naphthalene	mg/L	<0.00010	<0.00010	<0.00010	0.0036	<0.00010	0.00010	8946847
Phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8946847
Perylene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8946847
Pyrene	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8946847
Quinoline	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8946847
Surrogate Recovery (%)								
D10-ANTHRACENE (sur.)	%	108	108	111	111	109	N/A	8946847
D8-ACENAPHTHYLENE (sur.)	%	96	104	107	106	103	N/A	8946847
D8-NAPHTHALENE (sur.)	%	60	84	83	76	69	N/A	8946847
TERPHENYL-D14 (sur.)	%	113	110	103	127	125	N/A	8946847

RDL = Reportable Detection Limit  
N/A = Not Applicable

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE4201	TE4202	TE4203	TE4204	TE4205		
Sampling Date		2018/03/27 15:30	2018/03/27 15:50	2018/03/27 15:50	2018/03/27 15:20	2018/03/27 15:30		
COC Number		M070635	M070635	M070635	M070635	M070635		
	<b>UNITS</b>	<b>1906</b>	<b>1971</b>	<b>9971</b>	<b>1907</b>	<b>1908</b>	<b>RDL</b>	<b>QC Batch</b>

Polycyclic Aromatics								
Benzo[a]pyrene equivalency	mg/L	<0.000010	0.000016	<0.000010	<0.000010	<0.000010	0.000010	8946586
Acenaphthene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8946847
Acenaphthylene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8946847
Acridine	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8946847
Anthracene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8946847
Benzo(a)anthracene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Benzo(b&j)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Benzo(k)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8946847
Benzo(a)pyrene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8946847
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8946847
Chrysene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Dibenz(a,h)anthracene	mg/L	<0.0000075	0.000011 (1)	<0.0000075	<0.0000075	<0.0000075	0.0000075	8946847
Fluoranthene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8946847
Fluorene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8946847
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
1-Methylnaphthalene	mg/L	<0.00010	0.00054	0.00042	0.0040	<0.00010	0.00010	8946847
2-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	0.0074	<0.00010	0.00010	8946847
Naphthalene	mg/L	<0.00010	0.00030	0.00025	0.020	<0.00010	0.00010	8946847
Phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8946847
Perylene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8946847
Pyrene	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8946847
Quinoline	mg/L	<0.00020	0.00025	0.00020	0.00090	<0.00020	0.00020	8946847

Surrogate Recovery (%)								
D10-ANTHRACENE (sur.)	%	108	103	110	109	104	N/A	8946847
D8-ACENAPHTHYLENE (sur.)	%	103	98	107	103	97	N/A	8946847
D8-NAPHTHALENE (sur.)	%	80	71	76	72	63	N/A	8946847
TERPHENYL-D14 (sur.)	%	124	119	127	124	91	N/A	8946847

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE4207	TE4208	TE4209		
Sampling Date		2018/03/27 16:10	2018/03/27 12:00	2018/03/27 15:50		
COC Number		M021481	M021481	M021481		
	<b>UNITS</b>	<b>1966</b>	<b>1923</b>	<b>1102</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Polycyclic Aromatics</b>						
Benzo[a]pyrene equivalency	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8946586
Acenaphthene	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8946847
Acenaphthylene	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8946847
Acridine	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8946847
Anthracene	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8946847
Benzo(a)anthracene	mg/L	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Benzo(b&j)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Benzo(k)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8946847
Benzo(a)pyrene	mg/L	<0.0000075	<0.0000075	<0.0000075	0.0000075	8946847
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8946847
Chrysene	mg/L	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
Dibenz(a,h)anthracene	mg/L	<0.0000075	<0.0000075	<0.0000075	0.0000075	8946847
Fluoranthene	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8946847
Fluorene	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8946847
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	<0.0000085	0.0000085	8946847
1-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8946847
2-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8946847
Naphthalene	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8946847
Phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8946847
Perylene	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8946847
Pyrene	mg/L	<0.000020	<0.000020	<0.000020	0.000020	8946847
Quinoline	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8946847
<b>Surrogate Recovery (%)</b>						
D10-ANTHRACENE (sur.)	%	110	108	109	N/A	8946847
D8-ACENAPHTHYLENE (sur.)	%	108	101	106	N/A	8946847
D8-NAPHTHALENE (sur.)	%	88	77	77	N/A	8946847
TERPHENYL-D14 (sur.)	%	128	127	125	N/A	8946847
RDL = Reportable Detection Limit N/A = Not Applicable						



Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE4196	TE4196	TE4197	TE4198	TE4199		
Sampling Date		2018/03/27 13:15	2018/03/27 13:15	2018/03/27 14:15	2018/03/27 14:30	2018/03/27 14:50		
COC Number		M070635	M070635	M070635	M070635	M070635		
	UNITS	1911	1911 Lab-Dup	1976	2007	1924	RDL	QC Batch

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	N/A	<0.0013	<0.0013	<0.0013	0.0013	8946575
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8946792
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8946792
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8946792
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8946792
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8946792
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,2-dichloroethane	mg/L	0.039	0.038	<0.00050	<0.00050	0.14	0.00050	8946792
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8946792
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8946792
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8946792
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8946792

RDL = Reportable Detection Limit  
Lab-Dup = Laboratory Initiated Duplicate  
N/A = Not Applicable

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE4196	TE4196	TE4197	TE4198	TE4199		
Sampling Date		2018/03/27 13:15	2018/03/27 13:15	2018/03/27 14:15	2018/03/27 14:30	2018/03/27 14:50		
COC Number		M070635	M070635	M070635	M070635	M070635		
	UNITS	1911	1911 Lab-Dup	1976	2007	1924	RDL	QC Batch
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8946792
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.0020	0.00050	8946792
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.0019	0.00050	8946792
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	101	101	104	102	101	N/A	8946792
4-Bromofluorobenzene (sur.)	%	96	92	98	99	94	N/A	8946792
D4-1,2-Dichloroethane (sur.)	%	110	107	105	101	108	N/A	8946792
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable								

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE4200	TE4201	TE4202	TE4203	TE4204		
Sampling Date		2018/03/27 15:00	2018/03/27 15:30	2018/03/27 15:50	2018/03/27 15:50	2018/03/27 15:20		
COC Number		M070635	M070635	M070635	M070635	M070635		
	UNITS	1910	1906	1971	9971	1907	RDL	QC Batch

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0013	8946575
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8946792
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8946792
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8946792
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8946792
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8946792
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.0023 (1)	0.00050	8946792
1,2-dichloroethane	mg/L	0.021	0.032	0.21	0.21	0.0088	0.00050	8946792
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8946792
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8946792
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8946792
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8946792
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8946792

RDL = Reportable Detection Limit

(1) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE4200	TE4201	TE4202	TE4203	TE4204		
Sampling Date		2018/03/27 15:00	2018/03/27 15:30	2018/03/27 15:50	2018/03/27 15:50	2018/03/27 15:20		
COC Number		M070635	M070635	M070635	M070635	M070635		
	UNITS	1910	1906	1971	9971	1907	RDL	QC Batch
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,1,2-trichloroethane	mg/L	<0.00050	0.00060	<0.00050	<0.00050	<0.00050	0.00050	8946792
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.34	0.00050	8946792
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.13	0.00050	8946792
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8946792
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	99	102	101	100	100	N/A	8946792
4-Bromofluorobenzene (sur.)	%	99	100	98	90	99	N/A	8946792
D4-1,2-Dichloroethane (sur.)	%	109	115	106	105	83	N/A	8946792
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE4205	TE4207	TE4208	TE4209		TE4210		
Sampling Date		2018/03/27 15:30	2018/03/27 16:10	2018/03/27 12:00	2018/03/27 15:50		2018/03/27 14:00		
COC Number		M070635	M021481	M021481	M021481		M021481		
	UNITS	1908	1966	1923	1102	RDL	EX5	RDL	QC Batch

Volatiles									
Total Trihalomethanes	mg/L	<0.0013	<0.0013	<0.0013	<0.0013	0.0013	<0.0013	0.0013	8946575
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	8946792
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	8946792
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	8946792
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	0.0072	0.0020	8946792
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	<0.00020	0.00020	8946792
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	0.0011 (1)	0.00050	8946792
1,2-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	0.086	0.00050	8946792
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	8946792
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	8946792
1,1,1,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	8946792
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	8946792
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	8946792

RDL = Reportable Detection Limit

(1) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE4205	TE4207	TE4208	TE4209		TE4210		
Sampling Date		2018/03/27 15:30	2018/03/27 16:10	2018/03/27 12:00	2018/03/27 15:50		2018/03/27 14:00		
COC Number		M070635	M021481	M021481	M021481		M021481		
	UNITS	1908	1966	1923	1102	RDL	EX5	RDL	QC Batch
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.0012 (1)	0.0012	8946792
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
1,2,4-trimethylbenzene	mg/L	0.0014	<0.00050	<0.00050	<0.00050	0.00050	0.38	0.00050	8946792
1,3,5-trimethylbenzene	mg/L	0.00090	<0.00050	<0.00050	<0.00050	0.00050	0.15	0.00050	8946792
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8946792
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene (sur.)	%	101	102	102	100	N/A	101	N/A	8946792
4-Bromofluorobenzene (sur.)	%	99	102	98	99	N/A	96	N/A	8946792
D4-1,2-Dichloroethane (sur.)	%	104	103	102	96	N/A	97	N/A	8946792
RDL = Reportable Detection Limit N/A = Not Applicable (1) Detection limits raised due to matrix interference.									

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE4211		TE4212		
Sampling Date		2018/03/27 14:00		2018/03/27		
COC Number		M021481		M021481		
	UNITS	EX95	RDL	TRIP BLANK 2	RDL	QC Batch
<b>Volatiles</b>						
Total Trihalomethanes	mg/L	<0.0013	0.0013	<0.0013	0.0013	8946575
Benzene	mg/L	N/A	0.00040	<0.00040	0.00040	8946792
Bromodichloromethane	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
Bromoform	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
Bromomethane	mg/L	<0.0020	0.0020	<0.0020	0.0020	8946792
Carbon tetrachloride	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
Chlorobenzene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
Chlorodibromomethane	mg/L	<0.0010	0.0010	<0.0010	0.0010	8946792
Chloroethane	mg/L	<0.0010	0.0010	<0.0010	0.0010	8946792
Chloroform	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
Chloromethane	mg/L	0.0085	0.0020	<0.0020	0.0020	8946792
1,2-dibromoethane	mg/L	<0.00020	0.00020	<0.00020	0.00020	8946792
1,2-dichlorobenzene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
1,3-dichlorobenzene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
1,4-dichlorobenzene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
1,1-dichloroethane	mg/L	0.0014 (1)	0.00050	<0.00050	0.00050	8946792
1,2-dichloroethane	mg/L	0.097	0.00050	<0.00050	0.00050	8946792
1,1-dichloroethene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
cis-1,2-dichloroethene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
trans-1,2-dichloroethene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
Dichloromethane	mg/L	<0.0020	0.0020	<0.0020	0.0020	8946792
1,2-dichloropropane	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
cis-1,3-dichloropropene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
trans-1,3-dichloropropene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
Ethylbenzene	mg/L	N/A	0.00040	<0.00040	0.00040	8946792
Methyl methacrylate	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
Styrene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
1,1,1,2-tetrachloroethane	mg/L	<0.0010	0.0010	<0.0010	0.0010	8946792
RDL = Reportable Detection Limit N/A = Not Applicable (1) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.						



Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE4211		TE4212		
Sampling Date		2018/03/27 14:00		2018/03/27		
COC Number		M021481		M021481		
	UNITS	EX95	RDL	TRIP BLANK 2	RDL	QC Batch
1,1,2,2-tetrachloroethane	mg/L	<0.0020	0.0020	<0.0020	0.0020	8946792
Tetrachloroethene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
Toluene	mg/L	N/A	0.00040	<0.00040	0.00040	8946792
1,2,3-trichlorobenzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	8946792
1,2,4-trichlorobenzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	8946792
1,3,5-trichlorobenzene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
1,1,1-trichloroethane	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
1,1,2-trichloroethane	mg/L	<0.0015 (1)	0.0015	<0.00050	0.00050	8946792
Trichloroethene	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
Trichlorofluoromethane	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
1,2,4-trimethylbenzene	mg/L	0.39	0.00050	<0.00050	0.00050	8946792
1,3,5-trimethylbenzene	mg/L	0.16	0.00050	<0.00050	0.00050	8946792
Vinyl chloride	mg/L	<0.00050	0.00050	<0.00050	0.00050	8946792
Xylenes (Total)	mg/L	N/A	N/A	<0.00080	0.00080	8946792
m & p-Xylene	mg/L	N/A	N/A	<0.00080	0.00080	8946792
o-Xylene	mg/L	N/A	N/A	<0.00040	0.00040	8946792
<b>Surrogate Recovery (%)</b>						
1,4-Difluorobenzene (sur.)	%	103	N/A	101	N/A	8946792
4-Bromofluorobenzene (sur.)	%	96	N/A	96	N/A	8946792
D4-1,2-Dichloroethane (sur.)	%	93	N/A	99	N/A	8946792
RDL = Reportable Detection Limit N/A = Not Applicable (1) Detection limits raised due to matrix interference.						

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**GENERAL COMMENTS**

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

Package 1	5.3°C
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**Results relate only to the items tested.**

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**QUALITY ASSURANCE REPORT**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8946784	WZ0	Matrix Spike [TE4197-02]	1,4-Difluorobenzene (sur.)	2018/03/28		103	%	50 - 140	
			4-Bromofluorobenzene (sur.)	2018/03/28		100	%	50 - 140	
			D4-1,2-Dichloroethane (sur.)	2018/03/28		107	%	50 - 140	
			Benzene	2018/03/28		86	%	50 - 140	
			Toluene	2018/03/28		80	%	50 - 140	
			Ethylbenzene	2018/03/28		83	%	50 - 140	
			m & p-Xylene	2018/03/28		78	%	50 - 140	
			o-Xylene	2018/03/28		83	%	50 - 140	
			F1 (C6-C10)	2018/03/28		74	%	60 - 140	
			8946784	WZ0	Spiked Blank	1,4-Difluorobenzene (sur.)	2018/03/28		96
4-Bromofluorobenzene (sur.)	2018/03/28					104	%	50 - 140	
D4-1,2-Dichloroethane (sur.)	2018/03/28					108	%	50 - 140	
Benzene	2018/03/28					96	%	60 - 130	
Toluene	2018/03/28					90	%	60 - 130	
Ethylbenzene	2018/03/28					94	%	60 - 130	
m & p-Xylene	2018/03/28					91	%	60 - 130	
o-Xylene	2018/03/28					95	%	60 - 130	
F1 (C6-C10)	2018/03/28					74	%	60 - 140	
8946784	WZ0	Method Blank				1,4-Difluorobenzene (sur.)	2018/03/28		95
			4-Bromofluorobenzene (sur.)	2018/03/28		103	%	50 - 140	
			D4-1,2-Dichloroethane (sur.)	2018/03/28		111	%	50 - 140	
			Benzene	2018/03/28	<0.00040		mg/L		
			Toluene	2018/03/28	<0.00040		mg/L		
			Ethylbenzene	2018/03/28	<0.00040		mg/L		
			m & p-Xylene	2018/03/28	<0.00080		mg/L		
			o-Xylene	2018/03/28	<0.00040		mg/L		
			F1 (C6-C10)	2018/03/28	<0.10		mg/L		
			8946784	WZ0	RPD [TE4196-02]	Benzene	2018/03/28	4.5	
Toluene	2018/03/28	NC					%	30	
Ethylbenzene	2018/03/28	NC					%	30	
m & p-Xylene	2018/03/28	NC					%	30	
o-Xylene	2018/03/28	4.9					%	30	
F1 (C6-C10)	2018/03/28	6.5					%	30	
8946792	RSU	Matrix Spike [TE4197-02]	1,4-Difluorobenzene (sur.)	2018/03/29		99	%	70 - 130	
			4-Bromofluorobenzene (sur.)	2018/03/29		101	%	70 - 130	
			D4-1,2-Dichloroethane (sur.)	2018/03/29		104	%	70 - 130	
			Benzene	2018/03/29		92	%	70 - 130	
			Bromodichloromethane	2018/03/29		95	%	70 - 130	
			Bromoform	2018/03/29		101	%	70 - 130	
			Bromomethane	2018/03/29		78	%	70 - 130	
			Carbon tetrachloride	2018/03/29		93	%	70 - 130	
			Chlorobenzene	2018/03/29		99	%	70 - 130	
			Chlorodibromomethane	2018/03/29		100	%	70 - 130	
			Chloroethane	2018/03/29		81	%	70 - 130	
			Chloroform	2018/03/29		89	%	70 - 130	
			Chloromethane	2018/03/29		87	%	70 - 130	
			1,2-dibromoethane	2018/03/29		107	%	70 - 130	
			1,2-dichlorobenzene	2018/03/29		100	%	70 - 130	
			1,3-dichlorobenzene	2018/03/29		97	%	70 - 130	
			1,4-dichlorobenzene	2018/03/29		94	%	70 - 130	
			1,1-dichloroethane	2018/03/29		80	%	70 - 130	
			1,2-dichloroethane	2018/03/29		100	%	70 - 130	
			1,1-dichloroethene	2018/03/29		89	%	70 - 130	
cis-1,2-dichloroethene	2018/03/29		93	%	70 - 130				

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QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				trans-1,2-dichloroethene	2018/03/29		88	%	70 - 130
				Dichloromethane	2018/03/29		77	%	70 - 130
				1,2-dichloropropane	2018/03/29		96	%	70 - 130
				cis-1,3-dichloropropene	2018/03/29		97	%	70 - 130
				trans-1,3-dichloropropene	2018/03/29		111	%	70 - 130
				Ethylbenzene	2018/03/29		94	%	70 - 130
				Methyl methacrylate	2018/03/29		109	%	70 - 130
				Methyl-tert-butylether (MTBE)	2018/03/29		85	%	70 - 130
				Styrene	2018/03/29		99	%	70 - 130
				1,1,1,2-tetrachloroethane	2018/03/29		97	%	70 - 130
				1,1,2,2-tetrachloroethane	2018/03/29		96	%	70 - 130
				Tetrachloroethene	2018/03/29		98	%	70 - 130
				Toluene	2018/03/29		99	%	70 - 130
				1,2,3-trichlorobenzene	2018/03/29		106	%	70 - 130
				1,2,4-trichlorobenzene	2018/03/29		103	%	70 - 130
				1,3,5-trichlorobenzene	2018/03/29		103	%	70 - 130
				1,1,1-trichloroethane	2018/03/29		100	%	70 - 130
				1,1,2-trichloroethane	2018/03/29		95	%	70 - 130
				Trichloroethene	2018/03/29		98	%	70 - 130
				Trichlorofluoromethane	2018/03/29		90	%	70 - 130
				1,2,4-trimethylbenzene	2018/03/29		99	%	70 - 130
				1,3,5-trimethylbenzene	2018/03/29		100	%	70 - 130
				Vinyl chloride	2018/03/29		91	%	70 - 130
				m & p-Xylene	2018/03/29		96	%	70 - 130
				o-Xylene	2018/03/29		99	%	70 - 130
8946792	RSU		Spiked Blank	1,4-Difluorobenzene (sur.)	2018/03/29		102	%	70 - 130
				4-Bromofluorobenzene (sur.)	2018/03/29		103	%	70 - 130
				D4-1,2-Dichloroethane (sur.)	2018/03/29		100	%	70 - 130
				Benzene	2018/03/29		95	%	70 - 130
				Bromodichloromethane	2018/03/29		95	%	70 - 130
				Bromoform	2018/03/29		103	%	70 - 130
				Bromomethane	2018/03/29		90	%	70 - 130
				Carbon tetrachloride	2018/03/29		97	%	70 - 130
				Chlorobenzene	2018/03/29		102	%	70 - 130
				Chlorodibromomethane	2018/03/29		102	%	70 - 130
				Chloroethane	2018/03/29		94	%	70 - 130
				Chloroform	2018/03/29		96	%	70 - 130
				Chloromethane	2018/03/29		101	%	70 - 130
				1,2-dibromoethane	2018/03/29		107	%	70 - 130
				1,2-dichlorobenzene	2018/03/29		101	%	70 - 130
				1,3-dichlorobenzene	2018/03/29		97	%	70 - 130
				1,4-dichlorobenzene	2018/03/29		95	%	70 - 130
				1,1-dichloroethane	2018/03/29		93	%	70 - 130
				1,2-dichloroethane	2018/03/29		102	%	70 - 130
				1,1-dichloroethene	2018/03/29		103	%	70 - 130
				cis-1,2-dichloroethene	2018/03/29		101	%	70 - 130
				trans-1,2-dichloroethene	2018/03/29		101	%	70 - 130
				Dichloromethane	2018/03/29		88	%	70 - 130
				1,2-dichloropropane	2018/03/29		95	%	70 - 130
				cis-1,3-dichloropropene	2018/03/29		97	%	70 - 130
				trans-1,3-dichloropropene	2018/03/29		106	%	70 - 130
				Ethylbenzene	2018/03/29		100	%	70 - 130
				Methyl methacrylate	2018/03/29		105	%	70 - 130
				Methyl-tert-butylether (MTBE)	2018/03/29		98	%	70 - 130

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Styrene	2018/03/29		100	%	70 - 130
			1,1,1,2-tetrachloroethane	2018/03/29		104	%	70 - 130
			1,1,2,2-tetrachloroethane	2018/03/29		95	%	70 - 130
			Tetrachloroethene	2018/03/29		102	%	70 - 130
			Toluene	2018/03/29		102	%	70 - 130
			1,2,3-trichlorobenzene	2018/03/29		100	%	70 - 130
			1,2,4-trichlorobenzene	2018/03/29		100	%	70 - 130
			1,3,5-trichlorobenzene	2018/03/29		99	%	70 - 130
			1,1,1-trichloroethane	2018/03/29		100	%	70 - 130
			1,1,2-trichloroethane	2018/03/29		97	%	70 - 130
			Trichloroethene	2018/03/29		99	%	70 - 130
			Trichlorofluoromethane	2018/03/29		103	%	70 - 130
			1,2,4-trimethylbenzene	2018/03/29		101	%	70 - 130
			1,3,5-trimethylbenzene	2018/03/29		101	%	70 - 130
			Vinyl chloride	2018/03/29		107	%	70 - 130
			m & p-Xylene	2018/03/29		105	%	70 - 130
			o-Xylene	2018/03/29		101	%	70 - 130
8946792	RSU	Method Blank	1,4-Difluorobenzene (sur.)	2018/03/30		101	%	70 - 130
			4-Bromofluorobenzene (sur.)	2018/03/30		100	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2018/03/30		100	%	70 - 130
			Benzene	2018/03/30	<0.00040		mg/L	
			Bromodichloromethane	2018/03/30	<0.00050		mg/L	
			Bromoform	2018/03/30	<0.00050		mg/L	
			Bromomethane	2018/03/30	<0.0020		mg/L	
			Carbon tetrachloride	2018/03/30	<0.00050		mg/L	
			Chlorobenzene	2018/03/30	<0.00050		mg/L	
			Chlorodibromomethane	2018/03/30	<0.0010		mg/L	
			Chloroethane	2018/03/30	<0.0010		mg/L	
			Chloroform	2018/03/30	<0.00050		mg/L	
			Chloromethane	2018/03/30	<0.0020		mg/L	
			1,2-dibromoethane	2018/03/30	<0.00020		mg/L	
			1,2-dichlorobenzene	2018/03/30	<0.00050		mg/L	
			1,3-dichlorobenzene	2018/03/30	<0.00050		mg/L	
			1,4-dichlorobenzene	2018/03/30	<0.00050		mg/L	
			1,1-dichloroethane	2018/03/30	<0.00050		mg/L	
			1,2-dichloroethane	2018/03/30	<0.00050		mg/L	
			1,1-dichloroethene	2018/03/30	<0.00050		mg/L	
			cis-1,2-dichloroethene	2018/03/30	<0.00050		mg/L	
			trans-1,2-dichloroethene	2018/03/30	<0.00050		mg/L	
			Dichloromethane	2018/03/30	<0.0020		mg/L	
			1,2-dichloropropane	2018/03/30	<0.00050		mg/L	
			cis-1,3-dichloropropene	2018/03/30	<0.00050		mg/L	
			trans-1,3-dichloropropene	2018/03/30	<0.00050		mg/L	
			Ethylbenzene	2018/03/30	<0.00040		mg/L	
			Methyl methacrylate	2018/03/30	<0.00050		mg/L	
			Methyl-tert-butylether (MTBE)	2018/03/30	<0.00050		mg/L	
			Styrene	2018/03/30	<0.00050		mg/L	
			1,1,1,2-tetrachloroethane	2018/03/30	<0.0010		mg/L	
			1,1,2,2-tetrachloroethane	2018/03/30	<0.0020		mg/L	
			Tetrachloroethene	2018/03/30	<0.00050		mg/L	
			Toluene	2018/03/30	<0.00040		mg/L	
			1,2,3-trichlorobenzene	2018/03/30	<0.0010		mg/L	
			1,2,4-trichlorobenzene	2018/03/30	<0.0010		mg/L	
			1,3,5-trichlorobenzene	2018/03/30	<0.00050		mg/L	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1,1-trichloroethane	2018/03/30	<0.00050		mg/L	
			1,1,2-trichloroethane	2018/03/30	<0.00050		mg/L	
			Trichloroethene	2018/03/30	<0.00050		mg/L	
			Trichlorofluoromethane	2018/03/30	<0.00050		mg/L	
			1,2,4-trimethylbenzene	2018/03/30	<0.00050		mg/L	
			1,3,5-trimethylbenzene	2018/03/30	<0.00050		mg/L	
			Vinyl chloride	2018/03/30	<0.00050		mg/L	
			Xylenes (Total)	2018/03/30	<0.00080		mg/L	
			m & p-Xylene	2018/03/30	<0.00080		mg/L	
			o-Xylene	2018/03/30	<0.00040		mg/L	
8946792	RSU	RPD [TE4196-02]	Bromodichloromethane	2018/03/30	NC		%	30
			Bromoform	2018/03/30	NC		%	30
			Bromomethane	2018/03/30	NC		%	30
			Carbon tetrachloride	2018/03/30	NC		%	30
			Chlorobenzene	2018/03/30	NC		%	30
			Chlorodibromomethane	2018/03/30	NC		%	30
			Chloroethane	2018/03/30	NC		%	30
			Chloroform	2018/03/30	NC		%	30
			Chloromethane	2018/03/30	NC		%	30
			1,2-dibromoethane	2018/03/30	NC		%	30
			1,2-dichlorobenzene	2018/03/30	NC		%	30
			1,3-dichlorobenzene	2018/03/30	NC		%	30
			1,4-dichlorobenzene	2018/03/30	NC		%	30
			1,1-dichloroethane	2018/03/30	NC		%	30
			1,2-dichloroethane	2018/03/30	2.6		%	30
			1,1-dichloroethene	2018/03/30	NC		%	30
			cis-1,2-dichloroethene	2018/03/30	NC		%	30
			trans-1,2-dichloroethene	2018/03/30	NC		%	30
			Dichloromethane	2018/03/30	NC		%	30
			1,2-dichloropropane	2018/03/30	NC		%	30
			cis-1,3-dichloropropene	2018/03/30	NC		%	30
			trans-1,3-dichloropropene	2018/03/30	NC		%	30
			Methyl methacrylate	2018/03/30	NC		%	30
			Methyl-tert-butylether (MTBE)	2018/03/30	NC		%	30
			Styrene	2018/03/30	NC		%	30
			1,1,1,2-tetrachloroethane	2018/03/30	NC		%	30
			1,1,2,2-tetrachloroethane	2018/03/30	NC		%	30
			Tetrachloroethene	2018/03/30	NC		%	30
			1,2,3-trichlorobenzene	2018/03/30	NC		%	30
			1,2,4-trichlorobenzene	2018/03/30	NC		%	30
			1,3,5-trichlorobenzene	2018/03/30	NC		%	30
			1,1,1-trichloroethane	2018/03/30	NC		%	30
			1,1,2-trichloroethane	2018/03/30	NC		%	30
			Trichloroethene	2018/03/30	NC		%	30
			Trichlorofluoromethane	2018/03/30	NC		%	30
			1,2,4-trimethylbenzene	2018/03/30	NC		%	30
			1,3,5-trimethylbenzene	2018/03/30	NC		%	30
			Vinyl chloride	2018/03/30	NC		%	30
8946841	VP4	Matrix Spike	O-TERPHENYL (sur.)	2018/03/29		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2018/03/29		96	%	60 - 130
8946841	VP4	Spiked Blank	O-TERPHENYL (sur.)	2018/03/29		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2018/03/29		95	%	70 - 130
8946841	VP4	Method Blank	O-TERPHENYL (sur.)	2018/03/29		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2018/03/29	<0.10		mg/L	

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QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	8946841	VP4	RPD	F2 (C10-C16 Hydrocarbons)	2018/03/29	NC		%	30
	8946847	LZ3	Matrix Spike	D10-ANTHRACENE (sur.)	2018/04/02		106	%	50 - 130
				D8-ACENAPHTHYLENE (sur.)	2018/04/02		103	%	50 - 130
				D8-NAPHTHALENE (sur.)	2018/04/02		74	%	50 - 130
				TERPHENYL-D14 (sur.)	2018/04/02		124	%	50 - 130
				Acenaphthene	2018/04/02		100	%	50 - 130
				Acenaphthylene	2018/04/02		103	%	50 - 130
				Acridine	2018/04/02		92	%	50 - 130
				Anthracene	2018/04/02		83	%	50 - 130
				Benzo(a)anthracene	2018/04/02		122	%	50 - 130
				Benzo(b&j)fluoranthene	2018/04/02		113	%	50 - 130
				Benzo(k)fluoranthene	2018/04/02		117	%	50 - 130
				Benzo(g,h,i)perylene	2018/04/02		100	%	50 - 130
				Benzo(c)phenanthrene	2018/04/02		119	%	50 - 130
				Benzo(a)pyrene	2018/04/02		108	%	50 - 130
				Benzo[e]pyrene	2018/04/02		103	%	50 - 130
				Chrysene	2018/04/02		112	%	50 - 130
				Dibenz(a,h)anthracene	2018/04/02		107	%	50 - 130
				Fluoranthene	2018/04/02		113	%	50 - 130
				Fluorene	2018/04/02		106	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2018/04/02		110	%	50 - 130
				1-Methylnaphthalene	2018/04/02		96	%	50 - 130
				2-Methylnaphthalene	2018/04/02		89	%	50 - 130
				Naphthalene	2018/04/02		89	%	50 - 130
				Phenanthrene	2018/04/02		99	%	50 - 130
				Perylene	2018/04/02		90	%	50 - 130
				Pyrene	2018/04/02		108	%	50 - 130
				Quinoline	2018/04/02		107	%	50 - 130
	8946847	LZ3	Spiked Blank	D10-ANTHRACENE (sur.)	2018/04/02		104	%	50 - 130
				D8-ACENAPHTHYLENE (sur.)	2018/04/02		98	%	50 - 130
				D8-NAPHTHALENE (sur.)	2018/04/02		67	%	50 - 130
				TERPHENYL-D14 (sur.)	2018/04/02		122	%	50 - 130
				Acenaphthene	2018/04/02		80	%	50 - 130
				Acenaphthylene	2018/04/02		86	%	50 - 130
				Acridine	2018/04/02		92	%	50 - 130
				Anthracene	2018/04/02		82	%	50 - 130
				Benzo(a)anthracene	2018/04/02		126	%	50 - 130
				Benzo(b&j)fluoranthene	2018/04/02		117	%	50 - 130
				Benzo(k)fluoranthene	2018/04/02		119	%	50 - 130
				Benzo(g,h,i)perylene	2018/04/02		104	%	50 - 130
				Benzo(c)phenanthrene	2018/04/02		121	%	50 - 130
				Benzo(a)pyrene	2018/04/02		104	%	50 - 130
				Benzo[e]pyrene	2018/04/02		105	%	50 - 130
				Chrysene	2018/04/02		118	%	50 - 130
				Dibenz(a,h)anthracene	2018/04/02		110	%	50 - 130
				Fluoranthene	2018/04/02		119	%	50 - 130
				Fluorene	2018/04/02		89	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2018/04/02		113	%	50 - 130
				1-Methylnaphthalene	2018/04/02		69	%	50 - 130
				2-Methylnaphthalene	2018/04/02		60	%	50 - 130
				Naphthalene	2018/04/02		70	%	50 - 130
				Phenanthrene	2018/04/02		96	%	50 - 130
				Perylene	2018/04/02		96	%	50 - 130
				Pyrene	2018/04/02		112	%	50 - 130

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits	
8946847	LZ3	Method Blank	Quinoline	2018/04/02		105	%	50 - 130	
			D10-ANTHRACENE (sur.)	2018/04/02		108	%	50 - 130	
			D8-ACENAPHTHYLENE (sur.)	2018/04/02		104	%	50 - 130	
			D8-NAPHTHALENE (sur.)	2018/04/02		78	%	50 - 130	
			TERPHENYL-D14 (sur.)	2018/04/02		124	%	50 - 130	
			Acenaphthene	2018/04/02	<0.00010		mg/L		
			Acenaphthylene	2018/04/02	<0.00010		mg/L		
			Acridine	2018/04/02	<0.000050		mg/L		
			Anthracene	2018/04/02	<0.000010		mg/L		
			Benzo(a)anthracene	2018/04/02	<0.0000085		mg/L		
			Benzo(b&j)fluoranthene	2018/04/02	<0.0000085		mg/L		
			Benzo(k)fluoranthene	2018/04/02	<0.0000085		mg/L		
			Benzo(g,h,i)perylene	2018/04/02	<0.0000085		mg/L		
			Benzo(c)phenanthrene	2018/04/02	<0.000050		mg/L		
			Benzo(a)pyrene	2018/04/02	<0.0000075		mg/L		
			Benzo[e]pyrene	2018/04/02	<0.000050		mg/L		
			Chrysene	2018/04/02	<0.0000085		mg/L		
			Dibenz(a,h)anthracene	2018/04/02	<0.0000075		mg/L		
			Fluoranthene	2018/04/02	<0.000010		mg/L		
			Fluorene	2018/04/02	<0.000050		mg/L		
			Indeno(1,2,3-cd)pyrene	2018/04/02	<0.0000085		mg/L		
			1-Methylnaphthalene	2018/04/02	<0.00010		mg/L		
			2-Methylnaphthalene	2018/04/02	<0.00010		mg/L		
			Naphthalene	2018/04/02	<0.00010		mg/L		
			Phenanthrene	2018/04/02	<0.000050		mg/L		
			Perylene	2018/04/02	<0.000050		mg/L		
			Pyrene	2018/04/02	<0.000020		mg/L		
Quinoline	2018/04/02	<0.00020		mg/L					
8946847	LZ3	RPD	Acenaphthene	2018/04/02	NC		%	30	
			Acenaphthylene	2018/04/02	NC		%	30	
			Acridine	2018/04/02	NC		%	30	
			Anthracene	2018/04/02	NC		%	30	
			Benzo(a)anthracene	2018/04/02	NC		%	30	
			Benzo(b&j)fluoranthene	2018/04/02	NC		%	30	
			Benzo(k)fluoranthene	2018/04/02	NC		%	30	
			Benzo(g,h,i)perylene	2018/04/02	NC		%	30	
			Benzo(c)phenanthrene	2018/04/02	NC		%	30	
			Benzo(a)pyrene	2018/04/02	NC		%	30	
			Benzo[e]pyrene	2018/04/02	NC		%	30	
			Chrysene	2018/04/02	NC		%	30	
			Dibenz(a,h)anthracene	2018/04/02	NC		%	30	
			Fluoranthene	2018/04/02	NC		%	30	
			Fluorene	2018/04/02	NC		%	30	
			Indeno(1,2,3-cd)pyrene	2018/04/02	NC		%	30	
			2-Methylnaphthalene	2018/04/02	NC		%	30	
			Naphthalene	2018/04/02	NC		%	30	
			Phenanthrene	2018/04/02	NC		%	30	
			Perylene	2018/04/02	NC		%	30	
Pyrene	2018/04/02	NC		%	30				



Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Quinoline	2018/04/02	NC		%	30
<p>Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.</p> <p>Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.</p> <p>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.</p> <p>Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.</p> <p>Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.</p> <p>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 &lt;= 2x RDL).</p>									

Maxxam Job #: B822891  
Report Date: 2018/04/03

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**NOTIFICATION LOG**

No Reportable Regulation Exceedences Noted.

Maxxam Job #: B822891  
Report Date: 2018/04/03

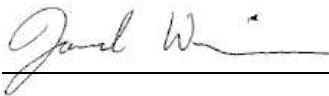
CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

### VALIDATION SIGNATURE PAGE

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



Janet Gao, B.Sc., QP, Supervisor, Organics



Jared Wiseman, B.Sc., P.Chem., QP, Senior Analyst, Organics



Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Invoice Information	Report Information (if differs from invoice)	Project Information	Turnaround Time (TAT) Required
Company: <u>Clifton Associates</u>	Company: _____	Quotation #: _____	<input checked="" type="checkbox"/> 5 - 7 Days Regular (Most analyses)
Contact Name: <u>Stephen d'Abadie</u>	Contact Name: _____	P.O. #/ AFER: _____	<b>PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS</b>
Address: <u>2222 - 30 Ave NE Calgary AB T2E 7K9</u>	Address: _____	Project #: <u>CG2430.1 E30</u>	<b>Rush TAT (Surcharges will be applied)</b>
Phone: <u>403-263-2556</u>	Phone: _____	Site Location: _____	<input type="checkbox"/> Same Day <input type="checkbox"/> 2 Days
Email: <u>Stephen.dabadie@clifton.ca</u>	Email: _____	Site #: _____	<input type="checkbox"/> 1 Day <input type="checkbox"/> 3-4 Days
Copies: <u>Terryn-kuzyk@clifton.ca</u>	Copies: _____	Sampled By: <u>Austin</u>	Date Required: _____
			Rush Confirmation #: _____

Laboratory Use Only				Analysis Requested												Regulatory Criteria					
YES	NO	COOLER ID	Temp																		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	574	574													<input checked="" type="checkbox"/> AT1					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															<input type="checkbox"/> CCME					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															<input type="checkbox"/> Drinking Water					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															<input type="checkbox"/> D50 (Drilling Waste)					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															<input type="checkbox"/> Saskatchewan					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															<input type="checkbox"/> Other:					
Sample Identification				Depth (Unit)	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	# of containers	BTEX F1 <input type="checkbox"/> VOC <input checked="" type="checkbox"/>	BTEX F1-F2	BTEX F1-F4	Routine Water	Regulated Metals Tot <input type="checkbox"/> Diss <input type="checkbox"/>	Mercury Total <input type="checkbox"/> Dissolved <input type="checkbox"/>	Salinity 4	Sieve (75 micron)	Texture (% Sand, Silt, Clay)	Basic Class II Landfill	PAHs	HOLD - DO NOT ANALYZE	Special Instructions
1	1911		2018-3-27	13:15	GW	8	✓	✓											✓		
2	1976			14:15		8	✓	✓											✓		
3	2007			14:30		8	✓	✓											✓		
4	1924			14:50		8	✓	✓											✓		
5	1910			15:00		8	✓	✓											✓		
6	1906			15:30		8	✓	✓											✓		
7	1971			15:50		7	✓	✓											✓		
8	9971			15:50		7	✓	✓											✓		
9	1907			15:20		8	✓	✓											✓		
10	1908		2018-3-27	15:30	GW	8	✓	✓											✓		
Please indicate Filtered, Preserved or Both (F, P, F/P)																					
Relinquished by: (Signature/ Print)				DATE (YYYY/MM/DD)	Time (HH:MM)	Received by: (Signature/ Print)				DATE (YYYY/MM/DD)	Time (HH:MM)										
<u>Austin Mei</u>				2018.3.28	8:46	<u>Amrita Chharma</u>				2018/03/28	08:49										

28-Mar-18 08:49  
Jennifer Stephenson  
B822891  
JZ8    INS-0150

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



Report Information				Comments				Analysis Requested												Same as CoC			
Company: <u>Clifton Associates</u>								# of containers	BTEX F1 <input type="checkbox"/> VOC <input checked="" type="checkbox"/>	BTEX F1-F2	BTEX F1-F4	Routine Water	Regulated Metals	Total <input type="checkbox"/> Diss <input type="checkbox"/>	Mercury <input type="checkbox"/> Total <input type="checkbox"/> Dissolved <input type="checkbox"/>	Salinity 4	Sieve (75 micron)	Texture (% Sand, Silt, Clay)	Basic Class II Landfill	PAHs	HOLD - DO NOT ANALYZE	M070635	
Contact: <u>Stephen dAbadie</u>																						Project/LSID	
Phone: <u>403-263-2556</u>																						CG2430.1E30	
Email: <u>Stephen_dabadie@clifton.ca</u>																						Special Instructions	
Sampled by: <u>Terryn_Kuzyk@clifton.ca</u>																							
Sample Identification	Depth (Unit)	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix																			
11	1966	2018.3.27	16:10	GW	8	✓	✓																
12	1923	↓	12:00	GW	8	✓	✓																
13	1102	↓	15:50	GW	8	✓	✓																
14	EX5	↓	14:00	GW	6	✓	✓																
15	EX95	↓	14:00	GW	6	✓	✓																
16	TRIP Blank 2	2018.3.27		W	2	✓																	
17																							
18																							
19																							
20																							
21																							
22																							
23																							
24																							
25																							
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30																							

Please indicate Filtered, Preserved or Both (F, P, F/P) → PIP

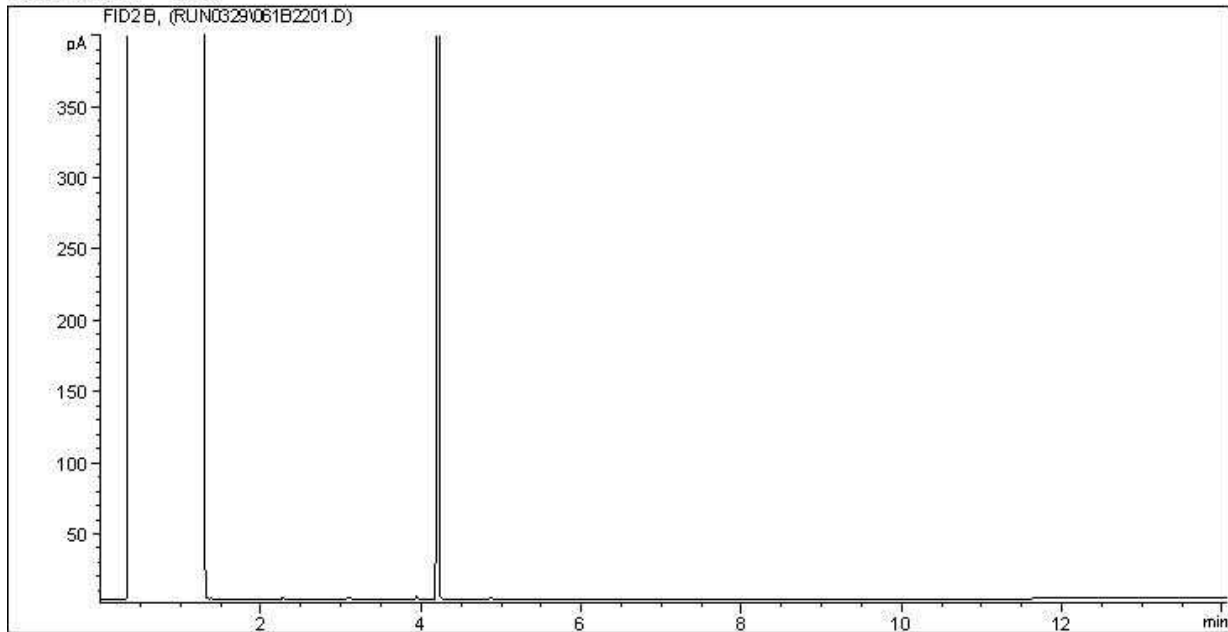
Relinquished by: (Signature/ Print)	DATE (YYYY/MM/DD)	Time (HH:MM)	Received by: (Signature/ Print)	DATE (YYYY/MM/DD)	Time (HH:MM)
<u>Austin McJ.</u>	<u>2018.3.28</u>	<u>8:46</u>	<u>Amrita Sharma</u>	<u>2018/03/28</u>	<u>08:49</u>

28-Mar-18 08:49  
Jennifer Stephenson  
B822891  
JZ8 INS-0150

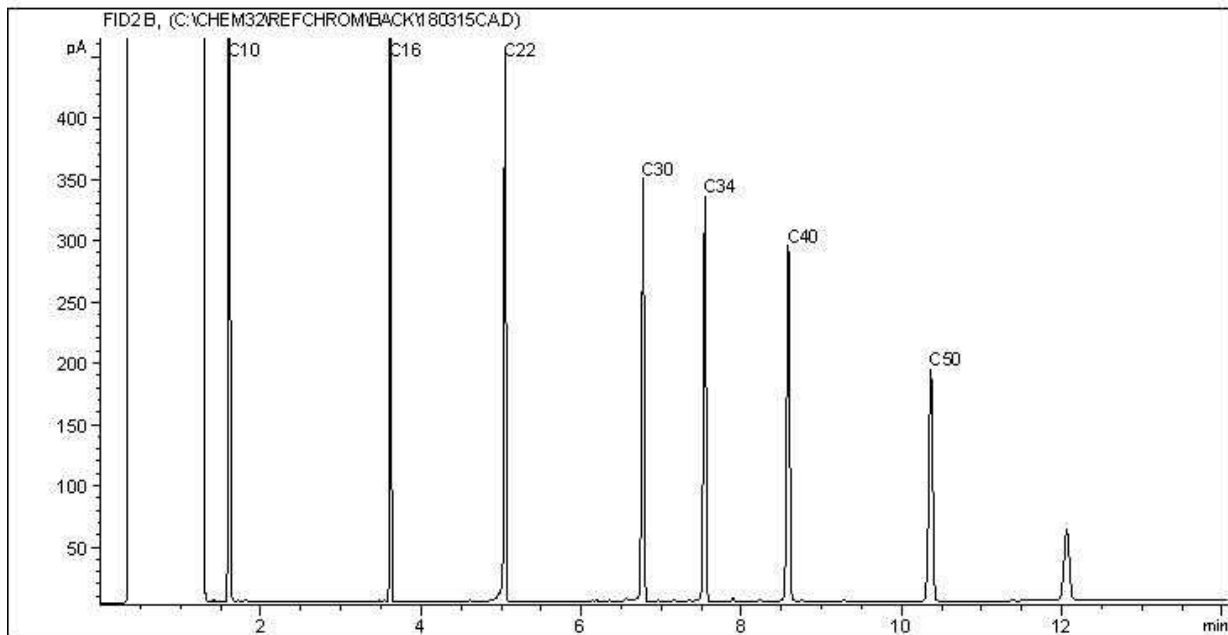


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram

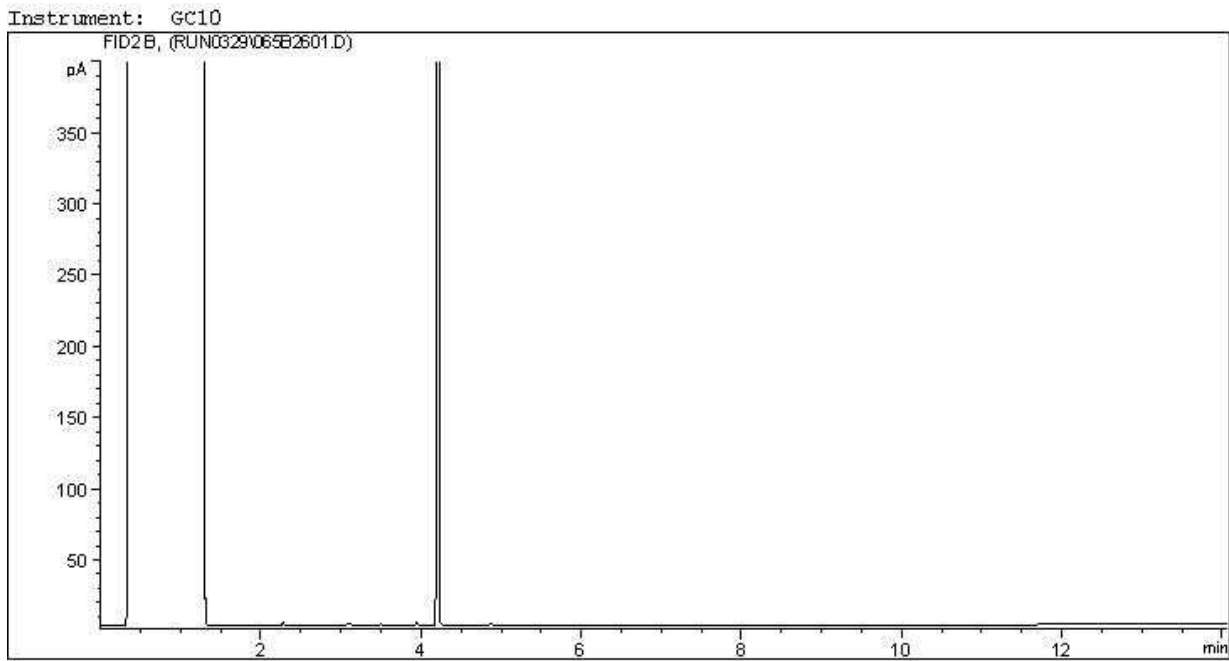


TYPICAL PRODUCT CARBON NUMBER RANGES

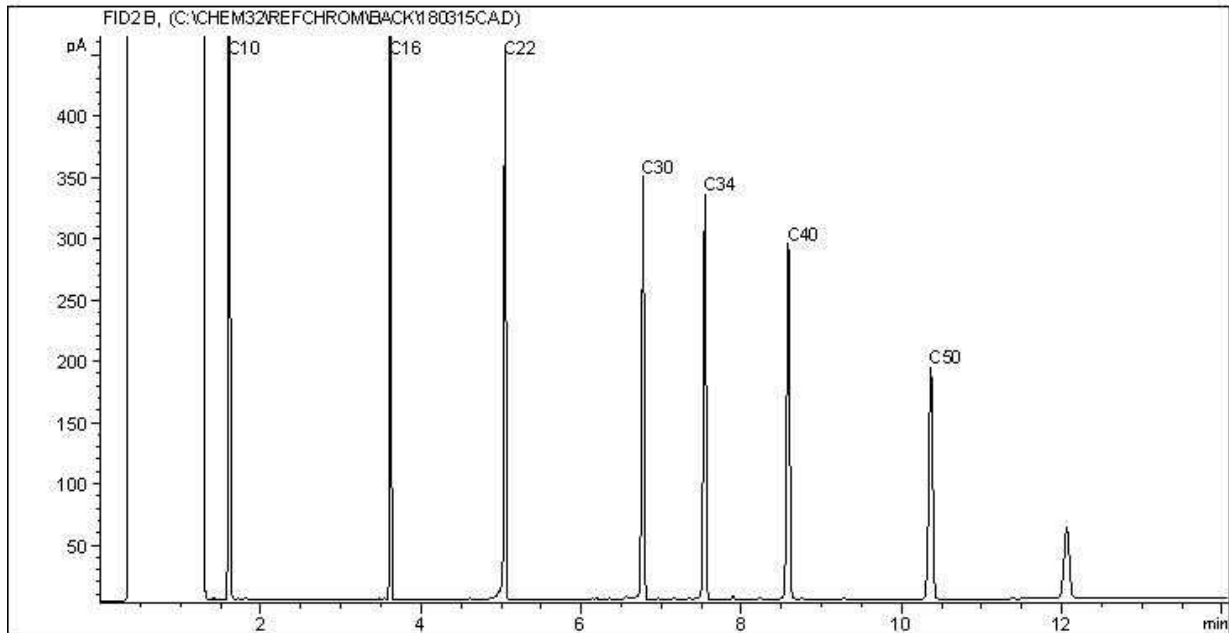
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Carbon Range Distribution - Reference Chromatogram

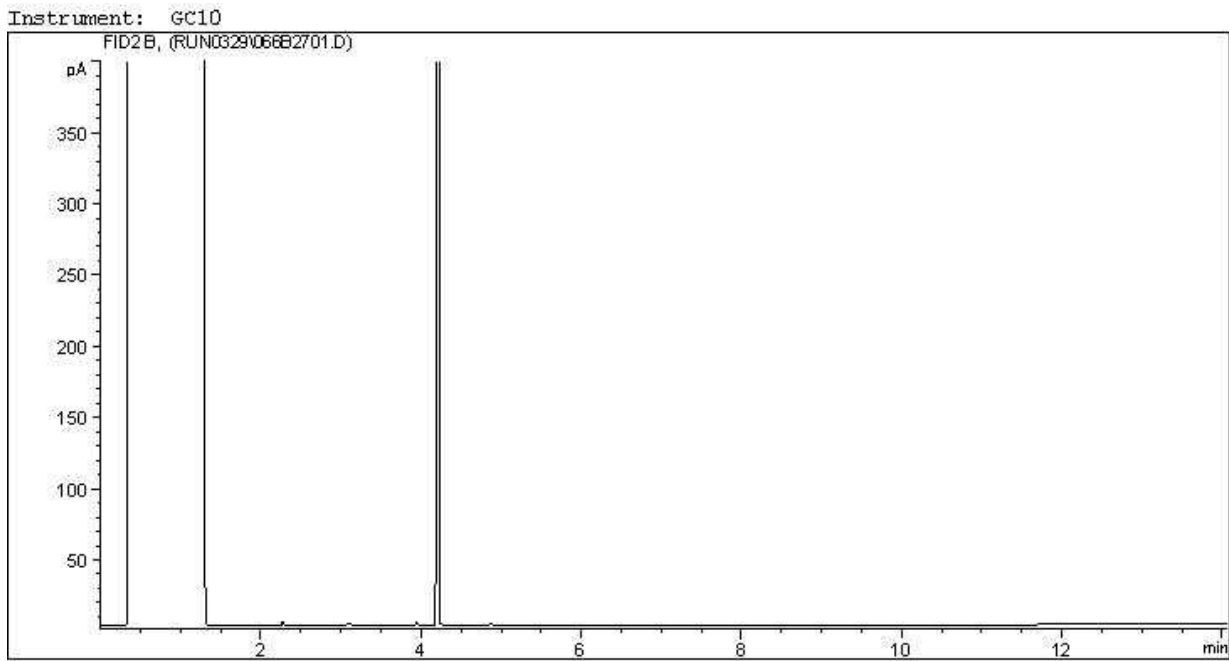


TYPICAL PRODUCT CARBON NUMBER RANGES

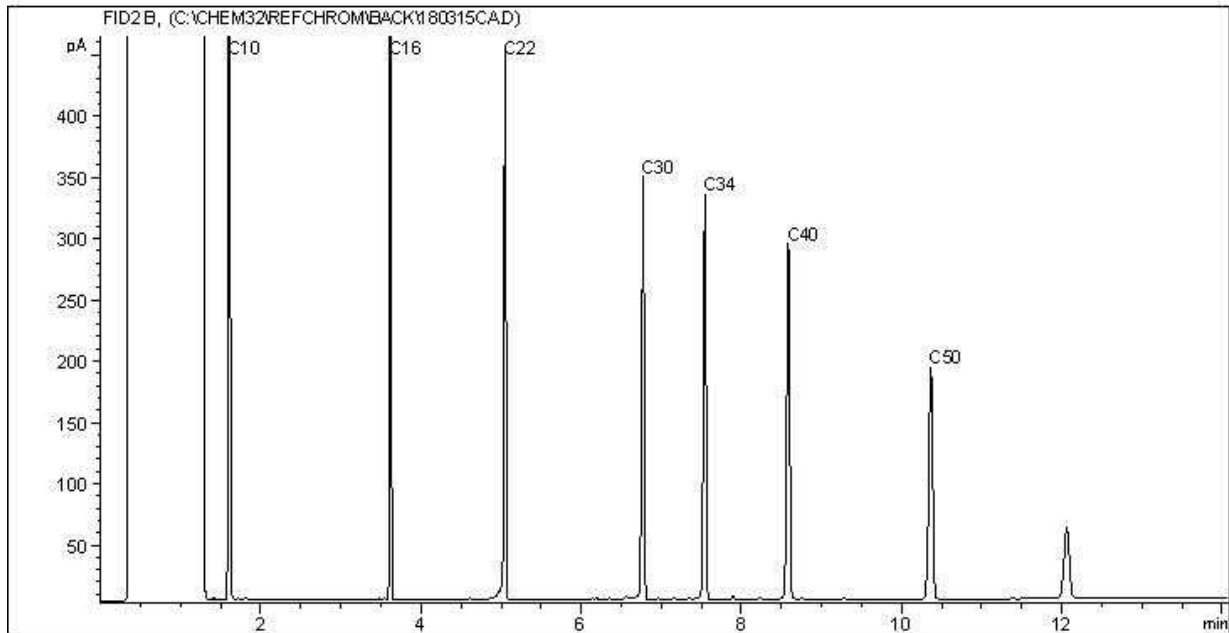
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Carbon Range Distribution - Reference Chromatogram

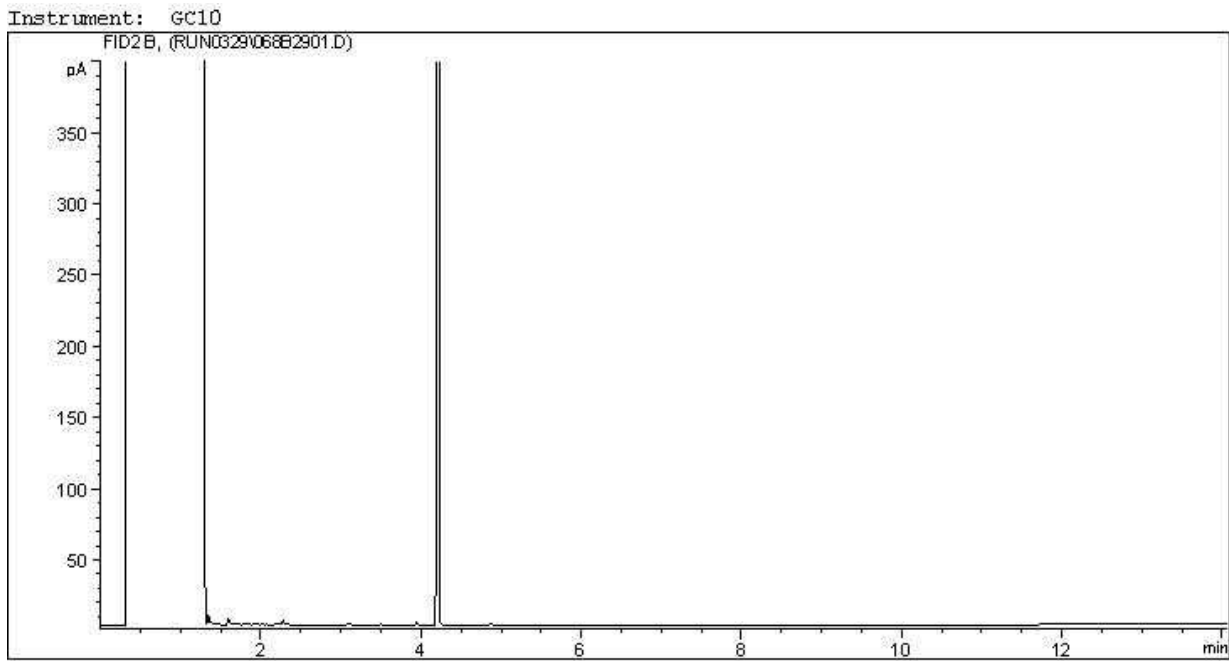


TYPICAL PRODUCT CARBON NUMBER RANGES

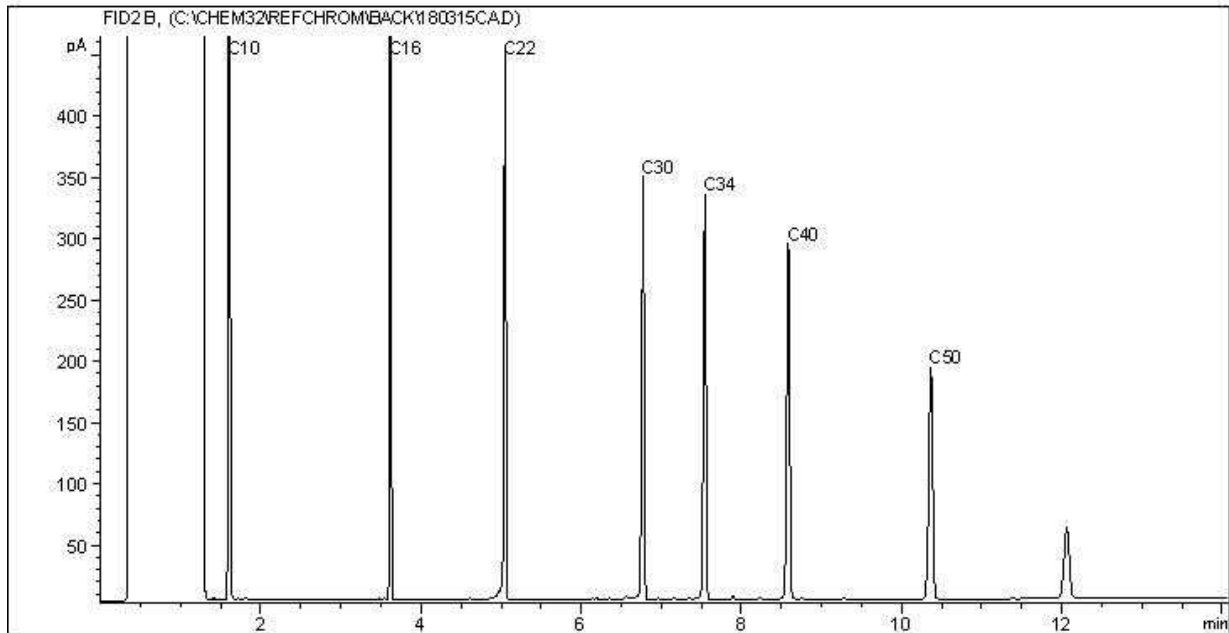
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Carbon Range Distribution - Reference Chromatogram

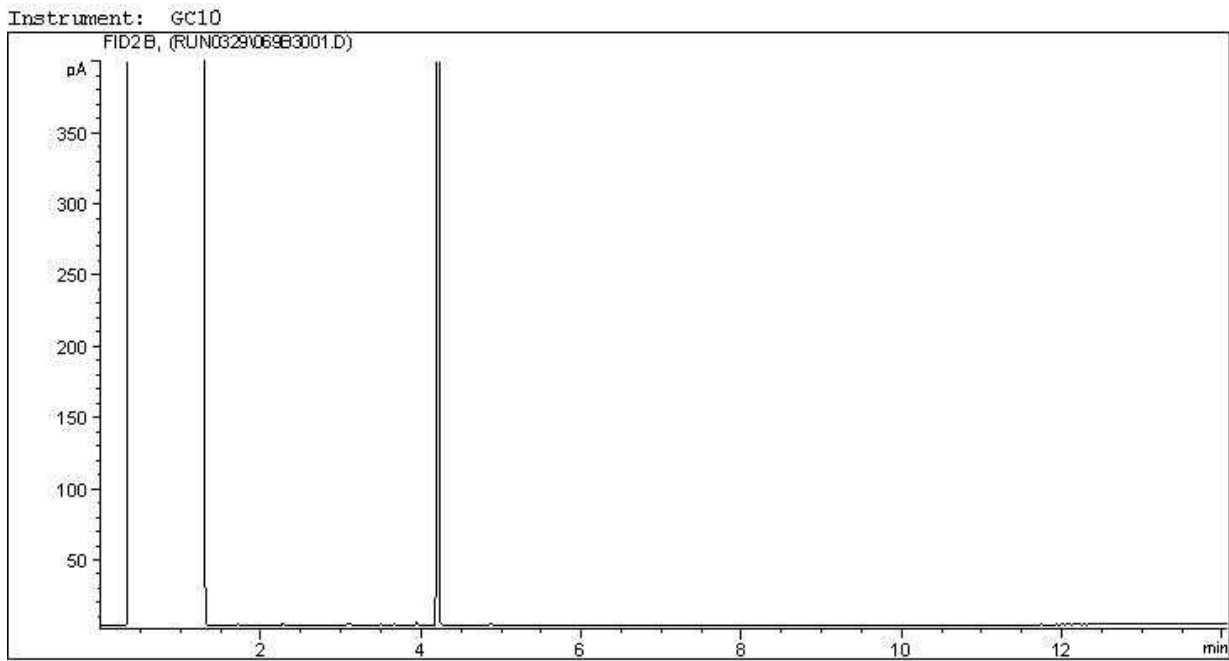


TYPICAL PRODUCT CARBON NUMBER RANGES

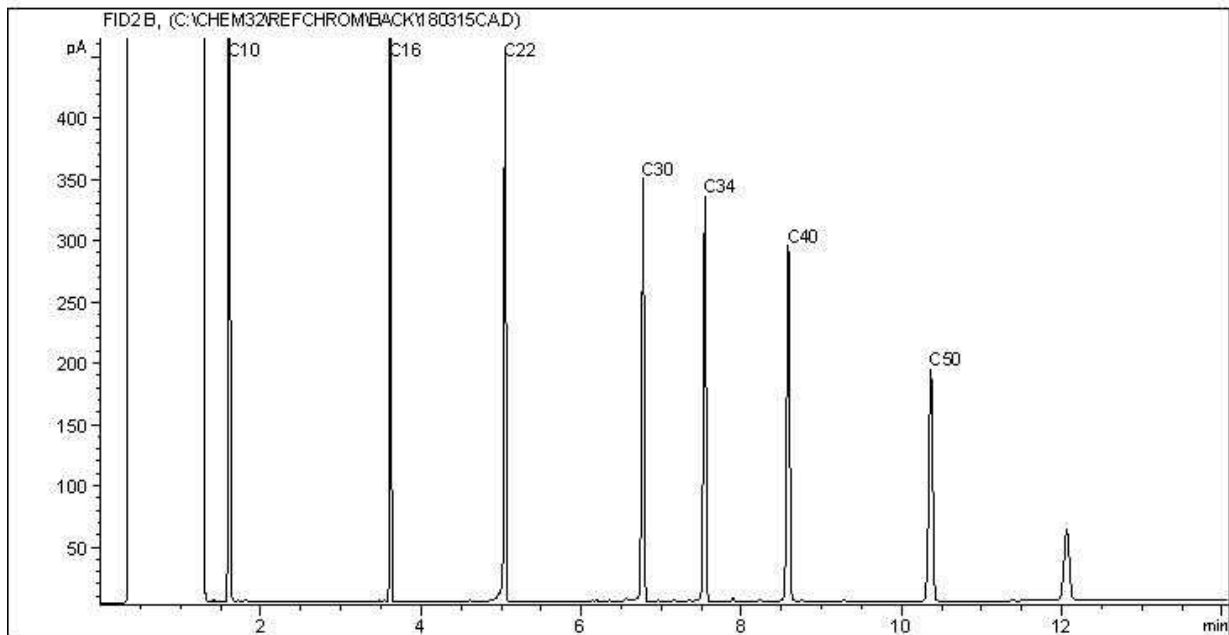
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

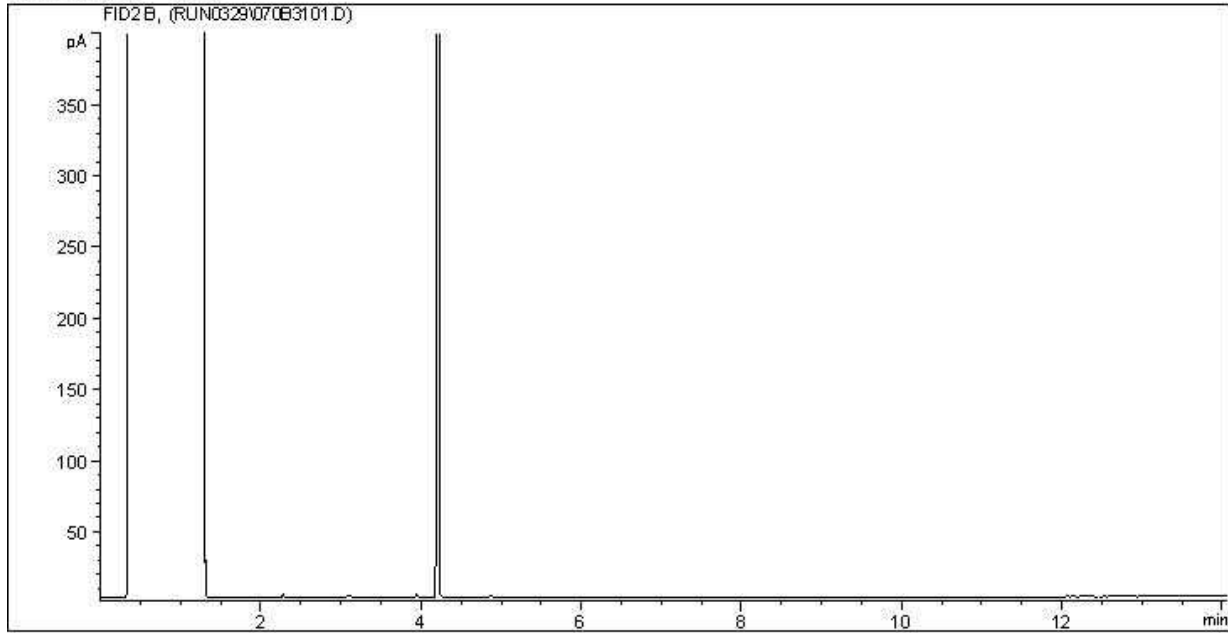
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

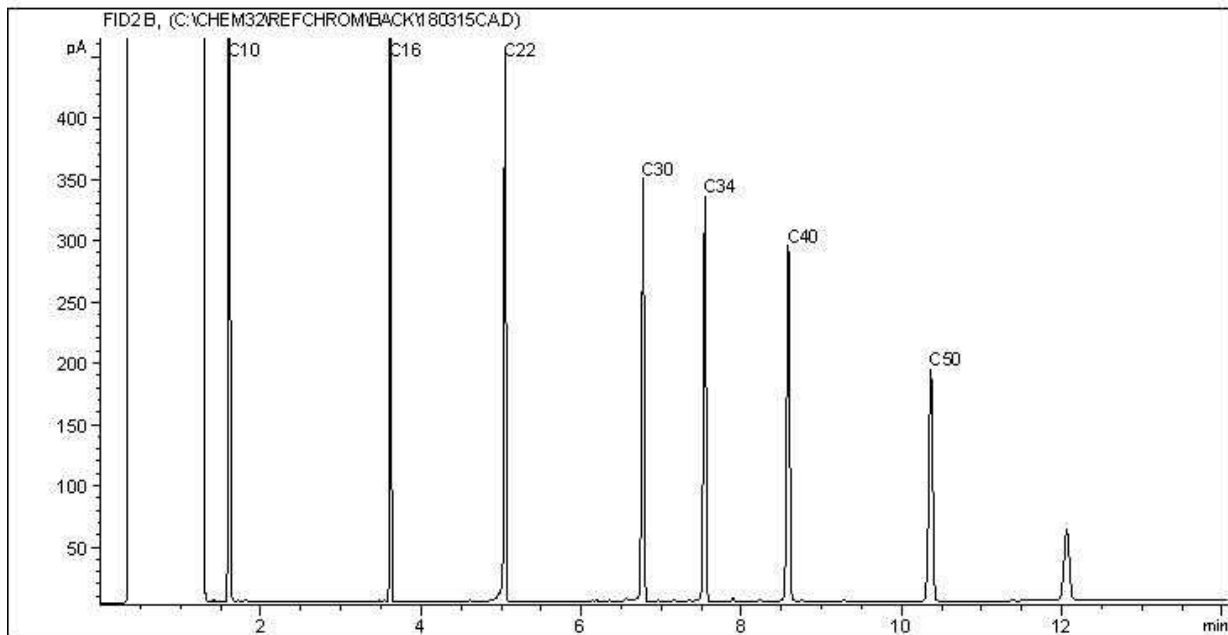


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram

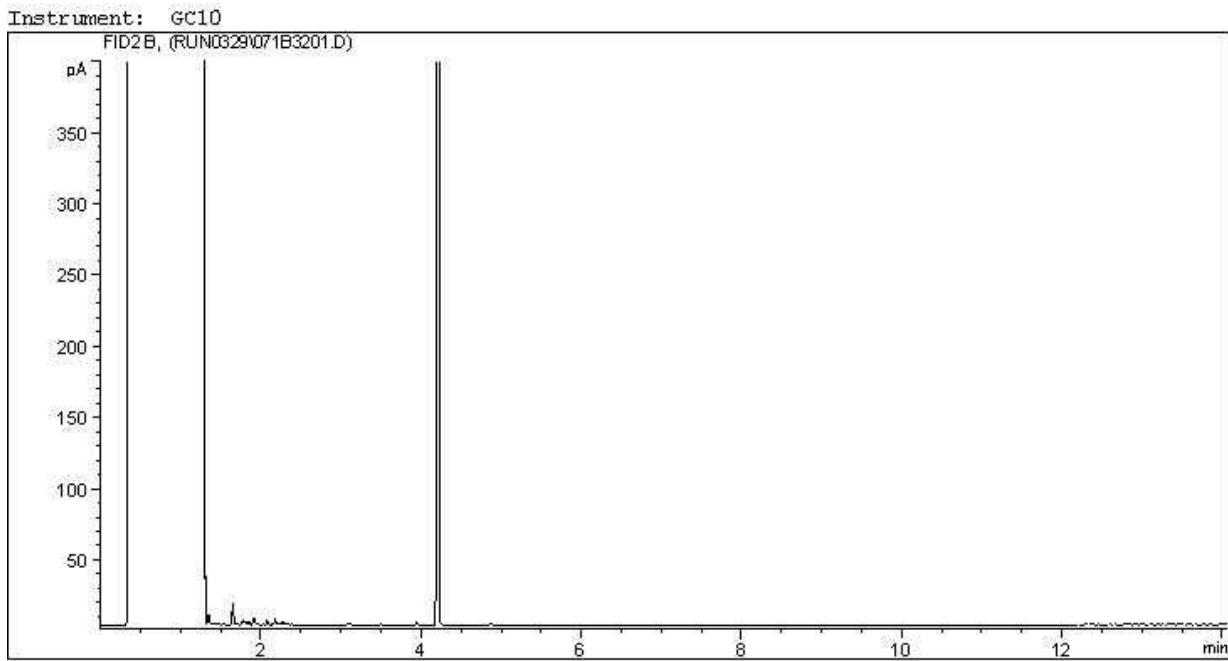


TYPICAL PRODUCT CARBON NUMBER RANGES

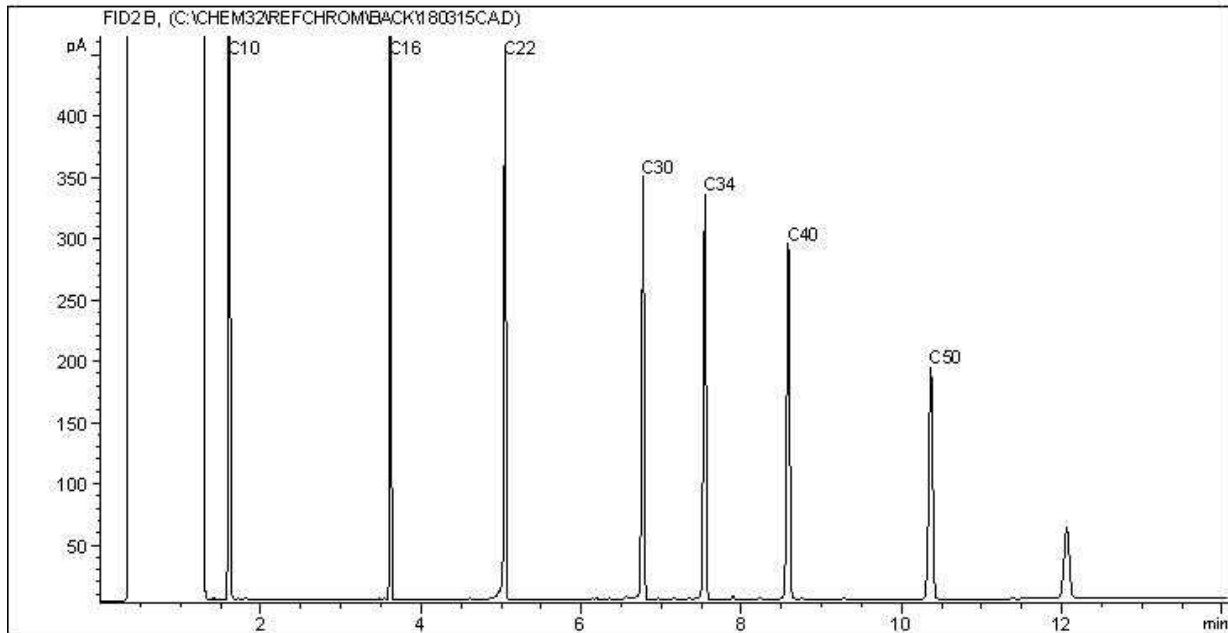
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Carbon Range Distribution - Reference Chromatogram



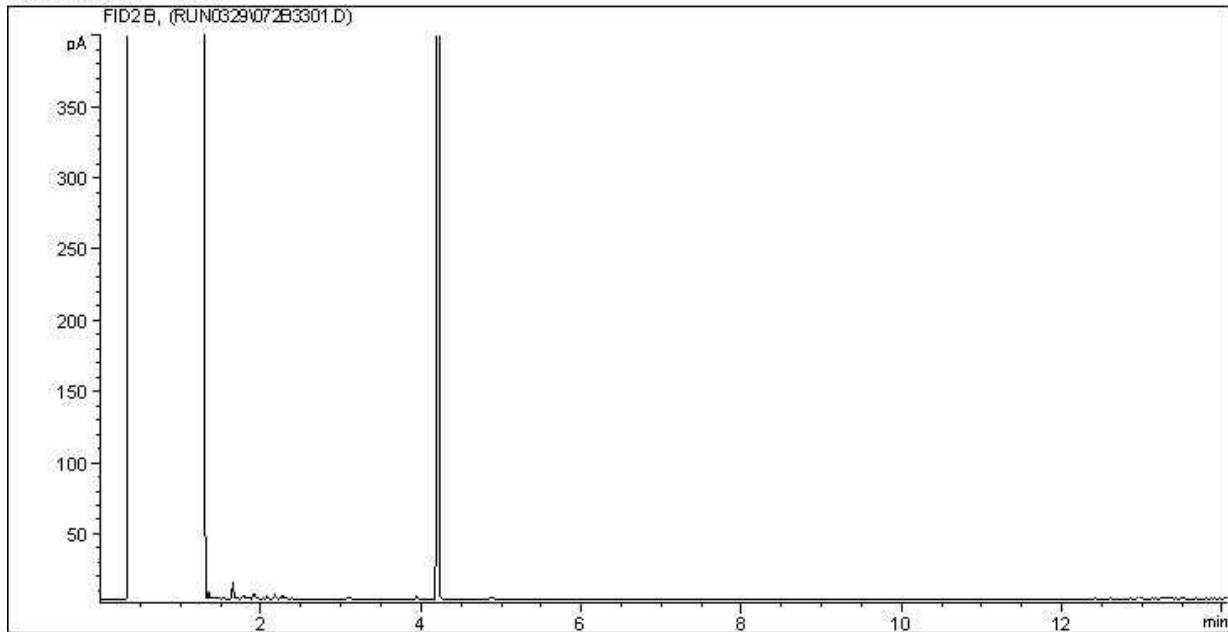
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

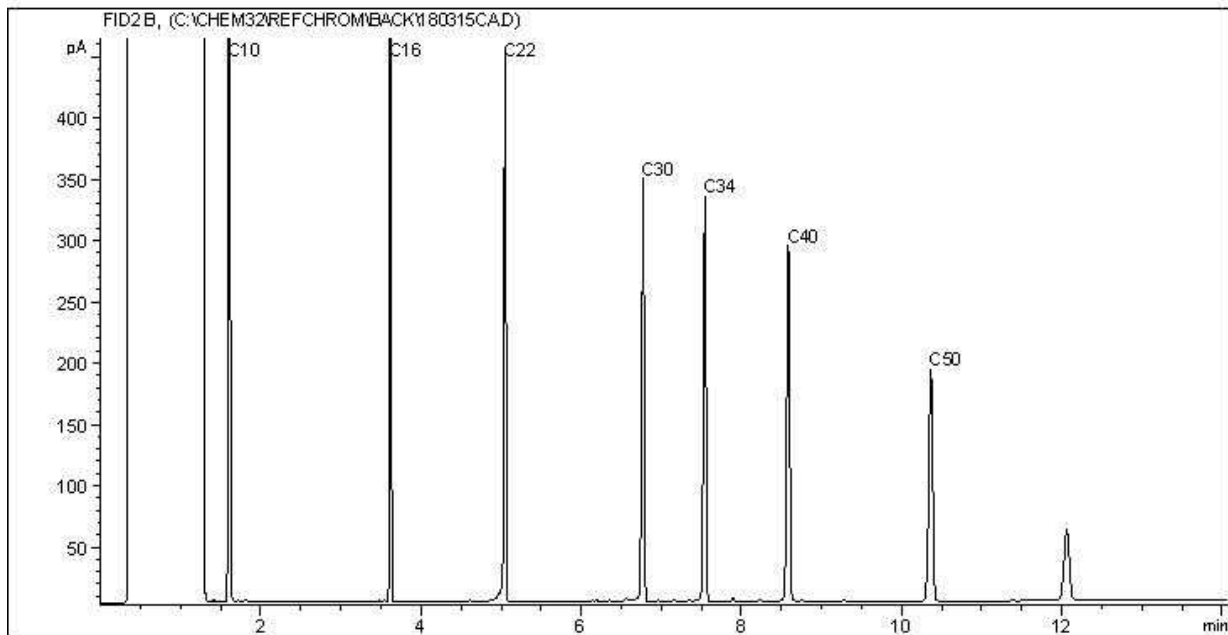
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram

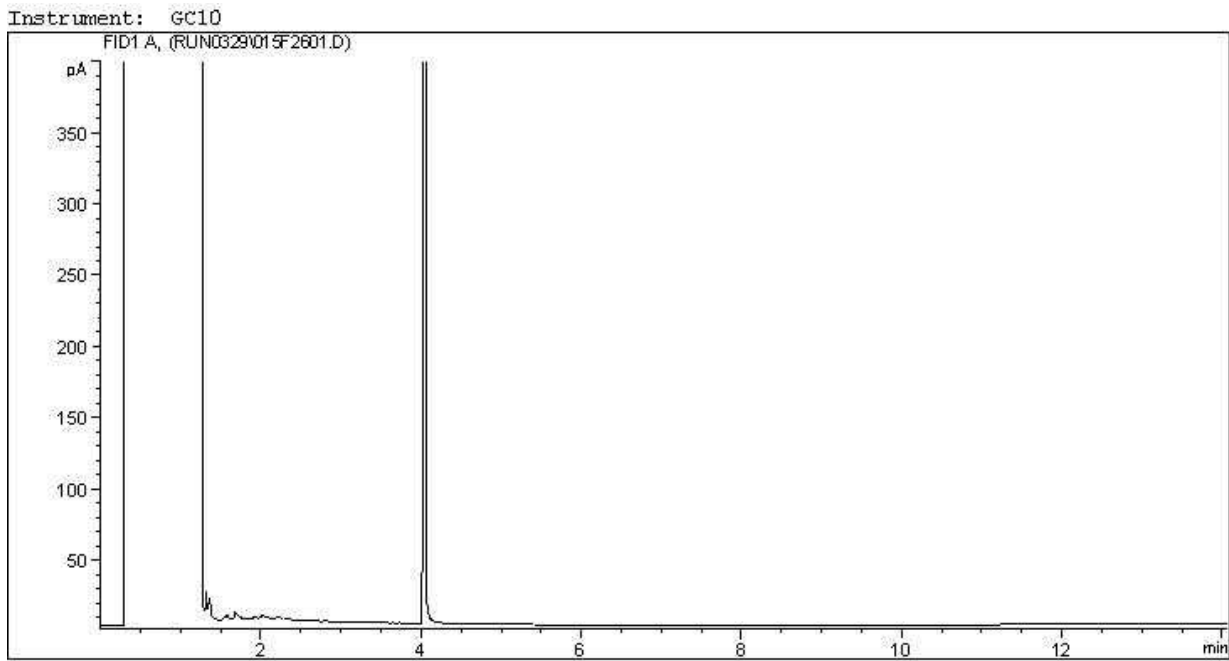


TYPICAL PRODUCT CARBON NUMBER RANGES

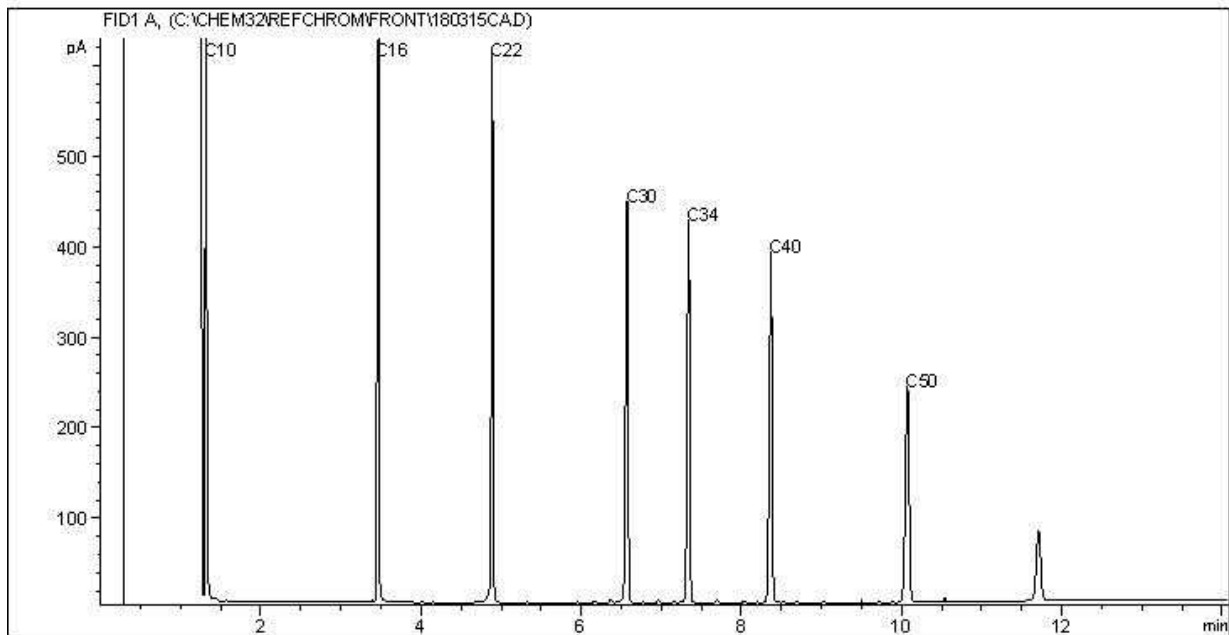
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Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Carbon Range Distribution - Reference Chromatogram



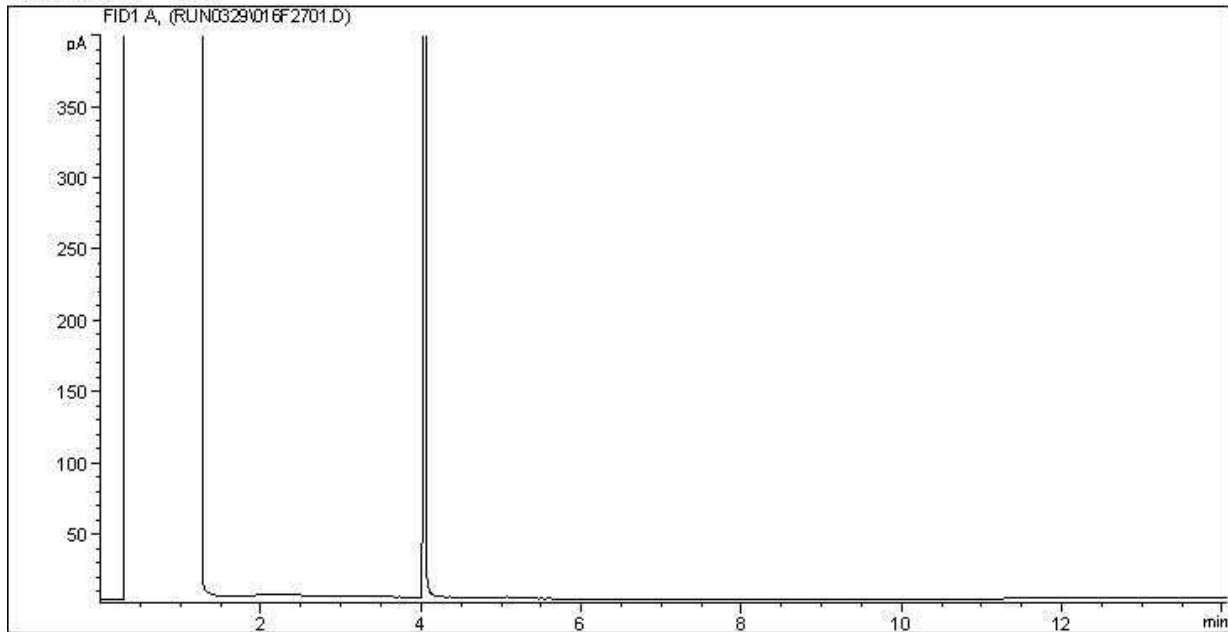
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

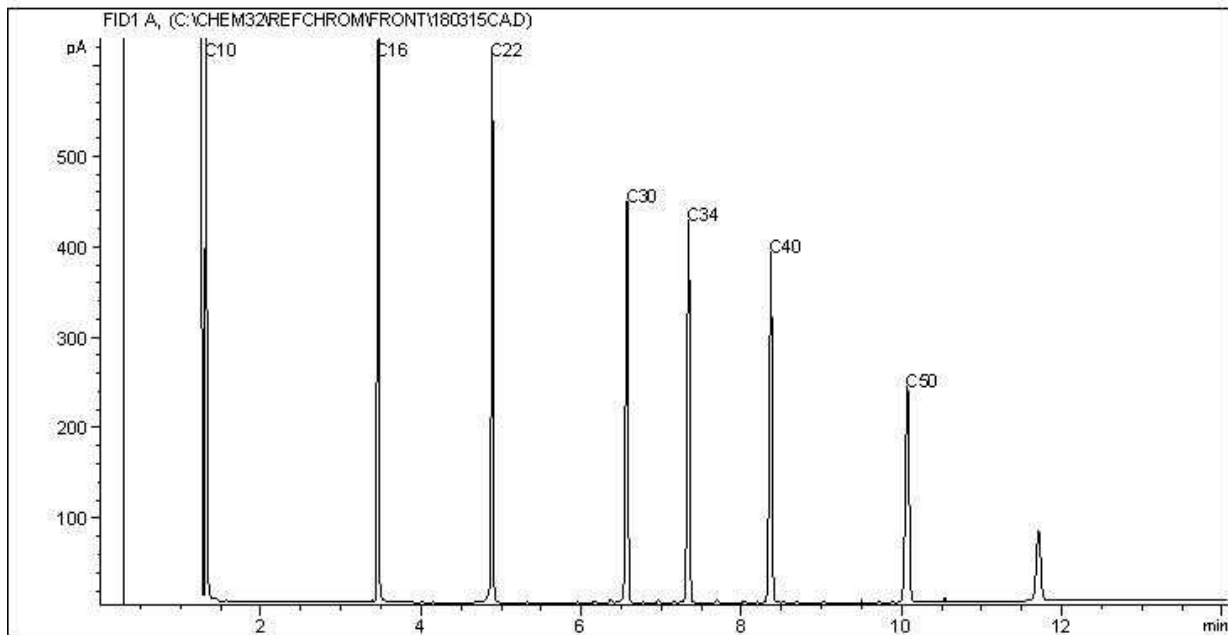
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

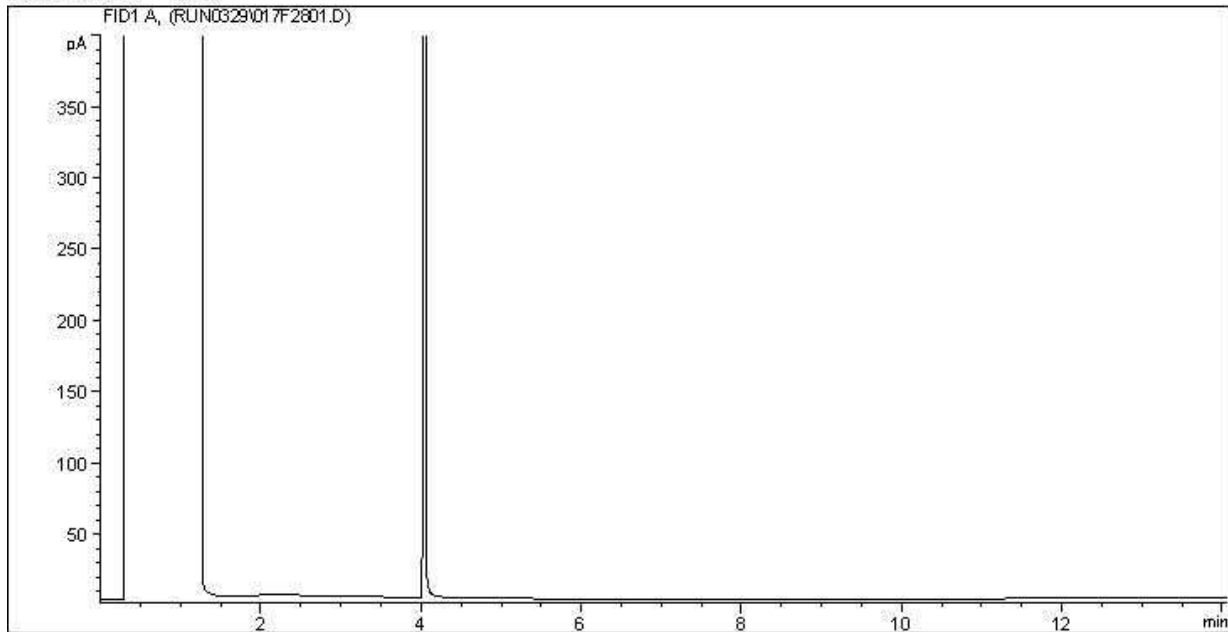
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Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

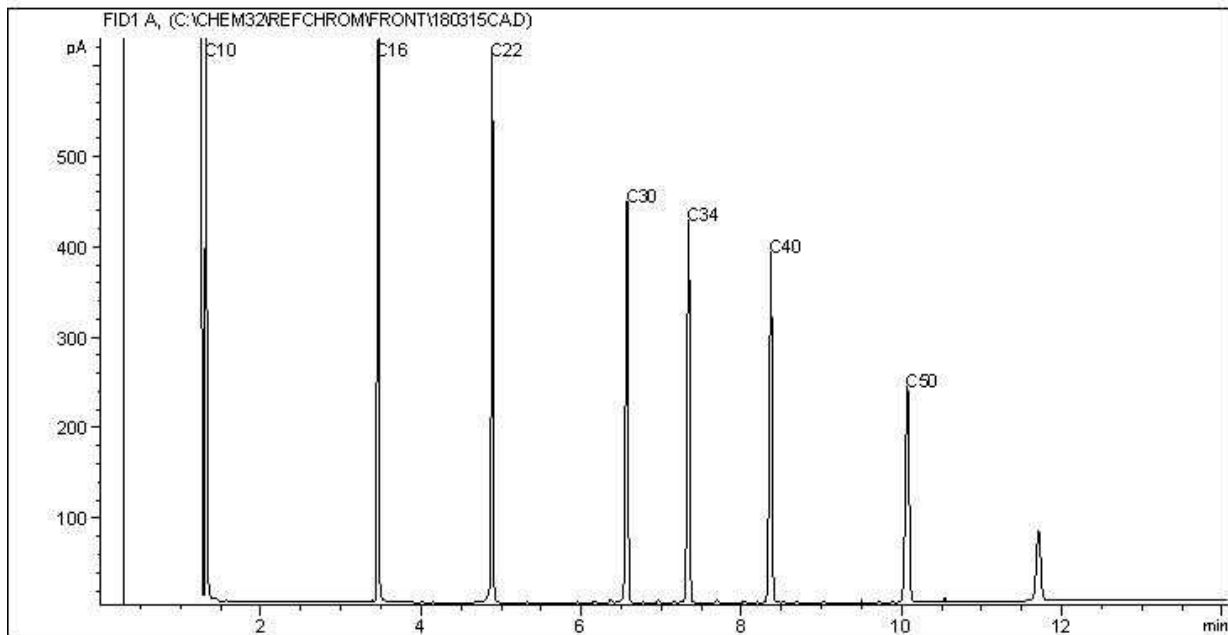


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



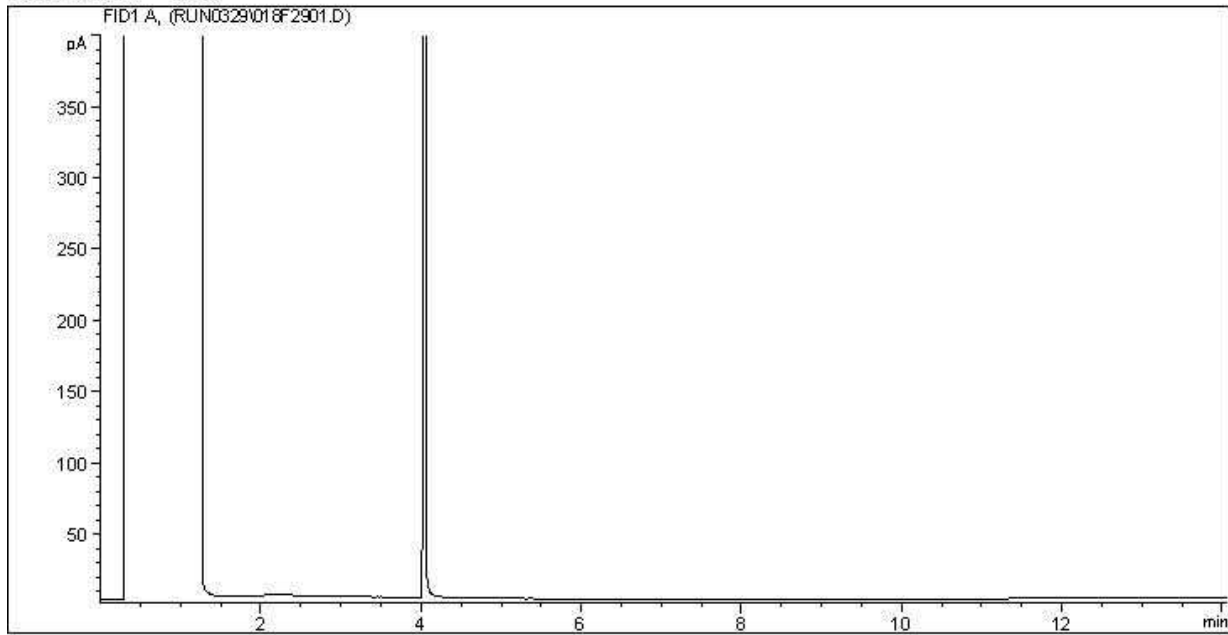
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

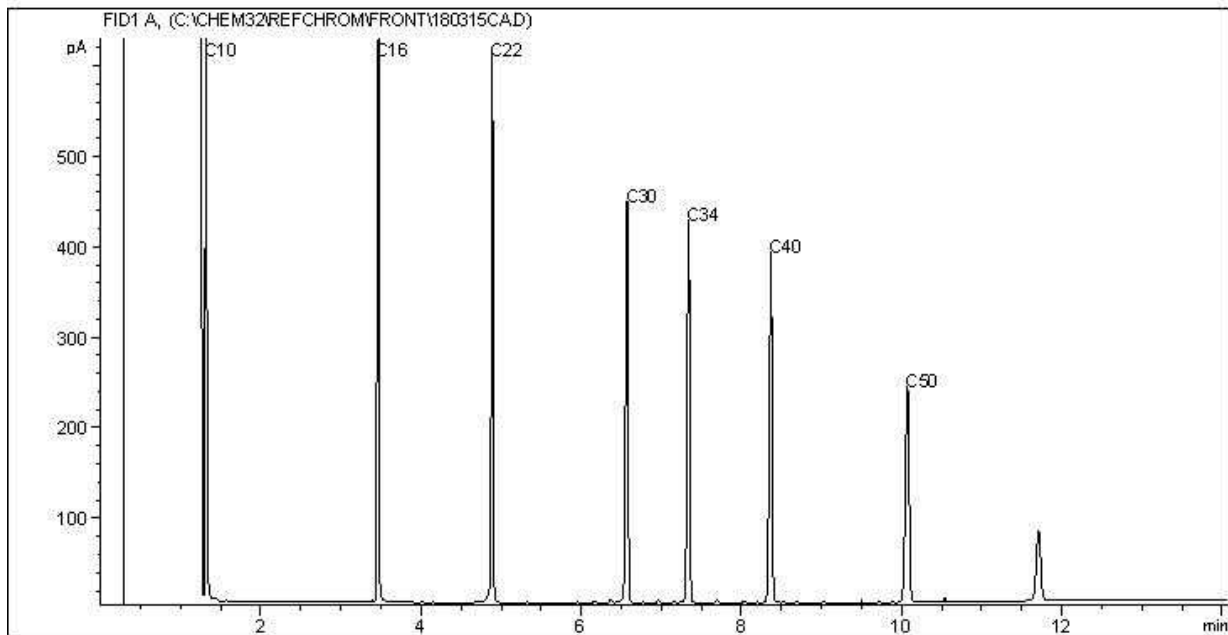
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



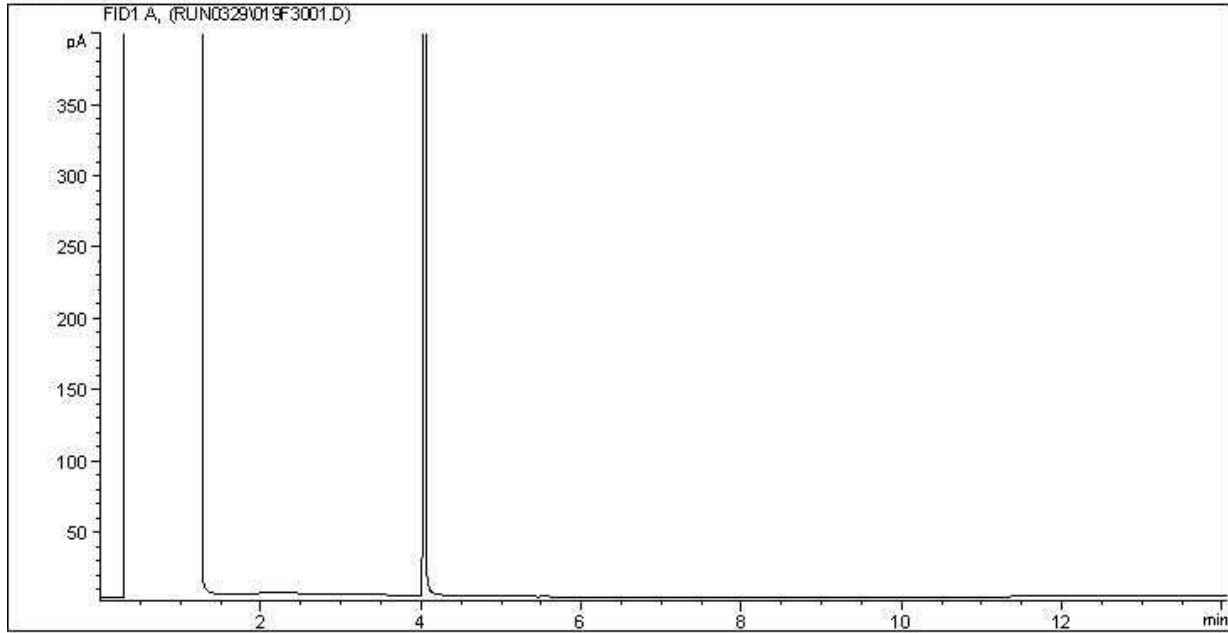
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

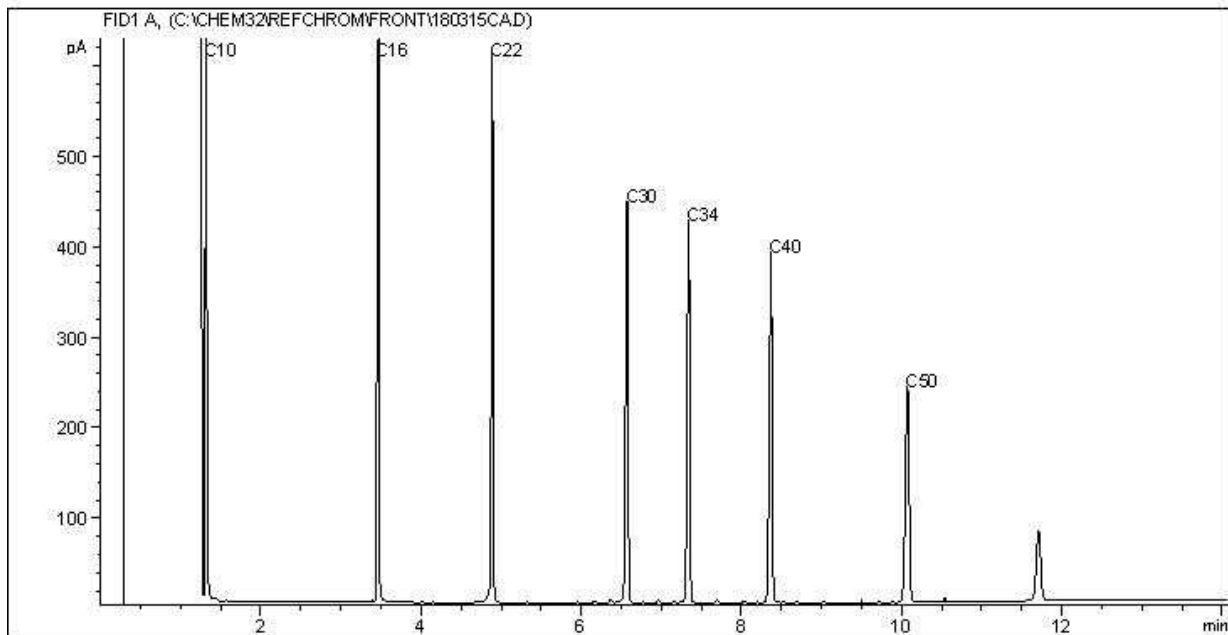
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



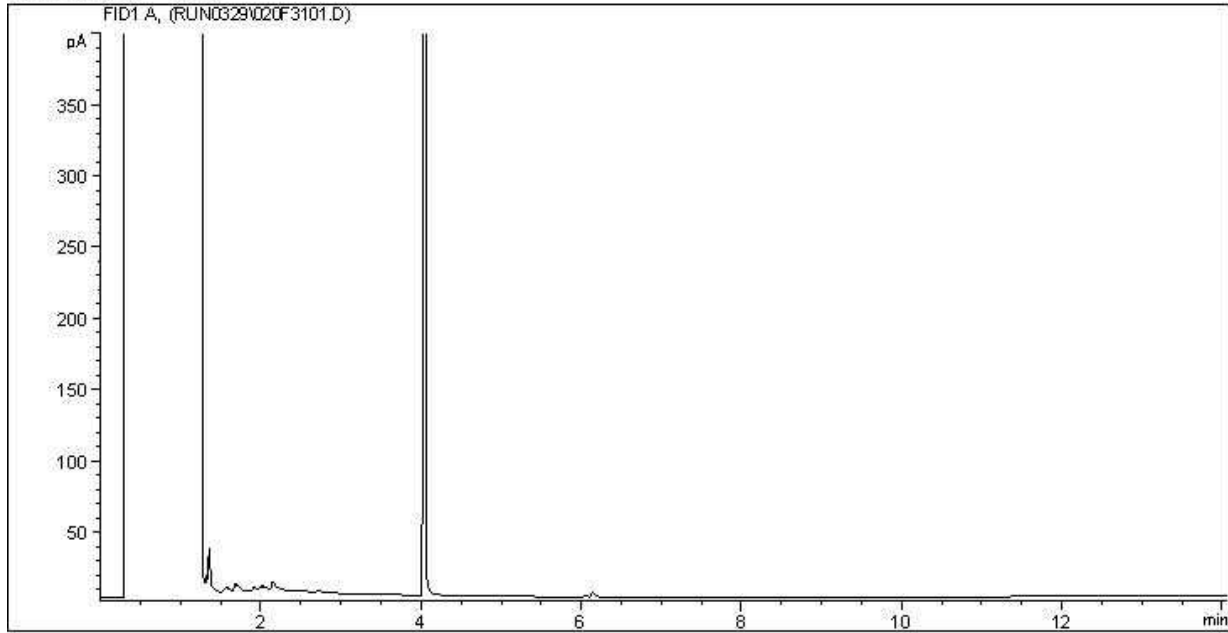
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

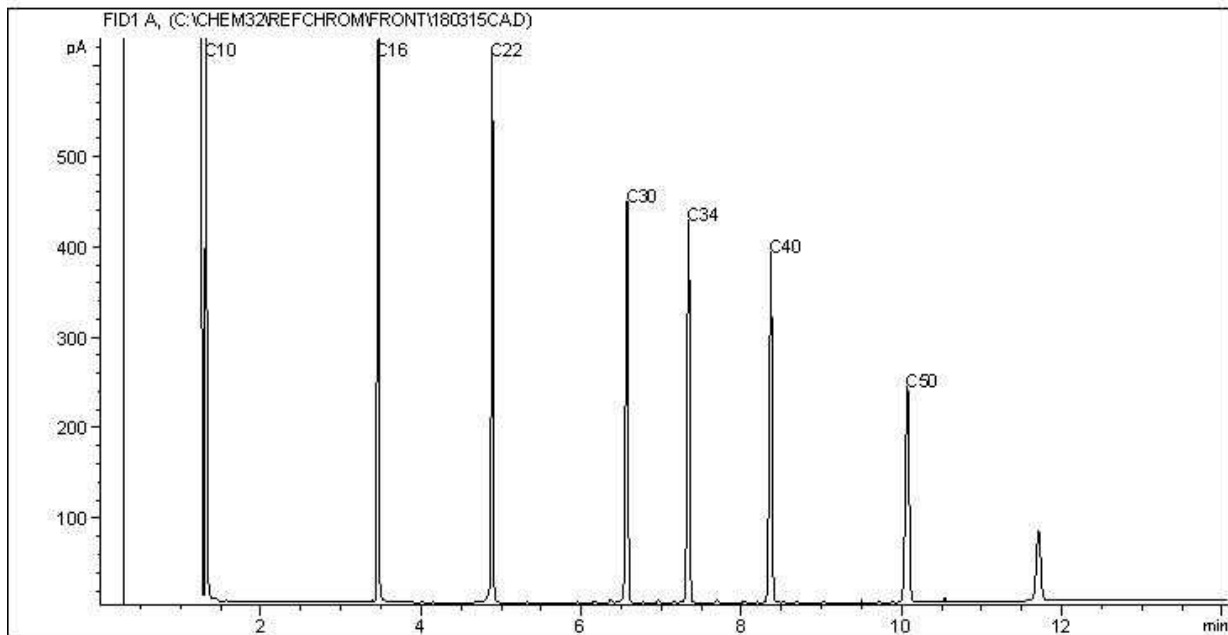
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



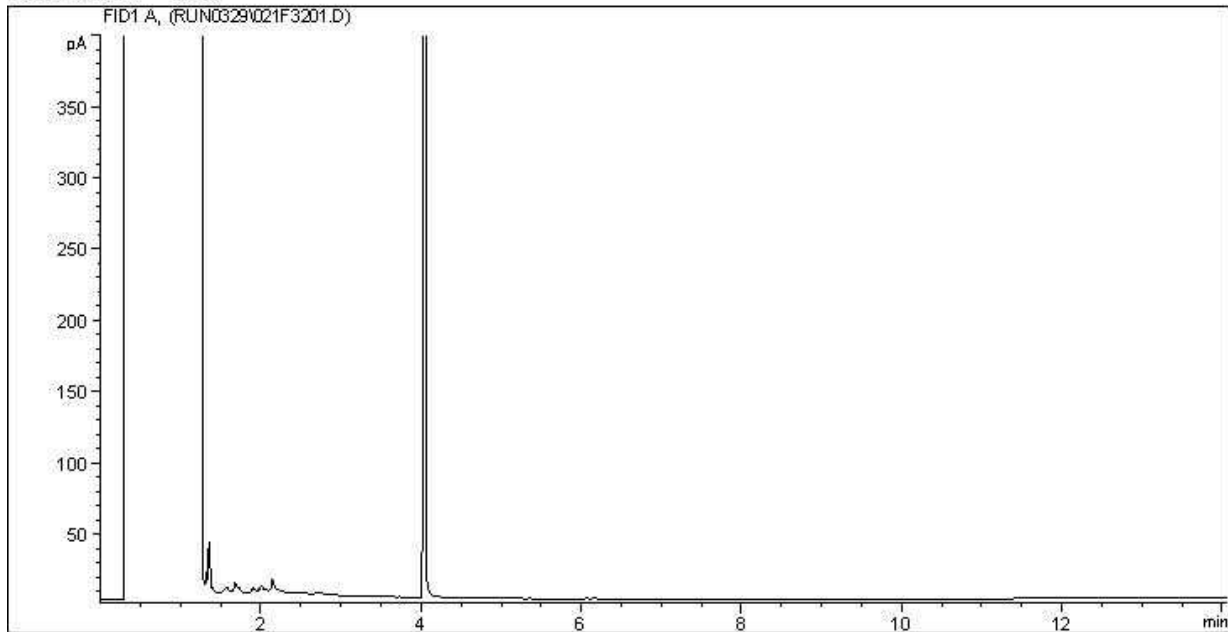
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

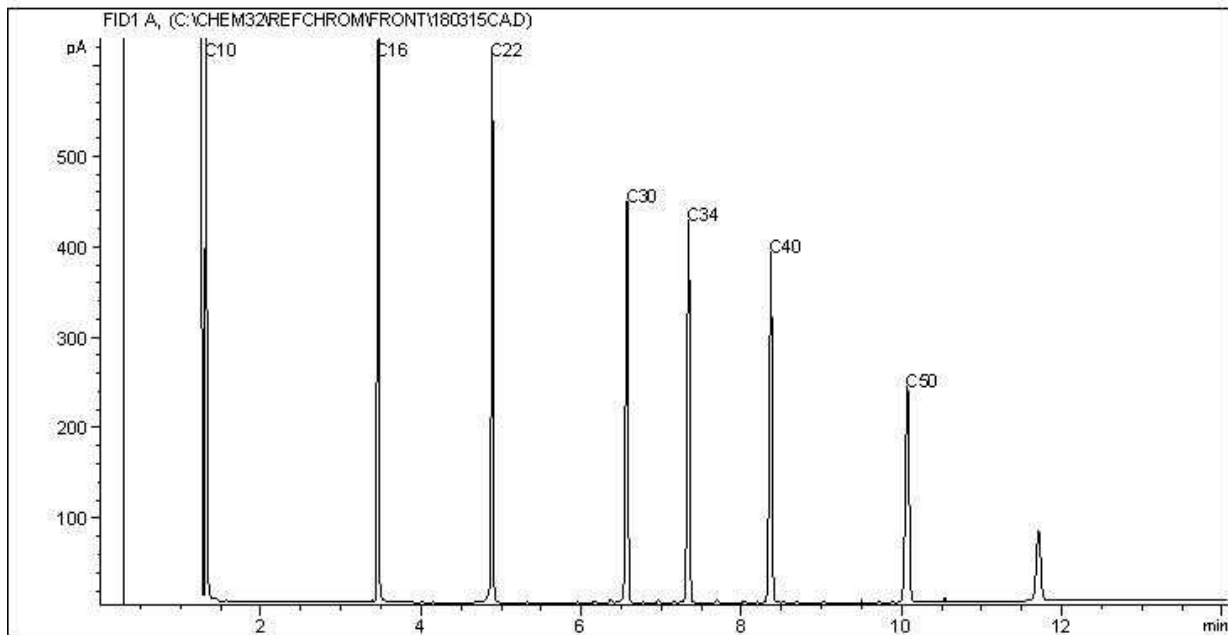
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

Your Project #: CG2430.1 E 30  
Your C.O.C. #: a116066

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/05**  
Report #: R2537260  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B823195**

**Received: 2018/03/29, 08:19**

Sample Matrix: Water  
# Samples Received: 11

Analyses	Date		Laboratory Method	Analytical Method
	Quantity	Extracted		
BTEX/F1 in Water by HS GC/MS/FID	10	N/A	2018/03/31 AB SOP-00039	CCME CWS/EPA 8260c m
F1-BTEX	9	N/A	2018/04/02 AB SOP-00039	Auto Calc
F1-BTEX	1	N/A	2018/04/03 AB SOP-00039	Auto Calc
CCME Hydrocarbons in Water (F2; C10-C16) (1)	10	2018/03/31	2018/03/31 AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Benzo[a]pyrene Equivalency (2)	8	N/A	2018/04/04 AB SOP-00003	Auto Calc
PAH in Water by GC/MS	8	2018/03/31	2018/04/03 AB SOP-00037 / AB SOP-00003	EPA 3510C/8270D m
Total Trihalomethanes Calculation	11	N/A	2018/04/02 AB SOP-00056	Auto Calc
VOCs in Water by HS GC/MS (Std List)	11	N/A	2018/03/31 AB SOP-00056	EPA 5021a/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) Silica gel clean up employed.

(2) B[a]P TPE is calculated using 1/2 of the RDL for non detect results as per Alberta Environment instructions. This protocol may not apply in other jurisdictions.



Your Project #: CG2430.1 E 30  
Your C.O.C. #: a116066

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/05**  
Report #: R2537260  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B823195**

**Received: 2018/03/29, 08:19**

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.  
Jennifer Stephenson, B.Sc, Technical Specialist  
Email: [jstephenson@maxxam.ca](mailto:jstephenson@maxxam.ca)  
Phone# (403) 291-3077

=====  
This report has been generated and distributed using a secure automated process.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

<b>Maxxam ID</b>		TE5501	TE5502	TE5503	TE5504		TE5505		
<b>Sampling Date</b>		2018/03/28 15:20	2018/03/28 15:40	2018/03/28 13:00	2018/03/28 13:25		2018/03/28 13:40		
<b>COC Number</b>		a116066	a116066	a116066	a116066		a116066		
	<b>UNITS</b>	<b>1936</b>	<b>1937</b>	<b>1952</b>	<b>1930</b>	<b>RDL</b>	<b>1928</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Ext. Pet. Hydrocarbon</b>									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	<0.10	0.10	<0.10	0.10	8948340
<b>Volatiles</b>									
Benzene	mg/L	0.018	<0.00040	<0.00040	0.027	0.00040	2.5 (1)	0.0040	8946771
Toluene	mg/L	0.00051	<0.00040	<0.00040	<0.00040	0.00040	<0.00040	0.00040	8946771
Ethylbenzene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	<0.00040	0.00040	8946771
m & p-Xylene	mg/L	0.0014	<0.00080	<0.00080	<0.00080	0.00080	0.0012	0.00080	8946771
o-Xylene	mg/L	<0.00040	<0.00040	<0.00040	0.038	0.00040	0.12	0.00040	8946771
Xylenes (Total)	mg/L	0.0014	<0.00089	<0.00089	0.038	0.00089	0.12	0.00089	8947375
F1 (C6-C10) - BTEX	mg/L	0.16	<0.10	<0.10	<0.10	0.10	<0.10	0.10	8947375
F1 (C6-C10)	mg/L	0.18	<0.10	<0.10	0.11	0.10	1.8	0.10	8946771
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene (sur.)	%	107	107	109	109	N/A	108	N/A	8946771
4-Bromofluorobenzene (sur.)	%	96	96	96	96	N/A	96	N/A	8946771
D4-1,2-Dichloroethane (sur.)	%	97	92	91	92	N/A	109	N/A	8946771
O-TERPHENYL (sur.)	%	95	95	93	92	N/A	93	N/A	8948340

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

Maxxam ID		TE5506	TE5507	TE5508		TE5509		
Sampling Date		2018/03/28 13:50	2018/03/28 14:40	2018/03/28 15:00		2018/03/28 15:15		
COC Number		a116066	a116066	a116066		a116066		
	<b>UNITS</b>	<b>1929</b>	<b>1981</b>	<b>1977</b>	<b>RDL</b>	<b>2005</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Ext. Pet. Hydrocarbon</b>								
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	0.10	<0.10	0.10	8948340
<b>Volatiles</b>								
Benzene	mg/L	0.10	<0.00040	<0.00040	0.00040	<0.00042 (1)	0.00042	8946771
Toluene	mg/L	<0.00040	<0.00040	<0.00040	0.00040	<0.00040	0.00040	8946771
Ethylbenzene	mg/L	<0.00040	<0.00040	<0.00040	0.00040	<0.00040	0.00040	8946771
m & p-Xylene	mg/L	<0.00080	<0.00080	<0.00080	0.00080	<0.00080	0.00080	8946771
o-Xylene	mg/L	<0.00040	<0.00040	<0.00040	0.00040	<0.00040	0.00040	8946771
Xylenes (Total)	mg/L	<0.00089	<0.00089	<0.00089	0.00089	<0.00089	0.00089	8947375
F1 (C6-C10) - BTEX	mg/L	<0.10	<0.10	<0.10	0.10	<0.10	0.10	8947375
F1 (C6-C10)	mg/L	<0.10	<0.10	<0.10	0.10	<0.10	0.10	8946771
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	109	110	110	N/A	107	N/A	8946771
4-Bromofluorobenzene (sur.)	%	96	96	95	N/A	96	N/A	8946771
D4-1,2-Dichloroethane (sur.)	%	95	94	92	N/A	92	N/A	8946771
O-TERPHENYL (sur.)	%	92	92	88	N/A	91	N/A	8948340
RDL = Reportable Detection Limit N/A = Not Applicable (1) Detection limit raised due to interferent.								

Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

<b>Maxxam ID</b>		TE5510		
<b>Sampling Date</b>		2018/03/28 16:00		
<b>COC Number</b>		a116066		
	<b>UNITS</b>	<b>732</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Ext. Pet. Hydrocarbon</b>				
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	0.10	8948340
<b>Volatiles</b>				
Benzene	mg/L	<0.00040	0.00040	8946771
Toluene	mg/L	<0.00040	0.00040	8946771
Ethylbenzene	mg/L	<0.00040	0.00040	8946771
m & p-Xylene	mg/L	<0.00080	0.00080	8946771
o-Xylene	mg/L	<0.00040	0.00040	8946771
Xylenes (Total)	mg/L	<0.00089	0.00089	8947375
F1 (C6-C10) - BTEX	mg/L	<0.10	0.10	8947375
F1 (C6-C10)	mg/L	<0.10	0.10	8946771
<b>Surrogate Recovery (%)</b>				
1,4-Difluorobenzene (sur.)	%	108	N/A	8946771
4-Bromofluorobenzene (sur.)	%	96	N/A	8946771
D4-1,2-Dichloroethane (sur.)	%	93	N/A	8946771
O-TERPHENYL (sur.)	%	92	N/A	8948340
RDL = Reportable Detection Limit N/A = Not Applicable				

Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE5501	TE5502	TE5503	TE5504	TE5505		
Sampling Date		2018/03/28 15:20	2018/03/28 15:40	2018/03/28 13:00	2018/03/28 13:25	2018/03/28 13:40		
COC Number		a116066	a116066	a116066	a116066	a116066		
	<b>UNITS</b>	<b>1936</b>	<b>1937</b>	<b>1952</b>	<b>1930</b>	<b>1928</b>	<b>RDL</b>	<b>QC Batch</b>

Polycyclic Aromatics								
Benzo[a]pyrene equivalency	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8947371
Acenaphthene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8948336
Acenaphthylene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8948336
Acridine	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8948336
Anthracene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8948336
Benzo(a)anthracene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948336
Benzo(b&j)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948336
Benzo(k)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948336
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948336
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8948336
Benzo(a)pyrene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8948336
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8948336
Chrysene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948336
Dibenz(a,h)anthracene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8948336
Fluoranthene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8948336
Fluorene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8948336
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948336
1-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8948336
2-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8948336
Naphthalene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8948336
Phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8948336
Perylene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8948336
Pyrene	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8948336
Quinoline	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8948336

Surrogate Recovery (%)								
D10-ANTHRACENE (sur.)	%	116	109	109	110	113	N/A	8948336
D8-ACENAPHTHYLENE (sur.)	%	107	101	103	103	107	N/A	8948336
D8-NAPHTHALENE (sur.)	%	75	73	84	76	78	N/A	8948336
TERPHENYL-D14 (sur.)	%	132 (1)	124	124	126	130	N/A	8948336

RDL = Reportable Detection Limit  
N/A = Not Applicable  
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE5506	TE5507	TE5510		
Sampling Date		2018/03/28 13:50	2018/03/28 14:40	2018/03/28 16:00		
COC Number		a116066	a116066	a116066		
	<b>UNITS</b>	<b>1929</b>	<b>1981</b>	<b>732</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Polycyclic Aromatics</b>						
Benzo[a]pyrene equivalency	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8947371
Acenaphthene	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8948336
Acenaphthylene	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8948336
Acridine	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8948336
Anthracene	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8948336
Benzo(a)anthracene	mg/L	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948336
Benzo(b&j)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948336
Benzo(k)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948336
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948336
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8948336
Benzo(a)pyrene	mg/L	<0.0000075	<0.0000075	<0.0000075	0.0000075	8948336
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8948336
Chrysene	mg/L	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948336
Dibenz(a,h)anthracene	mg/L	<0.0000075	<0.0000075	<0.0000075	0.0000075	8948336
Fluoranthene	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8948336
Fluorene	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8948336
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948336
1-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8948336
2-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8948336
Naphthalene	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8948336
Phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8948336
Perylene	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8948336
Pyrene	mg/L	<0.000020	<0.000020	<0.000020	0.000020	8948336
Quinoline	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8948336
<b>Surrogate Recovery (%)</b>						
D10-ANTHRACENE (sur.)	%	111	112	114	N/A	8948336
D8-ACENAPHTHYLENE (sur.)	%	104	107	103	N/A	8948336
D8-NAPHTHALENE (sur.)	%	77	81	83	N/A	8948336
TERPHENYL-D14 (sur.)	%	126	129	132 (1)	N/A	8948336
RDL = Reportable Detection Limit N/A = Not Applicable (1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.						



Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE5501	TE5501	TE5502	TE5503	TE5504		
Sampling Date		2018/03/28 15:20	2018/03/28 15:20	2018/03/28 15:40	2018/03/28 13:00	2018/03/28 13:25		
COC Number		a116066	a116066	a116066	a116066	a116066		
	UNITS	1936	1936 Lab-Dup	1937	1952	1930	RDL	QC Batch

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	N/A	<0.0013	<0.0013	<0.0013	0.0013	8947671
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8947715
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8947715
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8947715
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8947715
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8947715
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,2-dichloroethane	mg/L	0.060	0.061	0.0027	<0.00050	<0.00050	0.00050	8947715
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8947715
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8947715
1,1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8947715
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8947715

RDL = Reportable Detection Limit  
Lab-Dup = Laboratory Initiated Duplicate  
N/A = Not Applicable

Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE5501	TE5501	TE5502	TE5503	TE5504		
Sampling Date		2018/03/28 15:20	2018/03/28 15:20	2018/03/28 15:40	2018/03/28 13:00	2018/03/28 13:25		
COC Number		a116066	a116066	a116066	a116066	a116066		
	UNITS	1936	1936 Lab-Dup	1937	1952	1930	RDL	QC Batch
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8947715
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,1,2-trichloroethane	mg/L	0.00060	0.00064	<0.00050	<0.00050	<0.00050	0.00050	8947715
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	100	101	101	101	100	N/A	8947715
4-Bromofluorobenzene (sur.)	%	98	97	97	98	98	N/A	8947715
D4-1,2-Dichloroethane (sur.)	%	90	88	102	104	101	N/A	8947715
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable								

Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE5505	TE5506	TE5507	TE5508	TE5509		
Sampling Date		2018/03/28 13:40	2018/03/28 13:50	2018/03/28 14:40	2018/03/28 15:00	2018/03/28 15:15		
COC Number		a116066	a116066	a116066	a116066	a116066		
	UNITS	1928	1929	1981	1977	2005	RDL	QC Batch

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0013	8947671
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8947715
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8947715
Chloroethane	mg/L	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8947715
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00092	0.00050	8947715
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8947715
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8947715
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,2-dichloroethane	mg/L	0.26	0.048	0.019	0.0014	0.0035	0.00050	8947715
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8947715
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8947715
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8947715
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8947715
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8947715

RDL = Reportable Detection Limit

Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE5505	TE5506	TE5507	TE5508	TE5509		
Sampling Date		2018/03/28 13:40	2018/03/28 13:50	2018/03/28 14:40	2018/03/28 15:00	2018/03/28 15:15		
COC Number		a116066	a116066	a116066	a116066	a116066		
	UNITS	1928	1929	1981	1977	2005	RDL	QC Batch
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,1,2-trichloroethane	mg/L	0.0023	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8947715
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	101	100	101	101	100	N/A	8947715
4-Bromofluorobenzene (sur.)	%	93	96	99	98	98	N/A	8947715
D4-1,2-Dichloroethane (sur.)	%	102	100	105	98	101	N/A	8947715
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE5510	TE5511		
Sampling Date		2018/03/28 16:00	2018/03/28		
COC Number		a116066	a116066		
	UNITS	732	TRIP BLANK 3	RDL	QC Batch
<b>Volatiles</b>					
Total Trihalomethanes	mg/L	0.0076	<0.0013	0.0013	8947671
Benzene	mg/L	N/A	<0.00040	0.00040	8947715
Bromodichloromethane	mg/L	0.00088	<0.00050	0.00050	8947715
Bromoform	mg/L	<0.00050	<0.00050	0.00050	8947715
Bromomethane	mg/L	<0.0020	<0.0020	0.0020	8947715
Carbon tetrachloride	mg/L	<0.00050	<0.00050	0.00050	8947715
Chlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8947715
Chlorodibromomethane	mg/L	<0.0010	<0.0010	0.0010	8947715
Chloroethane	mg/L	<0.0010	<0.0010	0.0010	8947715
Chloroform	mg/L	0.0067	<0.00050	0.00050	8947715
Chloromethane	mg/L	<0.0020	<0.0020	0.0020	8947715
1,2-dibromoethane	mg/L	<0.00020	<0.00020	0.00020	8947715
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8947715
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8947715
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8947715
1,1-dichloroethane	mg/L	<0.00050	<0.00050	0.00050	8947715
1,2-dichloroethane	mg/L	<0.00050	<0.00050	0.00050	8947715
1,1-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	8947715
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	8947715
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	8947715
Dichloromethane	mg/L	<0.0020	<0.0020	0.0020	8947715
1,2-dichloropropane	mg/L	<0.00050	<0.00050	0.00050	8947715
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	0.00050	8947715
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	0.00050	8947715
Ethylbenzene	mg/L	N/A	<0.00040	0.00040	8947715
Methyl methacrylate	mg/L	<0.00050	<0.00050	0.00050	8947715
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	0.00050	8947715
Styrene	mg/L	<0.00050	<0.00050	0.00050	8947715
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	0.0010	8947715
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	0.0020	8947715
Tetrachloroethene	mg/L	<0.00050	<0.00050	0.00050	8947715
RDL = Reportable Detection Limit N/A = Not Applicable					

Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE5510	TE5511		
Sampling Date		2018/03/28 16:00	2018/03/28		
COC Number		a116066	a116066		
	UNITS	732	TRIP BLANK 3	RDL	QC Batch
Toluene	mg/L	N/A	<0.00040	0.00040	8947715
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	0.0010	8947715
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	0.0010	8947715
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8947715
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	0.00050	8947715
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	0.00050	8947715
Trichloroethene	mg/L	<0.00050	<0.00050	0.00050	8947715
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	0.00050	8947715
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	0.00050	8947715
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	0.00050	8947715
Vinyl chloride	mg/L	<0.00050	<0.00050	0.00050	8947715
Xylenes (Total)	mg/L	N/A	<0.00080	0.00080	8947715
m & p-Xylene	mg/L	N/A	<0.00080	0.00080	8947715
o-Xylene	mg/L	N/A	<0.00040	0.00040	8947715
<b>Surrogate Recovery (%)</b>					
1,4-Difluorobenzene (sur.)	%	101	102	N/A	8947715
4-Bromofluorobenzene (sur.)	%	99	99	N/A	8947715
D4-1,2-Dichloroethane (sur.)	%	100	103	N/A	8947715
RDL = Reportable Detection Limit N/A = Not Applicable					



Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**GENERAL COMMENTS**

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

Package 1	-1.0°C
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**Results relate only to the items tested.**

Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**QUALITY ASSURANCE REPORT**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8946771	RSU	Matrix Spike	1,4-Difluorobenzene (sur.)	2018/03/31	102	%	50 - 140		
			4-Bromofluorobenzene (sur.)	2018/03/31	99	%	50 - 140		
			D4-1,2-Dichloroethane (sur.)	2018/03/31	103	%	50 - 140		
			Benzene	2018/03/31	94	%	50 - 140		
			Toluene	2018/03/31	87	%	50 - 140		
			Ethylbenzene	2018/03/31	88	%	50 - 140		
			m & p-Xylene	2018/03/31	86	%	50 - 140		
			o-Xylene	2018/03/31	89	%	50 - 140		
			F1 (C6-C10)	2018/03/31	104	%	60 - 140		
			8946771	RSU	Spiked Blank	1,4-Difluorobenzene (sur.)	2018/03/31	101	%
4-Bromofluorobenzene (sur.)	2018/03/31	99				%	50 - 140		
D4-1,2-Dichloroethane (sur.)	2018/03/31	104				%	50 - 140		
Benzene	2018/03/31	93				%	60 - 130		
Toluene	2018/03/31	85				%	60 - 130		
Ethylbenzene	2018/03/31	86				%	60 - 130		
m & p-Xylene	2018/03/31	84				%	60 - 130		
o-Xylene	2018/03/31	88				%	60 - 130		
F1 (C6-C10)	2018/03/31	97				%	60 - 140		
8946771	RSU	Method Blank				1,4-Difluorobenzene (sur.)	2018/03/31	104	%
			4-Bromofluorobenzene (sur.)	2018/03/31	98	%	50 - 140		
			D4-1,2-Dichloroethane (sur.)	2018/03/31	100	%	50 - 140		
			Benzene	2018/03/31	<0.00040	mg/L			
			Toluene	2018/03/31	<0.00040	mg/L			
			Ethylbenzene	2018/03/31	<0.00040	mg/L			
			m & p-Xylene	2018/03/31	<0.00080	mg/L			
			o-Xylene	2018/03/31	<0.00040	mg/L			
			F1 (C6-C10)	2018/03/31	<0.10	mg/L			
			8946771	RSU	RPD	Benzene	2018/03/31	NC	%
Toluene	2018/03/31	NC				%	30		
Ethylbenzene	2018/03/31	NC				%	30		
m & p-Xylene	2018/03/31	NC				%	30		
o-Xylene	2018/03/31	NC				%	30		
F1 (C6-C10)	2018/03/31	NC				%	30		
8947715	RSU	Matrix Spike [TE5502-02]				1,4-Difluorobenzene (sur.)	2018/03/31	103	%
			4-Bromofluorobenzene (sur.)	2018/03/31	99	%	70 - 130		
			D4-1,2-Dichloroethane (sur.)	2018/03/31	105	%	70 - 130		
			Benzene	2018/03/31	98	%	70 - 130		
			Bromodichloromethane	2018/03/31	100	%	70 - 130		
			Bromoform	2018/03/31	108	%	70 - 130		
			Bromomethane	2018/03/31	89	%	70 - 130		
			Carbon tetrachloride	2018/03/31	96	%	70 - 130		
			Chlorobenzene	2018/03/31	101	%	70 - 130		
			Chlorodibromomethane	2018/03/31	104	%	70 - 130		
			Chloroethane	2018/03/31	93	%	70 - 130		
			Chloroform	2018/03/31	96	%	70 - 130		
			Chloromethane	2018/03/31	97	%	70 - 130		
			1,2-dibromoethane	2018/03/31	112	%	70 - 130		
			1,2-dichlorobenzene	2018/03/31	100	%	70 - 130		
			1,3-dichlorobenzene	2018/03/31	94	%	70 - 130		
			1,4-dichlorobenzene	2018/03/31	93	%	70 - 130		
			1,1-dichloroethane	2018/03/31	93	%	70 - 130		
			1,2-dichloroethane	2018/03/31	105	%	70 - 130		
			1,1-dichloroethene	2018/03/31	102	%	70 - 130		
			cis-1,2-dichloroethene	2018/03/31	102	%	70 - 130		

Maxxam Job #: B823195  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E 30  
Sampler Initials: A

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				trans-1,2-dichloroethene	2018/03/31		104	%	70 - 130
				Dichloromethane	2018/03/31		90	%	70 - 130
				1,2-dichloropropane	2018/03/31		98	%	70 - 130
				cis-1,3-dichloropropene	2018/03/31		113	%	70 - 130
				trans-1,3-dichloropropene	2018/03/31		126	%	70 - 130
				Ethylbenzene	2018/03/31		96	%	70 - 130
				Methyl methacrylate	2018/03/31		115	%	70 - 130
				Methyl-tert-butylether (MTBE)	2018/03/31		99	%	70 - 130
				Styrene	2018/03/31		101	%	70 - 130
				1,1,1,2-tetrachloroethane	2018/03/31		101	%	70 - 130
				1,1,2,2-tetrachloroethane	2018/03/31		101	%	70 - 130
				Tetrachloroethene	2018/03/31		96	%	70 - 130
				Toluene	2018/03/31		98	%	70 - 130
				1,2,3-trichlorobenzene	2018/03/31		103	%	70 - 130
				1,2,4-trichlorobenzene	2018/03/31		103	%	70 - 130
				1,3,5-trichlorobenzene	2018/03/31		97	%	70 - 130
				1,1,1-trichloroethane	2018/03/31		96	%	70 - 130
				1,1,2-trichloroethane	2018/03/31		101	%	70 - 130
				Trichloroethene	2018/03/31		100	%	70 - 130
				Trichlorofluoromethane	2018/03/31		98	%	70 - 130
				1,2,4-trimethylbenzene	2018/03/31		95	%	70 - 130
				1,3,5-trimethylbenzene	2018/03/31		91	%	70 - 130
				Vinyl chloride	2018/03/31		102	%	70 - 130
				m & p-Xylene	2018/03/31		98	%	70 - 130
				o-Xylene	2018/03/31		97	%	70 - 130
8947715	RSU		Spiked Blank	1,4-Difluorobenzene (sur.)	2018/03/31		102	%	70 - 130
				4-Bromofluorobenzene (sur.)	2018/03/31		94	%	70 - 130
				D4-1,2-Dichloroethane (sur.)	2018/03/31		122	%	70 - 130
				Benzene	2018/03/31		97	%	70 - 130
				Bromodichloromethane	2018/03/31		104	%	70 - 130
				Bromoform	2018/03/31		96	%	70 - 130
				Bromomethane	2018/03/31		82	%	70 - 130
				Carbon tetrachloride	2018/03/31		94	%	70 - 130
				Chlorobenzene	2018/03/31		98	%	70 - 130
				Chlorodibromomethane	2018/03/31		100	%	70 - 130
				Chloroethane	2018/03/31		84	%	70 - 130
				Chloroform	2018/03/31		93	%	70 - 130
				Chloromethane	2018/03/31		88	%	70 - 130
				1,2-dibromoethane	2018/03/31		100	%	70 - 130
				1,2-dichlorobenzene	2018/03/31		99	%	70 - 130
				1,3-dichlorobenzene	2018/03/31		96	%	70 - 130
				1,4-dichlorobenzene	2018/03/31		95	%	70 - 130
				1,1-dichloroethane	2018/03/31		97	%	70 - 130
				1,2-dichloroethane	2018/03/31		99	%	70 - 130
				1,1-dichloroethene	2018/03/31		102	%	70 - 130
				cis-1,2-dichloroethene	2018/03/31		99	%	70 - 130
				trans-1,2-dichloroethene	2018/03/31		108	%	70 - 130
				Dichloromethane	2018/03/31		88	%	70 - 130
				1,2-dichloropropane	2018/03/31		104	%	70 - 130
				cis-1,3-dichloropropene	2018/03/31		108	%	70 - 130
				trans-1,3-dichloropropene	2018/03/31		118	%	70 - 130
				Ethylbenzene	2018/03/31		89	%	70 - 130
				Methyl methacrylate	2018/03/31		120	%	70 - 130
				Methyl-tert-butylether (MTBE)	2018/03/31		103	%	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
			Styrene	2018/03/31		93	%	70 - 130
			1,1,1,2-tetrachloroethane	2018/03/31		93	%	70 - 130
			1,1,2,2-tetrachloroethane	2018/03/31		97	%	70 - 130
			Tetrachloroethene	2018/03/31		93	%	70 - 130
			Toluene	2018/03/31		93	%	70 - 130
			1,2,3-trichlorobenzene	2018/03/31		95	%	70 - 130
			1,2,4-trichlorobenzene	2018/03/31		95	%	70 - 130
			1,3,5-trichlorobenzene	2018/03/31		95	%	70 - 130
			1,1,1-trichloroethane	2018/03/31		100	%	70 - 130
			1,1,2-trichloroethane	2018/03/31		105	%	70 - 130
			Trichloroethene	2018/03/31		105	%	70 - 130
			Trichlorofluoromethane	2018/03/31		98	%	70 - 130
			1,2,4-trimethylbenzene	2018/03/31		93	%	70 - 130
			1,3,5-trimethylbenzene	2018/03/31		89	%	70 - 130
			Vinyl chloride	2018/03/31		93	%	70 - 130
			m & p-Xylene	2018/03/31		88	%	70 - 130
			o-Xylene	2018/03/31		90	%	70 - 130
8947715	RSU	Method Blank	1,4-Difluorobenzene (sur.)	2018/03/31		97	%	70 - 130
			4-Bromofluorobenzene (sur.)	2018/03/31		91	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2018/03/31		100	%	70 - 130
			Benzene	2018/03/31	<0.00040		mg/L	
			Bromodichloromethane	2018/03/31	<0.00050		mg/L	
			Bromoform	2018/03/31	<0.00050		mg/L	
			Bromomethane	2018/03/31	<0.0020		mg/L	
			Carbon tetrachloride	2018/03/31	<0.00050		mg/L	
			Chlorobenzene	2018/03/31	<0.00050		mg/L	
			Chlorodibromomethane	2018/03/31	<0.0010		mg/L	
			Chloroethane	2018/03/31	<0.0010		mg/L	
			Chloroform	2018/03/31	<0.00050		mg/L	
			Chloromethane	2018/03/31	<0.0020		mg/L	
			1,2-dibromoethane	2018/03/31	<0.00020		mg/L	
			1,2-dichlorobenzene	2018/03/31	<0.00050		mg/L	
			1,3-dichlorobenzene	2018/03/31	<0.00050		mg/L	
			1,4-dichlorobenzene	2018/03/31	<0.00050		mg/L	
			1,1-dichloroethane	2018/03/31	<0.00050		mg/L	
			1,2-dichloroethane	2018/03/31	<0.00050		mg/L	
			1,1-dichloroethene	2018/03/31	<0.00050		mg/L	
			cis-1,2-dichloroethene	2018/03/31	<0.00050		mg/L	
			trans-1,2-dichloroethene	2018/03/31	<0.00050		mg/L	
			Dichloromethane	2018/03/31	<0.0020		mg/L	
			1,2-dichloropropane	2018/03/31	<0.00050		mg/L	
			cis-1,3-dichloropropene	2018/03/31	<0.00050		mg/L	
			trans-1,3-dichloropropene	2018/03/31	<0.00050		mg/L	
			Ethylbenzene	2018/03/31	<0.00040		mg/L	
			Methyl methacrylate	2018/03/31	<0.00050		mg/L	
			Methyl-tert-butylether (MTBE)	2018/03/31	<0.00050		mg/L	
			Styrene	2018/03/31	<0.00050		mg/L	
			1,1,1,2-tetrachloroethane	2018/03/31	<0.0010		mg/L	
			1,1,2,2-tetrachloroethane	2018/03/31	<0.0020		mg/L	
			Tetrachloroethene	2018/03/31	<0.00050		mg/L	
			Toluene	2018/03/31	<0.00040		mg/L	
			1,2,3-trichlorobenzene	2018/03/31	<0.0010		mg/L	
			1,2,4-trichlorobenzene	2018/03/31	<0.0010		mg/L	
			1,3,5-trichlorobenzene	2018/03/31	<0.00050		mg/L	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1,1-trichloroethane	2018/03/31	<0.00050		mg/L	
			1,1,2-trichloroethane	2018/03/31	<0.00050		mg/L	
			Trichloroethene	2018/03/31	<0.00050		mg/L	
			Trichlorofluoromethane	2018/03/31	<0.00050		mg/L	
			1,2,4-trimethylbenzene	2018/03/31	<0.00050		mg/L	
			1,3,5-trimethylbenzene	2018/03/31	<0.00050		mg/L	
			Vinyl chloride	2018/03/31	<0.00050		mg/L	
			Xylenes (Total)	2018/03/31	<0.00080		mg/L	
			m & p-Xylene	2018/03/31	<0.00080		mg/L	
			o-Xylene	2018/03/31	<0.00040		mg/L	
8947715	RSU	RPD [TE5501-02]	Bromodichloromethane	2018/03/31	NC		%	30
			Bromoform	2018/03/31	NC		%	30
			Bromomethane	2018/03/31	NC		%	30
			Carbon tetrachloride	2018/03/31	NC		%	30
			Chlorobenzene	2018/03/31	NC		%	30
			Chlorodibromomethane	2018/03/31	NC		%	30
			Chloroethane	2018/03/31	NC		%	30
			Chloroform	2018/03/31	NC		%	30
			Chloromethane	2018/03/31	NC		%	30
			1,2-dibromoethane	2018/03/31	NC		%	30
			1,2-dichlorobenzene	2018/03/31	NC		%	30
			1,3-dichlorobenzene	2018/03/31	NC		%	30
			1,4-dichlorobenzene	2018/03/31	NC		%	30
			1,1-dichloroethane	2018/03/31	NC		%	30
			1,2-dichloroethane	2018/03/31	0.50		%	30
			1,1-dichloroethene	2018/03/31	NC		%	30
			cis-1,2-dichloroethene	2018/03/31	NC		%	30
			trans-1,2-dichloroethene	2018/03/31	NC		%	30
			Dichloromethane	2018/03/31	NC		%	30
			1,2-dichloropropane	2018/03/31	NC		%	30
			cis-1,3-dichloropropene	2018/03/31	NC		%	30
			trans-1,3-dichloropropene	2018/03/31	NC		%	30
			Methyl methacrylate	2018/03/31	NC		%	30
			Methyl-tert-butylether (MTBE)	2018/03/31	NC		%	30
			Styrene	2018/03/31	NC		%	30
			1,1,1,2-tetrachloroethane	2018/03/31	NC		%	30
			1,1,2,2-tetrachloroethane	2018/03/31	NC		%	30
			Tetrachloroethene	2018/03/31	NC		%	30
			1,2,3-trichlorobenzene	2018/03/31	NC		%	30
			1,2,4-trichlorobenzene	2018/03/31	NC		%	30
			1,3,5-trichlorobenzene	2018/03/31	NC		%	30
			1,1,1-trichloroethane	2018/03/31	NC		%	30
			1,1,2-trichloroethane	2018/03/31	6.5		%	30
			Trichloroethene	2018/03/31	NC		%	30
			Trichlorofluoromethane	2018/03/31	NC		%	30
			1,2,4-trimethylbenzene	2018/03/31	NC		%	30
			1,3,5-trimethylbenzene	2018/03/31	NC		%	30
			Vinyl chloride	2018/03/31	NC		%	30
8948336	LZ3	Matrix Spike [TE5501-01]	D10-ANTHRACENE (sur.)	2018/04/02		108	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2018/04/02		109	%	50 - 130
			D8-NAPHTHALENE (sur.)	2018/04/02		93	%	50 - 130
			TERPHENYL-D14 (sur.)	2018/04/02		127	%	50 - 130
			Acenaphthene	2018/04/02		100	%	50 - 130
			Acenaphthylene	2018/04/02		100	%	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
			Acridine	2018/04/02		92	%	50 - 130
			Anthracene	2018/04/02		87	%	50 - 130
			Benzo(a)anthracene	2018/04/02		127	%	50 - 130
			Benzo(b&j)fluoranthene	2018/04/02		116	%	50 - 130
			Benzo(k)fluoranthene	2018/04/02		121	%	50 - 130
			Benzo(g,h,i)perylene	2018/04/02		102	%	50 - 130
			Benzo(c)phenanthrene	2018/04/02		126	%	50 - 130
			Benzo(a)pyrene	2018/04/02		108	%	50 - 130
			Benzo[e]pyrene	2018/04/02		105	%	50 - 130
			Chrysene	2018/04/02		121	%	50 - 130
			Dibenz(a,h)anthracene	2018/04/02		108	%	50 - 130
			Fluoranthene	2018/04/02		118	%	50 - 130
			Fluorene	2018/04/02		106	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2018/04/02		110	%	50 - 130
			1-Methylnaphthalene	2018/04/02		95	%	50 - 130
			2-Methylnaphthalene	2018/04/02		88	%	50 - 130
			Naphthalene	2018/04/02		84	%	50 - 130
			Phenanthrene	2018/04/02		104	%	50 - 130
			Perylene	2018/04/02		95	%	50 - 130
			Pyrene	2018/04/02		114	%	50 - 130
			Quinoline	2018/04/02		105	%	50 - 130
8948336	LZ3	Spiked Blank	D10-ANTHRACENE (sur.)	2018/04/02		105	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2018/04/02		106	%	50 - 130
			D8-NAPHTHALENE (sur.)	2018/04/02		88	%	50 - 130
			TERPHENYL-D14 (sur.)	2018/04/02		125	%	50 - 130
			Acenaphthene	2018/04/02		95	%	50 - 130
			Acenaphthylene	2018/04/02		96	%	50 - 130
			Acridine	2018/04/02		89	%	50 - 130
			Anthracene	2018/04/02		83	%	50 - 130
			Benzo(a)anthracene	2018/04/02		122	%	50 - 130
			Benzo(b&j)fluoranthene	2018/04/02		112	%	50 - 130
			Benzo(k)fluoranthene	2018/04/02		122	%	50 - 130
			Benzo(g,h,i)perylene	2018/04/02		100	%	50 - 130
			Benzo(c)phenanthrene	2018/04/02		120	%	50 - 130
			Benzo(a)pyrene	2018/04/02		106	%	50 - 130
			Benzo[e]pyrene	2018/04/02		104	%	50 - 130
			Chrysene	2018/04/02		117	%	50 - 130
			Dibenz(a,h)anthracene	2018/04/02		108	%	50 - 130
			Fluoranthene	2018/04/02		116	%	50 - 130
			Fluorene	2018/04/02		100	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2018/04/02		105	%	50 - 130
			1-Methylnaphthalene	2018/04/02		87	%	50 - 130
			2-Methylnaphthalene	2018/04/02		80	%	50 - 130
			Naphthalene	2018/04/02		82	%	50 - 130
			Phenanthrene	2018/04/02		100	%	50 - 130
			Perylene	2018/04/02		95	%	50 - 130
			Pyrene	2018/04/02		112	%	50 - 130
			Quinoline	2018/04/02		103	%	50 - 130
8948336	LZ3	Method Blank	D10-ANTHRACENE (sur.)	2018/04/02		114	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2018/04/02		104	%	50 - 130
			D8-NAPHTHALENE (sur.)	2018/04/02		77	%	50 - 130
			TERPHENYL-D14 (sur.)	2018/04/02		130	%	50 - 130
			Acenaphthene	2018/04/02	<0.00010		mg/L	
			Acenaphthylene	2018/04/02	<0.00010		mg/L	



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QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Acridine	2018/04/02	<0.000050		mg/L	
				Anthracene	2018/04/02	<0.000010		mg/L	
				Benzo(a)anthracene	2018/04/02	<0.0000085		mg/L	
				Benzo(b&j)fluoranthene	2018/04/02	<0.0000085		mg/L	
				Benzo(k)fluoranthene	2018/04/02	<0.0000085		mg/L	
				Benzo(g,h,i)perylene	2018/04/02	<0.0000085		mg/L	
				Benzo(c)phenanthrene	2018/04/02	<0.000050		mg/L	
				Benzo(a)pyrene	2018/04/02	<0.0000075		mg/L	
				Benzo[e]pyrene	2018/04/02	<0.000050		mg/L	
				Chrysene	2018/04/02	<0.0000085		mg/L	
				Dibenz(a,h)anthracene	2018/04/02	<0.0000075		mg/L	
				Fluoranthene	2018/04/02	<0.000010		mg/L	
				Fluorene	2018/04/02	<0.000050		mg/L	
				Indeno(1,2,3-cd)pyrene	2018/04/02	<0.0000085		mg/L	
				1-Methylnaphthalene	2018/04/02	<0.00010		mg/L	
				2-Methylnaphthalene	2018/04/02	<0.00010		mg/L	
				Naphthalene	2018/04/02	<0.00010		mg/L	
				Phenanthrene	2018/04/02	<0.000050		mg/L	
				Perylene	2018/04/02	<0.000050		mg/L	
				Pyrene	2018/04/02	<0.000020		mg/L	
				Quinoline	2018/04/02	<0.00020		mg/L	
8948336	LZ3	RPD		Acenaphthene	2018/04/02	NC		%	30
				Acenaphthylene	2018/04/02	NC		%	30
				Acridine	2018/04/02	NC		%	30
				Anthracene	2018/04/02	NC		%	30
				Benzo(a)anthracene	2018/04/02	NC		%	30
				Benzo(b&j)fluoranthene	2018/04/02	NC		%	30
				Benzo(k)fluoranthene	2018/04/02	NC		%	30
				Benzo(g,h,i)perylene	2018/04/02	NC		%	30
				Benzo(c)phenanthrene	2018/04/02	NC		%	30
				Benzo(a)pyrene	2018/04/02	NC		%	30
				Benzo[e]pyrene	2018/04/02	NC		%	30
				Chrysene	2018/04/02	NC		%	30
				Dibenz(a,h)anthracene	2018/04/02	NC		%	30
				Fluoranthene	2018/04/02	NC		%	30
				Fluorene	2018/04/02	NC		%	30
				Indeno(1,2,3-cd)pyrene	2018/04/02	NC		%	30
				1-Methylnaphthalene	2018/04/02	NC		%	30
				2-Methylnaphthalene	2018/04/02	NC		%	30
				Naphthalene	2018/04/02	NC		%	30
				Phenanthrene	2018/04/02	NC		%	30
				Perylene	2018/04/02	NC		%	30
				Pyrene	2018/04/02	NC		%	30
				Quinoline	2018/04/02	NC		%	30
8948340	MHF	Matrix Spike		O-TERPHENYL (sur.)	2018/03/31		95	%	60 - 140
				F2 (C10-C16 Hydrocarbons)	2018/03/31		90	%	60 - 130
8948340	MHF	Spiked Blank		O-TERPHENYL (sur.)	2018/03/31		92	%	60 - 140
				F2 (C10-C16 Hydrocarbons)	2018/03/31		87	%	70 - 130
8948340	MHF	Method Blank		O-TERPHENYL (sur.)	2018/03/31		91	%	60 - 140
				F2 (C10-C16 Hydrocarbons)	2018/03/31	<0.10		mg/L	

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**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC									
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits	
8948340	MHF	RPD	F2 (C10-C16 Hydrocarbons)	2018/03/31	NC		%	30	
<p>Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.</p> <p>Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.</p> <p>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.</p> <p>Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.</p> <p>Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.</p> <p>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 &lt;= 2x RDL).</p>									

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**NOTIFICATION LOG**

No Reportable Regulation Exceedences Noted.

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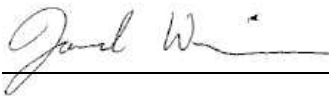
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### VALIDATION SIGNATURE PAGE

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



Janet Gao, B.Sc., QP, Supervisor, Organics



Jared Wiseman, B.Sc., P.Chem., QP, Senior Analyst, Organics



Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

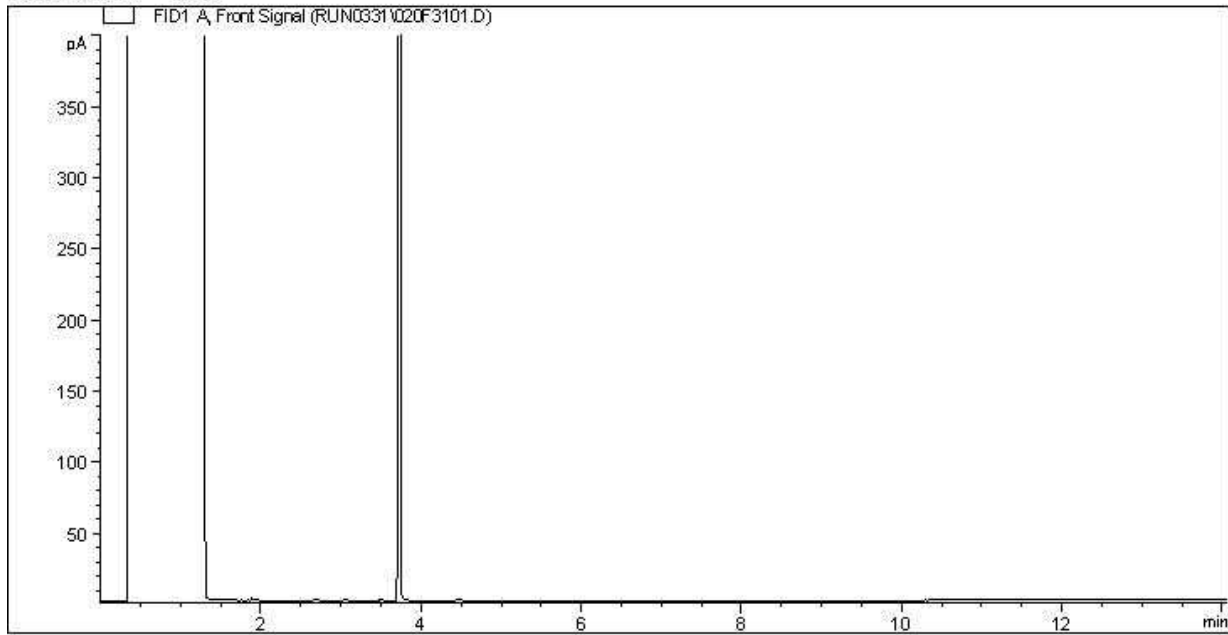
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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

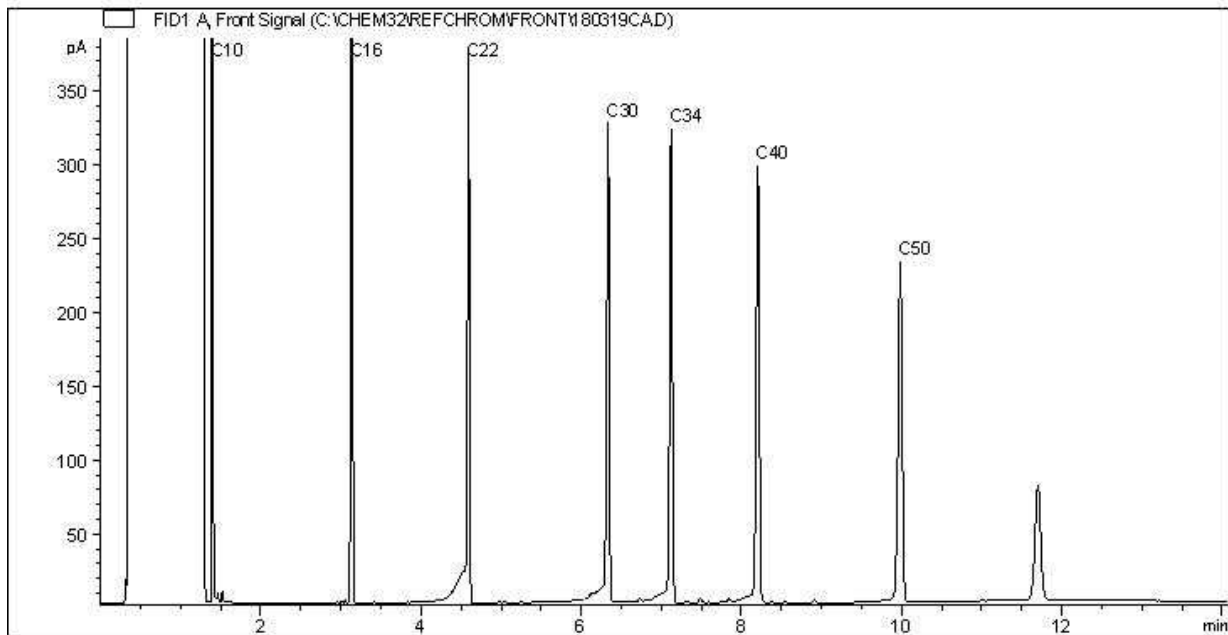


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

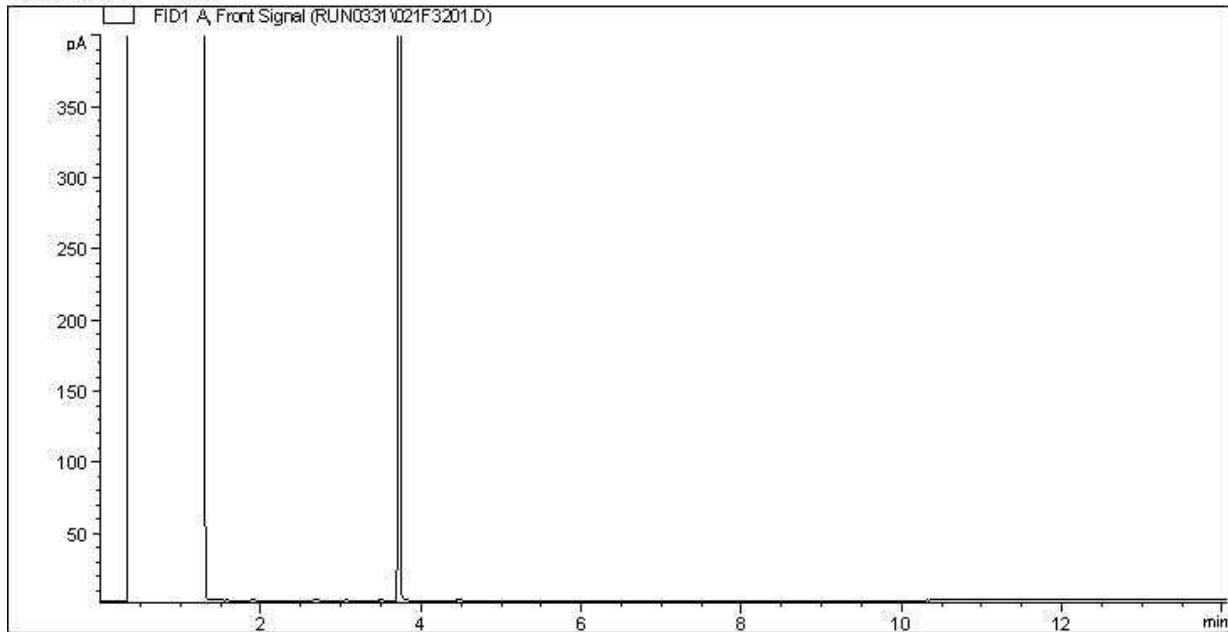
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

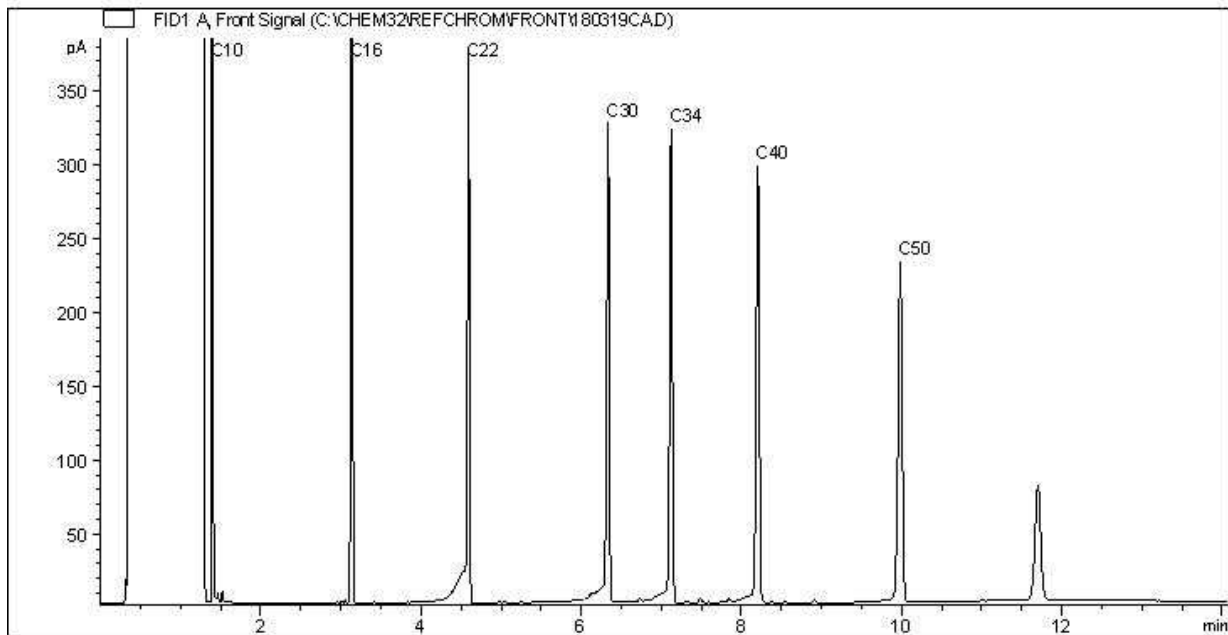


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



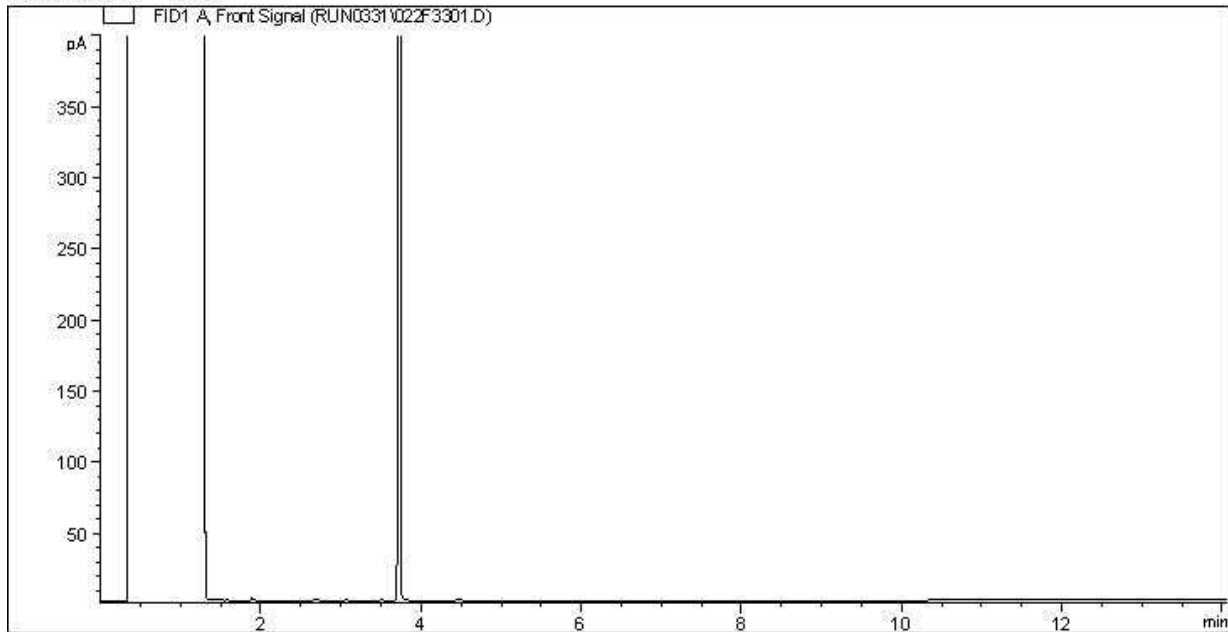
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

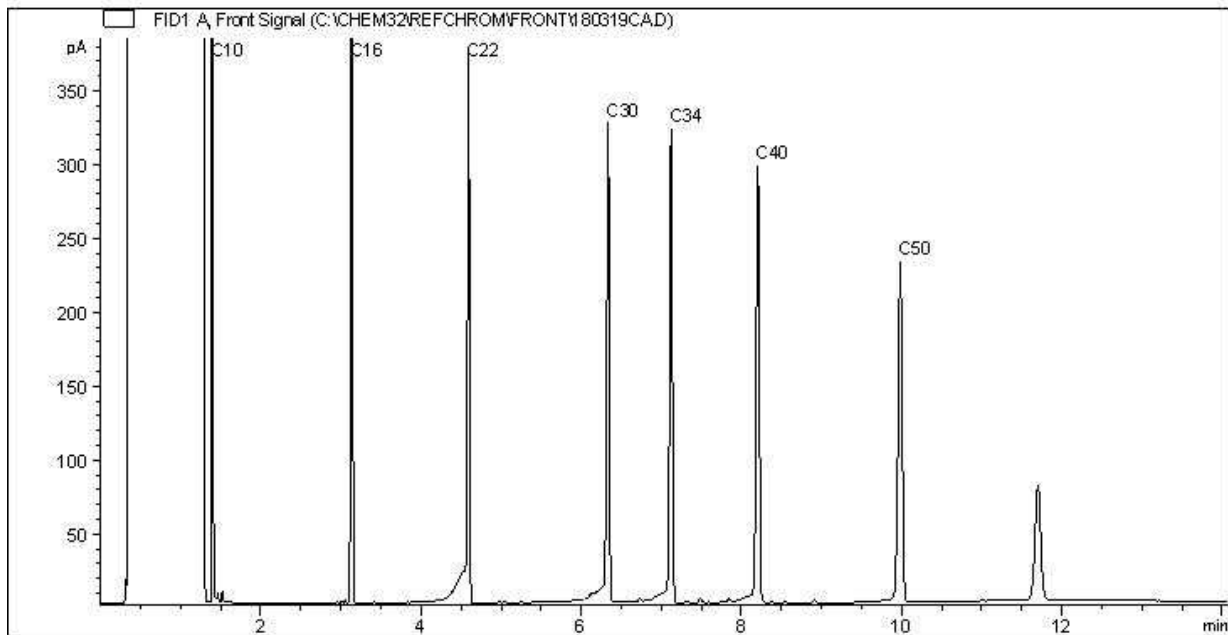
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



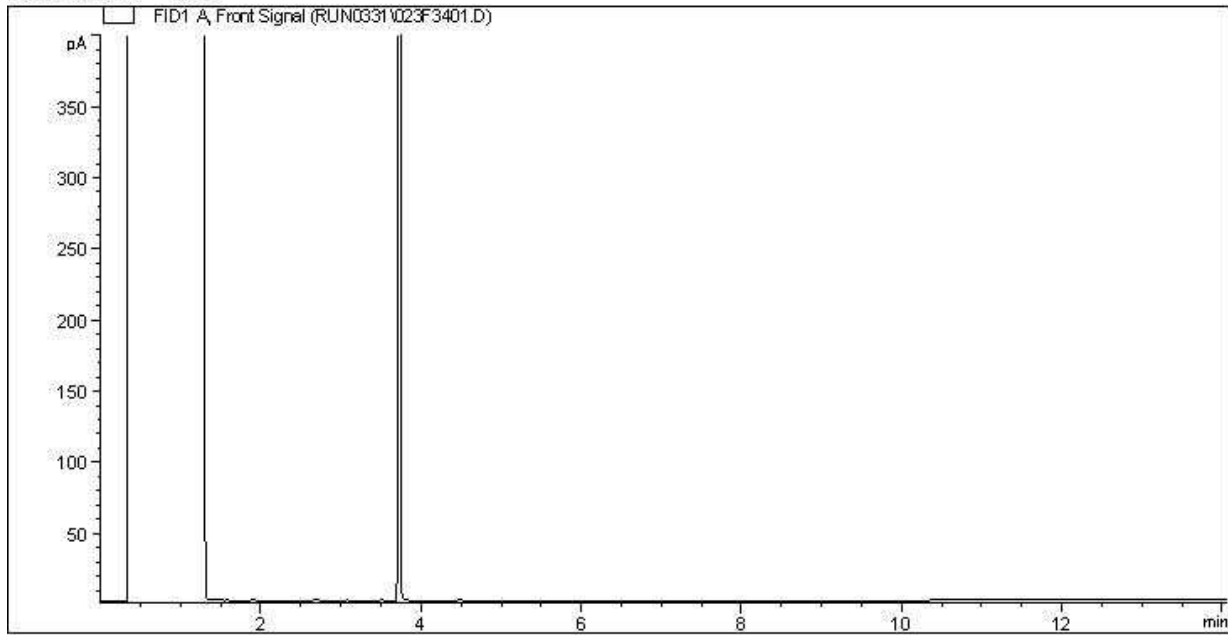
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

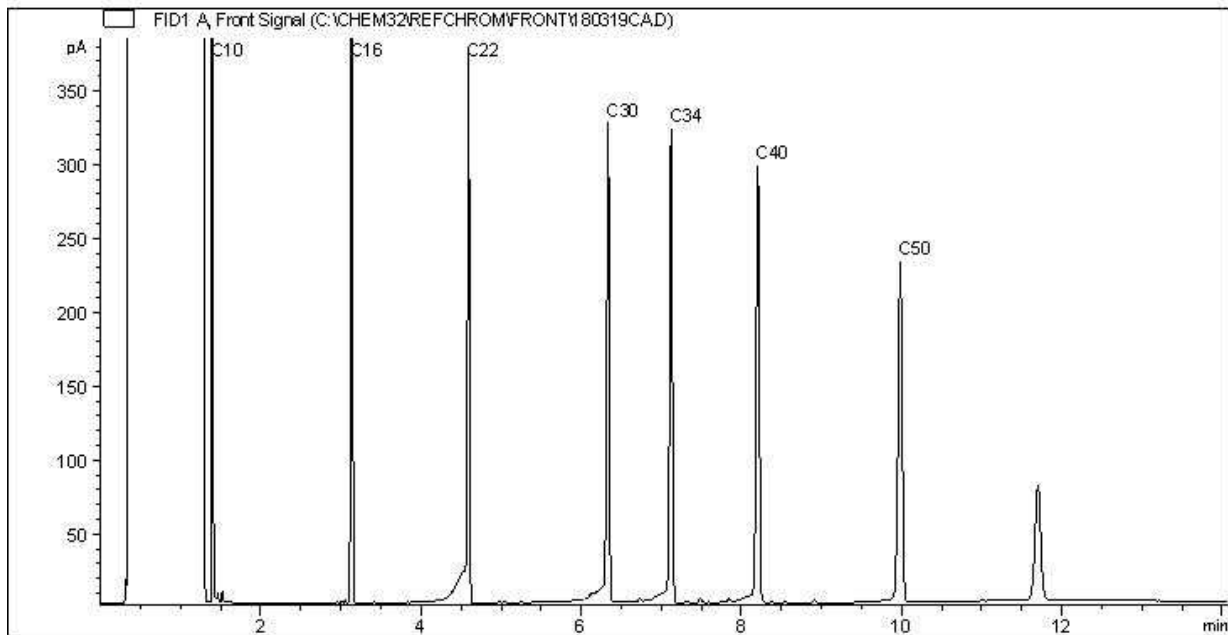
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



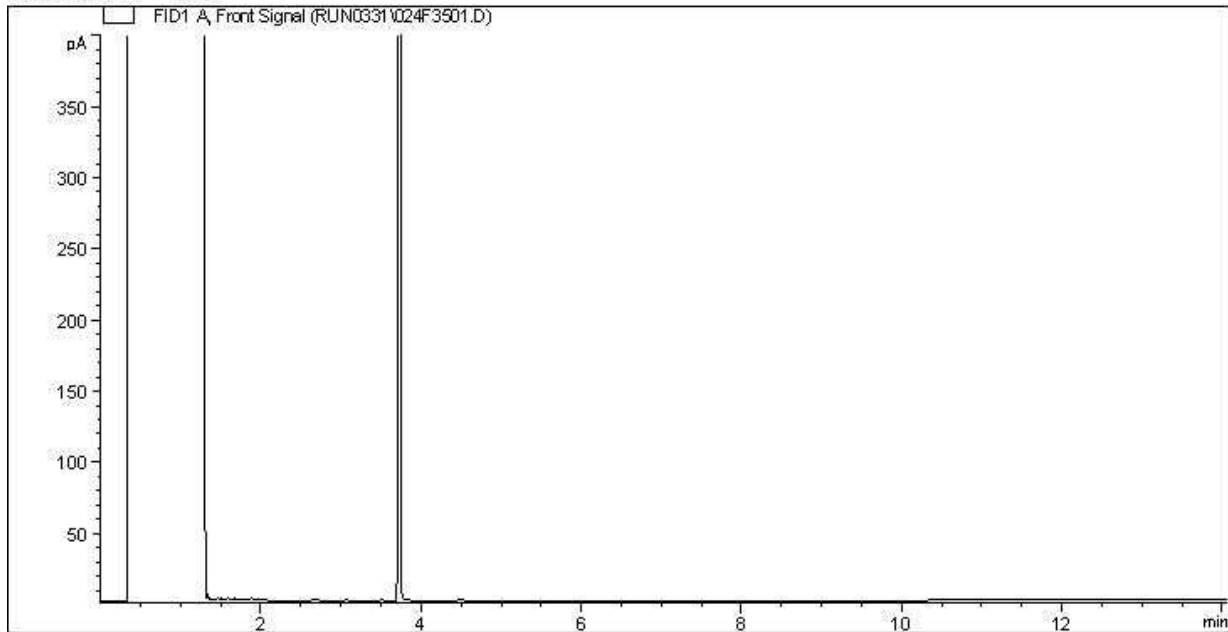
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

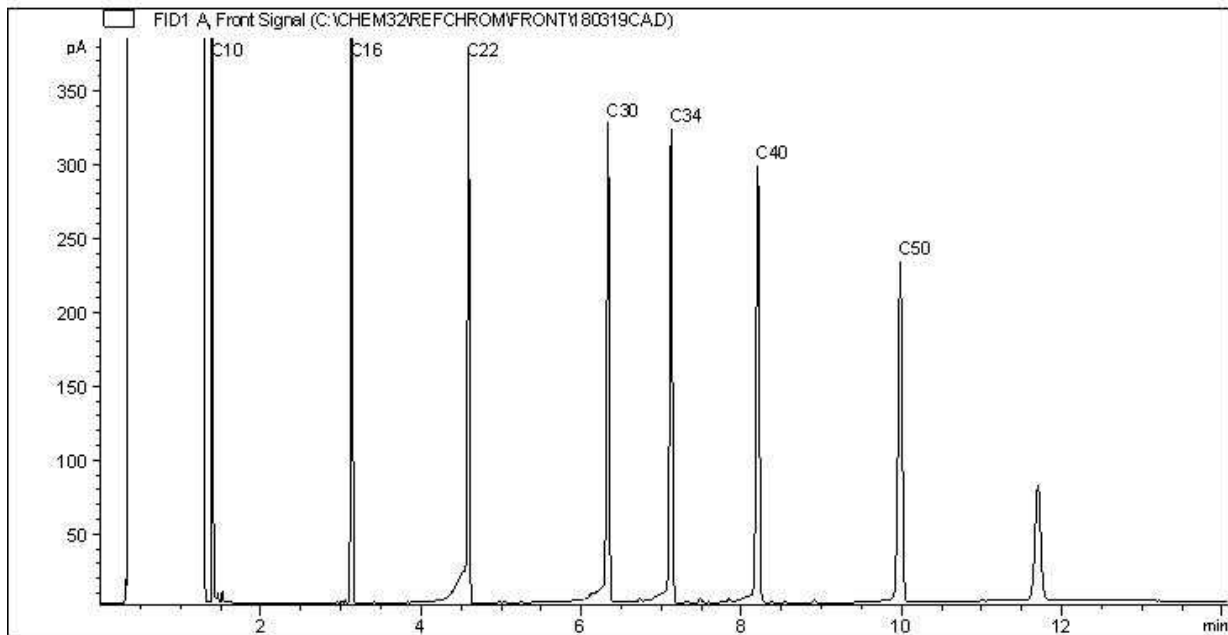
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



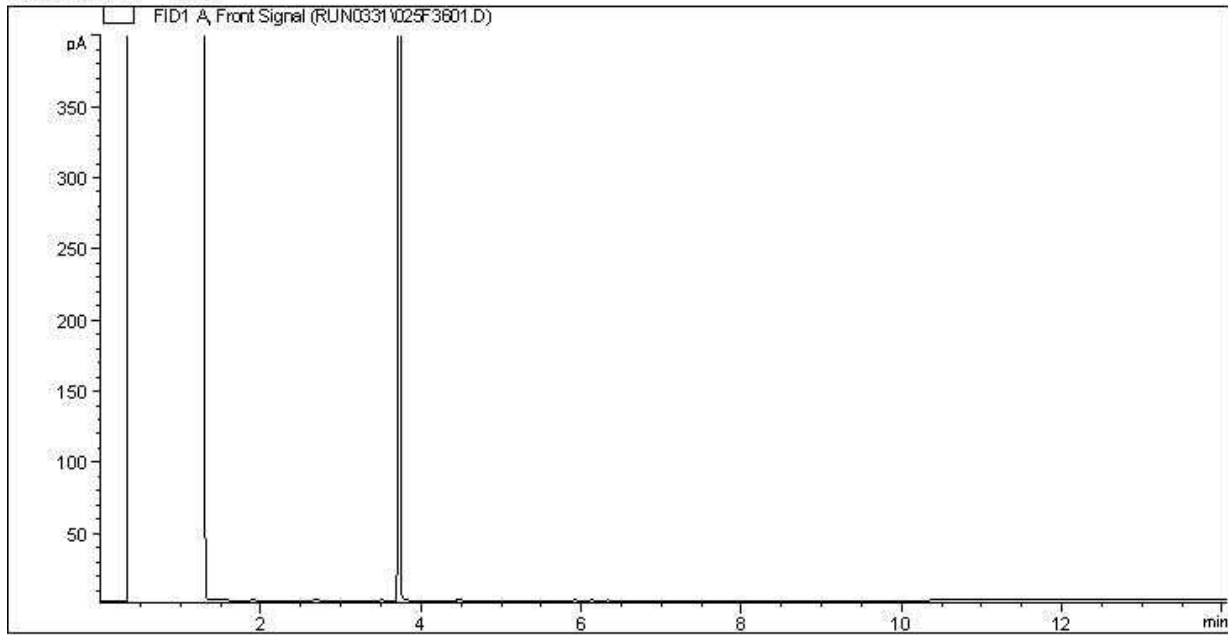
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

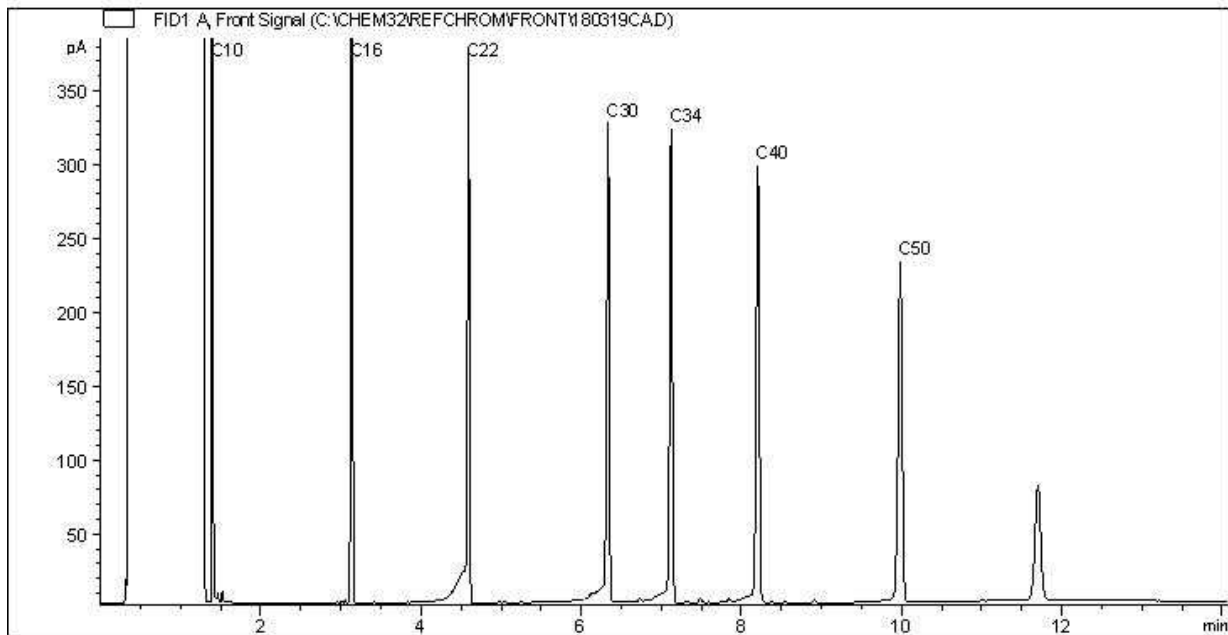
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



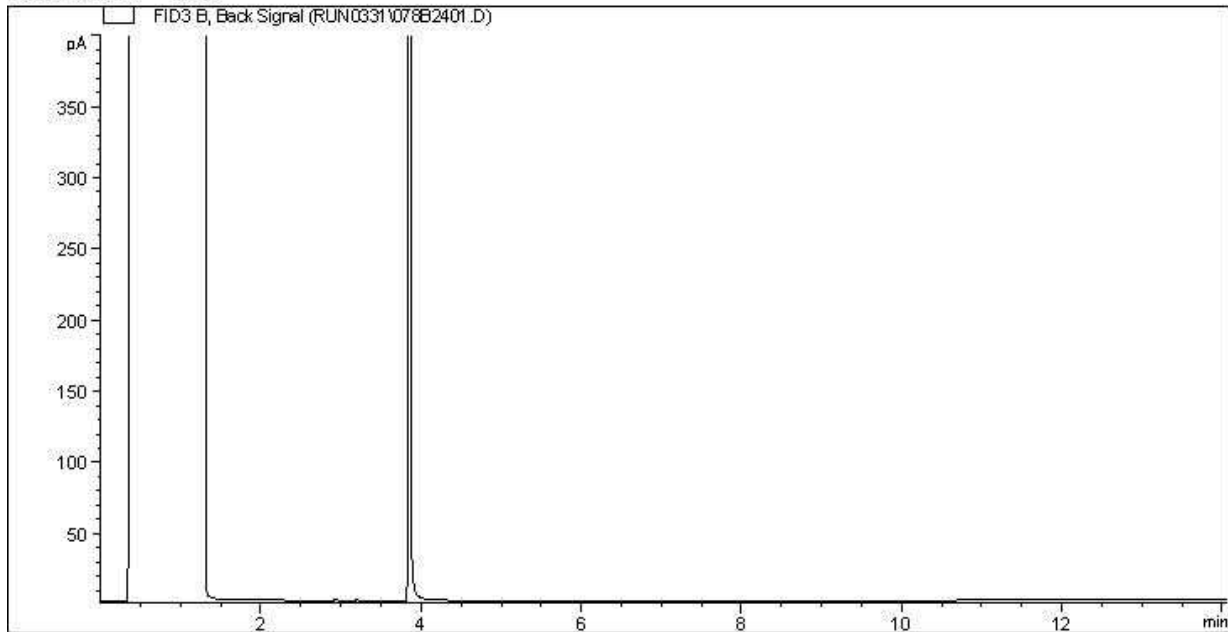
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

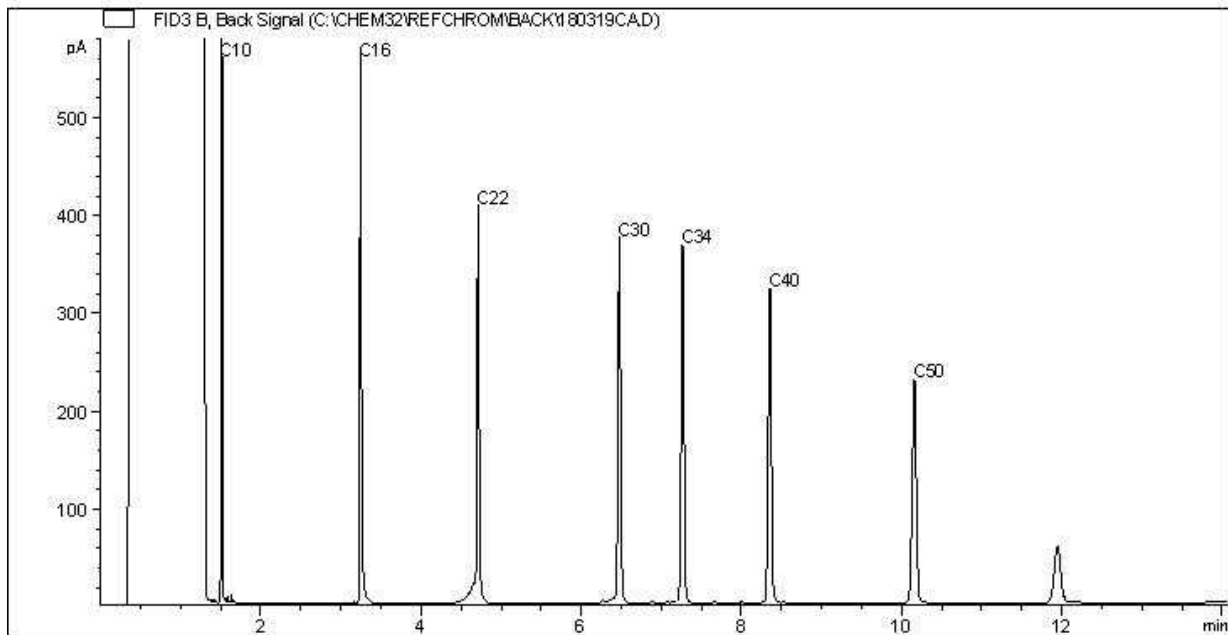
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

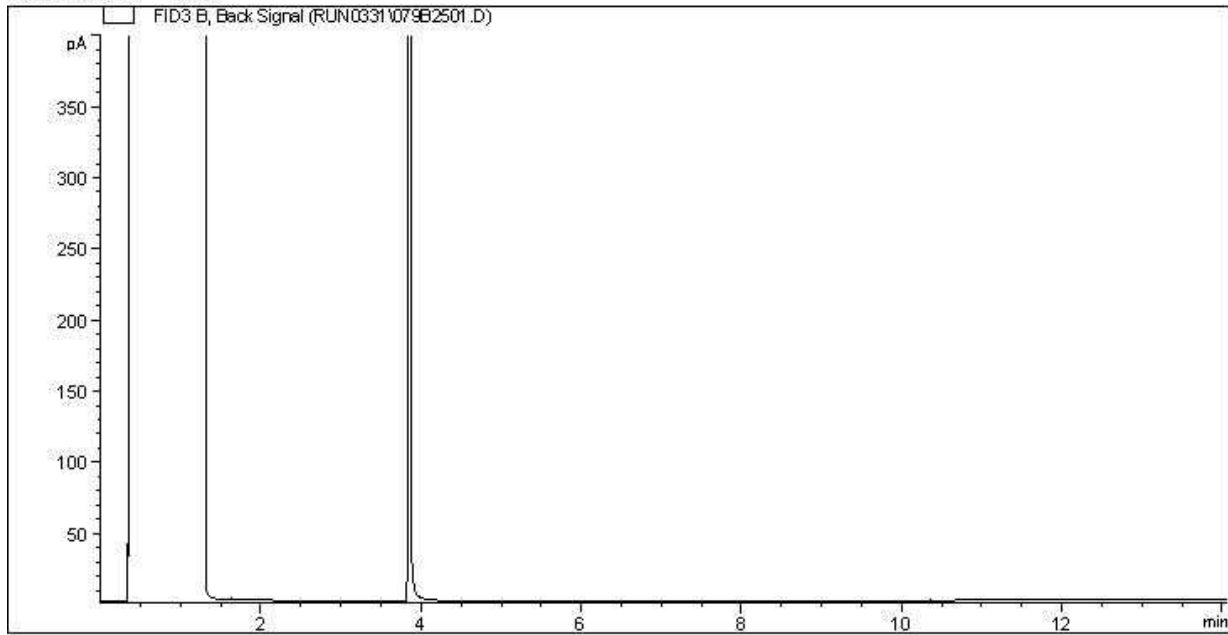
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

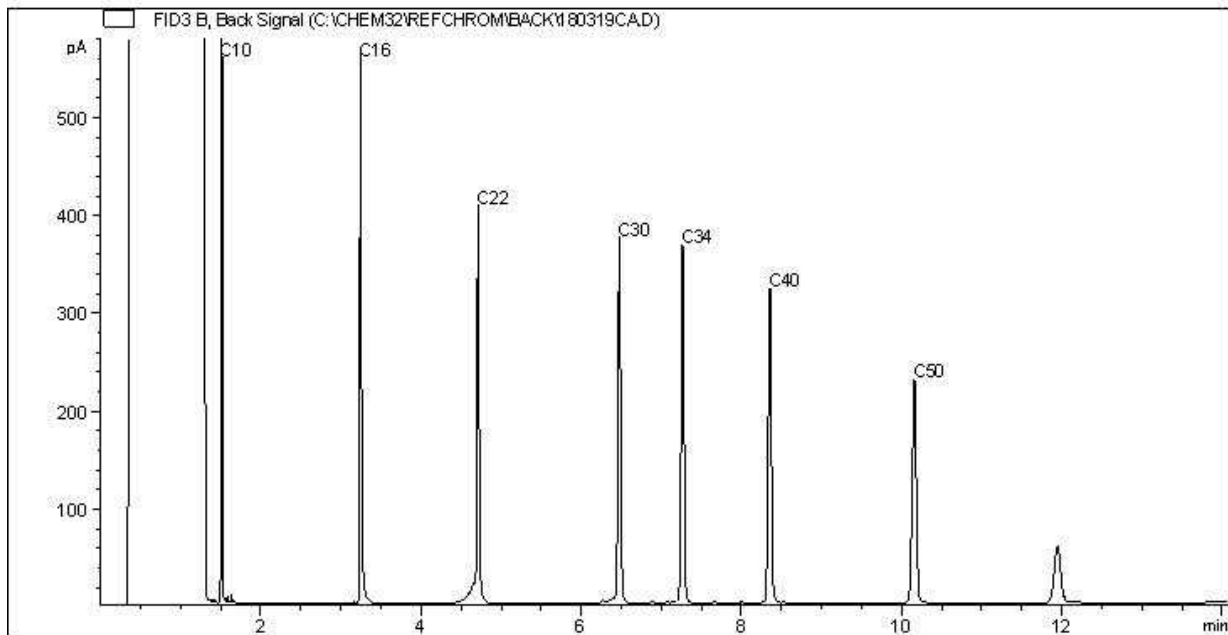


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



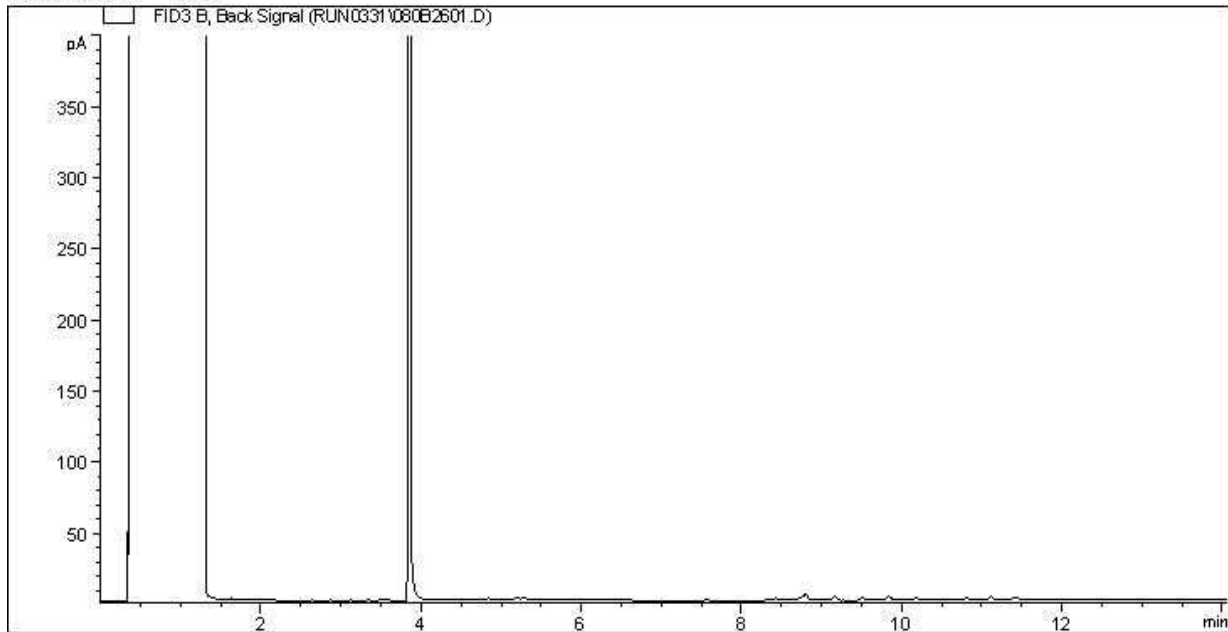
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

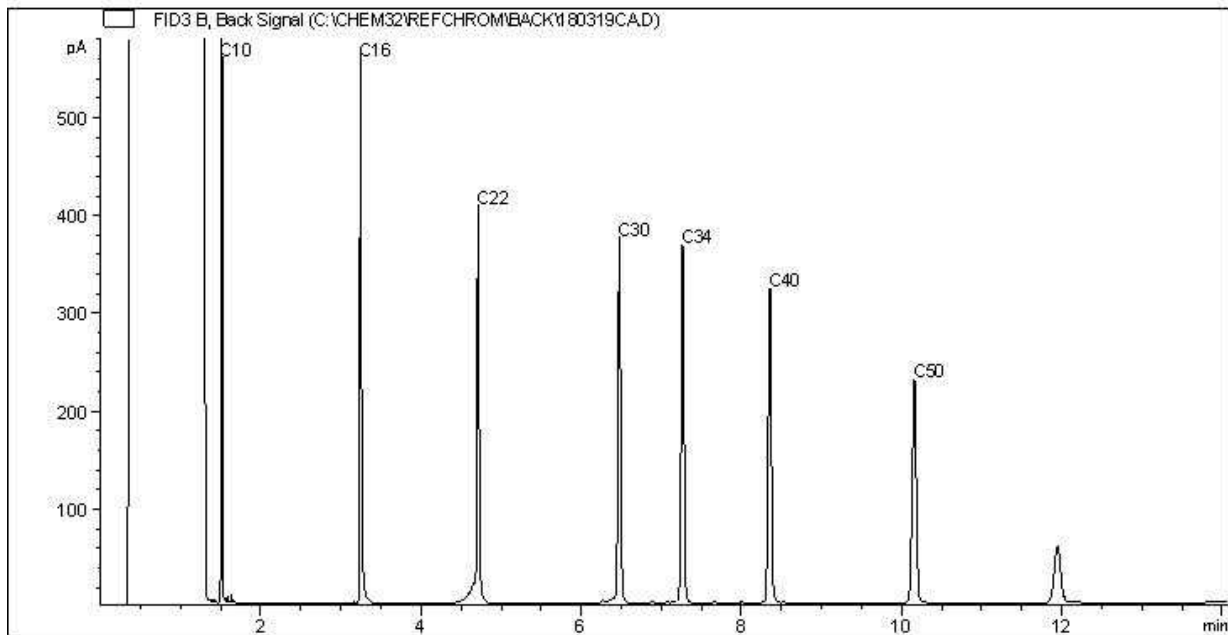
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



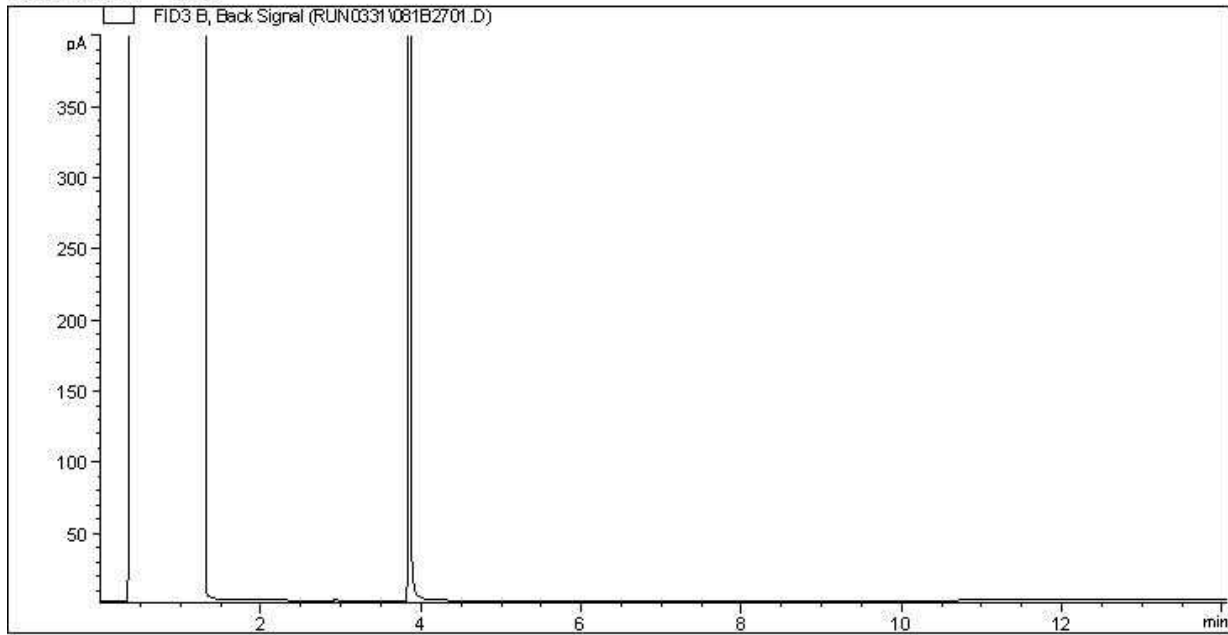
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

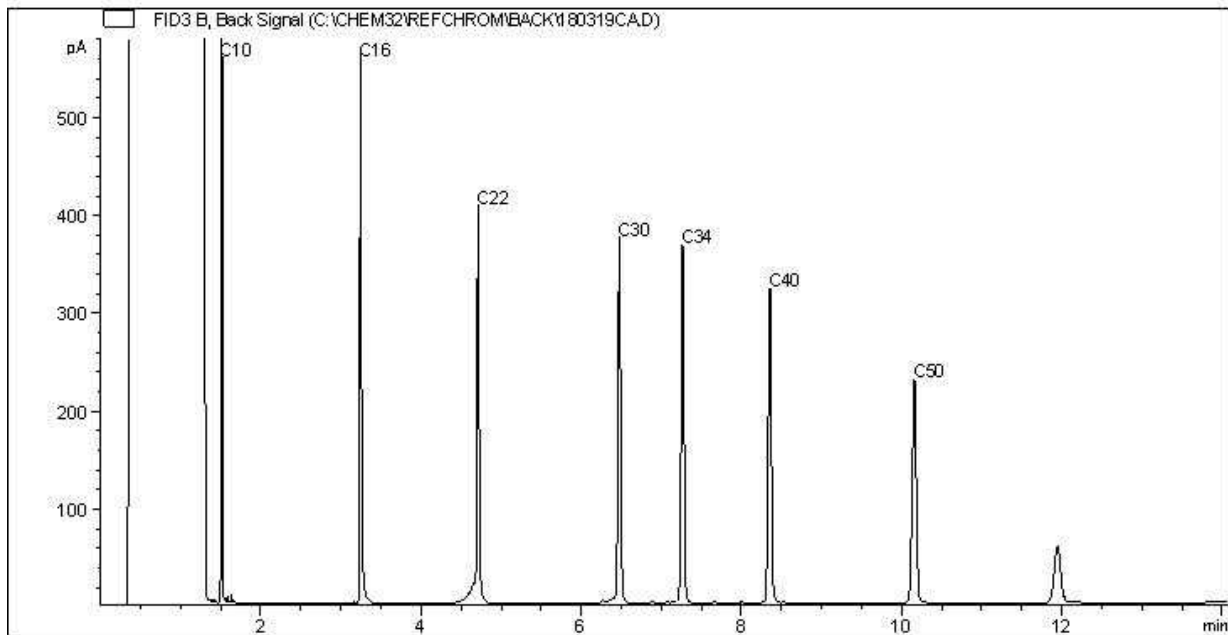
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

Your Project #: CG2430.1 E30  
Your C.O.C. #: M052865, M052866

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/05**

Report #: R2537063

Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B823618**

**Received: 2018/03/29, 16:54**

Sample Matrix: Water  
# Samples Received: 17

Analyses	Date		Laboratory Method	Analytical Method
	Quantity	Extracted		
BTEX/F1 in Water by HS GC/MS/FID	2	N/A	2018/04/02 AB SOP-00039	CCME CWS/EPA 8260c m
BTEX/F1 in Water by HS GC/MS/FID	14	N/A	2018/04/03 AB SOP-00039	CCME CWS/EPA 8260c m
F1-BTEX	16	N/A	2018/04/03 AB SOP-00039	Auto Calc
CCME Hydrocarbons in Water (F2; C10-C16) (1)	9	2018/04/02	2018/04/02 AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
CCME Hydrocarbons in Water (F2; C10-C16) (1)	7	2018/04/02	2018/04/03 AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Benzo[a]pyrene Equivalency (2)	4	N/A	2018/04/05 AB SOP-00003	Auto Calc
PAH in Water by GC/MS	4	2018/04/02	2018/04/03 AB SOP-00037 / AB SOP-00003	EPA 3510C/8270D m
Total Trihalomethanes Calculation	17	N/A	2018/04/03 AB SOP-00056	Auto Calc
VOCs in Water by HS GC/MS (Std List)	17	N/A	2018/04/02 AB SOP-00056	EPA 5021a/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.

Your Project #: CG2430.1 E30  
Your C.O.C. #: M052865, M052866

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/05**  
Report #: R2537063  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B823618**

**Received: 2018/03/29, 16:54**

- (1) Silica gel clean up employed.
- (2) B[a]P TPE is calculated using 1/2 of the RDL for non detect results as per Alberta Environment instructions. This protocol may not apply in other jurisdictions.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Jennifer Stephenson, B.Sc, Technical Specialist

Email: [jstephenson@maxxam.ca](mailto:jstephenson@maxxam.ca)

Phone# (403) 291-3077

=====  
This report has been generated and distributed using a secure automated process.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

<b>Maxxam ID</b>		TE7495	TE7495	TE7496	TE7497	TE7498	TE7499		
<b>Sampling Date</b>		2018/03/29 16:10	2018/03/29 16:10	2018/03/29 13:10	2018/03/29 15:50	2018/03/29 11:40	2018/03/29 15:15		
<b>COC Number</b>		M052865	M052865	M052865	M052865	M052865	M052865		
	<b>UNITS</b>	<b>1917</b>	<b>1917 Lab-Dup</b>	<b>1918</b>	<b>1919</b>	<b>1954</b>	<b>1941</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Ext. Pet. Hydrocarbon</b>									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8948479
<b>Volatiles</b>									
Benzene	mg/L	<0.00040	N/A	<0.00040	<0.00040	0.0023	<0.00040	0.00040	8948787
Toluene	mg/L	<0.00040	N/A	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	8948787
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	8948787
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	<0.00080	<0.00080	<0.00080	0.00080	8948787
o-Xylene	mg/L	<0.00040	N/A	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	8948787
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	<0.00089	<0.00089	<0.00089	0.00089	8948287
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	<0.10	<0.10	<0.10	0.10	8948287
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	<0.10	<0.10	<0.10	0.10	8948787
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene (sur.)	%	108	N/A	107	108	107	104	N/A	8948787
4-Bromofluorobenzene (sur.)	%	95	N/A	97	96	99	99	N/A	8948787
D4-1,2-Dichloroethane (sur.)	%	93	N/A	96	95	95	96	N/A	8948787
O-TERPHENYL (sur.)	%	88	93	90	98	90	85	N/A	8948479

RDL = Reportable Detection Limit  
Lab-Dup = Laboratory Initiated Duplicate  
N/A = Not Applicable



Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

Maxxam ID		TE7500	TE7501	TE7502	TE7503	TE7504	TE7505		
Sampling Date		2018/03/29 15:25	2018/03/29 15:40	2018/03/29 14:50	2018/03/29 15:00	2018/03/29 14:10	2018/03/29 14:30		
COC Number		M052865	M052865	M052865	M052865	M052865	M052866		
	<b>UNITS</b>	<b>1942</b>	<b>1948</b>	<b>1963</b>	<b>1961</b>	<b>1922</b>	<b>1921</b>	<b>RDL</b>	<b>QC Batch</b>

Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8948479
Volatiles									
Benzene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.044	0.00040	8948787
Toluene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.0067	0.00040	8948787
Ethylbenzene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.028	0.00040	8948787
m & p-Xylene	mg/L	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	0.0021	0.00080	8948787
o-Xylene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.0012	0.00040	8948787
Xylenes (Total)	mg/L	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	0.0033	0.00089	8948287
F1 (C6-C10) - BTEX	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.65	0.10	8948287
F1 (C6-C10)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.73	0.10	8948787
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	105	105	104	105	104	104	N/A	8948787
4-Bromofluorobenzene (sur.)	%	98	98	98	98	97	97	N/A	8948787
D4-1,2-Dichloroethane (sur.)	%	98	97	96	96	94	94	N/A	8948787
O-TERPHENYL (sur.)	%	99	90	94	89	94	92	N/A	8948479

RDL = Reportable Detection Limit  
N/A = Not Applicable

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

Maxxam ID		TE7506	TE7507	TE7508	TE7509	TE7510		
Sampling Date		2018/03/29 14:30	2018/03/29 13:40	2018/03/29 13:40	2018/03/29 13:25	2018/03/29 13:55		
COC Number		M052866	M052866	M052866	M052866	M052866		
	<b>UNITS</b>	<b>9921</b>	<b>510A</b>	<b>9510A</b>	<b>1925</b>	<b>1956</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Ext. Pet. Hydrocarbon</b>								
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8948479
<b>Volatiles</b>								
Benzene	mg/L	0.043	0.090	0.073	0.32	0.0080	0.00040	8948787
Toluene	mg/L	0.0066	0.0017	0.0015	0.0037	<0.00040	0.00040	8948787
Ethylbenzene	mg/L	0.029	0.047	0.044	0.15	<0.00040	0.00040	8948787
m & p-Xylene	mg/L	0.0021	0.021	0.019	0.0018	<0.00080	0.00080	8948787
o-Xylene	mg/L	0.0011	0.00066	0.00065	0.00049	<0.00040	0.00040	8948787
Xylenes (Total)	mg/L	0.0032	0.022	0.020	0.0023	<0.00089	0.00089	8948287
F1 (C6-C10) - BTEX	mg/L	0.57	0.19	0.15	0.37	<0.10	0.10	8948287
F1 (C6-C10)	mg/L	0.65	0.35	0.29	0.85	<0.10	0.10	8948787
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	105	105	104	105	105	N/A	8948787
4-Bromofluorobenzene (sur.)	%	98	97	99	98	97	N/A	8948787
D4-1,2-Dichloroethane (sur.)	%	91	94	93	97	99	N/A	8948787
O-TERPHENYL (sur.)	%	92	98	93	95	94	N/A	8948479
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE7504	TE7505	TE7509	TE7510		
Sampling Date		2018/03/29 14:10	2018/03/29 14:30	2018/03/29 13:25	2018/03/29 13:55		
COC Number		M052865	M052866	M052866	M052866		
	<b>UNITS</b>	<b>1922</b>	<b>1921</b>	<b>1925</b>	<b>1956</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Polycyclic Aromatics</b>							
Benzo[a]pyrene equivalency	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8948303
Acenaphthene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8948477
Acenaphthylene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8948477
Acridine	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8948477
Anthracene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8948477
Benzo(a)anthracene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948477
Benzo(b&j)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948477
Benzo(k)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948477
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948477
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8948477
Benzo(a)pyrene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8948477
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8948477
Chrysene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948477
Dibenz(a,h)anthracene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8948477
Fluoranthene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8948477
Fluorene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8948477
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8948477
1-Methylnaphthalene	mg/L	<0.00010	0.00015	<0.00010	<0.00010	0.00010	8948477
2-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8948477
Naphthalene	mg/L	<0.00010	0.00014	0.00030	<0.00010	0.00010	8948477
Phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8948477
Perylene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8948477
Pyrene	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8948477
Quinoline	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8948477
<b>Surrogate Recovery (%)</b>							
D10-ANTHRACENE (sur.)	%	113	114	110	111	N/A	8948477
D8-ACENAPHTHYLENE (sur.)	%	97	104	95	101	N/A	8948477
D8-NAPHTHALENE (sur.)	%	68	68	62	83	N/A	8948477
TERPHENYL-D14 (sur.)	%	126	127	127	128	N/A	8948477

RDL = Reportable Detection Limit  
N/A = Not Applicable

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE7495	TE7495	TE7496	TE7497	TE7498		
Sampling Date		2018/03/29 16:10	2018/03/29 16:10	2018/03/29 13:10	2018/03/29 15:50	2018/03/29 11:40		
COC Number		M052865	M052865	M052865	M052865	M052865		
	UNITS	1917	1917 Lab-Dup	1918	1919	1954	RDL	QC Batch

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	N/A	<0.0013	<0.0013	<0.0013	0.0013	8948419
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8948783
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8948783
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8948783
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,2-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.0013	0.00050	8948783
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8948783
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783
1,1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8948783
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783

RDL = Reportable Detection Limit  
Lab-Dup = Laboratory Initiated Duplicate  
N/A = Not Applicable

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE7495	TE7495	TE7496	TE7497	TE7498		
Sampling Date		2018/03/29 16:10	2018/03/29 16:10	2018/03/29 13:10	2018/03/29 15:50	2018/03/29 11:40		
COC Number		M052865	M052865	M052865	M052865	M052865		
	UNITS	1917	1917 Lab-Dup	1918	1919	1954	RDL	QC Batch
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	101	102	101	101	101	N/A	8948783
4-Bromofluorobenzene (sur.)	%	96	96	95	95	97	N/A	8948783
D4-1,2-Dichloroethane (sur.)	%	102	102	101	95	103	N/A	8948783
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable								

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE7499	TE7500	TE7501	TE7502	TE7503		
Sampling Date		2018/03/29 15:15	2018/03/29 15:25	2018/03/29 15:40	2018/03/29 14:50	2018/03/29 15:00		
COC Number		M052865	M052865	M052865	M052865	M052865		
	UNITS	1941	1942	1948	1963	1961	RDL	QC Batch

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0013	8948419
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8948783
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8948783
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8948783
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,2-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8948783
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8948783
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783

RDL = Reportable Detection Limit



Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE7499	TE7500	TE7501	TE7502	TE7503		
Sampling Date		2018/03/29 15:15	2018/03/29 15:25	2018/03/29 15:40	2018/03/29 14:50	2018/03/29 15:00		
COC Number		M052865	M052865	M052865	M052865	M052865		
	UNITS	1941	1942	1948	1963	1961	RDL	QC Batch
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	102	102	102	102	101	N/A	8948783
4-Bromofluorobenzene (sur.)	%	95	97	95	96	96	N/A	8948783
D4-1,2-Dichloroethane (sur.)	%	102	106	100	100	101	N/A	8948783
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE7504	TE7505	TE7506	TE7507	TE7508		
Sampling Date		2018/03/29 14:10	2018/03/29 14:30	2018/03/29 14:30	2018/03/29 13:40	2018/03/29 13:40		
COC Number		M052865	M052866	M052866	M052866	M052866		
	UNITS	1922	1921	9921	510A	9510A	RDL	QC Batch

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0013	8948419
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8948783
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8948783
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8948783
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,2-dichloroethane	mg/L	<0.00050	0.074	0.072	0.0027	0.0020	0.00050	8948783
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8948783
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8948783
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8948783

RDL = Reportable Detection Limit

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE7504	TE7505	TE7506	TE7507	TE7508		
Sampling Date		2018/03/29 14:10	2018/03/29 14:30	2018/03/29 14:30	2018/03/29 13:40	2018/03/29 13:40		
COC Number		M052865	M052866	M052866	M052866	M052866		
	UNITS	1922	1921	9921	510A	9510A	RDL	QC Batch
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,2,4-trimethylbenzene	mg/L	<0.00050	0.00065	0.00067	0.0033	0.0027	0.00050	8948783
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8948783
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	101	102	102	101	102	N/A	8948783
4-Bromofluorobenzene (sur.)	%	97	95	96	96	96	N/A	8948783
D4-1,2-Dichloroethane (sur.)	%	106	83	83	104	106	N/A	8948783
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**VOLATILE ORGANICS BY GC-MS (WATER)**

<b>Maxxam ID</b>		TE7509	TE7510	TE7511		
<b>Sampling Date</b>		2018/03/29 13:25	2018/03/29 13:55	2018/03/29		
<b>COC Number</b>		M052866	M052866	M052866		
	<b>UNITS</b>	<b>1925</b>	<b>1956</b>	<b>TRIP BLANK 4</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Volatiles</b>						
Total Trihalomethanes	mg/L	<0.0013	<0.0013	<0.0013	0.0013	8948419
Benzene	mg/L	N/A	N/A	<0.00040	0.00040	8948783
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	0.0020	8948783
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	0.0010	8948783
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	0.0010	8948783
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	0.0020	8948783
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8948783
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,2-dichloroethane	mg/L	0.026	0.0097	<0.00050	0.00050	8948783
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	0.0020	8948783
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
Ethylbenzene	mg/L	N/A	N/A	<0.00040	0.00040	8948783
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
Styrene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	0.0010	8948783
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	0.0020	8948783
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783

RDL = Reportable Detection Limit  
N/A = Not Applicable

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TE7509	TE7510	TE7511		
Sampling Date		2018/03/29 13:25	2018/03/29 13:55	2018/03/29		
COC Number		M052866	M052866	M052866		
	UNITS	1925	1956	TRIP BLANK 4	RDL	QC Batch
Toluene	mg/L	N/A	N/A	<0.00040	0.00040	8948783
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	8948783
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	8948783
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
1,3,5-trimethylbenzene	mg/L	0.0017	<0.00050	<0.00050	0.00050	8948783
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8948783
Xylenes (Total)	mg/L	N/A	N/A	<0.00080	0.00080	8948783
m & p-Xylene	mg/L	N/A	N/A	<0.00080	0.00080	8948783
o-Xylene	mg/L	N/A	N/A	<0.00040	0.00040	8948783
<b>Surrogate Recovery (%)</b>						
1,4-Difluorobenzene (sur.)	%	102	103	101	N/A	8948783
4-Bromofluorobenzene (sur.)	%	95	98	97	N/A	8948783
D4-1,2-Dichloroethane (sur.)	%	121	103	101	N/A	8948783
RDL = Reportable Detection Limit N/A = Not Applicable						

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**GENERAL COMMENTS**

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

Package 1	2.3°C
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**Results relate only to the items tested.**



Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**QUALITY ASSURANCE REPORT**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits	
8948477	LZ3	Matrix Spike	D10-ANTHRACENE (sur.)	2018/04/03	113	%	50 - 130			
			D8-ACENAPHTHYLENE (sur.)	2018/04/03	107	%	50 - 130			
			D8-NAPHTHALENE (sur.)	2018/04/03	74	%	50 - 130			
			TERPHENYL-D14 (sur.)	2018/04/03	133 (1)	%	50 - 130			
			Acenaphthene	2018/04/03	99	%	50 - 130			
			Acenaphthylene	2018/04/03	98	%	50 - 130			
			Acridine	2018/04/03	95	%	50 - 130			
			Anthracene	2018/04/03	89	%	50 - 130			
			Benzo(a)anthracene	2018/04/03	130	%	50 - 130			
			Benzo(b&j)fluoranthene	2018/04/03	119	%	50 - 130			
			Benzo(k)fluoranthene	2018/04/03	129	%	50 - 130			
			Benzo(g,h,i)perylene	2018/04/03	103	%	50 - 130			
			Benzo(c)phenanthrene	2018/04/03	128	%	50 - 130			
			Benzo(a)pyrene	2018/04/03	110	%	50 - 130			
			Benzo[e]pyrene	2018/04/03	107	%	50 - 130			
			Chrysene	2018/04/03	125	%	50 - 130			
			Dibenz(a,h)anthracene	2018/04/03	110	%	50 - 130			
			Fluoranthene	2018/04/03	121	%	50 - 130			
			Fluorene	2018/04/03	107	%	50 - 130			
			Indeno(1,2,3-cd)pyrene	2018/04/03	105	%	50 - 130			
			1-Methylnaphthalene	2018/04/03	81	%	50 - 130			
			2-Methylnaphthalene	2018/04/03	74	%	50 - 130			
			Naphthalene	2018/04/03	68	%	50 - 130			
			Phenanthrene	2018/04/03	107	%	50 - 130			
			Perylene	2018/04/03	96	%	50 - 130			
			Pyrene	2018/04/03	116	%	50 - 130			
			Quinoline	2018/04/03	106	%	50 - 130			
			8948477	LZ3	Spiked Blank	D10-ANTHRACENE (sur.)	2018/04/03	112	%	50 - 130
						D8-ACENAPHTHYLENE (sur.)	2018/04/03	102	%	50 - 130
						D8-NAPHTHALENE (sur.)	2018/04/03	72	%	50 - 130
						TERPHENYL-D14 (sur.)	2018/04/03	133 (1)	%	50 - 130
Acenaphthene	2018/04/03	87				%	50 - 130			
Acenaphthylene	2018/04/03	92				%	50 - 130			
Acridine	2018/04/03	91				%	50 - 130			
Anthracene	2018/04/03	83				%	50 - 130			
Benzo(a)anthracene	2018/04/03	126				%	50 - 130			
Benzo(b&j)fluoranthene	2018/04/03	117				%	50 - 130			
Benzo(k)fluoranthene	2018/04/03	126				%	50 - 130			
Benzo(g,h,i)perylene	2018/04/03	103				%	50 - 130			
Benzo(c)phenanthrene	2018/04/03	124				%	50 - 130			
Benzo(a)pyrene	2018/04/03	102				%	50 - 130			
Benzo[e]pyrene	2018/04/03	108				%	50 - 130			
Chrysene	2018/04/03	122				%	50 - 130			
Dibenz(a,h)anthracene	2018/04/03	112				%	50 - 130			
Fluoranthene	2018/04/03	120				%	50 - 130			
Fluorene	2018/04/03	91				%	50 - 130			
Indeno(1,2,3-cd)pyrene	2018/04/03	107				%	50 - 130			
1-Methylnaphthalene	2018/04/03	80	%	50 - 130						
2-Methylnaphthalene	2018/04/03	71	%	50 - 130						
Naphthalene	2018/04/03	80	%	50 - 130						
Phenanthrene	2018/04/03	99	%	50 - 130						
Perylene	2018/04/03	97	%	50 - 130						
Pyrene	2018/04/03	112	%	50 - 130						
Quinoline	2018/04/03	102	%	50 - 130						

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	8948477	LZ3	Method Blank	D10-ANTHRACENE (sur.)	2018/04/03		111	%	50 - 130
				D8-ACENAPHTHYLENE (sur.)	2018/04/03		97	%	50 - 130
				D8-NAPHTHALENE (sur.)	2018/04/03		68	%	50 - 130
				TERPHENYL-D14 (sur.)	2018/04/03		126	%	50 - 130
				Acenaphthene	2018/04/03	<0.00010		mg/L	
				Acenaphthylene	2018/04/03	<0.00010		mg/L	
				Acridine	2018/04/03	<0.000050		mg/L	
				Anthracene	2018/04/03	<0.000010		mg/L	
				Benzo(a)anthracene	2018/04/03	<0.0000085		mg/L	
				Benzo(b&j)fluoranthene	2018/04/03	<0.0000085		mg/L	
				Benzo(k)fluoranthene	2018/04/03	<0.0000085		mg/L	
				Benzo(g,h,i)perylene	2018/04/03	<0.0000085		mg/L	
				Benzo(c)phenanthrene	2018/04/03	<0.000050		mg/L	
				Benzo(a)pyrene	2018/04/03	<0.0000075		mg/L	
				Benzo[e]pyrene	2018/04/03	<0.000050		mg/L	
				Chrysene	2018/04/03	<0.0000085		mg/L	
				Dibenz(a,h)anthracene	2018/04/03	<0.0000075		mg/L	
				Fluoranthene	2018/04/03	<0.000010		mg/L	
				Fluorene	2018/04/03	<0.000050		mg/L	
				Indeno(1,2,3-cd)pyrene	2018/04/03	<0.0000085		mg/L	
				1-Methylnaphthalene	2018/04/03	<0.00010		mg/L	
				2-Methylnaphthalene	2018/04/03	<0.00010		mg/L	
				Naphthalene	2018/04/03	<0.00010		mg/L	
				Phenanthrene	2018/04/03	<0.000050		mg/L	
				Perylene	2018/04/03	<0.000050		mg/L	
				Pyrene	2018/04/03	<0.000020		mg/L	
				Quinoline	2018/04/03	<0.00020		mg/L	
	8948477	LZ3	RPD	Acenaphthene	2018/04/03	NC		%	30
				Acenaphthylene	2018/04/03	NC		%	30
				Acridine	2018/04/03	NC		%	30
				Anthracene	2018/04/03	NC		%	30
				Benzo(a)anthracene	2018/04/03	3.0		%	30
				Benzo(b&j)fluoranthene	2018/04/03	NC		%	30
				Benzo(k)fluoranthene	2018/04/03	NC		%	30
				Benzo(g,h,i)perylene	2018/04/03	NC		%	30
				Benzo(c)phenanthrene	2018/04/03	NC		%	30
				Benzo(a)pyrene	2018/04/03	NC		%	30
				Benzo[e]pyrene	2018/04/03	NC		%	30
				Chrysene	2018/04/03	NC		%	30
				Dibenz(a,h)anthracene	2018/04/03	NC		%	30
				Fluoranthene	2018/04/03	NC		%	30
				Fluorene	2018/04/03	NC		%	30
				Indeno(1,2,3-cd)pyrene	2018/04/03	NC		%	30
				1-Methylnaphthalene	2018/04/03	NC		%	30
				2-Methylnaphthalene	2018/04/03	NC		%	30
				Naphthalene	2018/04/03	NC		%	30
				Phenanthrene	2018/04/03	NC		%	30
				Perylene	2018/04/03	NC		%	30
				Pyrene	2018/04/03	NC		%	30
				Quinoline	2018/04/03	NC		%	30
	8948479	VP4	Matrix Spike [TE7496-01]	O-TERPHENYL (sur.)	2018/04/02		89	%	60 - 140
				F2 (C10-C16 Hydrocarbons)	2018/04/02		84	%	60 - 130
	8948479	VP4	Spiked Blank	O-TERPHENYL (sur.)	2018/04/02		91	%	60 - 140
				F2 (C10-C16 Hydrocarbons)	2018/04/02		82	%	70 - 130

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CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
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**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	8948479	VP4	Method Blank	O-TERPHENYL (sur.)	2018/04/02		90	%	60 - 140
				F2 (C10-C16 Hydrocarbons)	2018/04/02	<0.10		mg/L	
	8948479	VP4	RPD [TE7495-01]	F2 (C10-C16 Hydrocarbons)	2018/04/02	NC		%	30
	8948783	RSU	Matrix Spike [TE7496-02]	1,4-Difluorobenzene (sur.)	2018/04/02		103	%	70 - 130
				4-Bromofluorobenzene (sur.)	2018/04/02		95	%	70 - 130
				D4-1,2-Dichloroethane (sur.)	2018/04/02		102	%	70 - 130
				Benzene	2018/04/02		96	%	70 - 130
				Bromodichloromethane	2018/04/02		100	%	70 - 130
				Bromoform	2018/04/02		114	%	70 - 130
				Bromomethane	2018/04/02		92	%	70 - 130
				Carbon tetrachloride	2018/04/02		95	%	70 - 130
				Chlorobenzene	2018/04/02		104	%	70 - 130
				Chlorodibromomethane	2018/04/02		107	%	70 - 130
				Chloroethane	2018/04/02		94	%	70 - 130
				Chloroform	2018/04/02		97	%	70 - 130
				Chloromethane	2018/04/02		61 (1)	%	70 - 130
				1,2-dibromoethane	2018/04/02		114	%	70 - 130
				1,2-dichlorobenzene	2018/04/02		99	%	70 - 130
				1,3-dichlorobenzene	2018/04/02		94	%	70 - 130
				1,4-dichlorobenzene	2018/04/02		94	%	70 - 130
				1,1-dichloroethane	2018/04/02		92	%	70 - 130
				1,2-dichloroethane	2018/04/02		102	%	70 - 130
				1,1-dichloroethene	2018/04/02		102	%	70 - 130
				cis-1,2-dichloroethene	2018/04/02		103	%	70 - 130
				trans-1,2-dichloroethene	2018/04/02		103	%	70 - 130
				Dichloromethane	2018/04/02		91	%	70 - 130
				1,2-dichloropropane	2018/04/02		98	%	70 - 130
				cis-1,3-dichloropropene	2018/04/02		105	%	70 - 130
				trans-1,3-dichloropropene	2018/04/02		123	%	70 - 130
				Ethylbenzene	2018/04/02		99	%	70 - 130
				Methyl methacrylate	2018/04/02		115	%	70 - 130
				Methyl-tert-butylether (MTBE)	2018/04/02		98	%	70 - 130
				Styrene	2018/04/02		103	%	70 - 130
				1,1,1,2-tetrachloroethane	2018/04/02		103	%	70 - 130
				1,1,2,2-tetrachloroethane	2018/04/02		105	%	70 - 130
				Tetrachloroethene	2018/04/02		100	%	70 - 130
				Toluene	2018/04/02		101	%	70 - 130
				1,2,3-trichlorobenzene	2018/04/02		101	%	70 - 130
				1,2,4-trichlorobenzene	2018/04/02		97	%	70 - 130
				1,3,5-trichlorobenzene	2018/04/02		95	%	70 - 130
				1,1,1-trichloroethane	2018/04/02		96	%	70 - 130
				1,1,2-trichloroethane	2018/04/02		103	%	70 - 130
				Trichloroethene	2018/04/02		101	%	70 - 130
				Trichlorofluoromethane	2018/04/02		98	%	70 - 130
				1,2,4-trimethylbenzene	2018/04/02		96	%	70 - 130
				1,3,5-trimethylbenzene	2018/04/02		92	%	70 - 130
				Vinyl chloride	2018/04/02		98	%	70 - 130
				m & p-Xylene	2018/04/02		101	%	70 - 130
				o-Xylene	2018/04/02		102	%	70 - 130
	8948783	RSU	Spiked Blank	1,4-Difluorobenzene (sur.)	2018/04/02		102	%	70 - 130
				4-Bromofluorobenzene (sur.)	2018/04/02		97	%	70 - 130
				D4-1,2-Dichloroethane (sur.)	2018/04/02		100	%	70 - 130
				Benzene	2018/04/02		101	%	70 - 130
				Bromodichloromethane	2018/04/02		105	%	70 - 130

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Client Project #: CG2430.1 E30  
Sampler Initials: AG

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Bromoform	2018/04/02		117	%	70 - 130
				Bromomethane	2018/04/02		97	%	70 - 130
				Carbon tetrachloride	2018/04/02		102	%	70 - 130
				Chlorobenzene	2018/04/02		110	%	70 - 130
				Chlorodibromomethane	2018/04/02		114	%	70 - 130
				Chloroethane	2018/04/02		98	%	70 - 130
				Chloroform	2018/04/02		102	%	70 - 130
				Chloromethane	2018/04/02		102	%	70 - 130
				1,2-dibromoethane	2018/04/02		119	%	70 - 130
				1,2-dichlorobenzene	2018/04/02		104	%	70 - 130
				1,3-dichlorobenzene	2018/04/02		100	%	70 - 130
				1,4-dichlorobenzene	2018/04/02		98	%	70 - 130
				1,1-dichloroethane	2018/04/02		98	%	70 - 130
				1,2-dichloroethane	2018/04/02		105	%	70 - 130
				1,1-dichloroethene	2018/04/02		109	%	70 - 130
				cis-1,2-dichloroethene	2018/04/02		108	%	70 - 130
				trans-1,2-dichloroethene	2018/04/02		109	%	70 - 130
				Dichloromethane	2018/04/02		95	%	70 - 130
				1,2-dichloropropane	2018/04/02		103	%	70 - 130
				cis-1,3-dichloropropene	2018/04/02		104	%	70 - 130
				trans-1,3-dichloropropene	2018/04/02		121	%	70 - 130
				Ethylbenzene	2018/04/02		107	%	70 - 130
				Methyl methacrylate	2018/04/02		117	%	70 - 130
				Methyl-tert-butylether (MTBE)	2018/04/02		103	%	70 - 130
				Styrene	2018/04/02		109	%	70 - 130
				1,1,1,2-tetrachloroethane	2018/04/02		110	%	70 - 130
				1,1,2,2-tetrachloroethane	2018/04/02		108	%	70 - 130
				Tetrachloroethene	2018/04/02		109	%	70 - 130
				Toluene	2018/04/02		108	%	70 - 130
				1,2,3-trichlorobenzene	2018/04/02		101	%	70 - 130
				1,2,4-trichlorobenzene	2018/04/02		98	%	70 - 130
				1,3,5-trichlorobenzene	2018/04/02		97	%	70 - 130
				1,1,1-trichloroethane	2018/04/02		104	%	70 - 130
				1,1,2-trichloroethane	2018/04/02		105	%	70 - 130
				Trichloroethene	2018/04/02		107	%	70 - 130
				Trichlorofluoromethane	2018/04/02		106	%	70 - 130
				1,2,4-trimethylbenzene	2018/04/02		103	%	70 - 130
				1,3,5-trimethylbenzene	2018/04/02		100	%	70 - 130
				Vinyl chloride	2018/04/02		109	%	70 - 130
				m & p-Xylene	2018/04/02		108	%	70 - 130
				o-Xylene	2018/04/02		108	%	70 - 130
8948783	RSU		Method Blank	1,4-Difluorobenzene (sur.)	2018/04/02		102	%	70 - 130
				4-Bromofluorobenzene (sur.)	2018/04/02		98	%	70 - 130
				D4-1,2-Dichloroethane (sur.)	2018/04/02		93	%	70 - 130
				Benzene	2018/04/02	<0.00040		mg/L	
				Bromodichloromethane	2018/04/02	<0.00050		mg/L	
				Bromoform	2018/04/02	<0.00050		mg/L	
				Bromomethane	2018/04/02	<0.0020		mg/L	
				Carbon tetrachloride	2018/04/02	<0.00050		mg/L	
				Chlorobenzene	2018/04/02	<0.00050		mg/L	
				Chlorodibromomethane	2018/04/02	<0.0010		mg/L	
				Chloroethane	2018/04/02	<0.0010		mg/L	
				Chloroform	2018/04/02	<0.00050		mg/L	
				Chloromethane	2018/04/02	<0.0020		mg/L	

Maxxam Job #: B823618  
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CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,2-dibromoethane	2018/04/02	<0.00020		mg/L	
			1,2-dichlorobenzene	2018/04/02	<0.00050		mg/L	
			1,3-dichlorobenzene	2018/04/02	<0.00050		mg/L	
			1,4-dichlorobenzene	2018/04/02	<0.00050		mg/L	
			1,1-dichloroethane	2018/04/02	<0.00050		mg/L	
			1,2-dichloroethane	2018/04/02	<0.00050		mg/L	
			1,1-dichloroethene	2018/04/02	<0.00050		mg/L	
			cis-1,2-dichloroethene	2018/04/02	<0.00050		mg/L	
			trans-1,2-dichloroethene	2018/04/02	<0.00050		mg/L	
			Dichloromethane	2018/04/02	<0.0020		mg/L	
			1,2-dichloropropane	2018/04/02	<0.00050		mg/L	
			cis-1,3-dichloropropene	2018/04/02	<0.00050		mg/L	
			trans-1,3-dichloropropene	2018/04/02	<0.00050		mg/L	
			Ethylbenzene	2018/04/02	<0.00040		mg/L	
			Methyl methacrylate	2018/04/02	<0.00050		mg/L	
			Methyl-tert-butylether (MTBE)	2018/04/02	<0.00050		mg/L	
			Styrene	2018/04/02	<0.00050		mg/L	
			1,1,1,2-tetrachloroethane	2018/04/02	<0.0010		mg/L	
			1,1,2,2-tetrachloroethane	2018/04/02	<0.0020		mg/L	
			Tetrachloroethene	2018/04/02	<0.00050		mg/L	
			Toluene	2018/04/02	<0.00040		mg/L	
			1,2,3-trichlorobenzene	2018/04/02	<0.0010		mg/L	
			1,2,4-trichlorobenzene	2018/04/02	<0.0010		mg/L	
			1,3,5-trichlorobenzene	2018/04/02	<0.00050		mg/L	
			1,1,1-trichloroethane	2018/04/02	<0.00050		mg/L	
			1,1,2-trichloroethane	2018/04/02	<0.00050		mg/L	
			Trichloroethene	2018/04/02	<0.00050		mg/L	
			Trichlorofluoromethane	2018/04/02	<0.00050		mg/L	
			1,2,4-trimethylbenzene	2018/04/02	<0.00050		mg/L	
			1,3,5-trimethylbenzene	2018/04/02	<0.00050		mg/L	
			Vinyl chloride	2018/04/02	<0.00050		mg/L	
			Xylenes (Total)	2018/04/02	<0.00080		mg/L	
			m & p-Xylene	2018/04/02	<0.00080		mg/L	
			o-Xylene	2018/04/02	<0.00040		mg/L	
8948783	RSU	RPD [TE7495-02]	Bromodichloromethane	2018/04/02	NC		%	30
			Bromoform	2018/04/02	NC		%	30
			Bromomethane	2018/04/02	NC		%	30
			Carbon tetrachloride	2018/04/02	NC		%	30
			Chlorobenzene	2018/04/02	NC		%	30
			Chlorodibromomethane	2018/04/02	NC		%	30
			Chloroethane	2018/04/02	NC		%	30
			Chloroform	2018/04/02	NC		%	30
			Chloromethane	2018/04/02	NC		%	30
			1,2-dibromoethane	2018/04/02	NC		%	30
			1,2-dichlorobenzene	2018/04/02	NC		%	30
			1,3-dichlorobenzene	2018/04/02	NC		%	30
			1,4-dichlorobenzene	2018/04/02	NC		%	30
			1,1-dichloroethane	2018/04/02	NC		%	30
			1,2-dichloroethane	2018/04/02	NC		%	30
			1,1-dichloroethene	2018/04/02	NC		%	30
			cis-1,2-dichloroethene	2018/04/02	NC		%	30
			trans-1,2-dichloroethene	2018/04/02	NC		%	30
			Dichloromethane	2018/04/02	NC		%	30
			1,2-dichloropropane	2018/04/02	NC		%	30

Maxxam Job #: B823618  
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CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			cis-1,3-dichloropropene	2018/04/02	NC		%	30
			trans-1,3-dichloropropene	2018/04/02	NC		%	30
			Methyl methacrylate	2018/04/02	NC		%	30
			Methyl-tert-butylether (MTBE)	2018/04/02	NC		%	30
			Styrene	2018/04/02	NC		%	30
			1,1,1,2-tetrachloroethane	2018/04/02	NC		%	30
			1,1,2,2-tetrachloroethane	2018/04/02	NC		%	30
			Tetrachloroethene	2018/04/02	NC		%	30
			1,2,3-trichlorobenzene	2018/04/02	NC		%	30
			1,2,4-trichlorobenzene	2018/04/02	NC		%	30
			1,3,5-trichlorobenzene	2018/04/02	NC		%	30
			1,1,1-trichloroethane	2018/04/02	NC		%	30
			1,1,2-trichloroethane	2018/04/02	NC		%	30
			Trichloroethene	2018/04/02	NC		%	30
			Trichlorofluoromethane	2018/04/02	NC		%	30
			1,2,4-trimethylbenzene	2018/04/02	NC		%	30
			1,3,5-trimethylbenzene	2018/04/02	NC		%	30
			Vinyl chloride	2018/04/02	NC		%	30
8948787	DO1	Matrix Spike	1,4-Difluorobenzene (sur.)	2018/04/02		98	%	50 - 140
			4-Bromofluorobenzene (sur.)	2018/04/02		100	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2018/04/02		103	%	50 - 140
			Benzene	2018/04/02		91	%	50 - 140
			Toluene	2018/04/02		86	%	50 - 140
			Ethylbenzene	2018/04/02		87	%	50 - 140
			m & p-Xylene	2018/04/02		84	%	50 - 140
			o-Xylene	2018/04/02		89	%	50 - 140
			F1 (C6-C10)	2018/04/02		100	%	60 - 140
8948787	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2018/04/02		106	%	50 - 140
			4-Bromofluorobenzene (sur.)	2018/04/02		98	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2018/04/02		91	%	50 - 140
			Benzene	2018/04/02		90	%	60 - 130
			Toluene	2018/04/02		87	%	60 - 130
			Ethylbenzene	2018/04/02		90	%	60 - 130
			m & p-Xylene	2018/04/02		86	%	60 - 130
			o-Xylene	2018/04/02		89	%	60 - 130
			F1 (C6-C10)	2018/04/02		97	%	60 - 140
8948787	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2018/04/02		105	%	50 - 140
			4-Bromofluorobenzene (sur.)	2018/04/02		96	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2018/04/02		92	%	50 - 140
			Benzene	2018/04/02	<0.00040		mg/L	
			Toluene	2018/04/02	<0.00040		mg/L	
			Ethylbenzene	2018/04/02	<0.00040		mg/L	
			m & p-Xylene	2018/04/02	<0.00080		mg/L	
			o-Xylene	2018/04/02	<0.00040		mg/L	
			F1 (C6-C10)	2018/04/02	<0.10		mg/L	
8948787	DO1	RPD	Benzene	2018/04/03	NC		%	30
			Toluene	2018/04/03	NC		%	30
			Ethylbenzene	2018/04/03	NC		%	30
			m & p-Xylene	2018/04/03	NC		%	30
			o-Xylene	2018/04/03	NC		%	30



Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				F1 (C6-C10)	2018/04/03	NC		%	30
<p>Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.</p> <p>Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.</p> <p>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.</p> <p>Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.</p> <p>Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.</p> <p>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 &lt;= 2x RDL).</p> <p>(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.</p>									

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

**NOTIFICATION LOG**

No Reportable Regulation Exceedences Noted.

Maxxam Job #: B823618  
Report Date: 2018/04/05

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AG

### VALIDATION SIGNATURE PAGE

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



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Dennis Ngundu, B.Sc., P.Chem., QP, Supervisor, Organics



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Janet Gao, B.Sc., QP, Supervisor, Organics



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Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Invoice Information	Report Information (if differs from invoice)	Project Information	Turnaround Time (TAT) Required
Company: <u>Clifton Associates</u>	Company:	Quotation #:	<input checked="" type="checkbox"/> 5-7 Days Regular (Most analyses)
Contact Name: <u>Stephane Dabodie</u>	Contact Name:	P.O. #/ AFE#:	<b>PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS</b>
Address: <u>2277-30 Ave. NE Calgary, AB T2E 7K9</u>	Address:	Project #: <u>CG2430.1 E30</u>	<b>Rush TAT (Surcharges will be applied)</b>
Phone: <u>403-263-2556</u>	Phone:	Site Location:	<input type="checkbox"/> Same Day <input type="checkbox"/> 2 Days
Email: <u>Stephane.Dabodie@clifton.ca</u>	Email:	Site #:	<input type="checkbox"/> 1 Day <input type="checkbox"/> 3-4 Days
Copies: <u>terryn_kuzyk@clifton.ca</u>	Copies:	Sampled By: <u>Austin Gordon</u>	Date Required: _____
			Rush Confirmation #: _____

Laboratory Use Only				Analysis Requested												Regulatory Criteria	
YES	NO	Temp	Cooler ID														
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3	13													<input checked="" type="checkbox"/> AT1	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															<input type="checkbox"/> CCME	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															<input type="checkbox"/> Drinking Water	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															<input type="checkbox"/> D50 (Drilling Waste)	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															<input type="checkbox"/> Saskatchewan	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															<input type="checkbox"/> Other:	

Sample Identification	Depth (Unit)	Date Sampled (YYY/MM/DD)	Time Sampled (HH:MM)	Matrix	# of containers	BTEX F1	BTEX F2	BTEX F3-F4	Routine Water	Regulated Metals Tot	Mercury Total	Salinity 4	Sieve (75 micron)	Texture (% Sand, Silt, Clay)	Basic Class II Landfill	PAHs	HOLD - DO NOT ANALYZE	Special Instructions
1	1917	2018.3.29	16:10	GW	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
2	1918		13:10		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
3	1919		15:50		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
4	1954		11:40		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
5	1941		15:15		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
6	1942		15:25		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
7	1948		15:40		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
8	1963		14:50		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
9	1961		15:00		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
10	1922	2018.3.29	14:10	GW	8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											

Please Indicate Filtered, Preserved or Both (F, P, F/P)

Relinquished by: (Signature/ Print)	DATE (YYYY/MM/DD)	Time (HH:MM)	Received by: (Signature/ Print)	DATE (YYYY/MM/DD)	Time (HH:MM)
<u>Austin Mei</u>	<u>2018.3.29</u>	<u>16:53</u>	<u>Kate Love</u>	<u>2018/03/29</u>	<u>16:54</u>

29-Mar-18 16:54  
Jennifer Stephenson  
B823618  
ASQ INS-0001

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Invoice Information	Report Information (if differs from invoice)	Project Information	Turnaround Time (TAT) Required
Company: <u>Clifton Associates</u>	Company:	Quotation #:	<input checked="" type="checkbox"/> 5-7 Days Regular (Most analyses)
Contact Name: <u>Stephen d'Abadie</u>	Contact Name:	P.O. #/ AFE#:	<b>PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS</b>
Address: <u>2222 - 30 Ave. NE Calgary, AB. T2E2K9</u>	Address:	Project #: <u>CG2430.1 E30</u>	<b>Rush TAT (Surcharges will be applied)</b>
Phone: <u>403-263-2556</u>	Phone:	Site Location:	<input type="checkbox"/> Same Day <input type="checkbox"/> 2 Days
Email: <u>stephen_dabadie@clifton.ca</u>	Email:	Site #:	<input type="checkbox"/> 1 Day <input type="checkbox"/> 3-4 Days
Copies: <u>Terryn_Kuzyk@clifton.ca</u>	Copies:	Sampled By: <u>Austin, Gordon</u>	Date Required: _____
			Rush Confirmation #: _____

Laboratory Use Only				Analysis Requested												Regulatory Criteria					
Seal Present	YES NO	Cooler ID	Depot Reception	# of containers <input type="checkbox"/> BTEX F1 <input type="checkbox"/> VOC <input checked="" type="checkbox"/> <input type="checkbox"/> BTEX F1-F2 <input type="checkbox"/> BTEX F1-F4 Routine Water Regulated Metals Tot <input type="checkbox"/> Diss <input type="checkbox"/> Dissolved Mercury Total <input type="checkbox"/> Dissolved Salinity 4 Sieve (75 micron) Texture (% Sand, Silt, Clay) Basic Class II Landfill													<input checked="" type="checkbox"/> AT1 <input type="checkbox"/> CCME <input type="checkbox"/> Drinking Water <input type="checkbox"/> D50 (Drilling Waste) <input type="checkbox"/> Saskatchewan <input type="checkbox"/> Other:				
Seal Intact		Temp															<b>HOLD - DO NOT ANALYZE</b>  <b>Special Instructions</b>				
Cooling Media		3 1 3																			
Seal Present	YES NO	Cooler ID																			
Seal Intact																					
Cooling Media																					
Seal Present	YES NO	Cooler ID																			
Seal Intact																					
Cooling Media																					
Sample Identification					Depth (Unit)	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix													
1	1921				2018.3.29	14:30	GW 8														
2	9921					14:30	6														
3	510A					13:40	4														
4	9510A					13:40	4														
5	1925					13:25	8														
6	1956					13:55	GW 8														
7	Trip Blank 4				2018.3.29		W 2														
8																					
9																					
10																					

Please indicate Filtered, Preserved or Both (F, P, F/P) P P P

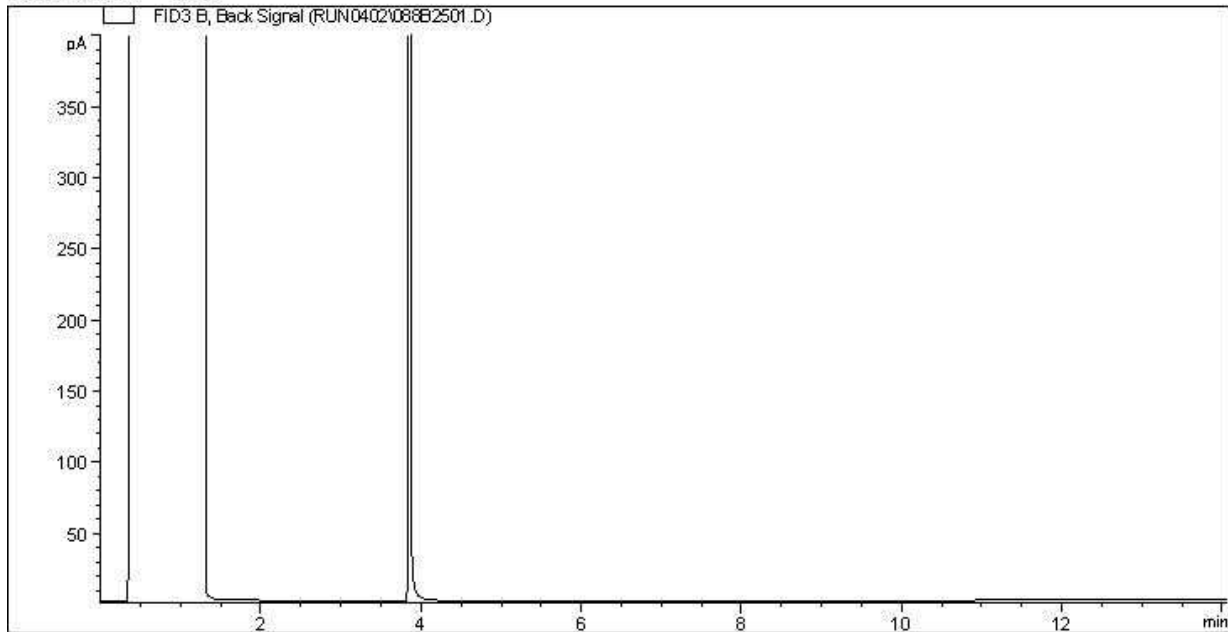
Relinquished by: (Signature/ Print)	DATE (YYYY/MM/DD)	Time (HH:MM)	Received by: (Signature/ Print)	DATE (YYYY/MM/DD)	Time (HH:MM)
<u>Austin Mei</u>	<u>2018.3.29</u>	<u>16:53</u>	<u>[Signature]</u> <u>Kate Lovett</u>	<u>2018/03/29</u>	<u>16:54</u>

29-Mar-18.16:54  
Jennifer Stephenson  
B823618  
ASQ INS-0001

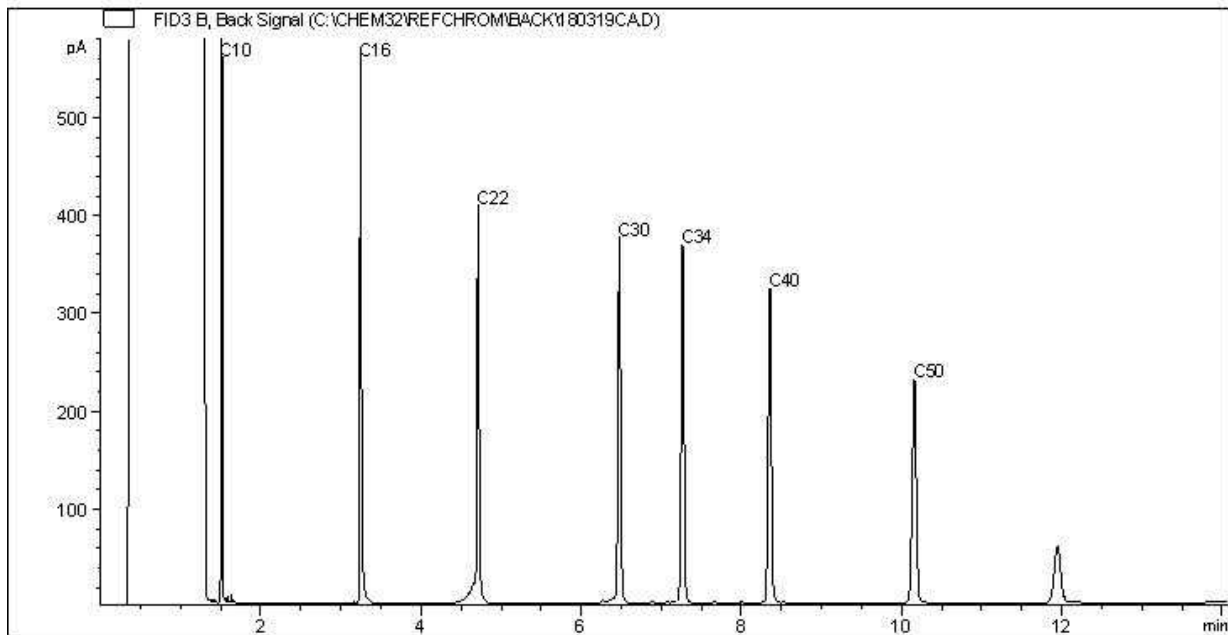
Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Maxxam's standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of our terms which are available for viewing at www.maxxam.com

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

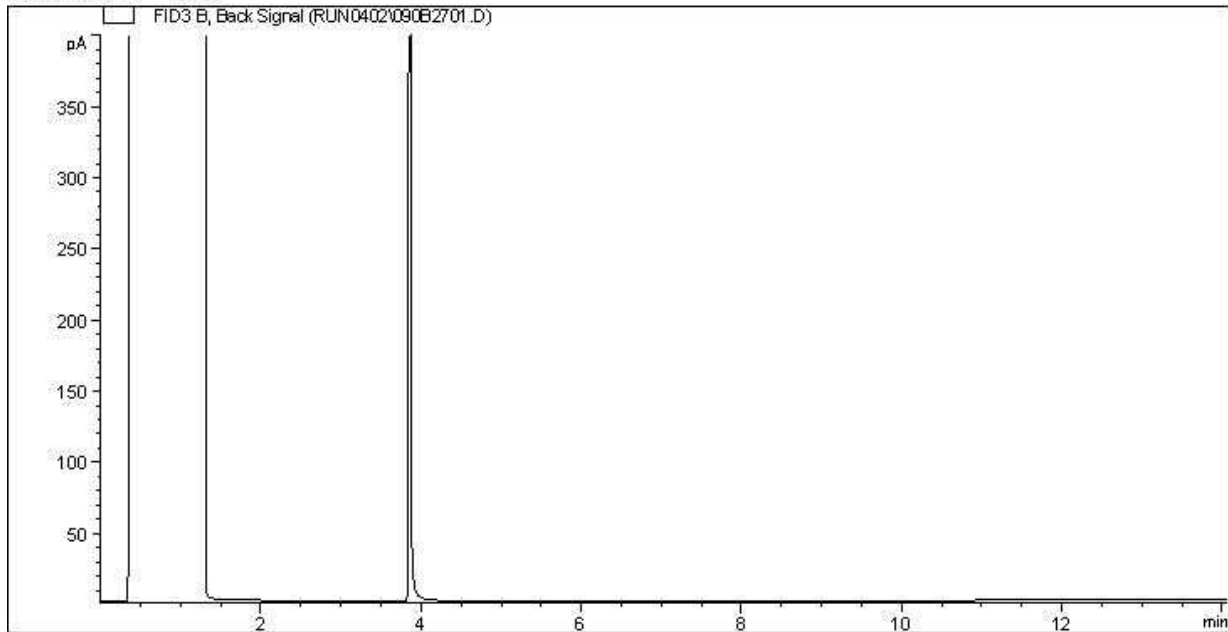
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

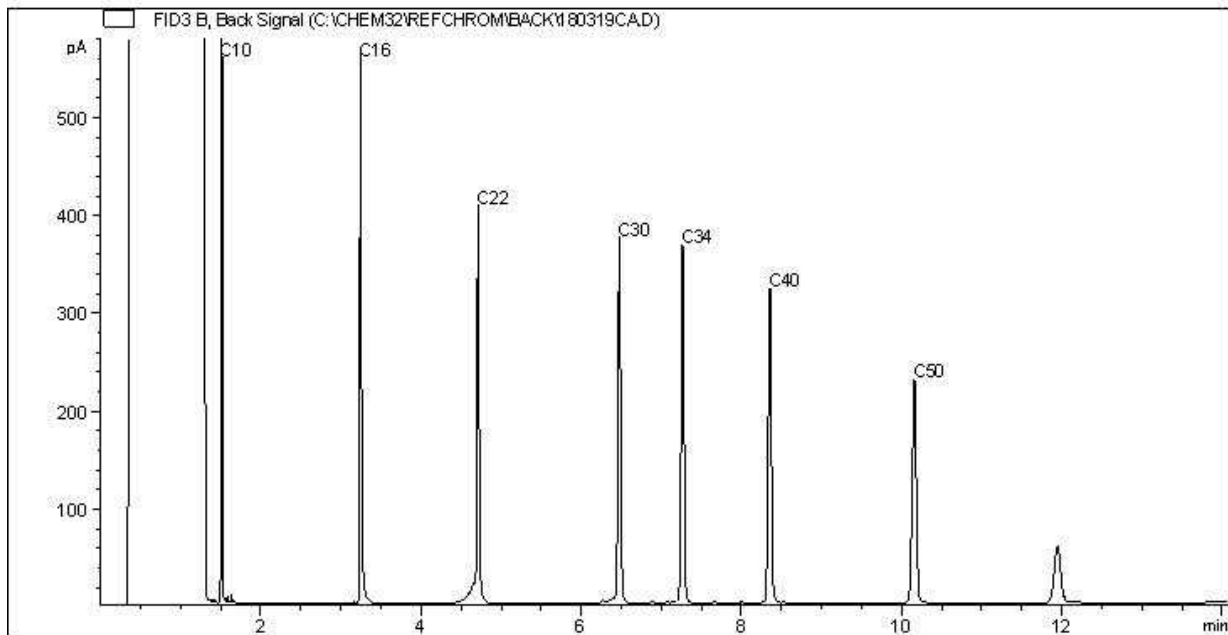


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



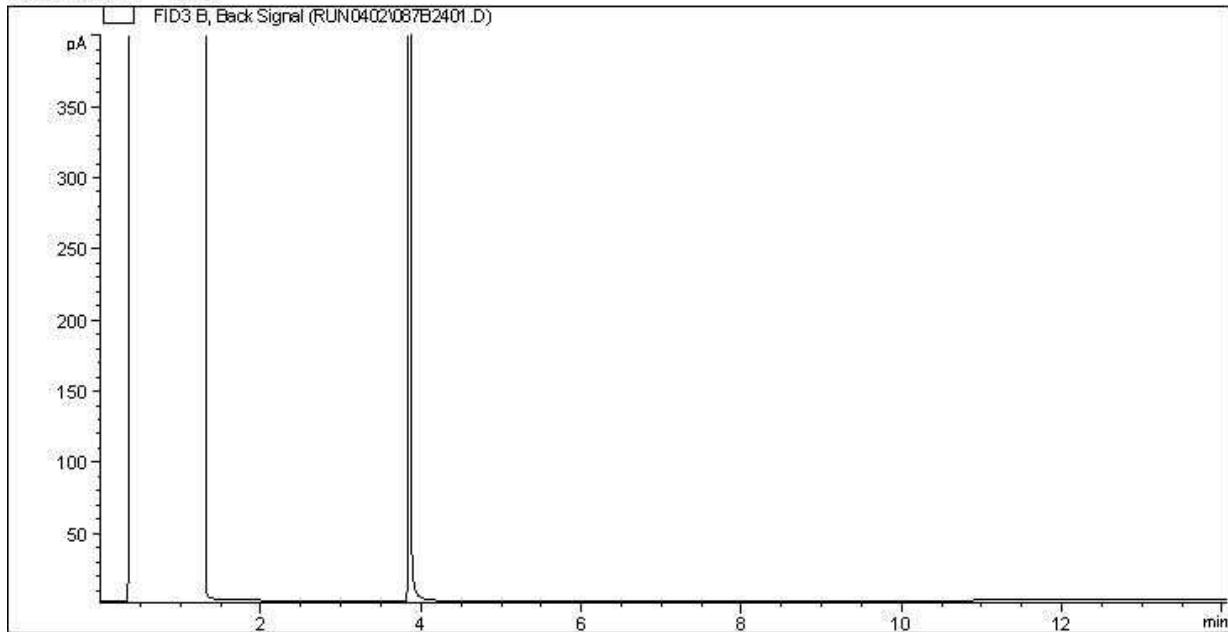
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

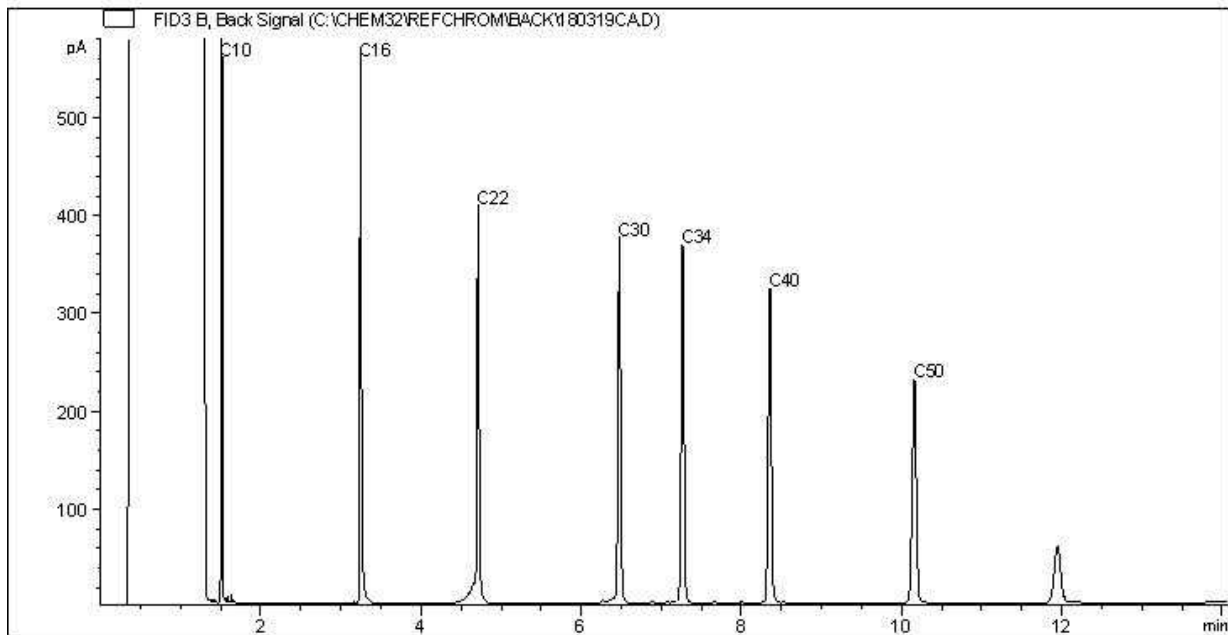
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



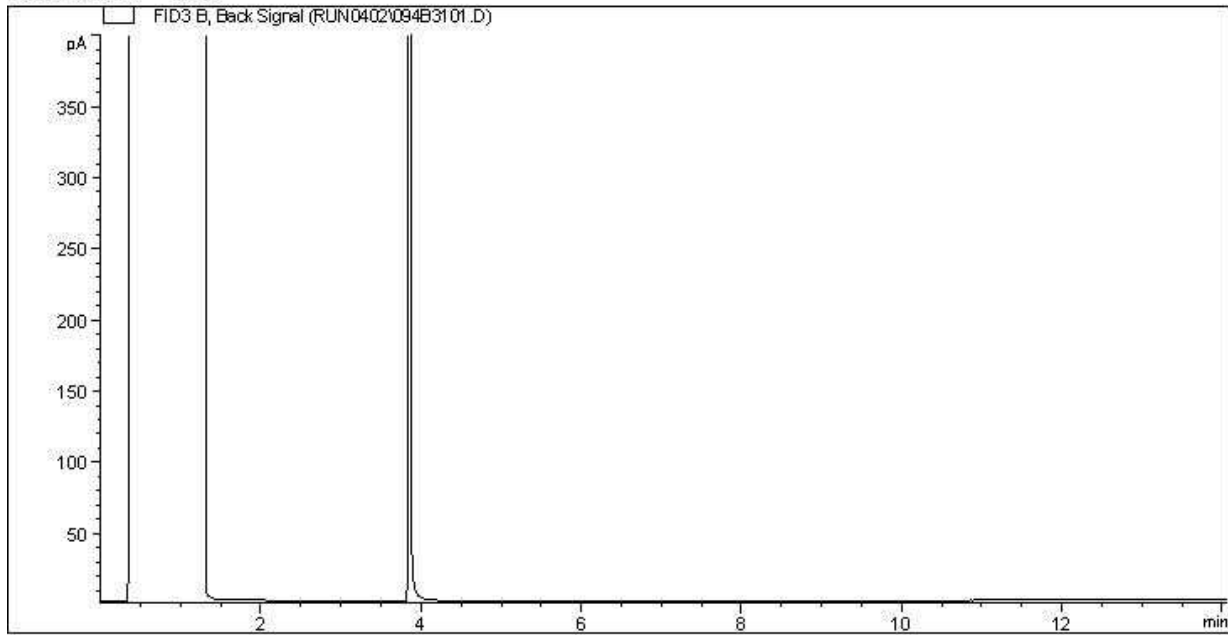
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

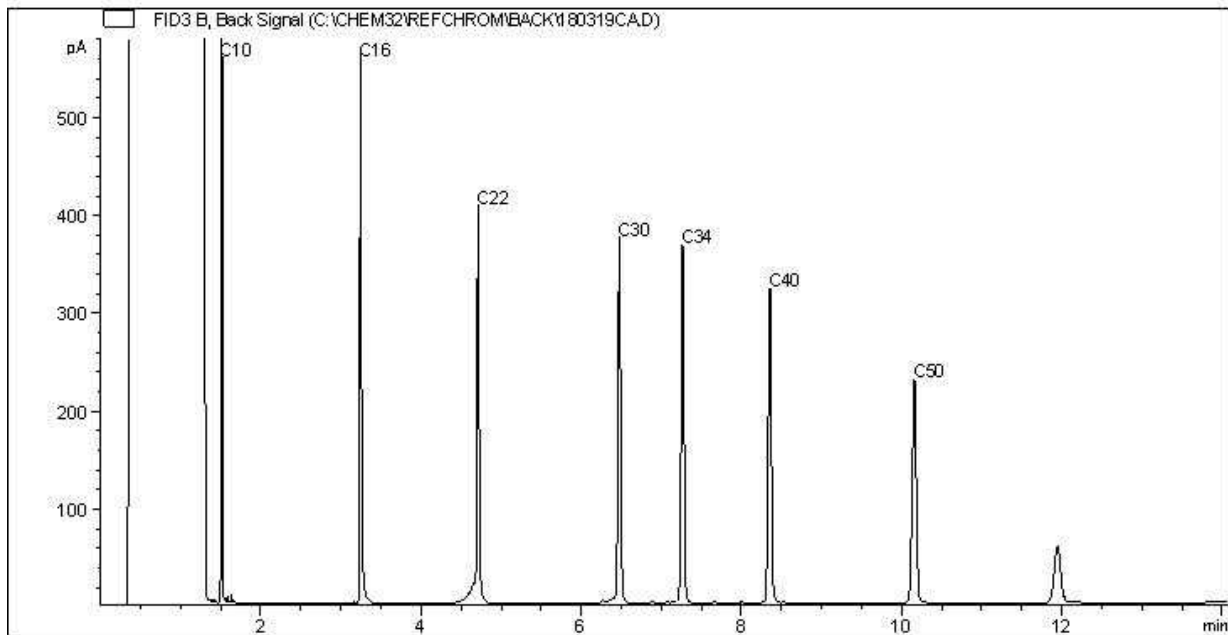
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



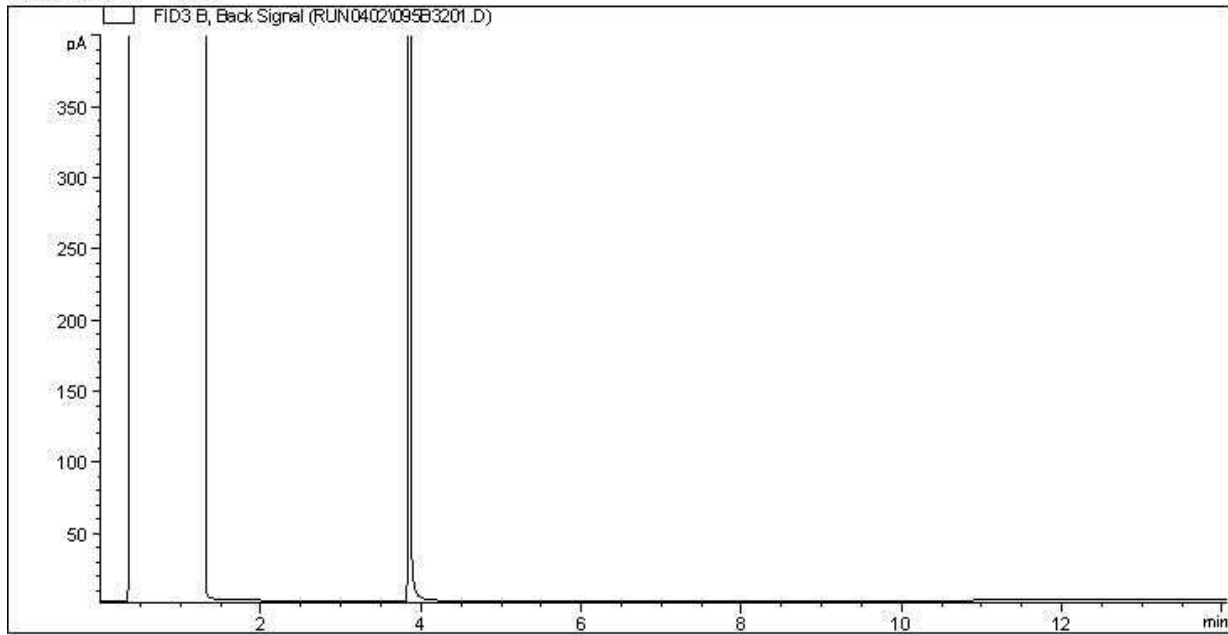
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

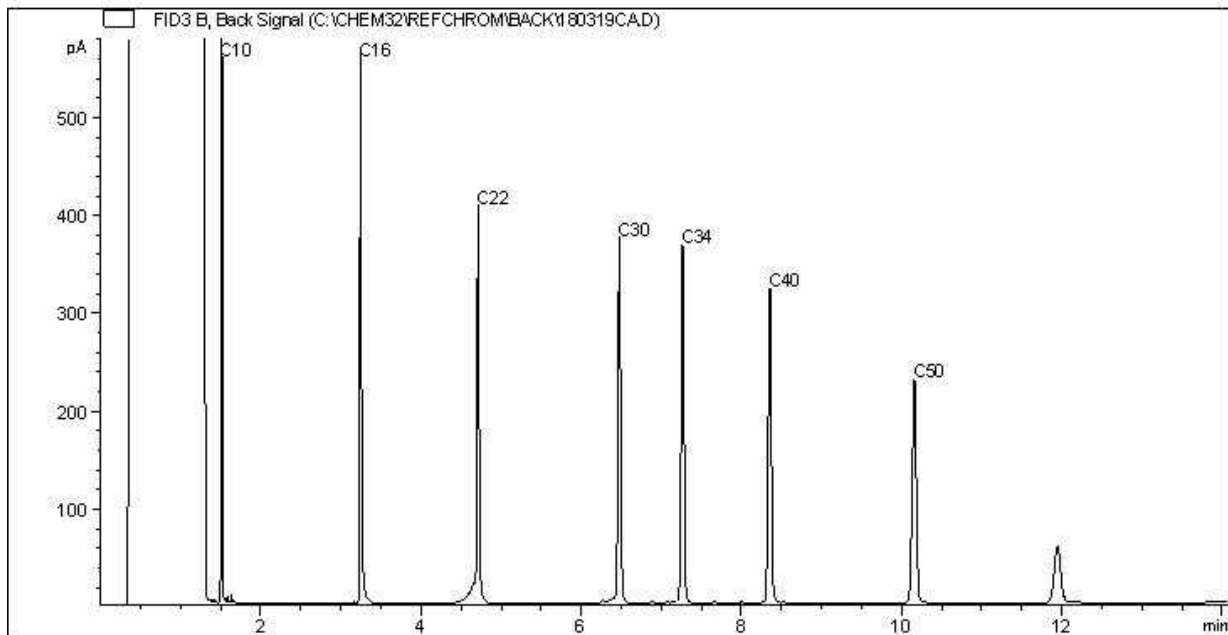
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



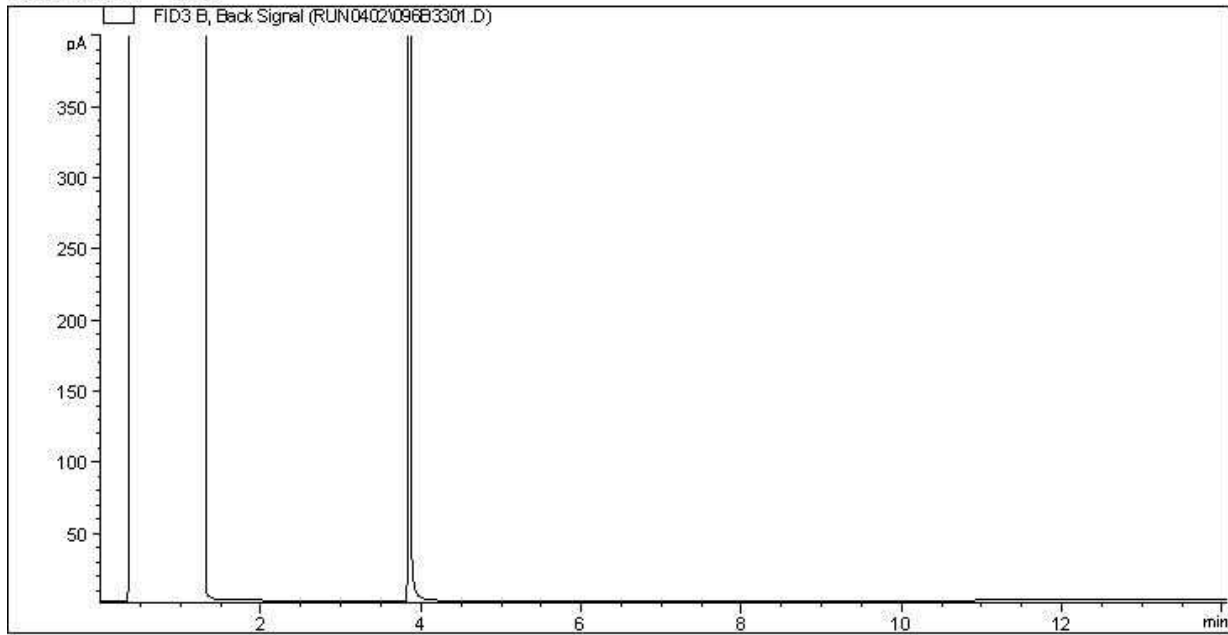
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

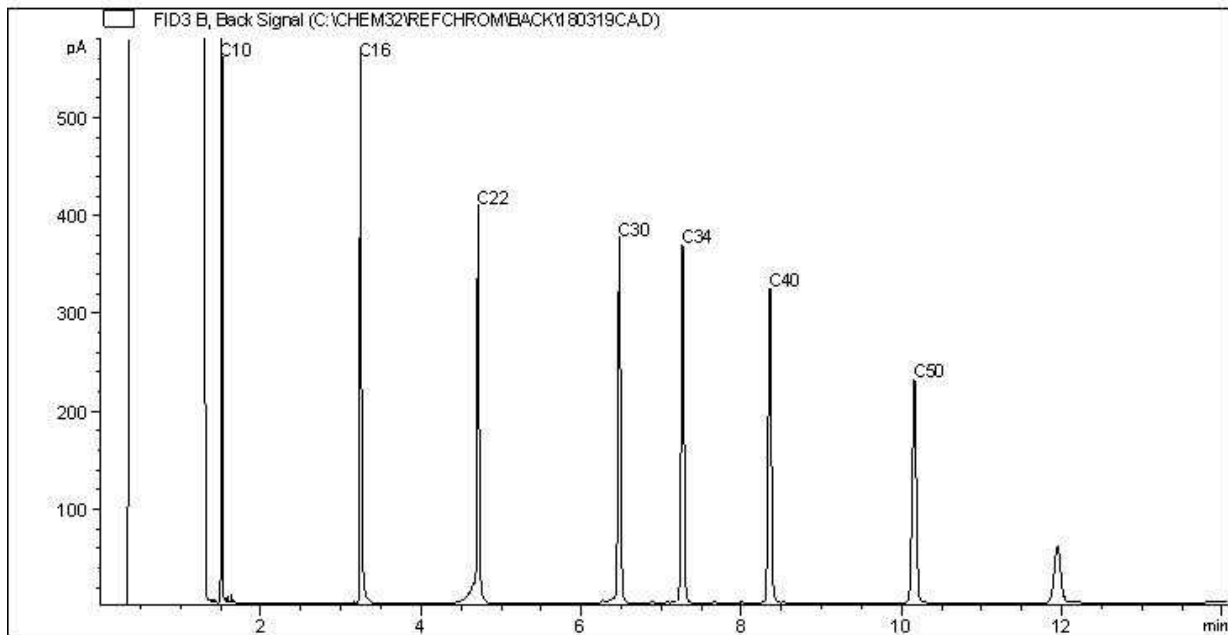
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



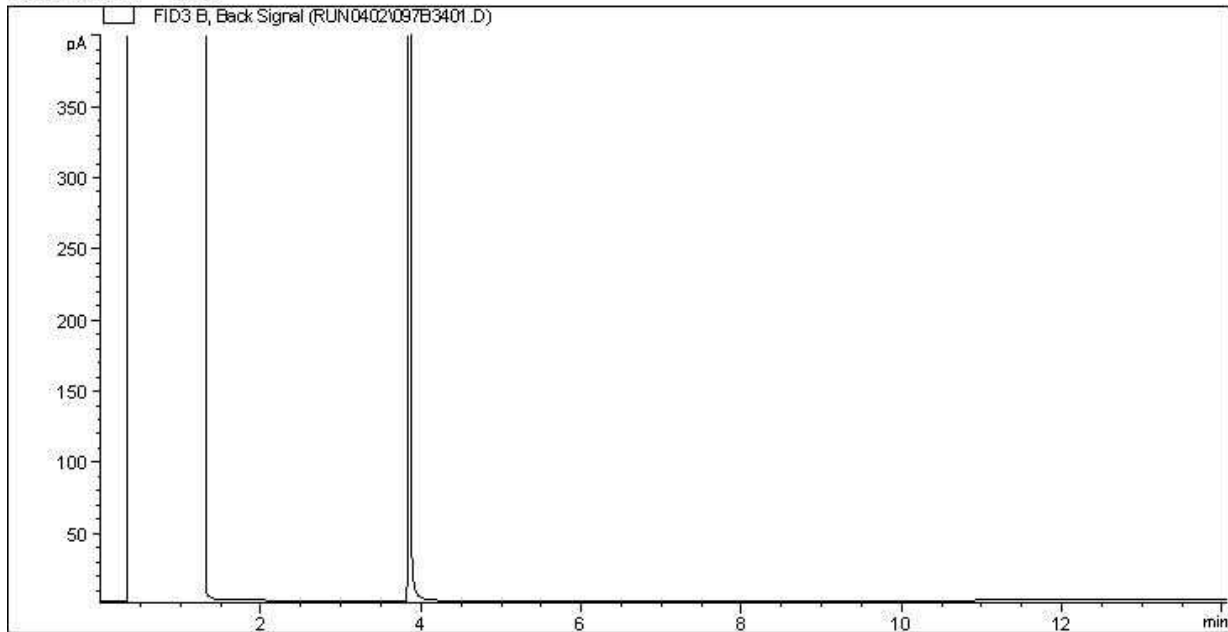
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

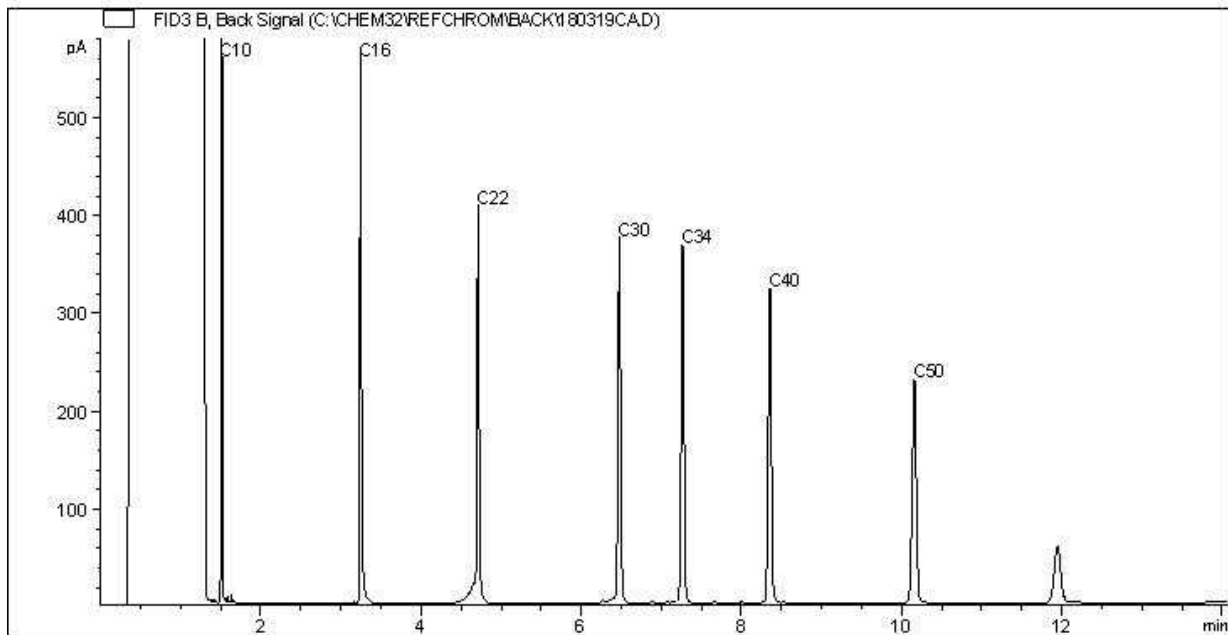
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

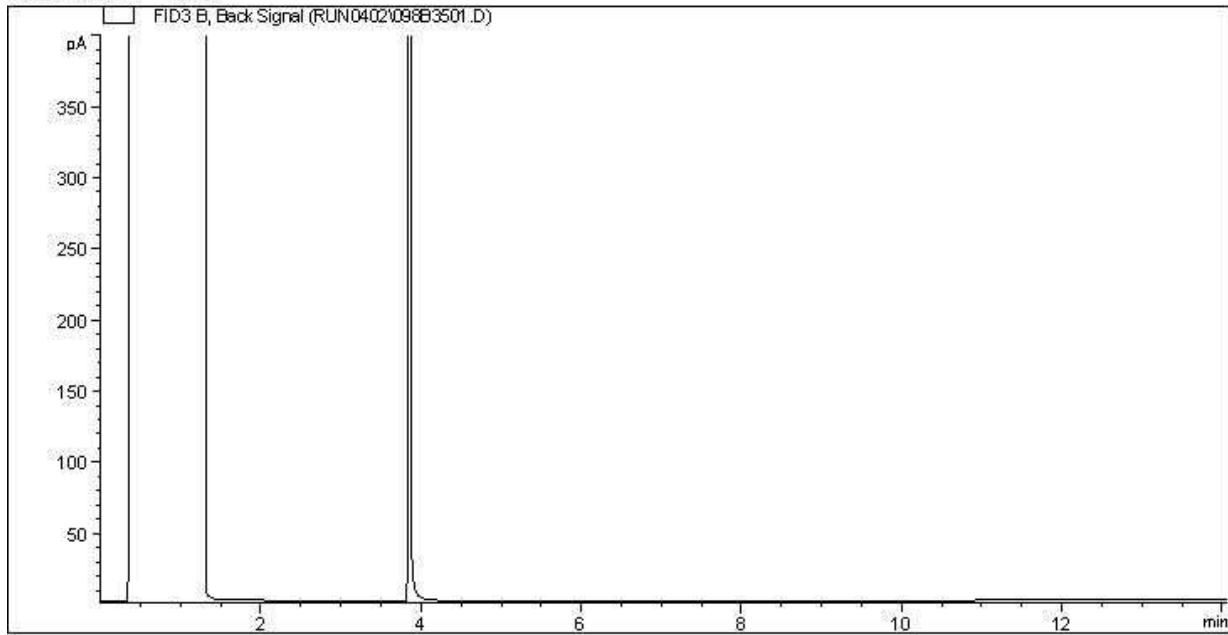
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

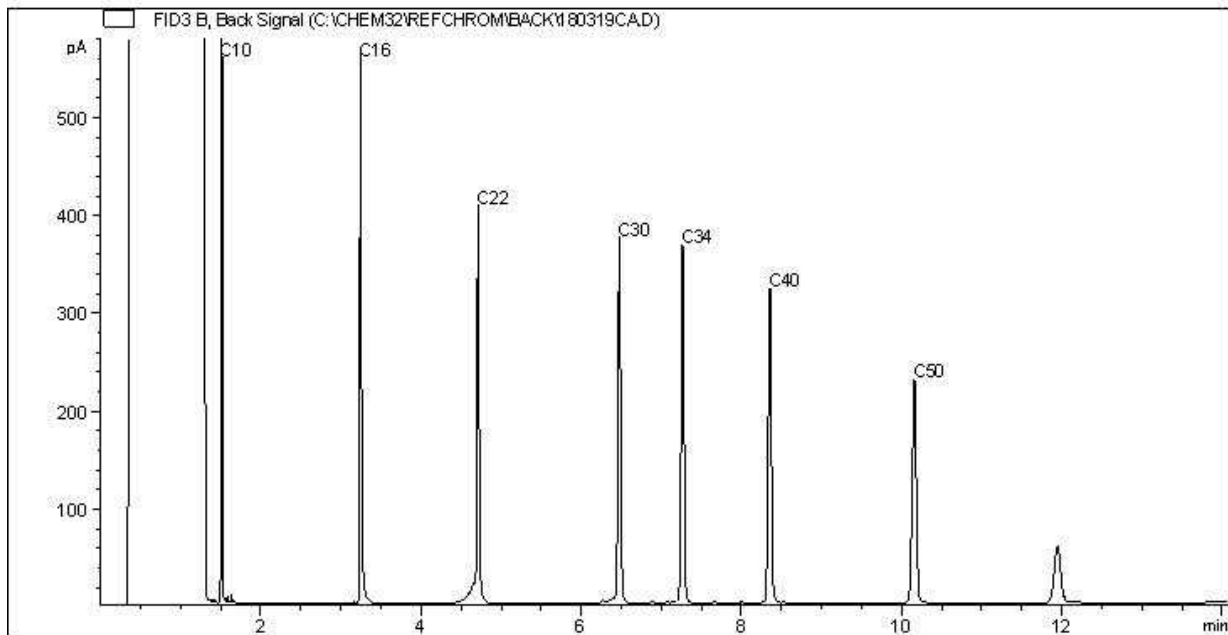


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



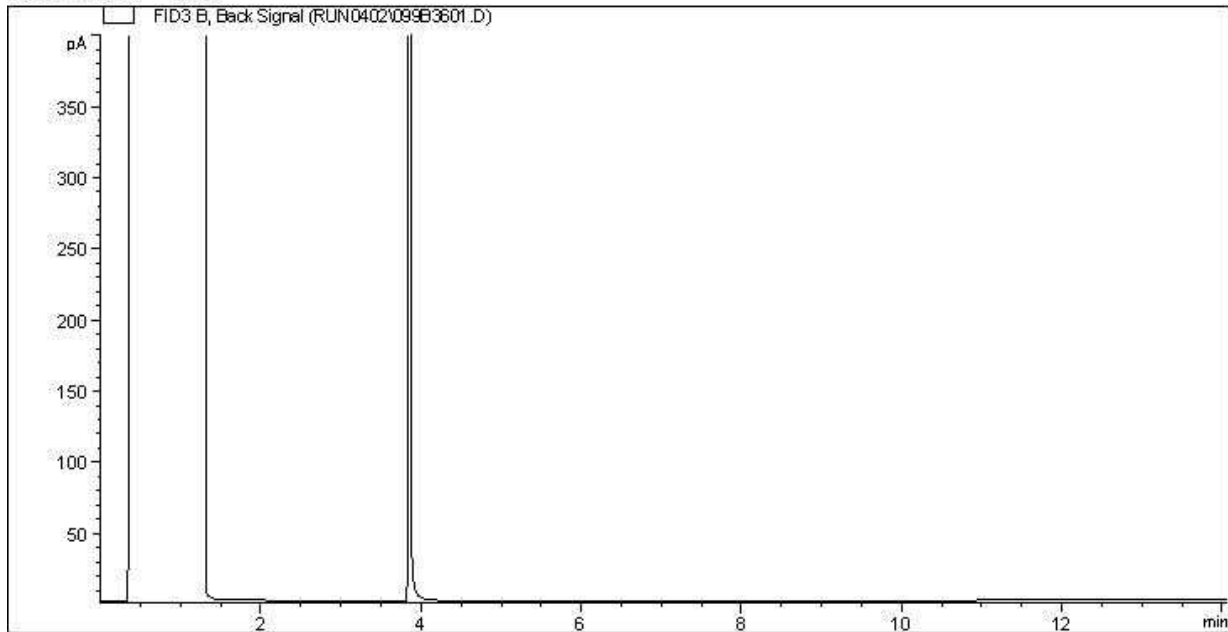
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

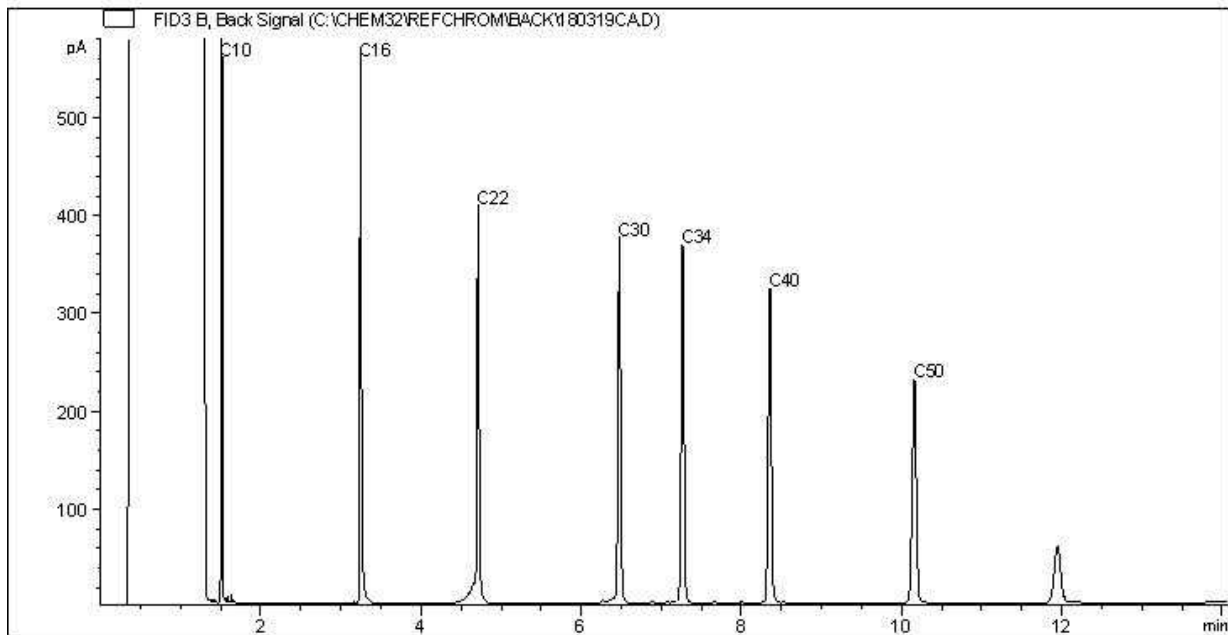
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



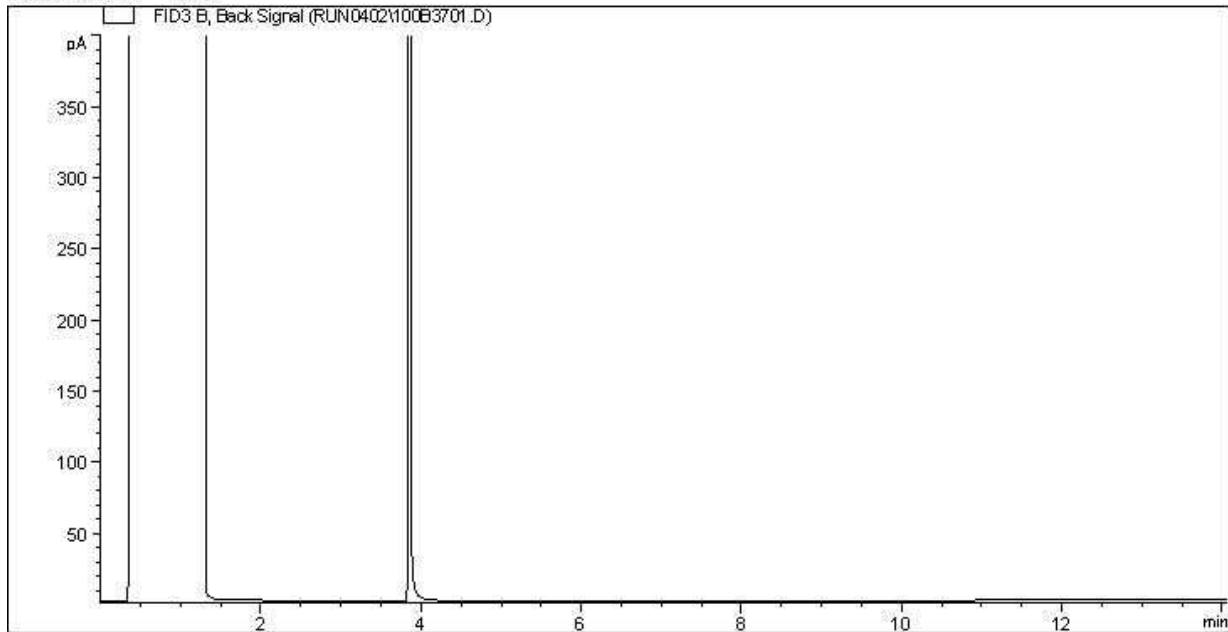
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

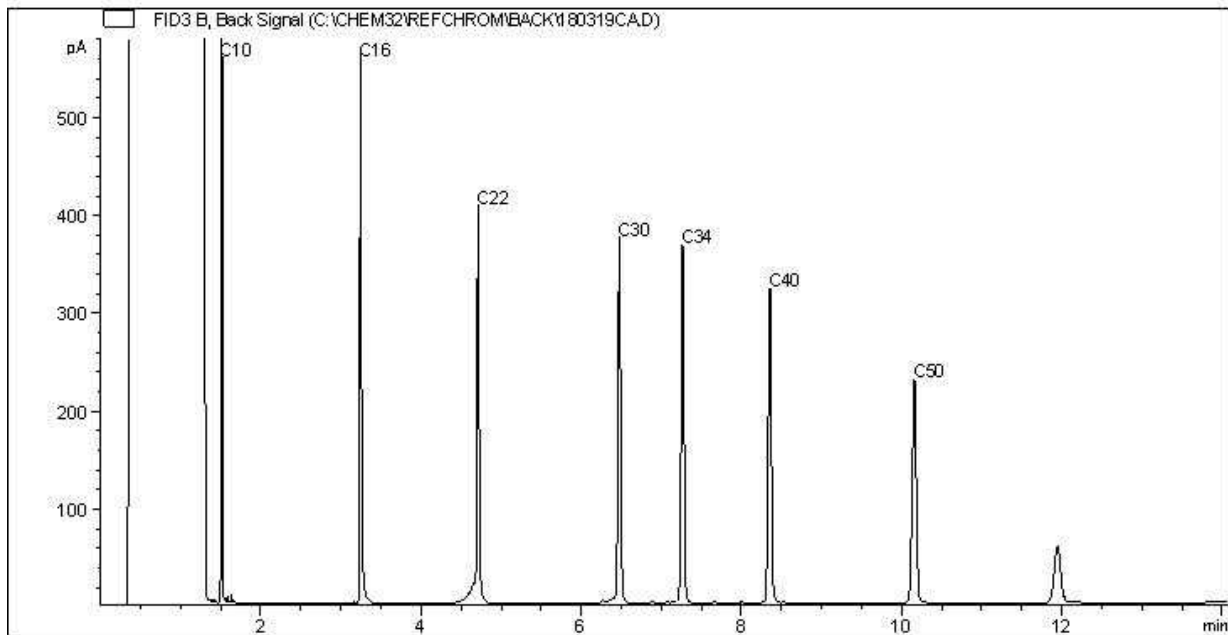
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



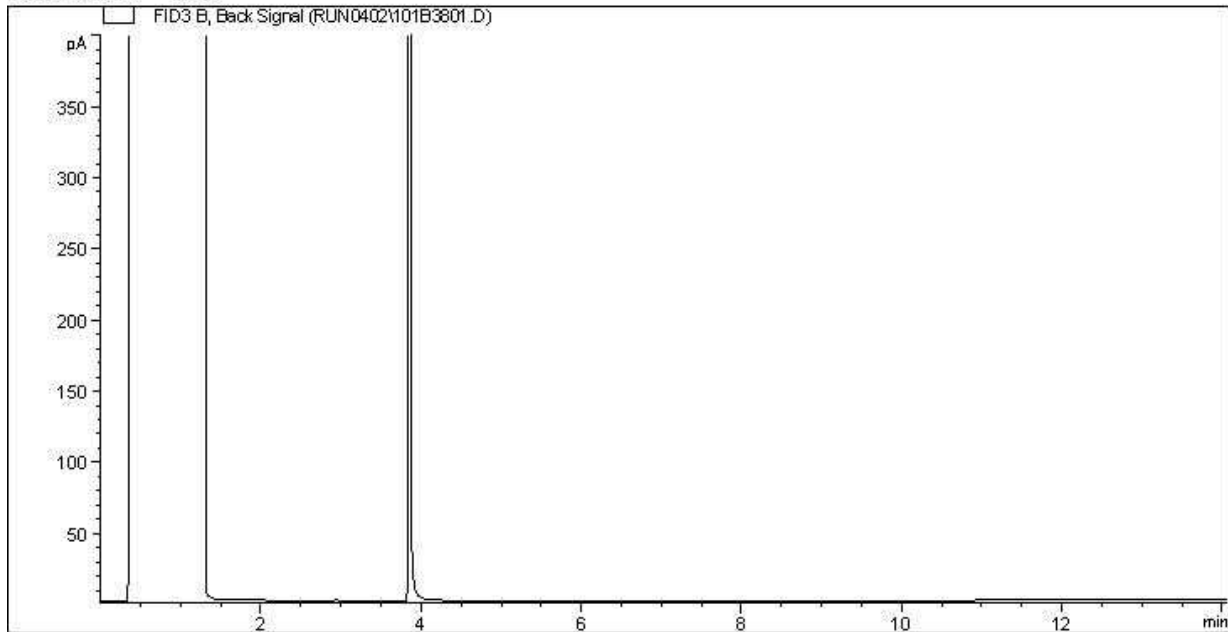
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

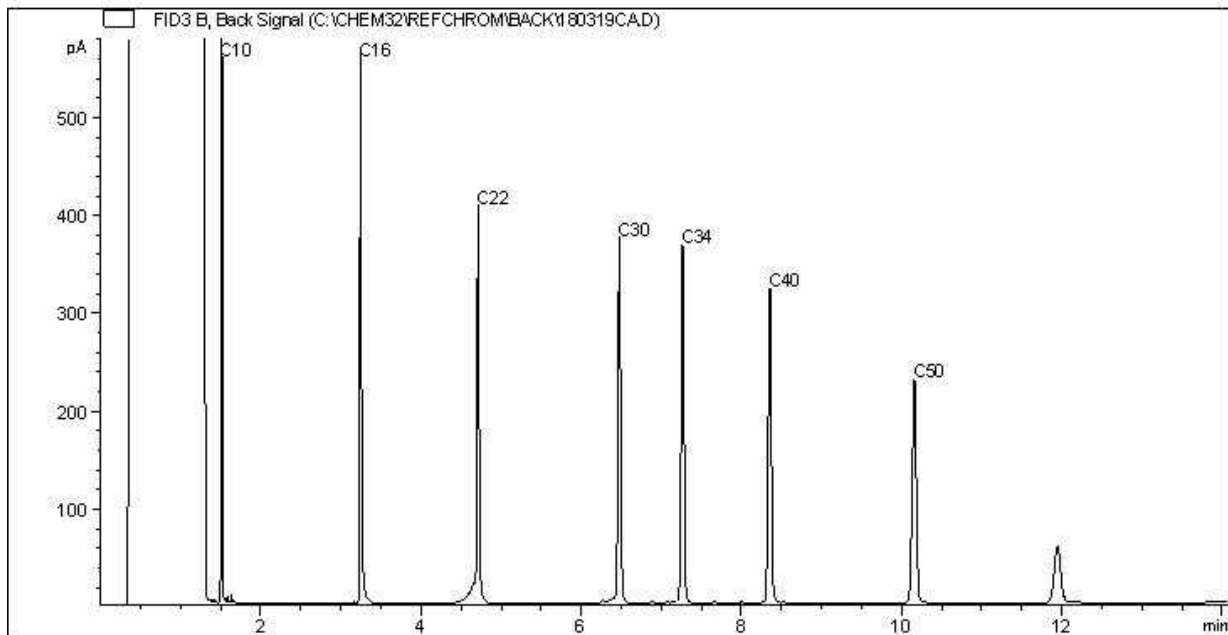
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



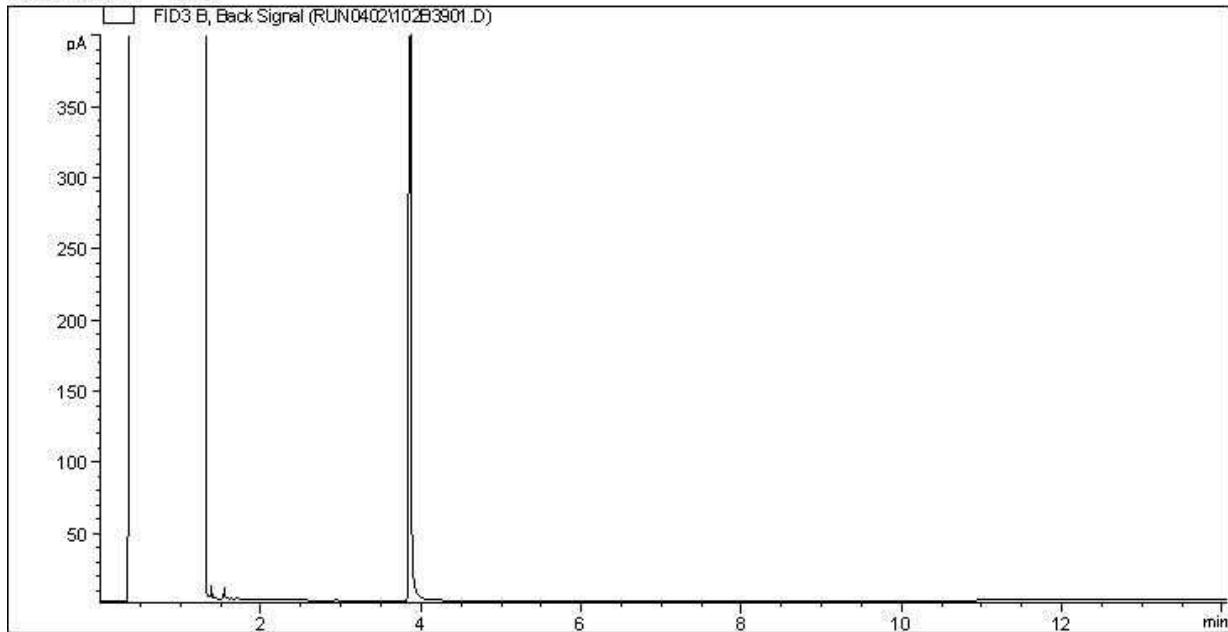
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

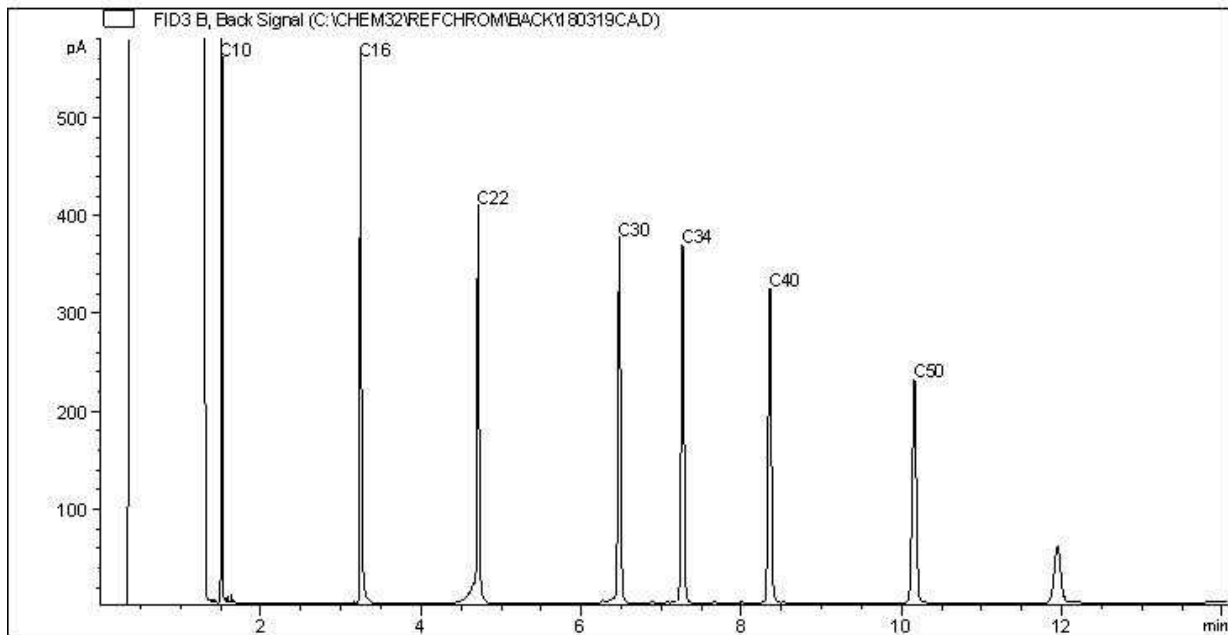
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



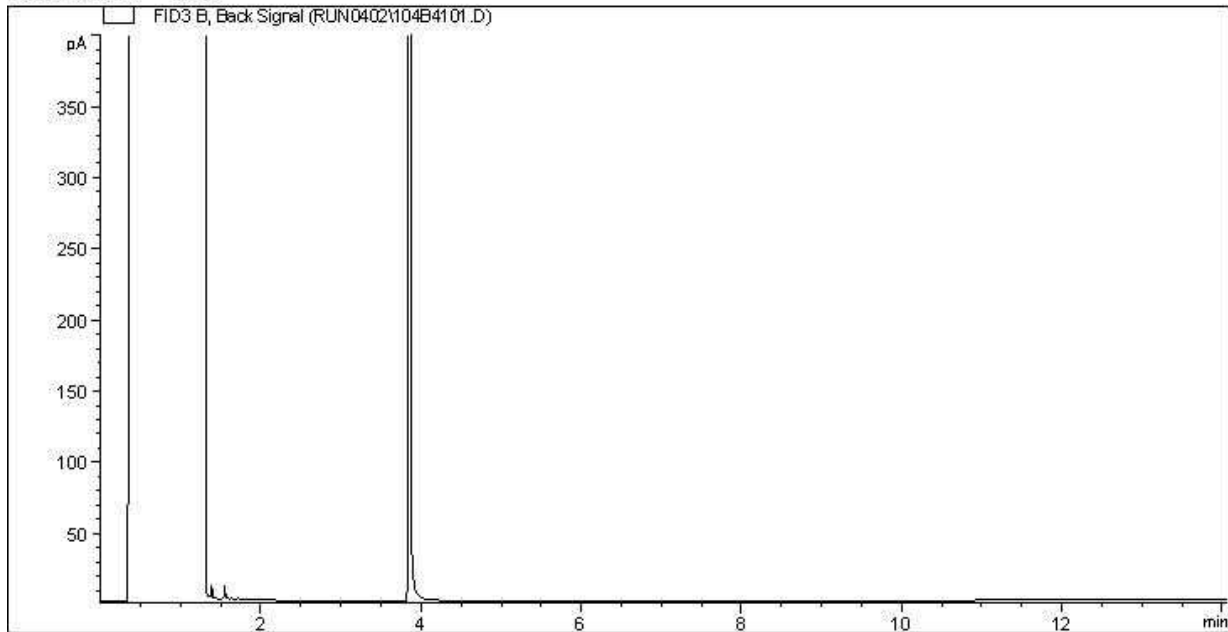
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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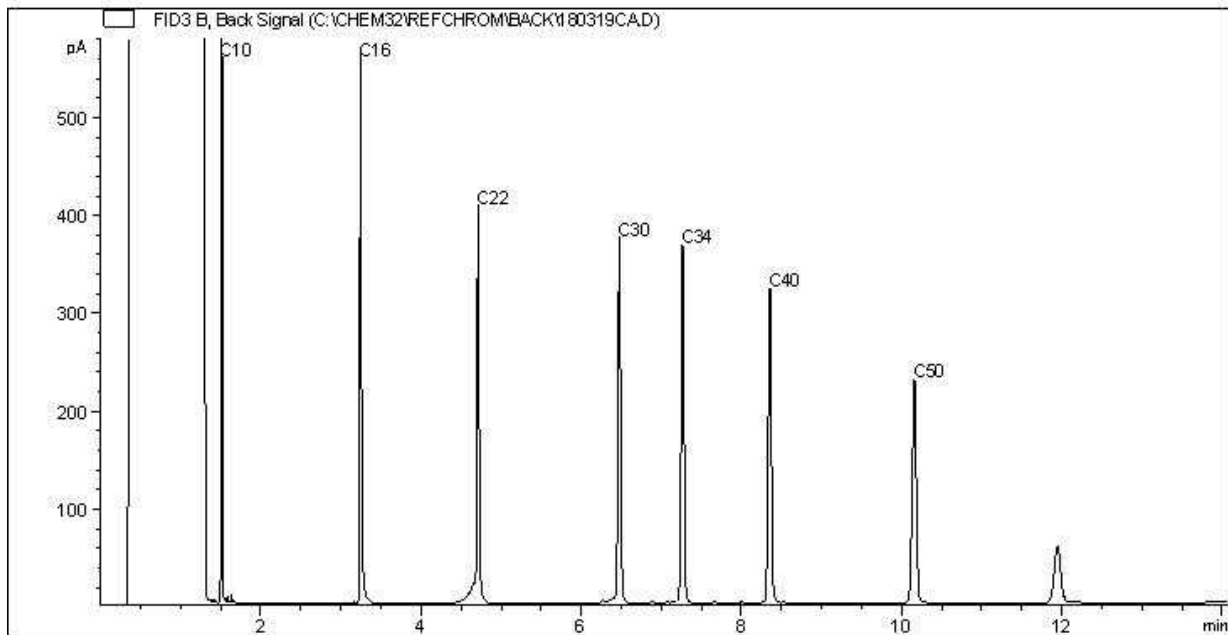
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



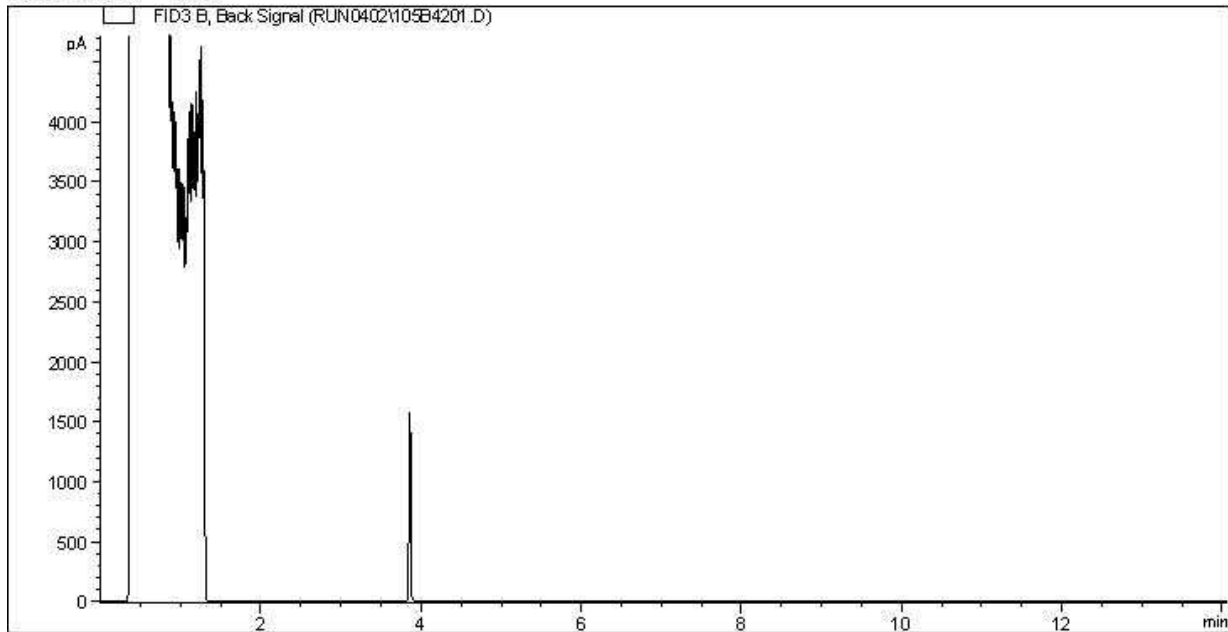
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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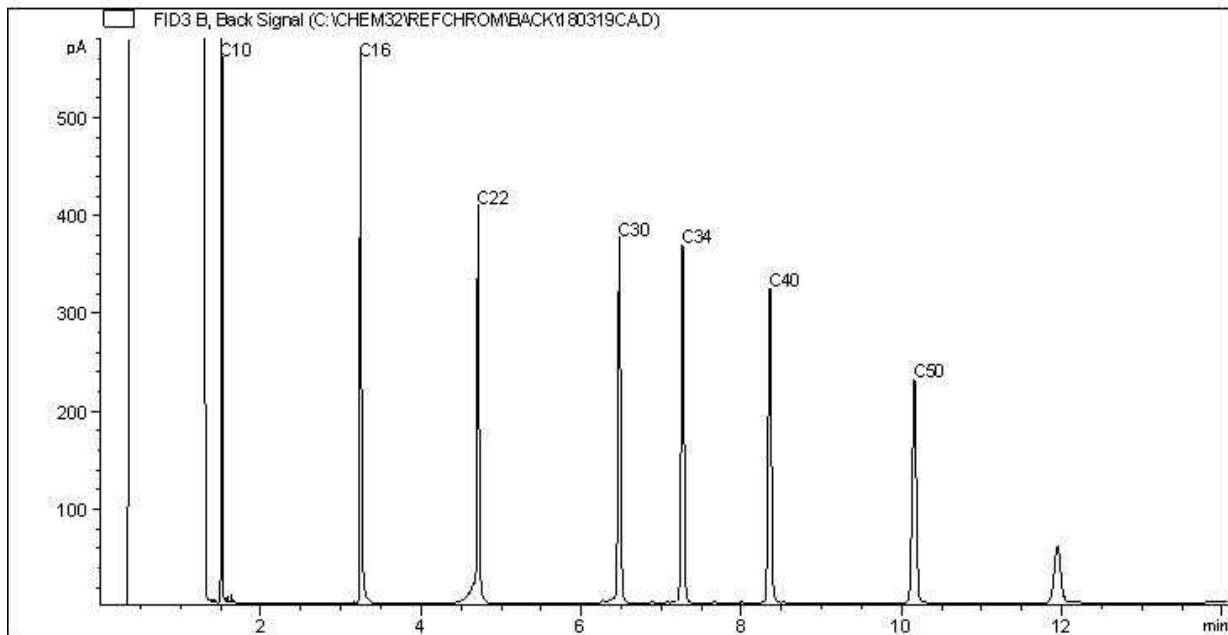
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

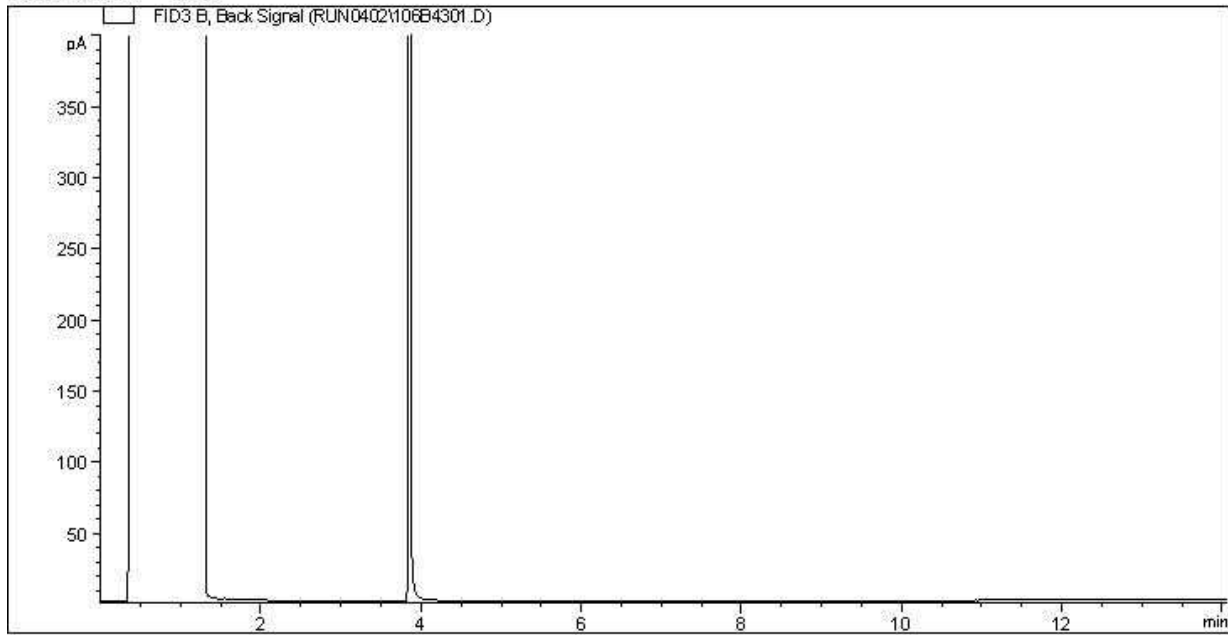
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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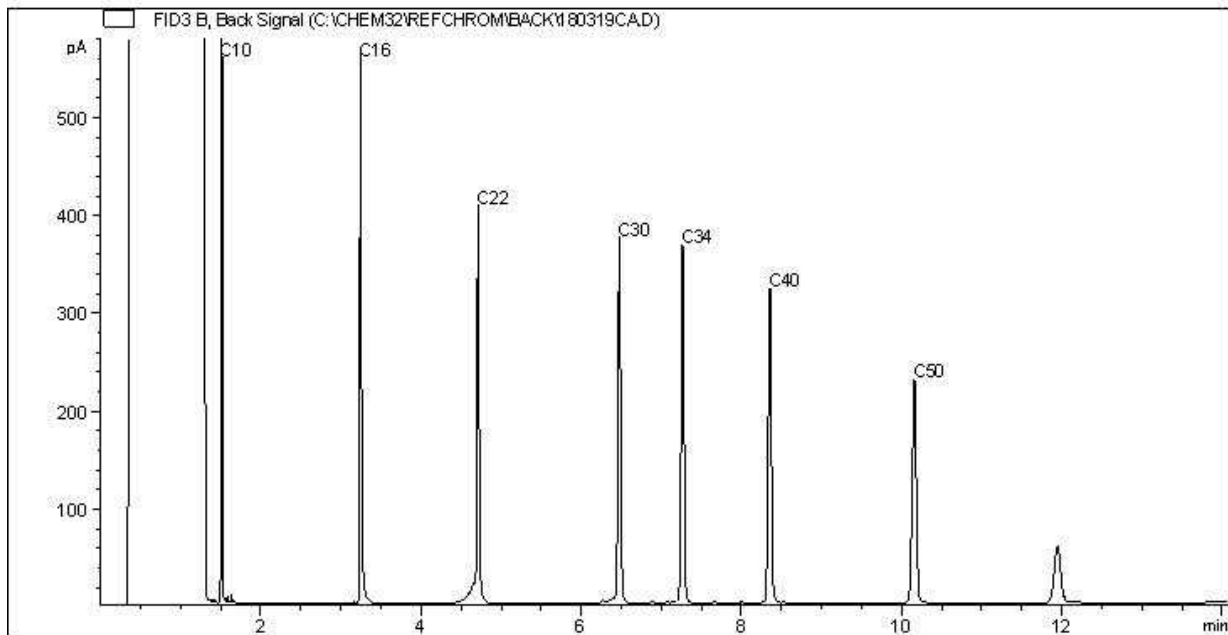


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



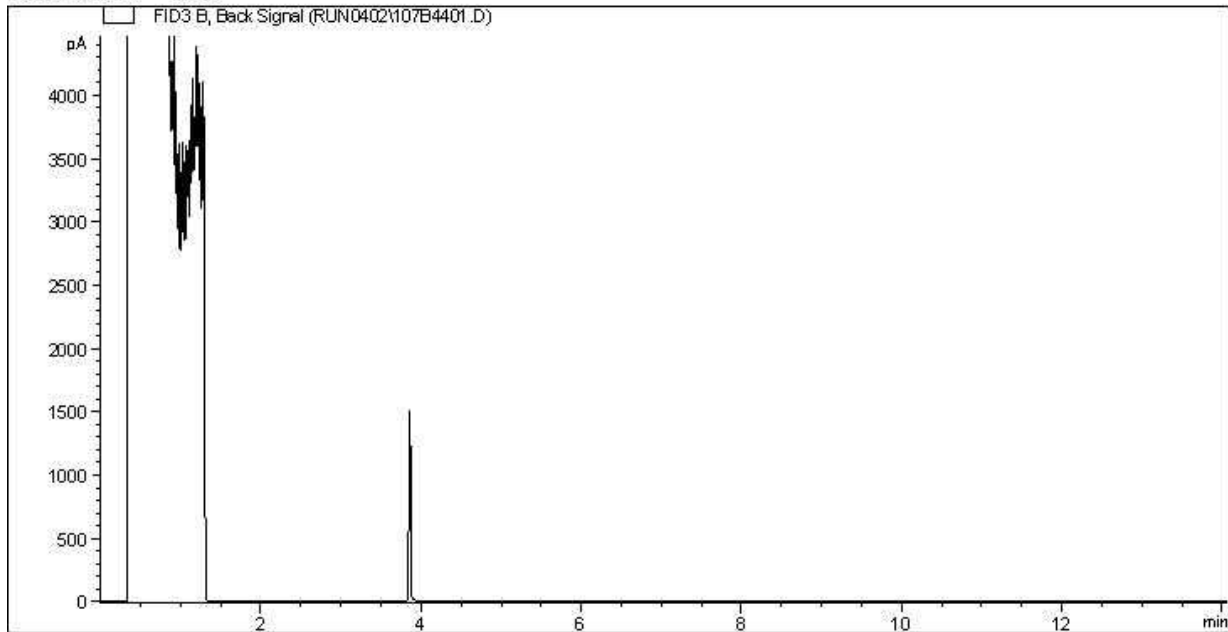
TYPICAL PRODUCT CARBON NUMBER RANGES

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Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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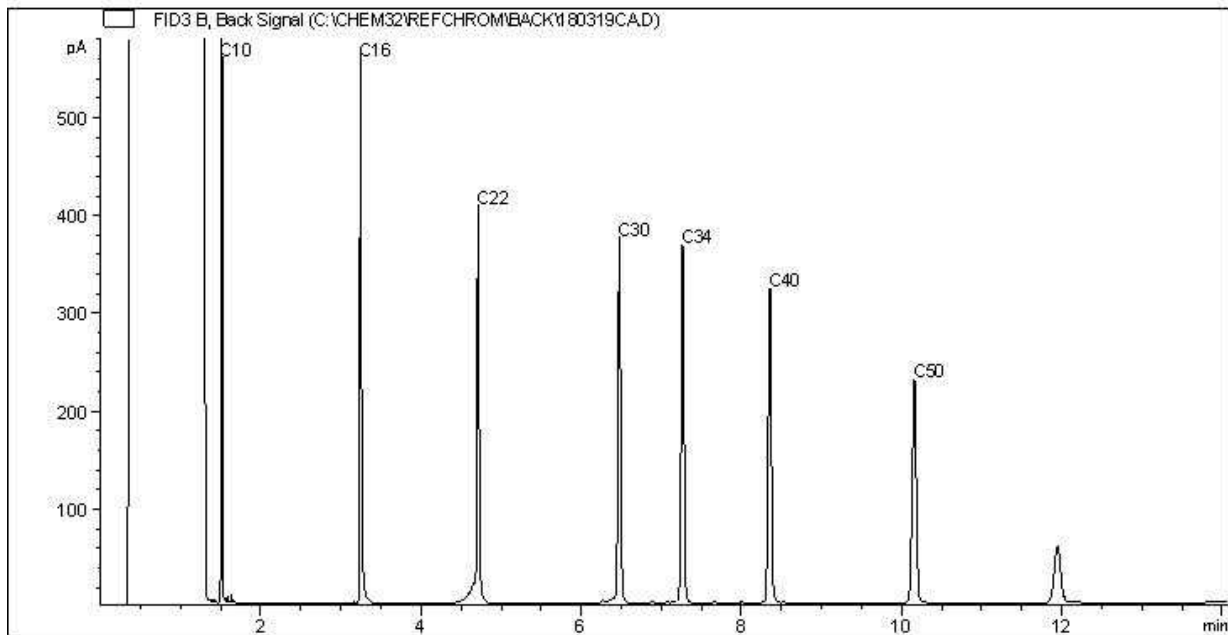
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



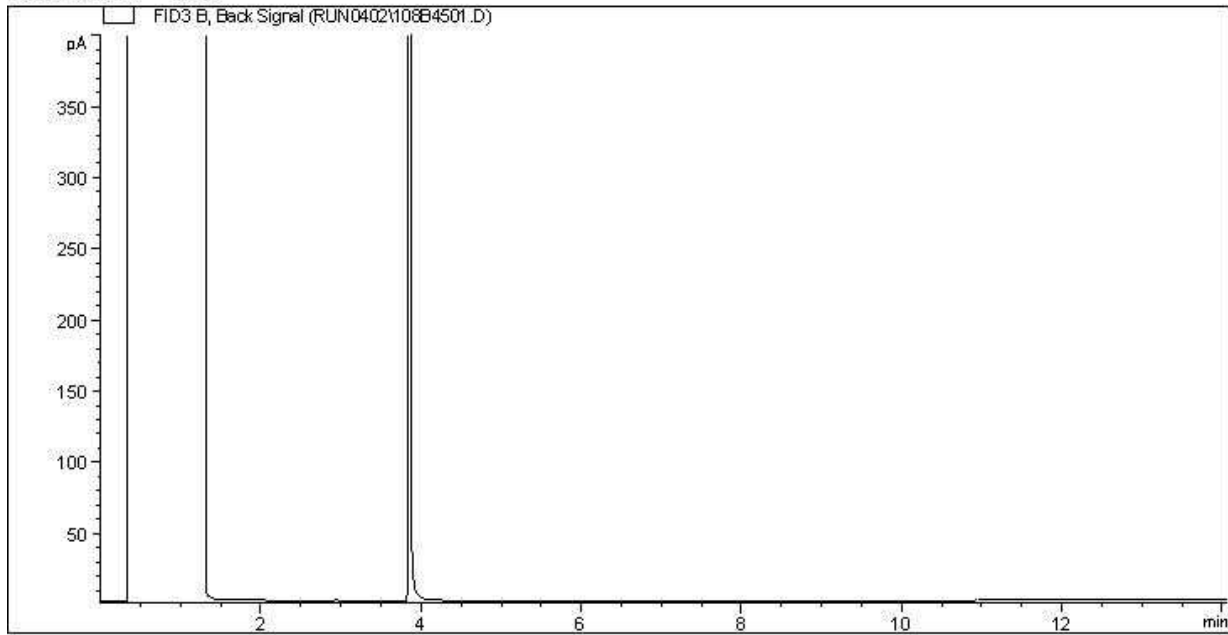
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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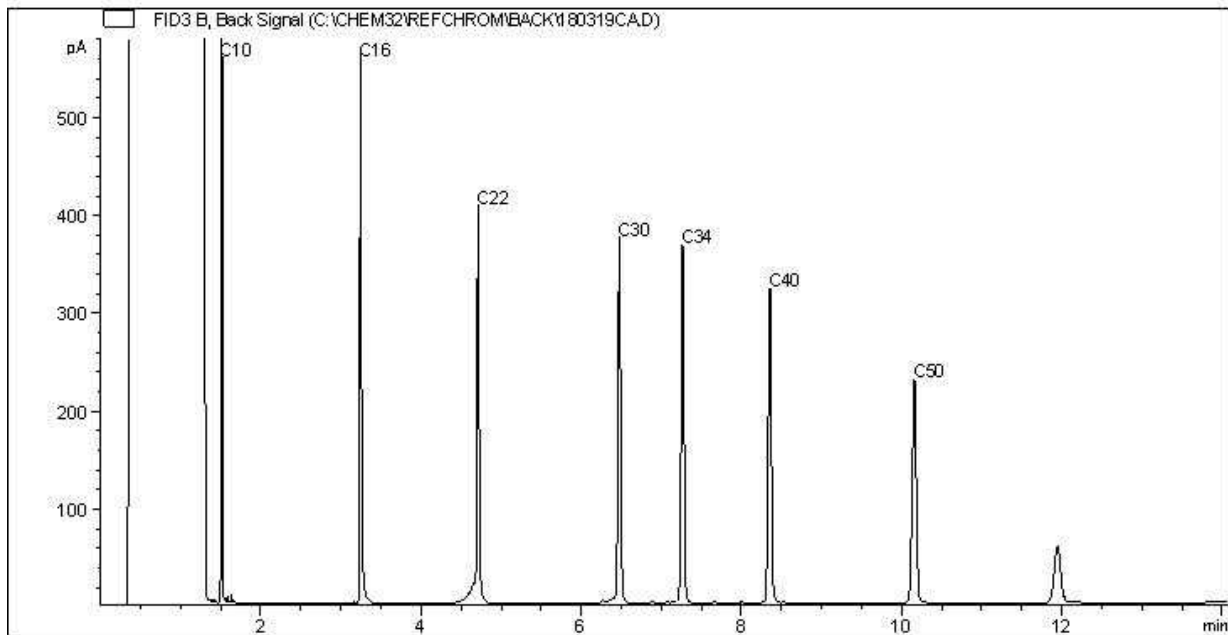
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC15



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

Your C.O.C. #: M070636

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/10**

Report #: R2538977

Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B824471**

**Received: 2018/04/04, 08:23**

Sample Matrix: GROUND WATER  
# Samples Received: 9

Analyses	Date		Laboratory Method	Analytical Method
	Quantity	Extracted		
BTEX/F1 in Water by HS GC/MS/FID	8	N/A	2018/04/06 AB SOP-00039	CCME CWS/EPA 8260c m
F1-BTEX	8	N/A	2018/04/09 AB SOP-00039	Auto Calc
CCME Hydrocarbons in Water (F2; C10-C16) (1)	5	2018/04/05	2018/04/05 AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
CCME Hydrocarbons in Water (F2; C10-C16) (1)	3	2018/04/05	2018/04/06 AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Benzo[a]pyrene Equivalency (2)	1	N/A	2018/04/06 AB SOP-00003	Auto Calc
PAH in Water by GC/MS	1	2018/04/05	2018/04/06 AB SOP-00037 / AB SOP-00003	EPA 3510C/8270D m
Total Trihalomethanes Calculation	9	N/A	2018/04/09 AB SOP-00056	Auto Calc
VOCs in Water by HS GC/MS (Std List)	9	N/A	2018/04/06 AB SOP-00056	EPA 5021a/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) Silica gel clean up employed.

(2) B[a]P TPE is calculated using 1/2 of the RDL for non detect results as per Alberta Environment instructions. This protocol may not apply in other jurisdictions.

Your C.O.C. #: M070636

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/10**  
Report #: R2538977  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B824471**

**Received: 2018/04/04, 08:23**

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.  
Jennifer Stephenson, B.Sc, Technical Specialist  
Email: [jstephenson@maxxam.ca](mailto:jstephenson@maxxam.ca)  
Phone# (403) 291-3077

=====  
This report has been generated and distributed using a secure automated process.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B824471  
Report Date: 2018/04/10

CLIFTON ASSOCIATES LTD.

**AT1 BTEX AND F1-F2 IN WATER (GROUND WATER)**

Maxxam ID		TF1636		TF1637	TF1638	TF1639	TF1640		
Sampling Date		2018/04/03 09:30		2018/04/03 10:45	2018/04/03 11:00	2018/04/03 10:00	2018/04/03 10:55		
COC Number		M070636		M070636	M070636	M070636	M070636		
	<b>UNITS</b>	<b>1928 B</b>	<b>RDL</b>	<b>1945</b>	<b>1951</b>	<b>1955 A</b>	<b>1978</b>	<b>RDL</b>	<b>QC Batch</b>

**Ext. Pet. Hydrocarbon**

F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	0.10	<0.10	<0.10	<0.10	<0.10	0.10	8951134
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**Volatiles**

Benzene	mg/L	3.0 (1)	0.0040	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	8951021
Toluene	mg/L	0.00055	0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	8951021
Ethylbenzene	mg/L	0.00051	0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	8951021
m & p-Xylene	mg/L	0.0027	0.00080	<0.00080	<0.00080	<0.00080	<0.00080	0.00080	8951021
o-Xylene	mg/L	0.095	0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	8951021
Xylenes (Total)	mg/L	0.098	0.00089	<0.00089	<0.00089	<0.00089	<0.00089	0.00089	8950824
F1 (C6-C10) - BTEX	mg/L	<0.10	0.10	<0.10	<0.10	<0.10	<0.10	0.10	8950824
F1 (C6-C10)	mg/L	3.0	0.10	<0.10	<0.10	<0.10	<0.10	0.10	8951021

**Surrogate Recovery (%)**

1,4-Difluorobenzene (sur.)	%	95	N/A	97	94	100	94	N/A	8951021
4-Bromofluorobenzene (sur.)	%	99	N/A	97	98	96	101	N/A	8951021
D4-1,2-Dichloroethane (sur.)	%	102	N/A	83	83	91	88	N/A	8951021
O-TERPHENYL (sur.)	%	94	N/A	93	92	96	96	N/A	8951134

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

Maxxam Job #: B824471  
Report Date: 2018/04/10

CLIFTON ASSOCIATES LTD.

**AT1 BTEX AND F1-F2 IN WATER (GROUND WATER)**

Maxxam ID		TF1641	TF1642	TF1643		
Sampling Date		2018/04/03 10:30	2018/04/03 10:15	2018/04/03 09:45		
COC Number		M070636	M070636	M070636		
	<b>UNITS</b>	<b>2001</b>	<b>2006</b>	<b>912</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Ext. Pet. Hydrocarbon</b>						
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	0.10	8951134
<b>Volatiles</b>						
Benzene	mg/L	<0.00040	<0.00040	<0.00040	0.00040	8951021
Toluene	mg/L	<0.00040	<0.00040	<0.00040	0.00040	8951021
Ethylbenzene	mg/L	<0.00040	<0.00040	<0.00040	0.00040	8951021
m & p-Xylene	mg/L	<0.00080	<0.00080	<0.00080	0.00080	8951021
o-Xylene	mg/L	<0.00040	<0.00040	<0.00040	0.00040	8951021
Xylenes (Total)	mg/L	<0.00089	<0.00089	<0.00089	0.00089	8950824
F1 (C6-C10) - BTEX	mg/L	<0.10	<0.10	<0.10	0.10	8950824
F1 (C6-C10)	mg/L	<0.10	<0.10	<0.10	0.10	8951021
<b>Surrogate Recovery (%)</b>						
1,4-Difluorobenzene (sur.)	%	95	94	91	N/A	8951021
4-Bromofluorobenzene (sur.)	%	104	88	94	N/A	8951021
D4-1,2-Dichloroethane (sur.)	%	84	82	82	N/A	8951021
O-TERPHENYL (sur.)	%	93	90	95	N/A	8951134
RDL = Reportable Detection Limit N/A = Not Applicable						



**SEMIVOLATILE ORGANICS BY GC-MS (GROUND WATER)**

<b>Maxxam ID</b>		TF1636		
<b>Sampling Date</b>		2018/04/03 09:30		
<b>COC Number</b>		M070636		
	<b>UNITS</b>	<b>1928 B</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Polycyclic Aromatics</b>				
Benzo[a]pyrene equivalency	mg/L	<0.000010	0.000010	8950832
Acenaphthene	mg/L	<0.00010	0.00010	8951125
Acenaphthylene	mg/L	<0.00010	0.00010	8951125
Acridine	mg/L	<0.000050	0.000050	8951125
Anthracene	mg/L	<0.000010	0.000010	8951125
Benzo(a)anthracene	mg/L	<0.0000085	0.0000085	8951125
Benzo(b&j)fluoranthene	mg/L	<0.0000085	0.0000085	8951125
Benzo(k)fluoranthene	mg/L	<0.0000085	0.0000085	8951125
Benzo(g,h,i)perylene	mg/L	<0.0000085	0.0000085	8951125
Benzo(c)phenanthrene	mg/L	<0.000050	0.000050	8951125
Benzo(a)pyrene	mg/L	<0.0000075	0.0000075	8951125
Benzo[e]pyrene	mg/L	<0.000050	0.000050	8951125
Chrysene	mg/L	<0.0000085	0.0000085	8951125
Dibenz(a,h)anthracene	mg/L	<0.0000075	0.0000075	8951125
Fluoranthene	mg/L	<0.000010	0.000010	8951125
Fluorene	mg/L	<0.000050	0.000050	8951125
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	0.0000085	8951125
1-Methylnaphthalene	mg/L	<0.00010	0.00010	8951125
2-Methylnaphthalene	mg/L	<0.00010	0.00010	8951125
Naphthalene	mg/L	<0.00010	0.00010	8951125
Phenanthrene	mg/L	<0.000050	0.000050	8951125
Perylene	mg/L	<0.000050	0.000050	8951125
Pyrene	mg/L	<0.000020	0.000020	8951125
Quinoline	mg/L	<0.00020	0.00020	8951125
<b>Surrogate Recovery (%)</b>				
D10-ANTHRACENE (sur.)	%	91	N/A	8951125
D8-ACENAPHTHYLENE (sur.)	%	95	N/A	8951125
D8-NAPHTHALENE (sur.)	%	69	N/A	8951125
TERPHENYL-D14 (sur.)	%	121	N/A	8951125
RDL = Reportable Detection Limit N/A = Not Applicable				

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TF1636	TF1636	TF1637	TF1638	TF1639		
Sampling Date		2018/04/03 09:30	2018/04/03 09:30	2018/04/03 10:45	2018/04/03 11:00	2018/04/03 10:00		
COC Number		M070636	M070636	M070636	M070636	M070636		
	UNITS	1928 B	1928 B Lab-Dup	1945	1951	1955 A	RDL	QC Batch

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	N/A	<0.0013	<0.0013	<0.0013	0.0013	8950942
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8951031
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8951031
Chloroethane	mg/L	0.0021	0.0021	<0.0010	<0.0010	<0.0010	0.0010	8951031
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Chloromethane	mg/L	0.0029	0.0026	<0.0020	<0.0020	<0.0020	0.0020	8951031
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8951031
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,2-dichloroethane	mg/L	0.37	0.31	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8951031
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8951031
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8951031
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8951031
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8951031

RDL = Reportable Detection Limit  
 Lab-Dup = Laboratory Initiated Duplicate  
 N/A = Not Applicable

Maxxam Job #: B824471  
Report Date: 2018/04/10

CLIFTON ASSOCIATES LTD.

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TF1636	TF1636	TF1637	TF1638	TF1639		
Sampling Date		2018/04/03 09:30	2018/04/03 09:30	2018/04/03 10:45	2018/04/03 11:00	2018/04/03 10:00		
COC Number		M070636	M070636	M070636	M070636	M070636		
	UNITS	1928 B	1928 B Lab-Dup	1945	1951	1955 A	RDL	QC Batch
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,1,2-trichloroethane	mg/L	0.0034	0.0031	<0.00050	<0.00050	<0.00050	0.00050	8951031
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,2,4-trimethylbenzene	mg/L	0.00080	0.00075	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	103	105	101	100	102	N/A	8951031
4-Bromofluorobenzene (sur.)	%	86	86	92	94	91	N/A	8951031
D4-1,2-Dichloroethane (sur.)	%	129	118	99	99	98	N/A	8951031
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable								

Maxxam Job #: B824471  
Report Date: 2018/04/10

CLIFTON ASSOCIATES LTD.

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TF1640	TF1641	TF1642	TF1643	TF1644		
Sampling Date		2018/04/03 10:55	2018/04/03 10:30	2018/04/03 10:15	2018/04/03 09:45	2018/04/03		
COC Number		M070636	M070636	M070636	M070636	M070636		
	UNITS	1978	2001	2006	912	TRIP BLANK 5	RDL	QC Batch

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0013	8950942
Benzene	mg/L	N/A	N/A	N/A	N/A	<0.00040	0.00040	8951031
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8951031
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8951031
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8951031
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8951031
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8951031
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,2-dichloroethane	mg/L	<0.00050	0.0017	0.0021	<0.00050	<0.00050	0.00050	8951031
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8951031
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Ethylbenzene	mg/L	N/A	N/A	N/A	N/A	<0.00040	0.00040	8951031
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8951031
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8951031
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Toluene	mg/L	N/A	N/A	N/A	N/A	<0.00040	0.00040	8951031
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B824471  
Report Date: 2018/04/10

CLIFTON ASSOCIATES LTD.

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TF1640	TF1641	TF1642	TF1643	TF1644		
Sampling Date		2018/04/03 10:55	2018/04/03 10:30	2018/04/03 10:15	2018/04/03 09:45	2018/04/03		
COC Number		M070636	M070636	M070636	M070636	M070636		
	UNITS	1978	2001	2006	912	TRIP BLANK 5	RDL	QC Batch
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8951031
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8951031
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8951031
Xylenes (Total)	mg/L	N/A	N/A	N/A	N/A	<0.00080	0.00080	8951031
m & p-Xylene	mg/L	N/A	N/A	N/A	N/A	<0.00080	0.00080	8951031
o-Xylene	mg/L	N/A	N/A	N/A	N/A	<0.00040	0.00040	8951031
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	99	100	101	100	99	N/A	8951031
4-Bromofluorobenzene (sur.)	%	92	95	91	91	92	N/A	8951031
D4-1,2-Dichloroethane (sur.)	%	100	106	98	104	97	N/A	8951031
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B824471  
Report Date: 2018/04/10

CLIFTON ASSOCIATES LTD.

**GENERAL COMMENTS**

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

Package 1	1.3°C
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**Results relate only to the items tested.**

Maxxam Job #: B824471  
Report Date: 2018/04/10

CLIFTON ASSOCIATES LTD.

**QUALITY ASSURANCE REPORT**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8951021	DO1	Matrix Spike	1,4-Difluorobenzene (sur.)	2018/04/06	96	%	50 - 140		
			4-Bromofluorobenzene (sur.)	2018/04/06	101	%	50 - 140		
			D4-1,2-Dichloroethane (sur.)	2018/04/06	89	%	50 - 140		
			Benzene	2018/04/06	84	%	50 - 140		
			Toluene	2018/04/06	87	%	50 - 140		
			Ethylbenzene	2018/04/06	91	%	50 - 140		
			m & p-Xylene	2018/04/06	89	%	50 - 140		
			o-Xylene	2018/04/06	86	%	50 - 140		
			F1 (C6-C10)	2018/04/06	90	%	60 - 140		
			8951021	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2018/04/06	85	%
4-Bromofluorobenzene (sur.)	2018/04/06	88				%	50 - 140		
D4-1,2-Dichloroethane (sur.)	2018/04/06	83				%	50 - 140		
Benzene	2018/04/06	84				%	60 - 130		
Toluene	2018/04/06	91				%	60 - 130		
Ethylbenzene	2018/04/06	98				%	60 - 130		
m & p-Xylene	2018/04/06	94				%	60 - 130		
o-Xylene	2018/04/06	96				%	60 - 130		
F1 (C6-C10)	2018/04/06	92				%	60 - 140		
8951021	DO1	Method Blank				1,4-Difluorobenzene (sur.)	2018/04/06	88	%
			4-Bromofluorobenzene (sur.)	2018/04/06	80	%	50 - 140		
			D4-1,2-Dichloroethane (sur.)	2018/04/06	81	%	50 - 140		
			Benzene	2018/04/06	<0.00040	mg/L			
			Toluene	2018/04/06	<0.00040	mg/L			
			Ethylbenzene	2018/04/06	<0.00040	mg/L			
			m & p-Xylene	2018/04/06	<0.00080	mg/L			
			o-Xylene	2018/04/06	<0.00040	mg/L			
			F1 (C6-C10)	2018/04/06	<0.10	mg/L			
			8951021	DO1	RPD	Benzene	2018/04/06	NC	%
Toluene	2018/04/06	NC				%	30		
Ethylbenzene	2018/04/06	NC				%	30		
m & p-Xylene	2018/04/06	NC				%	30		
o-Xylene	2018/04/06	NC				%	30		
F1 (C6-C10)	2018/04/06	NC				%	30		
8951031	RSU	Matrix Spike [TF1637-01]				1,4-Difluorobenzene (sur.)	2018/04/06	103	%
			4-Bromofluorobenzene (sur.)	2018/04/06	103	%	70 - 130		
			D4-1,2-Dichloroethane (sur.)	2018/04/06	98	%	70 - 130		
			Benzene	2018/04/06	90	%	70 - 130		
			Bromodichloromethane	2018/04/06	91	%	70 - 130		
			Bromoform	2018/04/06	122	%	70 - 130		
			Bromomethane	2018/04/06	84	%	70 - 130		
			Carbon tetrachloride	2018/04/06	90	%	70 - 130		
			Chlorobenzene	2018/04/06	110	%	70 - 130		
			Chlorodibromomethane	2018/04/06	118	%	70 - 130		
			Chloroethane	2018/04/06	83	%	70 - 130		
			Chloroform	2018/04/06	90	%	70 - 130		
			Chloromethane	2018/04/06	82	%	70 - 130		
			1,2-dibromoethane	2018/04/06	116	%	70 - 130		
			1,2-dichlorobenzene	2018/04/06	105	%	70 - 130		
			1,3-dichlorobenzene	2018/04/06	96	%	70 - 130		
			1,4-dichlorobenzene	2018/04/06	99	%	70 - 130		
			1,1-dichloroethane	2018/04/06	90	%	70 - 130		
			1,2-dichloroethane	2018/04/06	98	%	70 - 130		
			1,1-dichloroethene	2018/04/06	98	%	70 - 130		
			cis-1,2-dichloroethene	2018/04/06	100	%	70 - 130		
			trans-1,2-dichloroethene	2018/04/06	96	%	70 - 130		



Maxxam Job #: B824471  
Report Date: 2018/04/10

CLIFTON ASSOCIATES LTD.

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dichloromethane	2018/04/06		89	%	70 - 130
			1,2-dichloropropane	2018/04/06		91	%	70 - 130
			cis-1,3-dichloropropene	2018/04/06		103	%	70 - 130
			trans-1,3-dichloropropene	2018/04/06		115	%	70 - 130
			Ethylbenzene	2018/04/06		101	%	70 - 130
			Methyl methacrylate	2018/04/06		100	%	70 - 130
			Methyl-tert-butylether (MTBE)	2018/04/06		93	%	70 - 130
			Styrene	2018/04/06		109	%	70 - 130
			1,1,1,2-tetrachloroethane	2018/04/06		107	%	70 - 130
			1,1,2,2-tetrachloroethane	2018/04/06		110	%	70 - 130
			Tetrachloroethene	2018/04/06		108	%	70 - 130
			Toluene	2018/04/06		102	%	70 - 130
			1,2,3-trichlorobenzene	2018/04/06		104	%	70 - 130
			1,2,4-trichlorobenzene	2018/04/06		103	%	70 - 130
			1,3,5-trichlorobenzene	2018/04/06		101	%	70 - 130
			1,1,1-trichloroethane	2018/04/06		94	%	70 - 130
			1,1,2-trichloroethane	2018/04/06		94	%	70 - 130
			Trichloroethene	2018/04/06		100	%	70 - 130
			Trichlorofluoromethane	2018/04/06		83	%	70 - 130
			1,2,4-trimethylbenzene	2018/04/06		99	%	70 - 130
			1,3,5-trimethylbenzene	2018/04/06		97	%	70 - 130
			Vinyl chloride	2018/04/06		81	%	70 - 130
			m & p-Xylene	2018/04/06		102	%	70 - 130
			o-Xylene	2018/04/06		100	%	70 - 130
8951031	RSU	Spiked Blank	1,4-Difluorobenzene (sur.)	2018/04/06		102	%	70 - 130
			4-Bromofluorobenzene (sur.)	2018/04/06		104	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2018/04/06		111	%	70 - 130
			Benzene	2018/04/06		99	%	70 - 130
			Bromodichloromethane	2018/04/06		108	%	70 - 130
			Bromoform	2018/04/06		129	%	70 - 130
			Bromomethane	2018/04/06		87	%	70 - 130
			Carbon tetrachloride	2018/04/06		100	%	70 - 130
			Chlorobenzene	2018/04/06		118	%	70 - 130
			Chlorodibromomethane	2018/04/06		127	%	70 - 130
			Chloroethane	2018/04/06		87	%	70 - 130
			Chloroform	2018/04/06		97	%	70 - 130
			Chloromethane	2018/04/06		92	%	70 - 130
			1,2-dibromoethane	2018/04/06		130	%	70 - 130
			1,2-dichlorobenzene	2018/04/06		118	%	70 - 130
			1,3-dichlorobenzene	2018/04/06		107	%	70 - 130
			1,4-dichlorobenzene	2018/04/06		110	%	70 - 130
			1,1-dichloroethane	2018/04/06		97	%	70 - 130
			1,2-dichloroethane	2018/04/06		103	%	70 - 130
			1,1-dichloroethene	2018/04/06		108	%	70 - 130
			cis-1,2-dichloroethene	2018/04/06		107	%	70 - 130
			trans-1,2-dichloroethene	2018/04/06		103	%	70 - 130
			Dichloromethane	2018/04/06		96	%	70 - 130
			1,2-dichloropropane	2018/04/06		108	%	70 - 130
			cis-1,3-dichloropropene	2018/04/06		117	%	70 - 130
			trans-1,3-dichloropropene	2018/04/06		130	%	70 - 130
			Ethylbenzene	2018/04/06		110	%	70 - 130
			Methyl methacrylate	2018/04/06		116	%	70 - 130
			Methyl-tert-butylether (MTBE)	2018/04/06		100	%	70 - 130
			Styrene	2018/04/06		118	%	70 - 130
			1,1,1,2-tetrachloroethane	2018/04/06		114	%	70 - 130

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CLIFTON ASSOCIATES LTD.

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1,2,2-tetrachloroethane	2018/04/06		116	%	70 - 130
			Tetrachloroethene	2018/04/06		120	%	70 - 130
			Toluene	2018/04/06		117	%	70 - 130
			1,2,3-trichlorobenzene	2018/04/06		114	%	70 - 130
			1,2,4-trichlorobenzene	2018/04/06		115	%	70 - 130
			1,3,5-trichlorobenzene	2018/04/06		114	%	70 - 130
			1,1,1-trichloroethane	2018/04/06		104	%	70 - 130
			1,1,2-trichloroethane	2018/04/06		111	%	70 - 130
			Trichloroethene	2018/04/06		117	%	70 - 130
			Trichlorofluoromethane	2018/04/06		92	%	70 - 130
			1,2,4-trimethylbenzene	2018/04/06		110	%	70 - 130
			1,3,5-trimethylbenzene	2018/04/06		109	%	70 - 130
			Vinyl chloride	2018/04/06		90	%	70 - 130
			m & p-Xylene	2018/04/06		110	%	70 - 130
			o-Xylene	2018/04/06		107	%	70 - 130
8951031	RSU	Method Blank	1,4-Difluorobenzene (sur.)	2018/04/06		99	%	70 - 130
			4-Bromofluorobenzene (sur.)	2018/04/06		91	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2018/04/06		103	%	70 - 130
			Benzene	2018/04/06	<0.00040		mg/L	
			Bromodichloromethane	2018/04/06	<0.00050		mg/L	
			Bromoform	2018/04/06	<0.00050		mg/L	
			Bromomethane	2018/04/06	<0.0020		mg/L	
			Carbon tetrachloride	2018/04/06	<0.00050		mg/L	
			Chlorobenzene	2018/04/06	<0.00050		mg/L	
			Chlorodibromomethane	2018/04/06	<0.0010		mg/L	
			Chloroethane	2018/04/06	<0.0010		mg/L	
			Chloroform	2018/04/06	<0.00050		mg/L	
			Chloromethane	2018/04/06	<0.0020		mg/L	
			1,2-dibromoethane	2018/04/06	<0.00020		mg/L	
			1,2-dichlorobenzene	2018/04/06	<0.00050		mg/L	
			1,3-dichlorobenzene	2018/04/06	<0.00050		mg/L	
			1,4-dichlorobenzene	2018/04/06	<0.00050		mg/L	
			1,1-dichloroethane	2018/04/06	<0.00050		mg/L	
			1,2-dichloroethane	2018/04/06	<0.00050		mg/L	
			1,1-dichloroethene	2018/04/06	<0.00050		mg/L	
			cis-1,2-dichloroethene	2018/04/06	<0.00050		mg/L	
			trans-1,2-dichloroethene	2018/04/06	<0.00050		mg/L	
			Dichloromethane	2018/04/06	<0.0020		mg/L	
			1,2-dichloropropane	2018/04/06	<0.00050		mg/L	
			cis-1,3-dichloropropene	2018/04/06	<0.00050		mg/L	
			trans-1,3-dichloropropene	2018/04/06	<0.00050		mg/L	
			Ethylbenzene	2018/04/06	<0.00040		mg/L	
			Methyl methacrylate	2018/04/06	<0.00050		mg/L	
			Methyl-tert-butylether (MTBE)	2018/04/06	<0.00050		mg/L	
			Styrene	2018/04/06	<0.00050		mg/L	
			1,1,1,2-tetrachloroethane	2018/04/06	<0.0010		mg/L	
			1,1,2,2-tetrachloroethane	2018/04/06	<0.0020		mg/L	
			Tetrachloroethene	2018/04/06	<0.00050		mg/L	
			Toluene	2018/04/06	<0.00040		mg/L	
			1,2,3-trichlorobenzene	2018/04/06	<0.0010		mg/L	
			1,2,4-trichlorobenzene	2018/04/06	<0.0010		mg/L	
			1,3,5-trichlorobenzene	2018/04/06	<0.00050		mg/L	
			1,1,1-trichloroethane	2018/04/06	<0.00050		mg/L	
			1,1,2-trichloroethane	2018/04/06	<0.00050		mg/L	
			Trichloroethene	2018/04/06	<0.00050		mg/L	

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CLIFTON ASSOCIATES LTD.

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Trichlorofluoromethane	2018/04/06	<0.00050		mg/L	
			1,2,4-trimethylbenzene	2018/04/06	<0.00050		mg/L	
			1,3,5-trimethylbenzene	2018/04/06	<0.00050		mg/L	
			Vinyl chloride	2018/04/06	<0.00050		mg/L	
			Xylenes (Total)	2018/04/06	<0.00080		mg/L	
			m & p-Xylene	2018/04/06	<0.00080		mg/L	
			o-Xylene	2018/04/06	<0.00040		mg/L	
8951031	RSU	RPD [TF1636-01]	Bromodichloromethane	2018/04/06	NC		%	30
			Bromoform	2018/04/06	NC		%	30
			Bromomethane	2018/04/06	NC		%	30
			Carbon tetrachloride	2018/04/06	NC		%	30
			Chlorobenzene	2018/04/06	NC		%	30
			Chlorodibromomethane	2018/04/06	NC		%	30
			Chloroethane	2018/04/06	2.8		%	30
			Chloroform	2018/04/06	NC		%	30
			Chloromethane	2018/04/06	12		%	30
			1,2-dibromoethane	2018/04/06	NC		%	30
			1,2-dichlorobenzene	2018/04/06	NC		%	30
			1,3-dichlorobenzene	2018/04/06	NC		%	30
			1,4-dichlorobenzene	2018/04/06	NC		%	30
			1,1-dichloroethane	2018/04/06	NC		%	30
			1,2-dichloroethane	2018/04/06	16		%	30
			1,1-dichloroethene	2018/04/06	NC		%	30
			cis-1,2-dichloroethene	2018/04/06	NC		%	30
			trans-1,2-dichloroethene	2018/04/06	NC		%	30
			Dichloromethane	2018/04/06	NC		%	30
			1,2-dichloropropane	2018/04/06	NC		%	30
			cis-1,3-dichloropropene	2018/04/06	NC		%	30
			trans-1,3-dichloropropene	2018/04/06	NC		%	30
			Methyl methacrylate	2018/04/06	NC		%	30
			Methyl-tert-butylether (MTBE)	2018/04/06	NC		%	30
			Styrene	2018/04/06	NC		%	30
			1,1,1,2-tetrachloroethane	2018/04/06	NC		%	30
			1,1,2,2-tetrachloroethane	2018/04/06	NC		%	30
			Tetrachloroethene	2018/04/06	NC		%	30
			1,2,3-trichlorobenzene	2018/04/06	NC		%	30
			1,2,4-trichlorobenzene	2018/04/06	NC		%	30
			1,3,5-trichlorobenzene	2018/04/06	NC		%	30
			1,1,1-trichloroethane	2018/04/06	NC		%	30
			1,1,2-trichloroethane	2018/04/06	8.3		%	30
			Trichloroethene	2018/04/06	NC		%	30
			Trichlorofluoromethane	2018/04/06	NC		%	30
			1,2,4-trimethylbenzene	2018/04/06	5.9		%	30
			1,3,5-trimethylbenzene	2018/04/06	NC		%	30
			Vinyl chloride	2018/04/06	NC		%	30
8951125	LZ3	Matrix Spike	D10-ANTHRACENE (sur.)	2018/04/05		91	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2018/04/05		92	%	50 - 130
			D8-NAPHTHALENE (sur.)	2018/04/05		61	%	50 - 130
			TERPHENYL-D14 (sur.)	2018/04/05		113	%	50 - 130
			Acenaphthene	2018/04/05		101	%	50 - 130
			Acenaphthylene	2018/04/05		105	%	50 - 130
			Acridine	2018/04/05		96	%	50 - 130
			Anthracene	2018/04/05		82	%	50 - 130
			Benzo(a)anthracene	2018/04/05		122	%	50 - 130
			Benzo(b&j)fluoranthene	2018/04/05		111	%	50 - 130

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CLIFTON ASSOCIATES LTD.

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Benzo(k)fluoranthene	2018/04/05		117	%	50 - 130
				Benzo(g,h,i)perylene	2018/04/05		85	%	50 - 130
				Benzo(c)phenanthrene	2018/04/05		123	%	50 - 130
				Benzo(a)pyrene	2018/04/05		100	%	50 - 130
				Benzo[e]pyrene	2018/04/05		98	%	50 - 130
				Chrysene	2018/04/05		117	%	50 - 130
				Dibenz(a,h)anthracene	2018/04/05		92	%	50 - 130
				Fluoranthene	2018/04/05		113	%	50 - 130
				Fluorene	2018/04/05		106	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2018/04/05		91	%	50 - 130
				1-Methylnaphthalene	2018/04/05		94	%	50 - 130
				2-Methylnaphthalene	2018/04/05		85	%	50 - 130
				Naphthalene	2018/04/05		91	%	50 - 130
				Phenanthrene	2018/04/05		101	%	50 - 130
				Perylene	2018/04/05		88	%	50 - 130
				Pyrene	2018/04/05		108	%	50 - 130
				Quinoline	2018/04/05		120	%	50 - 130
8951125	LZ3		Spiked Blank	D10-ANTHRACENE (sur.)	2018/04/05		92	%	50 - 130
				D8-ACENAPHTHYLENE (sur.)	2018/04/05		95	%	50 - 130
				D8-NAPHTHALENE (sur.)	2018/04/05		64	%	50 - 130
				TERPHENYL-D14 (sur.)	2018/04/05		94	%	50 - 130
				Acenaphthene	2018/04/05		102	%	50 - 130
				Acenaphthylene	2018/04/05		106	%	50 - 130
				Acridine	2018/04/05		97	%	50 - 130
				Anthracene	2018/04/05		90	%	50 - 130
				Benzo(a)anthracene	2018/04/05		117	%	50 - 130
				Benzo(b&j)fluoranthene	2018/04/05		106	%	50 - 130
				Benzo(k)fluoranthene	2018/04/05		109	%	50 - 130
				Benzo(g,h,i)perylene	2018/04/05		84	%	50 - 130
				Benzo(c)phenanthrene	2018/04/05		115	%	50 - 130
				Benzo(a)pyrene	2018/04/05		99	%	50 - 130
				Benzo[e]pyrene	2018/04/05		96	%	50 - 130
				Chrysene	2018/04/05		110	%	50 - 130
				Dibenz(a,h)anthracene	2018/04/05		90	%	50 - 130
				Fluoranthene	2018/04/05		128	%	50 - 130
				Fluorene	2018/04/05		110	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2018/04/05		91	%	50 - 130
				1-Methylnaphthalene	2018/04/05		89	%	50 - 130
				2-Methylnaphthalene	2018/04/05		80	%	50 - 130
				Naphthalene	2018/04/05		83	%	50 - 130
				Phenanthrene	2018/04/05		108	%	50 - 130
				Perylene	2018/04/05		86	%	50 - 130
				Pyrene	2018/04/05		117	%	50 - 130
				Quinoline	2018/04/05		121	%	50 - 130
8951125	LZ3		Method Blank	D10-ANTHRACENE (sur.)	2018/04/05		93	%	50 - 130
				D8-ACENAPHTHYLENE (sur.)	2018/04/05		93	%	50 - 130
				D8-NAPHTHALENE (sur.)	2018/04/05		65	%	50 - 130
				TERPHENYL-D14 (sur.)	2018/04/05		112	%	50 - 130
				Acenaphthene	2018/04/05	<0.00010		mg/L	
				Acenaphthylene	2018/04/05	<0.00010		mg/L	
				Acridine	2018/04/05	<0.000050		mg/L	
				Anthracene	2018/04/05	<0.000010		mg/L	
				Benzo(a)anthracene	2018/04/05	<0.0000085		mg/L	
				Benzo(b&j)fluoranthene	2018/04/05	<0.0000085		mg/L	
				Benzo(k)fluoranthene	2018/04/05	<0.0000085		mg/L	

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzo(g,h,i)perylene	2018/04/05	<0.000085		mg/L	
			Benzo(c)phenanthrene	2018/04/05	<0.000050		mg/L	
			Benzo(a)pyrene	2018/04/05	<0.000075		mg/L	
			Benzo[e]pyrene	2018/04/05	<0.000050		mg/L	
			Chrysene	2018/04/05	<0.000085		mg/L	
			Dibenz(a,h)anthracene	2018/04/05	<0.000075		mg/L	
			Fluoranthene	2018/04/05	<0.000010		mg/L	
			Fluorene	2018/04/05	<0.000050		mg/L	
			Indeno(1,2,3-cd)pyrene	2018/04/05	<0.000085		mg/L	
			1-Methylnaphthalene	2018/04/05	<0.00010		mg/L	
			2-Methylnaphthalene	2018/04/05	<0.00010		mg/L	
			Naphthalene	2018/04/05	<0.00010		mg/L	
			Phenanthrene	2018/04/05	<0.000050		mg/L	
			Perylene	2018/04/05	<0.000050		mg/L	
			Pyrene	2018/04/05	<0.000020		mg/L	
			Quinoline	2018/04/05	<0.00020		mg/L	
8951125	LZ3	RPD	Acenaphthene	2018/04/05	NC		%	30
			Acenaphthylene	2018/04/05	NC		%	30
			Acridine	2018/04/05	NC		%	30
			Anthracene	2018/04/05	NC		%	30
			Benzo(a)anthracene	2018/04/05	NC		%	30
			Benzo(b&j)fluoranthene	2018/04/05	NC		%	30
			Benzo(k)fluoranthene	2018/04/05	NC		%	30
			Benzo(g,h,i)perylene	2018/04/05	NC		%	30
			Benzo(c)phenanthrene	2018/04/05	NC		%	30
			Benzo(a)pyrene	2018/04/05	NC		%	30
			Benzo[e]pyrene	2018/04/05	NC		%	30
			Chrysene	2018/04/05	NC		%	30
			Dibenz(a,h)anthracene	2018/04/05	NC		%	30
			Fluoranthene	2018/04/05	NC		%	30
			Fluorene	2018/04/05	NC		%	30
			Indeno(1,2,3-cd)pyrene	2018/04/05	NC		%	30
			2-Methylnaphthalene	2018/04/05	NC		%	30
			Naphthalene	2018/04/05	NC		%	30
			Phenanthrene	2018/04/05	NC		%	30
			Perylene	2018/04/05	NC		%	30
			Pyrene	2018/04/05	NC		%	30
			Quinoline	2018/04/05	NC		%	30
8951134	LSH	Matrix Spike	O-TERPHENYL (sur.)	2018/04/05		91	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/05		86	%	60 - 130
8951134	LSH	Spiked Blank	O-TERPHENYL (sur.)	2018/04/05		97	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/05		91	%	70 - 130
8951134	LSH	Method Blank	O-TERPHENYL (sur.)	2018/04/05		94	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/05	<0.10		mg/L	
8951134	LSH	RPD	F2 (C10-C16 Hydrocarbons)	2018/04/05	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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CLIFTON ASSOCIATES LTD.

**NOTIFICATION LOG**

No Reportable Regulation Exceedences Noted.

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CLIFTON ASSOCIATES LTD.

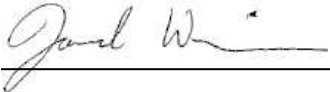
### VALIDATION SIGNATURE PAGE

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



---

Dennis Ngandu, B.Sc., P.Chem., QP, Supervisor, Organics



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Jared Wiseman, B.Sc., P.Chem., QP, Senior Analyst, Organics



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Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



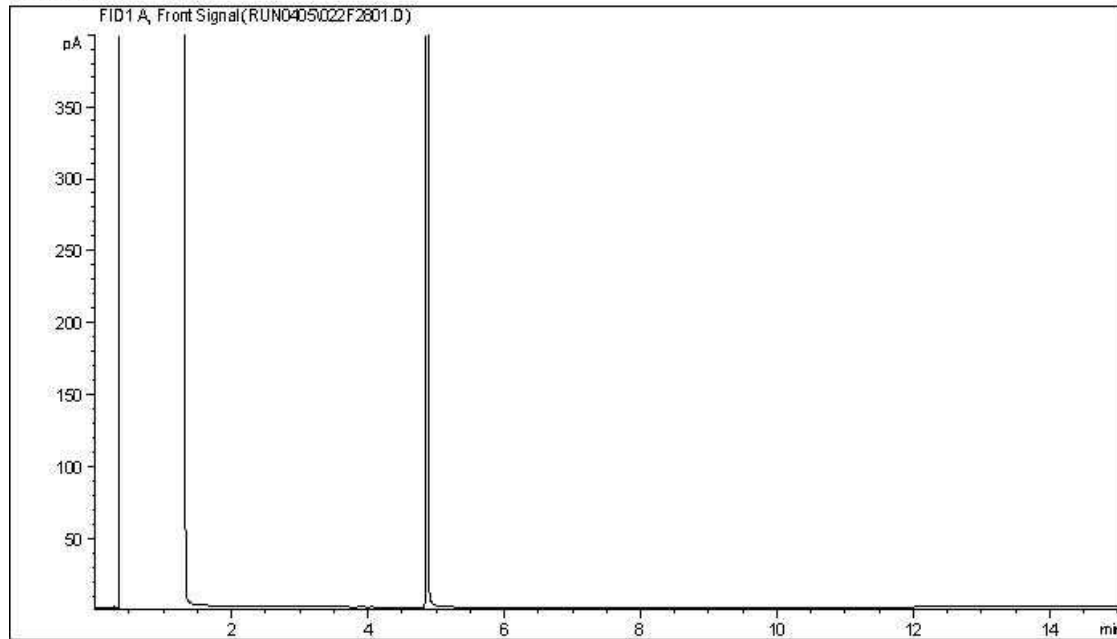
Invoice Information	Report Information (if differs from invoice)	Project Information	Turnaround Time (TAT) Required
Company: <u>Clifton Associates</u>	Company:	Quotation #:	<input checked="" type="checkbox"/> 5 - 7 Days Regular (Most analyses)
Contact Name: <u>Stephen D'Abadie</u>	Contact Name:	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: <u>2222 - 30 Ave. NE</u> <u>Calgary, AB T2E 7K9</u>	Address:	Project #:	Rush TAT (Surcharges will be applied)
Phone: <u>403-263-2556</u>	Phone:	Site Location:	<input type="checkbox"/> Same Day <input type="checkbox"/> 2 Days
Email: <u>Stephen.dabadie@clifton.ca</u>	Email:	Site #:	<input type="checkbox"/> 1 Day <input type="checkbox"/> 3-4 Days
Copies: <u>terryn-kazyk@clifton.ca</u>	Copies:	Sampled By:	Date Required: _____
			Rush Confirmation #: _____

Laboratory Use Only				Analysis Requested												Regulatory Criteria								
Seal Present	Seal Intact	Cooling Media	Temp	Depot Reception												Regulatory Criteria								
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	400													<input checked="" type="checkbox"/> AT1								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														<input type="checkbox"/> CCME								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														<input type="checkbox"/> Drinking Water								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														<input type="checkbox"/> D50 (Drilling Waste)								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														<input type="checkbox"/> Saskatchewan								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														<input type="checkbox"/> Other:								
Sample Identification				Depth (Unit)	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	# of containers	BTEX F1	VOC	BTEX F1-F2	BTEX F1-F4	Routine Water	Regulated Metals Tot	Diss	Mercury Total	Disolved	Salinity 4	Sieve (75 micron)	Texture (% Sand, Silt, Clay)	Basic Class II Landfill	PAHS	HOLD - DO NOT ANALYZE	Special Instructions
1	1928 B				2018.4.3	9:30	GW	8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
2	1945					10:45		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
3	1951					11:00		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
4	1955A					10:00		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
5	1978					10:55		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
6	2001					10:30		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
7	2006					10:15		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
8	912					9:45	GW	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
9	Trip Blank 5				2018.4.3		W	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
10																								
Please indicate Filtered, Preserved or Both (F, P, F/P)																								
Relinquished by: (Signature/ Print)	DATE (YYYY/MM/DD)	Time (HH:MM)	Received by: (Signature/ Print)	DATE (YYYY/MM/DD)	Time (HH:MM)																			
<u>Austin Mei</u>	2018.4.4	8:22	<u>Jennifer Stephenson</u>	2018/04/18	08:23																			

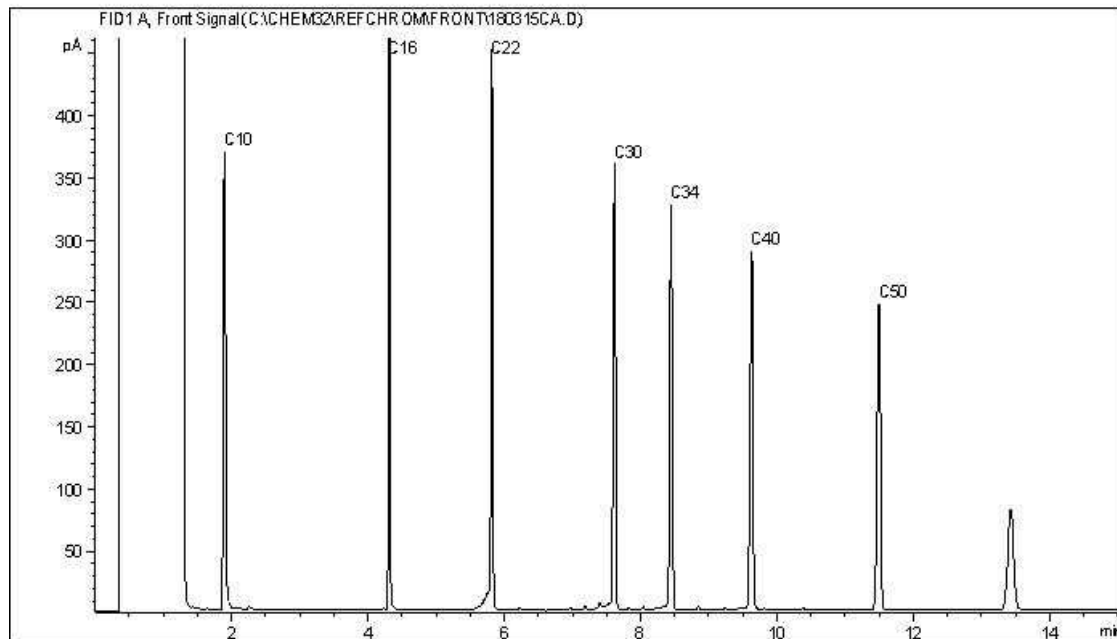
04-Apr-18 08:23  
Jennifer Stephenson  
B824471  
BLK INS-0001

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



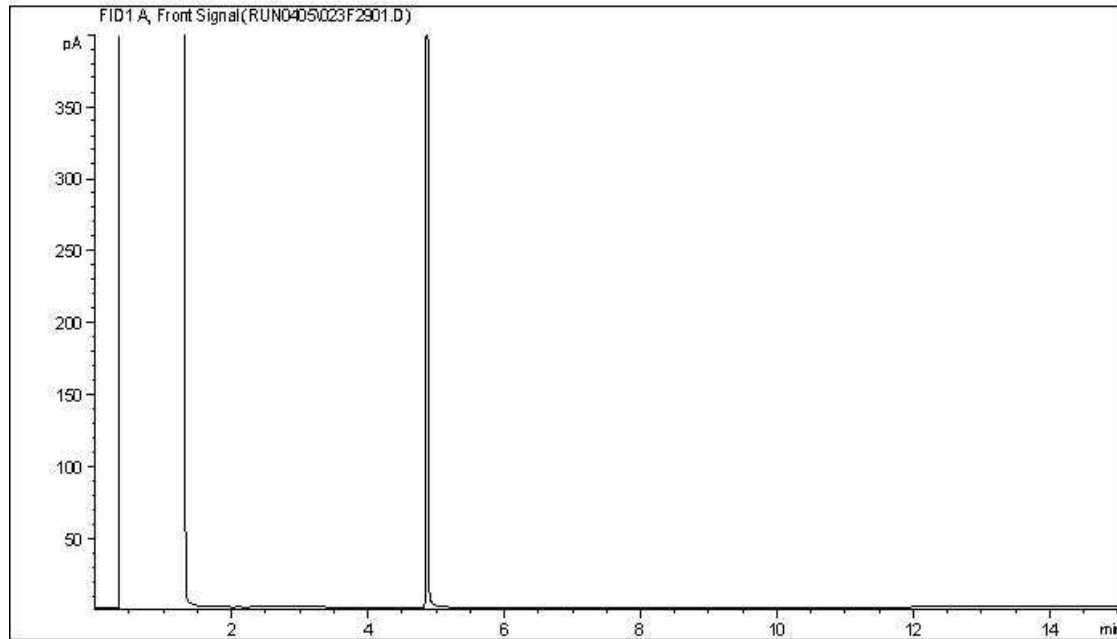
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

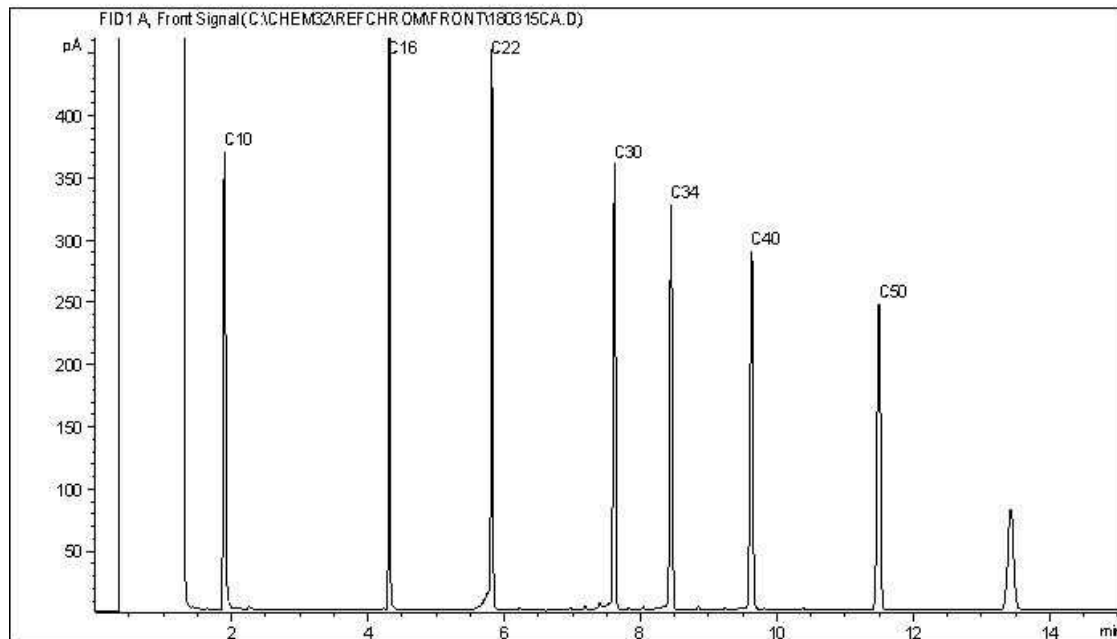
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

### CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



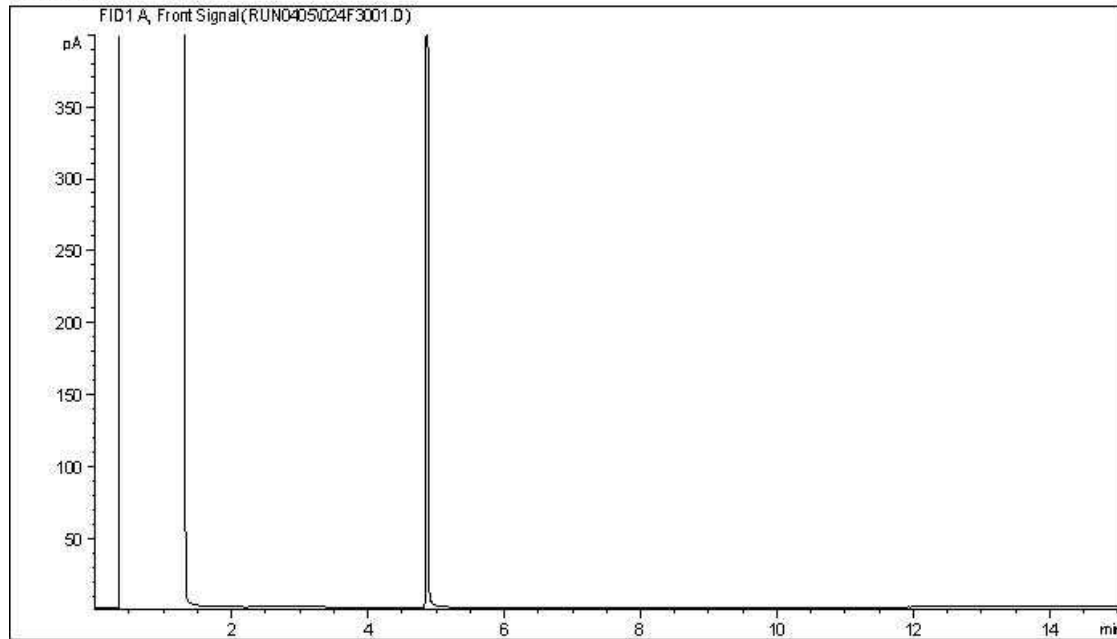
#### TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

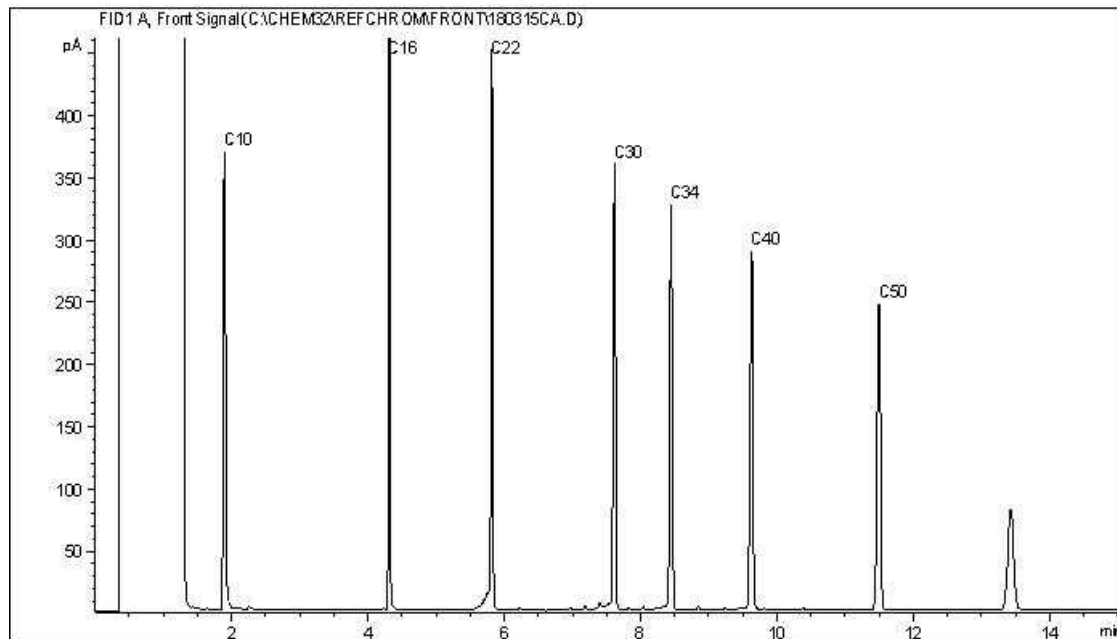
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



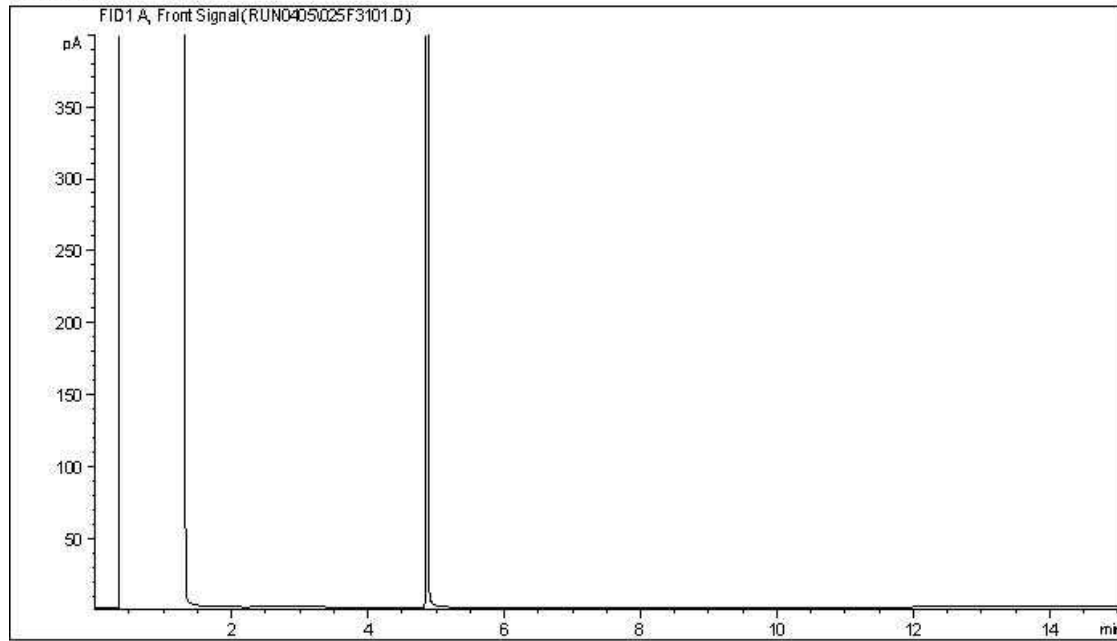
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

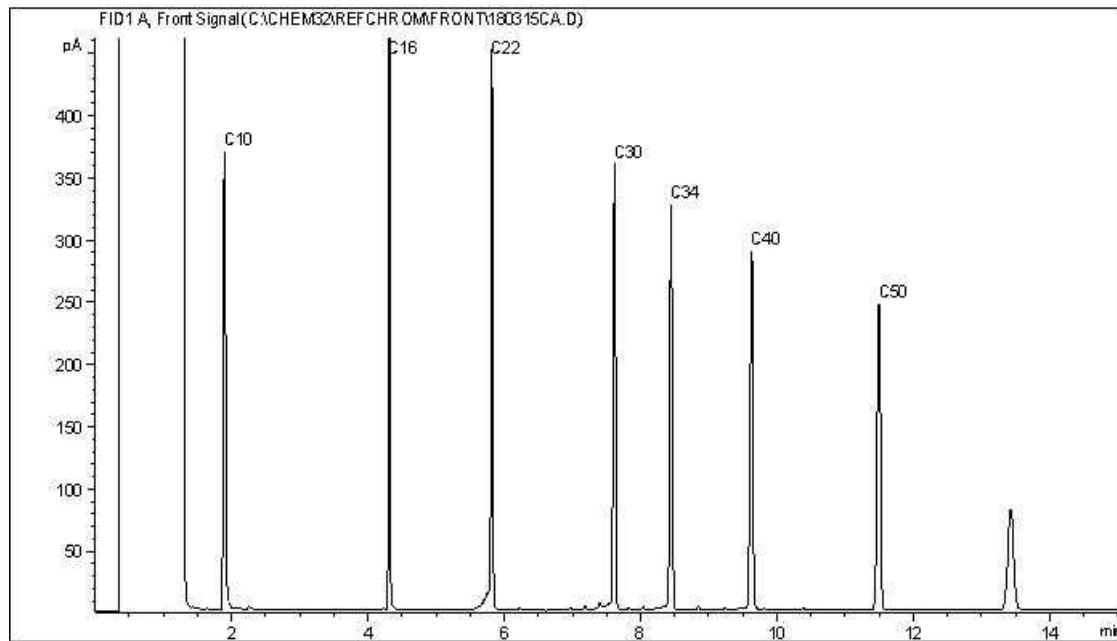
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



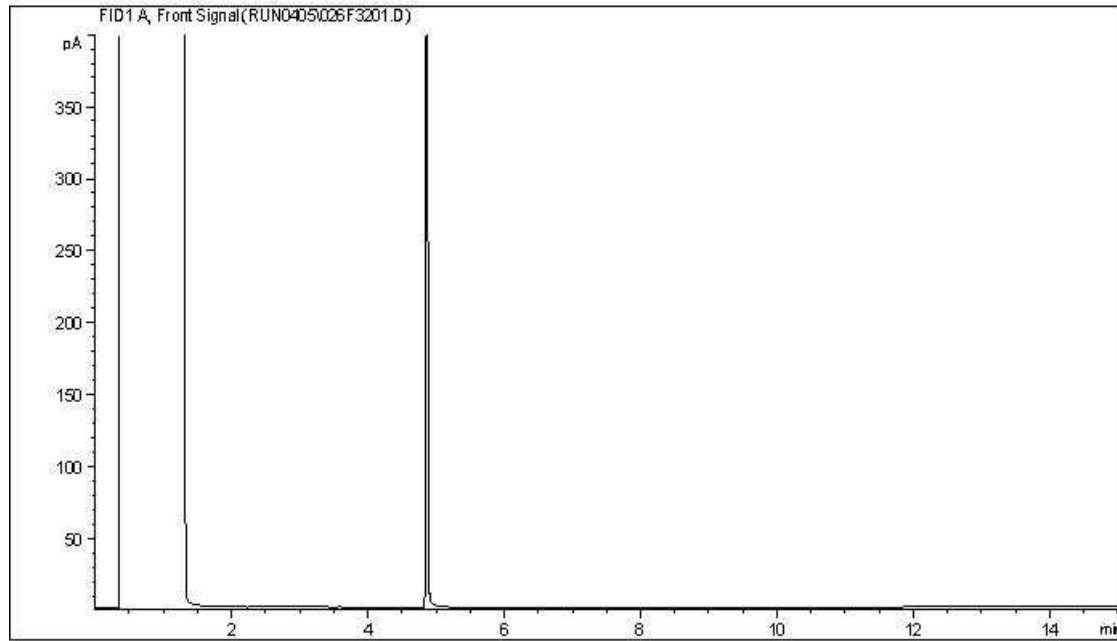
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

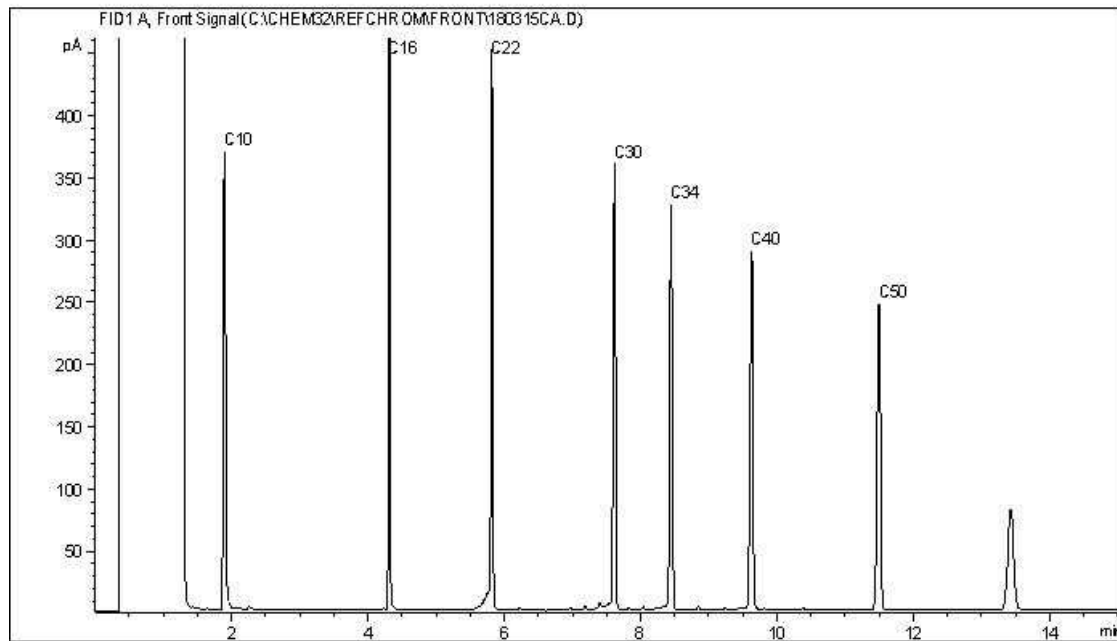
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



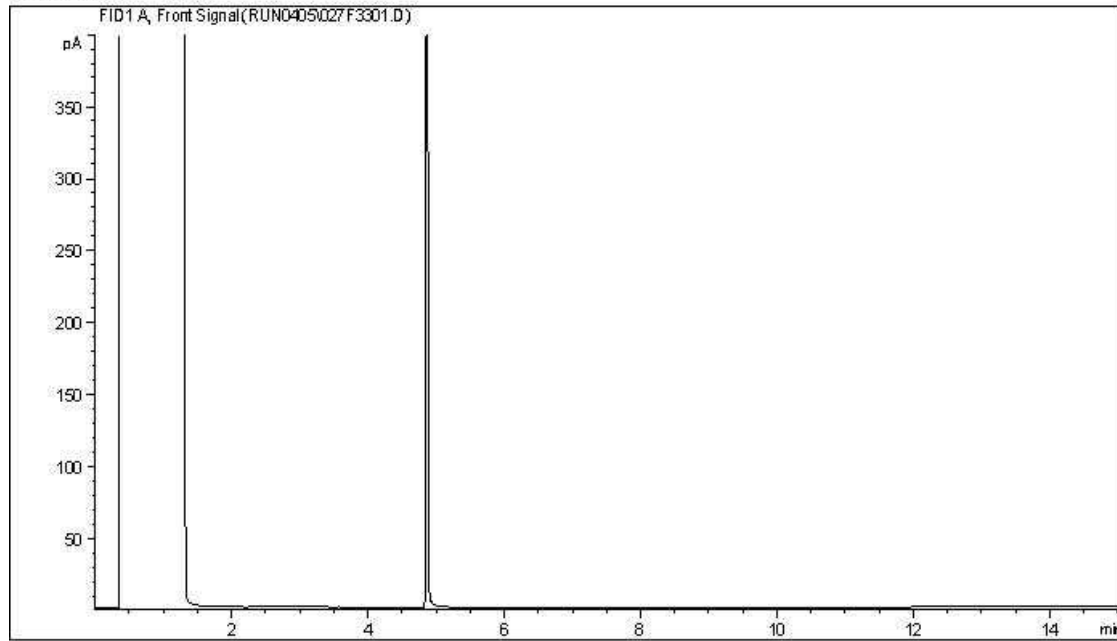
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

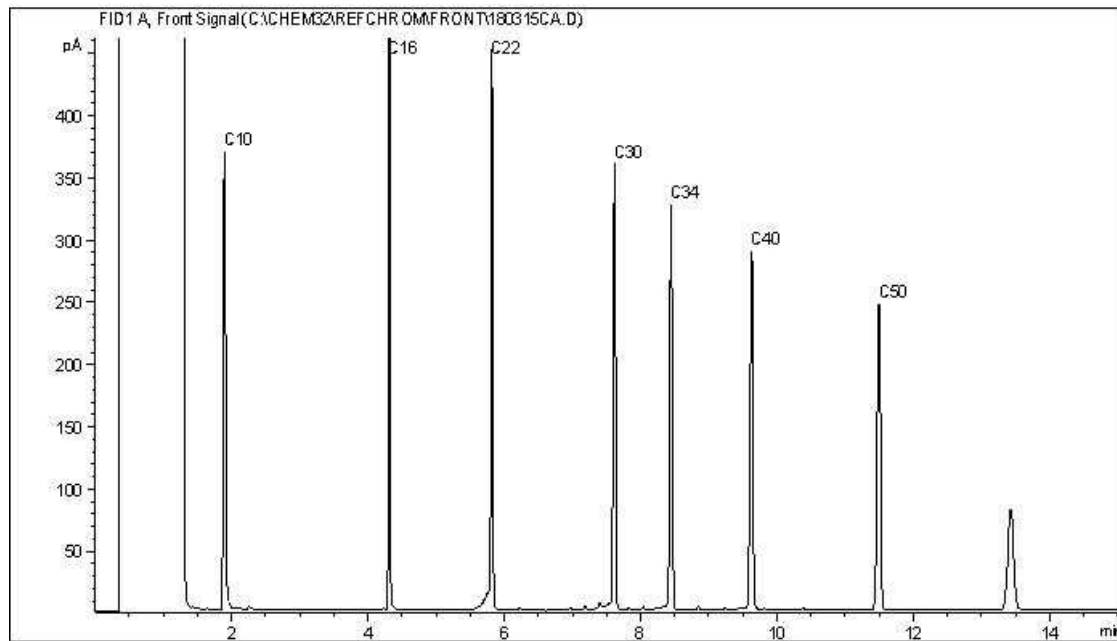
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

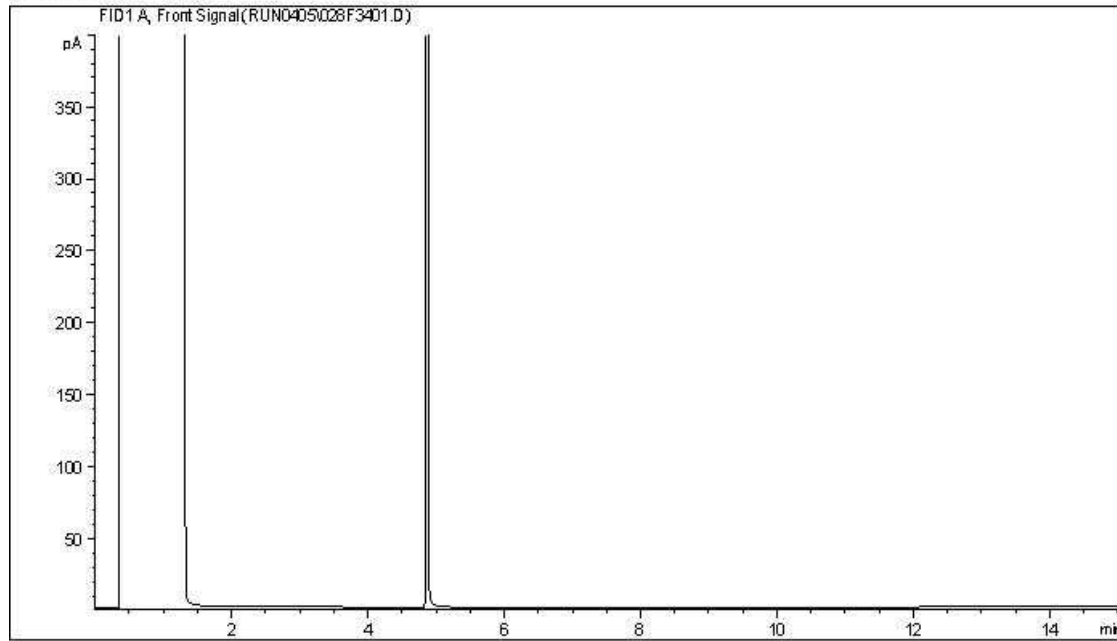
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

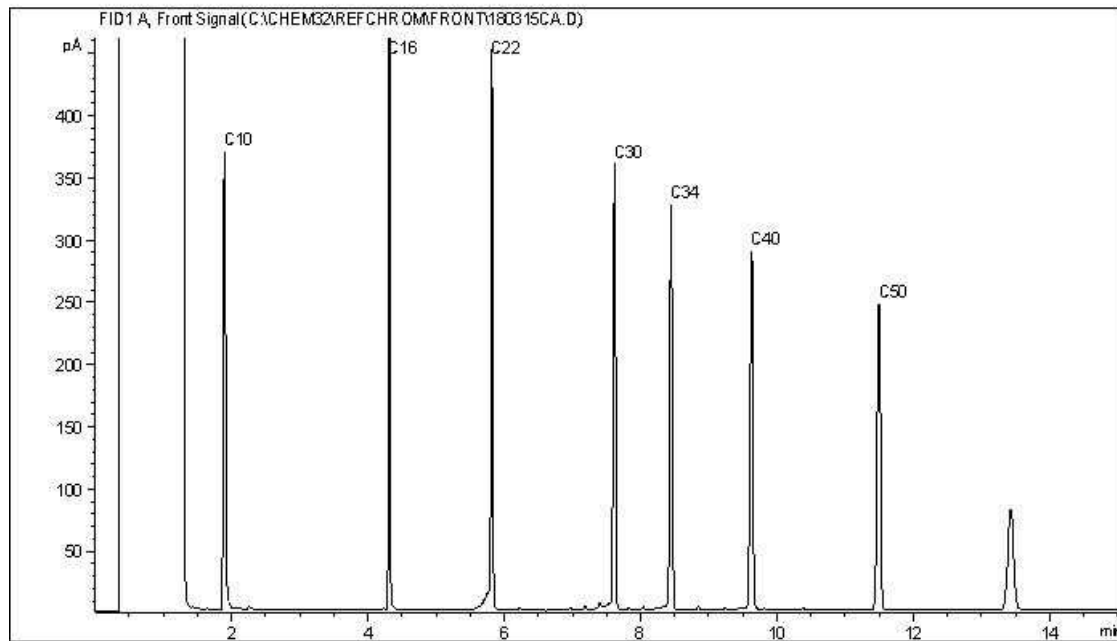


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



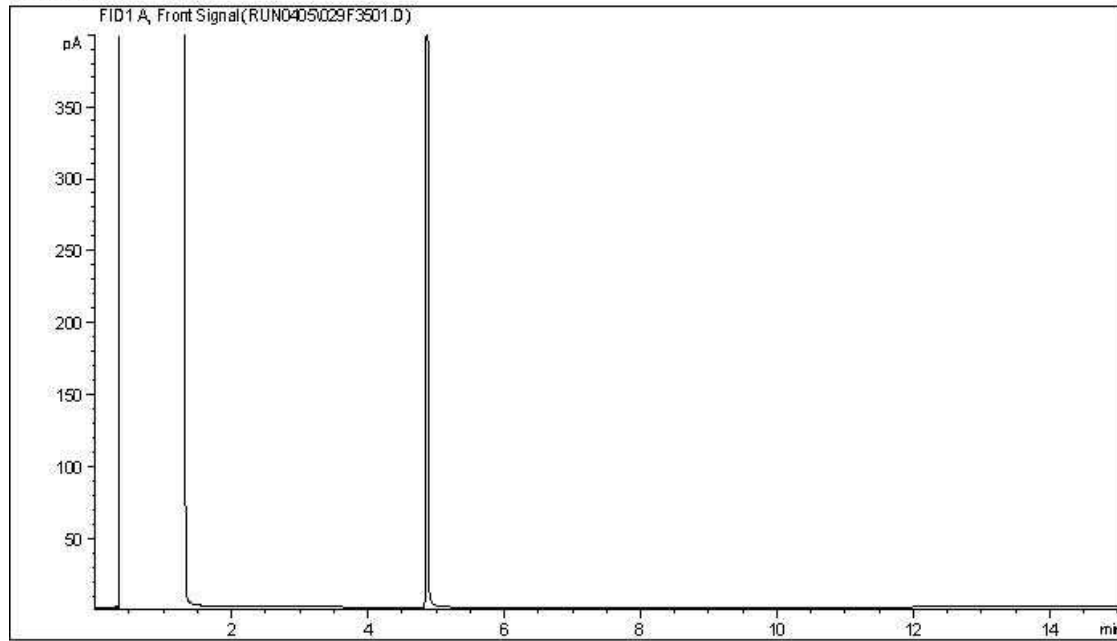
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

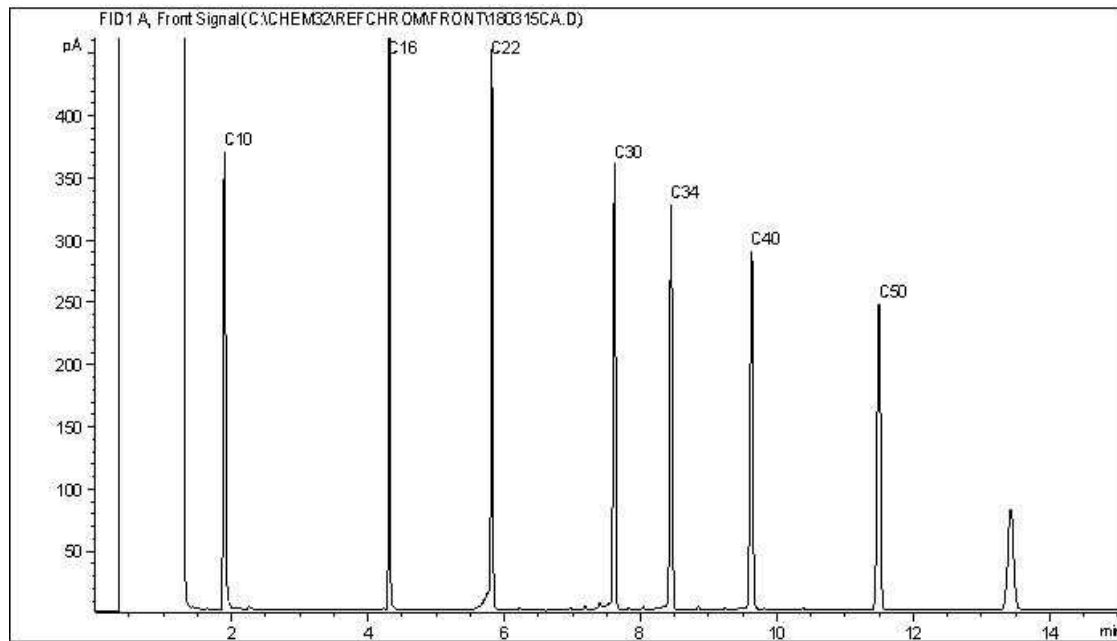
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

Your Project #: CG2430.1 E30  
Your C.O.C. #: m070643, m070644

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/11**  
Report #: R2540234  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B824942**

**Received: 2018/04/05, 08:38**

Sample Matrix: Water  
# Samples Received: 13

Analyses	Date		Laboratory Method	Analytical Method
	Quantity	Extracted		
BTEX/F1 in Water by HS GC/MS/FID	11	N/A	2018/04/06 AB SOP-00039	CCME CWS/EPA 8260c m
BTEX/F1 in Water by HS GC/MS/FID	1	N/A	2018/04/09 AB SOP-00039	CCME CWS/EPA 8260c m
F1-BTEX	11	N/A	2018/04/07 AB SOP-00039	Auto Calc
F1-BTEX	1	N/A	2018/04/09 AB SOP-00039	Auto Calc
CCME Hydrocarbons in Water (F2; C10-C16) (1)	12	2018/04/09	2018/04/09 AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Benzo[a]pyrene Equivalency (2)	1	N/A	2018/04/11 AB SOP-00003	Auto Calc
PAH in Water by GC/MS	1	2018/04/09	2018/04/11 AB SOP-00037 / AB SOP-00003	EPA 3510C/8270D m
Total Trihalomethanes Calculation	13	N/A	2018/04/09 AB SOP-00056	Auto Calc
VOCs in Water by HS GC/MS (Std List)	13	N/A	2018/04/06 AB SOP-00056	EPA 5021a/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) Silica gel clean up employed.

(2) B[a]P TPE is calculated using 1/2 of the RDL for non detect results as per Alberta Environment instructions. This protocol may not apply in other jurisdictions.

Your Project #: CG2430.1 E30  
Your C.O.C. #: m070643, m070644

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/11**  
Report #: R2540234  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B824942**

**Received: 2018/04/05, 08:38**

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.  
Jennifer Stephenson, B.Sc, Technical Specialist  
Email: [jstephenson@maxxam.ca](mailto:jstephenson@maxxam.ca)  
Phone# (403) 291-3077

=====  
This report has been generated and distributed using a secure automated process.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

Maxxam ID		TF3916	TF3917	TF3918	TF3919	TF3919	TF3920		
Sampling Date		2018/04/04 11:20	2018/04/04 11:30	2018/04/04 13:00	2018/04/04 13:35	2018/04/04 13:35	2018/04/04 13:20		
COC Number		m070643	m070643	m070643	m070643	m070643	m070643		
	<b>UNITS</b>	<b>1946</b>	<b>1947</b>	<b>1980</b>	<b>2002</b>	<b>2002 Lab-Dup</b>	<b>2003</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Ext. Pet. Hydrocarbon</b>									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8952527
<b>Volatiles</b>									
Benzene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	N/A	<0.00040	0.00040	8952223
Toluene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	N/A	<0.00040	0.00040	8952223
Ethylbenzene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	N/A	<0.00040	0.00040	8952223
m & p-Xylene	mg/L	<0.00080	<0.00080	<0.00080	<0.00080	N/A	<0.00080	0.00080	8952223
o-Xylene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	N/A	<0.00040	0.00040	8952223
Xylenes (Total)	mg/L	<0.00089	<0.00089	<0.00089	<0.00089	N/A	<0.00089	0.00089	8951849
F1 (C6-C10) - BTEX	mg/L	<0.10	<0.10	<0.10	<0.10	N/A	<0.10	0.10	8951849
F1 (C6-C10)	mg/L	<0.10	<0.10	<0.10	<0.10	N/A	<0.10	0.10	8952223
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene (sur.)	%	100	101	100	100	N/A	101	N/A	8952223
4-Bromofluorobenzene (sur.)	%	103	103	103	103	N/A	103	N/A	8952223
D4-1,2-Dichloroethane (sur.)	%	96	94	96	96	N/A	95	N/A	8952223
O-TERPHENYL (sur.)	%	103	95	104	102	100	94	N/A	8952527

RDL = Reportable Detection Limit  
Lab-Dup = Laboratory Initiated Duplicate  
N/A = Not Applicable

Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

Maxxam ID		TF3921	TF3922	TF3923	TF3924	TF3925		TF3929		
Sampling Date		2018/04/04 10:15	2018/04/04 09:40	2018/04/04 09:20	2018/04/04 14:10	2018/04/04 14:30		2018/04/04 14:45		
COC Number		m070643	m070643	m070643	m070643	m070643		m070644		
	UNITS	EX1	EX2	EX3	EX4	EX6	RDL	EX7	RDL	QC Batch
<b>Ext. Pet. Hydrocarbon</b>										
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	0.74	0.58	0.10	0.27	0.10	8952527
<b>Volatiles</b>										
Benzene	mg/L	0.30	0.47	<0.00040	0.47	0.13	0.00040	2.8 (1)	0.0040	8952223
Toluene	mg/L	0.0046	0.013	<0.00040	0.021	0.10	0.00040	0.055	0.00040	8952223
Ethylbenzene	mg/L	0.040	0.19	<0.00040	0.53	0.71	0.00040	0.50	0.00040	8952223
m & p-Xylene	mg/L	0.034	0.12	<0.00080	1.3	0.63	0.00080	0.18	0.00080	8952223
o-Xylene	mg/L	0.0044	0.0024	<0.00040	0.089	0.049	0.00040	0.031	0.00040	8952223
Xylenes (Total)	mg/L	0.039	0.12	<0.00089	1.4	0.68	0.00089	0.21	0.00089	8951849
F1 (C6-C10) - BTEX	mg/L	0.11	0.42	<0.10	2.2	2.3	0.10	1.5	0.10	8951849
F1 (C6-C10)	mg/L	0.49	1.2	<0.10	4.6	3.9	0.10	5.1	0.10	8952223
<b>Surrogate Recovery (%)</b>										
1,4-Difluorobenzene (sur.)	%	103	92	100	98	88	N/A	102	N/A	8952223
4-Bromofluorobenzene (sur.)	%	102	101	104	100	88	N/A	104	N/A	8952223
D4-1,2-Dichloroethane (sur.)	%	90	78	96	83	57	N/A	90	N/A	8952223
O-TERPHENYL (sur.)	%	94	97	101	106	99	N/A	105	N/A	8952527
RDL = Reportable Detection Limit N/A = Not Applicable (1) Detection limits raised due to dilution to bring analyte within the calibrated range.										

Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

<b>Maxxam ID</b>		TF3930		
<b>Sampling Date</b>		2018/04/04 10:15		
<b>COC Number</b>		m070644		
	<b>UNITS</b>	<b>EX91</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Ext. Pet. Hydrocarbon</b>				
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	0.10	8952527
<b>Volatiles</b>				
Benzene	mg/L	0.29	0.00040	8952223
Toluene	mg/L	0.0046	0.00040	8952223
Ethylbenzene	mg/L	0.039	0.00040	8952223
m & p-Xylene	mg/L	0.033	0.00080	8952223
o-Xylene	mg/L	0.0044	0.00040	8952223
Xylenes (Total)	mg/L	0.037	0.00089	8951849
F1 (C6-C10) - BTEX	mg/L	0.11	0.10	8951849
F1 (C6-C10)	mg/L	0.48	0.10	8952223
<b>Surrogate Recovery (%)</b>				
1,4-Difluorobenzene (sur.)	%	102	N/A	8952223
4-Bromofluorobenzene (sur.)	%	101	N/A	8952223
D4-1,2-Dichloroethane (sur.)	%	83	N/A	8952223
O-TERPHENYL (sur.)	%	103	N/A	8952527
RDL = Reportable Detection Limit N/A = Not Applicable				



Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF3919	TF3919		
Sampling Date		2018/04/04 13:35	2018/04/04 13:35		
COC Number		m070643	m070643		
	UNITS	2002	2002 Lab-Dup	RDL	QC Batch
<b>Polycyclic Aromatics</b>					
Benzo[a]pyrene equivalency	mg/L	<0.000010	N/A	0.000010	8951857
Acenaphthene	mg/L	<0.00010	<0.00010	0.00010	8952530
Acenaphthylene	mg/L	<0.00010	<0.00010	0.00010	8952530
Acridine	mg/L	<0.000050	<0.000050	0.000050	8952530
Anthracene	mg/L	<0.000010	<0.000010	0.000010	8952530
Benzo(a)anthracene	mg/L	<0.0000085	<0.0000085	0.0000085	8952530
Benzo(b&j)fluoranthene	mg/L	<0.0000085	<0.0000085	0.0000085	8952530
Benzo(k)fluoranthene	mg/L	<0.0000085	<0.0000085	0.0000085	8952530
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	0.0000085	8952530
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	0.000050	8952530
Benzo(a)pyrene	mg/L	<0.0000075	<0.0000075	0.0000075	8952530
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	0.000050	8952530
Chrysene	mg/L	<0.0000085	<0.0000085	0.0000085	8952530
Dibenz(a,h)anthracene	mg/L	<0.0000075	0.0000082	0.0000075	8952530
Fluoranthene	mg/L	<0.000010	<0.000010	0.000010	8952530
Fluorene	mg/L	<0.000050	<0.000050	0.000050	8952530
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	0.0000085	8952530
1-Methylnaphthalene	mg/L	<0.00010	<0.00010	0.00010	8952530
2-Methylnaphthalene	mg/L	<0.00010	<0.00010	0.00010	8952530
Naphthalene	mg/L	<0.00010	<0.00010	0.00010	8952530
Phenanthrene	mg/L	<0.000050	<0.000050	0.000050	8952530
Perylene	mg/L	<0.000050	<0.000050	0.000050	8952530
Pyrene	mg/L	<0.000020	<0.000020	0.000020	8952530
Quinoline	mg/L	<0.00020	<0.00020	0.00020	8952530
<b>Surrogate Recovery (%)</b>					
D10-ANTHRACENE (sur.)	%	84	84	N/A	8952530
D8-ACENAPHTHYLENE (sur.)	%	79	83	N/A	8952530
D8-NAPHTHALENE (sur.)	%	62	67	N/A	8952530
TERPHENYL-D14 (sur.)	%	105	105	N/A	8952530
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable					

Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF3916	TF3916	TF3917	TF3918	TF3919		
Sampling Date		2018/04/04 11:20	2018/04/04 11:20	2018/04/04 11:30	2018/04/04 13:00	2018/04/04 13:35		
COC Number		m070643	m070643	m070643	m070643	m070643		
	<b>UNITS</b>	<b>1946</b>	<b>1946 Lab-Dup</b>	<b>1947</b>	<b>1980</b>	<b>2002</b>	<b>RDL</b>	<b>QC Batch</b>

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	N/A	<0.0013	<0.0013	<0.0013	0.0013	8952239
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8952402
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8952402
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8952402
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8952402
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8952402
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
1,2-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8952402
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8952402
1,1,1,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8952402
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8952402

RDL = Reportable Detection Limit  
Lab-Dup = Laboratory Initiated Duplicate  
N/A = Not Applicable

Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF3916	TF3916	TF3917	TF3918	TF3919		
Sampling Date		2018/04/04 11:20	2018/04/04 11:20	2018/04/04 11:30	2018/04/04 13:00	2018/04/04 13:35		
COC Number		m070643	m070643	m070643	m070643	m070643		
	UNITS	1946	1946 Lab-Dup	1947	1980	2002	RDL	QC Batch
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8952402
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8952402
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	102	103	101	102	101	N/A	8952402
4-Bromofluorobenzene (sur.)	%	91	92	93	94	91	N/A	8952402
D4-1,2-Dichloroethane (sur.)	%	102	107	99	101	105	N/A	8952402
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable								

Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF3920	TF3921		TF3922		TF3923		
Sampling Date		2018/04/04 13:20	2018/04/04 10:15		2018/04/04 09:40		2018/04/04 09:20		
COC Number		m070643	m070643		m070643		m070643		
	UNITS	2003	EX1	RDL	EX2	RDL	EX3	RDL	QC Batch
<b>Volatiles</b>									
Total Trihalomethanes	mg/L	<0.0013	<0.0013	0.0013	<0.0013	0.0013	<0.0013	0.0013	8952239
Bromodichloromethane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Bromoform	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Bromomethane	mg/L	<0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	8952402
Carbon tetrachloride	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Chlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Chlorodibromomethane	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8952402
Chloroethane	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8952402
Chloroform	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Chloromethane	mg/L	<0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	8952402
1,2-dibromoethane	mg/L	<0.00020	<0.00020	0.00020	<0.00020	0.00020	<0.00020	0.00020	8952402
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,1-dichloroethane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,2-dichloroethane	mg/L	<0.00050	0.0061	0.00050	0.050	0.00050	<0.00050	0.00050	8952402
1,1-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Dichloromethane	mg/L	<0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	8952402
1,2-dichloropropane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Methyl methacrylate	mg/L	<0.00050	<0.00050	0.00050	<0.00060 (1)	0.00060	<0.00050	0.00050	8952402
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Styrene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8952402
1,1,1,2-tetrachloroethane	mg/L	<0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	8952402
Tetrachloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8952402
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8952402
RDL = Reportable Detection Limit									
(1) Detection limits raised due to matrix interference.									

Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF3920	TF3921		TF3922		TF3923		
Sampling Date		2018/04/04 13:20	2018/04/04 10:15		2018/04/04 09:40		2018/04/04 09:20		
COC Number		m070643	m070643		m070643		m070643		
	UNITS	2003	EX1	RDL	EX2	RDL	EX3	RDL	QC Batch
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	0.00050	0.0026 (1)	0.00050	<0.00050	0.00050	8952402
Trichloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,2,4-trimethylbenzene	mg/L	<0.00050	0.0058	0.00050	0.0063	0.00050	<0.00050	0.00050	8952402
1,3,5-trimethylbenzene	mg/L	<0.00050	0.0015	0.00050	0.0033	0.00050	<0.00050	0.00050	8952402
Vinyl chloride	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene (sur.)	%	101	102	N/A	104	N/A	99	N/A	8952402
4-Bromofluorobenzene (sur.)	%	91	92	N/A	95	N/A	88	N/A	8952402
D4-1,2-Dichloroethane (sur.)	%	105	125	N/A	84	N/A	104	N/A	8952402
RDL = Reportable Detection Limit N/A = Not Applicable (1) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.									

Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF3924		TF3925		TF3929		TF3930		
Sampling Date		2018/04/04 14:10		2018/04/04 14:30		2018/04/04 14:45		2018/04/04 10:15		
COC Number		m070643		m070643		m070644		m070644		
	UNITS	EX4	RDL	EX6	RDL	EX7	RDL	EX91	RDL	QC Batch

Volatiles										
Total Trihalomethanes	mg/L	<0.0013	0.0013	<0.0013	0.0013	<0.0013	0.0013	<0.0013	0.0013	8952239
Bromodichloromethane	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Bromoform	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Bromomethane	mg/L	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	8952402
Carbon tetrachloride	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Chlorobenzene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Chlorodibromomethane	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8952402
Chloroethane	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8952402
Chloroform	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Chloromethane	mg/L	<0.0020	0.0020	<0.0020	0.0020	0.0080	0.0020	<0.0020	0.0020	8952402
1,2-dibromoethane	mg/L	0.00043	0.00020	<0.00020	0.00020	0.00022	0.00020	<0.00020	0.00020	8952402
1,2-dichlorobenzene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,3-dichlorobenzene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,4-dichlorobenzene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,1-dichloroethane	mg/L	<0.00050	0.00050	0.00066 (1)	0.00050	0.00059 (1)	0.00050	<0.00050	0.00050	8952402
1,2-dichloroethane	mg/L	0.015	0.00050	0.021	0.00050	0.25	0.00050	0.0058	0.00050	8952402
1,1-dichloroethene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
cis-1,2-dichloroethene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
trans-1,2-dichloroethene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Dichloromethane	mg/L	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	8952402
1,2-dichloropropane	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
cis-1,3-dichloropropene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
trans-1,3-dichloropropene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Methyl methacrylate	mg/L	<0.0038 (2)	0.0038	<0.0080 (2)	0.0080	<0.0023 (2)	0.0023	<0.00050	0.00050	8952402
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Styrene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,1,1,2-tetrachloroethane	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8952402
1,1,1,2-tetrachloroethane	mg/L	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	8952402
Tetrachloroethene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,2,3-trichlorobenzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8952402

RDL = Reportable Detection Limit

(1) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.

(2) Detection limits raised due to matrix interference.

Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF3924		TF3925		TF3929		TF3930		
Sampling Date		2018/04/04 14:10		2018/04/04 14:30		2018/04/04 14:45		2018/04/04 10:15		
COC Number		m070643		m070643		m070644		m070644		
	UNITS	EX4	RDL	EX6	RDL	EX7	RDL	EX91	RDL	QC Batch
1,2,4-trichlorobenzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8952402
1,3,5-trichlorobenzene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,1,1-trichloroethane	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,1,2-trichloroethane	mg/L	<0.00050	0.00050	<0.00050	0.00050	0.0053	0.00050	<0.00050	0.00050	8952402
Trichloroethene	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
Trichlorofluoromethane	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
1,2,4-trimethylbenzene	mg/L	0.22	0.00050	0.0091	0.00050	0.026	0.00050	0.0056	0.00050	8952402
1,3,5-trimethylbenzene	mg/L	0.034	0.00050	0.088	0.00050	0.024	0.00050	0.0015	0.00050	8952402
Vinyl chloride	mg/L	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8952402
<b>Surrogate Recovery (%)</b>										
1,4-Difluorobenzene (sur.)	%	103	N/A	104	N/A	103	N/A	103	N/A	8952402
4-Bromofluorobenzene (sur.)	%	93	N/A	91	N/A	94	N/A	90	N/A	8952402
D4-1,2-Dichloroethane (sur.)	%	122	N/A	100	N/A	106	N/A	125	N/A	8952402
RDL = Reportable Detection Limit N/A = Not Applicable										



Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

<b>Maxxam ID</b>		TF3931		
<b>Sampling Date</b>		2018/04/04		
<b>COC Number</b>		m070644		
	<b>UNITS</b>	<b>TRIP BLANK 6</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Volatiles</b>				
Total Trihalomethanes	mg/L	<0.0013	0.0013	8952239
Benzene	mg/L	<0.00040	0.00040	8952402
Bromodichloromethane	mg/L	<0.00050	0.00050	8952402
Bromoform	mg/L	<0.00050	0.00050	8952402
Bromomethane	mg/L	<0.0020	0.0020	8952402
Carbon tetrachloride	mg/L	<0.00050	0.00050	8952402
Chlorobenzene	mg/L	<0.00050	0.00050	8952402
Chlorodibromomethane	mg/L	<0.0010	0.0010	8952402
Chloroethane	mg/L	<0.0010	0.0010	8952402
Chloroform	mg/L	<0.00050	0.00050	8952402
Chloromethane	mg/L	<0.0020	0.0020	8952402
1,2-dibromoethane	mg/L	<0.00020	0.00020	8952402
1,2-dichlorobenzene	mg/L	<0.00050	0.00050	8952402
1,3-dichlorobenzene	mg/L	<0.00050	0.00050	8952402
1,4-dichlorobenzene	mg/L	<0.00050	0.00050	8952402
1,1-dichloroethane	mg/L	<0.00050	0.00050	8952402
1,2-dichloroethane	mg/L	<0.00050	0.00050	8952402
1,1-dichloroethene	mg/L	<0.00050	0.00050	8952402
cis-1,2-dichloroethene	mg/L	<0.00050	0.00050	8952402
trans-1,2-dichloroethene	mg/L	<0.00050	0.00050	8952402
Dichloromethane	mg/L	<0.0020	0.0020	8952402
1,2-dichloropropane	mg/L	<0.00050	0.00050	8952402
cis-1,3-dichloropropene	mg/L	<0.00050	0.00050	8952402
trans-1,3-dichloropropene	mg/L	<0.00050	0.00050	8952402
Ethylbenzene	mg/L	<0.00040	0.00040	8952402
Methyl methacrylate	mg/L	<0.00050	0.00050	8952402
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	0.00050	8952402
Styrene	mg/L	<0.00050	0.00050	8952402
1,1,1,2-tetrachloroethane	mg/L	<0.0010	0.0010	8952402
1,1,2,2-tetrachloroethane	mg/L	<0.0020	0.0020	8952402
Tetrachloroethene	mg/L	<0.00050	0.00050	8952402
RDL = Reportable Detection Limit				

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**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF3931		
Sampling Date		2018/04/04		
COC Number		m070644		
	UNITS	TRIP BLANK 6	RDL	QC Batch
Toluene	mg/L	<0.00040	0.00040	8952402
1,2,3-trichlorobenzene	mg/L	<0.0010	0.0010	8952402
1,2,4-trichlorobenzene	mg/L	<0.0010	0.0010	8952402
1,3,5-trichlorobenzene	mg/L	<0.00050	0.00050	8952402
1,1,1-trichloroethane	mg/L	<0.00050	0.00050	8952402
1,1,2-trichloroethane	mg/L	<0.00050	0.00050	8952402
Trichloroethene	mg/L	<0.00050	0.00050	8952402
Trichlorofluoromethane	mg/L	<0.00050	0.00050	8952402
1,2,4-trimethylbenzene	mg/L	<0.00050	0.00050	8952402
1,3,5-trimethylbenzene	mg/L	<0.00050	0.00050	8952402
Vinyl chloride	mg/L	<0.00050	0.00050	8952402
Xylenes (Total)	mg/L	<0.00080	0.00080	8952402
m & p-Xylene	mg/L	<0.00080	0.00080	8952402
o-Xylene	mg/L	<0.00040	0.00040	8952402
<b>Surrogate Recovery (%)</b>				
1,4-Difluorobenzene (sur.)	%	95	N/A	8952402
4-Bromofluorobenzene (sur.)	%	91	N/A	8952402
D4-1,2-Dichloroethane (sur.)	%	98	N/A	8952402
RDL = Reportable Detection Limit N/A = Not Applicable				

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CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
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### GENERAL COMMENTS

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

Package 1	4.3°C
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**Results relate only to the items tested.**

Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8952223	DO1	Matrix Spike	1,4-Difluorobenzene (sur.)	2018/04/06		100	%	50 - 140
			4-Bromofluorobenzene (sur.)	2018/04/06		103	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2018/04/06		96	%	50 - 140
			Benzene	2018/04/06		98	%	50 - 140
			Toluene	2018/04/06		99	%	50 - 140
			Ethylbenzene	2018/04/06		98	%	50 - 140
			m & p-Xylene	2018/04/06		97	%	50 - 140
			o-Xylene	2018/04/06		98	%	50 - 140
			F1 (C6-C10)	2018/04/06		85	%	60 - 140
			8952223	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2018/04/06	
4-Bromofluorobenzene (sur.)	2018/04/06					105	%	50 - 140
D4-1,2-Dichloroethane (sur.)	2018/04/06					98	%	50 - 140
Benzene	2018/04/06					102	%	60 - 130
Toluene	2018/04/06					101	%	60 - 130
Ethylbenzene	2018/04/06					100	%	60 - 130
m & p-Xylene	2018/04/06					98	%	60 - 130
o-Xylene	2018/04/06					103	%	60 - 130
F1 (C6-C10)	2018/04/06					102	%	60 - 140
8952223	DO1	Method Blank				1,4-Difluorobenzene (sur.)	2018/04/06	
			4-Bromofluorobenzene (sur.)	2018/04/06		104	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2018/04/06		98	%	50 - 140
			Benzene	2018/04/06	<0.00040		mg/L	
			Toluene	2018/04/06	<0.00040		mg/L	
			Ethylbenzene	2018/04/06	<0.00040		mg/L	
			m & p-Xylene	2018/04/06	<0.00080		mg/L	
			o-Xylene	2018/04/06	<0.00040		mg/L	
			F1 (C6-C10)	2018/04/06	<0.10		mg/L	
			8952223	DO1	RPD	Benzene	2018/04/06	NC
Toluene	2018/04/06	NC					%	30
Ethylbenzene	2018/04/06	NC					%	30
m & p-Xylene	2018/04/06	NC					%	30
o-Xylene	2018/04/06	NC					%	30
F1 (C6-C10)	2018/04/06	NC					%	30
8952402	RSU	Matrix Spike [TF3917-02]	1,4-Difluorobenzene (sur.)	2018/04/09		102	%	70 - 130
			4-Bromofluorobenzene (sur.)	2018/04/09		97	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2018/04/09		99	%	70 - 130
			Benzene	2018/04/09		100	%	70 - 130
			Bromodichloromethane	2018/04/09		100	%	70 - 130
			Bromoform	2018/04/09		113	%	70 - 130
			Bromomethane	2018/04/09		93	%	70 - 130
			Carbon tetrachloride	2018/04/09		99	%	70 - 130
			Chlorobenzene	2018/04/09		110	%	70 - 130
			Chlorodibromomethane	2018/04/09		108	%	70 - 130
			Chloroethane	2018/04/09		94	%	70 - 130
			Chloroform	2018/04/09		95	%	70 - 130
			Chloromethane	2018/04/09		95	%	70 - 130
			1,2-dibromoethane	2018/04/09		114	%	70 - 130
			1,2-dichlorobenzene	2018/04/09		99	%	70 - 130
			1,3-dichlorobenzene	2018/04/09		98	%	70 - 130
			1,4-dichlorobenzene	2018/04/09		95	%	70 - 130
			1,1-dichloroethane	2018/04/09		96	%	70 - 130
			1,2-dichloroethane	2018/04/09		101	%	70 - 130
			1,1-dichloroethene	2018/04/09		107	%	70 - 130
cis-1,2-dichloroethene	2018/04/09		107	%	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
				trans-1,2-dichloroethene	2018/04/09		108	%	70 - 130
				Dichloromethane	2018/04/09		91	%	70 - 130
				1,2-dichloropropane	2018/04/09		100	%	70 - 130
				cis-1,3-dichloropropene	2018/04/09		116	%	70 - 130
				trans-1,3-dichloropropene	2018/04/09		128	%	70 - 130
				Ethylbenzene	2018/04/09		106	%	70 - 130
				Methyl methacrylate	2018/04/09		115	%	70 - 130
				Methyl-tert-butylether (MTBE)	2018/04/09		101	%	70 - 130
				Styrene	2018/04/09		111	%	70 - 130
				1,1,1,2-tetrachloroethane	2018/04/09		107	%	70 - 130
				1,1,2,2-tetrachloroethane	2018/04/09		104	%	70 - 130
				Tetrachloroethene	2018/04/09		107	%	70 - 130
				Toluene	2018/04/09		105	%	70 - 130
				1,2,3-trichlorobenzene	2018/04/09		98	%	70 - 130
				1,2,4-trichlorobenzene	2018/04/09		98	%	70 - 130
				1,3,5-trichlorobenzene	2018/04/09		98	%	70 - 130
				1,1,1-trichloroethane	2018/04/09		101	%	70 - 130
				1,1,2-trichloroethane	2018/04/09		101	%	70 - 130
				Trichloroethene	2018/04/09		106	%	70 - 130
				Trichlorofluoromethane	2018/04/09		99	%	70 - 130
				1,2,4-trimethylbenzene	2018/04/09		99	%	70 - 130
				1,3,5-trimethylbenzene	2018/04/09		96	%	70 - 130
				Vinyl chloride	2018/04/09		104	%	70 - 130
				m & p-Xylene	2018/04/09		107	%	70 - 130
				o-Xylene	2018/04/09		107	%	70 - 130
8952402	RSU		Spiked Blank	1,4-Difluorobenzene (sur.)	2018/04/06		102	%	70 - 130
				4-Bromofluorobenzene (sur.)	2018/04/06		99	%	70 - 130
				D4-1,2-Dichloroethane (sur.)	2018/04/06		103	%	70 - 130
				Benzene	2018/04/06		107	%	70 - 130
				Bromodichloromethane	2018/04/06		116	%	70 - 130
				Bromoform	2018/04/06		135 (1)	%	70 - 130
				Bromomethane	2018/04/06		102	%	70 - 130
				Carbon tetrachloride	2018/04/06		108	%	70 - 130
				Chlorobenzene	2018/04/06		120	%	70 - 130
				Chlorodibromomethane	2018/04/06		129	%	70 - 130
				Chloroethane	2018/04/06		104	%	70 - 130
				Chloroform	2018/04/06		106	%	70 - 130
				Chloromethane	2018/04/06		106	%	70 - 130
				1,2-dibromoethane	2018/04/06		128	%	70 - 130
				1,2-dichlorobenzene	2018/04/06		118	%	70 - 130
				1,3-dichlorobenzene	2018/04/06		108	%	70 - 130
				1,4-dichlorobenzene	2018/04/06		111	%	70 - 130
				1,1-dichloroethane	2018/04/06		104	%	70 - 130
				1,2-dichloroethane	2018/04/06		115	%	70 - 130
				1,1-dichloroethene	2018/04/06		115	%	70 - 130
				cis-1,2-dichloroethene	2018/04/06		118	%	70 - 130
				trans-1,2-dichloroethene	2018/04/06		112	%	70 - 130
				Dichloromethane	2018/04/06		104	%	70 - 130
				1,2-dichloropropane	2018/04/06		112	%	70 - 130
				cis-1,3-dichloropropene	2018/04/06		122	%	70 - 130
				trans-1,3-dichloropropene	2018/04/06		133 (1)	%	70 - 130
				Ethylbenzene	2018/04/06		110	%	70 - 130
				Methyl methacrylate	2018/04/06		123	%	70 - 130
				Methyl-tert-butylether (MTBE)	2018/04/06		108	%	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
			Styrene	2018/04/06		120	%	70 - 130
			1,1,1,2-tetrachloroethane	2018/04/06		118	%	70 - 130
			1,1,2,2-tetrachloroethane	2018/04/06		120	%	70 - 130
			Tetrachloroethene	2018/04/06		117	%	70 - 130
			Toluene	2018/04/06		114	%	70 - 130
			1,2,3-trichlorobenzene	2018/04/06		114	%	70 - 130
			1,2,4-trichlorobenzene	2018/04/06		110	%	70 - 130
			1,3,5-trichlorobenzene	2018/04/06		108	%	70 - 130
			1,1,1-trichloroethane	2018/04/06		111	%	70 - 130
			1,1,2-trichloroethane	2018/04/06		116	%	70 - 130
			Trichloroethene	2018/04/06		122	%	70 - 130
			Trichlorofluoromethane	2018/04/06		103	%	70 - 130
			1,2,4-trimethylbenzene	2018/04/06		112	%	70 - 130
			1,3,5-trimethylbenzene	2018/04/06		106	%	70 - 130
			Vinyl chloride	2018/04/06		103	%	70 - 130
			m & p-Xylene	2018/04/06		111	%	70 - 130
			o-Xylene	2018/04/06		110	%	70 - 130
8952402	RSU	Method Blank	1,4-Difluorobenzene (sur.)	2018/04/06		99	%	70 - 130
			4-Bromofluorobenzene (sur.)	2018/04/06		91	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2018/04/06		101	%	70 - 130
			Benzene	2018/04/06	<0.00040		mg/L	
			Bromodichloromethane	2018/04/06	<0.00050		mg/L	
			Bromoform	2018/04/06	<0.00050		mg/L	
			Bromomethane	2018/04/06	<0.0020		mg/L	
			Carbon tetrachloride	2018/04/06	<0.00050		mg/L	
			Chlorobenzene	2018/04/06	<0.00050		mg/L	
			Chlorodibromomethane	2018/04/06	<0.0010		mg/L	
			Chloroethane	2018/04/06	<0.0010		mg/L	
			Chloroform	2018/04/06	<0.00050		mg/L	
			Chloromethane	2018/04/06	<0.0020		mg/L	
			1,2-dibromoethane	2018/04/06	<0.00020		mg/L	
			1,2-dichlorobenzene	2018/04/06	<0.00050		mg/L	
			1,3-dichlorobenzene	2018/04/06	<0.00050		mg/L	
			1,4-dichlorobenzene	2018/04/06	<0.00050		mg/L	
			1,1-dichloroethane	2018/04/06	<0.00050		mg/L	
			1,2-dichloroethane	2018/04/06	<0.00050		mg/L	
			1,1-dichloroethene	2018/04/06	<0.00050		mg/L	
			cis-1,2-dichloroethene	2018/04/06	<0.00050		mg/L	
			trans-1,2-dichloroethene	2018/04/06	<0.00050		mg/L	
			Dichloromethane	2018/04/06	<0.0020		mg/L	
			1,2-dichloropropane	2018/04/06	<0.00050		mg/L	
			cis-1,3-dichloropropene	2018/04/06	<0.00050		mg/L	
			trans-1,3-dichloropropene	2018/04/06	<0.00050		mg/L	
			Ethylbenzene	2018/04/06	<0.00040		mg/L	
			Methyl methacrylate	2018/04/06	<0.00050		mg/L	
			Methyl-tert-butylether (MTBE)	2018/04/06	<0.00050		mg/L	
			Styrene	2018/04/06	<0.00050		mg/L	
			1,1,1,2-tetrachloroethane	2018/04/06	<0.0010		mg/L	
			1,1,2,2-tetrachloroethane	2018/04/06	<0.0020		mg/L	
			Tetrachloroethene	2018/04/06	<0.00050		mg/L	
			Toluene	2018/04/06	<0.00040		mg/L	
			1,2,3-trichlorobenzene	2018/04/06	<0.0010		mg/L	
			1,2,4-trichlorobenzene	2018/04/06	<0.0010		mg/L	
			1,3,5-trichlorobenzene	2018/04/06	<0.00050		mg/L	

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**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1,1-trichloroethane	2018/04/06	<0.00050		mg/L	
			1,1,2-trichloroethane	2018/04/06	<0.00050		mg/L	
			Trichloroethene	2018/04/06	<0.00050		mg/L	
			Trichlorofluoromethane	2018/04/06	<0.00050		mg/L	
			1,2,4-trimethylbenzene	2018/04/06	<0.00050		mg/L	
			1,3,5-trimethylbenzene	2018/04/06	<0.00050		mg/L	
			Vinyl chloride	2018/04/06	<0.00050		mg/L	
			Xylenes (Total)	2018/04/06	<0.00080		mg/L	
			m & p-Xylene	2018/04/06	<0.00080		mg/L	
			o-Xylene	2018/04/06	<0.00040		mg/L	
8952402	RSU	RPD [TF3916-02]	Bromodichloromethane	2018/04/06	NC		%	30
			Bromoform	2018/04/06	NC		%	30
			Bromomethane	2018/04/06	NC		%	30
			Carbon tetrachloride	2018/04/06	NC		%	30
			Chlorobenzene	2018/04/06	NC		%	30
			Chlorodibromomethane	2018/04/06	NC		%	30
			Chloroethane	2018/04/06	NC		%	30
			Chloroform	2018/04/06	NC		%	30
			Chloromethane	2018/04/06	NC		%	30
			1,2-dibromoethane	2018/04/06	NC		%	30
			1,2-dichlorobenzene	2018/04/06	NC		%	30
			1,3-dichlorobenzene	2018/04/06	NC		%	30
			1,4-dichlorobenzene	2018/04/06	NC		%	30
			1,1-dichloroethane	2018/04/06	NC		%	30
			1,2-dichloroethane	2018/04/06	NC		%	30
			1,1-dichloroethene	2018/04/06	NC		%	30
			cis-1,2-dichloroethene	2018/04/06	NC		%	30
			trans-1,2-dichloroethene	2018/04/06	NC		%	30
			Dichloromethane	2018/04/06	NC		%	30
			1,2-dichloropropane	2018/04/06	NC		%	30
			cis-1,3-dichloropropene	2018/04/06	NC		%	30
			trans-1,3-dichloropropene	2018/04/06	NC		%	30
			Methyl methacrylate	2018/04/06	NC		%	30
			Methyl-tert-butylether (MTBE)	2018/04/06	NC		%	30
			Styrene	2018/04/06	NC		%	30
			1,1,1,2-tetrachloroethane	2018/04/06	NC		%	30
			1,1,2,2-tetrachloroethane	2018/04/06	NC		%	30
			Tetrachloroethene	2018/04/06	NC		%	30
			1,2,3-trichlorobenzene	2018/04/06	NC		%	30
			1,2,4-trichlorobenzene	2018/04/06	NC		%	30
			1,3,5-trichlorobenzene	2018/04/06	NC		%	30
			1,1,1-trichloroethane	2018/04/06	NC		%	30
			1,1,2-trichloroethane	2018/04/06	NC		%	30
			Trichloroethene	2018/04/06	NC		%	30
			Trichlorofluoromethane	2018/04/06	NC		%	30
			1,2,4-trimethylbenzene	2018/04/06	NC		%	30
			1,3,5-trimethylbenzene	2018/04/06	NC		%	30
			Vinyl chloride	2018/04/06	NC		%	30
8952527	VP4	Matrix Spike [TF3916-01]	O-TERPHENYL (sur.)	2018/04/09		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/09		107	%	60 - 130
8952527	VP4	Spiked Blank	O-TERPHENYL (sur.)	2018/04/09		95	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/09		103	%	70 - 130
8952527	VP4	Method Blank	O-TERPHENYL (sur.)	2018/04/09		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/09	<0.10		mg/L	



Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8952527	VP4	RPD [TF3919-01]	F2 (C10-C16 Hydrocarbons)	2018/04/09	NC		%	30
8952530	LZ3	Matrix Spike [TF3919-01]	D10-ANTHRACENE (sur.)	2018/04/11		91	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2018/04/11		100	%	50 - 130
			D8-NAPHTHALENE (sur.)	2018/04/11		91	%	50 - 130
			TERPHENYL-D14 (sur.)	2018/04/11		111	%	50 - 130
			Acenaphthene	2018/04/11		97	%	50 - 130
			Acenaphthylene	2018/04/11		97	%	50 - 130
			Acridine	2018/04/11		90	%	50 - 130
			Anthracene	2018/04/11		91	%	50 - 130
			Benzo(a)anthracene	2018/04/11		123	%	50 - 130
			Benzo(b&j)fluoranthene	2018/04/11		114	%	50 - 130
			Benzo(k)fluoranthene	2018/04/11		117	%	50 - 130
			Benzo(g,h,i)perylene	2018/04/11		98	%	50 - 130
			Benzo(c)phenanthrene	2018/04/11		123	%	50 - 130
			Benzo(a)pyrene	2018/04/11		105	%	50 - 130
			Benzo[e]pyrene	2018/04/11		102	%	50 - 130
			Chrysene	2018/04/11		118	%	50 - 130
			Dibenz(a,h)anthracene	2018/04/11		101	%	50 - 130
			Fluoranthene	2018/04/11		112	%	50 - 130
			Fluorene	2018/04/11		103	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2018/04/11		101	%	50 - 130
			1-Methylnaphthalene	2018/04/11		91	%	50 - 130
			2-Methylnaphthalene	2018/04/11		84	%	50 - 130
			Naphthalene	2018/04/11		84	%	50 - 130
			Phenanthrene	2018/04/11		100	%	50 - 130
			Perylene	2018/04/11		92	%	50 - 130
			Pyrene	2018/04/11		108	%	50 - 130
			Quinoline	2018/04/11		115	%	50 - 130
8952530	LZ3	Spiked Blank	D10-ANTHRACENE (sur.)	2018/04/11		89	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2018/04/11		96	%	50 - 130
			D8-NAPHTHALENE (sur.)	2018/04/11		82	%	50 - 130
			TERPHENYL-D14 (sur.)	2018/04/11		108	%	50 - 130
			Acenaphthene	2018/04/11		92	%	50 - 130
			Acenaphthylene	2018/04/11		93	%	50 - 130
			Acridine	2018/04/11		83	%	50 - 130
			Anthracene	2018/04/11		89	%	50 - 130
			Benzo(a)anthracene	2018/04/11		125	%	50 - 130
			Benzo(b&j)fluoranthene	2018/04/11		115	%	50 - 130
			Benzo(k)fluoranthene	2018/04/11		115	%	50 - 130
			Benzo(g,h,i)perylene	2018/04/11		100	%	50 - 130
			Benzo(c)phenanthrene	2018/04/11		121	%	50 - 130
			Benzo(a)pyrene	2018/04/11		108	%	50 - 130
			Benzo[e]pyrene	2018/04/11		104	%	50 - 130
			Chrysene	2018/04/11		118	%	50 - 130
			Dibenz(a,h)anthracene	2018/04/11		104	%	50 - 130
			Fluoranthene	2018/04/11		114	%	50 - 130
			Fluorene	2018/04/11		100	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2018/04/11		105	%	50 - 130
			1-Methylnaphthalene	2018/04/11		86	%	50 - 130
			2-Methylnaphthalene	2018/04/11		79	%	50 - 130
			Naphthalene	2018/04/11		81	%	50 - 130
			Phenanthrene	2018/04/11		97	%	50 - 130
			Perylene	2018/04/11		94	%	50 - 130
			Pyrene	2018/04/11		110	%	50 - 130

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CLIFTON ASSOCIATES LTD.  
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Sampler Initials: AM

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits	
8952530	LZ3	Method Blank	Quinoline	2018/04/11		111	%	50 - 130	
			D10-ANTHRACENE (sur.)	2018/04/11		92	%	50 - 130	
			D8-ACENAPHTHYLENE (sur.)	2018/04/11		88	%	50 - 130	
			D8-NAPHTHALENE (sur.)	2018/04/11		64	%	50 - 130	
			TERPHENYL-D14 (sur.)	2018/04/11		113	%	50 - 130	
			Acenaphthene	2018/04/11	<0.00010		mg/L		
			Acenaphthylene	2018/04/11	<0.00010		mg/L		
			Acridine	2018/04/11	<0.000050		mg/L		
			Anthracene	2018/04/11	<0.000010		mg/L		
			Benzo(a)anthracene	2018/04/11	<0.0000085		mg/L		
			Benzo(b&j)fluoranthene	2018/04/11	<0.0000085		mg/L		
			Benzo(k)fluoranthene	2018/04/11	<0.0000085		mg/L		
			Benzo(g,h,i)perylene	2018/04/11	<0.0000085		mg/L		
			Benzo(c)phenanthrene	2018/04/11	<0.000050		mg/L		
			Benzo(a)pyrene	2018/04/11	<0.0000075		mg/L		
			Benzo[e]pyrene	2018/04/11	<0.000050		mg/L		
			Chrysene	2018/04/11	<0.0000085		mg/L		
			Dibenz(a,h)anthracene	2018/04/11	<0.0000075		mg/L		
			Fluoranthene	2018/04/11	<0.000010		mg/L		
			Fluorene	2018/04/11	<0.000050		mg/L		
			Indeno(1,2,3-cd)pyrene	2018/04/11	<0.0000085		mg/L		
			1-Methylnaphthalene	2018/04/11	<0.00010		mg/L		
			2-Methylnaphthalene	2018/04/11	<0.00010		mg/L		
			Naphthalene	2018/04/11	<0.00010		mg/L		
			Phenanthrene	2018/04/11	<0.000050		mg/L		
			Perylene	2018/04/11	<0.000050		mg/L		
Pyrene	2018/04/11	<0.000020		mg/L					
Quinoline	2018/04/11	<0.00020		mg/L					
8952530	LZ3	RPD [TF3919-01]	Acenaphthene	2018/04/11	NC		%	30	
			Acenaphthylene	2018/04/11	NC		%	30	
			Acridine	2018/04/11	NC		%	30	
			Anthracene	2018/04/11	NC		%	30	
			Benzo(a)anthracene	2018/04/11	NC		%	30	
			Benzo(b&j)fluoranthene	2018/04/11	NC		%	30	
			Benzo(k)fluoranthene	2018/04/11	NC		%	30	
			Benzo(g,h,i)perylene	2018/04/11	NC		%	30	
			Benzo(c)phenanthrene	2018/04/11	NC		%	30	
			Benzo(a)pyrene	2018/04/11	NC		%	30	
			Benzo[e]pyrene	2018/04/11	NC		%	30	
			Chrysene	2018/04/11	NC		%	30	
			Dibenz(a,h)anthracene	2018/04/11	8.9		%	30	
			Fluoranthene	2018/04/11	NC		%	30	
			Fluorene	2018/04/11	NC		%	30	
			Indeno(1,2,3-cd)pyrene	2018/04/11	NC		%	30	
			1-Methylnaphthalene	2018/04/11	NC		%	30	
			2-Methylnaphthalene	2018/04/11	NC		%	30	
			Naphthalene	2018/04/11	NC		%	30	
			Phenanthrene	2018/04/11	NC		%	30	
Perylene	2018/04/11	NC		%	30				
Pyrene	2018/04/11	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
				Quinoline	2018/04/11	NC		%	30
<p>Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.</p> <p>Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.</p> <p>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.</p> <p>Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.</p> <p>Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.</p> <p>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 &lt;= 2x RDL).</p> <p>(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.</p>									

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**NOTIFICATION LOG**

No Reportable Regulation Exceedences Noted.

Maxxam Job #: B824942  
Report Date: 2018/04/11

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VALIDATION SIGNATURE PAGE**

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



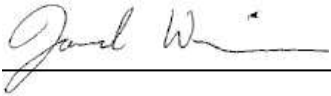
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Dennis Ngondo, B.Sc., P.Chem., QP, Supervisor, Organics



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Janet Gao, B.Sc., QP, Supervisor, Organics



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Jared Wiseman, B.Sc., P.Chem., QP, Senior Analyst, Organics



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Jingyuan Song, QP, Organics – Senior Analyst

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Invoice Information		Report Information (If differs from invoice)		Project Information		Turnaround Time (TAT) Required																																																																							
Company: <u>Clifton Associates</u>		Company: _____		Quotation #: _____		<input checked="" type="checkbox"/> 5 - 7 Days Regular (Most analyses)																																																																							
Contact Name: <u>Stephen Dabadie</u>		Contact Name: _____		P.O. #: / AFE#: _____		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS																																																																							
Address: <u>2222 - 30 Ave. NE</u> <u>Calgary, AB T2E7K9</u>		Address: _____		Project #: <u>CG2430.1 E30</u>		Rush TAT (Surcharges will be applied)																																																																							
Phone: <u>403-263-2556</u>		Phone: _____		Site Location: _____		<input type="checkbox"/> Same Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 1 Day <input type="checkbox"/> 3-4 Days																																																																							
Email: <u>stephen.dabadie@clifton.ca</u>		Email: _____		Site #: _____		Date Required: _____																																																																							
Copies: <u>terryn_kuzyk@clifton.ca</u>		Copies: _____		Sampled By: <u>Austin</u>		Rush Confirmation #: _____																																																																							
Laboratory Use Only				Analysis Requested				Regulatory Criteria																																																																					
<table border="1"> <tr><td>Seal Present</td><td>YES</td><td>NO</td><td>Cooler ID</td></tr> <tr><td>Seal Intact</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td>Temp</td></tr> <tr><td>Cooling Media</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td>5 3 5</td></tr> <tr><td>Seal Present</td><td>YES</td><td>NO</td><td>Cooler ID</td></tr> <tr><td>Seal Intact</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Temp</td></tr> <tr><td>Cooling Media</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr> <tr><td>Seal Present</td><td>YES</td><td>NO</td><td>Cooler ID</td></tr> <tr><td>Seal Intact</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Temp</td></tr> <tr><td>Cooling Media</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr> </table>				Seal Present	YES	NO	Cooler ID	Seal Intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temp	Cooling Media	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5 3 5	Seal Present	YES	NO	Cooler ID	Seal Intact	<input type="checkbox"/>	<input type="checkbox"/>	Temp	Cooling Media	<input type="checkbox"/>	<input type="checkbox"/>		Seal Present	YES	NO	Cooler ID	Seal Intact	<input type="checkbox"/>	<input type="checkbox"/>	Temp	Cooling Media	<input type="checkbox"/>	<input type="checkbox"/>		<table border="1"> <tr><td># of containers</td><td><input checked="" type="checkbox"/></td><td>VOC</td><td><input type="checkbox"/></td></tr> <tr><td>BTEX F1</td><td><input checked="" type="checkbox"/></td><td>BTEX F1-F2</td><td><input type="checkbox"/></td></tr> <tr><td>BTEX F3-F4</td><td><input type="checkbox"/></td><td>Routine Water</td><td><input type="checkbox"/></td></tr> <tr><td>Regulated Metals</td><td><input type="checkbox"/></td><td>Tot</td><td><input type="checkbox"/></td></tr> <tr><td>Mercury</td><td><input type="checkbox"/></td><td>Total</td><td><input type="checkbox"/></td></tr> <tr><td>Salinity</td><td><input type="checkbox"/></td><td>Sieve (75 micron)</td><td><input type="checkbox"/></td></tr> <tr><td>Texture (% Sand, Silt, Clay)</td><td><input type="checkbox"/></td><td>Basic Class II Landfill</td><td><input type="checkbox"/></td></tr> <tr><td>PAHs</td><td><input checked="" type="checkbox"/></td><td></td><td></td></tr> </table>				# of containers	<input checked="" type="checkbox"/>	VOC	<input type="checkbox"/>	BTEX F1	<input checked="" type="checkbox"/>	BTEX F1-F2	<input type="checkbox"/>	BTEX F3-F4	<input type="checkbox"/>	Routine Water	<input type="checkbox"/>	Regulated Metals	<input type="checkbox"/>	Tot	<input type="checkbox"/>	Mercury	<input type="checkbox"/>	Total	<input type="checkbox"/>	Salinity	<input type="checkbox"/>	Sieve (75 micron)	<input type="checkbox"/>	Texture (% Sand, Silt, Clay)	<input type="checkbox"/>	Basic Class II Landfill	<input type="checkbox"/>	PAHs	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/> AT1 <input type="checkbox"/> CCME <input type="checkbox"/> Drinking Water <input type="checkbox"/> D50 (Drilling Waste) <input type="checkbox"/> Saskatchewan <input type="checkbox"/> Other: _____	
Seal Present	YES	NO	Cooler ID																																																																										
Seal Intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temp																																																																										
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Texture (% Sand, Silt, Clay)	<input type="checkbox"/>	Basic Class II Landfill	<input type="checkbox"/>																																																																										
PAHs	<input checked="" type="checkbox"/>																																																																												
Sample Identification		Depth (Unit)	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	HOLD - DO NOT ANALYZE		Special Instructions																																																																					
1	1946		2018.4.4	11:20	GW	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																					
2	1947			11:30		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																					
3	1980			13:00		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																					
4	2002			13:35		8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																					
5	2003			13:20		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																					
6	EX 1			10:15		5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																					
7	EX 2			9:40		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																					
8	EX 3			9:20		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																					
9	EX 4			14:10		6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																					
10	EX 6		2018.4.4	14:30	GW	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																					
Please indicate Filtered, Preserved or Both (F, P, F/P)						P	P																																																																						
Relinquished by: (Signature/ Print)		DATE (YYYY/MM/DD)	Time (HH:MM)	Received by: (Signature/ Print)		DATE (YYYY/MM/DD)	Time (HH:MM)																																																																						
<u>Austin Mei</u>		2018.4.5	8:38	<u>Jennifer Stephenson</u>		2018/04/05	08:38																																																																						

05-Apr-18 08:38  
Jennifer Stephenson  
B824942  
JZ8 INS-0067

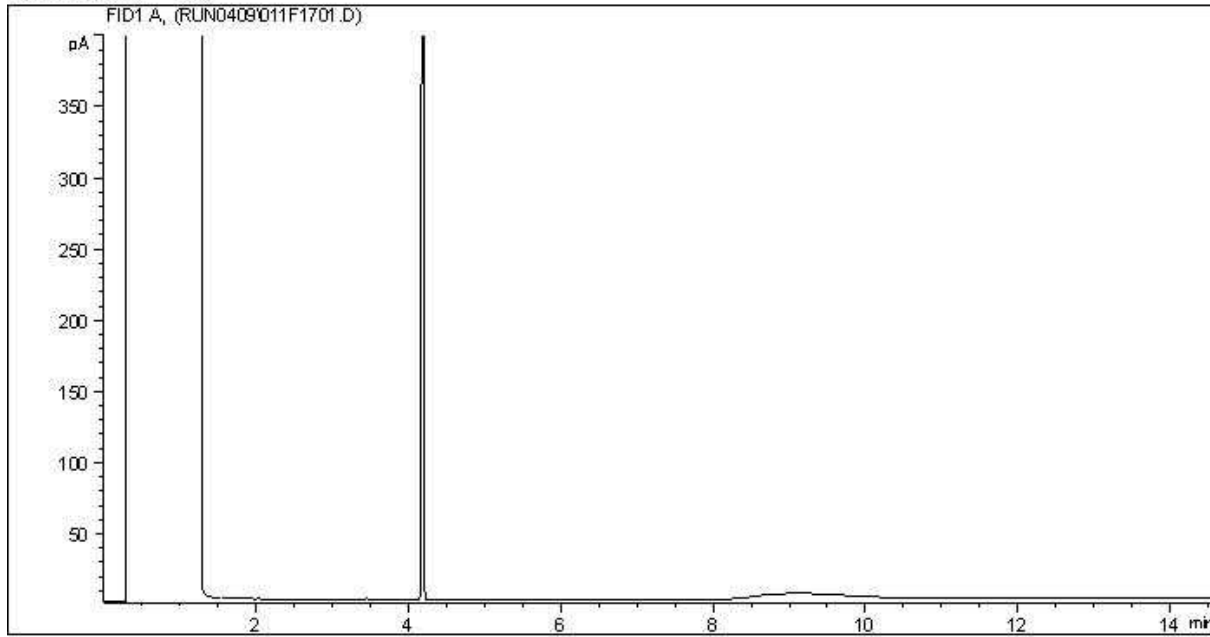




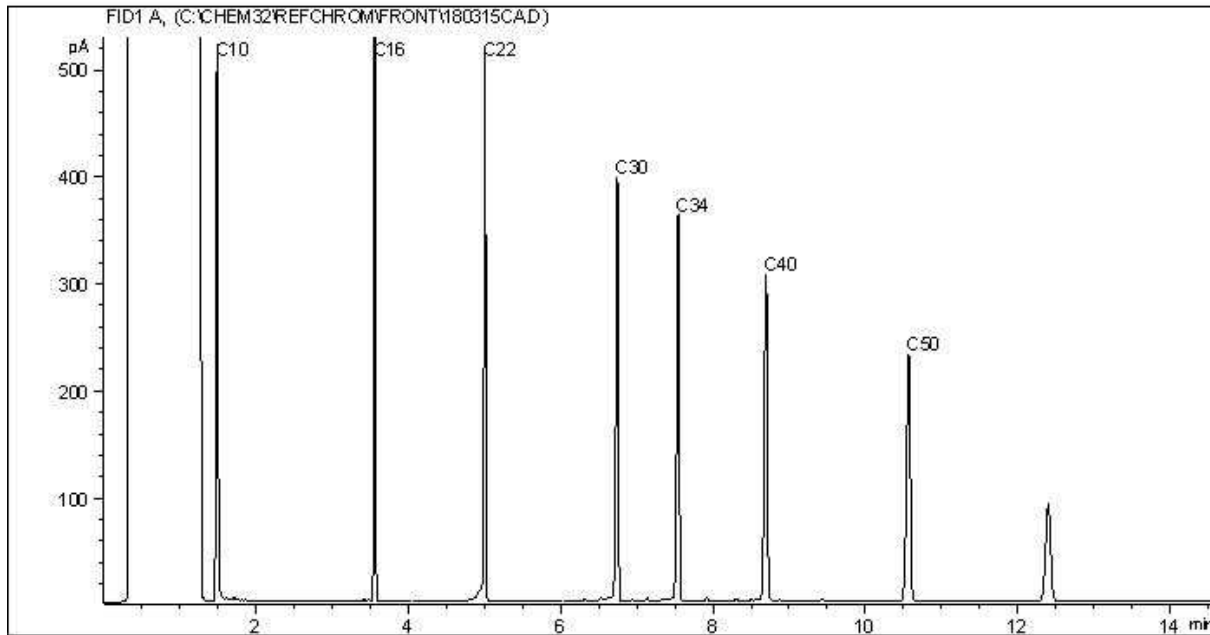


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



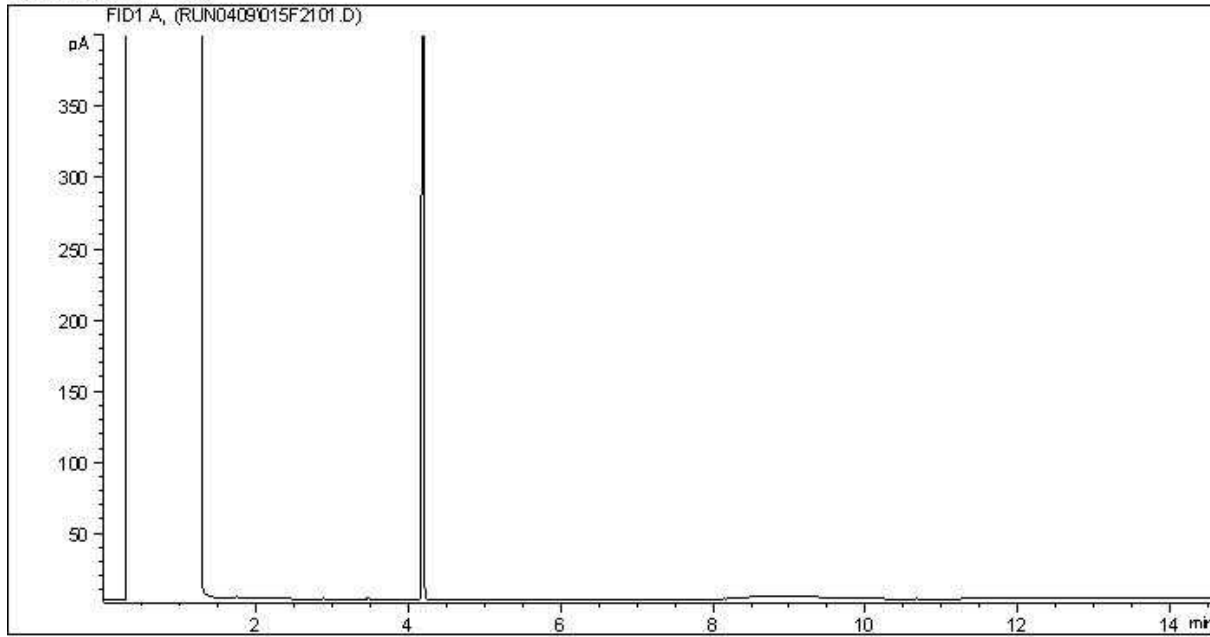
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

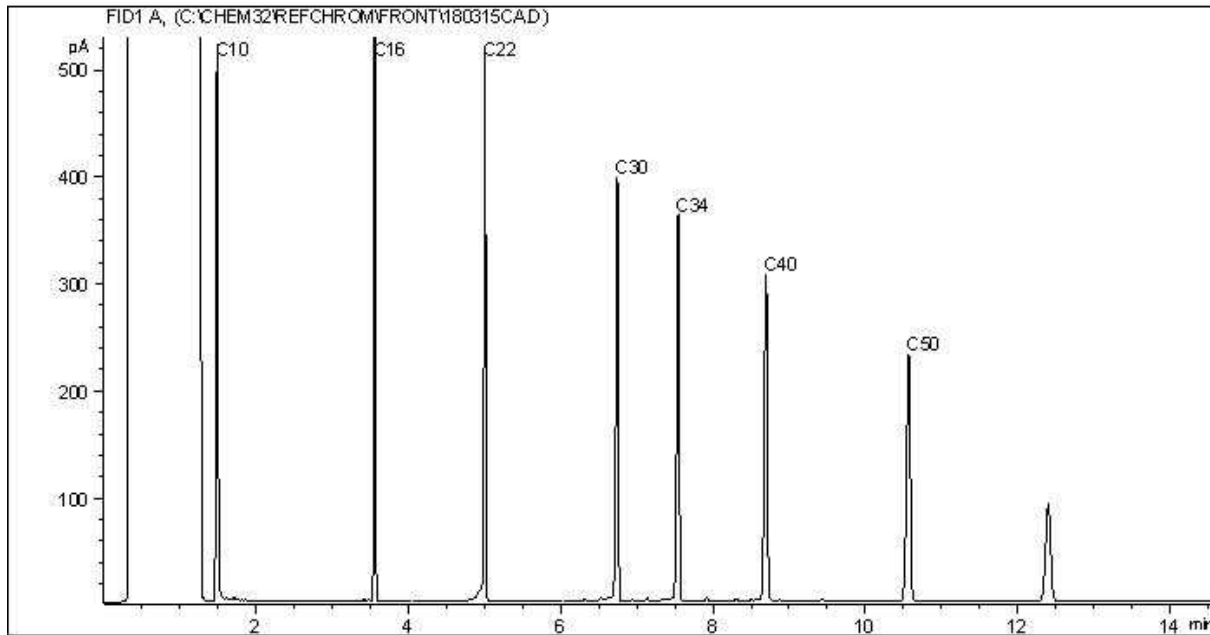
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



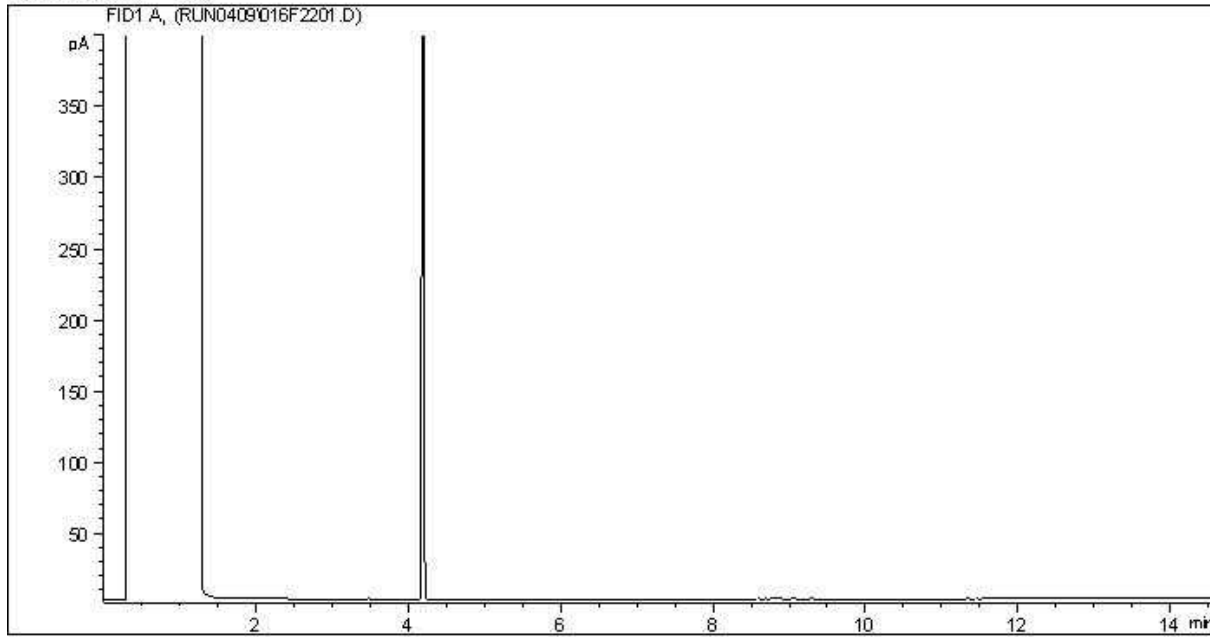
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

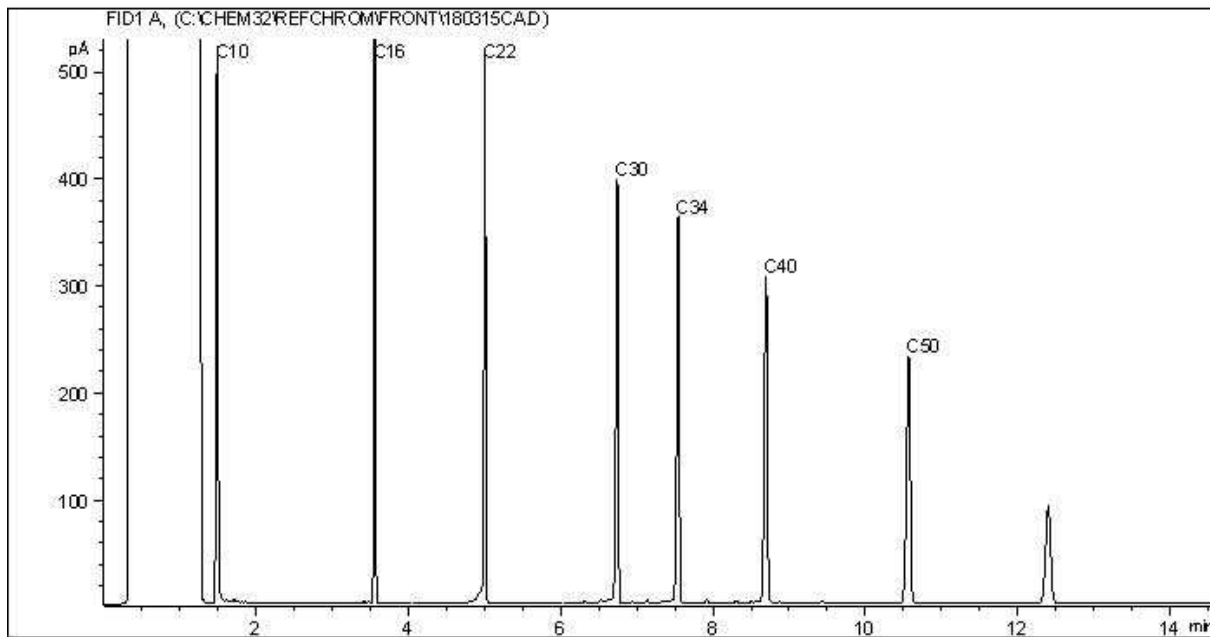
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



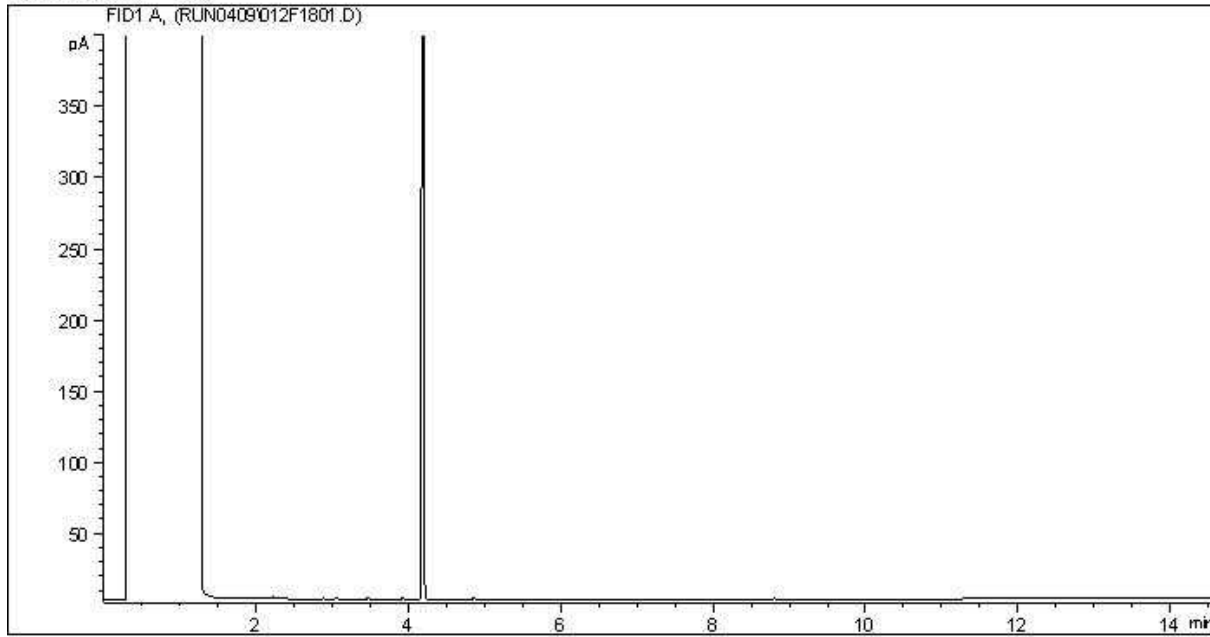
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

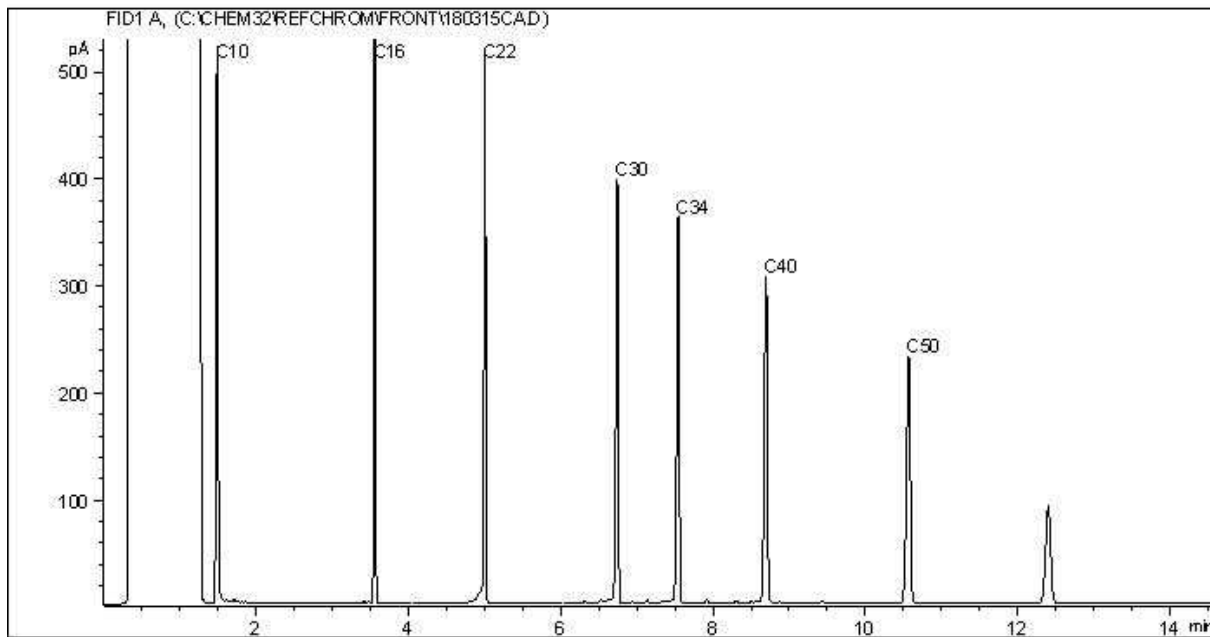
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



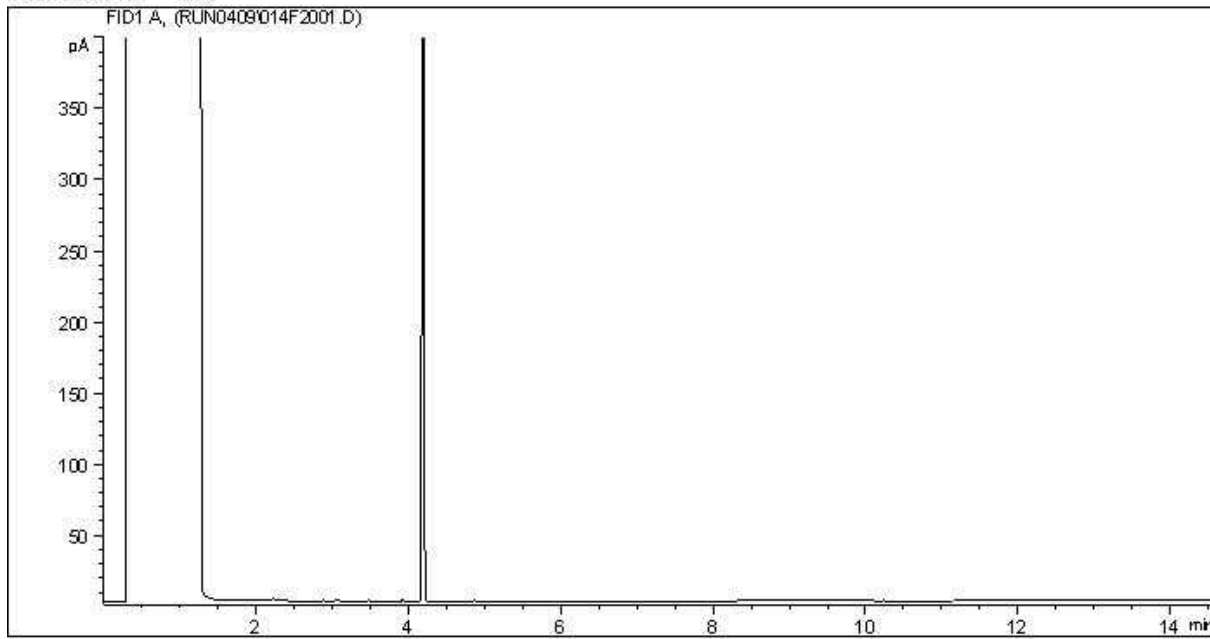
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

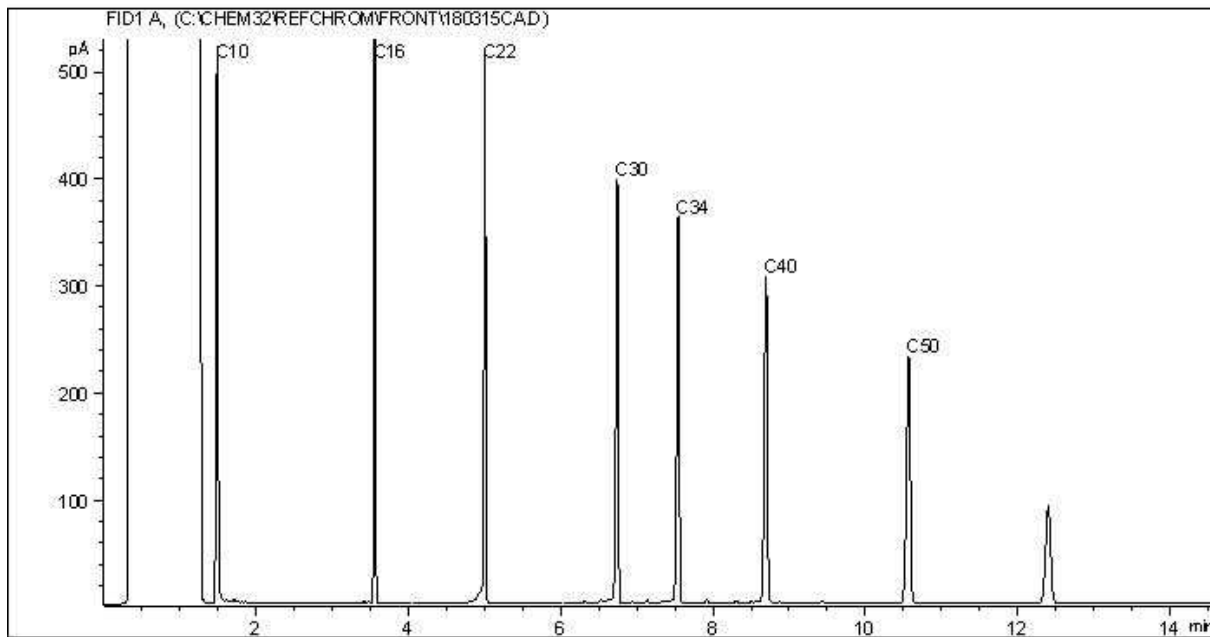
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



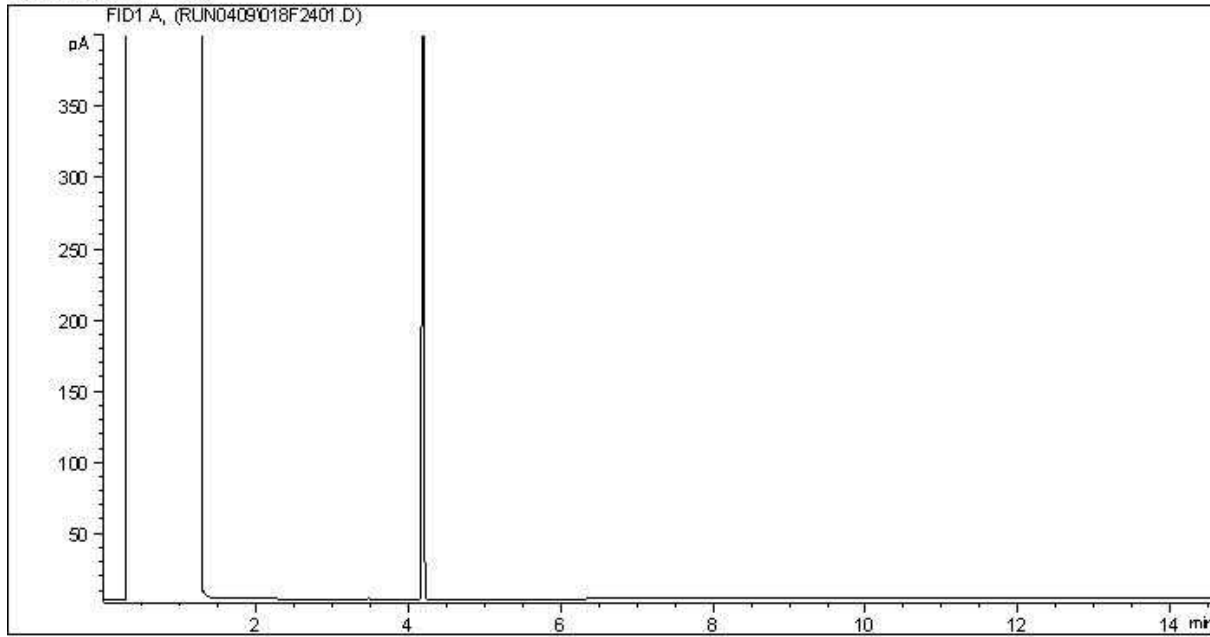
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

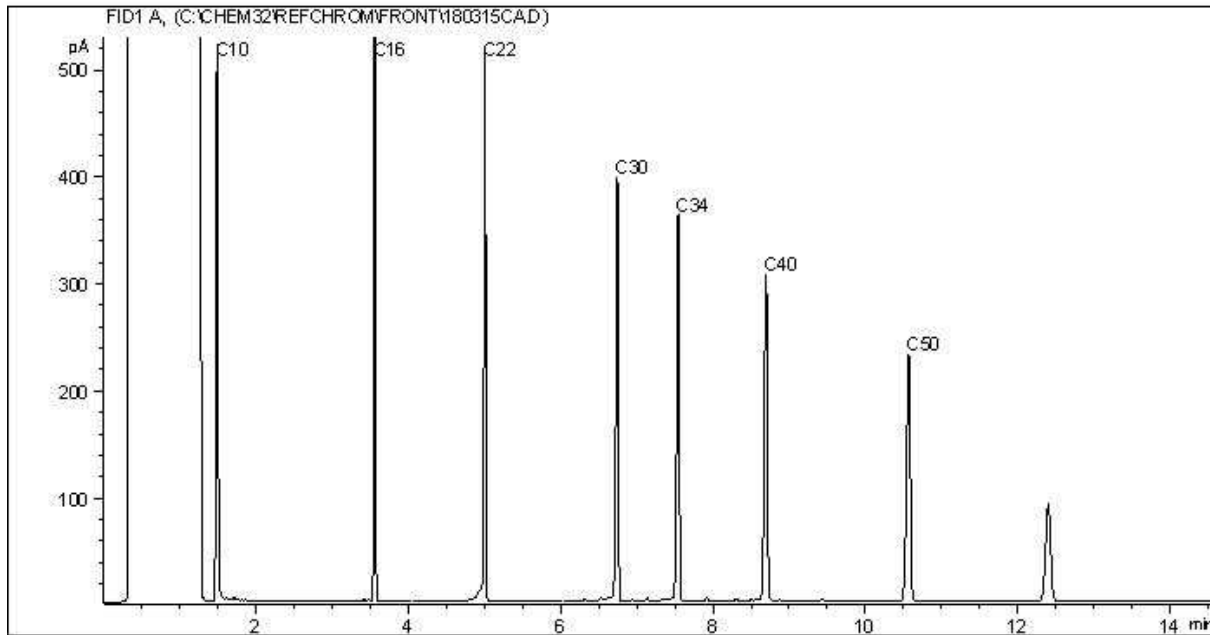
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



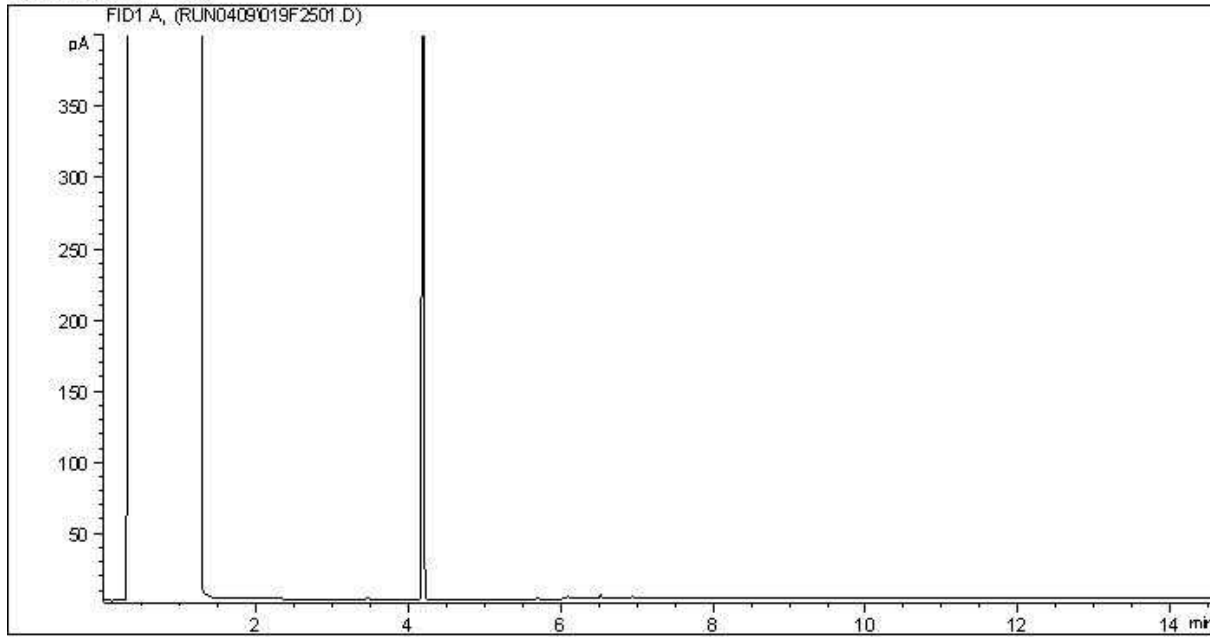
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

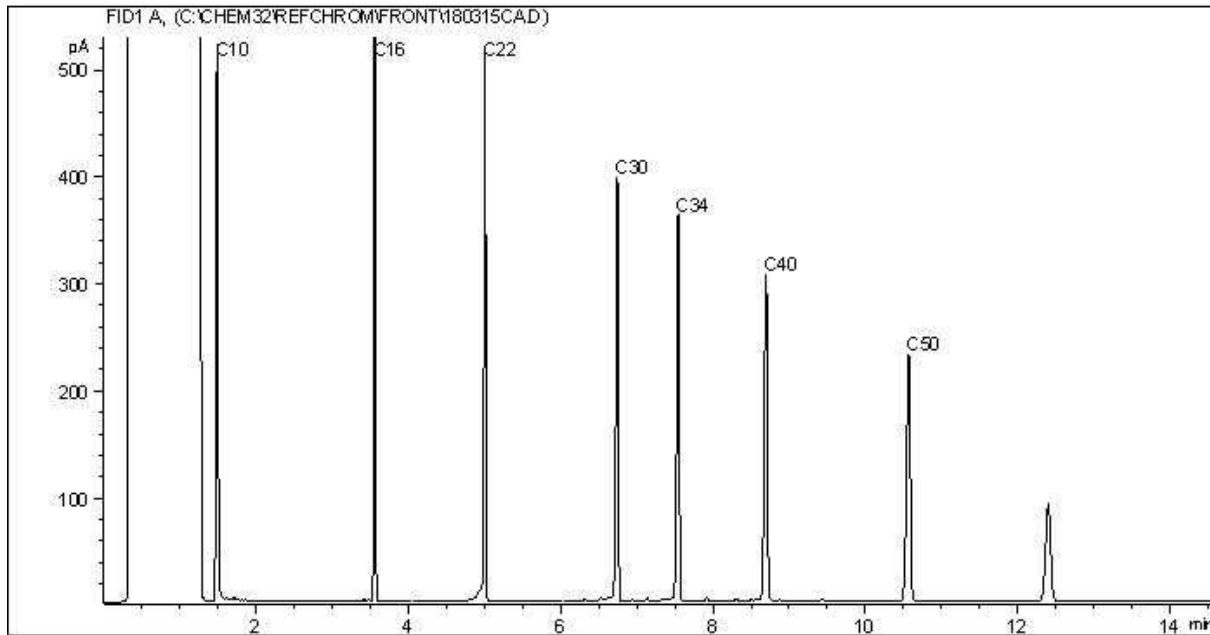
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

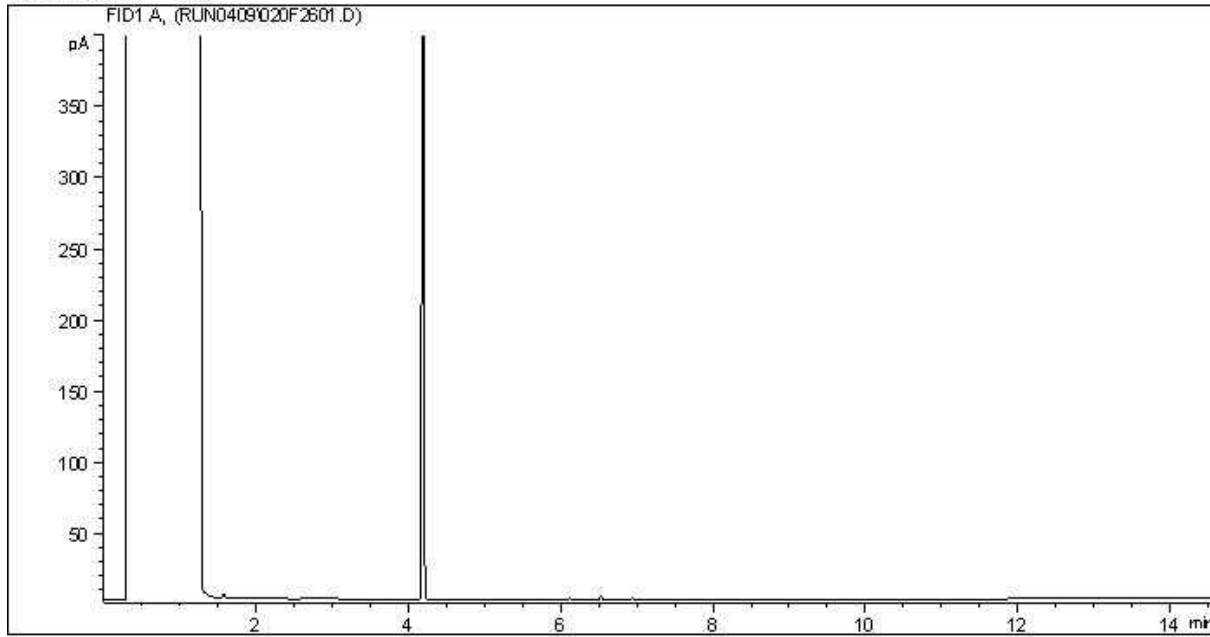
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

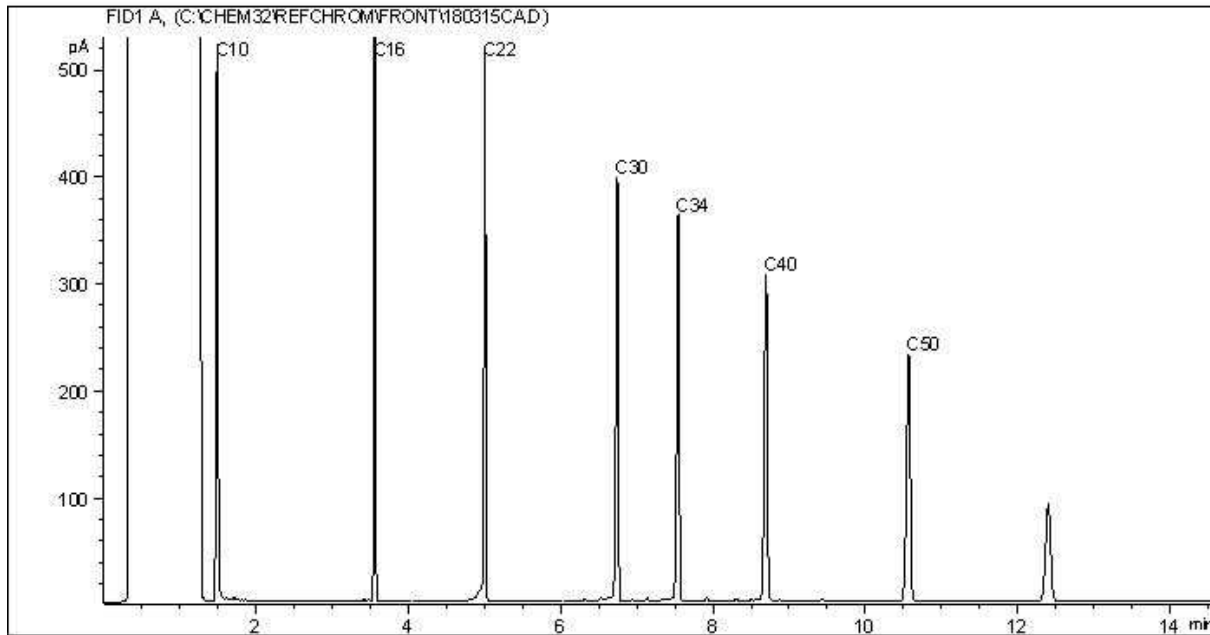


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



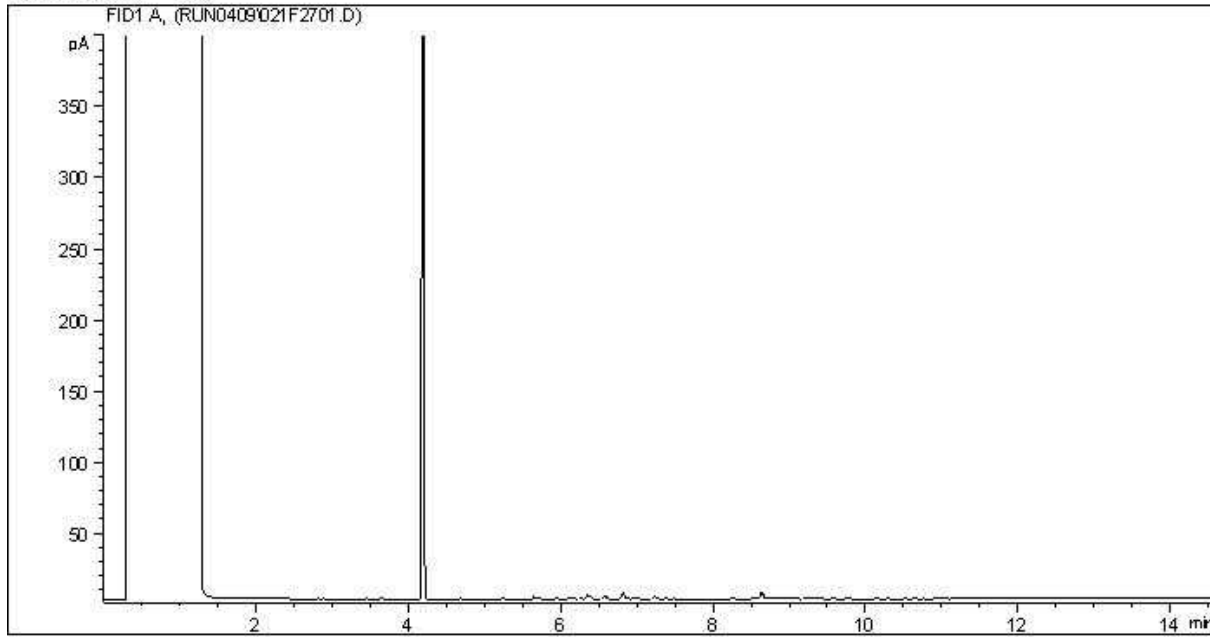
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

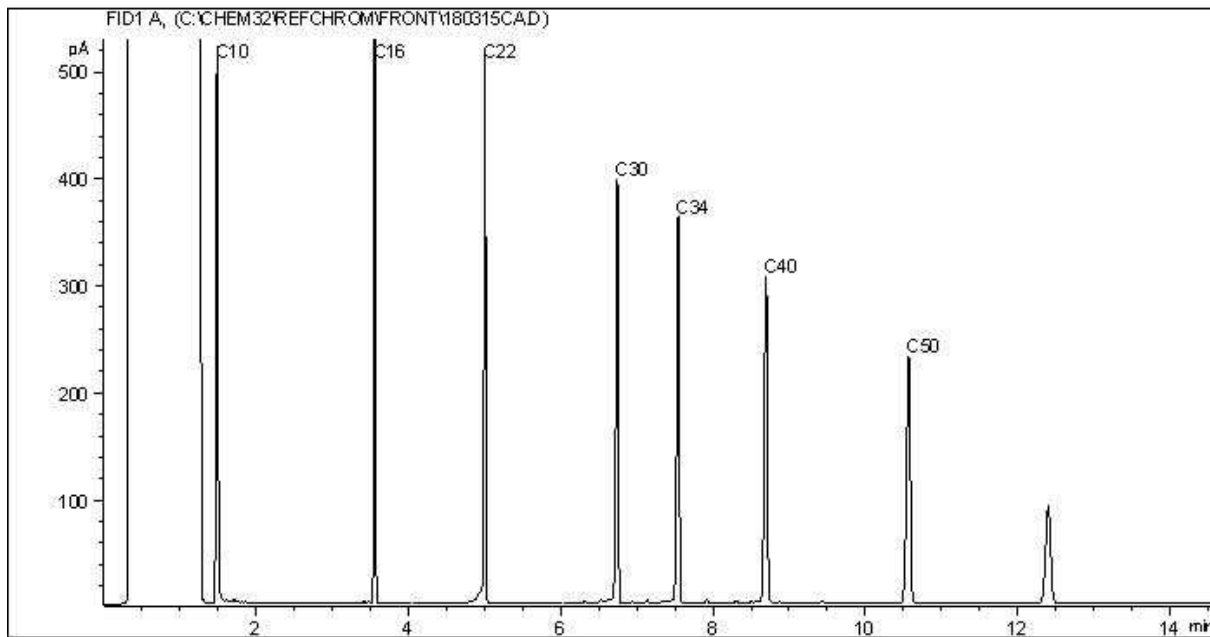
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



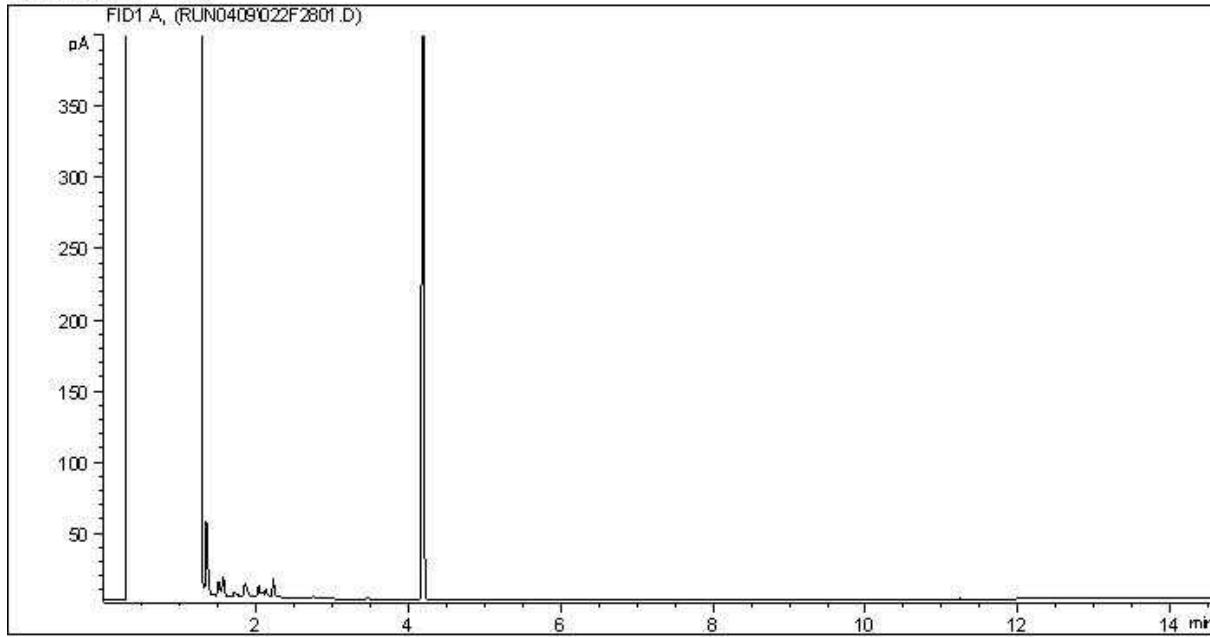
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

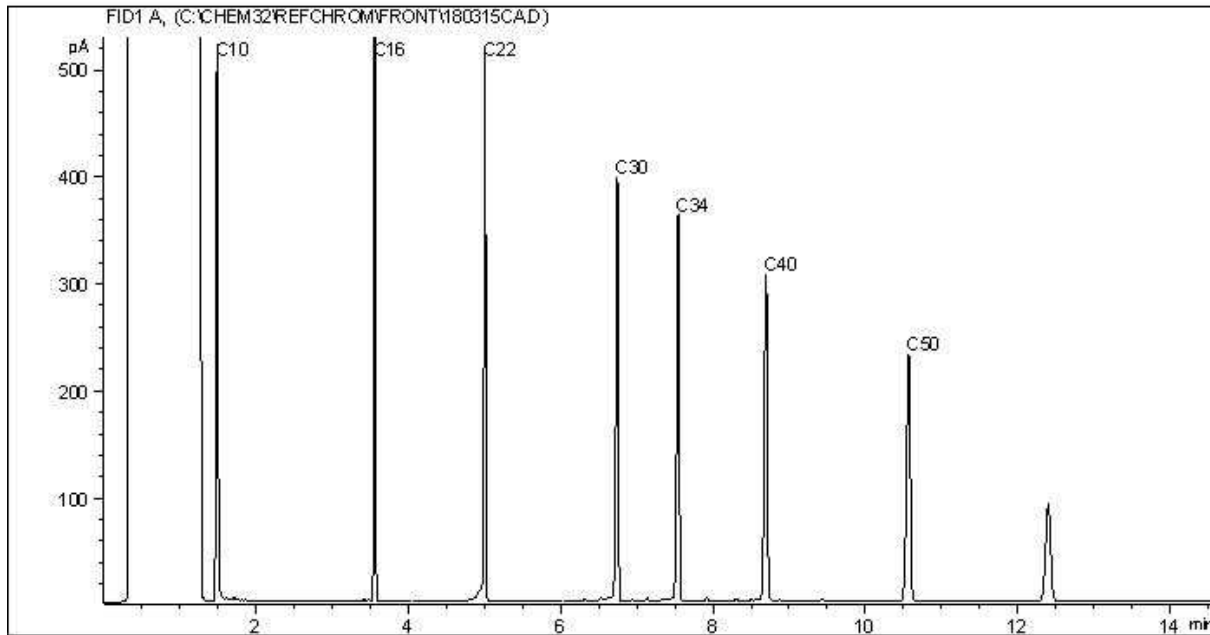
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



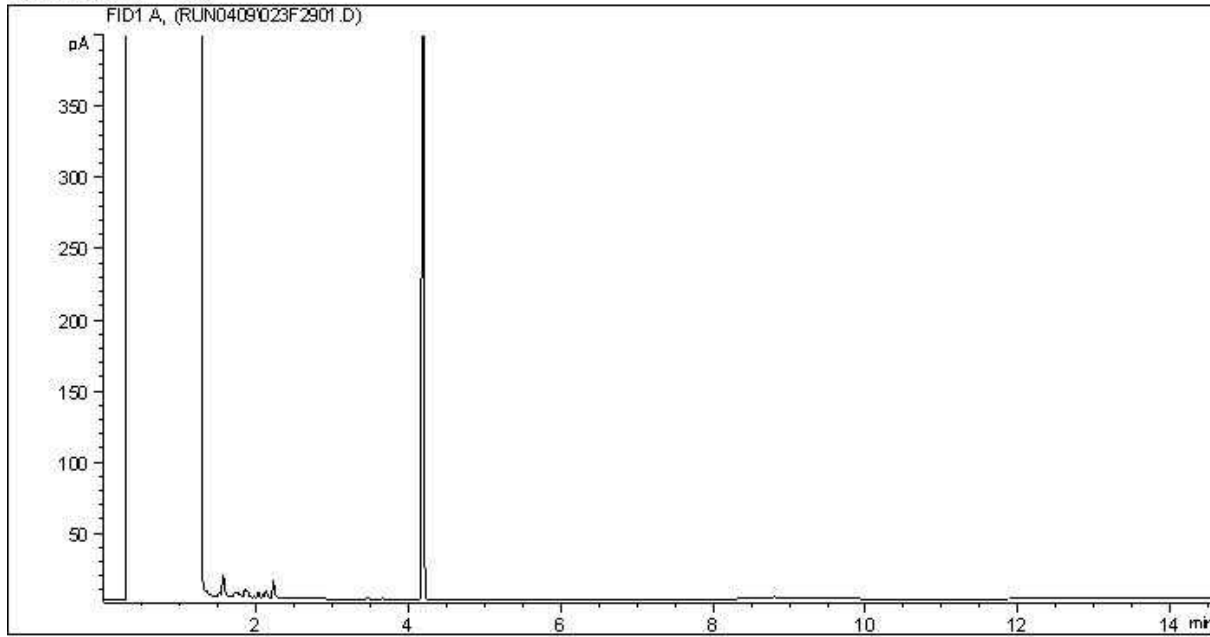
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

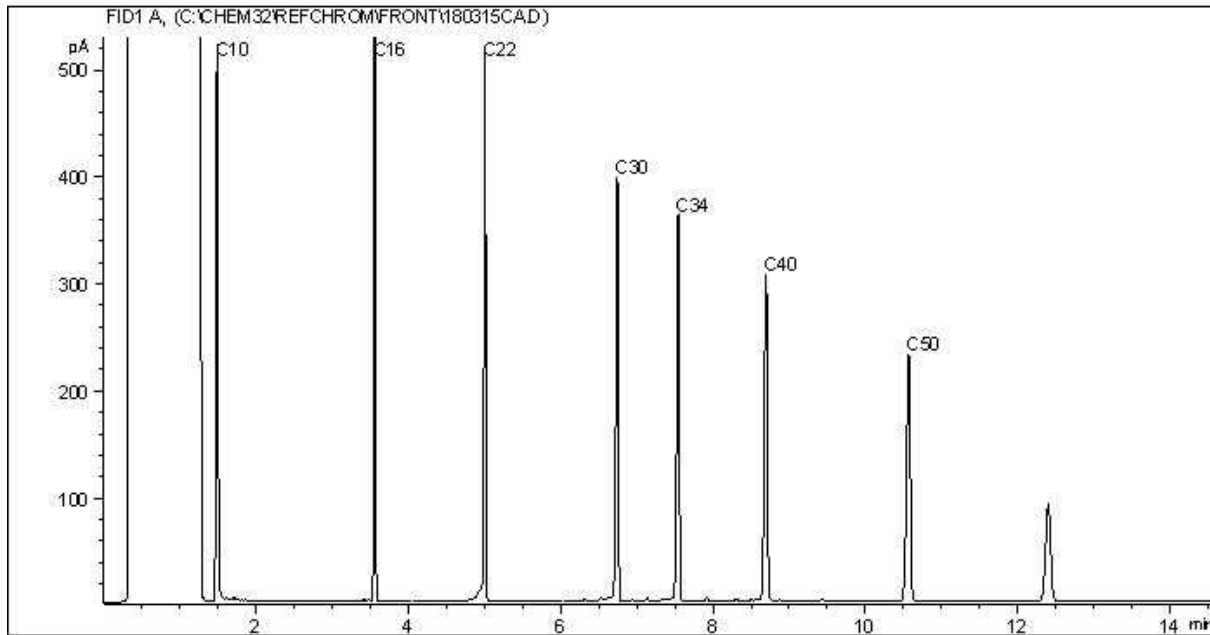
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



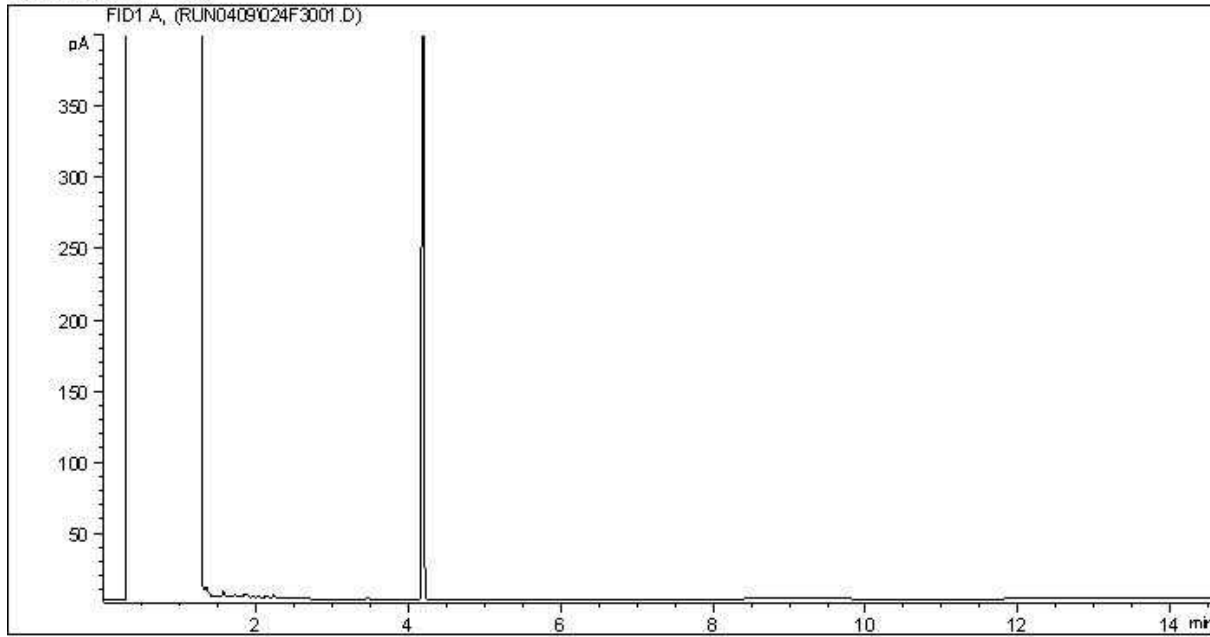
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

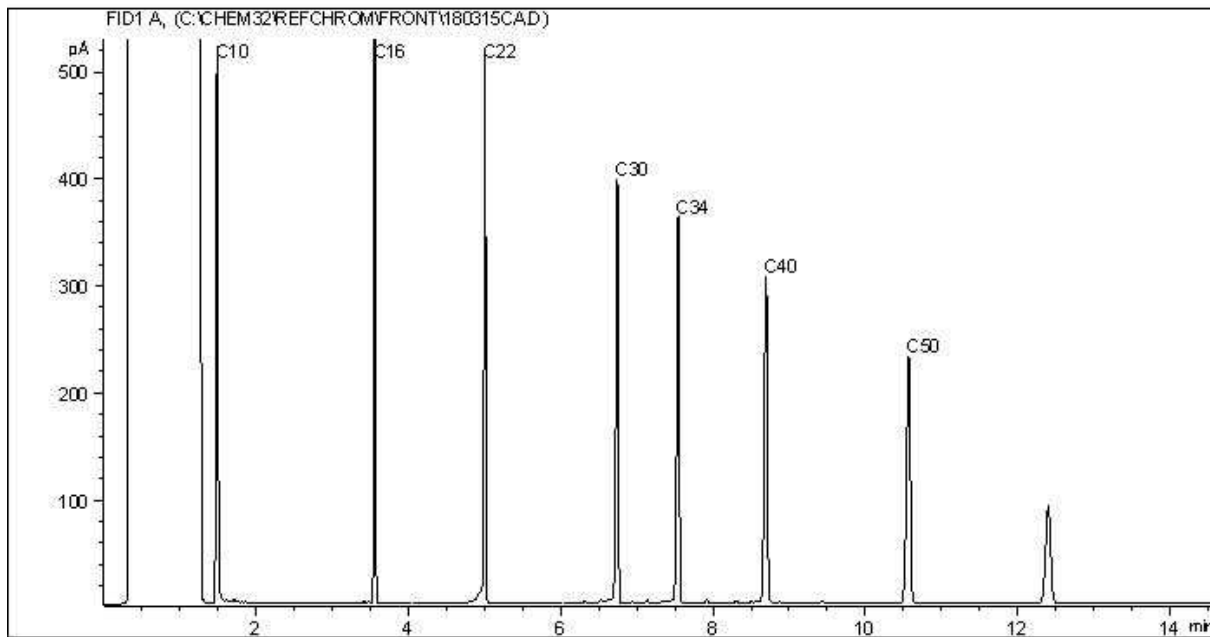
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



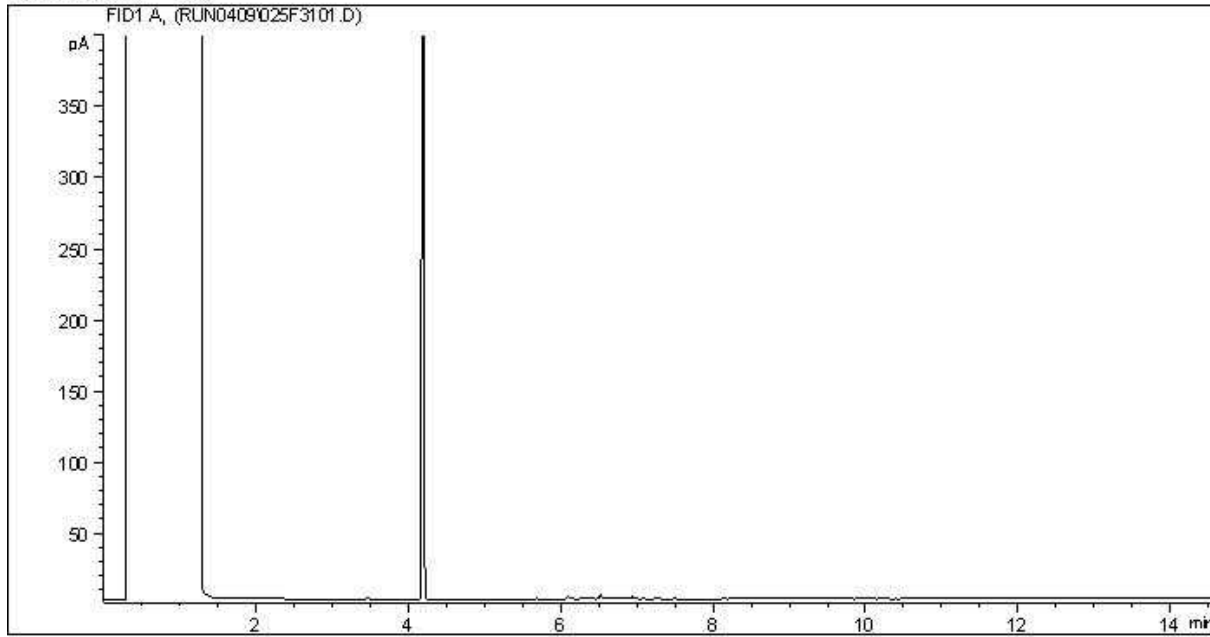
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

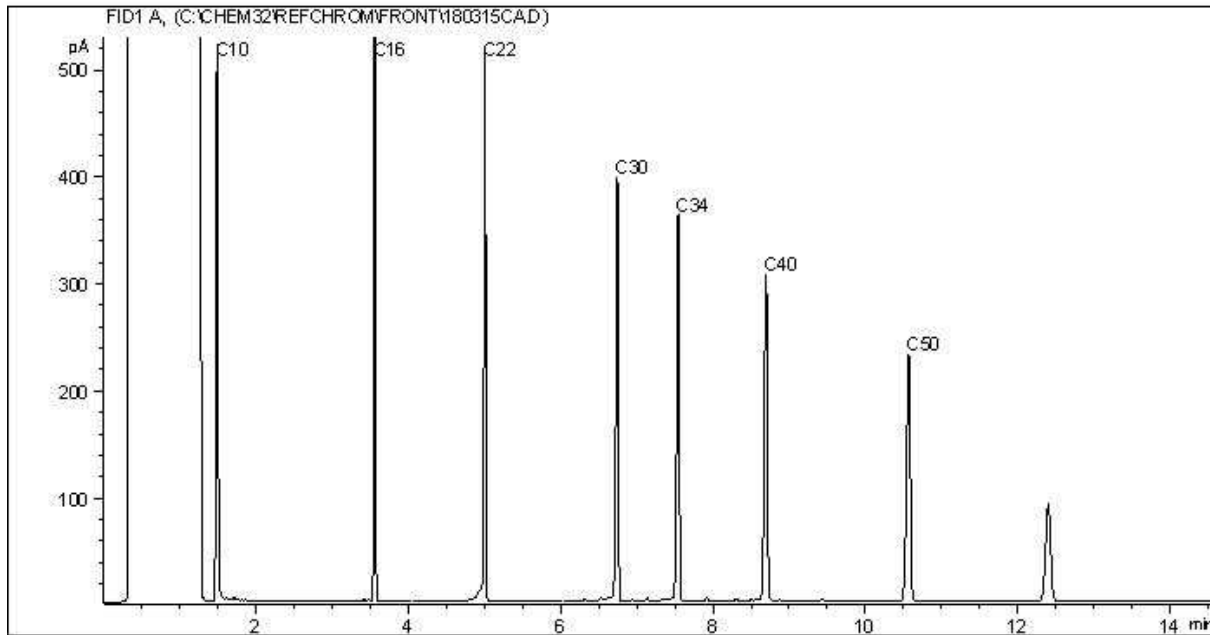
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

Your Project #: CG2430.1 E30  
Your C.O.C. #: A113174

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/13**  
Report #: R2540956  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B825288**

**Received: 2018/04/06, 08:20**

Sample Matrix: GROUND WATER  
# Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 in Water by HS GC/MS/FID	11	N/A	2018/04/07	AB SOP-00039	CCME CWS/EPA 8260c m
F1-BTEX	11	N/A	2018/04/08	AB SOP-00039	Auto Calc
CCME Hydrocarbons in Water (F2; C10-C16) (1)	9	2018/04/09	2018/04/09	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
CCME Hydrocarbons in Water (F2; C10-C16) (1)	1	2018/04/09	2018/04/10	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Benzo[a]pyrene Equivalency (2)	9	N/A	2018/04/12	AB SOP-00003	Auto Calc
PAH in Water by GC/MS	9	2018/04/09	2018/04/11	AB SOP-00037 / AB SOP-00003	EPA 3510C/8270D m
Total Trihalomethanes Calculation	11	N/A	2018/04/10	AB SOP-00056	Auto Calc
VOCs in Water by HS GC/MS (Std List)	11	N/A	2018/04/09	AB SOP-00056	EPA 5021a/8260c m

Sample Matrix: Water  
# Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Trihalomethanes Calculation	1	N/A	2018/04/10	AB SOP-00056	Auto Calc
VOCs in Water by HS GC/MS (Std List)	1	N/A	2018/04/09	AB SOP-00056	EPA 5021a/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.



Your Project #: CG2430.1 E30  
Your C.O.C. #: A113174

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/13**  
Report #: R2540956  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B825288**

**Received: 2018/04/06, 08:20**

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) Silica gel clean up employed.

(2) B[a]P TPE is calculated using 1/2 of the RDL for non detect results as per Alberta Environment instructions. This protocol may not apply in other jurisdictions.

**Encryption Key**

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Jennifer Stephenson, B.Sc, Technical Specialist

Email: [jstephenson@maxxam.ca](mailto:jstephenson@maxxam.ca)

Phone# (403) 291-3077

=====

This report has been generated and distributed using a secure automated process.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (GROUND WATER)**

Maxxam ID		TF5517	TF5518	TF5519	TF5520	TF5521	TF5522		
Sampling Date		2018/04/05 11:10	2018/04/05 11:20	2018/04/05 15:50	2018/04/05 11:30	2018/04/05 11:30	2018/04/05 16:10		
COC Number		A113174	A113174	A113174	A113174	A113174	A113174		
	<b>UNITS</b>	<b>1912</b>	<b>1913</b>	<b>1914</b>	<b>1915</b>	<b>9915</b>	<b>1915B</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Ext. Pet. Hydrocarbon</b>									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	0.33	0.29	0.49	0.10	8953356
<b>Volatiles</b>									
Benzene	mg/L	0.25	<0.00040	<0.00040	0.053	0.061	0.078	0.00040	8953123
Toluene	mg/L	0.00079	<0.00040	<0.00040	0.0020	0.0022	0.0022	0.00040	8953123
Ethylbenzene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.00099	0.00040	8953123
m & p-Xylene	mg/L	<0.00080	<0.00080	<0.00080	0.030	0.030	0.072	0.00080	8953123
o-Xylene	mg/L	<0.00040	<0.00040	<0.00040	0.087	0.080	0.062	0.00040	8953123
Xylenes (Total)	mg/L	<0.00089	<0.00089	<0.00089	0.12	0.11	0.13	0.00089	8952992
F1 (C6-C10) - BTEX	mg/L	<0.10	<0.10	<0.10	1.8	1.8	1.3	0.10	8952992
F1 (C6-C10)	mg/L	0.24	<0.10	<0.10	2.0	1.9	1.6	0.10	8953123
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene (sur.)	%	90	94	88	87	96	88	N/A	8953123
4-Bromofluorobenzene (sur.)	%	99	95	122	103	96	88	N/A	8953123
D4-1,2-Dichloroethane (sur.)	%	84	86	82	74	89	83	N/A	8953123
O-TERPHENYL (sur.)	%	98	97	104	98	103	103	N/A	8953356

RDL = Reportable Detection Limit  
N/A = Not Applicable

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (GROUND WATER)**

Maxxam ID		TF5523	TF5525	TF5526	TF5527		
Sampling Date		2018/04/05 16:10	2018/04/05 10:45	2018/04/05 11:00	2018/04/05 10:30		
COC Number		A113174	A113174	A113174	A113174		
	<b>UNITS</b>	<b>9915B</b>	<b>1944</b>	<b>2004</b>	<b>1701</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Ext. Pet. Hydrocarbon</b>							
F2 (C10-C16 Hydrocarbons)	mg/L	0.55	<0.10	<0.10	<0.10	0.10	8953356
<b>Volatiles</b>							
Benzene	mg/L	0.082	0.012	<0.00040	<0.00040	0.00040	8953123
Toluene	mg/L	0.0016	<0.00040	<0.00040	<0.00040	0.00040	8953123
Ethylbenzene	mg/L	0.00059	<0.00040	<0.00040	<0.00040	0.00040	8953123
m & p-Xylene	mg/L	0.053	<0.00080	<0.00080	<0.00080	0.00080	8953123
o-Xylene	mg/L	0.067	<0.00040	<0.00040	<0.00040	0.00040	8953123
Xylenes (Total)	mg/L	0.12	<0.00089	<0.00089	<0.00089	0.00089	8952992
F1 (C6-C10) - BTEX	mg/L	1.3	<0.10	<0.10	<0.10	0.10	8952992
F1 (C6-C10)	mg/L	1.5	<0.10	<0.10	<0.10	0.10	8953123
<b>Surrogate Recovery (%)</b>							
1,4-Difluorobenzene (sur.)	%	107	88	92	96	N/A	8953123
4-Bromofluorobenzene (sur.)	%	88	94	102	99	N/A	8953123
D4-1,2-Dichloroethane (sur.)	%	81	79	82	89	N/A	8953123
O-TERPHENYL (sur.)	%	101	108	99	105	N/A	8953356
RDL = Reportable Detection Limit N/A = Not Applicable							

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**AT1 BTEX AND F1 WATER (GROUND WATER)**

<b>Maxxam ID</b>		TF5524		
<b>Sampling Date</b>		2018/04/05 16:30		
<b>COC Number</b>		A113174		
	<b>UNITS</b>	<b>1916</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Volatiles</b>				
Benzene	mg/L	<0.00040	0.00040	8953123
Toluene	mg/L	<0.00040	0.00040	8953123
Ethylbenzene	mg/L	<0.00040	0.00040	8953123
m & p-Xylene	mg/L	<0.00080	0.00080	8953123
o-Xylene	mg/L	<0.00040	0.00040	8953123
Xylenes (Total)	mg/L	<0.00089	0.00089	8952992
F1 (C6-C10) - BTEX	mg/L	<0.10	0.10	8952992
F1 (C6-C10)	mg/L	<0.10	0.10	8953123
<b>Surrogate Recovery (%)</b>				
1,4-Difluorobenzene (sur.)	%	84	N/A	8953123
4-Bromofluorobenzene (sur.)	%	99	N/A	8953123
D4-1,2-Dichloroethane (sur.)	%	87	N/A	8953123
RDL = Reportable Detection Limit N/A = Not Applicable				

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**SEMIVOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TF5517	TF5518	TF5519	TF5520	TF5521		
Sampling Date		2018/04/05 11:10	2018/04/05 11:20	2018/04/05 15:50	2018/04/05 11:30	2018/04/05 11:30		
COC Number		A113174	A113174	A113174	A113174	A113174		
	<b>UNITS</b>	<b>1912</b>	<b>1913</b>	<b>1914</b>	<b>1915</b>	<b>9915</b>	<b>RDL</b>	<b>QC Batch</b>

Polycyclic Aromatics								
Benzo[a]pyrene equivalency	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8952998
Acenaphthene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8953368
Acenaphthylene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8953368
Acridine	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953368
Anthracene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8953368
Benzo(a)anthracene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953368
Benzo(b&j)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953368
Benzo(k)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953368
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953368
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953368
Benzo(a)pyrene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8953368
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953368
Chrysene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953368
Dibenz(a,h)anthracene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8953368
Fluoranthene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8953368
Fluorene	mg/L	<0.000050	<0.000050	<0.000050	0.000086	0.000073	0.000050	8953368
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953368
1-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	0.0089	0.0069	0.00010	8953368
2-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	0.018	0.014	0.00010	8953368
Naphthalene	mg/L	<0.00010	<0.00010	<0.00010	0.011	0.0088	0.00010	8953368
Phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953368
Perylene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953368
Pyrene	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8953368
Quinoline	mg/L	<0.00020	<0.00020	<0.00020	0.00044	0.00034	0.00020	8953368

Surrogate Recovery (%)								
D10-ANTHRACENE (sur.)	%	98	99	101	98	96	N/A	8953368
D8-ACENAPHTHYLENE (sur.)	%	89	88	88	88	90	N/A	8953368
D8-NAPHTHALENE (sur.)	%	55	67	76	70	74	N/A	8953368
TERPHENYL-D14 (sur.)	%	98	105	107	106	105	N/A	8953368

RDL = Reportable Detection Limit  
N/A = Not Applicable

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**SEMIVOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TF5522	TF5523	TF5524	TF5527		
Sampling Date		2018/04/05 16:10	2018/04/05 16:10	2018/04/05 16:30	2018/04/05 10:30		
COC Number		A113174	A113174	A113174	A113174		
	<b>UNITS</b>	<b>1915B</b>	<b>9915B</b>	<b>1916</b>	<b>1701</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Polycyclic Aromatics</b>							
Benzo[a]pyrene equivalency	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8952998
Acenaphthene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8953368
Acenaphthylene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8953368
Acridine	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953368
Anthracene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8953368
Benzo(a)anthracene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953368
Benzo(b&j)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953368
Benzo(k)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953368
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953368
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953368
Benzo(a)pyrene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8953368
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953368
Chrysene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953368
Dibenz(a,h)anthracene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8953368
Fluoranthene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8953368
Fluorene	mg/L	0.000078	0.000085	<0.000050	<0.000050	0.000050	8953368
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953368
1-Methylnaphthalene	mg/L	0.0084	0.0092	<0.00010	<0.00010	0.00010	8953368
2-Methylnaphthalene	mg/L	0.018	0.019	<0.00010	<0.00010	0.00010	8953368
Naphthalene	mg/L	0.011	0.012	<0.00010	<0.00010	0.00010	8953368
Phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953368
Perylene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953368
Pyrene	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8953368
Quinoline	mg/L	0.00066	0.00080	<0.00020	<0.00020	0.00020	8953368
<b>Surrogate Recovery (%)</b>							
D10-ANTHRACENE (sur.)	%	100	98	99	97	N/A	8953368
D8-ACENAPHTHYLENE (sur.)	%	94	89	88	92	N/A	8953368
D8-NAPHTHALENE (sur.)	%	76	74	71	77	N/A	8953368
TERPHENYL-D14 (sur.)	%	108	107	108	106	N/A	8953368

RDL = Reportable Detection Limit  
N/A = Not Applicable

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TF5517	TF5517	TF5518	TF5519	TF5520		
Sampling Date		2018/04/05 11:10	2018/04/05 11:10	2018/04/05 11:20	2018/04/05 15:50	2018/04/05 11:30		
COC Number		A113174	A113174	A113174	A113174	A113174		
	UNITS	1912	1912 Lab-Dup	1913	1914	1915	RDL	QC Batch

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	N/A	<0.0013	<0.0013	<0.0013	0.0013	8953071
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953155
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953155
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953155
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953155
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8953155
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,2-dichloroethane	mg/L	0.045	0.039	<0.00050	<0.00050	0.0088	0.00050	8953155
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953155
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953155
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953155
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953155
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953155

RDL = Reportable Detection Limit  
Lab-Dup = Laboratory Initiated Duplicate  
N/A = Not Applicable



Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TF5517	TF5517	TF5518	TF5519	TF5520		
Sampling Date		2018/04/05 11:10	2018/04/05 11:10	2018/04/05 11:20	2018/04/05 15:50	2018/04/05 11:30		
COC Number		A113174	A113174	A113174	A113174	A113174		
	UNITS	1912	1912 Lab-Dup	1913	1914	1915	RDL	QC Batch
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.038	0.00050	8953155
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.0049	0.00050	8953155
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Surrogate Recovery (%)								
1,4-Difluorobenzene (sur.)	%	103	101	102	102	102	N/A	8953155
4-Bromofluorobenzene (sur.)	%	95	95	95	95	95	N/A	8953155
D4-1,2-Dichloroethane (sur.)	%	116	106	100	100	96	N/A	8953155
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable								

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TF5521	TF5522	TF5523	TF5524	TF5525		
Sampling Date		2018/04/05 11:30	2018/04/05 16:10	2018/04/05 16:10	2018/04/05 16:30	2018/04/05 10:45		
COC Number		A113174	A113174	A113174	A113174	A113174		
	<b>UNITS</b>	<b>9915</b>	<b>1915B</b>	<b>9915B</b>	<b>1916</b>	<b>1944</b>	<b>RDL</b>	<b>QC Batch</b>

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0013	8953071
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953155
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953155
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953155
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953155
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8953155
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,2-dichloroethane	mg/L	0.0086	0.017	0.016	<0.00050	<0.00050	0.00050	8953155
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953155
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953155
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953155
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953155
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953155
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
RDL = Reportable Detection Limit								

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TF5521	TF5522	TF5523	TF5524	TF5525		
Sampling Date		2018/04/05 11:30	2018/04/05 16:10	2018/04/05 16:10	2018/04/05 16:30	2018/04/05 10:45		
COC Number		A113174	A113174	A113174	A113174	A113174		
	<b>UNITS</b>	<b>9915</b>	<b>1915B</b>	<b>9915B</b>	<b>1916</b>	<b>1944</b>	<b>RDL</b>	<b>QC Batch</b>
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
1,2,4-trimethylbenzene	mg/L	0.038	0.049	0.067	<0.00050	<0.00050	0.00050	8953155
1,3,5-trimethylbenzene	mg/L	0.0050	0.017	0.024	<0.00050	<0.00050	0.00050	8953155
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953155
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	102	103	101	103	102	N/A	8953155
4-Bromofluorobenzene (sur.)	%	95	96	95	97	98	N/A	8953155
D4-1,2-Dichloroethane (sur.)	%	95	97	98	101	102	N/A	8953155
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TF5526	TF5527		
Sampling Date		2018/04/05 11:00	2018/04/05 10:30		
COC Number		A113174	A113174		
	UNITS	2004	1701	RDL	QC Batch
<b>Volatiles</b>					
Total Trihalomethanes	mg/L	<0.0013	<0.0013	0.0013	8953071
Bromodichloromethane	mg/L	<0.00050	<0.00050	0.00050	8953155
Bromoform	mg/L	<0.00050	<0.00050	0.00050	8953155
Bromomethane	mg/L	<0.0020	<0.0020	0.0020	8953155
Carbon tetrachloride	mg/L	<0.00050	<0.00050	0.00050	8953155
Chlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8953155
Chlorodibromomethane	mg/L	<0.0010	<0.0010	0.0010	8953155
Chloroethane	mg/L	<0.0010	<0.0010	0.0010	8953155
Chloroform	mg/L	<0.00050	<0.00050	0.00050	8953155
Chloromethane	mg/L	<0.0020	<0.0020	0.0020	8953155
1,2-dibromoethane	mg/L	<0.00020	<0.00020	0.00020	8953155
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8953155
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8953155
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8953155
1,1-dichloroethane	mg/L	<0.00050	<0.00050	0.00050	8953155
1,2-dichloroethane	mg/L	<0.00050	<0.00050	0.00050	8953155
1,1-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	8953155
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	8953155
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	8953155
Dichloromethane	mg/L	<0.0020	<0.0020	0.0020	8953155
1,2-dichloropropane	mg/L	<0.00050	<0.00050	0.00050	8953155
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	0.00050	8953155
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	0.00050	8953155
Methyl methacrylate	mg/L	<0.00050	<0.00050	0.00050	8953155
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	0.00050	8953155
Styrene	mg/L	<0.00050	<0.00050	0.00050	8953155
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	0.0010	8953155
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	0.0020	8953155
Tetrachloroethene	mg/L	<0.00050	<0.00050	0.00050	8953155
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	0.0010	8953155
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	0.0010	8953155
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	8953155
RDL = Reportable Detection Limit					

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (GROUND WATER)**

Maxxam ID		TF5526	TF5527		
Sampling Date		2018/04/05 11:00	2018/04/05 10:30		
COC Number		A113174	A113174		
	UNITS	2004	1701	RDL	QC Batch
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	0.00050	8953155
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	0.00050	8953155
Trichloroethene	mg/L	<0.00050	<0.00050	0.00050	8953155
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	0.00050	8953155
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	0.00050	8953155
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	0.00050	8953155
Vinyl chloride	mg/L	<0.00050	<0.00050	0.00050	8953155
<b>Surrogate Recovery (%)</b>					
1,4-Difluorobenzene (sur.)	%	102	102	N/A	8953155
4-Bromofluorobenzene (sur.)	%	96	96	N/A	8953155
D4-1,2-Dichloroethane (sur.)	%	107	101	N/A	8953155
RDL = Reportable Detection Limit N/A = Not Applicable					

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

<b>Maxxam ID</b>		TF5528		
<b>Sampling Date</b>		2018/04/05		
<b>COC Number</b>		A113174		
	<b>UNITS</b>	<b>TRIP BLANK 7</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Volatiles</b>				
Total Trihalomethanes	mg/L	<0.0013	0.0013	8953071
Benzene	mg/L	<0.00040	0.00040	8953155
Bromodichloromethane	mg/L	<0.00050	0.00050	8953155
Bromoform	mg/L	<0.00050	0.00050	8953155
Bromomethane	mg/L	<0.0020	0.0020	8953155
Carbon tetrachloride	mg/L	<0.00050	0.00050	8953155
Chlorobenzene	mg/L	<0.00050	0.00050	8953155
Chlorodibromomethane	mg/L	<0.0010	0.0010	8953155
Chloroethane	mg/L	<0.0010	0.0010	8953155
Chloroform	mg/L	<0.00050	0.00050	8953155
Chloromethane	mg/L	<0.0020	0.0020	8953155
1,2-dibromoethane	mg/L	<0.00020	0.00020	8953155
1,2-dichlorobenzene	mg/L	<0.00050	0.00050	8953155
1,3-dichlorobenzene	mg/L	<0.00050	0.00050	8953155
1,4-dichlorobenzene	mg/L	<0.00050	0.00050	8953155
1,1-dichloroethane	mg/L	<0.00050	0.00050	8953155
1,2-dichloroethane	mg/L	<0.00050	0.00050	8953155
1,1-dichloroethene	mg/L	<0.00050	0.00050	8953155
cis-1,2-dichloroethene	mg/L	<0.00050	0.00050	8953155
trans-1,2-dichloroethene	mg/L	<0.00050	0.00050	8953155
Dichloromethane	mg/L	<0.0020	0.0020	8953155
1,2-dichloropropane	mg/L	<0.00050	0.00050	8953155
cis-1,3-dichloropropene	mg/L	<0.00050	0.00050	8953155
trans-1,3-dichloropropene	mg/L	<0.00050	0.00050	8953155
Ethylbenzene	mg/L	<0.00040	0.00040	8953155
Methyl methacrylate	mg/L	<0.00050	0.00050	8953155
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	0.00050	8953155
Styrene	mg/L	<0.00050	0.00050	8953155
1,1,1,2-tetrachloroethane	mg/L	<0.0010	0.0010	8953155
1,1,2,2-tetrachloroethane	mg/L	<0.0020	0.0020	8953155
Tetrachloroethene	mg/L	<0.00050	0.00050	8953155
Toluene	mg/L	<0.00040	0.00040	8953155
RDL = Reportable Detection Limit				

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

<b>Maxxam ID</b>		TF5528		
<b>Sampling Date</b>		2018/04/05		
<b>COC Number</b>		A113174		
	<b>UNITS</b>	<b>TRIP BLANK 7</b>	<b>RDL</b>	<b>QC Batch</b>
1,2,3-trichlorobenzene	mg/L	<0.0010	0.0010	8953155
1,2,4-trichlorobenzene	mg/L	<0.0010	0.0010	8953155
1,3,5-trichlorobenzene	mg/L	<0.00050	0.00050	8953155
1,1,1-trichloroethane	mg/L	<0.00050	0.00050	8953155
1,1,2-trichloroethane	mg/L	<0.00050	0.00050	8953155
Trichloroethene	mg/L	<0.00050	0.00050	8953155
Trichlorofluoromethane	mg/L	<0.00050	0.00050	8953155
1,2,4-trimethylbenzene	mg/L	<0.00050	0.00050	8953155
1,3,5-trimethylbenzene	mg/L	<0.00050	0.00050	8953155
Vinyl chloride	mg/L	<0.00050	0.00050	8953155
Xylenes (Total)	mg/L	<0.00080	0.00080	8953155
m & p-Xylene	mg/L	<0.00080	0.00080	8953155
o-Xylene	mg/L	<0.00040	0.00040	8953155
<b>Surrogate Recovery (%)</b>				
1,4-Difluorobenzene (sur.)	%	102	N/A	8953155
4-Bromofluorobenzene (sur.)	%	97	N/A	8953155
D4-1,2-Dichloroethane (sur.)	%	95	N/A	8953155
RDL = Reportable Detection Limit N/A = Not Applicable				



Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**GENERAL COMMENTS**

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

Package 1	2.3°C
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**Results relate only to the items tested.**

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8953123	SAW	Matrix Spike	1,4-Difluorobenzene (sur.)	2018/04/07	72	%	50 - 140		
			4-Bromofluorobenzene (sur.)	2018/04/07	86	%	50 - 140		
			D4-1,2-Dichloroethane (sur.)	2018/04/07	67	%	50 - 140		
			Benzene	2018/04/07	63	%	50 - 140		
			Toluene	2018/04/07	70	%	50 - 140		
			Ethylbenzene	2018/04/07	95	%	50 - 140		
			m & p-Xylene	2018/04/07	69	%	50 - 140		
			o-Xylene	2018/04/07	75	%	50 - 140		
			F1 (C6-C10)	2018/04/07	83	%	60 - 140		
			8953123	SAW	Spiked Blank	1,4-Difluorobenzene (sur.)	2018/04/07	105	%
4-Bromofluorobenzene (sur.)	2018/04/07	108				%	50 - 140		
D4-1,2-Dichloroethane (sur.)	2018/04/07	92				%	50 - 140		
Benzene	2018/04/07	95				%	60 - 130		
Toluene	2018/04/07	101				%	60 - 130		
Ethylbenzene	2018/04/07	97				%	60 - 130		
m & p-Xylene	2018/04/07	108				%	60 - 130		
o-Xylene	2018/04/07	105				%	60 - 130		
F1 (C6-C10)	2018/04/07	92				%	60 - 140		
8953123	SAW	Method Blank				1,4-Difluorobenzene (sur.)	2018/04/07	87	%
			4-Bromofluorobenzene (sur.)	2018/04/07	124	%	50 - 140		
			D4-1,2-Dichloroethane (sur.)	2018/04/07	81	%	50 - 140		
			Benzene	2018/04/07	<0.00040	mg/L			
			Toluene	2018/04/07	<0.00040	mg/L			
			Ethylbenzene	2018/04/07	<0.00040	mg/L			
			m & p-Xylene	2018/04/07	<0.00080	mg/L			
			o-Xylene	2018/04/07	<0.00040	mg/L			
			F1 (C6-C10)	2018/04/07	<0.10	mg/L			
			8953123	SAW	RPD	Benzene	2018/04/07	NC	%
Toluene	2018/04/07	NC				%	30		
Ethylbenzene	2018/04/07	NC				%	30		
m & p-Xylene	2018/04/07	NC				%	30		
o-Xylene	2018/04/07	NC				%	30		
F1 (C6-C10)	2018/04/07	NC				%	30		
8953155	RSU	Matrix Spike [TF5518-02]	1,4-Difluorobenzene (sur.)	2018/04/09	103	%	70 - 130		
			4-Bromofluorobenzene (sur.)	2018/04/09	96	%	70 - 130		
			D4-1,2-Dichloroethane (sur.)	2018/04/09	103	%	70 - 130		
			Benzene	2018/04/09	101	%	70 - 130		
			Bromodichloromethane	2018/04/09	105	%	70 - 130		
			Bromoform	2018/04/09	118	%	70 - 130		
			Bromomethane	2018/04/09	87	%	70 - 130		
			Carbon tetrachloride	2018/04/09	100	%	70 - 130		
			Chlorobenzene	2018/04/09	109	%	70 - 130		
			Chlorodibromomethane	2018/04/09	112	%	70 - 130		
			Chloroethane	2018/04/09	91	%	70 - 130		
			Chloroform	2018/04/09	100	%	70 - 130		
			Chloromethane	2018/04/09	94	%	70 - 130		
			1,2-dibromoethane	2018/04/09	118	%	70 - 130		
			1,2-dichlorobenzene	2018/04/09	99	%	70 - 130		
			1,3-dichlorobenzene	2018/04/09	96	%	70 - 130		
			1,4-dichlorobenzene	2018/04/09	94	%	70 - 130		
			1,1-dichloroethane	2018/04/09	95	%	70 - 130		
			1,2-dichloroethane	2018/04/09	105	%	70 - 130		
			1,1-dichloroethene	2018/04/09	106	%	70 - 130		
cis-1,2-dichloroethene	2018/04/09	108	%	70 - 130					

Maxxam Job #: B825288  
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CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				trans-1,2-dichloroethene	2018/04/09		106	%	70 - 130
				Dichloromethane	2018/04/09		94	%	70 - 130
				1,2-dichloropropane	2018/04/09		103	%	70 - 130
				cis-1,3-dichloropropene	2018/04/09		111	%	70 - 130
				trans-1,3-dichloropropene	2018/04/09		125	%	70 - 130
				Ethylbenzene	2018/04/09		105	%	70 - 130
				Methyl methacrylate	2018/04/09		120	%	70 - 130
				Methyl-tert-butylether (MTBE)	2018/04/09		101	%	70 - 130
				Styrene	2018/04/09		110	%	70 - 130
				1,1,1,2-tetrachloroethane	2018/04/09		108	%	70 - 130
				1,1,2,2-tetrachloroethane	2018/04/09		107	%	70 - 130
				Tetrachloroethene	2018/04/09		106	%	70 - 130
				Toluene	2018/04/09		106	%	70 - 130
				1,2,3-trichlorobenzene	2018/04/09		96	%	70 - 130
				1,2,4-trichlorobenzene	2018/04/09		95	%	70 - 130
				1,3,5-trichlorobenzene	2018/04/09		94	%	70 - 130
				1,1,1-trichloroethane	2018/04/09		102	%	70 - 130
				1,1,2-trichloroethane	2018/04/09		107	%	70 - 130
				Trichloroethene	2018/04/09		108	%	70 - 130
				Trichlorofluoromethane	2018/04/09		100	%	70 - 130
				1,2,4-trimethylbenzene	2018/04/09		97	%	70 - 130
				1,3,5-trimethylbenzene	2018/04/09		95	%	70 - 130
				Vinyl chloride	2018/04/09		99	%	70 - 130
				m & p-Xylene	2018/04/09		106	%	70 - 130
				o-Xylene	2018/04/09		107	%	70 - 130
8953155	RSU		Spiked Blank	1,4-Difluorobenzene (sur.)	2018/04/09		102	%	70 - 130
				4-Bromofluorobenzene (sur.)	2018/04/09		96	%	70 - 130
				D4-1,2-Dichloroethane (sur.)	2018/04/09		95	%	70 - 130
				Benzene	2018/04/09		89	%	70 - 130
				Bromodichloromethane	2018/04/09		92	%	70 - 130
				Bromoform	2018/04/09		107	%	70 - 130
				Bromomethane	2018/04/09		83	%	70 - 130
				Carbon tetrachloride	2018/04/09		88	%	70 - 130
				Chlorobenzene	2018/04/09		101	%	70 - 130
				Chlorodibromomethane	2018/04/09		102	%	70 - 130
				Chloroethane	2018/04/09		86	%	70 - 130
				Chloroform	2018/04/09		88	%	70 - 130
				Chloromethane	2018/04/09		87	%	70 - 130
				1,2-dibromoethane	2018/04/09		108	%	70 - 130
				1,2-dichlorobenzene	2018/04/09		95	%	70 - 130
				1,3-dichlorobenzene	2018/04/09		92	%	70 - 130
				1,4-dichlorobenzene	2018/04/09		91	%	70 - 130
				1,1-dichloroethane	2018/04/09		85	%	70 - 130
				1,2-dichloroethane	2018/04/09		92	%	70 - 130
				1,1-dichloroethene	2018/04/09		95	%	70 - 130
				cis-1,2-dichloroethene	2018/04/09		95	%	70 - 130
				trans-1,2-dichloroethene	2018/04/09		96	%	70 - 130
				Dichloromethane	2018/04/09		84	%	70 - 130
				1,2-dichloropropane	2018/04/09		89	%	70 - 130
				cis-1,3-dichloropropene	2018/04/09		101	%	70 - 130
				trans-1,3-dichloropropene	2018/04/09		109	%	70 - 130
				Ethylbenzene	2018/04/09		97	%	70 - 130
				Methyl methacrylate	2018/04/09		103	%	70 - 130
				Methyl-tert-butylether (MTBE)	2018/04/09		90	%	70 - 130

Maxxam Job #: B825288  
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CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Styrene	2018/04/09		102	%	70 - 130
			1,1,1,2-tetrachloroethane	2018/04/09		99	%	70 - 130
			1,1,2,2-tetrachloroethane	2018/04/09		97	%	70 - 130
			Tetrachloroethene	2018/04/09		99	%	70 - 130
			Toluene	2018/04/09		99	%	70 - 130
			1,2,3-trichlorobenzene	2018/04/09		92	%	70 - 130
			1,2,4-trichlorobenzene	2018/04/09		92	%	70 - 130
			1,3,5-trichlorobenzene	2018/04/09		91	%	70 - 130
			1,1,1-trichloroethane	2018/04/09		90	%	70 - 130
			1,1,2-trichloroethane	2018/04/09		92	%	70 - 130
			Trichloroethene	2018/04/09		95	%	70 - 130
			Trichlorofluoromethane	2018/04/09		91	%	70 - 130
			1,2,4-trimethylbenzene	2018/04/09		92	%	70 - 130
			1,3,5-trimethylbenzene	2018/04/09		90	%	70 - 130
			Vinyl chloride	2018/04/09		94	%	70 - 130
			m & p-Xylene	2018/04/09		99	%	70 - 130
			o-Xylene	2018/04/09		98	%	70 - 130
8953155	RSU	Method Blank	1,4-Difluorobenzene (sur.)	2018/04/09		102	%	70 - 130
			4-Bromofluorobenzene (sur.)	2018/04/09		94	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2018/04/09		100	%	70 - 130
			Benzene	2018/04/09	<0.00040		mg/L	
			Bromodichloromethane	2018/04/09	<0.00050		mg/L	
			Bromoform	2018/04/09	<0.00050		mg/L	
			Bromomethane	2018/04/09	<0.0020		mg/L	
			Carbon tetrachloride	2018/04/09	<0.00050		mg/L	
			Chlorobenzene	2018/04/09	<0.00050		mg/L	
			Chlorodibromomethane	2018/04/09	<0.0010		mg/L	
			Chloroethane	2018/04/09	<0.0010		mg/L	
			Chloroform	2018/04/09	<0.00050		mg/L	
			Chloromethane	2018/04/09	<0.0020		mg/L	
			1,2-dibromoethane	2018/04/09	<0.00020		mg/L	
			1,2-dichlorobenzene	2018/04/09	<0.00050		mg/L	
			1,3-dichlorobenzene	2018/04/09	<0.00050		mg/L	
			1,4-dichlorobenzene	2018/04/09	<0.00050		mg/L	
			1,1-dichloroethane	2018/04/09	<0.00050		mg/L	
			1,2-dichloroethane	2018/04/09	<0.00050		mg/L	
			1,1-dichloroethene	2018/04/09	<0.00050		mg/L	
			cis-1,2-dichloroethene	2018/04/09	<0.00050		mg/L	
			trans-1,2-dichloroethene	2018/04/09	<0.00050		mg/L	
			Dichloromethane	2018/04/09	<0.0020		mg/L	
			1,2-dichloropropane	2018/04/09	<0.00050		mg/L	
			cis-1,3-dichloropropene	2018/04/09	<0.00050		mg/L	
			trans-1,3-dichloropropene	2018/04/09	<0.00050		mg/L	
			Ethylbenzene	2018/04/09	<0.00040		mg/L	
			Methyl methacrylate	2018/04/09	<0.00050		mg/L	
			Methyl-tert-butylether (MTBE)	2018/04/09	<0.00050		mg/L	
			Styrene	2018/04/09	<0.00050		mg/L	
			1,1,1,2-tetrachloroethane	2018/04/09	<0.0010		mg/L	
			1,1,2,2-tetrachloroethane	2018/04/09	<0.0020		mg/L	
			Tetrachloroethene	2018/04/09	<0.00050		mg/L	
			Toluene	2018/04/09	<0.00040		mg/L	
			1,2,3-trichlorobenzene	2018/04/09	<0.0010		mg/L	
			1,2,4-trichlorobenzene	2018/04/09	<0.0010		mg/L	
			1,3,5-trichlorobenzene	2018/04/09	<0.00050		mg/L	

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CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
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**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1,1-trichloroethane	2018/04/09	<0.00050		mg/L	
			1,1,2-trichloroethane	2018/04/09	<0.00050		mg/L	
			Trichloroethene	2018/04/09	<0.00050		mg/L	
			Trichlorofluoromethane	2018/04/09	<0.00050		mg/L	
			1,2,4-trimethylbenzene	2018/04/09	<0.00050		mg/L	
			1,3,5-trimethylbenzene	2018/04/09	<0.00050		mg/L	
			Vinyl chloride	2018/04/09	<0.00050		mg/L	
			Xylenes (Total)	2018/04/09	<0.00080		mg/L	
			m & p-Xylene	2018/04/09	<0.00080		mg/L	
			o-Xylene	2018/04/09	<0.00040		mg/L	
8953155	RSU	RPD [TF5517-02]	Bromodichloromethane	2018/04/09	NC		%	30
			Bromoform	2018/04/09	NC		%	30
			Bromomethane	2018/04/09	NC		%	30
			Carbon tetrachloride	2018/04/09	NC		%	30
			Chlorobenzene	2018/04/09	NC		%	30
			Chlorodibromomethane	2018/04/09	NC		%	30
			Chloroethane	2018/04/09	NC		%	30
			Chloroform	2018/04/09	NC		%	30
			Chloromethane	2018/04/09	NC		%	30
			1,2-dibromoethane	2018/04/09	NC		%	30
			1,2-dichlorobenzene	2018/04/09	NC		%	30
			1,3-dichlorobenzene	2018/04/09	NC		%	30
			1,4-dichlorobenzene	2018/04/09	NC		%	30
			1,1-dichloroethane	2018/04/09	NC		%	30
			1,2-dichloroethane	2018/04/09	14		%	30
			1,1-dichloroethene	2018/04/09	NC		%	30
			cis-1,2-dichloroethene	2018/04/09	NC		%	30
			trans-1,2-dichloroethene	2018/04/09	NC		%	30
			Dichloromethane	2018/04/09	NC		%	30
			1,2-dichloropropane	2018/04/09	NC		%	30
			cis-1,3-dichloropropene	2018/04/09	NC		%	30
			trans-1,3-dichloropropene	2018/04/09	NC		%	30
			Methyl methacrylate	2018/04/09	NC		%	30
			Methyl-tert-butylether (MTBE)	2018/04/09	NC		%	30
			Styrene	2018/04/09	NC		%	30
			1,1,1,2-tetrachloroethane	2018/04/09	NC		%	30
			1,1,2,2-tetrachloroethane	2018/04/09	NC		%	30
			Tetrachloroethene	2018/04/09	NC		%	30
			1,2,3-trichlorobenzene	2018/04/09	NC		%	30
			1,2,4-trichlorobenzene	2018/04/09	NC		%	30
			1,3,5-trichlorobenzene	2018/04/09	NC		%	30
			1,1,1-trichloroethane	2018/04/09	NC		%	30
			1,1,2-trichloroethane	2018/04/09	NC		%	30
			Trichloroethene	2018/04/09	NC		%	30
			Trichlorofluoromethane	2018/04/09	NC		%	30
			1,2,4-trimethylbenzene	2018/04/09	NC		%	30
			1,3,5-trimethylbenzene	2018/04/09	NC		%	30
			Vinyl chloride	2018/04/09	NC		%	30
8953356	VP4	Matrix Spike	O-TERPHENYL (sur.)	2018/04/09		110	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/09		115	%	60 - 130
8953356	VP4	Spiked Blank	O-TERPHENYL (sur.)	2018/04/09		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/09		101	%	70 - 130
8953356	VP4	Method Blank	O-TERPHENYL (sur.)	2018/04/09		93	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/09	<0.10		mg/L	

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	8953356	VP4	RPD	F2 (C10-C16 Hydrocarbons)	2018/04/09	NC		%	30
	8953368	LZ3	Matrix Spike	D10-ANTHRACENE (sur.)	2018/04/11		94	%	50 - 130
				D8-ACENAPHTHYLENE (sur.)	2018/04/11		95	%	50 - 130
				D8-NAPHTHALENE (sur.)	2018/04/11		89	%	50 - 130
				TERPHENYL-D14 (sur.)	2018/04/11		102	%	50 - 130
				Acenaphthene	2018/04/11		96	%	50 - 130
				Acenaphthylene	2018/04/11		95	%	50 - 130
				Acridine	2018/04/11		87	%	50 - 130
				Anthracene	2018/04/11		95	%	50 - 130
				Benzo(a)anthracene	2018/04/11		121	%	50 - 130
				Benzo(b&j)fluoranthene	2018/04/11		113	%	50 - 130
				Benzo(k)fluoranthene	2018/04/11		108	%	50 - 130
				Benzo(g,h,i)perylene	2018/04/11		107	%	50 - 130
				Benzo(c)phenanthrene	2018/04/11		110	%	50 - 130
				Benzo(a)pyrene	2018/04/11		114	%	50 - 130
				Benzo[e]pyrene	2018/04/11		103	%	50 - 130
				Chrysene	2018/04/11		112	%	50 - 130
				Dibenz(a,h)anthracene	2018/04/11		110	%	50 - 130
				Fluoranthene	2018/04/11		112	%	50 - 130
				Fluorene	2018/04/11		100	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2018/04/11		100	%	50 - 130
				1-Methylnaphthalene	2018/04/11		96	%	50 - 130
				2-Methylnaphthalene	2018/04/11		89	%	50 - 130
				Naphthalene	2018/04/11		87	%	50 - 130
				Phenanthrene	2018/04/11		95	%	50 - 130
				Perylene	2018/04/11		94	%	50 - 130
				Pyrene	2018/04/11		108	%	50 - 130
				Quinoline	2018/04/11		107	%	50 - 130
	8953368	LZ3	Spiked Blank	D10-ANTHRACENE (sur.)	2018/04/11		92	%	50 - 130
				D8-ACENAPHTHYLENE (sur.)	2018/04/11		91	%	50 - 130
				D8-NAPHTHALENE (sur.)	2018/04/11		77	%	50 - 130
				TERPHENYL-D14 (sur.)	2018/04/11		102	%	50 - 130
				Acenaphthene	2018/04/11		89	%	50 - 130
				Acenaphthylene	2018/04/11		88	%	50 - 130
				Acridine	2018/04/11		83	%	50 - 130
				Anthracene	2018/04/11		90	%	50 - 130
				Benzo(a)anthracene	2018/04/11		111	%	50 - 130
				Benzo(b&j)fluoranthene	2018/04/11		107	%	50 - 130
				Benzo(k)fluoranthene	2018/04/11		101	%	50 - 130
				Benzo(g,h,i)perylene	2018/04/11		100	%	50 - 130
				Benzo(c)phenanthrene	2018/04/11		102	%	50 - 130
				Benzo(a)pyrene	2018/04/11		99	%	50 - 130
				Benzo[e]pyrene	2018/04/11		97	%	50 - 130
				Chrysene	2018/04/11		107	%	50 - 130
				Dibenz(a,h)anthracene	2018/04/11		102	%	50 - 130
				Fluoranthene	2018/04/11		109	%	50 - 130
				Fluorene	2018/04/11		91	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2018/04/11		93	%	50 - 130
				1-Methylnaphthalene	2018/04/11		83	%	50 - 130
				2-Methylnaphthalene	2018/04/11		75	%	50 - 130
				Naphthalene	2018/04/11		75	%	50 - 130
				Phenanthrene	2018/04/11		90	%	50 - 130
				Perylene	2018/04/11		90	%	50 - 130
				Pyrene	2018/04/11		102	%	50 - 130

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits	
8953368	LZ3	Method Blank	Quinoline	2018/04/11		103	%	50 - 130	
			D10-ANTHRACENE (sur.)	2018/04/11		94	%	50 - 130	
			D8-ACENAPHTHYLENE (sur.)	2018/04/11		75	%	50 - 130	
			D8-NAPHTHALENE (sur.)	2018/04/11		51	%	50 - 130	
			TERPHENYL-D14 (sur.)	2018/04/11		101	%	50 - 130	
			Acenaphthene	2018/04/11	<0.00010		mg/L		
			Acenaphthylene	2018/04/11	<0.00010		mg/L		
			Acridine	2018/04/11	<0.000050		mg/L		
			Anthracene	2018/04/11	<0.000010		mg/L		
			Benzo(a)anthracene	2018/04/11	<0.0000085		mg/L		
			Benzo(b&j)fluoranthene	2018/04/11	<0.0000085		mg/L		
			Benzo(k)fluoranthene	2018/04/11	<0.0000085		mg/L		
			Benzo(g,h,i)perylene	2018/04/11	<0.0000085		mg/L		
			Benzo(c)phenanthrene	2018/04/11	<0.000050		mg/L		
			Benzo(a)pyrene	2018/04/11	<0.0000075		mg/L		
			Benzo[e]pyrene	2018/04/11	<0.000050		mg/L		
			Chrysene	2018/04/11	<0.0000085		mg/L		
			Dibenz(a,h)anthracene	2018/04/11	<0.0000075		mg/L		
			Fluoranthene	2018/04/11	<0.000010		mg/L		
			Fluorene	2018/04/11	<0.000050		mg/L		
			Indeno(1,2,3-cd)pyrene	2018/04/11	<0.0000085		mg/L		
			1-Methylnaphthalene	2018/04/11	<0.00010		mg/L		
			2-Methylnaphthalene	2018/04/11	<0.00010		mg/L		
			Naphthalene	2018/04/11	<0.00010		mg/L		
			Phenanthrene	2018/04/11	<0.000050		mg/L		
			Perylene	2018/04/11	<0.000050		mg/L		
			Pyrene	2018/04/11	<0.000020		mg/L		
Quinoline	2018/04/11	<0.00020		mg/L					
8953368	LZ3	RPD	Acenaphthene	2018/04/11	NC		%	30	
			Acenaphthylene	2018/04/11	NC		%	30	
			Acridine	2018/04/11	NC		%	30	
			Anthracene	2018/04/11	NC		%	30	
			Benzo(a)anthracene	2018/04/11	NC		%	30	
			Benzo(b&j)fluoranthene	2018/04/11	NC		%	30	
			Benzo(k)fluoranthene	2018/04/11	NC		%	30	
			Benzo(g,h,i)perylene	2018/04/11	NC		%	30	
			Benzo(c)phenanthrene	2018/04/11	NC		%	30	
			Benzo(a)pyrene	2018/04/11	NC		%	30	
			Benzo[e]pyrene	2018/04/11	NC		%	30	
			Chrysene	2018/04/11	NC		%	30	
			Dibenz(a,h)anthracene	2018/04/11	NC		%	30	
			Fluoranthene	2018/04/11	NC		%	30	
			Fluorene	2018/04/11	NC		%	30	
			Indeno(1,2,3-cd)pyrene	2018/04/11	NC		%	30	
			2-Methylnaphthalene	2018/04/11	NC		%	30	
			Naphthalene	2018/04/11	NC		%	30	
			Phenanthrene	2018/04/11	NC		%	30	
Perylene	2018/04/11	NC		%	30				
Pyrene	2018/04/11	NC		%	30				



Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Quinoline	2018/04/11	NC		%	30
<p>Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.</p> <p>Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.</p> <p>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.</p> <p>Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.</p> <p>Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.</p> <p>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 &lt;= 2x RDL).</p>									

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**NOTIFICATION LOG**

No Reportable Regulation Exceedences Noted.

Maxxam Job #: B825288  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

### VALIDATION SIGNATURE PAGE

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



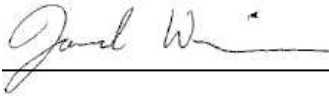
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Dennis Ngandu, B.Sc., P.Chem., QP, Supervisor, Organics



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Janet Gao, B.Sc., QP, Supervisor, Organics



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Jared Wiseman, B.Sc., P.Chem., QP, Senior Analyst, Organics



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Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

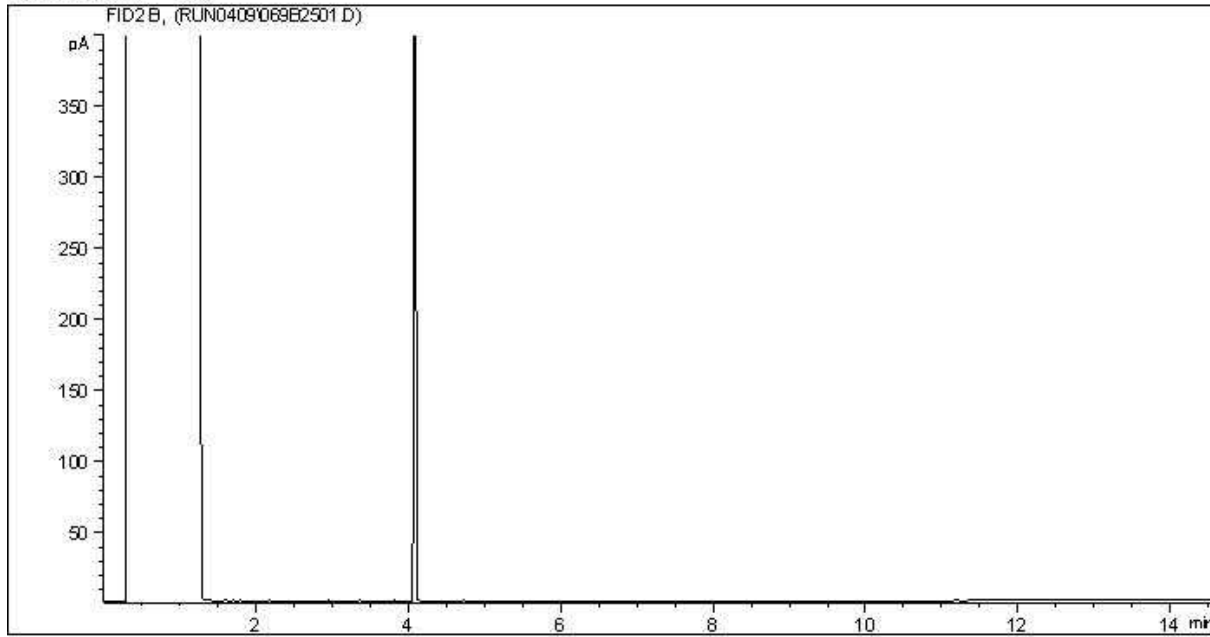
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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

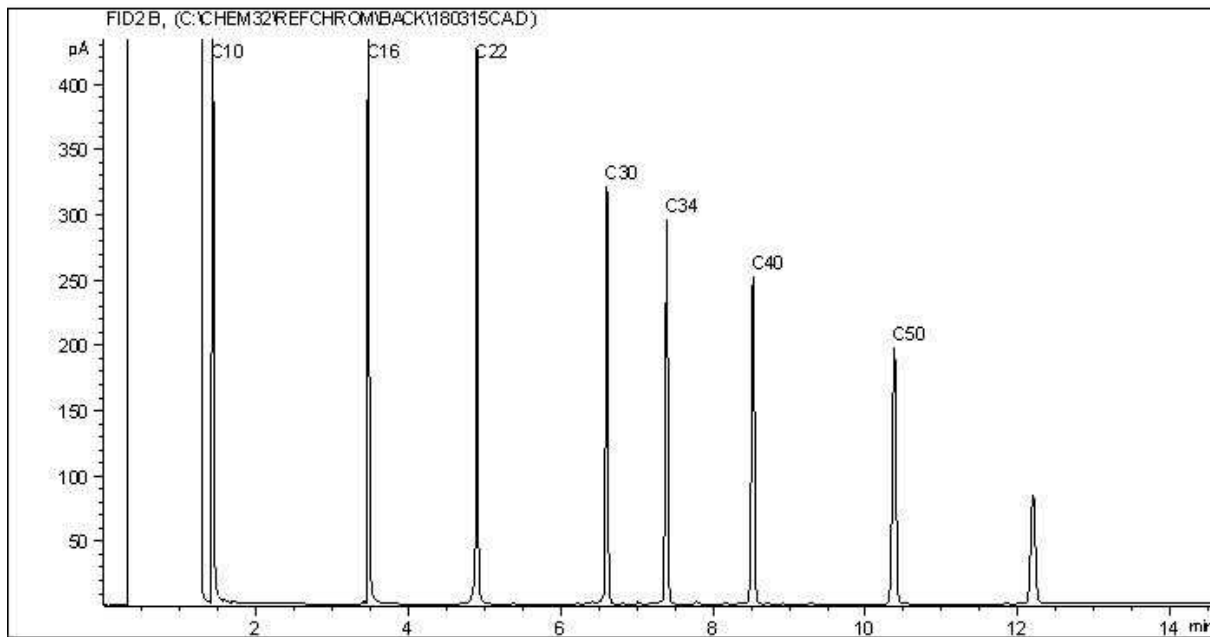


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



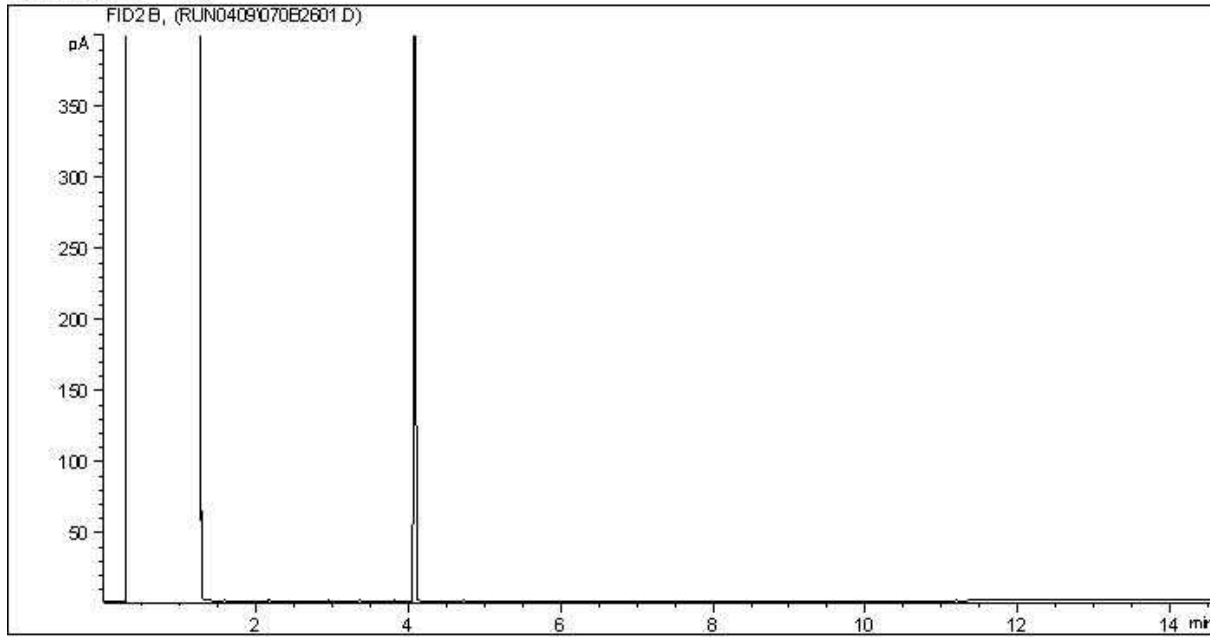
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

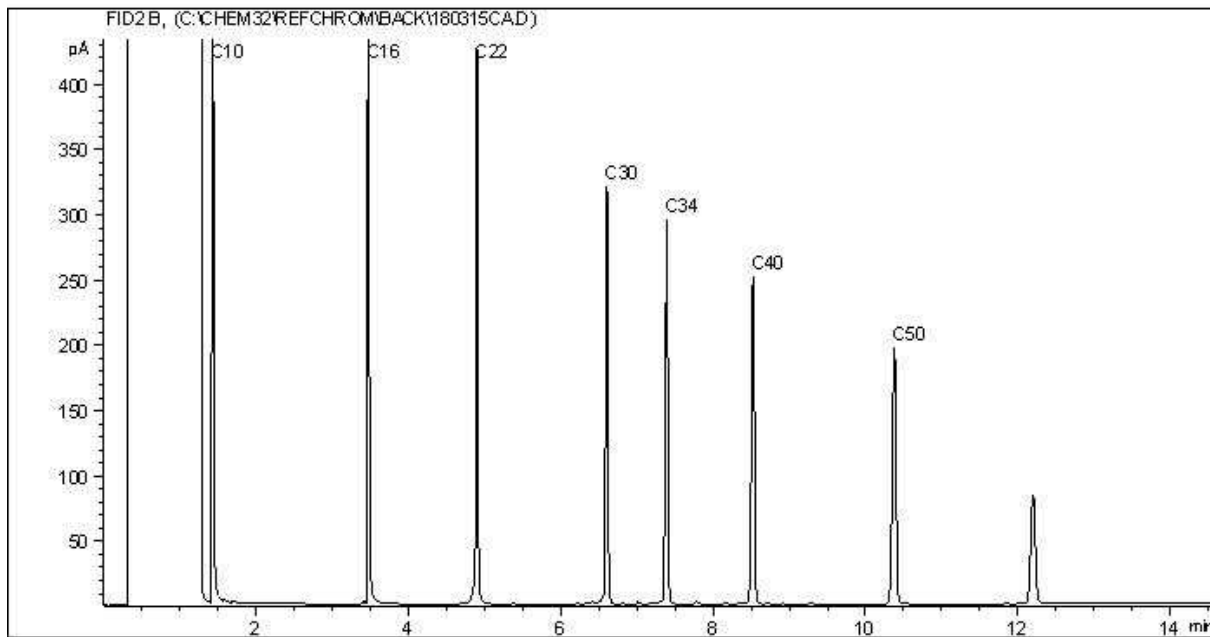
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



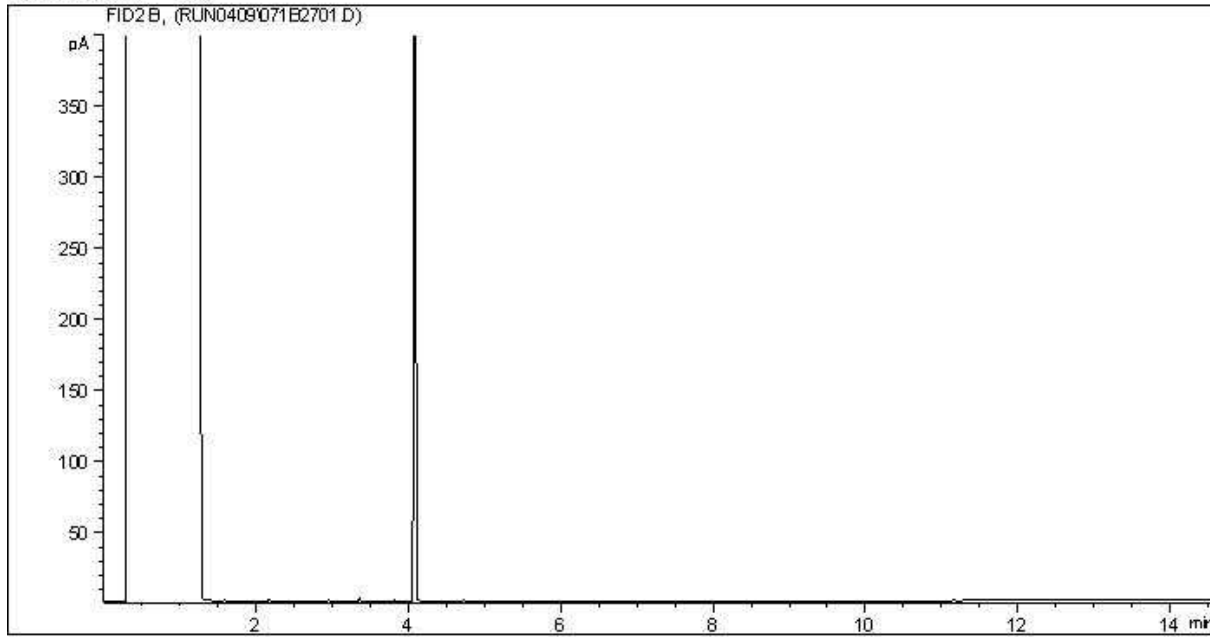
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

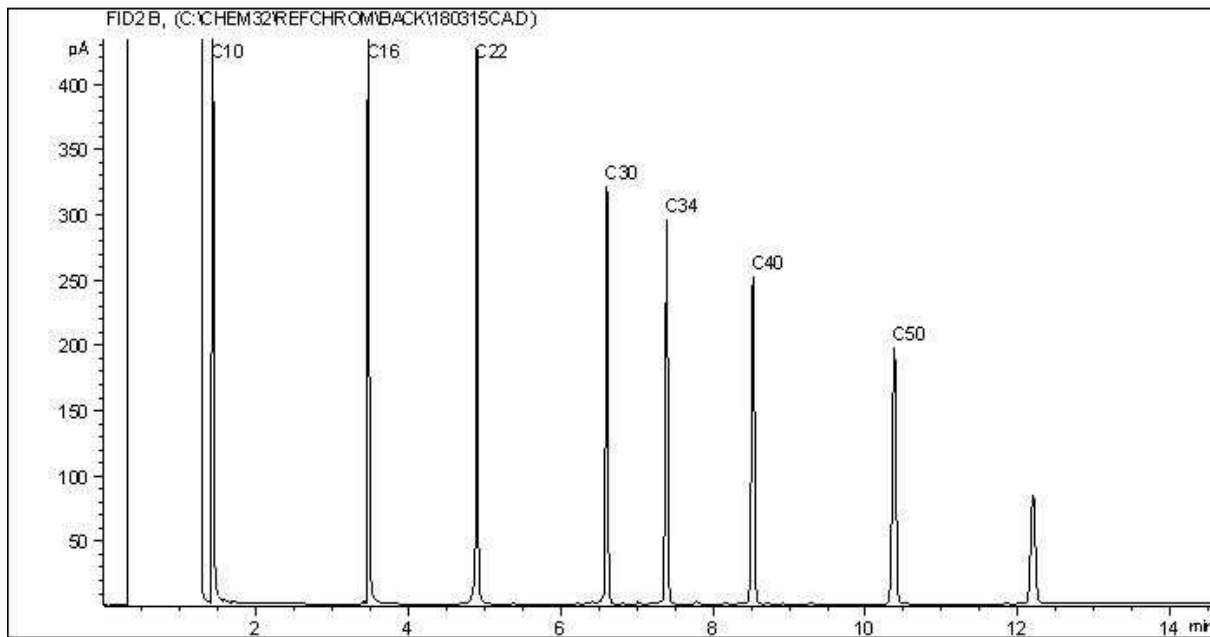
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

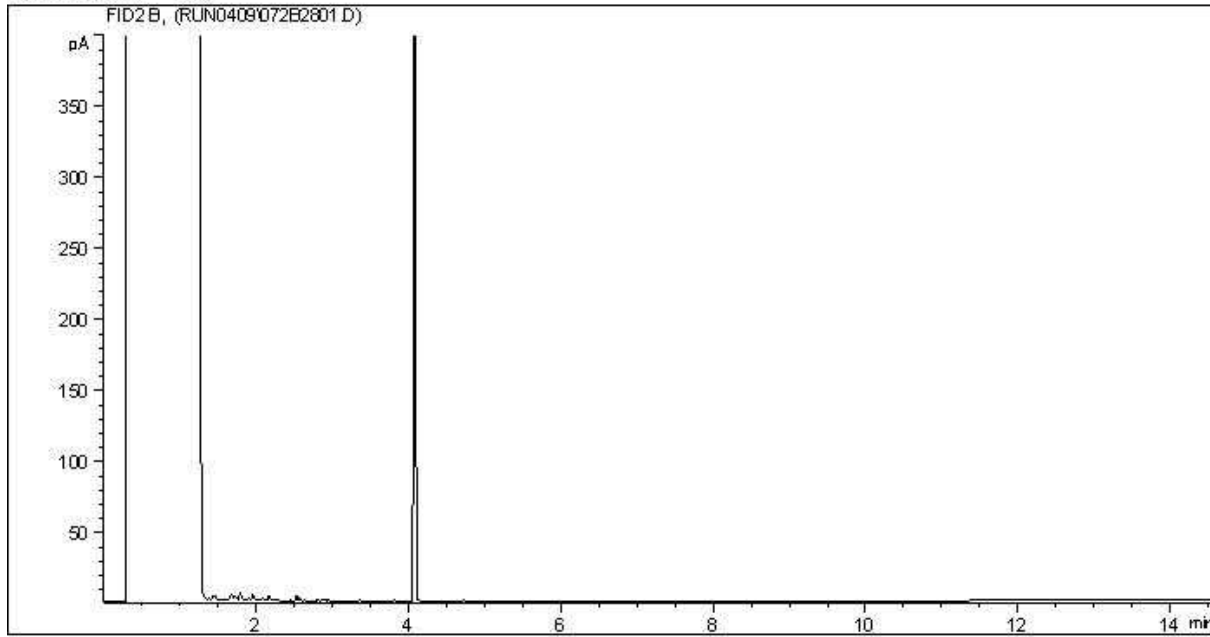
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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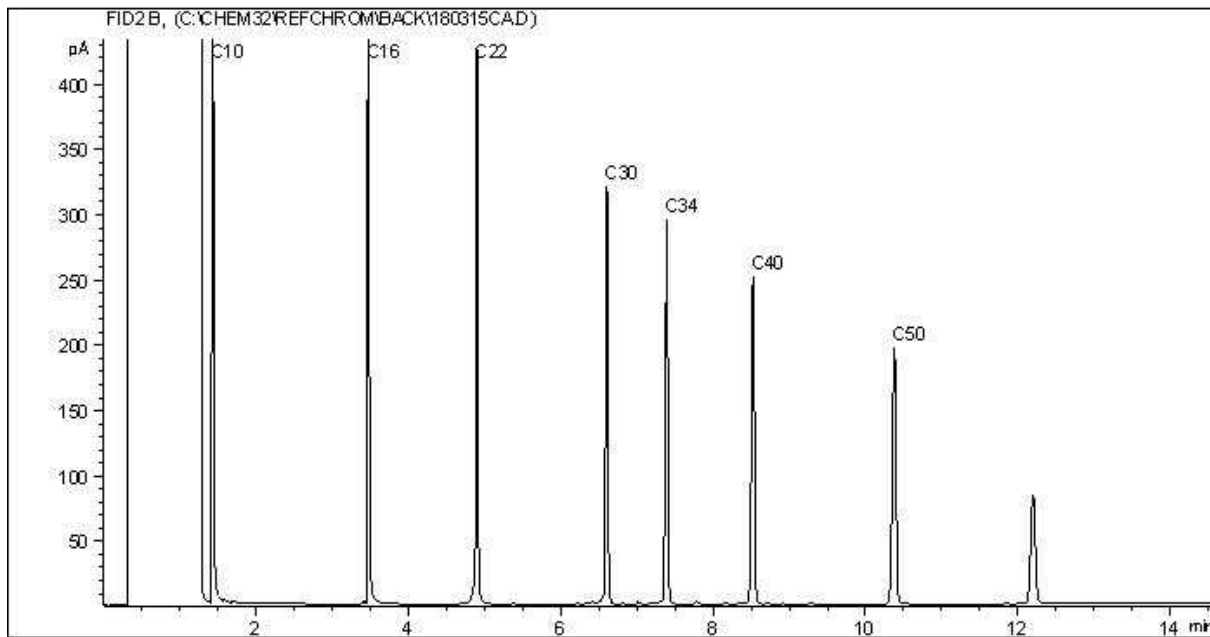


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



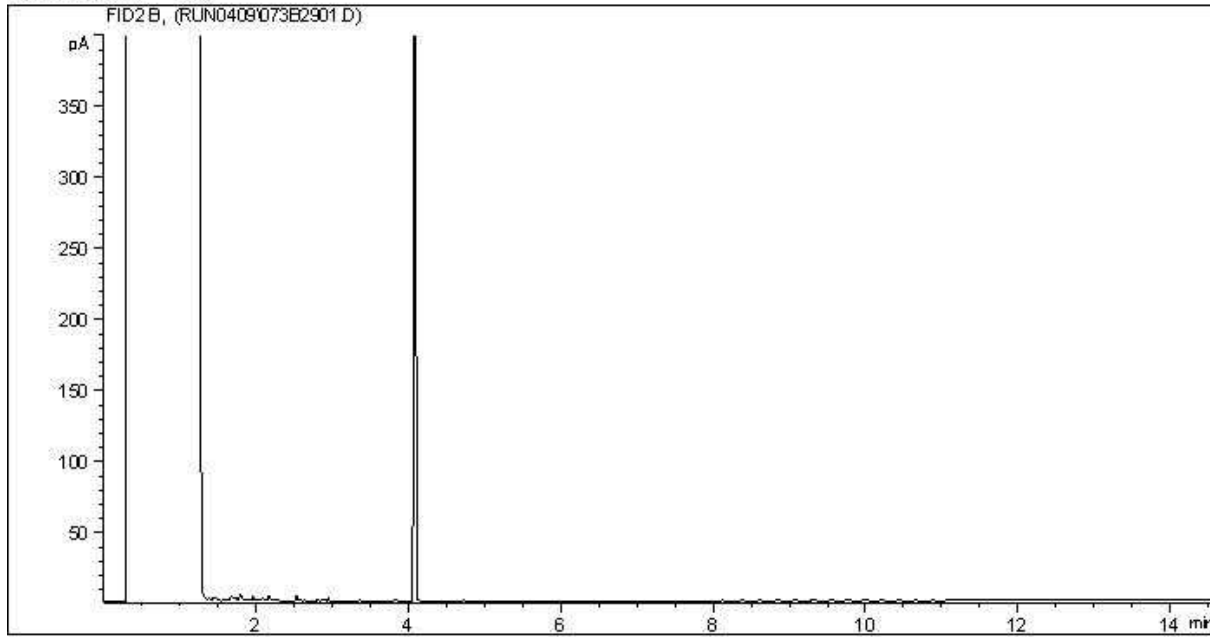
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

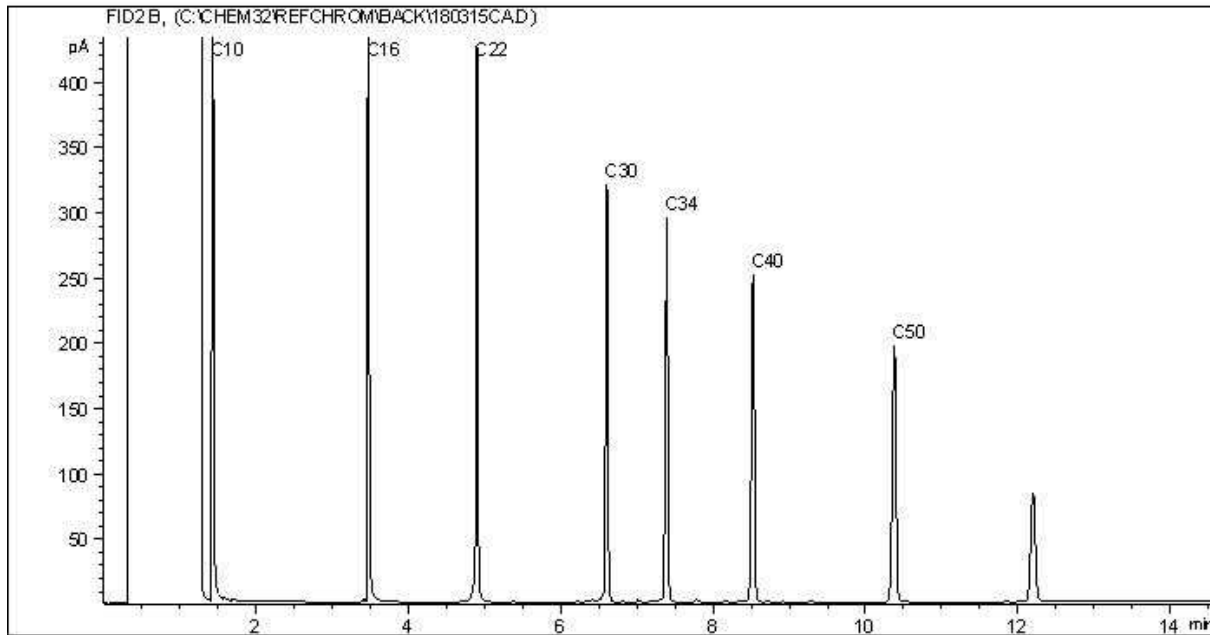
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



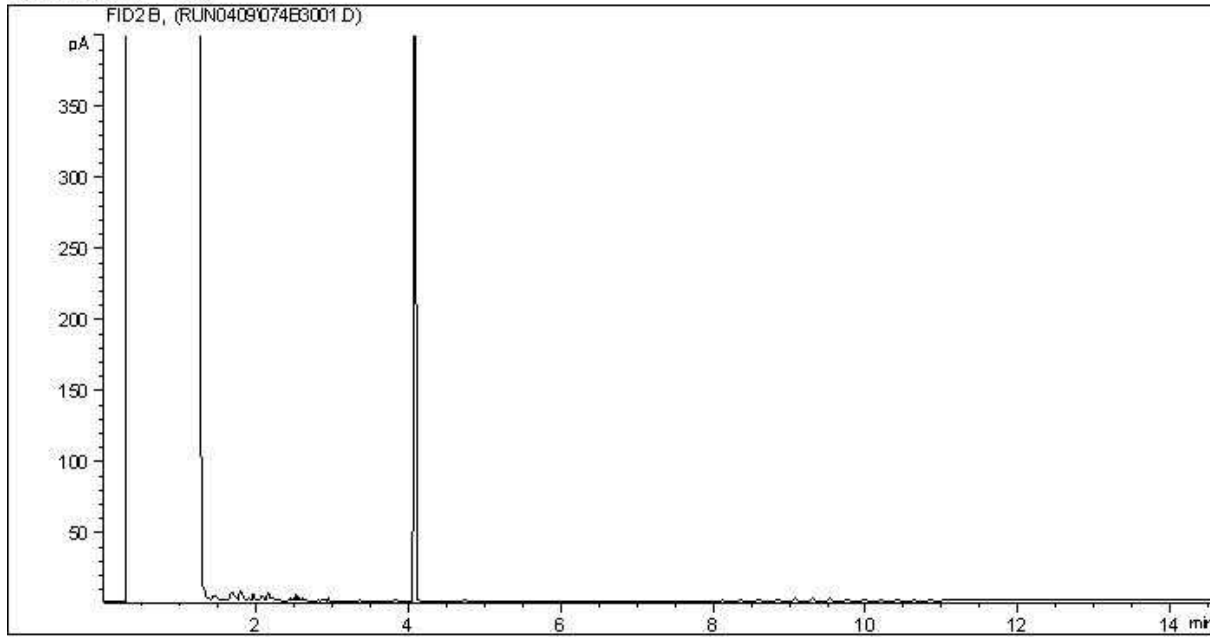
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

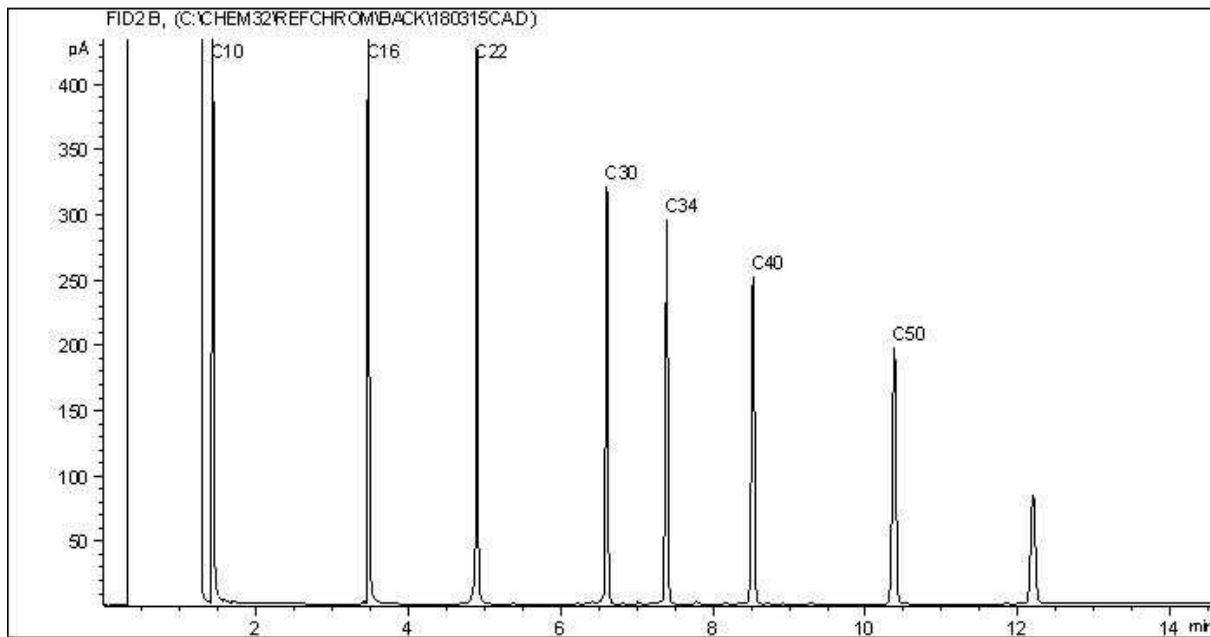
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



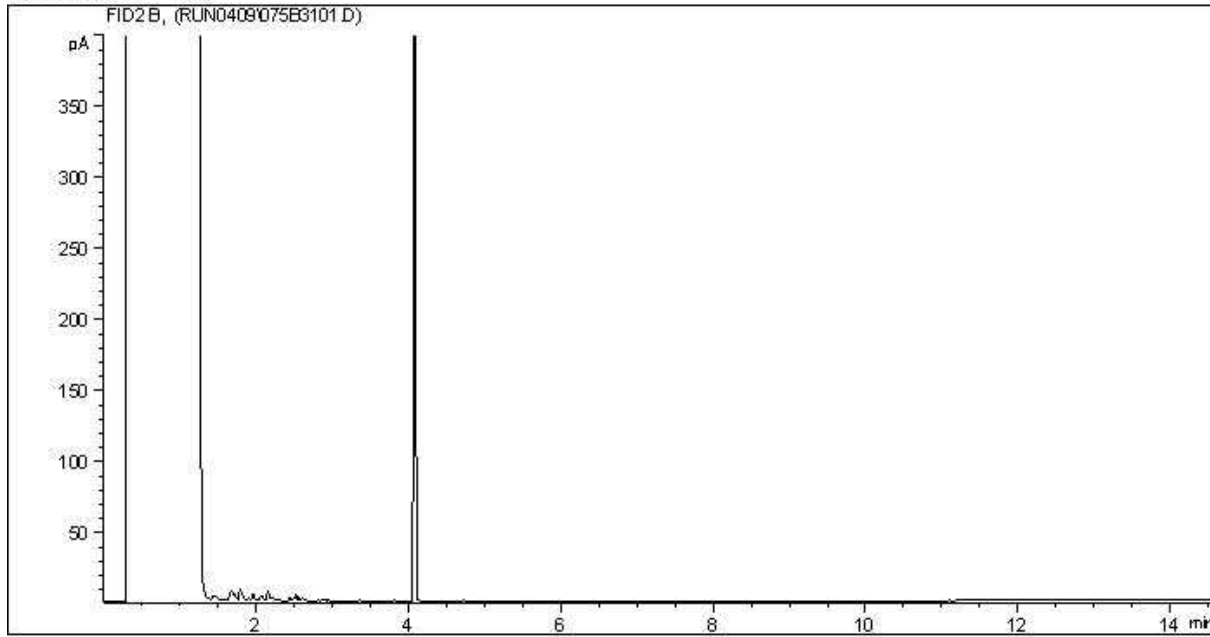
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

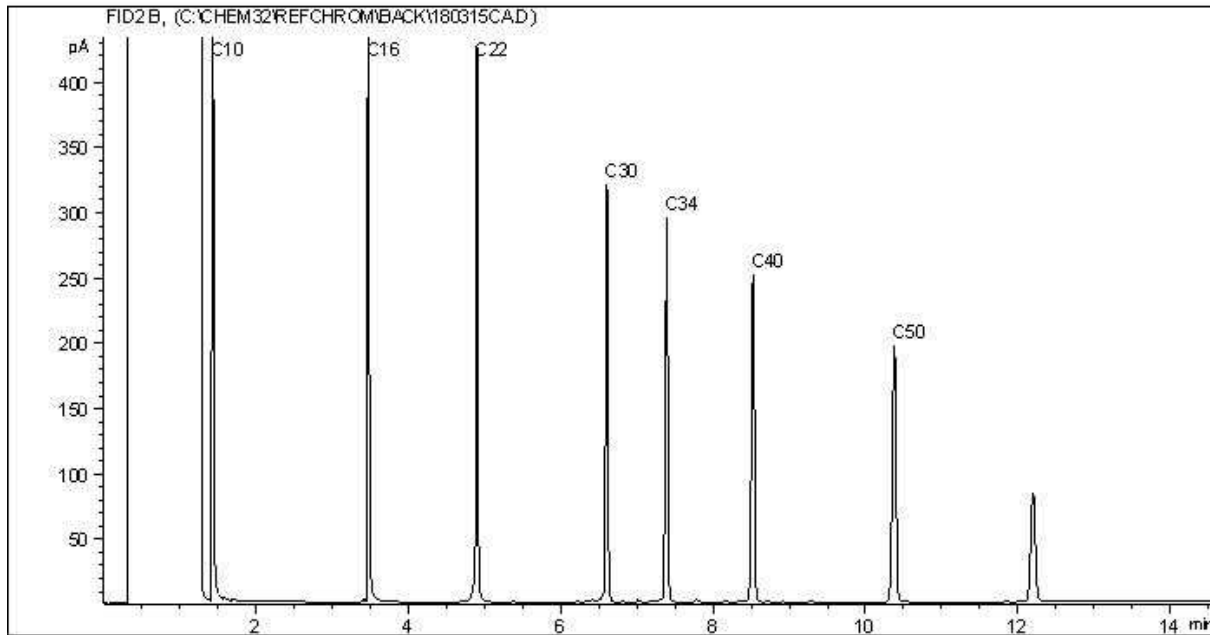
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



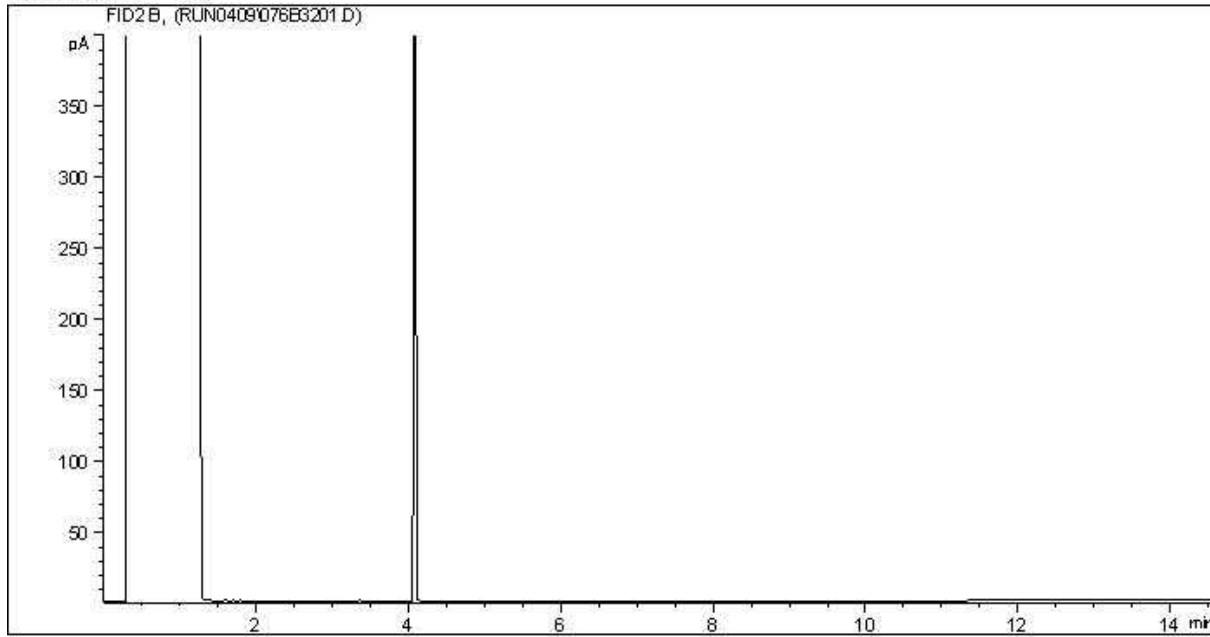
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

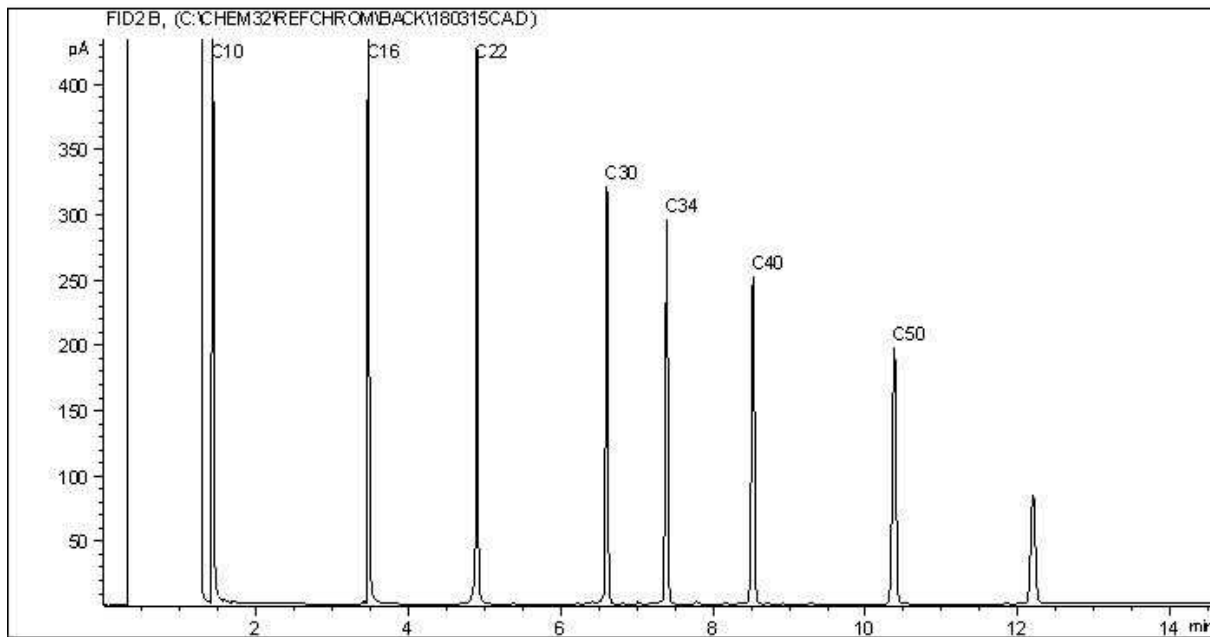
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



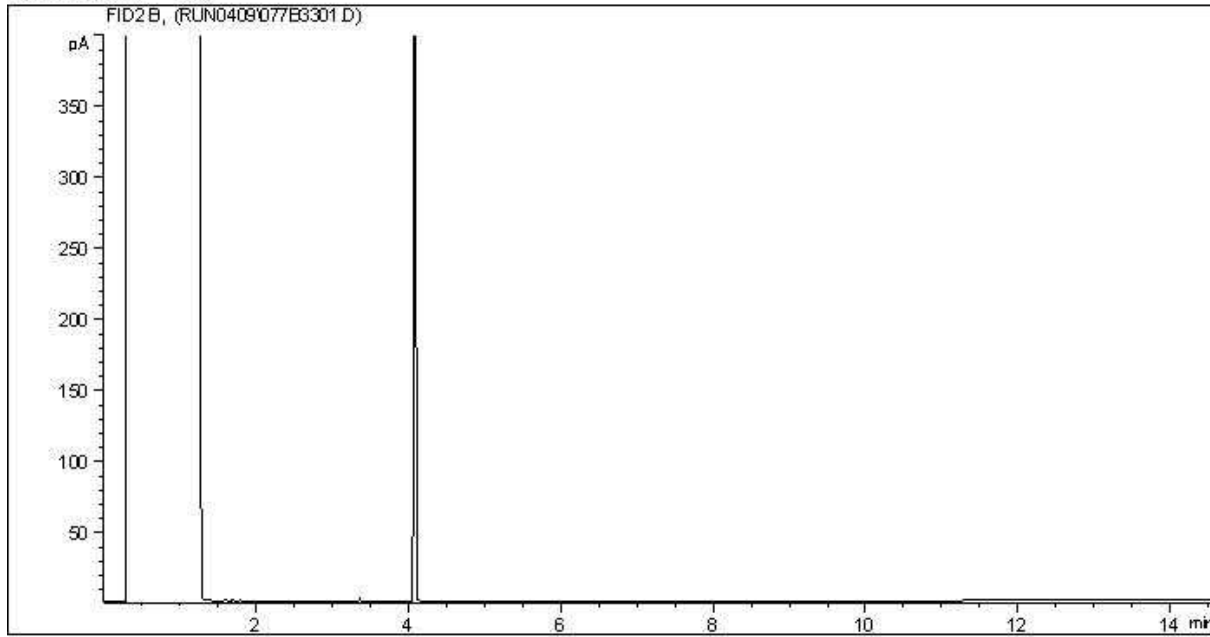
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

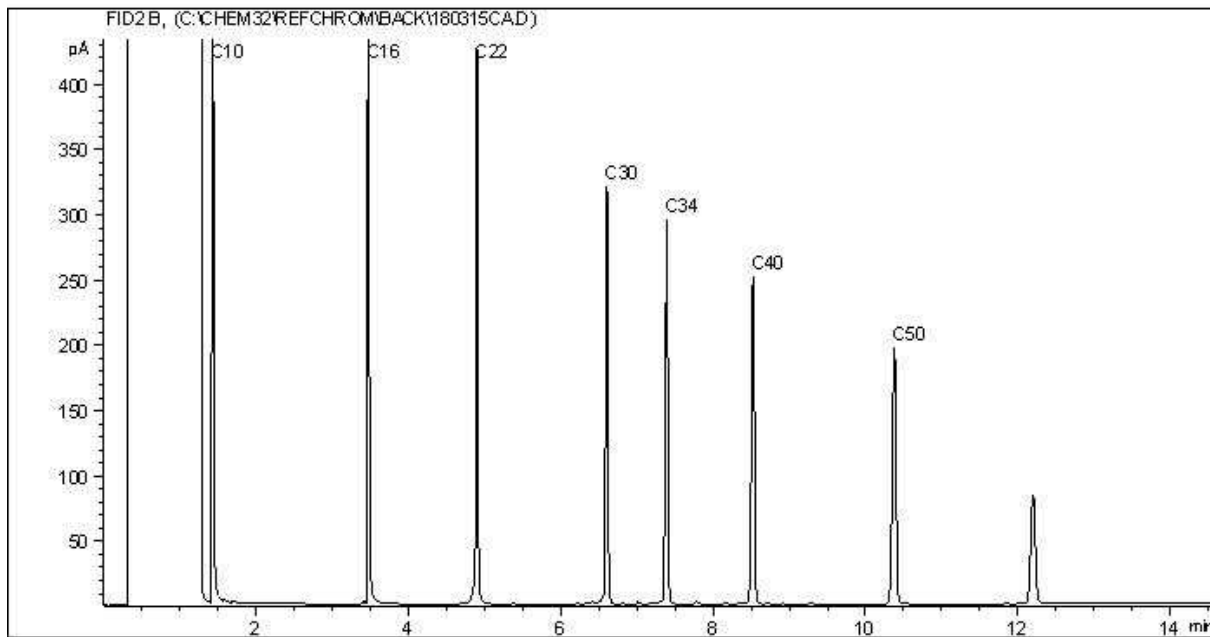
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



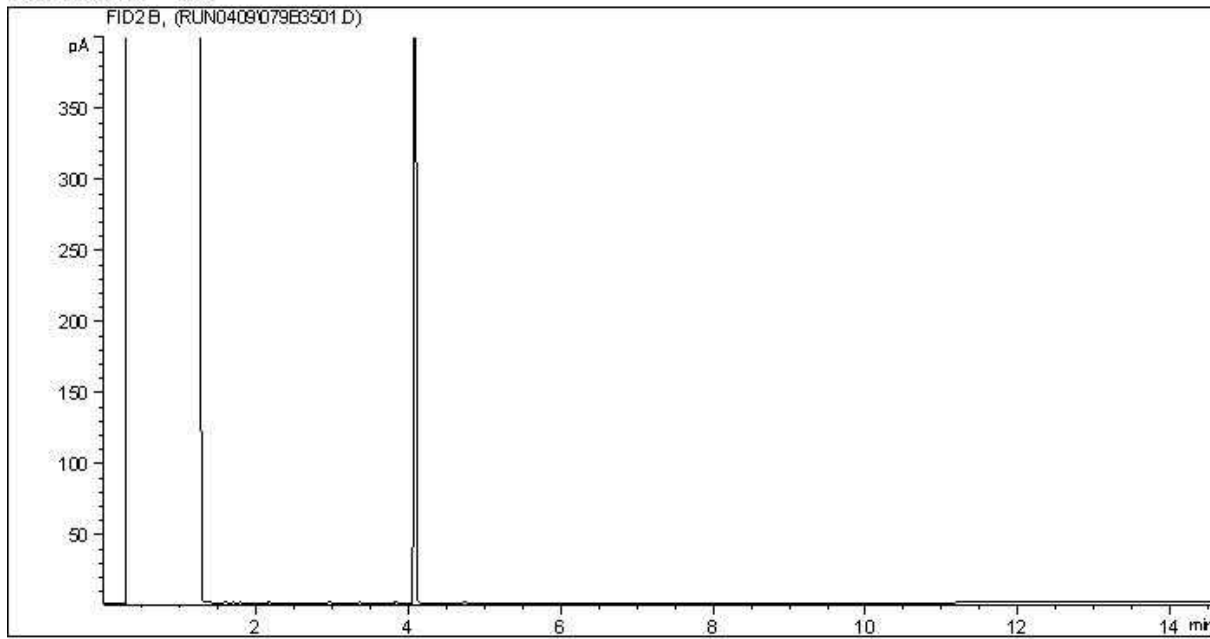
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

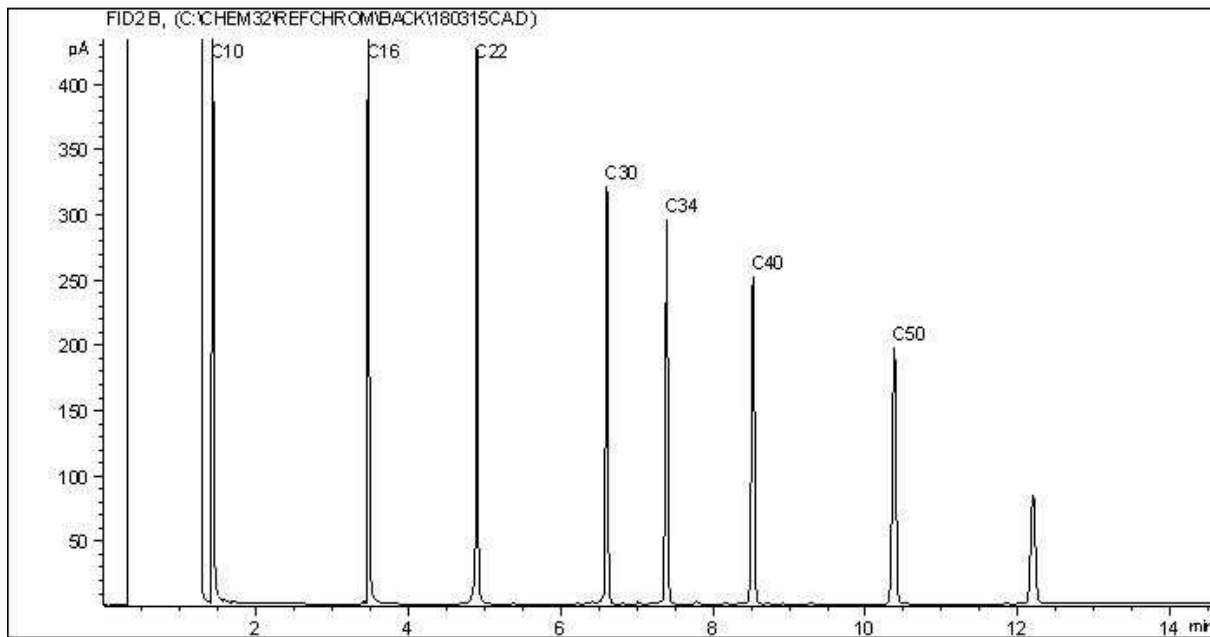
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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



Your Project #: CG2430.E30  
Your C.O.C. #: a113175, a078946

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/13**

Report #: R2541379

Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B825627**

**Received: 2018/04/06, 15:03**

Sample Matrix: Water  
# Samples Received: 17

Analyses	Date		Laboratory Method	Analytical Method
	Quantity	Date Extracted		
BTEX/F1 in Water by HS GC/MS/FID	12	N/A	2018/04/07 AB SOP-00039	CCME CWS/EPA 8260c m
BTEX/F1 in Water by HS GC/MS/FID	4	N/A	2018/04/08 AB SOP-00039	CCME CWS/EPA 8260c m
F1-BTEX	16	N/A	2018/04/09 AB SOP-00039	Auto Calc
CCME Hydrocarbons in Water (F2; C10-C16) (1)	4	2018/04/11	2018/04/11 AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
CCME Hydrocarbons in Water (F2; C10-C16) (1)	12	2018/04/11	2018/04/12 AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Benzo[a]pyrene Equivalency (2)	13	N/A	2018/04/12 AB SOP-00003	Auto Calc
PAH in Water by GC/MS	13	2018/04/11	2018/04/12 AB SOP-00037 / AB SOP-00003	EPA 3510C/8270D m
Total Trihalomethanes Calculation	17	N/A	2018/04/11 AB SOP-00056	Auto Calc
VOCs in Water by HS GC/MS (Std List)	12	N/A	2018/04/09 AB SOP-00056	EPA 5021a/8260c m
VOCs in Water by HS GC/MS (Std List)	5	N/A	2018/04/10 AB SOP-00056	EPA 5021a/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.

Your Project #: CG2430.E30  
Your C.O.C. #: a113175, a078946

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/13**  
Report #: R2541379  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B825627**

**Received: 2018/04/06, 15:03**

- (1) Silica gel clean up employed.
- (2) B[a]P TPE is calculated using 1/2 of the RDL for non detect results as per Alberta Environment instructions. This protocol may not apply in other jurisdictions.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Jennifer Stephenson, B.Sc, Technical Specialist

Email: [jstephenson@maxxam.ca](mailto:jstephenson@maxxam.ca)

Phone# (403) 291-3077

=====  
This report has been generated and distributed using a secure automated process.

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Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

<b>Maxxam ID</b>		TF7063	TF7063	TF7064		TF7065		TF7066		
<b>Sampling Date</b>		2018/04/06 13:50	2018/04/06 13:50	2018/04/06 13:50		2018/04/06 11:00		2018/04/06 10:45		
<b>COC Number</b>		a113175	a113175	a113175		a113175		a113175		
	<b>UNITS</b>	<b>1905</b>	<b>1905 Lab-Dup</b>	<b>9905</b>	<b>RDL</b>	<b>1907B</b>	<b>RDL</b>	<b>1924B</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Ext. Pet. Hydrocarbon</b>										
F2 (C10-C16 Hydrocarbons)	mg/L	2.7	N/A	2.5	0.10	<0.10	0.10	<0.10	0.10	8953552
<b>Volatiles</b>										
Benzene	mg/L	0.028	0.027	0.028	0.00040	0.021	0.00040	1.5 (1)	0.0040	8953649
Toluene	mg/L	0.0028	0.0028	0.0029	0.00040	0.045	0.00040	0.0042	0.00040	8953649
Ethylbenzene	mg/L	0.36	0.35	0.37	0.00040	0.0027	0.00040	0.00043	0.00040	8953649
m & p-Xylene	mg/L	2.1 (1)	2.1	2.2 (1)	0.0080	0.050	0.00080	0.0071	0.00080	8953649
o-Xylene	mg/L	0.26	0.25	0.26	0.00040	0.012	0.00040	0.15	0.00040	8953649
Xylenes (Total)	mg/L	2.3	N/A	2.4	0.0080	0.062	0.00089	0.16	0.00089	8952992
F1 (C6-C10) - BTEX	mg/L	4.7	N/A	5.0	0.10	0.58	0.10	0.59	0.10	8952992
F1 (C6-C10)	mg/L	7.5	7.4	7.8	0.10	0.71	0.10	2.3	0.10	8953649
<b>Surrogate Recovery (%)</b>										
1,4-Difluorobenzene (sur.)	%	100	96	98	N/A	98	N/A	98	N/A	8953649
4-Bromofluorobenzene (sur.)	%	100	103	94	N/A	104	N/A	104	N/A	8953649
D4-1,2-Dichloroethane (sur.)	%	84	109	85	N/A	73	N/A	101	N/A	8953649
O-TERPHENYL (sur.)	%	96	N/A	93	N/A	96	N/A	97	N/A	8953552

RDL = Reportable Detection Limit  
 Lab-Dup = Laboratory Initiated Duplicate  
 N/A = Not Applicable  
 (1) Detection limits raised due to dilution to bring analyte within the calibrated range.

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

<b>Maxxam ID</b>		TF7067	TF7068	TF7069		TF7070	TF7071		
<b>Sampling Date</b>		2018/04/06 14:00	2018/04/06 14:20	2018/04/06 11:15		2018/04/06 11:15	2018/04/06 10:30		
<b>COC Number</b>		a113175	a113175	a113175		a113175	a113175		
	<b>UNITS</b>	<b>1962</b>	<b>1964</b>	<b>1967</b>	<b>QC Batch</b>	<b>9967</b>	<b>1974</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Ext. Pet. Hydrocarbon</b>									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	0.38	8953552	0.30	<0.10	0.10	8953552
<b>Volatiles</b>									
Benzene	mg/L	<0.00040	<0.00040	0.16	8953649	0.16	0.00082	0.00040	8953649
Toluene	mg/L	<0.00040	<0.00040	0.018	8953649	0.019	<0.00040	0.00040	8953649
Ethylbenzene	mg/L	<0.00040	<0.00040	0.18	8953649	0.19	0.00048	0.00040	8953649
m & p-Xylene	mg/L	<0.00080	<0.00080	0.0041	8953649	0.0037	0.0012	0.00080	8953649
o-Xylene	mg/L	<0.00040	<0.00040	0.00077	8953649	0.00089	<0.00040	0.00040	8953649
Xylenes (Total)	mg/L	<0.00089	<0.00089	0.0048	8952992	0.0046	0.0012	0.00089	8953647
F1 (C6-C10) - BTEX	mg/L	<0.10	<0.10	3.0	8952992	3.3	0.14	0.10	8953647
F1 (C6-C10)	mg/L	<0.10	<0.10	3.4	8953649	3.7	0.15	0.10	8953649
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene (sur.)	%	100	101	100	8953649	97	100	N/A	8953649
4-Bromofluorobenzene (sur.)	%	105	103	94	8953649	99	104	N/A	8953649
D4-1,2-Dichloroethane (sur.)	%	98	94	70	8953649	90	112	N/A	8953649
O-TERPHENYL (sur.)	%	104	94	114	8953552	96	100	N/A	8953552

RDL = Reportable Detection Limit  
N/A = Not Applicable

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

Maxxam ID		TF7072	TF7074	TF7077	TF7078	TF7079	TF7080		
Sampling Date		2018/04/06 10:10	2018/04/06 12:35	2018/04/06 13:20	2018/04/06 13:00	2018/04/06 14:50	2018/04/06 15:00		
COC Number		a113175	a113175	a078946	a078946	a078946	a078946		
	<b>UNITS</b>	<b>2008</b>	<b>1983A</b>	<b>1984</b>	<b>1985</b>	<b>1933</b>	<b>1934</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Ext. Pet. Hydrocarbon</b>									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8953552
<b>Volatiles</b>									
Benzene	mg/L	<0.00040	<0.00040	0.0013	<0.00040	<0.00040	<0.00040	0.00040	8953649
Toluene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	8953649
Ethylbenzene	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	8953649
m & p-Xylene	mg/L	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	0.00080	8953649
o-Xylene	mg/L	<0.00040	<0.00040	0.00044	<0.00040	<0.00040	<0.00040	0.00040	8953649
Xylenes (Total)	mg/L	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	0.00089	8953647
F1 (C6-C10) - BTEX	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8953647
F1 (C6-C10)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8953649
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene (sur.)	%	99	99	99	101	100	99	N/A	8953649
4-Bromofluorobenzene (sur.)	%	102	103	104	103	104	103	N/A	8953649
D4-1,2-Dichloroethane (sur.)	%	94	94	97	93	96	95	N/A	8953649
O-TERPHENYL (sur.)	%	112	117	102	97	106	103	N/A	8953552

RDL = Reportable Detection Limit  
N/A = Not Applicable

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

<b>Maxxam ID</b>		TF7081		
<b>Sampling Date</b>		2018/04/06 14:40		
<b>COC Number</b>		a078946		
	<b>UNITS</b>	<b>1935</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Ext. Pet. Hydrocarbon</b>				
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	0.10	8953552
<b>Volatiles</b>				
Benzene	mg/L	<0.00040	0.00040	8953649
Toluene	mg/L	<0.00040	0.00040	8953649
Ethylbenzene	mg/L	<0.00040	0.00040	8953649
m & p-Xylene	mg/L	<0.00080	0.00080	8953649
o-Xylene	mg/L	<0.00040	0.00040	8953649
Xylenes (Total)	mg/L	<0.00089	0.00089	8953647
F1 (C6-C10) - BTEX	mg/L	<0.10	0.10	8953647
F1 (C6-C10)	mg/L	<0.10	0.10	8953649
<b>Surrogate Recovery (%)</b>				
1,4-Difluorobenzene (sur.)	%	101	N/A	8953649
4-Bromofluorobenzene (sur.)	%	103	N/A	8953649
D4-1,2-Dichloroethane (sur.)	%	92	N/A	8953649
O-TERPHENYL (sur.)	%	100	N/A	8953552
RDL = Reportable Detection Limit N/A = Not Applicable				

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF7063	TF7064		TF7065	TF7066		
Sampling Date		2018/04/06 13:50	2018/04/06 13:50		2018/04/06 11:00	2018/04/06 10:45		
COC Number		a113175	a113175		a113175	a113175		
	<b>UNITS</b>	<b>1905</b>	<b>9905</b>	<b>RDL</b>	<b>1907B</b>	<b>1924B</b>	<b>RDL</b>	<b>QC Batch</b>

Polycyclic Aromatics								
Benzo[a]pyrene equivalency	mg/L	0.000025	0.000030	0.000010	<0.000010	<0.000010	0.000010	8952998
Acenaphthene	mg/L	0.00033	0.00029	0.00010	<0.00010	<0.00010	0.00010	8953557
Acenaphthylene	mg/L	<0.00010	<0.00010	0.00010	<0.00010	<0.00010	0.00010	8953557
Acridine	mg/L	0.00018	0.00020	0.000050	<0.000050	<0.000050	0.000050	8953557
Anthracene	mg/L	0.000054	0.000052	0.000010	<0.000010	<0.000010	0.000010	8953557
Benzo(a)anthracene	mg/L	0.000026	0.000041	0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Benzo(b&j)fluoranthene	mg/L	0.000023	0.000027	0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Benzo(k)fluoranthene	mg/L	<0.0000085	0.0000094	0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	0.000050	<0.000050	<0.000050	0.000050	8953557
Benzo(a)pyrene	mg/L	0.000016	0.000018	0.0000075	<0.0000075	<0.0000075	0.0000075	8953557
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	0.000050	<0.000050	<0.000050	0.000050	8953557
Chrysene	mg/L	0.000034	0.000051	0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Dibenz(a,h)anthracene	mg/L	<0.0000075	<0.0000075	0.0000075	<0.0000075	<0.0000075	0.0000075	8953557
Fluoranthene	mg/L	0.00024	0.00033	0.000010	<0.000010	<0.000010	0.000010	8953557
Fluorene	mg/L	0.00032	0.00028	0.000050	<0.000050	<0.000050	0.000050	8953557
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
1-Methylnaphthalene	mg/L	0.032	0.029	0.00010	<0.00010	<0.00010	0.00010	8953557
2-Methylnaphthalene	mg/L	0.046	0.040	0.00010	0.00011	<0.00010	0.00010	8953557
Naphthalene	mg/L	0.12 (1)	0.12 (1)	0.0010	0.00034	0.0028	0.00010	8953557
Phenanthrene	mg/L	0.00032	0.00030	0.000050	<0.000050	<0.000050	0.000050	8953557
Perylene	mg/L	<0.000050	<0.000050	0.000050	<0.000050	<0.000050	0.000050	8953557
Pyrene	mg/L	0.00027	0.00038	0.000020	<0.000020	<0.000020	0.000020	8953557
Quinoline	mg/L	0.0048	0.0041	0.00020	<0.00020	<0.00020	0.00020	8953557

Surrogate Recovery (%)								
D10-ANTHRACENE (sur.)	%	98	96	N/A	95	103	N/A	8953557
D8-ACENAPHTHYLENE (sur.)	%	84	81	N/A	94	94	N/A	8953557
D8-NAPHTHALENE (sur.)	%	68	65	N/A	82	79	N/A	8953557
TERPHENYL-D14 (sur.)	%	96	95	N/A	109	111	N/A	8953557

RDL = Reportable Detection Limit  
N/A = Not Applicable  
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF7069		TF7071	TF7072	TF7074		
Sampling Date		2018/04/06 11:15		2018/04/06 10:30	2018/04/06 10:10	2018/04/06 12:35		
COC Number		a113175		a113175	a113175	a113175		
	<b>UNITS</b>	<b>1967</b>	<b>QC Batch</b>	<b>1974</b>	<b>2008</b>	<b>1983A</b>	<b>RDL</b>	<b>QC Batch</b>

**Polycyclic Aromatics**

Benzo[a]pyrene equivalency	mg/L	<0.000010	8952998	<0.000010	<0.000010	<0.000010	0.000010	8953632
Acenaphthene	mg/L	<0.00010	8953557	<0.00010	<0.00010	<0.00010	0.00010	8953557
Acenaphthylene	mg/L	<0.00010	8953557	<0.00010	<0.00010	<0.00010	0.00010	8953557
Acridine	mg/L	<0.000050	8953557	<0.000050	<0.000050	<0.000050	0.000050	8953557
Anthracene	mg/L	<0.000010	8953557	<0.000010	<0.000010	<0.000010	0.000010	8953557
Benzo(a)anthracene	mg/L	<0.0000085	8953557	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Benzo(b&j)fluoranthene	mg/L	<0.0000085	8953557	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Benzo(k)fluoranthene	mg/L	<0.0000085	8953557	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Benzo(g,h,i)perylene	mg/L	<0.0000085	8953557	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Benzo(c)phenanthrene	mg/L	<0.000050	8953557	<0.000050	<0.000050	<0.000050	0.000050	8953557
Benzo(a)pyrene	mg/L	<0.0000075	8953557	<0.0000075	<0.0000075	<0.0000075	0.0000075	8953557
Benzo[e]pyrene	mg/L	<0.000050	8953557	<0.000050	<0.000050	<0.000050	0.000050	8953557
Chrysene	mg/L	<0.0000085	8953557	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Dibenz(a,h)anthracene	mg/L	<0.0000075	8953557	<0.0000075	<0.0000075	<0.0000075	0.0000075	8953557
Fluoranthene	mg/L	<0.000010	8953557	<0.000010	<0.000010	<0.000010	0.000010	8953557
Fluorene	mg/L	<0.000050	8953557	<0.000050	<0.000050	<0.000050	0.000050	8953557
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	8953557	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
1-Methylnaphthalene	mg/L	0.00054	8953557	<0.00010	<0.00010	<0.00010	0.00010	8953557
2-Methylnaphthalene	mg/L	<0.00010	8953557	<0.00010	<0.00010	<0.00010	0.00010	8953557
Naphthalene	mg/L	0.00082	8953557	<0.00010	<0.00010	<0.00010	0.00010	8953557
Phenanthrene	mg/L	<0.000050	8953557	<0.000050	<0.000050	<0.000050	0.000050	8953557
Perylene	mg/L	<0.000050	8953557	<0.000050	<0.000050	<0.000050	0.000050	8953557
Pyrene	mg/L	<0.000020	8953557	<0.000020	<0.000020	<0.000020	0.000020	8953557
Quinoline	mg/L	<0.00020	8953557	<0.00020	<0.00020	<0.00020	0.00020	8953557

**Surrogate Recovery (%)**

D10-ANTHRACENE (sur.)	%	100	8953557	104	115	108	N/A	8953557
D8-ACENAPHTHYLENE (sur.)	%	92	8953557	96	106	98	N/A	8953557
D8-NAPHTHALENE (sur.)	%	76	8953557	82	93	72	N/A	8953557
TERPHENYL-D14 (sur.)	%	107	8953557	112	125	113	N/A	8953557

RDL = Reportable Detection Limit

N/A = Not Applicable



Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF7077	TF7078	TF7079	TF7080	TF7081		
Sampling Date		2018/04/06 13:20	2018/04/06 13:00	2018/04/06 14:50	2018/04/06 15:00	2018/04/06 14:40		
COC Number		a078946	a078946	a078946	a078946	a078946		
	<b>UNITS</b>	<b>1984</b>	<b>1985</b>	<b>1933</b>	<b>1934</b>	<b>1935</b>	<b>RDL</b>	<b>QC Batch</b>

Polycyclic Aromatics								
Benzo[a]pyrene equivalency	mg/L	0.000014	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8953632
Acenaphthene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8953557
Acenaphthylene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8953557
Acridine	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953557
Anthracene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8953557
Benzo(a)anthracene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Benzo(b&j)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Benzo(k)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953557
Benzo(a)pyrene	mg/L	0.0000085 (1)	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8953557
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953557
Chrysene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
Dibenz(a,h)anthracene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8953557
Fluoranthene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8953557
Fluorene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953557
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8953557
1-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8953557
2-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8953557
Naphthalene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8953557
Phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953557
Perylene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8953557
Pyrene	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8953557
Quinoline	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8953557

Surrogate Recovery (%)								
D10-ANTHRACENE (sur.)	%	97	104	100	94	96	N/A	8953557
D8-ACENAPHTHYLENE (sur.)	%	94	93	96	91	94	N/A	8953557
D8-NAPHTHALENE (sur.)	%	73	71	81	76	83	N/A	8953557
TERPHENYL-D14 (sur.)	%	112	115	113	107	113	N/A	8953557

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF7063	TF7063		TF7064		TF7065		
Sampling Date		2018/04/06 13:50	2018/04/06 13:50		2018/04/06 13:50		2018/04/06 11:00		
COC Number		a113175	a113175		a113175		a113175		
	UNITS	1905	1905 Lab-Dup	RDL	9905	RDL	1907B	RDL	QC Batch

Volatiles									
Total Trihalomethanes	mg/L	<0.0013	N/A	0.0013	<0.0013	0.0013	<0.0013	0.0013	8953071
Bromodichloromethane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
Bromoform	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
Bromomethane	mg/L	<0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	8953651
Carbon tetrachloride	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
Chlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
Chlorodibromomethane	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8953651
Chloroethane	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8953651
Chloroform	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
Chloromethane	mg/L	<0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	8953651
1,2-dibromoethane	mg/L	0.00039	0.00040	0.00020	0.00051	0.00020	<0.00020	0.00020	8953651
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
1,1-dichloroethane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
1,2-dichloroethane	mg/L	0.051	0.054	0.00050	0.057	0.00050	<0.00050	0.00050	8953651
1,1-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
Dichloromethane	mg/L	<0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	8953651
1,2-dichloropropane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
Methyl methacrylate	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
Styrene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8953651
1,1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	8953651
Tetrachloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8953651

RDL = Reportable Detection Limit  
Lab-Dup = Laboratory Initiated Duplicate  
N/A = Not Applicable

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF7063	TF7063		TF7064		TF7065		
Sampling Date		2018/04/06 13:50	2018/04/06 13:50		2018/04/06 13:50		2018/04/06 11:00		
COC Number		a113175	a113175		a113175		a113175		
	UNITS	1905	1905 Lab-Dup	RDL	9905	RDL	1907B	RDL	QC Batch
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	8953651
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
Trichloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
1,2,4-trimethylbenzene	mg/L	1.5 (1)	1.5	0.0025	1.4 (1)	0.0025	0.0061	0.00050	8953651
1,3,5-trimethylbenzene	mg/L	0.50	0.50	0.00050	0.56 (1)	0.0025	0.0023	0.00050	8953651
Vinyl chloride	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	<0.00050	0.00050	8953651
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	102	102	N/A	103	N/A	102	N/A	8953651
4-Bromofluorobenzene (sur.)	%	96	97	N/A	97	N/A	97	N/A	8953651
D4-1,2-Dichloroethane (sur.)	%	98	97	N/A	104	N/A	120	N/A	8953651
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable (1) Detection limits raised due to dilution to bring analyte within the calibrated range.									

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF7066	TF7067	TF7068	TF7069	TF7070		
Sampling Date		2018/04/06 10:45	2018/04/06 14:00	2018/04/06 14:20	2018/04/06 11:15	2018/04/06 11:15		
COC Number		a113175	a113175	a113175	a113175	a113175		
	<b>UNITS</b>	<b>1924B</b>	<b>1962</b>	<b>1964</b>	<b>1967</b>	<b>9967</b>	<b>RDL</b>	<b>QC Batch</b>

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0013	8953071
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953651
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953651
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953651
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953651
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8953651
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,2-dichloroethane	mg/L	0.10	<0.00050	<0.00050	0.028	0.031	0.00050	8953651
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953651
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953651
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953651
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953651
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953651

RDL = Reportable Detection Limit

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF7066	TF7067	TF7068	TF7069	TF7070		
Sampling Date		2018/04/06 10:45	2018/04/06 14:00	2018/04/06 14:20	2018/04/06 11:15	2018/04/06 11:15		
COC Number		a113175	a113175	a113175	a113175	a113175		
	UNITS	1924B	1962	1964	1967	9967	RDL	QC Batch
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,1,2-trichloroethane	mg/L	0.0015	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,2,4-trimethylbenzene	mg/L	0.0017	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	0.0035	0.0036	0.00050	8953651
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	102	102	102	101	102	N/A	8953651
4-Bromofluorobenzene (sur.)	%	96	96	96	95	96	N/A	8953651
D4-1,2-Dichloroethane (sur.)	%	110	99	104	93	99	N/A	8953651
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF7071	TF7072	TF7073	TF7074	TF7077		
Sampling Date		2018/04/06 10:30	2018/04/06 10:10	2018/04/06	2018/04/06 12:35	2018/04/06 13:20		
COC Number		a113175	a113175	a113175	a113175	a078946		
	UNITS	1974	2008	TRIP BLANK 8	1983A	1984	RDL	QC Batch

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0013	8953071
Benzene	mg/L	N/A	N/A	<0.00040	N/A	N/A	0.00040	8953651
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953651
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953651
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953651
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953651
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8953651
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,2-dichloroethane	mg/L	0.058	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953651
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Ethylbenzene	mg/L	N/A	N/A	<0.00040	N/A	N/A	0.00040	8953651
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953651
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8953651
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651

RDL = Reportable Detection Limit  
N/A = Not Applicable

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF7071	TF7072	TF7073	TF7074	TF7077		
Sampling Date		2018/04/06 10:30	2018/04/06 10:10	2018/04/06	2018/04/06 12:35	2018/04/06 13:20		
COC Number		a113175	a113175	a113175	a113175	a078946		
	UNITS	1974	2008	TRIP BLANK 8	1983A	1984	RDL	QC Batch
Toluene	mg/L	N/A	N/A	<0.00040	N/A	N/A	0.00040	8953651
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953651
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8953651
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8953651
Xylenes (Total)	mg/L	N/A	N/A	<0.00080	N/A	N/A	0.00080	8953651
m & p-Xylene	mg/L	N/A	N/A	<0.00080	N/A	N/A	0.00080	8953651
o-Xylene	mg/L	N/A	N/A	<0.00040	N/A	N/A	0.00040	8953651
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	102	101	102	102	101	N/A	8953651
4-Bromofluorobenzene (sur.)	%	96	98	97	98	96	N/A	8953651
D4-1,2-Dichloroethane (sur.)	%	106	104	97	95	98	N/A	8953651
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF7078	TF7079	TF7080		TF7081		
Sampling Date		2018/04/06 13:00	2018/04/06 14:50	2018/04/06 15:00		2018/04/06 14:40		
COC Number		a078946	a078946	a078946		a078946		
	UNITS	1985	1933	1934	QC Batch	1935	RDL	QC Batch
<b>Volatiles</b>								
Total Trihalomethanes	mg/L	<0.0013	<0.0013	<0.0013	8953071	<0.0013	0.0013	8953637
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	8953651	<0.0020	0.0020	8953651
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	8953651	<0.0010	0.0010	8953651
Chloroethane	mg/L	<0.0010	<0.0010	<0.0010	8953651	<0.0010	0.0010	8953651
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	8953651	<0.0020	0.0020	8953651
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	8953651	<0.00020	0.00020	8953651
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
1,2-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	8953651	<0.0020	0.0020	8953651
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
Styrene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	8953651	<0.0010	0.0010	8953651
1,1,2,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	8953651	<0.0020	0.0020	8953651
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	8953651	<0.0010	0.0010	8953651
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	8953651	<0.0010	0.0010	8953651
RDL = Reportable Detection Limit								



Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TF7078	TF7079	TF7080		TF7081		
Sampling Date		2018/04/06 13:00	2018/04/06 14:50	2018/04/06 15:00		2018/04/06 14:40		
COC Number		a078946	a078946	a078946		a078946		
	UNITS	1985	1933	1934	QC Batch	1935	RDL	QC Batch
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	8953651	<0.00050	0.00050	8953651
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	102	102	101	8953651	101	N/A	8953651
4-Bromofluorobenzene (sur.)	%	97	96	98	8953651	97	N/A	8953651
D4-1,2-Dichloroethane (sur.)	%	103	102	102	8953651	100	N/A	8953651
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

### GENERAL COMMENTS

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

Package 1	3.0°C
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**Results relate only to the items tested.**

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8953552	VP4	Matrix Spike	O-TERPHENYL (sur.)	2018/04/11		81	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/11		86	%	60 - 130
8953552	VP4	Spiked Blank	O-TERPHENYL (sur.)	2018/04/11		89	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/11		97	%	70 - 130
8953552	VP4	Method Blank	O-TERPHENYL (sur.)	2018/04/11		93	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/11	<0.10		mg/L	
8953552	VP4	RPD	F2 (C10-C16 Hydrocarbons)	2018/04/12	NC		%	30
8953557	LZ3	Matrix Spike	D10-ANTHRACENE (sur.)	2018/04/12		97	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2018/04/12		81	%	50 - 130
			D8-NAPHTHALENE (sur.)	2018/04/12		78	%	50 - 130
			TERPHENYL-D14 (sur.)	2018/04/12		98	%	50 - 130
			Acenaphthene	2018/04/12		92	%	50 - 130
			Acenaphthylene	2018/04/12		90	%	50 - 130
			Acridine	2018/04/12		53	%	50 - 130
			Anthracene	2018/04/12		87	%	50 - 130
			Benzo(a)anthracene	2018/04/12		100	%	50 - 130
			Benzo(b&j)fluoranthene	2018/04/12		94	%	50 - 130
			Benzo(k)fluoranthene	2018/04/12		92	%	50 - 130
			Benzo(g,h,i)perylene	2018/04/12		88	%	50 - 130
			Benzo(c)phenanthrene	2018/04/12		84	%	50 - 130
			Benzo(a)pyrene	2018/04/12		91	%	50 - 130
			Benzo[e]pyrene	2018/04/12		82	%	50 - 130
			Chrysene	2018/04/12		98	%	50 - 130
			Dibenz(a,h)anthracene	2018/04/12		93	%	50 - 130
			Fluoranthene	2018/04/12		87	%	50 - 130
			Fluorene	2018/04/12		93	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2018/04/12		80	%	50 - 130
			1-Methylnaphthalene	2018/04/12		94	%	50 - 130
			2-Methylnaphthalene	2018/04/12		88	%	50 - 130
			Naphthalene	2018/04/12		90	%	50 - 130
			Phenanthrene	2018/04/12		86	%	50 - 130
			Perylene	2018/04/12		81	%	50 - 130
			Pyrene	2018/04/12		82	%	50 - 130
			Quinoline	2018/04/12		107	%	50 - 130
8953557	LZ3	Spiked Blank	D10-ANTHRACENE (sur.)	2018/04/12		99	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2018/04/12		94	%	50 - 130
			D8-NAPHTHALENE (sur.)	2018/04/12		80	%	50 - 130
			TERPHENYL-D14 (sur.)	2018/04/12		107	%	50 - 130
			Acenaphthene	2018/04/12		94	%	50 - 130
			Acenaphthylene	2018/04/12		95	%	50 - 130
			Acridine	2018/04/12		89	%	50 - 130
			Anthracene	2018/04/12		96	%	50 - 130
			Benzo(a)anthracene	2018/04/12		120	%	50 - 130
			Benzo(b&j)fluoranthene	2018/04/12		113	%	50 - 130
			Benzo(k)fluoranthene	2018/04/12		111	%	50 - 130
			Benzo(g,h,i)perylene	2018/04/12		105	%	50 - 130
			Benzo(c)phenanthrene	2018/04/12		110	%	50 - 130
			Benzo(a)pyrene	2018/04/12		106	%	50 - 130
			Benzo[e]pyrene	2018/04/12		103	%	50 - 130
			Chrysene	2018/04/12		114	%	50 - 130
			Dibenz(a,h)anthracene	2018/04/12		108	%	50 - 130
			Fluoranthene	2018/04/12		116	%	50 - 130
			Fluorene	2018/04/12		96	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2018/04/12		95	%	50 - 130

Maxxam Job #: B825627  
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CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
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**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits		
8953557	LZ3	Method Blank	1-Methylnaphthalene	2018/04/12		93	%	50 - 130		
			2-Methylnaphthalene	2018/04/12		84	%	50 - 130		
			Naphthalene	2018/04/12		88	%	50 - 130		
			Phenanthrene	2018/04/12		95	%	50 - 130		
			Perylene	2018/04/12		96	%	50 - 130		
			Pyrene	2018/04/12		106	%	50 - 130		
			Quinoline	2018/04/12		106	%	50 - 130		
			D10-ANTHRACENE (sur.)	2018/04/12		100	%	50 - 130		
			D8-ACENAPHTHYLENE (sur.)	2018/04/12		90	%	50 - 130		
			D8-NAPHTHALENE (sur.)	2018/04/12		73	%	50 - 130		
			TERPHENYL-D14 (sur.)	2018/04/12		104	%	50 - 130		
			Acenaphthene	2018/04/12		<0.00010			mg/L	
			Acenaphthylene	2018/04/12		<0.00010			mg/L	
			Acridine	2018/04/12		<0.000050			mg/L	
			Anthracene	2018/04/12		<0.000010			mg/L	
			Benzo(a)anthracene	2018/04/12		<0.0000085			mg/L	
			Benzo(b&j)fluoranthene	2018/04/12		<0.0000085			mg/L	
			Benzo(k)fluoranthene	2018/04/12		<0.0000085			mg/L	
			Benzo(g,h,i)perylene	2018/04/12		<0.0000085			mg/L	
			Benzo(c)phenanthrene	2018/04/12		<0.000050			mg/L	
			Benzo(a)pyrene	2018/04/12		<0.0000075			mg/L	
			Benzo[e]pyrene	2018/04/12		<0.000050			mg/L	
			Chrysene	2018/04/12		<0.0000085			mg/L	
			Dibenz(a,h)anthracene	2018/04/12		<0.0000075			mg/L	
			Fluoranthene	2018/04/12		<0.000010			mg/L	
			Fluorene	2018/04/12		<0.000050			mg/L	
			Indeno(1,2,3-cd)pyrene	2018/04/12		<0.0000085			mg/L	
			1-Methylnaphthalene	2018/04/12		<0.00010			mg/L	
			2-Methylnaphthalene	2018/04/12		<0.00010			mg/L	
			Naphthalene	2018/04/12		<0.00010			mg/L	
			Phenanthrene	2018/04/12		<0.000050			mg/L	
			Perylene	2018/04/12		<0.000050			mg/L	
			Pyrene	2018/04/12		<0.000020			mg/L	
Quinoline	2018/04/12		<0.00020			mg/L				
8953557	LZ3	RPD	Acenaphthene	2018/04/12	NC		%	30		
			Acenaphthylene	2018/04/12	NC		%	30		
			Acridine	2018/04/12	NC		%	30		
			Anthracene	2018/04/12	NC		%	30		
			Benzo(a)anthracene	2018/04/12	NC		%	30		
			Benzo(b&j)fluoranthene	2018/04/12	NC		%	30		
			Benzo(k)fluoranthene	2018/04/12	NC		%	30		
			Benzo(g,h,i)perylene	2018/04/12	NC		%	30		
			Benzo(c)phenanthrene	2018/04/12	NC		%	30		
			Benzo(a)pyrene	2018/04/12	NC		%	30		
			Benzo[e]pyrene	2018/04/12	NC		%	30		
			Chrysene	2018/04/12	NC		%	30		
			Dibenz(a,h)anthracene	2018/04/12	NC		%	30		
			Fluoranthene	2018/04/12	NC		%	30		
			Fluorene	2018/04/12	NC		%	30		
Indeno(1,2,3-cd)pyrene	2018/04/12	NC		%	30					
1-Methylnaphthalene	2018/04/12	NC		%	30					
2-Methylnaphthalene	2018/04/12	NC		%	30					
Naphthalene	2018/04/12	NC		%	30					
Phenanthrene	2018/04/12	NC		%	30					

Maxxam Job #: B825627  
Report Date: 2018/04/13

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits			
8953649	SAW	Matrix Spike [TF7064-02]	Perylene	2018/04/12	NC		%	30			
			Pyrene	2018/04/12	NC		%	30			
			Quinoline	2018/04/12	NC		%	30			
			1,4-Difluorobenzene (sur.)	2018/04/08		97	%	50 - 140			
			4-Bromofluorobenzene (sur.)	2018/04/08		99	%	50 - 140			
			D4-1,2-Dichloroethane (sur.)	2018/04/08		102	%	50 - 140			
			Benzene	2018/04/08		87	%	50 - 140			
			Toluene	2018/04/08		82	%	50 - 140			
			Ethylbenzene	2018/04/08		NC	%	50 - 140			
			m & p-Xylene	2018/04/08		NC	%	50 - 140			
			o-Xylene	2018/04/08		89	%	50 - 140			
8953649	SAW	Spiked Blank	F1 (C6-C10)	2018/04/08		72	%	60 - 140			
			1,4-Difluorobenzene (sur.)	2018/04/07		98	%	50 - 140			
			4-Bromofluorobenzene (sur.)	2018/04/07		104	%	50 - 140			
			D4-1,2-Dichloroethane (sur.)	2018/04/07		96	%	50 - 140			
			Benzene	2018/04/07		97	%	60 - 130			
			Toluene	2018/04/07		97	%	60 - 130			
			Ethylbenzene	2018/04/07		96	%	60 - 130			
			m & p-Xylene	2018/04/07		95	%	60 - 130			
			o-Xylene	2018/04/07		97	%	60 - 130			
			F1 (C6-C10)	2018/04/07		110	%	60 - 140			
			8953649	SAW	Method Blank	1,4-Difluorobenzene (sur.)	2018/04/07		98	%	50 - 140
4-Bromofluorobenzene (sur.)	2018/04/07					105	%	50 - 140			
D4-1,2-Dichloroethane (sur.)	2018/04/07					97	%	50 - 140			
Benzene	2018/04/07	<0.00040					mg/L				
Toluene	2018/04/07	<0.00040					mg/L				
Ethylbenzene	2018/04/07	<0.00040					mg/L				
m & p-Xylene	2018/04/07	<0.00080					mg/L				
o-Xylene	2018/04/07	<0.00040					mg/L				
F1 (C6-C10)	2018/04/07	<0.10					mg/L				
8953649	SAW	RPD [TF7063-02]				Benzene	2018/04/08	4.1		%	30
						Toluene	2018/04/08	2.2		%	30
			Ethylbenzene	2018/04/08	3.1		%	30			
			m & p-Xylene	2018/04/08	1.8		%	30			
			o-Xylene	2018/04/08	2.0		%	30			
			F1 (C6-C10)	2018/04/08	0.90		%	30			
8953651	RSU	Matrix Spike [TF7064-02]	1,4-Difluorobenzene (sur.)	2018/04/09		104	%	70 - 130			
			4-Bromofluorobenzene (sur.)	2018/04/09		103	%	70 - 130			
			D4-1,2-Dichloroethane (sur.)	2018/04/09		94	%	70 - 130			
			Benzene	2018/04/09		106	%	70 - 130			
			Bromodichloromethane	2018/04/09		106	%	70 - 130			
			Bromoform	2018/04/09		116	%	70 - 130			
			Bromomethane	2018/04/09		96	%	70 - 130			
			Carbon tetrachloride	2018/04/09		107	%	70 - 130			
			Chlorobenzene	2018/04/09		113	%	70 - 130			
			Chlorodibromomethane	2018/04/09		112	%	70 - 130			
			Chloroethane	2018/04/09		99	%	70 - 130			
			Chloroform	2018/04/09		106	%	70 - 130			
			Chloromethane	2018/04/09		98	%	70 - 130			
			1,2-dibromoethane	2018/04/09		119	%	70 - 130			
			1,2-dichlorobenzene	2018/04/09		99	%	70 - 130			
			1,3-dichlorobenzene	2018/04/09		100	%	70 - 130			
			1,4-dichlorobenzene	2018/04/09		97	%	70 - 130			
			1,1-dichloroethane	2018/04/09		102	%	70 - 130			

Maxxam Job #: B825627  
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CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.E30  
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**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,2-dichloroethane	2018/04/09		107	%	70 - 130
				1,1-dichloroethene	2018/04/09		113	%	70 - 130
				cis-1,2-dichloroethene	2018/04/09		113	%	70 - 130
				trans-1,2-dichloroethene	2018/04/09		114	%	70 - 130
				Dichloromethane	2018/04/09		99	%	70 - 130
				1,2-dichloropropane	2018/04/09		106	%	70 - 130
				cis-1,3-dichloropropene	2018/04/09		115	%	70 - 130
				trans-1,3-dichloropropene	2018/04/09		125	%	70 - 130
				Ethylbenzene	2018/04/09		NC	%	70 - 130
				Methyl methacrylate	2018/04/09		109	%	70 - 130
				Methyl-tert-butylether (MTBE)	2018/04/09		108	%	70 - 130
				Styrene	2018/04/09		115	%	70 - 130
				1,1,1,2-tetrachloroethane	2018/04/09		111	%	70 - 130
				1,1,1,2-tetrachloroethane	2018/04/09		102	%	70 - 130
				Tetrachloroethene	2018/04/09		111	%	70 - 130
				Toluene	2018/04/09		109	%	70 - 130
				1,2,3-trichlorobenzene	2018/04/09		87	%	70 - 130
				1,2,4-trichlorobenzene	2018/04/09		76	%	70 - 130
				1,3,5-trichlorobenzene	2018/04/09		76	%	70 - 130
				1,1,1-trichloroethane	2018/04/09		108	%	70 - 130
				1,1,2-trichloroethane	2018/04/09		122	%	70 - 130
				Trichloroethene	2018/04/09		117	%	70 - 130
				Trichlorofluoromethane	2018/04/09		108	%	70 - 130
				1,2,4-trimethylbenzene	2018/04/09		NC	%	70 - 130
				1,3,5-trimethylbenzene	2018/04/09		NC	%	70 - 130
				Vinyl chloride	2018/04/09		107	%	70 - 130
				m & p-Xylene	2018/04/09		NC	%	70 - 130
				o-Xylene	2018/04/09		NC	%	70 - 130
8953651	RSU		Spiked Blank	1,4-Difluorobenzene (sur.)	2018/04/09		101	%	70 - 130
				4-Bromofluorobenzene (sur.)	2018/04/09		98	%	70 - 130
				D4-1,2-Dichloroethane (sur.)	2018/04/09		85	%	70 - 130
				Benzene	2018/04/09		86	%	70 - 130
				Bromodichloromethane	2018/04/09		88	%	70 - 130
				Bromoform	2018/04/09		104	%	70 - 130
				Bromomethane	2018/04/09		76	%	70 - 130
				Carbon tetrachloride	2018/04/09		87	%	70 - 130
				Chlorobenzene	2018/04/09		99	%	70 - 130
				Chlorodibromomethane	2018/04/09		100	%	70 - 130
				Chloroethane	2018/04/09		82	%	70 - 130
				Chloroform	2018/04/09		86	%	70 - 130
				Chloromethane	2018/04/09		82	%	70 - 130
				1,2-dibromoethane	2018/04/09		105	%	70 - 130
				1,2-dichlorobenzene	2018/04/09		91	%	70 - 130
				1,3-dichlorobenzene	2018/04/09		88	%	70 - 130
				1,4-dichlorobenzene	2018/04/09		87	%	70 - 130
				1,1-dichloroethane	2018/04/09		82	%	70 - 130
				1,2-dichloroethane	2018/04/09		88	%	70 - 130
				1,1-dichloroethene	2018/04/09		93	%	70 - 130
				cis-1,2-dichloroethene	2018/04/09		93	%	70 - 130
				trans-1,2-dichloroethene	2018/04/09		92	%	70 - 130
				Dichloromethane	2018/04/09		81	%	70 - 130
				1,2-dichloropropane	2018/04/09		87	%	70 - 130
				cis-1,3-dichloropropene	2018/04/09		86	%	70 - 130
				trans-1,3-dichloropropene	2018/04/09		95	%	70 - 130

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CLIFTON ASSOCIATES LTD.  
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**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Ethylbenzene	2018/04/09		94	%	70 - 130
			Methyl methacrylate	2018/04/09		99	%	70 - 130
			Methyl-tert-butylether (MTBE)	2018/04/09		87	%	70 - 130
			Styrene	2018/04/09		96	%	70 - 130
			1,1,1,2-tetrachloroethane	2018/04/09		98	%	70 - 130
			1,1,2,2-tetrachloroethane	2018/04/09		94	%	70 - 130
			Tetrachloroethene	2018/04/09		96	%	70 - 130
			Toluene	2018/04/09		95	%	70 - 130
			1,2,3-trichlorobenzene	2018/04/09		88	%	70 - 130
			1,2,4-trichlorobenzene	2018/04/09		87	%	70 - 130
			1,3,5-trichlorobenzene	2018/04/09		86	%	70 - 130
			1,1,1-trichloroethane	2018/04/09		88	%	70 - 130
			1,1,2-trichloroethane	2018/04/09		89	%	70 - 130
			Trichloroethene	2018/04/09		91	%	70 - 130
			Trichlorofluoromethane	2018/04/09		89	%	70 - 130
			1,2,4-trimethylbenzene	2018/04/09		91	%	70 - 130
			1,3,5-trimethylbenzene	2018/04/09		89	%	70 - 130
			Vinyl chloride	2018/04/09		89	%	70 - 130
			m & p-Xylene	2018/04/09		96	%	70 - 130
			o-Xylene	2018/04/09		95	%	70 - 130
8953651	RSU	Method Blank	1,4-Difluorobenzene (sur.)	2018/04/09		100	%	70 - 130
			4-Bromofluorobenzene (sur.)	2018/04/09		97	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2018/04/09		101	%	70 - 130
			Benzene	2018/04/09	<0.00040		mg/L	
			Bromodichloromethane	2018/04/09	<0.00050		mg/L	
			Bromoform	2018/04/09	<0.00050		mg/L	
			Bromomethane	2018/04/09	<0.0020		mg/L	
			Carbon tetrachloride	2018/04/09	<0.00050		mg/L	
			Chlorobenzene	2018/04/09	<0.00050		mg/L	
			Chlorodibromomethane	2018/04/09	<0.0010		mg/L	
			Chloroethane	2018/04/09	<0.0010		mg/L	
			Chloroform	2018/04/09	<0.00050		mg/L	
			Chloromethane	2018/04/09	<0.0020		mg/L	
			1,2-dibromoethane	2018/04/09	<0.00020		mg/L	
			1,2-dichlorobenzene	2018/04/09	<0.00050		mg/L	
			1,3-dichlorobenzene	2018/04/09	<0.00050		mg/L	
			1,4-dichlorobenzene	2018/04/09	<0.00050		mg/L	
			1,1-dichloroethane	2018/04/09	<0.00050		mg/L	
			1,2-dichloroethane	2018/04/09	<0.00050		mg/L	
			1,1-dichloroethene	2018/04/09	<0.00050		mg/L	
			cis-1,2-dichloroethene	2018/04/09	<0.00050		mg/L	
			trans-1,2-dichloroethene	2018/04/09	<0.00050		mg/L	
			Dichloromethane	2018/04/09	<0.0020		mg/L	
			1,2-dichloropropane	2018/04/09	<0.00050		mg/L	
			cis-1,3-dichloropropene	2018/04/09	<0.00050		mg/L	
			trans-1,3-dichloropropene	2018/04/09	<0.00050		mg/L	
			Ethylbenzene	2018/04/09	<0.00040		mg/L	
			Methyl methacrylate	2018/04/09	<0.00050		mg/L	
			Methyl-tert-butylether (MTBE)	2018/04/09	<0.00050		mg/L	
			Styrene	2018/04/09	<0.00050		mg/L	
			1,1,1,2-tetrachloroethane	2018/04/09	<0.0010		mg/L	
			1,1,2,2-tetrachloroethane	2018/04/09	<0.0020		mg/L	
			Tetrachloroethene	2018/04/09	<0.00050		mg/L	
			Toluene	2018/04/09	<0.00040		mg/L	

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CLIFTON ASSOCIATES LTD.  
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**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,2,3-trichlorobenzene	2018/04/09	<0.0010		mg/L	
			1,2,4-trichlorobenzene	2018/04/09	<0.0010		mg/L	
			1,3,5-trichlorobenzene	2018/04/09	<0.00050		mg/L	
			1,1,1-trichloroethane	2018/04/09	<0.00050		mg/L	
			1,1,2-trichloroethane	2018/04/09	<0.00050		mg/L	
			Trichloroethene	2018/04/09	<0.00050		mg/L	
			Trichlorofluoromethane	2018/04/09	<0.00050		mg/L	
			1,2,4-trimethylbenzene	2018/04/09	<0.00050		mg/L	
			1,3,5-trimethylbenzene	2018/04/09	<0.00050		mg/L	
			Vinyl chloride	2018/04/09	<0.00050		mg/L	
			Xylenes (Total)	2018/04/09	<0.00080		mg/L	
			m & p-Xylene	2018/04/09	<0.00080		mg/L	
			o-Xylene	2018/04/09	<0.00040		mg/L	
8953651	RSU	RPD [TF7063-02]	Bromodichloromethane	2018/04/09	NC		%	30
			Bromoform	2018/04/09	NC		%	30
			Bromomethane	2018/04/09	NC		%	30
			Carbon tetrachloride	2018/04/09	NC		%	30
			Chlorobenzene	2018/04/09	NC		%	30
			Chlorodibromomethane	2018/04/09	NC		%	30
			Chloroethane	2018/04/09	NC		%	30
			Chloroform	2018/04/09	NC		%	30
			Chloromethane	2018/04/09	NC		%	30
			1,2-dibromoethane	2018/04/09	2.5		%	30
			1,2-dichlorobenzene	2018/04/09	NC		%	30
			1,3-dichlorobenzene	2018/04/09	NC		%	30
			1,4-dichlorobenzene	2018/04/09	NC		%	30
			1,1-dichloroethane	2018/04/09	NC		%	30
			1,2-dichloroethane	2018/04/09	5.6		%	30
			1,1-dichloroethene	2018/04/09	NC		%	30
			cis-1,2-dichloroethene	2018/04/09	NC		%	30
			trans-1,2-dichloroethene	2018/04/09	NC		%	30
			Dichloromethane	2018/04/09	NC		%	30
			1,2-dichloropropane	2018/04/09	NC		%	30
			cis-1,3-dichloropropene	2018/04/09	NC		%	30
			trans-1,3-dichloropropene	2018/04/09	NC		%	30
			Methyl methacrylate	2018/04/09	NC		%	30
			Methyl-tert-butylether (MTBE)	2018/04/09	NC		%	30
			Styrene	2018/04/09	NC		%	30
			1,1,1,2-tetrachloroethane	2018/04/09	NC		%	30
			1,1,2,2-tetrachloroethane	2018/04/09	NC		%	30
			Tetrachloroethene	2018/04/09	NC		%	30
			1,2,3-trichlorobenzene	2018/04/09	NC		%	30
			1,2,4-trichlorobenzene	2018/04/09	NC		%	30
			1,3,5-trichlorobenzene	2018/04/09	NC		%	30
			1,1,1-trichloroethane	2018/04/09	NC		%	30
			1,1,2-trichloroethane	2018/04/09	NC		%	30
			Trichloroethene	2018/04/09	NC		%	30
			Trichlorofluoromethane	2018/04/09	NC		%	30
			1,2,4-trimethylbenzene	2018/04/09	2.8		%	30
			1,3,5-trimethylbenzene	2018/04/09	0.40		%	30



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Client Project #: CG2430.E30  
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**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Vinyl chloride	2018/04/09	NC		%	30
<p>Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.</p> <p>Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.</p> <p>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.</p> <p>Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.</p> <p>Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.</p> <p>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)</p> <p>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 &lt;= 2x RDL).</p>									

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**NOTIFICATION LOG**

No Reportable Regulation Exceedences Noted.

Maxxam Job #: B825627  
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CLIFTON ASSOCIATES LTD.  
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Sampler Initials: AM

### VALIDATION SIGNATURE PAGE

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



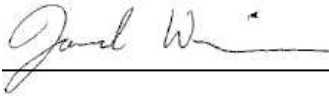
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Dennis Ngundu, B.Sc., P.Chem., QP, Supervisor, Organics



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Janet Gao, B.Sc., QP, Supervisor, Organics



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Jared Wiseman, B.Sc., P.Chem., QP, Senior Analyst, Organics



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Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

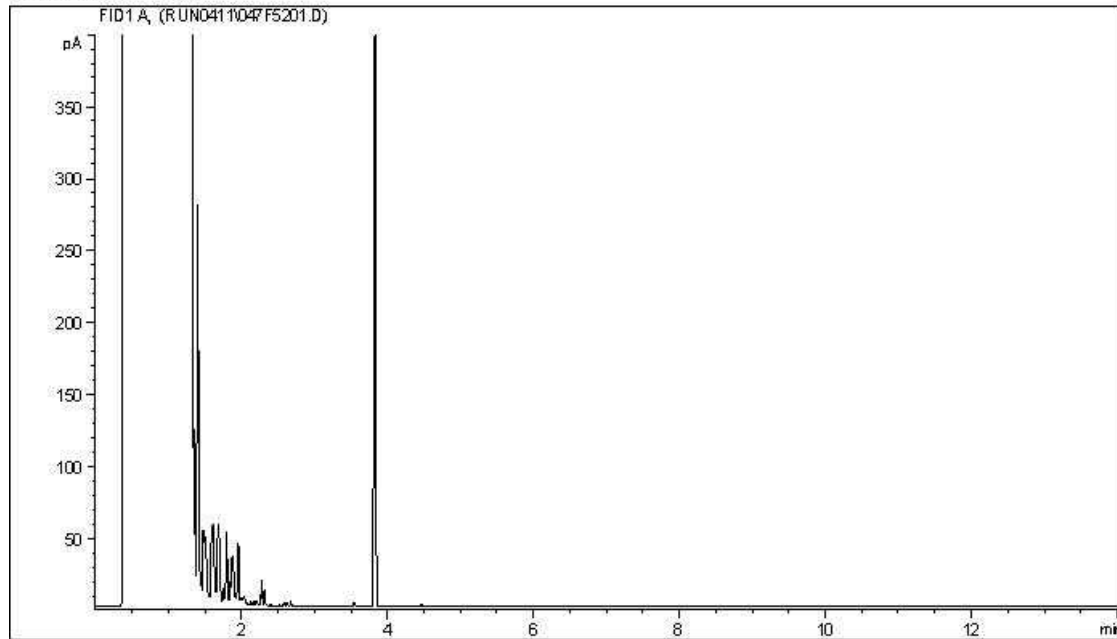




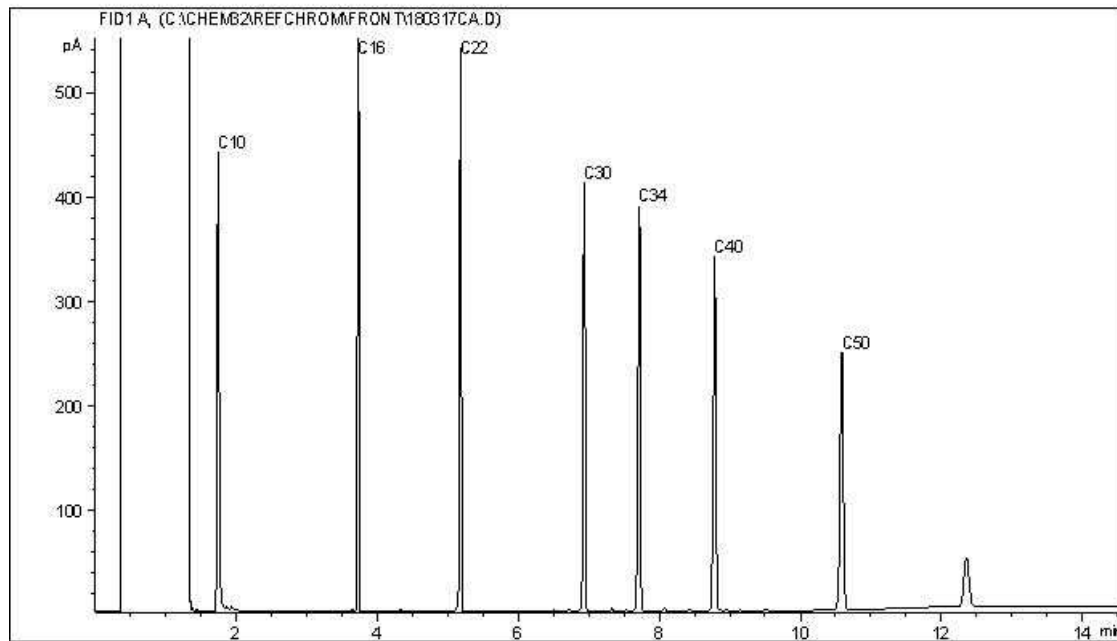


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



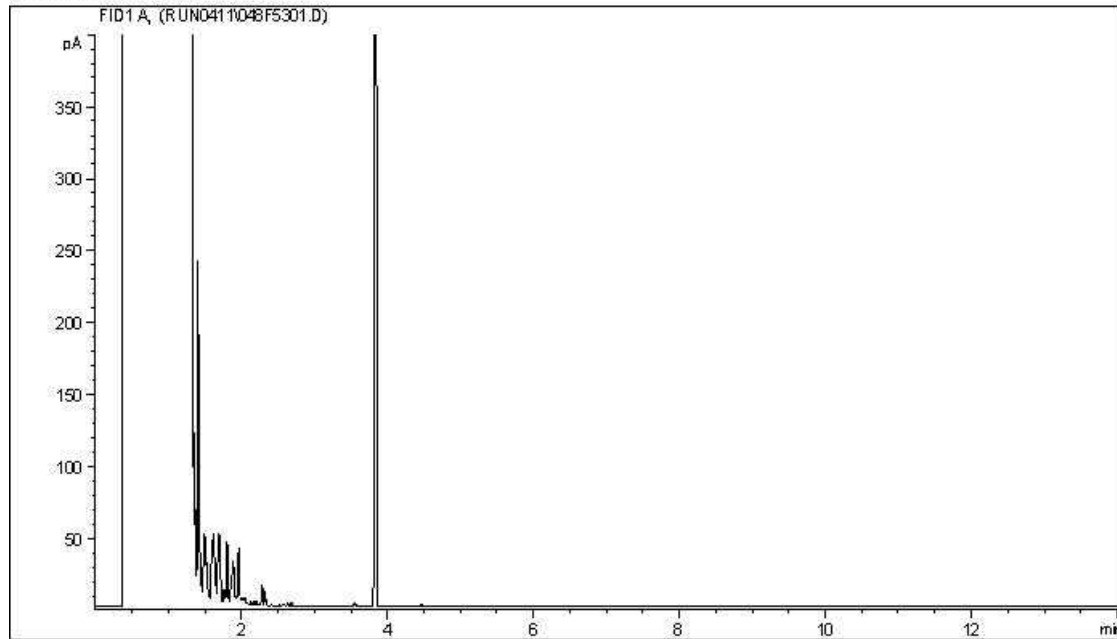
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

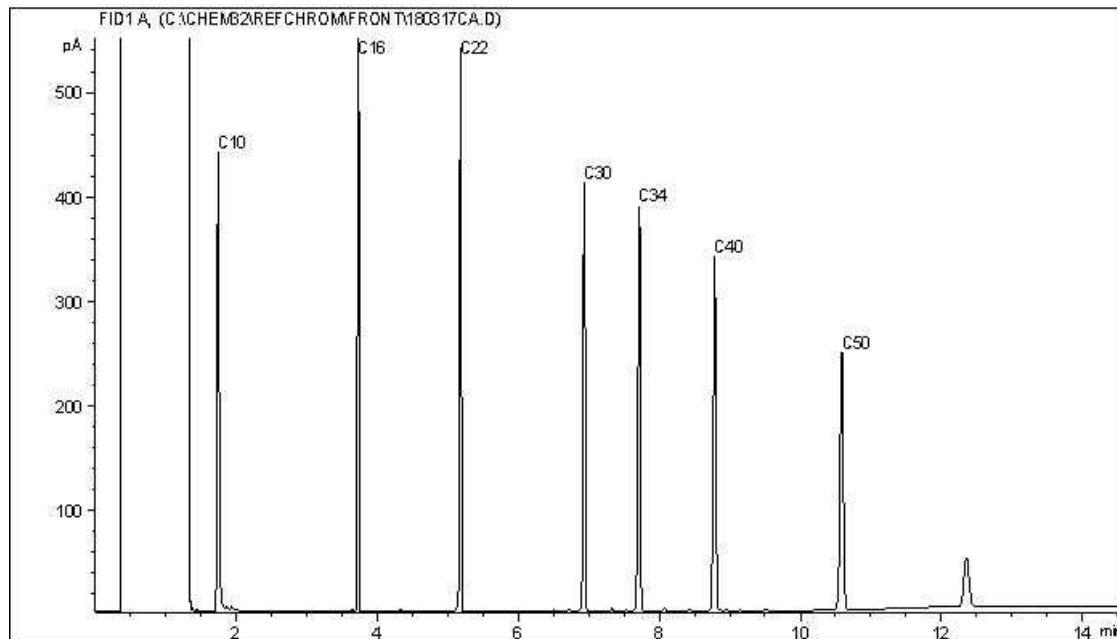
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



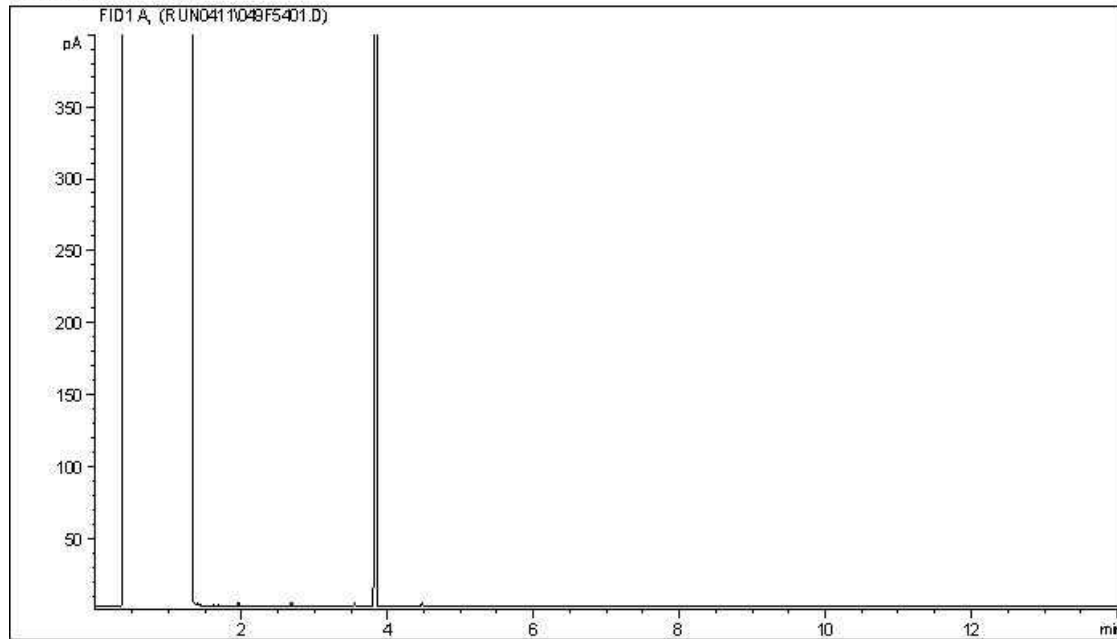
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

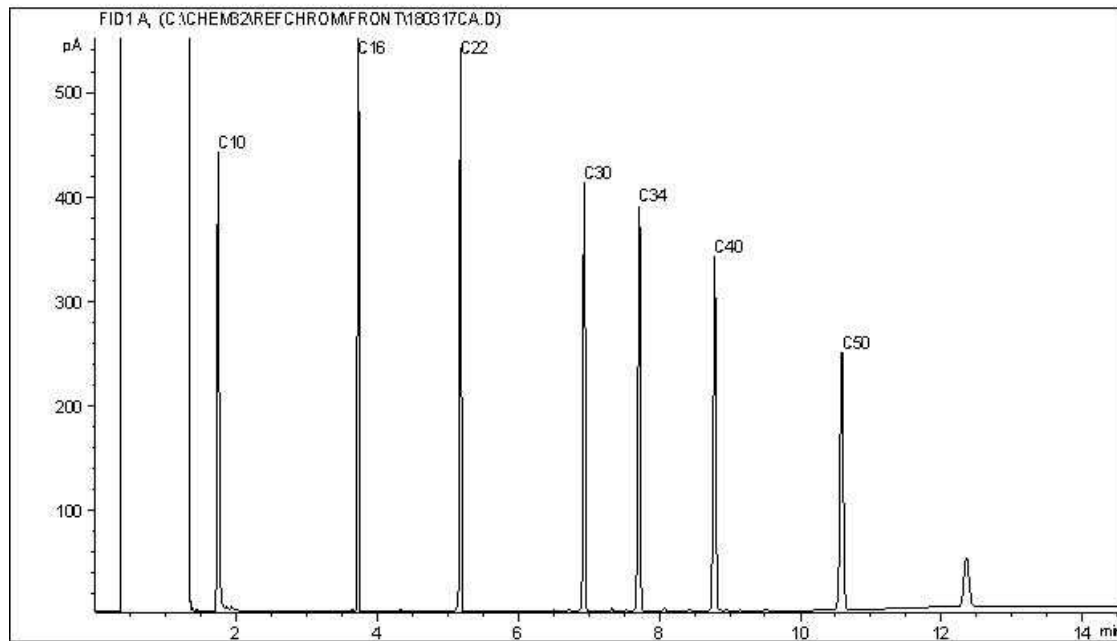
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

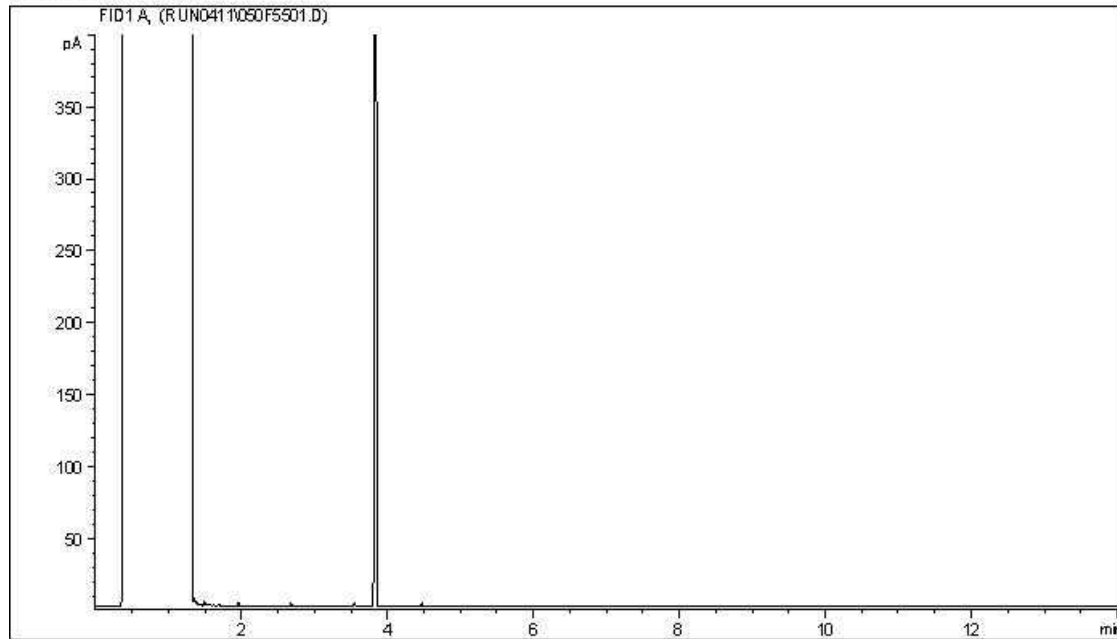
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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

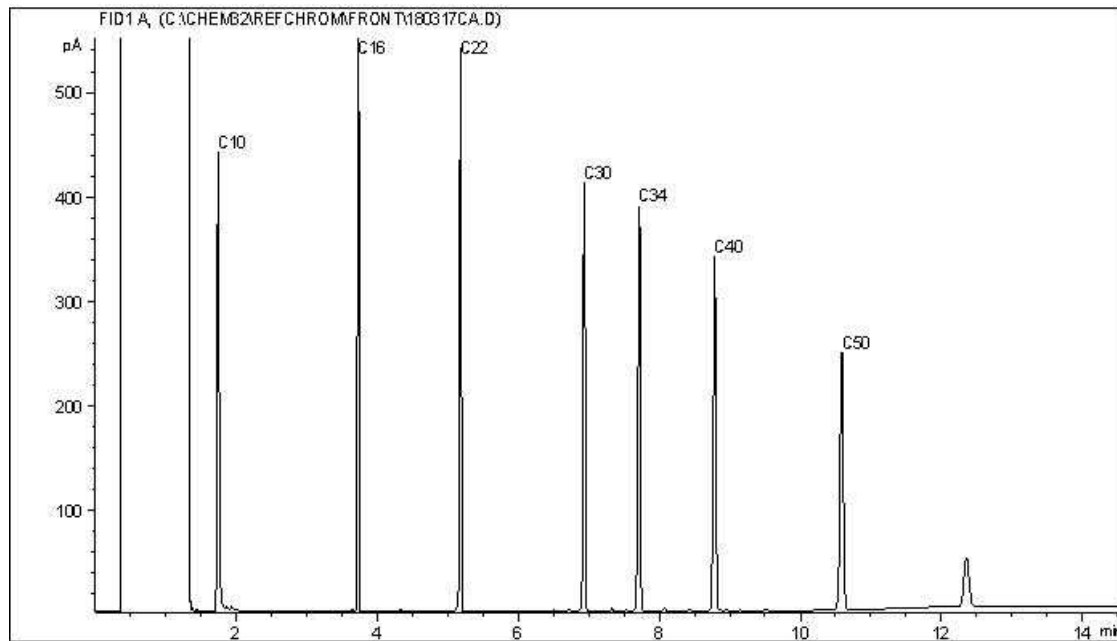


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



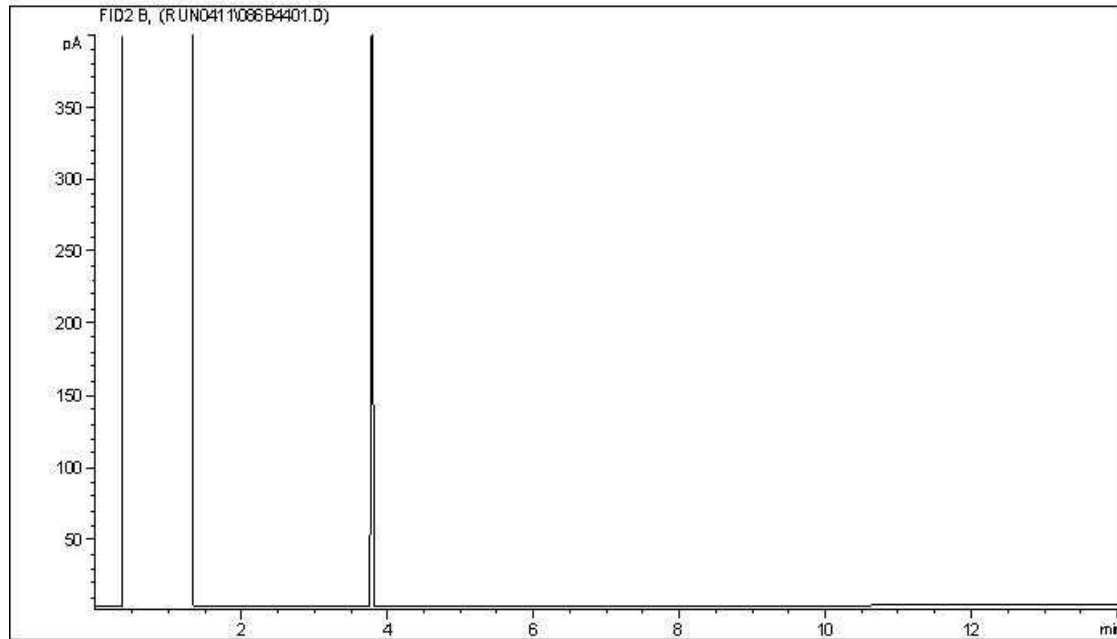
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

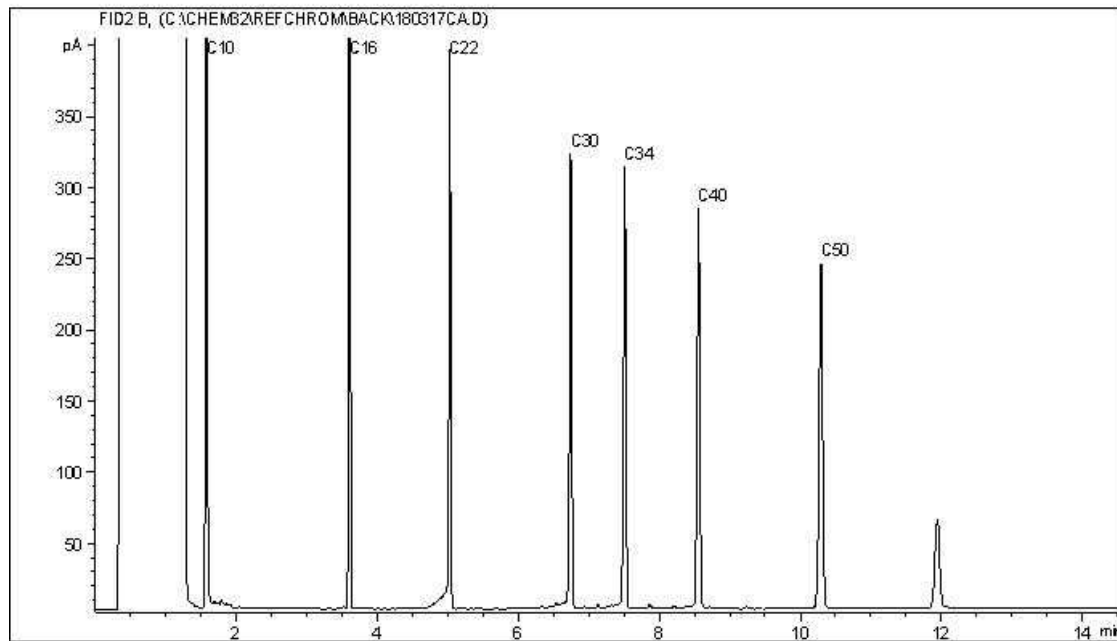
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



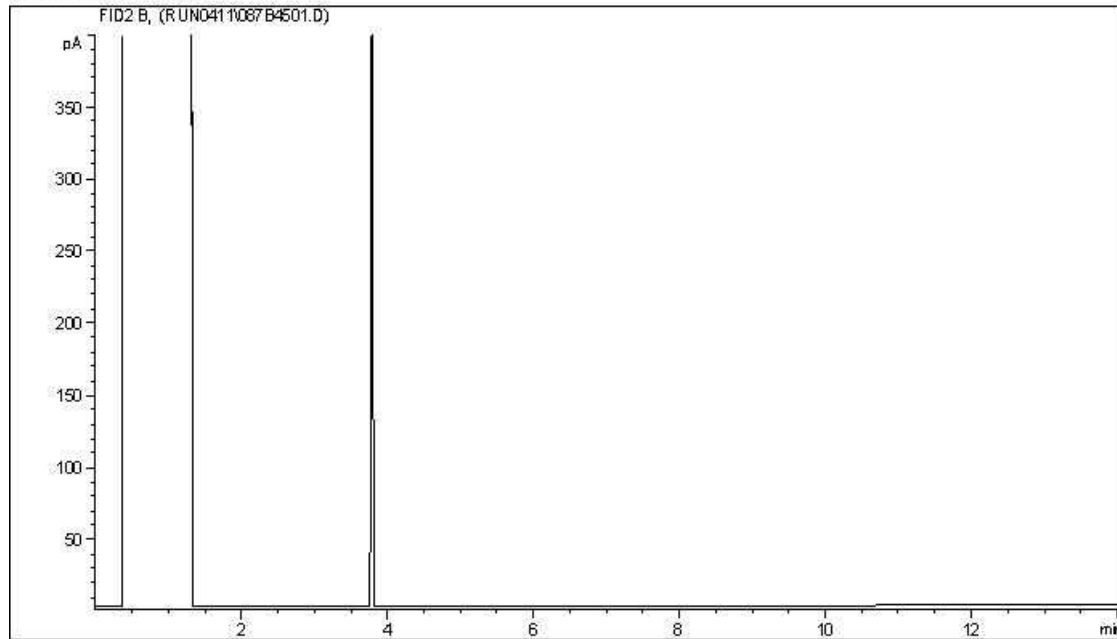
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

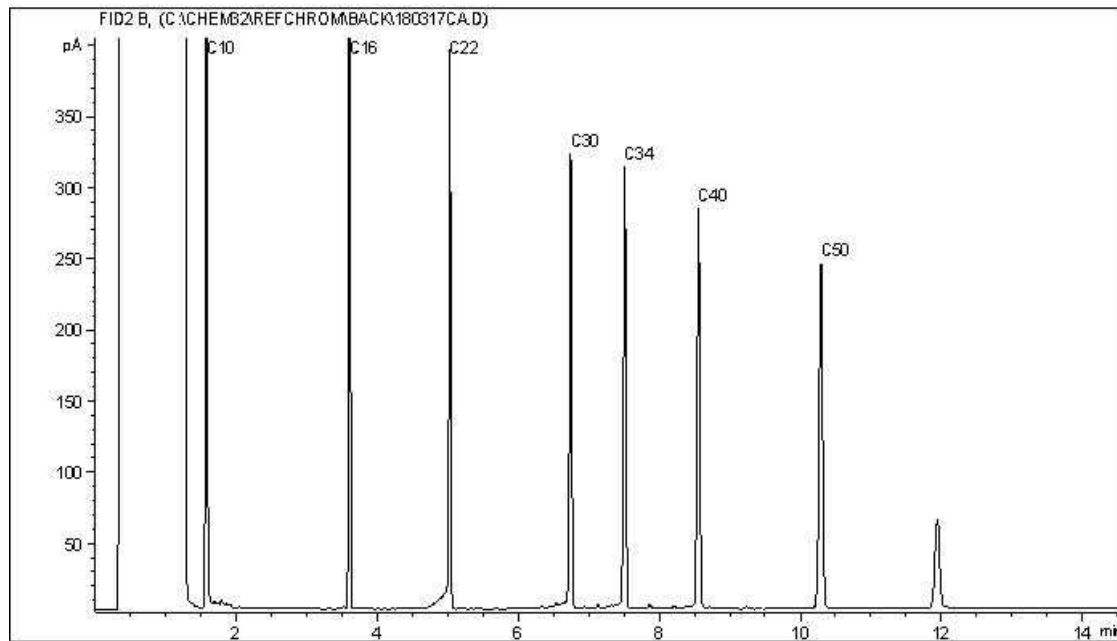
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



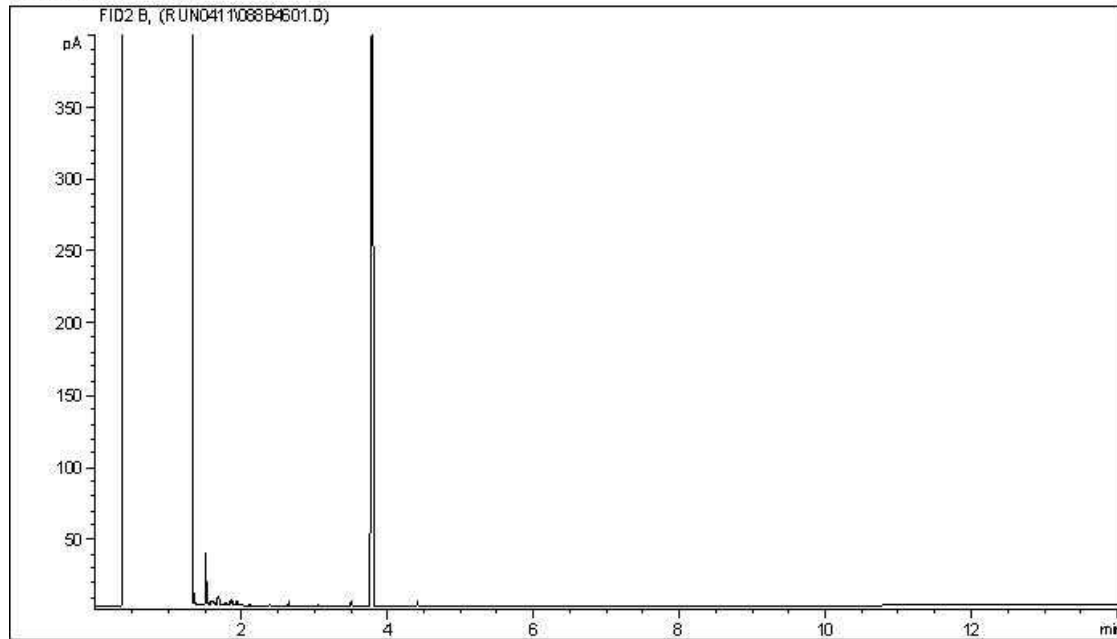
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

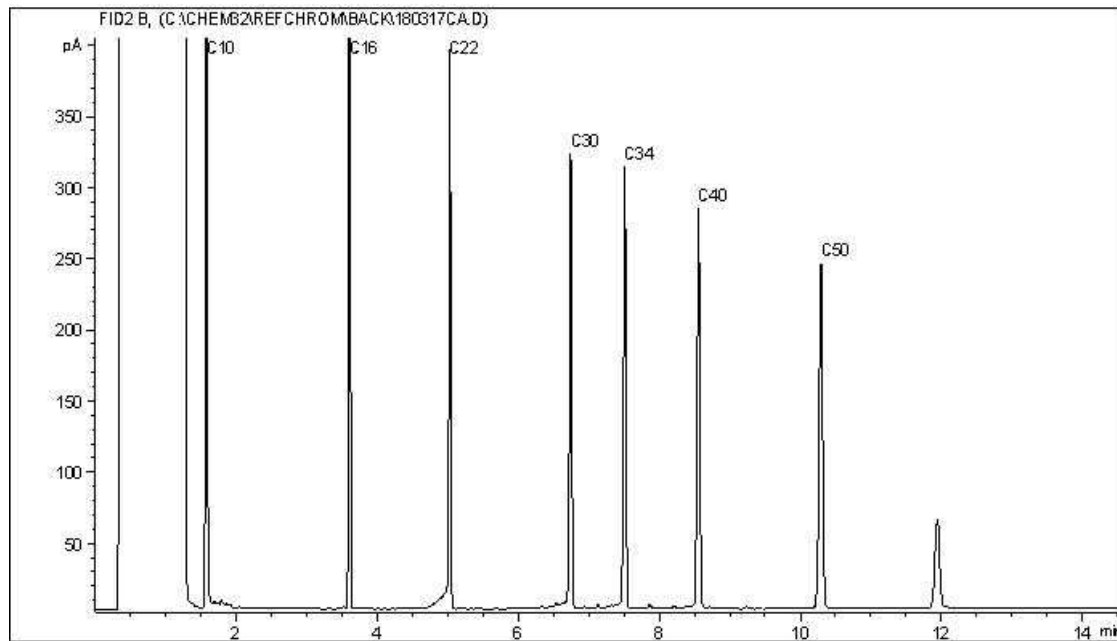
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



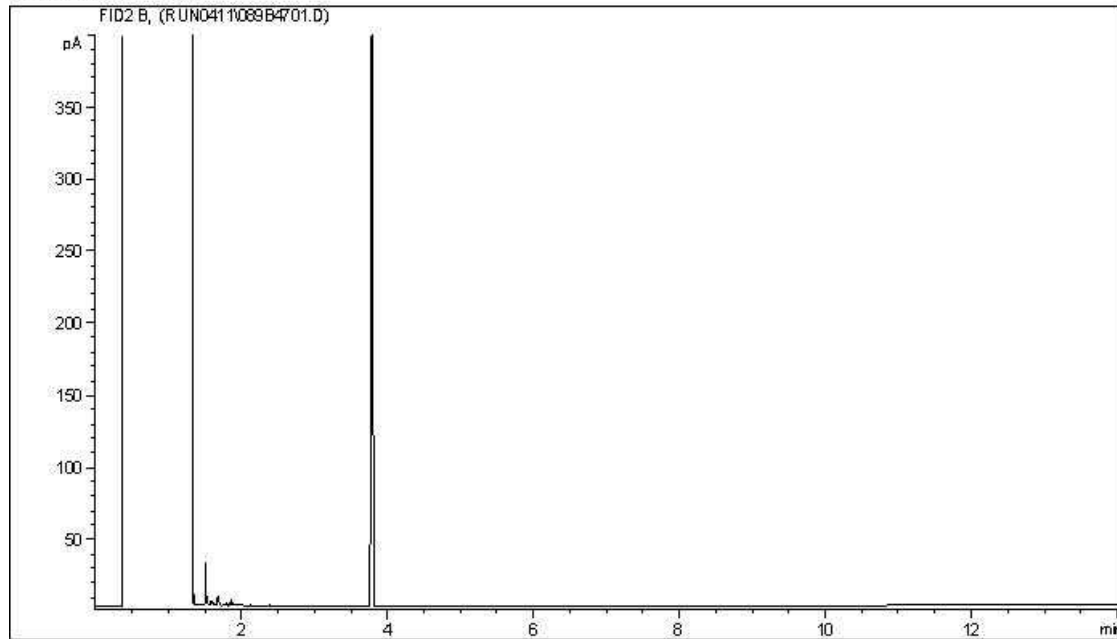
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

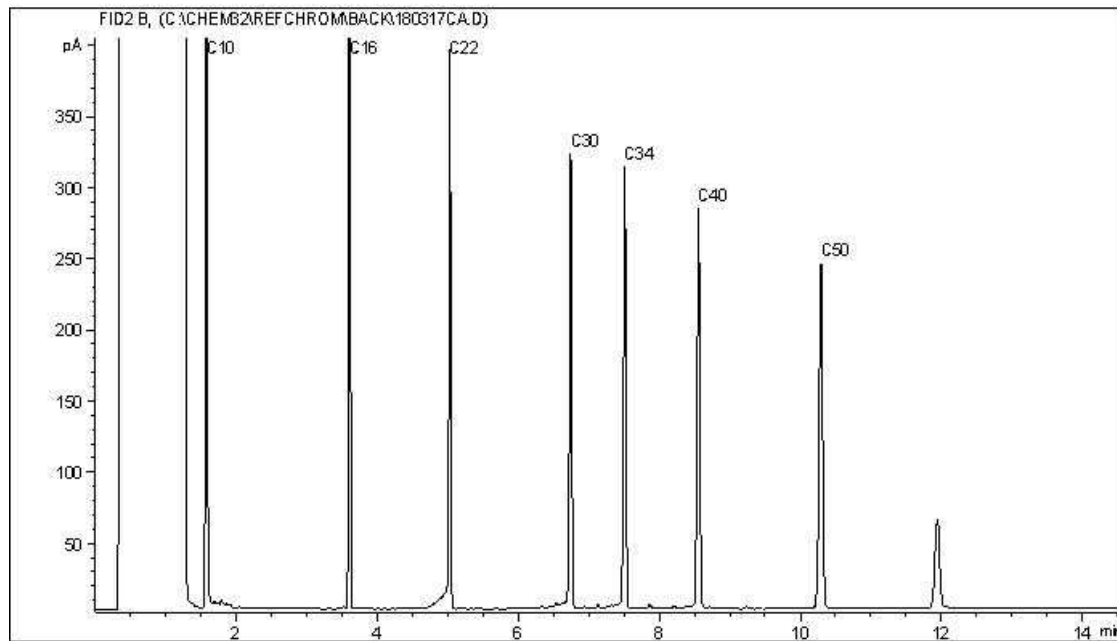
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



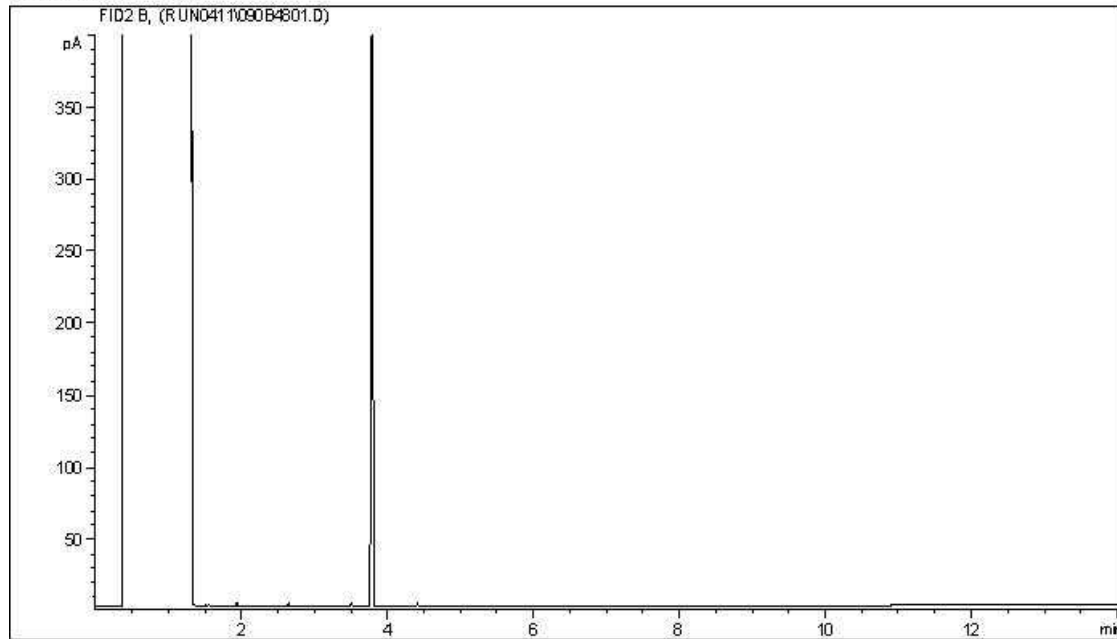
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

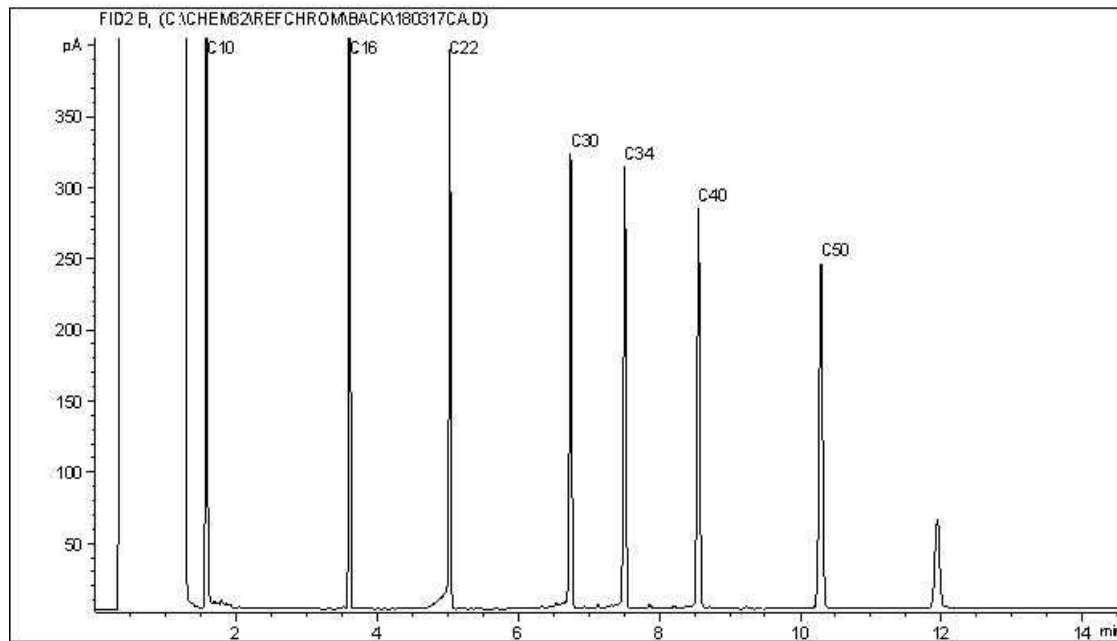
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



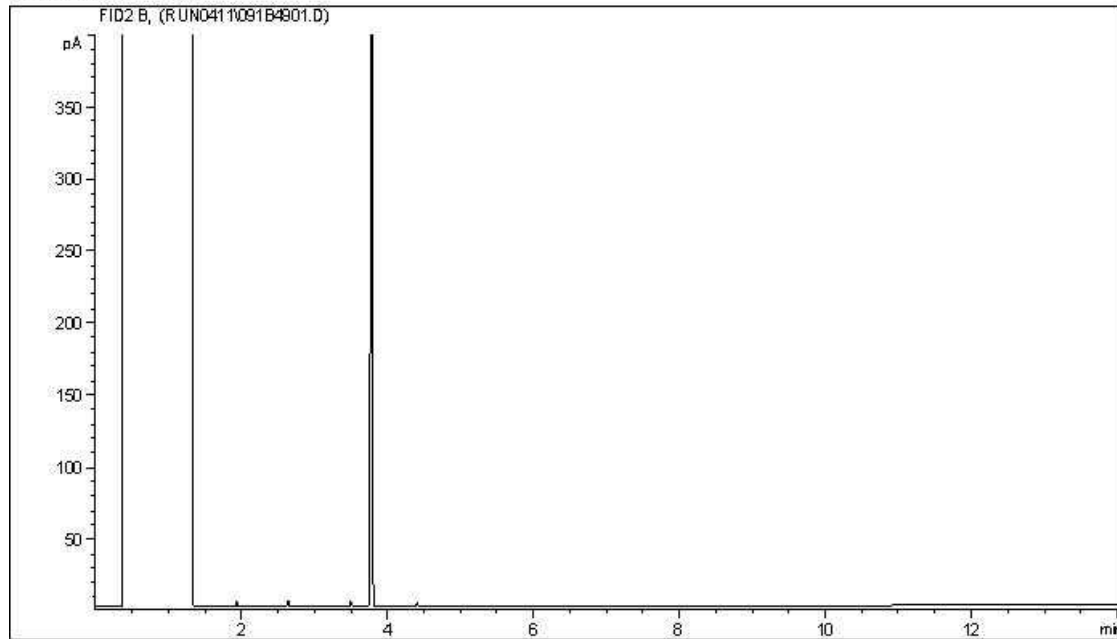
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

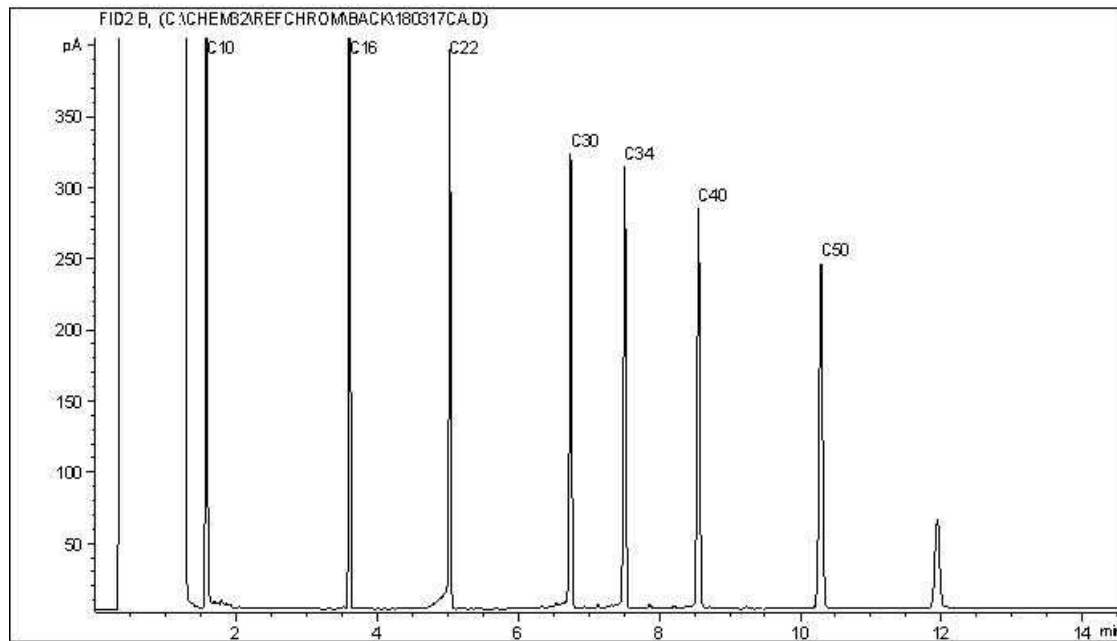
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



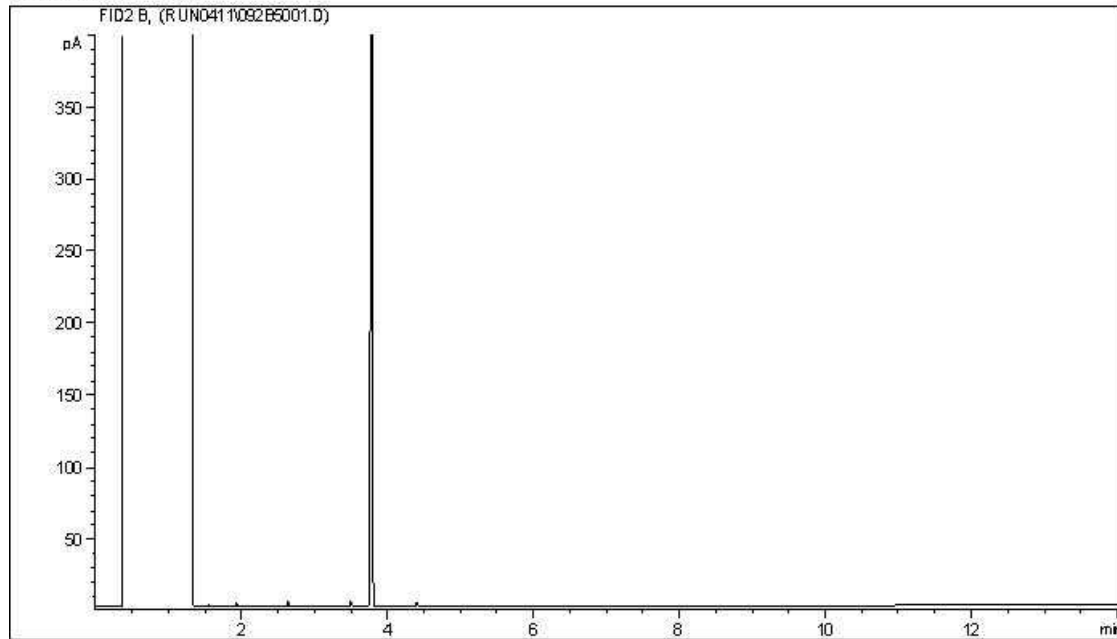
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

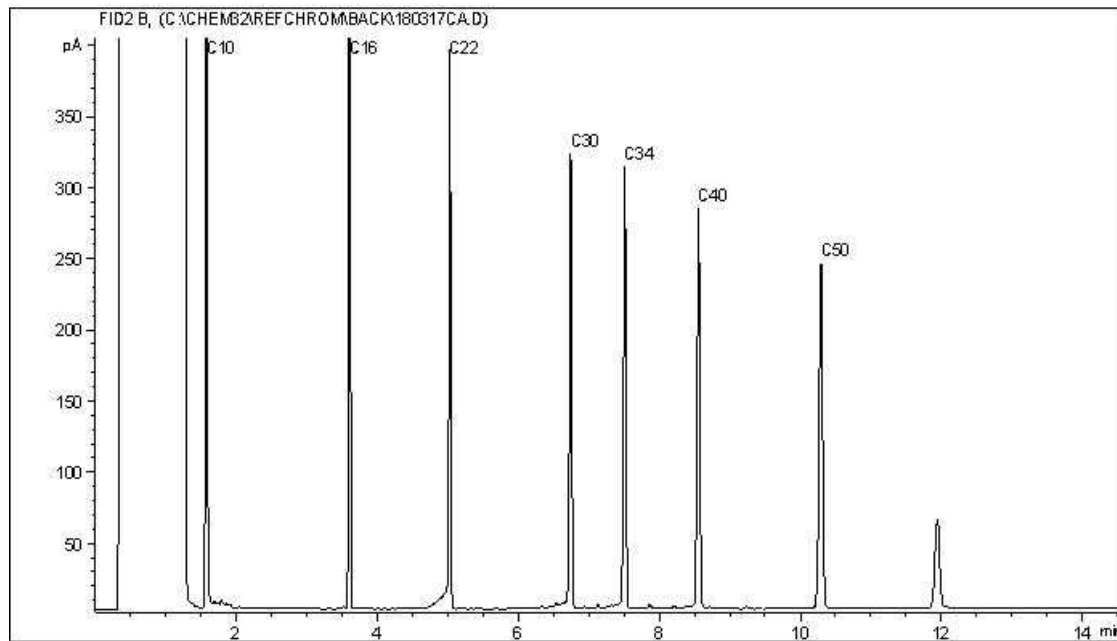
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

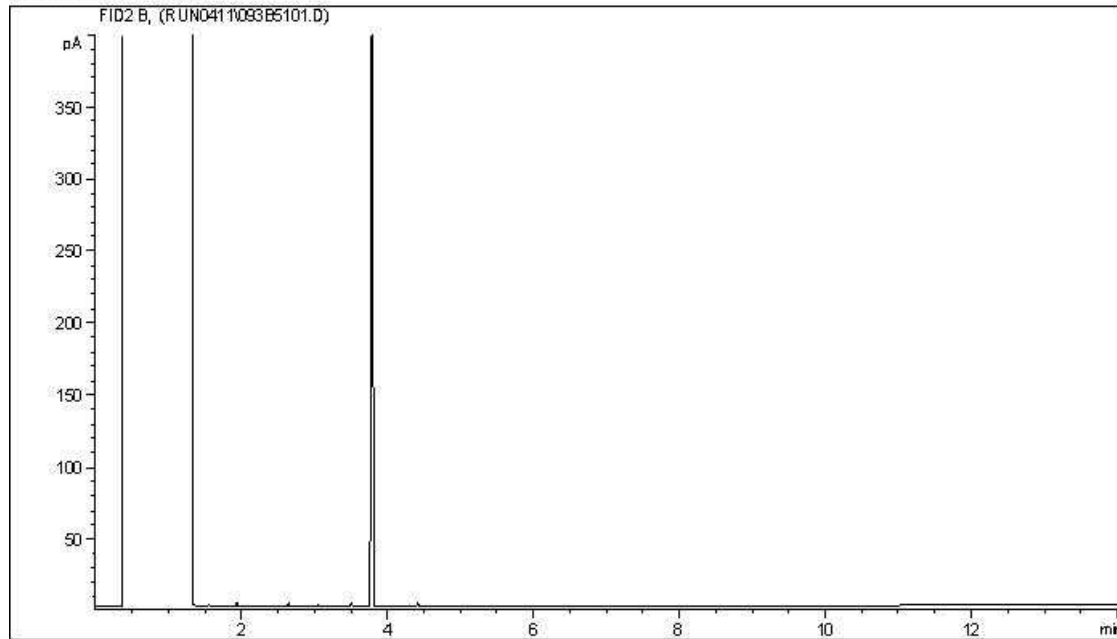
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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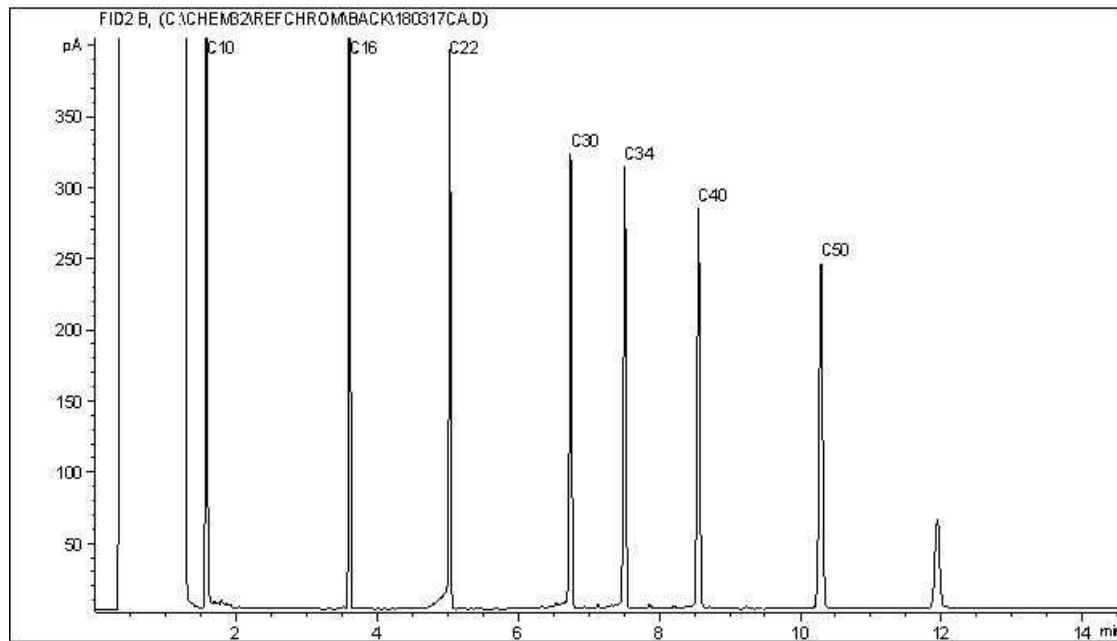


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



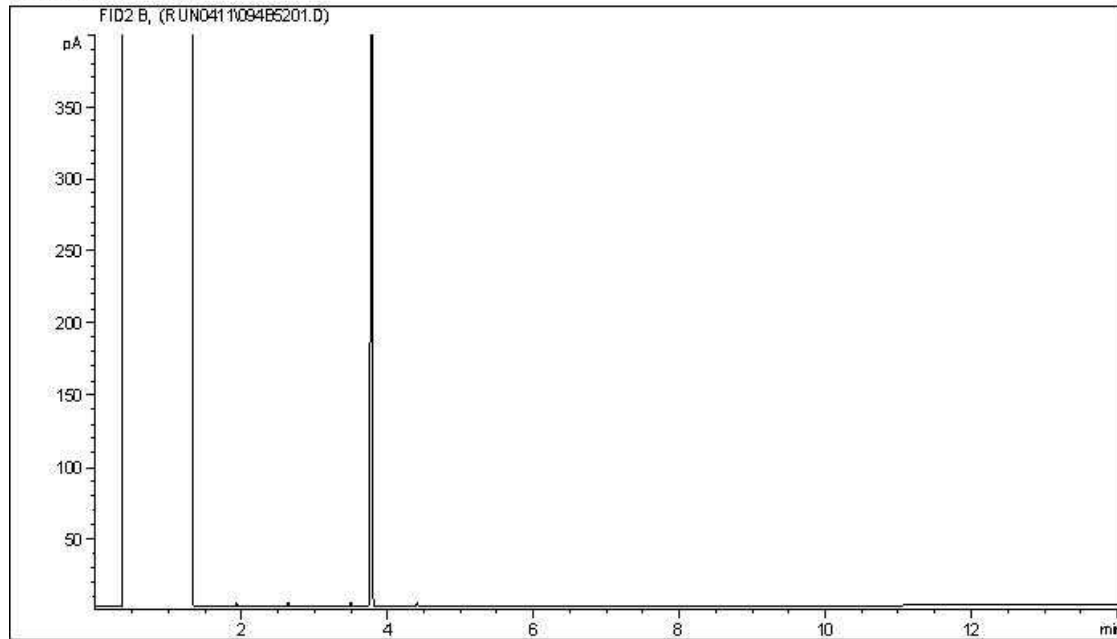
TYPICAL PRODUCT CARBON NUMBER RANGES

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Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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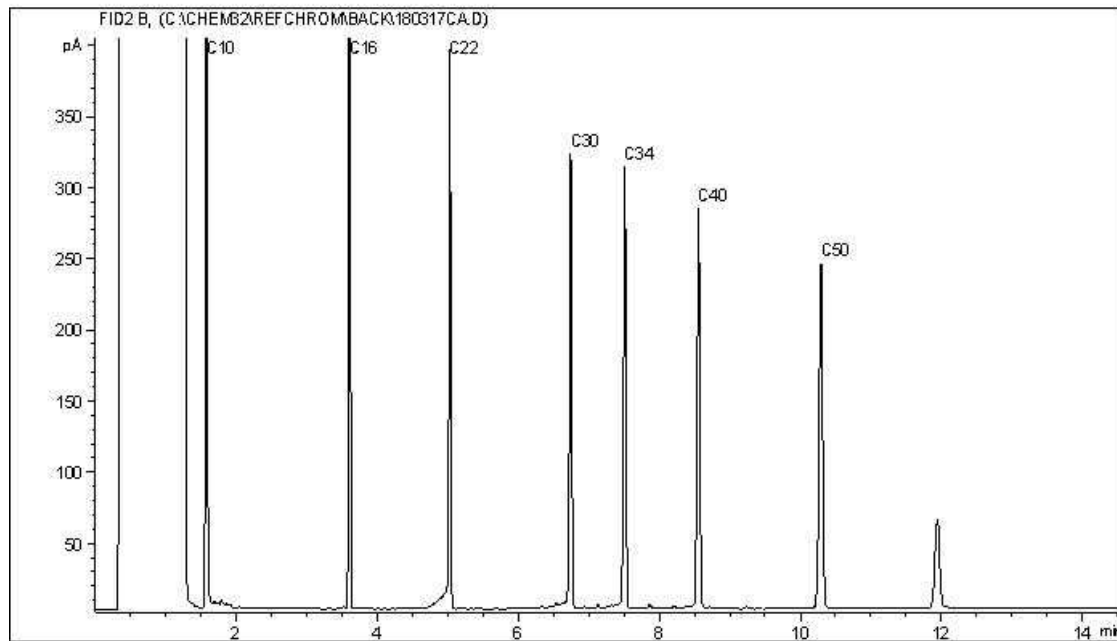
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



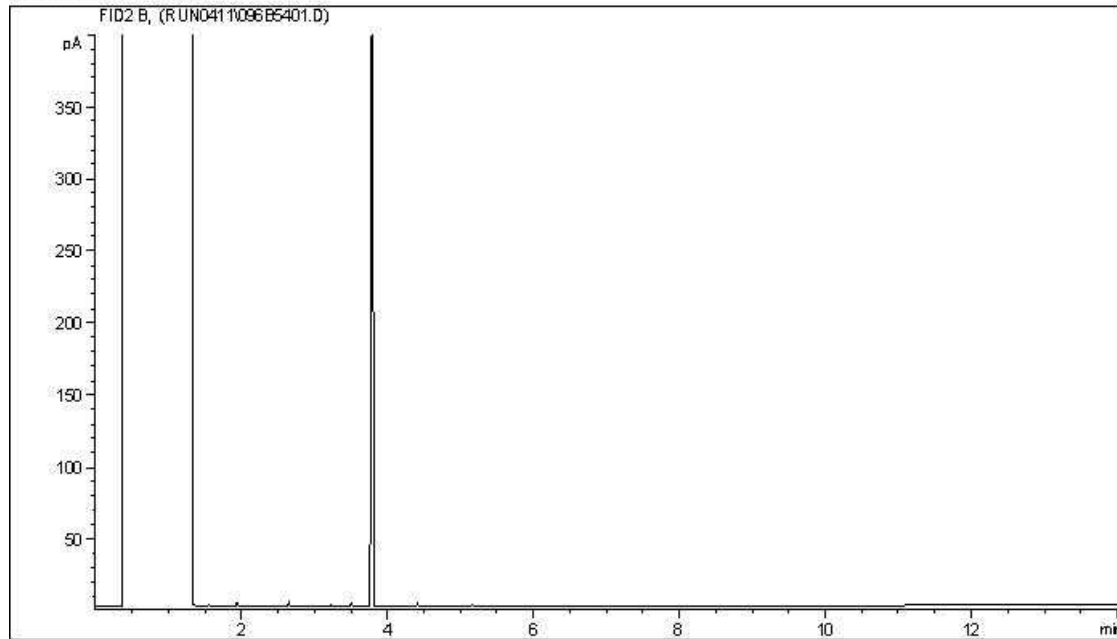
TYPICAL PRODUCT CARBON NUMBER RANGES

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Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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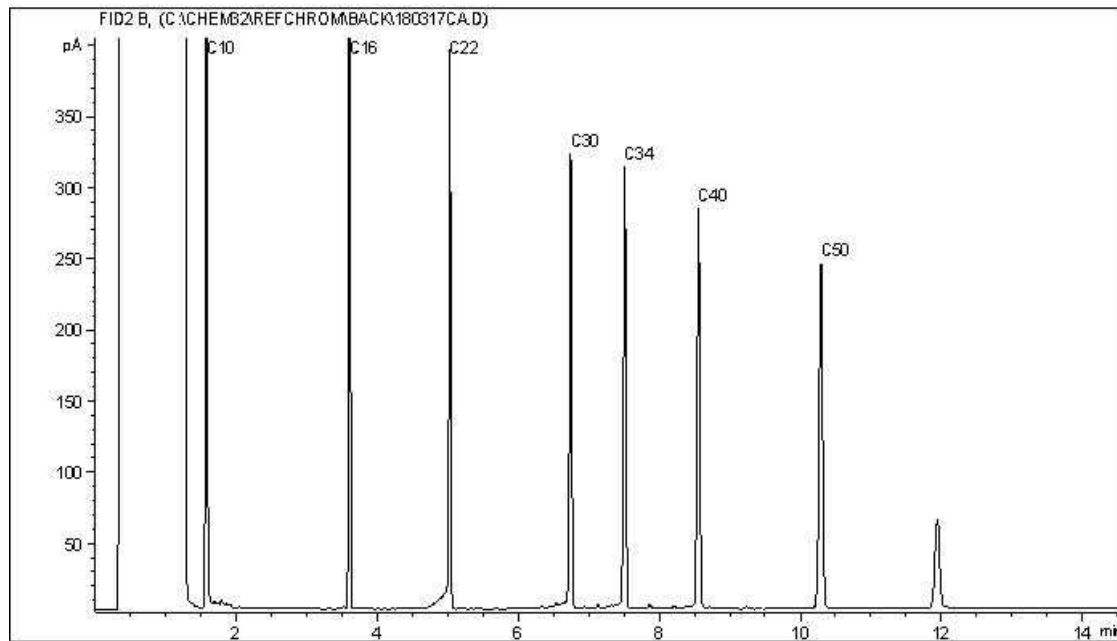
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



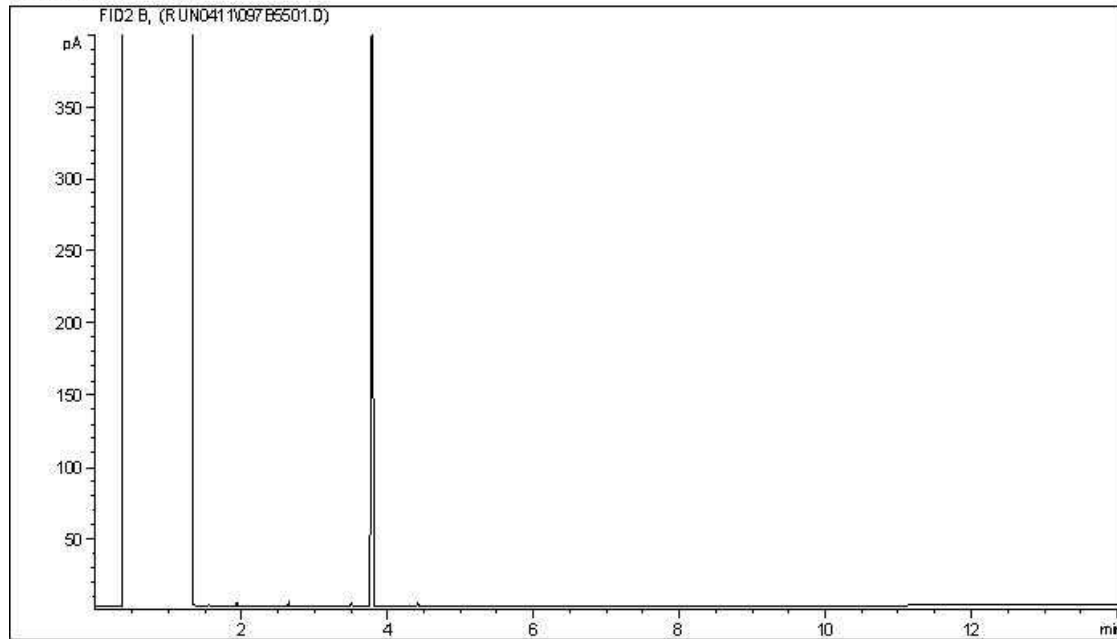
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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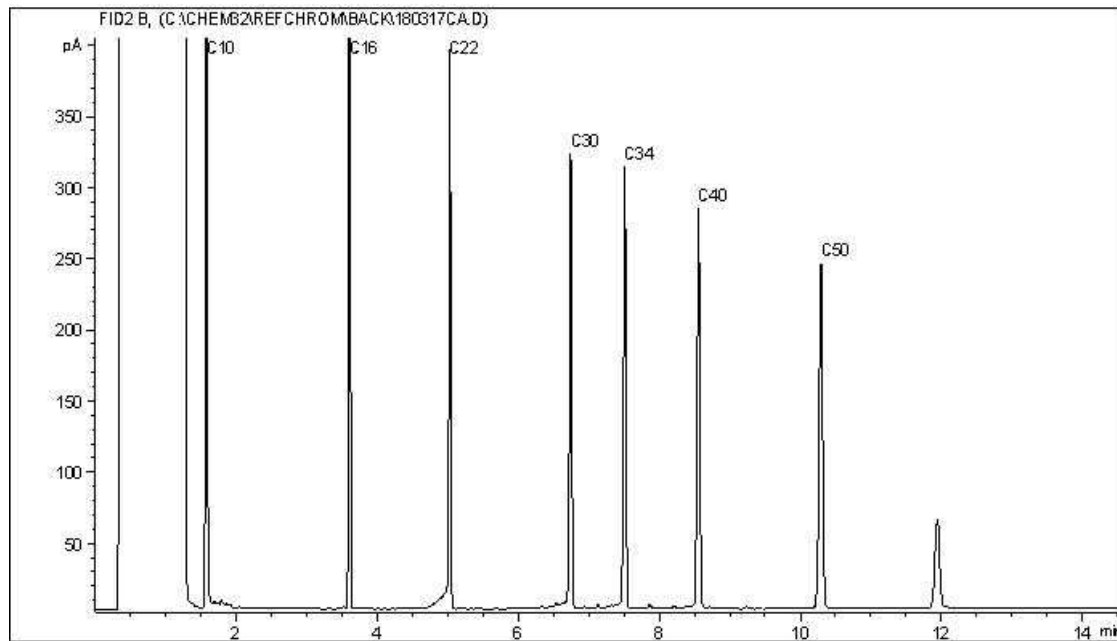
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



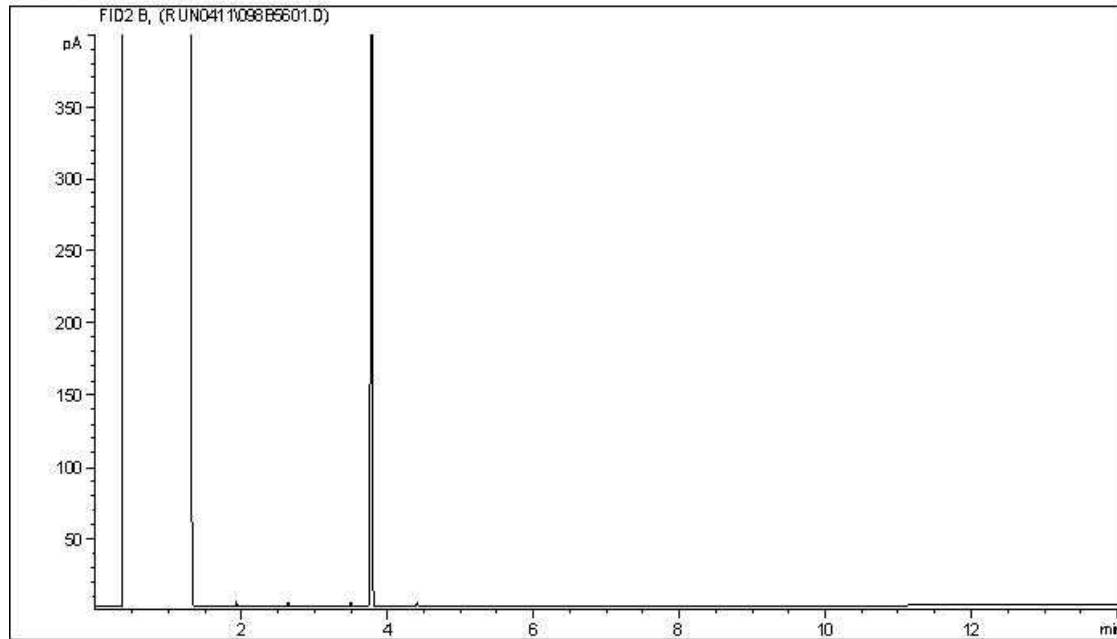
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Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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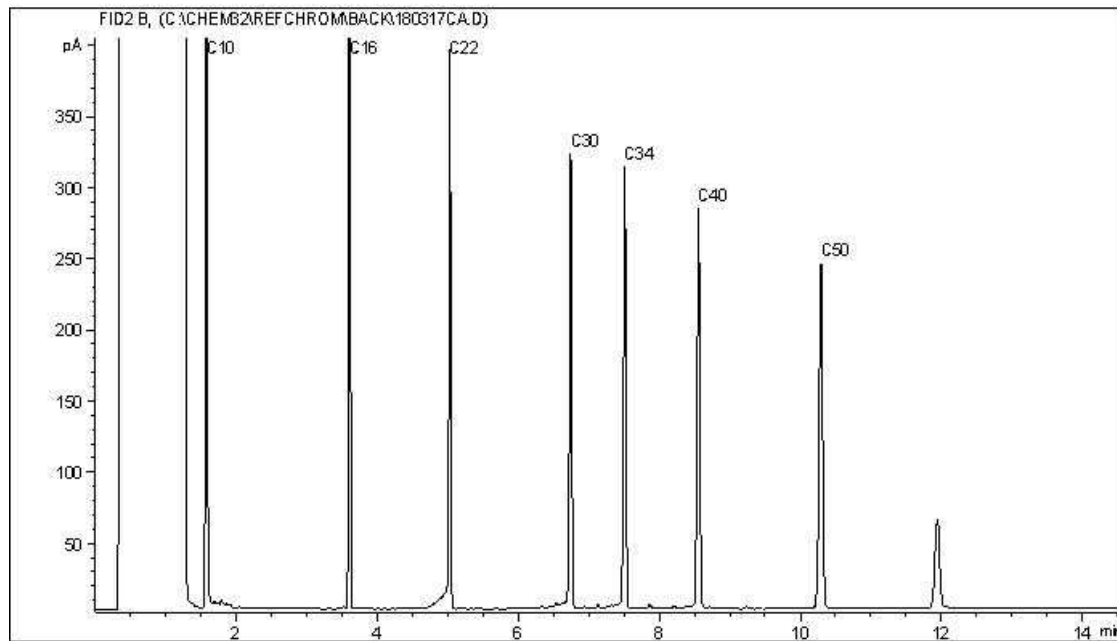
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
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Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: CG2430.1 E30  
Your C.O.C. #: 070645

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/17**  
Report #: R2542318  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B826352**

**Received: 2018/04/10, 11:21**

Sample Matrix: Water  
# Samples Received: 8

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
BTEX/F1 in Water by HS GC/MS/FID	4	N/A	2018/04/12	AB SOP-00039	CCME CWS/EPA 8260c m
BTEX/F1 in Water by HS GC/MS/FID	3	N/A	2018/04/13	AB SOP-00039	CCME CWS/EPA 8260c m
F1-BTEX	1	N/A	2018/04/12	AB SOP-00039	Auto Calc
F1-BTEX	6	N/A	2018/04/16	AB SOP-00039	Auto Calc
CCME Hydrocarbons in Water (F2; C10-C16) (1)	7	2018/04/12	2018/04/12	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Benzo[a]pyrene Equivalency (2)	6	N/A	2018/04/16	AB SOP-00003	Auto Calc
PAH in Water by GC/MS	5	2018/04/12	2018/04/15	AB SOP-00037 / AB SOP-00003	EPA 3510C/8270E m
PAH in Water by GC/MS	1	2018/04/12	2018/04/16	AB SOP-00037 / AB SOP-00003	EPA 3510C/8270E m
Total Trihalomethanes Calculation	2	N/A	2018/04/12	AB SOP-00056	Auto Calc
Total Trihalomethanes Calculation	6	N/A	2018/04/13	AB SOP-00056	Auto Calc
VOCs in Water by HS GC/MS (Std List)	7	N/A	2018/04/12	AB SOP-00056	EPA 5021a/8260c m
VOCs in Water by HS GC/MS (Std List)	1	N/A	2018/04/13	AB SOP-00056	EPA 5021a/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.

Your Project #: CG2430.1 E30  
Your C.O.C. #: 070645

**Attention: STEPHEN DABADIE**

CLIFTON ASSOCIATES LTD.  
2222 30TH AVENUE NE  
CALGARY, AB  
CANADA T2E 7K9

**Report Date: 2018/04/17**  
Report #: R2542318  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B826352**

**Received: 2018/04/10, 11:21**

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) Silica gel clean up employed.

(2) B[a]P TPE is calculated using 1/2 of the RDL for non detect results as per Alberta Environment instructions. This protocol may not apply in other jurisdictions.

**Encryption Key**

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Jennifer Stephenson, B.Sc, Technical Specialist

Email: jstephenson@maxxam.ca

Phone# (403) 291-3077

=====  
This report has been generated and distributed using a secure automated process.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

<b>Maxxam ID</b>		TG0903	TG0904		TG0905		TG0906	TG0907		
<b>Sampling Date</b>		2018/04/10 09:40	2018/04/10 10:00		2018/04/10 10:00		2018/04/10 10:15	2018/04/10 10:15		
<b>COC Number</b>		070645	070645		070645		070645	070645		
	<b>UNITS</b>	<b>1972</b>	<b>1939</b>	<b>QC Batch</b>	<b>9939</b>	<b>RDL</b>	<b>1982</b>	<b>9982</b>	<b>RDL</b>	<b>QC Batch</b>

**Ext. Pet. Hydrocarbon**

F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	8956964	<0.10	0.10	<0.10	<0.10	0.10	8956964
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**Volatiles**

Benzene	mg/L	<0.00040	0.52	8956788	0.50	0.00040	5.9 (1)	5.8 (1)	0.0040	8956788
Toluene	mg/L	<0.00040	0.0020	8956788	0.0020	0.00040	0.015	0.015	0.00040	8956788
Ethylbenzene	mg/L	<0.00040	0.057	8956788	0.046	0.00040	0.092	0.086	0.00040	8956788
m & p-Xylene	mg/L	<0.00080	0.0049	8956788	0.0051	0.00080	0.0077	0.0071	0.00080	8956788
o-Xylene	mg/L	<0.00040	0.00093	8956788	0.0010	0.00040	0.0027	0.0027	0.00040	8956788
Xylenes (Total)	mg/L	<0.00089	0.0058	8955539	0.0060	0.00089	0.010	0.0098	0.00089	8956288
F1 (C6-C10) - BTEX	mg/L	<0.10	0.40	8955539	0.57	0.10	<1.0	<1.0	1.0	8956288
F1 (C6-C10)	mg/L	<0.10	0.98	8956788	1.1	0.10	4.9 (1)	6.5 (1)	1.0	8956788

**Surrogate Recovery (%)**

1,4-Difluorobenzene (sur.)	%	91	90	8956788	88	N/A	104	99	N/A	8956788
4-Bromofluorobenzene (sur.)	%	99	101	8956788	102	N/A	100	101	N/A	8956788
D4-1,2-Dichloroethane (sur.)	%	94	100	8956788	108	N/A	115	98	N/A	8956788
O-TERPHENYL (sur.)	%	82	92	8956964	84	N/A	79	82	N/A	8956964

RDL = Reportable Detection Limit  
N/A = Not Applicable  
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.



Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**AT1 BTEX AND F1-F2 IN WATER (WATER)**

Maxxam ID		TG0908		TG0909	TG0909		
Sampling Date		2018/04/10 10:30		2018/04/10 10:50	2018/04/10 10:50		
COC Number		070645		070645	070645		
	UNITS	1956B	RDL	1704	1704 Lab-Dup	RDL	QC Batch
<b>Ext. Pet. Hydrocarbon</b>							
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	0.10	3.0	3.0	0.10	8956964
<b>Volatiles</b>							
Benzene	mg/L	0.040	0.00040	0.52	N/A	0.00040	8956788
Toluene	mg/L	<0.00040	0.00040	1.3 (1)	N/A	0.0040	8956788
Ethylbenzene	mg/L	<0.00040	0.00040	0.23	N/A	0.00040	8956788
m & p-Xylene	mg/L	<0.00080	0.00080	8.7 (1)	N/A	0.0080	8956788
o-Xylene	mg/L	<0.00040	0.00040	3.6 (1)	N/A	0.0040	8956788
Xylenes (Total)	mg/L	<0.00089	0.00089	12	N/A	0.0089	8956288
F1 (C6-C10) - BTEX	mg/L	<0.10	0.10	22	N/A	1.0	8956288
F1 (C6-C10)	mg/L	<0.10	0.10	36 (1)	N/A	1.0	8956788
<b>Surrogate Recovery (%)</b>							
1,4-Difluorobenzene (sur.)	%	91	N/A	91	N/A	N/A	8956788
4-Bromofluorobenzene (sur.)	%	99	N/A	103	N/A	N/A	8956788
D4-1,2-Dichloroethane (sur.)	%	95	N/A	55	N/A	N/A	8956788
O-TERPHENYL (sur.)	%	87	N/A	90	88	N/A	8956964
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable (1) Detection limits raised due to dilution to bring analyte within the calibrated range.							

Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TG0903	TG0904	TG0906	TG0907	TG0908		
Sampling Date		2018/04/10 09:40	2018/04/10 10:00	2018/04/10 10:15	2018/04/10 10:15	2018/04/10 10:30		
COC Number		070645	070645	070645	070645	070645		
	<b>UNITS</b>	<b>1972</b>	<b>1939</b>	<b>1982</b>	<b>9982</b>	<b>1956B</b>	<b>RDL</b>	<b>QC Batch</b>

Polycyclic Aromatics								
Benzo[a]pyrene equivalency	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8955680
Acenaphthene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8957061
Acenaphthylene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8957061
Acridine	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8957061
Anthracene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8957061
Benzo(a)anthracene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8957061
Benzo(b&j)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8957061
Benzo(k)fluoranthene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8957061
Benzo(g,h,i)perylene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8957061
Benzo(c)phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8957061
Benzo(a)pyrene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8957061
Benzo[e]pyrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8957061
Chrysene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8957061
Dibenz(a,h)anthracene	mg/L	<0.0000075	<0.0000075	<0.0000075	<0.0000075	<0.0000075	0.0000075	8957061
Fluoranthene	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8957061
Fluorene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8957061
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	<0.0000085	<0.0000085	<0.0000085	<0.0000085	0.0000085	8957061
1-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8957061
2-Methylnaphthalene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8957061
Naphthalene	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8957061
Phenanthrene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8957061
Perylene	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8957061
Pyrene	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8957061
Quinoline	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8957061

Surrogate Recovery (%)								
D10-ANTHRACENE (sur.)	%	102	98	101	99	104	N/A	8957061
D8-ACENAPHTHYLENE (sur.)	%	94	87	93	90	89	N/A	8957061
D8-NAPHTHALENE (sur.)	%	81	66	82	77	81	N/A	8957061
TERPHENYL-D14 (sur.)	%	102	99	103	98	105	N/A	8957061

RDL = Reportable Detection Limit  
N/A = Not Applicable

Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TG0909		TG0909		
Sampling Date		2018/04/10 10:50		2018/04/10 10:50		
COC Number		070645		070645		
	UNITS	1704	RDL	1704 Lab-Dup	RDL	QC Batch
<b>Polycyclic Aromatics</b>						
Benzo[a]pyrene equivalency	mg/L	0.000019	0.000010	N/A	0.000010	8955680
Acenaphthene	mg/L	0.00099 (1)	0.00010	0.00044 (2)	0.00010	8957061
Acenaphthylene	mg/L	0.00023	0.00010	<0.00010	0.00010	8957061
Acridine	mg/L	0.00088 (1)	0.000050	0.00025 (2)	0.000050	8957061
Anthracene	mg/L	0.00015 (1)	0.000010	0.000051 (2)	0.000010	8957061
Benzo(a)anthracene	mg/L	0.000030 (1)	0.0000085	<0.00000 (2)	0.0000085	8957061
Benzo(b&j)fluoranthene	mg/L	0.000023	0.0000085	<0.0000085	0.0000085	8957061
Benzo(k)fluoranthene	mg/L	<0.0000085	0.0000085	<0.0000085	0.0000085	8957061
Benzo(g,h,i)perylene	mg/L	0.000025	0.0000085	<0.0000085	0.0000085	8957061
Benzo(c)phenanthrene	mg/L	<0.000050	0.000050	<0.000050	0.000050	8957061
Benzo(a)pyrene	mg/L	0.0000088	0.0000075	<0.0000075	0.0000075	8957061
Benzo[e]pyrene	mg/L	<0.000050	0.000050	<0.000050	0.000050	8957061
Chrysene	mg/L	<0.000028 (3)	0.000028	<0.0000085	0.0000085	8957061
Dibenz(a,h)anthracene	mg/L	<0.0000075	0.0000075	<0.0000075	0.0000075	8957061
Fluoranthene	mg/L	0.00017 (1)	0.000010	0.000054 (2)	0.000010	8957061
Fluorene	mg/L	0.0012 (1)	0.000050	0.00049 (2)	0.000050	8957061
Indeno(1,2,3-cd)pyrene	mg/L	<0.0000085	0.0000085	<0.0000085	0.0000085	8957061
1-Methylnaphthalene	mg/L	0.083 (4)	0.0010	0.041 (2)	0.00010	8957061
2-Methylnaphthalene	mg/L	0.17 (4)	0.0010	0.093 (2)	0.0010	8957061
Naphthalene	mg/L	0.27 (5)	0.0010	0.22	0.0010	8957061
Phenanthrene	mg/L	0.0013 (1)	0.000050	0.00047 (2)	0.000050	8957061
Perylene	mg/L	<0.000050	0.000050	<0.000050	0.000050	8957061
Pyrene	mg/L	0.00040 (1)	0.000020	0.00013 (2)	0.000020	8957061
Quinoline	mg/L	0.014 (1)	0.00020	0.0042 (2)	0.00020	8957061
<p>RDL = Reportable Detection Limit            Lab-Dup = Laboratory Initiated Duplicate            N/A = Not Applicable            (1) Duplicate exceeds acceptance criteria due to sample matrix. Reanalysis yields similar results.            (2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.            (3) Detection limits raised due to matrix interference.            (4) Detection limits raised due to dilution to bring analyte within the calibrated range. Duplicate exceeds acceptance criteria due to sample matrix. Reanalysis yields similar results.            (5) Detection limits raised due to dilution to bring analyte within the calibrated range.</p>						

Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**SEMIVOLATILE ORGANICS BY GC-MS (WATER)**

<b>Maxxam ID</b>		TG0909		TG0909		
<b>Sampling Date</b>		2018/04/10 10:50		2018/04/10 10:50		
<b>COC Number</b>		070645		070645		
	<b>UNITS</b>	<b>1704</b>	<b>RDL</b>	<b>1704 Lab-Dup</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Surrogate Recovery (%)</b>						
D10-ANTHRACENE (sur.)	%	97	N/A	97	N/A	8957061
D8-ACENAPHTHYLENE (sur.)	%	93	N/A	89	N/A	8957061
D8-NAPHTHALENE (sur.)	%	64	N/A	65	N/A	8957061
TERPHENYL-D14 (sur.)	%	104	N/A	97	N/A	8957061
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable						

Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TG0903	TG0903	TG0904	TG0905	TG0906		
Sampling Date		2018/04/10 09:40	2018/04/10 09:40	2018/04/10 10:00	2018/04/10 10:00	2018/04/10 10:15		
COC Number		070645	070645	070645	070645	070645		
	UNITS	1972	1972 Lab-Dup	1939	9939	1982	RDL	QC Batch

Volatiles								
Total Trihalomethanes	mg/L	<0.0013	N/A	<0.0013	<0.0013	<0.0013	0.0013	8956289
Bromodichloromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
Bromoform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
Bromomethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8956791
Carbon tetrachloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
Chlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
Chlorodibromomethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8956791
Chloroethane	mg/L	<0.0010	<0.0010	0.0016	0.0016	<0.0010	0.0010	8956791
Chloroform	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
Chloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8956791
1,2-dibromoethane	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8956791
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
1,1-dichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
1,2-dichloroethane	mg/L	<0.00050	<0.00050	0.15	0.14	0.11	0.00050	8956791
1,1-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
Dichloromethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8956791
1,2-dichloropropane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
Methyl methacrylate	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
Styrene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8956791
1,1,1,2-tetrachloroethane	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8956791
Tetrachloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8956791

RDL = Reportable Detection Limit  
Lab-Dup = Laboratory Initiated Duplicate  
N/A = Not Applicable

Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TG0903	TG0903	TG0904	TG0905	TG0906		
Sampling Date		2018/04/10 09:40	2018/04/10 09:40	2018/04/10 10:00	2018/04/10 10:00	2018/04/10 10:15		
COC Number		070645	070645	070645	070645	070645		
	UNITS	1972	1972 Lab-Dup	1939	9939	1982	RDL	QC Batch
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8956791
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
1,1,2-trichloroethane	mg/L	<0.00050	<0.00050	0.0025	0.0018	0.0020	0.00050	8956791
Trichloroethene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	0.00076	0.00069	<0.00050	0.00050	8956791
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
Vinyl chloride	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8956791
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	102	101	102	103	100	N/A	8956791
4-Bromofluorobenzene (sur.)	%	95	94	94	95	96	N/A	8956791
D4-1,2-Dichloroethane (sur.)	%	102	93	96	106	112	N/A	8956791
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable								

Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TG0907	TG0908		TG0909			TG0910		
Sampling Date		2018/04/10 10:15	2018/04/10 10:30		2018/04/10 10:50			2018/04/10		
COC Number		070645	070645		070645			070645		
	UNITS	9982	1956B	RDL	1704	RDL	QC Batch	TRIP BLANK 9	RDL	QC Batch

Volatiles										
Total Trihalomethanes	mg/L	<0.0013	<0.0013	0.0013	<0.0013	0.0013	8956289	<0.0013	0.0013	8957117
Benzene	mg/L	N/A	N/A	N/A	N/A	0.00040	N/A	<0.00040	0.00040	8956791
Bromodichloromethane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Bromoform	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Bromomethane	mg/L	<0.0020	<0.0020	0.0020	<0.0020	0.0020	8956791	<0.0020	0.0020	8956791
Carbon tetrachloride	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Chlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Chlorodibromomethane	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	8956791	<0.0010	0.0010	8956791
Chloroethane	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	8956791	<0.0010	0.0010	8956791
Chloroform	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Chloromethane	mg/L	<0.0020	<0.0020	0.0020	<0.0020	0.0020	8956791	<0.0020	0.0020	8956791
1,2-dibromoethane	mg/L	<0.00020	<0.00020	0.00020	0.0010 (1)	0.00020	8956791	<0.00020	0.00020	8956791
1,2-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
1,3-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
1,4-dichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
1,1-dichloroethane	mg/L	<0.00050	<0.00050	0.00050	0.00057 (1)	0.00050	8956791	<0.00050	0.00050	8956791
1,2-dichloroethane	mg/L	0.11	0.0030	0.00050	0.049	0.00050	8956791	<0.00050	0.00050	8956791
1,1-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
cis-1,2-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
trans-1,2-dichloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Dichloromethane	mg/L	<0.0020	<0.0020	0.0020	<0.0020	0.0020	8956791	<0.0020	0.0020	8956791
1,2-dichloropropane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
cis-1,3-dichloropropene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
trans-1,3-dichloropropene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Ethylbenzene	mg/L	N/A	N/A	N/A	N/A	0.00040	N/A	<0.00040	0.00040	8956791
Methyl methacrylate	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Methyl-tert-butylether (MTBE)	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Styrene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
1,1,1,2-tetrachloroethane	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	8956791	<0.0010	0.0010	8956791
1,1,1,2-tetrachloroethane	mg/L	<0.0020	<0.0020	0.0020	<0.0020	0.0020	8956791	<0.0020	0.0020	8956791

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.

Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**VOLATILE ORGANICS BY GC-MS (WATER)**

Maxxam ID		TG0907	TG0908		TG0909			TG0910		
Sampling Date		2018/04/10 10:15	2018/04/10 10:30		2018/04/10 10:50			2018/04/10		
COC Number		070645	070645		070645			070645		
	UNITS	9982	1956B	RDL	1704	RDL	QC Batch	TRIP BLANK 9	RDL	QC Batch
Tetrachloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Toluene	mg/L	N/A	N/A	N/A	N/A	0.00040	N/A	<0.00040	0.00040	8956791
1,2,3-trichlorobenzene	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	8956791	<0.0010	0.0010	8956791
1,2,4-trichlorobenzene	mg/L	<0.0010	<0.0010	0.0010	<0.0010	0.0010	8956791	<0.0010	0.0010	8956791
1,3,5-trichlorobenzene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
1,1,1-trichloroethane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
1,1,2-trichloroethane	mg/L	0.0021	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Trichloroethene	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Trichlorofluoromethane	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
1,2,4-trimethylbenzene	mg/L	<0.00050	<0.00050	0.00050	2.0 (1)	0.0050	8956791	<0.00050	0.00050	8956791
1,3,5-trimethylbenzene	mg/L	<0.00050	<0.00050	0.00050	0.61 (1)	0.0050	8956791	<0.00050	0.00050	8956791
Vinyl chloride	mg/L	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8956791	<0.00050	0.00050	8956791
Xylenes (Total)	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	<0.00080	0.00080	8956791
m & p-Xylene	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	<0.00080	0.00080	8956791
o-Xylene	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	<0.00040	0.00040	8956791
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	102	100	N/A	101	N/A	8956791	101	N/A	8956791
4-Bromofluorobenzene (sur.)	%	95	98	N/A	110	N/A	8956791	96	N/A	8956791
D4-1,2-Dichloroethane (sur.)	%	89	108	N/A	96	N/A	8956791	111	N/A	8956791

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Detection limits raised due to dilution to bring analyte within the calibrated range.



Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**GENERAL COMMENTS**

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

Package 1	7.3°C
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**Results relate only to the items tested.**

Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8956788	SAW	Matrix Spike [TG0904-02]		1,4-Difluorobenzene (sur.)	2018/04/12		91	%	50 - 140
				4-Bromofluorobenzene (sur.)	2018/04/12		101	%	50 - 140
				D4-1,2-Dichloroethane (sur.)	2018/04/12		109	%	50 - 140
				Benzene	2018/04/12		NC	%	50 - 140
				Toluene	2018/04/12		87	%	50 - 140
				Ethylbenzene	2018/04/12		92	%	50 - 140
				m & p-Xylene	2018/04/12		90	%	50 - 140
				o-Xylene	2018/04/12		89	%	50 - 140
				F1 (C6-C10)	2018/04/12		86	%	60 - 140
				8956788	SAW	Spiked Blank		1,4-Difluorobenzene (sur.)	2018/04/12
4-Bromofluorobenzene (sur.)	2018/04/12		104					%	50 - 140
D4-1,2-Dichloroethane (sur.)	2018/04/12		103					%	50 - 140
Benzene	2018/04/12		84					%	60 - 130
Toluene	2018/04/12		83					%	60 - 130
Ethylbenzene	2018/04/12		87					%	60 - 130
m & p-Xylene	2018/04/12		85					%	60 - 130
o-Xylene	2018/04/12		85					%	60 - 130
F1 (C6-C10)	2018/04/12		90					%	60 - 140
8956788	SAW	Method Blank						1,4-Difluorobenzene (sur.)	2018/04/12
				4-Bromofluorobenzene (sur.)	2018/04/12		100	%	50 - 140
				D4-1,2-Dichloroethane (sur.)	2018/04/12		76	%	50 - 140
				Benzene	2018/04/12	<0.00040		mg/L	
				Toluene	2018/04/12	<0.00040		mg/L	
				Ethylbenzene	2018/04/12	<0.00040		mg/L	
				m & p-Xylene	2018/04/12	<0.00080		mg/L	
				o-Xylene	2018/04/12	<0.00040		mg/L	
				F1 (C6-C10)	2018/04/12	<0.10		mg/L	
				8956788	SAW	RPD		Benzene	2018/04/12
Toluene	2018/04/12	NC						%	30
Ethylbenzene	2018/04/12	NC						%	30
m & p-Xylene	2018/04/12	NC						%	30
o-Xylene	2018/04/12	NC						%	30
F1 (C6-C10)	2018/04/12	NC						%	30
8956791	RSU	Matrix Spike [TG0904-02]		1,4-Difluorobenzene (sur.)	2018/04/12		101	%	70 - 130
				4-Bromofluorobenzene (sur.)	2018/04/12		98	%	70 - 130
				D4-1,2-Dichloroethane (sur.)	2018/04/12		102	%	70 - 130
				Benzene	2018/04/12		NC	%	70 - 130
				Bromodichloromethane	2018/04/12		108	%	70 - 130
				Bromoform	2018/04/12		120	%	70 - 130
				Bromomethane	2018/04/12		86	%	70 - 130
				Carbon tetrachloride	2018/04/12		92	%	70 - 130
				Chlorobenzene	2018/04/12		103	%	70 - 130
				Chlorodibromomethane	2018/04/12		110	%	70 - 130
				Chloroethane	2018/04/12		86	%	70 - 130
				Chloroform	2018/04/12		102	%	70 - 130
				Chloromethane	2018/04/12		79	%	70 - 130
				1,2-dibromoethane	2018/04/12		123	%	70 - 130
				1,2-dichlorobenzene	2018/04/12		102	%	70 - 130
				1,3-dichlorobenzene	2018/04/12		97	%	70 - 130
				1,4-dichlorobenzene	2018/04/12		96	%	70 - 130
				1,1-dichloroethane	2018/04/12		96	%	70 - 130
				1,2-dichloroethane	2018/04/12		114	%	70 - 130
				1,1-dichloroethene	2018/04/12		95	%	70 - 130
cis-1,2-dichloroethene	2018/04/12		109	%	70 - 130				

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			trans-1,2-dichloroethene	2018/04/12		101	%	70 - 130
			Dichloromethane	2018/04/12		97	%	70 - 130
			1,2-dichloropropane	2018/04/12		106	%	70 - 130
			cis-1,3-dichloropropene	2018/04/12		123	%	70 - 130
			trans-1,3-dichloropropene	2018/04/12		122	%	70 - 130
			Ethylbenzene	2018/04/12		91	%	70 - 130
			Methyl methacrylate	2018/04/12		135 (1)	%	70 - 130
			Methyl-tert-butylether (MTBE)	2018/04/12		102	%	70 - 130
			Styrene	2018/04/12		106	%	70 - 130
			1,1,1,2-tetrachloroethane	2018/04/12		102	%	70 - 130
			1,1,2,2-tetrachloroethane	2018/04/12		113	%	70 - 130
			Tetrachloroethene	2018/04/12		94	%	70 - 130
			Toluene	2018/04/12		97	%	70 - 130
			1,2,3-trichlorobenzene	2018/04/12		111	%	70 - 130
			1,2,4-trichlorobenzene	2018/04/12		103	%	70 - 130
			1,3,5-trichlorobenzene	2018/04/12		97	%	70 - 130
			1,1,1-trichloroethane	2018/04/12		97	%	70 - 130
			1,1,2-trichloroethane	2018/04/12		116	%	70 - 130
			Trichloroethene	2018/04/12		102	%	70 - 130
			Trichlorofluoromethane	2018/04/12		87	%	70 - 130
			1,2,4-trimethylbenzene	2018/04/12		95	%	70 - 130
			1,3,5-trimethylbenzene	2018/04/12		93	%	70 - 130
			Vinyl chloride	2018/04/12		84	%	70 - 130
			m & p-Xylene	2018/04/12		97	%	70 - 130
			o-Xylene	2018/04/12		99	%	70 - 130
8956791	RSU	Spiked Blank	1,4-Difluorobenzene (sur.)	2018/04/12		103	%	70 - 130
			4-Bromofluorobenzene (sur.)	2018/04/12		95	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2018/04/12		94	%	70 - 130
			Benzene	2018/04/12		92	%	70 - 130
			Bromodichloromethane	2018/04/12		95	%	70 - 130
			Bromoform	2018/04/12		102	%	70 - 130
			Bromomethane	2018/04/12		74	%	70 - 130
			Carbon tetrachloride	2018/04/12		92	%	70 - 130
			Chlorobenzene	2018/04/12		105	%	70 - 130
			Chlorodibromomethane	2018/04/12		100	%	70 - 130
			Chloroethane	2018/04/12		83	%	70 - 130
			Chloroform	2018/04/12		93	%	70 - 130
			Chloromethane	2018/04/12		75	%	70 - 130
			1,2-dibromoethane	2018/04/12		106	%	70 - 130
			1,2-dichlorobenzene	2018/04/12		98	%	70 - 130
			1,3-dichlorobenzene	2018/04/12		96	%	70 - 130
			1,4-dichlorobenzene	2018/04/12		95	%	70 - 130
			1,1-dichloroethane	2018/04/12		89	%	70 - 130
			1,2-dichloroethane	2018/04/12		95	%	70 - 130
			1,1-dichloroethene	2018/04/12		96	%	70 - 130
			cis-1,2-dichloroethene	2018/04/12		100	%	70 - 130
			trans-1,2-dichloroethene	2018/04/12		98	%	70 - 130
			Dichloromethane	2018/04/12		84	%	70 - 130
			1,2-dichloropropane	2018/04/12		95	%	70 - 130
			cis-1,3-dichloropropene	2018/04/12		100	%	70 - 130
			trans-1,3-dichloropropene	2018/04/12		104	%	70 - 130
			Ethylbenzene	2018/04/12		103	%	70 - 130
			Methyl methacrylate	2018/04/12		105	%	70 - 130
			Methyl-tert-butylether (MTBE)	2018/04/12		94	%	70 - 130

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Styrene	2018/04/12		105	%	70 - 130
			1,1,1,2-tetrachloroethane	2018/04/12		101	%	70 - 130
			1,1,2,2-tetrachloroethane	2018/04/12		97	%	70 - 130
			Tetrachloroethene	2018/04/12		101	%	70 - 130
			Toluene	2018/04/12		102	%	70 - 130
			1,2,3-trichlorobenzene	2018/04/12		107	%	70 - 130
			1,2,4-trichlorobenzene	2018/04/12		103	%	70 - 130
			1,3,5-trichlorobenzene	2018/04/12		100	%	70 - 130
			1,1,1-trichloroethane	2018/04/12		96	%	70 - 130
			1,1,2-trichloroethane	2018/04/12		96	%	70 - 130
			Trichloroethene	2018/04/12		100	%	70 - 130
			Trichlorofluoromethane	2018/04/12		89	%	70 - 130
			1,2,4-trimethylbenzene	2018/04/12		99	%	70 - 130
			1,3,5-trimethylbenzene	2018/04/12		95	%	70 - 130
			Vinyl chloride	2018/04/12		86	%	70 - 130
			m & p-Xylene	2018/04/12		103	%	70 - 130
			o-Xylene	2018/04/12		103	%	70 - 130
8956791	RSU	Method Blank	1,4-Difluorobenzene (sur.)	2018/04/12		101	%	70 - 130
			4-Bromofluorobenzene (sur.)	2018/04/12		95	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2018/04/12		96	%	70 - 130
			Benzene	2018/04/12	<0.00040		mg/L	
			Bromodichloromethane	2018/04/12	<0.00050		mg/L	
			Bromoform	2018/04/12	<0.00050		mg/L	
			Bromomethane	2018/04/12	<0.0020		mg/L	
			Carbon tetrachloride	2018/04/12	<0.00050		mg/L	
			Chlorobenzene	2018/04/12	<0.00050		mg/L	
			Chlorodibromomethane	2018/04/12	<0.0010		mg/L	
			Chloroethane	2018/04/12	<0.0010		mg/L	
			Chloroform	2018/04/12	<0.00050		mg/L	
			Chloromethane	2018/04/12	<0.0020		mg/L	
			1,2-dibromoethane	2018/04/12	<0.00020		mg/L	
			1,2-dichlorobenzene	2018/04/12	<0.00050		mg/L	
			1,3-dichlorobenzene	2018/04/12	<0.00050		mg/L	
			1,4-dichlorobenzene	2018/04/12	<0.00050		mg/L	
			1,1-dichloroethane	2018/04/12	<0.00050		mg/L	
			1,2-dichloroethane	2018/04/12	<0.00050		mg/L	
			1,1-dichloroethene	2018/04/12	<0.00050		mg/L	
			cis-1,2-dichloroethene	2018/04/12	<0.00050		mg/L	
			trans-1,2-dichloroethene	2018/04/12	<0.00050		mg/L	
			Dichloromethane	2018/04/12	<0.0020		mg/L	
			1,2-dichloropropane	2018/04/12	<0.00050		mg/L	
			cis-1,3-dichloropropene	2018/04/12	<0.00050		mg/L	
			trans-1,3-dichloropropene	2018/04/12	<0.00050		mg/L	
			Ethylbenzene	2018/04/12	<0.00040		mg/L	
			Methyl methacrylate	2018/04/12	<0.00050		mg/L	
			Methyl-tert-butylether (MTBE)	2018/04/12	<0.00050		mg/L	
			Styrene	2018/04/12	<0.00050		mg/L	
			1,1,1,2-tetrachloroethane	2018/04/12	<0.0010		mg/L	
			1,1,2,2-tetrachloroethane	2018/04/12	<0.0020		mg/L	
			Tetrachloroethene	2018/04/12	<0.00050		mg/L	
			Toluene	2018/04/12	<0.00040		mg/L	
			1,2,3-trichlorobenzene	2018/04/12	<0.0010		mg/L	
			1,2,4-trichlorobenzene	2018/04/12	<0.0010		mg/L	
			1,3,5-trichlorobenzene	2018/04/12	<0.00050		mg/L	

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			1,1,1-trichloroethane	2018/04/12	<0.00050		mg/L	
			1,1,2-trichloroethane	2018/04/12	<0.00050		mg/L	
			Trichloroethene	2018/04/12	<0.00050		mg/L	
			Trichlorofluoromethane	2018/04/12	<0.00050		mg/L	
			1,2,4-trimethylbenzene	2018/04/12	<0.00050		mg/L	
			1,3,5-trimethylbenzene	2018/04/12	<0.00050		mg/L	
			Vinyl chloride	2018/04/12	<0.00050		mg/L	
			Xylenes (Total)	2018/04/12	<0.00080		mg/L	
			m & p-Xylene	2018/04/12	<0.00080		mg/L	
			o-Xylene	2018/04/12	<0.00040		mg/L	
8956791	RSU	RPD [TG0903-02]	Bromodichloromethane	2018/04/12	NC		%	30
			Bromoform	2018/04/12	NC		%	30
			Bromomethane	2018/04/12	NC		%	30
			Carbon tetrachloride	2018/04/12	NC		%	30
			Chlorobenzene	2018/04/12	NC		%	30
			Chlorodibromomethane	2018/04/12	NC		%	30
			Chloroethane	2018/04/12	NC		%	30
			Chloroform	2018/04/12	NC		%	30
			Chloromethane	2018/04/12	NC		%	30
			1,2-dibromoethane	2018/04/12	NC		%	30
			1,2-dichlorobenzene	2018/04/12	NC		%	30
			1,3-dichlorobenzene	2018/04/12	NC		%	30
			1,4-dichlorobenzene	2018/04/12	NC		%	30
			1,1-dichloroethane	2018/04/12	NC		%	30
			1,2-dichloroethane	2018/04/12	NC		%	30
			1,1-dichloroethene	2018/04/12	NC		%	30
			cis-1,2-dichloroethene	2018/04/12	NC		%	30
			trans-1,2-dichloroethene	2018/04/12	NC		%	30
			Dichloromethane	2018/04/12	NC		%	30
			1,2-dichloropropane	2018/04/12	NC		%	30
			cis-1,3-dichloropropene	2018/04/12	NC		%	30
			trans-1,3-dichloropropene	2018/04/12	NC		%	30
			Methyl methacrylate	2018/04/12	NC		%	30
			Methyl-tert-butylether (MTBE)	2018/04/12	NC		%	30
			Styrene	2018/04/12	NC		%	30
			1,1,1,2-tetrachloroethane	2018/04/12	NC		%	30
			1,1,2,2-tetrachloroethane	2018/04/12	NC		%	30
			Tetrachloroethene	2018/04/12	NC		%	30
			1,2,3-trichlorobenzene	2018/04/12	NC		%	30
			1,2,4-trichlorobenzene	2018/04/12	NC		%	30
			1,3,5-trichlorobenzene	2018/04/12	NC		%	30
			1,1,1-trichloroethane	2018/04/12	NC		%	30
			1,1,2-trichloroethane	2018/04/12	NC		%	30
			Trichloroethene	2018/04/12	NC		%	30
			Trichlorofluoromethane	2018/04/12	NC		%	30
			1,2,4-trimethylbenzene	2018/04/12	NC		%	30
			1,3,5-trimethylbenzene	2018/04/12	NC		%	30
			Vinyl chloride	2018/04/12	NC		%	30
8956964	VP4	Matrix Spike [TG0903-01]	O-TERPHENYL (sur.)	2018/04/12		82	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/12		88	%	60 - 130
8956964	VP4	Spiked Blank	O-TERPHENYL (sur.)	2018/04/12		81	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/12		87	%	70 - 130
8956964	VP4	Method Blank	O-TERPHENYL (sur.)	2018/04/12		89	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2018/04/12	<0.10		mg/L	

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QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	8956964	VP4	RPD [TG0909-01]	F2 (C10-C16 Hydrocarbons)	2018/04/12	0.73		%	30
	8957061	DM	Matrix Spike [TG0903-01]	D10-ANTHRACENE (sur.)	2018/04/15		101	%	50 - 130
				D8-ACENAPHTHYLENE (sur.)	2018/04/15		93	%	50 - 130
				D8-NAPHTHALENE (sur.)	2018/04/15		79	%	50 - 130
				TERPHENYL-D14 (sur.)	2018/04/15		104	%	50 - 130
				Acenaphthene	2018/04/15		98	%	50 - 130
				Acenaphthylene	2018/04/15		98	%	50 - 130
				Acridine	2018/04/15		89	%	50 - 130
				Anthracene	2018/04/15		94	%	50 - 130
				Benzo(a)anthracene	2018/04/15		104	%	50 - 130
				Benzo(b&j)fluoranthene	2018/04/15		101	%	50 - 130
				Benzo(k)fluoranthene	2018/04/15		91	%	50 - 130
				Benzo(g,h,i)perylene	2018/04/15		93	%	50 - 130
				Benzo(c)phenanthrene	2018/04/15		99	%	50 - 130
				Benzo(a)pyrene	2018/04/15		96	%	50 - 130
				Benzo[e]pyrene	2018/04/15		90	%	50 - 130
				Chrysene	2018/04/15		97	%	50 - 130
				Dibenz(a,h)anthracene	2018/04/15		99	%	50 - 130
				Fluoranthene	2018/04/15		97	%	50 - 130
				Fluorene	2018/04/15		99	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2018/04/15		90	%	50 - 130
				1-Methylnaphthalene	2018/04/15		100	%	50 - 130
				2-Methylnaphthalene	2018/04/15		91	%	50 - 130
				Naphthalene	2018/04/15		95	%	50 - 130
				Phenanthrene	2018/04/15		95	%	50 - 130
				Perylene	2018/04/15		83	%	50 - 130
				Pyrene	2018/04/15		95	%	50 - 130
				Quinoline	2018/04/15		104	%	50 - 130
	8957061	DM	Spiked Blank	D10-ANTHRACENE (sur.)	2018/04/15		101	%	50 - 130
				D8-ACENAPHTHYLENE (sur.)	2018/04/15		90	%	50 - 130
				D8-NAPHTHALENE (sur.)	2018/04/15		72	%	50 - 130
				TERPHENYL-D14 (sur.)	2018/04/15		104	%	50 - 130
				Acenaphthene	2018/04/15		93	%	50 - 130
				Acenaphthylene	2018/04/15		93	%	50 - 130
				Acridine	2018/04/15		88	%	50 - 130
				Anthracene	2018/04/15		96	%	50 - 130
				Benzo(a)anthracene	2018/04/15		114	%	50 - 130
				Benzo(b&j)fluoranthene	2018/04/15		108	%	50 - 130
				Benzo(k)fluoranthene	2018/04/15		102	%	50 - 130
				Benzo(g,h,i)perylene	2018/04/15		101	%	50 - 130
				Benzo(c)phenanthrene	2018/04/15		104	%	50 - 130
				Benzo(a)pyrene	2018/04/15		106	%	50 - 130
				Benzo[e]pyrene	2018/04/15		99	%	50 - 130
				Chrysene	2018/04/15		106	%	50 - 130
				Dibenz(a,h)anthracene	2018/04/15		106	%	50 - 130
				Fluoranthene	2018/04/15		101	%	50 - 130
				Fluorene	2018/04/15		93	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2018/04/15		95	%	50 - 130
				1-Methylnaphthalene	2018/04/15		91	%	50 - 130
				2-Methylnaphthalene	2018/04/15		84	%	50 - 130
				Naphthalene	2018/04/15		88	%	50 - 130
				Phenanthrene	2018/04/15		94	%	50 - 130
				Perylene	2018/04/15		92	%	50 - 130
				Pyrene	2018/04/15		98	%	50 - 130

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits	
8957061	DM	Method Blank	Quinoline	2018/04/15		103	%	50 - 130	
			D10-ANTHRACENE (sur.)	2018/04/15		105	%	50 - 130	
			D8-ACENAPHTHYLENE (sur.)	2018/04/15		92	%	50 - 130	
			D8-NAPHTHALENE (sur.)	2018/04/15		71	%	50 - 130	
			TERPHENYL-D14 (sur.)	2018/04/15		107	%	50 - 130	
			Acenaphthene	2018/04/15	<0.00010		mg/L		
			Acenaphthylene	2018/04/15	<0.00010		mg/L		
			Acridine	2018/04/15	<0.000050		mg/L		
			Anthracene	2018/04/15	<0.000010		mg/L		
			Benzo(a)anthracene	2018/04/15	<0.0000085		mg/L		
			Benzo(b&j)fluoranthene	2018/04/15	<0.0000085		mg/L		
			Benzo(k)fluoranthene	2018/04/15	<0.0000085		mg/L		
			Benzo(g,h,i)perylene	2018/04/15	<0.0000085		mg/L		
			Benzo(c)phenanthrene	2018/04/15	<0.000050		mg/L		
			Benzo(a)pyrene	2018/04/15	<0.0000075		mg/L		
			Benzo[e]pyrene	2018/04/15	<0.000050		mg/L		
			Chrysene	2018/04/15	<0.0000085		mg/L		
			Dibenz(a,h)anthracene	2018/04/15	<0.0000075		mg/L		
			Fluoranthene	2018/04/15	<0.000010		mg/L		
			Fluorene	2018/04/15	<0.000050		mg/L		
			Indeno(1,2,3-cd)pyrene	2018/04/15	<0.0000085		mg/L		
			1-Methylnaphthalene	2018/04/15	<0.00010		mg/L		
			2-Methylnaphthalene	2018/04/15	<0.00010		mg/L		
			Naphthalene	2018/04/15	<0.00010		mg/L		
			Phenanthrene	2018/04/15	<0.000050		mg/L		
			Perylene	2018/04/15	<0.000050		mg/L		
			Pyrene	2018/04/15	<0.000020		mg/L		
Quinoline	2018/04/15	<0.00020		mg/L					
8957061	DM	RPD [TG0909-01]	Acenaphthene	2018/04/16	77 (1)		%	30	
			Acenaphthylene	2018/04/16	NC		%	30	
			Acridine	2018/04/16	112 (1)		%	30	
			Anthracene	2018/04/16	98 (1)		%	30	
			Benzo(a)anthracene	2018/04/16	113 (1)		%	30	
			Benzo(b&j)fluoranthene	2018/04/16	NC		%	30	
			Benzo(k)fluoranthene	2018/04/16	NC		%	30	
			Benzo(g,h,i)perylene	2018/04/16	NC		%	30	
			Benzo(c)phenanthrene	2018/04/16	NC		%	30	
			Benzo(a)pyrene	2018/04/16	16		%	30	
			Benzo[e]pyrene	2018/04/16	NC		%	30	
			Chrysene	2018/04/16	NC		%	30	
			Dibenz(a,h)anthracene	2018/04/16	NC		%	30	
			Fluoranthene	2018/04/16	104 (1)		%	30	
			Fluorene	2018/04/16	82 (1)		%	30	
			Indeno(1,2,3-cd)pyrene	2018/04/16	NC		%	30	
			1-Methylnaphthalene	2018/04/16	68 (1)		%	30	
			2-Methylnaphthalene	2018/04/16	57 (1)		%	30	
			Naphthalene	2018/04/16	21		%	30	
			Phenanthrene	2018/04/16	94 (1)		%	30	
			Perylene	2018/04/16	NC		%	30	
			Pyrene	2018/04/16	101 (1)		%	30	

Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Quinoline	2018/04/16	106 (1)		%	30
<p>Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.</p> <p>Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.</p> <p>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.</p> <p>Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.</p> <p>Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.</p> <p>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)</p> <p>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 &lt;= 2x RDL).</p> <p>(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.</p>									



Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

**NOTIFICATION LOG**

No Reportable Regulation Exceedences Noted.

Maxxam Job #: B826352  
Report Date: 2018/04/17

CLIFTON ASSOCIATES LTD.  
Client Project #: CG2430.1 E30  
Sampler Initials: AM

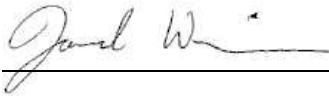
### VALIDATION SIGNATURE PAGE

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



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Dennis Ngundu, B.Sc., P.Chem., QP, Supervisor, Organics



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Jared Wiseman, B.Sc., P.Chem., QP, Senior Analyst, Organics



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Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Invoice Information	Report Information (if differs from invoice)	Project Information	Turnaround Time (TAT) Required
Company: <u>Clifton Associates</u>	Company: _____	Quotation #: _____	<input checked="" type="checkbox"/> 7 Days Regular (Most analyses)
Contact Name: <u>Stephen dAbadie</u>	Contact Name: _____	P.O. #/ AFE#: _____	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: <u>2222 - 30 Ave. NE</u> <u>Calgary AB T2E7K9</u>	Address: _____	Project #: <u>C92430.1 E30</u>	<b>Rush TAT (Surcharges will be applied)</b>
Phone: <u>403-263-2556</u>	Phone: _____	Site Location: _____	<input type="checkbox"/> Same Day <input type="checkbox"/> 2 Days
Email: <u>Stephen_dabadie@clifton.ca</u>	Email: _____	Site #: _____	<input type="checkbox"/> 1 Day <input type="checkbox"/> 3-4 Days
Copies: <u>terry.n_kuzyk@clifton.ca</u>	Copies: _____	Sampled By: <u>Austin</u>	Date Required: _____
			Rush Confirmation #: _____

Laboratory Use Only				Analysis Requested												Regulatory Criteria									
Seal Present	Seal Intact	Cooling Media	Cooler ID	Depot Reception												Regulatory Criteria									
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	679													<input checked="" type="checkbox"/> AT1									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														<input type="checkbox"/> CCME									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														<input type="checkbox"/> Drinking Water									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														<input type="checkbox"/> D50 (Drilling Waste)									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														<input type="checkbox"/> Saskatchewan									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														<input type="checkbox"/> Other:									
Sample Identification				Depth (Unit)	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	# of containers	BTEX F1	VOC	BTEX F1-F2	BTEX F1-F4	Routine Water	Regulated Metals	Total	Mercury	Dissolved	Salinity 4	Sieve (75 micron)	Texture (% Sand, Silt, Clay)	Basic Class II Landfill	PAHs	HOLD - DO NOT ANALYZE	Special Instructions	
1	1972				2018.4.10	9:40	GW 8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
2	1939					10:00	GW 8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
3	9939					10:00	GW 6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
4	1982					10:15	GW 7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
5	9982					10:15	GW 7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
6	1956B					10:30	GW 8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
7	1704					10:50	GW 8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
8	Trip Blank 9				2018.4.10		W 2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																→ 1704 is heavy contaminated!
9																									
10																									

Please Indicate Filtered, Preserved or Both (F, P, F/P)

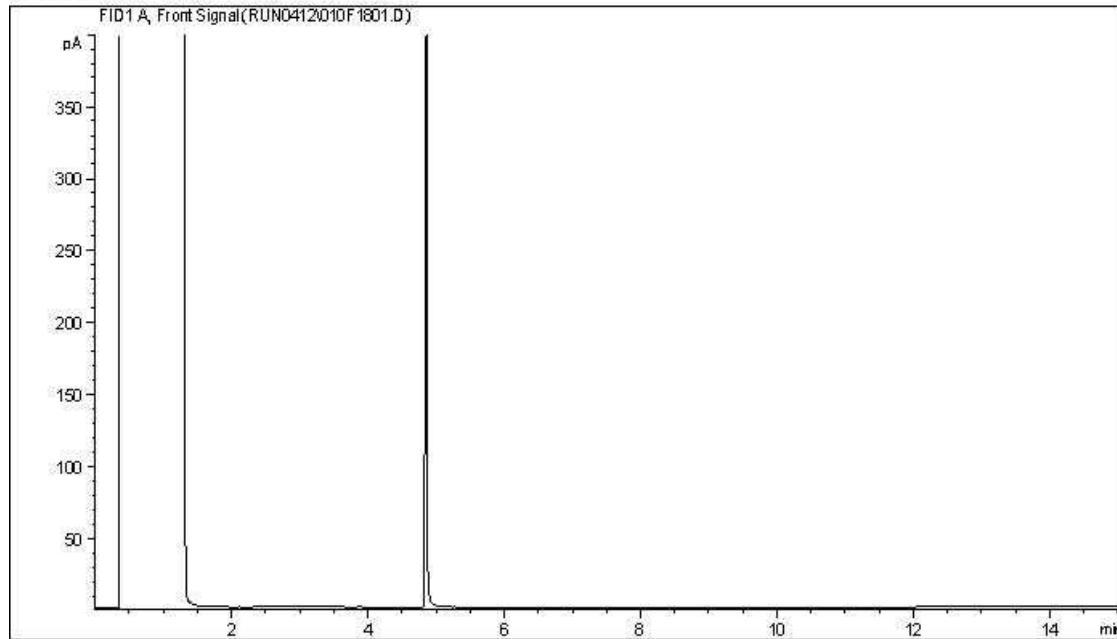
Relinquished by: (Signature/ Print) Austin Mei DATE (YYYY/MM/DD) 2018.4.10 Time (HH:MM) 11:20

Received by: (Signature/ Print) Jennifer Stephenson DATE (YYYY/MM/DD) 2018/04/10 Time (HH:MM) 11:21

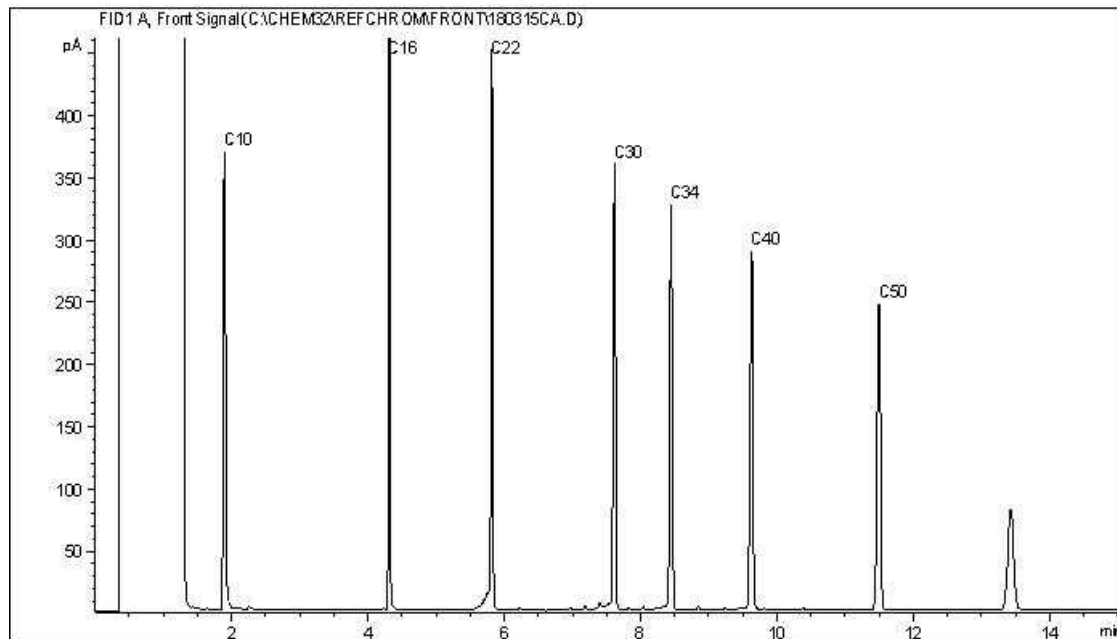
10-Apr-18 11:21  
Jennifer Stephenson  
B826352  
RWE INS-0158

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



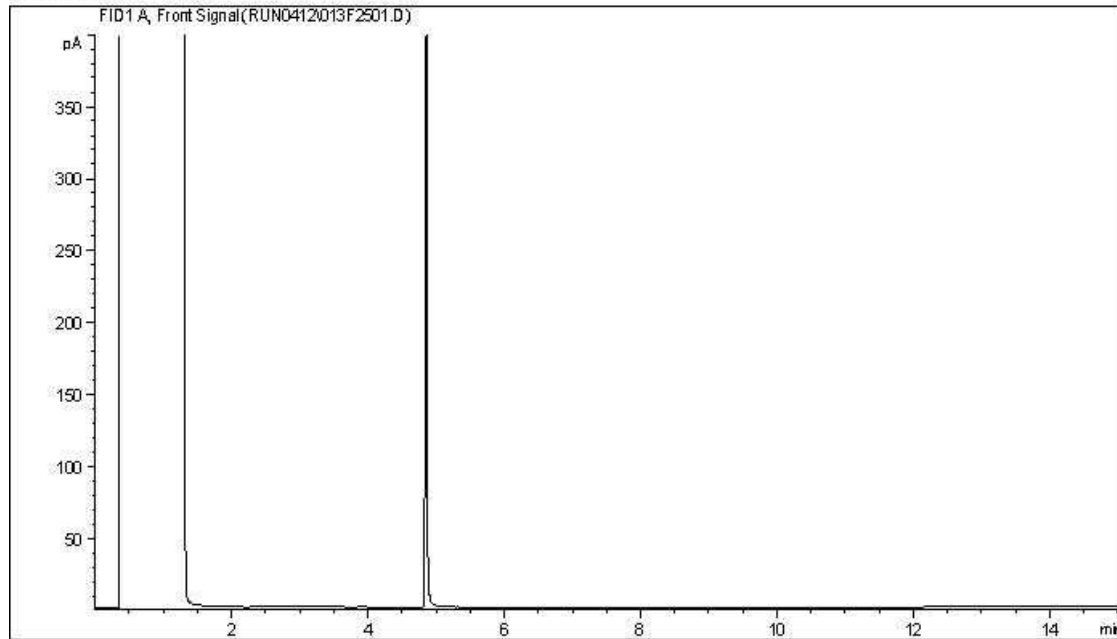
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

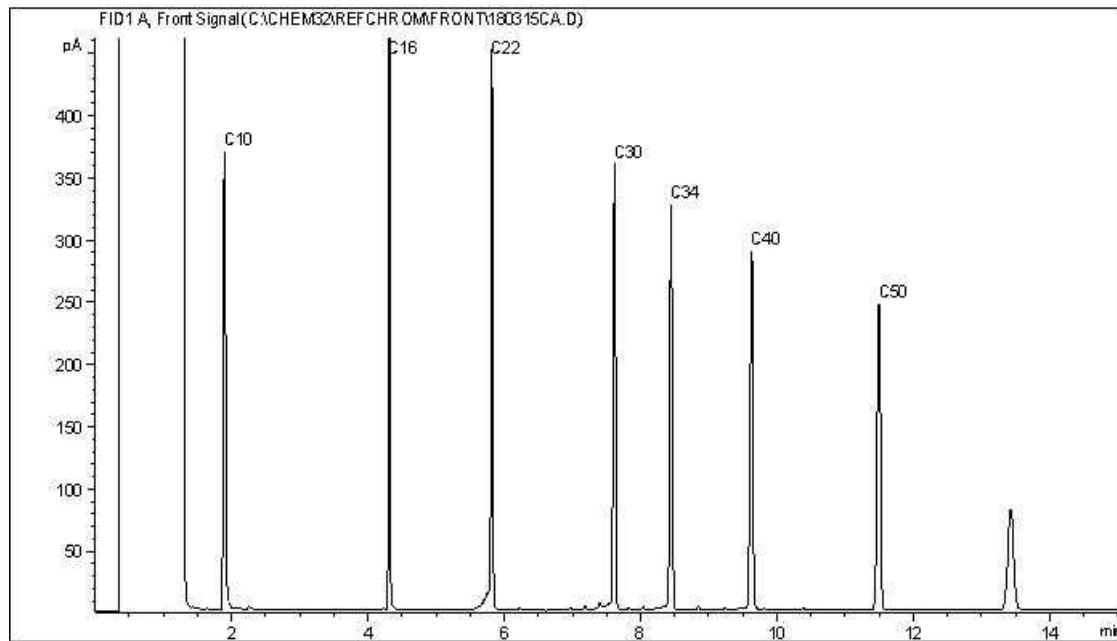
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



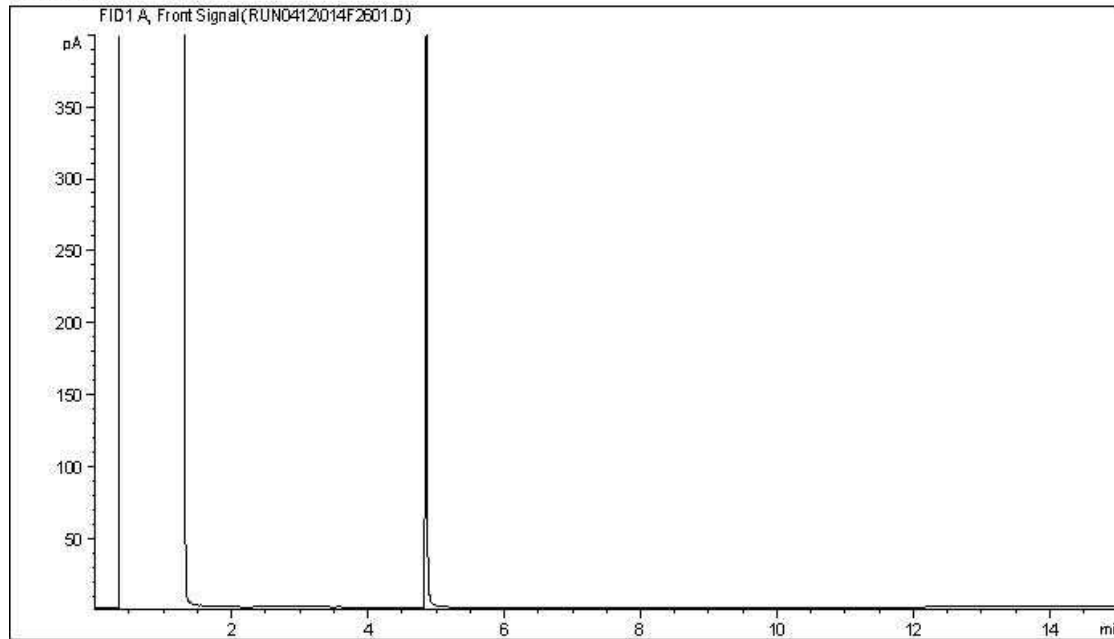
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

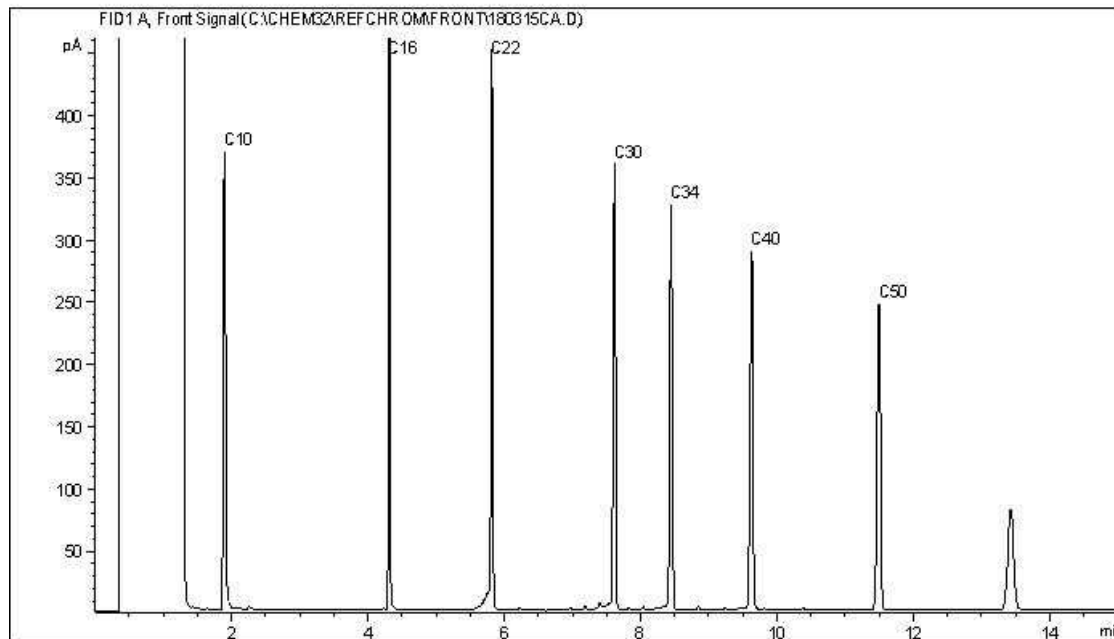
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



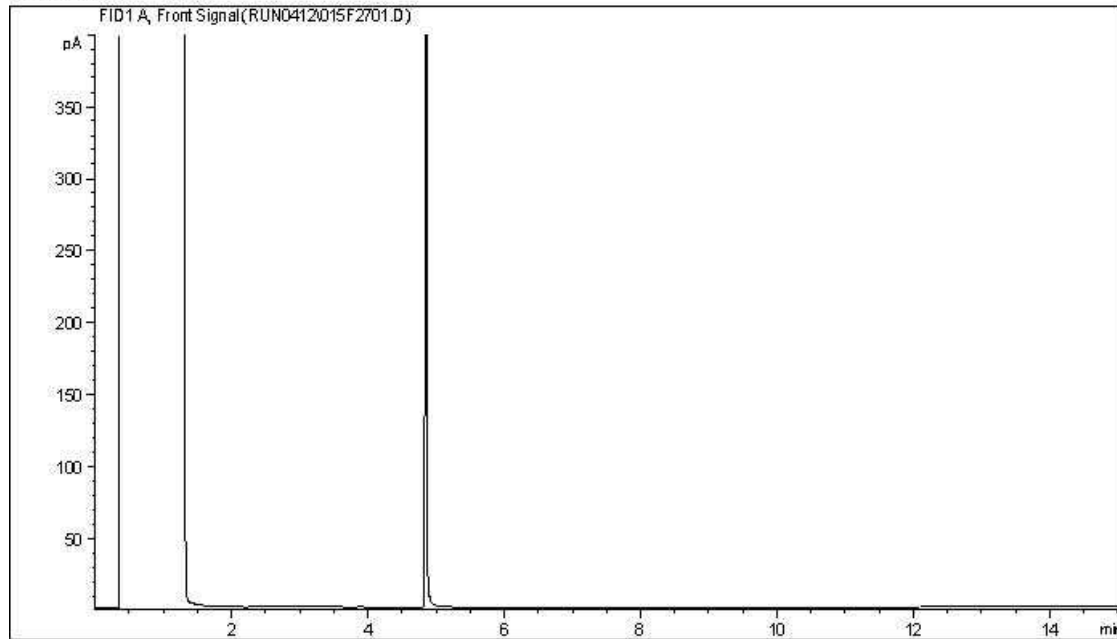
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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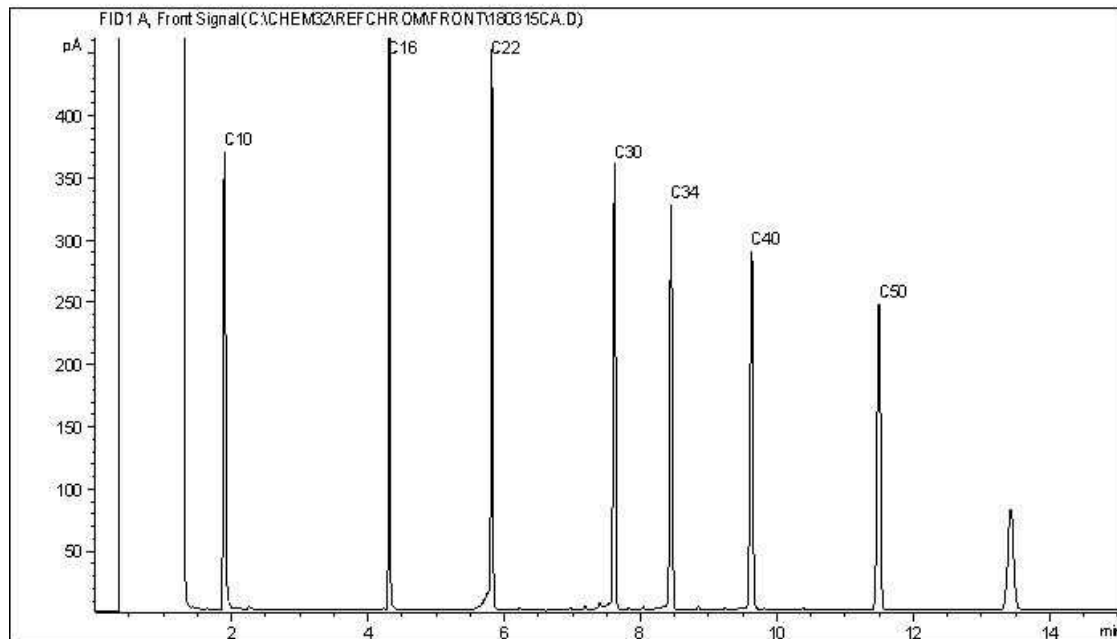
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



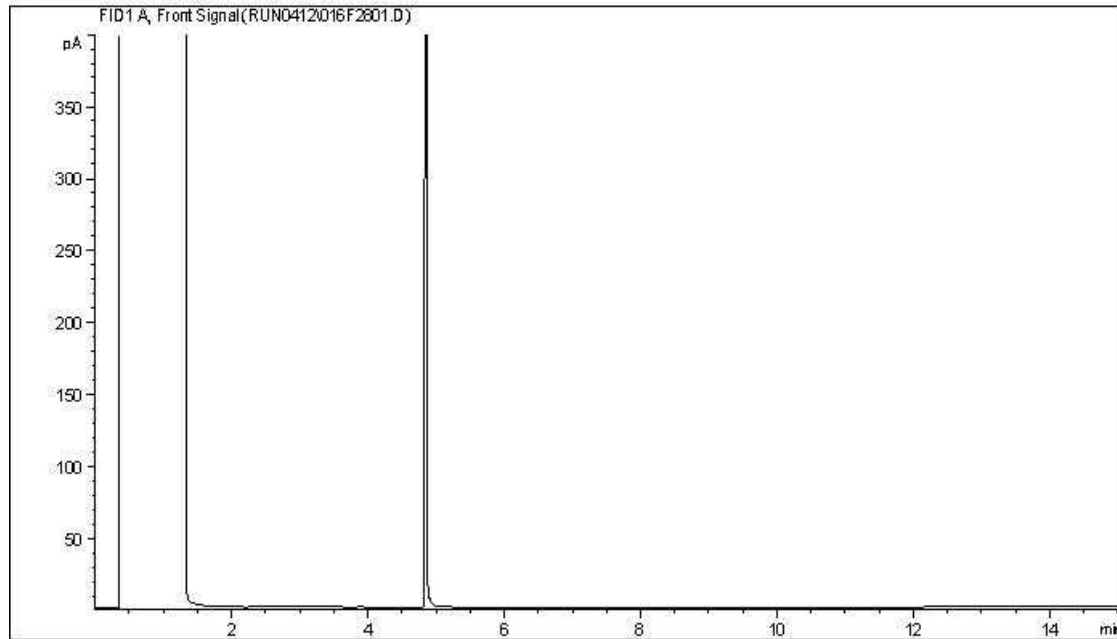
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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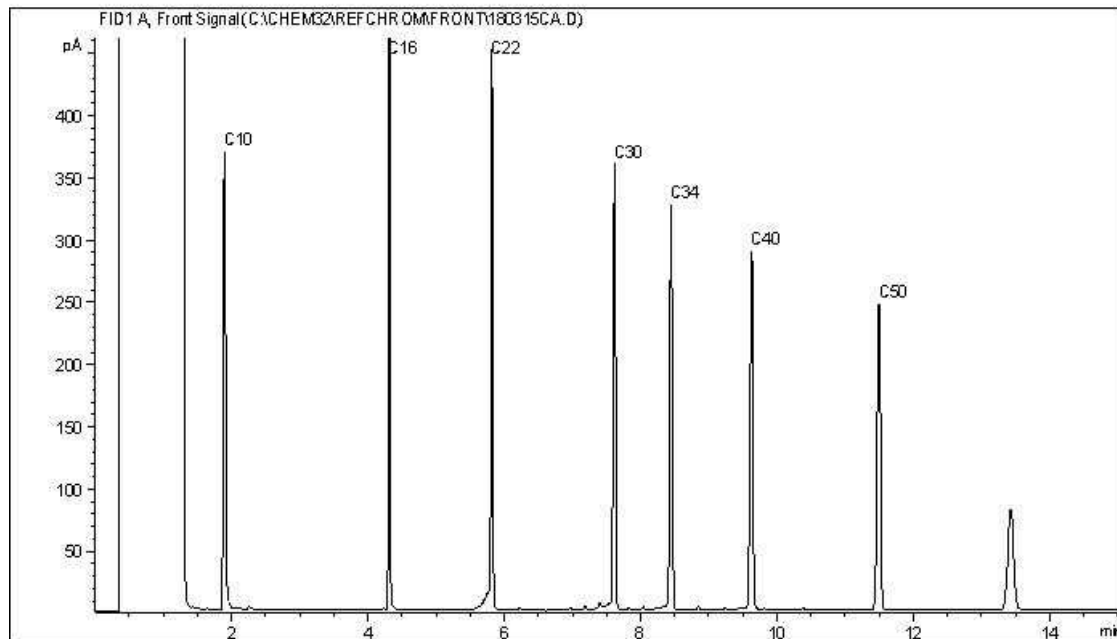
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

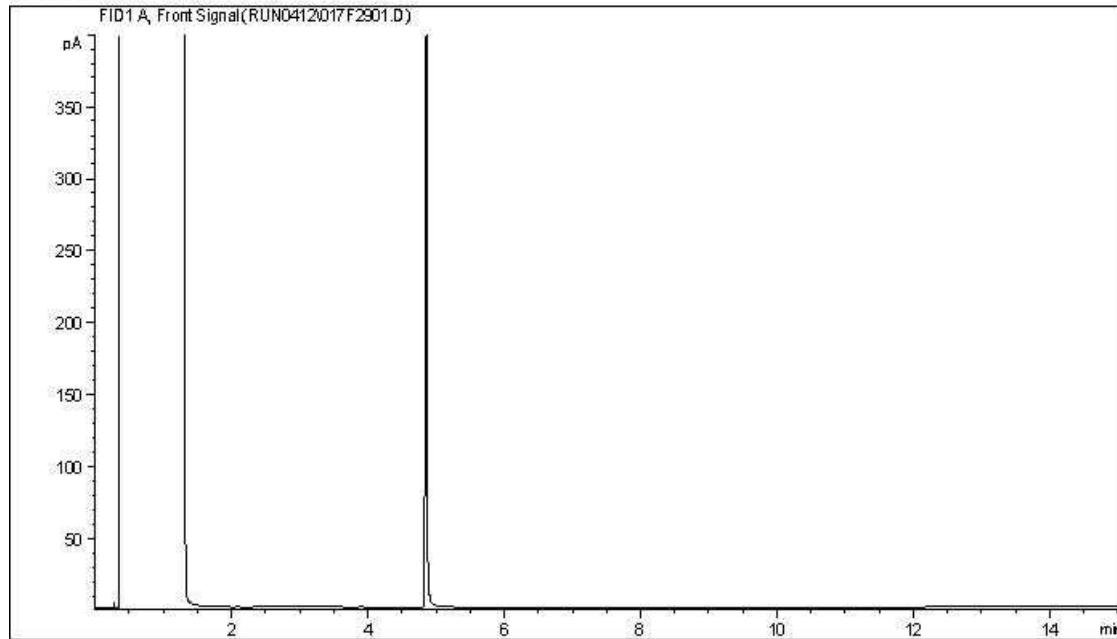
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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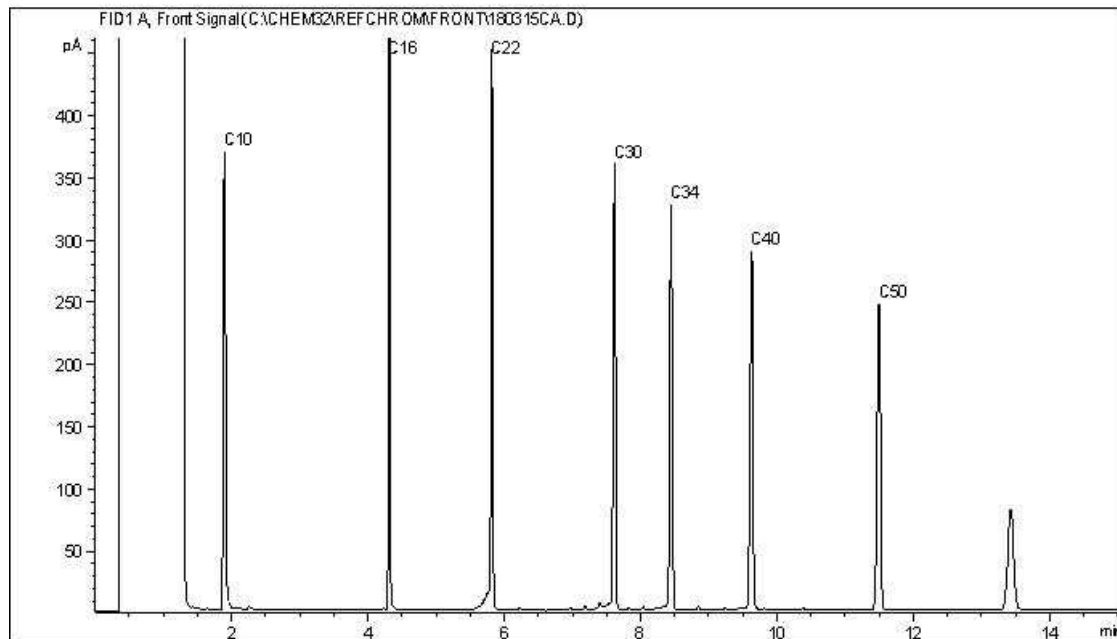


CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



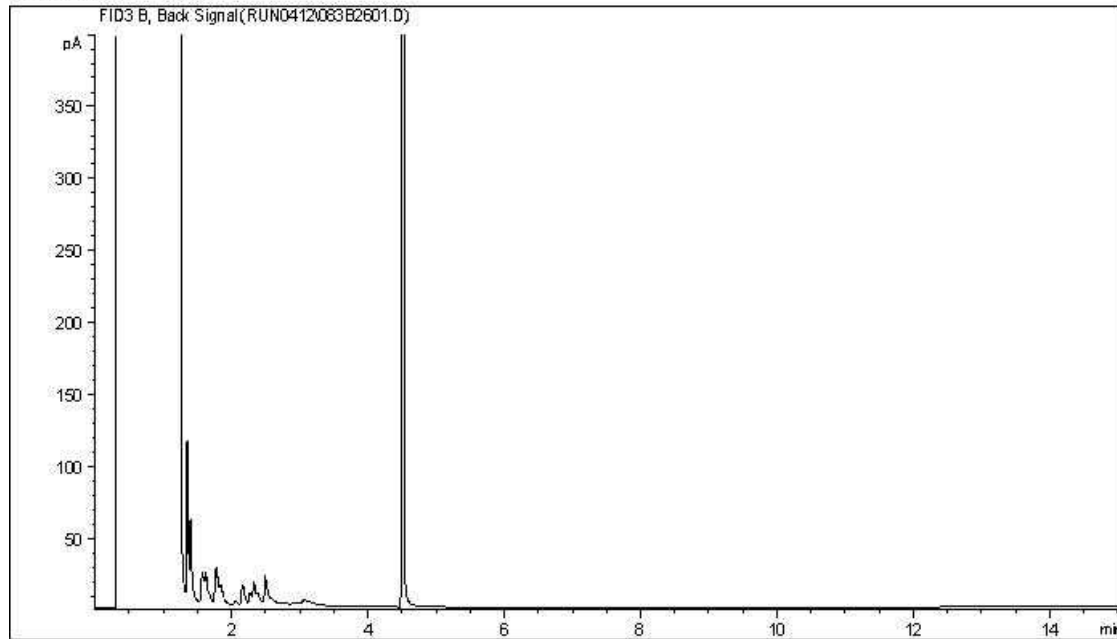
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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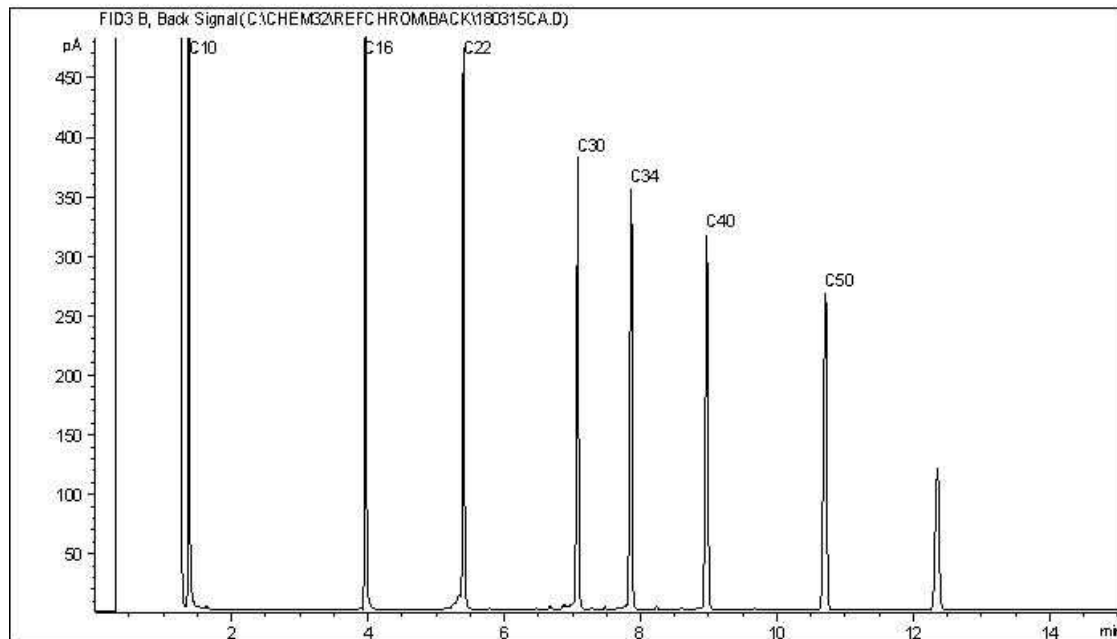
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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



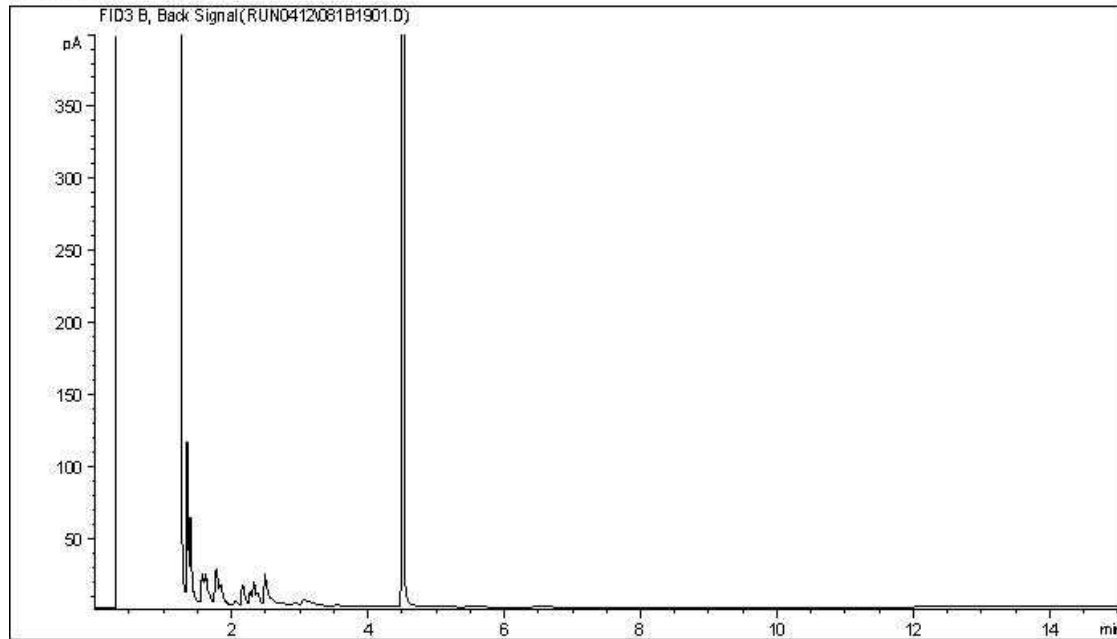
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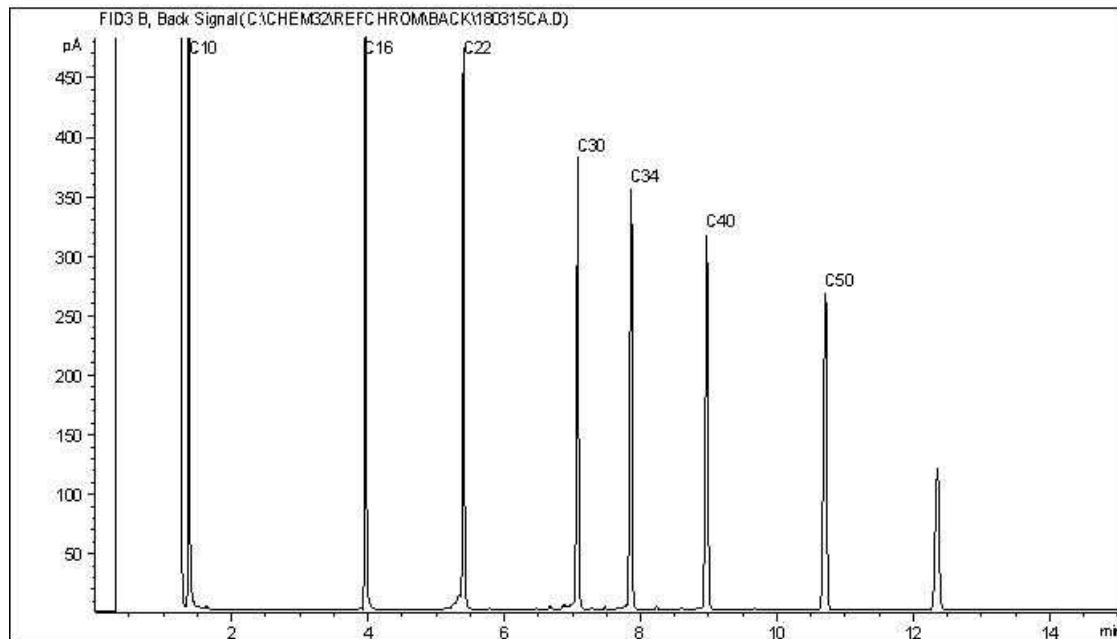
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