

California Air Resources Board
RFP No. 161SD005

Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations

Technical Memorandum- Phase 1



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Submitted by

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EXECUTIVE SUMMARY

This Technical Memorandum describes the methodology, sampling procedures and test results for Phase 1 of the Air Resources Board project titled *Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations (No. 161SD005)*.

The purpose of this testing effort was to conduct a screening effort for the project which covered a large geographic area of Central California identified in the project documents as R5 S and R3 S. In total, 19 produced water sites were tested on a limited basis over a three-month time period as shown below.

Project Region	Dates	Sites
R5 S	9/26/2017 through 9/28/2017 (Field Trip #1)	7, 8, 9, 10, 11, 12, 13
R5 S	10/10/2017 through 10/12/2017 (Field Trip #2)	1B, 1B/1-3, 2, 3, 4, 5, 6R
R3 S	11/1/2017 (Field Trip #3)	4, 5, 6, 8, 9

In total, one or more samples were collected, along with Quality Control sampling, at these sites for a total of 53 sample sets. Sample collection included air emission sampling and produced water sampling.

The assessment included using the US EPA flux chamber technology complete with all test equipment as specified in the US EPA Flux Chamber User's and measurement protocol, to measure the 'flux' of study compounds from selected sources on these sites. Testing included using a fixed sweep air flow rate of 5.0 liters per minute and a 30 liter dynamic flux chamber as per the User's guidance document. Gas phase measurements were performed for volatile organic compounds (VOCs) and toxic air contaminants (TACs) using US EPA Methods TO-14/TO-15, and fixed gases carbon dioxide and methane by ASTM Methods 1945 and 3416, respectively. Liquid phase measurements were performed by liquid sample collection and analysis for dissolved phase VOCs by US EPA Method 8260b, and for oil and grease by US EPA Method 1664 as described in the attached project Test Plan.

A summary of the Phase 1 testing program, complete with data summary and QC report is provided.

I. INTRODUCTION

This Technical Memorandum describes the field testing that was conducted in order to collect a large data base at the screening level with regard to air emissions from crude oil and natural gas operations in California. Testing was conducted by Mr. Tom Card, Dr. C.E. Schmidt, a field technician, and CARB staff. The testing was conducted in three testing events over the months of September, October, and November 2017. Produced water operations included in the Phase 1 screening effort were selected by the Site Manager; the selection process involved identifying operating sites, contacting site owners/operators and the regional water boards for permission and access for testing and arranging for access to sites on the days of testing. Testing included making arrangements for testing, equipment preparation, travel to the sites, obtaining access to the specific test locations, testing, preparing and shipping air and water samples to the laboratories. Testing activities were observed by one or more representatives from the sites and the regional water boards.

The objective of this effort was to obtain a wide-reaching data base with regard to emissions or the potential to emit volatile organic compounds (VOCs) from crude oil and natural gas produced water treatment operations in California. Phase 1 of this project provided data intended to describe the nature and extent of VOC emissions from these operations, and select several sites that are representative of these operations for more in-depth testing and analysis scheduled for Phase 2 of the program.

This memorandum includes a discussion of the testing methodology, quality control procedures, results, discussion of the results, and summary statements. The actual site emissions estimates and control efficiency calculations are reported elsewhere.

II. TEST METHODOLOGY

Testing for surface flux was conducted using the US EPA recommended Surface Isolation Flux Chamber (Radian Corporation, February 1986) following the project Test Plan. Flux chamber sampling was performed on the wastewater surface of selected unit processes or on produced water extracted from processes and placed in a 30-gallon wash tub. At equilibrium in the flux chamber, gas samples were collected using evacuated Summa polished canisters sampled as grab samples to atmospheric pressure. Process produced water was collected using a long-handle 'dipper' following the Test Plan protocol. Produced water was transferred to a container where pH and total dissolved solids (TDS) were measured, then the waste water was poured into method-specific sample containers for per method.

The operation of the surface flux chamber and gas sample collection is given below:

- 1) Flux chamber, sweep air, sample collection equipment, and field documents were located on-site.
- 2) The site information, location information, equipment information, date, and proposed time of testing were documented on the Emissions Measurement Field Data Sheet.
- 3) The exact test location was selected and placed about 0.5" to 1" into the liquid or oil surface sealing the chamber bottom edge for testing.
- 4) The sweep air flow rate (ultra-high purity- UHP air) was initiated and the calibrated rotameter, which controls the sweep air flow rate, was set at 5.0 liters per minute. A constant sweep air flow rate was maintained throughout the measurement for each sampling location.
- 5) Flux chamber data were recorded every residence interval (6 minutes) for five intervals, or 30 minutes. Source temperature and ambient temperature, along with source description and UTM coordinates were recorded during the equilibration time period.
- 6) At steady-state (greater than 5 residence intervals per method), the sample line was purged preparing for sample collection. Sample collection was performed by interfacing the sample canister to the purged, sample line and filling the sampling media with sample gas or collecting the desired sample following sample collection protocols as per the Test Plan. The canisters were filled to atmospheric pressure and then sealed.
- 7) After sample collection, the sample collection information was documented on the field data sheet and sample collection Chain of Custody sheet.
- 8) After sampling, the flux measurement was discontinued by shutting off the sweep air, removing the chamber, and securing the equipment. The sample line was back-flushed

with UHP clean air, and the flux chamber was cleaned by dry wipe with a clean paper towel and then washed as needed with soap and water.

- 9) The sampling location was recorded on the field data sheet. The equipment was then relocated to the next test location and steps 1) through 8) were repeated.

The operation of the liquid 'dipper' and liquid sample collection is given below:

- 1) The long-handle dipper and collection container, field analyzers, and field documents were located on-site at the selected test location. Note- screening surveys were conducted at multiple locations for each operations tested supporting the flux chamber and liquid sample collection locations.
- 2) The site information, location information, equipment information, date, and proposed time of testing were documented on the sample collection log sheets.
- 3) A location near the flux chamber test (1' to 2') was selected for liquid sampling and the dipper was rinsed with produced water, then a sample was taken below the produced water surface by filling the dipper and retrieving the sample catch as shown below.
- 4) Once collected, the sample catch was tested for pH and TDS using calibrated real-time instruments, then the sample vials were filled as per the method specifications, sealed, and stored following the sample preservation requirements.
- 5) After sample collection, the dipper and sampling containers were cleaned by washing and drying as was appropriate.
- 6) Samples were sealed, labels were applied, sample collection was recorded on Chain of Custody sheets, and samples were prepared for shipping to the laboratory.

Sample collection information is provided in Table 1.

Photo Showing Liquid Sample Collection.



III. QUALITY CONTROL

Control procedures that were used to ensure compliance to the data quality specifications as stated in Test Plan and are listed and described below. The application and frequency of these procedures were developed to meet the program data quality objectives and were executed without exception. QC data for air analyses are found on Tables 2 and 3 (field blank data and precision data respectively), and for liquid analyses on Tables 4 and 5 (field blank and precision data, respectively).

Field Documentation -- A field notebook containing data forms, including sample chain-of-custody (COC) forms, was maintained for the testing program. Attachment A contains the Emission Measurement Data Sheets.

Chain-of-Custody -- COC forms were used for field data collection; all samples were logged daily. Field data were recorded on the COC forms provided in Attachment B.

VOC Analysis by US EPA Method TO-14

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds. These data are reported in the method specific lab reports (footnoted on each lab report showing compliance with the methods).

Laboratory Method Blank- A total of 16 laboratory method blank samples were performed by the laboratory. No compounds were detected in any of the 16 samples above detection, and one laboratory blank showed 79 $\mu\text{g}/\text{m}^3$ TNMNH_C. These data indicate acceptable method performance.

Laboratory Precision- A total of six laboratory Lab Control Duplicate (LCD) samples including nine compounds were performed by the laboratory. All six LCD samples were reported within the criteria of 25 relative percent difference (RPD). These data indicate acceptable method performance.

Laboratory Accuracy- A total of six laboratory Lab Control Samples (LCS) including nine compounds were performed by the laboratory. All six LCS samples were reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Five media (field) blank samples were prepared in the field (T-208, T-307, T-507, T-608, and T-710) were analyzed as field samples (blind QC samples). The maximum values of compounds detected by this method are shown below in concentration units.

TO-14; GC/FID Compounds	Units	Max Value
Total Non-Methane Hydrocarbons	C6 µg/m ³	109.12
Total Non-Methane Hydrocarbons	C1 µg/m ³	121.52
Ethene	µg/m ³	17.75
Ethane	µg/m ³	11.82
Propane	µg/m ³	37.85
i-Butane	µg/m ³	1.77
n-Butane	µg/m ³	1.67
t-2-Butene	µg/m ³	1.73
n-Pentane	µg/m ³	2.13
Isoprene	µg/m ³	2.22
2-Methylpentane	µg/m ³	1.58
3-Methylpentane	µg/m ³	3.0
n-Hexane	µg/m ³	12.9
Methylcyclopentane	µg/m ³	3.23
Styrene	µg/m ³	2.46
1,2,4-Trimethylbenzene	µg/m ³	1.93
n-Decane	µg/m ³	2.2
1,2,3-Trimethylbenzene	µg/m ³	1.43
n-Butylbenzene	µg/m ³	2.12
Undecane	µg/m ³	1.57

In total, 18 compounds were detected in one or more samples. In addition, total non-methane hydrocarbon (TNMHC) data reported as C1 and C6 are provided. The maximum levels shown can be used to qualify lab data below these compounds were detections were noted for the blind field samples if so desired. However, these blank levels did not affect the quality of the sample data. These data demonstrate acceptable method performance.

Field Method Precision – Seven field samples were collected in replicate and analyzed for the flux chamber testing (T-104/-105, T-206/-207, T-305/-306, T-401/-402, T-403/-404, T-405/-406, and T-407/-408). The replicate samples showed RPD values, when detected in sample a replicate, as follows: TNMHC 39 RPD, benzene/toluene/ethylbenzenes/xylene (BTEX) 65 RPD, and other TO-14 compounds 52 RPD. RPD values per group of reported compounds have been averaged and the individual RPD values are found on Table 3. The criteria for field precision is RPD 50. As such, most of these values exceed the precision criteria. This was not unexpected given the matrix of compounds in the flux chamber samples. These precision data do not necessarily indicate unacceptable method performance given the challenge a complex composition of these samples. Qualifiers can be added to these data for reporting regarding field precision if so desired, however the laboratory precision data do indicate acceptable method performance.

VOC Analysis by US EPA Method TO-15

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of eight laboratory method blank samples were performed by the laboratory. One compound, benzene, was detected in all lab blank samples indicating a systematic blank contamination or carryover of compound from sample to sample. The range of detection of benzene was 0.54 $\mu\text{g}/\text{m}^3$ to 2.9 $\mu\text{g}/\text{m}^3$. Benzene levels below 2.9 $\mu\text{g}/\text{m}^3$ should be considered below the method detection for Phase 1, so data qualification is recommended. However, that balance of these data showing non-detect indicate acceptable method performance.

Laboratory Precision- A total of three laboratory LCD samples including 16 compounds were performed by the laboratory. All six LCD samples were reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- A total of three laboratory LCS samples including nine compounds were performed by the laboratory. All six LCS samples were reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Five media (field) blank samples were prepared in the field (T-208, T-307, T-507, T-608, and T-710) were analyzed as field samples (blind QC samples). The maximum values of compounds detected by this method are shown below in concentration units.

TO-15; GC/MS Compounds	Units	Max Value
Benzene	$\mu\text{g}/\text{m}^3$	3.84
Dichlorodifluoromethane	$\mu\text{g}/\text{m}^3$	47.01
Acetone	$\mu\text{g}/\text{m}^3$	5.25
Carbon tetrachloride	$\mu\text{g}/\text{m}^3$	2.06

In total, four compounds were detected in one or more samples. The maximum levels shown can be used to qualify lab data below these compounds were detections were noted for the blind field samples if so desired. Note that the maximum blank level for benzene at 3.8 $\mu\text{g}/\text{m}^3$ is very near the maximum laboratory blank level. It is recommended that these four compounds carry a qualifier for data use as found in the field blank sample data set at these

maximum levels. However, these blank levels did not affect the quality of the sample data. These data demonstrate acceptable method performance.

Field Method Precision – Seven field samples were collected in replicate and analyzed for the flux chamber testing (T-104/-105, T-206/-207, T-305/-306, T-401/-402, T-403/-404, T-405/-406, and T-407/-408). BTEX compounds were summed from the full compound list, and when detected as sample and replicate pair, the average RPD for BTEX compounds was RPD 18. For all other compounds, the average RPD was 19. These data indicate acceptable method performance.

Methane Analysis by ASTM Method 3416

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of four laboratory method blank samples were performed by the laboratory. Methane was not detected in the blank samples. These data indicate acceptable method performance.

Laboratory Precision- One LCD sample was performed by the laboratory. The sample was reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- One LCS sample was performed by the laboratory. The sample was reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Seven media (field) blank samples were prepared in the field (T-208, T-307, T-507, T-608, and T-710) were analyzed as field samples (blind QC samples). Methane was detected in three samples ranging from 0.59-to-13 ppmv (maximum value of 13 ppmv is 8.8 mg/m³). These data demonstrate acceptable method performance.

Field Method Precision – Seven field samples were collected in replicate and analyzed for the flux chamber testing (T-104/-105, T-206/-207, T-305/-306, T-401/-402, T-403/-404, T-405/-406, and T-407/-408). The average RPD for methane in the replicate sample data set as detected in five of the seven sample/replicate pairs was 15 (criteria RPD 50). These data indicate acceptable method performance.

Carbon Dioxide Analysis by ASTM Method 1945

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of four laboratory method blank samples were performed by the laboratory. Carbon Dioxide was not detected in the blank samples. These data indicate acceptable method performance.

Laboratory Precision- One LCD sample was performed by the laboratory. The sample was reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- One LCS sample was performed by the laboratory. The sample was reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Five media (field) blank samples were prepared in the field (T-208, T-307, T-507, T-608, and T-710) were analyzed as field samples (blind QC samples). Carbon dioxide was detected in these blank samples. These data demonstrate acceptable method performance.

Field Method Precision – Seven field samples were collected in replicate and analyzed for the flux chamber testing (T-104/-105, T-206/-207, T-305/-306, T-401/-402, T-403/-404, T-405/-406, and T-407/-408). The average RPD for carbon dioxide detected in three of the seven replicate pairs was 4 (criteria RPD 50). These data indicate acceptable method performance.

Liquid Sample VOC Analysis by US EPA Method 8260b

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds, matrix spike samples, and matrix spike duplicate samples. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of seven laboratory method blank samples were performed by the laboratory. No compounds were detected in any of the samples above detection. Two field samples were analyzed as oil/tar samples (solid), and one method blank was prepared and reported as such with no detections in the sample. These data indicate acceptable method performance.

Laboratory Precision- A total of seven laboratory Lab Control Duplicate (LCD) samples including nine compounds and three surrogates were performed by the laboratory. All six LCD samples were reported within the criteria of 20 RPD. Two field samples were analyzed as oil/tar samples (solid), and one LCD sample was prepared and reported as such with no detections in the sample. These data indicate acceptable method performance.

Laboratory Accuracy- A total of six laboratory Lab Control Samples (LCS) including nine compounds and three surrogates were performed by the laboratory. All six LCS samples were reported within the criteria of 70-to-130 percent recovery. Two field samples were analyzed as oil/tar samples (solid), and one LCD sample was prepared and reported as such with no detections in the sample. These data indicate acceptable method performance.

Field System Blank – Five media (field) blank samples were prepared in the field (V-208, V-307, V-507, V-608, and V-710) were analyzed as field samples (blind QC samples). In total, two

16 compounds were detected in two samples; methylene chloride ranging from 1.2-to-1.8 µg/L (maximum 1.8 µg/L) and chloroform ranging from 0.30-to-0.33 µg/L (maximum 0.33 µg/L). The maximum levels shown can be used to qualify lab data below these compounds were detections were noted for the blind field samples if so desired. However, these blank levels did not affect the quality of the sample data. These data demonstrate acceptable method performance.

Field Method Precision – Seven field samples were collected in replicate and analyzed for the flux chamber testing (V-104/-105, V-206/-207, V-305/-306, V-401/-402, V-403/-404, V-405/-406, and V-407/-408). In total, 14 compounds were detected in one or more samples. The replicate samples showed RPD values, when detected in sample an replicate, as follows: benzene/toluene/ethylbenzene/xylenes (BTEX) 7.1 RPD, and other compounds 7.8 RPD. RPD values per group of reported compounds have been averaged and the individual RPD values are found on Table 3. The criteria for field precision was met with individual and BTEX. These data indicate acceptable method performance.

Liquid Sample Oil and Grease Analysis by US EPA Method 1664

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of seven laboratory method blank samples were performed by the laboratory. No compounds were detected in any of the samples above detection. Two field samples were analyzed as oil/tar samples (solid), and one method blank was prepared and reported as such with no detections in the sample. These data indicate acceptable method performance.

Laboratory Precision- A total of seven laboratory Lab Control Duplicate (LCD) samples including nine compounds and three surrogates were performed by the laboratory. All six LCD samples were reported within the criteria of 18 RPD. Two field samples were analyzed as oil/tar samples (solid), and one LCD sample was prepared and reported as such with no detections in the sample. These data indicate acceptable method performance.

Laboratory Accuracy- A total of six laboratory Lab Control Samples (LCS) including nine compounds and three surrogates were performed by the laboratory. All six LCS samples were reported within the criteria of 78-to-114 percent recovery. Two field samples were analyzed as oil/tar samples (solid), and one LCD sample was prepared and reported as such with no detections in the sample. These data indicate acceptable method performance.

Field System Blank – Five media (field) blank samples were prepared in the field (J-208, J-307, J-507, J-608, and J-710) were analyzed as field samples (blind QC samples). In total, only one sample showed detection in the blank at 0.95 mg/L (MDL 0.86 mg/L). These data demonstrate acceptable method performance.

Field Method Precision – Seven field samples were collected in replicate and analyzed for the flux chamber testing (J-104/-105, J-206/-207, J-305/-306, J-401/-402, J-403/-404, J-405/-406, and J-407/-408). The replicate samples showed an average RPD of 43, however the range of response was 0.0 RPD to 189 RPD with two sample replicate pairs exceeding the criteria of 50 RPD (60 and 189 RPD exceeded criteria). It is likely that this variable is related to the process of 'decanting' or 'separating' any oil layer from the water layer in the field given that the goal is to collect a water sample free from oil meeting the charter of the method. This precision performance give the reader pause when making decisions regarding high detections with this method given the sample matrix issues. Note that these data do not indicate an unacceptable method performance.

IV. RESULTS AND DISCUSSIONS

A summary of the field sample collection data and information for the testing conducted during this source test is provided in Table 1. All field data for the on-site surface flux chamber testing for temperature, along with sample identification and sample ID data and information on the liquid sample collection are presented in Table 1.

Quality control data for both air and liquid samples is reported in Tables 2 through 5; blank and replicate QC data for air samples is found in Tables 2 and 3, respectively, and blank and replicate QC data for liquid samples is found in Tables 4 and 5, respectively.

Laboratory data for air samples are summarized in Table 6 and reported in concentration units, and in flux units in Table 7. All liquid sample data are summarized in Table 7, and are reported in concentration units.

Surface flux data for surface area sources are calculated using measured target compound concentrations and flux chamber operating parameter data (i.e., sweep air flow rate of 5.0 liters per minute, and surface area of 0.13 square meters [m^2]). The site emissions can be calculated by multiplying the flux by the surface area of the source. The flux is calculated from the sweep air flow rate Q (cubic meters per minute [m^3/min]), the species concentration Y_i (micrograms or milligrams per cubic meter [$\mu g/m^3$; mg/m^3]), and exposure to the chamber surface area A (square meters [m^2]), as follows:

$$F_i = (Q) (Y_i) / (A)$$

V. SUMMARY

An extensive screening study was conducted as Phase 1 of a multi-phased program, over a wide geographic range in central California and a total of 19 crude oil and natural gas produced water operations were tested. Testing was conducted with the intent of understanding the nature and extent of VOC emissions from these facilities which are operationally different. The following is a summary of activities and results associated with this objective:

- A total of 53 flux samples (including QC samples) were conducted using the US EPA Surface Emission Isolation flux chamber technology. The technology, coupled with regulatory approved analytical methods, quantitatively measures flux of VOCs and fixed gases at the test surface of study compounds. In addition, liquid samples were taken at each test location to determine the content of VOCs and oil/grease; the sample collection was co-located so that a relationship between VOC flux and dissolved phase VOCs in waste water could be established.
- Field and laboratory quality control data indicate acceptable data quality for the air methods, including US EPA Method TO-14 (GC/FID), US EPA Method TO-15 (GC/MS), and ASTM 1945 for carbon dioxide and ASTM Method 3416 for methane. Low levels of a 18 compounds were found in the TO-14 field blank samples. Likewise low levels of four compounds were found in the TO-15 field blank samples. Since the laboratory blank samples show no contamination, this type and level of contamination is likely due to the high levels found for some compounds plus the complex matrix of compounds. Data qualifiers can be used for compounds found in blank samples if desired, however given the levels of detection of key compounds, this may not be necessary. Other QC parameters indicated acceptable method performance.
- Field and laboratory quality control data indicate acceptable data quality for the liquid methods, including US EPA Method 8260b (GC/MS) for dissolved phase VOCs and US EPA Method 1664 for oil and grease. Low levels of methylene chloride and chloroform were detected in two of field blanks, and it is likely that these contaminants are not related to the program. One oil and grease field blank showed a low level of contamination. Data qualifiers can be used for compounds found in blank samples if desired, however given the levels of detection of key compounds, this may not be necessary. Other QC parameters indicated acceptable method performance.
- The flux data can be used to estimate VOC and fixed gas (methane and carbon dioxide) emissions from those operations tested. Likewise the liquid sample data can be used to describe the VOC and oil/grease content of the produced water sources tested. Further, these data can be used to correlate produced water concentration data to VOC flux data.

REFERENCES

US EPA. 1986. ***"Measurement of Gaseous Emission Rates From Land Surfaces Using an Emission Isolation Flux Chamber, Users Guide."*** EPA Environmental Monitoring Systems Laboratory, Las Vegas, Nevada, EPA Contract No. 68-02-3889, Work Assignment No. 18, Radian Corporation, February 1986. NTIS # PB 86-223161.

Card, TR, and CE Schmidt, Test Plan. August 17, 2017. ***"Measurement of Produced water Emissions from Crude Oil and Natural Gas Operations"***.

Attachment 1
Field Notes

SURFACE FLUX MEASUREMENT DATA FORM

DATE 9/26/17 SAMPLERS LES TOL JOA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 8

SURFACE DESCRIPTION WW after skimmer 45% oil on surface

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

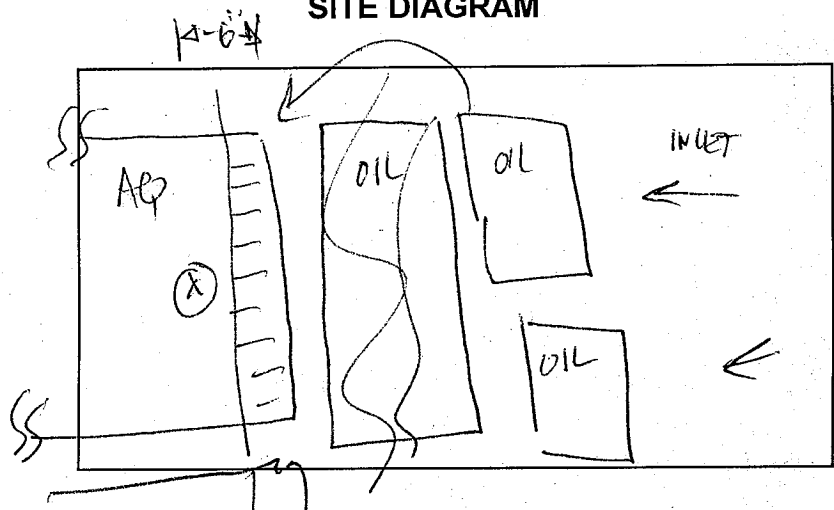
SWEEP AIR 50630 cc 50638 SUPPLIER STM PA PSIG START 1000 PSIG STOP _____
DHR #12

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0814	5.0	0								
		1								
		2						T101	689	
0832		3			67	74	7.88	4.070		
		4								
0844		5								
ΔT	3'30"									

COMMENTS:

AGUEOUS SURFACE w/ LIGHT SHEEN PATCHES (~5%)
LB #12
UTM 11S 331030 E
3914034 N
INLET TEMP 82°

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 9/26/17 SAMPLERS LES TRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 8
 SURFACE DESCRIPTION WW before skimmer 100% oil surface
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 50638 SUPPLIER SMA PA PSIG START 960 PSIG STOP _____

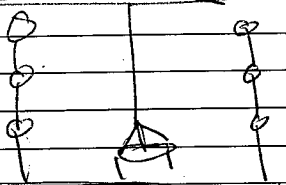
Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0901	5.0	0								
↓		1								
↓		2						1102	725	
0919		3	80	80	80	81	7.38	5,110		
		4	81							
0931		5								
ΔT	4'30"									

COMMENTS:

BLACK OIL LAYER

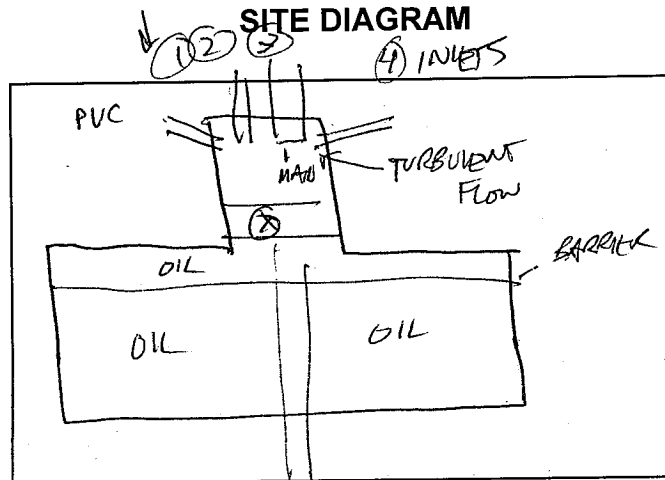
REMOVED GRATE

SUSPENSION FROM FALLS



DTM 115 331038 E
 3914025 N

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 9/26/17 SAMPLERS LES TPC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S CP-2 #9

SURFACE DESCRIPTION AQUICOLS, NO SHEEN

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL ✓ CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

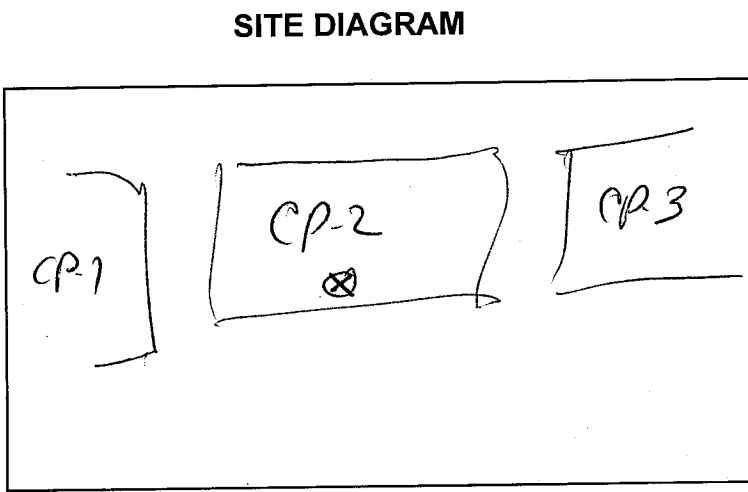
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR VHP CC 50638 SUPPLIER SMT PA PSIG START 800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1150	5.0	0								
		1								
		2								
1214		3			72	88	7.88	3060	T103	852
		4								
1226	5									
ΔT	3:30									

COMMENTS:
AQUICOLS - NO SHEEN

UTM 11S 334522 E
391 7924



SURFACE FLUX MEASUREMENT DATA FORM

DATE 1/26/17 SAMPLERS LES TRL SDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S CP-1 #9

SURFACE DESCRIPTION AQUEOUS @ 20% SURFACE SLUM

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL V CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR VHP CC 50638 SUPPLIER SM PA PSIG START 700 PSIG STOP _____

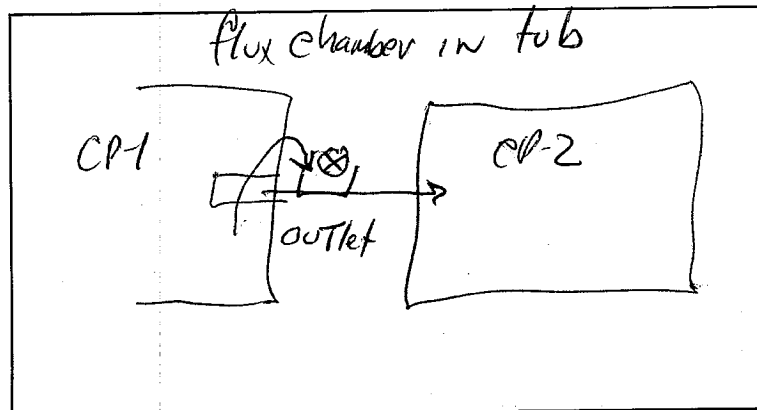
Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1305	5.0	0								
		1								
		2								
1323		3	85	93	84	88	7.97	3840	T104 769 T105 804	
		4								
1335	V	5					1337	AT	4:37	
							1341	AT	3:32	

COMMENTS:

AQUEOUS @ ~20% SURFACE SLUM

UTM 11S 334479 E
3917922 N

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

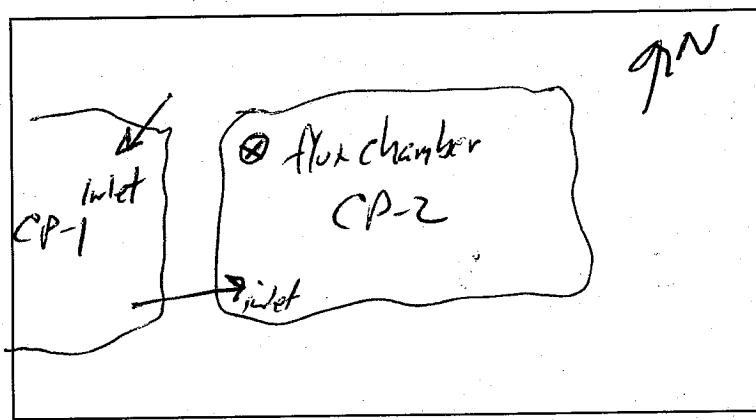
DATE 9/27/17 SAMPLERS LES TEL SDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 7
 SURFACE DESCRIPTION CP-2 OIL/SCUM SURFACE @ BLOWN WATER
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 50638 SUPPLIER SMT PA PSIG START 600 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>0826</u>	<u>5.0</u>	<u>0</u>								
		<u>1</u>								
		<u>2</u>								
<u>0844</u>		<u>3</u>			<u>106</u>	<u>80</u>	<u>7.54</u>	<u>412</u>	<u>T201 802</u>	
		<u>4</u>								
<u>0856</u>	<u>V</u>	<u>5</u>							<u>ΔT 3:06</u>	

COMMENTS:
OIL/SCUM SURFACE,
BLOWN WATER

UTM 11S 313194E
3926547N

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 9/27/17 SAMPLERS LES TRL JDA

LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 7

SURFACE DESCRIPTION CP1 * HIGH FLOW OF WATER IN PRIOR TEST, OIL COVERED PRIOR

CURRENT ACTIVITY NO OIL NOW

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR VHP CC 50638 SUPPLIER SPT PA PSIG START 500 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>0934</u>	<u>5.0</u>	<u>0</u>								
		<u>1</u>								
		<u>2</u>								
<u>0952</u>		<u>3</u>			<u>84</u>	<u>80</u>	<u>7.82</u>	<u>358</u>	<u>1202</u>	<u>805</u>
		<u>4</u>								
<u>1004</u>	<u>✓</u>	<u>5</u>								
								<u>AT</u>	<u>3.20</u>	

COMMENTS:

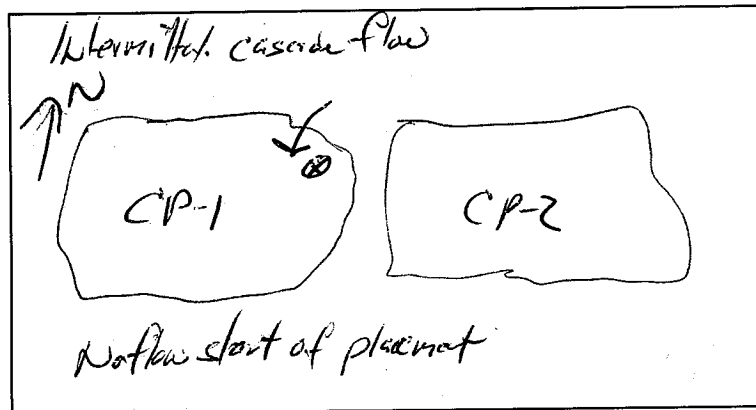
SITE DIAGRAM

Water off @ 9:25

0948 CHAMBER ADJUST

WTM 115 313185 E
3926549 N

HIGH VOLUME OF CLEAR
LOOKING WATER FOR 250 MIN
PRIOR TO TESTING
-LARGELY OIL COVERED



SURFACE FLUX MEASUREMENT DATA FORM

DATE 9/27/17 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 7

SURFACE DESCRIPTION CP1

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR UHP CC 50638 SUPPLIER 3M PA PSIG START 450 PSIG STOP _____

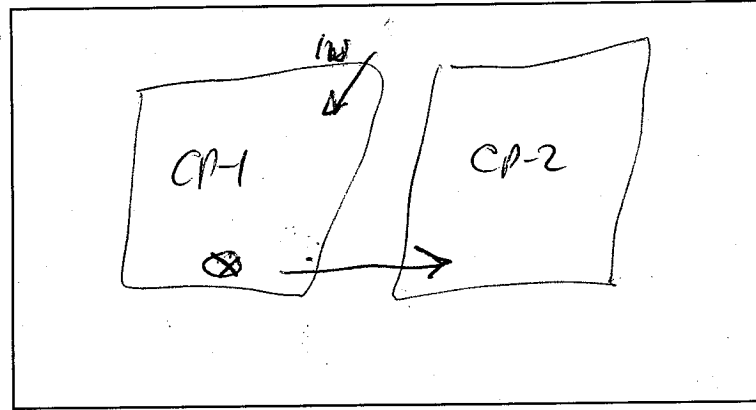
Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1034	5.0	0								
		1								
		2						T203	541	
1052		3			85	85	7.84	358		
		4								
1104	V	5								
1106		START						AT	4:18	

COMMENTS:

AQUEOUS SURFACE w/ SHEEN, NO GLOBULES

UTM 11S 313169 E
3926512 N

SITE DIAGRAM



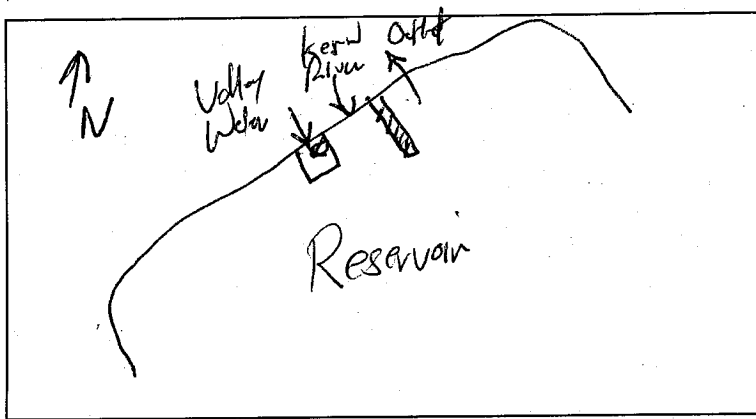
SURFACE FLUX MEASUREMENT DATA FORM

DATE 9/27/17 SAMPLERS LES JRC SDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 12
 SURFACE DESCRIPTION VALLEY WATER INLET
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 50638 SUPPLIER SM PA PSIG START 40300 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1231	5.0 ↓ ↓ ↓ ↓	0								
		1								
		2								
1249		3	99	99	99	90	7.63	449	T204 849	
		4								
1301		5						ΔT 3:46		

COMMENTS:
4X3 UPWELLING INLET
SLIGHTLY BROWN, CLEAR WATER
SAME WATER FROM SITE 7
UTM US 310474 E
3629474 N

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

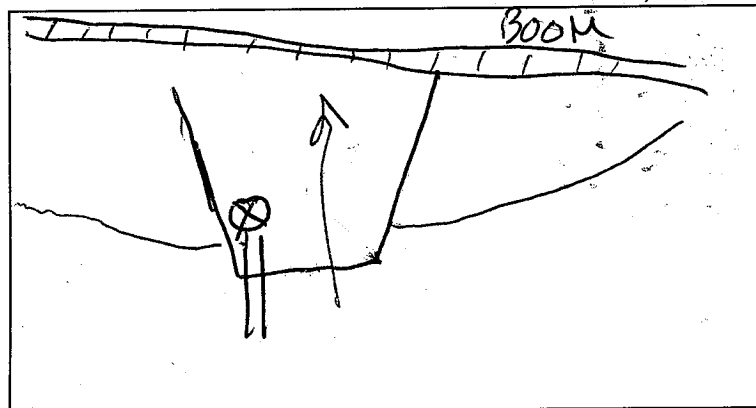
DATE 9/27/17 SAMPLERS LES TEL JOA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 12
 SURFACE DESCRIPTION Polishing Pond Inlet (Chevron)
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 50638 SUPPLIER PA PSIG START 300 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1335	5.0	0								
↓		1								
↓		2						T205	686	
1353		3			144	91	6.49	345		
		4								
1405	↓	5						ΔT	4:15	

COMMENTS:

Vary Hot but Very Clean
BTEX odor
Transparent liquid

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 9/27/17 SAMPLERS CBS TRC-JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 12

SURFACE DESCRIPTION Polishing Pond Outlet (Chevron)

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL _____ CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

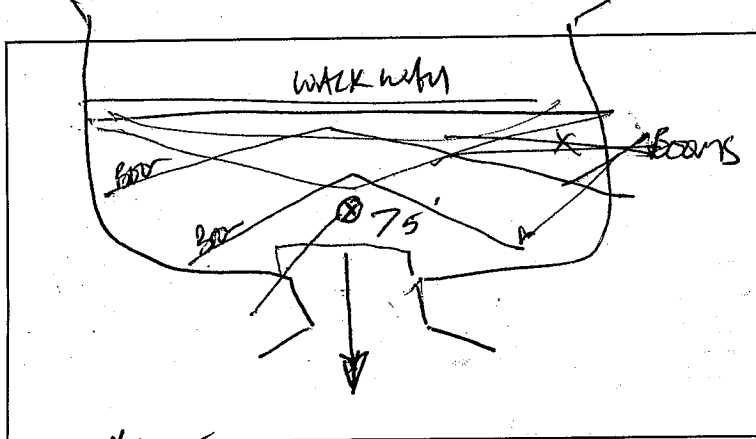
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR UAP CC 105021 SUPPLIER PA PSIG START 200 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1429	5.0	0								
↓		1								
		2						T206	692	
1447		3			141	94	6.67	396	T207	772
		4								
1459	↓	5						AT	3:40	
								AT	3:44	
1503	REAL									

COMMENTS:
 SLIGHT SHEEN/CLEAR WATER
 UTM NS 310740 E
 3929790 N
 REAL - SOME CONDENSATE (2 DROPS)
 SHEEN TRAPPED UNDER CHAMBER
 cc 105021

SITE DIAGRAM



Med/A BLANK T-208 0519 #078

SURFACE FLUX MEASUREMENT DATA FORM

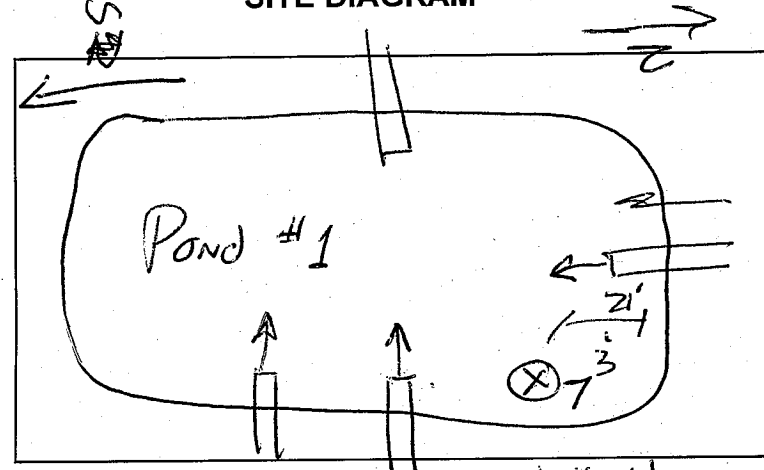
DATE 9/29/17 SAMPLERS LES TRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 13
 SURFACE DESCRIPTION POND 1 AQ WITH OIL SHEEN
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL V CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 105021 SUPPLIER PA PSIG START 1900 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0732	5.0 ↓ ↓ ↓ ↓	0								
↓		1								
0750		2						T301	980	
		3			105	65	843	340		
0802		4								
		5						AT	4:40	

COMMENTS:

UTM 11S 313845 E
395 8869 N
AQUEOUS w/ SHEEN
WINCO TEMP ~90°

SITE DIAGRAM



WIND UNITS (16F) 1-1/2 w/h/1

SURFACE FLUX MEASUREMENT DATA FORM

DATE 9/28/17 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 13

SURFACE DESCRIPTION POND 4 AQUEOUS, ~~SOME~~ SHOWN

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

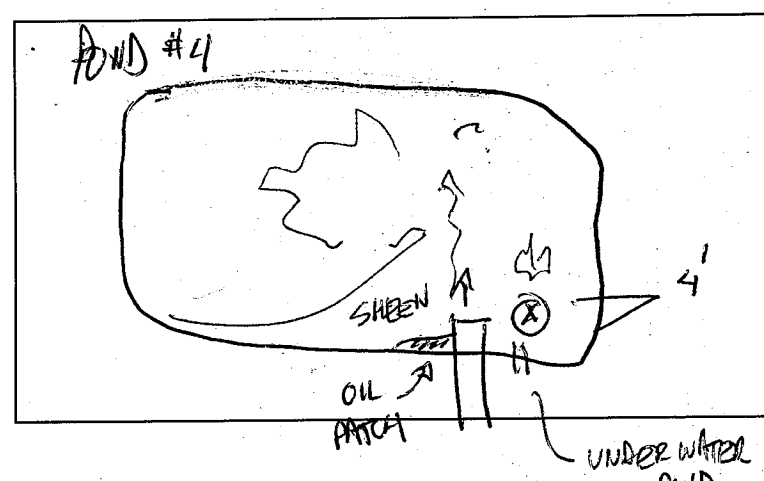
SWEEP AIR UHP CC 105021 SUPPLIER PA PSIG START 1800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0840	5.0	0								
		1								
		2						T302	507	
0848		3			98	72	8.28	340		
		4								
0910		5						AT	3:25	

COMMENTS: 1st POND UNCOVERED

UTM 115 313800 E
 3958758 N

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 9/28/17 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 11

SURFACE DESCRIPTION POND 3 NO VISIBLE OIL

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

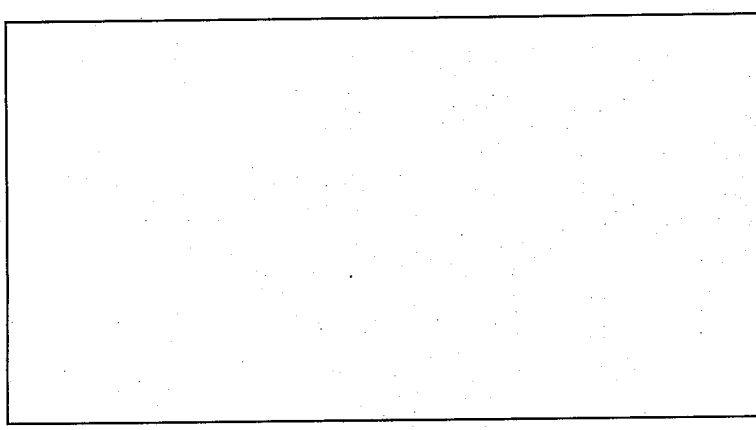
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR UHP CC 605021 SUPPLIER PA PSIG START 1700 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1010	5.0 ↓ ↓ ↓ ↓	0								
↓		1								
↓		2						T303	664	
1028		3			69	80	9.16	403		
		4				83				
1040		5						ΔT	3:30	

COMMENTS:
GREEN/BROWN POND WATER
 UTM 11S 315541 E
 3984134 N

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

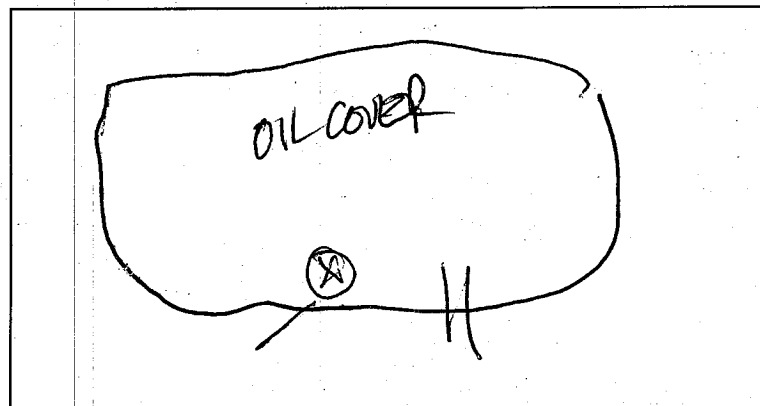
DATE 9/28/17 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 10
 SURFACE DESCRIPTION POND BLACK OIL SURFACE
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P. Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 105021 SUPPLIER PA PSIG START 1600 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1232	5.0 ↓	0								
↓		1								
↓		2						T305	603	
1250		3						T306	779	
		4			126	97				
1302	↓	5						ΔT	4:25	
								AT	3:25	

COMMENTS:

cc 105021
~~ALBERT BARR~~
 T-307 K750
 1325

SITE DIAGRAM



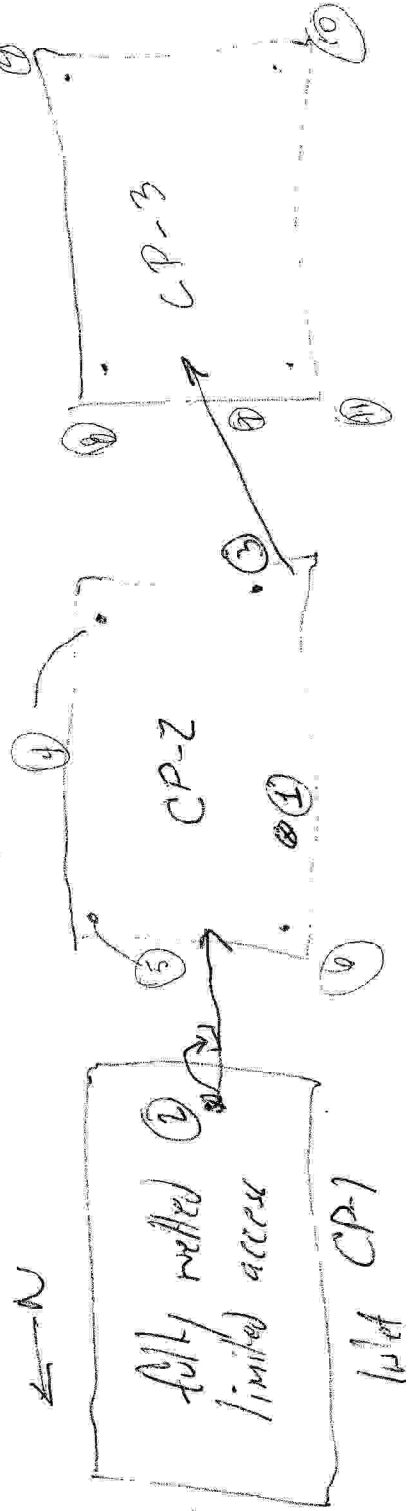
Air Resources Board - Oilfield Wastewater Emissions Assessment
 Liquid Screening/Sampling Log

Site # 9 Data taken by me

Date 9/26/2017 Time 12:25 Temp (°F) 74.6 pH 7.88 TDS (mg/l) 3860 Sample ID 103 East 115384522 UTM North 3911924

Location	Date	Time	Temp (°F)	pH	TDS (mg/l)	Sample ID	East	UTM North	Comments
1	9/26/2017	12:25	74.6	7.88	3860	103	115384522	3911924	
2		13:30	26.6	7.97	3840	104/105	479	922	
3	9/26/2017	11:55	24.5	6.99	4680				
4	9/26/2017	11:58	24.0	6.96	3850				
5	9/26/2017	12:03	24.0	7.82	3800				
6	9/26/2017	12:05	23.9	7.87	3850				
7	9/26/2017	12:10	23.2	7.87	3850				
8	9/26/2017	12:12	23.8	7.92	3880				
9	9/26/2017	12:15	24.5	7.94	3990				
10	9/26/2017	12:19	24.3	7.91	3930				
11	9/26/2017	12:37	24.0	7.89	3920				

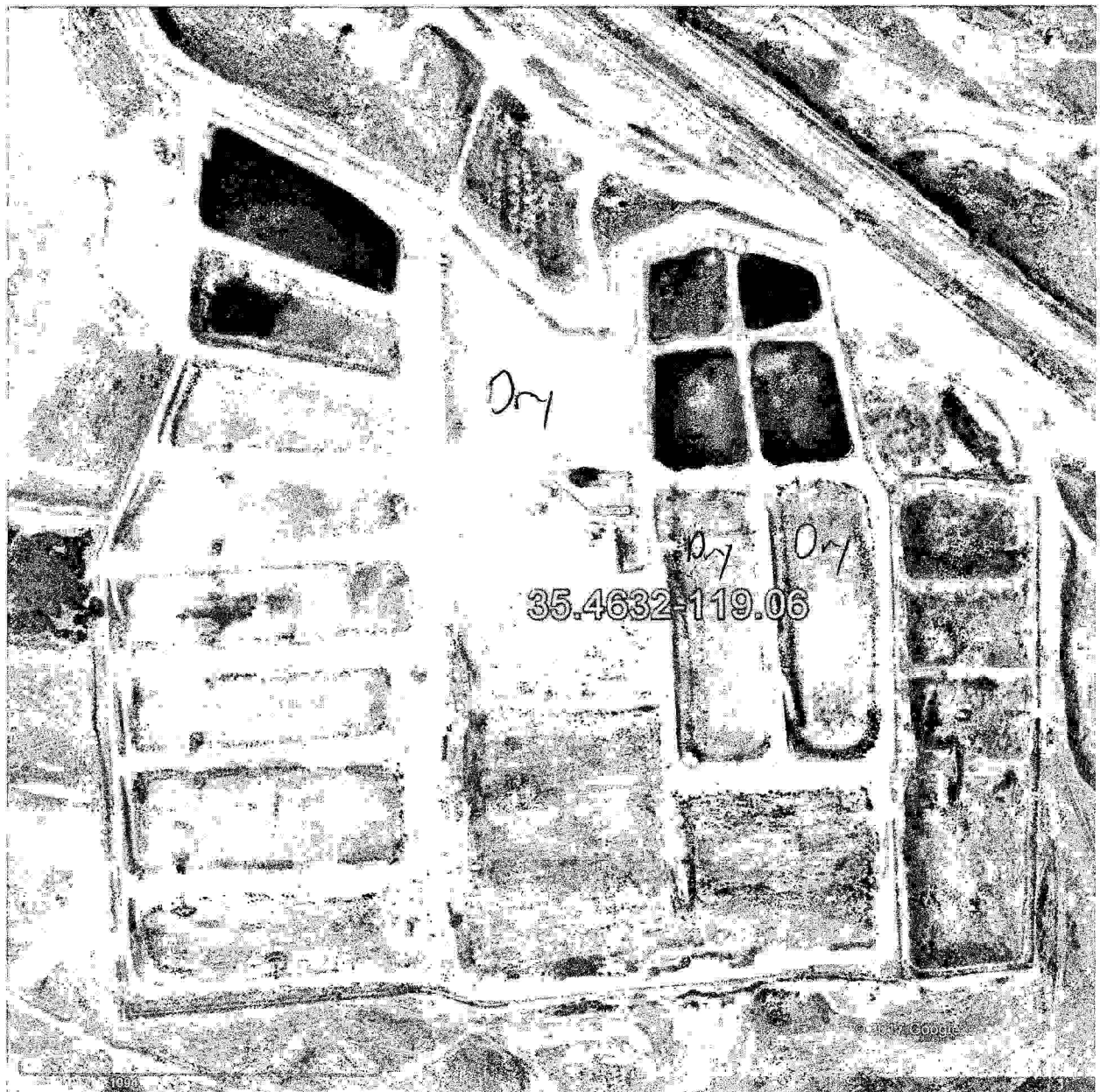
Drawing



Site 7 - Kern Front #2

35.4632

-119.06



Air Resources Board - Oilfield Wastewater Emissions Assessment

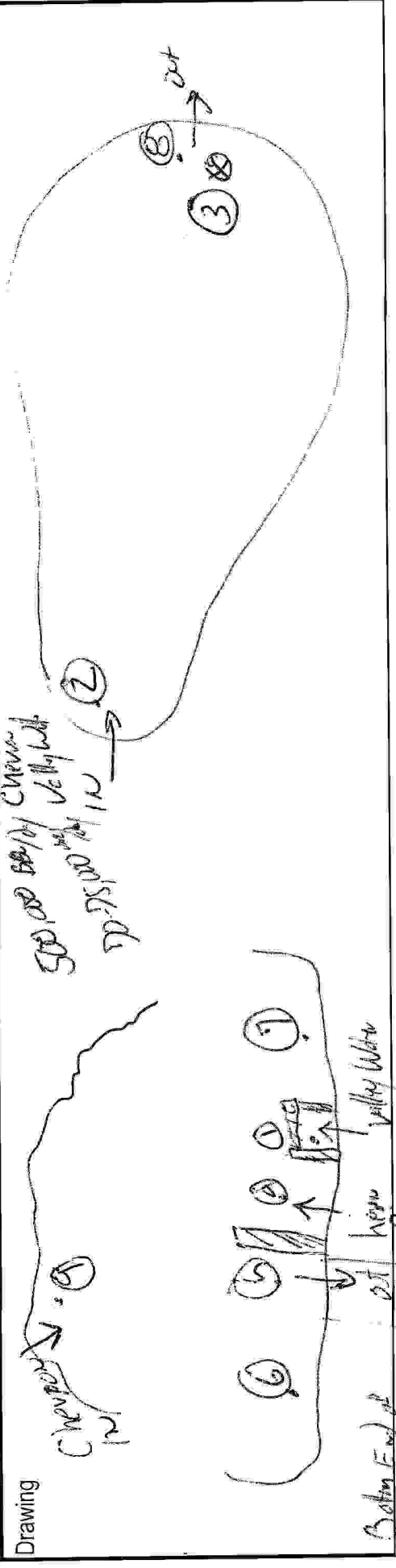
Liquid Screening/Sampling Log

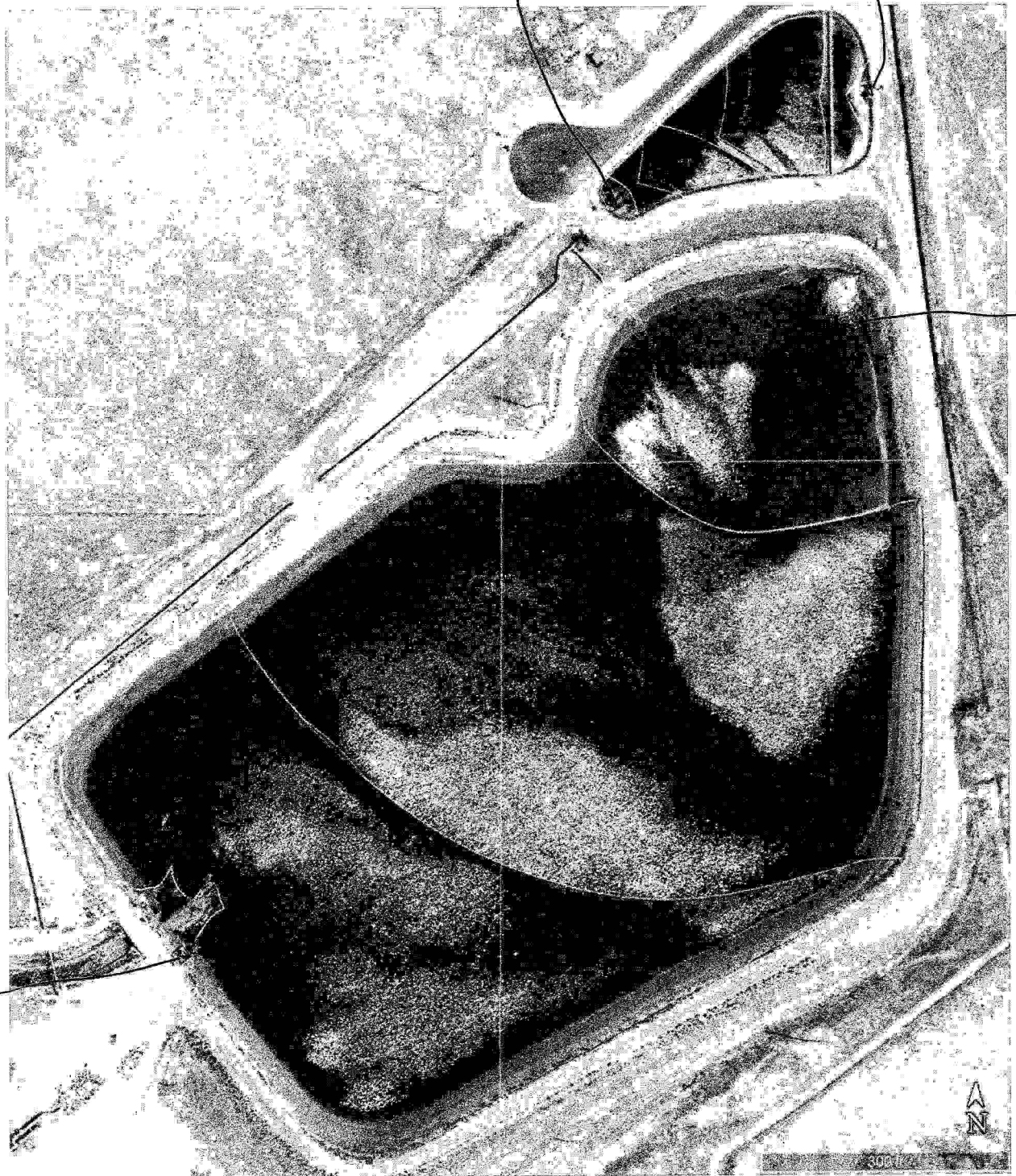
Data taken by TC

Site # 12

Date 9/29/17 Time 12:47 Temp (°F) 33.0 pH 7.63 TDS (mg/l) 449 Sample ID 204 UTM East 115310642 North 3297477 Comments Delay for casing

Location	Date	Time	Temp (°F)	pH	TDS (mg/l)	Sample ID	UTM East	UTM North	Comments
1	9/29/17	12:47	33.0	7.63	449	204			
2		1400	41.2	6.89	345	205	115310642	3297477	Delay for casing
3		1455	36.8	6.67	376	206/207			
4		12:27	22.6	8.32	105				
5		12:32	31.6	6.95	172				
6		12:37	30.8	7.01	175				
7		12:40	32.6	6.90	176				
8		13:40	55.0	6.44	350				
9		13:47	55.5	6.87	213				





①

②

③

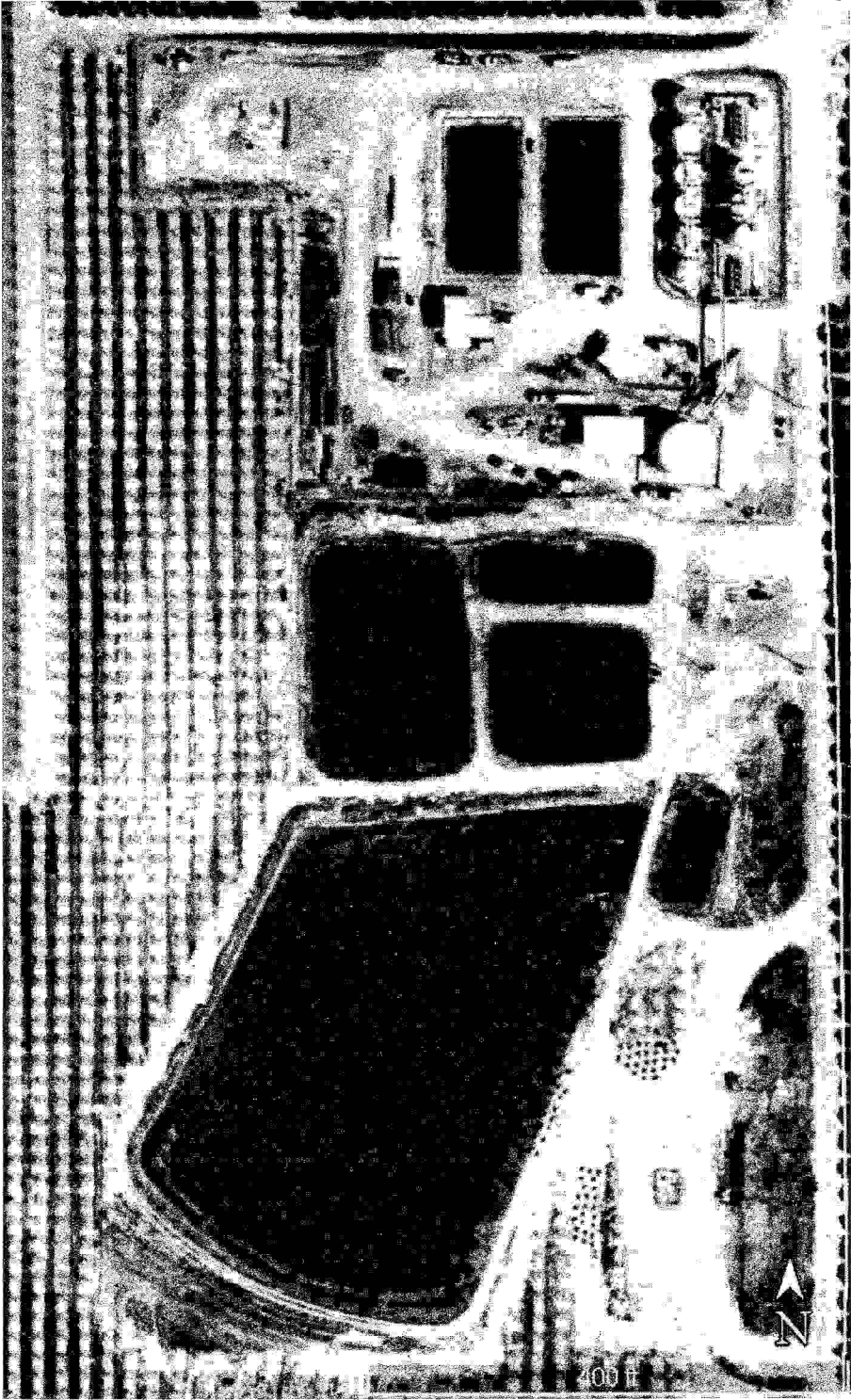
④



300m

Site 13 – Quinn Ponds, Hathaway LLC Jasmin

35.7552 -119.06



SURFACE FLUX MEASUREMENT DATA FORM

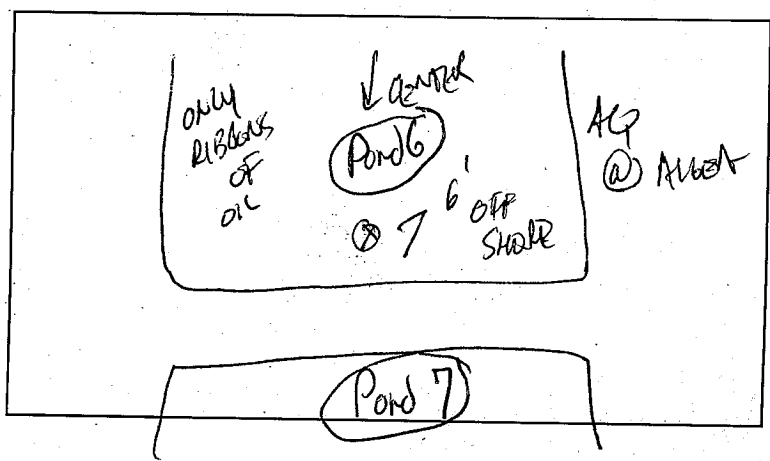
DATE 10/10/17 SAMPLERS LES TRL JDA
 LOCATION POND #6 SITE #5 ~~#4~~ 5 TRV
 SURFACE DESCRIPTION AQUEOUS w/ VERY LIGHT OIL
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No STACK SIZE/VELOCITY _____
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 105021 SUPPLIER PA PSIG START 1350 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)					Real-Time (ppmv)		Sample Number	Comments
			Chamber		Stack	Ambient		PH	TDS		
			Surf	Air	Air	Surf	Air				
1041	5.0	0									
↓		1									
↓		2									
1059	↓	3	79			83	7.78	9.010		PURGE 0.8 L/min	
		4									
1111	↓	5					AT	T401		#605 AT 4'	
1116							AT	T402		#509 AT 3'	
										SPLIT RC BARK POND 6	

COMMENTS:

SITE DIAGRAM NO ID

UTM 10S 732932 E
4005525 N



SURFACE FLUX MEASUREMENT DATA FORM

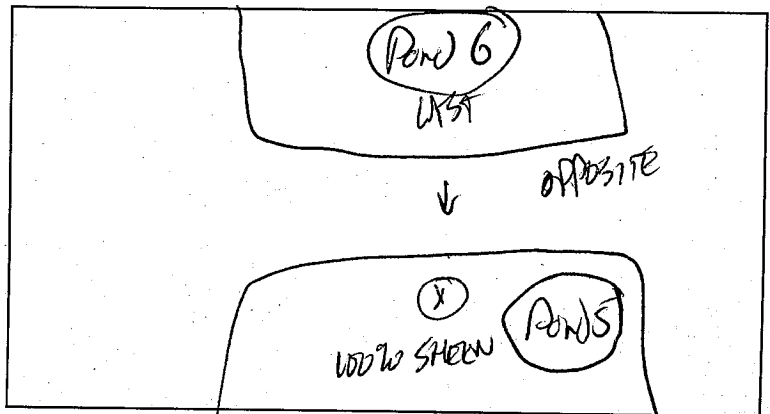
DATE 10/10/17 SAMPLERS LES TRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE # 81657
 SURFACE DESCRIPTION POND #5 AQUOUS w/ OIL SHEEN 100%
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G7 PHOTO TAKEN: Yes No
 CHAMBER SEAL ✓ CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC105021 SUPPLIER PA PSIG START 1200 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1141	5.0	0								
		1								
		2								
1159	✓	3			130	185	6.89	9.500	T403 #776 ΔT 250"	
		4							T404 #659 ΔT 220"	
1211	✓	5								
1216	REPL								BE POND 5	

COMMENTS:

SITE DIAGRAM

UTM 10S 732930 E
4005521 N



SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/10/17 SAMPLERS LES TRL JDA the
6

LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE # ~~8~~

SURFACE DESCRIPTION AQUEOUS w/ OIL SHEEN 30% - NO HEAVY OIL

CURRENT ACTIVITY Pond #1

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS _____

CHAMBER I.D. 5 PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P. Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

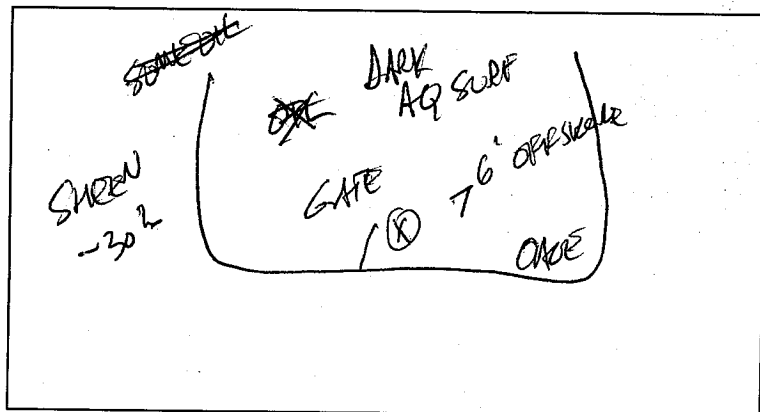
SWEEP AIR VHP CC 105021 SUPPLIER PA PSIG START 1100 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>1449</u>	<u>5.0</u>	<u>0</u>								
		<u>1</u>								
		<u>2</u>								
<u>1507</u>		<u>3</u>								
		<u>4</u>	<u>125</u>	<u>125</u>	<u>80</u>	<u>6.50</u>	<u>9,130</u>			
<u>1519</u>		<u>5</u>						<u>T-405</u>	<u># 782 3'40"</u>	
<u>1523</u>								<u>T-406</u>	<u># 734 250"</u>	

COMMENTS:

SITE DIAGRAM

UTM 10S 734207E
40106114N



SURFACE FLUX MEASUREMENT DATA FORM

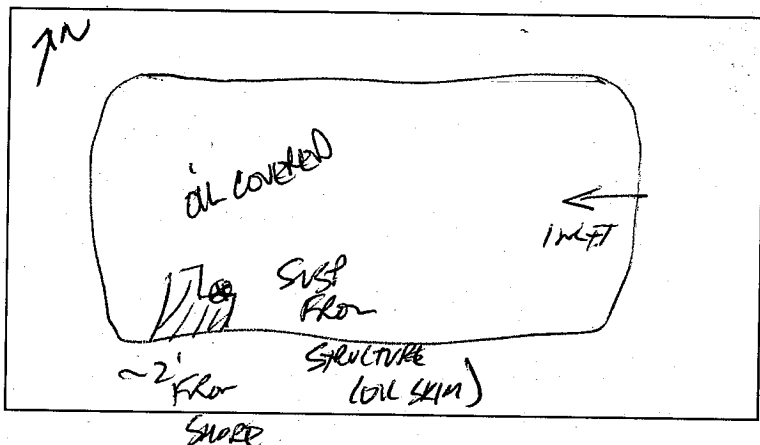
DATE 10/10/17 SAMPLERS 183 JRL JDA Gm
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE #8
 SURFACE DESCRIPTION POND # 7 - AQUEOUS w/ BLACK OIL 100%
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 105021 SUPPLIER PA PSIG START 1000 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1549	5.0	0								
↓		1								
↓		2								
1607		3			116	86	7.00	4.130	T407 #417 T408 #681	
		4								
1619	✓	5						AT 3'32" AT 2'37"		
1624	-230									

COMMENTS:

SITE DIAGRAM

10S 734359 E
4010282 N
100% oil



SURFACE FLUX MEASUREMENT DATA FORM

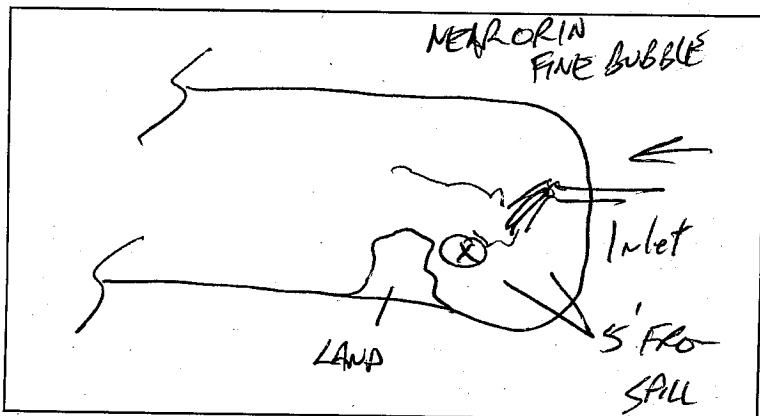
DATE 10/11/17 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE #4
 SURFACE DESCRIPTION POND #P-2B AQUEOUS BROWN WATER / SMALL PATCHES OF SCREEN
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 105021 SUPPLIER PA PSIG START 900 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0828	5.0	0								
		1								
		2						T501	#69 ΔF	
0846		3			90	73	7.50	6140		
		4							ΔT 2' 35"	
0850		5								

COMMENTS:

SITE DIAGRAM

UTM 11 ~~S~~ 278899 E
 3891473 N



SURFACE FLUX MEASUREMENT DATA FORM

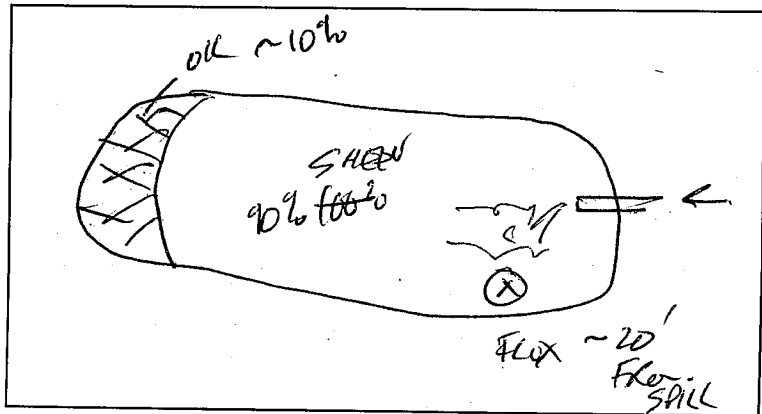
DATE 10/11/17 SAMPLERS OS/DA/RC
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S
 SURFACE DESCRIPTION SITE #4 INLET POND #CP4
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 105021 SUPPLIER PA PSIG START 800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0920	5.0 ↓ V	0								
0926		1								
0932		2								
0938		3	100		100	68	6.96	6.900	T562 #706 ΔT 4' 35"	
0944		4								
0950		5								

COMMENTS:

SITE DIAGRAM

UTM 11S 278700 E
3891501 N
ZONE 11S OR N - TO BE DETERMINED



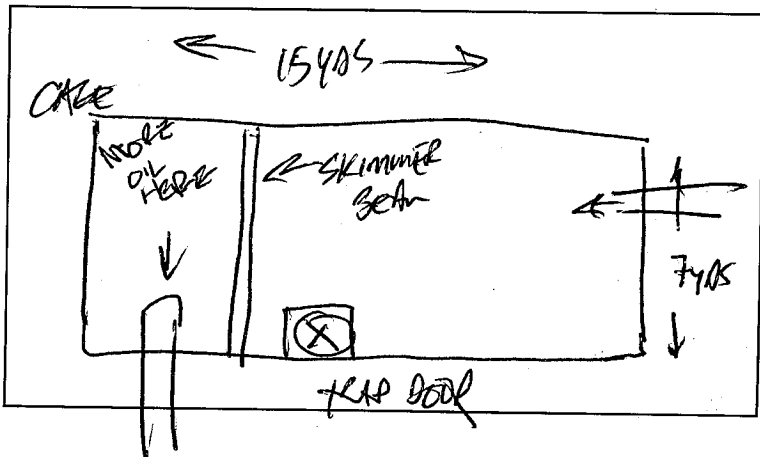
SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/11/17 SAMPLERS LES TRL JDA 27
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE # 103
 SURFACE DESCRIPTION POND # AQUEOUS w/ FULL SCREEN & 20% GLOBULS
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 105021 SUPPLIER PA PSIG START 700 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1115	5.0 ↓ ↓ ↓ ↓	0								
↓		1								
↓		2								
1133		3	84	84	84	78	7.34	11,400	1503 #637 11350	
		4								
1145		5								

COMMENTS:

SITE DIAGRAM



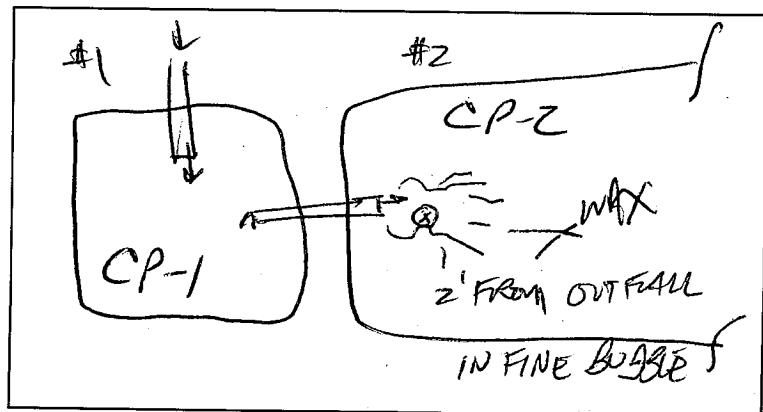
SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/11/17 SAMPLERS LES TOL JDA ③
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE #
 SURFACE DESCRIPTION POND #2 AQUOUS - 50% SAEPS, 10% GLOBULES
 CURRENT ACTIVITY CP-2
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 105021 SUPPLIER PA PSIG START 600 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1305	5.0 ↓ ↓ ↓	0								
↓		1								
↓		2								
1323		3			111	82	7.40	1350	T504 #518	
↓		4							ΔT 4'10"	
1335		5						T505 #850		
1340									ΔT 4'20"	

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/11/17 3
 SAMPLERS LBS TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE # 8
 SURFACE DESCRIPTION POND # CP1/AQUEOUS LAYER OVER WAX LAYER
 CURRENT ACTIVITY FLOATING OIL GLOBULES
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. 8522EN
 INSTRUMENT BASELINE _____

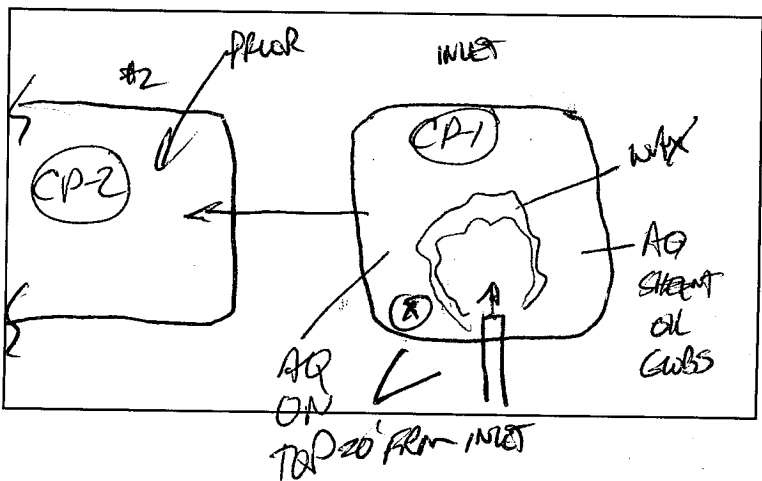
PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. _____ PHOTO TAKEN: Yes No
 CHAMBER SEAL _____ CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 105021 SUPPLIER PA PSIG START 500 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>1357</u>	<u>5.0</u>	<u>0</u>								
<u>1415</u>		<u>3</u>						<u>T506 # 644</u>	<u>AT 6' 10"</u>	
<u>1427</u>		<u>5</u>	<u>112</u>		<u>112</u>	<u>80</u>	<u>7.33</u>	<u>13,500</u>		

COMMENTS:

MEDIA BLANK
1447 #628
T507
CC105021

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

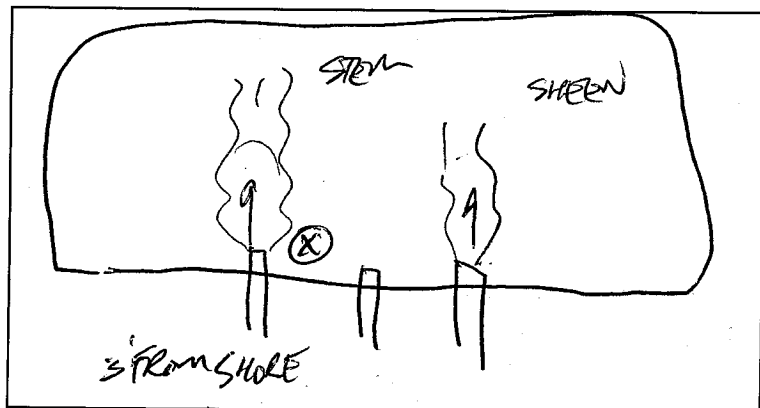
DATE 10/12/17 SAMPLERS CS TRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE 1B/1-3
 SURFACE DESCRIPTION POND - P-2B AQUEOUS - FULL SHEEN, SOME GLOBULES
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 65021 SUPPLIER PA PSIG START 350 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0816	50	0								
↓	↓	1								
↓	↓	2								
0834	↓	3						T601	#697 AT 4'10"	
		4	116		116	65	2.79	15700		
0846		5						15700		

COMMENTS:

SITE DIAGRAM

UTM 11S 258947E
3919096N



{ 3 FROM 10FZ INLET PIPES

SURFACE FLUX MEASUREMENT DATA FORM

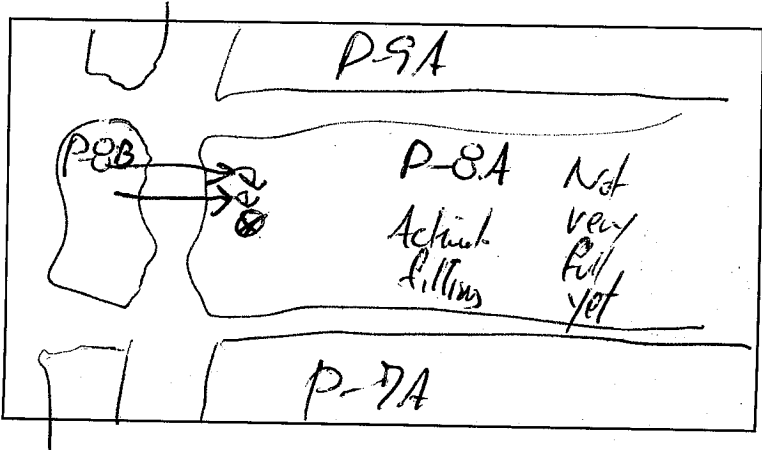
DATE 10/12/17 SAMPLERS LES JRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE 1B/1-3
 SURFACE DESCRIPTION POND #8A AQUEOUS Blown WATER 210% STEAM
 CURRENT ACTIVITY FILLING
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. 6 PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 105021 SUPPLIER PA PSIG START 250 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0921	5.0 ↓ ↓ ↓ ↓	0								
		1								
		2								
0939		3							#157	
0951		4							AT 4'40"	
		5	92		92	70	7.79	15900		
							8.03	14600		

COMMENTS:

115 259091 E
3919245 N

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

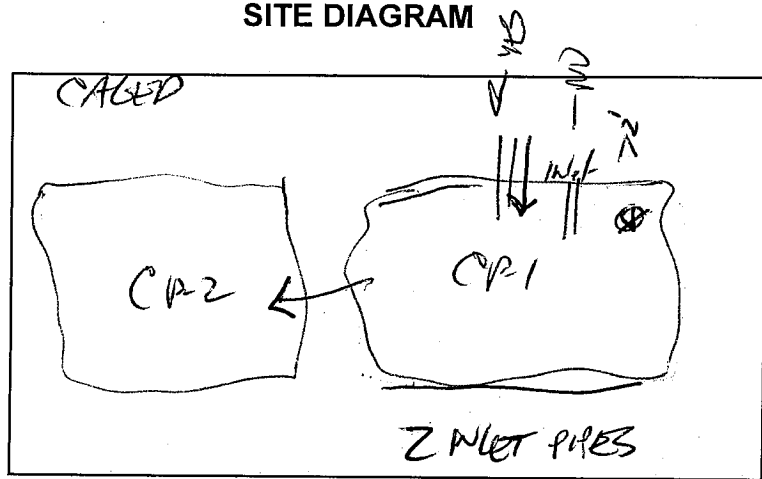
DATE 10/2/17 SAMPLERS AS / Mc / JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 13
 SURFACE DESCRIPTION 1-3 Pond CP-1
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UNP CC C73017 SUPPLIER MAXAIR PSIG START 2100 PSIG STOP _____
< 0.01 PPM

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1030	5.0	0								
1036	↓	1								
1042	↓	2								
1048		3								
1054		4	140		140	63				
1100		5						T603	#786	
1104									AT	

COMMENTS:

SITE DIAGRAM

UTM IS 258880 E
 3919112 N
 40 SAMPLES/MIN FLOW
 ON INLET



OPERATING

SURFACE FLUX MEASUREMENT DATA FORM

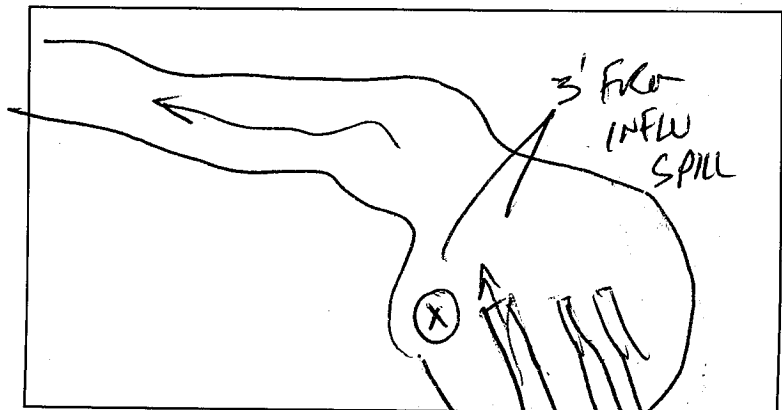
DATE 10/12/17 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SNE # 1
 SURFACE DESCRIPTION CONVEYANCE CHANNEL - AQUEOUS w/ SHEEN & SOME OIL
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL V CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP cc 73017 SUPPLIER PA PSIG START 1900 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>1145</u>	<u>5.0</u>	<u>0</u>								
<u>↓</u>	<u>↓</u>	<u>1</u>								
<u>↓</u>	<u>↓</u>	<u>2</u>						<u>T604</u>	<u># 716</u>	
<u>1203</u>	<u>↓</u>	<u>3</u>			<u>72</u>	<u>75</u>			<u>AT 3' 0"</u>	
	<u>↓</u>	<u>4</u>				<u>62</u>				
<u>1215</u>	<u>↓</u>	<u>5</u>				<u>73</u>				

COMMENTS:

SITE DIAGRAM

UTM 11S 256882E
3918974N
CONVEYANCE CHANNEL



SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/12/17 SAMPLERS CBJ TPL JDA

LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE #10

SURFACE DESCRIPTION POND #P-1A, AQUEOUS BLACK WATER w/ 10% SHEEN &

CURRENT ACTIVITY SLUMMAGE ON EDGE

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

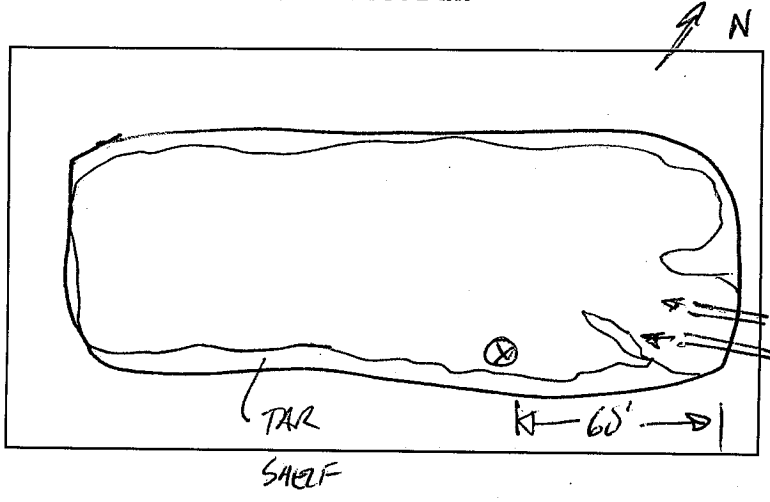
SWEEP AIR UHP CC 73017 SUPPLIER PA PSIG START 1800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1244	5.0	0								
1250		1								
1256	↓	2						T605	#698	
1302		3			75	74			#	
1309		4						T606	#877	
1314		5							AT 3'40"	
1319									AT 2'50"	

COMMENTS:

SITE DIAGRAM

UTM 11S 256849E
3919091N



SURFACE FLUX MEASUREMENT DATA FORM

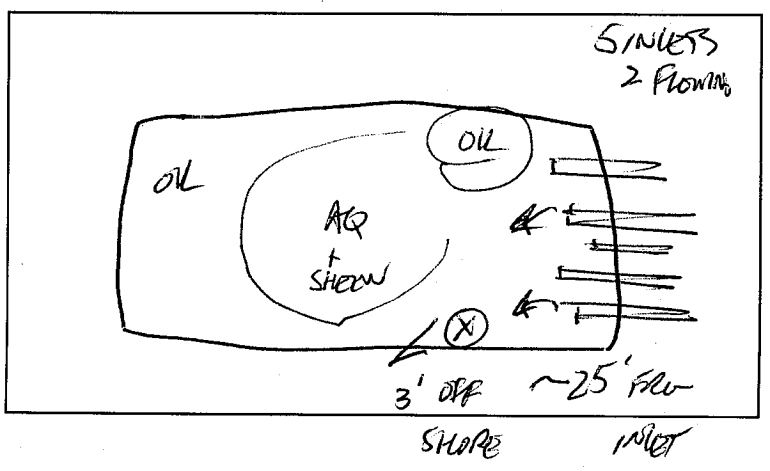
DATE 10/2/17 SAMPLERS LES TRE JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE #1
 SURFACE DESCRIPTION POND #CP-1, AQUEOUS w/SHEEN, 50% BLACK OIL
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 73017 SUPPLIER PA PSIG START 1800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1346	5.0 ↓ ↓ ↓ ↓	0								
		1								
		2								
1404		3			88	71			T607 #665 ΔT 8'40"	
		4								
1416		5								

COMMENTS:

SITE DIAGRAM

UTMA US 296820 E
3918986 N
MEDIA BUW
T-608 1429
700
73017



SURFACE FLUX MEASUREMENT DATA FORM

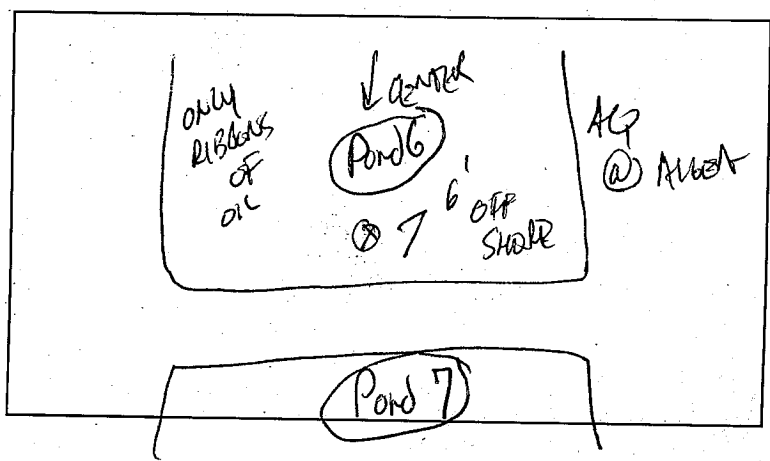
DATE 10/10/17 SAMPLERS LES TRL JDA
 LOCATION POND #6 SITE #5 ~~#4~~ 5 TRV
 SURFACE DESCRIPTION AQUEOUS w/ VERY LIGHT OIL
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No STACK SIZE/VELOCITY _____
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 105021 SUPPLIER PA PSIG START 1350 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)					Real-Time (ppmv)		Sample Number	Comments
			Chamber		Stack	Ambient		PH	TDS		
			Surf	Air	Air	Surf	Air				
1041	5.0	0									
↓		1									
↓		2									
1059	↓	3	79			83	7.78	9.010		PURGE 0.8 L/min	
		4									
1111	↓	5					AT	T401		#605 AT 4'	
1116							AT	T402		#509 AT 3'	
										SPLIT RC BARK POND 6	

COMMENTS:

SITE DIAGRAM NO ID

UTM 10S 732932 E
4005525 N



SURFACE FLUX MEASUREMENT DATA FORM

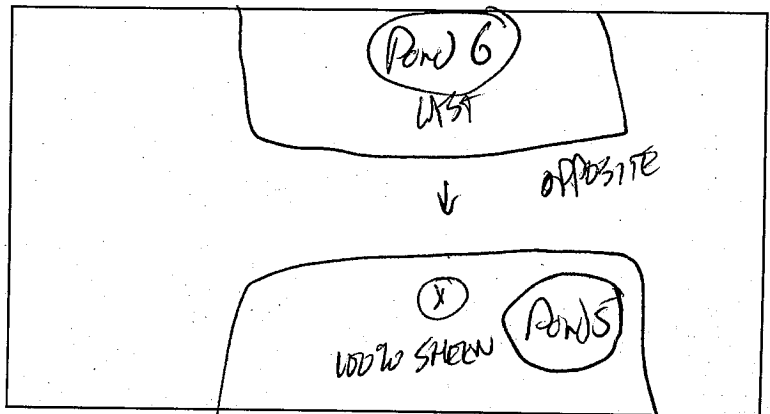
DATE 10/10/17 SAMPLERS LES TRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE # 81657
 SURFACE DESCRIPTION POND #5 AQUOUS w/ OIL SHEEN 100%
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G7 PHOTO TAKEN: Yes No
 CHAMBER SEAL ✓ CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 105021 SUPPLIER PA PSIG START 1200 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1141	5.0	0								
		1								
		2								
1159	✓	3			130	185	6.89	9.500	T403 #776 ΔT 250"	
		4							T404 #659 ΔT 220"	
1211	✓	5								
1216	REPL								BE POND #5	

COMMENTS:

SITE DIAGRAM

UTM 10S 732930 E
4005521 N



SURFACE FLUX MEASUREMENT DATA FORM

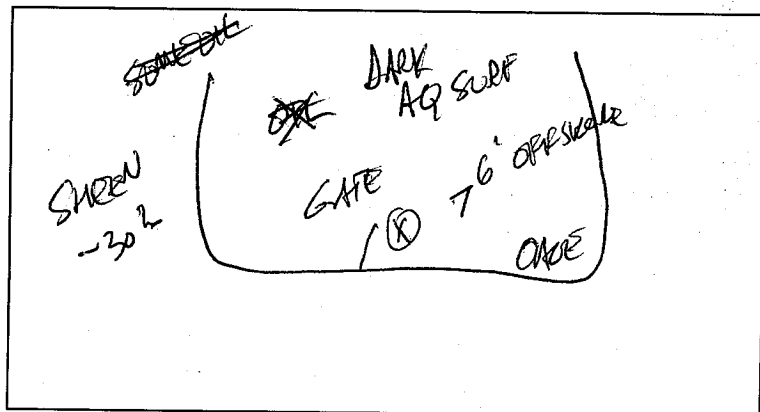
DATE 10/10/17 SAMPLERS LES TRL JDA 6 ^{the}
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE # ~~8~~
 SURFACE DESCRIPTION AQUEOUS w/ OIL SHEEN 30% - NO HEAVY OIL
 CURRENT ACTIVITY Pond #1
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. 5 PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P. Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 105021 SUPPLIER PA PSIG START 1100 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>1449</u>	<u>5.0</u>	<u>0</u>								
		<u>1</u>								
		<u>2</u>								
<u>1507</u>		<u>3</u>								
		<u>4</u>	<u>125</u>	<u>125</u>	<u>80</u>	<u>6.50</u>	<u>9,130</u>			
<u>1519</u>		<u>5</u>						<u>T-405</u>	<u># 782 3'40"</u>	
<u>1523</u>								<u>T-406</u>	<u># 734 250"</u>	

COMMENTS:

SITE DIAGRAM

UTM 10S 734207E
40106114N



SURFACE FLUX MEASUREMENT DATA FORM

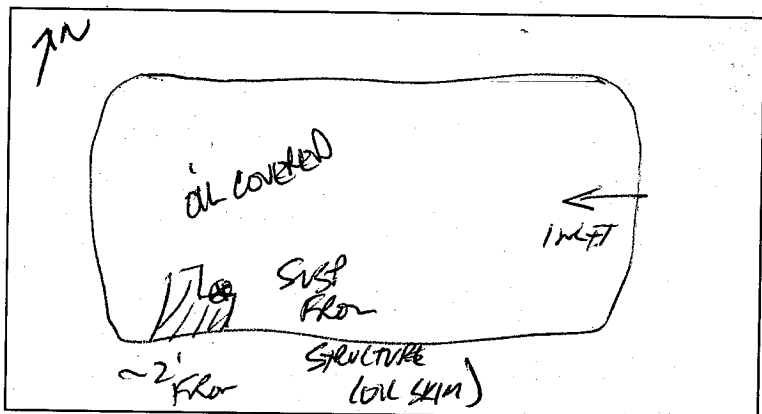
DATE 10/10/17 SAMPLERS 183 JRL JDA Gm
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE #8
 SURFACE DESCRIPTION POND # 7 - AQUEOUS w/ BLACK OIL 100%
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UAP CC 105021 SUPPLIER PA PSIG START 1000 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1549	5.0	0								
↓		1								
↓		2								
1607		3			116	86	7.00	4.130	T407 #417 T408 #681	
		4								
1619	✓	5						AT 3'32" AT 2'37"		
1624	-230									

COMMENTS:

SITE DIAGRAM

10 S 734359 E
4010282 N
100% oil



SURFACE FLUX MEASUREMENT DATA FORM

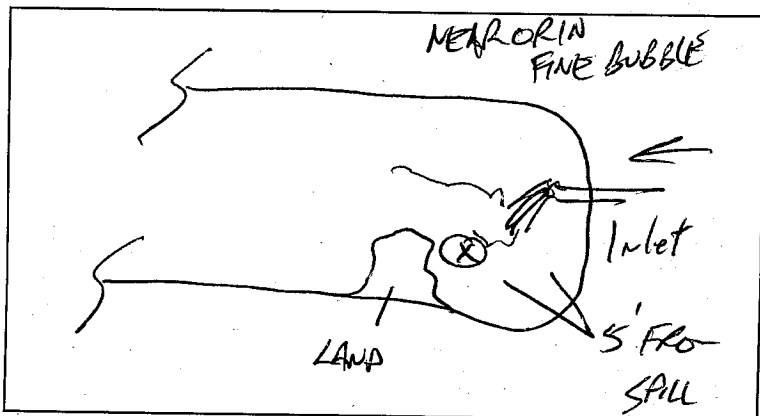
DATE 10/11/17 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE #4
 SURFACE DESCRIPTION POND #P-2B AQUEOUS BROWN WATER / SMALL PATCHES OF SCREEN
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 105021 SUPPLIER PA PSIG START 900 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0828	5.0	0								
		1								
		2						T501	#69 ΔF	
0846		3			90	73	7.50	6140		
		4							ΔT 2' 35"	
0850		5								

COMMENTS:

SITE DIAGRAM

UTM 11 ~~S~~ 278899 E
 3891473 N



SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/11/17 SAMPLERS OS/DA/RC

LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S

SURFACE DESCRIPTION SITE #4 INLET POND #CP4

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL V CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

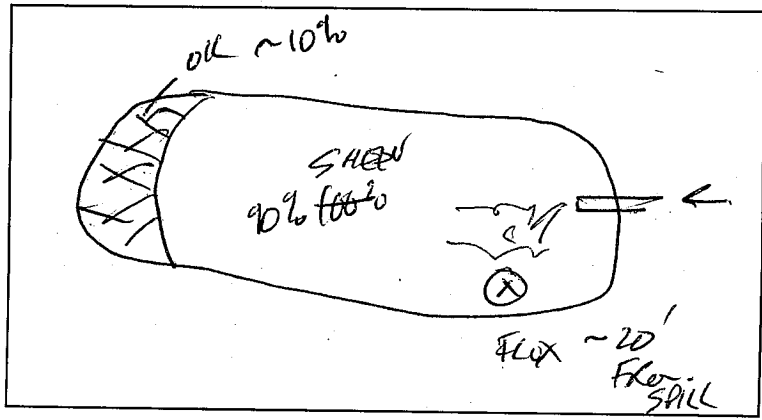
SWEEP AIR VHP CC 105021 SUPPLIER PA PSIG START 800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0920	5.0	0								
0926		1								
0932		2								
0938		3	100		100	68	6.96	6.900	T562 #706	
0944		4							ΔT 4' 35"	
0950		5								

COMMENTS:

SITE DIAGRAM

UTM 11S 278700 E
 3891501 N
 ZONE 11S OR N - TO BE DETERMINED



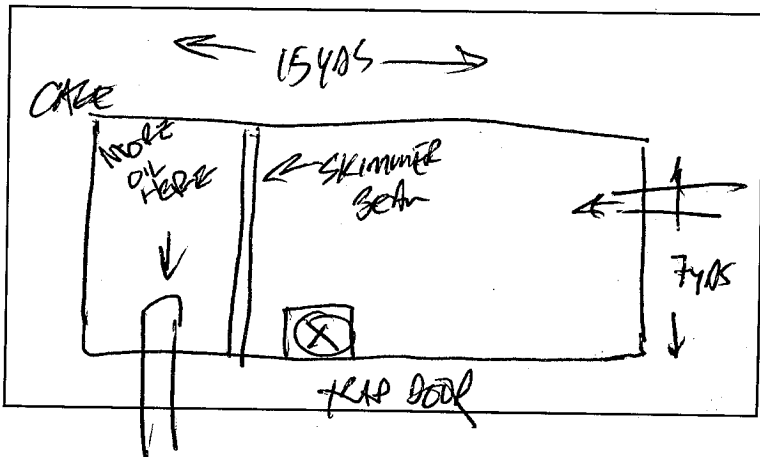
SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/11/17 SAMPLERS LBS TRL JDA 27
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE # 108
 SURFACE DESCRIPTION POND # AQUEOUS w/ FULL SCREEN & 20% GLOBULS
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 105021 SUPPLIER PA PSIG START 700 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1115	5.0 ↓ ↓ ↓ ↓	0								
↓		1								
↓		2								
1133		3	84	84	84	78	7.34	11,400	1503 #657 11350	
		4								
1145		5								

COMMENTS:

SITE DIAGRAM



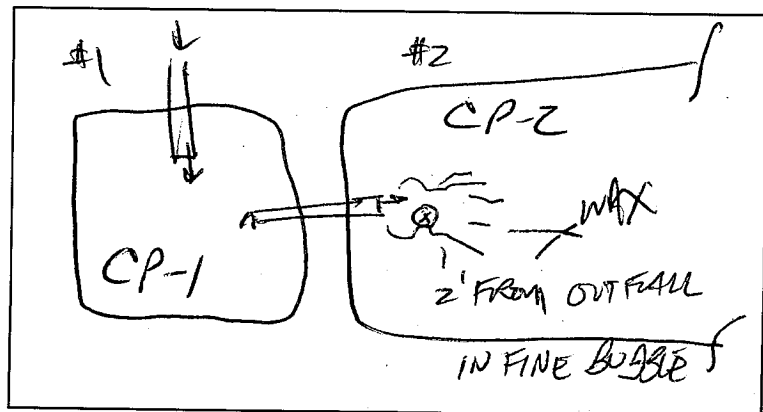
SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/11/17 SAMPLERS LES TORL JDA ①
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE # 112 ③
 SURFACE DESCRIPTION POND #2 AQUOUS - 50% SAEPS, 10% GLOBULES
 CURRENT ACTIVITY CP-2
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 105021 SUPPLIER PA PSIG START 600 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1305	5.0 ↓ ↓ ↓	0								
↓		1								
↓		2								
1323		3			111	82	7.40	1350	T504 #518	
↓		4							ΔT 4'10"	
1335	5							T505 #850		
1340									ΔT 4'20"	

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/11/17 3
 SAMPLERS LBS TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE # 8
 SURFACE DESCRIPTION POND # CP1/AQUEOUS LAYER OVER WAX LAYER
 CURRENT ACTIVITY FLOATING OIL GLOBULES
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. 8522EN
 INSTRUMENT BASELINE _____

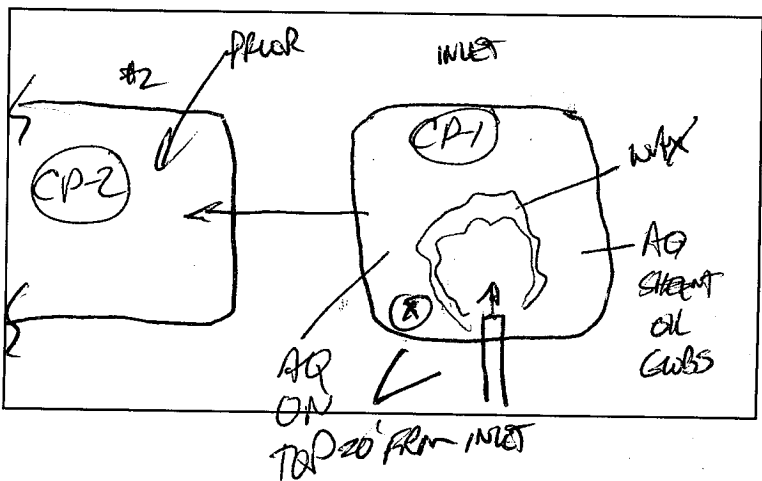
PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. _____ PHOTO TAKEN: Yes No
 CHAMBER SEAL _____ CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 105021 SUPPLIER PA PSIG START 500 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1357	5.0 ↓ ↓ ↓ ↓	0								
		1								
		2								
1415		3						T506 # 644	AT 6' 10"	
		4								
1427		5	112		112	80	7.33	13,500		

COMMENTS:

SITE DIAGRAM

MEDIA BLANK
1447 #628
T507
CC105021



SURFACE FLUX MEASUREMENT DATA FORM

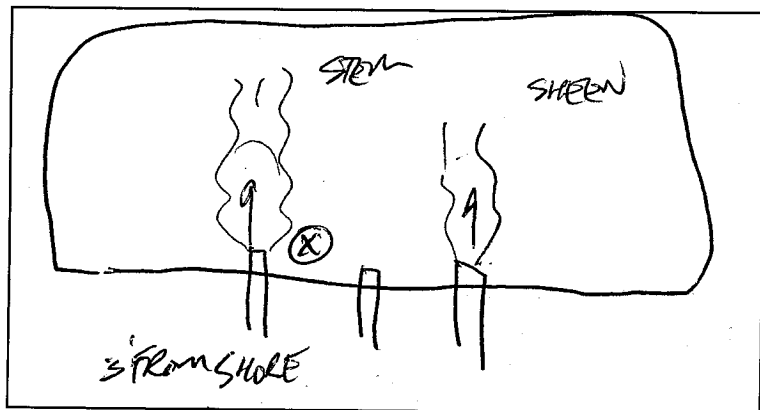
DATE 10/12/17 SAMPLERS CS TRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE 1B/1-3
 SURFACE DESCRIPTION POND - P-2B AQUEOUS - FULL SHEEN, SOME GLOBULES
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 65021 SUPPLIER PA PSIG START 350 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0816	50	0								
↓	↓	1								
↓	↓	2								
0834	↓	3						T601	#697 AT 4'10"	
		4	116		116	65	2.79	15700		
0846		5						15700		

COMMENTS:

SITE DIAGRAM

UTM 11S 258947E
3919096N



{ 3 FROM 10\"/>

SURFACE FLUX MEASUREMENT DATA FORM

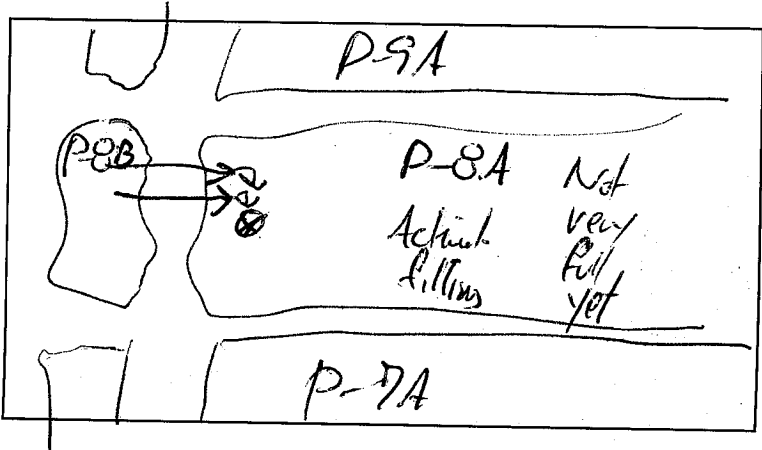
DATE 10/12/17 SAMPLERS LES JRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE 1B/1-3
 SURFACE DESCRIPTION POND #8A AQUEOUS BLOWN WATER 210% STEEN
 CURRENT ACTIVITY FILLING
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. 6 PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 105021 SUPPLIER PA PSIG START 250 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0921	5.0	0								
		1								
		2								
0939		3							# 157	
0951		4	92		92	70	7.79	15900	ΔT 4'40"	
		5				8.03	14600			

COMMENTS:

115 259091 E
3919245 N

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

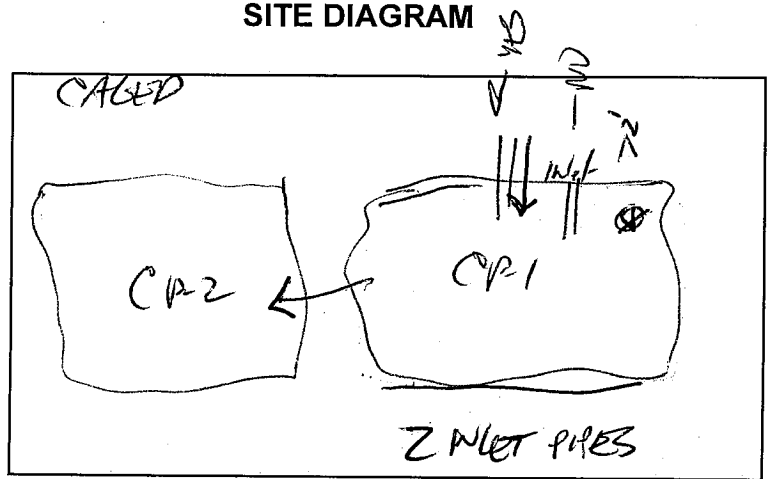
DATE 10/2/17 SAMPLERS AS / Mc / JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S 13
 SURFACE DESCRIPTION 1-3 Pond CP-1
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UNP CC C73017 SUPPLIER MAXAIR PSIG START 2100 PSIG STOP _____
< 0.01 PPM

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1030	5.0	0								
1036	↓	1								
1042	↓	2								
1048		3								
1054		4	140		140	63				
1100		5						T603	#786	
1104									AT	

COMMENTS:

SITE DIAGRAM

UTM 11S 298880 E
 3919112 N
 40 SAMPLES/MIN FLOW
 ON INLET



OPERATING

SURFACE FLUX MEASUREMENT DATA FORM

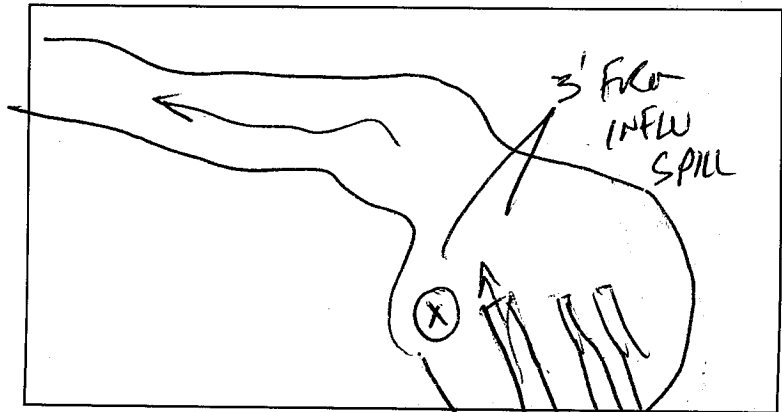
DATE 10/12/17 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SNE # 1
 SURFACE DESCRIPTION CONVEYANCE CHANNEL - AQUEOUS w/ SHEEN & SOME OIL
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL V CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP cc 73017 SUPPLIER PA PSIG START 1900 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>1145</u>	<u>5.0</u>	<u>0</u>								
<u>↓</u>	<u>↓</u>	<u>1</u>								
<u>↓</u>	<u>↓</u>	<u>2</u>						<u>T604</u>	<u># 716</u>	
<u>1203</u>	<u>↓</u>	<u>3</u>			<u>72</u>	<u>75</u>			<u>AT 3' 0"</u>	
	<u>↓</u>	<u>4</u>				<u>62</u>				
<u>1215</u>	<u>↓</u>	<u>5</u>				<u>73</u>				

COMMENTS:

SITE DIAGRAM

UTM 11S 256882E
3918974N
CONVEYANCE CHANNEL



SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/12/17 SAMPLERS CBJ TRC JDA

LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE #10

SURFACE DESCRIPTION POND #P-1A, AQUEOUS BLACK WATER w/ 10% SHEEN &

CURRENT ACTIVITY SLURRING ON EDGE

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

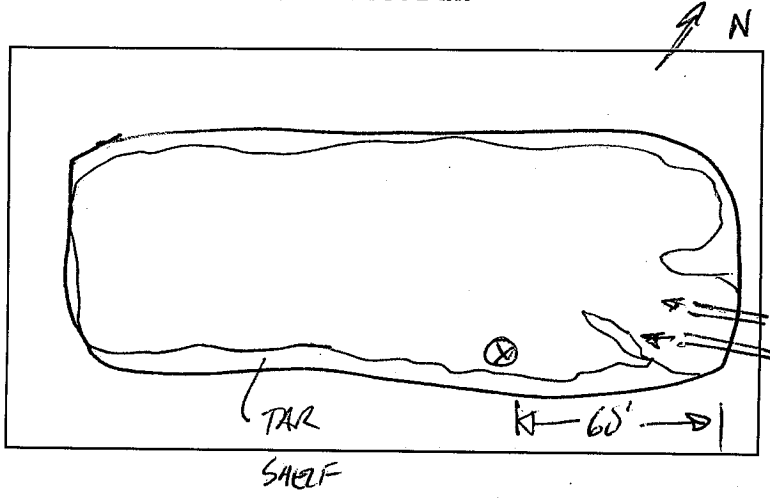
SWEEP AIR UTM CC 73017 SUPPLIER PA PSIG START 1800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1244	5.0	0								
1250		1								
1256	↓	2						T605	#698	
1302		3			75	74			#	
1309		4						T606	#877	
1314		5							AT 3'40"	
1319									AT 2'50"	

COMMENTS:

SITE DIAGRAM

UTM 11S 256849E
3919091N



SURFACE FLUX MEASUREMENT DATA FORM

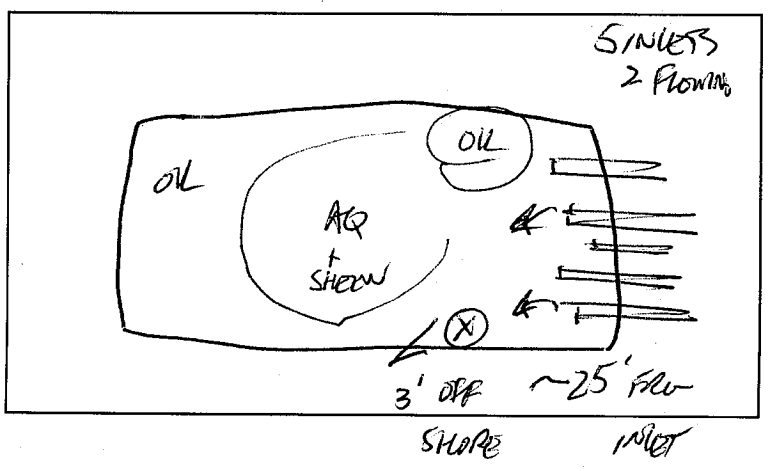
DATE 10/12/17 SAMPLERS LES TRE JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. R5 S SITE #1
 SURFACE DESCRIPTION POND #CP-1, AQUEOUS w/SHEEN, 50% BLACK OIL
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 73017 SUPPLIER PA PSIG START 1800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1346	5.0 ↓ ↓ ↓ ↓	0								
		1								
		2								
1404		3			88	71			T607 #665 ΔT 8'40"	
		4								
1416		5								

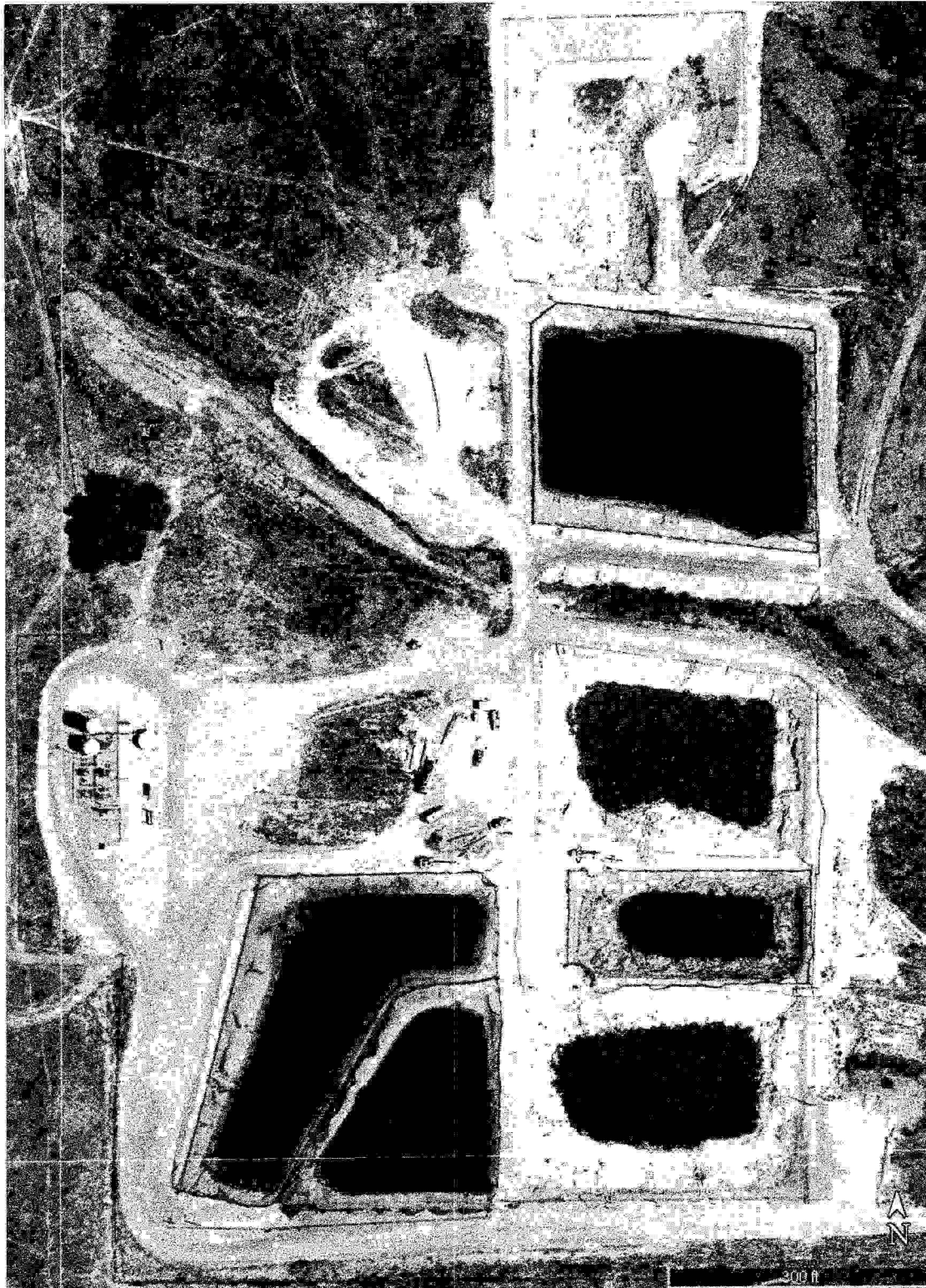
COMMENTS:

SITE DIAGRAM

UTMA US 296820 E
3918986 N
MEDIA BUWK
T-608 1429
700
73017




Site Photo





N:\FR_projects\FR13s\FR1316053A\digitalmaps\2016_City\Q4_fig03_Sampl_locs_PennZier.mxd

<p>Explanation</p> <p>⊕ Sample location</p> <p>⊙ Inlet to impoundment</p>	<p>SAMPLE LOCATIONS PENN-ZIER SURFACE IMPOUNDMENTS Coalinga Oil Field Fresno County, California</p>		 <p>amec foster wheeler</p>
	<p>Date: 07/06/2017</p> <p>Submitted By: LKP</p>	<p>Project No. FR1316053</p> <p>Drawn By: DB</p>	

Drilling and Production Company



Legend

Lease



Lease Ponds

Pond #1:
 Length - 36'
 Width - 20'
 Depth - 10'

Pond #2:
 Length - 150'
 Width - 100'
 Depth - 8'

Pond #3:
 Length-85'
 Width-305'
 Depth-10'

Pond #4:
 Length-250'
 Width-75'
 Depth-12'

Prepared By:

Snook and Wells Lease Ponds

TITLE:

**EnviroTech
 Consultants, Inc.**

Midway-Sunset Oil Field

FIELD:

Kern

COUNTY:

Kelsey Padilla

Section/Township/Range

DRN BY:

DATE:

T11N/R24W - Section 12 MDB&M
 (NE ¼ and NE ¼ of the NW ¼)

May 28, 2015



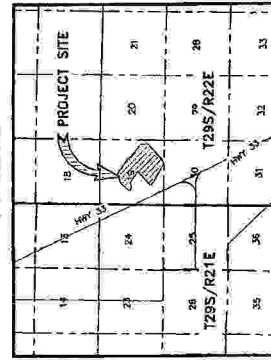
NOTES:

1. SURVEY PROVIDED BY PASQUINI ENGINEERING, INC. SURVEY DATA DATED 8/2015.
2. AS-BUILT DRAWING HAS BEEN CHECKED AGAINST DOUBLE EXPOSURE AERIAL PHOTOS DATED 4/30/15.
3. AVERAGE POND DEPTH = 5' OF AVAILABLE STORAGE.
4. AVERAGE DEPTH REPRESENTS THE AVERAGE AVAILABLE VERTICAL FEET OF STANDING WATER. THIS VALUE VARIES FROM AN AVERAGE MAXIMUM OF 5 FEET TO A MINIMUM OF 1 FEET. THIS VALUE IS BASED ON MINIMUM EXCESS STORAGE BEING 100% OF AVAILABLE SUPPLY.
5. ASSESSOR'S PARCEL NUMBER: D08-280-19
6. 1/2" DIMENSIONS ARE INDICATED FOR MAIN POND, DIMENSIONS BY MASS THROUGH FOR MAIN POND.

LEGEND

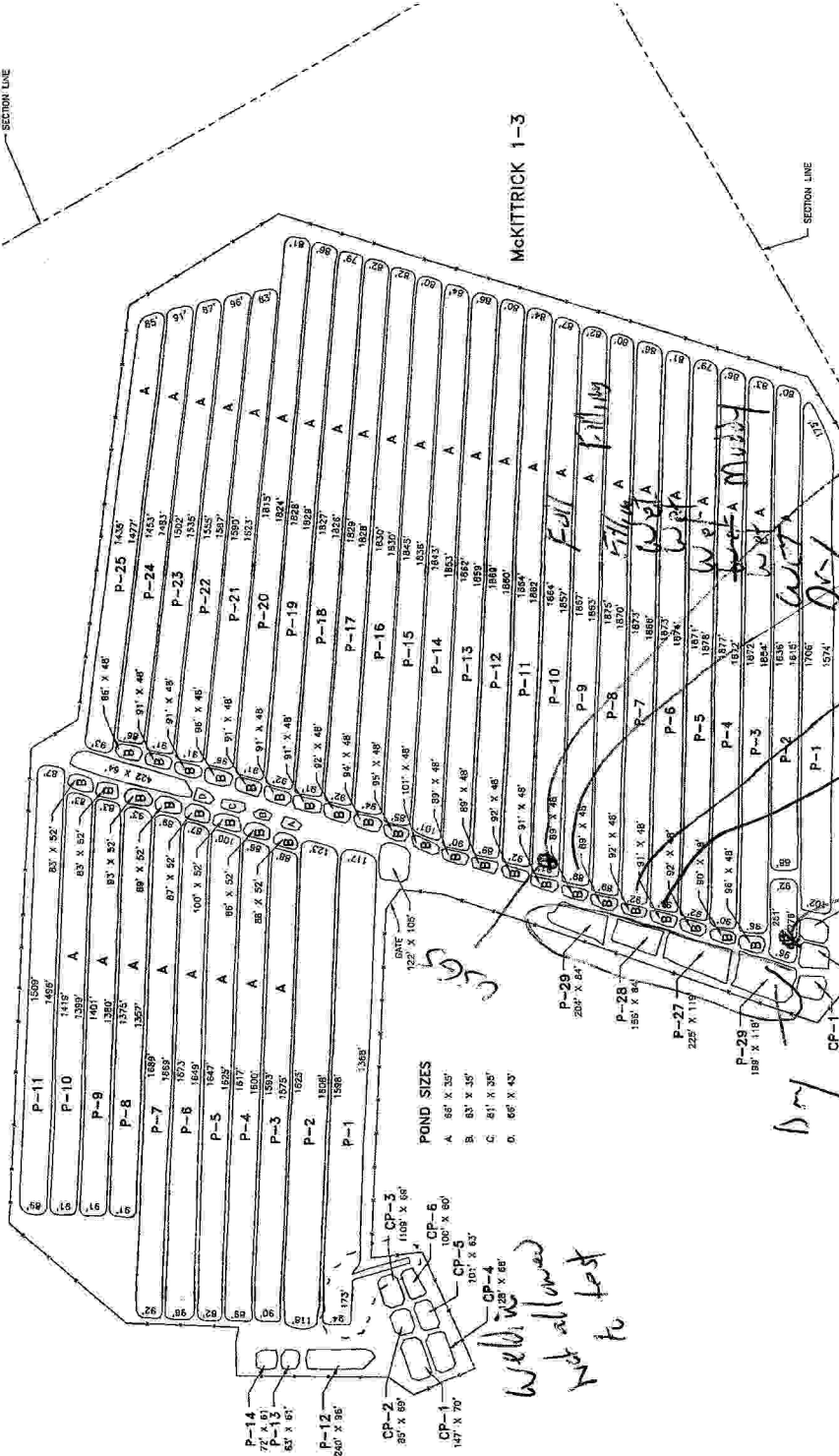
- EGRESS TRAIL / FACILITY
- PROPERTY BOUNDARY
- SECTION LINE
- TOWNSHIP LINE
- CLEANING PONDS
- CP PERCOLATION / EMAPORATION PONDS
- P

GRAPHIC SCALE:
(IN FEET)
(FOR 1" = 200' SCALE SHEET)



VICINITY MAP
SCALE: NONE

McKITTRICK 1



POND SIZES

- A. 86' X 35'
- B. 83' X 35'
- C. 81' X 35'
- D. 66' X 43'

Welding not allowed
Not to test

McKITTRICK 1-3

TJCROSS
ENGINEERS
a PARSONS Company

PERCOLATION POND AS-BUILT
VALLEY WATER MANAGEMENT COMPANY
McKITTRICK NO. 1-3
McKITTRICK AREA T29S/R22E, SEC 19
SHEET 10 OF 18
C-15384-12 B 1

REV. NO.	DATE	ISSUED FOR REVIEW	REVISION	DESIGNED BY	CHECKED BY	DATE
A		ISSUED FOR REVIEW				
B		RE-ISSUED FOR REVIEW				

VALLEY WATER
MANAGEMENT COMPANY

APPROVED BY	DATE

Attachment 2
Chain of Custody Forms

CE Schmidt, P.L., Environmental Consultant
Chain of Custody Record

Form Serial Number
 CES F1-02106

Client Name
 Air Resources Board
 Offfield WW Emissions Assessment
 Project Manager
 Luis Leyva
 916.923.1079

Requested Completion Date

For Information Regarding These Samples
 Please Contact:
 Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

Client Address and Phone Number
 1001 I Street
 Sacramento, CA 95814 800-242-4450

Laboratory Name
 EAS
 Laboratory Address
 173 Cross Street
 San Luis Obispo, CA 93401
 Laboratory Phone
 805-781-3585
 Laboratory Contact
 Dr. Steve Hoyt

Station Number	Date	Time	C O R M A P			Sample ID Number	Can ID Number	Sample Container	#	Analysis Requested			Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
			T-14 FID (NMHC)	T-14 FID (Target List)	TO-15 (Target List)					ASTM D-1946 (CH4, CO2)	TO-14 FID (Target List/Groups)	TO-15 (Target List)			
	9/27/2017	8:56	X	X	X	T-201	806	Can	1	X	X	X	X	0	217539-00
	9/27/2017	10:04	X	X	X	T-202	805	Can	1	X	X	X	X	0	217539-01
	9/27/2017	11:06	X	X	X	T-203	804	Can	1	X	X	X	X	0	217539-02
	9/27/2017	1:30	X	X	X	T-204	803	Can	1	X	X	X	X	0	217539-03
	9/27/2017	1:40	X	X	X	T-205	802	Can	1	X	X	X	X	0	217539-04
	9/27/2017	1:59	X	X	X	T-206	801	Can	1	X	X	X	X	0	217539-05
	9/27/2017	1:50	X	X	X	T-207	800	Can	1	X	X	X	X	0	217539-06
	9/27/2017	1:59	X	X	X	T-208	799	Can	1	X	X	X	X	0	217539-07
	9/27/2017		X	X	X	T-209		Can	1	X	X	X	X	0	217539-08
Sampler															
Received by	CSM		Date/Time	9/27/17		WOOD		Relinquished by	CSM	Date/Time	9/28/17		2000		HAZWRAP/NEESA Y N
Received by	CSM		Date/Time	9-28-17		1645		Relinquished by		Date/Time					COC
Received by	CSM		Date/Time					Relinquished by		Date/Time					Ana Reg
Received by	CSM		Date/Time	9/28/17		1645		Relinquished by		Date/Time					Cust Seal
Remarks								Sample Shipped Via	UPS	FEDEX	BUS	Other			Sample Condition

CE Schmidt, Phd., Environmental Consultant
Chain of Custody Record

Form Serial Number
 CES F1-02106

Client Name
Air Resources Board
Offfield WW Emissions Assessment

Project Manager
Luis Leyva
 916.323.1079

Requested Completion Date

For information Regarding These Samples
 Please Contact:

Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

OF CONTAINERS

Analysis Requested

TO-14 FID (NMHC)

TO-14 FID (Target List)

ASTM D-1945 (CH4, CO2)

Client Address and Phone Number
 1001 I Street
 Sacramento, CA 95814 800-242-4450

Laboratory Name
 EAS

Laboratory Address
 173 Cross Street
 San Luis Obispo, CA 93401

Laboratory Phone
 805-781-3585

Laboratory Contact
 Dr. Steve Hoyt

Station Number	Date	Time	COR		Sample ID Number	Can ID Number	Sample Container		TO-14 FID (NMHC)	TO-14 FID (Target List)	ASTM D-1945 (CH4, CO2)	Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
			A	B			Vial	Can / Tube						
	9/28/2017	802	X		T-301	980	X	X	X	X				2759-14
	9/28/2017	910	X		T-302	507	X	X	X	X				-15
	9/28/2017	1040	X		T-303	664	X	X	X	X				-12
	9/28/2017	1133	X		T-304	610	X	X	X	X				-11
	9/28/2017	1302	X		T-305	603	X	X	X	X				-18
	9/28/2017	1307	X		T-306	779	X	X	X	X				-19
	9/28/2017	1325	X		T-307	758	X	X	X	X				-20
	9/28/2017		X		T-308		X	X	X	X				
	9/28/2017		X		T-309		X	X	X	X				
Sampler														
Received by	9/28/17	1400												HAZWRAP/NEESA Y N
Received by	9/28/17	16:45												COC
Received by	9/28/17	16:48												ANA Req
Received by	9/28/17	16:48												Cust Seal
Remarks	Sample Conciliation													

CE Schmidt, P.L., Environmental Consultant
Chain of Custody Record

Form Serial Number: CES F1-02106
 Client Name: Dr. Charles E. Schmidt
 Air Resources Board
 Cliffield WW Emissions Assessment
 Project Manager: Luis Leyva
 916.323.1079
 Requested Completion Date: *10/10/2017*

For Information Regarding These Samples
 Please Contact:
 Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-629-4256
 E-Mail: SCHMIDTCE@aol.com

Laboratory Name: EAS
 Laboratory Address: 173 Cross Street
 San Luis Obispo, CA 93401
 Laboratory Phone: 805-781-3585
 Laboratory Contact: Dr. Steve Hoyt

Client Address and Phone Number: 1001 I Street
 Sacramento, CA 95814 800-242-4450

Station Number	Date	Time	C G O R M A P B	Sample ID Number	Can ID Number	# OF CONTAINERS		Sample Container	TO-14 FID (TMHC)	TO-14 FID (Target Lists)	ASTMD-1945 (CH4, CO2)	Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
						Vial	Can / Tube							
	10/10/2017	1111	X	T-401	609	21700-01	1	X	X	X	X	0		
	10/10/2017	1116	X	T-402	509	-12	1	X	X	X	X	0		
	10/10/2017	1211	X	T-403	776	-03	1	X	X	X	X	0		
	10/10/2017	1216	X	T-404	659	-04	1	X	X	X	X	0		
	10/10/2017	1517	X	T-405	982	-05	1	X	X	X	X	0		
	10/10/2017	1523	X	T-406	1734	-00	1	X	X	X	X	0		
	10/10/2017	1617	X	T-407	417	-01	1	X	X	X	X	0		
	10/10/2017	1821	X	T-408	681	-08	1	X	X	X	X	0		
	10/10/2017		X	T-409			1	X	X	X	X	0		

Relinquished by: *CS Schmidt* Date/Time: 10/12/17 1500
 Relinquished by: *CS Schmidt* Date/Time: 10/12/17 1500
 Relinquished by: *CS Schmidt* Date/Time: 10/12/17 1700
 Sample Shipped Via: *UPS* Date/Time: 10/12/17 4:50 PM
 Remarks: *CS Schmidt*

HAZWRAP/NEESA Y N
 QC Level 1 2 3
 COC
 Ana Req
 Cust Seal
 Sample Condition

CE Schmidt, P.I., Environmental Consultant
Chain of Custody Record

Form Serial Number: **GES F1-02108**
 Client Name: **Air Resources Board**
 Project Manager: **Luis Leyva**
 Requested Completion Date: **916.323.1079**

For information Regarding These Samples Please Contact:
Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-629-4256
 E-Mail: SCHMIDTCE@aol.com

Station Number	Date	Time	CIG OR MA PB	Sample ID Number	Sample Container			# OF CONTAINERS	Client Address and Phone Number	Laboratory Name	Remarks
					Vial	Jar	Tube				
1	9/26/2017	840	X	V-101 a/b/c	X			3	1001 / Street Sacramento, CA 95814 800-242-4450	BC Laboratories	17-27588
2	9/26/2017	933	X	V-102 a/b/c	X			3		4100 Atlas Court Bakersfield, CA 93308	
3	9/26/2017	125	X	V-103 a/b/c	X			3		661-327-4911	
4	9/26/2017	130	X	V-104 a/b/c	X			3		Ms. Kerrie Vaughn Kerrie.vaughan@bclabs.com	
5	9/26/2017	130	X	V-105 a/b/c	X			3			
	9/26/2017		X	V-106 a/b/c	X			3			
	9/26/2017		X	V-107 a/b/c	X			3			
	9/26/2017		X	V-108 a/b/c	X			3			
	9/26/2017		X	V-109 a/b/c	X			3			

Analysis Requested: **USEPA Method 1664**
USEPA Method 8260b

Relinquished by: **CE Schmidt** Date/Time: **9/26/17 1400**
 Relinquished by: **BC Labs** Date/Time: **9/26/17 1400**
 Relinquished by: **BC Labs** Date/Time: **9/26/17 1400**

Sample Shipped Via: **UPS** Other: **Other**

Remarks: **All Samples are in a Wastewater Matrix**

CHK BY: **DISTRIBUTION**
WV **10/2**
SUB-OUT

HAZWOP/NEESA Y N
 QC Level 1 2 3
 COC
 Ana Reg
 Cust Seal
 Sample Condition

Chain of Custody and Cooler Receipt Form for 1727590 Page 1 of 2

Job Day 3

CE Schmidt, P., Environmental Consultant Chain of Custody Record Form Serial Number: CES F1-02106		For information regarding these samples please contact: Dr. Charles E. Schmidt 19200 Live Oak Road, Red Bluff, CA 96080 530-529-4256 E-Mail: SCHMIDTCE@aol.com		Client Name: BC Laboratories Laboratory Address: 4100 Atlas Court Bakersfield, CA 93308 Laboratory Phone: 661-327-4911 Laboratory Contact: Mrs. Kerrie Vaughn E-Mail: kerrie.vaugn@bclabs.com		Client Address and Phone Number: 1001 I Street Sacramento, CA 95814 800-242-4450 Analysis Requested:		Laboratory Name: BC Laboratories Laboratory Address: 4100 Atlas Court Bakersfield, CA 93308 Laboratory Phone: 661-327-4911 Laboratory Contact: Mrs. Kerrie Vaughn E-Mail: kerrie.vaugn@bclabs.com		17-27590								
Station Number	Date	Time	CIG OR M A	Sample ID Number	Sample Container			USEPA Method 8260b	USEPA Method 1661	Date/Time	Date/Time	Date/Time	HAZARDOUS Y N	CC Level 1 2 3	COC	Ana Req	Cust Seal	Sample Condition
					Vial	Lar	Tuba											
1	9/28/2017	7:55	X	V-301 a/b/c	X	X	X	X										
2	9/28/2017	9:00	X	V-302 a/b/c	X	X	X	X										
3	9/28/2017	10:30	X	V-303 a/b/c	X	X	X	X										
4	9/28/2017	11:30	X	V-304 a/b/c	X	X	X	X										
5	9/28/2017	12:15	X	V-305 a/b/c	X	X	X	X										
6	9/28/2017	12:45	X	V-306 a/b/c	X	X	X	X										
7	9/28/2017	1:30	X	V-307 a/b/c	X	X	X	X										
	9/28/2017		X	V-308 a/b/c	X	X	X	X										
	9/28/2017		X	V-309 a/b/c	X	X	X	X										
Sampler										9/28/17 14:00	9/28/17 14:00							
Received by																		
Received by																		
Received by																		
Remarks: All Samples are in a Wastewater Matrix																		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

CE Schmidt, P.C., Environmental Consultant
Chain of Custody Record

For information Regarding These Samples
 Please Contact:
 Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

Client Name: **Oilfield WW Emissions Assessment**
 Project Manager: **Luis Leyva**
 916-323-1079

Requested Completion Date: **17-29087**

Client Address and Phone Number
 1001 / Street
 Sacramento, CA 95814 800-242-4450

Laboratory Name
BC Laboratories

Laboratory Address
**4100 Atlas Court
 Bakersfield, CA 93308**

Laboratory Phone
661-327-4911

Laboratory Contact
**Ms. Kerrie Vaughn
 Kerrie.vaughan@bclabs.com**

Station Number	Date	Time	Sample ID Number			Sample Container	S	Vial	Jar	Tube	Remarks
			CIG	OIR	MA						
-1	10/10/2017	1150	X			V-401	a/b/c	X			
-2	10/10/2017	1100	X			V-402	a/b/c	X			
-3	10/10/2017	1205	X			V-403	a/b/c	X			
-4	10/10/2017	1205	X			V-404	a/b/c	X			
-5	10/10/2017	1507	X			V-405	a/b/c	X			
-6	10/10/2017	1507	X			V-406	a/b/c	X			
-7	10/10/2017	1610	X			V-407	a/b/c	X			
-8	10/10/2017	1610	X			V-408	a/b/c	X			
			X			V-409	a/b/c	X			

Analysis Requested: **USEPA Method 1664**

Analysis Requested: **USEPA Method 8260b**

Relinquished by: **CE Schmidt** Date/Time: **1516 10/11/17**

Relinquished by: **BC Labs** Date/Time: **1600 10/11/17**

Relinquished by: **BC Labs** Date/Time: **1600 10/11/17**

Sample Shipped Via: **UPS** **FEDEX** **BUS** **Other**

Remarks: **All Samples are in a Wastewater Matrix**

HAZWRAP/NEESA Y N
 OC Level 1 2 3
 COC
 Ana Req
 Cust Seal
 Sample Condition

CE Schmidt, P.C., Environmental Consultant
Chain of Custody Record

Form Serial Number: **17-29085**

Client Name: **Dr. Charles E. Schmidt**
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

Project Manager: **Luis Leyva**
 916.323.1079

Requested Completion Date: _____

For Information Regarding These Samples Please Contact: _____

Laboratory Name: **BC Laboratories**
 Laboratory Address: **4100 Atlas Court Bakersfield, CA 93308**
 Laboratory Phone: **861-327-4911**

Laboratory Contact: **Ms. Kerrie Vaughan**
 Ms. Kerrie.vaughan@bcblabs.com

Client Address and Phone Number: **1001 I Street Sacramento, CA 95814 800-242-4450**

Analysis Requested: _____

Station Number	Date	Time	Sample ID Number			Sample Container	Remarks
			CIG	OR	MIA		
-1	10/11/2017	855	X	V-501	a/b/c	3 X	No preservation, high CO ₂ = " "
-2	10/11/2017	925	X	V-502	a/b/c	3 X	
-3	10/11/2017	1130	X	V-503	a/b/c	3 X	
-4	10/11/2017	1330	X	V-504	a/b/c	3 X	
-5	10/11/2017	1350	X	V-505	a/b/c	3 X	
-6	10/11/2017	1425	X	V-506	a/b/c	3 X	
-7	10/11/2017	1445	X	V-507	a/b/c	3 X	
			X	V-508	a/b/c	3 X	
			X	V-509	a/b/c	3 X	

Relinquished by: **RESUMIA** Date/Time: **10/11/17 1516**

Relinquished by: **RESUMIA** Date/Time: **10/11/17 1516**

Relinquished by: **Kara Johnson** Date/Time: **10/11/17 1629**

Sample Shipped Via: **UPS** FEDEX BUS Other

Remarks: **All Samples are in a Wastewater Matrix**

CHK BY: **DISPATCH**
WIP
DISPATCH

17-29388

CE Schmidt, P.L.L.C., Environmental Consultant
Chain of Custody Record

Form Serial Number: **CE S F1-02105**
 Client Name: **Air Resources Board**
 Project Manager: **Luis Leyva**
 Requested Completion Date: _____

For Information Regarding These Samples
 Please Contact:
Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: **SCHMIDTCE@aol.com**

Client Address and Phone Number
1001 I Street
Sacramento, CA 95814 800-242-4450

Laboratory Name: **BC Laboratories**
 Laboratory Address: **4100 Atlas Court**
 Bakersfield, CA 93308
 Laboratory Phone: **661-327-4911**

Laboratory Contact: **Ms. Kerrie Vaughn**
 Kerrie.vaughan@bclabs.com

Station Number	Date	Time	Sample ID Number			Sample Container	Vial	Jar	Tube	USEPA Method 8260b	USEPA Method 1664	Analysis Requested	Remarks
			C	I	G								
1	10/12/2017	8:45	X						X				
2	10/12/2017	9:40	X						X				
3	10/12/2017	10:50	X						X				
4	10/12/2017	1:20	X						X				No Petroleum, high CO2
5	10/12/2017	1:30	X						X				"
6	10/12/2017	1:30	X						X				"
7	10/12/2017	1:45	X						X				"
8	10/12/2017	1:45	X						X				"
	10/12/2017		X						X				

Relinquished by: **CE Schmidt** Date/Time: **1500 10/12/17**

Relinquished by: **CE Schmidt** Date/Time: **1700 10/12/17**

Relinquished by: **CE Schmidt** Date/Time: **10:12-17 10:00**

Sample Shipped Via: **UPS** **FEDEX** **BUS** **Other** _____

HAZWRAP/NEESA Y N
 QC Level 1 2 3
 COC
 Ana Req
 Cust. Seal
 Sample Condition

CE Schmidt, Ph.D., Environmental Consultant
Chain of Custody Record

Form Serial Number: **CES F1-02106**

Client Name: **Dr. Charles E. Schmidt**
 Air Resources Board
 Oilfield WW Emissions Assessment
 Luis Leyva
 Project Manager
 916.323.1079

For Information Regarding These Samples
 Please Contact:
 Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 95080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

Requested Completion Date: _____

Laboratory Name: **BC Laboratories**
 Laboratory Address: **4100 Atlas Court, Bakersfield, CA 93308**
 Laboratory Phone: **661-327-4911**
 Laboratory Contact: **Mrs. Kerrie Vaughn**
 Email: **Kerrie.vaughn@bcilabs.com**

Station Number	Date	Time	CIGOR M A P B			Sample ID Number	# OF CONTAINERS			Sample Container	Analysis Requested	Remarks
			S	Vial	Jar		Tube	S	Vial			
	11/1/2017	8:15	X			V-701	a/b/c		X			
	11/1/2017	8:40	X			V-702	a/b/c		X			
	11/1/2017	10:5	X			V-703	a/b/c		X			
	11/1/2017	12:5	X			V-704	a/b/c		X			
	11/1/2017	12:5	X			V-705	a/b/c		X			
	11/1/2017	13:5	X			V-706	a/b/c		X			
	11/1/2017	14:40	X			V-707	a/b/c		X			
	11/1/2017	16:00	X			V-708	a/b/c		X			
	11/1/2017	16:50	X			V-709	a/b/c		X			
	11/1/2017	17:00	X			V-710	a/b/c		X			
	11/1/2017	17:11	X			V-711	a/b/c		X			
	11/1/2017		X			V-712	a/b/c		X			
	11/1/2017		X			V-713	a/b/c		X			
	11/1/2017		X			V-714	a/b/c		X			
	11/1/2017		X			V-715	a/b/c		X			

Client Address and Phone Number: **1001 I Street, Sacramento, CA 95814 800-242-4450**

Analysis Requested: **USEPA Method 1664**
USEPA Method 8260b

Relinquished by: **CE Schmidt** Date/Time: **11/1/17 17:30**

Relinquished by: **[Signature]** Date/Time: **11/1/17 18:15**

Relinquished by: **[Signature]** Date/Time: **11/1/17 18:15**

Sample Shipped Via: **BUS**

Remarks: **Highly Contaminated**
Slightly Contaminated

Chain of Custody and Cooler Receipt Form for 1727591 Page 1 of 2

064 Day 1

17-27591

CE Schmidt, P.E., Environmental Consultant
Chain of Custody Record
Form Serial Number: CES-F1-02-106

Client Name: Air Resources Board
Officer/Project Manager: Lilia Leyva
Requested Completion Date:

For Information Regarding These Samples, Please Contact:
Dr. Charles E. Schmidt
19200 Lys Clark Road, Red Bluff, CA 96000
530-529-4256
E-Mail: SCHMIDTCE@aol.com

Client Address and Phone Number: 1007 I Street, Sacramento, CA 95814, 800-218-4450

Laboratory Name: BC Laboratories
Laboratory Address: 4100 Atlas Court, Bakersfield, CA 93308
Laboratory Phone: 661-327-4911
Laboratory Contact: Ms. Kerrie Vaughn
Kerrie.vau@bclabs.com

Station Number	Date	Time	COPIES			Samples ID Number	CONTAINER			Sample Container	Analysis Requested	Remarks
			C	O	P		S	O	P			
1	9/26/2017	8:40	X	X	X	J-101	1		X	US EPA Method 8250b		
2	9/26/2017	9:33	X	X	X	J-102	1		X	US EPA Method 8250b		
3	9/26/2017	12:25	X	X	X	J-103	1		X	US EPA Method 8250b		
4	9/26/2017	1:30	X	X	X	J-104	1		X	US EPA Method 8250b		
5	9/26/2017	1:30	X	X	X	J-105	1		X	US EPA Method 8250b		
	9/26/2017		X	X	X	J-106	1		X	US EPA Method 8250b		
	9/26/2017		X	X	X	J-107	1		X	US EPA Method 8250b		
	9/26/2017		X	X	X	J-108	1		X	US EPA Method 8250b		
	9/26/2017		X	X	X	J-109	1		X	US EPA Method 8250b		

Sample: 1727591-101
Received by: [Signature]
Received by: [Signature]
Received by Laboratory: [Signature]
Remarks: All Samples are in a Wastewater Matrix

Relinquished by: [Signature] Date/Time: 9/27/17 1:00
Relinquished by: [Signature] Date/Time: 9/27/17 1:00
Relinquished by: [Signature] Date/Time: 9/27/17 1:00
Sample Shipped Via: UPS
Other:

Analysis Requested: HAZWASTE - V, N
GC Level: 1, 2, 3
Ara Res: 000
Cust Seal
Sample Controll:

THIRTY EIGHT (38) ATTACHED

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

**CE Schmidt, Ph.D., Environmental Consultant
Chain of Custody Record**

Form Serial Number: **CE5 F4-02106**
 Client Name: **Air Resources Board
Offroad W/V Emissions Assessment**
 Project Manager: **Luis Leyva**
 816.323.1079
 Requested Completion Date: _____

For Information Regarding These Samples Please Contact:
Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-525-4256
 E-Mail: SCHMIDTCE@aol.com

17-29088

Station Number	Date	Time	C O R M A P B			Sample ID Number	# O F C O N T A I N E R S		Sample Container	Tube	Remarks
			S	M	J		Jar	Tube			
1	10/10/2017	1100	X			J-401	1	X			
2	10/10/2017	1100	X			J-402	1	X			
3	10/10/2017	11205	X			J-403	1	X			
4	10/10/2017	1205	X			J-404	1	X			
5	10/10/2017	1507	X			J-405	1	X			
6	10/10/2017	1507	X			J-406	1	X			
7	10/10/2017	1610	X			J-407	1	X			
8	10/10/2017	1610	X			J-408	1	X			
	10/10/2017		X			J-409	1	X			

Client Address and Phone Number: **1001 / Street Sacramento, CA 95814 800-242-4450**

Analysis Requested: **USEPA Method 1664**

Laboratory Name: **BC Laboratories**

Laboratory Address: **4100 Atlas Court Bakersfield, CA 93308**

Laboratory Phone: **661-327-4911**

Laboratory Contact: **Ms. Kerrie Vaughn**
 Kerrie.vaughn@bclabs.com

Relinquished by: **CE Schmidt** Date/Time: **10/11/17 1517**

Relinquished by: **CE Schmidt** Date/Time: **10/11/17 1600**

Relinquished by: **CE Schmidt** Date/Time: **10/11/17 1600**

Sample Shipped Via: **UPS** FEDEX **BUS** Other _____

Remarks: **All Samples are in a Wastewater Matrix**

CE Schmidt, P.h., Environmental Consultant
Chain of Custody Record

17-29387
.64 Day 3

Form Serial Number: **CES F1-02106**
 Client Name: **Air Resources Board / Cliffield WW Emissions Assessment**
 Project Manager: **Luis Leyva**
 Requested Completion Date: **9/16/2017**

For Information Regarding These Samples Please Contact:
Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, GA 96080
 530-529-4286
 E-Mail: SCHMIDTCE@aol.com

Laboratory Name: **BC Laboratories**
 Laboratory Address: **4100 Atlas Court, Bakersfield, CA 93308**
 Laboratory Phone: **661-327-4917**
 Laboratory Contact: **Ms. Kerrie Vaughn**
 Kerrie.v Vaughn@bclabs.com

Station Number	Date	Time	Sample ID Number			Sample Container		Analysis Requested	Client Address and Phone Number	Laboratory Name	
			C	O	M	A	P				B
1	10/12/2017	8:45	X					J-601	US EPA Method 8260	1001 / Street Sacramento, CA 95814 800-242-4450	BC Laboratories
2	10/12/2017	9:40	X					J-602	US EPA Method 1664		
3	10/12/2017	10:50	X					J-603			
4	10/12/2017	12:00	X					J-604			
5	10/12/2017	13:00	X					J-605			
6	10/12/2017	13:00	X					J-606			
7	10/12/2017	14:05	X					J-607			
8	10/12/2017	14:25	X					J-608			
	10/12/2017		X					J-609			

Relinquished by: **MS SCHUMKA** Date/Time: **10/12/17 15:20**
 Relinquished by: **BC LABS** Date/Time: **10/12/17 17:00**
 Relinquished by: **BC LABS** Date/Time: **10/12/17 16:00**

Sample Shipped Via: **BUS**
 UPS FEDEX Other

Remarks: **All Samples are in a Wastewater Matrix**

CE Schmidt, Ph., Environmental Consultant
Chain of Custody Record

064 Day 1

17-31163

Form Serial Number	For Information Regarding These Samples		Client: Address and Phone Number		Laboratory Name	
	GES-F1-02106	Please Contact	1007 / Street	Sacramento, CA 95814 800-242-4450	BC Laboratories	
Client Name	Dr. Charles E. Schmidt		Laboratory Address		Laboratory Contact	
Air Resources Board	19200 Live Oak Road, Red Bluff, CA, 96080		4100 Atlas Court		Ms. Kerrie Vaughn	
Oilfield WVI/Emissions Assessment	530-529-4256		Bakersfield, CA 93308		Kerrie.vaultan@bcilabs.com	
Project Manager	E-Mail: SCHMIDTCE@aol.com		Laboratory Phone		Remarks	
Luis Leyva			661-327-4911			
Requested Completion Date			Laboratory/Address			
			4100 Atlas Court			
			Bakersfield, CA 93308			
			661-327-4911			
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			Bakersfield, CA 93308			

Attachment 3
Laboratory Reports

Laboratory Report

Project Name:

CARB Oil & Water Separator Ponds

EAS SDG Number: 217539

Task:

Client Project Manager: Chuck Schmidt

Prepared For:

C.E. Schmidt

19200 Live Oak Road

Red Bluff

CA 96080

Project Number: 17198

Sample Event Date: 9/26/, 9/27, 9/28

Received Date: 9/28/2017

Report Date: 10/26/2017

Project Number: None Given

PO Number:

This is the Laboratory Report for the samples in the indicated Sample Delivery Group (SDG). Each sample received in the group is assigned a Laboratory ID number. The combination of the SDG number and the Lab ID number is a unique identifier for the sample.

This Report Contains:

Laboratory Work Order

Project Sample Media

Laboratory Case Narrative and Chain of Custody

Method Description (when applicable)

Quality Control Reports

Analytical Reports

NELAC Certification: Florida E871125

173 Cross Street, San Luis Obispo, CA 93401 (805) 781-3585

Laboratory Work Order

SDG Number: 217539

Project Number: 17198

Client: Chuck Schmidt

Received: 9/28/2017

C.E. Schmidt

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 101	217539 1	ASTM D3416 Methane, MDL 0.5 ppmv	9/26/2017
T - 101	217539 1	EPA TO-14 DHA with TO-15	9/26/2017
T - 101	217539 1	EPA TO-15 VOC + TIC	9/26/2017
T - 101	217539 1	ASTM D1945 Carbon Dioxide	9/26/2017
T - 102	217539 2	ASTM D1945 Carbon Dioxide	9/26/2017
T - 102	217539 2	ASTM D3416 Methane, MDL 0.5 ppmv	9/26/2017
T - 102	217539 2	EPA TO-14 DHA with TO-15	9/26/2017
T - 102	217539 2	EPA TO-15 VOC + TIC	9/26/2017
T - 103	217539 3	EPA TO-14 DHA with TO-15	9/26/2017
T - 103	217539 3	EPA TO-15 VOC + TIC	9/26/2017
T - 103	217539 3	ASTM D3416 Methane, MDL 0.5 ppmv	9/26/2017
T - 103	217539 3	ASTM D1945 Carbon Dioxide	9/26/2017
T - 104	217539 4	ASTM D3416 Methane, MDL 0.5 ppmv	9/26/2017
T - 104	217539 4	EPA TO-14 DHA with TO-15	9/26/2017
T - 104	217539 4	EPA TO-15 VOC + TIC	9/26/2017
T - 104	217539 4	ASTM D1945 Carbon Dioxide	9/26/2017
T - 105	217539 5	EPA TO-15 VOC + TIC	9/26/2017
T - 105	217539 5	ASTM D1945 Carbon Dioxide	9/26/2017
T - 105	217539 5	ASTM D3416 Methane, MDL 0.5 ppmv	9/26/2017
T - 105	217539 5	EPA TO-14 DHA with TO-15	9/26/2017
T - 201	217539 6	EPA TO-14 DHA with TO-15	9/27/2017
T - 201	217539 6	EPA TO-15 VOC + TIC	9/27/2017
T - 201	217539 6	ASTM D1945 Carbon Dioxide	9/27/2017

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 201	217539 6	ASTM D3416 Methane, MDL 0.5 ppmv	9/27/2017
T - 202	217539 7	ASTM D1945 Carbon Dioxide	9/27/2017
T - 202	217539 7	ASTM D3416 Methane, MDL 0.5 ppmv	9/27/2017
T - 202	217539 7	EPA TO-14 DHA with TO-15	9/27/2017
T - 202	217539 7	EPA TO-15 VOC + TIC	9/27/2017
T - 203	217539 8	EPA TO-14 DHA with TO-15	9/27/2017
T - 203	217539 8	EPA TO-15 VOC + TIC	9/27/2017
T - 203	217539 8	ASTM D3416 Methane, MDL 0.5 ppmv	9/27/2017
T - 203	217539 8	ASTM D1945 Carbon Dioxide	9/27/2017
T - 204	217539 9	ASTM D3416 Methane, MDL 0.5 ppmv	9/27/2017
T - 204	217539 9	EPA TO-14 DHA with TO-15	9/27/2017
T - 204	217539 9	EPA TO-15 VOC + TIC	9/27/2017
T - 204	217539 9	ASTM D1945 Carbon Dioxide	9/27/2017
T - 205	217539 10	EPA TO-14 DHA with TO-15	9/27/2017
T - 205	217539 10	ASTM D1945 Carbon Dioxide	9/27/2017
T - 205	217539 10	ASTM D3416 Methane, MDL 0.5 ppmv	9/27/2017
T - 205	217539 10	EPA TO-15 VOC + TIC	9/27/2017
T - 206	217539 11	ASTM D3416 Methane, MDL 0.5 ppmv	9/27/2017
T - 206	217539 11	EPA TO-14 DHA with TO-15	9/27/2017
T - 206	217539 11	EPA TO-15 VOC + TIC	9/27/2017
T - 206	217539 11	ASTM D1945 Carbon Dioxide	9/27/2017
T - 207	217539 12	ASTM D1945 Carbon Dioxide	9/27/2017
T - 207	217539 12	ASTM D3416 Methane, MDL 0.5 ppmv	9/27/2017
T - 207	217539 12	EPA TO-14 DHA with TO-15	9/27/2017
T - 207	217539 12	EPA TO-15 VOC + TIC	9/27/2017
T - 208	217539 13	EPA TO-14 DHA with TO-15	9/27/2017
T - 208	217539 13	EPA TO-15 VOC + TIC	9/27/2017
T - 208	217539 13	ASTM D3416 Methane, MDL 0.5 ppmv	9/27/2017
T - 208	217539 13	ASTM D1945 Carbon Dioxide	9/27/2017
T - 301	217539 14	ASTM D3416 Methane, MDL 0.5 ppmv	9/28/2017

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 301	217539 14	EPA TO-14 DHA with TO-15	9/28/2017
T - 301	217539 14	EPA TO-15 VOC + TIC	9/28/2017
T - 301	217539 14	ASTM D1945 Carbon Dioxide	9/28/2017
T - 302	217539 15	EPA TO-15 VOC + TIC	9/28/2017
T - 302	217539 15	ASTM D1945 Carbon Dioxide	9/28/2017
T - 302	217539 15	ASTM D3416 Methane, MDL 0.5 ppmv	9/28/2017
T - 302	217539 15	EPA TO-14 DHA with TO-15	9/28/2017
T - 303	217539 16	EPA TO-15 VOC + TIC	9/28/2017
T - 303	217539 16	EPA TO-14 DHA with TO-15	9/28/2017
T - 303	217539 16	ASTM D3416 Methane, MDL 0.5 ppmv	9/28/2017
T - 303	217539 16	ASTM D1945 Carbon Dioxide	9/28/2017
T - 304	217539 17	ASTM D1945 Carbon Dioxide	9/28/2017
T - 304	217539 17	ASTM D3416 Methane, MDL 0.5 ppmv	9/28/2017
T - 304	217539 17	EPA TO-14 DHA with TO-15	9/28/2017
T - 304	217539 17	EPA TO-15 VOC + TIC	9/28/2017
T - 305	217539 18	EPA TO-14 DHA with TO-15	9/28/2017
T - 305	217539 18	EPA TO-15 VOC + TIC	9/28/2017
T - 305	217539 18	ASTM D3416 Methane, MDL 0.5 ppmv	9/28/2017
T - 305	217539 18	ASTM D1945 Carbon Dioxide	9/28/2017
T - 306	217539 19	ASTM D3416 Methane, MDL 0.5 ppmv	9/28/2017
T - 306	217539 19	EPA TO-14 DHA with TO-15	9/28/2017
T - 306	217539 19	EPA TO-15 VOC + TIC	9/28/2017
T - 306	217539 19	ASTM D1945 Carbon Dioxide	9/28/2017
T - 307	217539 20	EPA TO-15 VOC + TIC	9/28/2017
T - 307	217539 20	ASTM D1945 Carbon Dioxide	9/28/2017
T - 307	217539 20	ASTM D3416 Methane, MDL 0.5 ppmv	9/28/2017
T - 307	217539 20	EPA TO-14 DHA with TO-15	9/28/2017

Project Sample Media

SDG Number: 217539

The following sample media was used for this Sample Delivery Group (SDG). The Sample Media column identifies the type of media. For canisters, the Sample Media Batch gives the canister number followed by the cleaning batch number, which is a unique identification. Canisters that are received with sub-ambient pressures are pressurized to about 5 psig. The initial pressure of the canister when it is received is recorded along with the final pressure after pressurization. The canister dilution factor is the ratio of the final to initial pressure. The results are adjusted for the can dilution factor.

SDG	Lab ID	Client Sample No.	Sample Media		Pressure, torr		Can Factor
				Batch	Initial	Final	
217539	1	T - 101	689	092317A	709	810	1.14
217539	2	T - 102	725	092317A	729	804	1.10
217539	3	T - 103	852	092217A	678	810	1.19
217539	4	T - 104	769	092317A	676	806	1.19
217539	5	T - 105	804	092317A	667	804	1.21
217539	6	T - 201	802	092217B	704	803	1.14
217539	7	T - 202	805	92217B	714	807	1.13
217539	8	T - 203	541	92217B	691	806	1.17
217539	9	T - 204	849	92217B	676	805	1.19
217539	10	T - 205	686	092217A	663	811	1.22
217539	11	T - 206	692	092217A	678	811	1.20
217539	12	T - 207	772	092517A	666	808	1.21
217539	13	T - 208	675	092517A	804	804	1.00
217539	14	T - 301	980	092317A	739	807	1.09
217539	15	T - 302	507	092317A	728	806	1.11
217539	16	T - 303	664	092317A	701	804	1.15
217539	17	T - 304	610	092317A	695	818	1.18
217539	18	T - 305	603	092217B	698	808	1.16
217539	19	T - 306	779	092517A	700	818	1.17
217539	20	T - 307	758	092517A	1006	1006	1.00

Laboratory Case Narrative

EAS SDG Number: 217539

Project Number: 17198

Client: C.E. Schmidt

The Laboratory Case Narrative for the SDG is below. The Chain of Custody form(s) follow the Laboratory Case Narrative.

Sample Control Narrative

The samples were all received in good condition and with proper preservation.

Analytical Methods

The methods used for sample analysis are listed on the Analytical Report header, and have been modified as described in the EAS Quality Manual.

Case Narrative

QC Narrative

All analyses met EAS method criteria as defined in the Quality Manual, except as noted in the report or QC reports with data qualifiers.

Subcontract Narrative

No sample analysis was subcontracted for this project

Laboratory Certification

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness other than the condition(s) noted above. The Laboratory Report is property of EAS and its client. The entire report has been reviewed and approved.



Date Approved: 10/26/2017

Steven D. Hoyt, Ph.D.
Environmental Analytical Service
Laboratory Director

CE Schmidt, P.I., Environmental Consultant
Chain of Custody Record

Form Serial Number: **CES F1-02106**

Client Name: **Air Resources Board**
 Client Address and Phone Number: **19200 Live Oak Road, Red Bluff, CA 96080**
 Project Manager: **Luis Leyva**
 Laboratory Name: **EAS**
 Laboratory Address: **173 Cross Street, San Luis Obispo, CA 93401**
 Laboratory Phone: **805-781-3585**
 Laboratory Contact: **Dr. Steve Hoyt**

For Information Regarding These Samples Please Contact:
Dr. Charles E. Schmidt
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

Requested Completion Date: _____

Station Number	Date	Time	Sample ID Number			Can ID Number	Analysis Requested			Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
			C	O	M		A	P	TO-14 FID (NMHC)			
	9/26/2017	8:44	X			T-101						217539-01
	9/26/2017	9:31	X			T-102						-02
	9/26/2017	12:15	X			T-103						-03
	9/26/2017	1:37	X			T-104						-04
	9/26/2017	1:41	X			T-105						-05
	9/26/2017		X			T-106						
	9/26/2017		X			T-107						
	9/26/2017		X			T-108						
	9/26/2017		X			T-109						

Relinquished by: **CSCHMIDT** Date/Time: **9/28/17 2:00**

Relinquished by: **CSCHMIDT** Date/Time: **9/28/17 2:00**

Relinquished by: **CSCHMIDT** Date/Time: **9/28/17 16:43**

Relinquished by: **CSCHMIDT** Date/Time: **9/28/17 16:43**

Sample Shipped Via: **UPS** **FEDEX** **BUS** **Other**

HAZWRAP/NEESA Y N
 QC Level 1 2 3
 COC
 Ana Req
 Cust Seal
 Sample Condition

CE Schmidt, P.L.L.C., Environmental Consultant
Chain of Custody Record

Form Serial Number: **CESES F1-02106**

Client Name: **Air Resources Board**
 Client Address: **19200 Live Oak Road, Red Bluff, CA 96080**
 Project Manager: **Luis Leyva**
 Requested Completion Date: **916.323.1079**

For information regarding these samples please contact:
Dr. Charles E. Schmidt
 530-529-4256
 E-Mail: **SCHMIDTCE@aol.com**

Laboratory Name: **EAS**
 Laboratory Address: **173 Cross Street**
San Luis Obispo, CA 93401
 Laboratory Phone: **805-781-3585**
 Laboratory Contact: **Dr. Steve Hoyt**

Client Address and Phone Number: **1001 J Street**
Sacramento, CA 95814 800-242-4450

Station Number	Date	Time	For Information Regarding These Samples			Can ID Number	Sample ID Number	Can ID Number	CONTAINER		Sample Container	TO-14 FID (NMHC)	TO-14 FID (Target Lists)	ASTM D-1945 (CH4, CO2)	Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
			CG	OR	MA				VP	Vial							
	9/27/2017	8:56	X			T-201	806		X	X	X	X	X	-27	0	217539-06	
	9/27/2017	10:04	X			T-202	805		X	X	X	X	X	-29	0	80-07	
	9/27/2017	11:06	X			T-203	804		X	X	X	X	X	-29	0	80-08	
	9/27/2017	13:01	X			T-204	809		X	X	X	X	X	-29	0	80-09	
	9/27/2017	14:01	X			T-205	688		X	X	X	X	X	-27	0	80-10	
	9/27/2017	14:59	X			T-206	697		X	X	X	X	X	-27	0	80-11	
	9/27/2017	15:03	X			T-207	977		X	X	X	X	X	-29	0	80-12	
	9/27/2017	15:19	X			T-208	675		X	X	X	X	X	-29	0	80-13	
	9/27/2017		X			T-209			X	X	X	X	X				
Sampler																	
Received by	CE Schmidt						1600										
Received by	LENS						1645										
Received by																	
Received by	Good Blank						1648										
Remarks																	

Quality Control Report

EAS SDG Number 217539

Project Number: 17198

QC Narrative

Samples were analyzed in a daily analytical batch (DAB) designated by a QC batch number, and were analyzed using EAS standard laboratory QC specified in the EAS Quality Manual which may be different the referenced agency method. Any deviations from the EAS QC criteria are flagged in the Laboratory Control Reports or in the sample Analytical Reports.

Standard Laboratory QC Report

Unless project specific QC was requested, this Section containing the standard laboratory QC (Level 2) supplied with the Analytical Reports. Each sample is analyzed in a Daily Analytical Batch (DAB) which includes the method blank, a laboratory control spike (LCS) and a laboratory control duplicate (LCD). A Daily Analytical Batch QC report is supplied for each method requested.

Method Blank

A method blank is a laboratory generated sample which assesses the degree to which laboratory operations and procedures cause a false positive. In the method blank, compounds should be present below the reporting limit (RL). Compounds present above the RL are flagged with a "B" in the Analytical Reports in that batch unless the result is greater than ten times the blank value..

Laboratory Control Spike

A laboratory control spike is a well characterized matrix similar to the sample which is spiked and run in duplicate with each Daily Analytical Batch. The laboratory control spike results are reported as a percent recovery. The QC Criteria for the control spike is listed in the Laboratory Control Report. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report. The control spike contains an abbreviated list of compounds in the method, and may contain compounds not on the target list for the specified report.

Laboratory Control Duplicate

The laboratory control duplicate is a duplicate analysis of the laboratory control spike, a standard, or a sample depending on the method. The results are reported as a relative percent difference (RPD). The criteria for the duplicate is in the Laboratory Control Report for the Daily Analytical Batch. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report.

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B10177

File Name: B10177B.D
Description: METHOD BLANK
Canister:
QC_Batch: 101717-MA1

Date Sampled:
Date Analyzed: 10/17/17
Can Dilution Factor: 1.00
Air Volume: 500 ml
Time: 12:26

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.10	0.50	ND	0.49	2.49	ND	
74-87-3	Chloromethane	0.10	0.50	ND	0.21	1.04	ND	
76-14-2	Freon 114	0.10	0.50	ND	0.70	3.51	ND	
75-01-4	Vinyl chloride	0.10	0.50	ND	0.26	1.29	ND	
106-99-0	1,3-Butadiene	0.10	0.50	ND	0.22	1.11	ND	
74-83-9	Bromomethane	0.10	0.50	ND	0.39	1.95	ND	
75-00-3	Chloroethane	0.10	0.50	ND	0.26	1.33	ND	
64-17-5	Ethanol	0.50	1.50	ND	0.94	2.83	ND	
75-69-4	Trichlorofluoromethane	0.10	0.48	ND	0.56	2.70	ND	
67-64-1	Acetone	0.50	1.23	ND	1.19	2.92	ND	
67-63-0	2-propanol	0.50	1.15	ND	1.23	2.82	ND	
75-35-4	1,1-Dichloroethene	0.10	0.50	ND	0.40	1.96	ND	
76-13-1	Freon 113	0.10	0.48	ND	0.77	3.67	ND	
75-09-2	Dichloromethane	0.20	0.48	ND	0.69	1.67	ND	
75-15-0	Carbon disulfide	0.50	0.93	ND	1.56	2.89	ND	
156-60-5	trans-1,2-Dichloroethene	0.10	0.36	ND	0.40	1.43	ND	
1634-04-4	Methyl tert butyl ether	0.10	0.37	ND	0.36	1.33	ND	
75-34-3	1,1-Dichloroethane	0.10	0.50	ND	0.40	2.02	ND	
108-05-4	Vinyl acetate	0.10	0.44	ND	0.35	1.55	ND	
78-93-3	2-Butanone	0.40	1.02	ND	1.18	3.00	ND	
141-78-6	Ethyl acetate	0.20	0.44	ND	0.72	1.58	ND	
74-97-5	Bromochloromethane	0.10	0.27	ND	0.53	1.41	ND	
109-99-9	Tetrahydrofuran	0.20	0.50	ND	0.59	1.48	ND	
156-59-2	cis-1,2-Dichloroethene	0.20	0.54	ND	0.79	2.13	ND	
67-66-3	Chloroform	0.10	0.50	ND	0.49	2.45	ND	
71-55-6	1,1,1-Trichloroethane	0.10	0.44	ND	0.55	2.42	ND	
107-06-2	1,2-Dichloroethane	0.10	0.46	ND	0.40	1.85	ND	
110-82-7	Cyclohexane	0.10	0.38	ND	0.35	1.32	ND	
71-43-2	Benzene	0.10	0.51	0.25	0.32	1.62	0.79	J
56-23-5	Carbon tetrachloride	0.10	0.47	ND	0.63	2.98	ND	
142-82-5	n-Heptane	0.50	1.21	ND	2.05	4.96	ND	
78-87-5	1,2-Dichloropropane	0.10	0.48	ND	0.46	2.22	ND	
123-91-1	1,4 Dioxane	0.40	0.82	ND	1.44	2.95	ND	
79-01-6	Trichloroethene	0.06	0.47	ND	0.32	2.50	ND	
75-27-4	Bromodichloromethane	0.10	0.20	ND	0.67	1.35	ND	
80-62-6	Methyl methacrylate	0.40	1.35	ND	1.64	5.53	ND	
108-10-1	4-Methyl-2-pentanone	0.40	1.51	ND	1.64	6.20	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.10	0.52	ND	0.45	2.35	ND	
108-88-3	Toluene	0.20	0.52	ND	0.75	1.97	ND	
10061-02-6	trans-1,3-Dichloropropene	0.10	0.52	ND	0.45	2.35	ND	
79-00-5	1,1,2-Trichloroethane	0.10	0.51	ND	0.55	2.80	ND	
591-78-6	2-Hexanone	0.50	1.42	ND	2.05	5.81	ND	
124-48-1	Dibromochloromethane	0.10	0.20	ND	0.85	1.70	ND	
106-93-4	1,2-Dibromoethane	0.10	0.24	ND	0.77	1.86	ND	
127-18-4	Tetrachloroethene	0.06	0.24	ND	0.41	1.65	ND	
108-90-7	Chlorobenzene	0.10	0.46	ND	0.46	2.09	ND	
100-41-4	Ethylbenzene	0.21	0.53	ND	0.92	2.29	ND	
1330-20-7	m,p-Xylenes	0.21	0.53	ND	0.92	2.30	ND	
100-42-5	Styrene	0.21	0.52	ND	0.88	2.21	ND	
75-25-2	Bromoform	0.10	0.13	ND	1.03	1.39	ND	
95-47-6	o-Xylene	0.21	0.52	ND	0.90	2.24	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.10	0.25	ND	0.68	1.70	ND	
622-96-8	4-Ethyltoluene	0.33	0.83	ND	1.63	4.07	ND	
108-67-8	1,3,5-Trimethylbenzene	0.21	0.52	ND	1.02	2.54	ND	
95-63-6	1,2,4-Trimethylbenzene	0.20	0.51	ND	1.00	2.50	ND	
541-73-1	1,3-Dichlorobenzene	0.20	0.37	ND	1.20	2.22	ND	
100-44-7	Benzyl chloride	0.20	1.21	ND	1.04	6.27	ND	
106-46-7	1,4-Dichlorobenzene	0.20	0.35	ND	1.20	2.08	ND	
95-50-1	1,2-Dichlorobenzene	0.20	0.32	ND	1.20	1.95	ND	
120-82-1	1,2,4-Trichlorobenzene	0.50	0.69	ND	3.71	5.10	ND	
91-20-3	Naphthalene	0.10	0.16	ND	0.53	0.84	ND	
87-68-3	Hexachlorobutadiene	0.50	0.53	ND	5.33	5.65	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				96	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B10187

File Name: B10187C.D
Description: METHOD BLANK
Canister:
QC_Batch: 101817-MA1

Date Sampled:
Date Analyzed: 10/18/17
Can Dilution Factor: 1.00
Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.10	0.50	ND	0.49	2.49	ND	
74-87-3	Chloromethane	0.10	0.50	ND	0.21	1.04	ND	
76-14-2	Freon 114	0.10	0.50	ND	0.70	3.51	ND	
75-01-4	Vinyl chloride	0.10	0.50	ND	0.26	1.29	ND	
106-99-0	1,3-Butadiene	0.10	0.50	ND	0.22	1.11	ND	
74-83-9	Bromomethane	0.10	0.50	ND	0.39	1.95	ND	
75-00-3	Chloroethane	0.10	0.50	ND	0.26	1.33	ND	
64-17-5	Ethanol	0.50	1.50	ND	0.94	2.83	ND	
75-69-4	Trichlorofluoromethane	0.10	0.48	ND	0.56	2.70	ND	
67-64-1	Acetone	0.50	1.23	ND	1.19	2.92	ND	
67-63-0	2-propanol	0.50	1.15	ND	1.23	2.82	ND	
75-35-4	1,1-Dichloroethene	0.10	0.50	ND	0.40	1.96	ND	
76-13-1	Freon 113	0.10	0.48	ND	0.77	3.67	ND	
75-09-2	Dichloromethane	0.20	0.48	ND	0.69	1.67	ND	
75-15-0	Carbon disulfide	0.50	0.93	ND	1.56	2.89	ND	
156-60-5	trans-1,2-Dichloroethene	0.10	0.36	ND	0.40	1.43	ND	
1634-04-4	Methyl tert butyl ether	0.10	0.37	ND	0.36	1.33	ND	
75-34-3	1,1-Dichloroethane	0.10	0.50	ND	0.40	2.02	ND	
108-05-4	Vinyl acetate	0.10	0.44	ND	0.35	1.55	ND	
78-93-3	2-Butanone	0.40	1.02	ND	1.18	3.00	ND	
141-78-6	Ethyl acetate	0.20	0.44	ND	0.72	1.58	ND	
74-97-5	Bromochloromethane	0.10	0.27	ND	0.53	1.41	ND	
109-99-9	Tetrahydrofuran	0.20	0.50	ND	0.59	1.48	ND	
156-59-2	cis-1,2-Dichloroethene	0.20	0.54	ND	0.79	2.13	ND	
67-66-3	Chloroform	0.10	0.50	ND	0.49	2.45	ND	
71-55-6	1,1,1-Trichloroethane	0.10	0.44	ND	0.55	2.42	ND	
107-06-2	1,2-Dichloroethane	0.10	0.46	ND	0.40	1.85	ND	
110-82-7	Cyclohexane	0.10	0.38	ND	0.35	1.32	ND	
71-43-2	Benzene	0.10	0.51	0.17	0.32	1.62	0.54	J
56-23-5	Carbon tetrachloride	0.10	0.47	ND	0.63	2.98	ND	
142-82-5	n-Heptane	0.50	1.21	ND	2.05	4.96	ND	
78-87-5	1,2-Dichloropropane	0.10	0.48	ND	0.46	2.22	ND	
123-91-1	1,4 Dioxane	0.40	0.82	ND	1.44	2.95	ND	
79-01-6	Trichloroethene	0.06	0.47	ND	0.32	2.50	ND	
75-27-4	Bromodichloromethane	0.10	0.20	ND	0.67	1.35	ND	
80-62-6	Methyl methacrylate	0.40	1.35	ND	1.64	5.53	ND	
108-10-1	4-Methyl-2-pentanone	0.40	1.51	ND	1.64	6.20	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.10	0.52	ND	0.45	2.35	ND	
108-88-3	Toluene	0.20	0.52	ND	0.75	1.97	ND	
10061-02-6	trans-1,3-Dichloropropene	0.10	0.52	ND	0.45	2.35	ND	
79-00-5	1,1,2-Trichloroethane	0.10	0.51	ND	0.55	2.80	ND	
591-78-6	2-Hexanone	0.50	1.42	ND	2.05	5.81	ND	
124-48-1	Dibromochloromethane	0.10	0.20	ND	0.85	1.70	ND	
106-93-4	1,2-Dibromoethane	0.10	0.24	ND	0.77	1.86	ND	
127-18-4	Tetrachloroethene	0.06	0.24	ND	0.41	1.65	ND	
108-90-7	Chlorobenzene	0.10	0.46	ND	0.46	2.09	ND	
100-41-4	Ethylbenzene	0.21	0.53	ND	0.92	2.29	ND	
1330-20-7	m,p-Xylenes	0.21	0.53	ND	0.92	2.30	ND	
100-42-5	Styrene	0.21	0.52	ND	0.88	2.21	ND	
75-25-2	Bromoform	0.10	0.13	ND	1.03	1.39	ND	
95-47-6	o-Xylene	0.21	0.52	ND	0.90	2.24	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.10	0.25	ND	0.68	1.70	ND	
622-96-8	4-Ethyltoluene	0.33	0.83	ND	1.63	4.07	ND	
108-67-8	1,3,5-Trimethylbenzene	0.21	0.52	ND	1.02	2.54	ND	
95-63-6	1,2,4-Trimethylbenzene	0.20	0.51	ND	1.00	2.50	ND	
541-73-1	1,3-Dichlorobenzene	0.20	0.37	ND	1.20	2.22	ND	
100-44-7	Benzyl chloride	0.20	1.21	ND	1.04	6.27	ND	
106-46-7	1,4-Dichlorobenzene	0.20	0.35	ND	1.20	2.08	ND	
95-50-1	1,2-Dichlorobenzene	0.20	0.32	ND	1.20	1.95	ND	
120-82-1	1,2,4-Trichlorobenzene	0.50	0.69	ND	3.71	5.10	ND	
91-20-3	Naphthalene	0.10	0.16	ND	0.53	0.84	ND	
87-68-3	Hexachlorobutadiene	0.50	0.53	ND	5.33	5.65	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	91	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B10207

File Name: B10207D.D
Description: METHOD BLANK
Canister:
QC_Batch: 102017-MA1

Date Sampled:
Date Analyzed: 10/20/17
Can Dilution Factor: 1.00
Air Volume: 500 ml
Time: 12:38

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.10	0.50	ND	0.49	2.49	ND	
74-87-3	Chloromethane	0.10	0.50	ND	0.21	1.04	ND	
76-14-2	Freon 114	0.10	0.50	ND	0.70	3.51	ND	
75-01-4	Vinyl chloride	0.10	0.50	ND	0.26	1.29	ND	
106-99-0	1,3-Butadiene	0.10	0.50	ND	0.22	1.11	ND	
74-83-9	Bromomethane	0.10	0.50	ND	0.39	1.95	ND	
75-00-3	Chloroethane	0.10	0.50	ND	0.26	1.33	ND	
64-17-5	Ethanol	0.50	1.50	ND	0.94	2.83	ND	
75-69-4	Trichlorofluoromethane	0.10	0.48	ND	0.56	2.70	ND	
67-64-1	Acetone	0.50	1.23	ND	1.19	2.92	ND	
67-63-0	2-propanol	0.50	1.15	ND	1.23	2.82	ND	
75-35-4	1,1-Dichloroethene	0.10	0.50	ND	0.40	1.96	ND	
76-13-1	Freon 113	0.10	0.48	ND	0.77	3.67	ND	
75-09-2	Dichloromethane	0.20	0.48	ND	0.69	1.67	ND	
75-15-0	Carbon disulfide	0.50	0.93	ND	1.56	2.89	ND	
156-60-5	trans-1,2-Dichloroethene	0.10	0.36	ND	0.40	1.43	ND	
1634-04-4	Methyl tert butyl ether	0.10	0.37	ND	0.36	1.33	ND	
75-34-3	1,1-Dichloroethane	0.10	0.50	ND	0.40	2.02	ND	
108-05-4	Vinyl acetate	0.10	0.44	ND	0.35	1.55	ND	
78-93-3	2-Butanone	0.40	1.02	ND	1.18	3.00	ND	
141-78-6	Ethyl acetate	0.20	0.44	ND	0.72	1.58	ND	
74-97-5	Bromochloromethane	0.10	0.27	ND	0.53	1.41	ND	
109-99-9	Tetrahydrofuran	0.20	0.50	ND	0.59	1.48	ND	
156-59-2	cis-1,2-Dichloroethene	0.20	0.54	ND	0.79	2.13	ND	
67-66-3	Chloroform	0.10	0.50	ND	0.49	2.45	ND	
71-55-6	1,1,1-Trichloroethane	0.10	0.44	ND	0.55	2.42	ND	
107-06-2	1,2-Dichloroethane	0.10	0.46	ND	0.40	1.85	ND	
110-82-7	Cyclohexane	0.10	0.38	ND	0.35	1.32	ND	
71-43-2	Benzene	0.10	0.51	0.66	0.32	1.62	2.11	
56-23-5	Carbon tetrachloride	0.10	0.47	ND	0.63	2.98	ND	
142-82-5	n-Heptane	0.50	1.21	ND	2.05	4.96	ND	
78-87-5	1,2-Dichloropropane	0.10	0.48	ND	0.46	2.22	ND	
123-91-1	1,4-Dioxane	0.40	0.82	ND	1.44	2.95	ND	
79-01-6	Trichloroethene	0.06	0.47	ND	0.32	2.50	ND	
75-27-4	Bromodichloromethane	0.10	0.20	ND	0.67	1.35	ND	
80-62-6	Methyl methacrylate	0.40	1.35	ND	1.64	5.53	ND	
108-10-1	4-Methyl-2-pentanone	0.40	1.51	ND	1.64	6.20	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.10	0.52	ND	0.45	2.35	ND	
108-88-3	Toluene	0.20	0.52	ND	0.75	1.97	ND	
10061-02-6	trans-1,3-Dichloropropene	0.10	0.52	ND	0.45	2.35	ND	
79-00-5	1,1,2-Trichloroethane	0.10	0.51	ND	0.55	2.80	ND	
591-78-6	2-Hexanone	0.50	1.42	ND	2.05	5.81	ND	
124-48-1	Dibromochloromethane	0.10	0.20	ND	0.85	1.70	ND	
106-93-4	1,2-Dibromoethane	0.10	0.24	ND	0.77	1.86	ND	
127-18-4	Tetrachloroethene	0.06	0.24	ND	0.41	1.65	ND	
108-90-7	Chlorobenzene	0.10	0.46	ND	0.46	2.09	ND	
100-41-4	Ethylbenzene	0.21	0.53	ND	0.92	2.29	ND	
1330-20-7	m,p-Xylenes	0.21	0.53	ND	0.92	2.30	ND	
100-42-5	Styrene	0.21	0.52	ND	0.88	2.21	ND	
75-25-2	Bromoform	0.10	0.13	ND	1.03	1.39	ND	
95-47-6	o-Xylene	0.21	0.52	ND	0.90	2.24	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.10	0.25	ND	0.68	1.70	ND	
622-96-8	4-Ethyltoluene	0.33	0.83	ND	1.63	4.07	ND	
108-67-8	1,3,5-Trimethylbenzene	0.21	0.52	ND	1.02	2.54	ND	
95-63-6	1,2,4-Trimethylbenzene	0.20	0.51	ND	1.00	2.50	ND	
541-73-1	1,3-Dichlorobenzene	0.20	0.37	ND	1.20	2.22	ND	
100-44-7	Benzyl chloride	0.20	1.21	ND	1.04	6.27	ND	
106-46-7	1,4-Dichlorobenzene	0.20	0.35	ND	1.20	2.08	ND	
95-50-1	1,2-Dichlorobenzene	0.20	0.32	ND	1.20	1.95	ND	
120-82-1	1,2,4-Trichlorobenzene	0.50	0.69	ND	3.71	5.10	ND	
91-20-3	Naphthalene	0.10	0.16	ND	0.53	0.84	ND	
87-68-3	Hexachlorobutadiene	0.50	0.53	ND	5.33	5.65	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	89	70	130	

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B10057

File Name: B10057B
Description: METHOD BLANK
Canister:
QC_Batch: 100517-GCK

Date Sampled:
Date Analyzed: 10/05/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 12:13

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B10067

File Name: B10067C
Description: METHOD BLANK
Canister:
QC_Batch: 100617-GCK

Date Sampled:
Date Analyzed: 10/06/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 12:14

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B10097

File Name: B10097B
Description: METHOD BLANK
Canister:
QC_Batch: 100917-GCK

Date Sampled:
Date Analyzed: 10/09/17
Can Factor: 1.00
Air Volume: 100 ml
Time: 11:19

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2.00	6.00	ND	2.30	6.91	ND	ND
74-86-2	Acetylene	2.00	6.00	ND	2.13	6.39	ND	ND
74-84-0	Ethane	2.00	6.00	ND	2.47	7.40	ND	ND
115-07-1	Propene	1.33	4.00	ND	2.30	6.90	ND	ND
74-98-6	Propane	1.33	4.00	ND	2.41	7.23	ND	ND
75-28-5	i-Butane	1.00	3.00	ND	2.38	7.14	ND	ND
106-98-9	1-Butene	1.00	3.00	ND	2.30	6.90	ND	ND
106-97-8	n-Butane	1.00	3.00	ND	2.38	7.14	ND	ND
624-64-6	t-2-Butene	1.00	3.00	ND	2.30	6.90	ND	ND
590-18-1	c-2-Butene	1.00	3.00	ND	2.30	6.90	ND	ND
78-78-4	i-Pentane	0.80	2.40	ND	2.37	7.10	ND	ND
109-67-1	1-Pentene	0.80	2.40	ND	2.30	6.90	ND	ND
109-66-0	n-Pentane	0.80	2.40	ND	2.36	7.09	ND	ND
78-79-5	Isoprene	0.80	2.40	ND	2.23	6.70	ND	ND
646-04-8	t-2-Pentene	0.80	2.40	ND	2.30	6.90	ND	ND
627-20-3	c-2-Pentene	0.80	2.40	ND	2.30	6.90	ND	ND
75-83-2	2,2-Dimethylbutane	0.67	2.00	ND	2.36	7.07	ND	ND
287-92-3	Cyclopentane	0.80	2.40	ND	2.30	6.90	ND	ND
79-29-8	2,3-Dimethylbutane	0.67	2.00	ND	2.36	7.07	ND	ND
107-83-5	2-Methylpentane	0.67	2.00	ND	2.36	7.07	ND	ND
96-14-0	3-Methylpentane	0.67	2.00	ND	2.36	7.07	ND	ND
110-54-3	n-Hexane	0.67	2.00	ND	2.36	7.07	ND	ND
96-37-7	Methylcyclopentane	0.67	2.00	ND	2.30	6.90	ND	ND
108-08-7	2,4-Dimethylpentane	0.57	1.71	ND	2.35	7.04	ND	ND
71-43-2	Benzene	0.67	2.00	ND	2.13	6.40	ND	ND
110-82-7	Cyclohexane	0.67	2.00	ND	2.30	6.90	ND	ND
591-76-4	2-Methylhexane	0.57	1.71	ND	2.35	7.04	ND	ND
565-59-3	2,3-Dimethylpentane	0.57	1.71	ND	2.35	7.04	ND	ND
589-34-4	3-Methylhexane	0.57	1.71	ND	2.35	7.04	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.50	1.50	ND	2.34	7.02	ND	ND
142-82-5	n-Heptane	0.57	1.71	ND	2.35	7.04	ND	ND
108-87-2	Methylcyclohexane	0.57	1.71	ND	2.30	6.90	ND	ND
592-13-2	2,5-Dimethylhexane	0.50	1.50	ND	2.34	7.02	ND	ND
589-43-5	2,4-Dimethylhexane	0.50	1.50	ND	2.34	7.02	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.50	1.50	ND	2.34	7.02	ND	ND
108-88-3	Toluene	0.57	1.71	ND	2.16	6.47	ND	ND
584-94-1	2,3-Dimethylhexane	0.50	1.50	ND	2.34	7.02	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.50	1.50	ND	2.34	7.02	ND	ND
589-81-1	3-Methylheptane	0.50	1.50	ND	2.34	7.02	ND	ND
111-65-9	n-Octane	0.50	1.50	ND	2.34	7.02	ND	ND
100-41-4	Ethylbenzene	0.50	1.50	ND	2.18	6.53	ND	ND
108-38-3	m,p-xylene	0.50	1.50	ND	2.18	6.53	ND	ND
100-42-5	Styrene	0.50	1.50	ND	2.14	6.41	ND	ND
95-47-6	o-xylene	0.50	1.50	ND	2.18	6.53	ND	ND
111-84-2	n-Nonane	0.44	1.33	ND	2.34	7.01	ND	ND
98-82-8	i-Propylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
103-65-1	n-propylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
80-56-8	a-Pinene	0.40	1.20	ND	2.23	6.70	ND	ND
620-14-4	3-Ethyltoluene	0.44	1.33	ND	2.19	6.57	ND	ND
622-96-8	4-Ethyltoluene	0.44	1.33	ND	2.19	6.57	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
611-14-3	2-Ethyltoluene	0.44	1.33	ND	2.19	6.57	ND	ND
127-91-3	b-Pinene	0.40	1.20	ND	2.23	6.70	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
124-18-5	n-Decane	0.40	1.20	ND	2.33	7.00	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
5989-27-5	d-Limonene	0.40	1.20	ND	2.23	6.70	ND	ND
141-93-5	1,3-Diethylbenzene	0.40	1.20	ND	2.20	6.60	ND	ND
105-05-5	1,4-Diethylbenzene	0.40	1.20	ND	2.20	6.60	ND	ND
104-51-8	n-Butylbenzene	0.40	1.20	ND	2.20	6.60	ND	ND
1120-21-4	Undecane	0.36	1.09	ND	2.33	6.99	ND	ND
112-40-3	Dodecane	0.33	1.00	ND	2.33	6.98	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	15.00	45.00	ND	52.99	158.98	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	90.00	270.00	ND	59.02	177.05	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B10257

File Name: B10257B
Description: METHOD BLANK
Canister:
QC_Batch: 102517-GCK

Date Sampled:
Date Analyzed: 10/25/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 13:25

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B10277

File Name: B10277c

Description: METHOD BLANK

Canister:

QC_Batch: 102717-GCK

Date Sampled:

Date Analyzed: 10/27/17

Can Factor: 1.00

Air Volume: 200 ml

Time:

Time: 13:25

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	22.29	26.50	79.49	78.74	J
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	133.73	29.51	88.52	87.69	J

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: LABQC

Laboratory Number: B10037

File Name: B10037B

Date Sampled:

Time:

Description: METHOD BLANK

Date Analyzed: 10/03/17

Time: 10:17

Can/Tube#:

Can Dilution Factor: 1.00

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	100	300	ND	ND

METHOD BLANK REPORT

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: LABQC
Laboratory Number: B10037

File Name: B10037B
Description: METHOD BLANK
Can/Tube#:
QC_Batch: 100317-GCL

Date Sampled:
Date Analyzed: 10/03/17
Dilution Factor: 1.00
Time: 10:01

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.20	0.60	ND	0.14	0.41	ND	

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 101717-MA1

Date: 10/17/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	111		93		70	130	17	25	
75-35-4	1,1-Dichloroethene	116		93		70	130	22	25	
75-09-2	Dichloromethane	104		89		70	130	16	25	
75-34-3	1,1-Dichloroethane	106		92		70	130	14	25	
67-66-3	Chloroform	107		88		70	130	19	25	
71-55-6	1,1,1-Trichloroethane	110		99		70	130	10	25	
107-06-2	1,2-Dichloroethane	111		99		70	130	12	25	
71-43-2	Benzene	105		94		70	130	11	25	
56-23-5	Carbon tetrachloride	88		71		70	130	21	25	
79-01-6	Trichloroethene	106		96		70	130	9	25	
108-88-3	Toluene	103		96		70	130	7	25	
127-18-4	Tetrachloroethene	105		90		70	130	16	25	
100-41-4	Ethylbenzene	101		86		70	130	16	25	
1330-20-7	m,p-Xylenes	100		84		70	130	18	25	
95-47-6	o-Xylene	100		85		70	130	16	25	
108-67-8	1,3,5-Trimethylbenzene	95		82		70	130	15	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 101817-MA1

Date: 10/18/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	106		101		70	130	5	25	
75-35-4	1,1-Dichloroethene	106		101		70	130	5	25	
75-09-2	Dichloromethane	105		103		70	130	2	25	
75-34-3	1,1-Dichloroethane	103		98		70	130	5	25	
67-66-3	Chloroform	102		100		70	130	2	25	
71-55-6	1,1,1-Trichloroethane	122		106		70	130	15	25	
107-06-2	1,2-Dichloroethane	111		113		70	130	2	25	
71-43-2	Benzene	107		106		70	130	1	25	
56-23-5	Carbon tetrachloride	78		84		70	130	8	25	
79-01-6	Trichloroethene	110		109		70	130	1	25	
108-88-3	Toluene	109		111		70	130	2	25	
127-18-4	Tetrachloroethene	102		104		70	130	2	25	
100-41-4	Ethylbenzene	105		109		70	130	4	25	
1330-20-7	m,p-Xylenes	106		107		70	130	1	25	
95-47-6	o-Xylene	99		106		70	130	7	25	
108-67-8	1,3,5-Trimethylbenzene	74		81		70	130	10	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 102017-MA1

Date: 10/20/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	100		116		70	130	14	25	
75-35-4	1,1-Dichloroethene	99		115		70	130	15	25	
75-09-2	Dichloromethane	112		127		70	130	12	25	
75-34-3	1,1-Dichloroethane	102		117		70	130	14	25	
67-66-3	Chloroform	106		112		70	130	6	25	
71-55-6	1,1,1-Trichloroethane	96		94		70	130	2	25	
107-06-2	1,2-Dichloroethane	99		99		70	130	0	25	
71-43-2	Benzene	102		104		70	130	2	25	
56-23-5	Carbon tetrachloride	104		93		70	130	11	25	
79-01-6	Trichloroethene	100		103		70	130	4	25	
108-88-3	Toluene	99		102		70	130	3	25	
127-18-4	Tetrachloroethene	93		101		70	130	8	25	
100-41-4	Ethylbenzene	89		109		70	130	21	25	
1330-20-7	m,p-Xylenes	85		103		70	130	19	25	
95-47-6	o-Xylene	83		96		70	130	14	25	
108-67-8	1,3,5-Trimethylbenzene	71		86		70	130	19	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 100517-GCK

Date: 10/05/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	Flag
		%		%		%	%	%	%	
109-66-0	n-Pentane	108		106		70	130	2	25	
110-54-3	n-Hexane	111		114		70	130	3	25	
71-43-2	Benzene	95		96		70	130	1	25	
142-82-5	n-Heptane	110		111		70	130	1	25	
108-88-3	Toluene	101		95		70	130	6	25	
111-65-9	n-Octane	109		111		70	130	2	25	
108-38-3	m,p-xylene	108		100		70	130	7	25	
95-47-6	o-xylene	113		105		70	130	8	25	
108-67-8	1,3,5-Trimethylbenzene	105		113		70	130	7	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 100617-GCK

Date: 10/06/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
109-66-0	n-Pentane	92		87		70	130	5	25	
110-54-3	n-Hexane	101		96		70	130	5	25	
71-43-2	Benzene	90		83		70	130	6	25	
142-82-5	n-Heptane	97		94		70	130	3	25	
108-88-3	Toluene	87		78		70	130	9	25	
111-65-9	n-Octane	75		90		70	130	15	25	
108-38-3	m,p-xylene	73		90		70	130	17	25	
95-47-6	o-xylene	84		104		70	130	20	25	
108-67-8	1,3,5-Trimethylbenzene	123		103		70	130	20	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 100917-GCK

Date: 10/09/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	Flag
		%		%		%	%	%	%	
109-66-0	n-Pentane	103		85		70	130	18	25	
110-54-3	n-Hexane	98		107		70	130	8	25	
71-43-2	Benzene	74		82		70	130	8	25	
142-82-5	n-Heptane	97		93		70	130	4	25	
108-88-3	Toluene	81		80		70	130	0	25	
111-65-9	n-Octane	80		94		70	130	14	25	
108-38-3	m,p-xylene	90		97		70	130	7	25	
95-47-6	o-xylene	85		99		70	130	14	25	
108-67-8	1,3,5-Trimethylbenzene	85		91		70	130	6	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 102517-GCK

Date: 10/25/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	Flag
		%		%		%	%	%	%	
109-66-0	n-Pentane	89		95		70	130	6	25	
110-54-3	n-Hexane	93		93		70	130	0	25	
71-43-2	Benzene	88		93		70	130	5	25	
142-82-5	n-Heptane	97		102		70	130	5	25	
108-88-3	Toluene	81		97		70	130	16	25	
111-65-9	n-Octane	98		104		70	130	5	25	
108-38-3	m,p-xylene	114		126		70	130	11	25	
95-47-6	o-xylene	110		120		70	130	10	25	
108-67-8	1,3,5-Trimethylbenzene	110		127		70	130	17	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 102717-GCK

Date: 10/27/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
109-66-0	n-Pentane	96		90		70	130	6	25	
110-54-3	n-Hexane	89		88		70	130	1	25	
71-43-2	Benzene	93		99		70	130	6	25	
142-82-5	n-Heptane	109		109		70	130	0	25	
108-88-3	Toluene	102		108		70	130	6	25	
111-65-9	n-Octane	86		91		70	130	5	25	
108-38-3	m,p-xylene	113		109		70	130	4	25	
95-47-6	o-xylene	106		108		70	130	2	25	
108-67-8	1,3,5-Trimethylbenzene	116		109		70	130	7	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL REPORT

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D 1945 GC/TCD

Analytical Method: D1945

QC_Batch: 100317-GCO

Date Analyzed: 10/03/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
124-38-9	Carbon Dioxide	102		103		70	130	1	25	

Analytical Reports

EAS SDG Number 217539

Project Number: 17198

The following pages contain the certified Analytical Reports for the samples submitted in the Sample Delivery Group (SDG) and are in order of the EAS Lab ID number. All of the analytical methods used are modifications of the published methods. Procedural method modifications are listed in the method descriptions, and the QC modifications are in the QC Criteria table in the EAS Quality Manual.

The Analytical Report has columns for the method detection limit (MDL), the reporting limit (RL), and the Amount. The Amount is the concentration of the compound in the sample. The report usually has the results reported with two commonly used units. The MDL, RL, and Amount are adjusted for the canister dilution factor and any dilution caused by sample matrix effects.

DETECTION LIMITS

MDL: The MDL is initially determined from the standard deviation of seven replicate measurements, but the value in the report is set from a MDL verification sample run at a level near the calculated MDL.

RL: The reporting limit (RL) is usually the lowest concentration standard on the calibration curve, and represents the lowest concentration that can be measured that will meet all of the QC Criteria for the method.

DATA FLAGS

In the standard report, if a compound is not detected above the method detection limit, a "ND" is in the Amount column. The flag column is used for both the not detect flag and for any data flags. The not detect flag is either a "ND" or a "U". If the "U" flag is selected, the MDL for the compound is reported in the Amount column instead of "ND". Other flags are listed below:

B - This compound was detected in the batch method blank above the reporting limit.

E - This compound exceeds the calibration range for this sample volume.

J - The amount reported is estimated because it was below the RL and above the MDL

F - Higher detection limits because of matrix interference

UNITS

PPBV or PPMV: Parts-per-billion (or million) by volume is a mole (volume) ratio of the moles of analyte divided by the moles of air (gas). This is the primary unit used to report air or gas concentrations and is independent of temperature and pressure. It is different from the ppb unit used to report water or soil data, which is a mass ratio.

UG/M3 OR MG/M3: Micrograms (or milligrams) per cubic meter is a mass/volume ratio and does depend on temperature and pressure of the source at time of sample collection. The reported result was calculated based on 1 atm pressure and a temperature of 25C. The conversion from PPBV is: $UG/M3 = PPBV \times MW/24.46$ where 24.46 is the gas constant and MW is the Compounds Molecular Weight (sometimes called Formula Weight)

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 01

File Name: 1753901A.D

Date Sampled: 09/26/17

Time: 08:44

Description: T - 101

Date Analyzed: 10/18/17

Time: 20:01

Canister: 689

Can Dilution Factor: 1.14

QC_Batch: 101817-MA1

Air Volume: 500 ml

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-71-8	Dichlorodifluoromethane	0.11	0.57	ND	0.56	2.83	ND	
74-87-3	Chloromethane	0.11	0.57	ND	0.24	1.18	ND	
76-14-2	Freon 114	0.11	0.57	ND	0.80	4.01	ND	
75-01-4	Vinyl chloride	0.11	0.57	ND	0.29	1.47	ND	
106-99-0	1,3-Butadiene	0.11	0.57	ND	0.25	1.27	ND	
74-83-9	Bromomethane	0.11	0.57	ND	0.44	2.22	ND	
75-00-3	Chloroethane	0.11	0.57	ND	0.30	1.51	ND	
64-17-5	Ethanol	0.57	1.71	ND	1.07	3.22	ND	
75-69-4	Trichlorofluoromethane	0.11	0.55	ND	0.64	3.07	ND	
67-64-1	Acetone	0.57	1.40	2.55	1.35	3.33	6.06	
67-63-0	2-propanol	0.57	1.31	ND	1.40	3.22	ND	
75-35-4	1,1-Dichloroethene	0.11	0.57	ND	0.45	2.24	ND	
76-13-1	Freon 113	0.11	0.55	ND	0.87	4.18	ND	
75-09-2	Dichloromethane	0.23	0.55	ND	0.79	1.91	ND	
75-15-0	Carbon disulfide	0.57	1.06	ND	1.77	3.29	ND	
156-60-5	trans-1,2-Dichloroethene	0.11	0.41	ND	0.45	1.63	ND	
1634-04-4	Methyl tert butyl ether	0.11	0.42	ND	0.41	1.51	ND	
75-34-3	1,1-Dichloroethane	0.11	0.57	ND	0.46	2.30	ND	
108-05-4	Vinyl acetate	0.11	0.50	ND	0.40	1.76	ND	
78-93-3	2-Butanone	0.46	1.16	ND	1.34	3.42	ND	
141-78-6	Ethyl acetate	0.23	0.50	ND	0.82	1.80	ND	
74-97-5	Bromochloromethane	0.11	0.30	ND	0.60	1.61	ND	
109-99-9	Tetrahydrofuran	0.23	0.57	ND	0.67	1.69	ND	
156-59-2	cis-1,2-Dichloroethene	0.23	0.61	ND	0.90	2.43	ND	
67-66-3	Chloroform	0.11	0.57	ND	0.56	2.79	ND	
71-55-6	1,1,1-Trichloroethane	0.11	0.51	ND	0.62	2.76	ND	
107-06-2	1,2-Dichloroethane	0.11	0.52	ND	0.46	2.10	ND	
110-82-7	Cyclohexane	0.11	0.44	ND	0.39	1.51	ND	
71-43-2	Benzene	0.11	0.58	1.77	0.36	1.85	5.64	
56-23-5	Carbon tetrachloride	0.11	0.54	ND	0.72	3.40	ND	
142-82-5	n-Heptane	0.57	1.38	ND	2.33	5.66	ND	
78-87-5	1,2-Dichloropropane	0.11	0.55	ND	0.53	2.53	ND	
123-91-1	1,4 Dioxane	0.46	0.93	ND	1.64	3.36	ND	
79-01-6	Trichloroethene	0.07	0.53	ND	0.37	2.85	ND	
75-27-4	Bromodichloromethane	0.11	0.23	ND	0.76	1.54	ND	
80-62-6	Methyl methacrylate	0.46	1.54	ND	1.87	6.31	ND	
108-10-1	4-Methyl-2-pentanone	0.46	1.73	ND	1.87	7.07	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.11	0.59	ND	0.52	2.68	ND	
108-88-3	Toluene	0.23	0.60	0.29	0.86	2.24	1.09	J
10061-02-6	trans-1,3-Dichloropropene	0.11	0.59	ND	0.52	2.68	ND	
79-00-5	1,1,2-Trichloroethane	0.11	0.59	ND	0.62	3.20	ND	
591-78-6	2-Hexanone	0.57	1.62	ND	2.33	6.62	ND	
124-48-1	Dibromochloromethane	0.11	0.23	ND	0.97	1.94	ND	
106-93-4	1,2-Dibromoethane	0.11	0.28	ND	0.88	2.13	ND	
127-18-4	Tetrachloroethene	0.07	0.28	ND	0.46	1.88	ND	
108-90-7	Chlorobenzene	0.11	0.52	ND	0.52	2.39	ND	
100-41-4	Ethylbenzene	0.24	0.60	ND	1.05	2.62	ND	
1330-20-7	m,p-Xylenes	0.24	0.60	ND	1.05	2.62	ND	
100-42-5	Styrene	0.24	0.59	ND	1.01	2.51	ND	
75-25-2	Bromoform	0.11	0.15	ND	1.18	1.58	ND	
95-47-6	o-Xylene	0.24	0.59	ND	1.02	2.55	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.11	0.28	ND	0.77	1.94	ND	
622-96-8	4-Ethyltoluene	0.38	0.94	ND	1.86	4.64	ND	
108-67-8	1,3,5-Trimethylbenzene	0.24	0.59	ND	1.16	2.89	ND	
95-63-6	1,2,4-Trimethylbenzene	0.23	0.58	ND	1.14	2.85	ND	
541-73-1	1,3-Dichlorobenzene	0.23	0.42	ND	1.37	2.53	ND	
100-44-7	Benzyl chloride	0.23	1.38	ND	1.18	7.15	ND	
106-46-7	1,4-Dichlorobenzene	0.23	0.39	ND	1.37	2.37	ND	
95-50-1	1,2-Dichlorobenzene	0.23	0.37	ND	1.37	2.22	ND	
120-82-1	1,2,4-Trichlorobenzene	0.57	0.78	ND	4.23	5.82	ND	
91-20-3	Naphthalene	0.12	0.18	ND	0.61	0.96	ND	
87-68-3	Hexachlorobutadiene	0.57	0.60	ND	6.08	6.44	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	101	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 01

File Name: 1753901A
Description: T - 101
Canister: 689
QC_Batch: 100517-GCK

Date Sampled: 09/26/17 Time: 8:44
Date Analyzed: 10/05/17 Time: 14:29
Can Factor: 1.14
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.14	3.42	ND	1.31	3.94	ND	ND
74-86-2	Acetylene	1.14	3.42	ND	1.21	3.64	ND	ND
74-84-0	Ethane	1.14	3.42	77.56	1.41	4.22	95.68	
115-07-1	Propene	0.76	2.28	ND	1.31	3.93	ND	ND
74-98-6	Propane	0.76	2.28	54.90	1.37	4.12	99.23	
75-28-5	i-Butane	0.57	1.71	20.27	1.36	4.07	48.26	
106-98-9	1-Butene	0.57	1.71	ND	1.31	3.93	ND	ND
106-97-8	n-Butane	0.57	1.71	10.46	1.36	4.07	24.90	
624-64-6	t-2-Butene	0.57	1.71	ND	1.31	3.93	ND	ND
590-18-1	c-2-Butene	0.57	1.71	ND	1.31	3.93	ND	ND
78-78-4	i-Pentane	0.46	1.37	15.73	1.35	4.05	46.53	
109-67-1	1-Pentene	0.46	1.37	ND	1.31	3.93	ND	ND
109-66-0	n-Pentane	0.46	1.37	1.53	1.35	4.04	4.51	
78-79-5	Isoprene	0.46	1.37	ND	1.27	3.82	ND	ND
646-04-8	t-2-Pentene	0.46	1.37	ND	1.31	3.93	ND	ND
627-20-3	c-2-Pentene	0.46	1.37	ND	1.31	3.93	ND	ND
75-83-2	2,2-Dimethylbutane	0.38	1.14	ND	1.34	4.03	ND	ND
287-92-3	Cyclopentane	0.46	1.37	ND	1.31	3.93	ND	ND
79-29-8	2,3-Dimethylbutane	0.38	1.14	ND	1.34	4.03	ND	ND
107-83-5	2-Methylpentane	0.38	1.14	1.17	1.34	4.03	4.14	
96-14-0	3-Methylpentane	0.38	1.14	3.45	1.34	4.03	12.19	
110-54-3	n-Hexane	0.38	1.14	0.41	1.34	4.03	1.46	J
96-37-7	Methylcyclopentane	0.38	1.14	ND	1.31	3.93	ND	ND
108-08-7	2,4-Dimethylpentane	0.33	0.98	2.33	1.34	4.01	9.55	
71-43-2	Benzene	0.38	1.14	1.43	1.22	3.65	4.56	
110-82-7	Cyclohexane	0.38	1.14	1.49	1.31	3.93	5.15	
591-76-4	2-Methylhexane	0.33	0.98	1.49	1.34	4.01	6.12	
565-59-3	2,3-Dimethylpentane	0.33	0.98	1.29	1.34	4.01	5.30	
589-34-4	3-Methylhexane	0.33	0.98	0.86	1.34	4.01	3.53	J
540-84-1	2,2,4-Trimethylpentane	0.29	0.86	1.53	1.33	4.00	7.14	
142-82-5	n-Heptane	0.33	0.98	0.34	1.34	4.01	1.39	J
108-87-2	Methylcyclohexane	0.33	0.98	2.11	1.31	3.93	8.50	
592-13-2	2,5-Dimethylhexane	0.29	0.86	ND	1.33	4.00	ND	ND
589-43-5	2,4-Dimethylhexane	0.29	0.86	0.72	1.33	4.00	3.38	J
565-75-3	2,3,4-Trimethylpentane	0.29	0.86	2.18	1.33	4.00	10.21	
108-88-3	Toluene	0.33	0.98	0.49	1.23	3.69	1.87	J
584-94-1	2,3-Dimethylhexane	0.29	0.86	1.00	1.33	4.00	4.70	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.86	ND	1.33	4.00	ND	ND
589-81-1	3-Methylheptane	0.29	0.86	ND	1.33	4.00	ND	ND
111-65-9	n-Octane	0.29	0.86	1.19	1.33	4.00	5.56	
100-41-4	Ethylbenzene	0.29	0.86	0.91	1.24	3.72	3.95	
108-38-3	m,p-xylene	0.29	0.86	2.10	1.24	3.72	9.14	
100-42-5	Styrene	0.29	0.86	1.12	1.22	3.65	4.78	
95-47-6	o-xylene	0.29	0.86	2.27	1.24	3.72	9.90	
111-84-2	n-Nonane	0.25	0.76	0.58	1.33	4.00	3.04	J
98-82-8	i-Propylbenzene	0.25	0.76	0.63	1.25	3.74	3.10	J
103-65-1	n-propylbenzene	0.25	0.76	0.45	1.25	3.74	2.21	J
80-56-8	a-Pinene	0.23	0.68	ND	1.27	3.82	ND	ND
620-14-4	3-Ethyltoluene	0.25	0.76	0.68	1.25	3.74	3.36	J
622-96-8	4-Ethyltoluene	0.25	0.76	0.37	1.25	3.74	1.82	J
108-67-8	1,3,5-Trimethylbenzene	0.25	0.76	0.90	1.25	3.74	4.45	
611-14-3	2-Ethyltoluene	0.25	0.76	0.54	1.25	3.74	2.64	J
127-91-3	b-Pinene	0.23	0.68	ND	1.27	3.82	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.25	0.76	0.44	1.25	3.74	2.17	J
124-18-5	n-Decane	0.23	0.68	0.54	1.33	3.99	3.16	J
526-73-8	1,2,3-Trimethylbenzene	0.25	0.76	0.38	1.25	3.74	1.88	J
5989-27-5	d-Limonene	0.23	0.68	ND	1.27	3.82	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.68	ND	1.25	3.76	ND	ND
105-05-5	1,4-Diethylbenzene	0.23	0.68	0.73	1.25	3.76	3.99	
104-51-8	n-Butylbenzene	0.23	0.68	ND	1.25	3.76	ND	ND
1120-21-4	Undecane	0.21	0.62	0.99	1.33	3.98	6.37	
112-40-3	Dodecane	0.19	0.57	1.18	1.33	3.98	8.21	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.55	25.65	222.35	30.21	90.62	785.52	
TNMHC - C1	Total Non-Methane Hydrocarbons	51.30	153.90	1,334.11	33.64	100.92	874.82	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 01

File Name: 753901PA

Date Sampled: 09/26/17

Time: 8:44

Description: T-101

Date Analyzed: 10/03/17

Time: 10:29

Can/Tube#: 689

Can Dilution Factor: 1.14

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	114	342	ND	ND

ANALYTICAL REPORT

ASTM D3416 Methane by GC/FID

Modified Analytical Method: **ASTM D3416**

SDG: **217539**
Laboratory Number: **01**

File Name: 1753901A
Description: T-101
Can/Tube#: 689
QC_Batch: 100317-GCL

Date Sampled: 09/26/17 Time: 8:44
Date Analyzed: 10/03/17 Time: 10:17
Dilution Factor: 1.14

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.68	2.14	0.15	0.46	1.44	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 02

File Name: 1753902A.D
Description: T-102
Canister: 725
QC_Batch: 102017-MA1

Date Sampled: 09/26/17 Time: 09:31
Date Analyzed: 10/20/17 Time: 17:10
Can Dilution Factor: 1.10
Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	11.00	55.33	ND	54.37	273.46	ND	
74-87-3	Chloromethane	11.00	55.33	ND	22.71	114.23	ND	
76-14-2	Freon 114	11.00	55.33	ND	76.85	386.56	ND	
75-01-4	Vinyl chloride	11.00	55.33	ND	28.10	141.37	ND	
106-99-0	1,3-Butadiene	11.00	55.33	ND	24.33	122.37	ND	
74-83-9	Bromomethane	11.00	55.33	ND	42.67	214.65	ND	
75-00-3	Chloroethane	11.00	55.33	ND	29.00	145.89	ND	
64-17-5	Ethanol	55.00	165.00	ND	103.65	310.95	ND	
75-69-4	Trichlorofluoromethane	11.00	52.82	ND	61.79	296.68	ND	
67-64-1	Acetone	55.00	135.30	154.02	130.63	321.35	365.82	
67-63-0	2-propanol	55.00	126.28	ND	135.13	310.25	ND	
75-35-4	1,1-Dichloroethene	11.00	54.56	ND	43.57	216.12	ND	
76-13-1	Freon 113	11.00	52.63	ND	84.27	403.17	ND	
75-09-2	Dichloromethane	22.00	52.98	ND	76.35	183.87	ND	
75-15-0	Carbon disulfide	55.00	102.08	ND	171.10	317.56	ND	
156-60-5	trans-1,2-Dichloroethene	11.00	39.71	ND	43.57	157.31	ND	
1634-04-4	Methyl tert butyl ether	11.00	40.56	ND	39.62	146.06	ND	
75-34-3	1,1-Dichloroethane	11.00	54.86	ND	44.52	222.03	ND	
108-05-4	Vinyl acetate	11.00	48.33	ND	38.72	170.11	ND	
78-93-3	2-Butanone	44.00	111.98	ND	129.69	330.05	ND	
141-78-6	Ethyl acetate	22.00	48.18	ND	79.23	173.52	ND	
74-97-5	Bromochloromethane	11.00	29.30	ND	58.19	154.98	ND	
109-99-9	Tetrahydrofuran	22.00	55.33	ND	64.84	163.08	ND	
156-59-2	cis-1,2-Dichloroethene	22.00	59.18	ND	87.15	234.42	ND	
67-66-3	Chloroform	11.00	55.17	ND	53.69	269.28	ND	
71-55-6	1,1,1-Trichloroethane	11.00	48.84	ND	59.99	266.34	ND	
107-06-2	1,2-Dichloroethane	11.00	50.18	ND	44.52	203.07	ND	
110-82-7	Cyclohexane	11.04	42.24	ND	38.01	145.39	ND	
71-43-2	Benzene	11.00	55.88	554.12	35.12	178.42	1,769.13	
56-23-5	Carbon tetrachloride	11.00	52.14	ND	69.16	327.82	ND	
142-82-5	n-Heptane	55.00	133.32	75.58	225.29	546.09	309.58	J
78-87-5	1,2-Dichloropropane	11.00	52.94	ND	50.81	244.55	ND	
123-91-1	1,4 Dioxane	44.00	89.98	ND	158.46	324.06	ND	
79-01-6	Trichloroethene	6.60	51.24	ND	35.45	275.22	ND	
75-27-4	Bromodichloromethane	11.00	22.22	ND	73.66	148.79	ND	
80-62-6	Methyl methacrylate	44.00	148.72	ND	180.05	608.57	ND	
108-10-1	4-Methyl-2-pentanone	44.00	166.54	ND	180.23	682.17	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	11.00	57.00	ND	49.91	258.65	ND	
108-88-3	Toluene	22.00	57.42	340.02	82.83	216.19	1,280.18	
10061-02-6	trans-1,3-Dichloropropene	11.00	57.05	ND	49.91	258.86	ND	
79-00-5	1,1,2-Trichloroethane	11.00	56.56	ND	59.99	308.43	ND	
591-78-6	2-Hexanone	55.00	155.98	ND	225.29	638.91	ND	
124-48-1	Dibromochloromethane	11.00	21.96	ND	93.67	187.02	ND	
106-93-4	1,2-Dibromoethane	11.00	26.70	ND	84.49	205.08	ND	
127-18-4	Tetrachloroethene	6.60	26.77	ND	44.73	181.46	ND	
108-90-7	Chlorobenzene	11.00	50.06	ND	50.63	230.42	ND	
100-41-4	Ethylbenzene	23.26	58.15	175.20	100.98	252.45	760.61	
1330-20-7	m,p-Xylenes	23.32	58.29	526.92	101.23	253.08	2,287.57	
100-42-5	Styrene	22.78	56.95	ND	97.03	242.58	ND	
75-25-2	Bromoform	11.00	14.76	ND	113.63	152.47	ND	
95-47-6	o-Xylene	22.68	56.69	150.98	98.45	246.13	655.44	
79-34-5	1,1,2,2-Tetrachloroethane	10.89	27.23	ND	74.72	186.80	ND	
622-96-8	4-Ethyltoluene	36.46	91.16	87.16	179.18	447.94	428.30	J
108-67-8	1,3,5-Trimethylbenzene	22.73	56.83	74.72	111.69	279.23	367.17	
95-63-6	1,2,4-Trimethylbenzene	22.36	55.90	193.30	109.88	274.69	949.83	
541-73-1	1,3-Dichlorobenzene	22.00	40.70	ND	132.20	244.58	ND	
100-44-7	Benzyl chloride	22.00	133.32	ND	113.86	689.98	ND	
106-46-7	1,4-Dichlorobenzene	22.00	38.06	ND	132.20	228.71	ND	
95-50-1	1,2-Dichlorobenzene	22.00	35.64	ND	132.20	214.17	ND	
120-82-1	1,2,4-Trichlorobenzene	55.00	75.68	ND	407.85	561.21	ND	
91-20-3	Naphthalene	11.22	17.60	ND	58.80	92.24	ND	
87-68-3	Hexachlorobutadiene	55.00	58.30	ND	586.37	621.56	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	99	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 02

File Name: 1753902A
Description: T - 102
Canister: 725
QC_Batch: 100517-GCK

Date Sampled: 09/26/17 Time: 9:31
Date Analyzed: 10/05/17 Time: 15:20
Can Factor: 1.10
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.10	3.30	ND	1.27	3.80	ND	ND
74-86-2	Acetylene	1.10	3.30	ND	1.17	3.52	ND	ND
74-84-0	Ethane	1.10	3.30	3,886.20	1.36	4.07	4,794.05	
115-07-1	Propene	0.73	2.20	ND	1.27	3.80	ND	ND
74-98-6	Propane	0.73	2.20	4,598.29	1.33	3.98	8,310.85	
75-28-5	i-Butane	0.55	1.65	2,281.19	1.31	3.93	5,431.84	
106-98-9	1-Butene	0.55	1.65	ND	1.26	3.79	ND	ND
106-97-8	n-Butane	0.55	1.65	2,705.08	1.31	3.93	6,441.20	
624-64-6	t-2-Butene	0.55	1.65	ND	1.26	3.79	ND	ND
590-18-1	c-2-Butene	0.55	1.65	ND	1.26	3.79	ND	ND
78-78-4	i-Pentane	0.44	1.32	2,780.80	1.30	3.91	8,228.43	
109-67-1	1-Pentene	0.44	1.32	ND	1.26	3.79	ND	ND
109-66-0	n-Pentane	0.44	1.32	611.93	1.30	3.90	1,808.21	
78-79-5	Isoprene	0.44	1.32	ND	1.23	3.68	ND	ND
646-04-8	t-2-Pentene	0.44	1.32	ND	1.26	3.79	ND	ND
627-20-3	c-2-Pentene	0.44	1.32	ND	1.26	3.79	ND	ND
75-83-2	2,2-Dimethylbutane	0.37	1.10	ND	1.30	3.89	ND	ND
287-92-3	Cyclopentane	0.44	1.32	ND	1.26	3.79	ND	ND
79-29-8	2,3-Dimethylbutane	0.37	1.10	ND	1.30	3.89	ND	ND
107-83-5	2-Methylpentane	0.37	1.10	293.11	1.30	3.89	1,035.49	
96-14-0	3-Methylpentane	0.37	1.10	649.62	1.30	3.89	2,294.96	
110-54-3	n-Hexane	0.37	1.10	204.10	1.30	3.89	721.04	
96-37-7	Methylcyclopentane	0.37	1.10	1.54	1.27	3.80	5.31	
108-08-7	2,4-Dimethylpentane	0.31	0.94	873.74	1.29	3.87	3,588.06	
71-43-2	Benzene	0.37	1.10	957.81	1.17	3.52	3,065.78	
110-82-7	Cyclohexane	0.37	1.10	ND	1.27	3.80	ND	ND
591-76-4	2-Methylhexane	0.31	0.94	140.87	1.29	3.87	578.48	
565-59-3	2,3-Dimethylpentane	0.31	0.94	212.04	1.29	3.87	870.76	
589-34-4	3-Methylhexane	0.31	0.94	146.38	1.29	3.87	601.11	
540-84-1	2,2,4-Trimethylpentane	0.28	0.83	225.31	1.29	3.86	1,054.55	
142-82-5	n-Heptane	0.31	0.94	119.06	1.29	3.87	488.92	
108-87-2	Methylcyclohexane	0.31	0.94	1,181.29	1.26	3.79	4,754.20	
592-13-2	2,5-Dimethylhexane	0.28	0.83	142.65	1.29	3.86	667.64	
589-43-5	2,4-Dimethylhexane	0.28	0.83	205.43	1.29	3.86	961.47	
565-75-3	2,3,4-Trimethylpentane	0.28	0.83	205.00	1.29	3.86	959.45	
108-88-3	Toluene	0.31	0.94	689.15	1.19	3.56	2,601.24	
584-94-1	2,3-Dimethylhexane	0.28	0.83	153.84	1.29	3.86	720.04	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.28	0.83	ND	1.29	3.86	ND	ND
589-81-1	3-Methylheptane	0.28	0.83	ND	1.29	3.86	ND	ND
111-65-9	n-Octane	0.28	0.83	161.44	1.29	3.86	755.59	
100-41-4	Ethylbenzene	0.28	0.83	552.86	1.20	3.59	2,406.29	
108-38-3	m,p-xylene	0.28	0.83	1,352.09	1.20	3.59	5,884.90	
100-42-5	Styrene	0.28	0.83	244.86	1.17	3.52	1,045.69	
95-47-6	o-xylene	0.28	0.83	469.36	1.20	3.59	2,042.85	
111-84-2	n-Nonane	0.24	0.73	76.05	1.29	3.86	399.91	
98-82-8	i-Propylbenzene	0.24	0.73	284.74	1.20	3.61	1,402.72	
103-65-1	n-propylbenzene	0.24	0.73	121.65	1.20	3.61	599.26	
80-56-8	a-Pinene	0.22	0.66	ND	1.23	3.68	ND	ND
620-14-4	3-Ethyltoluene	0.24	0.73	359.91	1.20	3.61	1,773.02	
622-96-8	4-Ethyltoluene	0.24	0.73	721.28	1.20	3.61	3,553.17	
108-67-8	1,3,5-Trimethylbenzene	0.24	0.73	464.11	1.20	3.61	2,286.30	
611-14-3	2-Ethyltoluene	0.24	0.73	536.86	1.20	3.61	2,644.71	
127-91-3	b-Pinene	0.22	0.66	ND	1.23	3.68	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.24	0.73	962.62	1.20	3.61	4,742.11	
124-18-5	n-Decane	0.22	0.66	139.79	1.28	3.85	815.24	
526-73-8	1,2,3-Trimethylbenzene	0.24	0.73	355.62	1.20	3.61	1,751.87	
5989-27-5	d-Limonene	0.22	0.66	ND	1.23	3.68	ND	ND
141-93-5	1,3-Diethylbenzene	0.22	0.66	229.49	1.21	3.63	1,262.20	
105-05-5	1,4-Diethylbenzene	0.22	0.66	589.47	1.21	3.63	3,242.07	
104-51-8	n-Butylbenzene	0.22	0.66	ND	1.21	3.63	ND	ND
1120-21-4	Undecane	0.20	0.60	893.42	1.28	3.84	5,723.05	
112-40-3	Dodecane	0.18	0.55	417.48	1.28	3.84	2,913.80	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.25	24.75	78,933.23	29.15	87.44	278,854.28	
TNMHC - C1	Total Non-Methane Hydrocarbons	49.50	148.50	473,599.38	32.46	97.38	310,556.97	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 02

File Name: 753902PA

Date Sampled: 09/26/17

Time: 9:31

Description: T-102

Date Analyzed: 10/03/17

Time: 10:36

Can/Tube#: 725

Can Dilution Factor: 1.10

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.01	110	330	126	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 02

File Name: 1753902A

Description: T-102

Can/Tube#: 725

QC_Batch: 100317-GCL

Date Sampled: 09/26/17

Time: 9:31

Date Analyzed: 10/03/17

Time: 10:24

Dilution Factor: 1.10

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.22	0.66	27.84	0.15	0.45	18.81	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 03

File Name: 1753903A.D
Description: T - 103
Canister: 852
QC_Batch: 101817-MA1

Date Sampled: 09/26/17 Time: 12:26
Date Analyzed: 10/18/17 Time: 20:35
Can Dilution Factor: 1.19
Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.12	0.60	ND	0.59	2.96	ND	
74-87-3	Chloromethane	0.12	0.60	ND	0.25	1.24	ND	
76-14-2	Freon 114	0.12	0.60	ND	0.83	4.18	ND	
75-01-4	Vinyl chloride	0.12	0.60	ND	0.30	1.53	ND	
106-99-0	1,3-Butadiene	0.12	0.60	ND	0.26	1.32	ND	
74-83-9	Bromomethane	0.12	0.60	ND	0.46	2.32	ND	
75-00-3	Chloroethane	0.12	0.60	ND	0.31	1.58	ND	
64-17-5	Ethanol	0.60	1.79	ND	1.12	3.36	ND	
75-69-4	Trichlorofluoromethane	0.12	0.57	ND	0.67	3.21	ND	
67-64-1	Acetone	0.60	1.46	2.67	1.41	3.48	6.35	
67-63-0	2-propanol	0.60	1.37	ND	1.46	3.36	ND	
75-35-4	1,1-Dichloroethene	0.12	0.59	ND	0.47	2.34	ND	
76-13-1	Freon 113	0.12	0.57	ND	0.91	4.36	ND	
75-09-2	Dichloromethane	0.24	0.57	ND	0.83	1.99	ND	
75-15-0	Carbon disulfide	0.60	1.10	ND	1.85	3.44	ND	
156-60-5	trans-1,2-Dichloroethene	0.12	0.43	ND	0.47	1.70	ND	
1634-04-4	Methyl tert butyl ether	0.12	0.44	ND	0.43	1.58	ND	
75-34-3	1,1-Dichloroethane	0.12	0.59	ND	0.48	2.40	ND	
108-05-4	Vinyl acetate	0.12	0.52	ND	0.42	1.84	ND	
78-93-3	2-Butanone	0.48	1.21	ND	1.40	3.57	ND	
141-78-6	Ethyl acetate	0.24	0.52	ND	0.86	1.88	ND	
74-97-5	Bromochloromethane	0.12	0.32	ND	0.63	1.68	ND	
109-99-9	Tetrahydrofuran	0.24	0.60	ND	0.70	1.76	ND	
156-59-2	cis-1,2-Dichloroethene	0.24	0.64	ND	0.94	2.54	ND	
67-66-3	Chloroform	0.12	0.60	ND	0.58	2.91	ND	
71-55-6	1,1,1-Trichloroethane	0.12	0.53	ND	0.65	2.88	ND	
107-06-2	1,2-Dichloroethane	0.12	0.54	ND	0.48	2.20	ND	
110-82-7	Cyclohexane	0.12	0.46	ND	0.41	1.57	ND	
71-43-2	Benzene	0.12	0.60	0.83	0.38	1.93	2.64	
56-23-5	Carbon tetrachloride	0.12	0.56	ND	0.75	3.55	ND	
142-82-5	n-Heptane	0.60	1.44	ND	2.44	5.91	ND	
78-87-5	1,2-Dichloropropane	0.12	0.57	ND	0.55	2.65	ND	
123-91-1	1,4 Dioxane	0.48	0.97	ND	1.71	3.51	ND	
79-01-6	Trichloroethene	0.07	0.55	ND	0.38	2.98	ND	
75-27-4	Bromodichloromethane	0.12	0.24	ND	0.80	1.61	ND	
80-62-6	Methyl methacrylate	0.48	1.61	ND	1.95	6.58	ND	
108-10-1	4-Methyl-2-pentanone	0.48	1.80	ND	1.95	7.38	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.12	0.62	ND	0.54	2.80	ND	
108-88-3	Toluene	0.24	0.62	ND	0.90	2.34	ND	
10061-02-6	trans-1,3-Dichloropropene	0.12	0.62	ND	0.54	2.80	ND	
79-00-5	1,1,2-Trichloroethane	0.12	0.61	ND	0.65	3.34	ND	
591-78-6	2-Hexanone	0.60	1.69	ND	2.44	6.91	ND	
124-48-1	Dibromochloromethane	0.12	0.24	ND	1.01	2.02	ND	
106-93-4	1,2-Dibromoethane	0.12	0.29	ND	0.91	2.22	ND	
127-18-4	Tetrachloroethene	0.07	0.29	ND	0.48	1.96	ND	
108-90-7	Chlorobenzene	0.12	0.54	ND	0.55	2.49	ND	
100-41-4	Ethylbenzene	0.25	0.63	ND	1.09	2.73	ND	
1330-20-7	m,p-Xylenes	0.25	0.63	ND	1.10	2.74	ND	
100-42-5	Styrene	0.25	0.62	ND	1.05	2.62	ND	
75-25-2	Bromoform	0.12	0.16	ND	1.23	1.65	ND	
95-47-6	o-Xylene	0.25	0.61	ND	1.07	2.66	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.12	0.29	ND	0.81	2.02	ND	
622-96-8	4-Ethyltoluene	0.39	0.99	ND	1.94	4.85	ND	
108-67-8	1,3,5-Trimethylbenzene	0.25	0.61	ND	1.21	3.02	ND	
95-63-6	1,2,4-Trimethylbenzene	0.24	0.60	ND	1.19	2.97	ND	
541-73-1	1,3-Dichlorobenzene	0.24	0.44	ND	1.43	2.65	ND	
100-44-7	Benzyl chloride	0.24	1.44	ND	1.23	7.46	ND	
106-46-7	1,4-Dichlorobenzene	0.24	0.41	ND	1.43	2.47	ND	
95-50-1	1,2-Dichlorobenzene	0.24	0.39	ND	1.43	2.32	ND	
120-82-1	1,2,4-Trichlorobenzene	0.60	0.82	ND	4.41	6.07	ND	
91-20-3	Naphthalene	0.12	0.19	ND	0.64	1.00	ND	
87-68-3	Hexachlorobutadiene	0.60	0.63	ND	6.34	6.72	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				105	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 03

File Name: 1753903A
Description: T - 103
Canister: 852
QC_Batch: 102517-GCK

Date Sampled: 09/26/17 Time: 12:26
Date Analyzed: 10/25/17 Time: 17:04
Can Factor: 1.19
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.19	3.57	17.65	1.37	4.11	20.33	
74-86-2	Acetylene	1.19	3.57	ND	1.27	3.80	ND	ND
74-84-0	Ethane	1.19	3.57	10.17	1.47	4.40	12.54	
115-07-1	Propene	0.79	2.38	ND	1.37	4.11	ND	ND
74-98-6	Propane	0.79	2.38	18.25	1.43	4.30	32.98	
75-28-5	i-Butane	0.60	1.79	2.35	1.42	4.25	5.59	
106-98-9	1-Butene	0.60	1.79	ND	1.37	4.10	ND	ND
106-97-8	n-Butane	0.60	1.79	3.16	1.42	4.25	7.52	
624-64-6	t-2-Butene	0.60	1.79	ND	1.37	4.10	ND	ND
590-18-1	c-2-Butene	0.60	1.79	ND	1.37	4.10	ND	ND
78-78-4	i-Pentane	0.48	1.43	0.97	1.41	4.23	2.88	J
109-67-1	1-Pentene	0.48	1.43	ND	1.37	4.10	ND	ND
109-66-0	n-Pentane	0.48	1.43	0.71	1.41	4.22	2.09	J
78-79-5	Isoprene	0.48	1.43	ND	1.33	3.99	ND	ND
646-04-8	t-2-Pentene	0.48	1.43	ND	1.37	4.10	ND	ND
627-20-3	c-2-Pentene	0.48	1.43	ND	1.37	4.10	ND	ND
75-83-2	2,2-Dimethylbutane	0.40	1.19	ND	1.40	4.20	ND	ND
287-92-3	Cyclopentane	0.48	1.43	ND	1.37	4.10	ND	ND
79-29-8	2,3-Dimethylbutane	0.40	1.19	ND	1.40	4.20	ND	ND
107-83-5	2-Methylpentane	0.40	1.19	ND	1.40	4.20	ND	ND
96-14-0	3-Methylpentane	0.40	1.19	2.03	1.40	4.20	7.17	
110-54-3	n-Hexane	0.40	1.19	2.28	1.40	4.20	8.04	
96-37-7	Methylcyclopentane	0.40	1.19	ND	1.37	4.11	ND	ND
108-08-7	2,4-Dimethylpentane	0.34	1.02	0.61	1.40	4.19	2.52	J
71-43-2	Benzene	0.40	1.19	ND	1.27	3.81	ND	ND
110-82-7	Cyclohexane	0.40	1.19	ND	1.37	4.11	ND	ND
591-76-4	2-Methylhexane	0.34	1.02	ND	1.40	4.19	ND	ND
565-59-3	2,3-Dimethylpentane	0.34	1.02	ND	1.40	4.19	ND	ND
589-34-4	3-Methylhexane	0.34	1.02	ND	1.40	4.19	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.30	0.89	0.42	1.39	4.18	1.99	J
142-82-5	n-Heptane	0.34	1.02	0.53	1.40	4.19	2.19	J
108-87-2	Methylcyclohexane	0.34	1.02	ND	1.37	4.11	ND	ND
592-13-2	2,5-Dimethylhexane	0.30	0.89	ND	1.39	4.18	ND	ND
589-43-5	2,4-Dimethylhexane	0.30	0.89	ND	1.39	4.18	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.30	0.89	ND	1.39	4.18	ND	ND
108-88-3	Toluene	0.34	1.02	ND	1.28	3.85	ND	ND
584-94-1	2,3-Dimethylhexane	0.30	0.89	ND	1.39	4.18	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.30	0.89	ND	1.39	4.18	ND	ND
589-81-1	3-Methylheptane	0.30	0.89	ND	1.39	4.18	ND	ND
111-65-9	n-Octane	0.30	0.89	ND	1.39	4.18	ND	ND
100-41-4	Ethylbenzene	0.30	0.89	ND	1.29	3.88	ND	ND
108-38-3	m,p-xylene	0.30	0.89	0.30	1.29	3.88	1.32	J
100-42-5	Styrene	0.30	0.89	ND	1.27	3.81	ND	ND
95-47-6	o-xylene	0.30	0.89	ND	1.29	3.88	ND	ND
111-84-2	n-Nonane	0.26	0.79	ND	1.39	4.17	ND	ND
98-82-8	i-Propylbenzene	0.26	0.79	ND	1.30	3.91	ND	ND
103-65-1	n-propylbenzene	0.26	0.79	ND	1.30	3.91	ND	ND
80-56-8	a-Pinene	0.24	0.71	ND	1.33	3.99	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.79	ND	1.30	3.91	ND	ND
622-96-8	4-Ethyltoluene	0.26	0.79	ND	1.30	3.91	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.26	0.79	ND	1.30	3.91	ND	ND
611-14-3	2-Ethyltoluene	0.26	0.79	ND	1.30	3.91	ND	ND
127-91-3	b-Pinene	0.24	0.71	ND	1.33	3.99	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.79	0.47	1.30	3.91	2.33	J
124-18-5	n-Decane	0.24	0.71	ND	1.39	4.16	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.26	0.79	ND	1.30	3.91	ND	ND
5989-27-5	d-Limonene	0.24	0.71	ND	1.33	3.99	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.71	0.51	1.31	3.93	2.79	J
105-05-5	1,4-Diethylbenzene	0.24	0.71	0.42	1.31	3.93	2.31	J
104-51-8	n-Butylbenzene	0.24	0.71	ND	1.31	3.93	ND	ND
1120-21-4	Undecane	0.22	0.65	0.80	1.39	4.16	5.14	
112-40-3	Dodecane	0.20	0.60	ND	1.38	4.15	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.93	26.78	51.15	31.53	94.59	180.71	
TNMHC - C1	Total Non-Methane Hydrocarbons	53.55	160.65	306.91	35.11	105.34	201.25	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 03

File Name: 753903PA

Date Sampled: 09/26/17

Time: 12:26

Description: T-103

Date Analyzed: 10/03/17

Time: 10:43

Can/Tube#: 852

Can Dilution Factor: 1.19

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	119	357	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 03

File Name: 1753903A

Date Sampled: 09/26/17 Time: 12:26

Description: T-103

Date Analyzed: 10/03/17 Time: 10:28

Can/Tube#: 852

Dilution Factor: 1.19

QC_Batch: 100317-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.71	1.95	0.16	0.48	1.32	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 04

File Name: 1753904A.D

Date Sampled: 09/26/17

Time: 13:37

Description: T-104

Date Analyzed: 10/17/17

Time: 13:07

Canister: 769

Can Dilution Factor: 1.19

QC_Batch: 101717-MA1

Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.12	0.60	ND	0.59	2.96	ND	
74-87-3	Chloromethane	0.12	0.60	1.07	0.25	1.24	2.21	
76-14-2	Freon 114	0.12	0.60	ND	0.83	4.18	ND	
75-01-4	Vinyl chloride	0.12	0.60	ND	0.30	1.53	ND	
106-99-0	1,3-Butadiene	0.12	0.60	ND	0.26	1.32	ND	
74-83-9	Bromomethane	0.12	0.60	2.72	0.46	2.32	10.56	
75-00-3	Chloroethane	0.12	0.60	ND	0.31	1.58	ND	
64-17-5	Ethanol	0.60	1.79	1.99	1.12	3.36	3.76	
75-69-4	Trichlorofluoromethane	0.12	0.57	ND	0.67	3.21	ND	
67-64-1	Acetone	0.60	1.46	12.95	1.41	3.48	30.76	
67-63-0	2-propanol	0.60	1.37	ND	1.46	3.36	ND	
75-35-4	1,1-Dichloroethene	0.12	0.59	ND	0.47	2.34	ND	
76-13-1	Freon 113	0.12	0.57	ND	0.91	4.36	ND	
75-09-2	Dichloromethane	0.24	0.57	ND	0.83	1.99	ND	
75-15-0	Carbon disulfide	0.60	1.10	ND	1.85	3.44	ND	
156-60-5	trans-1,2-Dichloroethene	0.12	0.43	ND	0.47	1.70	ND	
1634-04-4	Methyl tert butyl ether	0.12	0.44	ND	0.43	1.58	ND	
75-34-3	1,1-Dichloroethane	0.12	0.59	ND	0.48	2.40	ND	
108-05-4	Vinyl acetate	0.12	0.52	ND	0.42	1.84	ND	
78-93-3	2-Butanone	0.48	1.21	2.10	1.40	3.57	6.19	
141-78-6	Ethyl acetate	0.24	0.52	ND	0.86	1.88	ND	
74-97-5	Bromochloromethane	0.12	0.32	ND	0.63	1.68	ND	
109-99-9	Tetrahydrofuran	0.24	0.60	ND	0.70	1.76	ND	
156-59-2	cis-1,2-Dichloroethene	0.24	0.64	ND	0.94	2.54	ND	
67-66-3	Chloroform	0.12	0.60	ND	0.58	2.91	ND	
71-55-6	1,1,1-Trichloroethane	0.12	0.53	ND	0.65	2.88	ND	
107-06-2	1,2-Dichloroethane	0.12	0.54	ND	0.48	2.20	ND	
110-82-7	Cyclohexane	0.12	0.46	ND	0.41	1.57	ND	
71-43-2	Benzene	0.12	0.60	1.10	0.38	1.93	3.50	
56-23-5	Carbon tetrachloride	0.12	0.56	ND	0.75	3.55	ND	
142-82-5	n-Heptane	0.60	1.44	ND	2.44	5.91	ND	
78-87-5	1,2-Dichloropropane	0.12	0.57	ND	0.55	2.65	ND	
123-91-1	1,4 Dioxane	0.48	0.97	ND	1.71	3.51	ND	
79-01-6	Trichloroethene	0.07	0.55	ND	0.38	2.98	ND	
75-27-4	Bromodichloromethane	0.12	0.24	ND	0.80	1.61	ND	
80-62-6	Methyl methacrylate	0.48	1.61	ND	1.95	6.58	ND	
108-10-1	4-Methyl-2-pentanone	0.48	1.80	ND	1.95	7.38	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.12	0.62	ND	0.54	2.80	ND	
108-88-3	Toluene	0.24	0.62	ND	0.90	2.34	ND	
10061-02-6	trans-1,3-Dichloropropene	0.12	0.62	ND	0.54	2.80	ND	
79-00-5	1,1,2-Trichloroethane	0.12	0.61	ND	0.65	3.34	ND	
591-78-6	2-Hexanone	0.60	1.69	ND	2.44	6.91	ND	
124-48-1	Dibromochloromethane	0.12	0.24	ND	1.01	2.02	ND	
106-93-4	1,2-Dibromoethane	0.12	0.29	ND	0.91	2.22	ND	
127-18-4	Tetrachloroethene	0.07	0.29	ND	0.48	1.96	ND	
108-90-7	Chlorobenzene	0.12	0.54	ND	0.55	2.49	ND	
100-41-4	Ethylbenzene	0.25	0.63	ND	1.09	2.73	ND	
1330-20-7	m,p-Xylenes	0.25	0.63	0.25	1.10	2.74	1.10	J
100-42-5	Styrene	0.25	0.62	ND	1.05	2.62	ND	
75-25-2	Bromoform	0.12	0.16	ND	1.23	1.65	ND	
95-47-6	o-Xylene	0.25	0.61	ND	1.07	2.66	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.12	0.29	ND	0.81	2.02	ND	
622-96-8	4-Ethyltoluene	0.39	0.99	ND	1.94	4.85	ND	
108-67-8	1,3,5-Trimethylbenzene	0.25	0.61	ND	1.21	3.02	ND	
95-63-6	1,2,4-Trimethylbenzene	0.24	0.60	0.30	1.19	2.97	1.50	J
541-73-1	1,3-Dichlorobenzene	0.24	0.44	ND	1.43	2.65	ND	
100-44-7	Benzyl chloride	0.24	1.44	ND	1.23	7.46	ND	
106-46-7	1,4-Dichlorobenzene	0.24	0.41	ND	1.43	2.47	ND	
95-50-1	1,2-Dichlorobenzene	0.24	0.39	0.24	1.43	2.32	1.44	J
120-82-1	1,2,4-Trichlorobenzene	0.60	0.82	ND	4.41	6.07	ND	
91-20-3	Naphthalene	0.12	0.19	0.16	0.64	1.00	0.84	J
87-68-3	Hexachlorobutadiene	0.60	0.63	ND	6.34	6.72	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	95	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 04

File Name: 1753904A
Description: T - 104
Canister: 769
QC_Batch: 100517-GCK

Date Sampled: 09/26/17 Time: 13:37
Date Analyzed: 10/05/17 Time: 16:56
Can Factor: 1.19
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.19	3.57	ND	1.37	4.11	ND	ND
74-86-2	Acetylene	1.19	3.57	ND	1.27	3.80	ND	ND
74-84-0	Ethane	1.19	3.57	2.82	1.47	4.40	3.47	J
115-07-1	Propene	0.79	2.38	ND	1.37	4.11	ND	ND
74-98-6	Propane	0.79	2.38	8.37	1.43	4.30	15.13	
75-28-5	i-Butane	0.60	1.79	3.90	1.42	4.25	9.28	
106-98-9	1-Butene	0.60	1.79	ND	1.37	4.10	ND	ND
106-97-8	n-Butane	0.60	1.79	2.12	1.42	4.25	5.05	
624-64-6	t-2-Butene	0.60	1.79	ND	1.37	4.10	ND	ND
590-18-1	c-2-Butene	0.60	1.79	ND	1.37	4.10	ND	ND
78-78-4	i-Pentane	0.48	1.43	7.99	1.41	4.23	23.64	
109-67-1	1-Pentene	0.48	1.43	ND	1.37	4.10	ND	ND
109-66-0	n-Pentane	0.48	1.43	0.99	1.41	4.22	2.94	J
78-79-5	Isoprene	0.48	1.43	ND	1.33	3.99	ND	ND
646-04-8	t-2-Pentene	0.48	1.43	ND	1.37	4.10	ND	ND
627-20-3	c-2-Pentene	0.48	1.43	ND	1.37	4.10	ND	ND
75-83-2	2,2-Dimethylbutane	0.40	1.19	ND	1.40	4.20	ND	ND
287-92-3	Cyclopentane	0.48	1.43	ND	1.37	4.10	ND	ND
79-29-8	2,3-Dimethylbutane	0.40	1.19	ND	1.40	4.20	ND	ND
107-83-5	2-Methylpentane	0.40	1.19	3.88	1.40	4.20	13.72	
96-14-0	3-Methylpentane	0.40	1.19	8.10	1.40	4.20	28.62	
110-54-3	n-Hexane	0.40	1.19	11.21	1.40	4.20	39.59	
96-37-7	Methylcyclopentane	0.40	1.19	6.46	1.37	4.11	22.30	
108-08-7	2,4-Dimethylpentane	0.34	1.02	0.90	1.40	4.19	3.71	J
71-43-2	Benzene	0.40	1.19	2.20	1.27	3.81	7.03	
110-82-7	Cyclohexane	0.40	1.19	ND	1.37	4.11	ND	ND
591-76-4	2-Methylhexane	0.34	1.02	2.49	1.40	4.19	10.24	
565-59-3	2,3-Dimethylpentane	0.34	1.02	ND	1.40	4.19	ND	ND
589-34-4	3-Methylhexane	0.34	1.02	2.90	1.40	4.19	11.91	
540-84-1	2,2,4-Trimethylpentane	0.30	0.89	2.54	1.39	4.18	11.87	
142-82-5	n-Heptane	0.34	1.02	0.67	1.40	4.19	2.73	J
108-87-2	Methylcyclohexane	0.34	1.02	10.33	1.37	4.11	41.59	
592-13-2	2,5-Dimethylhexane	0.30	0.89	3.62	1.39	4.18	16.95	
589-43-5	2,4-Dimethylhexane	0.30	0.89	2.56	1.39	4.18	11.99	
565-75-3	2,3,4-Trimethylpentane	0.30	0.89	5.30	1.39	4.18	24.82	
108-88-3	Toluene	0.34	1.02	1.47	1.28	3.85	5.55	
584-94-1	2,3-Dimethylhexane	0.30	0.89	2.96	1.39	4.18	13.84	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.30	0.89	ND	1.39	4.18	ND	ND
589-81-1	3-Methylheptane	0.30	0.89	ND	1.39	4.18	ND	ND
111-65-9	n-Octane	0.30	0.89	3.01	1.39	4.18	14.11	
100-41-4	Ethylbenzene	0.30	0.89	4.17	1.29	3.88	18.13	
108-38-3	m,p-xylene	0.30	0.89	8.63	1.29	3.88	37.57	
100-42-5	Styrene	0.30	0.89	3.84	1.27	3.81	16.39	
95-47-6	o-xylene	0.30	0.89	3.18	1.29	3.88	13.86	
111-84-2	n-Nonane	0.26	0.79	2.32	1.39	4.17	12.22	
98-82-8	i-Propylbenzene	0.26	0.79	0.99	1.30	3.91	4.89	
103-65-1	n-propylbenzene	0.26	0.79	2.69	1.30	3.91	13.26	
80-56-8	a-Pinene	0.24	0.71	ND	1.33	3.99	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.79	1.72	1.30	3.91	8.47	
622-96-8	4-Ethyltoluene	0.26	0.79	1.34	1.30	3.91	6.58	
108-67-8	1,3,5-Trimethylbenzene	0.26	0.79	2.18	1.30	3.91	10.75	
611-14-3	2-Ethyltoluene	0.26	0.79	4.97	1.30	3.91	24.50	
127-91-3	b-Pinene	0.24	0.71	ND	1.33	3.99	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.79	2.53	1.30	3.91	12.45	
124-18-5	n-Decane	0.24	0.71	2.70	1.39	4.16	15.74	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.79	1.18	1.30	3.91	5.80	
5989-27-5	d-Limonene	0.24	0.71	ND	1.33	3.99	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.71	1.80	1.31	3.93	9.92	
105-05-5	1,4-Diethylbenzene	0.24	0.71	4.69	1.31	3.93	25.78	
104-51-8	n-Butylbenzene	0.24	0.71	ND	1.31	3.93	ND	ND
1120-21-4	Undecane	0.22	0.65	1.73	1.39	4.16	11.10	
112-40-3	Dodecane	0.20	0.60	0.76	1.38	4.15	5.28	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.93	26.78	392.16	31.53	94.59	1,385.43
TNMHC - C1	Total Non-Methane Hydrocarbons	53.55	160.65	2,352.98	35.11	105.34	1,542.94

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 04

File Name: 753904PA

Date Sampled: 09/26/17

Time: 13:37

Description: T-104

Date Analyzed: 10/03/17

Time: 10:49

Can/Tube#: 769

Can Dilution Factor: 1.19

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	119	357	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 04

File Name: 1753904A

Date Sampled: 09/26/17

Time: 13:37

Description: T-104

Date Analyzed: 10/03/17

Time: 10:35

Can/Tube#: 769

Dilution Factor: 1.19

QC_Batch: 100317-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.71	2.01	0.16	0.48	1.36	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 05

File Name: 1753905A.D

Date Sampled: 09/26/17

Time: 13:47

Description: T-105

Date Analyzed: 10/17/17

Time: 13:44

Canister: 804

Can Dilution Factor: 1.21

QC_Batch: 101717-MA1

Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.12	0.61	ND	0.60	3.01	ND	
74-87-3	Chloromethane	0.12	0.61	ND	0.25	1.26	ND	
76-14-2	Freon 114	0.12	0.61	ND	0.85	4.25	ND	
75-01-4	Vinyl chloride	0.12	0.61	ND	0.31	1.56	ND	
106-99-0	1,3-Butadiene	0.12	0.61	ND	0.27	1.35	ND	
74-83-9	Bromomethane	0.12	0.61	ND	0.47	2.36	ND	
75-00-3	Chloroethane	0.12	0.61	ND	0.32	1.60	ND	
64-17-5	Ethanol	0.61	1.82	ND	1.14	3.42	ND	
75-69-4	Trichlorofluoromethane	0.12	0.58	ND	0.68	3.26	ND	
67-64-1	Acetone	0.61	1.49	9.60	1.44	3.53	22.81	
67-63-0	2-propanol	0.61	1.39	ND	1.49	3.41	ND	
75-35-4	1,1-Dichloroethene	0.12	0.60	ND	0.48	2.38	ND	
76-13-1	Freon 113	0.12	0.58	ND	0.93	4.43	ND	
75-09-2	Dichloromethane	0.24	0.58	ND	0.84	2.02	ND	
75-15-0	Carbon disulfide	0.61	1.12	ND	1.88	3.49	ND	
156-60-5	trans-1,2-Dichloroethene	0.12	0.44	ND	0.48	1.73	ND	
1634-04-4	Methyl tert butyl ether	0.12	0.45	ND	0.44	1.61	ND	
75-34-3	1,1-Dichloroethane	0.12	0.60	ND	0.49	2.44	ND	
108-05-4	Vinyl acetate	0.12	0.53	ND	0.43	1.87	ND	
78-93-3	2-Butanone	0.48	1.23	ND	1.43	3.63	ND	
141-78-6	Ethyl acetate	0.24	0.53	ND	0.87	1.91	ND	
74-97-5	Bromochloromethane	0.12	0.32	ND	0.64	1.70	ND	
109-99-9	Tetrahydrofuran	0.24	0.61	ND	0.71	1.79	ND	
156-59-2	cis-1,2-Dichloroethene	0.24	0.65	ND	0.96	2.58	ND	
67-66-3	Chloroform	0.12	0.61	ND	0.59	2.96	ND	
71-55-6	1,1,1-Trichloroethane	0.12	0.54	ND	0.66	2.93	ND	
107-06-2	1,2-Dichloroethane	0.12	0.55	ND	0.49	2.23	ND	
110-82-7	Cyclohexane	0.12	0.46	ND	0.42	1.60	ND	
71-43-2	Benzene	0.12	0.61	1.05	0.39	1.96	3.37	
56-23-5	Carbon tetrachloride	0.12	0.57	ND	0.76	3.61	ND	
142-82-5	n-Heptane	0.61	1.47	ND	2.48	6.01	ND	
78-87-5	1,2-Dichloropropane	0.12	0.58	ND	0.56	2.69	ND	
123-91-1	1,4 Dioxane	0.48	0.99	ND	1.74	3.56	ND	
79-01-6	Trichloroethene	0.07	0.56	ND	0.39	3.03	ND	
75-27-4	Bromodichloromethane	0.12	0.24	ND	0.81	1.64	ND	
80-62-6	Methyl methacrylate	0.48	1.64	ND	1.98	6.69	ND	
108-10-1	4-Methyl-2-pentanone	0.48	1.83	ND	1.98	7.50	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.12	0.63	ND	0.55	2.85	ND	
108-88-3	Toluene	0.24	0.63	ND	0.91	2.38	ND	
10061-02-6	trans-1,3-Dichloropropene	0.12	0.63	ND	0.55	2.85	ND	
79-00-5	1,1,2-Trichloroethane	0.12	0.62	ND	0.66	3.39	ND	
591-78-6	2-Hexanone	0.61	1.72	ND	2.48	7.03	ND	
124-48-1	Dibromochloromethane	0.12	0.24	ND	1.03	2.06	ND	
106-93-4	1,2-Dibromoethane	0.12	0.29	ND	0.93	2.26	ND	
127-18-4	Tetrachloroethene	0.07	0.29	ND	0.49	2.00	ND	
108-90-7	Chlorobenzene	0.12	0.55	ND	0.56	2.53	ND	
100-41-4	Ethylbenzene	0.26	0.64	ND	1.11	2.78	ND	
1330-20-7	m,p-Xylenes	0.26	0.64	ND	1.11	2.78	ND	
100-42-5	Styrene	0.25	0.63	ND	1.07	2.67	ND	
75-25-2	Bromoform	0.12	0.16	ND	1.25	1.68	ND	
95-47-6	o-Xylene	0.25	0.62	ND	1.08	2.71	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.12	0.30	ND	0.82	2.05	ND	
622-96-8	4-Ethyltoluene	0.40	1.00	ND	1.97	4.93	ND	
108-67-8	1,3,5-Trimethylbenzene	0.25	0.63	ND	1.23	3.07	ND	
95-63-6	1,2,4-Trimethylbenzene	0.25	0.61	ND	1.21	3.02	ND	
541-73-1	1,3-Dichlorobenzene	0.24	0.45	ND	1.45	2.69	ND	
100-44-7	Benzyl chloride	0.24	1.47	ND	1.25	7.59	ND	
106-46-7	1,4-Dichlorobenzene	0.24	0.42	ND	1.45	2.52	ND	
95-50-1	1,2-Dichlorobenzene	0.24	0.39	ND	1.45	2.36	ND	
120-82-1	1,2,4-Trichlorobenzene	0.61	0.83	ND	4.49	6.17	ND	
91-20-3	Naphthalene	0.12	0.19	0.15	0.65	1.01	0.81	J
87-68-3	Hexachlorobutadiene	0.61	0.64	ND	6.45	6.84	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				90	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539

Laboratory Number: 05

File Name: 1753905A
Description: T - 105
Canister: 804
QC_Batch: 102717-GCK

Date Sampled: 09/26/17 Time: 13:47
Date Analyzed: 10/27/17 Time: 14:38
Can Factor: 1.21
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.21	3.63	ND	1.39	4.18	ND	ND
74-86-2	Acetylene	1.21	3.63	ND	1.29	3.87	ND	ND
74-84-0	Ethane	1.21	3.63	7.57	1.49	4.48	9.34	
115-07-1	Propene	0.81	2.42	ND	1.39	4.18	ND	ND
74-98-6	Propane	0.81	2.42	2.10	1.46	4.37	3.79	J
75-28-5	i-Butane	0.61	1.82	2.51	1.44	4.32	5.98	
106-98-9	1-Butene	0.61	1.82	ND	1.39	4.17	ND	ND
106-97-8	n-Butane	0.61	1.82	2.43	1.44	4.32	5.79	
624-64-6	t-2-Butene	0.61	1.82	ND	1.39	4.17	ND	ND
590-18-1	c-2-Butene	0.61	1.82	ND	1.39	4.17	ND	ND
78-78-4	i-Pentane	0.48	1.45	ND	1.43	4.30	ND	ND
109-67-1	1-Pentene	0.48	1.45	ND	1.39	4.17	ND	ND
109-66-0	n-Pentane	0.48	1.45	ND	1.43	4.29	ND	ND
78-79-5	Isoprene	0.48	1.45	ND	1.35	4.05	ND	ND
646-04-8	t-2-Pentene	0.48	1.45	ND	1.39	4.17	ND	ND
627-20-3	c-2-Pentene	0.48	1.45	ND	1.39	4.17	ND	ND
75-83-2	2,2-Dimethylbutane	0.40	1.21	ND	1.42	4.27	ND	ND
287-92-3	Cyclopentane	0.48	1.45	ND	1.39	4.17	ND	ND
79-29-8	2,3-Dimethylbutane	0.40	1.21	ND	1.42	4.27	ND	ND
107-83-5	2-Methylpentane	0.40	1.21	0.60	1.42	4.27	2.11	J
96-14-0	3-Methylpentane	0.40	1.21	1.17	1.42	4.27	4.12	J
110-54-3	n-Hexane	0.40	1.21	ND	1.42	4.27	ND	ND
96-37-7	Methylcyclopentane	0.40	1.21	ND	1.39	4.18	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.04	1.17	1.42	4.26	4.81	
71-43-2	Benzene	0.40	1.21	1.20	1.29	3.87	3.85	J
110-82-7	Cyclohexane	0.40	1.21	ND	1.39	4.18	ND	ND
591-76-4	2-Methylhexane	0.35	1.04	ND	1.42	4.26	ND	ND
565-59-3	2,3-Dimethylpentane	0.35	1.04	ND	1.42	4.26	ND	ND
589-34-4	3-Methylhexane	0.35	1.04	ND	1.42	4.26	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.30	0.91	1.16	1.42	4.25	5.43	
142-82-5	n-Heptane	0.35	1.04	1.03	1.42	4.26	4.23	J
108-87-2	Methylcyclohexane	0.35	1.04	0.74	1.39	4.17	2.96	J
592-13-2	2,5-Dimethylhexane	0.30	0.91	ND	1.42	4.25	ND	ND
589-43-5	2,4-Dimethylhexane	0.30	0.91	ND	1.42	4.25	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.30	0.91	0.76	1.42	4.25	3.55	J
108-88-3	Toluene	0.35	1.04	1.07	1.30	3.91	4.04	
584-94-1	2,3-Dimethylhexane	0.30	0.91	ND	1.42	4.25	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.30	0.91	ND	1.42	4.25	ND	ND
589-81-1	3-Methylheptane	0.30	0.91	ND	1.42	4.25	ND	ND
111-65-9	n-Octane	0.30	0.91	0.39	1.42	4.25	1.81	J
100-41-4	Ethylbenzene	0.30	0.91	ND	1.32	3.95	ND	ND
108-38-3	m,p-xylene	0.30	0.91	0.91	1.32	3.95	3.98	
100-42-5	Styrene	0.30	0.91	ND	1.29	3.88	ND	ND
95-47-6	o-xylene	0.30	0.91	0.76	1.32	3.95	3.31	J
111-84-2	n-Nonane	0.27	0.81	ND	1.41	4.24	ND	ND
98-82-8	i-Propylbenzene	0.27	0.81	ND	1.32	3.97	ND	ND
103-65-1	n-propylbenzene	0.27	0.81	ND	1.32	3.97	ND	ND
80-56-8	a-Pinene	0.24	0.73	ND	1.35	4.05	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.81	ND	1.32	3.97	ND	ND
622-96-8	4-Ethyltoluene	0.27	0.81	ND	1.32	3.97	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.27	0.81	ND	1.32	3.97	ND	ND
611-14-3	2-Ethyltoluene	0.27	0.81	ND	1.32	3.97	ND	ND
127-91-3	b-Pinene	0.24	0.73	ND	1.35	4.05	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.81	3.12	1.32	3.97	15.37	
124-18-5	n-Decane	0.24	0.73	ND	1.41	4.23	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.27	0.81	2.27	1.32	3.97	11.17	
5989-27-5	d-Limonene	0.24	0.73	ND	1.35	4.05	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.73	ND	1.33	3.99	ND	ND
105-05-5	1,4-Diethylbenzene	0.24	0.73	ND	1.33	3.99	ND	ND
104-51-8	n-Butylbenzene	0.24	0.73	ND	1.33	3.99	ND	ND
1120-21-4	Undecane	0.22	0.66	0.78	1.41	4.23	5.02	
112-40-3	Dodecane	0.20	0.61	0.63	1.41	4.22	4.39	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.08	27.23	68.05	32.06	96.18	240.40	
TNMHC - C1	Total Non-Methane Hydrocarbons	54.45	163.35	408.28	35.70	107.11	267.73	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 05

File Name: 753905PA

Date Sampled: 09/26/17

Time: 13:47

Description: T-105

Date Analyzed: 10/03/17

Time: 10:55

Can/Tube#: 804

Can Dilution Factor: 1.21

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	121	363	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 05

File Name: 1753905A

Date Sampled: 09/26/17

Time: 13:47

Description: T-105

Date Analyzed: 10/03/17

Time: 10:39

Can/Tube#: 804

Dilution Factor: 1.21

QC_Batch: 100317-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.73	ND	0.16	0.49	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 06

File Name: 1753906A.D
Description: T-201
Canister: 802
QC_Batch: 102017-MA1

Date Sampled: 09/27/17 Time: 08:56
Date Analyzed: 10/20/17 Time: 16:32
Can Dilution Factor: 1.14
Air Volume: 100 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.57	2.87	ND	2.82	14.17	ND	
74-87-3	Chloromethane	0.57	2.87	ND	1.18	5.92	ND	
76-14-2	Freon 114	0.57	2.87	ND	3.98	20.03	ND	
75-01-4	Vinyl chloride	0.57	2.87	ND	1.46	7.33	ND	
106-99-0	1,3-Butadiene	0.57	2.87	ND	1.26	6.34	ND	
74-83-9	Bromomethane	0.57	2.87	6.94	2.21	11.12	26.93	
75-00-3	Chloroethane	0.57	2.87	ND	1.50	7.56	ND	
64-17-5	Ethanol	2.85	8.55	ND	5.37	16.11	ND	
75-69-4	Trichlorofluoromethane	0.57	2.74	ND	3.20	15.37	ND	
67-64-1	Acetone	2.85	7.01	114.64	6.77	16.65	272.28	
67-63-0	2-propanol	2.85	6.54	ND	7.00	16.08	ND	
75-35-4	1,1-Dichloroethene	0.57	2.83	13.51	2.26	11.20	53.53	
76-13-1	Freon 113	0.57	2.73	ND	4.37	20.89	ND	
75-09-2	Dichloromethane	1.14	2.75	ND	3.96	9.53	ND	
75-15-0	Carbon disulfide	2.85	5.29	6.86	8.87	16.46	21.34	
156-60-5	trans-1,2-Dichloroethene	0.57	2.06	ND	2.26	8.15	ND	
1634-04-4	Methyl tert butyl ether	0.57	2.10	ND	2.05	7.57	ND	
75-34-3	1,1-Dichloroethane	0.57	2.84	ND	2.31	11.50	ND	
108-05-4	Vinyl acetate	0.57	2.50	ND	2.01	8.81	ND	
78-93-3	2-Butanone	2.28	5.80	31.68	6.72	17.10	93.37	
141-78-6	Ethyl acetate	1.14	2.50	ND	4.11	8.99	ND	
74-97-5	Bromochloromethane	0.57	1.52	ND	3.02	8.03	ND	
109-99-9	Tetrahydrofuran	1.14	2.87	ND	3.36	8.45	ND	
156-59-2	cis-1,2-Dichloroethene	1.14	3.07	ND	4.52	12.15	ND	
67-66-3	Chloroform	0.57	2.86	ND	2.78	13.95	ND	
71-55-6	1,1,1-Trichloroethane	0.57	2.53	ND	3.11	13.80	ND	
107-06-2	1,2-Dichloroethane	0.57	2.60	ND	2.31	10.52	ND	
110-82-7	Cyclohexane	0.57	2.19	ND	1.97	7.53	ND	
71-43-2	Benzene	0.57	2.90	7.32	1.82	9.25	23.38	
56-23-5	Carbon tetrachloride	0.57	2.70	ND	3.58	16.99	ND	
142-82-5	n-Heptane	2.85	6.91	ND	11.67	28.30	ND	
78-87-5	1,2-Dichloropropane	0.57	2.74	ND	2.63	12.67	ND	
123-91-1	1,4-Dioxane	2.28	4.66	ND	8.21	16.79	ND	
79-01-6	Trichloroethene	0.34	2.66	ND	1.84	14.26	ND	
75-27-4	Bromodichloromethane	0.57	1.15	ND	3.82	7.71	ND	
80-62-6	Methyl methacrylate	2.28	7.71	ND	9.33	31.53	ND	
108-10-1	4-Methyl-2-pentanone	2.28	8.63	ND	9.34	35.35	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.57	2.95	ND	2.59	13.40	ND	
108-88-3	Toluene	1.14	2.98	2.87	4.29	11.20	10.79	J
10061-02-6	trans-1,3-Dichloropropene	0.57	2.96	ND	2.59	13.41	ND	
79-00-5	1,1,2-Trichloroethane	0.57	2.93	ND	3.11	15.98	ND	
591-78-6	2-Hexanone	2.85	8.08	ND	11.67	33.11	ND	
124-48-1	Dibromochloromethane	0.57	1.14	ND	4.85	9.69	ND	
106-93-4	1,2-Dibromoethane	0.57	1.38	ND	4.38	10.63	ND	
127-18-4	Tetrachloroethene	0.34	1.39	ND	2.32	9.40	ND	
108-90-7	Chlorobenzene	0.57	2.59	ND	2.62	11.94	ND	
100-41-4	Ethylbenzene	1.21	3.01	1.62	5.23	13.08	7.02	J
1330-20-7	m,p-Xylenes	1.21	3.02	4.69	5.25	13.11	20.35	
100-42-5	Styrene	1.18	2.95	ND	5.03	12.57	ND	
75-25-2	Bromoform	0.57	0.76	ND	5.89	7.90	ND	
95-47-6	o-Xylene	1.18	2.94	5.81	5.10	12.75	25.23	
79-34-5	1,1,2,2-Tetrachloroethane	0.56	1.41	ND	3.87	9.68	ND	
622-96-8	4-Ethyltoluene	1.89	4.72	54.61	9.28	23.21	268.32	
108-67-8	1,3,5-Trimethylbenzene	1.18	2.94	20.14	5.79	14.47	98.97	
95-63-6	1,2,4-Trimethylbenzene	1.16	2.90	66.40	5.69	14.23	326.26	
541-73-1	1,3-Dichlorobenzene	1.14	2.11	ND	6.85	12.67	ND	
100-44-7	Benzyl chloride	1.14	6.91	ND	5.90	35.75	ND	
106-46-7	1,4-Dichlorobenzene	1.14	1.97	ND	6.85	11.85	ND	
95-50-1	1,2-Dichlorobenzene	1.14	1.85	ND	6.85	11.10	ND	
120-82-1	1,2,4-Trichlorobenzene	2.85	3.92	ND	21.13	29.08	ND	
91-20-3	Naphthalene	0.58	0.91	1.11	3.05	4.78	5.84	
87-68-3	Hexachlorobutadiene	2.85	3.02	ND	30.38	32.21	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				92	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 06

File Name: 1753906A
Description: T - 201
Canister: 802
QC_Batch: 100517-GCK

Date Sampled: 09/27/17 Time: 8:56
Date Analyzed: 10/05/17 Time: 19:23
Can Factor: 1.14
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.14	3.42	ND	1.31	3.94	ND	ND
74-86-2	Acetylene	1.14	3.42	ND	1.21	3.64	ND	ND
74-84-0	Ethane	1.14	3.42	87.18	1.41	4.22	107.55	
115-07-1	Propene	0.76	2.28	ND	1.31	3.93	ND	ND
74-98-6	Propane	0.76	2.28	3.78	1.37	4.12	6.83	
75-28-5	i-Butane	0.57	1.71	0.90	1.36	4.07	2.14	J
106-98-9	1-Butene	0.57	1.71	ND	1.31	3.93	ND	ND
106-97-8	n-Butane	0.57	1.71	2.02	1.36	4.07	4.80	
624-64-6	t-2-Butene	0.57	1.71	ND	1.31	3.93	ND	ND
590-18-1	c-2-Butene	0.57	1.71	ND	1.31	3.93	ND	ND
78-78-4	i-Pentane	0.46	1.37	ND	1.35	4.05	ND	ND
109-67-1	1-Pentene	0.46	1.37	ND	1.31	3.93	ND	ND
109-66-0	n-Pentane	0.46	1.37	13.89	1.35	4.04	41.03	
78-79-5	Isoprene	0.46	1.37	ND	1.27	3.82	ND	ND
646-04-8	t-2-Pentene	0.46	1.37	ND	1.31	3.93	ND	ND
627-20-3	c-2-Pentene	0.46	1.37	ND	1.31	3.93	ND	ND
75-83-2	2,2-Dimethylbutane	0.38	1.14	ND	1.34	4.03	ND	ND
287-92-3	Cyclopentane	0.46	1.37	ND	1.31	3.93	ND	ND
79-29-8	2,3-Dimethylbutane	0.38	1.14	ND	1.34	4.03	ND	ND
107-83-5	2-Methylpentane	0.38	1.14	ND	1.34	4.03	ND	ND
96-14-0	3-Methylpentane	0.38	1.14	ND	1.34	4.03	ND	ND
110-54-3	n-Hexane	0.38	1.14	ND	1.34	4.03	ND	ND
96-37-7	Methylcyclopentane	0.38	1.14	0.42	1.31	3.93	1.46	J
108-08-7	2,4-Dimethylpentane	0.33	0.98	ND	1.34	4.01	ND	ND
71-43-2	Benzene	0.38	1.14	3.58	1.22	3.65	11.47	
110-82-7	Cyclohexane	0.38	1.14	0.63	1.31	3.93	2.17	J
591-76-4	2-Methylhexane	0.33	0.98	1.92	1.34	4.01	7.88	
565-59-3	2,3-Dimethylpentane	0.33	0.98	ND	1.34	4.01	ND	ND
589-34-4	3-Methylhexane	0.33	0.98	1.40	1.34	4.01	5.73	
540-84-1	2,2,4-Trimethylpentane	0.29	0.86	0.43	1.33	4.00	2.00	J
142-82-5	n-Heptane	0.33	0.98	0.36	1.34	4.01	1.47	J
108-87-2	Methylcyclohexane	0.33	0.98	1.73	1.31	3.93	6.94	
592-13-2	2,5-Dimethylhexane	0.29	0.86	ND	1.33	4.00	ND	ND
589-43-5	2,4-Dimethylhexane	0.29	0.86	ND	1.33	4.00	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.29	0.86	0.39	1.33	4.00	1.81	J
108-88-3	Toluene	0.33	0.98	4.17	1.23	3.69	15.74	
584-94-1	2,3-Dimethylhexane	0.29	0.86	ND	1.33	4.00	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.86	ND	1.33	4.00	ND	ND
589-81-1	3-Methylheptane	0.29	0.86	ND	1.33	4.00	ND	ND
111-65-9	n-Octane	0.29	0.86	0.98	1.33	4.00	4.57	
100-41-4	Ethylbenzene	0.29	0.86	0.84	1.24	3.72	3.65	J
108-38-3	m,p-xylene	0.29	0.86	3.48	1.24	3.72	15.15	
100-42-5	Styrene	0.29	0.86	2.82	1.22	3.65	12.03	
95-47-6	o-xylene	0.29	0.86	5.01	1.24	3.72	21.80	
111-84-2	n-Nonane	0.25	0.76	2.35	1.33	4.00	12.34	
98-82-8	i-Propylbenzene	0.25	0.76	4.41	1.25	3.74	21.72	
103-65-1	n-propylbenzene	0.25	0.76	4.71	1.25	3.74	23.22	
80-56-8	a-Pinene	0.23	0.68	ND	1.27	3.82	ND	ND
620-14-4	3-Ethyltoluene	0.25	0.76	63.86	1.25	3.74	314.61	
622-96-8	4-Ethyltoluene	0.25	0.76	29.80	1.25	3.74	146.81	
108-67-8	1,3,5-Trimethylbenzene	0.25	0.76	38.74	1.25	3.74	190.86	
611-14-3	2-Ethyltoluene	0.25	0.76	34.86	1.25	3.74	171.71	
127-91-3	b-Pinene	0.23	0.68	ND	1.27	3.82	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.25	0.76	94.31	1.25	3.74	464.62	
124-18-5	n-Decane	0.23	0.68	8.55	1.33	3.99	49.85	
526-73-8	1,2,3-Trimethylbenzene	0.25	0.76	13.88	1.25	3.74	68.37	
5989-27-5	d-Limonene	0.23	0.68	ND	1.27	3.82	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.68	10.07	1.25	3.76	55.38	
105-05-5	1,4-Diethylbenzene	0.23	0.68	20.38	1.25	3.76	112.08	
104-51-8	n-Butylbenzene	0.23	0.68	ND	1.25	3.76	ND	ND
1120-21-4	Undecane	0.21	0.62	39.75	1.33	3.98	254.61	
112-40-3	Dodecane	0.19	0.57	20.13	1.33	3.98	140.47	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.55	25.65	3,751.81	30.21	90.62	13,254.35
TNMHC - C1	Total Non-Methane Hydrocarbons	51.30	153.90	22,510.87	33.64	100.92	14,761.23

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 06

File Name: 753906PA

Date Sampled: 09/27/17

Time: 8:56

Description: T-201

Date Analyzed: 10/03/17

Time: 11:01

Can/Tube#: 802

Can Dilution Factor: 1.14

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.03	114	342	260	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 217539

Laboratory Number: 06

File Name: 1753906A
Description: T-201
Can/Tube#: 802
QC_Batch: 100317-GCL

Date Sampled: 09/27/17 Time: 8:56
Date Analyzed: 10/03/17 Time: 10:44
Dilution Factor: 1.14

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.68	47.51	0.15	0.46	32.10	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 07

File Name: 1753907A.D

Date Sampled: 09/27/17

Time: 10:04

Description: T-202

Date Analyzed: 10/17/17

Time: 14:21

Canister: 805

Can Dilution Factor: 1.13

QC_Batch: 101717-MSA

Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.11	0.57	ND	0.56	2.81	ND	
74-87-3	Chloromethane	0.11	0.57	ND	0.23	1.17	ND	
76-14-2	Freon 114	0.11	0.57	ND	0.79	3.97	ND	
75-01-4	Vinyl chloride	0.11	0.57	ND	0.29	1.45	ND	
106-99-0	1,3-Butadiene	0.11	0.57	ND	0.25	1.26	ND	
74-83-9	Bromomethane	0.11	0.57	ND	0.44	2.21	ND	
75-00-3	Chloroethane	0.11	0.57	ND	0.30	1.50	ND	
64-17-5	Ethanol	0.57	1.70	ND	1.06	3.19	ND	
75-69-4	Trichlorofluoromethane	0.11	0.54	ND	0.63	3.05	ND	
67-64-1	Acetone	0.57	1.39	12.06	1.34	3.30	28.65	
67-63-0	2-propanol	0.57	1.30	ND	1.39	3.19	ND	
75-35-4	1,1-Dichloroethene	0.11	0.56	ND	0.45	2.22	ND	
76-13-1	Freon 113	0.11	0.54	ND	0.87	4.14	ND	
75-09-2	Dichloromethane	0.23	0.54	ND	0.78	1.89	ND	
75-15-0	Carbon disulfide	0.57	1.05	3.08	1.76	3.26	9.60	
156-60-5	trans-1,2-Dichloroethene	0.11	0.41	ND	0.45	1.62	ND	
1634-04-4	Methyl tert butyl ether	0.11	0.42	ND	0.41	1.50	ND	
75-34-3	1,1-Dichloroethane	0.11	0.56	ND	0.46	2.28	ND	
108-05-4	Vinyl acetate	0.11	0.50	ND	0.40	1.75	ND	
78-93-3	2-Butanone	0.45	1.15	3.02	1.33	3.39	8.91	
141-78-6	Ethyl acetate	0.23	0.49	ND	0.81	1.78	ND	
74-97-5	Bromochloromethane	0.11	0.30	ND	0.60	1.59	ND	
109-99-9	Tetrahydrofuran	0.23	0.57	ND	0.67	1.68	ND	
156-59-2	cis-1,2-Dichloroethene	0.23	0.61	ND	0.90	2.41	ND	
67-66-3	Chloroform	0.11	0.57	ND	0.55	2.77	ND	
71-55-6	1,1,1-Trichloroethane	0.11	0.50	ND	0.62	2.74	ND	
107-06-2	1,2-Dichloroethane	0.11	0.52	ND	0.46	2.09	ND	
110-82-7	Cyclohexane	0.11	0.43	ND	0.39	1.49	ND	
71-43-2	Benzene	0.11	0.57	0.75	0.36	1.83	2.39	
56-23-5	Carbon tetrachloride	0.11	0.54	ND	0.71	3.37	ND	
142-82-5	n-Heptane	0.57	1.37	ND	2.31	5.61	ND	
78-87-5	1,2-Dichloropropane	0.11	0.54	ND	0.52	2.51	ND	
123-91-1	1,4 Dioxane	0.45	0.92	ND	1.63	3.33	ND	
79-01-6	Trichloroethene	0.07	0.53	ND	0.36	2.83	ND	
75-27-4	Bromodichloromethane	0.11	0.23	ND	0.76	1.53	ND	
80-62-6	Methyl methacrylate	0.45	1.53	ND	1.85	6.25	ND	
108-10-1	4-Methyl-2-pentanone	0.45	1.71	ND	1.85	7.01	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.11	0.59	ND	0.51	2.66	ND	
108-88-3	Toluene	0.23	0.59	0.24	0.85	2.22	0.92	J
10061-02-6	trans-1,3-Dichloropropene	0.11	0.59	ND	0.51	2.66	ND	
79-00-5	1,1,2-Trichloroethane	0.11	0.58	ND	0.62	3.17	ND	
591-78-6	2-Hexanone	0.57	1.60	ND	2.31	6.56	ND	
124-48-1	Dibromochloromethane	0.11	0.23	ND	0.96	1.92	ND	
106-93-4	1,2-Dibromoethane	0.11	0.27	ND	0.87	2.11	ND	
127-18-4	Tetrachloroethene	0.07	0.28	ND	0.46	1.86	ND	
108-90-7	Chlorobenzene	0.11	0.51	ND	0.52	2.37	ND	
100-41-4	Ethylbenzene	0.24	0.60	0.35	1.04	2.59	1.50	J
1330-20-7	m,p-Xylenes	0.24	0.60	ND	1.04	2.60	ND	
100-42-5	Styrene	0.23	0.59	ND	1.00	2.49	ND	
75-25-2	Bromoform	0.11	0.15	ND	1.17	1.57	ND	
95-47-6	o-Xylene	0.23	0.58	ND	1.01	2.53	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.11	0.28	ND	0.77	1.92	ND	
622-96-8	4-Ethyltoluene	0.37	0.94	0.69	1.84	4.60	3.38	J
108-67-8	1,3,5-Trimethylbenzene	0.23	0.58	0.30	1.15	2.87	1.46	J
95-63-6	1,2,4-Trimethylbenzene	0.23	0.57	0.82	1.13	2.82	4.04	
541-73-1	1,3-Dichlorobenzene	0.23	0.42	ND	1.36	2.51	ND	
100-44-7	Benzyl chloride	0.23	1.37	ND	1.17	7.09	ND	
106-46-7	1,4-Dichlorobenzene	0.23	0.39	ND	1.36	2.35	ND	
95-50-1	1,2-Dichlorobenzene	0.23	0.37	ND	1.36	2.20	ND	
120-82-1	1,2,4-Trichlorobenzene	0.57	0.78	ND	4.19	5.77	ND	
91-20-3	Naphthalene	0.12	0.18	ND	0.60	0.95	ND	
87-68-3	Hexachlorobutadiene	0.57	0.60	ND	6.02	6.39	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	94	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539

Laboratory Number: 07

File Name: 1753907A
Description: T - 202
Canister: 805
QC_Batch: 102717-GCK

Date Sampled: 09/27/17 Time: 10:04
Date Analyzed: 10/27/17 Time: 15:24
Can Factor: 1.13
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.13	3.39	20.03	1.30	3.90	23.07	
74-86-2	Acetylene	1.13	3.39	ND	1.20	3.61	ND	ND
74-84-0	Ethane	1.13	3.39	13.62	1.39	4.18	16.80	
115-07-1	Propene	0.75	2.26	ND	1.30	3.90	ND	ND
74-98-6	Propane	0.75	2.26	9.41	1.36	4.08	17.01	
75-28-5	i-Butane	0.57	1.70	ND	1.35	4.04	ND	ND
106-98-9	1-Butene	0.57	1.70	ND	1.30	3.90	ND	ND
106-97-8	n-Butane	0.57	1.70	6.40	1.35	4.04	15.23	
624-64-6	t-2-Butene	0.57	1.70	ND	1.30	3.90	ND	ND
590-18-1	c-2-Butene	0.57	1.70	ND	1.30	3.90	ND	ND
78-78-4	i-Pentane	0.45	1.36	ND	1.34	4.01	ND	ND
109-67-1	1-Pentene	0.45	1.36	ND	1.30	3.90	ND	ND
109-66-0	n-Pentane	0.45	1.36	ND	1.34	4.01	ND	ND
78-79-5	Isoprene	0.45	1.36	ND	1.26	3.78	ND	ND
646-04-8	t-2-Pentene	0.45	1.36	ND	1.30	3.90	ND	ND
627-20-3	c-2-Pentene	0.45	1.36	ND	1.30	3.90	ND	ND
75-83-2	2,2-Dimethylbutane	0.38	1.13	ND	1.33	3.99	ND	ND
287-92-3	Cyclopentane	0.45	1.36	ND	1.30	3.90	ND	ND
79-29-8	2,3-Dimethylbutane	0.38	1.13	ND	1.33	3.99	ND	ND
107-83-5	2-Methylpentane	0.38	1.13	4.14	1.33	3.99	14.61	
96-14-0	3-Methylpentane	0.38	1.13	1.85	1.33	3.99	6.55	
110-54-3	n-Hexane	0.38	1.13	0.84	1.33	3.99	2.96	J
96-37-7	Methylcyclopentane	0.38	1.13	ND	1.30	3.90	ND	ND
108-08-7	2,4-Dimethylpentane	0.32	0.97	ND	1.33	3.98	ND	ND
71-43-2	Benzene	0.38	1.13	0.82	1.21	3.62	2.63	J
110-82-7	Cyclohexane	0.38	1.13	ND	1.30	3.90	ND	ND
591-76-4	2-Methylhexane	0.32	0.97	0.75	1.33	3.98	3.08	J
565-59-3	2,3-Dimethylpentane	0.32	0.97	ND	1.33	3.98	ND	ND
589-34-4	3-Methylhexane	0.32	0.97	ND	1.33	3.98	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.28	0.85	0.66	1.32	3.97	3.09	J
142-82-5	n-Heptane	0.32	0.97	ND	1.33	3.98	ND	ND
108-87-2	Methylcyclohexane	0.32	0.97	ND	1.30	3.90	ND	ND
592-13-2	2,5-Dimethylhexane	0.28	0.85	ND	1.32	3.97	ND	ND
589-43-5	2,4-Dimethylhexane	0.28	0.85	ND	1.32	3.97	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.28	0.85	1.06	1.32	3.97	4.96	
108-88-3	Toluene	0.32	0.97	0.37	1.22	3.66	1.39	J
584-94-1	2,3-Dimethylhexane	0.28	0.85	ND	1.32	3.97	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.28	0.85	ND	1.32	3.97	ND	ND
589-81-1	3-Methylheptane	0.28	0.85	ND	1.32	3.97	ND	ND
111-65-9	n-Octane	0.28	0.85	3.81	1.32	3.97	17.81	
100-41-4	Ethylbenzene	0.28	0.85	2.10	1.23	3.69	9.15	
108-38-3	m,p-xylene	0.28	0.85	5.18	1.23	3.69	22.57	
100-42-5	Styrene	0.28	0.85	3.50	1.21	3.62	14.93	
95-47-6	o-xylene	0.28	0.85	1.49	1.23	3.69	6.48	
111-84-2	n-Nonane	0.25	0.75	4.17	1.32	3.96	21.95	
98-82-8	i-Propylbenzene	0.25	0.75	1.63	1.24	3.71	8.01	
103-65-1	n-propylbenzene	0.25	0.75	4.34	1.24	3.71	21.38	
80-56-8	a-Pinene	0.23	0.68	ND	1.26	3.78	ND	ND
620-14-4	3-Ethyltoluene	0.25	0.75	3.64	1.24	3.71	17.92	
622-96-8	4-Ethyltoluene	0.25	0.75	5.60	1.24	3.71	27.57	
108-67-8	1,3,5-Trimethylbenzene	0.25	0.75	5.98	1.24	3.71	29.47	
611-14-3	2-Ethyltoluene	0.25	0.75	5.10	1.24	3.71	25.11	
127-91-3	b-Pinene	0.23	0.68	ND	1.26	3.78	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.25	0.75	4.68	1.24	3.71	23.04	
124-18-5	n-Decane	0.23	0.68	3.29	1.32	3.95	19.17	
526-73-8	1,2,3-Trimethylbenzene	0.25	0.75	3.69	1.24	3.71	18.16	
5989-27-5	d-Limonene	0.23	0.68	ND	1.26	3.78	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.68	7.20	1.24	3.73	39.60	
105-05-5	1,4-Diethylbenzene	0.23	0.68	13.15	1.24	3.73	72.34	
104-51-8	n-Butylbenzene	0.23	0.68	ND	1.24	3.73	ND	ND
1120-21-4	Undecane	0.21	0.62	26.42	1.32	3.95	169.24	
112-40-3	Dodecane	0.19	0.57	13.78	1.31	3.94	96.19	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.48	25.43	1,970.89	29.94	89.82	6,962.74
TNMHC - C1	Total Non-Methane Hydrocarbons	50.85	152.55	11,825.35	33.34	100.03	7,754.33

ANALYTICAL REPORT

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 07

File Name: 753907PA

Date Sampled: 09/27/17

Time: 10:04

Description: T-202

Date Analyzed: 10/03/17

Time: 11:09

Can/Tube#: 805

Can Dilution Factor: 1.13

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	113	339	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 07

File Name: 1753907A

Description: T-202

Can/Tube#: 805

QC_Batch: 100317-GCL

Date Sampled: 09/27/17

Time: 10:04

Date Analyzed: 10/03/17

Time: 10:48

Dilution Factor: 1.13

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.68	1.92	0.15	0.46	1.30	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 08

File Name: 1753908A.D
Description: T - 203
Canister: 541
QC_Batch: 101817-MA1

Date Sampled: 09/27/17 Time: 11:06
Date Analyzed: 10/18/17 Time: 21:09
Can Dilution Factor: 1.17
Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.12	0.59	ND	0.58	2.91	ND	
74-87-3	Chloromethane	0.12	0.59	ND	0.24	1.21	ND	
76-14-2	Freon 114	0.12	0.59	ND	0.82	4.11	ND	
75-01-4	Vinyl chloride	0.12	0.59	ND	0.30	1.50	ND	
106-99-0	1,3-Butadiene	0.12	0.59	ND	0.26	1.30	ND	
74-83-9	Bromomethane	0.12	0.59	ND	0.45	2.28	ND	
75-00-3	Chloroethane	0.12	0.59	ND	0.31	1.55	ND	
64-17-5	Ethanol	0.59	1.76	ND	1.10	3.31	ND	
75-69-4	Trichlorofluoromethane	0.12	0.56	ND	0.66	3.16	ND	
67-64-1	Acetone	0.59	1.44	1.99	1.39	3.42	4.74	
67-63-0	2-propanol	0.59	1.34	ND	1.44	3.30	ND	
75-35-4	1,1-Dichloroethene	0.12	0.58	ND	0.46	2.30	ND	
76-13-1	Freon 113	0.12	0.56	ND	0.90	4.29	ND	
75-09-2	Dichloromethane	0.23	0.56	ND	0.81	1.96	ND	
75-15-0	Carbon disulfide	0.59	1.09	3.67	1.82	3.38	11.43	
156-60-5	trans-1,2-Dichloroethene	0.12	0.42	ND	0.46	1.67	ND	
1634-04-4	Methyl tert butyl ether	0.12	0.43	ND	0.42	1.55	ND	
75-34-3	1,1-Dichloroethane	0.12	0.58	ND	0.47	2.36	ND	
108-05-4	Vinyl acetate	0.12	0.51	ND	0.41	1.81	ND	
78-93-3	2-Butanone	0.47	1.19	1.16	1.38	3.51	3.41	J
141-78-6	Ethyl acetate	0.23	0.51	ND	0.84	1.85	ND	
74-97-5	Bromochloromethane	0.12	0.31	ND	0.62	1.65	ND	
109-99-9	Tetrahydrofuran	0.23	0.59	ND	0.69	1.73	ND	
156-59-2	cis-1,2-Dichloroethene	0.23	0.63	ND	0.93	2.49	ND	
67-66-3	Chloroform	0.12	0.59	ND	0.57	2.86	ND	
71-55-6	1,1,1-Trichloroethane	0.12	0.52	ND	0.64	2.83	ND	
107-06-2	1,2-Dichloroethane	0.12	0.53	ND	0.47	2.16	ND	
110-82-7	Cyclohexane	0.12	0.45	ND	0.40	1.55	ND	
71-43-2	Benzene	0.12	0.59	0.87	0.37	1.90	2.78	
56-23-5	Carbon tetrachloride	0.12	0.55	ND	0.74	3.49	ND	
142-82-5	n-Heptane	0.59	1.42	ND	2.40	5.81	ND	
78-87-5	1,2-Dichloropropane	0.12	0.56	ND	0.54	2.60	ND	
123-91-1	1,4 Dioxane	0.47	0.96	ND	1.69	3.45	ND	
79-01-6	Trichloroethene	0.07	0.54	ND	0.38	2.93	ND	
75-27-4	Bromodichloromethane	0.12	0.24	ND	0.78	1.58	ND	
80-62-6	Methyl methacrylate	0.47	1.58	ND	1.92	6.47	ND	
108-10-1	4-Methyl-2-pentanone	0.47	1.77	ND	1.92	7.26	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.12	0.61	ND	0.53	2.75	ND	
108-88-3	Toluene	0.23	0.61	ND	0.88	2.30	ND	
10061-02-6	trans-1,3-Dichloropropene	0.12	0.61	ND	0.53	2.75	ND	
79-00-5	1,1,2-Trichloroethane	0.12	0.60	ND	0.64	3.28	ND	
591-78-6	2-Hexanone	0.59	1.66	ND	2.40	6.80	ND	
124-48-1	Dibromochloromethane	0.12	0.23	ND	1.00	1.99	ND	
106-93-4	1,2-Dibromoethane	0.12	0.28	ND	0.90	2.18	ND	
127-18-4	Tetrachloroethene	0.07	0.28	ND	0.48	1.93	ND	
108-90-7	Chlorobenzene	0.12	0.53	ND	0.54	2.45	ND	
100-41-4	Ethylbenzene	0.25	0.62	ND	1.07	2.69	ND	
1330-20-7	m,p-Xylenes	0.25	0.62	ND	1.08	2.69	ND	
100-42-5	Styrene	0.24	0.61	ND	1.03	2.58	ND	
75-25-2	Bromoform	0.12	0.16	ND	1.21	1.62	ND	
95-47-6	o-Xylene	0.24	0.60	ND	1.05	2.62	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.12	0.29	ND	0.79	1.99	ND	
622-96-8	4-Ethyltoluene	0.39	0.97	ND	1.91	4.76	ND	
108-67-8	1,3,5-Trimethylbenzene	0.24	0.60	ND	1.19	2.97	ND	
95-63-6	1,2,4-Trimethylbenzene	0.24	0.59	ND	1.17	2.92	ND	
541-73-1	1,3-Dichlorobenzene	0.23	0.43	ND	1.41	2.60	ND	
100-44-7	Benzyl chloride	0.23	1.42	ND	1.21	7.34	ND	
106-46-7	1,4-Dichlorobenzene	0.23	0.40	ND	1.41	2.43	ND	
95-50-1	1,2-Dichlorobenzene	0.23	0.38	ND	1.41	2.28	ND	
120-82-1	1,2,4-Trichlorobenzene	0.59	0.80	ND	4.34	5.97	ND	
91-20-3	Naphthalene	0.12	0.19	ND	0.63	0.98	ND	
87-68-3	Hexachlorobutadiene	0.59	0.62	ND	6.24	6.61	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				98	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 08

File Name: 1753908A
Description: T - 203
Canister: 541
QC_Batch: 100517-GCK

Date Sampled: 09/27/17 Time: 11:06
Date Analyzed: 10/05/17 Time: 21:01
Can Factor: 1.17
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.17	3.51	ND	1.35	4.04	ND	ND
74-86-2	Acetylene	1.17	3.51	ND	1.25	3.74	ND	ND
74-84-0	Ethane	1.17	3.51	7.92	1.44	4.33	9.76	
115-07-1	Propene	0.78	2.34	ND	1.35	4.04	ND	ND
74-98-6	Propane	0.78	2.34	1.67	1.41	4.23	3.02	J
75-28-5	i-Butane	0.59	1.76	ND	1.39	4.18	ND	ND
106-98-9	1-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
106-97-8	n-Butane	0.59	1.76	ND	1.39	4.18	ND	ND
624-64-6	t-2-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
590-18-1	c-2-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
78-78-4	i-Pentane	0.47	1.40	1.08	1.38	4.15	3.20	J
109-67-1	1-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
109-66-0	n-Pentane	0.47	1.40	ND	1.38	4.15	ND	ND
78-79-5	Isoprene	0.47	1.40	ND	1.31	3.92	ND	ND
646-04-8	t-2-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
627-20-3	c-2-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
75-83-2	2,2-Dimethylbutane	0.39	1.17	ND	1.38	4.13	ND	ND
287-92-3	Cyclopentane	0.47	1.40	ND	1.34	4.03	ND	ND
79-29-8	2,3-Dimethylbutane	0.39	1.17	ND	1.38	4.13	ND	ND
107-83-5	2-Methylpentane	0.39	1.17	ND	1.38	4.13	ND	ND
96-14-0	3-Methylpentane	0.39	1.17	1.10	1.38	4.13	3.87	J
110-54-3	n-Hexane	0.39	1.17	0.52	1.38	4.13	1.85	J
96-37-7	Methylcyclopentane	0.39	1.17	ND	1.35	4.04	ND	ND
108-08-7	2,4-Dimethylpentane	0.33	1.00	0.58	1.37	4.12	2.37	J
71-43-2	Benzene	0.39	1.17	1.00	1.25	3.74	3.22	J
110-82-7	Cyclohexane	0.39	1.17	1.06	1.35	4.04	3.65	J
591-76-4	2-Methylhexane	0.33	1.00	0.65	1.37	4.12	2.68	J
565-59-3	2,3-Dimethylpentane	0.33	1.00	0.72	1.37	4.12	2.95	J
589-34-4	3-Methylhexane	0.33	1.00	0.41	1.37	4.12	1.67	J
540-84-1	2,2,4-Trimethylpentane	0.29	0.88	0.64	1.37	4.11	2.97	J
142-82-5	n-Heptane	0.33	1.00	ND	1.37	4.12	ND	ND
108-87-2	Methylcyclohexane	0.33	1.00	2.39	1.35	4.04	9.63	
592-13-2	2,5-Dimethylhexane	0.29	0.88	ND	1.37	4.11	ND	ND
589-43-5	2,4-Dimethylhexane	0.29	0.88	0.57	1.37	4.11	2.65	J
565-75-3	2,3,4-Trimethylpentane	0.29	0.88	1.44	1.37	4.11	6.73	
108-88-3	Toluene	0.33	1.00	1.42	1.26	3.79	5.35	
584-94-1	2,3-Dimethylhexane	0.29	0.88	0.47	1.37	4.11	2.19	J

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.88	ND	1.37	4.11	ND	ND
589-81-1	3-Methylheptane	0.29	0.88	ND	1.37	4.11	ND	ND
111-65-9	n-Octane	0.29	0.88	1.10	1.37	4.11	5.15	
100-41-4	Ethylbenzene	0.29	0.88	0.47	1.27	3.82	2.06	J
108-38-3	m,p-xylene	0.29	0.88	0.54	1.27	3.82	2.33	J
100-42-5	Styrene	0.29	0.88	0.85	1.25	3.75	3.63	J
95-47-6	o-xylene	0.29	0.88	0.85	1.27	3.82	3.70	J
111-84-2	n-Nonane	0.26	0.78	1.03	1.37	4.10	5.40	
98-82-8	i-Propylbenzene	0.26	0.78	1.27	1.28	3.84	6.26	
103-65-1	n-propylbenzene	0.26	0.78	0.65	1.28	3.84	3.18	J
80-56-8	a-Pinene	0.23	0.70	ND	1.31	3.92	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.78	0.80	1.28	3.84	3.92	
622-96-8	4-Ethyltoluene	0.26	0.78	0.64	1.28	3.84	3.16	J
108-67-8	1,3,5-Trimethylbenzene	0.26	0.78	1.06	1.28	3.84	5.24	
611-14-3	2-Ethyltoluene	0.26	0.78	1.09	1.28	3.84	5.39	
127-91-3	b-Pinene	0.23	0.70	ND	1.31	3.92	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.78	0.87	1.28	3.84	4.26	
124-18-5	n-Decane	0.23	0.70	1.12	1.36	4.09	6.54	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.78	0.38	1.28	3.84	1.87	J
5989-27-5	d-Limonene	0.23	0.70	ND	1.31	3.92	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.70	0.83	1.29	3.86	4.59	
105-05-5	1,4-Diethylbenzene	0.23	0.70	0.54	1.29	3.86	2.95	J
104-51-8	n-Butylbenzene	0.23	0.70	ND	1.29	3.86	ND	ND
1120-21-4	Undecane	0.21	0.64	0.33	1.36	4.09	2.11	J
112-40-3	Dodecane	0.20	0.59	0.80	1.36	4.08	5.58	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.78	26.33	122.80	31.00	93.00	433.82	
TNMHC - C1	Total Non-Methane Hydrocarbons	52.65	157.95	736.79	34.52	103.57	483.14	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 08

File Name: 753908PA

Date Sampled: 09/27/17

Time: 11:06

Description: T-203

Date Analyzed: 10/03/17

Time: 11:15

Can/Tube#: 541

Can Dilution Factor: 1.17

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	117	351	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 08

File Name: 1753908A

Date Sampled: 09/27/17 Time: 11:06

Description: T-203

Date Analyzed: 10/03/17 Time: 10:51

Can/Tube#: 541

Dilution Factor: 1.17

QC_Batch: 100317-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.70	1.90	0.16	0.47	1.28	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 09

File Name: 1753909A.D

Date Sampled: 09/27/17

Time: 13:01

Description: T-204

Date Analyzed: 10/20/17

Time: 13:21

Canister: 849

Can Dilution Factor: 1.19

QC_Batch: 102017-MA1

Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.12	0.60	ND	0.59	2.96	ND	
74-87-3	Chloromethane	0.12	0.60	ND	0.25	1.24	ND	
76-14-2	Freon 114	0.12	0.60	ND	0.83	4.18	ND	
75-01-4	Vinyl chloride	0.12	0.60	ND	0.30	1.53	ND	
106-99-0	1,3-Butadiene	0.12	0.60	ND	0.26	1.32	ND	
74-83-9	Bromomethane	0.12	0.60	ND	0.46	2.32	ND	
75-00-3	Chloroethane	0.12	0.60	ND	0.31	1.58	ND	
64-17-5	Ethanol	0.60	1.79	ND	1.12	3.36	ND	
75-69-4	Trichlorofluoromethane	0.12	0.57	ND	0.67	3.21	ND	
67-64-1	Acetone	0.60	1.46	12.16	1.41	3.48	28.88	
67-63-0	2-propanol	0.60	1.37	ND	1.46	3.36	ND	
75-35-4	1,1-Dichloroethene	0.12	0.59	ND	0.47	2.34	ND	
76-13-1	Freon 113	0.12	0.57	ND	0.91	4.36	ND	
75-09-2	Dichloromethane	0.24	0.57	ND	0.83	1.99	ND	
75-15-0	Carbon disulfide	0.60	1.10	1.58	1.85	3.44	4.91	
156-60-5	trans-1,2-Dichloroethene	0.12	0.43	ND	0.47	1.70	ND	
1634-04-4	Methyl tert butyl ether	0.12	0.44	ND	0.43	1.58	ND	
75-34-3	1,1-Dichloroethane	0.12	0.59	ND	0.48	2.40	ND	
108-05-4	Vinyl acetate	0.12	0.52	ND	0.42	1.84	ND	
78-93-3	2-Butanone	0.48	1.21	0.91	1.40	3.57	2.69	J
141-78-6	Ethyl acetate	0.24	0.52	ND	0.86	1.88	ND	
74-97-5	Bromochloromethane	0.12	0.32	ND	0.63	1.68	ND	
109-99-9	Tetrahydrofuran	0.24	0.60	ND	0.70	1.76	ND	
156-59-2	cis-1,2-Dichloroethene	0.24	0.64	ND	0.94	2.54	ND	
67-66-3	Chloroform	0.12	0.60	ND	0.58	2.91	ND	
71-55-6	1,1,1-Trichloroethane	0.12	0.53	ND	0.65	2.88	ND	
107-06-2	1,2-Dichloroethane	0.12	0.54	ND	0.48	2.20	ND	
110-82-7	Cyclohexane	0.12	0.46	ND	0.41	1.57	ND	
71-43-2	Benzene	0.12	0.60	2.04	0.38	1.93	6.51	
56-23-5	Carbon tetrachloride	0.12	0.56	ND	0.75	3.55	ND	
142-82-5	n-Heptane	0.60	1.44	ND	2.44	5.91	ND	
78-87-5	1,2-Dichloropropane	0.12	0.57	ND	0.55	2.65	ND	
123-91-1	1,4 Dioxane	0.48	0.97	ND	1.71	3.51	ND	
79-01-6	Trichloroethene	0.07	0.55	ND	0.38	2.98	ND	
75-27-4	Bromodichloromethane	0.12	0.24	ND	0.80	1.61	ND	
80-62-6	Methyl methacrylate	0.48	1.61	ND	1.95	6.58	ND	
108-10-1	4-Methyl-2-pentanone	0.48	1.80	ND	1.95	7.38	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.12	0.62	ND	0.54	2.80	ND	
108-88-3	Toluene	0.24	0.62	0.90	0.90	2.34	3.39	
10061-02-6	trans-1,3-Dichloropropene	0.12	0.62	ND	0.54	2.80	ND	
79-00-5	1,1,2-Trichloroethane	0.12	0.61	ND	0.65	3.34	ND	
591-78-6	2-Hexanone	0.60	1.69	ND	2.44	6.91	ND	
124-48-1	Dibromochloromethane	0.12	0.24	ND	1.01	2.02	ND	
106-93-4	1,2-Dibromoethane	0.12	0.29	ND	0.91	2.22	ND	
127-18-4	Tetrachloroethene	0.07	0.29	ND	0.48	1.96	ND	
108-90-7	Chlorobenzene	0.12	0.54	ND	0.55	2.49	ND	
100-41-4	Ethylbenzene	0.25	0.63	ND	1.09	2.73	ND	
1330-20-7	m,p-Xylenes	0.25	0.63	ND	1.10	2.74	ND	
100-42-5	Styrene	0.25	0.62	ND	1.05	2.62	ND	
75-25-2	Bromoform	0.12	0.16	ND	1.23	1.65	ND	
95-47-6	o-Xylene	0.25	0.61	0.28	1.07	2.66	1.21	J
79-34-5	1,1,2,2-Tetrachloroethane	0.12	0.29	ND	0.81	2.02	ND	
622-96-8	4-Ethyltoluene	0.39	0.99	1.04	1.94	4.85	5.12	
108-67-8	1,3,5-Trimethylbenzene	0.25	0.61	ND	1.21	3.02	ND	
95-63-6	1,2,4-Trimethylbenzene	0.24	0.60	0.25	1.19	2.97	1.22	J
541-73-1	1,3-Dichlorobenzene	0.24	0.44	ND	1.43	2.65	ND	
100-44-7	Benzyl chloride	0.24	1.44	ND	1.23	7.46	ND	
106-46-7	1,4-Dichlorobenzene	0.24	0.41	ND	1.43	2.47	ND	
95-50-1	1,2-Dichlorobenzene	0.24	0.39	ND	1.43	2.32	ND	
120-82-1	1,2,4-Trichlorobenzene	0.60	0.82	ND	4.41	6.07	ND	
91-20-3	Naphthalene	0.12	0.19	ND	0.64	1.00	ND	
87-68-3	Hexachlorobutadiene	0.60	0.63	ND	6.34	6.72	ND	
						QC	Limits	
Surrogate Recovery					% Rec.	LCL	UCL	Flag
2037-26-5	Toluene-d8				96	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 09

File Name: 1753909B
Description: T - 204
Canister: 849
QC_Batch: 100617-GCK

Date Sampled: 09/27/17 Time: 13:01
Date Analyzed: 10/06/17 Time: 15:00
Can Factor: 1.19
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.19	3.57	ND	1.37	4.11	ND	ND
74-86-2	Acetylene	1.19	3.57	ND	1.27	3.80	ND	ND
74-84-0	Ethane	1.19	3.57	23.89	1.47	4.40	29.47	
115-07-1	Propene	0.79	2.38	ND	1.37	4.11	ND	ND
74-98-6	Propane	0.79	2.38	3.91	1.43	4.30	7.07	
75-28-5	i-Butane	0.60	1.79	1.30	1.42	4.25	3.09	J
106-98-9	1-Butene	0.60	1.79	ND	1.37	4.10	ND	ND
106-97-8	n-Butane	0.60	1.79	2.80	1.42	4.25	6.66	
624-64-6	t-2-Butene	0.60	1.79	ND	1.37	4.10	ND	ND
590-18-1	c-2-Butene	0.60	1.79	ND	1.37	4.10	ND	ND
78-78-4	i-Pentane	0.48	1.43	0.52	1.41	4.23	1.54	J
109-67-1	1-Pentene	0.48	1.43	ND	1.37	4.10	ND	ND
109-66-0	n-Pentane	0.48	1.43	2.16	1.41	4.22	6.38	
78-79-5	Isoprene	0.48	1.43	ND	1.33	3.99	ND	ND
646-04-8	t-2-Pentene	0.48	1.43	ND	1.37	4.10	ND	ND
627-20-3	c-2-Pentene	0.48	1.43	ND	1.37	4.10	ND	ND
75-83-2	2,2-Dimethylbutane	0.40	1.19	ND	1.40	4.20	ND	ND
287-92-3	Cyclopentane	0.48	1.43	ND	1.37	4.10	ND	ND
79-29-8	2,3-Dimethylbutane	0.40	1.19	ND	1.40	4.20	ND	ND
107-83-5	2-Methylpentane	0.40	1.19	ND	1.40	4.20	ND	ND
96-14-0	3-Methylpentane	0.40	1.19	ND	1.40	4.20	ND	ND
110-54-3	n-Hexane	0.40	1.19	ND	1.40	4.20	ND	ND
96-37-7	Methylcyclopentane	0.40	1.19	ND	1.37	4.11	ND	ND
108-08-7	2,4-Dimethylpentane	0.34	1.02	0.68	1.40	4.19	2.79	J
71-43-2	Benzene	0.40	1.19	1.54	1.27	3.81	4.93	
110-82-7	Cyclohexane	0.40	1.19	0.96	1.37	4.11	3.32	J
591-76-4	2-Methylhexane	0.34	1.02	ND	1.40	4.19	ND	ND
565-59-3	2,3-Dimethylpentane	0.34	1.02	ND	1.40	4.19	ND	ND
589-34-4	3-Methylhexane	0.34	1.02	ND	1.40	4.19	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.30	0.89	0.47	1.39	4.18	2.19	J
142-82-5	n-Heptane	0.34	1.02	ND	1.40	4.19	ND	ND
108-87-2	Methylcyclohexane	0.34	1.02	1.08	1.37	4.11	4.35	
592-13-2	2,5-Dimethylhexane	0.30	0.89	ND	1.39	4.18	ND	ND
589-43-5	2,4-Dimethylhexane	0.30	0.89	ND	1.39	4.18	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.30	0.89	0.38	1.39	4.18	1.79	J
108-88-3	Toluene	0.34	1.02	1.78	1.28	3.85	6.74	
584-94-1	2,3-Dimethylhexane	0.30	0.89	ND	1.39	4.18	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.30	0.89	ND	1.39	4.18	ND	ND
589-81-1	3-Methylheptane	0.30	0.89	ND	1.39	4.18	ND	ND
111-65-9	n-Octane	0.30	0.89	0.56	1.39	4.18	2.64	J
100-41-4	Ethylbenzene	0.30	0.89	0.47	1.29	3.88	2.03	J
108-38-3	m,p-xylene	0.30	0.89	1.49	1.29	3.88	6.50	
100-42-5	Styrene	0.30	0.89	1.50	1.27	3.81	6.41	
95-47-6	o-xylene	0.30	0.89	3.83	1.29	3.88	16.69	
111-84-2	n-Nonane	0.26	0.79	0.59	1.39	4.17	3.13	J
98-82-8	i-Propylbenzene	0.26	0.79	0.29	1.30	3.91	1.44	J
103-65-1	n-propylbenzene	0.26	0.79	0.84	1.30	3.91	4.11	
80-56-8	a-Pinene	0.24	0.71	ND	1.33	3.99	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.79	0.94	1.30	3.91	4.62	
622-96-8	4-Ethyltoluene	0.26	0.79	3.75	1.30	3.91	18.47	
108-67-8	1,3,5-Trimethylbenzene	0.26	0.79	1.55	1.30	3.91	7.62	
611-14-3	2-Ethyltoluene	0.26	0.79	1.03	1.30	3.91	5.09	
127-91-3	b-Pinene	0.24	0.71	ND	1.33	3.99	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.79	1.33	1.30	3.91	6.56	
124-18-5	n-Decane	0.24	0.71	1.09	1.39	4.16	6.34	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.79	1.07	1.30	3.91	5.26	
5989-27-5	d-Limonene	0.24	0.71	ND	1.33	3.99	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.71	1.30	1.31	3.93	7.14	
105-05-5	1,4-Diethylbenzene	0.24	0.71	1.44	1.31	3.93	7.93	
104-51-8	n-Butylbenzene	0.24	0.71	ND	1.31	3.93	ND	ND
1120-21-4	Undecane	0.22	0.65	2.25	1.39	4.16	14.42	
112-40-3	Dodecane	0.20	0.60	1.31	1.38	4.15	9.15	
Total Petroleum Hydrocarbons:								
TNMHC - C6	Total Non-Methane Hydrocarbons	8.93	26.78	248.02	31.53	94.59	876.20	
TNMHC - C1	Total Non-Methane Hydrocarbons	53.55	160.65	1,488.12	35.11	105.34	975.82	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 09

File Name: 753909PA

Date Sampled: 09/27/17

Time: 13:01

Description: T-204

Date Analyzed: 10/03/17

Time: 11:29

Can/Tube#: 849

Can Dilution Factor: 1.19

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.04	119	357	375	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 217539
Laboratory Number: 09

File Name: 1753909A
Description: T-204
Can/Tube#: 849
QC_Batch: 100317-GCL

Date Sampled: 09/27/17 Time: 13:01
Date Analyzed: 10/03/17 Time: 11:02
Dilution Factor: 1.19

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.71	11.32	0.16	0.48	7.65	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 217539

Laboratory ID: 10

File Name: 1753910A.D
Description: T-205
Canister: 686
QC_Batch: 102017-MA1

Date Sampled: 09/27/17 Time: 14:01
Date Analyzed: 10/20/17 Time: 14:00
Can Dilution Factor: 1.22
Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.12	0.61	ND	0.60	3.03	ND	
74-87-3	Chloromethane	0.12	0.61	ND	0.25	1.27	ND	
76-14-2	Freon 114	0.12	0.61	ND	0.85	4.29	ND	
75-01-4	Vinyl chloride	0.12	0.61	ND	0.31	1.57	ND	
106-99-0	1,3-Butadiene	0.12	0.61	ND	0.27	1.36	ND	
74-83-9	Bromomethane	0.12	0.61	ND	0.47	2.38	ND	
75-00-3	Chloroethane	0.12	0.61	ND	0.32	1.62	ND	
64-17-5	Ethanol	0.61	1.83	ND	1.15	3.45	ND	
75-69-4	Trichlorofluoromethane	0.12	0.59	ND	0.69	3.29	ND	
67-64-1	Acetone	0.61	1.50	4.85	1.45	3.56	11.52	
67-63-0	2-propanol	0.61	1.40	ND	1.50	3.44	ND	
75-35-4	1,1-Dichloroethene	0.12	0.61	1.55	0.48	2.40	6.15	
76-13-1	Freon 113	0.12	0.58	ND	0.93	4.47	ND	
75-09-2	Dichloromethane	0.24	0.59	ND	0.85	2.04	ND	
75-15-0	Carbon disulfide	0.61	1.13	53.21	1.90	3.52	165.55	E
156-60-5	trans-1,2-Dichloroethene	0.12	0.44	ND	0.48	1.74	ND	
1634-04-4	Methyl tert butyl ether	0.12	0.45	ND	0.44	1.62	ND	
75-34-3	1,1-Dichloroethane	0.12	0.61	ND	0.49	2.46	ND	
108-05-4	Vinyl acetate	0.12	0.54	ND	0.43	1.89	ND	
78-93-3	2-Butanone	0.49	1.24	4.51	1.44	3.66	13.30	
141-78-6	Ethyl acetate	0.24	0.53	ND	0.88	1.92	ND	
74-97-5	Bromochloromethane	0.12	0.32	ND	0.65	1.72	ND	
109-99-9	Tetrahydrofuran	0.24	0.61	ND	0.72	1.81	ND	
156-59-2	cis-1,2-Dichloroethene	0.24	0.66	ND	0.97	2.60	ND	
67-66-3	Chloroform	0.12	0.61	ND	0.60	2.99	ND	
71-55-6	1,1,1-Trichloroethane	0.12	0.54	ND	0.67	2.95	ND	
107-06-2	1,2-Dichloroethane	0.12	0.56	ND	0.49	2.25	ND	
110-82-7	Cyclohexane	0.12	0.47	ND	0.42	1.61	ND	
71-43-2	Benzene	0.12	0.62	2.79	0.39	1.98	8.92	
56-23-5	Carbon tetrachloride	0.12	0.58	ND	0.77	3.64	ND	
142-82-5	n-Heptane	0.61	1.48	ND	2.50	6.06	ND	
78-87-5	1,2-Dichloropropane	0.12	0.59	ND	0.56	2.71	ND	
123-91-1	1,4 Dioxane	0.49	1.00	ND	1.76	3.59	ND	
79-01-6	Trichloroethene	0.07	0.57	ND	0.39	3.05	ND	
75-27-4	Bromodichloromethane	0.12	0.25	ND	0.82	1.65	ND	
80-62-6	Methyl methacrylate	0.49	1.65	1.02	2.00	6.75	4.19	J
108-10-1	4-Methyl-2-pentanone	0.49	1.85	ND	2.00	7.57	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.12	0.63	ND	0.55	2.87	ND	
108-88-3	Toluene	0.24	0.64	3.28	0.92	2.40	12.36	
10061-02-6	trans-1,3-Dichloropropene	0.12	0.63	ND	0.55	2.87	ND	
79-00-5	1,1,2-Trichloroethane	0.12	0.63	ND	0.67	3.42	ND	
591-78-6	2-Hexanone	0.61	1.73	ND	2.50	7.09	ND	
124-48-1	Dibromochloromethane	0.12	0.24	ND	1.04	2.07	ND	
106-93-4	1,2-Dibromoethane	0.12	0.30	ND	0.94	2.27	ND	
127-18-4	Tetrachloroethene	0.07	0.30	ND	0.50	2.01	ND	
108-90-7	Chlorobenzene	0.12	0.56	ND	0.56	2.56	ND	
100-41-4	Ethylbenzene	0.26	0.64	4.15	1.12	2.80	18.00	
1330-20-7	m,p-Xylenes	0.26	0.65	6.61	1.12	2.81	28.68	
100-42-5	Styrene	0.25	0.63	ND	1.08	2.69	ND	
75-25-2	Bromoform	0.12	0.16	ND	1.26	1.69	ND	
95-47-6	o-Xylene	0.25	0.63	5.10	1.09	2.73	22.15	
79-34-5	1,1,2,2-Tetrachloroethane	0.12	0.30	ND	0.83	2.07	ND	
622-96-8	4-Ethyltoluene	0.40	1.01	1.63	1.99	4.97	7.99	
108-67-8	1,3,5-Trimethylbenzene	0.25	0.63	1.11	1.24	3.10	5.47	
95-63-6	1,2,4-Trimethylbenzene	0.25	0.62	4.38	1.22	3.05	21.53	
541-73-1	1,3-Dichlorobenzene	0.24	0.45	ND	1.47	2.71	ND	
100-44-7	Benzyl chloride	0.24	1.48	ND	1.26	7.65	ND	
106-46-7	1,4-Dichlorobenzene	0.24	0.42	ND	1.47	2.54	ND	
95-50-1	1,2-Dichlorobenzene	0.24	0.40	ND	1.47	2.38	ND	
120-82-1	1,2,4-Trichlorobenzene	0.61	0.84	ND	4.52	6.22	ND	
91-20-3	Naphthalene	0.12	0.20	0.19	0.65	1.02	1.02	J
87-68-3	Hexachlorobutadiene	0.61	0.65	ND	6.50	6.89	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	93	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 10

File Name: 1753910B
Description: T - 205
Canister: 686
QC_Batch: 100917-GCK

Date Sampled: 09/27/17 Time: 14:01
Date Analyzed: 10/09/17 Time: 13:00
Can Factor: 1.22
Air Volume: 100 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2.44	7.32	274.05	2.81	8.43	315.60	
74-86-2	Acetylene	2.44	7.32	ND	2.60	7.80	ND	ND
74-84-0	Ethane	2.44	7.32	75.34	3.01	9.03	92.94	
115-07-1	Propene	1.63	4.88	ND	2.81	8.42	ND	ND
74-98-6	Propane	1.63	4.88	20.33	2.94	8.82	36.74	
75-28-5	i-Butane	1.22	3.66	3.25	2.91	8.72	7.73	J
106-98-9	1-Butene	1.22	3.66	ND	2.81	8.42	ND	ND
106-97-8	n-Butane	1.22	3.66	3.44	2.91	8.72	8.19	J
624-64-6	t-2-Butene	1.22	3.66	ND	2.81	8.42	ND	ND
590-18-1	c-2-Butene	1.22	3.66	ND	2.81	8.42	ND	ND
78-78-4	i-Pentane	0.98	2.93	1.12	2.89	8.66	3.31	J
109-67-1	1-Pentene	0.98	2.93	ND	2.80	8.41	ND	ND
109-66-0	n-Pentane	0.98	2.93	1.67	2.88	8.65	4.94	J
78-79-5	Isoprene	0.98	2.93	ND	2.72	8.17	ND	ND
646-04-8	t-2-Pentene	0.98	2.93	ND	2.80	8.41	ND	ND
627-20-3	c-2-Pentene	0.98	2.93	ND	2.80	8.41	ND	ND
75-83-2	2,2-Dimethylbutane	0.81	2.44	ND	2.87	8.62	ND	ND
287-92-3	Cyclopentane	0.98	2.93	ND	2.80	8.41	ND	ND
79-29-8	2,3-Dimethylbutane	0.81	2.44	ND	2.87	8.62	ND	ND
107-83-5	2-Methylpentane	0.81	2.44	2.40	2.87	8.62	8.48	J
96-14-0	3-Methylpentane	0.81	2.44	0.94	2.87	8.62	3.32	J
110-54-3	n-Hexane	0.81	2.44	1.02	2.87	8.62	3.60	J
96-37-7	Methylcyclopentane	0.81	2.44	ND	2.81	8.42	ND	ND
108-08-7	2,4-Dimethylpentane	0.70	2.09	ND	2.86	8.59	ND	ND
71-43-2	Benzene	0.81	2.44	2.94	2.60	7.81	9.40	
110-82-7	Cyclohexane	0.81	2.44	ND	2.81	8.42	ND	ND
591-76-4	2-Methylhexane	0.70	2.09	0.73	2.86	8.59	3.00	J
565-59-3	2,3-Dimethylpentane	0.70	2.09	ND	2.86	8.59	ND	ND
589-34-4	3-Methylhexane	0.70	2.09	0.86	2.86	8.59	3.53	J
540-84-1	2,2,4-Trimethylpentane	0.61	1.83	0.67	2.86	8.57	3.11	J
142-82-5	n-Heptane	0.70	2.09	ND	2.86	8.59	ND	ND
108-87-2	Methylcyclohexane	0.70	2.09	1.30	2.81	8.42	5.22	J
592-13-2	2,5-Dimethylhexane	0.61	1.83	ND	2.86	8.57	ND	ND
589-43-5	2,4-Dimethylhexane	0.61	1.83	ND	2.86	8.57	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.61	1.83	1.52	2.86	8.57	7.10	J
108-88-3	Toluene	0.70	2.09	5.27	2.63	7.89	19.91	
584-94-1	2,3-Dimethylhexane	0.61	1.83	ND	2.86	8.57	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.61	1.83	ND	2.86	8.57	ND	ND
589-81-1	3-Methylheptane	0.61	1.83	ND	2.86	8.57	ND	ND
111-65-9	n-Octane	0.61	1.83	0.97	2.86	8.57	4.55	J
100-41-4	Ethylbenzene	0.61	1.83	8.87	2.66	7.97	38.61	
108-38-3	m,p-xylene	0.61	1.83	13.11	2.66	7.97	57.08	
100-42-5	Styrene	0.61	1.83	2.43	2.61	7.82	10.36	
95-47-6	o-xylene	0.61	1.83	3.10	2.66	7.97	13.51	
111-84-2	n-Nonane	0.54	1.63	0.82	2.85	8.55	4.29	J
98-82-8	i-Propylbenzene	0.54	1.63	1.73	2.67	8.01	8.52	
103-65-1	n-propylbenzene	0.54	1.63	1.65	2.67	8.01	8.11	
80-56-8	a-Pinene	0.49	1.46	ND	2.72	8.17	ND	ND
620-14-4	3-Ethyltoluene	0.54	1.63	3.84	2.67	8.01	18.92	
622-96-8	4-Ethyltoluene	0.54	1.63	4.07	2.67	8.01	20.07	
108-67-8	1,3,5-Trimethylbenzene	0.54	1.63	3.81	2.67	8.01	18.76	
611-14-3	2-Ethyltoluene	0.54	1.63	4.03	2.67	8.01	19.86	
127-91-3	b-Pinene	0.49	1.46	ND	2.72	8.17	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.54	1.63	4.22	2.67	8.01	20.81	
124-18-5	n-Decane	0.49	1.46	1.83	2.85	8.54	10.66	
526-73-8	1,2,3-Trimethylbenzene	0.54	1.63	3.10	2.67	8.01	15.28	
5989-27-5	d-Limonene	0.49	1.46	ND	2.72	8.17	ND	ND
141-93-5	1,3-Diethylbenzene	0.49	1.46	1.40	2.68	8.05	7.68	J
105-05-5	1,4-Diethylbenzene	0.49	1.46	4.63	2.68	8.05	25.49	
104-51-8	n-Butylbenzene	0.49	1.46	ND	2.68	8.05	ND	ND
1120-21-4	Undecane	0.44	1.33	1.09	2.84	8.53	7.01	J
112-40-3	Dodecane	0.41	1.22	3.55	2.84	8.52	24.76	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	18.30	54.90	462.36	64.65	193.95	1,633.43	
TNMHC - C1	Total Non-Methane Hydrocarbons	109.80	329.40	2,774.17	72.00	216.00	1,819.13	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 10

File Name: 753910PA

Date Sampled: 09/27/17

Time: 14:01

Description: T-205

Date Analyzed: 10/03/17

Time: 11:34

Can/Tube#: 686

Can Dilution Factor: 1.22

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.32	122	366	3,173	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 10

File Name: 1753910A
Description: T-205
Can/Tube#: 686
QC_Batch: 100317-GCL

Date Sampled: 09/27/17 Time: 14:01
Date Analyzed: 10/03/17 Time: 11:05
Dilution Factor: 1.22

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.73	162.11	0.16	0.49	109.54	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 11

File Name: 1753911A.D

Date Sampled: 09/27/17

Time: 14:59

Description: T-206

Date Analyzed: 10/20/17

Time: 14:39

Canister: 692

Can Dilution Factor: 1.20

QC_Batch: 102017-MA1

Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.12	0.60	ND	0.59	2.98	ND	
74-87-3	Chloromethane	0.12	0.60	ND	0.25	1.25	ND	
76-14-2	Freon 114	0.12	0.60	ND	0.84	4.22	ND	
75-01-4	Vinyl chloride	0.12	0.60	ND	0.31	1.54	ND	
106-99-0	1,3-Butadiene	0.12	0.60	ND	0.27	1.33	ND	
74-83-9	Bromomethane	0.12	0.60	ND	0.47	2.34	ND	
75-00-3	Chloroethane	0.12	0.60	ND	0.32	1.59	ND	
64-17-5	Ethanol	0.60	1.80	ND	1.13	3.39	ND	
75-69-4	Trichlorofluoromethane	0.12	0.58	ND	0.67	3.24	ND	
67-64-1	Acetone	0.60	1.48	6.36	1.43	3.51	15.12	
67-63-0	2-propanol	0.60	1.38	ND	1.47	3.38	ND	
75-35-4	1,1-Dichloroethene	0.12	0.60	ND	0.48	2.36	ND	
76-13-1	Freon 113	0.12	0.57	ND	0.92	4.40	ND	
75-09-2	Dichloromethane	0.24	0.58	ND	0.83	2.01	ND	
75-15-0	Carbon disulfide	0.60	1.11	29.67	1.87	3.46	92.29	
156-60-5	trans-1,2-Dichloroethene	0.12	0.43	ND	0.48	1.72	ND	
1634-04-4	Methyl tert butyl ether	0.12	0.44	ND	0.43	1.59	ND	
75-34-3	1,1-Dichloroethane	0.12	0.60	ND	0.49	2.42	ND	
108-05-4	Vinyl acetate	0.12	0.53	ND	0.42	1.86	ND	
78-93-3	2-Butanone	0.48	1.22	1.73	1.41	3.60	5.09	
141-78-6	Ethyl acetate	0.24	0.53	ND	0.86	1.89	ND	
74-97-5	Bromochloromethane	0.12	0.32	ND	0.63	1.69	ND	
109-99-9	Tetrahydrofuran	0.24	0.60	ND	0.71	1.78	ND	
156-59-2	cis-1,2-Dichloroethene	0.24	0.65	ND	0.95	2.56	ND	
67-66-3	Chloroform	0.12	0.60	ND	0.59	2.94	ND	
71-55-6	1,1,1-Trichloroethane	0.12	0.53	ND	0.65	2.91	ND	
107-06-2	1,2-Dichloroethane	0.12	0.55	ND	0.49	2.22	ND	
110-82-7	Cyclohexane	0.12	0.46	ND	0.41	1.59	ND	
71-43-2	Benzene	0.12	0.61	2.69	0.38	1.95	8.58	
56-23-5	Carbon tetrachloride	0.12	0.57	ND	0.75	3.58	ND	
142-82-5	n-Heptane	0.60	1.45	ND	2.46	5.96	ND	
78-87-5	1,2-Dichloropropane	0.12	0.58	ND	0.55	2.67	ND	
123-91-1	1,4 Dioxane	0.48	0.98	ND	1.73	3.54	ND	
79-01-6	Trichloroethene	0.07	0.56	ND	0.39	3.00	ND	
75-27-4	Bromodichloromethane	0.12	0.24	ND	0.80	1.62	ND	
80-62-6	Methyl methacrylate	0.48	1.62	0.96	1.96	6.64	3.92	J
108-10-1	4-Methyl-2-pentanone	0.48	1.82	ND	1.97	7.44	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.12	0.62	ND	0.54	2.82	ND	
108-88-3	Toluene	0.24	0.63	3.80	0.90	2.36	14.31	
10061-02-6	trans-1,3-Dichloropropene	0.12	0.62	ND	0.54	2.82	ND	
79-00-5	1,1,2-Trichloroethane	0.12	0.62	ND	0.65	3.36	ND	
591-78-6	2-Hexanone	0.60	1.70	ND	2.46	6.97	ND	
124-48-1	Dibromochloromethane	0.12	0.24	ND	1.02	2.04	ND	
106-93-4	1,2-Dibromoethane	0.12	0.29	ND	0.92	2.24	ND	
127-18-4	Tetrachloroethene	0.07	0.29	ND	0.49	1.98	ND	
108-90-7	Chlorobenzene	0.12	0.55	ND	0.55	2.51	ND	
100-41-4	Ethylbenzene	0.25	0.63	4.94	1.10	2.75	21.46	
1330-20-7	m,p-Xylenes	0.25	0.64	7.96	1.10	2.76	34.55	
100-42-5	Styrene	0.25	0.62	ND	1.06	2.65	ND	
75-25-2	Bromoform	0.12	0.16	ND	1.24	1.66	ND	
95-47-6	o-Xylene	0.25	0.62	5.98	1.07	2.69	25.98	
79-34-5	1,1,1,2-Tetrachloroethane	0.12	0.30	ND	0.82	2.04	ND	
622-96-8	4-Ethyltoluene	0.40	0.99	1.76	1.95	4.89	8.66	
108-67-8	1,3,5-Trimethylbenzene	0.25	0.62	1.18	1.22	3.05	5.80	
95-63-6	1,2,4-Trimethylbenzene	0.24	0.61	4.69	1.20	3.00	23.07	
541-73-1	1,3-Dichlorobenzene	0.24	0.44	ND	1.44	2.67	ND	
100-44-7	Benzyl chloride	0.24	1.45	ND	1.24	7.53	ND	
106-46-7	1,4-Dichlorobenzene	0.24	0.42	ND	1.44	2.50	ND	
95-50-1	1,2-Dichlorobenzene	0.24	0.39	ND	1.44	2.34	ND	
120-82-1	1,2,4-Trichlorobenzene	0.60	0.83	ND	4.45	6.12	ND	
91-20-3	Naphthalene	0.12	0.19	0.19	0.64	1.01	1.00	J
87-68-3	Hexachlorobutadiene	0.60	0.64	ND	6.40	6.78	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	94	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 11

File Name: 1753911A
Description: T - 206
Canister: 692
QC_Batch: 100917-GCK

Date Sampled: 09/27/17 Time: 14:59
Date Analyzed: 10/09/17 Time: 13:43
Can Factor: 1.20
Air Volume: 100 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2.40	7.20	100.07	2.76	8.29	115.25	
74-86-2	Acetylene	2.40	7.20	ND	2.56	7.67	ND	ND
74-84-0	Ethane	2.40	7.20	309.19	2.96	8.88	381.41	
115-07-1	Propene	1.60	4.80	ND	2.76	8.28	ND	ND
74-98-6	Propane	1.60	4.80	24.25	2.89	8.68	43.82	
75-28-5	i-Butane	1.20	3.60	4.44	2.86	8.57	10.58	
106-98-9	1-Butene	1.20	3.60	ND	2.76	8.28	ND	ND
106-97-8	n-Butane	1.20	3.60	3.60	2.86	8.57	8.56	J
624-64-6	t-2-Butene	1.20	3.60	ND	2.76	8.28	ND	ND
590-18-1	c-2-Butene	1.20	3.60	ND	2.76	8.28	ND	ND
78-78-4	i-Pentane	0.96	2.88	1.45	2.84	8.52	4.30	J
109-67-1	1-Pentene	0.96	2.88	ND	2.76	8.27	ND	ND
109-66-0	n-Pentane	0.96	2.88	ND	2.84	8.51	ND	ND
78-79-5	Isoprene	0.96	2.88	ND	2.68	8.04	ND	ND
646-04-8	t-2-Pentene	0.96	2.88	ND	2.76	8.27	ND	ND
627-20-3	c-2-Pentene	0.96	2.88	ND	2.76	8.27	ND	ND
75-83-2	2,2-Dimethylbutane	0.80	2.40	ND	2.83	8.48	ND	ND
287-92-3	Cyclopentane	0.96	2.88	ND	2.76	8.27	ND	ND
79-29-8	2,3-Dimethylbutane	0.80	2.40	ND	2.83	8.48	ND	ND
107-83-5	2-Methylpentane	0.80	2.40	3.03	2.83	8.48	10.70	
96-14-0	3-Methylpentane	0.80	2.40	ND	2.83	8.48	ND	ND
110-54-3	n-Hexane	0.80	2.40	ND	2.83	8.48	ND	ND
96-37-7	Methylcyclopentane	0.80	2.40	ND	2.76	8.28	ND	ND
108-08-7	2,4-Dimethylpentane	0.69	2.06	ND	2.82	8.45	ND	ND
71-43-2	Benzene	0.80	2.40	4.04	2.56	7.68	12.92	
110-82-7	Cyclohexane	0.80	2.40	0.97	2.76	8.28	3.34	J
591-76-4	2-Methylhexane	0.69	2.06	1.05	2.82	8.45	4.29	J
565-59-3	2,3-Dimethylpentane	0.69	2.06	ND	2.82	8.45	ND	ND
589-34-4	3-Methylhexane	0.69	2.06	1.37	2.82	8.45	5.61	J
540-84-1	2,2,4-Trimethylpentane	0.60	1.80	0.83	2.81	8.42	3.89	J
142-82-5	n-Heptane	0.69	2.06	ND	2.82	8.45	ND	ND
108-87-2	Methylcyclohexane	0.69	2.06	2.48	2.76	8.28	9.96	
592-13-2	2,5-Dimethylhexane	0.60	1.80	ND	2.81	8.42	ND	ND
589-43-5	2,4-Dimethylhexane	0.60	1.80	ND	2.81	8.42	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.60	1.80	1.43	2.81	8.42	6.67	J
108-88-3	Toluene	0.69	2.06	6.84	2.59	7.76	25.84	
584-94-1	2,3-Dimethylhexane	0.60	1.80	ND	2.81	8.42	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.60	1.80	ND	2.81	8.42	ND	ND
589-81-1	3-Methylheptane	0.60	1.80	ND	2.81	8.42	ND	ND
111-65-9	n-Octane	0.60	1.80	1.52	2.81	8.42	7.13	J
100-41-4	Ethylbenzene	0.60	1.80	7.81	2.61	7.83	33.99	
108-38-3	m,p-xylene	0.60	1.80	15.59	2.61	7.83	67.84	
100-42-5	Styrene	0.60	1.80	2.51	2.56	7.69	10.74	
95-47-6	o-xylene	0.60	1.80	3.64	2.61	7.83	15.85	
111-84-2	n-Nonane	0.53	1.60	1.09	2.80	8.41	5.71	J
98-82-8	i-Propylbenzene	0.53	1.60	2.43	2.63	7.88	11.97	
103-65-1	n-propylbenzene	0.53	1.60	1.52	2.63	7.88	7.49	J
80-56-8	a-Pinene	0.48	1.44	ND	2.68	8.04	ND	ND
620-14-4	3-Ethyltoluene	0.53	1.60	4.83	2.63	7.88	23.77	
622-96-8	4-Ethyltoluene	0.53	1.60	5.14	2.63	7.88	25.30	
108-67-8	1,3,5-Trimethylbenzene	0.53	1.60	4.46	2.63	7.88	21.98	
611-14-3	2-Ethyltoluene	0.53	1.60	ND	2.63	7.88	ND	ND
127-91-3	b-Pinene	0.48	1.44	ND	2.68	8.04	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.53	1.60	15.68	2.63	7.88	77.25	
124-18-5	n-Decane	0.48	1.44	2.63	2.80	8.40	15.35	
526-73-8	1,2,3-Trimethylbenzene	0.53	1.60	1.88	2.63	7.88	9.28	
5989-27-5	d-Limonene	0.48	1.44	ND	2.68	8.04	ND	ND
141-93-5	1,3-Diethylbenzene	0.48	1.44	1.40	2.64	7.92	7.69	J
105-05-5	1,4-Diethylbenzene	0.48	1.44	5.07	2.64	7.92	27.87	
104-51-8	n-Butylbenzene	0.48	1.44	ND	2.64	7.92	ND	ND
1120-21-4	Undecane	0.44	1.31	1.45	2.80	8.39	9.29	
112-40-3	Dodecane	0.40	1.20	2.51	2.79	8.38	17.53	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	18.00	54.00	518.63	63.59	190.77	1,832.20	
TNMHC - C1	Total Non-Methane Hydrocarbons	108.00	324.00	3,111.76	70.82	212.46	2,040.50	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 11

File Name: 753911PA

Date Sampled: 09/27/17

Time: 14:59

Description: T-206

Date Analyzed: 10/03/17

Time: 11:46

Can/Tube#: 692

Can Dilution Factor: 1.20

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.31	120	360	3,087	

ANALYTICAL REPORT

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 11

File Name: 1753911A

Date Sampled: 09/27/17

Time: 14:59

Description: T-206

Date Analyzed: 10/03/17

Time: 11:11

Can/Tube#: 692

Dilution Factor: 1.20

QC_Batch: 100317-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.72	154.79	0.16	0.49	104.59	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 12

File Name: 1753912A.D
Description: T-207
Canister: 772
QC_Batch: 102017-MA1

Date Sampled: 09/27/17 Time: 15:03
Date Analyzed: 10/20/17 Time: 15:15
Can Dilution Factor: 1.21
Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.12	0.61	ND	0.60	3.01	ND	
74-87-3	Chloromethane	0.12	0.61	ND	0.25	1.26	ND	
76-14-2	Freon 114	0.12	0.61	ND	0.85	4.25	ND	
75-01-4	Vinyl chloride	0.12	0.61	ND	0.31	1.56	ND	
106-99-0	1,3-Butadiene	0.12	0.61	ND	0.27	1.35	ND	
74-83-9	Bromomethane	0.12	0.61	ND	0.47	2.36	ND	
75-00-3	Chloroethane	0.12	0.61	ND	0.32	1.60	ND	
64-17-5	Ethanol	0.61	1.82	ND	1.14	3.42	ND	
75-69-4	Trichlorofluoromethane	0.12	0.58	ND	0.68	3.26	ND	
67-64-1	Acetone	0.61	1.49	11.39	1.44	3.53	27.06	
67-63-0	2-propanol	0.61	1.39	ND	1.49	3.41	ND	
75-35-4	1,1-Dichloroethene	0.12	0.60	1.55	0.48	2.38	6.14	
76-13-1	Freon 113	0.12	0.58	ND	0.93	4.43	ND	
75-09-2	Dichloromethane	0.24	0.58	ND	0.84	2.02	ND	
75-15-0	Carbon disulfide	0.61	1.12	30.15	1.88	3.49	93.80	
156-60-5	trans-1,2-Dichloroethene	0.12	0.44	ND	0.48	1.73	ND	
1634-04-4	Methyl tert butyl ether	0.12	0.45	ND	0.44	1.61	ND	
75-34-3	1,1-Dichloroethane	0.12	0.60	ND	0.49	2.44	ND	
108-05-4	Vinyl acetate	0.12	0.53	5.31	0.43	1.87	18.69	
78-93-3	2-Butanone	0.48	1.23	4.47	1.43	3.63	13.18	
141-78-6	Ethyl acetate	0.24	0.53	ND	0.87	1.91	ND	
74-97-5	Bromochloromethane	0.12	0.32	ND	0.64	1.70	ND	
109-99-9	Tetrahydrofuran	0.24	0.61	ND	0.71	1.79	ND	
156-59-2	cis-1,2-Dichloroethene	0.24	0.65	ND	0.96	2.58	ND	
67-66-3	Chloroform	0.12	0.61	ND	0.59	2.96	ND	
71-55-6	1,1,1-Trichloroethane	0.12	0.54	ND	0.66	2.93	ND	
107-06-2	1,2-Dichloroethane	0.12	0.55	ND	0.49	2.23	ND	
110-82-7	Cyclohexane	0.12	0.46	ND	0.42	1.60	ND	
71-43-2	Benzene	0.12	0.61	2.55	0.39	1.96	8.15	
56-23-5	Carbon tetrachloride	0.12	0.57	ND	0.76	3.61	ND	
142-82-5	n-Heptane	0.61	1.47	ND	2.48	6.01	ND	
78-87-5	1,2-Dichloropropane	0.12	0.58	ND	0.56	2.69	ND	
123-91-1	1,4 Dioxane	0.48	0.99	ND	1.74	3.56	ND	
79-01-6	Trichloroethene	0.07	0.56	ND	0.39	3.03	ND	
75-27-4	Bromodichloromethane	0.12	0.24	ND	0.81	1.64	ND	
80-62-6	Methyl methacrylate	0.48	1.64	1.06	1.98	6.69	4.32	J
108-10-1	4-Methyl-2-pentanone	0.48	1.83	ND	1.98	7.50	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.12	0.63	ND	0.55	2.85	ND	
108-88-3	Toluene	0.24	0.63	3.89	0.91	2.38	14.66	
10061-02-6	trans-1,3-Dichloropropene	0.12	0.63	ND	0.55	2.85	ND	
79-00-5	1,1,2-Trichloroethane	0.12	0.62	ND	0.66	3.39	ND	
591-78-6	2-Hexanone	0.61	1.72	ND	2.48	7.03	ND	
124-48-1	Dibromochloromethane	0.12	0.24	ND	1.03	2.06	ND	
106-93-4	1,2-Dibromoethane	0.12	0.29	ND	0.93	2.26	ND	
127-18-4	Tetrachloroethene	0.07	0.29	ND	0.49	2.00	ND	
108-90-7	Chlorobenzene	0.12	0.55	ND	0.56	2.53	ND	
100-41-4	Ethylbenzene	0.26	0.64	5.00	1.11	2.78	21.71	
1330-20-7	m,p-Xylenes	0.26	0.64	7.90	1.11	2.78	34.30	
100-42-5	Styrene	0.25	0.63	ND	1.07	2.67	ND	
75-25-2	Bromoform	0.12	0.16	ND	1.25	1.68	ND	
95-47-6	o-Xylene	0.25	0.62	5.80	1.08	2.71	25.16	
79-34-5	1,1,2,2-Tetrachloroethane	0.12	0.30	ND	0.82	2.05	ND	
622-96-8	4-Ethyltoluene	0.40	1.00	1.68	1.97	4.93	8.24	
108-67-8	1,3,5-Trimethylbenzene	0.25	0.63	1.10	1.23	3.07	5.41	
95-63-6	1,2,4-Trimethylbenzene	0.25	0.61	4.25	1.21	3.02	20.87	
541-73-1	1,3-Dichlorobenzene	0.24	0.45	ND	1.45	2.69	ND	
100-44-7	Benzyl chloride	0.24	1.47	0.44	1.25	7.59	2.25	J
106-46-7	1,4-Dichlorobenzene	0.24	0.42	ND	1.45	2.52	ND	
95-50-1	1,2-Dichlorobenzene	0.24	0.39	ND	1.45	2.36	ND	
120-82-1	1,2,4-Trichlorobenzene	0.61	0.83	ND	4.49	6.17	ND	
91-20-3	Naphthalene	0.12	0.19	ND	0.65	1.01	ND	
87-68-3	Hexachlorobutadiene	0.61	0.64	ND	6.45	6.84	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				98	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 12

File Name: 1753912A
Description: T - 207
Canister: 772
QC_Batch: 100917-GCK

Date Sampled: 09/27/17 Time: 15:03
Date Analyzed: 10/09/17 Time: 14:26
Can Factor: 1.21
Air Volume: 100 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2.42	7.26	ND	2.79	8.36	ND	ND
74-86-2	Acetylene	2.42	7.26	ND	2.58	7.74	ND	ND
74-84-0	Ethane	2.42	7.26	344.78	2.99	8.96	425.33	
115-07-1	Propene	1.61	4.84	ND	2.78	8.35	ND	ND
74-98-6	Propane	1.61	4.84	23.50	2.92	8.75	42.48	
75-28-5	i-Butane	1.21	3.63	3.53	2.88	8.64	8.41	J
106-98-9	1-Butene	1.21	3.63	ND	2.78	8.35	ND	ND
106-97-8	n-Butane	1.21	3.63	2.27	2.88	8.64	5.41	J
624-64-6	t-2-Butene	1.21	3.63	ND	2.78	8.35	ND	ND
590-18-1	c-2-Butene	1.21	3.63	ND	2.78	8.35	ND	ND
78-78-4	i-Pentane	0.97	2.90	ND	2.86	8.59	ND	ND
109-67-1	1-Pentene	0.97	2.90	ND	2.78	8.34	ND	ND
109-66-0	n-Pentane	0.97	2.90	1.33	2.86	8.58	3.93	J
78-79-5	Isoprene	0.97	2.90	ND	2.70	8.11	ND	ND
646-04-8	t-2-Pentene	0.97	2.90	ND	2.78	8.34	ND	ND
627-20-3	c-2-Pentene	0.97	2.90	ND	2.78	8.34	ND	ND
75-83-2	2,2-Dimethylbutane	0.81	2.42	ND	2.85	8.55	ND	ND
287-92-3	Cyclopentane	0.97	2.90	ND	2.78	8.34	ND	ND
79-29-8	2,3-Dimethylbutane	0.81	2.42	ND	2.85	8.55	ND	ND
107-83-5	2-Methylpentane	0.81	2.42	2.27	2.85	8.55	8.01	J
96-14-0	3-Methylpentane	0.81	2.42	1.63	2.85	8.55	5.76	J
110-54-3	n-Hexane	0.81	2.42	ND	2.85	8.55	ND	ND
96-37-7	Methylcyclopentane	0.81	2.42	ND	2.78	8.35	ND	ND
108-08-7	2,4-Dimethylpentane	0.69	2.07	ND	2.84	8.52	ND	ND
71-43-2	Benzene	0.81	2.42	3.31	2.58	7.75	10.60	
110-82-7	Cyclohexane	0.81	2.42	0.82	2.78	8.35	2.83	J
591-76-4	2-Methylhexane	0.69	2.07	0.89	2.84	8.52	3.68	J
565-59-3	2,3-Dimethylpentane	0.69	2.07	ND	2.84	8.52	ND	ND
589-34-4	3-Methylhexane	0.69	2.07	1.26	2.84	8.52	5.17	J
540-84-1	2,2,4-Trimethylpentane	0.61	1.82	0.66	2.83	8.49	3.09	J
142-82-5	n-Heptane	0.69	2.07	ND	2.84	8.52	ND	ND
108-87-2	Methylcyclohexane	0.69	2.07	1.83	2.78	8.35	7.37	J
592-13-2	2,5-Dimethylhexane	0.61	1.82	ND	2.83	8.49	ND	ND
589-43-5	2,4-Dimethylhexane	0.61	1.82	ND	2.83	8.49	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.61	1.82	1.51	2.83	8.49	7.09	J
108-88-3	Toluene	0.69	2.07	4.96	2.61	7.83	18.74	
584-94-1	2,3-Dimethylhexane	0.61	1.82	ND	2.83	8.49	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.61	1.82	ND	2.83	8.49	ND	ND
589-81-1	3-Methylheptane	0.61	1.82	ND	2.83	8.49	ND	ND
111-65-9	n-Octane	0.61	1.82	1.16	2.83	8.49	5.45	J
100-41-4	Ethylbenzene	0.61	1.82	6.37	2.63	7.90	27.74	
108-38-3	m,p-xylene	0.61	1.82	2.43	2.63	7.90	10.57	
100-42-5	Styrene	0.61	1.82	ND	2.58	7.75	ND	ND
95-47-6	o-xylene	0.61	1.82	2.94	2.63	7.90	12.79	
111-84-2	n-Nonane	0.54	1.61	0.72	2.83	8.48	3.78	J
98-82-8	i-Propylbenzene	0.54	1.61	0.72	2.65	7.95	3.54	J
103-65-1	n-propylbenzene	0.54	1.61	1.49	2.65	7.95	7.33	J
80-56-8	a-Pinene	0.48	1.45	ND	2.70	8.11	ND	ND
620-14-4	3-Ethyltoluene	0.54	1.61	3.79	2.65	7.95	18.65	
622-96-8	4-Ethyltoluene	0.54	1.61	4.11	2.65	7.95	20.23	
108-67-8	1,3,5-Trimethylbenzene	0.54	1.61	3.63	2.65	7.95	17.90	
611-14-3	2-Ethyltoluene	0.54	1.61	4.15	2.65	7.95	20.44	
127-91-3	b-Pinene	0.48	1.45	ND	2.70	8.11	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.54	1.61	4.27	2.65	7.95	21.05	
124-18-5	n-Decane	0.48	1.45	1.84	2.82	8.47	10.74	
526-73-8	1,2,3-Trimethylbenzene	0.54	1.61	2.03	2.65	7.95	9.99	
5989-27-5	d-Limonene	0.48	1.45	ND	2.70	8.11	ND	ND
141-93-5	1,3-Diethylbenzene	0.48	1.45	1.26	2.66	7.99	6.95	J
105-05-5	1,4-Diethylbenzene	0.48	1.45	4.45	2.66	7.99	24.46	
104-51-8	n-Butylbenzene	0.48	1.45	ND	2.66	7.99	ND	ND
1120-21-4	Undecane	0.44	1.32	1.15	2.82	8.46	7.38	J
112-40-3	Dodecane	0.40	1.21	3.15	2.82	8.45	22.02	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	18.15	54.45	427.14	64.12	192.36	1,508.98	
TNMHC - C1	Total Non-Methane Hydrocarbons	108.90	326.70	2,562.81	71.41	214.23	1,680.53	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 12

File Name: 753912PA

Date Sampled: 09/27/17

Time: 15:03

Description: T-207

Date Analyzed: 10/03/17

Time: 11:54

Can/Tube#: 772

Can Dilution Factor: 1.21

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.32	121	363	3,186	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 217539
Laboratory Number: 12

File Name: 1753912A
Description: T-207
Can/Tube#: 772
QC_Batch: 100317-GCL

Date Sampled: 09/27/17 Time: 15:03
Date Analyzed: 10/03/17 Time: 11:15
Dilution Factor: 1.21

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.73	169.73	0.16	0.49	114.68	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 13

File Name: 1753913A.D

Date Sampled: 09/27/17

Time: 15:19

Description: T-208

Date Analyzed: 10/20/17

Time: 15:52

Canister: 675

Can Dilution Factor: 1.00

QC_Batch: 102017-MA1

Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.10	0.50	ND	0.49	2.49	ND	
74-87-3	Chloromethane	0.10	0.50	ND	0.21	1.04	ND	
76-14-2	Freon 114	0.10	0.50	ND	0.70	3.51	ND	
75-01-4	Vinyl chloride	0.10	0.50	ND	0.26	1.29	ND	
106-99-0	1,3-Butadiene	0.10	0.50	ND	0.22	1.11	ND	
74-83-9	Bromomethane	0.10	0.50	ND	0.39	1.95	ND	
75-00-3	Chloroethane	0.10	0.50	ND	0.26	1.33	ND	
64-17-5	Ethanol	0.50	1.50	ND	0.94	2.83	ND	
75-69-4	Trichlorofluoromethane	0.10	0.48	ND	0.56	2.70	ND	
67-64-1	Acetone	0.50	1.23	ND	1.19	2.92	ND	
67-63-0	2-propanol	0.50	1.15	ND	1.23	2.82	ND	
75-35-4	1,1-Dichloroethene	0.10	0.50	ND	0.40	1.96	ND	
76-13-1	Freon 113	0.10	0.48	ND	0.77	3.67	ND	
75-09-2	Dichloromethane	0.20	0.48	ND	0.69	1.67	ND	
75-15-0	Carbon disulfide	0.50	0.93	ND	1.56	2.89	ND	
156-60-5	trans-1,2-Dichloroethene	0.10	0.36	ND	0.40	1.43	ND	
1634-04-4	Methyl tert butyl ether	0.10	0.37	ND	0.36	1.33	ND	
75-34-3	1,1-Dichloroethane	0.10	0.50	ND	0.40	2.02	ND	
108-05-4	Vinyl acetate	0.10	0.44	ND	0.35	1.55	ND	
78-93-3	2-Butanone	0.40	1.02	ND	1.18	3.00	ND	
141-78-6	Ethyl acetate	0.20	0.44	ND	0.72	1.58	ND	
74-97-5	Bromochloromethane	0.10	0.27	ND	0.53	1.41	ND	
109-99-9	Tetrahydrofuran	0.20	0.50	ND	0.59	1.48	ND	
156-59-2	cis-1,2-Dichloroethene	0.20	0.54	ND	0.79	2.13	ND	
67-66-3	Chloroform	0.10	0.50	ND	0.49	2.45	ND	
71-55-6	1,1,1-Trichloroethane	0.10	0.44	ND	0.55	2.42	ND	
107-06-2	1,2-Dichloroethane	0.10	0.46	ND	0.40	1.85	ND	
110-82-7	Cyclohexane	0.10	0.38	ND	0.35	1.32	ND	
71-43-2	Benzene	0.10	0.51	0.65	0.32	1.62	2.06	
56-23-5	Carbon tetrachloride	0.10	0.47	ND	0.63	2.98	ND	
142-82-5	n-Heptane	0.50	1.21	ND	2.05	4.96	ND	
78-87-5	1,2-Dichloropropane	0.10	0.48	ND	0.46	2.22	ND	
123-91-1	1,4 Dioxane	0.40	0.82	ND	1.44	2.95	ND	
79-01-6	Trichloroethene	0.06	0.47	ND	0.32	2.50	ND	
75-27-4	Bromodichloromethane	0.10	0.20	ND	0.67	1.35	ND	
80-62-6	Methyl methacrylate	0.40	1.35	ND	1.64	5.53	ND	
108-10-1	4-Methyl-2-pentanone	0.40	1.51	ND	1.64	6.20	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.10	0.52	ND	0.45	2.35	ND	
108-88-3	Toluene	0.20	0.52	ND	0.75	1.97	ND	
10061-02-6	trans-1,3-Dichloropropene	0.10	0.52	ND	0.45	2.35	ND	
79-00-5	1,1,2-Trichloroethane	0.10	0.51	ND	0.55	2.80	ND	
591-78-6	2-Hexanone	0.50	1.42	ND	2.05	5.81	ND	
124-48-1	Dibromochloromethane	0.10	0.20	ND	0.85	1.70	ND	
106-93-4	1,2-Dibromoethane	0.10	0.24	ND	0.77	1.86	ND	
127-18-4	Tetrachloroethene	0.06	0.24	ND	0.41	1.65	ND	
108-90-7	Chlorobenzene	0.10	0.46	ND	0.46	2.09	ND	
100-41-4	Ethylbenzene	0.21	0.53	ND	0.92	2.29	ND	
1330-20-7	m,p-Xylenes	0.21	0.53	ND	0.92	2.30	ND	
100-42-5	Styrene	0.21	0.52	ND	0.88	2.21	ND	
75-25-2	Bromoform	0.10	0.13	ND	1.03	1.39	ND	
95-47-6	o-Xylene	0.21	0.52	ND	0.90	2.24	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.10	0.25	ND	0.68	1.70	ND	
622-96-8	4-Ethyltoluene	0.33	0.83	ND	1.63	4.07	ND	
108-67-8	1,3,5-Trimethylbenzene	0.21	0.52	ND	1.02	2.54	ND	
95-63-6	1,2,4-Trimethylbenzene	0.20	0.51	ND	1.00	2.50	ND	
541-73-1	1,3-Dichlorobenzene	0.20	0.37	ND	1.20	2.22	ND	
100-44-7	Benzyl chloride	0.20	1.21	ND	1.04	6.27	ND	
106-46-7	1,4-Dichlorobenzene	0.20	0.35	ND	1.20	2.08	ND	
95-50-1	1,2-Dichlorobenzene	0.20	0.32	ND	1.20	1.95	ND	
120-82-1	1,2,4-Trichlorobenzene	0.50	0.69	ND	3.71	5.10	ND	
91-20-3	Naphthalene	0.10	0.16	ND	0.53	0.84	ND	
87-68-3	Hexachlorobutadiene	0.50	0.53	ND	5.33	5.65	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				95	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 13

File Name: 1753913A
Description: T - 208
Canister: 675
QC_Batch: 100617-GCK

Date Sampled: 09/27/17 Time: 15:19
Date Analyzed: 10/06/17 Time: 14:17
Can Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	0.72	1.19	3.57	1.73	J
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	0.75	1.18	3.55	2.22	J
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	0.57	1.09	3.26	2.46	J
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	0.45	1.09	3.28	2.20	J
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	0.38	1.10	3.30	2.12	J
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	11.95	26.50	79.49	42.21	J
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	71.68	29.51	88.52	47.01	J

ANALYTICAL REPORT

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 13

File Name: 753913PA

Date Sampled: 09/27/17

Time: 15:19

Description: T-208

Date Analyzed: 10/03/17

Time: 12:00

Can/Tube#: 675

Can Dilution Factor: 1.00

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	100	300	ND	ND

ANALYTICAL REPORT

ASTM D3416 Methane by GC/FID

Modified Analytical Method: **ASTM D3416**

SDG: 217539
Laboratory Number: 13

File Name: 1753913A
Description: T-208
Can/Tube#: 675
QC_Batch: 100317-GCL

Date Sampled: 09/27/17 Time: 15:19
Date Analyzed: 10/03/17 Time: 11:18
Dilution Factor: 1.00

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.20	0.60	0.98	0.14	0.41	0.66	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 14

File Name: 1753914A.D

Date Sampled: 09/28/17

Time: 08:02

Description: T-301

Date Analyzed: 10/17/17

Time: 16:14

Canister: 980

Can Dilution Factor: 1.09

QC_Batch: 101717-MSA

Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.11	0.55	ND	0.54	2.71	ND	
74-87-3	Chloromethane	0.11	0.55	0.40	0.23	1.13	0.83	J
76-14-2	Freon 114	0.11	0.55	ND	0.76	3.83	ND	
75-01-4	Vinyl chloride	0.11	0.55	ND	0.28	1.40	ND	
106-99-0	1,3-Butadiene	0.11	0.55	ND	0.24	1.21	ND	
74-83-9	Bromomethane	0.11	0.55	0.77	0.42	2.13	3.00	
75-00-3	Chloroethane	0.11	0.55	ND	0.29	1.45	ND	
64-17-5	Ethanol	0.55	1.64	ND	1.03	3.08	ND	
75-69-4	Trichlorofluoromethane	0.11	0.52	ND	0.61	2.94	ND	
67-64-1	Acetone	0.55	1.34	5.78	1.29	3.18	13.73	
67-63-0	2-propanol	0.55	1.25	ND	1.34	3.07	ND	
75-35-4	1,1-Dichloroethene	0.11	0.54	ND	0.43	2.14	ND	
76-13-1	Freon 113	0.11	0.52	ND	0.84	4.00	ND	
75-09-2	Dichloromethane	0.22	0.52	ND	0.76	1.82	ND	
75-15-0	Carbon disulfide	0.55	1.01	6.69	1.70	3.15	20.81	
156-60-5	trans-1,2-Dichloroethene	0.11	0.39	ND	0.43	1.56	ND	
1634-04-4	Methyl tert butyl ether	0.11	0.40	ND	0.39	1.45	ND	
75-34-3	1,1-Dichloroethane	0.11	0.54	ND	0.44	2.20	ND	
108-05-4	Vinyl acetate	0.11	0.48	ND	0.38	1.69	ND	
78-93-3	2-Butanone	0.44	1.11	ND	1.29	3.27	ND	
141-78-6	Ethyl acetate	0.22	0.48	ND	0.79	1.72	ND	
74-97-5	Bromochloromethane	0.11	0.29	ND	0.58	1.54	ND	
109-99-9	Tetrahydrofuran	0.22	0.55	ND	0.64	1.62	ND	
156-59-2	cis-1,2-Dichloroethene	0.22	0.59	ND	0.86	2.32	ND	
67-66-3	Chloroform	0.11	0.55	ND	0.53	2.67	ND	
71-55-6	1,1,1-Trichloroethane	0.11	0.48	ND	0.59	2.64	ND	
107-06-2	1,2-Dichloroethane	0.11	0.50	ND	0.44	2.01	ND	
110-82-7	Cyclohexane	0.11	0.42	ND	0.38	1.44	ND	
71-43-2	Benzene	0.11	0.55	1.54	0.35	1.77	4.92	
56-23-5	Carbon tetrachloride	0.11	0.52	ND	0.69	3.25	ND	
142-82-5	n-Heptane	0.55	1.32	ND	2.23	5.41	ND	
78-87-5	1,2-Dichloropropane	0.11	0.52	ND	0.50	2.42	ND	
123-91-1	1,4 Dioxane	0.44	0.89	ND	1.57	3.21	ND	
79-01-6	Trichloroethene	0.07	0.51	ND	0.35	2.73	ND	
75-27-4	Bromodichloromethane	0.11	0.22	ND	0.73	1.47	ND	
80-62-6	Methyl methacrylate	0.44	1.47	ND	1.78	6.03	ND	
108-10-1	4-Methyl-2-pentanone	0.44	1.65	ND	1.79	6.76	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.11	0.56	ND	0.49	2.56	ND	
108-88-3	Toluene	0.22	0.57	1.78	0.82	2.14	6.70	
10061-02-6	trans-1,3-Dichloropropene	0.11	0.57	ND	0.49	2.57	ND	
79-00-5	1,1,2-Trichloroethane	0.11	0.56	ND	0.59	3.06	ND	
591-78-6	2-Hexanone	0.55	1.55	ND	2.23	6.33	ND	
124-48-1	Dibromochloromethane	0.11	0.22	ND	0.93	1.85	ND	
106-93-4	1,2-Dibromoethane	0.11	0.26	ND	0.84	2.03	ND	
127-18-4	Tetrachloroethene	0.07	0.27	ND	0.44	1.80	ND	
108-90-7	Chlorobenzene	0.11	0.50	ND	0.50	2.28	ND	
100-41-4	Ethylbenzene	0.23	0.58	ND	1.00	2.50	ND	
1330-20-7	m,p-Xylenes	0.23	0.58	0.81	1.00	2.51	3.51	
100-42-5	Styrene	0.23	0.56	ND	0.96	2.40	ND	
75-25-2	Bromoform	0.11	0.15	ND	1.13	1.51	ND	
95-47-6	o-Xylene	0.22	0.56	0.75	0.98	2.44	3.24	
79-34-5	1,1,2,2-Tetrachloroethane	0.11	0.27	ND	0.74	1.85	ND	
622-96-8	4-Ethyltoluene	0.36	0.90	1.11	1.78	4.44	5.46	
108-67-8	1,3,5-Trimethylbenzene	0.23	0.56	0.35	1.11	2.77	1.73	J
95-63-6	1,2,4-Trimethylbenzene	0.22	0.55	1.50	1.09	2.72	7.36	
541-73-1	1,3-Dichlorobenzene	0.22	0.40	ND	1.31	2.42	ND	
100-44-7	Benzyl chloride	0.22	1.32	ND	1.13	6.84	ND	
106-46-7	1,4-Dichlorobenzene	0.22	0.38	ND	1.31	2.27	ND	
95-50-1	1,2-Dichlorobenzene	0.22	0.35	ND	1.31	2.12	ND	
120-82-1	1,2,4-Trichlorobenzene	0.55	0.75	ND	4.04	5.56	ND	
91-20-3	Naphthalene	0.11	0.17	ND	0.58	0.91	ND	
87-68-3	Hexachlorobutadiene	0.55	0.58	ND	5.81	6.16	ND	
					QC	Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag
2037-26-5	Toluene-d8				92	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 14

File Name: 1753914A
Description: T - 301
Canister: 980
QC_Batch: 100617-GCK

Date Sampled: 09/28/17 Time: 8:02
Date Analyzed: 10/06/17 Time: 15:47
Can Factor: 1.09
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.09	3.27	ND	1.26	3.77	ND	ND
74-86-2	Acetylene	1.09	3.27	ND	1.16	3.48	ND	ND
74-84-0	Ethane	1.09	3.27	6.61	1.34	4.03	8.15	
115-07-1	Propene	0.73	2.18	ND	1.25	3.76	ND	ND
74-98-6	Propane	0.73	2.18	ND	1.31	3.94	ND	ND
75-28-5	i-Butane	0.55	1.64	ND	1.30	3.89	ND	ND
106-98-9	1-Butene	0.55	1.64	ND	1.25	3.76	ND	ND
106-97-8	n-Butane	0.55	1.64	ND	1.30	3.89	ND	ND
624-64-6	t-2-Butene	0.55	1.64	ND	1.25	3.76	ND	ND
590-18-1	c-2-Butene	0.55	1.64	ND	1.25	3.76	ND	ND
78-78-4	i-Pentane	0.44	1.31	ND	1.29	3.87	ND	ND
109-67-1	1-Pentene	0.44	1.31	ND	1.25	3.76	ND	ND
109-66-0	n-Pentane	0.44	1.31	ND	1.29	3.87	ND	ND
78-79-5	Isoprene	0.44	1.31	ND	1.22	3.65	ND	ND
646-04-8	t-2-Pentene	0.44	1.31	ND	1.25	3.76	ND	ND
627-20-3	c-2-Pentene	0.44	1.31	ND	1.25	3.76	ND	ND
75-83-2	2,2-Dimethylbutane	0.36	1.09	ND	1.28	3.85	ND	ND
287-92-3	Cyclopentane	0.44	1.31	ND	1.25	3.76	ND	ND
79-29-8	2,3-Dimethylbutane	0.36	1.09	ND	1.28	3.85	ND	ND
107-83-5	2-Methylpentane	0.36	1.09	ND	1.28	3.85	ND	ND
96-14-0	3-Methylpentane	0.36	1.09	ND	1.28	3.85	ND	ND
110-54-3	n-Hexane	0.36	1.09	ND	1.28	3.85	ND	ND
96-37-7	Methylcyclopentane	0.36	1.09	ND	1.25	3.76	ND	ND
108-08-7	2,4-Dimethylpentane	0.31	0.93	ND	1.28	3.84	ND	ND
71-43-2	Benzene	0.36	1.09	0.65	1.16	3.49	2.08	J
110-82-7	Cyclohexane	0.36	1.09	ND	1.25	3.76	ND	ND
591-76-4	2-Methylhexane	0.31	0.93	ND	1.28	3.84	ND	ND
565-59-3	2,3-Dimethylpentane	0.31	0.93	ND	1.28	3.84	ND	ND
589-34-4	3-Methylhexane	0.31	0.93	ND	1.28	3.84	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.27	0.82	ND	1.28	3.83	ND	ND
142-82-5	n-Heptane	0.31	0.93	ND	1.28	3.84	ND	ND
108-87-2	Methylcyclohexane	0.31	0.93	ND	1.25	3.76	ND	ND
592-13-2	2,5-Dimethylhexane	0.27	0.82	ND	1.28	3.83	ND	ND
589-43-5	2,4-Dimethylhexane	0.27	0.82	ND	1.28	3.83	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.27	0.82	ND	1.28	3.83	ND	ND
108-88-3	Toluene	0.31	0.93	2.69	1.18	3.53	10.14	
584-94-1	2,3-Dimethylhexane	0.27	0.82	ND	1.28	3.83	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.27	0.82	ND	1.28	3.83	ND	ND
589-81-1	3-Methylheptane	0.27	0.82	ND	1.28	3.83	ND	ND
111-65-9	n-Octane	0.27	0.82	0.45	1.28	3.83	2.09	J
100-41-4	Ethylbenzene	0.27	0.82	0.75	1.19	3.56	3.26	J
108-38-3	m,p-xylene	0.27	0.82	1.27	1.19	3.56	5.52	
100-42-5	Styrene	0.27	0.82	1.06	1.16	3.49	4.55	
95-47-6	o-xylene	0.27	0.82	ND	1.19	3.56	ND	ND
111-84-2	n-Nonane	0.24	0.73	ND	1.27	3.82	ND	ND
98-82-8	i-Propylbenzene	0.24	0.73	ND	1.19	3.58	ND	ND
103-65-1	n-propylbenzene	0.24	0.73	ND	1.19	3.58	ND	ND
80-56-8	a-Pinene	0.22	0.65	ND	1.22	3.65	ND	ND
620-14-4	3-Ethyltoluene	0.24	0.73	2.26	1.19	3.58	11.12	
622-96-8	4-Ethyltoluene	0.24	0.73	0.54	1.19	3.58	2.68	J
108-67-8	1,3,5-Trimethylbenzene	0.24	0.73	0.65	1.19	3.58	3.22	J
611-14-3	2-Ethyltoluene	0.24	0.73	ND	1.19	3.58	ND	ND
127-91-3	b-Pinene	0.22	0.65	ND	1.22	3.65	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.24	0.73	2.97	1.19	3.58	14.62	
124-18-5	n-Decane	0.22	0.65	ND	1.27	3.81	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.24	0.73	1.10	1.19	3.58	5.42	
5989-27-5	d-Limonene	0.22	0.65	ND	1.22	3.65	ND	ND
141-93-5	1,3-Diethylbenzene	0.22	0.65	ND	1.20	3.60	ND	ND
105-05-5	1,4-Diethylbenzene	0.22	0.65	0.63	1.20	3.60	3.45	J
104-51-8	n-Butylbenzene	0.22	0.65	ND	1.20	3.60	ND	ND
1120-21-4	Undecane	0.20	0.59	0.25	1.27	3.81	1.58	J
112-40-3	Dodecane	0.18	0.55	0.31	1.27	3.80	2.17	J

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.18	24.53	26.43	28.88	86.64	93.36	
TNMHC - C1	Total Non-Methane Hydrocarbons	49.05	147.15	158.57	32.16	96.49	103.98	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 14

File Name: 753914PA

Date Sampled: 09/28/17

Time: 8:02

Description: T-301

Date Analyzed: 10/03/17

Time: 12:08

Can/Tube#: 980

Can Dilution Factor: 1.09

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	109	327	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 14

File Name: 1753914A

Date Sampled: 09/28/17

Time: 8:02

Description: T-301

Date Analyzed: 10/03/17

Time: 11:24

Can/Tube#: 980

Dilution Factor: 1.09

QC_Batch: 100317-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.22	0.65	10.01	0.15	0.44	6.77	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 15

File Name: 1753915A.D
Description: T-302
Canister: 507
QC_Batch: 101717-MA1

Date Sampled: 09/28/17 Time: 09:10
Date Analyzed: 10/17/17 Time: 16:56
Can Dilution Factor: 1.11
Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.11	0.56	ND	0.55	2.76	ND	
74-87-3	Chloromethane	0.11	0.56	ND	0.23	1.15	ND	
76-14-2	Freon 114	0.11	0.56	ND	0.78	3.90	ND	
75-01-4	Vinyl chloride	0.11	0.56	ND	0.28	1.43	ND	
106-99-0	1,3-Butadiene	0.11	0.56	ND	0.25	1.23	ND	
74-83-9	Bromomethane	0.11	0.56	ND	0.43	2.17	ND	
75-00-3	Chloroethane	0.11	0.56	ND	0.29	1.47	ND	
64-17-5	Ethanol	0.56	1.67	ND	1.05	3.14	ND	
75-69-4	Trichlorofluoromethane	0.11	0.53	ND	0.62	2.99	ND	
67-64-1	Acetone	0.56	1.37	5.52	1.32	3.24	13.11	
67-63-0	2-propanol	0.56	1.27	ND	1.36	3.13	ND	
75-35-4	1,1-Dichloroethene	0.11	0.55	ND	0.44	2.18	ND	
76-13-1	Freon 113	0.11	0.53	ND	0.85	4.07	ND	
75-09-2	Dichloromethane	0.22	0.53	ND	0.77	1.86	ND	
75-15-0	Carbon disulfide	0.56	1.03	11.20	1.73	3.20	34.83	
156-60-5	trans-1,2-Dichloroethene	0.11	0.40	ND	0.44	1.59	ND	
1634-04-4	Methyl tert butyl ether	0.11	0.41	ND	0.40	1.47	ND	
75-34-3	1,1-Dichloroethane	0.11	0.55	ND	0.45	2.24	ND	
108-05-4	Vinyl acetate	0.11	0.49	ND	0.39	1.72	ND	
78-93-3	2-Butanone	0.44	1.13	ND	1.31	3.33	ND	
141-78-6	Ethyl acetate	0.22	0.49	ND	0.80	1.75	ND	
74-97-5	Bromochloromethane	0.11	0.30	ND	0.59	1.56	ND	
109-99-9	Tetrahydrofuran	0.22	0.56	ND	0.65	1.65	ND	
156-59-2	cis-1,2-Dichloroethene	0.22	0.60	ND	0.88	2.37	ND	
67-66-3	Chloroform	0.11	0.56	ND	0.54	2.72	ND	
71-55-6	1,1,1-Trichloroethane	0.11	0.49	ND	0.61	2.69	ND	
107-06-2	1,2-Dichloroethane	0.11	0.51	ND	0.45	2.05	ND	
110-82-7	Cyclohexane	0.11	0.43	ND	0.38	1.47	ND	
71-43-2	Benzene	0.11	0.56	1.20	0.35	1.80	3.84	
56-23-5	Carbon tetrachloride	0.11	0.53	ND	0.70	3.31	ND	
142-82-5	n-Heptane	0.56	1.35	ND	2.27	5.51	ND	
78-87-5	1,2-Dichloropropane	0.11	0.53	ND	0.51	2.47	ND	
123-91-1	1,4 Dioxane	0.44	0.91	ND	1.60	3.27	ND	
79-01-6	Trichloroethene	0.07	0.52	ND	0.36	2.78	ND	
75-27-4	Bromodichloromethane	0.11	0.22	ND	0.74	1.50	ND	
80-62-6	Methyl methacrylate	0.44	1.50	ND	1.82	6.14	ND	
108-10-1	4-Methyl-2-pentanone	0.44	1.68	ND	1.82	6.88	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.11	0.58	ND	0.50	2.61	ND	
108-88-3	Toluene	0.22	0.58	0.87	0.84	2.18	3.27	
10061-02-6	trans-1,3-Dichloropropene	0.11	0.58	ND	0.50	2.61	ND	
79-00-5	1,1,2-Trichloroethane	0.11	0.57	ND	0.61	3.11	ND	
591-78-6	2-Hexanone	0.56	1.57	ND	2.27	6.45	ND	
124-48-1	Dibromochloromethane	0.11	0.22	ND	0.95	1.89	ND	
106-93-4	1,2-Dibromoethane	0.11	0.27	ND	0.85	2.07	ND	
127-18-4	Tetrachloroethene	0.07	0.27	ND	0.45	1.83	ND	
108-90-7	Chlorobenzene	0.11	0.51	ND	0.51	2.33	ND	
100-41-4	Ethylbenzene	0.23	0.59	ND	1.02	2.55	ND	
1330-20-7	m,p-Xylenes	0.24	0.59	0.43	1.02	2.55	1.89	J
100-42-5	Styrene	0.23	0.57	ND	0.98	2.45	ND	
75-25-2	Bromoform	0.11	0.15	ND	1.15	1.54	ND	
95-47-6	o-Xylene	0.23	0.57	0.41	0.99	2.48	1.79	J
79-34-5	1,1,2,2-Tetrachloroethane	0.11	0.27	ND	0.75	1.88	ND	
622-96-8	4-Ethyltoluene	0.37	0.92	0.47	1.81	4.52	2.33	J
108-67-8	1,3,5-Trimethylbenzene	0.23	0.57	ND	1.13	2.82	ND	
95-63-6	1,2,4-Trimethylbenzene	0.23	0.56	0.80	1.11	2.77	3.92	
541-73-1	1,3-Dichlorobenzene	0.22	0.41	ND	1.33	2.47	ND	
100-44-7	Benzyl chloride	0.22	1.35	ND	1.15	6.96	ND	
106-46-7	1,4-Dichlorobenzene	0.22	0.38	ND	1.33	2.31	ND	
95-50-1	1,2-Dichlorobenzene	0.22	0.36	ND	1.33	2.16	ND	
120-82-1	1,2,4-Trichlorobenzene	0.56	0.76	ND	4.12	5.66	ND	
91-20-3	Naphthalene	0.11	0.18	ND	0.59	0.93	ND	
87-68-3	Hexachlorobutadiene	0.56	0.59	ND	5.92	6.27	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				92	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539

Laboratory Number: 15

File Name: 1753915A
Description: T - 302
Canister: 507
QC_Batch: 100617-GCK

Date Sampled: 09/28/17 Time: 9:10
Date Analyzed: 10/06/17 Time: 16:29
Can Factor: 1.11
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.11	3.33	ND	1.28	3.83	ND	ND
74-86-2	Acetylene	1.11	3.33	ND	1.18	3.55	ND	ND
74-84-0	Ethane	1.11	3.33	3.39	1.37	4.11	4.19	
115-07-1	Propene	0.74	2.22	ND	1.28	3.83	ND	ND
74-98-6	Propane	0.74	2.22	ND	1.34	4.01	ND	ND
75-28-5	i-Butane	0.56	1.67	ND	1.32	3.96	ND	ND
106-98-9	1-Butene	0.56	1.67	ND	1.28	3.83	ND	ND
106-97-8	n-Butane	0.56	1.67	1.12	1.32	3.96	2.68	J
624-64-6	t-2-Butene	0.56	1.67	ND	1.28	3.83	ND	ND
590-18-1	c-2-Butene	0.56	1.67	ND	1.28	3.83	ND	ND
78-78-4	i-Pentane	0.44	1.33	ND	1.31	3.94	ND	ND
109-67-1	1-Pentene	0.44	1.33	ND	1.28	3.83	ND	ND
109-66-0	n-Pentane	0.44	1.33	ND	1.31	3.94	ND	ND
78-79-5	Isoprene	0.44	1.33	ND	1.24	3.72	ND	ND
646-04-8	t-2-Pentene	0.44	1.33	ND	1.28	3.83	ND	ND
627-20-3	c-2-Pentene	0.44	1.33	ND	1.28	3.83	ND	ND
75-83-2	2,2-Dimethylbutane	0.37	1.11	ND	1.31	3.92	ND	ND
287-92-3	Cyclopentane	0.44	1.33	ND	1.28	3.83	ND	ND
79-29-8	2,3-Dimethylbutane	0.37	1.11	ND	1.31	3.92	ND	ND
107-83-5	2-Methylpentane	0.37	1.11	ND	1.31	3.92	ND	ND
96-14-0	3-Methylpentane	0.37	1.11	ND	1.31	3.92	ND	ND
110-54-3	n-Hexane	0.37	1.11	ND	1.31	3.92	ND	ND
96-37-7	Methylcyclopentane	0.37	1.11	ND	1.28	3.83	ND	ND
108-08-7	2,4-Dimethylpentane	0.32	0.95	ND	1.30	3.91	ND	ND
71-43-2	Benzene	0.37	1.11	0.44	1.18	3.55	1.40	J
110-82-7	Cyclohexane	0.37	1.11	ND	1.28	3.83	ND	ND
591-76-4	2-Methylhexane	0.32	0.95	ND	1.30	3.91	ND	ND
565-59-3	2,3-Dimethylpentane	0.32	0.95	ND	1.30	3.91	ND	ND
589-34-4	3-Methylhexane	0.32	0.95	ND	1.30	3.91	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.28	0.83	ND	1.30	3.90	ND	ND
142-82-5	n-Heptane	0.32	0.95	ND	1.30	3.91	ND	ND
108-87-2	Methylcyclohexane	0.32	0.95	ND	1.28	3.83	ND	ND
592-13-2	2,5-Dimethylhexane	0.28	0.83	ND	1.30	3.90	ND	ND
589-43-5	2,4-Dimethylhexane	0.28	0.83	ND	1.30	3.90	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.28	0.83	ND	1.30	3.90	ND	ND
108-88-3	Toluene	0.32	0.95	1.20	1.20	3.59	4.54	
584-94-1	2,3-Dimethylhexane	0.28	0.83	ND	1.30	3.90	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.28	0.83	ND	1.30	3.90	ND	ND
589-81-1	3-Methylheptane	0.28	0.83	ND	1.30	3.90	ND	ND
111-65-9	n-Octane	0.28	0.83	ND	1.30	3.90	ND	ND
100-41-4	Ethylbenzene	0.28	0.83	0.58	1.21	3.62	2.52	J
108-38-3	m,p-xylene	0.28	0.83	0.51	1.21	3.62	2.21	J
100-42-5	Styrene	0.28	0.83	ND	1.19	3.56	ND	ND
95-47-6	o-xylene	0.28	0.83	0.47	1.21	3.62	2.06	J
111-84-2	n-Nonane	0.25	0.74	ND	1.30	3.89	ND	ND
98-82-8	i-Propylbenzene	0.25	0.74	ND	1.22	3.65	ND	ND
103-65-1	n-propylbenzene	0.25	0.74	ND	1.22	3.65	ND	ND
80-56-8	a-Pinene	0.22	0.67	ND	1.24	3.72	ND	ND
620-14-4	3-Ethyltoluene	0.25	0.74	1.00	1.22	3.65	4.92	
622-96-8	4-Ethyltoluene	0.25	0.74	0.39	1.22	3.65	1.91	J
108-67-8	1,3,5-Trimethylbenzene	0.25	0.74	ND	1.22	3.65	ND	ND
611-14-3	2-Ethyltoluene	0.25	0.74	0.34	1.22	3.65	1.66	J
127-91-3	b-Pinene	0.22	0.67	ND	1.24	3.72	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.25	0.74	1.84	1.22	3.65	9.04	
124-18-5	n-Decane	0.22	0.67	ND	1.29	3.88	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.25	0.74	ND	1.22	3.65	ND	ND
5989-27-5	d-Limonene	0.22	0.67	ND	1.24	3.72	ND	ND
141-93-5	1,3-Diethylbenzene	0.22	0.67	0.62	1.22	3.66	3.43	J
105-05-5	1,4-Diethylbenzene	0.22	0.67	0.75	1.22	3.66	4.11	
104-51-8	n-Butylbenzene	0.22	0.67	ND	1.22	3.66	ND	ND
1120-21-4	Undecane	0.20	0.61	ND	1.29	3.88	ND	ND
112-40-3	Dodecane	0.19	0.56	ND	1.29	3.87	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.33	24.98	18.57	29.41	88.23	65.59	J
TNMHC - C1	Total Non-Methane Hydrocarbons	49.95	149.85	111.39	32.75	98.26	73.04	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 15

File Name: 753915PA

Date Sampled: 09/28/17

Time: 9:10

Description: T-302

Date Analyzed: 10/03/17

Time: 12:14

Can/Tube#: 507

Can Dilution Factor: 1.11

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	111	333	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 15

File Name: 1753915A

Date Sampled: 09/28/17 Time: 9:10

Description: T-302

Date Analyzed: 10/03/17 Time: 11:29

Can/Tube#: 507

Dilution Factor: 1.11

QC_Batch: 100317-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.22	0.67	9.93	0.15	0.45	6.71	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 217539

Laboratory ID: 16

File Name: 1753916A.D

Date Sampled: 09/28/17

Time: 10:40

Description: T-303

Date Analyzed: 10/17/17

Time: 18:11

Canister: 664

Can Dilution Factor: 1.15

QC_Batch: 101717-MA1

Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.12	0.58	ND	0.57	2.86	ND	
74-87-3	Chloromethane	0.12	0.58	ND	0.24	1.19	ND	
76-14-2	Freon 114	0.12	0.58	ND	0.80	4.04	ND	
75-01-4	Vinyl chloride	0.12	0.58	ND	0.29	1.48	ND	
106-99-0	1,3-Butadiene	0.12	0.58	ND	0.25	1.28	ND	
74-83-9	Bromomethane	0.12	0.58	ND	0.45	2.24	ND	
75-00-3	Chloroethane	0.12	0.58	ND	0.30	1.53	ND	
64-17-5	Ethanol	0.58	1.73	ND	1.08	3.25	ND	
75-69-4	Trichlorofluoromethane	0.12	0.55	ND	0.65	3.10	ND	
67-64-1	Acetone	0.58	1.41	3.52	1.37	3.36	8.36	
67-63-0	2-propanol	0.58	1.32	ND	1.41	3.24	ND	
75-35-4	1,1-Dichloroethene	0.12	0.57	ND	0.46	2.26	ND	
76-13-1	Freon 113	0.12	0.55	ND	0.88	4.21	ND	
75-09-2	Dichloromethane	0.23	0.55	ND	0.80	1.92	ND	
75-15-0	Carbon disulfide	0.58	1.07	ND	1.79	3.32	ND	
156-60-5	trans-1,2-Dichloroethene	0.12	0.42	ND	0.46	1.64	ND	
1634-04-4	Methyl tert butyl ether	0.12	0.42	ND	0.41	1.53	ND	
75-34-3	1,1-Dichloroethane	0.12	0.57	ND	0.47	2.32	ND	
108-05-4	Vinyl acetate	0.12	0.51	ND	0.40	1.78	ND	
78-93-3	2-Butanone	0.46	1.17	ND	1.36	3.45	ND	
141-78-6	Ethyl acetate	0.23	0.50	ND	0.83	1.81	ND	
74-97-5	Bromochloromethane	0.12	0.31	ND	0.61	1.62	ND	
109-99-9	Tetrahydrofuran	0.23	0.58	ND	0.68	1.70	ND	
156-59-2	cis-1,2-Dichloroethene	0.23	0.62	ND	0.91	2.45	ND	
67-66-3	Chloroform	0.12	0.58	ND	0.56	2.82	ND	
71-55-6	1,1,1-Trichloroethane	0.12	0.51	ND	0.63	2.78	ND	
107-06-2	1,2-Dichloroethane	0.12	0.52	ND	0.47	2.12	ND	
110-82-7	Cyclohexane	0.12	0.44	ND	0.40	1.52	ND	
71-43-2	Benzene	0.12	0.58	1.01	0.37	1.87	3.24	
56-23-5	Carbon tetrachloride	0.12	0.55	ND	0.72	3.43	ND	
142-82-5	n-Heptane	0.58	1.39	ND	2.36	5.71	ND	
78-87-5	1,2-Dichloropropane	0.12	0.55	ND	0.53	2.56	ND	
123-91-1	1,4 Dioxane	0.46	0.94	ND	1.66	3.39	ND	
79-01-6	Trichloroethene	0.07	0.54	ND	0.37	2.88	ND	
75-27-4	Bromodichloromethane	0.12	0.23	ND	0.77	1.56	ND	
80-62-6	Methyl methacrylate	0.46	1.55	ND	1.88	6.36	ND	
108-10-1	4-Methyl-2-pentanone	0.46	1.74	ND	1.88	7.13	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.12	0.60	ND	0.52	2.70	ND	
108-88-3	Toluene	0.23	0.60	ND	0.87	2.26	ND	
10061-02-6	trans-1,3-Dichloropropene	0.12	0.60	ND	0.52	2.71	ND	
79-00-5	1,1,2-Trichloroethane	0.12	0.59	ND	0.63	3.22	ND	
591-78-6	2-Hexanone	0.58	1.63	ND	2.36	6.68	ND	
124-48-1	Dibromochloromethane	0.12	0.23	ND	0.98	1.96	ND	
106-93-4	1,2-Dibromoethane	0.12	0.28	ND	0.88	2.14	ND	
127-18-4	Tetrachloroethene	0.07	0.28	ND	0.47	1.90	ND	
108-90-7	Chlorobenzene	0.12	0.52	ND	0.53	2.41	ND	
100-41-4	Ethylbenzene	0.24	0.61	ND	1.06	2.64	ND	
1330-20-7	m,p-Xylenes	0.24	0.61	ND	1.06	2.65	ND	
100-42-5	Styrene	0.24	0.60	ND	1.01	2.54	ND	
75-25-2	Bromoform	0.12	0.15	ND	1.19	1.59	ND	
95-47-6	o-Xylene	0.24	0.59	ND	1.03	2.57	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.11	0.28	ND	0.78	1.95	ND	
622-96-8	4-Ethyltoluene	0.38	0.95	ND	1.87	4.68	ND	
108-67-8	1,3,5-Trimethylbenzene	0.24	0.59	ND	1.17	2.92	ND	
95-63-6	1,2,4-Trimethylbenzene	0.23	0.58	ND	1.15	2.87	ND	
541-73-1	1,3-Dichlorobenzene	0.23	0.43	ND	1.38	2.56	ND	
100-44-7	Benzyl chloride	0.23	1.39	ND	1.19	7.21	ND	
106-46-7	1,4-Dichlorobenzene	0.23	0.40	ND	1.38	2.39	ND	
95-50-1	1,2-Dichlorobenzene	0.23	0.37	ND	1.38	2.24	ND	
120-82-1	1,2,4-Trichlorobenzene	0.58	0.79	ND	4.26	5.87	ND	
91-20-3	Naphthalene	0.12	0.18	ND	0.61	0.96	ND	
87-68-3	Hexachlorobutadiene	0.58	0.61	ND	6.13	6.50	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	101	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 16

File Name: 1753916A
Description: T - 303
Canister: 664
QC_Batch: 100617-GCK

Date Sampled: 09/28/17 Time: 10:40
Date Analyzed: 10/06/17 Time: 17:13
Can Factor: 1.15
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.15	3.45	ND	1.32	3.97	ND	ND
74-86-2	Acetylene	1.15	3.45	ND	1.23	3.68	ND	ND
74-84-0	Ethane	1.15	3.45	ND	1.42	4.26	ND	ND
115-07-1	Propene	0.77	2.30	ND	1.32	3.97	ND	ND
74-98-6	Propane	0.77	2.30	ND	1.39	4.16	ND	ND
75-28-5	i-Butane	0.58	1.73	ND	1.37	4.11	ND	ND
106-98-9	1-Butene	0.58	1.73	ND	1.32	3.97	ND	ND
106-97-8	n-Butane	0.58	1.73	ND	1.37	4.11	ND	ND
624-64-6	t-2-Butene	0.58	1.73	ND	1.32	3.97	ND	ND
590-18-1	c-2-Butene	0.58	1.73	ND	1.32	3.97	ND	ND
78-78-4	i-Pentane	0.46	1.38	ND	1.36	4.08	ND	ND
109-67-1	1-Pentene	0.46	1.38	ND	1.32	3.96	ND	ND
109-66-0	n-Pentane	0.46	1.38	ND	1.36	4.08	ND	ND
78-79-5	Isoprene	0.46	1.38	ND	1.28	3.85	ND	ND
646-04-8	t-2-Pentene	0.46	1.38	ND	1.32	3.96	ND	ND
627-20-3	c-2-Pentene	0.46	1.38	ND	1.32	3.96	ND	ND
75-83-2	2,2-Dimethylbutane	0.38	1.15	ND	1.35	4.06	ND	ND
287-92-3	Cyclopentane	0.46	1.38	ND	1.32	3.96	ND	ND
79-29-8	2,3-Dimethylbutane	0.38	1.15	ND	1.35	4.06	ND	ND
107-83-5	2-Methylpentane	0.38	1.15	ND	1.35	4.06	ND	ND
96-14-0	3-Methylpentane	0.38	1.15	ND	1.35	4.06	ND	ND
110-54-3	n-Hexane	0.38	1.15	ND	1.35	4.06	ND	ND
96-37-7	Methylcyclopentane	0.38	1.15	ND	1.32	3.97	ND	ND
108-08-7	2,4-Dimethylpentane	0.33	0.99	ND	1.35	4.05	ND	ND
71-43-2	Benzene	0.38	1.15	ND	1.23	3.68	ND	ND
110-82-7	Cyclohexane	0.38	1.15	ND	1.32	3.97	ND	ND
591-76-4	2-Methylhexane	0.33	0.99	ND	1.35	4.05	ND	ND
565-59-3	2,3-Dimethylpentane	0.33	0.99	ND	1.35	4.05	ND	ND
589-34-4	3-Methylhexane	0.33	0.99	ND	1.35	4.05	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.29	0.86	ND	1.35	4.04	ND	ND
142-82-5	n-Heptane	0.33	0.99	ND	1.35	4.05	ND	ND
108-87-2	Methylcyclohexane	0.33	0.99	ND	1.32	3.97	ND	ND
592-13-2	2,5-Dimethylhexane	0.29	0.86	ND	1.35	4.04	ND	ND
589-43-5	2,4-Dimethylhexane	0.29	0.86	ND	1.35	4.04	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.29	0.86	ND	1.35	4.04	ND	ND
108-88-3	Toluene	0.33	0.99	ND	1.24	3.72	ND	ND
584-94-1	2,3-Dimethylhexane	0.29	0.86	ND	1.35	4.04	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.86	ND	1.35	4.04	ND	ND
589-81-1	3-Methylheptane	0.29	0.86	ND	1.35	4.04	ND	ND
111-65-9	n-Octane	0.29	0.86	ND	1.35	4.04	ND	ND
100-41-4	Ethylbenzene	0.29	0.86	ND	1.25	3.75	ND	ND
108-38-3	m,p-xylene	0.29	0.86	ND	1.25	3.75	ND	ND
100-42-5	Styrene	0.29	0.86	ND	1.23	3.68	ND	ND
95-47-6	o-xylene	0.29	0.86	ND	1.25	3.75	ND	ND
111-84-2	n-Nonane	0.26	0.77	ND	1.34	4.03	ND	ND
98-82-8	i-Propylbenzene	0.26	0.77	ND	1.26	3.78	ND	ND
103-65-1	n-propylbenzene	0.26	0.77	ND	1.26	3.78	ND	ND
80-56-8	a-Pinene	0.23	0.69	ND	1.28	3.85	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.77	ND	1.26	3.78	ND	ND
622-96-8	4-Ethyltoluene	0.26	0.77	ND	1.26	3.78	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.26	0.77	ND	1.26	3.78	ND	ND
611-14-3	2-Ethyltoluene	0.26	0.77	ND	1.26	3.78	ND	ND
127-91-3	b-Pinene	0.23	0.69	ND	1.28	3.85	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.77	ND	1.26	3.78	ND	ND
124-18-5	n-Decane	0.23	0.69	ND	1.34	4.02	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.26	0.77	ND	1.26	3.78	ND	ND
5989-27-5	d-Limonene	0.23	0.69	ND	1.28	3.85	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.69	ND	1.27	3.80	ND	ND
105-05-5	1,4-Diethylbenzene	0.23	0.69	ND	1.27	3.80	ND	ND
104-51-8	n-Butylbenzene	0.23	0.69	ND	1.27	3.80	ND	ND
1120-21-4	Undecane	0.21	0.63	ND	1.34	4.02	ND	ND
112-40-3	Dodecane	0.19	0.58	ND	1.34	4.01	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.63	25.88	ND	30.47	91.41	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	51.75	155.25	ND	33.93	101.80	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 16

File Name: 753916PA

Date Sampled: 09/28/17

Time: 10:40

Description: T-303

Date Analyzed: 10/03/17

Time: 12:21

Can/Tube#: 664

Can Dilution Factor: 1.15

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	115	345	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 16

File Name: 1753916A

Date Sampled: 09/28/17 Time: 10:40

Description: T-303

Date Analyzed: 10/03/17 Time: 11:33

Can/Tube#: 664

Dilution Factor: 1.15

QC_Batch: 100317-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.69	1.91	0.16	0.47	1.29	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 17

File Name: 1753917B.D

Date Sampled: 09/28/17

Time: 11:33

Description: T-304

Date Analyzed: 10/17/17

Time: 19:27

Canister: 610

Can Dilution Factor: 1.18

QC_Batch: 101717-MA1

Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.12	0.59	ND	0.58	2.93	ND	
74-87-3	Chloromethane	0.12	0.59	ND	0.24	1.23	ND	
76-14-2	Freon 114	0.12	0.59	ND	0.82	4.15	ND	
75-01-4	Vinyl chloride	0.12	0.59	ND	0.30	1.52	ND	
106-99-0	1,3-Butadiene	0.12	0.59	ND	0.26	1.31	ND	
74-83-9	Bromomethane	0.12	0.59	ND	0.46	2.30	ND	
75-00-3	Chloroethane	0.12	0.59	ND	0.31	1.57	ND	
64-17-5	Ethanol	0.59	1.77	3.78	1.11	3.34	7.12	
75-69-4	Trichlorofluoromethane	0.12	0.57	ND	0.66	3.18	ND	
67-64-1	Acetone	0.59	1.45	45.01	1.40	3.45	106.91	
67-63-0	2-propanol	0.59	1.35	ND	1.45	3.33	ND	
75-35-4	1,1-Dichloroethene	0.12	0.59	ND	0.47	2.32	ND	
76-13-1	Freon 113	0.12	0.56	ND	0.90	4.32	ND	
75-09-2	Dichloromethane	0.24	0.57	ND	0.82	1.97	ND	
75-15-0	Carbon disulfide	0.59	1.10	ND	1.84	3.41	ND	
156-60-5	trans-1,2-Dichloroethene	0.12	0.43	ND	0.47	1.69	ND	
1634-04-4	Methyl tert butyl ether	0.12	0.44	ND	0.42	1.57	ND	
75-34-3	1,1-Dichloroethane	0.12	0.59	ND	0.48	2.38	ND	
108-05-4	Vinyl acetate	0.12	0.52	ND	0.42	1.82	ND	
78-93-3	2-Butanone	0.47	1.20	6.33	1.39	3.54	18.65	
141-78-6	Ethyl acetate	0.24	0.52	ND	0.85	1.86	ND	
74-97-5	Bromochloromethane	0.12	0.31	ND	0.62	1.66	ND	
109-99-9	Tetrahydrofuran	0.24	0.59	ND	0.70	1.75	ND	
156-59-2	cis-1,2-Dichloroethene	0.24	0.63	ND	0.93	2.51	ND	
67-66-3	Chloroform	0.12	0.59	ND	0.58	2.89	ND	
71-55-6	1,1,1-Trichloroethane	0.12	0.52	ND	0.64	2.86	ND	
107-06-2	1,2-Dichloroethane	0.12	0.54	ND	0.48	2.18	ND	
110-82-7	Cyclohexane	0.12	0.45	ND	0.41	1.56	ND	
71-43-2	Benzene	0.12	0.60	0.46	0.38	1.91	1.47	J
56-23-5	Carbon tetrachloride	0.12	0.56	ND	0.74	3.52	ND	
142-82-5	n-Heptane	0.59	1.43	ND	2.42	5.86	ND	
78-87-5	1,2-Dichloropropane	0.12	0.57	ND	0.55	2.62	ND	
123-91-1	1,4 Dioxane	0.47	0.97	ND	1.70	3.48	ND	
79-01-6	Trichloroethene	0.07	0.55	ND	0.38	2.95	ND	
75-27-4	Bromodichloromethane	0.12	0.24	ND	0.79	1.60	ND	
80-62-6	Methyl methacrylate	0.47	1.60	ND	1.93	6.53	ND	
108-10-1	4-Methyl-2-pentanone	0.47	1.79	ND	1.93	7.32	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	0.12	0.61	ND	0.54	2.77	ND		
108-88-3	Toluene	0.24	0.62	0.34	0.89	2.32	1.26	J	
10061-02-6	trans-1,3-Dichloropropene	0.12	0.61	ND	0.54	2.78	ND		
79-00-5	1,1,2-Trichloroethane	0.12	0.61	ND	0.64	3.31	ND		
591-78-6	2-Hexanone	0.59	1.67	ND	2.42	6.85	ND		
124-48-1	Dibromochloromethane	0.12	0.24	ND	1.00	2.01	ND		
106-93-4	1,2-Dibromoethane	0.12	0.29	ND	0.91	2.20	ND		
127-18-4	Tetrachloroethene	0.07	0.29	ND	0.48	1.95	ND		
108-90-7	Chlorobenzene	0.12	0.54	ND	0.54	2.47	ND		
100-41-4	Ethylbenzene	0.25	0.62	ND	1.08	2.71	ND		
1330-20-7	m,p-Xylenes	0.25	0.63	ND	1.09	2.71	ND		
100-42-5	Styrene	0.24	0.61	ND	1.04	2.60	ND		
75-25-2	Bromoform	0.12	0.16	ND	1.22	1.64	ND		
95-47-6	o-Xylene	0.24	0.61	ND	1.06	2.64	ND		
79-34-5	1,1,2,2-Tetrachloroethane	0.12	0.29	ND	0.80	2.00	ND		
622-96-8	4-Ethyltoluene	0.39	0.98	ND	1.92	4.81	ND		
108-67-8	1,3,5-Trimethylbenzene	0.24	0.61	ND	1.20	3.00	ND		
95-63-6	1,2,4-Trimethylbenzene	0.24	0.60	ND	1.18	2.95	ND		
541-73-1	1,3-Dichlorobenzene	0.24	0.44	ND	1.42	2.62	ND		
100-44-7	Benzyl chloride	0.24	1.43	ND	1.22	7.40	ND		
106-46-7	1,4-Dichlorobenzene	0.24	0.41	ND	1.42	2.45	ND		
95-50-1	1,2-Dichlorobenzene	0.24	0.38	ND	1.42	2.30	ND		
120-82-1	1,2,4-Trichlorobenzene	0.59	0.81	ND	4.38	6.02	ND		
91-20-3	Naphthalene	0.12	0.19	ND	0.63	0.99	ND		
87-68-3	Hexachlorobutadiene	0.59	0.63	ND	6.29	6.67	ND		
					QC		Limits		
Surrogate Recovery				% Rec.	LCL	UCL	Flag		
2037-26-5	Toluene-d8			100	70	130			

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 17

File Name: 1753917A
Description: T - 304
Canister: 610
QC_Batch: 100617-GCK

Date Sampled: 09/28/17 Time: 11:33
Date Analyzed: 10/06/17 Time: 17:57
Can Factor: 1.18
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.18	3.54	2.21	1.36	4.08	2.55	J
74-86-2	Acetylene	1.18	3.54	ND	1.26	3.77	ND	ND
74-84-0	Ethane	1.18	3.54	1.48	1.46	4.37	1.82	J
115-07-1	Propene	0.79	2.36	ND	1.36	4.07	ND	ND
74-98-6	Propane	0.79	2.36	1.78	1.42	4.27	3.22	J
75-28-5	i-Butane	0.59	1.77	ND	1.40	4.21	ND	ND
106-98-9	1-Butene	0.59	1.77	ND	1.36	4.07	ND	ND
106-97-8	n-Butane	0.59	1.77	7.40	1.40	4.21	17.63	
624-64-6	t-2-Butene	0.59	1.77	ND	1.36	4.07	ND	ND
590-18-1	c-2-Butene	0.59	1.77	ND	1.36	4.07	ND	ND
78-78-4	i-Pentane	0.47	1.42	ND	1.40	4.19	ND	ND
109-67-1	1-Pentene	0.47	1.42	ND	1.36	4.07	ND	ND
109-66-0	n-Pentane	0.47	1.42	ND	1.39	4.18	ND	ND
78-79-5	Isoprene	0.47	1.42	ND	1.32	3.95	ND	ND
646-04-8	t-2-Pentene	0.47	1.42	ND	1.36	4.07	ND	ND
627-20-3	c-2-Pentene	0.47	1.42	ND	1.36	4.07	ND	ND
75-83-2	2,2-Dimethylbutane	0.39	1.18	ND	1.39	4.17	ND	ND
287-92-3	Cyclopentane	0.47	1.42	ND	1.36	4.07	ND	ND
79-29-8	2,3-Dimethylbutane	0.39	1.18	ND	1.39	4.17	ND	ND
107-83-5	2-Methylpentane	0.39	1.18	ND	1.39	4.17	ND	ND
96-14-0	3-Methylpentane	0.39	1.18	ND	1.39	4.17	ND	ND
110-54-3	n-Hexane	0.39	1.18	ND	1.39	4.17	ND	ND
96-37-7	Methylcyclopentane	0.39	1.18	ND	1.36	4.07	ND	ND
108-08-7	2,4-Dimethylpentane	0.34	1.01	ND	1.38	4.15	ND	ND
71-43-2	Benzene	0.39	1.18	0.58	1.26	3.78	1.85	J
110-82-7	Cyclohexane	0.39	1.18	ND	1.36	4.07	ND	ND
591-76-4	2-Methylhexane	0.34	1.01	ND	1.38	4.15	ND	ND
565-59-3	2,3-Dimethylpentane	0.34	1.01	0.54	1.38	4.15	2.23	J
589-34-4	3-Methylhexane	0.34	1.01	0.34	1.38	4.15	1.40	J
540-84-1	2,2,4-Trimethylpentane	0.30	0.89	ND	1.38	4.14	ND	ND
142-82-5	n-Heptane	0.34	1.01	ND	1.38	4.15	ND	ND
108-87-2	Methylcyclohexane	0.34	1.01	ND	1.36	4.07	ND	ND
592-13-2	2,5-Dimethylhexane	0.30	0.89	ND	1.38	4.14	ND	ND
589-43-5	2,4-Dimethylhexane	0.30	0.89	ND	1.38	4.14	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.30	0.89	2.42	1.38	4.14	11.33	
108-88-3	Toluene	0.34	1.01	0.75	1.27	3.82	2.83	J
584-94-1	2,3-Dimethylhexane	0.30	0.89	ND	1.38	4.14	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.30	0.89	ND	1.38	4.14	ND	ND
589-81-1	3-Methylheptane	0.30	0.89	ND	1.38	4.14	ND	ND
111-65-9	n-Octane	0.30	0.89	1.54	1.38	4.14	7.20	
100-41-4	Ethylbenzene	0.30	0.89	0.40	1.28	3.85	1.75	J
108-38-3	m,p-xylene	0.30	0.89	0.48	1.28	3.85	2.09	J
100-42-5	Styrene	0.30	0.89	ND	1.26	3.78	ND	ND
95-47-6	o-xylene	0.30	0.89	1.90	1.28	3.85	8.26	
111-84-2	n-Nonane	0.26	0.79	1.79	1.38	4.14	9.39	
98-82-8	i-Propylbenzene	0.26	0.79	0.28	1.29	3.88	1.37	J
103-65-1	n-propylbenzene	0.26	0.79	0.75	1.29	3.88	3.69	J
80-56-8	a-Pinene	0.24	0.71	ND	1.32	3.95	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.79	1.27	1.29	3.88	6.27	
622-96-8	4-Ethyltoluene	0.26	0.79	1.36	1.29	3.88	6.71	
108-67-8	1,3,5-Trimethylbenzene	0.26	0.79	1.84	1.29	3.88	9.04	
611-14-3	2-Ethyltoluene	0.26	0.79	0.82	1.29	3.88	4.05	
127-91-3	b-Pinene	0.24	0.71	ND	1.32	3.95	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.79	1.29	1.29	3.88	6.37	
124-18-5	n-Decane	0.24	0.71	2.02	1.38	4.13	11.81	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.79	4.23	1.29	3.88	20.84	
5989-27-5	d-Limonene	0.24	0.71	ND	1.32	3.95	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.71	1.86	1.30	3.89	10.24	
105-05-5	1,4-Diethylbenzene	0.24	0.71	3.06	1.30	3.89	16.82	
104-51-8	n-Butylbenzene	0.24	0.71	ND	1.30	3.89	ND	ND
1120-21-4	Undecane	0.21	0.64	8.14	1.37	4.12	52.11	
112-40-3	Dodecane	0.20	0.59	5.37	1.37	4.12	37.45	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.85	26.55	1,536.04	31.27	93.80	5,426.52
TNMHC - C1	Total Non-Methane Hydrocarbons	53.10	159.30	9,216.27	34.82	104.46	6,043.45

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 17

File Name: 753917PA

Date Sampled: 09/28/17

Time: 11:33

Description: T-304

Date Analyzed: 10/03/17

Time: 12:27

Can/Tube#: 610

Can Dilution Factor: 1.18

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	118	354	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 17

File Name: 1753917A

Date Sampled: 09/28/17 Time: 11:33

Description: T-304

Date Analyzed: 10/03/17 Time: 11:42

Can/Tube#: 610

Dilution Factor: 1.18

QC_Batch: 100317-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.71	1.95	0.16	0.48	1.32	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 217539

Laboratory ID: 18

File Name: 1753918A.D
Description: T-305
Canister: 603
QC_Batch: 101717-MA1

Date Sampled: 09/28/17 Time: 13:02
Date Analyzed: 10/17/17 Time: 20:04
Can Dilution Factor: 1.16
Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.12	0.58	ND	0.57	2.88	ND	
74-87-3	Chloromethane	0.12	0.58	ND	0.24	1.20	ND	
76-14-2	Freon 114	0.12	0.58	ND	0.81	4.08	ND	
75-01-4	Vinyl chloride	0.12	0.58	ND	0.30	1.49	ND	
106-99-0	1,3-Butadiene	0.12	0.58	ND	0.26	1.29	ND	
74-83-9	Bromomethane	0.12	0.58	ND	0.45	2.26	ND	
75-00-3	Chloroethane	0.12	0.58	ND	0.31	1.54	ND	
64-17-5	Ethanol	0.58	1.74	ND	1.09	3.28	ND	
75-69-4	Trichlorofluoromethane	0.12	0.56	ND	0.65	3.13	ND	
67-64-1	Acetone	0.58	1.43	51.15	1.38	3.39	121.48	E
67-63-0	2-propanol	0.58	1.33	ND	1.42	3.27	ND	
75-35-4	1,1-Dichloroethene	0.12	0.58	ND	0.46	2.28	ND	
76-13-1	Freon 113	0.12	0.55	ND	0.89	4.25	ND	
75-09-2	Dichloromethane	0.23	0.56	ND	0.81	1.94	ND	
75-15-0	Carbon disulfide	0.58	1.08	ND	1.80	3.35	ND	
156-60-5	trans-1,2-Dichloroethene	0.12	0.42	ND	0.46	1.66	ND	
1634-04-4	Methyl tert butyl ether	0.12	0.43	ND	0.42	1.54	ND	
75-34-3	1,1-Dichloroethane	0.12	0.58	ND	0.47	2.34	ND	
108-05-4	Vinyl acetate	0.12	0.51	ND	0.41	1.79	ND	
78-93-3	2-Butanone	0.46	1.18	5.71	1.37	3.48	16.84	
141-78-6	Ethyl acetate	0.23	0.51	ND	0.84	1.83	ND	
74-97-5	Bromochloromethane	0.12	0.31	ND	0.61	1.63	ND	
109-99-9	Tetrahydrofuran	0.23	0.58	ND	0.68	1.72	ND	
156-59-2	cis-1,2-Dichloroethene	0.23	0.62	ND	0.92	2.47	ND	
67-66-3	Chloroform	0.12	0.58	ND	0.57	2.84	ND	
71-55-6	1,1,1-Trichloroethane	0.12	0.52	ND	0.63	2.81	ND	
107-06-2	1,2-Dichloroethane	0.12	0.53	ND	0.47	2.14	ND	
110-82-7	Cyclohexane	0.12	0.45	ND	0.40	1.53	ND	
71-43-2	Benzene	0.12	0.59	0.74	0.37	1.88	2.37	
56-23-5	Carbon tetrachloride	0.12	0.55	ND	0.73	3.46	ND	
142-82-5	n-Heptane	0.58	1.41	ND	2.38	5.76	ND	
78-87-5	1,2-Dichloropropane	0.12	0.56	ND	0.54	2.58	ND	
123-91-1	1,4 Dioxane	0.46	0.95	ND	1.67	3.42	ND	
79-01-6	Trichloroethene	0.07	0.54	ND	0.37	2.90	ND	
75-27-4	Bromodichloromethane	0.12	0.23	ND	0.78	1.57	ND	
80-62-6	Methyl methacrylate	0.46	1.57	ND	1.90	6.42	ND	
108-10-1	4-Methyl-2-pentanone	0.46	1.76	ND	1.90	7.19	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.12	0.60	ND	0.53	2.73	ND	
108-88-3	Toluene	0.23	0.61	2.77	0.87	2.28	10.43	
10061-02-6	trans-1,3-Dichloropropene	0.12	0.60	ND	0.53	2.73	ND	
79-00-5	1,1,2-Trichloroethane	0.12	0.60	ND	0.63	3.25	ND	
591-78-6	2-Hexanone	0.58	1.64	ND	2.38	6.74	ND	
124-48-1	Dibromochloromethane	0.12	0.23	ND	0.99	1.97	ND	
106-93-4	1,2-Dibromoethane	0.12	0.28	ND	0.89	2.16	ND	
127-18-4	Tetrachloroethene	0.07	0.28	ND	0.47	1.91	ND	
108-90-7	Chlorobenzene	0.12	0.53	ND	0.53	2.43	ND	
100-41-4	Ethylbenzene	0.25	0.61	ND	1.06	2.66	ND	
1330-20-7	m,p-Xylenes	0.25	0.61	ND	1.07	2.67	ND	
100-42-5	Styrene	0.24	0.60	ND	1.02	2.56	ND	
75-25-2	Bromoform	0.12	0.16	ND	1.20	1.61	ND	
95-47-6	o-Xylene	0.24	0.60	ND	1.04	2.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.11	0.29	ND	0.79	1.97	ND	
622-96-8	4-Ethyltoluene	0.38	0.96	ND	1.89	4.72	ND	
108-67-8	1,3,5-Trimethylbenzene	0.24	0.60	ND	1.18	2.94	ND	
95-63-6	1,2,4-Trimethylbenzene	0.24	0.59	ND	1.16	2.90	ND	
541-73-1	1,3-Dichlorobenzene	0.23	0.43	ND	1.39	2.58	ND	
100-44-7	Benzyl chloride	0.23	1.41	ND	1.20	7.28	ND	
106-46-7	1,4-Dichlorobenzene	0.23	0.40	ND	1.39	2.41	ND	
95-50-1	1,2-Dichlorobenzene	0.23	0.38	ND	1.39	2.26	ND	
120-82-1	1,2,4-Trichlorobenzene	0.58	0.80	ND	4.30	5.92	ND	
91-20-3	Naphthalene	0.12	0.19	ND	0.62	0.97	ND	
87-68-3	Hexachlorobutadiene	0.58	0.61	ND	6.18	6.55	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				97	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 18

File Name: 1753918A
Description: T - 305
Canister: 603
QC_Batch: 100617-GCK

Date Sampled: 09/28/17 Time: 13:02
Date Analyzed: 10/06/17 Time: 18:41
Can Factor: 1.16
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.16	3.48	3.44	1.34	4.01	3.96	J
74-86-2	Acetylene	1.16	3.48	ND	1.24	3.71	ND	ND
74-84-0	Ethane	1.16	3.48	3.42	1.43	4.29	4.22	J
115-07-1	Propene	0.77	2.32	ND	1.33	4.00	ND	ND
74-98-6	Propane	0.77	2.32	6.16	1.40	4.19	11.14	
75-28-5	i-Butane	0.58	1.74	ND	1.38	4.14	ND	ND
106-98-9	1-Butene	0.58	1.74	ND	1.33	4.00	ND	ND
106-97-8	n-Butane	0.58	1.74	9.13	1.38	4.14	21.73	
624-64-6	t-2-Butene	0.58	1.74	ND	1.33	4.00	ND	ND
590-18-1	c-2-Butene	0.58	1.74	ND	1.33	4.00	ND	ND
78-78-4	i-Pentane	0.46	1.39	0.56	1.37	4.12	1.66	J
109-67-1	1-Pentene	0.46	1.39	ND	1.33	4.00	ND	ND
109-66-0	n-Pentane	0.46	1.39	0.84	1.37	4.11	2.49	J
78-79-5	Isoprene	0.46	1.39	ND	1.30	3.89	ND	ND
646-04-8	t-2-Pentene	0.46	1.39	ND	1.33	4.00	ND	ND
627-20-3	c-2-Pentene	0.46	1.39	ND	1.33	4.00	ND	ND
75-83-2	2,2-Dimethylbutane	0.39	1.16	ND	1.37	4.10	ND	ND
287-92-3	Cyclopentane	0.46	1.39	ND	1.33	4.00	ND	ND
79-29-8	2,3-Dimethylbutane	0.39	1.16	ND	1.37	4.10	ND	ND
107-83-5	2-Methylpentane	0.39	1.16	5.11	1.37	4.10	18.06	
96-14-0	3-Methylpentane	0.39	1.16	4.69	1.37	4.10	16.57	
110-54-3	n-Hexane	0.39	1.16	0.81	1.37	4.10	2.88	J
96-37-7	Methylcyclopentane	0.39	1.16	ND	1.33	4.00	ND	ND
108-08-7	2,4-Dimethylpentane	0.33	0.99	ND	1.36	4.08	ND	ND
71-43-2	Benzene	0.39	1.16	0.90	1.24	3.71	2.89	J
110-82-7	Cyclohexane	0.39	1.16	ND	1.33	4.00	ND	ND
591-76-4	2-Methylhexane	0.33	0.99	1.40	1.36	4.08	5.75	
565-59-3	2,3-Dimethylpentane	0.33	0.99	0.83	1.36	4.08	3.41	J
589-34-4	3-Methylhexane	0.33	0.99	3.43	1.36	4.08	14.08	
540-84-1	2,2,4-Trimethylpentane	0.29	0.87	0.42	1.36	4.07	1.98	J
142-82-5	n-Heptane	0.33	0.99	0.52	1.36	4.08	2.12	J
108-87-2	Methylcyclohexane	0.33	0.99	ND	1.33	4.00	ND	ND
592-13-2	2,5-Dimethylhexane	0.29	0.87	ND	1.36	4.07	ND	ND
589-43-5	2,4-Dimethylhexane	0.29	0.87	ND	1.36	4.07	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.29	0.87	2.44	1.36	4.07	11.41	
108-88-3	Toluene	0.33	0.99	4.78	1.25	3.75	18.04	
584-94-1	2,3-Dimethylhexane	0.29	0.87	ND	1.36	4.07	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.87	ND	1.36	4.07	ND	ND
589-81-1	3-Methylheptane	0.29	0.87	ND	1.36	4.07	ND	ND
111-65-9	n-Octane	0.29	0.87	ND	1.36	4.07	ND	ND
100-41-4	Ethylbenzene	0.29	0.87	0.76	1.26	3.79	3.32	J
108-38-3	m,p-xylene	0.29	0.87	0.72	1.26	3.79	3.12	J
100-42-5	Styrene	0.29	0.87	1.49	1.24	3.72	6.37	
95-47-6	o-xylene	0.29	0.87	1.82	1.26	3.79	7.93	
111-84-2	n-Nonane	0.26	0.77	0.35	1.36	4.07	1.82	J
98-82-8	i-Propylbenzene	0.26	0.77	0.91	1.27	3.81	4.48	
103-65-1	n-propylbenzene	0.26	0.77	0.61	1.27	3.81	3.01	J
80-56-8	a-Pinene	0.23	0.70	ND	1.30	3.89	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.77	1.17	1.27	3.81	5.79	
622-96-8	4-Ethyltoluene	0.26	0.77	1.26	1.27	3.81	6.21	
108-67-8	1,3,5-Trimethylbenzene	0.26	0.77	1.87	1.27	3.81	9.19	
611-14-3	2-Ethyltoluene	0.26	0.77	0.69	1.27	3.81	3.41	J
127-91-3	b-Pinene	0.23	0.70	ND	1.30	3.89	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.77	1.01	1.27	3.81	4.95	
124-18-5	n-Decane	0.23	0.70	0.28	1.35	4.06	1.61	J
526-73-8	1,2,3-Trimethylbenzene	0.26	0.77	2.97	1.27	3.81	14.62	
5989-27-5	d-Limonene	0.23	0.70	ND	1.30	3.89	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.70	4.28	1.28	3.83	23.56	
105-05-5	1,4-Diethylbenzene	0.23	0.70	5.15	1.28	3.83	28.34	
104-51-8	n-Butylbenzene	0.23	0.70	ND	1.28	3.83	ND	ND
1120-21-4	Undecane	0.21	0.63	5.02	1.35	4.05	32.15	
112-40-3	Dodecane	0.19	0.58	3.79	1.35	4.05	26.45	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.70	26.10	1,196.01	30.74	92.21	4,225.26
TNMHC - C1	Total Non-Methane Hydrocarbons	52.20	156.60	7,176.08	34.23	102.69	4,705.63

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

SDG: 217539

Analytical Method:

D1946

Laboratory Number: 18

File Name: 753918PA

Date Sampled: 09/28/17

Time: 13:02

Description: T-305

Date Analyzed: 10/03/17

Time: 12:33

Can/Tube#: 603

Can Dilution Factor: 1.16

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	116	348	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 217539
Laboratory Number: 18

File Name: 1753918A
Description: T-305
Can/Tube#: 603
QC_Batch: 100317-GCL

Date Sampled: 09/28/17 Time: 13:02
Date Analyzed: 10/03/17 Time: 11:49
Dilution Factor: 1.16

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.70	1.94	0.16	0.47	1.31	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 19

File Name: 1753919A.D
Description: T-306
Canister: 779
QC_Batch: 101717-MA1

Date Sampled: 09/28/17 Time: 13:07
Date Analyzed: 10/17/17 Time: 20:42
Can Dilution Factor: 1.17
Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.12	0.59	ND	0.58	2.91	ND	
74-87-3	Chloromethane	0.12	0.59	ND	0.24	1.21	ND	
76-14-2	Freon 114	0.12	0.59	ND	0.82	4.11	ND	
75-01-4	Vinyl chloride	0.12	0.59	ND	0.30	1.50	ND	
106-99-0	1,3-Butadiene	0.12	0.59	ND	0.26	1.30	ND	
74-83-9	Bromomethane	0.12	0.59	ND	0.45	2.28	ND	
75-00-3	Chloroethane	0.12	0.59	ND	0.31	1.55	ND	
64-17-5	Ethanol	0.59	1.76	ND	1.10	3.31	ND	
75-69-4	Trichlorofluoromethane	0.12	0.56	ND	0.66	3.16	ND	
67-64-1	Acetone	0.59	1.44	42.49	1.39	3.42	100.92	
67-63-0	2-propanol	0.59	1.34	ND	1.44	3.30	ND	
75-35-4	1,1-Dichloroethene	0.12	0.58	ND	0.46	2.30	ND	
76-13-1	Freon 113	0.12	0.56	ND	0.90	4.29	ND	
75-09-2	Dichloromethane	0.23	0.56	ND	0.81	1.96	ND	
75-15-0	Carbon disulfide	0.59	1.09	ND	1.82	3.38	ND	
156-60-5	trans-1,2-Dichloroethene	0.12	0.42	ND	0.46	1.67	ND	
1634-04-4	Methyl tert butyl ether	0.12	0.43	ND	0.42	1.55	ND	
75-34-3	1,1-Dichloroethane	0.12	0.58	ND	0.47	2.36	ND	
108-05-4	Vinyl acetate	0.12	0.51	ND	0.41	1.81	ND	
78-93-3	2-Butanone	0.47	1.19	6.03	1.38	3.51	17.78	
141-78-6	Ethyl acetate	0.23	0.51	ND	0.84	1.85	ND	
74-97-5	Bromochloromethane	0.12	0.31	ND	0.62	1.65	ND	
109-99-9	Tetrahydrofuran	0.23	0.59	ND	0.69	1.73	ND	
156-59-2	cis-1,2-Dichloroethene	0.23	0.63	ND	0.93	2.49	ND	
67-66-3	Chloroform	0.12	0.59	ND	0.57	2.86	ND	
71-55-6	1,1,1-Trichloroethane	0.12	0.52	ND	0.64	2.83	ND	
107-06-2	1,2-Dichloroethane	0.12	0.53	ND	0.47	2.16	ND	
110-82-7	Cyclohexane	0.12	0.45	ND	0.40	1.55	ND	
71-43-2	Benzene	0.12	0.59	0.84	0.37	1.90	2.68	
56-23-5	Carbon tetrachloride	0.12	0.55	ND	0.74	3.49	ND	
142-82-5	n-Heptane	0.59	1.42	ND	2.40	5.81	ND	
78-87-5	1,2-Dichloropropane	0.12	0.56	ND	0.54	2.60	ND	
123-91-1	1,4 Dioxane	0.47	0.96	ND	1.69	3.45	ND	
79-01-6	Trichloroethene	0.07	0.54	ND	0.38	2.93	ND	
75-27-4	Bromodichloromethane	0.12	0.24	ND	0.78	1.58	ND	
80-62-6	Methyl methacrylate	0.47	1.58	ND	1.92	6.47	ND	
108-10-1	4-Methyl-2-pentanone	0.47	1.77	ND	1.92	7.26	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.12	0.61	ND	0.53	2.75	ND	
108-88-3	Toluene	0.23	0.61	3.24	0.88	2.30	12.19	
10061-02-6	trans-1,3-Dichloropropene	0.12	0.61	ND	0.53	2.75	ND	
79-00-5	1,1,2-Trichloroethane	0.12	0.60	ND	0.64	3.28	ND	
591-78-6	2-Hexanone	0.59	1.66	0.62	2.40	6.80	2.56	J
124-48-1	Dibromochloromethane	0.12	0.23	ND	1.00	1.99	ND	
106-93-4	1,2-Dibromoethane	0.12	0.28	ND	0.90	2.18	ND	
127-18-4	Tetrachloroethene	0.07	0.28	ND	0.48	1.93	ND	
108-90-7	Chlorobenzene	0.12	0.53	ND	0.54	2.45	ND	
100-41-4	Ethylbenzene	0.25	0.62	ND	1.07	2.69	ND	
1330-20-7	m,p-Xylenes	0.25	0.62	ND	1.08	2.69	ND	
100-42-5	Styrene	0.24	0.61	ND	1.03	2.58	ND	
75-25-2	Bromoform	0.12	0.16	ND	1.21	1.62	ND	
95-47-6	o-Xylene	0.24	0.60	ND	1.05	2.62	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.12	0.29	ND	0.79	1.99	ND	
622-96-8	4-Ethyltoluene	0.39	0.97	ND	1.91	4.76	ND	
108-67-8	1,3,5-Trimethylbenzene	0.24	0.60	ND	1.19	2.97	ND	
95-63-6	1,2,4-Trimethylbenzene	0.24	0.59	ND	1.17	2.92	ND	
541-73-1	1,3-Dichlorobenzene	0.23	0.43	ND	1.41	2.60	ND	
100-44-7	Benzyl chloride	0.23	1.42	ND	1.21	7.34	ND	
106-46-7	1,4-Dichlorobenzene	0.23	0.40	ND	1.41	2.43	ND	
95-50-1	1,2-Dichlorobenzene	0.23	0.38	ND	1.41	2.28	ND	
120-82-1	1,2,4-Trichlorobenzene	0.59	0.80	ND	4.34	5.97	ND	
91-20-3	Naphthalene	0.12	0.19	ND	0.63	0.98	ND	
87-68-3	Hexachlorobutadiene	0.59	0.62	ND	6.24	6.61	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	101	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539
Laboratory Number: 19

File Name: 1753919A
Description: T - 306
Canister: 779
QC_Batch: 100617-GCK

Date Sampled: 09/28/17 Time: 13:07
Date Analyzed: 10/06/17 Time: 19:31
Can Factor: 1.17
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.17	3.51	ND	1.35	4.04	ND	ND
74-86-2	Acetylene	1.17	3.51	ND	1.25	3.74	ND	ND
74-84-0	Ethane	1.17	3.51	7.14	1.44	4.33	8.80	
115-07-1	Propene	0.78	2.34	ND	1.35	4.04	ND	ND
74-98-6	Propane	0.78	2.34	33.81	1.41	4.23	61.11	
75-28-5	i-Butane	0.59	1.76	ND	1.39	4.18	ND	ND
106-98-9	1-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
106-97-8	n-Butane	0.59	1.76	41.82	1.39	4.18	99.57	
624-64-6	t-2-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
590-18-1	c-2-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
78-78-4	i-Pentane	0.47	1.40	0.78	1.38	4.15	2.30	J
109-67-1	1-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
109-66-0	n-Pentane	0.47	1.40	6.22	1.38	4.15	18.39	
78-79-5	Isoprene	0.47	1.40	ND	1.31	3.92	ND	ND
646-04-8	t-2-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
627-20-3	c-2-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
75-83-2	2,2-Dimethylbutane	0.39	1.17	ND	1.38	4.13	ND	ND
287-92-3	Cyclopentane	0.47	1.40	ND	1.34	4.03	ND	ND
79-29-8	2,3-Dimethylbutane	0.39	1.17	ND	1.38	4.13	ND	ND
107-83-5	2-Methylpentane	0.39	1.17	2.28	1.38	4.13	8.04	
96-14-0	3-Methylpentane	0.39	1.17	1.02	1.38	4.13	3.61	J
110-54-3	n-Hexane	0.39	1.17	2.09	1.38	4.13	7.39	
96-37-7	Methylcyclopentane	0.39	1.17	0.74	1.35	4.04	2.56	J
108-08-7	2,4-Dimethylpentane	0.33	1.00	3.55	1.37	4.12	14.58	
71-43-2	Benzene	0.39	1.17	0.71	1.25	3.74	2.29	J
110-82-7	Cyclohexane	0.39	1.17	0.62	1.35	4.04	2.15	J
591-76-4	2-Methylhexane	0.33	1.00	1.07	1.37	4.12	4.39	
565-59-3	2,3-Dimethylpentane	0.33	1.00	0.66	1.37	4.12	2.71	J
589-34-4	3-Methylhexane	0.33	1.00	0.53	1.37	4.12	2.16	J
540-84-1	2,2,4-Trimethylpentane	0.29	0.88	2.57	1.37	4.11	12.03	
142-82-5	n-Heptane	0.33	1.00	5.39	1.37	4.12	22.12	
108-87-2	Methylcyclohexane	0.33	1.00	1.63	1.35	4.04	6.56	
592-13-2	2,5-Dimethylhexane	0.29	0.88	0.62	1.37	4.11	2.92	J
589-43-5	2,4-Dimethylhexane	0.29	0.88	2.52	1.37	4.11	11.81	
565-75-3	2,3,4-Trimethylpentane	0.29	0.88	0.51	1.37	4.11	2.40	J
108-88-3	Toluene	0.33	1.00	5.41	1.26	3.79	20.42	
584-94-1	2,3-Dimethylhexane	0.29	0.88	ND	1.37	4.11	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.88	ND	1.37	4.11	ND	ND
589-81-1	3-Methylheptane	0.29	0.88	ND	1.37	4.11	ND	ND
111-65-9	n-Octane	0.29	0.88	ND	1.37	4.11	ND	ND
100-41-4	Ethylbenzene	0.29	0.88	2.70	1.27	3.82	11.75	
108-38-3	m,p-xylene	0.29	0.88	1.75	1.27	3.82	7.60	
100-42-5	Styrene	0.29	0.88	0.52	1.25	3.75	2.23	J
95-47-6	o-xylene	0.29	0.88	1.17	1.27	3.82	5.09	
111-84-2	n-Nonane	0.26	0.78	6.14	1.37	4.10	32.30	
98-82-8	i-Propylbenzene	0.26	0.78	1.08	1.28	3.84	5.31	
103-65-1	n-propylbenzene	0.26	0.78	1.23	1.28	3.84	6.07	
80-56-8	a-Pinene	0.23	0.70	ND	1.31	3.92	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.78	1.27	1.28	3.84	6.24	
622-96-8	4-Ethyltoluene	0.26	0.78	0.76	1.28	3.84	3.75	J
108-67-8	1,3,5-Trimethylbenzene	0.26	0.78	1.12	1.28	3.84	5.52	
611-14-3	2-Ethyltoluene	0.26	0.78	5.26	1.28	3.84	25.91	
127-91-3	b-Pinene	0.23	0.70	ND	1.31	3.92	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.78	3.06	1.28	3.84	15.07	
124-18-5	n-Decane	0.23	0.70	5.17	1.36	4.09	30.17	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.78	5.04	1.28	3.84	24.81	
5989-27-5	d-Limonene	0.23	0.70	ND	1.31	3.92	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.70	2.28	1.29	3.86	12.56	
105-05-5	1,4-Diethylbenzene	0.23	0.70	2.15	1.29	3.86	11.80	
104-51-8	n-Butylbenzene	0.23	0.70	ND	1.29	3.86	ND	ND
1120-21-4	Undecane	0.21	0.64	10.08	1.36	4.09	64.54	
112-40-3	Dodecane	0.20	0.59	7.07	1.36	4.08	49.36	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.78	26.33	1,757.45	31.00	93.00	6,208.71	
TNMHC - C1	Total Non-Methane Hydrocarbons	52.65	157.95	10,544.72	34.52	103.57	6,914.57	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

SDG: 217539

Analytical Method:

D1946

Laboratory Number: 19

File Name: 753919PA

Date Sampled: 09/28/17

Time: 13:07

Description: T-306

Date Analyzed: 10/03/17

Time: 12:40

Can/Tube#: 779

Can Dilution Factor: 1.17

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	117	351	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 19

File Name: 1753919A

Date Sampled: 09/28/17 Time: 13:07

Description: T-306

Date Analyzed: 10/03/17 Time: 11:56

Can/Tube#: 779

Dilution Factor: 1.17

QC_Batch: 100317-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.70	1.96	0.16	0.47	1.32	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217539

Analytical Method: TO-15

Laboratory ID: 20

File Name: 1753920A.D

Date Sampled: 09/28/17

Time: 13:25

Description: T-307

Date Analyzed: 10/17/17

Time: 21:22

Canister: 758

Can Dilution Factor: 1.00

QC_Batch: 101717-MA1

Air Volume: 500 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.10	0.50	ND	0.49	2.49	ND	
74-87-3	Chloromethane	0.10	0.50	ND	0.21	1.04	ND	
76-14-2	Freon 114	0.10	0.50	ND	0.70	3.51	ND	
75-01-4	Vinyl chloride	0.10	0.50	ND	0.26	1.29	ND	
106-99-0	1,3-Butadiene	0.10	0.50	ND	0.22	1.11	ND	
74-83-9	Bromomethane	0.10	0.50	ND	0.39	1.95	ND	
75-00-3	Chloroethane	0.10	0.50	ND	0.26	1.33	ND	
64-17-5	Ethanol	0.50	1.50	ND	0.94	2.83	ND	
75-69-4	Trichlorofluoromethane	0.10	0.48	ND	0.56	2.70	ND	
67-64-1	Acetone	0.50	1.23	ND	1.19	2.92	ND	
67-63-0	2-propanol	0.50	1.15	ND	1.23	2.82	ND	
75-35-4	1,1-Dichloroethene	0.10	0.50	ND	0.40	1.96	ND	
76-13-1	Freon 113	0.10	0.48	ND	0.77	3.67	ND	
75-09-2	Dichloromethane	0.20	0.48	ND	0.69	1.67	ND	
75-15-0	Carbon disulfide	0.50	0.93	ND	1.56	2.89	ND	
156-60-5	trans-1,2-Dichloroethene	0.10	0.36	ND	0.40	1.43	ND	
1634-04-4	Methyl tert butyl ether	0.10	0.37	ND	0.36	1.33	ND	
75-34-3	1,1-Dichloroethane	0.10	0.50	ND	0.40	2.02	ND	
108-05-4	Vinyl acetate	0.10	0.44	ND	0.35	1.55	ND	
78-93-3	2-Butanone	0.40	1.02	ND	1.18	3.00	ND	
141-78-6	Ethyl acetate	0.20	0.44	ND	0.72	1.58	ND	
74-97-5	Bromochloromethane	0.10	0.27	ND	0.53	1.41	ND	
109-99-9	Tetrahydrofuran	0.20	0.50	ND	0.59	1.48	ND	
156-59-2	cis-1,2-Dichloroethene	0.20	0.54	ND	0.79	2.13	ND	
67-66-3	Chloroform	0.10	0.50	ND	0.49	2.45	ND	
71-55-6	1,1,1-Trichloroethane	0.10	0.44	ND	0.55	2.42	ND	
107-06-2	1,2-Dichloroethane	0.10	0.46	ND	0.40	1.85	ND	
110-82-7	Cyclohexane	0.10	0.38	ND	0.35	1.32	ND	
71-43-2	Benzene	0.10	0.51	0.46	0.32	1.62	1.47	J
56-23-5	Carbon tetrachloride	0.10	0.47	ND	0.63	2.98	ND	
142-82-5	n-Heptane	0.50	1.21	ND	2.05	4.96	ND	
78-87-5	1,2-Dichloropropane	0.10	0.48	ND	0.46	2.22	ND	
123-91-1	1,4 Dioxane	0.40	0.82	ND	1.44	2.95	ND	
79-01-6	Trichloroethene	0.06	0.47	ND	0.32	2.50	ND	
75-27-4	Bromodichloromethane	0.10	0.20	ND	0.67	1.35	ND	
80-62-6	Methyl methacrylate	0.40	1.35	ND	1.64	5.53	ND	
108-10-1	4-Methyl-2-pentanone	0.40	1.51	ND	1.64	6.20	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.10	0.52	ND	0.45	2.35	ND	
108-88-3	Toluene	0.20	0.52	ND	0.75	1.97	ND	
10061-02-6	trans-1,3-Dichloropropene	0.10	0.52	ND	0.45	2.35	ND	
79-00-5	1,1,2-Trichloroethane	0.10	0.51	ND	0.55	2.80	ND	
591-78-6	2-Hexanone	0.50	1.42	ND	2.05	5.81	ND	
124-48-1	Dibromochloromethane	0.10	0.20	ND	0.85	1.70	ND	
106-93-4	1,2-Dibromoethane	0.10	0.24	ND	0.77	1.86	ND	
127-18-4	Tetrachloroethene	0.06	0.24	ND	0.41	1.65	ND	
108-90-7	Chlorobenzene	0.10	0.46	ND	0.46	2.09	ND	
100-41-4	Ethylbenzene	0.21	0.53	ND	0.92	2.29	ND	
1330-20-7	m,p-Xylenes	0.21	0.53	ND	0.92	2.30	ND	
100-42-5	Styrene	0.21	0.52	ND	0.88	2.21	ND	
75-25-2	Bromoform	0.10	0.13	ND	1.03	1.39	ND	
95-47-6	o-Xylene	0.21	0.52	ND	0.90	2.24	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.10	0.25	ND	0.68	1.70	ND	
622-96-8	4-Ethyltoluene	0.33	0.83	ND	1.63	4.07	ND	
108-67-8	1,3,5-Trimethylbenzene	0.21	0.52	ND	1.02	2.54	ND	
95-63-6	1,2,4-Trimethylbenzene	0.20	0.51	ND	1.00	2.50	ND	
541-73-1	1,3-Dichlorobenzene	0.20	0.37	ND	1.20	2.22	ND	
100-44-7	Benzyl chloride	0.20	1.21	ND	1.04	6.27	ND	
106-46-7	1,4-Dichlorobenzene	0.20	0.35	ND	1.20	2.08	ND	
95-50-1	1,2-Dichlorobenzene	0.20	0.32	ND	1.20	1.95	ND	
120-82-1	1,2,4-Trichlorobenzene	0.50	0.69	ND	3.71	5.10	ND	
91-20-3	Naphthalene	0.10	0.16	ND	0.53	0.84	ND	
87-68-3	Hexachlorobutadiene	0.50	0.53	ND	5.33	5.65	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	100	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217539

Laboratory Number: 20

File Name: 1753920A
Description: T - 307
Canister: 758
QC_Batch: 100617-GCK

Date Sampled: 09/28/17 Time: 13:25
Date Analyzed: 10/06/17 Time: 20:13
Can Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	12.86	26.50	79.49	45.43	J
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	77.16	29.51	88.52	50.59	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

D1946

SDG: 217539

Laboratory Number: 20

File Name: 753920PA

Date Sampled: 09/28/17

Time: 13:25

Description: T-307

Date Analyzed: 10/03/17

Time: 12:46

Can/Tube#: 758

Can Dilution Factor: 1.00

QC_Batch: 100317-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	100	300	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217539

Laboratory Number: 20

File Name: 1753920A

Date Sampled: 09/28/17

Time: 13:25

Description: T-307

Date Analyzed: 10/03/17

Time: 12:00

Can/Tube#: 758

Dilution Factor: 1.00

QC_Batch: 100317-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.20	0.60	0.94	0.14	0.41	0.63	

Laboratory Report

Project Name:

CARB Oil and Water Separator Ponds

EAS SDG Number: **217566**

Client Project Manager: Chuck Schmidt

Task:

Prepared For:

Project Number: 17198

C.E. Schmidt

Sample Event Date: 10/10/17, 10/11/17,

19200 Live Oak Road

Received Date: 10/12/2017

Red Bluff

CA 96080

Report Date: 11/9/2017

Project Number: None Given

PO Number: None Given

This is the Laboratory Report for the samples in the indicated Sample Delivery Group (SDG). Each sample received in the group is assigned a Laboratory ID number. The combination of the SDG number and the Lab ID number is an unique identifier for the sample.

This Report Contains:

Laboratory Work Order

Project Sample Media

Laboratory Case Narrative and Chain of Custody

Method Description (when applicable)

Quality Control Reports

Analytical Reports

NELAC Certification: Florida E871125

173 Cross Street, San Luis Obispo, CA 93401 (805) 781-3585

Laboratory Work Order

SDG Number: 217566

Project Number: 17198

Client: Chuck Schmidt

Received: 10/12/2017

C.E. Schmidt

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 401	217566 1	ASTM D3416 Methane, MDL 0.5 ppmv	10/10/2017
T - 401	217566 1	EPA TO-14 DHA with TNMHC	10/10/2017
T - 401	217566 1	EPA TO-15 VOC + TIC	10/10/2017
T - 401	217566 1	ASTM D1945 Carbon Dioxide	10/10/2017
T - 402	217566 2	ASTM D1945 Carbon Dioxide	10/10/2017
T - 402	217566 2	ASTM D3416 Methane, MDL 0.5 ppmv	10/10/2017
T - 402	217566 2	EPA TO-14 DHA with TNMHC	10/10/2017
T - 402	217566 2	EPA TO-15 VOC + TIC	10/10/2017
T - 403	217566 3	EPA TO-14 DHA with TNMHC	10/10/2017
T - 403	217566 3	EPA TO-15 VOC + TIC	10/10/2017
T - 403	217566 3	ASTM D3416 Methane, MDL 0.5 ppmv	10/10/2017
T - 403	217566 3	ASTM D1945 Carbon Dioxide	10/10/2017
T - 404	217566 4	ASTM D3416 Methane, MDL 0.5 ppmv	10/10/2017
T - 404	217566 4	EPA TO-14 DHA with TNMHC	10/10/2017
T - 404	217566 4	EPA TO-15 VOC + TIC	10/10/2017
T - 404	217566 4	ASTM D1945 Carbon Dioxide	10/10/2017
T - 405	217566 5	ASTM D1945 Carbon Dioxide	10/10/2017
T - 405	217566 5	ASTM D3416 Methane, MDL 0.5 ppmv	10/10/2017
T - 405	217566 5	EPA TO-14 DHA with TNMHC	10/10/2017
T - 405	217566 5	EPA TO-15 VOC + TIC	10/10/2017
T - 406	217566 6	EPA TO-14 DHA with TNMHC	10/10/2017
T - 406	217566 6	EPA TO-15 VOC + TIC	10/10/2017
T - 406	217566 6	ASTM D3416 Methane, MDL 0.5 ppmv	10/10/2017

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 406	217566 6	ASTM D1945 Carbon Dioxide	10/10/2017
T - 407	217566 7	ASTM D3416 Methane, MDL 0.5 ppmv	10/10/2017
T - 407	217566 7	EPA TO-14 DHA with TNMHC	10/10/2017
T - 407	217566 7	EPA TO-15 VOC + TIC	10/10/2017
T - 407	217566 7	ASTM D1945 Carbon Dioxide	10/10/2017
T - 408	217566 8	ASTM D1945 Carbon Dioxide	10/10/2017
T - 408	217566 8	ASTM D3416 Methane, MDL 0.5 ppmv	10/10/2017
T - 408	217566 8	EPA TO-14 DHA with TNMHC	10/10/2017
T - 408	217566 8	EPA TO-15 VOC + TIC	10/10/2017
T - 501	217566 9	ASTM D3416 Methane, MDL 0.5 ppmv	10/11/2017
T - 501	217566 9	EPA TO-14 DHA with TNMHC	10/11/2017
T - 501	217566 9	ASTM D1945 Carbon Dioxide	10/11/2017
T - 501	217566 9	EPA TO-15 VOC + TIC	10/11/2017
T - 502	217566 10	ASTM D1945 Carbon Dioxide	10/11/2017
T - 502	217566 10	ASTM D3416 Methane, MDL 0.5 ppmv	10/11/2017
T - 502	217566 10	EPA TO-14 DHA with TNMHC	10/11/2017
T - 502	217566 10	EPA TO-15 VOC + TIC	10/11/2017
T - 503	217566 11	ASTM D1945 Carbon Dioxide	10/11/2017
T - 503	217566 11	ASTM D3416 Methane, MDL 0.5 ppmv	10/11/2017
T - 503	217566 11	EPA TO-14 DHA with TNMHC	10/11/2017
T - 503	217566 11	EPA TO-15 VOC + TIC	10/11/2017
T - 504	217566 12	EPA TO-14 DHA with TNMHC	10/11/2017
T - 504	217566 12	ASTM D3416 Methane, MDL 0.5 ppmv	10/11/2017
T - 504	217566 12	EPA TO-15 VOC + TIC	10/11/2017
T - 504	217566 12	ASTM D1945 Carbon Dioxide	10/11/2017
T - 505	217566 13	ASTM D1945 Carbon Dioxide	10/11/2017
T - 505	217566 13	ASTM D3416 Methane, MDL 0.5 ppmv	10/11/2017
T - 505	217566 13	EPA TO-14 DHA with TNMHC	10/11/2017
T - 505	217566 13	EPA TO-15 VOC + TIC	10/11/2017
T - 506	217566 14	ASTM D1945 Carbon Dioxide	10/11/2017

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 506	217566 14	ASTM D3416 Methane, MDL 0.5 ppmv	10/11/2017
T - 506	217566 14	EPA TO-14 DHA with TNMHC	10/11/2017
T - 506	217566 14	EPA TO-15 VOC + TIC	10/11/2017
T - 507	217566 15	ASTM D3416 Methane, MDL 0.5 ppmv	10/11/2017
T - 507	217566 15	EPA TO-14 DHA with TNMHC	10/11/2017
T - 507	217566 15	ASTM D1945 Carbon Dioxide	10/11/2017
T - 507	217566 15	EPA TO-15 VOC + TIC	10/11/2017
T - 601	217566 16	ASTM D1945 Carbon Dioxide	10/12/2017
T - 601	217566 16	ASTM D3416 Methane, MDL 0.5 ppmv	10/12/2017
T - 601	217566 16	EPA TO-14 DHA with TNMHC	10/12/2017
T - 601	217566 16	EPA TO-15 VOC + TIC	10/12/2017
T - 602	217566 17	ASTM D1945 Carbon Dioxide	10/12/2017
T - 602	217566 17	ASTM D3416 Methane, MDL 0.5 ppmv	10/12/2017
T - 602	217566 17	EPA TO-14 DHA with TNMHC	10/12/2017
T - 602	217566 17	EPA TO-15 VOC + TIC	10/12/2017
T - 603	217566 18	ASTM D1945 Carbon Dioxide	10/12/2017
T - 603	217566 18	EPA TO-15 VOC + TIC	10/12/2017
T - 603	217566 18	ASTM D3416 Methane, MDL 0.5 ppmv	10/12/2017
T - 603	217566 18	EPA TO-14 DHA with TNMHC	10/12/2017
T - 604	217566 19	ASTM D1945 Carbon Dioxide	10/12/2017
T - 604	217566 19	ASTM D3416 Methane, MDL 0.5 ppmv	10/12/2017
T - 604	217566 19	EPA TO-14 DHA with TNMHC	10/12/2017
T - 604	217566 19	EPA TO-15 VOC + TIC	10/12/2017
T - 605	217566 20	ASTM D1945 Carbon Dioxide	10/12/2017
T - 605	217566 20	ASTM D3416 Methane, MDL 0.5 ppmv	10/12/2017
T - 605	217566 20	EPA TO-14 DHA with TNMHC	10/12/2017
T - 605	217566 20	EPA TO-15 VOC + TIC	10/12/2017
T - 606	217566 21	ASTM D1945 Carbon Dioxide	10/12/2017
T - 606	217566 21	EPA TO-15 VOC + TIC	10/12/2017
T - 606	217566 21	ASTM D3416 Methane, MDL 0.5 ppmv	10/12/2017

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 606	217566 21	EPA TO-14 DHA with TNMHC	10/12/2017
T - 607	217566 22	ASTM D1945 Carbon Dioxide	10/12/2017
T - 607	217566 22	ASTM D3416 Methane, MDL 0.5 ppmv	10/12/2017
T - 607	217566 22	EPA TO-14 DHA with TNMHC	10/12/2017
T - 607	217566 22	EPA TO-15 VOC + TIC	10/12/2017
T - 608	217566 23	EPA TO-15 VOC + TIC	10/12/2017
T - 608	217566 23	ASTM D1945 Carbon Dioxide	10/12/2017
T - 608	217566 23	ASTM D3416 Methane, MDL 0.5 ppmv	10/12/2017
T - 608	217566 23	EPA TO-14 DHA with TNMHC	10/12/2017

Project Sample Media

SDG Number: 217566

The following sample media was used for this Sample Delivery Group (SDG). The Sample Media column identifies the type of media. For canisters, the Sample Media Batch gives the canister number followed by the cleaning batch number, which is a unique identification. Canisters that are received with sub-ambient pressures are pressurized to about 5 psig. The initial pressure of the canister when it is received is recorded along with the final pressure after pressurization. The canister dilution factor is the ratio of the final to initial pressure. The results are adjusted for the can dilution factor.

SDG	Lab ID	Client Sample No.	Sample		Pressure, torr		Can Factor
			Media	Batch	Initial	Final	
217566	1	T - 401	605	100517B	710	849	1.20
217566	2	T - 402	509	100517B	702	863	1.23
217566	3	T - 403	776	100417B	678	863	1.27
217566	4	T - 404	659	100417B	674	854	1.27
217566	5	T - 405	782	100617B	672	846	1.26
217566	6	T - 406	734	100617B	682	847	1.24
217566	7	T - 407	417	100617B	696	854	1.23
217566	8	T - 408	681	100617B	700	856	1.22
217566	9	T - 501	619	092917B	728	850	1.17
217566	10	T - 502	786	100517B	727	854	1.17
217566	11	T - 503	637	100517B	699	850	1.22
217566	12	T - 504	518	092917B	715	851	1.19
217566	13	T - 505	850	092217A	719	848	1.18
217566	14	T - 506	644	100317A	693	849	1.23
217566	15	T - 507	628	092217A	1029	1029	1.00
217566	16	T - 601	697	100417B	751	860	1.15
217566	17	T - 602	157	100417B	736	858	1.17
217566	18	T - 603	788	100417B	736	854	1.16
217566	19	T - 604	716	100417B	735	858	1.17
217566	20	T - 605	698	100617B	725	858	1.18
217566	21	T - 606	877	100617B	720	866	1.20
217566	22	T - 607	665	100617B	724	848	1.17
217566	23	T - 608	700	100617B	765	860	1.12

Laboratory Case Narrative

EAS SDG Number: 217566

Project Number: 17198

Client: C.E. Schmidt

The Laboratory Case Narrative for the SDG is below. The Chain of Custody form(s) follow the Laboratory Case Narrative.

Sample Control Narrative

The samples were all received in good condition and with proper preservation.

Analytical Methods

The methods used for sample analysis are listed on the Analytical Report header, and have been modified as described in the EAS Quality Manual.

Case Narrative

When there are duplicate values from the TO-15 GC/MS and TO-14 FID the TO-15 GC/MS values should be used because they are less subject to interferences and the GC/MS identifies the compound by its characteristic ions and retention time while the GC/FID has to rely only on the retention time.

QC Narrative


All analyses met EAS method criteria as defined in the Quality Manual, except as noted in the report or QC reports with data qualifiers.

Subcontract Narrative

No sample analysis was subcontracted for this project

Laboratory Certification

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness other than the condition(s) noted above. The Laboratory Report is property of EAS and its client. The entire report has been reviewed and approved.



Date Approved: 11/9/2017

Steven D. Hoyt, Ph.D.
Environmental Analytical Service
Laboratory Director

CE Schmidt, Ph.D., Environmental Consultant

Chain of Custody Record

Form Serial Number: CES F1-02-106
 Client Name: Air Resources Board
 Project Manager: Clifffield WW Emissions Assessment
 Luis Leyva
 916.323.1079
 Requested Completion Date: _____

For Information Regarding These Samples
 Please Contact:
 Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

Client Address and Phone Number
 1001 I Street
 Sacramento, CA 95814 800-242-4450

Laboratory Name: EAS
 Laboratory Address: 173 Cross Street
 San Luis Obispo, CA 93401
 Laboratory Phone: 805-781-5585
 Laboratory Contact: Dr. Steve Hoyt

Station Number	Date	Time	GRA B		Sample ID Number	Can ID Number	CONTAINER		Sample Container	Analysis Requested			Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
			C	G			TO-14 FID (TMMHC)	TO-14 FID (Target List/Groups)		TO-15 (Target List)	ASTM D-1945 (CH4, CO2)				
	10/11/2017	8:58	X	X	T-501	619	X	X	X	X	X	-29	0		
	10/11/2017	9:50	X	X	T-502	786	X	X	X	X	X	-29	0		
	10/11/2017	11:45	X	X	T-503	637	X	X	X	X	X	-29	0		
	10/11/2017	1:35	X	X	T-504	578	X	X	X	X	X	-29	0		
	10/11/2017	1:34	X	X	T-505	850	X	X	X	X	X	-29	0		
	10/11/2017	1:27	X	X	T-506	897	X	X	X	X	X	-29	0		
	10/11/2017	1:49	X	X	T-507	628	X	X	X	X	X	-29	0		
	10/11/2017		X	X	T-508		X	X	X	X	X				
	10/11/2017		X	X	T-509		X	X	X	X	X				

Relinquished by: *CE Schmidt* Date/Time: *10/12/17 1700*

Relinquished by: *EAS* Date/Time: *10/12/17 1700*

Relinquished by: _____ Date/Time: _____

Sample Shipped Via: _____ Date/Time: *10/12/17 4:50 PM*

Remarks: _____

HAZWRAP/NEESA Y N
 QC Level 1 2 3
 COC
 Ana Req
 Cust Seal
 Sample Condition

CE Schmidt, Ph., Environmental Consultant
Chain of Custody Record

For information Regarding These Samples Please Contact:

Form Serial Number: **CES F1-02106**
 Client Name: **Air Resources Board**
Oilfield WW Emissions Assessment
 Project Manager: **Luis Leyva**
 916.323.1079
 Requested Completion Date: _____

Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

1001 I Street
 Sacramento, CA 95814 800-242-4450

Laboratory Name: **EAS**
 Laboratory Address: **173 Cross Street**
San Luis Obispo, CA 93401
 Laboratory Phone: **805-781-3585**
 Laboratory Contact: **Dr. Steve Hoyt**

Station Number	Date	Time	C	G	O	M	P	Sample ID Number	Can ID Number	Sample Container			TO-14 FID (TNMHC)	TO-14 FID (Target Lists/Groups)	TO-15 (Target List)	ASTM D-1945 (CH4, CO2)	Date/Time	Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
										Vial	Can	Tube								
	10/12/2017	946	X					T-601	697	X	X	X	X	X	X		22	0		
	10/12/2017	951	X					T-602	757	X	X	X	X	X	X		22	0		
	10/12/2017	1184	X					T-603	788	X	X	X	X	X	X		22	0		
	10/12/2017	1216	X					T-604	776	X	X	X	X	X	X		22	0		
	10/12/2017	1311	X					T-605	698	X	X	X	X	X	X		22	0		
	10/12/2017	1319	X					T-606	817	X	X	X	X	X	X		22	0		
	10/12/2017	1411	X					T-607	665	X	X	X	X	X	X		22	0		
	10/12/2017	1429	X					T-608	700	X	X	X	X	X	X		22	0		
	10/12/2017		X					T-609		X	X	X	X	X	X					

Relinquished by: **CS Schmidt** Date/Time: **10/12/17 1700**

Relinquished by: **EBB WBS** Date/Time: **10/12/17 1700**

Relinquished by: _____ Date/Time: _____

Sample Shipped Via: **BUS** Date/Time: **10/12/17 4:50 AM**

Remarks: **Relinquished**

Quality Control Report

EAS SDG Number 217566

Project Number: 17198

QC Narrative

Samples were analyzed in a daily analytical batch (DAB) designated by a QC batch number, and were analyzed using EAS standard laboratory QC specified in the EAS Quality Manual which may be different the referenced agency method. Any deviations from the EAS QC criteria are flagged in the Laboratory Control Reports or in the sample Analytical Reports.

Standard Laboratory QC Report

Unless project specific QC was requested, this Section containing the standard laboratory QC (Level 2) supplied with the Analytical Reports. Each sample is analyzed in a Daily Analytical Batch (DAB) which includes the method blank, a laboratory control spike (LCS) and a laboratory control duplicate (LCD). A Daily Analytical Batch QC report is supplied for each method requested.

Method Blank

A method blank is a laboratory generated sample which assesses the degree to which laboratory operations and procedures cause a false positive. In the method blank, compounds should be present below the reporting limit (RL). Compounds present above the RL are flagged with a "B" in the Analytical Reports in that batch unless the result is greater than ten times the blank value..

Laboratory Control Spike

A laboratory control spike is a well characterized matrix similar to the sample which is spiked and run in duplicate with each Daily Analytical Batch. The laboratory control spike results are reported as a percent recovery. The QC Criteria for the control spike is listed in the Laboratory Control Report. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report. The control spike contains an abbreviated list of compounds in the method, and may contain compounds not on the target list for the specified report.

Laboratory Control Duplicate

The laboratory control duplicate is a duplicate analysis of the laboratory control spike, a standard, or a sample depending on the method. The results are reported as a relative percent difference (RPD). The criteria for the duplicate is in the Laboratory Control Report for the Daily Analytical Batch. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report.

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC

Analytical Method: TO-15

Laboratory ID: B10267

File Name: B10267B.D

Date Sampled:

Time:

Description: METHOD BLANK

Date Analyzed: 10/26/17

Time: 13:49

Canister:

Can Dilution Factor: 1.00

QC_Batch: 102617-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	0.58	0.80	4.05	1.86	J
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	89	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC

Analytical Method: TO-15

Laboratory ID: B10277

File Name: B10277B.D

Date Sampled:

Time:

Description: METHOD BLANK

Date Analyzed: 10/27/17

Time: 12:37

Canister:

Can Dilution Factor: 1.00

QC_Batch: 102717-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	0.74	0.80	4.05	2.36	J
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	
					QC	Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag
2037-26-5	Toluene-d8				97	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC
Laboratory ID: B10317

File Name: B10317B.D
Description: METHOD BLANK
Canister:
QC_Batch: 103117-MA1

Date Sampled:
Date Analyzed: 10/31/17
Can Dilution Factor: 1.00
Air Volume: 200 ml
Time: 13:06

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	0.83	0.80	4.05	2.66	J
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	90	70	130	

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B10237

File Name: B10207C
Description: METHOD BLANK
Canister:
QC_Batch: 102317-GCK

Date Sampled:
Date Analyzed: 10/23/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 14:03

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B10247

File Name: B10247B
Description: METHOD BLANK
Canister:
QC_Batch: 102417-GCK

Date Sampled:
Date Analyzed: 10/24/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 16:07

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B10257

File Name: B10257B
Description: METHOD BLANK
Canister:
QC_Batch: 102517-GCK

Date Sampled:
Date Analyzed: 10/25/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 13:25

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B10277

File Name: B10277E
Description: METHOD BLANK
Canister:
QC_Batch: 102717-GCK

Date Sampled:
Date Analyzed: 10/27/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 17:58

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B10317

File Name: B10317C
Description: METHOD BLANK
Canister:
QC_Batch: 103117-GCK

Date Sampled:
Date Analyzed: 10/31/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 11:49

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND
Total Petroleum Hydrocarbons:								
TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B11077

File Name: B11077B
Description: METHOD BLANK
Canister:
QC_Batch: 110717-GCK

Date Sampled:
Date Analyzed: 11/07/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 13:31

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B11097

File Name: B11097B
Description: METHOD BLANK
Canister:
QC_Batch: 110917-GCK

Date Sampled:
Date Analyzed: 11/09/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 16:34

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: LABQC

Laboratory Number: B10197

File Name: B10197A
Description: METHOD BLANK
Can/Tube#:
QC_Batch: 101917-GCO

Date Sampled:
Date Analyzed: 10/19/17
Can Dilution Factor: 1.00
Time: 11:34

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	100	300	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method:

ASTM D3416

SDG: LABQC
Laboratory Number: B10197

File Name: B10197A
Description: METHOD BLANK
Can/Tube#:
QC_Batch: 101917-GCL

Date Sampled:
Date Analyzed: 10/19/17
Dilution Factor: 1.00
Time: 9:31

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.20	0.60	ND	0.14	0.41	ND	

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 102617-MA1

Date: 10/26/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
75-01-4	Vinyl chloride	107		108		70	130	1	25	
75-35-4	1,1-Dichloroethene	109		112		70	130	3	25	
75-09-2	Dichloromethane	120		119		70	130	2	25	
75-34-3	1,1-Dichloroethane	104		104		70	130	0	25	
67-66-3	Chloroform	105		105		70	130	1	25	
71-55-6	1,1,1-Trichloroethane	99		98		70	130	1	25	
107-06-2	1,2-Dichloroethane	108		107		70	130	1	25	
71-43-2	Benzene	99		101		70	130	2	25	
56-23-5	Carbon tetrachloride	99		99		70	130	1	25	
79-01-6	Trichloroethene	110		112		70	130	2	25	
108-88-3	Toluene	101		107		70	130	6	25	
127-18-4	Tetrachloroethene	111		116		70	130	5	25	
100-41-4	Ethylbenzene	99		103		70	130	3	25	
1330-20-7	m,p-Xylenes	98		97		70	130	1	25	
95-47-6	o-Xylene	93		92		70	130	1	25	
108-67-8	1,3,5-Trimethylbenzene	71		72		70	130	1	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 102717-MA1

Date: 10/27/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	90		91		70	130	2	25	
75-35-4	1,1-Dichloroethene	97		104		70	130	7	25	
75-09-2	Dichloromethane	108		107		70	130	1	25	
75-34-3	1,1-Dichloroethane	97		97		70	130	0	25	
67-66-3	Chloroform	95		97		70	130	2	25	
71-55-6	1,1,1-Trichloroethane	99		95		70	130	3	25	
107-06-2	1,2-Dichloroethane	107		101		70	130	6	25	
71-43-2	Benzene	105		96		70	130	9	25	
56-23-5	Carbon tetrachloride	109		100		70	130	9	25	
79-01-6	Trichloroethene	110		112		70	130	2	25	
108-88-3	Toluene	110		110		70	130	0	25	
127-18-4	Tetrachloroethene	111		111		70	130	0	25	
100-41-4	Ethylbenzene	112		107		70	130	5	25	
1330-20-7	m,p-Xylenes	109		102		70	130	7	25	
95-47-6	o-Xylene	102		99		70	130	3	25	
108-67-8	1,3,5-Trimethylbenzene	79		74		70	130	6	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 103117-MA1

Date: 10/31/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	92		86		70	130	7	25	
75-35-4	1,1-Dichloroethene	100		97		70	130	4	25	
75-09-2	Dichloromethane	108		101		70	130	6	25	
75-34-3	1,1-Dichloroethane	98		93		70	130	5	25	
67-66-3	Chloroform	105		102		70	130	3	25	
71-55-6	1,1,1-Trichloroethane	106		103		70	130	3	25	
107-06-2	1,2-Dichloroethane	129		117		70	130	10	25	
71-43-2	Benzene	119		113		70	130	5	25	
56-23-5	Carbon tetrachloride	99		93		70	130	6	25	
79-01-6	Trichloroethene	124		117		70	130	5	25	
108-88-3	Toluene	128		123		70	130	4	25	
127-18-4	Tetrachloroethene	125		123		70	130	1	25	
100-41-4	Ethylbenzene	93		95		70	130	3	25	
1330-20-7	m,p-Xylenes	129		112		70	130	14	25	
95-47-6	o-Xylene	123		127		70	130	3	25	
108-67-8	1,3,5-Trimethylbenzene	99		106		70	130	6	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 102317-GCK

Date: 10/23/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
109-66-0	n-Pentane	93		94		70	130	1	25	
110-54-3	n-Hexane	87		86		70	130	1	25	
71-43-2	Benzene	90		89		70	130	0	25	
142-82-5	n-Heptane	105		106		70	130	0	25	
108-88-3	Toluene	97		98		70	130	1	25	
111-65-9	n-Octane	96		98		70	130	3	25	
108-38-3	m,p-xylene	117		117		70	130	0	25	
95-47-6	o-xylene	113		113		70	130	0	25	
108-67-8	1,3,5-Trimethylbenzene	123		126		70	130	3	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 102417-GCK

Date: 10/24/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
109-66-0	n-Pentane	95		92		70	130	2	25	
110-54-3	n-Hexane	97		87		70	130	10	25	
71-43-2	Benzene	88		85		70	130	3	25	
142-82-5	n-Heptane	102		99		70	130	2	25	
108-88-3	Toluene	100		103		70	130	3	25	
111-65-9	n-Octane	91		96		70	130	5	25	
108-38-3	m,p-xylene	110		121		70	130	11	25	
95-47-6	o-xylene	103		116		70	130	12	25	
108-67-8	1,3,5-Trimethylbenzene	116		129		70	130	13	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 102517-GCK

Date: 10/25/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
109-66-0	n-Pentane	89		95		70	130	6	25	
110-54-3	n-Hexane	93		93		70	130	0	25	
71-43-2	Benzene	88		93		70	130	5	25	
142-82-5	n-Heptane	97		102		70	130	5	25	
108-88-3	Toluene	81		97		70	130	16	25	
111-65-9	n-Octane	98		104		70	130	5	25	
108-38-3	m,p-xylene	114		126		70	130	11	25	
95-47-6	o-xylene	110		120		70	130	10	25	
108-67-8	1,3,5-Trimethylbenzene	110		127		70	130	17	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 102717-GCK

Date: 10/27/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
109-66-0	n-Pentane	96		90		70	130	6	25	
110-54-3	n-Hexane	89		88		70	130	1	25	
71-43-2	Benzene	93		99		70	130	6	25	
142-82-5	n-Heptane	109		109		70	130	0	25	
108-88-3	Toluene	102		108		70	130	6	25	
111-65-9	n-Octane	86		91		70	130	5	25	
108-38-3	m,p-xylene	113		109		70	130	4	25	
95-47-6	o-xylene	106		108		70	130	2	25	
108-67-8	1,3,5-Trimethylbenzene	116		109		70	130	7	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 103117-GCK

Date: 10/31/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
109-66-0	n-Pentane	121		123		70	130	2	25	
110-54-3	n-Hexane	90		87		70	130	2	25	
71-43-2	Benzene	93		92		70	130	1	25	
142-82-5	n-Heptane	105		104		70	130	1	25	
108-88-3	Toluene	105		100		70	130	5	25	
111-65-9	n-Octane	107		104		70	130	3	25	
108-38-3	m,p-xylene	119		118		70	130	1	25	
95-47-6	o-xylene	113		116		70	130	2	25	
108-67-8	1,3,5-Trimethylbenzene	110		112		70	130	2	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 110717-GCK

Date: 11/07/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate	
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %
109-66-0	n-Pentane	96		103		70	130	7	25
110-54-3	n-Hexane	88		86		70	130	2	25
71-43-2	Benzene	91		89		70	130	2	25
142-82-5	n-Heptane	101		103		70	130	2	25
108-88-3	Toluene	99		100		70	130	1	25
111-65-9	n-Octane	98		97		70	130	0	25
108-38-3	m,p-xylene	108		108		70	130	0	25
95-47-6	o-xylene	101		103		70	130	3	25
108-67-8	1,3,5-Trimethylbenzene	104		107		70	130	3	25

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 110917-GCK

Date: 11/09/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
109-66-0	n-Pentane	84		88		70	130	3	25	
110-54-3	n-Hexane	85		82		70	130	3	25	
71-43-2	Benzene	86		86		70	130	0	25	
142-82-5	n-Heptane	94		94		70	130	1	25	
108-88-3	Toluene	85		84		70	130	0	25	
111-65-9	n-Octane	94		92		70	130	2	25	
108-38-3	m,p-xylene	98		96		70	130	2	25	
95-47-6	o-xylene	98		95		70	130	3	25	
108-67-8	1,3,5-Trimethylbenzene	102		101		70	130	1	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL REPORT

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D 1945 GC/TCD

Analytical Method: D1945

QC_Batch: 101917-GCO

Date Analyzed: 10/19/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	Flag
		%		%		%	%	%	%	
124-38-9	Carbon Dioxide	106		103		70	130	3	25	

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D3416 Methane by GC/FID

Analytical Method: ASTM D3416

Date: 10/19/17

QC_Batch: 101917-GCL

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	Flag
		%		%		%	%	%	%	
74-82-8	Methane	86		87		70	130	0	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

Analytical Reports

EAS SDG Number 217566

Project Number: 17198

The following pages contain the certified Analytical Reports for the samples submitted in the Sample Delivery Group (SDG) and are in order of the EAS Lab ID number. All of the analytical methods used are modifications of the published methods. Procedural method modifications are listed in the method descriptions, and the QC modifications are in the QC Criteria table in the EAS Quality Manual.

The Analytical Report has columns for the method detection limit (MDL), the reporting limit (RL), and the Amount. The Amount is the concentration of the compound in the sample. The report usually has the results reported with two commonly used units. The MDL, RL, and Amount are adjusted for the canister dilution factor and any dilution caused by sample matrix effects.

DETECTION LIMITS

MDL: The MDL is initially determined from the standard deviation of seven replicate measurements, but the value in the report is set from a MDL verification sample run at a level near the calculated MDL.

RL: The reporting limit (RL) is usually the lowest concentration standard on the calibration curve, and represents the lowest concentration that can be measured that will meet all of the QC Criteria for the method.

DATA FLAGS

In the standard report, if a compound is not detected above the method detection limit, a "ND" is in the Amount column. The flag column is used for both the not detect flag and for any data flags. The not detect flag is either a "ND" or a "U". If the "U" flag is selected, the MDL for the compound is reported in the Amount column instead of "ND". Other flags are listed below:

B - This compound was detected in the batch method blank above the reporting limit.

E - This compound exceeds the calibration range for this sample volume.

J - The amount reported is estimated because it was below the RL and above the MDL

F - Higher detection limits because of matrix interference

UNITS

PPBV or PPMV: Parts-per-billion (or million) by volume is a mole (volume) ratio of the moles of analyte divided by the moles of air (gas). This is the primary unit used to report air or gas concentrations and is independent of temperature and pressure. It is different from the ppb unit used to report water or soil data, which is a mass ratio.

UG/M3 OR MG/M3: Micrograms (or milligrams) per cubic meter is a mass/volume ratio and does depend on temperature and pressure of the source at time of sample collection. The reported result was calculated based on 1 atm pressure and a temperature of 25C. The conversion from PPBV is: $UG/M3 = PPBV \times MW/24.46$ where 24.26 is the gas constant and MW is the Compounds Molecular Weight (sometimes called Formula Weight)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 01

File Name: 1756601A.D

Date Sampled: 10/10/17

Time: 11:11

Description: T-401

Date Analyzed: 10/26/17

Time: 14:31

Canister: 605

Can Dilution Factor: 1.20

QC_Batch: 102617-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.30	1.51	ND	1.48	7.46	ND	
74-87-3	Chloromethane	0.30	1.51	ND	0.62	3.12	ND	
76-14-2	Freon 114	0.30	1.51	ND	2.10	10.54	ND	
75-01-4	Vinyl chloride	0.30	1.51	ND	0.77	3.86	ND	
106-99-0	1,3-Butadiene	0.30	1.51	ND	0.66	3.34	ND	
74-83-9	Bromomethane	0.30	1.51	ND	1.16	5.85	ND	
75-00-3	Chloroethane	0.30	1.51	ND	0.79	3.98	ND	
64-17-5	Ethanol	1.50	4.50	ND	2.83	8.48	ND	
75-69-4	Trichlorofluoromethane	0.30	1.44	ND	1.69	8.09	ND	
67-64-1	Acetone	1.50	3.69	59.36	3.56	8.76	140.98	
67-63-0	2-propanol	1.50	3.44	ND	3.69	8.46	ND	
75-35-4	1,1-Dichloroethene	0.30	1.49	ND	1.19	5.89	ND	
76-13-1	Freon 113	0.30	1.44	ND	2.30	11.00	ND	
75-09-2	Dichloromethane	0.60	1.44	ND	2.08	5.01	ND	
75-15-0	Carbon disulfide	1.50	2.78	ND	4.67	8.66	ND	
156-60-5	trans-1,2-Dichloroethene	0.30	1.08	ND	1.19	4.29	ND	
1634-04-4	Methyl tert butyl ether	0.30	1.11	ND	1.08	3.98	ND	
75-34-3	1,1-Dichloroethane	0.30	1.50	ND	1.21	6.06	ND	
108-05-4	Vinyl acetate	0.30	1.32	ND	1.06	4.64	ND	
78-93-3	2-Butanone	1.20	3.05	11.45	3.54	9.00	33.75	
141-78-6	Ethyl acetate	0.60	1.31	ND	2.16	4.73	ND	
74-97-5	Bromochloromethane	0.30	0.80	ND	1.59	4.23	ND	
109-99-9	Tetrahydrofuran	0.60	1.51	ND	1.77	4.45	ND	
156-59-2	cis-1,2-Dichloroethene	0.60	1.61	ND	2.38	6.39	ND	
67-66-3	Chloroform	0.30	1.50	ND	1.46	7.34	ND	
71-55-6	1,1,1-Trichloroethane	0.30	1.33	ND	1.64	7.26	ND	
107-06-2	1,2-Dichloroethane	0.30	1.37	ND	1.21	5.54	ND	
110-82-7	Cyclohexane	0.30	1.15	ND	1.04	3.97	ND	
71-43-2	Benzene	0.30	1.52	3.46	0.96	4.87	11.05	
56-23-5	Carbon tetrachloride	0.30	1.42	ND	1.89	8.94	ND	
142-82-5	n-Heptane	1.50	3.64	ND	6.14	14.89	ND	
78-87-5	1,2-Dichloropropane	0.30	1.44	ND	1.39	6.67	ND	
123-91-1	1,4 Dioxane	1.20	2.45	ND	4.32	8.84	ND	
79-01-6	Trichloroethene	0.18	1.40	ND	0.97	7.51	ND	
75-27-4	Bromodichloromethane	0.30	0.61	ND	2.01	4.06	ND	
80-62-6	Methyl methacrylate	1.20	4.06	ND	4.91	16.60	ND	
108-10-1	4-Methyl-2-pentanone	1.20	4.54	ND	4.92	18.60	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.30	1.55	ND	1.36	7.05	ND	
108-88-3	Toluene	0.60	1.57	14.79	2.26	5.90	55.67	
10061-02-6	trans-1,3-Dichloropropene	0.30	1.56	ND	1.36	7.06	ND	
79-00-5	1,1,2-Trichloroethane	0.30	1.54	ND	1.64	8.41	ND	
591-78-6	2-Hexanone	1.50	4.25	ND	6.14	17.42	ND	
124-48-1	Dibromochloromethane	0.30	0.60	ND	2.55	5.10	ND	
106-93-4	1,2-Dibromoethane	0.30	0.73	ND	2.30	5.59	ND	
127-18-4	Tetrachloroethene	0.18	0.73	ND	1.22	4.95	ND	
108-90-7	Chlorobenzene	0.30	1.37	ND	1.38	6.28	ND	
100-41-4	Ethylbenzene	0.63	1.59	ND	2.75	6.88	ND	
1330-20-7	m,p-Xylenes	0.64	1.59	ND	2.76	6.90	ND	
100-42-5	Styrene	0.62	1.55	ND	2.65	6.62	ND	
75-25-2	Bromoform	0.30	0.40	ND	3.10	4.16	ND	
95-47-6	o-Xylene	0.62	1.55	ND	2.69	6.71	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.30	0.74	ND	2.04	5.09	ND	
622-96-8	4-Ethyltoluene	0.99	2.49	ND	4.89	12.22	ND	
108-67-8	1,3,5-Trimethylbenzene	0.62	1.55	ND	3.05	7.62	ND	
95-63-6	1,2,4-Trimethylbenzene	0.61	1.52	ND	3.00	7.49	ND	
541-73-1	1,3-Dichlorobenzene	0.60	1.11	ND	3.61	6.67	ND	
100-44-7	Benzyl chloride	0.60	3.64	ND	3.11	18.82	ND	
106-46-7	1,4-Dichlorobenzene	0.60	1.04	ND	3.61	6.24	ND	
95-50-1	1,2-Dichlorobenzene	0.60	0.97	ND	3.61	5.84	ND	
120-82-1	1,2,4-Trichlorobenzene	1.50	2.06	ND	11.12	15.31	ND	
91-20-3	Naphthalene	0.31	0.48	0.37	1.60	2.52	1.93	J
87-68-3	Hexachlorobutadiene	1.50	1.59	ND	15.99	16.95	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	93	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 01

File Name: 1756601A
Description: T - 401
Canister: 605
QC_Batch: 103117-GCK

Date Sampled: 10/10/17 Time: 11:11
Date Analyzed: 10/31/17 Time: 16:50
Can Factor: 1.20
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.20	3.60	21.00	1.38	4.15	24.18	
74-86-2	Acetylene	1.20	3.60	ND	1.28	3.84	ND	ND
74-84-0	Ethane	1.20	3.60	21.98	1.48	4.44	27.12	
115-07-1	Propene	0.80	2.40	ND	1.38	4.14	ND	ND
74-98-6	Propane	0.80	2.40	27.27	1.45	4.34	49.28	
75-28-5	i-Butane	0.60	1.80	1.10	1.43	4.29	2.62	J
106-98-9	1-Butene	0.60	1.80	ND	1.38	4.14	ND	ND
106-97-8	n-Butane	0.60	1.80	6.94	1.43	4.29	16.53	
624-64-6	t-2-Butene	0.60	1.80	ND	1.38	4.14	ND	ND
590-18-1	c-2-Butene	0.60	1.80	ND	1.38	4.14	ND	ND
78-78-4	i-Pentane	0.48	1.44	0.62	1.42	4.26	1.84	J
109-67-1	1-Pentene	0.48	1.44	ND	1.38	4.14	ND	ND
109-66-0	n-Pentane	0.48	1.44	0.60	1.42	4.26	1.78	J
78-79-5	Isoprene	0.48	1.44	ND	1.34	4.02	ND	ND
646-04-8	t-2-Pentene	0.48	1.44	ND	1.38	4.14	ND	ND
627-20-3	c-2-Pentene	0.48	1.44	ND	1.38	4.14	ND	ND
75-83-2	2,2-Dimethylbutane	0.40	1.20	ND	1.41	4.24	ND	ND
287-92-3	Cyclopentane	0.48	1.44	ND	1.38	4.14	ND	ND
79-29-8	2,3-Dimethylbutane	0.40	1.20	ND	1.41	4.24	ND	ND
107-83-5	2-Methylpentane	0.40	1.20	ND	1.41	4.24	ND	ND
96-14-0	3-Methylpentane	0.40	1.20	ND	1.41	4.24	ND	ND
110-54-3	n-Hexane	0.40	1.20	0.52	1.41	4.24	1.82	J
96-37-7	Methylcyclopentane	0.40	1.20	ND	1.38	4.14	ND	ND
108-08-7	2,4-Dimethylpentane	0.34	1.03	ND	1.41	4.22	ND	ND
71-43-2	Benzene	0.40	1.20	2.06	1.28	3.84	6.60	
110-82-7	Cyclohexane	0.40	1.20	ND	1.38	4.14	ND	ND
591-76-4	2-Methylhexane	0.34	1.03	ND	1.41	4.22	ND	ND
565-59-3	2,3-Dimethylpentane	0.34	1.03	ND	1.41	4.22	ND	ND
589-34-4	3-Methylhexane	0.34	1.03	ND	1.41	4.22	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.30	0.90	0.86	1.40	4.21	4.04	J
142-82-5	n-Heptane	0.34	1.03	0.59	1.41	4.22	2.44	J
108-87-2	Methylcyclohexane	0.34	1.03	ND	1.38	4.14	ND	ND
592-13-2	2,5-Dimethylhexane	0.30	0.90	ND	1.40	4.21	ND	ND
589-43-5	2,4-Dimethylhexane	0.30	0.90	0.38	1.40	4.21	1.77	J
565-75-3	2,3,4-Trimethylpentane	0.30	0.90	ND	1.40	4.21	ND	ND
108-88-3	Toluene	0.34	1.03	21.91	1.29	3.88	82.71	
584-94-1	2,3-Dimethylhexane	0.30	0.90	0.81	1.40	4.21	3.80	J

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.30	0.90	ND	1.40	4.21	ND	ND
589-81-1	3-Methylheptane	0.30	0.90	ND	1.40	4.21	ND	ND
111-65-9	n-Octane	0.30	0.90	ND	1.40	4.21	ND	ND
100-41-4	Ethylbenzene	0.30	0.90	0.41	1.31	3.92	1.78	J
108-38-3	m,p-xylene	0.30	0.90	0.61	1.31	3.92	2.64	J
100-42-5	Styrene	0.30	0.90	ND	1.28	3.84	ND	ND
95-47-6	o-xylene	0.30	0.90	0.43	1.31	3.92	1.89	J
111-84-2	n-Nonane	0.27	0.80	ND	1.40	4.21	ND	ND
98-82-8	i-Propylbenzene	0.27	0.80	ND	1.31	3.94	ND	ND
103-65-1	n-propylbenzene	0.27	0.80	ND	1.31	3.94	ND	ND
80-56-8	a-Pinene	0.24	0.72	ND	1.34	4.02	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.80	ND	1.31	3.94	ND	ND
622-96-8	4-Ethyltoluene	0.27	0.80	ND	1.31	3.94	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.27	0.80	0.72	1.31	3.94	3.55	J
611-14-3	2-Ethyltoluene	0.27	0.80	ND	1.31	3.94	ND	ND
127-91-3	b-Pinene	0.24	0.72	ND	1.34	4.02	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.80	0.48	1.31	3.94	2.34	J
124-18-5	n-Decane	0.24	0.72	ND	1.40	4.20	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.27	0.80	ND	1.31	3.94	ND	ND
5989-27-5	d-Limonene	0.24	0.72	ND	1.34	4.02	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.72	ND	1.32	3.96	ND	ND
105-05-5	1,4-Diethylbenzene	0.24	0.72	ND	1.32	3.96	ND	ND
104-51-8	n-Butylbenzene	0.24	0.72	ND	1.32	3.96	ND	ND
1120-21-4	Undecane	0.22	0.65	ND	1.40	4.19	ND	ND
112-40-3	Dodecane	0.20	0.60	ND	1.40	4.19	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.00	27.00	104.15	31.80	95.39	367.92
TNMHC - C1	Total Non-Methane Hydrocarbons	54.00	162.00	624.87	35.41	106.23	409.75

ANALYTICAL REPORT

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 01

File Name: 756601PA

Date Sampled: 10/10/17

Time: 11:11

Description: T - 401

Date Analyzed: 10/19/17

Time: 12:15

Can/Tube#: 605

Can Dilution Factor: 1.20

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	120	360	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 01

File Name: 1756601A
Description: T - 401
Can/Tube#: 605
QC_Batch: 101917-GCL

Date Sampled: 10/10/17 Time: 11:11
Date Analyzed: 10/19/17 Time: 9:38
Dilution Factor: 1.20

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.72	1.90	0.16	0.49	1.28	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 02

File Name: 1756602B.D

Date Sampled: 10/10/17

Time: 11:16

Description: T-402

Date Analyzed: 10/26/17

Time: 16:19

Canister: 509

Can Dilution Factor: 1.23

QC_Batch: 102617-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.31	1.55	ND	1.52	7.64	ND	
74-87-3	Chloromethane	0.31	1.55	ND	0.63	3.19	ND	
76-14-2	Freon 114	0.31	1.55	ND	2.15	10.81	ND	
75-01-4	Vinyl chloride	0.31	1.55	ND	0.79	3.95	ND	
106-99-0	1,3-Butadiene	0.31	1.55	ND	0.68	3.42	ND	
74-83-9	Bromomethane	0.31	1.55	ND	1.19	6.00	ND	
75-00-3	Chloroethane	0.31	1.55	ND	0.81	4.08	ND	
64-17-5	Ethanol	1.54	4.61	ND	2.90	8.69	ND	
75-69-4	Trichlorofluoromethane	0.31	1.48	ND	1.73	8.29	ND	
67-64-1	Acetone	1.54	3.78	32.82	3.65	8.98	77.95	
67-63-0	2-propanol	1.54	3.53	ND	3.78	8.67	ND	
75-35-4	1,1-Dichloroethene	0.31	1.53	ND	1.22	6.04	ND	
76-13-1	Freon 113	0.31	1.47	ND	2.36	11.27	ND	
75-09-2	Dichloromethane	0.62	1.48	ND	2.13	5.14	ND	
75-15-0	Carbon disulfide	1.54	2.85	ND	4.78	8.88	ND	
156-60-5	trans-1,2-Dichloroethene	0.31	1.11	ND	1.22	4.40	ND	
1634-04-4	Methyl tert butyl ether	0.31	1.13	ND	1.11	4.08	ND	
75-34-3	1,1-Dichloroethane	0.31	1.53	ND	1.24	6.21	ND	
108-05-4	Vinyl acetate	0.31	1.35	ND	1.08	4.76	ND	
78-93-3	2-Butanone	1.23	3.13	8.79	3.63	9.23	25.91	
141-78-6	Ethyl acetate	0.62	1.35	ND	2.21	4.85	ND	
74-97-5	Bromochloromethane	0.31	0.82	ND	1.63	4.33	ND	
109-99-9	Tetrahydrofuran	0.62	1.55	ND	1.81	4.56	ND	
156-59-2	cis-1,2-Dichloroethene	0.62	1.65	ND	2.44	6.55	ND	
67-66-3	Chloroform	0.31	1.54	ND	1.50	7.53	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.37	ND	1.68	7.45	ND	
107-06-2	1,2-Dichloroethane	0.31	1.40	ND	1.24	5.68	ND	
110-82-7	Cyclohexane	0.31	1.18	ND	1.06	4.06	ND	
71-43-2	Benzene	0.31	1.56	3.64	0.98	4.99	11.63	
56-23-5	Carbon tetrachloride	0.31	1.46	ND	1.93	9.16	ND	
142-82-5	n-Heptane	1.54	3.73	ND	6.30	15.27	ND	
78-87-5	1,2-Dichloropropane	0.31	1.48	ND	1.42	6.84	ND	
123-91-1	1,4 Dioxane	1.23	2.52	ND	4.43	9.06	ND	
79-01-6	Trichloroethene	0.18	1.43	ND	0.99	7.69	ND	
75-27-4	Bromodichloromethane	0.31	0.62	ND	2.06	4.16	ND	
80-62-6	Methyl methacrylate	1.23	4.16	ND	5.03	17.01	ND	
108-10-1	4-Methyl-2-pentanone	1.23	4.66	ND	5.04	19.07	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.31	1.59	ND	1.40	7.23	ND	
108-88-3	Toluene	0.62	1.61	ND	2.32	6.04	ND	
10061-02-6	trans-1,3-Dichloropropene	0.31	1.59	ND	1.40	7.24	ND	
79-00-5	1,1,2-Trichloroethane	0.31	1.58	ND	1.68	8.62	ND	
591-78-6	2-Hexanone	1.54	4.36	ND	6.30	17.86	ND	
124-48-1	Dibromochloromethane	0.31	0.61	ND	2.62	5.23	ND	
106-93-4	1,2-Dibromoethane	0.31	0.75	ND	2.36	5.73	ND	
127-18-4	Tetrachloroethene	0.18	0.75	ND	1.25	5.07	ND	
108-90-7	Chlorobenzene	0.31	1.40	ND	1.42	6.44	ND	
100-41-4	Ethylbenzene	0.65	1.63	ND	2.82	7.06	ND	
1330-20-7	m,p-Xylenes	0.65	1.63	ND	2.83	7.07	ND	
100-42-5	Styrene	0.64	1.59	ND	2.71	6.78	ND	
75-25-2	Bromoform	0.31	0.41	ND	3.18	4.26	ND	
95-47-6	o-Xylene	0.63	1.58	ND	2.75	6.88	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.30	0.76	ND	2.09	5.22	ND	
622-96-8	4-Ethyltoluene	1.02	2.55	ND	5.01	12.52	ND	
108-67-8	1,3,5-Trimethylbenzene	0.64	1.59	ND	3.12	7.81	ND	
95-63-6	1,2,4-Trimethylbenzene	0.63	1.56	ND	3.07	7.68	ND	
541-73-1	1,3-Dichlorobenzene	0.62	1.14	ND	3.70	6.84	ND	
100-44-7	Benzyl chloride	0.62	3.73	ND	3.18	19.29	ND	
106-46-7	1,4-Dichlorobenzene	0.62	1.06	ND	3.70	6.39	ND	
95-50-1	1,2-Dichlorobenzene	0.62	1.00	ND	3.70	5.99	ND	
120-82-1	1,2,4-Trichlorobenzene	1.54	2.12	ND	11.40	15.69	ND	
91-20-3	Naphthalene	0.31	0.49	ND	1.64	2.58	ND	
87-68-3	Hexachlorobutadiene	1.54	1.63	ND	16.39	17.38	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				95	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 02

File Name: 1756602A
Description: T - 402
Canister: 509
QC_Batch: 103117-GCK

Date Sampled: 10/10/17 Time: 11:16
Date Analyzed: 10/31/17 Time: 17:52
Can Factor: 1.23
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.23	3.69	11.37	1.42	4.25	13.09	
74-86-2	Acetylene	1.23	3.69	11.39	1.31	3.93	12.14	
74-84-0	Ethane	1.23	3.69	25.88	1.52	4.55	31.93	
115-07-1	Propene	0.82	2.46	ND	1.41	4.24	ND	ND
74-98-6	Propane	0.82	2.46	33.33	1.48	4.45	60.23	
75-28-5	i-Butane	0.62	1.85	ND	1.46	4.39	ND	ND
106-98-9	1-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
106-97-8	n-Butane	0.62	1.85	2.79	1.46	4.39	6.65	
624-64-6	t-2-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
590-18-1	c-2-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
78-78-4	i-Pentane	0.49	1.48	ND	1.46	4.37	ND	ND
109-67-1	1-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
109-66-0	n-Pentane	0.49	1.48	1.39	1.45	4.36	4.10	J
78-79-5	Isoprene	0.49	1.48	ND	1.37	4.12	ND	ND
646-04-8	t-2-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
627-20-3	c-2-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.23	ND	1.45	4.35	ND	ND
287-92-3	Cyclopentane	0.49	1.48	ND	1.41	4.24	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.23	ND	1.45	4.35	ND	ND
107-83-5	2-Methylpentane	0.41	1.23	ND	1.45	4.35	ND	ND
96-14-0	3-Methylpentane	0.41	1.23	ND	1.45	4.35	ND	ND
110-54-3	n-Hexane	0.41	1.23	ND	1.45	4.35	ND	ND
96-37-7	Methylcyclopentane	0.41	1.23	ND	1.41	4.24	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.05	ND	1.44	4.33	ND	ND
71-43-2	Benzene	0.41	1.23	3.54	1.31	3.94	11.33	
110-82-7	Cyclohexane	0.41	1.23	ND	1.41	4.24	ND	ND
591-76-4	2-Methylhexane	0.35	1.05	ND	1.44	4.33	ND	ND
565-59-3	2,3-Dimethylpentane	0.35	1.05	ND	1.44	4.33	ND	ND
589-34-4	3-Methylhexane	0.35	1.05	ND	1.44	4.33	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.31	0.92	0.60	1.44	4.32	2.83	J
142-82-5	n-Heptane	0.35	1.05	ND	1.44	4.33	ND	ND
108-87-2	Methylcyclohexane	0.35	1.05	ND	1.41	4.24	ND	ND
592-13-2	2,5-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND
589-43-5	2,4-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.31	0.92	ND	1.44	4.32	ND	ND
108-88-3	Toluene	0.35	1.05	1.31	1.33	3.98	4.96	
584-94-1	2,3-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.92	ND	1.44	4.32	ND	ND
589-81-1	3-Methylheptane	0.31	0.92	ND	1.44	4.32	ND	ND
111-65-9	n-Octane	0.31	0.92	ND	1.44	4.32	ND	ND
100-41-4	Ethylbenzene	0.31	0.92	ND	1.34	4.02	ND	ND
108-38-3	m,p-xylene	0.31	0.92	ND	1.34	4.02	ND	ND
100-42-5	Styrene	0.31	0.92	ND	1.31	3.94	ND	ND
95-47-6	o-xylene	0.31	0.92	ND	1.34	4.02	ND	ND
111-84-2	n-Nonane	0.27	0.82	ND	1.44	4.31	ND	ND
98-82-8	i-Propylbenzene	0.27	0.82	ND	1.35	4.04	ND	ND
103-65-1	n-propylbenzene	0.27	0.82	ND	1.35	4.04	ND	ND
80-56-8	a-Pinene	0.25	0.74	ND	1.37	4.12	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.82	ND	1.35	4.04	ND	ND
622-96-8	4-Ethyltoluene	0.27	0.82	ND	1.35	4.04	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.27	0.82	ND	1.35	4.04	ND	ND
611-14-3	2-Ethyltoluene	0.27	0.82	ND	1.35	4.04	ND	ND
127-91-3	b-Pinene	0.25	0.74	ND	1.37	4.12	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.82	2.65	1.35	4.04	13.06	
124-18-5	n-Decane	0.25	0.74	ND	1.43	4.30	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.27	0.82	1.34	1.35	4.04	6.58	
5989-27-5	d-Limonene	0.25	0.74	ND	1.37	4.12	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.74	ND	1.35	4.06	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.74	ND	1.35	4.06	ND	ND
104-51-8	n-Butylbenzene	0.25	0.74	ND	1.35	4.06	ND	ND
1120-21-4	Undecane	0.22	0.67	0.38	1.43	4.30	2.42	J
112-40-3	Dodecane	0.21	0.62	0.69	1.43	4.29	4.82	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.23	27.68	99.21	32.59	97.77	350.49	
TNMHC - C1	Total Non-Methane Hydrocarbons	55.35	166.05	595.26	36.30	108.89	390.33	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 02

File Name: 756602PA

Date Sampled: 10/10/17

Time: 11:16

Description: T - 402

Date Analyzed: 10/19/17

Time: 12:23

Can/Tube#: 509

Can Dilution Factor: 1.23

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	123	369	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 02

File Name: 1756602A

Description: T - 402

Can/Tube#: 509

QC_Batch: 101917-GCL

Date Sampled: 10/10/17

Time: 11:16

Date Analyzed: 10/19/17

Time: 9:42

Dilution Factor: 1.23

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.74	1.89	0.17	0.50	1.28	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 03

File Name: 1756603A.D

Date Sampled: 10/10/17

Time: 12:11

Description: T-403

Date Analyzed: 10/26/17

Time: 15:44

Canister: 776

Can Dilution Factor: 1.27

QC_Batch: 102617-MA1

Air Volume: 200 ml

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-71-8	Dichlorodifluoromethane	0.32	1.60	ND	1.57	7.89	ND	
74-87-3	Chloromethane	0.32	1.60	ND	0.66	3.30	ND	
76-14-2	Freon 114	0.32	1.60	ND	2.22	11.16	ND	
75-01-4	Vinyl chloride	0.32	1.60	ND	0.81	4.08	ND	
106-99-0	1,3-Butadiene	0.32	1.60	ND	0.70	3.53	ND	
74-83-9	Bromomethane	0.32	1.60	ND	1.23	6.20	ND	
75-00-3	Chloroethane	0.32	1.60	ND	0.84	4.21	ND	
64-17-5	Ethanol	1.59	4.76	ND	2.99	8.98	ND	
75-69-4	Trichlorofluoromethane	0.32	1.52	ND	1.78	8.56	ND	
67-64-1	Acetone	1.59	3.91	643.94	3.77	9.28	1,529.43	E
67-63-0	2-propanol	1.59	3.64	6.91	3.90	8.95	16.97	
75-35-4	1,1-Dichloroethene	0.32	1.57	ND	1.26	6.24	ND	
76-13-1	Freon 113	0.32	1.52	ND	2.43	11.64	ND	
75-09-2	Dichloromethane	0.64	1.53	ND	2.20	5.31	ND	
75-15-0	Carbon disulfide	1.59	2.95	79.68	4.94	9.17	247.88	
156-60-5	trans-1,2-Dichloroethene	0.32	1.15	ND	1.26	4.54	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.17	ND	1.14	4.22	ND	
75-34-3	1,1-Dichloroethane	0.32	1.58	ND	1.28	6.41	ND	
108-05-4	Vinyl acetate	0.32	1.39	ND	1.12	4.91	ND	
78-93-3	2-Butanone	1.27	3.23	217.51	3.74	9.53	641.09	E
141-78-6	Ethyl acetate	0.64	1.39	ND	2.29	5.01	ND	
74-97-5	Bromochloromethane	0.32	0.85	ND	1.68	4.47	ND	
109-99-9	Tetrahydrofuran	0.64	1.60	ND	1.87	4.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.64	1.71	ND	2.52	6.77	ND	
67-66-3	Chloroform	0.32	1.59	ND	1.55	7.77	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.41	ND	1.73	7.69	ND	
107-06-2	1,2-Dichloroethane	0.32	1.45	ND	1.28	5.86	ND	
110-82-7	Cyclohexane	0.32	1.22	ND	1.10	4.20	ND	
71-43-2	Benzene	0.32	1.61	17.87	1.01	5.15	57.04	
56-23-5	Carbon tetrachloride	0.32	1.50	ND	2.00	9.46	ND	
142-82-5	n-Heptane	1.59	3.85	ND	6.50	15.76	ND	
78-87-5	1,2-Dichloropropane	0.32	1.53	ND	1.47	7.06	ND	
123-91-1	1,4 Dioxane	1.27	2.60	ND	4.57	9.35	ND	
79-01-6	Trichloroethene	0.19	1.48	ND	1.02	7.94	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-27-4	Bromodichloromethane	0.32	0.64	ND	2.13	4.29	ND	
80-62-6	Methyl methacrylate	1.27	4.29	ND	5.20	17.57	ND	
108-10-1	4-Methyl-2-pentanone	1.27	4.81	1.84	5.20	19.69	7.52	J
10061-01-5	cis-1,3-Dichloropropene	0.32	1.65	ND	1.44	7.47	ND	
108-88-3	Toluene	0.64	1.66	1.88	2.39	6.24	7.08	
10061-02-6	trans-1,3-Dichloropropene	0.32	1.65	ND	1.44	7.47	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.63	ND	1.73	8.90	ND	
591-78-6	2-Hexanone	1.59	4.50	ND	6.50	18.44	ND	
124-48-1	Dibromochloromethane	0.32	0.63	ND	2.70	5.40	ND	
106-93-4	1,2-Dibromoethane	0.32	0.77	ND	2.44	5.92	ND	
127-18-4	Tetrachloroethene	0.19	0.77	ND	1.29	5.24	ND	
108-90-7	Chlorobenzene	0.32	1.44	ND	1.46	6.65	ND	
100-41-4	Ethylbenzene	0.67	1.68	2.46	2.91	7.29	10.70	
1330-20-7	m,p-Xylenes	0.67	1.68	ND	2.92	7.30	ND	
100-42-5	Styrene	0.66	1.64	ND	2.80	7.00	ND	
75-25-2	Bromoform	0.32	0.43	ND	3.28	4.40	ND	
95-47-6	o-Xylene	0.65	1.64	ND	2.84	7.10	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.79	ND	2.16	5.39	ND	
622-96-8	4-Ethyltoluene	1.05	2.63	ND	5.17	12.93	ND	
108-67-8	1,3,5-Trimethylbenzene	0.66	1.64	ND	3.22	8.06	ND	
95-63-6	1,2,4-Trimethylbenzene	0.65	1.61	ND	3.17	7.93	ND	
541-73-1	1,3-Dichlorobenzene	0.64	1.17	ND	3.82	7.06	ND	
100-44-7	Benzyl chloride	0.64	3.85	ND	3.29	19.92	ND	
106-46-7	1,4-Dichlorobenzene	0.64	1.10	ND	3.82	6.60	ND	
95-50-1	1,2-Dichlorobenzene	0.64	1.03	ND	3.82	6.18	ND	
120-82-1	1,2,4-Trichlorobenzene	1.59	2.18	ND	11.77	16.20	ND	
91-20-3	Naphthalene	0.32	0.51	0.86	1.70	2.66	4.48	
87-68-3	Hexachlorobutadiene	1.59	1.68	ND	16.92	17.94	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	98	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566

Laboratory Number: 03

File Name: 1756603A
Description: T - 403
Canister: 776
QC_Batch: 110717-GCK

Date Sampled: 10/10/17 Time: 12:11
Date Analyzed: 11/07/17 Time: 16:22
Can Factor: 1.27
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.27	3.81	22.71	1.46	4.39	26.16	
74-86-2	Acetylene	1.27	3.81	51.78	1.35	4.06	55.17	
74-84-0	Ethane	1.27	3.81	53.54	1.57	4.70	66.04	
115-07-1	Propene	0.85	2.54	20.63	1.46	4.38	35.59	
74-98-6	Propane	0.85	2.54	24.78	1.53	4.59	44.78	
75-28-5	i-Butane	0.64	1.91	2.29	1.51	4.54	5.44	
106-98-9	1-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
106-97-8	n-Butane	0.64	1.91	8.26	1.51	4.54	19.67	
624-64-6	t-2-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
590-18-1	c-2-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
78-78-4	i-Pentane	0.51	1.52	1.52	1.50	4.51	4.49	J
109-67-1	1-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
109-66-0	n-Pentane	0.51	1.52	2.75	1.50	4.50	8.11	
78-79-5	Isoprene	0.51	1.52	ND	1.42	4.25	ND	ND
646-04-8	t-2-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
627-20-3	c-2-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.27	ND	1.50	4.49	ND	ND
287-92-3	Cyclopentane	0.51	1.52	ND	1.46	4.38	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.27	ND	1.50	4.49	ND	ND
107-83-5	2-Methylpentane	0.42	1.27	ND	1.50	4.49	ND	ND
96-14-0	3-Methylpentane	0.42	1.27	ND	1.50	4.49	ND	ND
110-54-3	n-Hexane	0.42	1.27	1.07	1.50	4.49	3.78	J
96-37-7	Methylcyclopentane	0.42	1.27	ND	1.46	4.38	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.09	ND	1.49	4.47	ND	ND
71-43-2	Benzene	0.42	1.27	23.38	1.36	4.07	74.84	
110-82-7	Cyclohexane	0.42	1.27	ND	1.46	4.38	ND	ND
591-76-4	2-Methylhexane	0.36	1.09	17.00	1.49	4.47	69.80	
565-59-3	2,3-Dimethylpentane	0.36	1.09	1.50	1.49	4.47	6.18	
589-34-4	3-Methylhexane	0.36	1.09	9.31	1.49	4.47	38.24	
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	0.73	1.49	4.46	3.42	J
142-82-5	n-Heptane	0.36	1.09	ND	1.49	4.47	ND	ND
108-87-2	Methylcyclohexane	0.36	1.09	ND	1.46	4.38	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.95	ND	1.49	4.46	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.95	1.18	1.49	4.46	5.53	
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	0.48	1.49	4.46	2.24	J
108-88-3	Toluene	0.36	1.09	3.24	1.37	4.11	12.22	
584-94-1	2,3-Dimethylhexane	0.32	0.95	1.91	1.49	4.46	8.92	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	0.69	1.49	4.46	3.21	J
589-81-1	3-Methylheptane	0.32	0.95	0.78	1.49	4.46	3.64	J
111-65-9	n-Octane	0.32	0.95	0.42	1.49	4.46	1.97	J
100-41-4	Ethylbenzene	0.32	0.95	5.40	1.38	4.15	23.52	
108-38-3	m,p-xylene	0.32	0.95	4.54	1.38	4.15	19.74	
100-42-5	Styrene	0.32	0.95	5.98	1.36	4.07	25.52	
95-47-6	o-xylene	0.32	0.95	8.17	1.38	4.15	35.55	
111-84-2	n-Nonane	0.28	0.85	ND	1.48	4.45	ND	ND
98-82-8	i-Propylbenzene	0.28	0.85	5.57	1.39	4.17	27.45	
103-65-1	n-propylbenzene	0.28	0.85	6.25	1.39	4.17	30.80	
80-56-8	a-Pinene	0.25	0.76	ND	1.42	4.25	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.85	1.38	1.39	4.17	6.80	
622-96-8	4-Ethyltoluene	0.28	0.85	1.50	1.39	4.17	7.37	
108-67-8	1,3,5-Trimethylbenzene	0.28	0.85	1.71	1.39	4.17	8.45	
611-14-3	2-Ethyltoluene	0.28	0.85	1.92	1.39	4.17	9.45	
127-91-3	b-Pinene	0.25	0.76	ND	1.42	4.25	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.85	2.72	1.39	4.17	13.42	
124-18-5	n-Decane	0.25	0.76	2.24	1.48	4.44	13.09	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.85	3.14	1.39	4.17	15.48	
5989-27-5	d-Limonene	0.25	0.76	ND	1.42	4.25	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.76	3.31	1.40	4.19	18.23	
105-05-5	1,4-Diethylbenzene	0.25	0.76	2.01	1.40	4.19	11.04	
104-51-8	n-Butylbenzene	0.25	0.76	1.37	1.40	4.19	7.55	
1120-21-4	Undecane	0.23	0.69	2.02	1.48	4.44	12.97	
112-40-3	Dodecane	0.21	0.64	1.51	1.48	4.43	10.56	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.53	28.58	978.42	33.65	100.95	3,456.54
TNMHC - C1	Total Non-Methane Hydrocarbons	57.15	171.45	5,870.51	37.48	112.43	3,849.51

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 03

File Name: 756603PA

Date Sampled: 10/10/17

Time: 12:11

Description: T - 403

Date Analyzed: 10/19/17

Time: 13:59

Can/Tube#: 776

Can Dilution Factor: 1.27

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.07	127	381	666	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 03

File Name: 1756603A

Description: T - 403

Can/Tube#: 776

QC_Batch: 101917-GCL

Date Sampled: 10/10/17

Time: 12:11

Date Analyzed: 10/19/17

Time: 9:45

Dilution Factor: 1.27

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.76	7.89	0.17	0.51	5.33	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 04

File Name: 1756604B.D

Date Sampled: 10/10/17

Time: 12:16

Description: T-404

Date Analyzed: 10/26/17

Time: 17:31

Canister: 659

Can Dilution Factor: 1.27

QC_Batch: 102617-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.60	ND	1.57	7.89	ND	
74-87-3	Chloromethane	0.32	1.60	ND	0.66	3.30	ND	
76-14-2	Freon 114	0.32	1.60	ND	2.22	11.16	ND	
75-01-4	Vinyl chloride	0.32	1.60	ND	0.81	4.08	ND	
106-99-0	1,3-Butadiene	0.32	1.60	ND	0.70	3.53	ND	
74-83-9	Bromomethane	0.32	1.60	ND	1.23	6.20	ND	
75-00-3	Chloroethane	0.32	1.60	ND	0.84	4.21	ND	
64-17-5	Ethanol	1.59	4.76	ND	2.99	8.98	ND	
75-69-4	Trichlorofluoromethane	0.32	1.52	ND	1.78	8.56	ND	
67-64-1	Acetone	1.59	3.91	748.70	3.77	9.28	1,778.23	E
67-63-0	2-propanol	1.59	3.64	15.25	3.90	8.95	37.46	
75-35-4	1,1-Dichloroethene	0.32	1.57	ND	1.26	6.24	ND	
76-13-1	Freon 113	0.32	1.52	ND	2.43	11.64	ND	
75-09-2	Dichloromethane	0.64	1.53	ND	2.20	5.31	ND	
75-15-0	Carbon disulfide	1.59	2.95	90.19	4.94	9.17	280.58	
156-60-5	trans-1,2-Dichloroethene	0.32	1.15	ND	1.26	4.54	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.17	ND	1.14	4.22	ND	
75-34-3	1,1-Dichloroethane	0.32	1.58	ND	1.28	6.41	ND	
108-05-4	Vinyl acetate	0.32	1.39	ND	1.12	4.91	ND	
78-93-3	2-Butanone	1.27	3.23	232.26	3.74	9.53	684.56	E
141-78-6	Ethyl acetate	0.64	1.39	ND	2.29	5.01	ND	
74-97-5	Bromochloromethane	0.32	0.85	ND	1.68	4.47	ND	
109-99-9	Tetrahydrofuran	0.64	1.60	ND	1.87	4.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.64	1.71	ND	2.52	6.77	ND	
67-66-3	Chloroform	0.32	1.59	ND	1.55	7.77	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.41	ND	1.73	7.69	ND	
107-06-2	1,2-Dichloroethane	0.32	1.45	ND	1.28	5.86	ND	
110-82-7	Cyclohexane	0.32	1.22	ND	1.10	4.20	ND	
71-43-2	Benzene	0.32	1.61	22.67	1.01	5.15	72.37	
56-23-5	Carbon tetrachloride	0.32	1.50	ND	2.00	9.46	ND	
142-82-5	n-Heptane	1.59	3.85	ND	6.50	15.76	ND	
78-87-5	1,2-Dichloropropane	0.32	1.53	ND	1.47	7.06	ND	
123-91-1	1,4 Dioxane	1.27	2.60	ND	4.57	9.35	ND	
79-01-6	Trichloroethene	0.19	1.48	ND	1.02	7.94	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	0.32	0.64	ND	2.13	4.29	ND	
80-62-6	Methyl methacrylate	1.27	4.29	ND	5.20	17.57	ND	
108-10-1	4-Methyl-2-pentanone	1.27	4.81	1.73	5.20	19.69	7.07	J
10061-01-5	cis-1,3-Dichloropropene	0.32	1.65	ND	1.44	7.47	ND	
108-88-3	Toluene	0.64	1.66	1.96	2.39	6.24	7.38	
10061-02-6	trans-1,3-Dichloropropene	0.32	1.65	ND	1.44	7.47	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.63	ND	1.73	8.90	ND	
591-78-6	2-Hexanone	1.59	4.50	ND	6.50	18.44	ND	
124-48-1	Dibromochloromethane	0.32	0.63	ND	2.70	5.40	ND	
106-93-4	1,2-Dibromoethane	0.32	0.77	ND	2.44	5.92	ND	
127-18-4	Tetrachloroethene	0.19	0.77	ND	1.29	5.24	ND	
108-90-7	Chlorobenzene	0.32	1.44	ND	1.46	6.65	ND	
100-41-4	Ethylbenzene	0.67	1.68	2.63	2.91	7.29	11.40	
1330-20-7	m,p-Xylenes	0.67	1.68	0.70	2.92	7.30	3.02	J
100-42-5	Styrene	0.66	1.64	ND	2.80	7.00	ND	
75-25-2	Bromoform	0.32	0.43	ND	3.28	4.40	ND	
95-47-6	o-Xylene	0.65	1.64	ND	2.84	7.10	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.79	ND	2.16	5.39	ND	
622-96-8	4-Ethyltoluene	1.05	2.63	ND	5.17	12.93	ND	
108-67-8	1,3,5-Trimethylbenzene	0.66	1.64	ND	3.22	8.06	ND	
95-63-6	1,2,4-Trimethylbenzene	0.65	1.61	ND	3.17	7.93	ND	
541-73-1	1,3-Dichlorobenzene	0.64	1.17	ND	3.82	7.06	ND	
100-44-7	Benzyl chloride	0.64	3.85	ND	3.29	19.92	ND	
106-46-7	1,4-Dichlorobenzene	0.64	1.10	ND	3.82	6.60	ND	
95-50-1	1,2-Dichlorobenzene	0.64	1.03	ND	3.82	6.18	ND	
120-82-1	1,2,4-Trichlorobenzene	1.59	2.18	ND	11.77	16.20	ND	
91-20-3	Naphthalene	0.32	0.51	1.34	1.70	2.66	7.02	
87-68-3	Hexachlorobutadiene	1.59	1.68	ND	16.92	17.94	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				95	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 04

File Name: 1756604A
Description: T-404
Canister: 659
QC_Batch: 102317-GCK

Date Sampled: 10/10/17 Time: 12:16
Date Analyzed: 10/23/17 Time: 17:04
Can Factor: 1.27
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.27	3.81	21.52	1.46	4.39	24.78	
74-86-2	Acetylene	1.27	3.81	55.78	1.35	4.06	59.44	
74-84-0	Ethane	1.27	3.81	54.56	1.57	4.70	67.31	
115-07-1	Propene	0.85	2.54	ND	1.46	4.38	ND	ND
74-98-6	Propane	0.85	2.54	45.60	1.53	4.59	82.41	
75-28-5	i-Butane	0.64	1.91	ND	1.51	4.54	ND	ND
106-98-9	1-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
106-97-8	n-Butane	0.64	1.91	ND	1.51	4.54	ND	ND
624-64-6	t-2-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
590-18-1	c-2-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
78-78-4	i-Pentane	0.51	1.52	ND	1.50	4.51	ND	ND
109-67-1	1-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
109-66-0	n-Pentane	0.51	1.52	ND	1.50	4.50	ND	ND
78-79-5	Isoprene	0.51	1.52	ND	1.42	4.25	ND	ND
646-04-8	t-2-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
627-20-3	c-2-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.27	ND	1.50	4.49	ND	ND
287-92-3	Cyclopentane	0.51	1.52	ND	1.46	4.38	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.27	ND	1.50	4.49	ND	ND
107-83-5	2-Methylpentane	0.42	1.27	ND	1.50	4.49	ND	ND
96-14-0	3-Methylpentane	0.42	1.27	ND	1.50	4.49	ND	ND
110-54-3	n-Hexane	0.42	1.27	1.92	1.50	4.49	6.78	
96-37-7	Methylcyclopentane	0.42	1.27	1.96	1.46	4.38	6.77	
108-08-7	2,4-Dimethylpentane	0.36	1.09	1.46	1.49	4.47	6.00	
71-43-2	Benzene	0.42	1.27	10.71	1.36	4.07	34.29	
110-82-7	Cyclohexane	0.42	1.27	2.46	1.46	4.38	8.49	
591-76-4	2-Methylhexane	0.36	1.09	2.49	1.49	4.47	10.21	
565-59-3	2,3-Dimethylpentane	0.36	1.09	ND	1.49	4.47	ND	ND
589-34-4	3-Methylhexane	0.36	1.09	1.40	1.49	4.47	5.75	
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	ND	1.49	4.46	ND	ND
142-82-5	n-Heptane	0.36	1.09	1.45	1.49	4.47	5.95	
108-87-2	Methylcyclohexane	0.36	1.09	1.84	1.46	4.38	7.39	
592-13-2	2,5-Dimethylhexane	0.32	0.95	1.09	1.49	4.46	5.08	
589-43-5	2,4-Dimethylhexane	0.32	0.95	0.91	1.49	4.46	4.24	J
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	1.41	1.49	4.46	6.62	
108-88-3	Toluene	0.36	1.09	3.19	1.37	4.11	12.05	
584-94-1	2,3-Dimethylhexane	0.32	0.95	1.62	1.49	4.46	7.58	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	1.61	1.49	4.46	7.52	
589-81-1	3-Methylheptane	0.32	0.95	4.10	1.49	4.46	19.19	
111-65-9	n-Octane	0.32	0.95	0.85	1.49	4.46	3.98	J
100-41-4	Ethylbenzene	0.32	0.95	5.46	1.38	4.15	23.78	
108-38-3	m,p-xylene	0.32	0.95	2.20	1.38	4.15	9.60	
100-42-5	Styrene	0.32	0.95	4.87	1.36	4.07	20.79	
95-47-6	o-xylene	0.32	0.95	7.44	1.38	4.15	32.36	
111-84-2	n-Nonane	0.28	0.85	1.34	1.48	4.45	7.05	
98-82-8	i-Propylbenzene	0.28	0.85	5.15	1.39	4.17	25.37	
103-65-1	n-propylbenzene	0.28	0.85	1.49	1.39	4.17	7.34	
80-56-8	a-Pinene	0.25	0.76	ND	1.42	4.25	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.85	ND	1.39	4.17	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.85	ND	1.39	4.17	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.85	1.58	1.39	4.17	7.78	
611-14-3	2-Ethyltoluene	0.28	0.85	ND	1.39	4.17	ND	ND
127-91-3	b-Pinene	0.25	0.76	ND	1.42	4.25	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.85	4.11	1.39	4.17	20.23	
124-18-5	n-Decane	0.25	0.76	1.78	1.48	4.44	10.39	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.85	6.58	1.39	4.17	32.43	
5989-27-5	d-Limonene	0.25	0.76	ND	1.42	4.25	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.76	4.44	1.40	4.19	24.40	
105-05-5	1,4-Diethylbenzene	0.25	0.76	3.15	1.40	4.19	17.32	
104-51-8	n-Butylbenzene	0.25	0.76	ND	1.40	4.19	ND	ND
1120-21-4	Undecane	0.23	0.69	4.67	1.48	4.44	29.94	
112-40-3	Dodecane	0.21	0.64	1.75	1.48	4.43	12.22	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.53	28.58	554.49	33.65	100.95	1,958.89	
TNMHC - C1	Total Non-Methane Hydrocarbons	57.15	171.45	3,326.93	37.48	112.43	2,181.59	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 04

File Name: 756604PA

Date Sampled: 10/10/17

Time: 12:16

Description: T - 404

Date Analyzed: 10/19/17

Time: 14:06

Can/Tube#: 659

Can Dilution Factor: 1.27

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.07	127	381	710	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 04

File Name: 1756604A

Date Sampled: 10/10/17

Time: 12:16

Description: T - 404

Date Analyzed: 10/19/17

Time: 9:49

Can/Tube#: 659

Dilution Factor: 1.27

QC_Batch: 101917-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.76	8.65	0.17	0.51	5.84	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 05

File Name: 1756605A.D

Date Sampled: 10/10/17

Time: 15:17

Description: T-405

Date Analyzed: 10/26/17

Time: 18:07

Canister: 782

Can Dilution Factor: 1.26

QC_Batch: 102617-MA1

Air Volume: 200 ml

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-71-8	Dichlorodifluoromethane	0.32	1.58	ND	1.56	7.83	ND	
74-87-3	Chloromethane	0.32	1.58	ND	0.65	3.27	ND	
76-14-2	Freon 114	0.32	1.58	ND	2.20	11.07	ND	
75-01-4	Vinyl chloride	0.32	1.58	ND	0.80	4.05	ND	
106-99-0	1,3-Butadiene	0.32	1.58	ND	0.70	3.50	ND	
74-83-9	Bromomethane	0.32	1.58	ND	1.22	6.15	ND	
75-00-3	Chloroethane	0.32	1.58	ND	0.83	4.18	ND	
64-17-5	Ethanol	1.58	4.73	ND	2.97	8.90	ND	
75-69-4	Trichlorofluoromethane	0.32	1.51	ND	1.77	8.50	ND	
67-64-1	Acetone	1.58	3.87	456.93	3.74	9.20	1,085.25	E
67-63-0	2-propanol	1.58	3.62	14.91	3.87	8.88	36.64	
75-35-4	1,1-Dichloroethene	0.32	1.56	ND	1.25	6.19	ND	
76-13-1	Freon 113	0.32	1.51	ND	2.41	11.55	ND	
75-09-2	Dichloromethane	0.63	1.52	ND	2.19	5.27	ND	
75-15-0	Carbon disulfide	1.58	2.92	212.15	4.90	9.09	659.99	E
156-60-5	trans-1,2-Dichloroethene	0.32	1.14	ND	1.25	4.50	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.16	ND	1.13	4.18	ND	
75-34-3	1,1-Dichloroethane	0.32	1.57	ND	1.27	6.36	ND	
108-05-4	Vinyl acetate	0.32	1.38	ND	1.11	4.87	ND	
78-93-3	2-Butanone	1.26	3.21	123.96	3.71	9.45	365.36	
141-78-6	Ethyl acetate	0.63	1.38	ND	2.27	4.97	ND	
74-97-5	Bromochloromethane	0.32	0.84	ND	1.67	4.44	ND	
109-99-9	Tetrahydrofuran	0.63	1.58	ND	1.86	4.67	ND	
156-59-2	cis-1,2-Dichloroethene	0.63	1.69	ND	2.50	6.71	ND	
67-66-3	Chloroform	0.32	1.58	ND	1.54	7.71	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.40	ND	1.72	7.63	ND	
107-06-2	1,2-Dichloroethane	0.32	1.44	ND	1.27	5.82	ND	
110-82-7	Cyclohexane	0.32	1.21	ND	1.09	4.16	ND	
71-43-2	Benzene	0.32	1.60	8.41	1.01	5.11	26.86	
56-23-5	Carbon tetrachloride	0.32	1.49	ND	1.98	9.39	ND	
142-82-5	n-Heptane	1.58	3.82	ND	6.45	15.64	ND	
78-87-5	1,2-Dichloropropane	0.32	1.52	ND	1.46	7.00	ND	
123-91-1	1,4 Dioxane	1.26	2.58	ND	4.54	9.28	ND	
79-01-6	Trichloroethene	0.19	1.47	ND	1.02	7.88	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	0.32	0.64	ND	2.11	4.26	ND	
80-62-6	Methyl methacrylate	1.26	4.26	ND	5.16	17.43	ND	
108-10-1	4-Methyl-2-pentanone	1.26	4.77	1.68	5.16	19.53	6.87	J
10061-01-5	cis-1,3-Dichloropropene	0.32	1.63	ND	1.43	7.41	ND	
108-88-3	Toluene	0.63	1.64	2.03	2.37	6.19	7.63	
10061-02-6	trans-1,3-Dichloropropene	0.32	1.63	ND	1.43	7.41	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.62	ND	1.72	8.83	ND	
591-78-6	2-Hexanone	1.58	4.47	2.75	6.45	18.30	11.27	J
124-48-1	Dibromochloromethane	0.32	0.63	ND	2.68	5.36	ND	
106-93-4	1,2-Dibromoethane	0.32	0.76	ND	2.42	5.87	ND	
127-18-4	Tetrachloroethene	0.19	0.77	ND	1.28	5.20	ND	
108-90-7	Chlorobenzene	0.32	1.43	ND	1.45	6.60	ND	
100-41-4	Ethylbenzene	0.67	1.67	5.29	2.89	7.23	22.97	
1330-20-7	m,p-Xylenes	0.67	1.67	14.29	2.90	7.25	62.05	
100-42-5	Styrene	0.65	1.63	ND	2.78	6.95	ND	
75-25-2	Bromoform	0.32	0.42	ND	3.25	4.37	ND	
95-47-6	o-Xylene	0.65	1.62	6.53	2.82	7.05	28.35	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.78	ND	2.14	5.35	ND	
622-96-8	4-Ethyltoluene	1.04	2.61	ND	5.13	12.83	ND	
108-67-8	1,3,5-Trimethylbenzene	0.65	1.63	ND	3.20	8.00	ND	
95-63-6	1,2,4-Trimethylbenzene	0.64	1.60	1.78	3.15	7.87	8.75	
541-73-1	1,3-Dichlorobenzene	0.63	1.17	ND	3.79	7.00	ND	
100-44-7	Benzyl chloride	0.63	3.82	ND	3.26	19.76	ND	
106-46-7	1,4-Dichlorobenzene	0.63	1.09	ND	3.79	6.55	ND	
95-50-1	1,2-Dichlorobenzene	0.63	1.02	ND	3.79	6.13	ND	
120-82-1	1,2,4-Trichlorobenzene	1.58	2.17	ND	11.68	16.07	ND	
91-20-3	Naphthalene	0.32	0.50	ND	1.68	2.64	ND	
87-68-3	Hexachlorobutadiene	1.58	1.67	ND	16.79	17.80	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				92	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566

Laboratory Number: 05

File Name: 1756605A
Description: T-405
Canister: 782
QC_Batch: 102317-GCK

Date Sampled: 10/10/17 Time: 15:17
Date Analyzed: 10/23/17 Time: 17:47
Can Factor: 1.26
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.26	3.78	1,107.81	1.45	4.35	1,275.80	
74-86-2	Acetylene	1.26	3.78	ND	1.34	4.03	ND	ND
74-84-0	Ethane	1.26	3.78	168.03	1.55	4.66	207.29	
115-07-1	Propene	0.84	2.52	ND	1.45	4.35	ND	ND
74-98-6	Propane	0.84	2.52	71.20	1.52	4.55	128.68	
75-28-5	i-Butane	0.63	1.89	3.50	1.50	4.50	8.34	
106-98-9	1-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
106-97-8	n-Butane	0.63	1.89	18.84	1.50	4.50	44.87	
624-64-6	t-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
590-18-1	c-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
78-78-4	i-Pentane	0.50	1.51	10.31	1.49	4.47	30.50	
109-67-1	1-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
109-66-0	n-Pentane	0.50	1.51	1.63	1.49	4.47	4.82	
78-79-5	Isoprene	0.50	1.51	ND	1.41	4.22	ND	ND
646-04-8	t-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
627-20-3	c-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
287-92-3	Cyclopentane	0.50	1.51	ND	1.45	4.34	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
107-83-5	2-Methylpentane	0.42	1.26	ND	1.48	4.45	ND	ND
96-14-0	3-Methylpentane	0.42	1.26	ND	1.48	4.45	ND	ND
110-54-3	n-Hexane	0.42	1.26	13.36	1.48	4.45	47.21	
96-37-7	Methylcyclopentane	0.42	1.26	ND	1.45	4.35	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.08	ND	1.48	4.44	ND	ND
71-43-2	Benzene	0.42	1.26	3.32	1.34	4.03	10.62	
110-82-7	Cyclohexane	0.42	1.26	ND	1.45	4.35	ND	ND
591-76-4	2-Methylhexane	0.36	1.08	ND	1.48	4.44	ND	ND
565-59-3	2,3-Dimethylpentane	0.36	1.08	ND	1.48	4.44	ND	ND
589-34-4	3-Methylhexane	0.36	1.08	ND	1.48	4.44	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	2.72	1.47	4.42	12.72	
142-82-5	n-Heptane	0.36	1.08	3.95	1.48	4.44	16.24	
108-87-2	Methylcyclohexane	0.36	1.08	ND	1.45	4.35	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	ND	1.47	4.42	ND	ND
108-88-3	Toluene	0.36	1.08	0.99	1.36	4.08	3.74	J
584-94-1	2,3-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND
589-81-1	3-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND
111-65-9	n-Octane	0.32	0.95	11.24	1.47	4.42	52.62	
100-41-4	Ethylbenzene	0.32	0.95	1.30	1.37	4.11	5.67	
108-38-3	m,p-xylene	0.32	0.95	1.85	1.37	4.11	8.06	
100-42-5	Styrene	0.32	0.95	1.07	1.35	4.04	4.57	
95-47-6	o-xylene	0.32	0.95	5.99	1.37	4.11	26.09	
111-84-2	n-Nonane	0.28	0.84	2.64	1.47	4.42	13.91	
98-82-8	i-Propylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
103-65-1	n-propylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
80-56-8	a-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.84	2.13	1.38	4.14	10.49	
611-14-3	2-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
127-91-3	b-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.84	2.85	1.38	4.14	14.03	
124-18-5	n-Decane	0.25	0.76	2.45	1.47	4.41	14.31	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.84	1.17	1.38	4.14	5.74	
5989-27-5	d-Limonene	0.25	0.76	ND	1.41	4.22	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.76	1.89	1.39	4.16	10.40	
105-05-5	1,4-Diethylbenzene	0.25	0.76	1.09	1.39	4.16	6.02	
104-51-8	n-Butylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
1120-21-4	Undecane	0.23	0.69	1.08	1.47	4.40	6.95	
112-40-3	Dodecane	0.21	0.63	0.76	1.47	4.40	5.29	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.45	28.35	1,119.66	33.38	100.15	3,955.53	
TNMHC - C1	Total Non-Methane Hydrocarbons	56.70	170.10	6,717.98	37.18	111.54	4,405.23	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 05

File Name: 756605PA

Date Sampled: 10/10/17

Time: 15:17

Description: T - 405

Date Analyzed: 10/19/17

Time: 14:13

Can/Tube#: 782

Can Dilution Factor: 1.26

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.22	126	378	2,178	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 05

File Name: 1756605A

Description: T - 405

Can/Tube#: 782

QC_Batch: 101917-GCL

Date Sampled: 10/10/17

Time: 15:17

Date Analyzed: 10/19/17

Time: 9:53

Dilution Factor: 1.26

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.76	35.70	0.17	0.51	24.12	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 06

File Name: 1756606A.D

Date Sampled: 10/10/17

Time: 15:23

Description: T-406

Date Analyzed: 10/26/17

Time: 18:41

Canister: 734

Can Dilution Factor: 1.24

QC_Batch: 102617-MA1

Air Volume: 200 ml

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-71-8	Dichlorodifluoromethane	0.31	1.56	ND	1.53	7.71	ND	
74-87-3	Chloromethane	0.31	1.56	ND	0.64	3.22	ND	
76-14-2	Freon 114	0.31	1.56	ND	2.17	10.89	ND	
75-01-4	Vinyl chloride	0.31	1.56	ND	0.79	3.98	ND	
106-99-0	1,3-Butadiene	0.31	1.56	ND	0.69	3.45	ND	
74-83-9	Bromomethane	0.31	1.56	ND	1.20	6.05	ND	
75-00-3	Chloroethane	0.31	1.56	ND	0.82	4.11	ND	
64-17-5	Ethanol	1.55	4.65	8.63	2.92	8.76	16.26	
75-69-4	Trichlorofluoromethane	0.31	1.49	ND	1.74	8.36	ND	
67-64-1	Acetone	1.55	3.81	560.15	3.68	9.06	1,330.41	E
67-63-0	2-propanol	1.55	3.56	63.27	3.81	8.74	155.45	
75-35-4	1,1-Dichloroethene	0.31	1.54	7.00	1.23	6.09	27.74	
76-13-1	Freon 113	0.31	1.48	ND	2.37	11.36	ND	
75-09-2	Dichloromethane	0.62	1.49	ND	2.15	5.18	ND	
75-15-0	Carbon disulfide	1.55	2.88	189.54	4.82	8.95	589.64	E
156-60-5	trans-1,2-Dichloroethene	0.31	1.12	ND	1.23	4.43	ND	
1634-04-4	Methyl tert butyl ether	0.31	1.14	ND	1.12	4.12	ND	
75-34-3	1,1-Dichloroethane	0.31	1.55	ND	1.25	6.26	ND	
108-05-4	Vinyl acetate	0.31	1.36	ND	1.09	4.79	ND	
78-93-3	2-Butanone	1.24	3.16	125.03	3.65	9.30	368.52	E
141-78-6	Ethyl acetate	0.62	1.36	ND	2.23	4.89	ND	
74-97-5	Bromochloromethane	0.31	0.83	ND	1.64	4.37	ND	
109-99-9	Tetrahydrofuran	0.62	1.56	ND	1.83	4.60	ND	
156-59-2	cis-1,2-Dichloroethene	0.62	1.67	ND	2.46	6.61	ND	
67-66-3	Chloroform	0.31	1.55	ND	1.51	7.59	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.38	ND	1.69	7.51	ND	
107-06-2	1,2-Dichloroethane	0.31	1.41	ND	1.25	5.72	ND	
110-82-7	Cyclohexane	0.31	1.19	ND	1.07	4.10	ND	
71-43-2	Benzene	0.31	1.57	10.05	0.99	5.03	32.10	
56-23-5	Carbon tetrachloride	0.31	1.47	ND	1.95	9.24	ND	
142-82-5	n-Heptane	1.55	3.76	ND	6.35	15.39	ND	
78-87-5	1,2-Dichloropropane	0.31	1.49	ND	1.43	6.89	ND	
123-91-1	1,4 Dioxane	1.24	2.54	ND	4.47	9.13	ND	
79-01-6	Trichloroethene	0.19	1.44	ND	1.00	7.76	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	0.31	0.63	ND	2.08	4.19	ND	
80-62-6	Methyl methacrylate	1.24	4.19	ND	5.07	17.15	ND	
108-10-1	4-Methyl-2-pentanone	1.24	4.69	2.38	5.08	19.22	9.75	J
10061-01-5	cis-1,3-Dichloropropene	0.31	1.61	ND	1.41	7.29	ND	
108-88-3	Toluene	0.62	1.62	2.65	2.33	6.09	9.97	
10061-02-6	trans-1,3-Dichloropropene	0.31	1.61	ND	1.41	7.30	ND	
79-00-5	1,1,2-Trichloroethane	0.31	1.59	ND	1.69	8.69	ND	
591-78-6	2-Hexanone	1.55	4.40	3.26	6.35	18.01	13.36	J
124-48-1	Dibromochloromethane	0.31	0.62	ND	2.64	5.27	ND	
106-93-4	1,2-Dibromoethane	0.31	0.75	ND	2.38	5.78	ND	
127-18-4	Tetrachloroethene	0.19	0.75	ND	1.26	5.11	ND	
108-90-7	Chlorobenzene	0.31	1.41	ND	1.43	6.49	ND	
100-41-4	Ethylbenzene	0.66	1.64	6.37	2.85	7.11	27.64	
1330-20-7	m,p-Xylenes	0.66	1.64	18.81	2.85	7.13	81.68	
100-42-5	Styrene	0.64	1.60	ND	2.73	6.84	ND	
75-25-2	Bromoform	0.31	0.42	ND	3.20	4.30	ND	
95-47-6	o-Xylene	0.64	1.60	8.89	2.77	6.94	38.57	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.77	ND	2.11	5.26	ND	
622-96-8	4-Ethyltoluene	1.03	2.57	1.33	5.05	12.62	6.52	J
108-67-8	1,3,5-Trimethylbenzene	0.64	1.60	ND	3.15	7.87	ND	
95-63-6	1,2,4-Trimethylbenzene	0.63	1.58	2.46	3.10	7.74	12.09	
541-73-1	1,3-Dichlorobenzene	0.62	1.15	ND	3.73	6.89	ND	
100-44-7	Benzyl chloride	0.62	3.76	ND	3.21	19.44	ND	
106-46-7	1,4-Dichlorobenzene	0.62	1.07	ND	3.73	6.45	ND	
95-50-1	1,2-Dichlorobenzene	0.62	1.00	ND	3.73	6.04	ND	
120-82-1	1,2,4-Trichlorobenzene	1.55	2.13	ND	11.49	15.82	ND	
91-20-3	Naphthalene	0.32	0.50	0.32	1.66	2.60	1.66	J
87-68-3	Hexachlorobutadiene	1.55	1.64	ND	16.53	17.52	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				95	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 06

File Name: 1756606A
Description: T-406
Canister: 734
QC_Batch: 102317-GCK

Date Sampled: 10/10/17 Time: 15:23
Date Analyzed: 10/23/17 Time: 18:29
Can Factor: 1.24
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.24	3.72	16.36	1.43	4.28	18.84	
74-86-2	Acetylene	1.24	3.72	16.27	1.32	3.96	17.34	
74-84-0	Ethane	1.24	3.72	1,346.89	1.53	4.59	1,661.53	
115-07-1	Propene	0.83	2.48	ND	1.43	4.28	ND	ND
74-98-6	Propane	0.83	2.48	26.03	1.49	4.48	47.05	
75-28-5	i-Butane	0.62	1.86	6.72	1.48	4.43	16.00	
106-98-9	1-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
106-97-8	n-Butane	0.62	1.86	10.24	1.48	4.43	24.39	
624-64-6	t-2-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
590-18-1	c-2-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
78-78-4	i-Pentane	0.50	1.49	4.26	1.47	4.40	12.59	
109-67-1	1-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
109-66-0	n-Pentane	0.50	1.49	2.59	1.47	4.40	7.64	
78-79-5	Isoprene	0.50	1.49	ND	1.38	4.15	ND	ND
646-04-8	t-2-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
627-20-3	c-2-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.24	ND	1.46	4.38	ND	ND
287-92-3	Cyclopentane	0.50	1.49	ND	1.42	4.27	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.24	ND	1.46	4.38	ND	ND
107-83-5	2-Methylpentane	0.41	1.24	0.75	1.46	4.38	2.65	J
96-14-0	3-Methylpentane	0.41	1.24	0.56	1.46	4.38	1.99	J
110-54-3	n-Hexane	0.41	1.24	0.56	1.46	4.38	1.97	J
96-37-7	Methylcyclopentane	0.41	1.24	ND	1.43	4.28	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.06	0.37	1.45	4.36	1.54	J
71-43-2	Benzene	0.41	1.24	7.28	1.32	3.97	23.32	
110-82-7	Cyclohexane	0.41	1.24	0.58	1.43	4.28	2.00	J
591-76-4	2-Methylhexane	0.35	1.06	11.27	1.45	4.36	46.28	
565-59-3	2,3-Dimethylpentane	0.35	1.06	ND	1.45	4.36	ND	ND
589-34-4	3-Methylhexane	0.35	1.06	16.44	1.45	4.36	67.52	
540-84-1	2,2,4-Trimethylpentane	0.31	0.93	0.69	1.45	4.35	3.22	J
142-82-5	n-Heptane	0.35	1.06	0.54	1.45	4.36	2.20	J
108-87-2	Methylcyclohexane	0.35	1.06	3.66	1.43	4.28	14.73	
592-13-2	2,5-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND
589-43-5	2,4-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.31	0.93	0.57	1.45	4.35	2.66	J
108-88-3	Toluene	0.35	1.06	1.85	1.34	4.01	7.00	
584-94-1	2,3-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.93	ND	1.45	4.35	ND	ND
589-81-1	3-Methylheptane	0.31	0.93	ND	1.45	4.35	ND	ND
111-65-9	n-Octane	0.31	0.93	20.22	1.45	4.35	94.64	
100-41-4	Ethylbenzene	0.31	0.93	12.47	1.35	4.05	54.26	
108-38-3	m,p-xylene	0.31	0.93	30.13	1.35	4.05	131.15	
100-42-5	Styrene	0.31	0.93	5.39	1.32	3.97	23.02	
95-47-6	o-xylene	0.31	0.93	19.53	1.35	4.05	85.01	
111-84-2	n-Nonane	0.28	0.83	0.86	1.45	4.35	4.55	
98-82-8	i-Propylbenzene	0.28	0.83	0.99	1.36	4.07	4.88	
103-65-1	n-propylbenzene	0.28	0.83	1.65	1.36	4.07	8.15	
80-56-8	a-Pinene	0.25	0.74	ND	1.38	4.15	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.83	5.70	1.36	4.07	28.09	
622-96-8	4-Ethyltoluene	0.28	0.83	ND	1.36	4.07	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.83	2.19	1.36	4.07	10.79	
611-14-3	2-Ethyltoluene	0.28	0.83	2.58	1.36	4.07	12.70	
127-91-3	b-Pinene	0.25	0.74	ND	1.38	4.15	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.83	6.71	1.36	4.07	33.05	
124-18-5	n-Decane	0.25	0.74	2.72	1.45	4.34	15.87	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.83	1.04	1.36	4.07	5.12	
5989-27-5	d-Limonene	0.25	0.74	ND	1.38	4.15	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.74	1.67	1.36	4.09	9.20	
105-05-5	1,4-Diethylbenzene	0.25	0.74	2.54	1.36	4.09	13.96	
104-51-8	n-Butylbenzene	0.25	0.74	ND	1.36	4.09	ND	ND
1120-21-4	Undecane	0.23	0.68	2.35	1.44	4.33	15.03	
112-40-3	Dodecane	0.21	0.62	1.35	1.44	4.33	9.43	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.30	27.90	1,174.11	32.85	98.56	4,147.88
TNMHC - C1	Total Non-Methane Hydrocarbons	55.80	167.40	7,044.67	36.59	109.77	4,619.45

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 06

File Name: 756606PA

Date Sampled: 10/10/17

Time: 15:23

Description: T - 406

Date Analyzed: 10/19/17

Time: 14:19

Can/Tube#: 734

Can Dilution Factor: 1.24

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.24	124	372	2,411	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 06

File Name: 1756606A
Description: T - 406
Can/Tube#: 734
QC_Batch: 101917-GCL

Date Sampled: 10/10/17 Time: 15:23
Date Analyzed: 10/19/17 Time: 9:58
Dilution Factor: 1.24

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.74	41.47	0.17	0.50	28.02	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 07

File Name: 1756607A.D

Date Sampled: 10/10/17

Time: 16:19

Description: T-407

Date Analyzed: 10/27/17

Time: 15:19

Canister: 417

Can Dilution Factor: 1.23

QC_Batch: 102717-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	12.30	61.87	ND	60.79	305.78	ND	
74-87-3	Chloromethane	12.30	61.87	ND	25.39	127.73	ND	
76-14-2	Freon 114	12.30	61.87	ND	85.93	432.24	ND	
75-01-4	Vinyl chloride	12.30	61.87	ND	31.43	158.08	ND	
106-99-0	1,3-Butadiene	12.30	61.87	ND	27.20	136.83	ND	
74-83-9	Bromomethane	12.30	61.87	ND	47.72	240.02	ND	
75-00-3	Chloroethane	12.30	61.87	ND	32.43	163.13	ND	
64-17-5	Ethanol	61.50	184.50	ND	115.90	347.70	ND	
75-69-4	Trichlorofluoromethane	12.30	59.06	ND	69.09	331.74	ND	
67-64-1	Acetone	61.50	151.29	70.49	146.07	359.33	167.41	J
67-63-0	2-propanol	61.50	141.20	ND	151.10	346.92	ND	
75-35-4	1,1-Dichloroethene	12.30	61.01	ND	48.72	241.67	ND	
76-13-1	Freon 113	12.30	58.85	ND	94.23	450.82	ND	
75-09-2	Dichloromethane	24.60	59.24	ND	85.38	205.60	ND	
75-15-0	Carbon disulfide	61.50	114.14	ND	191.32	355.09	ND	
156-60-5	trans-1,2-Dichloroethene	12.30	44.41	ND	48.72	175.91	ND	
1634-04-4	Methyl tert butyl ether	12.30	45.35	ND	44.30	163.32	ND	
75-34-3	1,1-Dichloroethane	12.30	61.34	ND	49.78	248.27	ND	
108-05-4	Vinyl acetate	12.30	54.04	ND	43.29	190.21	ND	
78-93-3	2-Butanone	49.20	125.21	ND	145.01	369.06	ND	
141-78-6	Ethyl acetate	24.60	53.87	ND	88.60	194.03	ND	
74-97-5	Bromochloromethane	12.30	32.76	ND	65.06	173.30	ND	
109-99-9	Tetrahydrofuran	24.60	61.87	ND	72.51	182.36	ND	
156-59-2	cis-1,2-Dichloroethene	24.60	66.17	ND	97.45	262.13	ND	
67-66-3	Chloroform	12.30	61.69	ND	60.04	301.11	ND	
71-55-6	1,1,1-Trichloroethane	12.30	54.61	ND	67.08	297.82	ND	
107-06-2	1,2-Dichloroethane	12.30	56.11	ND	49.78	227.07	ND	
110-82-7	Cyclohexane	12.35	47.23	ND	42.51	162.57	ND	
71-43-2	Benzene	12.30	62.49	36.08	39.27	199.50	115.21	J
56-23-5	Carbon tetrachloride	12.30	58.30	ND	77.33	366.56	ND	
142-82-5	n-Heptane	61.50	149.08	ND	251.91	610.63	ND	
78-87-5	1,2-Dichloropropane	12.30	59.20	ND	56.82	273.46	ND	
123-91-1	1,4 Dioxane	49.20	100.61	ND	177.19	362.36	ND	
79-01-6	Trichloroethene	7.38	57.29	ND	39.64	307.75	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-27-4	Bromodichloromethane	12.30	24.85	ND	82.36	166.37	ND	
80-62-6	Methyl methacrylate	49.20	166.30	ND	201.33	680.49	ND	
108-10-1	4-Methyl-2-pentanone	49.20	186.22	ND	201.53	762.79	ND	
10061-01-5	cis-1,3-Dichloropropene	12.30	63.74	ND	55.81	289.22	ND	
108-88-3	Toluene	24.60	64.21	ND	92.62	241.74	ND	
10061-02-6	trans-1,3-Dichloropropene	12.30	63.79	ND	55.81	289.45	ND	
79-00-5	1,1,2-Trichloroethane	12.30	63.24	ND	67.08	344.89	ND	
591-78-6	2-Hexanone	61.50	174.41	ND	251.91	714.42	ND	
124-48-1	Dibromochloromethane	12.30	24.56	ND	104.74	209.13	ND	
106-93-4	1,2-Dibromoethane	12.30	29.85	ND	94.48	229.32	ND	
127-18-4	Tetrachloroethene	7.38	29.94	ND	50.02	202.91	ND	
108-90-7	Chlorobenzene	12.30	55.97	ND	56.62	257.65	ND	
100-41-4	Ethylbenzene	26.01	65.02	46.66	112.91	282.28	202.57	J
1330-20-7	m,p-Xylenes	26.07	65.18	110.53	113.20	282.99	479.86	
100-42-5	Styrene	25.47	63.68	ND	108.50	271.25	ND	
75-25-2	Bromoform	12.30	16.50	ND	127.06	170.49	ND	
95-47-6	o-Xylene	25.36	63.39	41.87	110.09	275.22	181.79	J
79-34-5	1,1,2,2-Tetrachloroethane	12.18	30.45	ND	83.55	208.87	ND	
622-96-8	4-Ethyltoluene	40.77	101.93	ND	200.35	500.88	ND	
108-67-8	1,3,5-Trimethylbenzene	25.42	63.54	ND	124.89	312.23	ND	
95-63-6	1,2,4-Trimethylbenzene	25.00	62.51	ND	122.86	307.15	ND	
541-73-1	1,3-Dichlorobenzene	24.60	45.51	ND	147.83	273.48	ND	
100-44-7	Benzyl chloride	24.60	149.08	ND	127.31	771.52	ND	
106-46-7	1,4-Dichlorobenzene	24.60	42.56	ND	147.83	255.74	ND	
95-50-1	1,2-Dichlorobenzene	24.60	39.85	ND	147.83	239.48	ND	
120-82-1	1,2,4-Trichlorobenzene	61.50	84.62	ND	456.05	627.53	ND	
91-20-3	Naphthalene	12.55	19.68	ND	65.75	103.14	ND	
87-68-3	Hexachlorobutadiene	61.50	65.19	ND	655.67	695.01	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				103	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 07

File Name: 1756607A
Description: T-407
Canister: 417
QC_Batch: 102317-GCK

Date Sampled: 10/10/17 Time: 16:19
Date Analyzed: 10/23/17 Time: 19:11
Can Factor: 1.23
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.23	3.69	24.14	1.42	4.25	27.80	
74-86-2	Acetylene	1.23	3.69	ND	1.31	3.93	ND	ND
74-84-0	Ethane	1.23	3.69	682.68	1.52	4.55	842.16	
115-07-1	Propene	0.82	2.46	ND	1.41	4.24	ND	ND
74-98-6	Propane	0.82	2.46	94.95	1.48	4.45	171.62	
75-28-5	i-Butane	0.62	1.85	23.08	1.46	4.39	54.96	
106-98-9	1-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
106-97-8	n-Butane	0.62	1.85	36.25	1.46	4.39	86.32	
624-64-6	t-2-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
590-18-1	c-2-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
78-78-4	i-Pentane	0.49	1.48	53.59	1.46	4.37	158.57	
109-67-1	1-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
109-66-0	n-Pentane	0.49	1.48	36.86	1.45	4.36	108.92	
78-79-5	Isoprene	0.49	1.48	ND	1.37	4.12	ND	ND
646-04-8	t-2-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
627-20-3	c-2-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.23	ND	1.45	4.35	ND	ND
287-92-3	Cyclopentane	0.49	1.48	ND	1.41	4.24	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.23	ND	1.45	4.35	ND	ND
107-83-5	2-Methylpentane	0.41	1.23	34.02	1.45	4.35	120.20	
96-14-0	3-Methylpentane	0.41	1.23	43.62	1.45	4.35	154.11	
110-54-3	n-Hexane	0.41	1.23	37.18	1.45	4.35	131.35	
96-37-7	Methylcyclopentane	0.41	1.23	8.89	1.41	4.24	30.68	
108-08-7	2,4-Dimethylpentane	0.35	1.05	43.19	1.44	4.33	177.36	
71-43-2	Benzene	0.41	1.23	7.89	1.31	3.94	25.24	
110-82-7	Cyclohexane	0.41	1.23	49.34	1.41	4.24	170.28	
591-76-4	2-Methylhexane	0.35	1.05	49.07	1.44	4.33	201.52	
565-59-3	2,3-Dimethylpentane	0.35	1.05	28.95	1.44	4.33	118.88	
589-34-4	3-Methylhexane	0.35	1.05	34.74	1.44	4.33	142.65	
540-84-1	2,2,4-Trimethylpentane	0.31	0.92	28.42	1.44	4.32	133.02	
142-82-5	n-Heptane	0.35	1.05	25.08	1.44	4.33	102.97	
108-87-2	Methylcyclohexane	0.35	1.05	73.71	1.41	4.24	296.66	
592-13-2	2,5-Dimethylhexane	0.31	0.92	4.43	1.44	4.32	20.74	
589-43-5	2,4-Dimethylhexane	0.31	0.92	53.21	1.44	4.32	249.02	
565-75-3	2,3,4-Trimethylpentane	0.31	0.92	69.82	1.44	4.32	326.76	
108-88-3	Toluene	0.35	1.05	11.66	1.33	3.98	44.02	
584-94-1	2,3-Dimethylhexane	0.31	0.92	29.85	1.44	4.32	139.71	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.92	68.21	1.44	4.32	319.23	
589-81-1	3-Methylheptane	0.31	0.92	33.99	1.44	4.32	159.10	
111-65-9	n-Octane	0.31	0.92	172.43	1.44	4.32	807.04	
100-41-4	Ethylbenzene	0.31	0.92	236.70	1.34	4.02	1,030.21	
108-38-3	m,p-xylene	0.31	0.92	223.94	1.34	4.02	974.69	
100-42-5	Styrene	0.31	0.92	174.19	1.31	3.94	743.88	
95-47-6	o-xylene	0.31	0.92	125.22	1.34	4.02	545.00	
111-84-2	n-Nonane	0.27	0.82	235.94	1.44	4.31	1,240.62	
98-82-8	i-Propylbenzene	0.27	0.82	78.28	1.35	4.04	385.61	
103-65-1	n-propylbenzene	0.27	0.82	313.10	1.35	4.04	1,542.40	
80-56-8	a-Pinene	0.25	0.74	ND	1.37	4.12	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.82	312.63	1.35	4.04	1,540.06	
622-96-8	4-Ethyltoluene	0.27	0.82	491.43	1.35	4.04	2,420.91	
108-67-8	1,3,5-Trimethylbenzene	0.27	0.82	686.05	1.35	4.04	3,379.62	
611-14-3	2-Ethyltoluene	0.27	0.82	151.46	1.35	4.04	746.13	
127-91-3	b-Pinene	0.25	0.74	ND	1.37	4.12	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.82	1,380.41	1.35	4.04	6,800.20	
124-18-5	n-Decane	0.25	0.74	524.71	1.43	4.30	3,060.08	
526-73-8	1,2,3-Trimethylbenzene	0.27	0.82	1,091.41	1.35	4.04	5,376.56	
5989-27-5	d-Limonene	0.25	0.74	ND	1.37	4.12	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.74	1,484.77	1.35	4.06	8,166.22	
105-05-5	1,4-Diethylbenzene	0.25	0.74	1,146.30	1.35	4.06	6,304.63	
104-51-8	n-Butylbenzene	0.25	0.74	565.41	1.35	4.06	3,109.75	
1120-21-4	Undecane	0.22	0.67	649.72	1.43	4.30	4,161.91	
112-40-3	Dodecane	0.21	0.62	137.84	1.43	4.29	962.04	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.23	27.68	46,143.53	32.59	97.77	163,015.26	
TNMHC - C1	Total Non-Methane Hydrocarbons	55.35	166.05	276,861.18	36.30	108.89	181,548.32	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 07

File Name: 756607PA

Date Sampled: 10/10/17

Time: 16:19

Description: T - 407

Date Analyzed: 10/19/17

Time: 14:26

Can/Tube#: 417

Can Dilution Factor: 1.23

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	123	369	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 07

File Name: 1756607A
Description: T - 407
Can/Tube#: 417
QC_Batch: 101917-GCL

Date Sampled: 10/10/17 Time: 16:19
Date Analyzed: 10/19/17 Time: 10:02
Dilution Factor: 1.23

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.74	5.35	0.17	0.50	3.61	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 08

File Name: 1756608A.D

Date Sampled: 10/10/17

Time: 16:21

Description: T-408

Date Analyzed: 10/27/17

Time: 15:57

Canister: 681

Can Dilution Factor: 1.22

QC_Batch: 102717-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.31	1.53	ND	1.51	7.58	ND	
74-87-3	Chloromethane	0.31	1.53	ND	0.63	3.17	ND	
76-14-2	Freon 114	0.31	1.53	ND	2.13	10.72	ND	
75-01-4	Vinyl chloride	0.31	1.53	ND	0.78	3.92	ND	
106-99-0	1,3-Butadiene	0.31	1.53	ND	0.67	3.39	ND	
74-83-9	Bromomethane	0.31	1.53	ND	1.18	5.95	ND	
75-00-3	Chloroethane	0.31	1.53	ND	0.80	4.05	ND	
64-17-5	Ethanol	1.53	4.58	4.64	2.87	8.62	8.75	
75-69-4	Trichlorofluoromethane	0.31	1.46	ND	1.71	8.23	ND	
67-64-1	Acetone	1.53	3.75	59.86	3.62	8.91	142.16	
67-63-0	2-propanol	1.53	3.50	3.23	3.75	8.60	7.93	J
75-35-4	1,1-Dichloroethene	0.31	1.51	ND	1.21	5.99	ND	
76-13-1	Freon 113	0.31	1.46	ND	2.34	11.18	ND	
75-09-2	Dichloromethane	0.61	1.47	ND	2.12	5.10	ND	
75-15-0	Carbon disulfide	1.53	2.83	5.74	4.74	8.81	17.85	
156-60-5	trans-1,2-Dichloroethene	0.31	1.10	ND	1.21	4.36	ND	
1634-04-4	Methyl tert butyl ether	0.31	1.12	ND	1.10	4.05	ND	
75-34-3	1,1-Dichloroethane	0.31	1.52	ND	1.23	6.16	ND	
108-05-4	Vinyl acetate	0.31	1.34	ND	1.07	4.72	ND	
78-93-3	2-Butanone	1.22	3.10	ND	3.60	9.15	ND	
141-78-6	Ethyl acetate	0.61	1.34	ND	2.20	4.81	ND	
74-97-5	Bromochloromethane	0.31	0.81	ND	1.61	4.30	ND	
109-99-9	Tetrahydrofuran	0.61	1.53	ND	1.80	4.52	ND	
156-59-2	cis-1,2-Dichloroethene	0.61	1.64	ND	2.42	6.50	ND	
67-66-3	Chloroform	0.31	1.53	ND	1.49	7.47	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.35	ND	1.66	7.38	ND	
107-06-2	1,2-Dichloroethane	0.31	1.39	ND	1.23	5.63	ND	
110-82-7	Cyclohexane	0.31	1.17	ND	1.05	4.03	ND	
71-43-2	Benzene	0.31	1.55	5.97	0.97	4.95	19.05	
56-23-5	Carbon tetrachloride	0.31	1.45	ND	1.92	9.09	ND	
142-82-5	n-Heptane	1.53	3.70	18.12	6.25	15.14	74.23	
78-87-5	1,2-Dichloropropane	0.31	1.47	ND	1.41	6.78	ND	
123-91-1	1,4 Dioxane	1.22	2.49	ND	4.39	8.99	ND	
79-01-6	Trichloroethene	0.18	1.42	ND	0.98	7.63	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	0.31	0.62	ND	2.04	4.13	ND	
80-62-6	Methyl methacrylate	1.22	4.12	ND	4.99	16.87	ND	
108-10-1	4-Methyl-2-pentanone	1.22	4.62	ND	5.00	18.91	ND	
10061-01-5	cis-1,3-Dichloropropene	0.31	1.58	ND	1.38	7.17	ND	
108-88-3	Toluene	0.61	1.59	10.24	2.30	5.99	38.55	
10061-02-6	trans-1,3-Dichloropropene	0.31	1.58	ND	1.38	7.18	ND	
79-00-5	1,1,2-Trichloroethane	0.31	1.57	ND	1.66	8.55	ND	
591-78-6	2-Hexanone	1.53	4.32	ND	6.25	17.72	ND	
124-48-1	Dibromochloromethane	0.31	0.61	ND	2.60	5.19	ND	
106-93-4	1,2-Dibromoethane	0.31	0.74	ND	2.34	5.69	ND	
127-18-4	Tetrachloroethene	0.18	0.74	ND	1.24	5.03	ND	
108-90-7	Chlorobenzene	0.31	1.39	ND	1.40	6.39	ND	
100-41-4	Ethylbenzene	0.64	1.61	56.93	2.80	7.00	247.17	
1330-20-7	m,p-Xylenes	0.65	1.62	105.56	2.81	7.02	458.26	
100-42-5	Styrene	0.63	1.58	1.43	2.69	6.73	6.07	J
75-25-2	Bromoform	0.31	0.41	ND	3.15	4.23	ND	
95-47-6	o-Xylene	0.63	1.57	53.99	2.73	6.82	234.37	
79-34-5	1,1,2,2-Tetrachloroethane	0.30	0.76	ND	2.07	5.18	ND	
622-96-8	4-Ethyltoluene	1.01	2.53	12.73	4.97	12.42	62.54	
108-67-8	1,3,5-Trimethylbenzene	0.63	1.58	6.51	3.10	7.74	31.97	
95-63-6	1,2,4-Trimethylbenzene	0.62	1.55	22.60	3.05	7.62	111.03	
541-73-1	1,3-Dichlorobenzene	0.61	1.13	ND	3.67	6.78	ND	
100-44-7	Benzyl chloride	0.61	3.70	ND	3.16	19.13	ND	
106-46-7	1,4-Dichlorobenzene	0.61	1.06	ND	3.67	6.34	ND	
95-50-1	1,2-Dichlorobenzene	0.61	0.99	ND	3.67	5.94	ND	
120-82-1	1,2,4-Trichlorobenzene	1.53	2.10	ND	11.31	15.56	ND	
91-20-3	Naphthalene	0.31	0.49	ND	1.63	2.56	ND	
87-68-3	Hexachlorobutadiene	1.53	1.62	ND	16.26	17.23	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				95	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 08

File Name: 1756608A
Description: T-408
Canister: 681
QC_Batch: 102317-GCK

Date Sampled: 10/10/17 Time: 16:21
Date Analyzed: 10/23/17 Time: 19:53
Can Factor: 1.22
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.22	3.66	19.64	1.41	4.22	22.62	
74-86-2	Acetylene	1.22	3.66	ND	1.30	3.90	ND	ND
74-84-0	Ethane	1.22	3.66	624.86	1.51	4.52	770.83	
115-07-1	Propene	0.81	2.44	ND	1.40	4.21	ND	ND
74-98-6	Propane	0.81	2.44	87.21	1.47	4.41	157.61	
75-28-5	i-Butane	0.61	1.83	20.85	1.45	4.36	49.64	
106-98-9	1-Butene	0.61	1.83	ND	1.40	4.21	ND	ND
106-97-8	n-Butane	0.61	1.83	29.97	1.45	4.36	71.35	
624-64-6	t-2-Butene	0.61	1.83	ND	1.40	4.21	ND	ND
590-18-1	c-2-Butene	0.61	1.83	ND	1.40	4.21	ND	ND
78-78-4	i-Pentane	0.49	1.46	49.06	1.44	4.33	145.18	
109-67-1	1-Pentene	0.49	1.46	ND	1.40	4.21	ND	ND
109-66-0	n-Pentane	0.49	1.46	32.29	1.44	4.33	95.41	
78-79-5	Isoprene	0.49	1.46	ND	1.36	4.09	ND	ND
646-04-8	t-2-Pentene	0.49	1.46	ND	1.40	4.21	ND	ND
627-20-3	c-2-Pentene	0.49	1.46	ND	1.40	4.21	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.22	ND	1.44	4.31	ND	ND
287-92-3	Cyclopentane	0.49	1.46	ND	1.40	4.21	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.22	ND	1.44	4.31	ND	ND
107-83-5	2-Methylpentane	0.41	1.22	30.78	1.44	4.31	108.74	
96-14-0	3-Methylpentane	0.41	1.22	42.92	1.44	4.31	151.64	
110-54-3	n-Hexane	0.41	1.22	33.90	1.44	4.31	119.76	
96-37-7	Methylcyclopentane	0.41	1.22	7.47	1.40	4.21	25.77	
108-08-7	2,4-Dimethylpentane	0.35	1.05	39.28	1.43	4.29	161.32	
71-43-2	Benzene	0.41	1.22	7.44	1.30	3.91	23.82	
110-82-7	Cyclohexane	0.41	1.22	43.53	1.40	4.21	150.20	
591-76-4	2-Methylhexane	0.35	1.05	45.86	1.43	4.29	188.31	
565-59-3	2,3-Dimethylpentane	0.35	1.05	25.82	1.43	4.29	106.02	
589-34-4	3-Methylhexane	0.35	1.05	31.51	1.43	4.29	129.38	
540-84-1	2,2,4-Trimethylpentane	0.31	0.92	25.75	1.43	4.28	120.53	
142-82-5	n-Heptane	0.35	1.05	23.11	1.43	4.29	94.89	
108-87-2	Methylcyclohexane	0.35	1.05	66.94	1.40	4.21	269.40	
592-13-2	2,5-Dimethylhexane	0.31	0.92	3.97	1.43	4.28	18.58	
589-43-5	2,4-Dimethylhexane	0.31	0.92	47.82	1.43	4.28	223.82	
565-75-3	2,3,4-Trimethylpentane	0.31	0.92	19.63	1.43	4.28	91.88	
108-88-3	Toluene	0.35	1.05	39.22	1.32	3.95	148.05	
584-94-1	2,3-Dimethylhexane	0.31	0.92	26.02	1.43	4.28	121.78	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.92	7.29	1.43	4.28	34.11	
589-81-1	3-Methylheptane	0.31	0.92	31.96	1.43	4.28	149.59	
111-65-9	n-Octane	0.31	0.92	169.52	1.43	4.28	793.40	
100-41-4	Ethylbenzene	0.31	0.92	225.93	1.33	3.98	983.37	
108-38-3	m,p-xylene	0.31	0.92	207.51	1.33	3.98	903.20	
100-42-5	Styrene	0.31	0.92	167.60	1.30	3.91	715.74	
95-47-6	o-xylene	0.31	0.92	120.27	1.33	3.98	523.49	
111-84-2	n-Nonane	0.27	0.81	223.92	1.43	4.28	1,177.41	
98-82-8	i-Propylbenzene	0.27	0.81	73.18	1.34	4.01	360.53	
103-65-1	n-propylbenzene	0.27	0.81	341.90	1.34	4.01	1,684.26	
80-56-8	a-Pinene	0.24	0.73	ND	1.36	4.09	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.81	444.05	1.34	4.01	2,187.47	
622-96-8	4-Ethyltoluene	0.27	0.81	280.47	1.34	4.01	1,381.65	
108-67-8	1,3,5-Trimethylbenzene	0.27	0.81	611.54	1.34	4.01	3,012.56	
611-14-3	2-Ethyltoluene	0.27	0.81	143.69	1.34	4.01	707.85	
127-91-3	b-Pinene	0.24	0.73	ND	1.36	4.09	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.81	1,223.21	1.34	4.01	6,025.83	
124-18-5	n-Decane	0.24	0.73	464.29	1.42	4.27	2,707.71	
526-73-8	1,2,3-Trimethylbenzene	0.27	0.81	918.70	1.34	4.01	4,525.71	
5989-27-5	d-Limonene	0.24	0.73	ND	1.36	4.09	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.73	1,280.20	1.34	4.03	7,041.12	
105-05-5	1,4-Diethylbenzene	0.24	0.73	978.83	1.34	4.03	5,383.58	
104-51-8	n-Butylbenzene	0.24	0.73	468.65	1.34	4.03	2,577.56	
1120-21-4	Undecane	0.22	0.67	580.97	1.42	4.26	3,721.55	
112-40-3	Dodecane	0.20	0.61	153.70	1.42	4.26	1,072.72	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.15	27.45	41,787.76	32.33	96.98	147,627.26	
TNMHC - C1	Total Non-Methane Hydrocarbons	54.90	164.70	250,726.57	36.00	108.00	164,410.86	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 08

File Name: 756608PA

Date Sampled: 10/10/17

Time: 16:21

Description: T - 408

Date Analyzed: 10/19/17

Time: 14:32

Can/Tube#: 681

Can Dilution Factor: 1.22

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	122	366	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 217566
Laboratory Number: 08

File Name: 1756608A
Description: T - 408
Can/Tube#: 681
QC_Batch: 101917-GCL

Date Sampled: 10/10/17 Time: 16:21
Date Analyzed: 10/19/17 Time: 10:06
Dilution Factor: 1.22

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.73	3.53	0.16	0.49	2.38	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 09

File Name: 1756609A.D

Date Sampled: 10/11/17

Time: 08:58

Description: T-501

Date Analyzed: 10/27/17

Time: 17:09

Canister: 619

Can Dilution Factor: 1.17

QC_Batch: 102717-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	11.7	58.9	ND	57.8	290.9	ND	
74-87-3	Chloromethane	11.7	58.9	ND	24.2	121.5	ND	
76-14-2	Freon 114	11.7	58.9	ND	81.7	411.2	ND	
75-01-4	Vinyl chloride	11.7	58.9	ND	29.9	150.4	ND	
106-99-0	1,3-Butadiene	11.7	58.9	ND	25.9	130.2	ND	
74-83-9	Bromomethane	11.7	58.9	ND	45.4	228.3	ND	
75-00-3	Chloroethane	11.7	58.9	ND	30.8	155.2	ND	
64-17-5	Ethanol	58.5	175.5	ND	110.2	330.7	ND	
75-69-4	Trichlorofluoromethane	11.7	56.2	ND	65.7	315.6	ND	
67-64-1	Acetone	58.5	143.9	20,672.2	138.9	341.8	49,098.4	E
67-63-0	2-propanol	58.5	134.3	256.0	143.7	330.0	629.0	
75-35-4	1,1-Dichloroethene	11.7	58.0	ND	46.3	229.9	ND	
76-13-1	Freon 113	11.7	56.0	ND	89.6	428.8	ND	
75-09-2	Dichloromethane	23.4	56.4	ND	81.2	195.6	ND	
75-15-0	Carbon disulfide	58.5	108.6	321.5	182.0	337.8	1,000.3	
156-60-5	trans-1,2-Dichloroethene	11.7	42.2	ND	46.3	167.3	ND	
1634-04-4	Methyl tert butyl ether	11.7	43.1	ND	42.1	155.4	ND	
75-34-3	1,1-Dichloroethane	11.7	58.4	ND	47.4	236.2	ND	
108-05-4	Vinyl acetate	11.7	51.4	ND	41.2	180.9	ND	
78-93-3	2-Butanone	46.8	119.1	11,613.2	137.9	351.1	34,228.8	E
141-78-6	Ethyl acetate	23.4	51.2	ND	84.3	184.6	ND	
74-97-5	Bromochloromethane	11.7	31.2	ND	61.9	164.8	ND	
109-99-9	Tetrahydrofuran	23.4	58.9	ND	69.0	173.5	ND	
156-59-2	cis-1,2-Dichloroethene	23.4	62.9	ND	92.7	249.3	ND	
67-66-3	Chloroform	11.7	58.7	ND	57.1	286.4	ND	
71-55-6	1,1,1-Trichloroethane	11.7	51.9	ND	63.8	283.3	ND	
107-06-2	1,2-Dichloroethane	11.7	53.4	ND	47.4	216.0	ND	
110-82-7	Cyclohexane	11.7	44.9	350.0	40.4	154.6	1,204.9	
71-43-2	Benzene	11.7	59.4	588.3	37.4	189.8	1,878.3	
56-23-5	Carbon tetrachloride	11.7	55.5	ND	73.6	348.7	ND	
142-82-5	n-Heptane	58.5	141.8	ND	239.6	580.8	ND	
78-87-5	1,2-Dichloropropane	11.7	56.3	ND	54.0	260.1	ND	
123-91-1	1,4 Dioxane	46.8	95.7	ND	168.5	344.7	ND	
79-01-6	Trichloroethene	7.0	54.5	ND	37.7	292.7	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	11.7	23.6	ND	78.3	158.3	ND	
80-62-6	Methyl methacrylate	46.8	158.2	ND	191.5	647.3	ND	
108-10-1	4-Methyl-2-pentanone	46.8	177.1	122.1	191.7	725.6	500.0	J
10061-01-5	cis-1,3-Dichloropropene	11.7	60.6	ND	53.1	275.1	ND	
108-88-3	Toluene	23.4	61.1	1,004.7	88.1	229.9	3,782.9	
10061-02-6	trans-1,3-Dichloropropene	11.7	60.7	ND	53.1	275.3	ND	
79-00-5	1,1,2-Trichloroethane	11.7	60.2	ND	63.8	328.1	ND	
591-78-6	2-Hexanone	58.5	165.9	181.4	239.6	679.6	743.2	
124-48-1	Dibromochloromethane	11.7	23.4	ND	99.6	198.9	ND	
106-93-4	1,2-Dibromoethane	11.7	28.4	ND	89.9	218.1	ND	
127-18-4	Tetrachloroethene	7.0	28.5	ND	47.6	193.0	ND	
108-90-7	Chlorobenzene	11.7	53.2	ND	53.9	245.1	ND	
100-41-4	Ethylbenzene	24.7	61.8	167.5	107.4	268.5	727.2	
1330-20-7	m,p-Xylenes	24.8	62.0	341.5	107.7	269.2	1,482.6	
100-42-5	Styrene	24.2	60.6	ND	103.2	258.0	ND	
75-25-2	Bromoform	11.7	15.7	ND	120.9	162.2	ND	
95-47-6	o-Xylene	24.1	60.3	176.1	104.7	261.8	764.7	
79-34-5	1,1,2,2-Tetrachloroethane	11.6	29.0	ND	79.5	198.7	ND	
622-96-8	4-Ethyltoluene	38.8	97.0	ND	190.6	476.4	ND	
108-67-8	1,3,5-Trimethylbenzene	24.2	60.4	ND	118.8	297.0	ND	
95-63-6	1,2,4-Trimethylbenzene	23.8	59.5	66.1	116.9	292.2	324.9	
541-73-1	1,3-Dichlorobenzene	23.4	43.3	ND	140.6	260.1	ND	
100-44-7	Benzyl chloride	23.4	141.8	ND	121.1	733.9	ND	
106-46-7	1,4-Dichlorobenzene	23.4	40.5	ND	140.6	243.3	ND	
95-50-1	1,2-Dichlorobenzene	23.4	37.9	ND	140.6	227.8	ND	
120-82-1	1,2,4-Trichlorobenzene	58.5	80.5	ND	433.8	596.9	ND	
91-20-3	Naphthalene	11.9	18.7	ND	62.5	98.1	ND	
87-68-3	Hexachlorobutadiene	58.5	62.0	ND	623.7	661.1	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				97	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 09

File Name: 1756609A
Description: T-501
Canister: 619
QC_Batch: 102317-GCK

Date Sampled: 10/11/17 Time: 8:58
Date Analyzed: 10/23/17 Time: 20:35
Can Factor: 1.17
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.17	3.51	34.72	1.35	4.04	39.99	
74-86-2	Acetylene	1.17	3.51	ND	1.25	3.74	ND	ND
74-84-0	Ethane	1.17	3.51	1,278.94	1.44	4.33	1,577.71	
115-07-1	Propene	0.78	2.34	ND	1.35	4.04	ND	ND
74-98-6	Propane	0.78	2.34	633.28	1.41	4.23	1,144.57	
75-28-5	i-Butane	0.59	1.76	65.74	1.39	4.18	156.53	
106-98-9	1-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
106-97-8	n-Butane	0.59	1.76	173.24	1.39	4.18	412.52	
624-64-6	t-2-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
590-18-1	c-2-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
78-78-4	i-Pentane	0.47	1.40	59.70	1.38	4.15	176.67	
109-67-1	1-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
109-66-0	n-Pentane	0.47	1.40	53.09	1.38	4.15	156.89	
78-79-5	Isoprene	0.47	1.40	ND	1.31	3.92	ND	ND
646-04-8	t-2-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
627-20-3	c-2-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
75-83-2	2,2-Dimethylbutane	0.39	1.17	ND	1.38	4.13	ND	ND
287-92-3	Cyclopentane	0.47	1.40	ND	1.34	4.03	ND	ND
79-29-8	2,3-Dimethylbutane	0.39	1.17	ND	1.38	4.13	ND	ND
107-83-5	2-Methylpentane	0.39	1.17	20.74	1.38	4.13	73.26	
96-14-0	3-Methylpentane	0.39	1.17	1,416.59	1.38	4.13	5,004.50	
110-54-3	n-Hexane	0.39	1.17	24.21	1.38	4.13	85.53	
96-37-7	Methylcyclopentane	0.39	1.17	2.25	1.35	4.04	7.75	
108-08-7	2,4-Dimethylpentane	0.33	1.00	122.31	1.37	4.12	502.26	
71-43-2	Benzene	0.39	1.17	162.92	1.25	3.74	521.48	
110-82-7	Cyclohexane	0.39	1.17	91.43	1.35	4.04	315.50	
591-76-4	2-Methylhexane	0.33	1.00	357.87	1.37	4.12	1,469.60	
565-59-3	2,3-Dimethylpentane	0.33	1.00	17.13	1.37	4.12	70.36	
589-34-4	3-Methylhexane	0.33	1.00	186.45	1.37	4.12	765.68	
540-84-1	2,2,4-Trimethylpentane	0.29	0.88	48.02	1.37	4.11	224.76	
142-82-5	n-Heptane	0.33	1.00	9.98	1.37	4.12	40.96	
108-87-2	Methylcyclohexane	0.33	1.00	122.79	1.35	4.04	494.17	
592-13-2	2,5-Dimethylhexane	0.29	0.88	32.22	1.37	4.11	150.81	
589-43-5	2,4-Dimethylhexane	0.29	0.88	31.45	1.37	4.11	147.19	
565-75-3	2,3,4-Trimethylpentane	0.29	0.88	30.61	1.37	4.11	143.29	
108-88-3	Toluene	0.33	1.00	307.27	1.26	3.79	1,159.82	
584-94-1	2,3-Dimethylhexane	0.29	0.88	72.82	1.37	4.11	340.84	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.88	55.78	1.37	4.11	261.08	
589-81-1	3-Methylheptane	0.29	0.88	8.52	1.37	4.11	39.88	
111-65-9	n-Octane	0.29	0.88	12.27	1.37	4.11	57.41	
100-41-4	Ethylbenzene	0.29	0.88	55.82	1.27	3.82	242.96	
108-38-3	m,p-xylene	0.29	0.88	127.09	1.27	3.82	553.17	
100-42-5	Styrene	0.29	0.88	172.84	1.25	3.75	738.10	
95-47-6	o-xylene	0.29	0.88	81.43	1.27	3.82	354.42	
111-84-2	n-Nonane	0.26	0.78	8.96	1.37	4.10	47.09	
98-82-8	i-Propylbenzene	0.26	0.78	83.77	1.28	3.84	412.67	
103-65-1	n-propylbenzene	0.26	0.78	101.26	1.28	3.84	498.81	
80-56-8	a-Pinene	0.23	0.70	ND	1.31	3.92	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.78	11.44	1.28	3.84	56.36	
622-96-8	4-Ethyltoluene	0.26	0.78	27.99	1.28	3.84	137.88	
108-67-8	1,3,5-Trimethylbenzene	0.26	0.78	28.84	1.28	3.84	142.07	
611-14-3	2-Ethyltoluene	0.26	0.78	30.13	1.28	3.84	148.44	
127-91-3	b-Pinene	0.23	0.70	ND	1.31	3.92	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.78	49.58	1.28	3.84	244.26	
124-18-5	n-Decane	0.23	0.70	11.46	1.36	4.09	66.82	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.78	14.61	1.28	3.84	71.99	
5989-27-5	d-Limonene	0.23	0.70	ND	1.31	3.92	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.70	49.41	1.29	3.86	271.78	
105-05-5	1,4-Diethylbenzene	0.23	0.70	31.01	1.29	3.86	170.57	
104-51-8	n-Butylbenzene	0.23	0.70	14.40	1.29	3.86	79.22	
1120-21-4	Undecane	0.21	0.64	8.57	1.36	4.09	54.91	
112-40-3	Dodecane	0.20	0.59	16.06	1.36	4.08	112.11	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.78	26.33	10,346.58	31.00	93.00	36,552.27	
TNMHC - C1	Total Non-Methane Hydrocarbons	52.65	157.95	62,079.50	34.52	103.57	40,707.87	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 09

File Name: 756609PA

Date Sampled: 10/11/17

Time: 8:58

Description: T - 501

Date Analyzed: 10/19/17

Time: 14:38

Can/Tube#: 619

Can Dilution Factor: 1.17

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.14	117	351	1,360	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 09

File Name: 1756609A

Description: T - 501

Can/Tube#: 619

QC_Batch: 101917-GCL

Date Sampled: 10/11/17

Time: 8:58

Date Analyzed: 10/19/17

Time: 10:15

Dilution Factor: 1.17

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.70	114.73	0.16	0.47	77.52	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 10

File Name: 1756610A.D

Date Sampled: 10/11/17

Time: 09:50

Description: T-502

Date Analyzed: 10/27/17

Time: 17:43

Canister: 786

Can Dilution Factor: 1.17

QC_Batch: 102717-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	11.7	58.9	ND	57.8	290.9	ND	
74-87-3	Chloromethane	11.7	58.9	ND	24.2	121.5	ND	
76-14-2	Freon 114	11.7	58.9	ND	81.7	411.2	ND	
75-01-4	Vinyl chloride	11.7	58.9	ND	29.9	150.4	ND	
106-99-0	1,3-Butadiene	11.7	58.9	ND	25.9	130.2	ND	
74-83-9	Bromomethane	11.7	58.9	ND	45.4	228.3	ND	
75-00-3	Chloroethane	11.7	58.9	ND	30.8	155.2	ND	
64-17-5	Ethanol	58.5	175.5	ND	110.2	330.7	ND	
75-69-4	Trichlorofluoromethane	11.7	56.2	ND	65.7	315.6	ND	
67-64-1	Acetone	58.5	143.9	4,391.1	138.9	341.8	10,429.2	
67-63-0	2-propanol	58.5	134.3	ND	143.7	330.0	ND	
75-35-4	1,1-Dichloroethene	11.7	58.0	ND	46.3	229.9	ND	
76-13-1	Freon 113	11.7	56.0	ND	89.6	428.8	ND	
75-09-2	Dichloromethane	23.4	56.4	ND	81.2	195.6	ND	
75-15-0	Carbon disulfide	58.5	108.6	61.0	182.0	337.8	189.9	J
156-60-5	trans-1,2-Dichloroethene	11.7	42.2	ND	46.3	167.3	ND	
1634-04-4	Methyl tert butyl ether	11.7	43.1	ND	42.1	155.4	ND	
75-34-3	1,1-Dichloroethane	11.7	58.4	ND	47.4	236.2	ND	
108-05-4	Vinyl acetate	11.7	51.4	ND	41.2	180.9	ND	
78-93-3	2-Butanone	46.8	119.1	2,546.5	137.9	351.1	7,505.6	
141-78-6	Ethyl acetate	23.4	51.2	ND	84.3	184.6	ND	
74-97-5	Bromochloromethane	11.7	31.2	ND	61.9	164.8	ND	
109-99-9	Tetrahydrofuran	23.4	58.9	ND	69.0	173.5	ND	
156-59-2	cis-1,2-Dichloroethene	23.4	62.9	ND	92.7	249.3	ND	
67-66-3	Chloroform	11.7	58.7	ND	57.1	286.4	ND	
71-55-6	1,1,1-Trichloroethane	11.7	51.9	ND	63.8	283.3	ND	
107-06-2	1,2-Dichloroethane	11.7	53.4	ND	47.4	216.0	ND	
110-82-7	Cyclohexane	11.7	44.9	ND	40.4	154.6	ND	
71-43-2	Benzene	11.7	59.4	92.1	37.4	189.8	294.0	
56-23-5	Carbon tetrachloride	11.7	55.5	ND	73.6	348.7	ND	
142-82-5	n-Heptane	58.5	141.8	ND	239.6	580.8	ND	
78-87-5	1,2-Dichloropropane	11.7	56.3	ND	54.0	260.1	ND	
123-91-1	1,4 Dioxane	46.8	95.7	ND	168.5	344.7	ND	
79-01-6	Trichloroethene	7.0	54.5	ND	37.7	292.7	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	11.7	23.6	ND	78.3	158.3	ND	
80-62-6	Methyl methacrylate	46.8	158.2	ND	191.5	647.3	ND	
108-10-1	4-Methyl-2-pentanone	46.8	177.1	ND	191.7	725.6	ND	
10061-01-5	cis-1,3-Dichloropropene	11.7	60.6	ND	53.1	275.1	ND	
108-88-3	Toluene	23.4	61.1	123.4	88.1	229.9	464.6	
10061-02-6	trans-1,3-Dichloropropene	11.7	60.7	ND	53.1	275.3	ND	
79-00-5	1,1,2-Trichloroethane	11.7	60.2	ND	63.8	328.1	ND	
591-78-6	2-Hexanone	58.5	165.9	ND	239.6	679.6	ND	
124-48-1	Dibromochloromethane	11.7	23.4	ND	99.6	198.9	ND	
106-93-4	1,2-Dibromoethane	11.7	28.4	ND	89.9	218.1	ND	
127-18-4	Tetrachloroethene	7.0	28.5	ND	47.6	193.0	ND	
108-90-7	Chlorobenzene	11.7	53.2	ND	53.9	245.1	ND	
100-41-4	Ethylbenzene	24.7	61.8	37.8	107.4	268.5	164.0	J
1330-20-7	m,p-Xylenes	24.8	62.0	82.0	107.7	269.2	355.8	
100-42-5	Styrene	24.2	60.6	ND	103.2	258.0	ND	
75-25-2	Bromoform	11.7	15.7	ND	120.9	162.2	ND	
95-47-6	o-Xylene	24.1	60.3	35.7	104.7	261.8	155.1	J
79-34-5	1,1,2,2-Tetrachloroethane	11.6	29.0	ND	79.5	198.7	ND	
622-96-8	4-Ethyltoluene	38.8	97.0	ND	190.6	476.4	ND	
108-67-8	1,3,5-Trimethylbenzene	24.2	60.4	ND	118.8	297.0	ND	
95-63-6	1,2,4-Trimethylbenzene	23.8	59.5	25.6	116.9	292.2	125.6	J
541-73-1	1,3-Dichlorobenzene	23.4	43.3	ND	140.6	260.1	ND	
100-44-7	Benzyl chloride	23.4	141.8	ND	121.1	733.9	ND	
106-46-7	1,4-Dichlorobenzene	23.4	40.5	ND	140.6	243.3	ND	
95-50-1	1,2-Dichlorobenzene	23.4	37.9	ND	140.6	227.8	ND	
120-82-1	1,2,4-Trichlorobenzene	58.5	80.5	ND	433.8	596.9	ND	
91-20-3	Naphthalene	11.9	18.7	ND	62.5	98.1	ND	
87-68-3	Hexachlorobutadiene	58.5	62.0	ND	623.7	661.1	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	105	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 10

File Name: 1756610A
Description: T - 502
Canister: 786
QC_Batch: 102417-GCK

Date Sampled: 10/11/17 Time: 9:50
Date Analyzed: 10/24/17 Time: 17:44
Can Factor: 1.17
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.17	3.51	30.82	1.35	4.04	35.50	
74-86-2	Acetylene	1.17	3.51	ND	1.25	3.74	ND	ND
74-84-0	Ethane	1.17	3.51	765.21	1.44	4.33	943.97	
115-07-1	Propene	0.78	2.34	ND	1.35	4.04	ND	ND
74-98-6	Propane	0.78	2.34	403.37	1.41	4.23	729.04	
75-28-5	i-Butane	0.59	1.76	48.20	1.39	4.18	114.77	
106-98-9	1-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
106-97-8	n-Butane	0.59	1.76	129.18	1.39	4.18	307.59	
624-64-6	t-2-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
590-18-1	c-2-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
78-78-4	i-Pentane	0.47	1.40	76.48	1.38	4.15	226.32	
109-67-1	1-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
109-66-0	n-Pentane	0.47	1.40	72.10	1.38	4.15	213.05	
78-79-5	Isoprene	0.47	1.40	ND	1.31	3.92	ND	ND
646-04-8	t-2-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
627-20-3	c-2-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
75-83-2	2,2-Dimethylbutane	0.39	1.17	ND	1.38	4.13	ND	ND
287-92-3	Cyclopentane	0.47	1.40	ND	1.34	4.03	ND	ND
79-29-8	2,3-Dimethylbutane	0.39	1.17	ND	1.38	4.13	ND	ND
107-83-5	2-Methylpentane	0.39	1.17	98.62	1.38	4.13	348.41	
96-14-0	3-Methylpentane	0.39	1.17	2,081.19	1.38	4.13	7,352.41	
110-54-3	n-Hexane	0.39	1.17	576.06	1.38	4.13	2,035.08	
96-37-7	Methylcyclopentane	0.39	1.17	ND	1.35	4.04	ND	ND
108-08-7	2,4-Dimethylpentane	0.33	1.00	306.90	1.37	4.12	1,260.29	
71-43-2	Benzene	0.39	1.17	112.61	1.25	3.74	360.46	
110-82-7	Cyclohexane	0.39	1.17	160.83	1.35	4.04	555.00	
591-76-4	2-Methylhexane	0.33	1.00	467.69	1.37	4.12	1,920.59	
565-59-3	2,3-Dimethylpentane	0.33	1.00	ND	1.37	4.12	ND	ND
589-34-4	3-Methylhexane	0.33	1.00	232.47	1.37	4.12	954.67	
540-84-1	2,2,4-Trimethylpentane	0.29	0.88	105.37	1.37	4.11	493.15	
142-82-5	n-Heptane	0.33	1.00	28.86	1.37	4.12	118.50	
108-87-2	Methylcyclohexane	0.33	1.00	234.57	1.35	4.04	944.05	
592-13-2	2,5-Dimethylhexane	0.29	0.88	27.27	1.37	4.11	127.65	
589-43-5	2,4-Dimethylhexane	0.29	0.88	47.30	1.37	4.11	221.36	
565-75-3	2,3,4-Trimethylpentane	0.29	0.88	64.34	1.37	4.11	301.12	
108-88-3	Toluene	0.33	1.00	252.16	1.26	3.79	951.78	
584-94-1	2,3-Dimethylhexane	0.29	0.88	112.80	1.37	4.11	527.95	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.88	64.14	1.37	4.11	300.21	
589-81-1	3-Methylheptane	0.29	0.88	11.13	1.37	4.11	52.08	
111-65-9	n-Octane	0.29	0.88	31.43	1.37	4.11	147.08	
100-41-4	Ethylbenzene	0.29	0.88	87.70	1.27	3.82	381.69	
108-38-3	m,p-xylene	0.29	0.88	191.28	1.27	3.82	832.55	
100-42-5	Styrene	0.29	0.88	267.47	1.25	3.75	1,142.24	
95-47-6	o-xylene	0.29	0.88	135.98	1.27	3.82	591.86	
111-84-2	n-Nonane	0.26	0.78	31.17	1.37	4.10	163.88	
98-82-8	i-Propylbenzene	0.26	0.78	43.22	1.28	3.84	212.90	
103-65-1	n-propylbenzene	0.26	0.78	156.95	1.28	3.84	773.17	
80-56-8	a-Pinene	0.23	0.70	ND	1.31	3.92	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.78	32.15	1.28	3.84	158.36	
622-96-8	4-Ethyltoluene	0.26	0.78	72.81	1.28	3.84	358.66	
108-67-8	1,3,5-Trimethylbenzene	0.26	0.78	67.88	1.28	3.84	334.42	
611-14-3	2-Ethyltoluene	0.26	0.78	76.76	1.28	3.84	378.13	
127-91-3	b-Pinene	0.23	0.70	ND	1.31	3.92	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.78	78.27	1.28	3.84	385.57	
124-18-5	n-Decane	0.23	0.70	43.78	1.36	4.09	255.34	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.78	32.95	1.28	3.84	162.31	
5989-27-5	d-Limonene	0.23	0.70	ND	1.31	3.92	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.70	47.88	1.29	3.86	263.33	
105-05-5	1,4-Diethylbenzene	0.23	0.70	39.02	1.29	3.86	214.59	
104-51-8	n-Butylbenzene	0.23	0.70	77.63	1.29	3.86	426.95	
1120-21-4	Undecane	0.21	0.64	83.47	1.36	4.09	534.70	
112-40-3	Dodecane	0.20	0.59	51.65	1.36	4.08	360.46	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.78	26.33	16,386.58	31.00	93.00	57,890.30	
TNMHC - C1	Total Non-Methane Hydrocarbons	52.65	157.95	98,319.49	34.52	103.57	64,471.80	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 10

File Name: 756610PA

Date Sampled: 10/11/17

Time: 9:50

Description: T - 502

Date Analyzed: 10/19/17

Time: 14:44

Can/Tube#: 786

Can Dilution Factor: 1.17

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.09	117	351	912	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 10

File Name: 1756610A

Description: T - 502

Can/Tube#: 786

QC_Batch: 101917-GCL

Date Sampled: 10/11/17

Time: 9:50

Date Analyzed: 10/19/17

Time: 10:19

Dilution Factor: 1.17

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.70	40.10	0.16	0.47	27.10	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 11

File Name: 1756611A.D

Date Sampled: 10/11/17

Time: 11:45

Description: T-503

Date Analyzed: 10/27/17

Time: 18:15

Canister: 637

Can Dilution Factor: 1.22

QC_Batch: 102717-MA1

Air Volume: 100 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.61	3.07	ND	3.01	15.16	ND	
74-87-3	Chloromethane	0.61	3.07	ND	1.26	6.33	ND	
76-14-2	Freon 114	0.61	3.07	ND	4.26	21.44	ND	
75-01-4	Vinyl chloride	0.61	3.07	ND	1.56	7.84	ND	
106-99-0	1,3-Butadiene	0.61	3.07	ND	1.35	6.79	ND	
74-83-9	Bromomethane	0.61	3.07	ND	2.37	11.90	ND	
75-00-3	Chloroethane	0.61	3.07	ND	1.61	8.09	ND	
64-17-5	Ethanol	3.05	9.15	ND	5.75	17.24	ND	
75-69-4	Trichlorofluoromethane	0.61	2.93	ND	3.43	16.45	ND	
67-64-1	Acetone	3.05	7.50	577.76	7.24	17.82	1,372.23	E
67-63-0	2-propanol	3.05	7.00	ND	7.49	17.20	ND	
75-35-4	1,1-Dichloroethene	0.61	3.03	ND	2.42	11.99	ND	
76-13-1	Freon 113	0.61	2.92	ND	4.67	22.36	ND	
75-09-2	Dichloromethane	1.22	2.94	ND	4.23	10.20	ND	
75-15-0	Carbon disulfide	3.05	5.66	ND	9.49	17.61	ND	
156-60-5	trans-1,2-Dichloroethene	0.61	2.20	ND	2.42	8.72	ND	
1634-04-4	Methyl tert butyl ether	0.61	2.25	ND	2.20	8.10	ND	
75-34-3	1,1-Dichloroethane	0.61	3.04	ND	2.47	12.31	ND	
108-05-4	Vinyl acetate	0.61	2.68	ND	2.15	9.43	ND	
78-93-3	2-Butanone	2.44	6.21	187.38	7.19	18.30	552.29	
141-78-6	Ethyl acetate	1.22	2.67	ND	4.39	9.62	ND	
74-97-5	Bromochloromethane	0.61	1.62	ND	3.23	8.59	ND	
109-99-9	Tetrahydrofuran	1.22	3.07	ND	3.60	9.04	ND	
156-59-2	cis-1,2-Dichloroethene	1.22	3.28	ND	4.83	13.00	ND	
67-66-3	Chloroform	0.61	3.06	ND	2.98	14.93	ND	
71-55-6	1,1,1-Trichloroethane	0.61	2.71	ND	3.33	14.77	ND	
107-06-2	1,2-Dichloroethane	0.61	2.78	ND	2.47	11.26	ND	
110-82-7	Cyclohexane	0.61	2.34	ND	2.11	8.06	ND	
71-43-2	Benzene	0.61	3.10	5.68	1.95	9.89	18.14	
56-23-5	Carbon tetrachloride	0.61	2.89	ND	3.84	18.18	ND	
142-82-5	n-Heptane	3.05	7.39	ND	12.49	30.28	ND	
78-87-5	1,2-Dichloropropane	0.61	2.94	ND	2.82	13.56	ND	
123-91-1	1,4 Dioxane	2.44	4.99	ND	8.79	17.97	ND	
79-01-6	Trichloroethene	0.37	2.84	ND	1.97	15.26	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	0.61	1.23	ND	4.08	8.25	ND	
80-62-6	Methyl methacrylate	2.44	8.25	ND	9.98	33.75	ND	
108-10-1	4-Methyl-2-pentanone	2.44	9.24	ND	9.99	37.83	ND	
10061-01-5	cis-1,3-Dichloropropene	0.61	3.16	ND	2.77	14.34	ND	
108-88-3	Toluene	1.22	3.18	ND	4.59	11.99	ND	
10061-02-6	trans-1,3-Dichloropropene	0.61	3.16	ND	2.77	14.35	ND	
79-00-5	1,1,2-Trichloroethane	0.61	3.14	ND	3.33	17.10	ND	
591-78-6	2-Hexanone	3.05	8.65	4.17	12.49	35.43	17.10	J
124-48-1	Dibromochloromethane	0.61	1.22	ND	5.19	10.37	ND	
106-93-4	1,2-Dibromoethane	0.61	1.48	ND	4.69	11.37	ND	
127-18-4	Tetrachloroethene	0.37	1.48	ND	2.48	10.06	ND	
108-90-7	Chlorobenzene	0.61	2.78	ND	2.81	12.78	ND	
100-41-4	Ethylbenzene	1.29	3.22	4.11	5.60	14.00	17.84	
1330-20-7	m,p-Xylenes	1.29	3.23	3.80	5.61	14.03	16.49	
100-42-5	Styrene	1.26	3.16	ND	5.38	13.45	ND	
75-25-2	Bromoform	0.61	0.82	ND	6.30	8.46	ND	
95-47-6	o-Xylene	1.26	3.14	1.74	5.46	13.65	7.55	J
79-34-5	1,1,2,2-Tetrachloroethane	0.60	1.51	ND	4.14	10.36	ND	
622-96-8	4-Ethyltoluene	2.02	5.06	ND	9.94	24.84	ND	
108-67-8	1,3,5-Trimethylbenzene	1.26	3.15	ND	6.19	15.48	ND	
95-63-6	1,2,4-Trimethylbenzene	1.24	3.10	ND	6.09	15.23	ND	
541-73-1	1,3-Dichlorobenzene	1.22	2.26	ND	7.33	13.56	ND	
100-44-7	Benzyl chloride	1.22	7.39	ND	6.31	38.26	ND	
106-46-7	1,4-Dichlorobenzene	1.22	2.11	ND	7.33	12.68	ND	
95-50-1	1,2-Dichlorobenzene	1.22	1.98	ND	7.33	11.88	ND	
120-82-1	1,2,4-Trichlorobenzene	3.05	4.20	ND	22.62	31.12	ND	
91-20-3	Naphthalene	0.62	0.98	0.72	3.26	5.11	3.76	J
87-68-3	Hexachlorobutadiene	3.05	3.23	ND	32.52	34.47	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				121	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566

Laboratory Number: 11

File Name: 1756611A
Description: T - 503
Canister: 637
QC_Batch: 110717-GCK

Date Sampled: 10/11/17 Time: 11:45
Date Analyzed: 11/07/17 Time: 18:30
Can Factor: 1.22
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.22	3.66	16.54	1.41	4.22	19.05	
74-86-2	Acetylene	1.22	3.66	ND	1.30	3.90	ND	ND
74-84-0	Ethane	1.22	3.66	73.27	1.51	4.52	90.39	
115-07-1	Propene	0.81	2.44	ND	1.40	4.21	ND	ND
74-98-6	Propane	0.81	2.44	32.35	1.47	4.41	58.48	
75-28-5	i-Butane	0.61	1.83	4.74	1.45	4.36	11.29	
106-98-9	1-Butene	0.61	1.83	ND	1.40	4.21	ND	ND
106-97-8	n-Butane	0.61	1.83	12.70	1.45	4.36	30.24	
624-64-6	t-2-Butene	0.61	1.83	ND	1.40	4.21	ND	ND
590-18-1	c-2-Butene	0.61	1.83	ND	1.40	4.21	ND	ND
78-78-4	i-Pentane	0.49	1.46	5.37	1.44	4.33	15.89	
109-67-1	1-Pentene	0.49	1.46	ND	1.40	4.21	ND	ND
109-66-0	n-Pentane	0.49	1.46	20.92	1.44	4.33	61.80	
78-79-5	Isoprene	0.49	1.46	ND	1.36	4.09	ND	ND
646-04-8	t-2-Pentene	0.49	1.46	ND	1.40	4.21	ND	ND
627-20-3	c-2-Pentene	0.49	1.46	ND	1.40	4.21	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.22	ND	1.44	4.31	ND	ND
287-92-3	Cyclopentane	0.49	1.46	ND	1.40	4.21	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.22	ND	1.44	4.31	ND	ND
107-83-5	2-Methylpentane	0.41	1.22	1.67	1.44	4.31	5.89	
96-14-0	3-Methylpentane	0.41	1.22	1.36	1.44	4.31	4.79	
110-54-3	n-Hexane	0.41	1.22	0.82	1.44	4.31	2.90	J
96-37-7	Methylcyclopentane	0.41	1.22	ND	1.40	4.21	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.05	ND	1.43	4.29	ND	ND
71-43-2	Benzene	0.41	1.22	16.99	1.30	3.91	54.38	
110-82-7	Cyclohexane	0.41	1.22	ND	1.40	4.21	ND	ND
591-76-4	2-Methylhexane	0.35	1.05	2.58	1.43	4.29	10.58	
565-59-3	2,3-Dimethylpentane	0.35	1.05	ND	1.43	4.29	ND	ND
589-34-4	3-Methylhexane	0.35	1.05	9.82	1.43	4.29	40.33	
540-84-1	2,2,4-Trimethylpentane	0.31	0.92	1.21	1.43	4.28	5.68	
142-82-5	n-Heptane	0.35	1.05	ND	1.43	4.29	ND	ND
108-87-2	Methylcyclohexane	0.35	1.05	2.18	1.40	4.21	8.76	
592-13-2	2,5-Dimethylhexane	0.31	0.92	4.35	1.43	4.28	20.38	
589-43-5	2,4-Dimethylhexane	0.31	0.92	5.24	1.43	4.28	24.54	
565-75-3	2,3,4-Trimethylpentane	0.31	0.92	3.13	1.43	4.28	14.67	
108-88-3	Toluene	0.35	1.05	2.86	1.32	3.95	10.81	
584-94-1	2,3-Dimethylhexane	0.31	0.92	ND	1.43	4.28	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.92	13.12	1.43	4.28	61.41	
589-81-1	3-Methylheptane	0.31	0.92	8.83	1.43	4.28	41.35	
111-65-9	n-Octane	0.31	0.92	1.42	1.43	4.28	6.65	
100-41-4	Ethylbenzene	0.31	0.92	15.06	1.33	3.98	65.53	
108-38-3	m,p-xylene	0.31	0.92	16.51	1.33	3.98	71.88	
100-42-5	Styrene	0.31	0.92	14.10	1.30	3.91	60.19	
95-47-6	o-xylene	0.31	0.92	22.37	1.33	3.98	97.34	
111-84-2	n-Nonane	0.27	0.81	5.11	1.43	4.28	26.85	
98-82-8	i-Propylbenzene	0.27	0.81	13.62	1.34	4.01	67.12	
103-65-1	n-propylbenzene	0.27	0.81	4.03	1.34	4.01	19.83	
80-56-8	a-Pinene	0.24	0.73	ND	1.36	4.09	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.81	3.52	1.34	4.01	17.36	
622-96-8	4-Ethyltoluene	0.27	0.81	2.04	1.34	4.01	10.06	
108-67-8	1,3,5-Trimethylbenzene	0.27	0.81	6.66	1.34	4.01	32.81	
611-14-3	2-Ethyltoluene	0.27	0.81	6.69	1.34	4.01	32.98	
127-91-3	b-Pinene	0.24	0.73	ND	1.36	4.09	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.81	7.20	1.34	4.01	35.48	
124-18-5	n-Decane	0.24	0.73	3.73	1.42	4.27	21.75	
526-73-8	1,2,3-Trimethylbenzene	0.27	0.81	8.59	1.34	4.01	42.31	
5989-27-5	d-Limonene	0.24	0.73	ND	1.36	4.09	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.73	7.99	1.34	4.03	43.92	
105-05-5	1,4-Diethylbenzene	0.24	0.73	11.57	1.34	4.03	63.63	
104-51-8	n-Butylbenzene	0.24	0.73	5.78	1.34	4.03	31.81	
1120-21-4	Undecane	0.22	0.67	5.27	1.42	4.26	33.73	
112-40-3	Dodecane	0.20	0.61	3.57	1.42	4.26	24.89	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.15	27.45	2,200.85	32.33	96.98	7,775.13	
TNMHC - C1	Total Non-Methane Hydrocarbons	54.90	164.70	13,205.09	36.00	108.00	8,659.08	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 11

File Name: 756611PA

Date Sampled: 10/11/17

Time: 11:45

Description: T - 503

Date Analyzed: 10/19/17

Time: 14:54

Can/Tube#: 637

Can Dilution Factor: 1.22

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.05	122	366	498	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: **ASTM D3416**

SDG: 217566
Laboratory Number: 11

File Name: 1756611A
Description: T - 503
Can/Tube#: 637
QC_Batch: 101917-GCL

Date Sampled: 10/11/17 Time: 11:45
Date Analyzed: 10/19/17 Time: 10:24
Dilution Factor: 1.22

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.73	8.45	0.16	0.49	5.71	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 12

File Name: 1756612A.D

Date Sampled: 10/11/17

Time: 13:35

Description: T-504

Date Analyzed: 10/27/17

Time: 18:49

Canister: 518

Can Dilution Factor: 1.19

QC_Batch: 102717-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	11.90	59.86	ND	58.81	295.84	ND	
74-87-3	Chloromethane	11.90	59.86	ND	24.57	123.57	ND	
76-14-2	Freon 114	11.90	59.86	ND	83.14	418.19	ND	
75-01-4	Vinyl chloride	11.90	59.86	ND	30.40	152.94	ND	
106-99-0	1,3-Butadiene	11.90	59.86	ND	26.32	132.38	ND	
74-83-9	Bromomethane	11.90	59.86	ND	46.17	232.22	ND	
75-00-3	Chloroethane	11.90	59.86	ND	31.38	157.83	ND	
64-17-5	Ethanol	59.50	178.50	ND	112.13	336.39	ND	
75-69-4	Trichlorofluoromethane	11.90	57.14	ND	66.84	320.95	ND	
67-64-1	Acetone	59.50	146.37	8,001.07	141.32	347.64	19,003.30	E
67-63-0	2-propanol	59.50	136.61	ND	146.18	335.64	ND	
75-35-4	1,1-Dichloroethene	11.90	59.02	ND	47.14	233.81	ND	
76-13-1	Freon 113	11.90	56.93	ND	91.16	436.15	ND	
75-09-2	Dichloromethane	23.80	57.31	ND	82.60	198.92	ND	
75-15-0	Carbon disulfide	59.50	110.43	ND	185.10	343.55	ND	
156-60-5	trans-1,2-Dichloroethene	11.90	42.96	ND	47.14	170.19	ND	
1634-04-4	Methyl tert butyl ether	11.90	43.87	ND	42.86	158.01	ND	
75-34-3	1,1-Dichloroethane	11.90	59.35	ND	48.16	240.19	ND	
108-05-4	Vinyl acetate	11.90	52.28	ND	41.88	184.03	ND	
78-93-3	2-Butanone	47.60	121.14	3,170.64	140.30	357.05	9,345.15	
141-78-6	Ethyl acetate	23.80	52.12	ND	85.72	187.72	ND	
74-97-5	Bromochloromethane	11.90	31.70	ND	62.95	167.66	ND	
109-99-9	Tetrahydrofuran	23.80	59.86	ND	70.15	176.43	ND	
156-59-2	cis-1,2-Dichloroethene	23.80	64.02	ND	94.28	253.60	ND	
67-66-3	Chloroform	11.90	59.68	ND	58.08	291.31	ND	
71-55-6	1,1,1-Trichloroethane	11.90	52.84	ND	64.89	288.13	ND	
107-06-2	1,2-Dichloroethane	11.90	54.28	ND	48.16	219.69	ND	
110-82-7	Cyclohexane	11.95	45.70	ND	41.12	157.29	ND	
71-43-2	Benzene	11.90	60.46	165.76	37.99	193.02	529.23	
56-23-5	Carbon tetrachloride	11.90	56.41	ND	74.82	354.64	ND	
142-82-5	n-Heptane	59.50	144.23	ND	243.72	590.77	ND	
78-87-5	1,2-Dichloropropane	11.90	57.27	ND	54.97	264.56	ND	
123-91-1	1,4 Dioxane	47.60	97.34	ND	171.43	350.57	ND	
79-01-6	Trichloroethene	7.14	55.43	ND	38.35	297.74	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-27-4	Bromodichloromethane	11.90	24.04	ND	79.68	160.96	ND	
80-62-6	Methyl methacrylate	47.60	160.89	ND	194.78	658.36	ND	
108-10-1	4-Methyl-2-pentanone	47.60	180.17	ND	194.98	737.98	ND	
10061-01-5	cis-1,3-Dichloropropene	11.90	61.67	ND	54.00	279.81	ND	
108-88-3	Toluene	23.80	62.12	85.69	89.61	233.87	322.64	
10061-02-6	trans-1,3-Dichloropropene	11.90	61.71	ND	54.00	280.04	ND	
79-00-5	1,1,2-Trichloroethane	11.90	61.19	ND	64.89	333.67	ND	
591-78-6	2-Hexanone	59.50	168.74	ND	243.72	691.19	ND	
124-48-1	Dibromochloromethane	11.90	23.76	ND	101.33	202.33	ND	
106-93-4	1,2-Dibromoethane	11.90	28.88	ND	91.41	221.86	ND	
127-18-4	Tetrachloroethene	7.14	28.96	ND	48.39	196.31	ND	
108-90-7	Chlorobenzene	11.90	54.15	ND	54.78	249.27	ND	
100-41-4	Ethylbenzene	25.16	62.91	101.91	109.24	273.10	442.44	
1330-20-7	m,p-Xylenes	25.23	63.06	46.11	109.52	273.79	200.17	J
100-42-5	Styrene	24.64	61.61	ND	104.97	262.43	ND	
75-25-2	Bromoform	11.90	15.97	ND	122.93	164.94	ND	
95-47-6	o-Xylene	24.53	61.33	31.14	106.51	266.27	135.18	J
79-34-5	1,1,2,2-Tetrachloroethane	11.78	29.46	ND	80.83	202.08	ND	
622-96-8	4-Ethyltoluene	39.45	98.62	ND	193.84	484.59	ND	
108-67-8	1,3,5-Trimethylbenzene	24.59	61.48	ND	120.83	302.08	ND	
95-63-6	1,2,4-Trimethylbenzene	24.19	60.48	ND	118.86	297.16	ND	
541-73-1	1,3-Dichlorobenzene	23.80	44.03	ND	143.02	264.59	ND	
100-44-7	Benzyl chloride	23.80	144.23	ND	123.17	746.43	ND	
106-46-7	1,4-Dichlorobenzene	23.80	41.17	ND	143.02	247.43	ND	
95-50-1	1,2-Dichlorobenzene	23.80	38.56	ND	143.02	231.69	ND	
120-82-1	1,2,4-Trichlorobenzene	59.50	81.87	ND	441.22	607.12	ND	
91-20-3	Naphthalene	12.14	19.04	ND	63.61	99.78	ND	
87-68-3	Hexachlorobutadiene	59.50	63.07	ND	634.35	672.41	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				106	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 12

File Name: 1756612A
Description: T - 504
Canister: 518
QC_Batch: 102417-GCK

Date Sampled: 10/11/17 Time: 13:35
Date Analyzed: 10/24/17 Time: 19:09
Can Factor: 1.19
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.19	3.57	1.23	1.37	4.11	1.42	J
74-86-2	Acetylene	1.19	3.57	38.76	1.27	3.80	41.30	
74-84-0	Ethane	1.19	3.57	964.76	1.47	4.40	1,190.14	
115-07-1	Propene	0.79	2.38	ND	1.37	4.11	ND	ND
74-98-6	Propane	0.79	2.38	424.88	1.43	4.30	767.92	
75-28-5	i-Butane	0.60	1.79	23.62	1.42	4.25	56.25	
106-98-9	1-Butene	0.60	1.79	ND	1.37	4.10	ND	ND
106-97-8	n-Butane	0.60	1.79	2.07	1.42	4.25	4.94	
624-64-6	t-2-Butene	0.60	1.79	ND	1.37	4.10	ND	ND
590-18-1	c-2-Butene	0.60	1.79	ND	1.37	4.10	ND	ND
78-78-4	i-Pentane	0.48	1.43	18.10	1.41	4.23	53.57	
109-67-1	1-Pentene	0.48	1.43	ND	1.37	4.10	ND	ND
109-66-0	n-Pentane	0.48	1.43	12.73	1.41	4.22	37.61	
78-79-5	Isoprene	0.48	1.43	ND	1.33	3.99	ND	ND
646-04-8	t-2-Pentene	0.48	1.43	ND	1.37	4.10	ND	ND
627-20-3	c-2-Pentene	0.48	1.43	ND	1.37	4.10	ND	ND
75-83-2	2,2-Dimethylbutane	0.40	1.19	ND	1.40	4.20	ND	ND
287-92-3	Cyclopentane	0.48	1.43	ND	1.37	4.10	ND	ND
79-29-8	2,3-Dimethylbutane	0.40	1.19	ND	1.40	4.20	ND	ND
107-83-5	2-Methylpentane	0.40	1.19	ND	1.40	4.20	ND	ND
96-14-0	3-Methylpentane	0.40	1.19	ND	1.40	4.20	ND	ND
110-54-3	n-Hexane	0.40	1.19	3.91	1.40	4.20	13.83	
96-37-7	Methylcyclopentane	0.40	1.19	ND	1.37	4.11	ND	ND
108-08-7	2,4-Dimethylpentane	0.34	1.02	ND	1.40	4.19	ND	ND
71-43-2	Benzene	0.40	1.19	337.19	1.27	3.81	1,079.27	
110-82-7	Cyclohexane	0.40	1.19	ND	1.37	4.11	ND	ND
591-76-4	2-Methylhexane	0.34	1.02	222.57	1.40	4.19	914.01	
565-59-3	2,3-Dimethylpentane	0.34	1.02	ND	1.40	4.19	ND	ND
589-34-4	3-Methylhexane	0.34	1.02	77.90	1.40	4.19	319.90	
540-84-1	2,2,4-Trimethylpentane	0.30	0.89	10.94	1.39	4.18	51.21	
142-82-5	n-Heptane	0.34	1.02	2.24	1.40	4.19	9.18	
108-87-2	Methylcyclohexane	0.34	1.02	23.15	1.37	4.11	93.17	
592-13-2	2,5-Dimethylhexane	0.30	0.89	32.88	1.39	4.18	153.87	
589-43-5	2,4-Dimethylhexane	0.30	0.89	37.61	1.39	4.18	176.04	
565-75-3	2,3,4-Trimethylpentane	0.30	0.89	147.78	1.39	4.18	691.66	
108-88-3	Toluene	0.34	1.02	133.07	1.28	3.85	502.27	
584-94-1	2,3-Dimethylhexane	0.30	0.89	ND	1.39	4.18	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.30	0.89	ND	1.39	4.18	ND	ND
589-81-1	3-Methylheptane	0.30	0.89	ND	1.39	4.18	ND	ND
111-65-9	n-Octane	0.30	0.89	23.62	1.39	4.18	110.56	
100-41-4	Ethylbenzene	0.30	0.89	141.13	1.29	3.88	614.28	
108-38-3	m,p-xylene	0.30	0.89	149.83	1.29	3.88	652.14	
100-42-5	Styrene	0.30	0.89	34.83	1.27	3.81	148.73	
95-47-6	o-xylene	0.30	0.89	149.03	1.29	3.88	648.63	
111-84-2	n-Nonane	0.26	0.79	14.96	1.39	4.17	78.64	
98-82-8	i-Propylbenzene	0.26	0.79	69.16	1.30	3.91	340.68	
103-65-1	n-propylbenzene	0.26	0.79	78.00	1.30	3.91	384.27	
80-56-8	a-Pinene	0.24	0.71	ND	1.33	3.99	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.79	58.64	1.30	3.91	288.88	
622-96-8	4-Ethyltoluene	0.26	0.79	ND	1.30	3.91	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.26	0.79	45.97	1.30	3.91	226.47	
611-14-3	2-Ethyltoluene	0.26	0.79	22.81	1.30	3.91	112.39	
127-91-3	b-Pinene	0.24	0.71	ND	1.33	3.99	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.79	28.86	1.30	3.91	142.17	
124-18-5	n-Decane	0.24	0.71	37.89	1.39	4.16	220.98	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.79	27.66	1.30	3.91	136.26	
5989-27-5	d-Limonene	0.24	0.71	ND	1.33	3.99	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.71	95.94	1.31	3.93	527.65	
105-05-5	1,4-Diethylbenzene	0.24	0.71	23.82	1.31	3.93	131.00	
104-51-8	n-Butylbenzene	0.24	0.71	20.68	1.31	3.93	113.73	
1120-21-4	Undecane	0.22	0.65	39.90	1.39	4.16	255.56	
112-40-3	Dodecane	0.20	0.60	57.36	1.38	4.15	400.35	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.93	26.78	17,122.76	31.53	94.59	60,491.07
TNMHC - C1	Total Non-Methane Hydrocarbons	53.55	160.65	102,736.58	35.11	105.34	67,368.25

ANALYTICAL REPORT

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 12

File Name: 756612PA

Date Sampled: 10/11/17

Time: 13:35

Description: T - 504

Date Analyzed: 10/19/17

Time: 15:13

Can/Tube#: 518

Can Dilution Factor: 1.19

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.38	119	357	3,751	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 12

File Name: 1756612A
Description: T - 504
Can/Tube#: 518
QC_Batch: 101917-GCL

Date Sampled: 10/11/17 Time: 13:35
Date Analyzed: 10/19/17 Time: 10:29
Dilution Factor: 1.19

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.71	76.43	0.16	0.48	51.64	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 13

File Name: 1756613A.D

Date Sampled: 10/11/17

Time: 13:40

Description: T-505

Date Analyzed: 10/27/17

Time: 19:23

Canister: 850

Can Dilution Factor: 1.18

QC_Batch: 102717-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	11.80	59.36	ND	58.32	293.35	ND	
74-87-3	Chloromethane	11.80	59.36	ND	24.36	122.53	ND	
76-14-2	Freon 114	11.80	59.36	ND	82.44	414.67	ND	
75-01-4	Vinyl chloride	11.80	59.36	ND	30.15	151.65	ND	
106-99-0	1,3-Butadiene	11.80	59.36	ND	26.10	131.27	ND	
74-83-9	Bromomethane	11.80	59.36	ND	45.78	230.27	ND	
75-00-3	Chloroethane	11.80	59.36	ND	31.11	156.50	ND	
64-17-5	Ethanol	59.00	177.00	ND	111.19	333.56	ND	
75-69-4	Trichlorofluoromethane	11.80	56.66	ND	66.28	318.26	ND	
67-64-1	Acetone	59.00	145.14	4,668.83	140.13	344.72	11,088.92	
67-63-0	2-propanol	59.00	135.46	ND	144.95	332.82	ND	
75-35-4	1,1-Dichloroethene	11.80	58.53	ND	46.74	231.84	ND	
76-13-1	Freon 113	11.80	56.45	ND	90.40	432.49	ND	
75-09-2	Dichloromethane	23.60	56.83	ND	81.91	197.25	ND	
75-15-0	Carbon disulfide	59.00	109.50	ND	183.54	340.66	ND	
156-60-5	trans-1,2-Dichloroethene	11.80	42.60	ND	46.74	168.76	ND	
1634-04-4	Methyl tert butyl ether	11.80	43.51	ND	42.50	156.68	ND	
75-34-3	1,1-Dichloroethane	11.80	58.85	ND	47.76	238.17	ND	
108-05-4	Vinyl acetate	11.80	51.85	ND	41.53	182.48	ND	
78-93-3	2-Butanone	47.20	120.12	1,731.42	139.12	354.05	5,103.19	
141-78-6	Ethyl acetate	23.60	51.68	ND	84.99	186.14	ND	
74-97-5	Bromochloromethane	11.80	31.43	ND	62.42	166.25	ND	
109-99-9	Tetrahydrofuran	23.60	59.36	ND	69.56	174.95	ND	
156-59-2	cis-1,2-Dichloroethene	23.60	63.48	ND	93.48	251.47	ND	
67-66-3	Chloroform	11.80	59.18	ND	57.60	288.87	ND	
71-55-6	1,1,1-Trichloroethane	11.80	52.39	ND	64.35	285.71	ND	
107-06-2	1,2-Dichloroethane	11.80	53.83	ND	47.76	217.84	ND	
110-82-7	Cyclohexane	11.85	45.31	138.59	40.78	155.97	477.05	
71-43-2	Benzene	11.80	59.95	105.65	37.67	191.39	337.29	
56-23-5	Carbon tetrachloride	11.80	55.93	ND	74.19	351.66	ND	
142-82-5	n-Heptane	59.00	143.02	ND	241.67	585.81	ND	
78-87-5	1,2-Dichloropropane	11.80	56.79	ND	54.51	262.34	ND	
123-91-1	1,4 Dioxane	47.20	96.52	ND	169.99	347.63	ND	
79-01-6	Trichloroethene	7.08	54.96	ND	38.03	295.24	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	11.80	23.84	ND	79.01	159.61	ND	
80-62-6	Methyl methacrylate	47.20	159.54	ND	193.14	652.83	ND	
108-10-1	4-Methyl-2-pentanone	47.20	178.65	ND	193.34	731.78	ND	
10061-01-5	cis-1,3-Dichloropropene	11.80	61.15	ND	53.54	277.46	ND	
108-88-3	Toluene	23.60	61.60	45.37	88.85	231.91	170.82	J
10061-02-6	trans-1,3-Dichloropropene	11.80	61.20	ND	53.54	277.68	ND	
79-00-5	1,1,2-Trichloroethane	11.80	60.67	ND	64.35	330.87	ND	
591-78-6	2-Hexanone	59.00	167.32	ND	241.67	685.38	ND	
124-48-1	Dibromochloromethane	11.80	23.56	ND	100.48	200.63	ND	
106-93-4	1,2-Dibromoethane	11.80	28.64	ND	90.64	220.00	ND	
127-18-4	Tetrachloroethene	7.08	28.72	ND	47.99	194.66	ND	
108-90-7	Chlorobenzene	11.80	53.70	ND	54.32	247.18	ND	
100-41-4	Ethylbenzene	24.95	62.38	44.46	108.32	270.81	193.00	J
1330-20-7	m,p-Xylenes	25.01	62.53	ND	108.59	271.49	ND	
100-42-5	Styrene	24.44	61.09	ND	104.09	260.22	ND	
75-25-2	Bromoform	11.80	15.83	ND	121.90	163.56	ND	
95-47-6	o-Xylene	24.33	60.82	ND	105.61	264.03	ND	
79-34-5	1,1,2,2-Tetrachloroethane	11.68	29.21	ND	80.15	200.38	ND	
622-96-8	4-Ethyltoluene	39.12	97.79	ND	192.21	480.52	ND	
108-67-8	1,3,5-Trimethylbenzene	24.38	60.96	ND	119.81	299.54	ND	
95-63-6	1,2,4-Trimethylbenzene	23.99	59.97	ND	117.87	294.66	ND	
541-73-1	1,3-Dichlorobenzene	23.60	43.66	ND	141.82	262.36	ND	
100-44-7	Benzyl chloride	23.60	143.02	ND	122.14	740.16	ND	
106-46-7	1,4-Dichlorobenzene	23.60	40.83	ND	141.82	245.35	ND	
95-50-1	1,2-Dichlorobenzene	23.60	38.23	ND	141.82	229.75	ND	
120-82-1	1,2,4-Trichlorobenzene	59.00	81.18	ND	437.52	602.02	ND	
91-20-3	Naphthalene	12.04	18.88	ND	63.08	98.95	ND	
87-68-3	Hexachlorobutadiene	59.00	62.54	ND	629.02	666.76	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	113	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 13

File Name: 1756613A
Description: T - 505
Canister: 850
QC_Batch: 102417-GCK

Date Sampled: 10/11/17 Time: 13:40
Date Analyzed: 10/24/17 Time: 20:06
Can Factor: 1.18
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.18	3.54	57.27	1.36	4.08	65.95	
74-86-2	Acetylene	1.18	3.54	38.88	1.26	3.77	41.43	
74-84-0	Ethane	1.18	3.54	1,105.06	1.46	4.37	1,363.21	
115-07-1	Propene	0.79	2.36	ND	1.36	4.07	ND	ND
74-98-6	Propane	0.79	2.36	706.06	1.42	4.27	1,276.12	
75-28-5	i-Butane	0.59	1.77	52.06	1.40	4.21	123.95	
106-98-9	1-Butene	0.59	1.77	ND	1.36	4.07	ND	ND
106-97-8	n-Butane	0.59	1.77	219.06	1.40	4.21	521.60	
624-64-6	t-2-Butene	0.59	1.77	ND	1.36	4.07	ND	ND
590-18-1	c-2-Butene	0.59	1.77	ND	1.36	4.07	ND	ND
78-78-4	i-Pentane	0.47	1.42	36.61	1.40	4.19	108.32	
109-67-1	1-Pentene	0.47	1.42	ND	1.36	4.07	ND	ND
109-66-0	n-Pentane	0.47	1.42	49.00	1.39	4.18	144.78	
78-79-5	Isoprene	0.47	1.42	ND	1.32	3.95	ND	ND
646-04-8	t-2-Pentene	0.47	1.42	ND	1.36	4.07	ND	ND
627-20-3	c-2-Pentene	0.47	1.42	ND	1.36	4.07	ND	ND
75-83-2	2,2-Dimethylbutane	0.39	1.18	ND	1.39	4.17	ND	ND
287-92-3	Cyclopentane	0.47	1.42	ND	1.36	4.07	ND	ND
79-29-8	2,3-Dimethylbutane	0.39	1.18	ND	1.39	4.17	ND	ND
107-83-5	2-Methylpentane	0.39	1.18	34.04	1.39	4.17	120.27	
96-14-0	3-Methylpentane	0.39	1.18	ND	1.39	4.17	ND	ND
110-54-3	n-Hexane	0.39	1.18	150.69	1.39	4.17	532.35	
96-37-7	Methylcyclopentane	0.39	1.18	2.34	1.36	4.07	8.07	
108-08-7	2,4-Dimethylpentane	0.34	1.01	239.34	1.38	4.15	982.88	
71-43-2	Benzene	0.39	1.18	250.20	1.26	3.78	800.83	
110-82-7	Cyclohexane	0.39	1.18	35.69	1.36	4.07	123.16	
591-76-4	2-Methylhexane	0.34	1.01	461.99	1.38	4.15	1,897.19	
565-59-3	2,3-Dimethylpentane	0.34	1.01	39.49	1.38	4.15	162.16	
589-34-4	3-Methylhexane	0.34	1.01	207.63	1.38	4.15	852.64	
540-84-1	2,2,4-Trimethylpentane	0.30	0.89	68.57	1.38	4.14	320.91	
142-82-5	n-Heptane	0.34	1.01	11.75	1.38	4.15	48.27	
108-87-2	Methylcyclohexane	0.34	1.01	268.47	1.36	4.07	1,080.47	
592-13-2	2,5-Dimethylhexane	0.30	0.89	7.84	1.38	4.14	36.71	
589-43-5	2,4-Dimethylhexane	0.30	0.89	29.77	1.38	4.14	139.33	
565-75-3	2,3,4-Trimethylpentane	0.30	0.89	62.55	1.38	4.14	292.74	
108-88-3	Toluene	0.34	1.01	130.24	1.27	3.82	491.59	
584-94-1	2,3-Dimethylhexane	0.30	0.89	37.03	1.38	4.14	173.32	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.30	0.89	38.98	1.38	4.14	182.42	
589-81-1	3-Methylheptane	0.30	0.89	10.96	1.38	4.14	51.30	
111-65-9	n-Octane	0.30	0.89	11.40	1.38	4.14	53.34	
100-41-4	Ethylbenzene	0.30	0.89	142.41	1.28	3.85	619.82	
108-38-3	m,p-xylene	0.30	0.89	58.21	1.28	3.85	253.36	
100-42-5	Styrene	0.30	0.89	16.85	1.26	3.78	71.95	
95-47-6	o-xylene	0.30	0.89	26.45	1.28	3.85	115.14	
111-84-2	n-Nonane	0.26	0.79	3.76	1.38	4.14	19.78	
98-82-8	i-Propylbenzene	0.26	0.79	23.25	1.29	3.88	114.56	
103-65-1	n-propylbenzene	0.26	0.79	13.50	1.29	3.88	66.49	
80-56-8	a-Pinene	0.24	0.71	ND	1.32	3.95	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.79	13.76	1.29	3.88	67.79	
622-96-8	4-Ethyltoluene	0.26	0.79	28.13	1.29	3.88	138.59	
108-67-8	1,3,5-Trimethylbenzene	0.26	0.79	15.30	1.29	3.88	75.39	
611-14-3	2-Ethyltoluene	0.26	0.79	ND	1.29	3.88	ND	ND
127-91-3	b-Pinene	0.24	0.71	ND	1.32	3.95	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.79	23.10	1.29	3.88	113.82	
124-18-5	n-Decane	0.24	0.71	9.33	1.38	4.13	54.41	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.79	9.18	1.29	3.88	45.24	
5989-27-5	d-Limonene	0.24	0.71	ND	1.32	3.95	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.71	8.37	1.30	3.89	46.05	
105-05-5	1,4-Diethylbenzene	0.24	0.71	8.76	1.30	3.89	48.19	
104-51-8	n-Butylbenzene	0.24	0.71	19.19	1.30	3.89	105.54	
1120-21-4	Undecane	0.21	0.64	17.66	1.37	4.12	113.15	
112-40-3	Dodecane	0.20	0.59	5.35	1.37	4.12	37.35	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.85	26.55	7,648.49	31.27	93.80	27,020.47	
TNMHC - C1	Total Non-Methane Hydrocarbons	53.10	159.30	45,890.91	34.82	104.46	30,092.40	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 13

File Name: 756613PA

Date Sampled: 10/11/17

Time: 13:40

Description: T - 505

Date Analyzed: 10/19/17

Time: 15:19

Can/Tube#: 850

Can Dilution Factor: 1.18

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.34	118	354	3,394	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

SDG: 217566

Modified Analytical Method:

ASTM D3416

Laboratory Number:

13

File Name: 1756613A

Date Sampled: 10/11/17

Time: 13:40

Description: T - 505

Date Analyzed: 10/19/17

Time: 10:33

Can/Tube#: 850

Dilution Factor: 1.18

QC_Batch: 101917-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.71	59.96	0.16	0.48	40.51	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 14

File Name: 1756614A.D

Date Sampled: 10/11/17

Time: 14:27

Description: T-506

Date Analyzed: 10/27/17

Time: 19:55

Canister: 644

Can Dilution Factor: 1.23

QC_Batch: 102717-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.31	1.55	ND	1.52	7.64	ND	
74-87-3	Chloromethane	0.31	1.55	ND	0.63	3.19	ND	
76-14-2	Freon 114	0.31	1.55	ND	2.15	10.81	ND	
75-01-4	Vinyl chloride	0.31	1.55	ND	0.79	3.95	ND	
106-99-0	1,3-Butadiene	0.31	1.55	ND	0.68	3.42	ND	
74-83-9	Bromomethane	0.31	1.55	ND	1.19	6.00	ND	
75-00-3	Chloroethane	0.31	1.55	ND	0.81	4.08	ND	
64-17-5	Ethanol	1.54	4.61	ND	2.90	8.69	ND	
75-69-4	Trichlorofluoromethane	0.31	1.48	ND	1.73	8.29	ND	
67-64-1	Acetone	1.54	3.78	2,321.01	3.65	8.98	5,512.62	E
67-63-0	2-propanol	1.54	3.53	98.35	3.78	8.67	241.63	
75-35-4	1,1-Dichloroethene	0.31	1.53	ND	1.22	6.04	ND	
76-13-1	Freon 113	0.31	1.47	ND	2.36	11.27	ND	
75-09-2	Dichloromethane	0.62	1.48	ND	2.13	5.14	ND	
75-15-0	Carbon disulfide	1.54	2.85	12.37	4.78	8.88	38.47	
156-60-5	trans-1,2-Dichloroethene	0.31	1.11	ND	1.22	4.40	ND	
1634-04-4	Methyl tert butyl ether	0.31	1.13	ND	1.11	4.08	ND	
75-34-3	1,1-Dichloroethane	0.31	1.53	ND	1.24	6.21	ND	
108-05-4	Vinyl acetate	0.31	1.35	ND	1.08	4.76	ND	
78-93-3	2-Butanone	1.23	3.13	1,475.68	3.63	9.23	4,349.44	E
141-78-6	Ethyl acetate	0.62	1.35	ND	2.21	4.85	ND	
74-97-5	Bromochloromethane	0.31	0.82	ND	1.63	4.33	ND	
109-99-9	Tetrahydrofuran	0.62	1.55	ND	1.81	4.56	ND	
156-59-2	cis-1,2-Dichloroethene	0.62	1.65	ND	2.44	6.55	ND	
67-66-3	Chloroform	0.31	1.54	ND	1.50	7.53	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.37	ND	1.68	7.45	ND	
107-06-2	1,2-Dichloroethane	0.31	1.40	ND	1.24	5.68	ND	
110-82-7	Cyclohexane	0.31	1.18	ND	1.06	4.06	ND	
71-43-2	Benzene	0.31	1.56	18.10	0.98	4.99	57.80	
56-23-5	Carbon tetrachloride	0.31	1.46	ND	1.93	9.16	ND	
142-82-5	n-Heptane	1.54	3.73	ND	6.30	15.27	ND	
78-87-5	1,2-Dichloropropane	0.31	1.48	ND	1.42	6.84	ND	
123-91-1	1,4 Dioxane	1.23	2.52	ND	4.43	9.06	ND	
79-01-6	Trichloroethene	0.18	1.43	ND	0.99	7.69	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	0.31	0.62	ND	2.06	4.16	ND	
80-62-6	Methyl methacrylate	1.23	4.16	ND	5.03	17.01	ND	
108-10-1	4-Methyl-2-pentanone	1.23	4.66	9.03	5.04	19.07	37.00	
10061-01-5	cis-1,3-Dichloropropene	0.31	1.59	ND	1.40	7.23	ND	
108-88-3	Toluene	0.62	1.61	12.08	2.32	6.04	45.47	
10061-02-6	trans-1,3-Dichloropropene	0.31	1.59	ND	1.40	7.24	ND	
79-00-5	1,1,2-Trichloroethane	0.31	1.58	ND	1.68	8.62	ND	
591-78-6	2-Hexanone	1.54	4.36	14.80	6.30	17.86	60.61	
124-48-1	Dibromochloromethane	0.31	0.61	ND	2.62	5.23	ND	
106-93-4	1,2-Dibromoethane	0.31	0.75	ND	2.36	5.73	ND	
127-18-4	Tetrachloroethene	0.18	0.75	ND	1.25	5.07	ND	
108-90-7	Chlorobenzene	0.31	1.40	ND	1.42	6.44	ND	
100-41-4	Ethylbenzene	0.65	1.63	9.02	2.82	7.06	39.16	
1330-20-7	m,p-Xylenes	0.65	1.63	5.25	2.83	7.07	22.78	
100-42-5	Styrene	0.64	1.59	ND	2.71	6.78	ND	
75-25-2	Bromoform	0.31	0.41	ND	3.18	4.26	ND	
95-47-6	o-Xylene	0.63	1.58	3.56	2.75	6.88	15.45	
79-34-5	1,1,2,2-Tetrachloroethane	0.30	0.76	ND	2.09	5.22	ND	
622-96-8	4-Ethyltoluene	1.02	2.55	ND	5.01	12.52	ND	
108-67-8	1,3,5-Trimethylbenzene	0.64	1.59	0.96	3.12	7.81	4.70	J
95-63-6	1,2,4-Trimethylbenzene	0.63	1.56	3.50	3.07	7.68	17.18	
541-73-1	1,3-Dichlorobenzene	0.62	1.14	ND	3.70	6.84	ND	
100-44-7	Benzyl chloride	0.62	3.73	ND	3.18	19.29	ND	
106-46-7	1,4-Dichlorobenzene	0.62	1.06	ND	3.70	6.39	ND	
95-50-1	1,2-Dichlorobenzene	0.62	1.00	ND	3.70	5.99	ND	
120-82-1	1,2,4-Trichlorobenzene	1.54	2.12	ND	11.40	15.69	ND	
91-20-3	Naphthalene	0.31	0.49	3.06	1.64	2.58	16.02	
87-68-3	Hexachlorobutadiene	1.54	1.63	ND	16.39	17.38	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	101	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

SDG: 217566

Analytical Method: TO-14FID

Laboratory Number: 14

File Name: 1756614A
Description: T - 506
Canister: 644
QC_Batch: 110717-GCK

Date Sampled: 10/11/17 Time: 14:27
Date Analyzed: 11/07/17 Time: 17:49
Can Factor: 1.23
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.23	3.69	20.60	1.42	4.25	23.72	
74-86-2	Acetylene	1.23	3.69	ND	1.31	3.93	ND	ND
74-84-0	Ethane	1.23	3.69	54.76	1.52	4.55	67.55	
115-07-1	Propene	0.82	2.46	ND	1.41	4.24	ND	ND
74-98-6	Propane	0.82	2.46	51.75	1.48	4.45	93.53	
75-28-5	i-Butane	0.62	1.85	3.19	1.46	4.39	7.59	
106-98-9	1-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
106-97-8	n-Butane	0.62	1.85	19.96	1.46	4.39	47.53	
624-64-6	t-2-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
590-18-1	c-2-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
78-78-4	i-Pentane	0.49	1.48	3.35	1.46	4.37	9.91	
109-67-1	1-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
109-66-0	n-Pentane	0.49	1.48	23.86	1.45	4.36	70.51	
78-79-5	Isoprene	0.49	1.48	ND	1.37	4.12	ND	ND
646-04-8	t-2-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
627-20-3	c-2-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.23	ND	1.45	4.35	ND	ND
287-92-3	Cyclopentane	0.49	1.48	ND	1.41	4.24	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.23	ND	1.45	4.35	ND	ND
107-83-5	2-Methylpentane	0.41	1.23	2.40	1.45	4.35	8.46	
96-14-0	3-Methylpentane	0.41	1.23	3.12	1.45	4.35	11.02	
110-54-3	n-Hexane	0.41	1.23	27.67	1.45	4.35	97.75	
96-37-7	Methylcyclopentane	0.41	1.23	ND	1.41	4.24	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.05	ND	1.44	4.33	ND	ND
71-43-2	Benzene	0.41	1.23	15.69	1.31	3.94	50.22	
110-82-7	Cyclohexane	0.41	1.23	ND	1.41	4.24	ND	ND
591-76-4	2-Methylhexane	0.35	1.05	176.65	1.44	4.33	725.43	
565-59-3	2,3-Dimethylpentane	0.35	1.05	ND	1.44	4.33	ND	ND
589-34-4	3-Methylhexane	0.35	1.05	81.22	1.44	4.33	333.54	
540-84-1	2,2,4-Trimethylpentane	0.31	0.92	2.12	1.44	4.32	9.92	
142-82-5	n-Heptane	0.35	1.05	ND	1.44	4.33	ND	ND
108-87-2	Methylcyclohexane	0.35	1.05	ND	1.41	4.24	ND	ND
592-13-2	2,5-Dimethylhexane	0.31	0.92	5.75	1.44	4.32	26.91	
589-43-5	2,4-Dimethylhexane	0.31	0.92	4.02	1.44	4.32	18.83	
565-75-3	2,3,4-Trimethylpentane	0.31	0.92	18.87	1.44	4.32	88.32	
108-88-3	Toluene	0.35	1.05	6.90	1.33	3.98	26.06	
584-94-1	2,3-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.92	26.14	1.44	4.32	122.33	
589-81-1	3-Methylheptane	0.31	0.92	11.42	1.44	4.32	53.47	
111-65-9	n-Octane	0.31	0.92	1.62	1.44	4.32	7.58	
100-41-4	Ethylbenzene	0.31	0.92	14.55	1.34	4.02	63.31	
108-38-3	m,p-xylene	0.31	0.92	10.30	1.34	4.02	44.82	
100-42-5	Styrene	0.31	0.92	26.55	1.31	3.94	113.39	
95-47-6	o-xylene	0.31	0.92	36.10	1.34	4.02	157.11	
111-84-2	n-Nonane	0.27	0.82	1.97	1.44	4.31	10.33	
98-82-8	i-Propylbenzene	0.27	0.82	10.88	1.35	4.04	53.58	
103-65-1	n-propylbenzene	0.27	0.82	6.07	1.35	4.04	29.89	
80-56-8	a-Pinene	0.25	0.74	ND	1.37	4.12	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.82	7.73	1.35	4.04	38.06	
622-96-8	4-Ethyltoluene	0.27	0.82	12.05	1.35	4.04	59.34	
108-67-8	1,3,5-Trimethylbenzene	0.27	0.82	15.31	1.35	4.04	75.40	
611-14-3	2-Ethyltoluene	0.27	0.82	7.63	1.35	4.04	37.56	
127-91-3	b-Pinene	0.25	0.74	ND	1.37	4.12	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.82	8.45	1.35	4.04	41.61	
124-18-5	n-Decane	0.25	0.74	7.30	1.43	4.30	42.59	
526-73-8	1,2,3-Trimethylbenzene	0.27	0.82	37.17	1.35	4.04	183.12	
5989-27-5	d-Limonene	0.25	0.74	ND	1.37	4.12	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.74	23.47	1.35	4.06	129.09	
105-05-5	1,4-Diethylbenzene	0.25	0.74	25.21	1.35	4.06	138.66	
104-51-8	n-Butylbenzene	0.25	0.74	12.30	1.35	4.06	67.65	
1120-21-4	Undecane	0.22	0.67	18.29	1.43	4.30	117.18	
112-40-3	Dodecane	0.21	0.62	23.91	1.43	4.29	166.90	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.23	27.68	6,601.13	32.59	97.77	23,320.37	
TNMHC - C1	Total Non-Methane Hydrocarbons	55.35	166.05	39,606.76	36.30	108.89	25,971.64	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

SDG: 217566

Analytical Method:

D1945

Laboratory Number: 14

File Name: 756614PA

Date Sampled: 10/11/17

Time: 14:27

Description: T - 506

Date Analyzed: 10/19/17

Time: 15:25

Can/Tube#: 644

Can Dilution Factor: 1.23

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.03	123	369	263	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 14

File Name: 1756614A
Description: T - 506
Can/Tube#: 644
QC_Batch: 101917-GCL

Date Sampled: 10/11/17 Time: 14:27
Date Analyzed: 10/19/17 Time: 10:36
Dilution Factor: 1.23

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.74	16.25	0.17	0.50	10.98	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 15

File Name: 1756615A.D

Date Sampled: 10/11/17

Time: 14:47

Description: T-507

Date Analyzed: 10/31/17

Time: 14:20

Canister: 628

Can Dilution Factor: 1.00

QC_Batch: 103117-MA1

Air Volume: 200 ml

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	0.84	0.80	4.05	2.68	J
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	95	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 15

File Name: 1756615B
Description: T - 507
Canister: 628
QC_Batch: 102517-GCK

Date Sampled: 10/11/17 Time: 14:47
Date Analyzed: 10/25/17 Time: 16:21
Can Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	15.41	1.15	3.45	17.75	
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	9.58	1.23	3.70	11.82	
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	20.94	1.20	3.61	37.85	
75-28-5	i-Butane	0.50	1.50	0.74	1.19	3.57	1.77	J
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	0.70	1.19	3.57	1.67	J
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	0.72	1.18	3.55	2.13	J
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	0.45	1.18	3.53	1.58	J
96-14-0	3-Methylpentane	0.33	1.00	0.85	1.18	3.53	3.00	J
110-54-3	n-Hexane	0.33	1.00	3.65	1.18	3.53	12.90	
96-37-7	Methylcyclopentane	0.33	1.00	0.93	1.15	3.45	3.23	J
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	0.39	1.09	3.28	1.93	J
124-18-5	n-Decane	0.20	0.60	0.35	1.17	3.50	2.07	J
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	0.29	1.09	3.28	1.43	J
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	0.25	1.16	3.49	1.57	J
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND
Total Petroleum Hydrocarbons:								
TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	30.89	26.50	79.49	109.12	
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	185.32	29.51	88.52	121.52	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 15

File Name: 756615PA

Date Sampled: 10/11/17

Time: 14:47

Description: T - 507

Date Analyzed: 10/19/17

Time: 15:31

Can/Tube#: 628

Can Dilution Factor: 1.00

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	100	300	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 15

File Name: 1756615A

Date Sampled: 10/11/17 Time: 14:47

Description: T - 507

Date Analyzed: 10/19/17 Time: 10:40

Can/Tube#: 628

Dilution Factor: 1.00

QC_Batch: 101917-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.20	0.60	ND	0.14	0.41	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 16

File Name: 1756616A.D

Date Sampled: 10/12/17

Time: 08:46

Description: T-601

Date Analyzed: 10/31/17

Time: 17:53

Canister: 697

Can Dilution Factor: 1.15

QC_Batch: 103117-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	11.5	57.8	ND	56.8	285.9	ND	
74-87-3	Chloromethane	11.5	57.8	ND	23.7	119.4	ND	
76-14-2	Freon 114	11.5	57.8	ND	80.3	404.1	ND	
75-01-4	Vinyl chloride	11.5	57.8	ND	29.4	147.8	ND	
106-99-0	1,3-Butadiene	11.5	57.8	ND	25.4	127.9	ND	
74-83-9	Bromomethane	11.5	57.8	ND	44.6	224.4	ND	
75-00-3	Chloroethane	11.5	57.8	ND	30.3	152.5	ND	
64-17-5	Ethanol	57.5	172.5	ND	108.4	325.1	ND	
75-69-4	Trichlorofluoromethane	11.5	55.2	ND	64.6	310.2	ND	
67-64-1	Acetone	57.5	141.5	6,571.9	136.6	336.0	15,609.0	
67-63-0	2-propanol	57.5	132.0	ND	141.3	324.4	ND	
75-35-4	1,1-Dichloroethene	11.5	57.0	ND	45.6	225.9	ND	
76-13-1	Freon 113	11.5	55.0	ND	88.1	421.5	ND	
75-09-2	Dichloromethane	23.0	55.4	ND	79.8	192.2	ND	
75-15-0	Carbon disulfide	57.5	106.7	ND	178.9	332.0	ND	
156-60-5	trans-1,2-Dichloroethene	11.5	41.5	ND	45.6	164.5	ND	
1634-04-4	Methyl tert butyl ether	11.5	42.4	ND	41.4	152.7	ND	
75-34-3	1,1-Dichloroethane	11.5	57.4	ND	46.5	232.1	ND	
108-05-4	Vinyl acetate	11.5	50.5	ND	40.5	177.8	ND	
78-93-3	2-Butanone	46.0	117.1	2,995.8	135.6	345.1	8,829.9	
141-78-6	Ethyl acetate	23.0	50.4	ND	82.8	181.4	ND	
74-97-5	Bromochloromethane	11.5	30.6	ND	60.8	162.0	ND	
109-99-9	Tetrahydrofuran	23.0	57.8	ND	67.8	170.5	ND	
156-59-2	cis-1,2-Dichloroethene	23.0	61.9	ND	91.1	245.1	ND	
67-66-3	Chloroform	11.5	57.7	ND	56.1	281.5	ND	
71-55-6	1,1,1-Trichloroethane	11.5	51.1	ND	62.7	278.4	ND	
107-06-2	1,2-Dichloroethane	11.5	52.5	ND	46.5	212.3	ND	
110-82-7	Cyclohexane	11.5	44.2	ND	39.7	152.0	ND	
71-43-2	Benzene	11.5	58.4	67.0	36.7	186.5	213.8	
56-23-5	Carbon tetrachloride	11.5	54.5	ND	72.3	342.7	ND	
142-82-5	n-Heptane	57.5	139.4	ND	235.5	570.9	ND	
78-87-5	1,2-Dichloropropane	11.5	55.3	ND	53.1	255.7	ND	
123-91-1	1,4 Dioxane	46.0	94.1	ND	165.7	338.8	ND	
79-01-6	Trichloroethene	6.9	53.6	ND	37.1	287.7	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	11.5	23.2	ND	77.0	155.5	ND	
80-62-6	Methyl methacrylate	46.0	155.5	ND	188.2	636.2	ND	
108-10-1	4-Methyl-2-pentanone	46.0	174.1	ND	188.4	713.2	ND	
10061-01-5	cis-1,3-Dichloropropene	11.5	59.6	ND	52.2	270.4	ND	
108-88-3	Toluene	23.0	60.0	51.9	86.6	226.0	195.4	J
10061-02-6	trans-1,3-Dichloropropene	11.5	59.6	ND	52.2	270.6	ND	
79-00-5	1,1,2-Trichloroethane	11.5	59.1	ND	62.7	322.5	ND	
591-78-6	2-Hexanone	57.5	163.1	ND	235.5	668.0	ND	
124-48-1	Dibromochloromethane	11.5	23.0	ND	97.9	195.5	ND	
106-93-4	1,2-Dibromoethane	11.5	27.9	ND	88.3	214.4	ND	
127-18-4	Tetrachloroethene	6.9	28.0	ND	46.8	189.7	ND	
108-90-7	Chlorobenzene	11.5	52.3	ND	52.9	240.9	ND	
100-41-4	Ethylbenzene	24.3	60.8	ND	105.6	263.9	ND	
1330-20-7	m,p-Xylenes	24.4	60.9	ND	105.8	264.6	ND	
100-42-5	Styrene	23.8	59.5	ND	101.4	253.6	ND	
75-25-2	Bromoform	11.5	15.4	ND	118.8	159.4	ND	
95-47-6	o-Xylene	23.7	59.3	24.1	102.9	257.3	104.8	J
79-34-5	1,1,2,2-Tetrachloroethane	11.4	28.5	ND	78.1	195.3	ND	
622-96-8	4-Ethyltoluene	38.1	95.3	ND	187.3	468.3	ND	
108-67-8	1,3,5-Trimethylbenzene	23.8	59.4	ND	116.8	291.9	ND	
95-63-6	1,2,4-Trimethylbenzene	23.4	58.4	ND	114.9	287.2	ND	
541-73-1	1,3-Dichlorobenzene	23.0	42.6	ND	138.2	255.7	ND	
100-44-7	Benzyl chloride	23.0	139.4	ND	119.0	721.3	ND	
106-46-7	1,4-Dichlorobenzene	23.0	39.8	ND	138.2	239.1	ND	
95-50-1	1,2-Dichlorobenzene	23.0	37.3	ND	138.2	223.9	ND	
120-82-1	1,2,4-Trichlorobenzene	57.5	79.1	ND	426.4	586.7	ND	
91-20-3	Naphthalene	11.7	18.4	ND	61.5	96.4	ND	
87-68-3	Hexachlorobutadiene	57.5	61.0	ND	613.0	649.8	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				107	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 16

File Name: 1756616A
Description: T - 601
Canister: 697
QC_Batch: 102517-GCK

Date Sampled: 10/12/17 Time: 8:46
Date Analyzed: 10/25/17 Time: 17:47
Can Factor: 1.15
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.15	3.45	26.99	1.32	3.97	31.09	
74-86-2	Acetylene	1.15	3.45	ND	1.23	3.68	ND	ND
74-84-0	Ethane	1.15	3.45	25.91	1.42	4.26	31.96	
115-07-1	Propene	0.77	2.30	15.71	1.32	3.97	27.10	
74-98-6	Propane	0.77	2.30	19.17	1.39	4.16	34.65	
75-28-5	i-Butane	0.58	1.73	2.12	1.37	4.11	5.04	
106-98-9	1-Butene	0.58	1.73	ND	1.32	3.97	ND	ND
106-97-8	n-Butane	0.58	1.73	6.06	1.37	4.11	14.43	
624-64-6	t-2-Butene	0.58	1.73	ND	1.32	3.97	ND	ND
590-18-1	c-2-Butene	0.58	1.73	ND	1.32	3.97	ND	ND
78-78-4	i-Pentane	0.46	1.38	5.73	1.36	4.08	16.96	
109-67-1	1-Pentene	0.46	1.38	ND	1.32	3.96	ND	ND
109-66-0	n-Pentane	0.46	1.38	5.67	1.36	4.08	16.75	
78-79-5	Isoprene	0.46	1.38	ND	1.28	3.85	ND	ND
646-04-8	t-2-Pentene	0.46	1.38	ND	1.32	3.96	ND	ND
627-20-3	c-2-Pentene	0.46	1.38	ND	1.32	3.96	ND	ND
75-83-2	2,2-Dimethylbutane	0.38	1.15	ND	1.35	4.06	ND	ND
287-92-3	Cyclopentane	0.46	1.38	ND	1.32	3.96	ND	ND
79-29-8	2,3-Dimethylbutane	0.38	1.15	ND	1.35	4.06	ND	ND
107-83-5	2-Methylpentane	0.38	1.15	3.74	1.35	4.06	13.23	
96-14-0	3-Methylpentane	0.38	1.15	19.63	1.35	4.06	69.35	
110-54-3	n-Hexane	0.38	1.15	27.57	1.35	4.06	97.40	
96-37-7	Methylcyclopentane	0.38	1.15	3.84	1.32	3.97	13.27	
108-08-7	2,4-Dimethylpentane	0.33	0.99	21.14	1.35	4.05	86.79	
71-43-2	Benzene	0.38	1.15	25.37	1.23	3.68	81.19	
110-82-7	Cyclohexane	0.38	1.15	4.59	1.32	3.97	15.83	
591-76-4	2-Methylhexane	0.33	0.99	401.45	1.35	4.05	1,648.56	
565-59-3	2,3-Dimethylpentane	0.33	0.99	14.18	1.35	4.05	58.23	
589-34-4	3-Methylhexane	0.33	0.99	196.11	1.35	4.05	805.33	
540-84-1	2,2,4-Trimethylpentane	0.29	0.86	16.74	1.35	4.04	78.37	
142-82-5	n-Heptane	0.33	0.99	6.91	1.35	4.05	28.38	
108-87-2	Methylcyclohexane	0.33	0.99	ND	1.32	3.97	ND	ND
592-13-2	2,5-Dimethylhexane	0.29	0.86	ND	1.35	4.04	ND	ND
589-43-5	2,4-Dimethylhexane	0.29	0.86	ND	1.35	4.04	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.29	0.86	ND	1.35	4.04	ND	ND
108-88-3	Toluene	0.33	0.99	65.40	1.24	3.72	246.86	
584-94-1	2,3-Dimethylhexane	0.29	0.86	6.36	1.35	4.04	29.75	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.86	63.87	1.35	4.04	298.93	
589-81-1	3-Methylheptane	0.29	0.86	69.51	1.35	4.04	325.31	
111-65-9	n-Octane	0.29	0.86	15.43	1.35	4.04	72.24	
100-41-4	Ethylbenzene	0.29	0.86	46.23	1.25	3.75	201.23	
108-38-3	m,p-xylene	0.29	0.86	42.35	1.25	3.75	184.35	
100-42-5	Styrene	0.29	0.86	70.81	1.23	3.68	302.38	
95-47-6	o-xylene	0.29	0.86	110.47	1.25	3.75	480.82	
111-84-2	n-Nonane	0.26	0.77	11.63	1.34	4.03	61.17	
98-82-8	i-Propylbenzene	0.26	0.77	67.38	1.26	3.78	331.92	
103-65-1	n-propylbenzene	0.26	0.77	71.80	1.26	3.78	353.71	
80-56-8	a-Pinene	0.23	0.69	ND	1.28	3.85	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.77	24.79	1.26	3.78	122.15	
622-96-8	4-Ethyltoluene	0.26	0.77	32.22	1.26	3.78	158.75	
108-67-8	1,3,5-Trimethylbenzene	0.26	0.77	40.90	1.26	3.78	201.50	
611-14-3	2-Ethyltoluene	0.26	0.77	19.62	1.26	3.78	96.63	
127-91-3	b-Pinene	0.23	0.69	ND	1.28	3.85	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.77	37.77	1.26	3.78	186.07	
124-18-5	n-Decane	0.23	0.69	21.15	1.34	4.02	123.33	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.77	34.81	1.26	3.78	171.49	
5989-27-5	d-Limonene	0.23	0.69	ND	1.28	3.85	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.69	76.42	1.27	3.80	420.31	
105-05-5	1,4-Diethylbenzene	0.23	0.69	38.21	1.27	3.80	210.15	
104-51-8	n-Butylbenzene	0.23	0.69	51.22	1.27	3.80	281.69	
1120-21-4	Undecane	0.21	0.63	37.66	1.34	4.02	241.27	
112-40-3	Dodecane	0.19	0.58	39.37	1.34	4.01	274.77	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.63	25.88	11,709.50	30.47	91.41	41,367.17	
TNMHC - C1	Total Non-Methane Hydrocarbons	51.75	155.25	70,257.01	33.93	101.80	46,070.17	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 16

File Name: 1756616A

Description: T - 601

Can/Tube#: 697

QC_Batch: 101917-GCL

Date Sampled: 10/12/17

Time: 8:46

Date Analyzed: 10/19/17

Time: 10:44

Dilution Factor: 1.15

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.69	8.82	0.16	0.47	5.96	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 17

File Name: 1756617A.D

Date Sampled: 10/12/17

Time: 09:51

Description: T-602

Date Analyzed: 10/31/17

Time: 15:39

Canister: 157

Can Dilution Factor: 1.17

QC_Batch: 103117-MA1

Air Volume: 50 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	1.17	5.89	ND	5.78	29.09	ND	
74-87-3	Chloromethane	1.17	5.89	ND	2.42	12.15	ND	
76-14-2	Freon 114	1.17	5.89	ND	8.17	41.12	ND	
75-01-4	Vinyl chloride	1.17	5.89	ND	2.99	15.04	ND	
106-99-0	1,3-Butadiene	1.17	5.89	ND	2.59	13.02	ND	
74-83-9	Bromomethane	1.17	5.89	ND	4.54	22.83	ND	
75-00-3	Chloroethane	1.17	5.89	ND	3.08	15.52	ND	
64-17-5	Ethanol	5.85	17.55	24.12	11.02	33.07	45.46	
75-69-4	Trichlorofluoromethane	1.17	5.62	ND	6.57	31.56	ND	
67-64-1	Acetone	5.85	14.39	4,241.40	13.89	34.18	10,073.73	E
67-63-0	2-propanol	5.85	13.43	108.83	14.37	33.00	267.37	
75-35-4	1,1-Dichloroethene	1.17	5.80	ND	4.63	22.99	ND	
76-13-1	Freon 113	1.17	5.60	ND	8.96	42.88	ND	
75-09-2	Dichloromethane	2.34	5.64	ND	8.12	19.56	ND	
75-15-0	Carbon disulfide	5.85	10.86	65.88	18.20	33.78	204.96	
156-60-5	trans-1,2-Dichloroethene	1.17	4.22	ND	4.63	16.73	ND	
1634-04-4	Methyl tert butyl ether	1.17	4.31	ND	4.21	15.54	ND	
75-34-3	1,1-Dichloroethane	1.17	5.84	ND	4.74	23.62	ND	
108-05-4	Vinyl acetate	1.17	5.14	ND	4.12	18.09	ND	
78-93-3	2-Butanone	4.68	11.91	1,717.79	13.79	35.11	5,063.03	E
141-78-6	Ethyl acetate	2.34	5.12	ND	8.43	18.46	ND	
74-97-5	Bromochloromethane	1.17	3.12	ND	6.19	16.48	ND	
109-99-9	Tetrahydrofuran	2.34	5.89	ND	6.90	17.35	ND	
156-59-2	cis-1,2-Dichloroethene	2.34	6.29	ND	9.27	24.93	ND	
67-66-3	Chloroform	1.17	5.87	ND	5.71	28.64	ND	
71-55-6	1,1,1-Trichloroethane	1.17	5.19	ND	6.38	28.33	ND	
107-06-2	1,2-Dichloroethane	1.17	5.34	ND	4.74	21.60	ND	
110-82-7	Cyclohexane	1.17	4.49	ND	4.04	15.46	ND	
71-43-2	Benzene	1.17	5.94	16.67	3.74	18.98	53.21	
56-23-5	Carbon tetrachloride	1.17	5.55	ND	7.36	34.87	ND	
142-82-5	n-Heptane	5.85	14.18	32.54	23.96	58.08	133.28	
78-87-5	1,2-Dichloropropane	1.17	5.63	ND	5.40	26.01	ND	
123-91-1	1,4 Dioxane	4.68	9.57	ND	16.85	34.47	ND	
79-01-6	Trichloroethene	0.70	5.45	ND	3.77	29.27	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-27-4	Bromodichloromethane	1.17	2.36	ND	7.83	15.83	ND	
80-62-6	Methyl methacrylate	4.68	15.82	ND	19.15	64.73	ND	
108-10-1	4-Methyl-2-pentanone	4.68	17.71	6.74	19.17	72.56	27.61	J
10061-01-5	cis-1,3-Dichloropropene	1.17	6.06	ND	5.31	27.51	ND	
108-88-3	Toluene	2.34	6.11	21.43	8.81	22.99	80.70	
10061-02-6	trans-1,3-Dichloropropene	1.17	6.07	ND	5.31	27.53	ND	
79-00-5	1,1,2-Trichloroethane	1.17	6.02	ND	6.38	32.81	ND	
591-78-6	2-Hexanone	5.85	16.59	ND	23.96	67.96	ND	
124-48-1	Dibromochloromethane	1.17	2.34	ND	9.96	19.89	ND	
106-93-4	1,2-Dibromoethane	1.17	2.84	ND	8.99	21.81	ND	
127-18-4	Tetrachloroethene	0.70	2.85	ND	4.76	19.30	ND	
108-90-7	Chlorobenzene	1.17	5.32	ND	5.39	24.51	ND	
100-41-4	Ethylbenzene	2.47	6.18	8.95	10.74	26.85	38.85	
1330-20-7	m,p-Xylenes	2.48	6.20	9.51	10.77	26.92	41.29	
100-42-5	Styrene	2.42	6.06	ND	10.32	25.80	ND	
75-25-2	Bromoform	1.17	1.57	ND	12.09	16.22	ND	
95-47-6	o-Xylene	2.41	6.03	10.49	10.47	26.18	45.54	
79-34-5	1,1,2,2-Tetrachloroethane	1.16	2.90	ND	7.95	19.87	ND	
622-96-8	4-Ethyltoluene	3.88	9.70	ND	19.06	47.64	ND	
108-67-8	1,3,5-Trimethylbenzene	2.42	6.04	ND	11.88	29.70	ND	
95-63-6	1,2,4-Trimethylbenzene	2.38	5.95	5.21	11.69	29.22	25.62	J
541-73-1	1,3-Dichlorobenzene	2.34	4.33	ND	14.06	26.01	ND	
100-44-7	Benzyl chloride	2.34	14.18	ND	12.11	73.39	ND	
106-46-7	1,4-Dichlorobenzene	2.34	4.05	ND	14.06	24.33	ND	
95-50-1	1,2-Dichlorobenzene	2.34	3.79	ND	14.06	22.78	ND	
120-82-1	1,2,4-Trichlorobenzene	5.85	8.05	ND	43.38	59.69	ND	
91-20-3	Naphthalene	1.19	1.87	ND	6.25	9.81	ND	
87-68-3	Hexachlorobutadiene	5.85	6.20	ND	62.37	66.11	ND	
					QC		Limits	
Surrogate Recovery					% Rec.	LCL	UCL	Flag
2037-26-5	Toluene-d8				100	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566

Laboratory Number: 17

File Name: 1756617A
Description: T - 602
Canister: 157
QC_Batch: 102517-GCK

Date Sampled: 10/12/17 Time: 9:51
Date Analyzed: 10/25/17 Time: 19:12
Can Factor: 1.17
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.17	3.51	19.38	1.35	4.04	22.32	
74-86-2	Acetylene	1.17	3.51	ND	1.25	3.74	ND	ND
74-84-0	Ethane	1.17	3.51	11.56	1.44	4.33	14.26	
115-07-1	Propene	0.78	2.34	17.02	1.35	4.04	29.37	
74-98-6	Propane	0.78	2.34	9.45	1.41	4.23	17.08	
75-28-5	i-Butane	0.59	1.76	0.98	1.39	4.18	2.33	J
106-98-9	1-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
106-97-8	n-Butane	0.59	1.76	3.38	1.39	4.18	8.05	
624-64-6	t-2-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
590-18-1	c-2-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
78-78-4	i-Pentane	0.47	1.40	1.96	1.38	4.15	5.80	
109-67-1	1-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
109-66-0	n-Pentane	0.47	1.40	2.97	1.38	4.15	8.76	
78-79-5	Isoprene	0.47	1.40	ND	1.31	3.92	ND	ND
646-04-8	t-2-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
627-20-3	c-2-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
75-83-2	2,2-Dimethylbutane	0.39	1.17	ND	1.38	4.13	ND	ND
287-92-3	Cyclopentane	0.47	1.40	ND	1.34	4.03	ND	ND
79-29-8	2,3-Dimethylbutane	0.39	1.17	ND	1.38	4.13	ND	ND
107-83-5	2-Methylpentane	0.39	1.17	0.88	1.38	4.13	3.10	J
96-14-0	3-Methylpentane	0.39	1.17	1.37	1.38	4.13	4.82	
110-54-3	n-Hexane	0.39	1.17	9.49	1.38	4.13	33.54	
96-37-7	Methylcyclopentane	0.39	1.17	0.72	1.35	4.04	2.48	J
108-08-7	2,4-Dimethylpentane	0.33	1.00	4.26	1.37	4.12	17.49	
71-43-2	Benzene	0.39	1.17	8.29	1.25	3.74	26.53	
110-82-7	Cyclohexane	0.39	1.17	1.95	1.35	4.04	6.74	
591-76-4	2-Methylhexane	0.33	1.00	69.96	1.37	4.12	287.30	
565-59-3	2,3-Dimethylpentane	0.33	1.00	2.02	1.37	4.12	8.28	
589-34-4	3-Methylhexane	0.33	1.00	33.75	1.37	4.12	138.59	
540-84-1	2,2,4-Trimethylpentane	0.29	0.88	4.44	1.37	4.11	20.79	
142-82-5	n-Heptane	0.33	1.00	1.92	1.37	4.12	7.89	
108-87-2	Methylcyclohexane	0.33	1.00	19.07	1.35	4.04	76.73	
592-13-2	2,5-Dimethylhexane	0.29	0.88	2.95	1.37	4.11	13.81	
589-43-5	2,4-Dimethylhexane	0.29	0.88	4.25	1.37	4.11	19.88	
565-75-3	2,3,4-Trimethylpentane	0.29	0.88	5.10	1.37	4.11	23.87	
108-88-3	Toluene	0.33	1.00	21.93	1.26	3.79	82.79	
584-94-1	2,3-Dimethylhexane	0.29	0.88	11.04	1.37	4.11	51.68	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.88	4.53	1.37	4.11	21.20	
589-81-1	3-Methylheptane	0.29	0.88	1.19	1.37	4.11	5.57	
111-65-9	n-Octane	0.29	0.88	3.27	1.37	4.11	15.31	
100-41-4	Ethylbenzene	0.29	0.88	10.35	1.27	3.82	45.07	
108-38-3	m,p-xylene	0.29	0.88	11.17	1.27	3.82	48.60	
100-42-5	Styrene	0.29	0.88	7.72	1.25	3.75	32.95	
95-47-6	o-xylene	0.29	0.88	14.83	1.27	3.82	64.56	
111-84-2	n-Nonane	0.26	0.78	3.07	1.37	4.10	16.16	
98-82-8	i-Propylbenzene	0.26	0.78	3.09	1.28	3.84	15.22	
103-65-1	n-propylbenzene	0.26	0.78	2.98	1.28	3.84	14.70	
80-56-8	a-Pinene	0.23	0.70	ND	1.31	3.92	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.78	3.17	1.28	3.84	15.64	
622-96-8	4-Ethyltoluene	0.26	0.78	5.98	1.28	3.84	29.47	
108-67-8	1,3,5-Trimethylbenzene	0.26	0.78	3.92	1.28	3.84	19.32	
611-14-3	2-Ethyltoluene	0.26	0.78	3.51	1.28	3.84	17.30	
127-91-3	b-Pinene	0.23	0.70	ND	1.31	3.92	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.78	3.24	1.28	3.84	15.95	
124-18-5	n-Decane	0.23	0.70	1.92	1.36	4.09	11.18	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.78	2.27	1.28	3.84	11.20	
5989-27-5	d-Limonene	0.23	0.70	ND	1.31	3.92	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.70	13.29	1.29	3.86	73.08	
105-05-5	1,4-Diethylbenzene	0.23	0.70	3.06	1.29	3.86	16.83	
104-51-8	n-Butylbenzene	0.23	0.70	6.94	1.29	3.86	38.15	
1120-21-4	Undecane	0.21	0.64	3.81	1.36	4.09	24.41	
112-40-3	Dodecane	0.20	0.59	5.10	1.36	4.08	35.60	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.78	26.33	2,522.84	31.00	93.00	8,912.64	
TNMHC - C1	Total Non-Methane Hydrocarbons	52.65	157.95	15,137.02	34.52	103.57	9,925.91	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 17

File Name: 756617PA

Date Sampled: 10/12/17

Time: 9:51

Description: T - 602

Date Analyzed: 10/19/17

Time: 15:49

Can/Tube#: 157

Can Dilution Factor: 1.17

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	117	351	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 17

File Name: 1756617A
Description: T - 602
Can/Tube#: 157
QC_Batch: 101917-GCL

Date Sampled: 10/12/17 Time: 9:51
Date Analyzed: 10/19/17 Time: 10:58
Dilution Factor: 1.17

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.70	1.97	0.16	0.47	1.33	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 18

File Name: 1756618A.D

Date Sampled: 10/12/17

Time: 11:04

Description: T-603

Date Analyzed: 10/31/17

Time: 18:29

Canister: 788

Can Dilution Factor: 1.16

QC_Batch: 103117-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	11.6	58.3	ND	57.3	288.4	ND	
74-87-3	Chloromethane	11.6	58.3	ND	23.9	120.5	ND	
76-14-2	Freon 114	11.6	58.3	ND	81.0	407.6	ND	
75-01-4	Vinyl chloride	11.6	58.3	ND	29.6	149.1	ND	
106-99-0	1,3-Butadiene	11.6	58.3	ND	25.7	129.0	ND	
74-83-9	Bromomethane	11.6	58.3	ND	45.0	226.4	ND	
75-00-3	Chloroethane	11.6	58.3	ND	30.6	153.9	ND	
64-17-5	Ethanol	58.0	174.0	ND	109.3	327.9	ND	
75-69-4	Trichlorofluoromethane	11.6	55.7	ND	65.2	312.9	ND	
67-64-1	Acetone	58.0	142.7	5,724.5	137.8	338.9	13,596.2	
67-63-0	2-propanol	58.0	133.2	140.7	142.5	327.2	345.6	
75-35-4	1,1-Dichloroethene	11.6	57.5	ND	46.0	227.9	ND	
76-13-1	Freon 113	11.6	55.5	ND	88.9	425.2	ND	
75-09-2	Dichloromethane	23.2	55.9	ND	80.5	193.9	ND	
75-15-0	Carbon disulfide	58.0	107.6	ND	180.4	334.9	ND	
156-60-5	trans-1,2-Dichloroethene	11.6	41.9	ND	46.0	165.9	ND	
1634-04-4	Methyl tert butyl ether	11.6	42.8	ND	41.8	154.0	ND	
75-34-3	1,1-Dichloroethane	11.6	57.9	ND	46.9	234.1	ND	
108-05-4	Vinyl acetate	11.6	51.0	ND	40.8	179.4	ND	
78-93-3	2-Butanone	46.4	118.1	3,641.8	136.8	348.1	10,733.9	
141-78-6	Ethyl acetate	23.2	50.8	ND	83.6	183.0	ND	
74-97-5	Bromochloromethane	11.6	30.9	ND	61.4	163.4	ND	
109-99-9	Tetrahydrofuran	23.2	58.3	ND	68.4	172.0	ND	
156-59-2	cis-1,2-Dichloroethene	23.2	62.4	ND	91.9	247.2	ND	
67-66-3	Chloroform	11.6	58.2	ND	56.6	284.0	ND	
71-55-6	1,1,1-Trichloroethane	11.6	51.5	ND	63.3	280.9	ND	
107-06-2	1,2-Dichloroethane	11.6	52.9	ND	46.9	214.1	ND	
110-82-7	Cyclohexane	11.6	44.5	ND	40.1	153.3	ND	
71-43-2	Benzene	11.6	58.9	51.4	37.0	188.1	164.0	J
56-23-5	Carbon tetrachloride	11.6	55.0	ND	72.9	345.7	ND	
142-82-5	n-Heptane	58.0	140.6	ND	237.6	575.9	ND	
78-87-5	1,2-Dichloropropane	11.6	55.8	ND	53.6	257.9	ND	
123-91-1	1,4 Dioxane	46.4	94.9	ND	167.1	341.7	ND	
79-01-6	Trichloroethene	7.0	54.0	ND	37.4	290.2	ND	
75-27-4	Bromodichloromethane	11.6	23.4	ND	77.7	156.9	ND	
80-62-6	Methyl methacrylate	46.4	156.8	ND	189.9	641.8	ND	
108-10-1	4-Methyl-2-pentanone	46.4	175.6	ND	190.1	719.4	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	11.6	60.1	ND	52.6	272.8	ND	
108-88-3	Toluene	23.2	60.6	115.2	87.3	228.0	433.8	
10061-02-6	trans-1,3-Dichloropropene	11.6	60.2	ND	52.6	273.0	ND	
79-00-5	1,1,2-Trichloroethane	11.6	59.6	ND	63.3	325.3	ND	
591-78-6	2-Hexanone	58.0	164.5	63.9	237.6	673.8	261.9	J
124-48-1	Dibromochloromethane	11.6	23.2	ND	98.8	197.2	ND	
106-93-4	1,2-Dibromoethane	11.6	28.2	ND	89.1	216.3	ND	
127-18-4	Tetrachloroethene	7.0	28.2	ND	47.2	191.4	ND	
108-90-7	Chlorobenzene	11.6	52.8	ND	53.4	243.0	ND	
100-41-4	Ethylbenzene	24.5	61.3	66.3	106.5	266.2	287.9	
1330-20-7	m,p-Xylenes	24.6	61.5	71.4	106.8	266.9	309.9	
100-42-5	Styrene	24.0	60.1	ND	102.3	255.8	ND	
75-25-2	Bromoform	11.6	15.6	ND	119.8	160.8	ND	
95-47-6	o-Xylene	23.9	59.8	76.7	103.8	259.6	333.0	
79-34-5	1,1,2,2-Tetrachloroethane	11.5	28.7	ND	78.8	197.0	ND	
622-96-8	4-Ethyltoluene	38.5	96.1	ND	188.9	472.4	ND	
108-67-8	1,3,5-Trimethylbenzene	24.0	59.9	ND	117.8	294.5	ND	
95-63-6	1,2,4-Trimethylbenzene	23.6	59.0	66.6	115.9	289.7	327.3	
541-73-1	1,3-Dichlorobenzene	23.2	42.9	ND	139.4	257.9	ND	
100-44-7	Benzyl chloride	23.2	140.6	ND	120.1	727.6	ND	
106-46-7	1,4-Dichlorobenzene	23.2	40.1	ND	139.4	241.2	ND	
95-50-1	1,2-Dichlorobenzene	23.2	37.6	ND	139.4	225.9	ND	
120-82-1	1,2,4-Trichlorobenzene	58.0	79.8	ND	430.1	591.8	ND	
91-20-3	Naphthalene	11.8	18.6	ND	62.0	97.3	ND	
87-68-3	Hexachlorobutadiene	58.0	61.5	ND	618.4	655.5	ND	
					QC		Limits	
Surrogate Recovery				% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8			111	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 18

File Name: 1756618A
Description: T - 603
Canister: 788
QC_Batch: 102517-GCK

Date Sampled: 10/12/17 Time: 11:04
Date Analyzed: 10/25/17 Time: 19:12
Can Factor: 1.16
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.16	3.48	31.18	1.34	4.01	35.91	
74-86-2	Acetylene	1.16	3.48	ND	1.24	3.71	ND	ND
74-84-0	Ethane	1.16	3.48	36.52	1.43	4.29	45.05	
115-07-1	Propene	0.77	2.32	21.48	1.33	4.00	37.06	
74-98-6	Propane	0.77	2.32	25.57	1.40	4.19	46.22	
75-28-5	i-Butane	0.58	1.74	4.65	1.38	4.14	11.08	
106-98-9	1-Butene	0.58	1.74	ND	1.33	4.00	ND	ND
106-97-8	n-Butane	0.58	1.74	27.95	1.38	4.14	66.56	
624-64-6	t-2-Butene	0.58	1.74	ND	1.33	4.00	ND	ND
590-18-1	c-2-Butene	0.58	1.74	ND	1.33	4.00	ND	ND
78-78-4	i-Pentane	0.46	1.39	16.71	1.37	4.12	49.45	
109-67-1	1-Pentene	0.46	1.39	ND	1.33	4.00	ND	ND
109-66-0	n-Pentane	0.46	1.39	29.27	1.37	4.11	86.50	
78-79-5	Isoprene	0.46	1.39	ND	1.30	3.89	ND	ND
646-04-8	t-2-Pentene	0.46	1.39	ND	1.33	4.00	ND	ND
627-20-3	c-2-Pentene	0.46	1.39	ND	1.33	4.00	ND	ND
75-83-2	2,2-Dimethylbutane	0.39	1.16	ND	1.37	4.10	ND	ND
287-92-3	Cyclopentane	0.46	1.39	ND	1.33	4.00	ND	ND
79-29-8	2,3-Dimethylbutane	0.39	1.16	ND	1.37	4.10	ND	ND
107-83-5	2-Methylpentane	0.39	1.16	18.94	1.37	4.10	66.92	
96-14-0	3-Methylpentane	0.39	1.16	2.42	1.37	4.10	8.56	
110-54-3	n-Hexane	0.39	1.16	99.24	1.37	4.10	350.59	
96-37-7	Methylcyclopentane	0.39	1.16	2.42	1.33	4.00	8.35	
108-08-7	2,4-Dimethylpentane	0.33	0.99	83.89	1.36	4.08	344.51	
71-43-2	Benzene	0.39	1.16	49.72	1.24	3.71	159.14	
110-82-7	Cyclohexane	0.39	1.16	12.23	1.33	4.00	42.21	
591-76-4	2-Methylhexane	0.33	0.99	8.21	1.36	4.08	33.73	
565-59-3	2,3-Dimethylpentane	0.33	0.99	741.50	1.36	4.08	3,045.02	
589-34-4	3-Methylhexane	0.33	0.99	33.77	1.36	4.08	138.69	
540-84-1	2,2,4-Trimethylpentane	0.29	0.87	116.63	1.36	4.07	545.87	
142-82-5	n-Heptane	0.33	0.99	35.73	1.36	4.08	146.74	
108-87-2	Methylcyclohexane	0.33	0.99	374.93	1.33	4.00	1,508.95	
592-13-2	2,5-Dimethylhexane	0.29	0.87	31.49	1.36	4.07	147.39	
589-43-5	2,4-Dimethylhexane	0.29	0.87	67.32	1.36	4.07	315.07	
565-75-3	2,3,4-Trimethylpentane	0.29	0.87	167.87	1.36	4.07	785.69	
108-88-3	Toluene	0.33	0.99	195.64	1.25	3.75	738.48	
584-94-1	2,3-Dimethylhexane	0.29	0.87	21.88	1.36	4.07	102.42	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.87	126.69	1.36	4.07	592.97	
589-81-1	3-Methylheptane	0.29	0.87	33.99	1.36	4.07	159.10	
111-65-9	n-Octane	0.29	0.87	96.90	1.36	4.07	453.52	
100-41-4	Ethylbenzene	0.29	0.87	222.48	1.26	3.79	968.32	
108-38-3	m,p-xylene	0.29	0.87	246.84	1.26	3.79	1,074.38	
100-42-5	Styrene	0.29	0.87	233.18	1.24	3.72	995.80	
95-47-6	o-xylene	0.29	0.87	472.36	1.26	3.79	2,055.93	
111-84-2	n-Nonane	0.26	0.77	116.09	1.36	4.07	610.43	
98-82-8	i-Propylbenzene	0.26	0.77	195.84	1.27	3.81	964.73	
103-65-1	n-propylbenzene	0.26	0.77	83.12	1.27	3.81	409.45	
80-56-8	a-Pinene	0.23	0.70	ND	1.30	3.89	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.77	146.94	1.27	3.81	723.86	
622-96-8	4-Ethyltoluene	0.26	0.77	211.28	1.27	3.81	1,040.80	
108-67-8	1,3,5-Trimethylbenzene	0.26	0.77	160.46	1.27	3.81	790.47	
611-14-3	2-Ethyltoluene	0.26	0.77	336.28	1.27	3.81	1,656.58	
127-91-3	b-Pinene	0.23	0.70	ND	1.30	3.89	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.77	226.35	1.27	3.81	1,115.07	
124-18-5	n-Decane	0.23	0.70	220.59	1.35	4.06	1,286.50	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.77	215.55	1.27	3.81	1,061.83	
5989-27-5	d-Limonene	0.23	0.70	ND	1.30	3.89	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.70	433.83	1.28	3.83	2,386.08	
105-05-5	1,4-Diethylbenzene	0.23	0.70	189.73	1.28	3.83	1,043.52	
104-51-8	n-Butylbenzene	0.23	0.70	329.56	1.28	3.83	1,812.56	
1120-21-4	Undecane	0.21	0.63	441.58	1.35	4.05	2,828.65	
112-40-3	Dodecane	0.19	0.58	220.47	1.35	4.05	1,538.80	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.70	26.10	37,084.45	30.74	92.21	131,011.46	
TNMHC - C1	Total Non-Methane Hydrocarbons	52.20	156.60	222,506.69	34.23	102.69	145,906.03	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 18

File Name: 756618PA

Date Sampled: 10/12/17 Time: 11:04

Description: T - 603

Date Analyzed: 10/19/17 Time: 15:55

Can/Tube#: 788

Can Dilution Factor: 1.16

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.03	116	348	350	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 18

File Name: 1756618A
Description: T - 603
Can/Tube#: 788
QC_Batch: 101917-GCL

Date Sampled: 10/12/17 Time: 11:04
Date Analyzed: 10/19/17 Time: 11:02
Dilution Factor: 1.16

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.70	10.61	0.16	0.47	7.17	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 19

File Name: 1756619A.D
Description: T-604
Canister: 716
QC_Batch: 103117-MA1

Date Sampled: 10/12/17
Date Analyzed: 10/31/17
Can Dilution Factor: 1.17
Air Volume: 5.00 ml

Time: 12:16
Time: 19:07

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	11.70	58.85	ND	57.83	290.87	ND	
74-87-3	Chloromethane	11.70	58.85	ND	24.15	121.50	ND	
76-14-2	Freon 114	11.70	58.85	ND	81.74	411.16	ND	
75-01-4	Vinyl chloride	11.70	58.85	ND	29.89	150.37	ND	
106-99-0	1,3-Butadiene	11.70	58.85	ND	25.88	130.16	ND	
74-83-9	Bromomethane	11.70	58.85	ND	45.39	228.31	ND	
75-00-3	Chloroethane	11.70	58.85	ND	30.85	155.18	ND	
64-17-5	Ethanol	58.50	175.50	ND	110.25	330.74	ND	
75-69-4	Trichlorofluoromethane	11.70	56.18	ND	65.72	315.56	ND	
67-64-1	Acetone	58.50	143.91	278.24	138.94	341.80	660.86	
67-63-0	2-propanol	58.50	134.32	ND	143.73	329.99	ND	
75-35-4	1,1-Dichloroethene	11.70	58.03	ND	46.35	229.88	ND	
76-13-1	Freon 113	11.70	55.98	ND	89.63	428.82	ND	
75-09-2	Dichloromethane	23.40	56.35	ND	81.21	195.57	ND	
75-15-0	Carbon disulfide	58.50	108.58	ND	181.99	337.77	ND	
156-60-5	trans-1,2-Dichloroethene	11.70	42.24	ND	46.35	167.33	ND	
1634-04-4	Methyl tert butyl ether	11.70	43.14	ND	42.14	155.36	ND	
75-34-3	1,1-Dichloroethane	11.70	58.35	ND	47.35	236.15	ND	
108-05-4	Vinyl acetate	11.70	51.41	ND	41.18	180.93	ND	
78-93-3	2-Butanone	46.80	119.11	112.47	137.94	351.05	331.49	J
141-78-6	Ethyl acetate	23.40	51.25	ND	84.27	184.56	ND	
74-97-5	Bromochloromethane	11.70	31.16	ND	61.89	164.85	ND	
109-99-9	Tetrahydrofuran	23.40	58.85	ND	68.97	173.46	ND	
156-59-2	cis-1,2-Dichloroethene	23.40	62.95	ND	92.69	249.34	ND	
67-66-3	Chloroform	11.70	58.68	ND	57.11	286.42	ND	
71-55-6	1,1,1-Trichloroethane	11.70	51.95	ND	63.80	283.29	ND	
107-06-2	1,2-Dichloroethane	11.70	53.37	ND	47.35	215.99	ND	
110-82-7	Cyclohexane	11.75	44.93	ND	40.43	154.64	ND	
71-43-2	Benzene	11.70	59.44	5,550.19	37.35	189.77	17,719.98	
56-23-5	Carbon tetrachloride	11.70	55.46	ND	73.56	348.68	ND	
142-82-5	n-Heptane	58.50	141.80	127.31	239.62	580.85	521.48	J
78-87-5	1,2-Dichloropropane	11.70	56.31	ND	54.05	260.12	ND	
123-91-1	1,4 Dioxane	46.80	95.71	ND	168.55	344.68	ND	
79-01-6	Trichloroethene	7.02	54.50	ND	37.71	292.74	ND	
75-27-4	Bromodichloromethane	11.70	23.63	ND	78.34	158.25	ND	
80-62-6	Methyl methacrylate	46.80	158.18	ND	191.51	647.29	ND	
108-10-1	4-Methyl-2-pentanone	46.80	177.14	ND	191.70	725.58	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	11.70	60.63	ND	53.09	275.11	ND	
108-88-3	Toluene	23.40	61.07	4,693.16	88.10	229.94	17,669.71	
10061-02-6	trans-1,3-Dichloropropene	11.70	60.68	ND	53.09	275.33	ND	
79-00-5	1,1,2-Trichloroethane	11.70	60.16	ND	63.80	328.06	ND	
591-78-6	2-Hexanone	58.50	165.91	ND	239.62	679.57	ND	
124-48-1	Dibromochloromethane	11.70	23.36	ND	99.63	198.93	ND	
106-93-4	1,2-Dibromoethane	11.70	28.40	ND	89.87	218.13	ND	
127-18-4	Tetrachloroethene	7.02	28.48	ND	47.58	193.01	ND	
108-90-7	Chlorobenzene	11.70	53.24	ND	53.86	245.08	ND	
100-41-4	Ethylbenzene	24.74	61.85	380.23	107.40	268.51	1,650.71	
1330-20-7	m,p-Xylenes	24.80	62.00	1,408.85	107.67	269.19	6,116.35	
100-42-5	Styrene	24.23	60.57	ND	103.21	258.02	ND	
75-25-2	Bromoform	11.70	15.70	ND	120.86	162.17	ND	
95-47-6	o-Xylene	24.12	60.30	711.35	104.72	261.79	3,088.24	
79-34-5	1,1,2,2-Tetrachloroethane	11.59	28.96	ND	79.47	198.68	ND	
622-96-8	4-Ethyltoluene	38.78	96.96	112.43	190.58	476.44	552.47	
108-67-8	1,3,5-Trimethylbenzene	24.18	60.44	47.40	118.80	297.00	232.89	J
95-63-6	1,2,4-Trimethylbenzene	23.78	59.46	222.09	116.87	292.17	1,091.27	
541-73-1	1,3-Dichlorobenzene	23.40	43.29	ND	140.62	260.14	ND	
100-44-7	Benzyl chloride	23.40	141.80	ND	121.10	733.88	ND	
106-46-7	1,4-Dichlorobenzene	23.40	40.48	ND	140.62	243.27	ND	
95-50-1	1,2-Dichlorobenzene	23.40	37.91	ND	140.62	227.80	ND	
120-82-1	1,2,4-Trichlorobenzene	58.50	80.50	ND	433.81	596.92	ND	
91-20-3	Naphthalene	11.93	18.72	ND	62.54	98.11	ND	
87-68-3	Hexachlorobutadiene	58.50	62.01	ND	623.69	661.11	ND	
					QC	Limits		
Surrogate Recovery				% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8			103	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 19

File Name: 1756619A
Description: T - 604
Canister: 716
QC_Batch: 110917-GCK

Date Sampled: 10/12/17 Time: 12:16
Date Analyzed: 11/09/17 Time: 12:21
Can Factor: 1.17
Air Volume: 50 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	4.68	14.04	ND	5.39	16.17	ND	ND
74-86-2	Acetylene	4.68	14.04	ND	4.99	14.96	ND	ND
74-84-0	Ethane	4.68	14.04	16,366.07	5.77	17.32	20,189.29	
115-07-1	Propene	3.12	9.36	ND	5.38	16.15	ND	ND
74-98-6	Propane	3.12	9.36	4,488.69	5.64	16.92	8,112.76	
75-28-5	i-Butane	2.34	7.02	341.41	5.57	16.72	812.95	
106-98-9	1-Butene	2.34	7.02	ND	5.38	16.14	ND	ND
106-97-8	n-Butane	2.34	7.02	1,820.37	5.57	16.72	4,334.57	
624-64-6	t-2-Butene	2.34	7.02	ND	5.38	16.14	ND	ND
590-18-1	c-2-Butene	2.34	7.02	ND	5.38	16.14	ND	ND
78-78-4	i-Pentane	1.87	5.62	450.91	5.54	16.62	1,334.24	
109-67-1	1-Pentene	1.87	5.62	ND	5.38	16.13	ND	ND
109-66-0	n-Pentane	1.87	5.62	881.34	5.53	16.59	2,604.29	
78-79-5	Isoprene	1.87	5.62	ND	5.22	15.67	ND	ND
646-04-8	t-2-Pentene	1.87	5.62	ND	5.38	16.13	ND	ND
627-20-3	c-2-Pentene	1.87	5.62	ND	5.38	16.13	ND	ND
75-83-2	2,2-Dimethylbutane	1.56	4.68	ND	5.51	16.53	ND	ND
287-92-3	Cyclopentane	1.87	5.62	ND	5.38	16.13	ND	ND
79-29-8	2,3-Dimethylbutane	1.56	4.68	ND	5.51	16.53	ND	ND
107-83-5	2-Methylpentane	1.56	4.68	777.93	5.51	16.53	2,748.26	
96-14-0	3-Methylpentane	1.56	4.68	294.06	5.51	16.53	1,038.84	
110-54-3	n-Hexane	1.56	4.68	338.55	5.51	16.53	1,196.02	
96-37-7	Methylcyclopentane	1.56	4.68	459.59	5.38	16.15	1,585.97	
108-08-7	2,4-Dimethylpentane	1.34	4.01	1,121.38	5.49	16.47	4,605.03	
71-43-2	Benzene	1.56	4.68	15,100.11	4.99	14.98	48,332.72	
110-82-7	Cyclohexane	1.56	4.68	604.90	5.38	16.15	2,087.42	
591-76-4	2-Methylhexane	1.34	4.01	60.90	5.49	16.47	250.09	
565-59-3	2,3-Dimethylpentane	1.34	4.01	71.78	5.49	16.47	294.76	
589-34-4	3-Methylhexane	1.34	4.01	144.69	5.49	16.47	594.18	
540-84-1	2,2,4-Trimethylpentane	1.17	3.51	627.48	5.48	16.43	2,936.81	
142-82-5	n-Heptane	1.34	4.01	297.71	5.49	16.47	1,222.55	
108-87-2	Methylcyclohexane	1.34	4.01	797.54	5.38	16.14	3,209.76	
592-13-2	2,5-Dimethylhexane	1.17	3.51	153.83	5.48	16.43	719.97	
589-43-5	2,4-Dimethylhexane	1.17	3.51	134.95	5.48	16.43	631.62	
565-75-3	2,3,4-Trimethylpentane	1.17	3.51	249.76	5.48	16.43	1,168.95	
108-88-3	Toluene	1.34	4.01	12,968.33	5.05	15.14	48,950.15	
584-94-1	2,3-Dimethylhexane	1.17	3.51	207.53	5.48	16.43	971.30	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	1.17	3.51	17.53	5.48	16.43	82.07	
589-81-1	3-Methylheptane	1.17	3.51	33.28	5.48	16.43	155.78	
111-65-9	n-Octane	1.17	3.51	87.70	5.48	16.43	410.48	
100-41-4	Ethylbenzene	1.17	3.51	895.94	5.09	15.28	3,899.56	
108-38-3	m,p-xylene	1.17	3.51	2,944.17	5.09	15.28	12,814.39	
100-42-5	Styrene	1.17	3.51	58.22	5.00	14.99	248.62	
95-47-6	o-xylene	1.17	3.51	1,588.19	5.09	15.28	6,912.55	
111-84-2	n-Nonane	1.04	3.12	241.19	5.47	16.41	1,268.23	
98-82-8	i-Propylbenzene	1.04	3.12	84.82	5.12	15.37	417.86	
103-65-1	n-propylbenzene	1.04	3.12	53.83	5.12	15.37	265.19	
80-56-8	a-Pinene	0.94	2.81	ND	5.22	15.67	ND	ND
620-14-4	3-Ethyltoluene	1.04	3.12	136.74	5.12	15.37	673.64	
622-96-8	4-Ethyltoluene	1.04	3.12	427.46	5.12	15.37	2,105.75	
108-67-8	1,3,5-Trimethylbenzene	1.04	3.12	181.48	5.12	15.37	894.03	
611-14-3	2-Ethyltoluene	1.04	3.12	209.59	5.12	15.37	1,032.49	
127-91-3	b-Pinene	0.94	2.81	ND	5.22	15.67	ND	ND
95-63-6	1,2,4-Trimethylbenzene	1.04	3.12	554.41	5.12	15.37	2,731.17	
124-18-5	n-Decane	0.94	2.81	209.42	5.46	16.38	1,221.33	
526-73-8	1,2,3-Trimethylbenzene	1.04	3.12	639.95	5.12	15.37	3,152.54	
5989-27-5	d-Limonene	0.94	2.81	ND	5.22	15.67	ND	ND
141-93-5	1,3-Diethylbenzene	0.94	2.81	50.18	5.15	15.44	275.99	
105-05-5	1,4-Diethylbenzene	0.94	2.81	112.35	5.15	15.44	617.91	
104-51-8	n-Butylbenzene	0.94	2.81	67.90	5.15	15.44	373.43	
1120-21-4	Undecane	0.85	2.55	189.90	5.45	16.35	1,216.46	
112-40-3	Dodecane	0.78	2.34	130.75	5.44	16.33	912.61	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	35.10	105.30	70,259.40	124.00	372.00	248,211.50	
TNMHC - C1	Total Non-Methane Hydrocarbons	210.60	631.80	421,556.42	138.10	414.30	276,430.44	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 19

File Name: 756619PA

Date Sampled: 10/12/17

Time: 12:16

Description: T - 604

Date Analyzed: 10/19/17

Time: 16:05

Can/Tube#: 716

Can Dilution Factor: 1.17

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.41	117	351	4,106	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 19

File Name: 1756619A

Date Sampled: 10/12/17 Time: 12:16

Description: T - 604

Date Analyzed: 10/19/17 Time: 11:06

Can/Tube#: 716

Dilution Factor: 1.17

QC_Batch: 101917-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.70	672.15	0.16	0.47	454.16	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 20

File Name: 1756620A.D

Date Sampled: 10/12/17

Time: 13:14

Description: T-605

Date Analyzed: 10/31/17

Time: 16:36

Canister: 698

Can Dilution Factor: 1.18

QC_Batch: 103117-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	11.8	59.4	ND	58.3	293.4	ND	
74-87-3	Chloromethane	11.8	59.4	ND	24.4	122.5	ND	
76-14-2	Freon 114	11.8	59.4	ND	82.4	414.7	ND	
75-01-4	Vinyl chloride	11.8	59.4	ND	30.1	151.7	ND	
106-99-0	1,3-Butadiene	11.8	59.4	ND	26.1	131.3	ND	
74-83-9	Bromomethane	11.8	59.4	ND	45.8	230.3	ND	
75-00-3	Chloroethane	11.8	59.4	ND	31.1	156.5	ND	
64-17-5	Ethanol	59.0	177.0	ND	111.2	333.6	ND	
75-69-4	Trichlorofluoromethane	11.8	56.7	ND	66.3	318.3	ND	
67-64-1	Acetone	59.0	145.1	ND	140.1	344.7	ND	
67-63-0	2-propanol	59.0	135.5	ND	145.0	332.8	ND	
75-35-4	1,1-Dichloroethene	11.8	58.5	ND	46.7	231.8	ND	
76-13-1	Freon 113	11.8	56.5	ND	90.4	432.5	ND	
75-09-2	Dichloromethane	23.6	56.8	ND	81.9	197.2	ND	
75-15-0	Carbon disulfide	59.0	109.5	ND	183.5	340.7	ND	
156-60-5	trans-1,2-Dichloroethene	11.8	42.6	ND	46.7	168.8	ND	
1634-04-4	Methyl tert butyl ether	11.8	43.5	ND	42.5	156.7	ND	
75-34-3	1,1-Dichloroethane	11.8	58.9	ND	47.8	238.2	ND	
108-05-4	Vinyl acetate	11.8	51.8	ND	41.5	182.5	ND	
78-93-3	2-Butanone	47.2	120.1	ND	139.1	354.1	ND	
141-78-6	Ethyl acetate	23.6	51.7	ND	85.0	186.1	ND	
74-97-5	Bromochloromethane	11.8	31.4	ND	62.4	166.3	ND	
109-99-9	Tetrahydrofuran	23.6	59.4	ND	69.6	174.9	ND	
156-59-2	cis-1,2-Dichloroethene	23.6	63.5	ND	93.5	251.5	ND	
67-66-3	Chloroform	11.8	59.2	ND	57.6	288.9	ND	
71-55-6	1,1,1-Trichloroethane	11.8	52.4	ND	64.3	285.7	ND	
107-06-2	1,2-Dichloroethane	11.8	53.8	ND	47.8	217.8	ND	
110-82-7	Cyclohexane	11.8	45.3	ND	40.8	156.0	ND	
71-43-2	Benzene	11.8	59.9	957.7	37.7	191.4	3,057.6	
56-23-5	Carbon tetrachloride	11.8	55.9	ND	74.2	351.7	ND	
142-82-5	n-Heptane	59.0	143.0	ND	241.7	585.8	ND	
78-87-5	1,2-Dichloropropane	11.8	56.8	ND	54.5	262.3	ND	
123-91-1	1,4 Dioxane	47.2	96.5	ND	170.0	347.6	ND	
79-01-6	Trichloroethene	7.1	55.0	ND	38.0	295.2	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	11.8	23.8	ND	79.0	159.6	ND	
80-62-6	Methyl methacrylate	47.2	159.5	ND	193.1	652.8	ND	
108-10-1	4-Methyl-2-pentanone	47.2	178.7	ND	193.3	731.8	ND	
10061-01-5	cis-1,3-Dichloropropene	11.8	61.1	ND	53.5	277.5	ND	
108-88-3	Toluene	23.6	61.6	858.5	88.9	231.9	3,232.3	
10061-02-6	trans-1,3-Dichloropropene	11.8	61.2	ND	53.5	277.7	ND	
79-00-5	1,1,2-Trichloroethane	11.8	60.7	ND	64.3	330.9	ND	
591-78-6	2-Hexanone	59.0	167.3	ND	241.7	685.4	ND	
124-48-1	Dibromochloromethane	11.8	23.6	ND	100.5	200.6	ND	
106-93-4	1,2-Dibromoethane	11.8	28.6	ND	90.6	220.0	ND	
127-18-4	Tetrachloroethene	7.1	28.7	ND	48.0	194.7	ND	
108-90-7	Chlorobenzene	11.8	53.7	ND	54.3	247.2	ND	
100-41-4	Ethylbenzene	25.0	62.4	39.7	108.3	270.8	172.5	J
1330-20-7	m,p-Xylenes	25.0	62.5	144.3	108.6	271.5	626.5	
100-42-5	Styrene	24.4	61.1	ND	104.1	260.2	ND	
75-25-2	Bromoform	11.8	15.8	ND	121.9	163.6	ND	
95-47-6	o-Xylene	24.3	60.8	79.6	105.6	264.0	345.6	
79-34-5	1,1,2,2-Tetrachloroethane	11.7	29.2	ND	80.2	200.4	ND	
622-96-8	4-Ethyltoluene	39.1	97.8	ND	192.2	480.5	ND	
108-67-8	1,3,5-Trimethylbenzene	24.4	61.0	ND	119.8	299.5	ND	
95-63-6	1,2,4-Trimethylbenzene	24.0	60.0	ND	117.9	294.7	ND	
541-73-1	1,3-Dichlorobenzene	23.6	43.7	ND	141.8	262.4	ND	
100-44-7	Benzyl chloride	23.6	143.0	ND	122.1	740.2	ND	
106-46-7	1,4-Dichlorobenzene	23.6	40.8	ND	141.8	245.3	ND	
95-50-1	1,2-Dichlorobenzene	23.6	38.2	ND	141.8	229.7	ND	
120-82-1	1,2,4-Trichlorobenzene	59.0	81.2	ND	437.5	602.0	ND	
91-20-3	Naphthalene	12.0	18.9	ND	63.1	98.9	ND	
87-68-3	Hexachlorobutadiene	59.0	62.5	ND	629.0	666.8	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				100	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 20

File Name: 1756620A
Description: T - 605
Canister: 698
QC_Batch: 102717-GCK

Date Sampled: 10/12/17 Time: 13:14
Date Analyzed: 10/27/17 Time: 19:10
Can Factor: 1.18
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.18	3.54	19.90	1.36	4.08	22.92	
74-86-2	Acetylene	1.18	3.54	ND	1.26	3.77	ND	ND
74-84-0	Ethane	1.18	3.54	303.54	1.46	4.37	374.45	
115-07-1	Propene	0.79	2.36	17.10	1.36	4.07	29.51	
74-98-6	Propane	0.79	2.36	152.47	1.42	4.27	275.57	
75-28-5	i-Butane	0.59	1.77	10.89	1.40	4.21	25.92	
106-98-9	1-Butene	0.59	1.77	ND	1.36	4.07	ND	ND
106-97-8	n-Butane	0.59	1.77	48.61	1.40	4.21	115.75	
624-64-6	t-2-Butene	0.59	1.77	ND	1.36	4.07	ND	ND
590-18-1	c-2-Butene	0.59	1.77	ND	1.36	4.07	ND	ND
78-78-4	i-Pentane	0.47	1.42	12.76	1.40	4.19	37.76	
109-67-1	1-Pentene	0.47	1.42	ND	1.36	4.07	ND	ND
109-66-0	n-Pentane	0.47	1.42	19.15	1.39	4.18	56.59	
78-79-5	Isoprene	0.47	1.42	ND	1.32	3.95	ND	ND
646-04-8	t-2-Pentene	0.47	1.42	ND	1.36	4.07	ND	ND
627-20-3	c-2-Pentene	0.47	1.42	ND	1.36	4.07	ND	ND
75-83-2	2,2-Dimethylbutane	0.39	1.18	ND	1.39	4.17	ND	ND
287-92-3	Cyclopentane	0.47	1.42	ND	1.36	4.07	ND	ND
79-29-8	2,3-Dimethylbutane	0.39	1.18	ND	1.39	4.17	ND	ND
107-83-5	2-Methylpentane	0.39	1.18	6.28	1.39	4.17	22.19	
96-14-0	3-Methylpentane	0.39	1.18	18.24	1.39	4.17	64.44	
110-54-3	n-Hexane	0.39	1.18	16.45	1.39	4.17	58.11	
96-37-7	Methylcyclopentane	0.39	1.18	ND	1.36	4.07	ND	ND
108-08-7	2,4-Dimethylpentane	0.34	1.01	ND	1.38	4.15	ND	ND
71-43-2	Benzene	0.39	1.18	844.96	1.26	3.78	2,704.58	
110-82-7	Cyclohexane	0.39	1.18	21.21	1.36	4.07	73.19	
591-76-4	2-Methylhexane	0.34	1.01	3.61	1.38	4.15	14.83	
565-59-3	2,3-Dimethylpentane	0.34	1.01	2.95	1.38	4.15	12.11	
589-34-4	3-Methylhexane	0.34	1.01	7.07	1.38	4.15	29.04	
540-84-1	2,2,4-Trimethylpentane	0.30	0.89	20.93	1.38	4.14	97.94	
142-82-5	n-Heptane	0.34	1.01	13.52	1.38	4.15	55.53	
108-87-2	Methylcyclohexane	0.34	1.01	31.03	1.36	4.07	124.88	
592-13-2	2,5-Dimethylhexane	0.30	0.89	0.47	1.38	4.14	2.21	J
589-43-5	2,4-Dimethylhexane	0.30	0.89	0.92	1.38	4.14	4.29	
565-75-3	2,3,4-Trimethylpentane	0.30	0.89	14.68	1.38	4.14	68.72	
108-88-3	Toluene	0.34	1.01	732.53	1.27	3.82	2,765.01	
584-94-1	2,3-Dimethylhexane	0.30	0.89	16.47	1.38	4.14	77.07	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.30	0.89	2.56	1.38	4.14	11.97	
589-81-1	3-Methylheptane	0.30	0.89	2.18	1.38	4.14	10.20	
111-65-9	n-Octane	0.30	0.89	6.20	1.38	4.14	29.02	
100-41-4	Ethylbenzene	0.30	0.89	51.56	1.28	3.85	224.41	
108-38-3	m,p-xylene	0.30	0.89	173.31	1.28	3.85	754.34	
100-42-5	Styrene	0.30	0.89	6.77	1.26	3.78	28.91	
95-47-6	o-xylene	0.30	0.89	107.49	1.28	3.85	467.87	
111-84-2	n-Nonane	0.26	0.79	23.40	1.38	4.14	123.03	
98-82-8	i-Propylbenzene	0.26	0.79	6.29	1.29	3.88	30.99	
103-65-1	n-propylbenzene	0.26	0.79	6.79	1.29	3.88	33.45	
80-56-8	a-Pinene	0.24	0.71	ND	1.32	3.95	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.79	11.56	1.29	3.88	56.93	
622-96-8	4-Ethyltoluene	0.26	0.79	29.56	1.29	3.88	145.60	
108-67-8	1,3,5-Trimethylbenzene	0.26	0.79	13.82	1.29	3.88	68.09	
611-14-3	2-Ethyltoluene	0.26	0.79	15.61	1.29	3.88	76.89	
127-91-3	b-Pinene	0.24	0.71	ND	1.32	3.95	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.79	40.29	1.29	3.88	198.47	
124-18-5	n-Decane	0.24	0.71	21.19	1.38	4.13	123.60	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.79	53.57	1.29	3.88	263.92	
5989-27-5	d-Limonene	0.24	0.71	ND	1.32	3.95	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.71	8.04	1.30	3.89	44.25	
105-05-5	1,4-Diethylbenzene	0.24	0.71	11.72	1.30	3.89	64.48	
104-51-8	n-Butylbenzene	0.24	0.71	9.03	1.30	3.89	49.69	
1120-21-4	Undecane	0.21	0.64	23.86	1.37	4.12	152.82	
112-40-3	Dodecane	0.20	0.59	13.49	1.37	4.12	94.16	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.85	26.55	4,214.72	31.27	93.80	14,889.71	
TNMHC - C1	Total Non-Methane Hydrocarbons	53.10	159.30	25,288.33	34.82	104.46	16,582.51	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 20

File Name: 756620PA

Date Sampled: 10/12/17

Time: 13:14

Description: T - 605

Date Analyzed: 10/19/17

Time: 16:14

Can/Tube#: 698

Can Dilution Factor: 1.18

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.02	118	354	209	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 20

File Name: 1756620A
Description: T - 605
Can/Tube#: 698
QC_Batch: 101917-GCL

Date Sampled: 10/12/17 Time: 13:14
Date Analyzed: 10/19/17 Time: 11:10
Dilution Factor: 1.18

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.71	102.36	0.16	0.48	69.16	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 21

File Name: 1756621A.D

Date Sampled: 10/12/17

Time: 13:19

Description: T-606

Date Analyzed: 10/31/17

Time: 17:15

Canister: 877

Can Dilution Factor: 1.20

QC_Batch: 103117-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-71-8	Dichlorodifluoromethane	12.0	60.4	ND	59.3	298.3	ND	
74-87-3	Chloromethane	12.0	60.4	ND	24.8	124.6	ND	
76-14-2	Freon 114	12.0	60.4	ND	83.8	421.7	ND	
75-01-4	Vinyl chloride	12.0	60.4	ND	30.7	154.2	ND	
106-99-0	1,3-Butadiene	12.0	60.4	ND	26.5	133.5	ND	
74-83-9	Bromomethane	12.0	60.4	ND	46.6	234.2	ND	
75-00-3	Chloroethane	12.0	60.4	ND	31.6	159.2	ND	
64-17-5	Ethanol	60.0	180.0	ND	113.1	339.2	ND	
75-69-4	Trichlorofluoromethane	12.0	57.6	ND	67.4	323.6	ND	
67-64-1	Acetone	60.0	147.6	ND	142.5	350.6	ND	
67-63-0	2-propanol	60.0	137.8	ND	147.4	338.5	ND	
75-35-4	1,1-Dichloroethene	12.0	59.5	ND	47.5	235.8	ND	
76-13-1	Freon 113	12.0	57.4	ND	91.9	439.8	ND	
75-09-2	Dichloromethane	24.0	57.8	ND	83.3	200.6	ND	
75-15-0	Carbon disulfide	60.0	111.4	ND	186.7	346.4	ND	
156-60-5	trans-1,2-Dichloroethene	12.0	43.3	ND	47.5	171.6	ND	
1634-04-4	Methyl tert butyl ether	12.0	44.2	ND	43.2	159.3	ND	
75-34-3	1,1-Dichloroethane	12.0	59.8	ND	48.6	242.2	ND	
108-05-4	Vinyl acetate	12.0	52.7	ND	42.2	185.6	ND	
78-93-3	2-Butanone	48.0	122.2	ND	141.5	360.1	ND	
141-78-6	Ethyl acetate	24.0	52.6	ND	86.4	189.3	ND	
74-97-5	Bromochloromethane	12.0	32.0	ND	63.5	169.1	ND	
109-99-9	Tetrahydrofuran	24.0	60.4	ND	70.7	177.9	ND	
156-59-2	cis-1,2-Dichloroethene	24.0	64.6	ND	95.1	255.7	ND	
67-66-3	Chloroform	12.0	60.2	ND	58.6	293.8	ND	
71-55-6	1,1,1-Trichloroethane	12.0	53.3	ND	65.4	290.6	ND	
107-06-2	1,2-Dichloroethane	12.0	54.7	ND	48.6	221.5	ND	
110-82-7	Cyclohexane	12.0	46.1	ND	41.5	158.6	ND	
71-43-2	Benzene	12.0	61.0	658.2	38.3	194.6	2,101.5	
56-23-5	Carbon tetrachloride	12.0	56.9	ND	75.4	357.6	ND	
142-82-5	n-Heptane	60.0	145.4	ND	245.8	595.7	ND	
78-87-5	1,2-Dichloropropane	12.0	57.8	ND	55.4	266.8	ND	
123-91-1	1,4 Dioxane	48.0	98.2	ND	172.9	353.5	ND	
79-01-6	Trichloroethene	7.2	55.9	ND	38.7	300.2	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-27-4	Bromodichloromethane	12.0	24.2	ND	80.4	162.3	ND	
80-62-6	Methyl methacrylate	48.0	162.2	ND	196.4	663.9	ND	
108-10-1	4-Methyl-2-pentanone	48.0	181.7	ND	196.6	744.2	ND	
10061-01-5	cis-1,3-Dichloropropene	12.0	62.2	ND	54.5	282.2	ND	
108-88-3	Toluene	24.0	62.6	545.9	90.4	235.8	2,055.3	
10061-02-6	trans-1,3-Dichloropropene	12.0	62.2	ND	54.5	282.4	ND	
79-00-5	1,1,2-Trichloroethane	12.0	61.7	ND	65.4	336.5	ND	
591-78-6	2-Hexanone	60.0	170.2	ND	245.8	697.0	ND	
124-48-1	Dibromochloromethane	12.0	24.0	ND	102.2	204.0	ND	
106-93-4	1,2-Dibromoethane	12.0	29.1	ND	92.2	223.7	ND	
127-18-4	Tetrachloroethene	7.2	29.2	ND	48.8	198.0	ND	
108-90-7	Chlorobenzene	12.0	54.6	ND	55.2	251.4	ND	
100-41-4	Ethylbenzene	25.4	63.4	26.8	110.2	275.4	116.1	J
1330-20-7	m,p-Xylenes	25.4	63.6	94.3	110.4	276.1	409.4	
100-42-5	Styrene	24.9	62.1	ND	105.9	264.6	ND	
75-25-2	Bromoform	12.0	16.1	ND	124.0	166.3	ND	
95-47-6	o-Xylene	24.7	61.8	50.4	107.4	268.5	218.7	J
79-34-5	1,1,2,2-Tetrachloroethane	11.9	29.7	ND	81.5	203.8	ND	
622-96-8	4-Ethyltoluene	39.8	99.4	ND	195.5	488.7	ND	
108-67-8	1,3,5-Trimethylbenzene	24.8	62.0	ND	121.8	304.6	ND	
95-63-6	1,2,4-Trimethylbenzene	24.4	61.0	ND	119.9	299.7	ND	
541-73-1	1,3-Dichlorobenzene	24.0	44.4	ND	144.2	266.8	ND	
100-44-7	Benzyl chloride	24.0	145.4	ND	124.2	752.7	ND	
106-46-7	1,4-Dichlorobenzene	24.0	41.5	ND	144.2	249.5	ND	
95-50-1	1,2-Dichlorobenzene	24.0	38.9	ND	144.2	233.6	ND	
120-82-1	1,2,4-Trichlorobenzene	60.0	82.6	ND	444.9	612.2	ND	
91-20-3	Naphthalene	12.2	19.2	ND	64.1	100.6	ND	
87-68-3	Hexachlorobutadiene	60.0	63.6	ND	639.7	678.1	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				99	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 21

File Name: 1756621A
Description: T - 606
Canister: 877
QC_Batch: 102717-GCK

Date Sampled: 10/12/17 Time: 13:19
Date Analyzed: 10/27/17 Time: 19:52
Can Factor: 1.20
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.20	3.60	18.07	1.38	4.15	20.81	
74-86-2	Acetylene	1.20	3.60	ND	1.28	3.84	ND	ND
74-84-0	Ethane	1.20	3.60	304.03	1.48	4.44	375.05	
115-07-1	Propene	0.80	2.40	16.38	1.38	4.14	28.26	
74-98-6	Propane	0.80	2.40	153.82	1.45	4.34	278.00	
75-28-5	i-Butane	0.60	1.80	10.23	1.43	4.29	24.37	
106-98-9	1-Butene	0.60	1.80	ND	1.38	4.14	ND	ND
106-97-8	n-Butane	0.60	1.80	47.19	1.43	4.29	112.36	
624-64-6	t-2-Butene	0.60	1.80	ND	1.38	4.14	ND	ND
590-18-1	c-2-Butene	0.60	1.80	ND	1.38	4.14	ND	ND
78-78-4	i-Pentane	0.48	1.44	13.36	1.42	4.26	39.52	
109-67-1	1-Pentene	0.48	1.44	ND	1.38	4.14	ND	ND
109-66-0	n-Pentane	0.48	1.44	19.34	1.42	4.26	57.16	
78-79-5	Isoprene	0.48	1.44	ND	1.34	4.02	ND	ND
646-04-8	t-2-Pentene	0.48	1.44	ND	1.38	4.14	ND	ND
627-20-3	c-2-Pentene	0.48	1.44	ND	1.38	4.14	ND	ND
75-83-2	2,2-Dimethylbutane	0.40	1.20	ND	1.41	4.24	ND	ND
287-92-3	Cyclopentane	0.48	1.44	ND	1.38	4.14	ND	ND
79-29-8	2,3-Dimethylbutane	0.40	1.20	ND	1.41	4.24	ND	ND
107-83-5	2-Methylpentane	0.40	1.20	6.39	1.41	4.24	22.56	
96-14-0	3-Methylpentane	0.40	1.20	19.19	1.41	4.24	67.81	
110-54-3	n-Hexane	0.40	1.20	16.11	1.41	4.24	56.91	
96-37-7	Methylcyclopentane	0.40	1.20	ND	1.38	4.14	ND	ND
108-08-7	2,4-Dimethylpentane	0.34	1.03	33.49	1.41	4.22	137.54	
71-43-2	Benzene	0.40	1.20	888.97	1.28	3.84	2,845.44	
110-82-7	Cyclohexane	0.40	1.20	22.57	1.38	4.14	77.89	
591-76-4	2-Methylhexane	0.34	1.03	3.95	1.41	4.22	16.23	
565-59-3	2,3-Dimethylpentane	0.34	1.03	5.25	1.41	4.22	21.55	
589-34-4	3-Methylhexane	0.34	1.03	7.70	1.41	4.22	31.60	
540-84-1	2,2,4-Trimethylpentane	0.30	0.90	22.39	1.40	4.21	104.79	
142-82-5	n-Heptane	0.34	1.03	14.81	1.41	4.22	60.83	
108-87-2	Methylcyclohexane	0.34	1.03	32.51	1.38	4.14	130.83	
592-13-2	2,5-Dimethylhexane	0.30	0.90	6.72	1.40	4.21	31.46	
589-43-5	2,4-Dimethylhexane	0.30	0.90	0.63	1.40	4.21	2.97	J
565-75-3	2,3,4-Trimethylpentane	0.30	0.90	15.39	1.40	4.21	72.01	
108-88-3	Toluene	0.34	1.03	769.23	1.29	3.88	2,903.53	
584-94-1	2,3-Dimethylhexane	0.30	0.90	17.30	1.40	4.21	80.97	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.30	0.90	1.82	1.40	4.21	8.50	
589-81-1	3-Methylheptane	0.30	0.90	2.28	1.40	4.21	10.66	
111-65-9	n-Octane	0.30	0.90	6.47	1.40	4.21	30.30	
100-41-4	Ethylbenzene	0.30	0.90	53.27	1.31	3.92	231.86	
108-38-3	m,p-xylene	0.30	0.90	180.29	1.31	3.92	784.72	
100-42-5	Styrene	0.30	0.90	6.59	1.28	3.84	28.15	
95-47-6	o-xylene	0.30	0.90	110.76	1.31	3.92	482.06	
111-84-2	n-Nonane	0.27	0.80	22.73	1.40	4.21	119.51	
98-82-8	i-Propylbenzene	0.27	0.80	5.73	1.31	3.94	28.22	
103-65-1	n-propylbenzene	0.27	0.80	6.21	1.31	3.94	30.61	
80-56-8	a-Pinene	0.24	0.72	ND	1.34	4.02	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.80	8.88	1.31	3.94	43.76	
622-96-8	4-Ethyltoluene	0.27	0.80	29.14	1.31	3.94	143.54	
108-67-8	1,3,5-Trimethylbenzene	0.27	0.80	13.59	1.31	3.94	66.96	
611-14-3	2-Ethyltoluene	0.27	0.80	15.70	1.31	3.94	77.34	
127-91-3	b-Pinene	0.24	0.72	ND	1.34	4.02	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.80	39.89	1.31	3.94	196.52	
124-18-5	n-Decane	0.24	0.72	19.97	1.40	4.20	116.46	
526-73-8	1,2,3-Trimethylbenzene	0.27	0.80	9.31	1.31	3.94	45.89	
5989-27-5	d-Limonene	0.24	0.72	ND	1.34	4.02	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.72	7.17	1.32	3.96	39.42	
105-05-5	1,4-Diethylbenzene	0.24	0.72	10.99	1.32	3.96	60.43	
104-51-8	n-Butylbenzene	0.24	0.72	8.35	1.32	3.96	45.92	
1120-21-4	Undecane	0.22	0.65	24.21	1.40	4.19	155.11	
112-40-3	Dodecane	0.20	0.60	12.40	1.40	4.19	86.56	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.00	27.00	4,232.35	31.80	95.39	14,951.97	
TNMHC - C1	Total Non-Methane Hydrocarbons	54.00	162.00	25,394.07	35.41	106.23	16,651.85	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 21

File Name: 756621PA

Date Sampled: 10/12/17 Time: 13:19

Description: T - 606

Date Analyzed: 10/19/17 Time: 16:20

Can/Tube#: 877

Can Dilution Factor: 1.20

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.02	120	360	172	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 21

File Name: 1756621A
Description: T - 606
Can/Tube#: 877
QC_Batch: 101917-GCL

Date Sampled: 10/12/17 Time: 13:19
Date Analyzed: 10/19/17 Time: 11:14
Dilution Factor: 1.20

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.72	126.13	0.16	0.49	85.22	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 22

File Name: 1756622A.D

Date Sampled: 10/12/17

Time: 14:16

Description: T-607

Date Analyzed: 10/31/17

Time: 19:46

Canister: 665

Can Dilution Factor: 1.25

QC_Batch: 103117-MA1

Air Volume: 1.00 ml

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-71-8	Dichlorodifluoromethane	62.5	314.4	ND	308.9	1,553.8	ND	
74-87-3	Chloromethane	62.5	314.4	ND	129.0	649.0	ND	
76-14-2	Freon 114	62.5	314.4	ND	436.6	2,196.4	ND	
75-01-4	Vinyl chloride	62.5	314.4	ND	159.7	803.2	ND	
106-99-0	1,3-Butadiene	62.5	314.4	ND	138.2	695.3	ND	
74-83-9	Bromomethane	62.5	314.4	ND	242.5	1,219.6	ND	
75-00-3	Chloroethane	62.5	314.4	ND	164.8	828.9	ND	
64-17-5	Ethanol	312.5	937.5	ND	588.9	1,766.8	ND	
75-69-4	Trichlorofluoromethane	62.5	300.1	ND	351.1	1,685.7	ND	
67-64-1	Acetone	312.5	768.8	ND	742.2	1,825.9	ND	
67-63-0	2-propanol	312.5	717.5	ND	767.8	1,762.8	ND	
75-35-4	1,1-Dichloroethene	62.5	310.0	ND	247.6	1,228.0	ND	
76-13-1	Freon 113	62.5	299.0	ND	478.8	2,290.7	ND	
75-09-2	Dichloromethane	125.0	301.0	ND	433.8	1,044.7	ND	
75-15-0	Carbon disulfide	312.5	580.0	ND	972.2	1,804.3	ND	
156-60-5	trans-1,2-Dichloroethene	62.5	225.6	ND	247.6	893.8	ND	
1634-04-4	Methyl tert butyl ether	62.5	230.4	ND	225.1	829.9	ND	
75-34-3	1,1-Dichloroethane	62.5	311.7	ND	252.9	1,261.5	ND	
108-05-4	Vinyl acetate	62.5	274.6	ND	220.0	966.5	ND	
78-93-3	2-Butanone	250.0	636.3	ND	736.9	1,875.3	ND	
141-78-6	Ethyl acetate	125.0	273.8	ND	450.2	985.9	ND	
74-97-5	Bromochloromethane	62.5	166.5	ND	330.6	880.6	ND	
109-99-9	Tetrahydrofuran	125.0	314.4	ND	368.4	926.6	ND	
156-59-2	cis-1,2-Dichloroethene	125.0	336.3	ND	495.2	1,332.0	ND	
67-66-3	Chloroform	62.5	313.5	ND	305.1	1,530.0	ND	
71-55-6	1,1,1-Trichloroethane	62.5	277.5	ND	340.8	1,513.3	ND	
107-06-2	1,2-Dichloroethane	62.5	285.1	ND	252.9	1,153.8	ND	
110-82-7	Cyclohexane	62.8	240.0	ND	216.0	826.1	ND	
71-43-2	Benzene	62.5	317.5	3,473.5	199.5	1,013.7	11,089.7	
56-23-5	Carbon tetrachloride	62.5	296.3	ND	393.0	1,862.6	ND	
142-82-5	n-Heptane	312.5	757.5	ND	1,280.0	3,102.8	ND	
78-87-5	1,2-Dichloropropane	62.5	300.8	ND	288.7	1,389.5	ND	
123-91-1	1,4 Dioxane	250.0	511.3	ND	900.4	1,841.3	ND	
79-01-6	Trichloroethene	37.5	291.1	ND	201.4	1,563.8	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	62.5	126.3	ND	418.5	845.4	ND	
80-62-6	Methyl methacrylate	250.0	845.0	ND	1,023.0	3,457.8	ND	
108-10-1	4-Methyl-2-pentanone	250.0	946.3	ND	1,024.0	3,875.9	ND	
10061-01-5	cis-1,3-Dichloropropene	62.5	323.9	ND	283.6	1,469.6	ND	
108-88-3	Toluene	125.0	326.3	3,243.8	470.6	1,228.3	12,213.0	
10061-02-6	trans-1,3-Dichloropropene	62.5	324.1	ND	283.6	1,470.8	ND	
79-00-5	1,1,2-Trichloroethane	62.5	321.4	ND	340.8	1,752.5	ND	
591-78-6	2-Hexanone	312.5	886.3	ND	1,280.0	3,630.2	ND	
124-48-1	Dibromochloromethane	62.5	124.8	ND	532.2	1,062.6	ND	
106-93-4	1,2-Dibromoethane	62.5	151.7	ND	480.1	1,165.2	ND	
127-18-4	Tetrachloroethene	37.5	152.1	ND	254.2	1,031.0	ND	
108-90-7	Chlorobenzene	62.5	284.4	ND	287.7	1,309.2	ND	
100-41-4	Ethylbenzene	132.2	330.4	265.6	573.7	1,434.4	1,153.0	J
1330-20-7	m,p-Xylenes	132.5	331.2	1,021.4	575.2	1,438.0	4,434.5	
100-42-5	Styrene	129.4	323.6	ND	551.3	1,378.3	ND	
75-25-2	Bromoform	62.5	83.9	ND	645.6	866.3	ND	
95-47-6	o-Xylene	128.9	322.1	492.1	559.4	1,398.5	2,136.4	
79-34-5	1,1,2,2-Tetrachloroethane	61.9	154.7	ND	424.5	1,061.3	ND	
622-96-8	4-Ethyltoluene	207.2	518.0	ND	1,018.0	2,545.1	ND	
108-67-8	1,3,5-Trimethylbenzene	129.2	322.9	ND	634.6	1,586.5	ND	
95-63-6	1,2,4-Trimethylbenzene	127.1	317.6	355.2	624.3	1,560.7	1,745.3	
541-73-1	1,3-Dichlorobenzene	125.0	231.3	ND	751.2	1,389.6	ND	
100-44-7	Benzyl chloride	125.0	757.5	ND	646.9	3,920.3	ND	
106-46-7	1,4-Dichlorobenzene	125.0	216.3	ND	751.2	1,299.5	ND	
95-50-1	1,2-Dichlorobenzene	125.0	202.5	ND	751.2	1,216.9	ND	
120-82-1	1,2,4-Trichlorobenzene	312.5	430.0	ND	2,317.4	3,188.7	ND	
91-20-3	Naphthalene	63.8	100.0	ND	334.1	524.1	ND	
87-68-3	Hexachlorobutadiene	312.5	331.3	ND	3,331.7	3,531.6	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				98	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 22

File Name: 1756622A
Description: T - 607
Canister: 665
QC_Batch: 103117-GCK

Date Sampled: 10/12/17 Time: 14:16
Date Analyzed: 10/31/17 Time: 14:12
Can Factor: 1.17
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.17	3.51	ND	1.35	4.04	ND	ND
74-86-2	Acetylene	1.17	3.51	ND	1.25	3.74	ND	ND
74-84-0	Ethane	1.17	3.51	5,306.42	1.44	4.33	6,546.03	
115-07-1	Propene	0.78	2.34	ND	1.35	4.04	ND	ND
74-98-6	Propane	0.78	2.34	2,807.92	1.41	4.23	5,074.97	
75-28-5	i-Butane	0.59	1.76	193.14	1.39	4.18	459.89	
106-98-9	1-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
106-97-8	n-Butane	0.59	1.76	818.71	1.39	4.18	1,949.47	
624-64-6	t-2-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
590-18-1	c-2-Butene	0.59	1.76	ND	1.35	4.04	ND	ND
78-78-4	i-Pentane	0.47	1.40	315.01	1.38	4.15	932.11	
109-67-1	1-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
109-66-0	n-Pentane	0.47	1.40	195.29	1.38	4.15	577.07	
78-79-5	Isoprene	0.47	1.40	ND	1.31	3.92	ND	ND
646-04-8	t-2-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
627-20-3	c-2-Pentene	0.47	1.40	ND	1.34	4.03	ND	ND
75-83-2	2,2-Dimethylbutane	0.39	1.17	ND	1.38	4.13	ND	ND
287-92-3	Cyclopentane	0.47	1.40	ND	1.34	4.03	ND	ND
79-29-8	2,3-Dimethylbutane	0.39	1.17	ND	1.38	4.13	ND	ND
107-83-5	2-Methylpentane	0.39	1.17	163.55	1.38	4.13	577.78	
96-14-0	3-Methylpentane	0.39	1.17	163.12	1.38	4.13	576.26	
110-54-3	n-Hexane	0.39	1.17	292.89	1.38	4.13	1,034.71	
96-37-7	Methylcyclopentane	0.39	1.17	ND	1.35	4.04	ND	ND
108-08-7	2,4-Dimethylpentane	0.33	1.00	7.61	1.37	4.12	31.23	
71-43-2	Benzene	0.39	1.17	6,487.09	1.25	3.74	20,763.99	
110-82-7	Cyclohexane	0.39	1.17	342.18	1.35	4.04	1,180.81	
591-76-4	2-Methylhexane	0.33	1.00	59.61	1.37	4.12	244.78	
565-59-3	2,3-Dimethylpentane	0.33	1.00	43.18	1.37	4.12	177.32	
589-34-4	3-Methylhexane	0.33	1.00	211.67	1.37	4.12	869.25	
540-84-1	2,2,4-Trimethylpentane	0.29	0.88	432.30	1.37	4.11	2,023.32	
142-82-5	n-Heptane	0.33	1.00	233.64	1.37	4.12	959.45	
108-87-2	Methylcyclohexane	0.33	1.00	570.43	1.35	4.04	2,295.76	
592-13-2	2,5-Dimethylhexane	0.29	0.88	114.71	1.37	4.11	536.87	
589-43-5	2,4-Dimethylhexane	0.29	0.88	106.92	1.37	4.11	500.43	
565-75-3	2,3,4-Trimethylpentane	0.29	0.88	197.49	1.37	4.11	924.33	
108-88-3	Toluene	0.33	1.00	6,224.77	1.26	3.79	23,495.95	
584-94-1	2,3-Dimethylhexane	0.29	0.88	146.93	1.37	4.11	687.70	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.88	9.93	1.37	4.11	46.48	
589-81-1	3-Methylheptane	0.29	0.88	23.52	1.37	4.11	110.10	
111-65-9	n-Octane	0.29	0.88	66.21	1.37	4.11	309.88	
100-41-4	Ethylbenzene	0.29	0.88	552.94	1.27	3.82	2,406.64	
108-38-3	m,p-xylene	0.29	0.88	1,867.01	1.27	3.82	8,126.10	
100-42-5	Styrene	0.29	0.88	53.62	1.25	3.75	229.00	
95-47-6	o-xylene	0.29	0.88	969.32	1.27	3.82	4,218.92	
111-84-2	n-Nonane	0.26	0.78	10.41	1.37	4.10	54.72	
98-82-8	i-Propylbenzene	0.26	0.78	67.99	1.28	3.84	334.94	
103-65-1	n-propylbenzene	0.26	0.78	116.54	1.28	3.84	574.12	
80-56-8	a-Pinene	0.23	0.70	ND	1.31	3.92	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.78	349.90	1.28	3.84	1,723.67	
622-96-8	4-Ethyltoluene	0.26	0.78	146.64	1.28	3.84	722.40	
108-67-8	1,3,5-Trimethylbenzene	0.26	0.78	125.64	1.28	3.84	618.93	
611-14-3	2-Ethyltoluene	0.26	0.78	167.17	1.28	3.84	823.51	
127-91-3	b-Pinene	0.23	0.70	ND	1.31	3.92	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.78	455.62	1.28	3.84	2,244.49	
124-18-5	n-Decane	0.23	0.70	74.04	1.36	4.09	431.78	
526-73-8	1,2,3-Trimethylbenzene	0.26	0.78	521.90	1.28	3.84	2,571.00	
5989-27-5	d-Limonene	0.23	0.70	ND	1.31	3.92	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.70	100.83	1.29	3.86	554.59	
105-05-5	1,4-Diethylbenzene	0.23	0.70	60.12	1.29	3.86	330.67	
104-51-8	n-Butylbenzene	0.23	0.70	98.95	1.29	3.86	544.22	
1120-21-4	Undecane	0.21	0.64	189.23	1.36	4.09	1,212.16	
112-40-3	Dodecane	0.20	0.59	152.21	1.36	4.08	1,062.34	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.78	26.33	41,218.28	31.00	93.00	145,615.41	
TNMHC - C1	Total Non-Methane Hydrocarbons	52.65	157.95	247,309.70	34.52	103.57	162,170.30	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 22

File Name: 756622PA

Date Sampled: 10/12/17

Time: 14:16

Description: T - 607

Date Analyzed: 10/19/17

Time: 16:27

Can/Tube#: 665

Can Dilution Factor: 1.17

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.19	117	351	1,898	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 22

File Name: 1756622A

Date Sampled: 10/12/17 Time: 14:16

Description: T - 607

Date Analyzed: 10/19/17 Time: 11:17

Can/Tube#: 665

Dilution Factor: 1.17

QC_Batch: 101917-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.23	0.70	525.14	0.16	0.47	354.82	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217566

Analytical Method: TO-15

Laboratory ID: 23

File Name: 1756623A.D

Date Sampled: 10/12/17

Time: 14:16

Description: T-608

Date Analyzed: 10/31/17

Time: 15:02

Canister: 700

Can Dilution Factor: 1.12

QC_Batch: 103117-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.28	1.41	ND	1.38	6.96	ND	
74-87-3	Chloromethane	0.28	1.41	ND	0.58	2.91	ND	
76-14-2	Freon 114	0.28	1.41	ND	1.96	9.84	ND	
75-01-4	Vinyl chloride	0.28	1.41	ND	0.72	3.60	ND	
106-99-0	1,3-Butadiene	0.28	1.41	ND	0.62	3.11	ND	
74-83-9	Bromomethane	0.28	1.41	ND	1.09	5.46	ND	
75-00-3	Chloroethane	0.28	1.41	ND	0.74	3.71	ND	
64-17-5	Ethanol	1.40	4.20	ND	2.64	7.92	ND	
75-69-4	Trichlorofluoromethane	0.28	1.34	ND	1.57	7.55	ND	
67-64-1	Acetone	1.40	3.44	ND	3.33	8.18	ND	
67-63-0	2-propanol	1.40	3.21	ND	3.44	7.90	ND	
75-35-4	1,1-Dichloroethene	0.28	1.39	ND	1.11	5.50	ND	
76-13-1	Freon 113	0.28	1.34	ND	2.15	10.26	ND	
75-09-2	Dichloromethane	0.56	1.35	ND	1.94	4.68	ND	
75-15-0	Carbon disulfide	1.40	2.60	ND	4.36	8.08	ND	
156-60-5	trans-1,2-Dichloroethene	0.28	1.01	ND	1.11	4.00	ND	
1634-04-4	Methyl tert butyl ether	0.28	1.03	ND	1.01	3.72	ND	
75-34-3	1,1-Dichloroethane	0.28	1.40	ND	1.13	5.65	ND	
108-05-4	Vinyl acetate	0.28	1.23	ND	0.99	4.33	ND	
78-93-3	2-Butanone	1.12	2.85	ND	3.30	8.40	ND	
141-78-6	Ethyl acetate	0.56	1.23	ND	2.02	4.42	ND	
74-97-5	Bromochloromethane	0.28	0.75	ND	1.48	3.95	ND	
109-99-9	Tetrahydrofuran	0.56	1.41	ND	1.65	4.15	ND	
156-59-2	cis-1,2-Dichloroethene	0.56	1.51	ND	2.22	5.97	ND	
67-66-3	Chloroform	0.28	1.40	ND	1.37	6.85	ND	
71-55-6	1,1,1-Trichloroethane	0.28	1.24	ND	1.53	6.78	ND	
107-06-2	1,2-Dichloroethane	0.28	1.28	ND	1.13	5.17	ND	
110-82-7	Cyclohexane	0.28	1.08	ND	0.97	3.70	ND	
71-43-2	Benzene	0.28	1.42	1.00	0.89	4.54	3.19	J
56-23-5	Carbon tetrachloride	0.28	1.33	ND	1.76	8.34	ND	
142-82-5	n-Heptane	1.40	3.39	ND	5.73	13.90	ND	
78-87-5	1,2-Dichloropropane	0.28	1.35	ND	1.29	6.22	ND	
123-91-1	1,4 Dioxane	1.12	2.29	ND	4.03	8.25	ND	
79-01-6	Trichloroethene	0.17	1.30	ND	0.90	7.01	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-27-4	Bromodichloromethane	0.28	0.57	ND	1.87	3.79	ND	
80-62-6	Methyl methacrylate	1.12	3.79	ND	4.58	15.49	ND	
108-10-1	4-Methyl-2-pentanone	1.12	4.24	ND	4.59	17.36	ND	
10061-01-5	cis-1,3-Dichloropropene	0.28	1.45	ND	1.27	6.58	ND	
108-88-3	Toluene	0.56	1.46	ND	2.11	5.50	ND	
10061-02-6	trans-1,3-Dichloropropene	0.28	1.45	ND	1.27	6.59	ND	
79-00-5	1,1,2-Trichloroethane	0.28	1.44	ND	1.53	7.85	ND	
591-78-6	2-Hexanone	1.40	3.97	ND	5.73	16.26	ND	
124-48-1	Dibromochloromethane	0.28	0.56	ND	2.38	4.76	ND	
106-93-4	1,2-Dibromoethane	0.28	0.68	ND	2.15	5.22	ND	
127-18-4	Tetrachloroethene	0.17	0.68	ND	1.14	4.62	ND	
108-90-7	Chlorobenzene	0.28	1.27	ND	1.29	5.87	ND	
100-41-4	Ethylbenzene	0.59	1.48	ND	2.57	6.43	ND	
1330-20-7	m,p-Xylenes	0.59	1.48	ND	2.58	6.44	ND	
100-42-5	Styrene	0.58	1.45	ND	2.47	6.17	ND	
75-25-2	Bromoform	0.28	0.38	ND	2.89	3.88	ND	
95-47-6	o-Xylene	0.58	1.44	ND	2.51	6.27	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.28	0.69	ND	1.90	4.75	ND	
622-96-8	4-Ethyltoluene	0.93	2.32	ND	4.56	11.40	ND	
108-67-8	1,3,5-Trimethylbenzene	0.58	1.45	ND	2.84	7.11	ND	
95-63-6	1,2,4-Trimethylbenzene	0.57	1.42	ND	2.80	6.99	ND	
541-73-1	1,3-Dichlorobenzene	0.56	1.04	ND	3.37	6.23	ND	
100-44-7	Benzyl chloride	0.56	3.39	ND	2.90	17.56	ND	
106-46-7	1,4-Dichlorobenzene	0.56	0.97	ND	3.37	5.82	ND	
95-50-1	1,2-Dichlorobenzene	0.56	0.91	ND	3.37	5.45	ND	
120-82-1	1,2,4-Trichlorobenzene	1.40	1.93	ND	10.38	14.29	ND	
91-20-3	Naphthalene	0.29	0.45	ND	1.50	2.35	ND	
87-68-3	Hexachlorobutadiene	1.40	1.48	ND	14.93	15.82	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	89	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217566
Laboratory Number: 23

File Name: 1756623A
Description: T - 608
Canister: 700
QC_Batch: 103117-GCK

Date Sampled: 10/12/17 Time: 14:16
Date Analyzed: 10/31/17 Time: 19:18
Can Factor: 1.12
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.12	3.36	ND	1.29	3.87	ND	ND
74-86-2	Acetylene	1.12	3.36	ND	1.19	3.58	ND	ND
74-84-0	Ethane	1.12	3.36	ND	1.38	4.14	ND	ND
115-07-1	Propene	0.75	2.24	ND	1.29	3.86	ND	ND
74-98-6	Propane	0.75	2.24	ND	1.35	4.05	ND	ND
75-28-5	i-Butane	0.56	1.68	ND	1.33	4.00	ND	ND
106-98-9	1-Butene	0.56	1.68	ND	1.29	3.86	ND	ND
106-97-8	n-Butane	0.56	1.68	ND	1.33	4.00	ND	ND
624-64-6	t-2-Butene	0.56	1.68	ND	1.29	3.86	ND	ND
590-18-1	c-2-Butene	0.56	1.68	ND	1.29	3.86	ND	ND
78-78-4	i-Pentane	0.45	1.34	ND	1.33	3.98	ND	ND
109-67-1	1-Pentene	0.45	1.34	ND	1.29	3.86	ND	ND
109-66-0	n-Pentane	0.45	1.34	ND	1.32	3.97	ND	ND
78-79-5	Isoprene	0.45	1.34	ND	1.25	3.75	ND	ND
646-04-8	t-2-Pentene	0.45	1.34	ND	1.29	3.86	ND	ND
627-20-3	c-2-Pentene	0.45	1.34	ND	1.29	3.86	ND	ND
75-83-2	2,2-Dimethylbutane	0.37	1.12	ND	1.32	3.96	ND	ND
287-92-3	Cyclopentane	0.45	1.34	ND	1.29	3.86	ND	ND
79-29-8	2,3-Dimethylbutane	0.37	1.12	ND	1.32	3.96	ND	ND
107-83-5	2-Methylpentane	0.37	1.12	ND	1.32	3.96	ND	ND
96-14-0	3-Methylpentane	0.37	1.12	ND	1.32	3.96	ND	ND
110-54-3	n-Hexane	0.37	1.12	ND	1.32	3.96	ND	ND
96-37-7	Methylcyclopentane	0.37	1.12	ND	1.29	3.86	ND	ND
108-08-7	2,4-Dimethylpentane	0.32	0.96	ND	1.31	3.94	ND	ND
71-43-2	Benzene	0.37	1.12	ND	1.19	3.58	ND	ND
110-82-7	Cyclohexane	0.37	1.12	ND	1.29	3.86	ND	ND
591-76-4	2-Methylhexane	0.32	0.96	ND	1.31	3.94	ND	ND
565-59-3	2,3-Dimethylpentane	0.32	0.96	ND	1.31	3.94	ND	ND
589-34-4	3-Methylhexane	0.32	0.96	ND	1.31	3.94	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.28	0.84	ND	1.31	3.93	ND	ND
142-82-5	n-Heptane	0.32	0.96	ND	1.31	3.94	ND	ND
108-87-2	Methylcyclohexane	0.32	0.96	ND	1.29	3.86	ND	ND
592-13-2	2,5-Dimethylhexane	0.28	0.84	ND	1.31	3.93	ND	ND
589-43-5	2,4-Dimethylhexane	0.28	0.84	ND	1.31	3.93	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.28	0.84	ND	1.31	3.93	ND	ND
108-88-3	Toluene	0.32	0.96	ND	1.21	3.62	ND	ND
584-94-1	2,3-Dimethylhexane	0.28	0.84	ND	1.31	3.93	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.28	0.84	ND	1.31	3.93	ND	ND
589-81-1	3-Methylheptane	0.28	0.84	ND	1.31	3.93	ND	ND
111-65-9	n-Octane	0.28	0.84	ND	1.31	3.93	ND	ND
100-41-4	Ethylbenzene	0.28	0.84	ND	1.22	3.66	ND	ND
108-38-3	m,p-xylene	0.28	0.84	ND	1.22	3.66	ND	ND
100-42-5	Styrene	0.28	0.84	ND	1.20	3.59	ND	ND
95-47-6	o-xylene	0.28	0.84	ND	1.22	3.66	ND	ND
111-84-2	n-Nonane	0.25	0.75	ND	1.31	3.93	ND	ND
98-82-8	i-Propylbenzene	0.25	0.75	ND	1.23	3.68	ND	ND
103-65-1	n-propylbenzene	0.25	0.75	ND	1.23	3.68	ND	ND
80-56-8	a-Pinene	0.22	0.67	ND	1.25	3.75	ND	ND
620-14-4	3-Ethyltoluene	0.25	0.75	ND	1.23	3.68	ND	ND
622-96-8	4-Ethyltoluene	0.25	0.75	ND	1.23	3.68	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.25	0.75	ND	1.23	3.68	ND	ND
611-14-3	2-Ethyltoluene	0.25	0.75	ND	1.23	3.68	ND	ND
127-91-3	b-Pinene	0.22	0.67	ND	1.25	3.75	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.25	0.75	ND	1.23	3.68	ND	ND
124-18-5	n-Decane	0.22	0.67	ND	1.31	3.92	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.25	0.75	ND	1.23	3.68	ND	ND
5989-27-5	d-Limonene	0.22	0.67	ND	1.25	3.75	ND	ND
141-93-5	1,3-Diethylbenzene	0.22	0.67	ND	1.23	3.70	ND	ND
105-05-5	1,4-Diethylbenzene	0.22	0.67	ND	1.23	3.70	ND	ND
104-51-8	n-Butylbenzene	0.22	0.67	ND	1.23	3.70	ND	ND
1120-21-4	Undecane	0.20	0.61	ND	1.30	3.91	ND	ND
112-40-3	Dodecane	0.19	0.56	ND	1.30	3.91	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.40	25.20	22.30	29.68	89.03	78.78	J
TNMHC - C1	Total Non-Methane Hydrocarbons	50.40	151.20	133.81	33.05	99.15	87.74	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217566

Laboratory Number: 23

File Name: 756623PA

Date Sampled: 10/12/17

Time: 14:16

Description: T - 608

Date Analyzed: 10/19/17

Time: 16:34

Can/Tube#: 700

Can Dilution Factor: 1.12

QC_Batch: 101917-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	112	336	ND	ND

ANALYTICAL REPORT

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217566

Laboratory Number: 23

File Name: 1756623A
Description: T - 608
Can/Tube#: 700
QC_Batch: 101917-GCL

Date Sampled: 10/12/17 Time: 14:16
Date Analyzed: 10/19/17 Time: 11:22
Dilution Factor: 1.12

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.22	0.67	ND	0.15	0.45	ND	

Laboratory Report

Project Name:

CARB Oil and Water Separator Pond

EAS SDG Number: **217607**

Client Project Manager: Chuck Schmidt

Task:

Prepared For:

Project Number: 17198

C.E. Schmidt

Sample Event Date: 11/1/17

19200 Live Oak Road

Received Date: 11/1/2017

Red Bluff

CA 96080

Report Date: 11/22/2017

Project Number: None Given

PO Number: None Given

This is the Laboratory Report for the samples in the indicated Sample Delivery Group (SDG). Each sample received in the group is assigned a Laboratory ID number. The combination of the SDG number and the Lab ID number is a unique identifier for the sample.

This Report Contains:

Laboratory Work Order

Project Sample Media

Laboratory Case Narrative and Chain of Custody

Method Description (when applicable)

Quality Control Reports

Analytical Reports

NELAC Certification: Florida E871125

173 Cross Street, San Luis Obispo, CA 93401 (805) 781-3585

Laboratory Work Order

SDG Number: 217607

Project Number: 17198

Client: Chuck Schmidt

Received: 11/1/2017

C.E. Schmidt

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 701	217607 1	ASTM D3416 Methane, MDL 0.5 ppmv	11/1/2017
T - 701	217607 1	EPA TO-14 DHA with TNMHC	11/1/2017
T - 701	217607 1	EPA TO-15 VOC + TIC	11/1/2017
T - 701	217607 1	ASTM D1945 Carbon Dioxide	11/1/2017
T - 702	217607 2	ASTM D1945 Carbon Dioxide	11/1/2017
T - 702	217607 2	ASTM D3416 Methane, MDL 0.5 ppmv	11/1/2017
T - 702	217607 2	EPA TO-14 DHA with TNMHC	11/1/2017
T - 702	217607 2	EPA TO-15 VOC + TIC	11/1/2017
T - 703	217607 3	ASTM D3416 Methane, MDL 0.5 ppmv	11/1/2017
T - 703	217607 3	EPA TO-14 DHA with TNMHC	11/1/2017
T - 703	217607 3	ASTM D1945 Carbon Dioxide	11/1/2017
T - 703	217607 3	EPA TO-15 VOC + TIC	11/1/2017
T - 704	217607 4	ASTM D1945 Carbon Dioxide	11/1/2017
T - 704	217607 4	ASTM D3416 Methane, MDL 0.5 ppmv	11/1/2017
T - 704	217607 4	EPA TO-14 DHA with TNMHC	11/1/2017
T - 704	217607 4	EPA TO-15 VOC + TIC	11/1/2017
T - 705	217607 5	EPA TO-15 VOC + TIC	11/1/2017
T - 705	217607 5	EPA TO-14 DHA with TNMHC	11/1/2017
T - 705	217607 5	ASTM D1945 Carbon Dioxide	11/1/2017
T - 705	217607 5	ASTM D3416 Methane, MDL 0.5 ppmv	11/1/2017
T - 706	217607 6	ASTM D3416 Methane, MDL 0.5 ppmv	11/1/2017
T - 706	217607 6	EPA TO-14 DHA with TNMHC	11/1/2017
T - 706	217607 6	EPA TO-15 VOC + TIC	11/1/2017

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 706	217607 6	ASTM D1945 Carbon Dioxide	11/1/2017
T - 707	217607 7	ASTM D1945 Carbon Dioxide	11/1/2017
T - 707	217607 7	ASTM D3416 Methane, MDL 0.5 ppmv	11/1/2017
T - 707	217607 7	EPA TO-14 DHA with TNMHC	11/1/2017
T - 707	217607 7	EPA TO-15 VOC + TIC	11/1/2017
T - 708	217607 8	ASTM D3416 Methane, MDL 0.5 ppmv	11/1/2017
T - 708	217607 8	EPA TO-14 DHA with TNMHC	11/1/2017
T - 708	217607 8	ASTM D1945 Carbon Dioxide	11/1/2017
T - 708	217607 8	EPA TO-15 VOC + TIC	11/1/2017
T - 709	217607 9	ASTM D1945 Carbon Dioxide	11/1/2017
T - 709	217607 9	ASTM D3416 Methane, MDL 0.5 ppmv	11/1/2017
T - 709	217607 9	EPA TO-14 DHA with TNMHC	11/1/2017
T - 709	217607 9	EPA TO-15 VOC + TIC	11/1/2017
T - 710	217607 10	EPA TO-15 VOC + TIC	11/1/2017
T - 710	217607 10	ASTM D1945 Carbon Dioxide	11/1/2017
T - 710	217607 10	ASTM D3416 Methane, MDL 0.5 ppmv	11/1/2017
T - 710	217607 10	EPA TO-14 DHA with TNMHC	11/1/2017

Project Sample Media

SDG Number: 217607

The following sample media was used for this Sample Delivery Group (SDG). The Sample Media column identifies the type of media. For canisters, the Sample Media Batch gives the canister number followed by the cleaning batch number, which is a unique identification. Canisters that are received with sub-ambient pressures are pressurized to about 5 psig. The initial pressure of the canister when it is received is recorded along with the final pressure after pressurization. The canister dilution factor is the ratio of the final to initial pressure. The results are adjusted for the can dilution factor.

SDG	Lab ID	Client Sample No.	Sample		Pressure, torr		Can Factor
			Media	Batch	Initial	Final	
217607	1	T - 701	802	102817A	746	912	1.22
217607	2	T - 702	689	102817A	737	907	1.23
217607	3	T - 703	849	102817A	718	915	1.27
217607	4	T - 704	541	102817A	715	921	1.29
217607	5	T - 705	769	102817A	718	918	1.28
217607	6	T - 706	686	102817A	735	919	1.25
217607	7	T - 707	852	102817A	731	915	1.25
217607	8	T - 708	507	102917A	737	914	1.24
217607	9	T - 709	772	102917A	741	925	1.25
217607	10	T - 710	805	102917A	832	929	1.12

Laboratory Case Narrative

EAS SDG Number: 217607

Project Number: 17198

Client: C.E. Schmidt

The Laboratory Case Narrative for the SDG is below. The Chain of Custody form(s) follow the Laboratory Case Narrative.

Sample Control Narrative

The samples were all received in good condition and with proper preservation.

Analytical Methods

The methods used for sample analysis are listed on the Analytical Report header, and have been modified as described in the EAS Quality Manual.

Case Narrative

When there are duplicate values from the TO-15 GC/MS and TO-14 FID the TO-15 GC/MS values should be used because they are less subject to interferences and the GC/MS identifies the compound by its characteristic ions and retention time while the GC/FID has to rely only on the retention time.

QC Narrative

All analyses met EAS method criteria as defined in the Quality Manual, except as noted in the report or QC reports with data qualifiers.

Subcontract Narrative

No sample analysis was subcontracted for this project

Laboratory Certification

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness other than the condition(s) noted above. The Laboratory Report is property of EAS and its client. The entire report has been reviewed and approved.



Date Approved: 11/22/2017

Steven D. Hoyt, Ph.D.
Environmental Analytical Service
Laboratory Director

CE Schmidt, Ph., Environmental Consultant

Chain of Custody Record

Form Serial Number: CES F1-02106
 Client Name: Air Resources Board
 Project Manager: Luis Leyva
 Requested Completion Date: 916.323.1079

For Information Regarding These Samples
 Please Contact:
 Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

Laboratory Name: EAS
 Laboratory Address: 173 Cross Street
 San Luis Obispo, CA 93401
 Laboratory Phone: 805-781-3585
 Laboratory Contact: Dr. Steve Hoyt

Station Number	Date	Time	Sample ID Number			Can ID Number	# OF CONTAINER	Analysis Requested				Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
			C	G	O			R	TO-14 FID (TMMHC)	TO-14 FID (Target List)	ASTM D-1945 (CH4, CO2)			
			M	A	P			Val.	Can	Tube				
-01	11/1/2017	0931	X	X	X	T-701	602	X	X	X	X	22		
-02	11/1/2017	0934	X	X	X	T-702	603	X	X	X	X	23		
-03	11/1/2017	1034	X	X	X	T-703	604	X	X	X	X	24		
-04	11/1/2017	1221	X	X	X	T-704	541	X	X	X	X	25		
-05	11/1/2017	1226	X	X	X	T-705	969	X	X	X	X	25		
-06	11/1/2017	1416	X	X	X	T-706	686	X	X	X	X	25		
-07	11/1/2017	1512	X	X	X	T-707	852	X	X	X	X	29		
-08	11/1/2017	1622	X	X	X	T-708	507	X	X	X	X	25		
-09	11/1/2017	1711	X	X	X	T-709	712	X	X	X	X	27		
-10	11/1/2017	1726	X	X	X	T-710	905	X	X	X	X	27		
	11/1/2017		X	X	X	T-711		X	X	X	X			
	11/1/2017		X	X	X	T-712		X	X	X	X			
	11/1/2017		X	X	X	T-713		X	X	X	X			
	11/1/2017		X	X	X	T-714		X	X	X	X			
	11/1/2017		X	X	X	T-745		X	X	X	X			

Client Address and Phone Number: 1007 I Street, Sacramento, CA 95814, 800-242-4450

Relinquished by: CESCHMIDT Date/Time: 11/17/17 1730
 HAZWAP/NEESA Y N
 GC Level: 1 2 3
 COC
 Ana Req.
 Cust Seal
 Sample Condition

Relinquished by: EAS Date/Time: 11/17 18:15
 Sample Shipped Via: UPS FEDEX BUS Other

Relinquished by: Megan Song Date/Time: 11/17 18:15

Remarks: [Handwritten signatures and notes]

Quality Control Report

EAS SDG Number 217607

Project Number: 17198

QC Narrative

Samples were analyzed in a daily analytical batch (DAB) designated by a QC batch number, and were analyzed using EAS standard laboratory QC specified in the EAS Quality Manual which may be different the referenced agency method. Any deviations from the EAS QC criteria are flagged in the Laboratory Control Reports or in the sample Analytical Reports.

Standard Laboratory QC Report

Unless project specific QC was requested, this Section containing the standard laboratory QC (Level 2) supplied with the Analytical Reports. Each sample is analyzed in a Daily Analytical Batch (DAB) which includes the method blank, a laboratory control spike (LCS) and a laboratory control duplicate (LCD). A Daily Analytical Batch QC report is supplied for each method requested.

Method Blank

A method blank is a laboratory generated sample which assesses the degree to which laboratory operations and procedures cause a false positive. In the method blank, compounds should be present below the reporting limit (RL). Compounds present above the RL are flagged with a "B" in the Analytical Reports in that batch unless the result is greater than ten times the blank value..

Laboratory Control Spike

A laboratory control spike is a well characterized matrix similar to the sample which is spiked and run in duplicate with each Daily Analytical Batch. The laboratory control spike results are reported as a percent recovery. The QC Criteria for the control spike is listed in the Laboratory Control Report. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report. The control spike contains an abbreviated list of compounds in the method, and may contain compounds not on the target list for the specified report.

Laboratory Control Duplicate

The laboratory control duplicate is a duplicate analysis of the laboratory control spike, a standard, or a sample depending on the method. The results are reported as a relative percent difference (RPD). The criteria for the duplicate is in the Laboratory Control Report for the Daily Analytical Batch. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report.

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC

Analytical Method: TO-15

Laboratory ID: B11177

File Name: B11177B.D

Date Sampled:

Time:

Description: METHOD BLANK

Date Analyzed: 11/17/17

Time: 13:10

Canister:

Can Dilution Factor: 1.00

QC_Batch: 111717-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	0.71	0.80	4.05	2.28	J
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	84	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC

Analytical Method: TO-15

Laboratory ID: B11217

File Name: B11217B.D

Date Sampled:

Time:

Description: METHOD BLANK

Date Analyzed: 11/21/17

Time: 15:02

Canister:

Can Dilution Factor: 1.00

QC_Batch: 112117-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	0.92	0.80	4.05	2.92	J
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	87	70	130	

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B11167

File Name: B11167B
Description: METHOD BLANK
Canister:
QC_Batch: 111617-GCK

Date Sampled:
Date Analyzed: 11/16/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 12:41

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B11207

File Name: B11207C
Description: METHOD BLANK
Canister:
QC_Batch: 112017-GCK

Date Sampled:
Date Analyzed: 11/20/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 13:53

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B11217

File Name: B11217B
Description: METHOD BLANK
Canister:
QC_Batch: 112117-GCK

Date Sampled:
Date Analyzed: 11/21/17
Can Factor: 1.00
Air Volume: 200 ml
Time: 11:53

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: LABQC
Laboratory Number: B11157

File Name: B11157A

Date Sampled:

Time:

Description: METHOD BLANK

Date Analyzed: 11/15/17

Time: 12:38

Can/Tube#:

Can Dilution Factor: 1.00

QC_Batch: 111517-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.02	ND	100	200	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: LABQC
Laboratory Number: B11157

File Name: B11157A
Description: METHOD BLANK
Can/Tube#:
QC_Batch: 111517-GCL

Date Sampled: Time:
Date Analyzed: 11/15/17 Time: 10:13
Dilution Factor: 1.00

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.20	0.60	ND	0.14	0.41	ND	

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 111717-MA1

Date: 11/17/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	92		94		70	130	2	25	
75-35-4	1,1-Dichloroethene	89		87		70	130	2	25	
75-09-2	Dichloromethane	88		91		70	130	3	25	
75-34-3	1,1-Dichloroethane	86		86		70	130	1	25	
67-66-3	Chloroform	89		87		70	130	3	25	
71-55-6	1,1,1-Trichloroethane	92		90		70	130	2	25	
107-06-2	1,2-Dichloroethane	89		95		70	130	7	25	
71-43-2	Benzene	92		91		70	130	1	25	
56-23-5	Carbon tetrachloride	75		71		70	130	6	25	
79-01-6	Trichloroethene	97		98		70	130	2	25	
108-88-3	Toluene	89		90		70	130	1	25	
127-18-4	Tetrachloroethene	92		100		70	130	8	25	
100-41-4	Ethylbenzene	92		89		70	130	3	25	
1330-20-7	m,p-Xylenes	91		86		70	130	6	25	
95-47-6	o-Xylene	91		91		70	130	1	25	
108-67-8	1,3,5-Trimethylbenzene	106		104		70	130	2	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 112117-MA1

Date: 11/21/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate	
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %
75-01-4	Vinyl chloride	98		95		70	130	3	25
75-35-4	1,1-Dichloroethene	92		90		70	130	3	25
75-09-2	Dichloromethane	98		94		70	130	4	25
75-34-3	1,1-Dichloroethane	92		89		70	130	3	25
67-66-3	Chloroform	94		89		70	130	5	25
71-55-6	1,1,1-Trichloroethane	101		96		70	130	6	25
107-06-2	1,2-Dichloroethane	97		92		70	130	6	25
71-43-2	Benzene	99		95		70	130	4	25
56-23-5	Carbon tetrachloride	85		71		70	130	18	25
79-01-6	Trichloroethene	108		98		70	130	10	25
108-88-3	Toluene	100		93		70	130	7	25
127-18-4	Tetrachloroethene	108		104		70	130	4	25
100-41-4	Ethylbenzene	97		101		70	130	4	25
1330-20-7	m,p-Xylenes	97		103		70	130	5	25
95-47-6	o-Xylene	99		106		70	130	7	25
108-67-8	1,3,5-Trimethylbenzene	115		123		70	130	7	25

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 111617-GCK

Date: 11/16/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate	
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %
109-66-0	n-Pentane	101		90		70	130	11	25
110-54-3	n-Hexane	102		85		70	130	17	25
71-43-2	Benzene	84		87		70	130	3	25
142-82-5	n-Heptane	101		98		70	130	3	25
108-88-3	Toluene	90		88		70	130	2	25
111-65-9	n-Octane	94		90		70	130	4	25
108-38-3	m,p-xylene	106		89		70	130	16	25
95-47-6	o-xylene	84		89		70	130	5	25
108-67-8	1,3,5-Trimethylbenzene	79		85		70	130	6	25

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 112017-GCK

Date: 11/20/17

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	Flag
		%		%		%	%	%	%	
109-66-0	n-Pentane	92		113		70	130	22	25	
110-54-3	n-Hexane	88		89		70	130	1	25	
71-43-2	Benzene	92		92		70	130	0	25	
142-82-5	n-Heptane	101		102		70	130	1	25	
108-88-3	Toluene	97		95		70	130	2	25	
111-65-9	n-Octane	99		98		70	130	2	25	
108-38-3	m,p-xylene	125		121		70	130	4	25	
95-47-6	o-xylene	106		104		70	130	2	25	
108-67-8	1,3,5-Trimethylbenzene	98		98		70	130	0	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 112117-GCK

Date: 11/21/17

CAS#	Compound	LCS Recovery		LCD Recovery		Spike Limit		Duplicate Limit		Flag
		%	Flag	%	Flag	LCL %	UCL %	Duplicate %	Limit %	
109-66-0	n-Pentane	97		88		70	130	9	25	
110-54-3	n-Hexane	94		86		70	130	8	25	
71-43-2	Benzene	101		84		70	130	17	25	
142-82-5	n-Heptane	99		97		70	130	2	25	
108-88-3	Toluene	107		96		70	130	11	25	
111-65-9	n-Octane	91		98		70	130	6	25	
108-38-3	m,p-xylene	115		96		70	130	18	25	
95-47-6	o-xylene	95		87		70	130	7	25	
108-67-8	1,3,5-Trimethylbenzene	85		78		70	130	7	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL REPORT

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D 1945 GC/TCD

Analytical Method: D1945

QC_Batch: 111517-GCO

Date Analyzed: 11/15/17

CAS#	Compound	LCS Recovery		LCD Recovery		Spike Limit		Duplicate		Flag
		%	Flag	%	Flag	LCL %	UCL %	Duplicate %	Limit %	
124-38-9	Carbon Dioxide	107		106		70	130	1	25	

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D3416 Methane by GC/FID

Analytical Method: ASTM D3416

Date: 11/15/17

QC_Batch: 111517-GCL

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	Flag
		%		%		%	%	%	%	
74-82-8	Methane	92		92		70	130	0	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

Analytical Reports

EAS SDG Number 217607

Project Number: 17198

The following pages contain the certified Analytical Reports for the samples submitted in the Sample Delivery Group (SDG) and are in order of the EAS Lab ID number. All of the analytical methods used are modifications of the published methods. Procedural method modifications are listed in the method descriptions, and the QC modifications are in the QC Criteria table in the EAS Quality Manual.

The Analytical Report has columns for the method detection limit (MDL), the reporting limit (RL), and the Amount. The Amount is the concentration of the compound in the sample. The report usually has the results reported with two commonly used units. The MDL, RL, and Amount are adjusted for the canister dilution factor and any dilution caused by sample matrix effects.

DETECTION LIMITS

MDL: The MDL is initially determined from the standard deviation of seven replicate measurements, but the value in the report is set from a MDL verification sample run at a level near the calculated MDL.

RL: The reporting limit (RL) is usually the lowest concentration standard on the calibration curve, and represents the lowest concentration that can be measured that will meet all of the QC Criteria for the method.

DATA FLAGS

In the standard report, if a compound is not detected above the method detection limit, a "ND" is in the Amount column. The flag column is used for both the not detect flag and for any data flags. The not detect flag is either a "ND" or a "U". If the "U" flag is selected, the MDL for the compound is reported in the Amount column instead of "ND". Other flags are listed below:

B - This compound was detected in the batch method blank above the reporting limit.

E - This compound exceeds the calibration range for this sample volume.

J - The amount reported is estimated because it was below the RL and above the MDL

F - Higher detection limits because of matrix interference

UNITS

PPBV or PPMV: Parts-per-billion (or million) by volume is a mole (volume) ratio of the moles of analyte divided by the moles of air (gas). This is the primary unit used to report air or gas concentrations and is independent of temperature and pressure. It is different from the ppb unit used to report water or soil data, which is a mass ratio.

UG/M3 OR MG/M3: Micrograms (or milligrams) per cubic meter is a mass/volume ratio and does depend on temperature and pressure of the source at time of sample collection. The reported result was calculated based on 1 atm pressure and a temperature of 25C. The conversion from PPBV is: $UG/M3 = PPBV \times MW/24.46$ where 24.46 is the gas constant and MW is the Compounds Molecular Weight (sometimes called Formula Weight)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217607

Analytical Method: TO-15

Laboratory ID: 01

File Name: 1760701A.D

Date Sampled: 11/01/17

Time: 08:31

Description: T-701

Date Analyzed: 11/17/17

Time: 18:24

Canister: 802

Can Dilution Factor: 1.22

QC_Batch: 111717-MA1

Air Volume: 10.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	6.10	30.68	ND	30.15	151.65	ND	
74-87-3	Chloromethane	6.10	30.68	ND	12.59	63.34	ND	
76-14-2	Freon 114	6.10	30.68	ND	42.62	214.36	ND	
75-01-4	Vinyl chloride	6.10	30.68	ND	15.59	78.40	ND	
106-99-0	1,3-Butadiene	6.10	30.68	ND	13.49	67.86	ND	
74-83-9	Bromomethane	6.10	30.68	ND	23.66	119.04	ND	
75-00-3	Chloroethane	6.10	30.68	ND	16.08	80.90	ND	
64-17-5	Ethanol	30.50	91.50	ND	57.48	172.44	ND	
75-69-4	Trichlorofluoromethane	6.10	29.29	ND	34.26	164.52	ND	
67-64-1	Acetone	30.50	75.03	ND	72.44	178.20	ND	
67-63-0	2-propanol	30.50	70.03	ND	74.93	172.05	ND	
75-35-4	1,1-Dichloroethene	6.10	30.26	ND	24.16	119.85	ND	
76-13-1	Freon 113	6.10	29.18	ND	46.73	223.58	ND	
75-09-2	Dichloromethane	12.20	29.38	ND	42.34	101.97	ND	
75-15-0	Carbon disulfide	30.50	56.61	ND	94.88	176.10	ND	
156-60-5	trans-1,2-Dichloroethene	6.10	22.02	ND	24.16	87.24	ND	
1634-04-4	Methyl tert butyl ether	6.10	22.49	ND	21.97	81.00	ND	
75-34-3	1,1-Dichloroethane	6.10	30.42	ND	24.69	123.12	ND	
108-05-4	Vinyl acetate	6.10	26.80	ND	21.47	94.33	ND	
78-93-3	2-Butanone	24.40	62.10	ND	71.92	183.03	ND	
141-78-6	Ethyl acetate	12.20	26.72	ND	43.94	96.22	ND	
74-97-5	Bromochloromethane	6.10	16.25	ND	32.27	85.94	ND	
109-99-9	Tetrahydrofuran	12.20	30.68	ND	35.96	90.44	ND	
156-59-2	cis-1,2-Dichloroethene	12.20	32.82	ND	48.33	130.00	ND	
67-66-3	Chloroform	6.10	30.59	ND	29.77	149.33	ND	
71-55-6	1,1,1-Trichloroethane	6.10	27.08	ND	33.27	147.70	ND	
107-06-2	1,2-Dichloroethane	6.10	27.83	ND	24.69	112.61	ND	
110-82-7	Cyclohexane	6.12	23.42	ND	21.08	80.63	ND	
71-43-2	Benzene	6.10	30.99	20.70	19.48	98.94	66.10	J
56-23-5	Carbon tetrachloride	6.10	28.91	ND	38.35	181.79	ND	
142-82-5	n-Heptane	30.50	73.93	ND	124.93	302.83	ND	
78-87-5	1,2-Dichloropropane	6.10	29.36	ND	28.18	135.62	ND	
123-91-1	1,4 Dioxane	24.40	49.90	ND	87.88	179.71	ND	
79-01-6	Trichloroethene	3.66	28.41	ND	19.66	152.62	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-27-4	Bromodichloromethane	6.10	12.32	ND	40.85	82.51	ND	
80-62-6	Methyl methacrylate	24.40	82.47	ND	99.85	337.48	ND	
108-10-1	4-Methyl-2-pentanone	24.40	92.35	ND	99.95	378.29	ND	
10061-01-5	cis-1,3-Dichloropropene	6.10	31.61	ND	27.68	143.43	ND	
108-88-3	Toluene	12.20	31.84	ND	45.93	119.88	ND	
10061-02-6	trans-1,3-Dichloropropene	6.10	31.63	ND	27.68	143.55	ND	
79-00-5	1,1,2-Trichloroethane	6.10	31.36	ND	33.27	171.04	ND	
591-78-6	2-Hexanone	30.50	86.50	ND	124.93	354.31	ND	
124-48-1	Dibromochloromethane	6.10	12.18	ND	51.94	103.71	ND	
106-93-4	1,2-Dibromoethane	6.10	14.81	ND	46.86	113.73	ND	
127-18-4	Tetrachloroethene	3.66	14.85	ND	24.81	100.63	ND	
108-90-7	Chlorobenzene	6.10	27.76	ND	28.08	127.78	ND	
100-41-4	Ethylbenzene	12.90	32.25	ND	56.00	139.99	ND	
1330-20-7	m,p-Xylenes	12.93	32.33	ND	56.14	140.34	ND	
100-42-5	Styrene	12.63	31.58	ND	53.81	134.52	ND	
75-25-2	Bromoform	6.10	8.18	ND	63.01	84.55	ND	
95-47-6	o-Xylene	12.58	31.44	ND	54.60	136.49	ND	
79-34-5	1,1,2,2-Tetrachloroethane	6.04	15.10	ND	41.43	103.59	ND	
622-96-8	4-Ethyltoluene	20.22	50.55	ND	99.36	248.40	ND	
108-67-8	1,3,5-Trimethylbenzene	12.61	31.51	ND	61.94	154.85	ND	
95-63-6	1,2,4-Trimethylbenzene	12.40	31.00	ND	60.93	152.33	ND	
541-73-1	1,3-Dichlorobenzene	12.20	22.57	ND	73.31	135.63	ND	
100-44-7	Benzyl chloride	12.20	73.93	ND	63.14	382.62	ND	
106-46-7	1,4-Dichlorobenzene	12.20	21.11	ND	73.31	126.83	ND	
95-50-1	1,2-Dichlorobenzene	12.20	19.76	ND	73.31	118.77	ND	
120-82-1	1,2,4-Trichlorobenzene	30.50	41.97	ND	226.17	311.21	ND	
91-20-3	Naphthalene	6.22	9.76	ND	32.61	51.15	ND	
87-68-3	Hexachlorobutadiene	30.50	32.33	ND	325.17	344.68	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	93	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217607
Laboratory Number: 01

File Name: 1760701A
Description: T - 701
Canister: 802
QC_Batch: 111617-GCK

Date Sampled: 11/01/17 Time: 8:31
Date Analyzed: 11/16/17 Time: 17:25
Can Factor: 1.22
Air Volume: 10 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	24.40	73.20	ND	28.10	84.30	ND	ND
74-86-2	Acetylene	24.40	73.20	ND	26.00	78.00	ND	ND
74-84-0	Ethane	24.40	73.20	227.80	30.10	90.30	281.02	
115-07-1	Propene	16.27	48.80	ND	28.07	84.20	ND	ND
74-98-6	Propane	16.27	48.80	201.52	29.40	88.20	364.23	
75-28-5	i-Butane	12.20	36.60	ND	29.05	87.15	ND	ND
106-98-9	1-Butene	12.20	36.60	ND	28.05	84.15	ND	ND
106-97-8	n-Butane	12.20	36.60	ND	29.05	87.15	ND	ND
624-64-6	t-2-Butene	12.20	36.60	ND	28.05	84.15	ND	ND
590-18-1	c-2-Butene	12.20	36.60	ND	28.05	84.15	ND	ND
78-78-4	i-Pentane	9.76	29.28	20.26	28.88	86.64	59.95	J
109-67-1	1-Pentene	9.76	29.28	ND	28.04	84.12	ND	ND
109-66-0	n-Pentane	9.76	29.28	15.06	28.84	86.52	44.51	J
78-79-5	Isoprene	9.76	29.28	ND	27.24	81.72	ND	ND
646-04-8	t-2-Pentene	9.76	29.28	ND	28.04	84.12	ND	ND
627-20-3	c-2-Pentene	9.76	29.28	ND	28.04	84.12	ND	ND
75-83-2	2,2-Dimethylbutane	8.13	24.40	ND	28.73	86.20	ND	ND
287-92-3	Cyclopentane	9.76	29.28	ND	28.04	84.12	ND	ND
79-29-8	2,3-Dimethylbutane	8.13	24.40	ND	28.73	86.20	ND	ND
107-83-5	2-Methylpentane	8.13	24.40	18.31	28.73	86.20	64.68	J
96-14-0	3-Methylpentane	8.13	24.40	20.66	28.73	86.20	72.98	J
110-54-3	n-Hexane	8.13	24.40	16.33	28.73	86.20	57.68	J
96-37-7	Methylcyclopentane	8.13	24.40	ND	28.07	84.20	ND	ND
108-08-7	2,4-Dimethylpentane	6.97	20.91	31.75	28.63	85.89	130.39	
71-43-2	Benzene	8.13	24.40	12.04	26.03	78.10	38.54	J
110-82-7	Cyclohexane	8.13	24.40	25.90	28.07	84.20	89.37	
591-76-4	2-Methylhexane	6.97	20.91	13.34	28.63	85.89	54.78	J
565-59-3	2,3-Dimethylpentane	6.97	20.91	10.36	28.63	85.89	42.53	J
589-34-4	3-Methylhexane	6.97	20.91	23.65	28.63	85.89	97.10	
540-84-1	2,2,4-Trimethylpentane	6.10	18.30	51.83	28.55	85.65	242.59	
142-82-5	n-Heptane	6.97	20.91	26.08	28.63	85.89	107.08	
108-87-2	Methylcyclohexane	6.97	20.91	72.60	28.06	84.17	292.19	
592-13-2	2,5-Dimethylhexane	6.10	18.30	16.10	28.55	85.65	75.35	J
589-43-5	2,4-Dimethylhexane	6.10	18.30	16.57	28.55	85.65	77.56	J
565-75-3	2,3,4-Trimethylpentane	6.10	18.30	35.54	28.55	85.65	166.36	
108-88-3	Toluene	6.97	20.91	9.41	26.31	78.94	35.53	J
584-94-1	2,3-Dimethylhexane	6.10	18.30	39.52	28.55	85.65	184.97	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	6.10	18.30	17.98	28.55	85.65	84.16	J
589-81-1	3-Methylheptane	6.10	18.30	37.48	28.55	85.65	175.43	
111-65-9	n-Octane	6.10	18.30	12.74	28.55	85.65	59.63	J
100-41-4	Ethylbenzene	6.10	18.30	20.89	26.55	79.65	90.92	
108-38-3	m,p-xylene	6.10	18.30	16.45	26.55	79.65	71.60	J
100-42-5	Styrene	6.10	18.30	9.64	26.05	78.15	41.15	J
95-47-6	o-xylene	6.10	18.30	41.46	26.55	79.65	180.44	
111-84-2	n-Nonane	5.42	16.27	41.08	28.51	85.53	216.01	
98-82-8	i-Propylbenzene	5.42	16.27	13.70	26.71	80.13	67.50	J
103-65-1	n-propylbenzene	5.42	16.27	13.82	26.71	80.13	68.08	J
80-56-8	a-Pinene	4.88	14.64	ND	27.24	81.72	ND	ND
620-14-4	3-Ethyltoluene	5.42	16.27	18.87	26.71	80.13	92.96	
622-96-8	4-Ethyltoluene	5.42	16.27	15.59	26.71	80.13	76.81	J
108-67-8	1,3,5-Trimethylbenzene	5.42	16.27	21.70	26.71	80.13	106.90	
611-14-3	2-Ethyltoluene	5.42	16.27	13.82	26.71	80.13	68.08	J
127-91-3	b-Pinene	4.88	14.64	ND	27.24	81.72	ND	ND
95-63-6	1,2,4-Trimethylbenzene	5.42	16.27	13.21	26.71	80.13	65.09	J
124-18-5	n-Decane	4.88	14.64	59.36	28.46	85.38	346.21	
526-73-8	1,2,3-Trimethylbenzene	5.42	16.27	12.85	26.71	80.13	63.31	J
5989-27-5	d-Limonene	4.88	14.64	ND	27.24	81.72	ND	ND
141-93-5	1,3-Diethylbenzene	4.88	14.64	10.51	26.84	80.52	57.80	J
105-05-5	1,4-Diethylbenzene	4.88	14.64	43.94	26.84	80.52	241.67	
104-51-8	n-Butylbenzene	4.88	14.64	ND	26.84	80.52	ND	ND
1120-21-4	Undecane	4.44	13.31	27.84	28.42	85.25	178.32	
112-40-3	Dodecane	4.07	12.20	16.43	28.38	85.15	114.67	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	183.00	549.00	3,514.05	646.50	1,939.50	12,414.39
TNMHC - C1	Total Non-Methane Hydrocarbons	1,098.00	3,294.00	21,084.29	720.00	2,160.00	13,825.77

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217607

Laboratory Number: 01

File Name: 760701PA

Date Sampled: 11/01/17

Time: 8:31

Description: T - 701

Date Analyzed: 11/15/17

Time: 13:14

Can/Tube#: 802

Can Dilution Factor: 1.22

QC_Batch: 111517-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.02	ND	122	244	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 217607

Laboratory Number: 01

File Name: 1760701A

Date Sampled: 11/01/17

Time: 8:31

Description: T - 701

Date Analyzed: 11/15/17

Time: 10:24

Can/Tube#: 802

Dilution Factor: 1.22

QC_Batch: 111517-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.24	0.73	65.62	0.16	0.49	44.34	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217607

Analytical Method: TO-15

Laboratory ID: 02

File Name: 1760702A.D

Date Sampled: 11/01/17

Time: 09:12

Description: T-702

Date Analyzed: 11/17/17

Time: 14:39

Canister: 689

Can Dilution Factor: 1.23

QC_Batch: 111717-MA1

Air Volume: 10.00 ml

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-71-8	Dichlorodifluoromethane	6.2	30.9	ND	30.4	152.9	ND	
74-87-3	Chloromethane	6.2	30.9	ND	12.7	63.9	ND	
76-14-2	Freon 114	6.2	30.9	ND	43.0	216.1	ND	
75-01-4	Vinyl chloride	6.2	30.9	ND	15.7	79.0	ND	
106-99-0	1,3-Butadiene	6.2	30.9	ND	13.6	68.4	ND	
74-83-9	Bromomethane	6.2	30.9	ND	23.9	120.0	ND	
75-00-3	Chloroethane	6.2	30.9	ND	16.2	81.6	ND	
64-17-5	Ethanol	30.8	92.3	ND	57.9	173.8	ND	
75-69-4	Trichlorofluoromethane	6.2	29.5	ND	34.5	165.9	ND	
67-64-1	Acetone	30.8	75.6	ND	73.0	179.7	ND	
67-63-0	2-propanol	30.8	70.6	ND	75.5	173.5	ND	
75-35-4	1,1-Dichloroethene	6.2	30.5	ND	24.4	120.8	ND	
76-13-1	Freon 113	6.2	29.4	ND	47.1	225.4	ND	
75-09-2	Dichloromethane	12.3	29.6	ND	42.7	102.8	ND	
75-15-0	Carbon disulfide	30.8	57.1	ND	95.7	177.5	ND	
156-60-5	trans-1,2-Dichloroethene	6.2	22.2	ND	24.4	88.0	ND	
1634-04-4	Methyl tert butyl ether	6.2	22.7	ND	22.1	81.7	ND	
75-34-3	1,1-Dichloroethane	6.2	30.7	ND	24.9	124.1	ND	
108-05-4	Vinyl acetate	6.2	27.0	ND	21.6	95.1	ND	
78-93-3	2-Butanone	24.6	62.6	ND	72.5	184.5	ND	
141-78-6	Ethyl acetate	12.3	26.9	ND	44.3	97.0	ND	
74-97-5	Bromochloromethane	6.2	16.4	ND	32.5	86.6	ND	
109-99-9	Tetrahydrofuran	12.3	30.9	ND	36.3	91.2	ND	
156-59-2	cis-1,2-Dichloroethene	12.3	33.1	ND	48.7	131.1	ND	
67-66-3	Chloroform	6.2	30.8	ND	30.0	150.6	ND	
71-55-6	1,1,1-Trichloroethane	6.2	27.3	ND	33.5	148.9	ND	
107-06-2	1,2-Dichloroethane	6.2	28.1	ND	24.9	113.5	ND	
110-82-7	Cyclohexane	6.2	23.6	ND	21.3	81.3	ND	
71-43-2	Benzene	6.2	31.2	25.4	19.6	99.8	81.1	J
56-23-5	Carbon tetrachloride	6.2	29.2	ND	38.7	183.3	ND	
142-82-5	n-Heptane	30.8	74.5	ND	126.0	305.3	ND	
78-87-5	1,2-Dichloropropane	6.2	29.6	ND	28.4	136.7	ND	
123-91-1	1,4 Dioxane	24.6	50.3	ND	88.6	181.2	ND	
79-01-6	Trichloroethene	3.7	28.6	ND	19.8	153.9	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	6.2	12.4	ND	41.2	83.2	ND	
80-62-6	Methyl methacrylate	24.6	83.1	ND	100.7	340.2	ND	
108-10-1	4-Methyl-2-pentanone	24.6	93.1	ND	100.8	381.4	ND	
10061-01-5	cis-1,3-Dichloropropene	6.2	31.9	ND	27.9	144.6	ND	
108-88-3	Toluene	12.3	32.1	ND	46.3	120.9	ND	
10061-02-6	trans-1,3-Dichloropropene	6.2	31.9	ND	27.9	144.7	ND	
79-00-5	1,1,2-Trichloroethane	6.2	31.6	ND	33.5	172.4	ND	
591-78-6	2-Hexanone	30.8	87.2	ND	126.0	357.2	ND	
124-48-1	Dibromochloromethane	6.2	12.3	ND	52.4	104.6	ND	
106-93-4	1,2-Dibromoethane	6.2	14.9	ND	47.2	114.7	ND	
127-18-4	Tetrachloroethene	3.7	15.0	ND	25.0	101.5	ND	
108-90-7	Chlorobenzene	6.2	28.0	ND	28.3	128.8	ND	
100-41-4	Ethylbenzene	13.0	32.5	ND	56.5	141.1	ND	
1330-20-7	m,p-Xylenes	13.0	32.6	ND	56.6	141.5	ND	
100-42-5	Styrene	12.7	31.8	ND	54.3	135.6	ND	
75-25-2	Bromoform	6.2	8.3	ND	63.5	85.2	ND	
95-47-6	o-Xylene	12.7	31.7	ND	55.0	137.6	ND	
79-34-5	1,1,2,2-Tetrachloroethane	6.1	15.2	ND	41.8	104.4	ND	
622-96-8	4-Ethyltoluene	20.4	51.0	ND	100.2	250.4	ND	
108-67-8	1,3,5-Trimethylbenzene	12.7	31.8	ND	62.4	156.1	ND	
95-63-6	1,2,4-Trimethylbenzene	12.5	31.3	ND	61.4	153.6	ND	
541-73-1	1,3-Dichlorobenzene	12.3	22.8	ND	73.9	136.7	ND	
100-44-7	Benzyl chloride	12.3	74.5	ND	63.7	385.8	ND	
106-46-7	1,4-Dichlorobenzene	12.3	21.3	ND	73.9	127.9	ND	
95-50-1	1,2-Dichlorobenzene	12.3	19.9	ND	73.9	119.7	ND	
120-82-1	1,2,4-Trichlorobenzene	30.8	42.3	ND	228.0	313.8	ND	
91-20-3	Naphthalene	6.3	9.8	ND	32.9	51.6	ND	
87-68-3	Hexachlorobutadiene	30.8	32.6	ND	327.8	347.5	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	104	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217607

Laboratory Number: 02

File Name: 1760702A
Description: T - 702
Canister: 689
QC_Batch: 112117-GCK

Date Sampled: 11/01/17 Time: 9:12
Date Analyzed: 11/21/17 Time: 12:18
Can Factor: 1.23
Air Volume: 100 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2.46	7.38	ND	2.83	8.50	ND	ND
74-86-2	Acetylene	2.46	7.38	ND	2.62	7.86	ND	ND
74-84-0	Ethane	2.46	7.38	17.73	3.03	9.10	21.87	
115-07-1	Propene	1.64	4.92	ND	2.83	8.49	ND	ND
74-98-6	Propane	1.64	4.92	18.56	2.96	8.89	33.54	
75-28-5	i-Butane	1.23	3.69	ND	2.93	8.79	ND	ND
106-98-9	1-Butene	1.23	3.69	ND	2.83	8.48	ND	ND
106-97-8	n-Butane	1.23	3.69	2.67	2.93	8.79	6.35	J
624-64-6	t-2-Butene	1.23	3.69	ND	2.83	8.48	ND	ND
590-18-1	c-2-Butene	1.23	3.69	ND	2.83	8.48	ND	ND
78-78-4	i-Pentane	0.98	2.95	3.17	2.91	8.74	9.37	
109-67-1	1-Pentene	0.98	2.95	ND	2.83	8.48	ND	ND
109-66-0	n-Pentane	0.98	2.95	2.09	2.91	8.72	6.17	J
78-79-5	Isoprene	0.98	2.95	ND	2.75	8.24	ND	ND
646-04-8	t-2-Pentene	0.98	2.95	ND	2.83	8.48	ND	ND
627-20-3	c-2-Pentene	0.98	2.95	ND	2.83	8.48	ND	ND
75-83-2	2,2-Dimethylbutane	0.82	2.46	ND	2.90	8.69	ND	ND
287-92-3	Cyclopentane	0.98	2.95	ND	2.83	8.48	ND	ND
79-29-8	2,3-Dimethylbutane	0.82	2.46	ND	2.90	8.69	ND	ND
107-83-5	2-Methylpentane	0.82	2.46	ND	2.90	8.69	ND	ND
96-14-0	3-Methylpentane	0.82	2.46	1.12	2.90	8.69	3.95	J
110-54-3	n-Hexane	0.82	2.46	1.08	2.90	8.69	3.82	J
96-37-7	Methylcyclopentane	0.82	2.46	ND	2.83	8.49	ND	ND
108-08-7	2,4-Dimethylpentane	0.70	2.11	3.48	2.89	8.66	14.30	
71-43-2	Benzene	0.82	2.46	7.46	2.62	7.87	23.88	
110-82-7	Cyclohexane	0.82	2.46	ND	2.83	8.49	ND	ND
591-76-4	2-Methylhexane	0.70	2.11	ND	2.89	8.66	ND	ND
565-59-3	2,3-Dimethylpentane	0.70	2.11	ND	2.89	8.66	ND	ND
589-34-4	3-Methylhexane	0.70	2.11	ND	2.89	8.66	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.62	1.85	2.04	2.88	8.64	9.55	
142-82-5	n-Heptane	0.70	2.11	ND	2.89	8.66	ND	ND
108-87-2	Methylcyclohexane	0.70	2.11	ND	2.83	8.49	ND	ND
592-13-2	2,5-Dimethylhexane	0.62	1.85	ND	2.88	8.64	ND	ND
589-43-5	2,4-Dimethylhexane	0.62	1.85	ND	2.88	8.64	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.62	1.85	ND	2.88	8.64	ND	ND
108-88-3	Toluene	0.70	2.11	3.79	2.65	7.96	14.32	
584-94-1	2,3-Dimethylhexane	0.62	1.85	ND	2.88	8.64	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.62	1.85	ND	2.88	8.64	ND	ND
589-81-1	3-Methylheptane	0.62	1.85	ND	2.88	8.64	ND	ND
111-65-9	n-Octane	0.62	1.85	ND	2.88	8.64	ND	ND
100-41-4	Ethylbenzene	0.62	1.85	3.24	2.68	8.03	14.08	
108-38-3	m,p-xylene	0.62	1.85	3.16	2.68	8.03	13.76	
100-42-5	Styrene	0.62	1.85	ND	2.63	7.88	ND	ND
95-47-6	o-xylene	0.62	1.85	2.92	2.68	8.03	12.69	
111-84-2	n-Nonane	0.55	1.64	ND	2.87	8.62	ND	ND
98-82-8	i-Propylbenzene	0.55	1.64	ND	2.69	8.08	ND	ND
103-65-1	n-propylbenzene	0.55	1.64	ND	2.69	8.08	ND	ND
80-56-8	a-Pinene	0.49	1.48	ND	2.75	8.24	ND	ND
620-14-4	3-Ethyltoluene	0.55	1.64	ND	2.69	8.08	ND	ND
622-96-8	4-Ethyltoluene	0.55	1.64	ND	2.69	8.08	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.55	1.64	ND	2.69	8.08	ND	ND
611-14-3	2-Ethyltoluene	0.55	1.64	ND	2.69	8.08	ND	ND
127-91-3	b-Pinene	0.49	1.48	ND	2.75	8.24	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.55	1.64	0.80	2.69	8.08	3.95	J
124-18-5	n-Decane	0.49	1.48	0.73	2.87	8.61	4.28	J
526-73-8	1,2,3-Trimethylbenzene	0.55	1.64	1.85	2.69	8.08	9.11	
5989-27-5	d-Limonene	0.49	1.48	ND	2.75	8.24	ND	ND
141-93-5	1,3-Diethylbenzene	0.49	1.48	ND	2.71	8.12	ND	ND
105-05-5	1,4-Diethylbenzene	0.49	1.48	ND	2.71	8.12	ND	ND
104-51-8	n-Butylbenzene	0.49	1.48	ND	2.71	8.12	ND	ND
1120-21-4	Undecane	0.45	1.34	ND	2.87	8.60	ND	ND
112-40-3	Dodecane	0.41	1.23	1.00	2.86	8.58	6.96	J

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	18.45	55.35	90.77	65.18	195.54	320.68	
TNMHC - C1	Total Non-Methane Hydrocarbons	110.70	332.10	544.64	72.59	217.77	357.14	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217607

Laboratory Number: 02

File Name: 760702PA

Date Sampled: 11/01/17 Time: 9:12

Description: T - 702

Date Analyzed: 11/15/17 Time: 13:22

Can/Tube#: 689

Can Dilution Factor: 1.23

QC_Batch: 111517-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.02	0.03	123	246	318	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 217607
Laboratory Number: 02

File Name: 1760702B
Description: T - 702
Can/Tube#: 689
QC_Batch: 111517-GCL

Date Sampled: 11/01/17 Time: 9:12
Date Analyzed: 11/15/17 Time: 11:47
Dilution Factor: 1.23

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.74	32.64	0.17	0.50	22.05	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217607

Analytical Method: TO-15

Laboratory ID: 03

File Name: 1760703A.D

Date Sampled: 11/01/17

Time: 10:34

Description: T-703

Date Analyzed: 11/21/17

Time: 18:54

Canister: 849

Can Dilution Factor: 1.27

QC_Batch: 112117-MA1

Air Volume: 0.25 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	254	1,278	ND	1,255	6,315	ND	
74-87-3	Chloromethane	254	1,278	ND	524	2,638	ND	
76-14-2	Freon 114	254	1,278	ND	1,775	8,926	ND	
75-01-4	Vinyl chloride	254	1,278	ND	649	3,264	ND	
106-99-0	1,3-Butadiene	254	1,278	ND	562	2,826	ND	
74-83-9	Bromomethane	254	1,278	ND	985	4,957	ND	
75-00-3	Chloroethane	254	1,278	ND	670	3,369	ND	
64-17-5	Ethanol	1,270	3,810	ND	2,393	7,180	ND	
75-69-4	Trichlorofluoromethane	254	1,220	ND	1,427	6,851	ND	
67-64-1	Acetone	1,270	3,124	ND	3,016	7,420	ND	
67-63-0	2-propanol	1,270	2,916	ND	3,120	7,164	ND	
75-35-4	1,1-Dichloroethene	254	1,260	ND	1,006	4,990	ND	
76-13-1	Freon 113	254	1,215	ND	1,946	9,310	ND	
75-09-2	Dichloromethane	508	1,223	ND	1,763	4,246	ND	
75-15-0	Carbon disulfide	1,270	2,357	ND	3,951	7,333	ND	
156-60-5	trans-1,2-Dichloroethene	254	917	ND	1,006	3,633	ND	
1634-04-4	Methyl tert butyl ether	254	936	ND	915	3,373	ND	
75-34-3	1,1-Dichloroethane	254	1,267	ND	1,028	5,127	ND	
108-05-4	Vinyl acetate	254	1,116	ND	894	3,928	ND	
78-93-3	2-Butanone	1,016	2,586	ND	2,995	7,621	ND	
141-78-6	Ethyl acetate	508	1,113	ND	1,830	4,007	ND	
74-97-5	Bromochloromethane	254	677	ND	1,344	3,579	ND	
109-99-9	Tetrahydrofuran	508	1,278	ND	1,497	3,766	ND	
156-59-2	cis-1,2-Dichloroethene	508	1,367	ND	2,012	5,413	ND	
67-66-3	Chloroform	254	1,274	ND	1,240	6,218	ND	
71-55-6	1,1,1-Trichloroethane	254	1,128	ND	1,385	6,150	ND	
107-06-2	1,2-Dichloroethane	254	1,159	ND	1,028	4,689	ND	
110-82-7	Cyclohexane	255	975	35,966	878	3,357	123,798	
71-43-2	Benzene	254	1,290	4,810	811	4,120	15,358	
56-23-5	Carbon tetrachloride	254	1,204	ND	1,597	7,570	ND	
142-82-5	n-Heptane	1,270	3,078	170,121	5,202	12,610	696,836	E
78-87-5	1,2-Dichloropropane	254	1,222	ND	1,173	5,647	ND	
123-91-1	1,4 Dioxane	1,016	2,078	ND	3,659	7,483	ND	
79-01-6	Trichloroethene	152	1,183	ND	819	6,355	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	254	513	ND	1,701	3,436	ND	
80-62-6	Methyl methacrylate	1,016	3,434	ND	4,158	14,052	ND	
108-10-1	4-Methyl-2-pentanone	1,016	3,846	ND	4,162	15,752	ND	
10061-01-5	cis-1,3-Dichloropropene	254	1,316	ND	1,153	5,973	ND	
108-88-3	Toluene	508	1,326	60,400	1,913	4,992	227,407	
10061-02-6	trans-1,3-Dichloropropene	254	1,317	ND	1,153	5,977	ND	
79-00-5	1,1,2-Trichloroethane	254	1,306	ND	1,385	7,122	ND	
591-78-6	2-Hexanone	1,270	3,602	ND	5,202	14,753	ND	
124-48-1	Dibromochloromethane	254	507	ND	2,163	4,319	ND	
106-93-4	1,2-Dibromoethane	254	617	ND	1,951	4,736	ND	
127-18-4	Tetrachloroethene	152	618	ND	1,033	4,190	ND	
108-90-7	Chlorobenzene	254	1,156	ND	1,169	5,321	ND	
100-41-4	Ethylbenzene	537	1,343	40,833	2,332	5,829	177,271	
1330-20-7	m,p-Xylenes	538	1,346	47,822	2,338	5,844	207,616	
100-42-5	Styrene	526	1,315	732	2,241	5,601	3,119	J
75-25-2	Bromoform	254	341	ND	2,624	3,521	ND	
95-47-6	o-Xylene	524	1,309	25,487	2,273	5,683	110,650	
79-34-5	1,1,2,2-Tetrachloroethane	252	629	ND	1,725	4,313	ND	
622-96-8	4-Ethyltoluene	842	2,105	9,493	4,137	10,343	46,646	
108-67-8	1,3,5-Trimethylbenzene	525	1,312	2,034	2,579	6,448	9,992	
95-63-6	1,2,4-Trimethylbenzene	516	1,291	7,266	2,537	6,343	35,701	
541-73-1	1,3-Dichlorobenzene	508	940	ND	3,053	5,648	ND	
100-44-7	Benzyl chloride	508	3,078	ND	2,629	15,932	ND	
106-46-7	1,4-Dichlorobenzene	508	879	ND	3,053	5,281	ND	
95-50-1	1,2-Dichlorobenzene	508	823	ND	3,053	4,945	ND	
120-82-1	1,2,4-Trichlorobenzene	1,270	1,748	ND	9,418	12,959	ND	
91-20-3	Naphthalene	259	406	ND	1,358	2,130	ND	
87-68-3	Hexachlorobutadiene	1,270	1,346	ND	13,540	14,352	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	97	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217607
Laboratory Number: 03

File Name: 1760703A
Description: T - 703
Canister: 849
QC_Batch: 111617-GCK

Date Sampled: 11/01/17 Time: 10:34
Date Analyzed: 11/16/17 Time: 20:17
Can Factor: 1.27
Air Volume: 20 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	12.70	38.10	ND	14.63	43.88	ND	ND
74-86-2	Acetylene	12.70	38.10	ND	13.53	40.60	ND	ND
74-84-0	Ethane	12.70	38.10	438.75	15.67	47.00	541.24	
115-07-1	Propene	8.47	25.40	ND	14.61	43.83	ND	ND
74-98-6	Propane	8.47	25.40	2,108.70	15.30	45.91	3,811.22	
75-28-5	i-Butane	6.35	19.05	1,594.33	15.12	45.36	3,796.34	
106-98-9	1-Butene	6.35	19.05	ND	14.60	43.80	ND	ND
106-97-8	n-Butane	6.35	19.05	5,584.37	15.12	45.36	13,297.22	
624-64-6	t-2-Butene	6.35	19.05	ND	14.60	43.80	ND	ND
590-18-1	c-2-Butene	6.35	19.05	ND	14.60	43.80	ND	ND
78-78-4	i-Pentane	5.08	15.24	8,862.87	15.03	45.10	26,225.39	
109-67-1	1-Pentene	5.08	15.24	ND	14.59	43.78	ND	ND
109-66-0	n-Pentane	5.08	15.24	9,876.58	15.01	45.03	29,184.50	
78-79-5	Isoprene	5.08	15.24	ND	14.18	42.53	ND	ND
646-04-8	t-2-Pentene	5.08	15.24	ND	14.59	43.78	ND	ND
627-20-3	c-2-Pentene	5.08	15.24	ND	14.59	43.78	ND	ND
75-83-2	2,2-Dimethylbutane	4.23	12.70	ND	14.96	44.87	ND	ND
287-92-3	Cyclopentane	5.08	15.24	ND	14.59	43.78	ND	ND
79-29-8	2,3-Dimethylbutane	4.23	12.70	ND	14.96	44.87	ND	ND
107-83-5	2-Methylpentane	4.23	12.70	11,744.91	14.96	44.87	41,492.27	
96-14-0	3-Methylpentane	4.23	12.70	11,465.86	14.96	44.87	40,506.44	
110-54-3	n-Hexane	4.23	12.70	26,727.79	14.96	44.87	94,423.60	
96-37-7	Methylcyclopentane	4.23	12.70	ND	14.61	43.83	ND	ND
108-08-7	2,4-Dimethylpentane	3.63	10.89	32,870.37	14.90	44.70	134,984.05	
71-43-2	Benzene	4.23	12.70	4,940.41	13.55	40.65	15,813.37	
110-82-7	Cyclohexane	4.23	12.70	22,903.77	14.61	43.83	79,036.78	
591-76-4	2-Methylhexane	3.63	10.89	23,234.54	14.90	44.70	95,413.98	
565-59-3	2,3-Dimethylpentane	3.63	10.89	10,643.66	14.90	44.70	43,708.78	
589-34-4	3-Methylhexane	3.63	10.89	33,732.84	14.90	44.70	138,525.86	
540-84-1	2,2,4-Trimethylpentane	3.18	9.53	ND	14.86	44.58	ND	ND
142-82-5	n-Heptane	3.63	10.89	48,241.15	14.90	44.70	198,105.03	
108-87-2	Methylcyclohexane	3.63	10.89	ND	14.60	43.81	ND	ND
592-13-2	2,5-Dimethylhexane	3.18	9.53	100,086.37	14.86	44.58	468,437.03	
589-43-5	2,4-Dimethylhexane	3.18	9.53	42,374.13	14.86	44.58	198,324.82	
565-75-3	2,3,4-Trimethylpentane	3.18	9.53	27,761.91	14.86	44.58	129,934.84	
108-88-3	Toluene	3.63	10.89	78,074.38	13.70	41.09	294,698.80	
584-94-1	2,3-Dimethylhexane	3.18	9.53	ND	14.86	44.58	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	3.18	9.53	50,815.64	14.86	44.58	237,833.84	
589-81-1	3-Methylheptane	3.18	9.53	65,772.65	14.86	44.58	307,837.56	
111-65-9	n-Octane	3.18	9.53	48,971.11	14.86	44.58	229,200.85	
100-41-4	Ethylbenzene	3.18	9.53	111,856.32	13.82	41.46	486,850.03	
108-38-3	m,p-xylene	3.18	9.53	53,824.06	13.82	41.46	234,267.03	
100-42-5	Styrene	3.18	9.53	ND	13.56	40.68	ND	ND
95-47-6	o-xylene	3.18	9.53	13,214.77	13.82	41.46	57,516.73	
111-84-2	n-Nonane	2.82	8.47	10,653.55	14.84	44.52	56,018.44	
98-82-8	i-Propylbenzene	2.82	8.47	8,235.43	13.90	41.71	40,569.62	
103-65-1	n-propylbenzene	2.82	8.47	14,303.85	13.90	41.71	70,464.04	
80-56-8	a-Pinene	2.54	7.62	ND	14.18	42.53	ND	ND
620-14-4	3-Ethyltoluene	2.82	8.47	4,374.48	13.90	41.71	21,549.71	
622-96-8	4-Ethyltoluene	2.82	8.47	8,482.47	13.90	41.71	41,786.60	
108-67-8	1,3,5-Trimethylbenzene	2.82	8.47	14,028.98	13.90	41.71	69,109.98	
611-14-3	2-Ethyltoluene	2.82	8.47	15,753.91	13.90	41.71	77,607.38	
127-91-3	b-Pinene	2.54	7.62	ND	14.18	42.53	ND	ND
95-63-6	1,2,4-Trimethylbenzene	2.82	8.47	3,809.72	13.90	41.71	18,767.54	
124-18-5	n-Decane	2.54	7.62	6,371.40	14.81	44.44	37,157.77	
526-73-8	1,2,3-Trimethylbenzene	2.82	8.47	3,317.94	13.90	41.71	16,344.93	
5989-27-5	d-Limonene	2.54	7.62	ND	14.18	42.53	ND	ND
141-93-5	1,3-Diethylbenzene	2.54	7.62	6,401.80	13.97	41.91	35,209.93	
105-05-5	1,4-Diethylbenzene	2.54	7.62	1,434.28	13.97	41.91	7,888.55	
104-51-8	n-Butylbenzene	2.54	7.62	ND	13.97	41.91	ND	ND
1120-21-4	Undecane	2.31	6.93	3,297.99	14.79	44.37	21,126.03	
112-40-3	Dodecane	2.12	6.35	1,054.82	14.77	44.32	7,362.13	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	95.25	285.75	1,329,179.5	336.50	1,009.49	3,228,495.0	
TNMHC - C1	Total Non-Methane Hydrocarbons	571.50	1,714.50	3,975,077.3	374.75	1,124.26	3,163,985.1	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217607

Laboratory Number: 03

File Name: 760703PA

Date Sampled: 11/01/17

Time: 10:34

Description: T - 703

Date Analyzed: 11/15/17

Time: 13:28

Can/Tube#: 849

Can Dilution Factor: 1.27

QC_Batch: 111517-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.02	0.02	127	254	171	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 217607
Laboratory Number: 03

File Name: 1760703A
Description: T - 703
Can/Tube#: 849
QC_Batch: 111517-GCL

Date Sampled: 11/01/17 Time: 10:34
Date Analyzed: 11/15/17 Time: 10:38
Dilution Factor: 1.27

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.76	53.57	0.17	0.51	36.20	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217607

Analytical Method: TO-15

Laboratory ID: 04

File Name: 1760704A.D

Date Sampled: 11/01/17

Time: 12:21

Description: T-704

Date Analyzed: 11/21/17

Time: 16:56

Canister: 541

Can Dilution Factor: 1.29

QC_Batch: 112117-MA1

Air Volume: 10.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	6.5	32.4	ND	31.9	160.3	ND	
74-87-3	Chloromethane	6.5	32.4	ND	13.3	67.0	ND	
76-14-2	Freon 114	6.5	32.4	ND	45.1	226.7	ND	
75-01-4	Vinyl chloride	6.5	32.4	ND	16.5	82.9	ND	
106-99-0	1,3-Butadiene	6.5	32.4	ND	14.3	71.8	ND	
74-83-9	Bromomethane	6.5	32.4	ND	25.0	125.9	ND	
75-00-3	Chloroethane	6.5	32.4	ND	17.0	85.5	ND	
64-17-5	Ethanol	32.3	96.8	ND	60.8	182.3	ND	
75-69-4	Trichlorofluoromethane	6.5	31.0	ND	36.2	174.0	ND	
67-64-1	Acetone	32.3	79.3	ND	76.6	188.4	ND	
67-63-0	2-propanol	32.3	74.0	ND	79.2	181.9	ND	
75-35-4	1,1-Dichloroethene	6.5	32.0	ND	25.5	126.7	ND	
76-13-1	Freon 113	6.5	30.9	ND	49.4	236.4	ND	
75-09-2	Dichloromethane	12.9	31.1	ND	44.8	107.8	ND	
75-15-0	Carbon disulfide	32.3	59.9	96.3	100.3	186.2	299.6	
156-60-5	trans-1,2-Dichloroethene	6.5	23.3	ND	25.5	92.2	ND	
1634-04-4	Methyl tert butyl ether	6.5	23.8	ND	23.2	85.6	ND	
75-34-3	1,1-Dichloroethane	6.5	32.2	ND	26.1	130.2	ND	
108-05-4	Vinyl acetate	6.5	28.3	ND	22.7	99.7	ND	
78-93-3	2-Butanone	25.8	65.7	ND	76.0	193.5	ND	
141-78-6	Ethyl acetate	12.9	28.3	ND	46.5	101.7	ND	
74-97-5	Bromochloromethane	6.5	17.2	ND	34.1	90.9	ND	
109-99-9	Tetrahydrofuran	12.9	32.4	ND	38.0	95.6	ND	
156-59-2	cis-1,2-Dichloroethene	12.9	34.7	ND	51.1	137.5	ND	
67-66-3	Chloroform	6.5	32.3	ND	31.5	157.9	ND	
71-55-6	1,1,1-Trichloroethane	6.5	28.6	ND	35.2	156.2	ND	
107-06-2	1,2-Dichloroethane	6.5	29.4	ND	26.1	119.1	ND	
110-82-7	Cyclohexane	6.5	24.8	582.5	22.3	85.3	2,005.1	
71-43-2	Benzene	6.5	32.8	238.6	20.6	104.6	761.6	
56-23-5	Carbon tetrachloride	6.5	30.6	ND	40.6	192.2	ND	
142-82-5	n-Heptane	32.3	78.2	639.2	132.1	320.2	2,618.1	
78-87-5	1,2-Dichloropropane	6.5	31.0	ND	29.8	143.4	ND	
123-91-1	1,4 Dioxane	25.8	52.8	ND	92.9	190.0	ND	
79-01-6	Trichloroethene	3.9	30.0	ND	20.8	161.4	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	6.5	13.0	ND	43.2	87.2	ND	
80-62-6	Methyl methacrylate	25.8	87.2	ND	105.6	356.8	ND	
108-10-1	4-Methyl-2-pentanone	25.8	97.7	ND	105.7	400.0	ND	
10061-01-5	cis-1,3-Dichloropropene	6.5	33.4	ND	29.3	151.7	ND	
108-88-3	Toluene	12.9	33.7	470.0	48.6	126.8	1,769.5	
10061-02-6	trans-1,3-Dichloropropene	6.5	33.5	ND	29.3	151.8	ND	
79-00-5	1,1,2-Trichloroethane	6.5	33.2	ND	35.2	180.9	ND	
591-78-6	2-Hexanone	32.3	91.5	ND	132.1	374.6	ND	
124-48-1	Dibromochloromethane	6.5	12.9	ND	54.9	109.7	ND	
106-93-4	1,2-Dibromoethane	6.5	15.7	ND	49.5	120.3	ND	
127-18-4	Tetrachloroethene	3.9	15.7	ND	26.2	106.4	ND	
108-90-7	Chlorobenzene	6.5	29.4	ND	29.7	135.1	ND	
100-41-4	Ethylbenzene	13.6	34.1	207.8	59.2	148.0	902.3	
1330-20-7	m,p-Xylenes	13.7	34.2	339.0	59.4	148.4	1,471.8	
100-42-5	Styrene	13.4	33.4	ND	56.9	142.2	ND	
75-25-2	Bromoform	6.5	8.7	ND	66.6	89.4	ND	
95-47-6	o-Xylene	13.3	33.2	189.2	57.7	144.3	821.3	
79-34-5	1,1,2,2-Tetrachloroethane	6.4	16.0	ND	43.8	109.5	ND	
622-96-8	4-Ethyltoluene	21.4	53.5	106.3	105.1	262.7	522.1	
108-67-8	1,3,5-Trimethylbenzene	13.3	33.3	34.6	65.5	163.7	169.8	
95-63-6	1,2,4-Trimethylbenzene	13.1	32.8	113.5	64.4	161.1	557.5	
541-73-1	1,3-Dichlorobenzene	12.9	23.9	ND	77.5	143.4	ND	
100-44-7	Benzyl chloride	12.9	78.2	ND	66.8	404.6	ND	
106-46-7	1,4-Dichlorobenzene	12.9	22.3	ND	77.5	134.1	ND	
95-50-1	1,2-Dichlorobenzene	12.9	20.9	ND	77.5	125.6	ND	
120-82-1	1,2,4-Trichlorobenzene	32.3	44.4	ND	239.2	329.1	ND	
91-20-3	Naphthalene	6.6	10.3	ND	34.5	54.1	ND	
87-68-3	Hexachlorobutadiene	32.3	34.2	ND	343.8	364.5	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				79	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217607
Laboratory Number: 04

File Name: 1760704A
Description: T - 704
Canister: 541
QC_Batch: 112117-GCK

Date Sampled: 11/01/17 Time: 12:21
Date Analyzed: 11/21/17 Time: 13:34
Can Factor: 1.29
Air Volume: 1.0 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	258.00	774.00	ND	297.12	891.37	ND	ND
74-86-2	Acetylene	258.00	774.00	ND	274.92	824.75	ND	ND
74-84-0	Ethane	258.00	774.00	1,552.44	318.27	954.81	1,915.11	
115-07-1	Propene	172.00	516.00	ND	296.77	890.31	ND	ND
74-98-6	Propane	172.00	516.00	952.92	310.87	932.61	1,722.29	
75-28-5	i-Butane	129.00	387.00	188.73	307.17	921.50	449.40	J
106-98-9	1-Butene	129.00	387.00	ND	296.59	889.78	ND	ND
106-97-8	n-Butane	129.00	387.00	ND	307.17	921.50	ND	ND
624-64-6	t-2-Butene	129.00	387.00	ND	296.59	889.78	ND	ND
590-18-1	c-2-Butene	129.00	387.00	ND	296.59	889.78	ND	ND
78-78-4	i-Pentane	103.20	309.60	423.61	305.37	916.11	1,253.47	
109-67-1	1-Pentene	103.20	309.60	ND	296.49	889.47	ND	ND
109-66-0	n-Pentane	103.20	309.60	489.16	304.95	914.84	1,445.43	
78-79-5	Isoprene	103.20	309.60	ND	288.03	864.09	ND	ND
646-04-8	t-2-Pentene	103.20	309.60	ND	296.49	889.47	ND	ND
627-20-3	c-2-Pentene	103.20	309.60	ND	296.49	889.47	ND	ND
75-83-2	2,2-Dimethylbutane	86.00	258.00	ND	303.82	911.46	ND	ND
287-92-3	Cyclopentane	103.20	309.60	ND	296.49	889.47	ND	ND
79-29-8	2,3-Dimethylbutane	86.00	258.00	ND	303.82	911.46	ND	ND
107-83-5	2-Methylpentane	86.00	258.00	505.65	303.82	911.46	1,786.35	
96-14-0	3-Methylpentane	86.00	258.00	445.50	303.82	911.46	1,573.85	
110-54-3	n-Hexane	86.00	258.00	709.96	303.82	911.46	2,508.14	
96-37-7	Methylcyclopentane	86.00	258.00	ND	296.77	890.31	ND	ND
108-08-7	2,4-Dimethylpentane	73.71	221.14	809.35	302.71	908.14	3,323.66	
71-43-2	Benzene	86.00	258.00	342.36	275.27	825.81	1,095.83	
110-82-7	Cyclohexane	86.00	258.00	565.60	296.77	890.31	1,951.79	
591-76-4	2-Methylhexane	73.71	221.14	274.52	302.71	908.14	1,127.32	
565-59-3	2,3-Dimethylpentane	73.71	221.14	276.38	302.71	908.14	1,134.96	
589-34-4	3-Methylhexane	73.71	221.14	575.24	302.71	908.14	2,362.24	
540-84-1	2,2,4-Trimethylpentane	64.50	193.50	804.03	301.88	905.64	3,763.12	
142-82-5	n-Heptane	73.71	221.14	928.36	302.71	908.14	3,812.35	
108-87-2	Methylcyclohexane	73.71	221.14	1,469.45	296.67	890.01	5,913.92	
592-13-2	2,5-Dimethylhexane	64.50	193.50	ND	301.88	905.64	ND	ND
589-43-5	2,4-Dimethylhexane	64.50	193.50	445.50	301.88	905.64	2,085.08	
565-75-3	2,3,4-Trimethylpentane	64.50	193.50	624.91	301.88	905.64	2,924.79	
108-88-3	Toluene	73.71	221.14	726.53	278.24	834.72	2,742.33	
584-94-1	2,3-Dimethylhexane	64.50	193.50	1,085.05	301.88	905.64	5,078.41	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	64.50	193.50	ND	301.88	905.64	ND	ND
589-81-1	3-Methylheptane	64.50	193.50	ND	301.88	905.64	ND	ND
111-65-9	n-Octane	64.50	193.50	359.42	301.88	905.64	1,682.19	
100-41-4	Ethylbenzene	64.50	193.50	392.99	280.73	842.20	1,710.48	
108-38-3	m,p-xylene	64.50	193.50	827.69	280.73	842.20	3,602.51	
100-42-5	Styrene	64.50	193.50	ND	275.45	826.34	ND	ND
95-47-6	o-xylene	64.50	193.50	281.03	280.73	842.20	1,223.15	
111-84-2	n-Nonane	57.33	172.00	1,054.95	301.47	904.41	5,547.12	
98-82-8	i-Propylbenzene	57.33	172.00	96.37	282.44	847.31	474.74	J
103-65-1	n-propylbenzene	57.33	172.00	222.06	282.44	847.31	1,093.92	
80-56-8	a-Pinene	51.60	154.80	ND	288.03	864.09	ND	ND
620-14-4	3-Ethyltoluene	57.33	172.00	182.22	282.44	847.31	897.67	
622-96-8	4-Ethyltoluene	57.33	172.00	343.94	282.44	847.31	1,694.31	
108-67-8	1,3,5-Trimethylbenzene	57.33	172.00	347.09	282.44	847.31	1,709.85	
611-14-3	2-Ethyltoluene	57.33	172.00	229.55	282.44	847.31	1,130.83	
127-91-3	b-Pinene	51.60	154.80	ND	288.03	864.09	ND	ND
95-63-6	1,2,4-Trimethylbenzene	57.33	172.00	269.52	282.44	847.31	1,327.73	
124-18-5	n-Decane	51.60	154.80	1,081.98	300.93	902.79	6,310.06	
526-73-8	1,2,3-Trimethylbenzene	57.33	172.00	141.47	282.44	847.31	696.89	J
5989-27-5	d-Limonene	51.60	154.80	ND	288.03	864.09	ND	ND
141-93-5	1,3-Diethylbenzene	51.60	154.80	135.48	283.80	851.40	745.16	J
105-05-5	1,4-Diethylbenzene	51.60	154.80	613.88	283.80	851.40	3,376.33	
104-51-8	n-Butylbenzene	51.60	154.80	ND	283.80	851.40	ND	ND
1120-21-4	Undecane	46.91	140.73	870.67	300.49	901.46	5,577.27	
112-40-3	Dodecane	43.00	129.00	208.35	300.12	900.36	1,454.20	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	1,935.00	5,805.00	61,272.46	6,835.94	20,507.83	216,462.53	
TNMHC - C1	Total Non-Methane Hydrocarbons	11,610.00	34,830.00	367,634.74	7,613.11	22,839.34	241,071.96	

ANALYTICAL REPORT

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217607

Laboratory Number: 04

File Name: 760704PA

Date Sampled: 11/01/17 Time: 12:21

Description: T - 704

Date Analyzed: 11/15/17 Time: 13:39

Can/Tube#: 541

Can Dilution Factor: 1.29

QC_Batch: 111517-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.02	0.02	129	258	167	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 217607
Laboratory Number: 04

File Name: 1760704B
Description: T - 704
Can/Tube#: 541
QC_Batch: 111517-GCL

Date Sampled: 11/01/17 Time: 12:21
Date Analyzed: 11/15/17 Time: 12:11
Dilution Factor: 1.29

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.26	0.77	44.38	0.17	0.52	29.98	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217607

Analytical Method: TO-15

Laboratory ID: 05

File Name: 1760705A.D

Date Sampled: 11/01/17

Time: 12:26

Description: T-705

Date Analyzed: 11/21/17

Time: 17:33

Canister: 769

Can Dilution Factor: 1.28

QC_Batch: 112117-MA1

Air Volume: 10.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	6.4	32.2	ND	31.6	159.1	ND	
74-87-3	Chloromethane	6.4	32.2	ND	13.2	66.5	ND	
76-14-2	Freon 114	6.4	32.2	ND	44.7	224.9	ND	
75-01-4	Vinyl chloride	6.4	32.2	ND	16.4	82.3	ND	
106-99-0	1,3-Butadiene	6.4	32.2	ND	14.2	71.2	ND	
74-83-9	Bromomethane	6.4	32.2	ND	24.8	124.9	ND	
75-00-3	Chloroethane	6.4	32.2	ND	16.9	84.9	ND	
64-17-5	Ethanol	32.0	96.0	ND	60.3	180.9	ND	
75-69-4	Trichlorofluoromethane	6.4	30.7	ND	35.9	172.6	ND	
67-64-1	Acetone	32.0	78.7	ND	76.0	187.0	ND	
67-63-0	2-propanol	32.0	73.5	ND	78.6	180.5	ND	
75-35-4	1,1-Dichloroethene	6.4	31.7	ND	25.4	125.7	ND	
76-13-1	Freon 113	6.4	30.6	ND	49.0	234.6	ND	
75-09-2	Dichloromethane	12.8	30.8	ND	44.4	107.0	ND	
75-15-0	Carbon disulfide	32.0	59.4	97.7	99.5	184.8	304.0	
156-60-5	trans-1,2-Dichloroethene	6.4	23.1	ND	25.4	91.5	ND	
1634-04-4	Methyl tert butyl ether	6.4	23.6	ND	23.0	85.0	ND	
75-34-3	1,1-Dichloroethane	6.4	31.9	ND	25.9	129.2	ND	
108-05-4	Vinyl acetate	6.4	28.1	ND	22.5	99.0	ND	
78-93-3	2-Butanone	25.6	65.2	ND	75.5	192.0	ND	
141-78-6	Ethyl acetate	12.8	28.0	ND	46.1	101.0	ND	
74-97-5	Bromochloromethane	6.4	17.0	ND	33.9	90.2	ND	
109-99-9	Tetrahydrofuran	12.8	32.2	ND	37.7	94.9	ND	
156-59-2	cis-1,2-Dichloroethene	12.8	34.4	ND	50.7	136.4	ND	
67-66-3	Chloroform	6.4	32.1	ND	31.2	156.7	ND	
71-55-6	1,1,1-Trichloroethane	6.4	28.4	ND	34.9	155.0	ND	
107-06-2	1,2-Dichloroethane	6.4	29.2	ND	25.9	118.2	ND	
110-82-7	Cyclohexane	6.4	24.6	503.1	22.1	84.6	1,731.5	
71-43-2	Benzene	6.4	32.5	213.1	20.4	103.8	680.4	
56-23-5	Carbon tetrachloride	6.4	30.3	ND	40.2	190.7	ND	
142-82-5	n-Heptane	32.0	77.6	627.0	131.1	317.7	2,568.3	
78-87-5	1,2-Dichloropropane	6.4	30.8	ND	29.6	142.3	ND	
123-91-1	1,4 Dioxane	25.6	52.4	ND	92.2	188.5	ND	
79-01-6	Trichloroethene	3.8	29.8	ND	20.6	160.1	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	6.4	12.9	ND	42.9	86.6	ND	
80-62-6	Methyl methacrylate	25.6	86.5	ND	104.8	354.1	ND	
108-10-1	4-Methyl-2-pentanone	25.6	96.9	ND	104.9	396.9	ND	
10061-01-5	cis-1,3-Dichloropropene	6.4	33.2	ND	29.0	150.5	ND	
108-88-3	Toluene	12.8	33.4	486.0	48.2	125.8	1,829.7	
10061-02-6	trans-1,3-Dichloropropene	6.4	33.2	ND	29.0	150.6	ND	
79-00-5	1,1,2-Trichloroethane	6.4	32.9	ND	34.9	179.5	ND	
591-78-6	2-Hexanone	32.0	90.8	ND	131.1	371.7	ND	
124-48-1	Dibromochloromethane	6.4	12.8	ND	54.5	108.8	ND	
106-93-4	1,2-Dibromoethane	6.4	15.5	ND	49.2	119.3	ND	
127-18-4	Tetrachloroethene	3.8	15.6	ND	26.0	105.6	ND	
108-90-7	Chlorobenzene	6.4	29.1	ND	29.5	134.1	ND	
100-41-4	Ethylbenzene	13.5	33.8	209.4	58.8	146.9	908.9	
1330-20-7	m,p-Xylenes	13.6	33.9	317.7	58.9	147.2	1,379.2	
100-42-5	Styrene	13.3	33.1	ND	56.5	141.1	ND	
75-25-2	Bromoform	6.4	8.6	ND	66.1	88.7	ND	
95-47-6	o-Xylene	13.2	33.0	172.3	57.3	143.2	748.1	
79-34-5	1,1,2,2-Tetrachloroethane	6.3	15.8	ND	43.5	108.7	ND	
622-96-8	4-Ethyltoluene	21.2	53.0	98.0	104.2	260.6	481.3	
108-67-8	1,3,5-Trimethylbenzene	13.2	33.1	28.2	65.0	162.5	138.6	J
95-63-6	1,2,4-Trimethylbenzene	13.0	32.5	94.7	63.9	159.8	465.3	
541-73-1	1,3-Dichlorobenzene	12.8	23.7	ND	76.9	142.3	ND	
100-44-7	Benzyl chloride	12.8	77.6	ND	66.2	401.4	ND	
106-46-7	1,4-Dichlorobenzene	12.8	22.1	ND	76.9	133.1	ND	
95-50-1	1,2-Dichlorobenzene	12.8	20.7	ND	76.9	124.6	ND	
120-82-1	1,2,4-Trichlorobenzene	32.0	44.0	ND	237.3	326.5	ND	
91-20-3	Naphthalene	6.5	10.2	ND	34.2	53.7	ND	
87-68-3	Hexachlorobutadiene	32.0	33.9	ND	341.2	361.6	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	91	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217607
Laboratory Number: 05

File Name: 1760705A
Description: T - 705
Canister: 769
QC_Batch: 112017-GCK

Date Sampled: 11/01/17 Time: 12:26
Date Analyzed: 11/20/17 Time: 15:08
Can Factor: 1.28
Air Volume: 1 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	256.00	768.00	ND	294.82	884.46	ND	ND
74-86-2	Acetylene	256.00	768.00	ND	272.79	818.36	ND	ND
74-84-0	Ethane	256.00	768.00	1,204.01	315.80	947.41	1,485.28	
115-07-1	Propene	170.67	512.00	ND	294.47	883.41	ND	ND
74-98-6	Propane	170.67	512.00	610.71	308.46	925.38	1,103.79	
75-28-5	i-Butane	128.00	384.00	165.94	304.79	914.36	395.12	J
106-98-9	1-Butene	128.00	384.00	ND	294.30	882.89	ND	ND
106-97-8	n-Butane	128.00	384.00	135.36	304.79	914.36	322.32	J
624-64-6	t-2-Butene	128.00	384.00	ND	294.30	882.89	ND	ND
590-18-1	c-2-Butene	128.00	384.00	ND	294.30	882.89	ND	ND
78-78-4	i-Pentane	102.40	307.20	384.00	303.00	909.01	1,136.27	
109-67-1	1-Pentene	102.40	307.20	ND	294.19	882.57	ND	ND
109-66-0	n-Pentane	102.40	307.20	436.25	302.58	907.75	1,289.07	
78-79-5	Isoprene	102.40	307.20	ND	285.80	857.39	ND	ND
646-04-8	t-2-Pentene	102.40	307.20	ND	294.19	882.57	ND	ND
627-20-3	c-2-Pentene	102.40	307.20	ND	294.19	882.57	ND	ND
75-83-2	2,2-Dimethylbutane	85.33	256.00	ND	301.46	904.39	ND	ND
287-92-3	Cyclopentane	102.40	307.20	ND	294.19	882.57	ND	ND
79-29-8	2,3-Dimethylbutane	85.33	256.00	ND	301.46	904.39	ND	ND
107-83-5	2-Methylpentane	85.33	256.00	450.81	301.46	904.39	1,592.62	
96-14-0	3-Methylpentane	85.33	256.00	396.98	301.46	904.39	1,402.46	
110-54-3	n-Hexane	85.33	256.00	645.15	301.46	904.39	2,279.17	
96-37-7	Methylcyclopentane	85.33	256.00	ND	294.47	883.41	ND	ND
108-08-7	2,4-Dimethylpentane	73.14	219.43	752.46	300.37	901.10	3,090.04	
71-43-2	Benzene	85.33	256.00	373.43	273.14	819.41	1,195.29	
110-82-7	Cyclohexane	85.33	256.00	516.71	294.47	883.41	1,783.08	
591-76-4	2-Methylhexane	73.14	219.43	242.74	300.37	901.10	996.81	
565-59-3	2,3-Dimethylpentane	73.14	219.43	80.06	300.37	901.10	328.79	J
589-34-4	3-Methylhexane	73.14	219.43	529.58	300.37	901.10	2,174.73	
540-84-1	2,2,4-Trimethylpentane	64.00	192.00	760.37	299.54	898.62	3,558.80	
142-82-5	n-Heptane	73.14	219.43	852.71	300.37	901.10	3,501.72	
108-87-2	Methylcyclohexane	73.14	219.43	1,353.62	294.37	883.11	5,447.78	
592-13-2	2,5-Dimethylhexane	64.00	192.00	379.82	299.54	898.62	1,777.66	
589-43-5	2,4-Dimethylhexane	64.00	192.00	307.53	299.54	898.62	1,439.36	
565-75-3	2,3,4-Trimethylpentane	64.00	192.00	590.43	299.54	898.62	2,763.40	
108-88-3	Toluene	73.14	219.43	667.14	276.08	828.25	2,518.19	
584-94-1	2,3-Dimethylhexane	64.00	192.00	1,035.11	299.54	898.62	4,844.63	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	64.00	192.00	ND	299.54	898.62	ND	ND
589-81-1	3-Methylheptane	64.00	192.00	ND	299.54	898.62	ND	ND
111-65-9	n-Octane	64.00	192.00	306.49	299.54	898.62	1,434.50	
100-41-4	Ethylbenzene	64.00	192.00	418.70	278.56	835.67	1,822.39	
108-38-3	m,p-xylene	64.00	192.00	979.89	278.56	835.67	4,264.94	
100-42-5	Styrene	64.00	192.00	ND	273.31	819.93	ND	ND
95-47-6	o-xylene	64.00	192.00	285.42	278.56	835.67	1,242.27	
111-84-2	n-Nonane	56.89	170.67	1,099.39	299.13	897.40	5,780.81	
98-82-8	i-Propylbenzene	56.89	170.67	135.36	280.25	840.74	666.83	J
103-65-1	n-propylbenzene	56.89	170.67	264.00	280.25	840.74	1,300.50	
80-56-8	a-Pinene	51.20	153.60	ND	285.80	857.39	ND	ND
620-14-4	3-Ethyltoluene	56.89	170.67	413.61	280.25	840.74	2,037.52	
622-96-8	4-Ethyltoluene	56.89	170.67	691.59	280.25	840.74	3,406.92	
108-67-8	1,3,5-Trimethylbenzene	56.89	170.67	849.91	280.25	840.74	4,186.83	
611-14-3	2-Ethyltoluene	56.89	170.67	311.89	280.25	840.74	1,536.43	
127-91-3	b-Pinene	51.20	153.60	ND	285.80	857.39	ND	ND
95-63-6	1,2,4-Trimethylbenzene	56.89	170.67	445.27	280.25	840.74	2,193.50	
124-18-5	n-Decane	51.20	153.60	1,177.06	298.60	895.79	6,864.56	
526-73-8	1,2,3-Trimethylbenzene	56.89	170.67	195.13	280.25	840.74	961.24	
5989-27-5	d-Limonene	51.20	153.60	ND	285.80	857.39	ND	ND
141-93-5	1,3-Diethylbenzene	51.20	153.60	161.01	281.60	844.80	885.55	
105-05-5	1,4-Diethylbenzene	51.20	153.60	727.39	281.60	844.80	4,000.67	
104-51-8	n-Butylbenzene	51.20	153.60	ND	281.60	844.80	ND	ND
1120-21-4	Undecane	46.55	139.64	1,284.21	298.16	894.47	8,226.34	
112-40-3	Dodecane	42.67	128.00	379.57	297.79	893.38	2,649.20	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	1,920.00	5,760.00	106,910.84	6,782.95	20,348.85	377,693.22
TNMHC - C1	Total Non-Methane Hydrocarbons	11,520.00	34,560.00	641,465.05	7,554.10	22,662.30	420,632.82

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217607

Laboratory Number: 05

File Name: 760705PA

Date Sampled: 11/01/17

Time: 12:26

Description: T - 705

Date Analyzed: 11/15/17

Time: 15:05

Can/Tube#: 769

Can Dilution Factor: 1.28

QC_Batch: 111517-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.02	ND	128	256	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217607

Laboratory Number: 05

File Name: 1760705B

Date Sampled: 11/01/17

Time: 12:26

Description: T - 705

Date Analyzed: 11/15/17

Time: 12:17

Can/Tube#: 769

Dilution Factor: 1.28

QC_Batch: 111517-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.26	0.77	35.35	0.17	0.52	23.89	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217607

Analytical Method: TO-15

Laboratory ID: 06

File Name: 1760706A.D
Description: T-706
Canister: 686
QC_Batch: 111717-MA1

Date Sampled: 11/01/17 Time: 14:16
Date Analyzed: 11/17/17 Time: 21:25
Can Dilution Factor: 1.25
Air Volume: 0.05 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	1,250	6,288	ND	6,178	31,075	ND	
74-87-3	Chloromethane	1,250	6,288	ND	2,581	12,980	ND	
76-14-2	Freon 114	1,250	6,288	ND	8,733	43,927	ND	
75-01-4	Vinyl chloride	1,250	6,288	ND	3,194	16,065	ND	
106-99-0	1,3-Butadiene	1,250	6,288	ND	2,764	13,906	ND	
74-83-9	Bromomethane	1,250	6,288	ND	4,849	24,393	ND	
75-00-3	Chloroethane	1,250	6,288	ND	3,296	16,579	ND	
64-17-5	Ethanol	6,250	18,750	ND	11,778	35,335	ND	
75-69-4	Trichlorofluoromethane	1,250	6,002	ND	7,021	33,714	ND	
67-64-1	Acetone	6,250	15,375	ND	14,844	36,517	ND	
67-63-0	2-propanol	6,250	14,350	ND	15,355	35,256	ND	
75-35-4	1,1-Dichloroethene	1,250	6,200	ND	4,952	24,560	ND	
76-13-1	Freon 113	1,250	5,980	ND	9,576	45,815	ND	
75-09-2	Dichloromethane	2,500	6,020	ND	8,677	20,895	ND	
75-15-0	Carbon disulfide	6,250	11,600	ND	19,443	36,087	ND	
156-60-5	trans-1,2-Dichloroethene	1,250	4,513	ND	4,952	17,877	ND	
1634-04-4	Methyl tert butyl ether	1,250	4,609	ND	4,502	16,598	ND	
75-34-3	1,1-Dichloroethane	1,250	6,234	ND	5,059	25,230	ND	
108-05-4	Vinyl acetate	1,250	5,492	ND	4,400	19,331	ND	
78-93-3	2-Butanone	5,000	12,725	ND	14,737	37,506	ND	
141-78-6	Ethyl acetate	2,500	5,475	ND	9,004	19,718	ND	
74-97-5	Bromochloromethane	1,250	3,329	ND	6,612	17,612	ND	
109-99-9	Tetrahydrofuran	2,500	6,288	ND	7,369	18,532	ND	
156-59-2	cis-1,2-Dichloroethene	2,500	6,725	ND	9,903	26,639	ND	
67-66-3	Chloroform	1,250	6,269	ND	6,101	30,600	ND	
71-55-6	1,1,1-Trichloroethane	1,250	5,550	ND	6,817	30,266	ND	
107-06-2	1,2-Dichloroethane	1,250	5,702	ND	5,059	23,076	ND	
110-82-7	Cyclohexane	1,255	4,800	ND	4,320	16,522	ND	
71-43-2	Benzene	1,250	6,350	39,202	3,991	20,275	125,158	
56-23-5	Carbon tetrachloride	1,250	5,925	ND	7,859	37,252	ND	
142-82-5	n-Heptane	6,250	15,150	498,148	25,601	62,056	2,040,471	
78-87-5	1,2-Dichloropropane	1,250	6,016	ND	5,774	27,790	ND	
123-91-1	1,4 Dioxane	5,000	10,225	ND	18,007	36,825	ND	
79-01-6	Trichloroethene	750	5,822	ND	4,029	31,275	ND	
75-27-4	Bromodichloromethane	1,250	2,525	ND	8,370	16,908	ND	
80-62-6	Methyl methacrylate	5,000	16,900	ND	20,460	69,155	ND	
108-10-1	4-Methyl-2-pentanone	5,000	18,925	ND	20,481	77,519	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	1,250	6,477	ND	5,672	29,392	ND	
108-88-3	Toluene	2,500	6,525	152,402	9,412	24,567	573,793	
10061-02-6	trans-1,3-Dichloropropene	1,250	6,483	ND	5,672	29,415	ND	
79-00-5	1,1,2-Trichloroethane	1,250	6,427	ND	6,817	35,049	ND	
591-78-6	2-Hexanone	6,250	17,725	ND	25,601	72,604	ND	
124-48-1	Dibromochloromethane	1,250	2,496	ND	10,644	21,253	ND	
106-93-4	1,2-Dibromoethane	1,250	3,034	ND	9,602	23,305	ND	
127-18-4	Tetrachloroethene	750	3,042	ND	5,083	20,621	ND	
108-90-7	Chlorobenzene	1,250	5,688	ND	5,754	26,184	ND	
100-41-4	Ethylbenzene	2,643	6,608	69,723	11,475	28,687	302,694	
1330-20-7	m,p-Xylenes	2,650	6,624	133,289	11,504	28,759	578,660	
100-42-5	Styrene	2,589	6,471	ND	11,026	27,566	ND	
75-25-2	Bromoform	1,250	1,677	ND	12,913	17,326	ND	
95-47-6	o-Xylene	2,577	6,443	65,854	11,188	27,970	285,898	
79-34-5	1,1,2,2-Tetrachloroethane	1,238	3,094	ND	8,491	21,227	ND	
622-96-8	4-Ethyltoluene	4,144	10,359	43,577	20,361	50,902	214,123	
108-67-8	1,3,5-Trimethylbenzene	2,583	6,458	11,357	12,692	31,731	55,803	
95-63-6	1,2,4-Trimethylbenzene	2,541	6,353	42,708	12,486	31,215	209,855	
541-73-1	1,3-Dichlorobenzene	2,500	4,625	ND	15,023	27,793	ND	
100-44-7	Benzyl chloride	2,500	15,150	ND	12,938	78,406	ND	
106-46-7	1,4-Dichlorobenzene	2,500	4,325	ND	15,023	25,990	ND	
95-50-1	1,2-Dichlorobenzene	2,500	4,050	ND	15,023	24,338	ND	
120-82-1	1,2,4-Trichlorobenzene	6,250	8,600	ND	46,347	63,774	ND	
91-20-3	Naphthalene	1,275	2,000	ND	6,682	10,481	ND	
87-68-3	Hexachlorobutadiene	6,250	6,625	ND	66,633	70,631	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	92	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217607
Laboratory Number: 06

File Name: 1760706A
Description: T - 706
Canister: 686
QC_Batch: 112017-GCK

Date Sampled: 11/01/17 Time: 14:16
Date Analyzed: 11/20/17 Time: 16:14
Can Factor: 1.25
Air Volume: 0.10 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2,500	7,500	ND	2,879	8,637	ND	ND
74-86-2	Acetylene	2,500	7,500	ND	2,664	7,992	ND	ND
74-84-0	Ethane	2,500	7,500	20,333	3,084	9,252	25,083	
115-07-1	Propene	1,667	5,000	ND	2,876	8,627	ND	ND
74-98-6	Propane	1,667	5,000	5,802	3,012	9,037	10,486	
75-28-5	i-Butane	1,250	3,750	13,010	2,976	8,929	30,979	
106-98-9	1-Butene	1,250	3,750	ND	2,874	8,622	ND	ND
106-97-8	n-Butane	1,250	3,750	66,799	2,976	8,929	159,059	
624-64-6	t-2-Butene	1,250	3,750	ND	2,874	8,622	ND	ND
590-18-1	c-2-Butene	1,250	3,750	ND	2,874	8,622	ND	ND
78-78-4	i-Pentane	1,000	3,000	136,842	2,959	8,877	404,917	
109-67-1	1-Pentene	1,000	3,000	ND	2,873	8,619	ND	ND
109-66-0	n-Pentane	1,000	3,000	267,431	2,955	8,865	790,238	
78-79-5	Isoprene	1,000	3,000	ND	2,791	8,373	ND	ND
646-04-8	t-2-Pentene	1,000	3,000	ND	2,873	8,619	ND	ND
627-20-3	c-2-Pentene	1,000	3,000	ND	2,873	8,619	ND	ND
75-83-2	2,2-Dimethylbutane	833	2,500	ND	2,944	8,832	ND	ND
287-92-3	Cyclopentane	1,000	3,000	ND	2,873	8,619	ND	ND
79-29-8	2,3-Dimethylbutane	833	2,500	ND	2,944	8,832	ND	ND
107-83-5	2-Methylpentane	833	2,500	295,160	2,944	8,832	1,042,737	
96-14-0	3-Methylpentane	833	2,500	230,876	2,944	8,832	815,635	
110-54-3	n-Hexane	833	2,500	542,987	2,944	8,832	1,918,256	
96-37-7	Methylcyclopentane	833	2,500	ND	2,876	8,627	ND	ND
108-08-7	2,4-Dimethylpentane	714	2,143	386,257	2,933	8,800	1,586,188	
71-43-2	Benzene	833	2,500	49,440	2,667	8,002	158,248	
110-82-7	Cyclohexane	833	2,500	5,203	2,876	8,627	17,953	
591-76-4	2-Methylhexane	714	2,143	167,013	2,933	8,800	685,848	
565-59-3	2,3-Dimethylpentane	714	2,143	95,753	2,933	8,800	393,215	
589-34-4	3-Methylhexane	714	2,143	269,044	2,933	8,800	1,104,845	
540-84-1	2,2,4-Trimethylpentane	625	1,875	311,972	2,925	8,776	1,460,131	
142-82-5	n-Heptane	714	2,143	550,370	2,933	8,800	2,260,124	
108-87-2	Methylcyclohexane	714	2,143	478,386	2,875	8,624	1,925,307	
592-13-2	2,5-Dimethylhexane	625	1,875	15,086	2,925	8,776	70,607	
589-43-5	2,4-Dimethylhexane	625	1,875	123,036	2,925	8,776	575,851	
565-75-3	2,3,4-Trimethylpentane	625	1,875	188,723	2,925	8,776	883,283	
108-88-3	Toluene	714	2,143	155,450	2,696	8,088	586,762	
584-94-1	2,3-Dimethylhexane	625	1,875	28,292	2,925	8,776	132,415	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	625	1,875	325,658	2,925	8,776	1,524,185	
589-81-1	3-Methylheptane	625	1,875	131,148	2,925	8,776	613,813	
111-65-9	n-Octane	625	1,875	407,592	2,925	8,776	1,907,665	
100-41-4	Ethylbenzene	625	1,875	152,917	2,720	8,161	665,564	
108-38-3	m,p-xylene	625	1,875	258,734	2,720	8,161	1,126,128	
100-42-5	Styrene	625	1,875	ND	2,669	8,007	ND	ND
95-47-6	o-xylene	625	1,875	47,162	2,720	8,161	205,271	
111-84-2	n-Nonane	556	1,667	303,799	2,921	8,764	1,597,436	
98-82-8	i-Propylbenzene	556	1,667	47,264	2,737	8,210	232,831	
103-65-1	n-propylbenzene	556	1,667	38,168	2,737	8,210	188,022	
80-56-8	a-Pinene	500	1,500	ND	2,791	8,373	ND	ND
620-14-4	3-Ethyltoluene	556	1,667	60,381	2,737	8,210	297,450	
622-96-8	4-Ethyltoluene	556	1,667	86,641	2,737	8,210	426,813	
108-67-8	1,3,5-Trimethylbenzene	556	1,667	48,593	2,737	8,210	239,381	
611-14-3	2-Ethyltoluene	556	1,667	107,787	2,737	8,210	530,986	
127-91-3	b-Pinene	500	1,500	ND	2,791	8,373	ND	ND
95-63-6	1,2,4-Trimethylbenzene	556	1,667	33,299	2,737	8,210	164,037	
124-18-5	n-Decane	500	1,500	141,632	2,916	8,748	825,993	
526-73-8	1,2,3-Trimethylbenzene	556	1,667	41,179	2,737	8,210	202,855	
5989-27-5	d-Limonene	500	1,500	ND	2,791	8,373	ND	ND
141-93-5	1,3-Diethylbenzene	500	1,500	107,310	2,750	8,250	590,206	
105-05-5	1,4-Diethylbenzene	500	1,500	16,023	2,750	8,250	88,125	
104-51-8	n-Butylbenzene	500	1,500	ND	2,750	8,250	ND	ND
1120-21-4	Undecane	455	1,364	58,364	2,912	8,735	373,863	
112-40-3	Dodecane	417	1,250	11,249	2,908	8,724	78,510	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	18,750	56,250	13,388,387	66,240	198,719	47,298,316	
TNMHC - C1	Total Non-Methane Hydrocarbons	112,500	337,500	80,330,319	73,770	221,311	52,675,619	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217607

Laboratory Number: 06

File Name: 760706PA

Date Sampled: 11/01/17

Time: 14:16

Description: T - 706

Date Analyzed: 11/15/17

Time: 15:33

Can/Tube#: 686

Can Dilution Factor: 1.25

QC_Batch: 111517-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.02	0.02	125	250	178	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217607

Laboratory Number: 06

File Name: 1760706B

Date Sampled: 11/01/17

Time: 14:16

Description: T - 706

Date Analyzed: 11/15/17

Time: 12:26

Can/Tube#: 686

Dilution Factor: 1.25

QC_Batch: 111517-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.75	205.20	0.17	0.51	138.65	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217607

Analytical Method: TO-15

Laboratory ID: 07

File Name: 1760707A.D

Date Sampled: 11/01/17

Time: 15:12

Description: T-707

Date Analyzed: 11/17/17

Time: 17:47

Canister: 852

Can Dilution Factor: 1.25

QC_Batch: 111717-MA1

Air Volume: 50 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	1.25	6.29	ND	6.18	31.08	ND	
74-87-3	Chloromethane	1.25	6.29	ND	2.58	12.98	ND	
76-14-2	Freon 114	1.25	6.29	ND	8.73	43.93	ND	
75-01-4	Vinyl chloride	1.25	6.29	ND	3.19	16.06	ND	
106-99-0	1,3-Butadiene	1.25	6.29	ND	2.76	13.91	ND	
74-83-9	Bromomethane	1.25	6.29	ND	4.85	24.39	ND	
75-00-3	Chloroethane	1.25	6.29	ND	3.30	16.58	ND	
64-17-5	Ethanol	6.25	18.75	ND	11.78	35.34	ND	
75-69-4	Trichlorofluoromethane	1.25	6.00	ND	7.02	33.71	ND	
67-64-1	Acetone	6.25	15.38	50.95	14.84	36.52	121.01	
67-63-0	2-propanol	6.25	14.35	ND	15.36	35.26	ND	
75-35-4	1,1-Dichloroethene	1.25	6.20	ND	4.95	24.56	ND	
76-13-1	Freon 113	1.25	5.98	ND	9.58	45.81	ND	
75-09-2	Dichloromethane	2.50	6.02	ND	8.68	20.89	ND	
75-15-0	Carbon disulfide	6.25	11.60	7.30	19.44	36.09	22.71	J
156-60-5	trans-1,2-Dichloroethene	1.25	4.51	ND	4.95	17.88	ND	
1634-04-4	Methyl tert butyl ether	1.25	4.61	ND	4.50	16.60	ND	
75-34-3	1,1-Dichloroethane	1.25	6.23	ND	5.06	25.23	ND	
108-05-4	Vinyl acetate	1.25	5.49	ND	4.40	19.33	ND	
78-93-3	2-Butanone	5.00	12.73	ND	14.74	37.51	ND	
141-78-6	Ethyl acetate	2.50	5.48	ND	9.00	19.72	ND	
74-97-5	Bromochloromethane	1.25	3.33	ND	6.61	17.61	ND	
109-99-9	Tetrahydrofuran	2.50	6.29	ND	7.37	18.53	ND	
156-59-2	cis-1,2-Dichloroethene	2.50	6.73	ND	9.90	26.64	ND	
67-66-3	Chloroform	1.25	6.27	ND	6.10	30.60	ND	
71-55-6	1,1,1-Trichloroethane	1.25	5.55	ND	6.82	30.27	ND	
107-06-2	1,2-Dichloroethane	1.25	5.70	ND	5.06	23.08	ND	
110-82-7	Cyclohexane	1.26	4.80	ND	4.32	16.52	ND	
71-43-2	Benzene	1.25	6.35	182.19	3.99	20.27	581.66	
56-23-5	Carbon tetrachloride	1.25	5.93	ND	7.86	37.25	ND	
142-82-5	n-Heptane	6.25	15.15	18.26	25.60	62.06	74.79	
78-87-5	1,2-Dichloropropane	1.25	6.02	ND	5.77	27.79	ND	
123-91-1	1,4 Dioxane	5.00	10.23	ND	18.01	36.83	ND	
79-01-6	Trichloroethene	0.75	5.82	ND	4.03	31.28	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-27-4	Bromodichloromethane	1.25	2.53	ND	8.37	16.91	ND	
80-62-6	Methyl methacrylate	5.00	16.90	ND	20.46	69.16	ND	
108-10-1	4-Methyl-2-pentanone	5.00	18.93	ND	20.48	77.52	ND	
10061-01-5	cis-1,3-Dichloropropene	1.25	6.48	ND	5.67	29.39	ND	
108-88-3	Toluene	2.50	6.53	117.84	9.41	24.57	443.67	
10061-02-6	trans-1,3-Dichloropropene	1.25	6.48	ND	5.67	29.42	ND	
79-00-5	1,1,2-Trichloroethane	1.25	6.43	ND	6.82	35.05	ND	
591-78-6	2-Hexanone	6.25	17.73	ND	25.60	72.60	ND	
124-48-1	Dibromochloromethane	1.25	2.50	ND	10.64	21.25	ND	
106-93-4	1,2-Dibromoethane	1.25	3.03	ND	9.60	23.30	ND	
127-18-4	Tetrachloroethene	0.75	3.04	ND	5.08	20.62	ND	
108-90-7	Chlorobenzene	1.25	5.69	ND	5.75	26.18	ND	
100-41-4	Ethylbenzene	2.64	6.61	18.85	11.47	28.69	81.86	
1330-20-7	m,p-Xylenes	2.65	6.62	33.18	11.50	28.76	144.03	
100-42-5	Styrene	2.59	6.47	ND	11.03	27.57	ND	
75-25-2	Bromoform	1.25	1.68	ND	12.91	17.33	ND	
95-47-6	o-Xylene	2.58	6.44	19.95	11.19	27.97	86.60	
79-34-5	1,1,2,2-Tetrachloroethane	1.24	3.09	ND	8.49	21.23	ND	
622-96-8	4-Ethyltoluene	4.14	10.36	8.51	20.36	50.90	41.81	J
108-67-8	1,3,5-Trimethylbenzene	2.58	6.46	3.70	12.69	31.73	18.18	J
95-63-6	1,2,4-Trimethylbenzene	2.54	6.35	10.05	12.49	31.21	49.36	
541-73-1	1,3-Dichlorobenzene	2.50	4.63	ND	15.02	27.79	ND	
100-44-7	Benzyl chloride	2.50	15.15	ND	12.94	78.41	ND	
106-46-7	1,4-Dichlorobenzene	2.50	4.33	ND	15.02	25.99	ND	
95-50-1	1,2-Dichlorobenzene	2.50	4.05	ND	15.02	24.34	ND	
120-82-1	1,2,4-Trichlorobenzene	6.25	8.60	ND	46.35	63.77	ND	
91-20-3	Naphthalene	1.28	2.00	1.48	6.68	10.48	7.77	J
87-68-3	Hexachlorobutadiene	6.25	6.63	ND	66.63	70.63	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	95	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217607
Laboratory Number: 07

File Name: 1760707A
Description: T - 707
Canister: 852
QC_Batch: 111617-GCK

Date Sampled: 11/01/17 Time: 15:12
Date Analyzed: 11/16/17 Time: 16:35
Can Factor: 1.25
Air Volume: 100 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2.50	7.50	ND	2.88	8.64	ND	ND
74-86-2	Acetylene	2.50	7.50	ND	2.66	7.99	ND	ND
74-84-0	Ethane	2.50	7.50	200.70	3.08	9.25	247.58	
115-07-1	Propene	1.67	5.00	ND	2.88	8.63	ND	ND
74-98-6	Propane	1.67	5.00	103.11	3.01	9.04	186.36	
75-28-5	i-Butane	1.25	3.75	5.70	2.98	8.93	13.56	
106-98-9	1-Butene	1.25	3.75	ND	2.87	8.62	ND	ND
106-97-8	n-Butane	1.25	3.75	22.46	2.98	8.93	53.49	
624-64-6	t-2-Butene	1.25	3.75	ND	2.87	8.62	ND	ND
590-18-1	c-2-Butene	1.25	3.75	ND	2.87	8.62	ND	ND
78-78-4	i-Pentane	1.00	3.00	8.63	2.96	8.88	25.54	
109-67-1	1-Pentene	1.00	3.00	ND	2.87	8.62	ND	ND
109-66-0	n-Pentane	1.00	3.00	11.69	2.95	8.86	34.55	
78-79-5	Isoprene	1.00	3.00	ND	2.79	8.37	ND	ND
646-04-8	t-2-Pentene	1.00	3.00	ND	2.87	8.62	ND	ND
627-20-3	c-2-Pentene	1.00	3.00	ND	2.87	8.62	ND	ND
75-83-2	2,2-Dimethylbutane	0.83	2.50	ND	2.94	8.83	ND	ND
287-92-3	Cyclopentane	1.00	3.00	ND	2.87	8.62	ND	ND
79-29-8	2,3-Dimethylbutane	0.83	2.50	ND	2.94	8.83	ND	ND
107-83-5	2-Methylpentane	0.83	2.50	7.09	2.94	8.83	25.04	
96-14-0	3-Methylpentane	0.83	2.50	6.56	2.94	8.83	23.19	
110-54-3	n-Hexane	0.83	2.50	17.44	2.94	8.83	61.60	
96-37-7	Methylcyclopentane	0.83	2.50	ND	2.88	8.63	ND	ND
108-08-7	2,4-Dimethylpentane	0.71	2.14	17.34	2.93	8.80	71.22	
71-43-2	Benzene	0.83	2.50	251.00	2.67	8.00	803.41	
110-82-7	Cyclohexane	0.83	2.50	13.40	2.88	8.63	46.23	
591-76-4	2-Methylhexane	0.71	2.14	4.93	2.93	8.80	20.26	
565-59-3	2,3-Dimethylpentane	0.71	2.14	2.90	2.93	8.80	11.91	
589-34-4	3-Methylhexane	0.71	2.14	9.68	2.93	8.80	39.74	
540-84-1	2,2,4-Trimethylpentane	0.63	1.88	10.75	2.93	8.78	50.31	
142-82-5	n-Heptane	0.71	2.14	28.50	2.93	8.80	117.06	
108-87-2	Methylcyclohexane	0.71	2.14	21.68	2.87	8.62	87.25	
592-13-2	2,5-Dimethylhexane	0.63	1.88	0.75	2.93	8.78	3.51	J
589-43-5	2,4-Dimethylhexane	0.63	1.88	6.71	2.93	8.78	31.41	
565-75-3	2,3,4-Trimethylpentane	0.63	1.88	7.35	2.93	8.78	34.39	
108-88-3	Toluene	0.71	2.14	165.27	2.70	8.09	623.84	
584-94-1	2,3-Dimethylhexane	0.63	1.88	ND	2.93	8.78	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.63	1.88	20.18	2.93	8.78	94.46	
589-81-1	3-Methylheptane	0.63	1.88	7.41	2.93	8.78	34.70	
111-65-9	n-Octane	0.63	1.88	36.97	2.93	8.78	173.04	
100-41-4	Ethylbenzene	0.63	1.88	39.29	2.72	8.16	171.02	
108-38-3	m,p-xylene	0.63	1.88	82.63	2.72	8.16	359.65	
100-42-5	Styrene	0.63	1.88	ND	2.67	8.01	ND	ND
95-47-6	o-xylene	0.63	1.88	57.90	2.72	8.16	252.00	
111-84-2	n-Nonane	0.56	1.67	47.50	2.92	8.76	249.77	
98-82-8	i-Propylbenzene	0.56	1.67	4.81	2.74	8.21	23.69	
103-65-1	n-propylbenzene	0.56	1.67	5.59	2.74	8.21	27.52	
80-56-8	a-Pinene	0.50	1.50	ND	2.79	8.37	ND	ND
620-14-4	3-Ethyltoluene	0.56	1.67	11.36	2.74	8.21	55.97	
622-96-8	4-Ethyltoluene	0.56	1.67	21.91	2.74	8.21	107.92	
108-67-8	1,3,5-Trimethylbenzene	0.56	1.67	18.83	2.74	8.21	92.77	
611-14-3	2-Ethyltoluene	0.56	1.67	18.97	2.74	8.21	93.44	
127-91-3	b-Pinene	0.50	1.50	ND	2.79	8.37	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.56	1.67	7.10	2.74	8.21	34.99	
124-18-5	n-Decane	0.50	1.50	38.93	2.92	8.75	227.03	
526-73-8	1,2,3-Trimethylbenzene	0.56	1.67	6.67	2.74	8.21	32.83	
5989-27-5	d-Limonene	0.50	1.50	ND	2.79	8.37	ND	ND
141-93-5	1,3-Diethylbenzene	0.50	1.50	5.82	2.75	8.25	32.00	
105-05-5	1,4-Diethylbenzene	0.50	1.50	10.30	2.75	8.25	56.63	
104-51-8	n-Butylbenzene	0.50	1.50	ND	2.75	8.25	ND	ND
1120-21-4	Undecane	0.45	1.36	30.33	2.91	8.74	194.31	
112-40-3	Dodecane	0.42	1.25	5.31	2.91	8.72	37.06	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	18.75	56.25	2,418.99	66.24	198.72	8,545.79	
TNMHC - C1	Total Non-Methane Hydrocarbons	112.50	337.50	14,513.96	73.77	221.31	9,517.35	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217607

Laboratory Number: 07

File Name: 760707PA

Date Sampled: 11/01/17

Time: 15:12

Description: T - 707

Date Analyzed: 11/15/17

Time: 13:08

Can/Tube#: 852

Can Dilution Factor: 1.25

QC_Batch: 111517-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.02	ND	125	250	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

SDG: 217607

Modified Analytical Method:

ASTM D3416

Laboratory Number:

07

File Name: 1760707A

Date Sampled: 11/01/17

Time: 15:12

Description: T - 707

Date Analyzed: 11/15/17

Time: 11:42

Can/Tube#: 852

Dilution Factor: 1.25

QC_Batch: 111517-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.75	2.75	0.17	0.51	1.86	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217607

Analytical Method: TO-15

Laboratory ID: 08

File Name: 1760708A.D

Date Sampled: 11/01/17

Time: 16:22

Description: T-708

Date Analyzed: 11/17/17

Time: 17:11

Canister: 507

Can Dilution Factor: 1.24

QC_Batch: 111717-MA1

Air Volume: 50 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	1.24	6.24	ND	6.13	30.83	ND	
74-87-3	Chloromethane	1.24	6.24	ND	2.56	12.88	ND	
76-14-2	Freon 114	1.24	6.24	ND	8.66	43.58	ND	
75-01-4	Vinyl chloride	1.24	6.24	ND	3.17	15.94	ND	
106-99-0	1,3-Butadiene	1.24	6.24	ND	2.74	13.79	ND	
74-83-9	Bromomethane	1.24	6.24	ND	4.81	24.20	ND	
75-00-3	Chloroethane	1.24	6.24	ND	3.27	16.45	ND	
64-17-5	Ethanol	6.20	18.60	ND	11.68	35.05	ND	
75-69-4	Trichlorofluoromethane	1.24	5.95	ND	6.96	33.44	ND	
67-64-1	Acetone	6.20	15.25	17.28	14.73	36.22	41.04	
67-63-0	2-propanol	6.20	14.24	ND	15.23	34.97	ND	
75-35-4	1,1-Dichloroethene	1.24	6.15	ND	4.91	24.36	ND	
76-13-1	Freon 113	1.24	5.93	ND	9.50	45.45	ND	
75-09-2	Dichloromethane	2.48	5.97	ND	8.61	20.73	ND	
75-15-0	Carbon disulfide	6.20	11.51	ND	19.29	35.80	ND	
156-60-5	trans-1,2-Dichloroethene	1.24	4.48	ND	4.91	17.73	ND	
1634-04-4	Methyl tert butyl ether	1.24	4.57	ND	4.47	16.47	ND	
75-34-3	1,1-Dichloroethane	1.24	6.18	ND	5.02	25.03	ND	
108-05-4	Vinyl acetate	1.24	5.45	ND	4.36	19.18	ND	
78-93-3	2-Butanone	4.96	12.62	ND	14.62	37.21	ND	
141-78-6	Ethyl acetate	2.48	5.43	ND	8.93	19.56	ND	
74-97-5	Bromochloromethane	1.24	3.30	ND	6.56	17.47	ND	
109-99-9	Tetrahydrofuran	2.48	6.24	ND	7.31	18.38	ND	
156-59-2	cis-1,2-Dichloroethene	2.48	6.67	ND	9.82	26.43	ND	
67-66-3	Chloroform	1.24	6.22	ND	6.05	30.36	ND	
71-55-6	1,1,1-Trichloroethane	1.24	5.51	ND	6.76	30.02	ND	
107-06-2	1,2-Dichloroethane	1.24	5.66	ND	5.02	22.89	ND	
110-82-7	Cyclohexane	1.24	4.76	ND	4.29	16.39	ND	
71-43-2	Benzene	1.24	6.30	6.35	3.96	20.11	20.27	
56-23-5	Carbon tetrachloride	1.24	5.88	ND	7.80	36.95	ND	
142-82-5	n-Heptane	6.20	15.03	ND	25.40	61.56	ND	
78-87-5	1,2-Dichloropropane	1.24	5.97	ND	5.73	27.57	ND	
123-91-1	1,4 Dioxane	4.96	10.14	ND	17.86	36.53	ND	
79-01-6	Trichloroethene	0.74	5.78	ND	4.00	31.03	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	1.24	2.50	ND	8.30	16.77	ND	
80-62-6	Methyl methacrylate	4.96	16.76	ND	20.30	68.60	ND	
108-10-1	4-Methyl-2-pentanone	4.96	18.77	ND	20.32	76.90	ND	
10061-01-5	cis-1,3-Dichloropropene	1.24	6.43	ND	5.63	29.16	ND	
108-88-3	Toluene	2.48	6.47	ND	9.34	24.37	ND	
10061-02-6	trans-1,3-Dichloropropene	1.24	6.43	ND	5.63	29.18	ND	
79-00-5	1,1,2-Trichloroethane	1.24	6.38	ND	6.76	34.77	ND	
591-78-6	2-Hexanone	6.20	17.58	ND	25.40	72.02	ND	
124-48-1	Dibromochloromethane	1.24	2.48	ND	10.56	21.08	ND	
106-93-4	1,2-Dibromoethane	1.24	3.01	ND	9.52	23.12	ND	
127-18-4	Tetrachloroethene	0.74	3.02	ND	5.04	20.46	ND	
108-90-7	Chlorobenzene	1.24	5.64	ND	5.71	25.97	ND	
100-41-4	Ethylbenzene	2.62	6.55	ND	11.38	28.46	ND	
1330-20-7	m,p-Xylenes	2.63	6.57	ND	11.41	28.53	ND	
100-42-5	Styrene	2.57	6.42	ND	10.94	27.35	ND	
75-25-2	Bromoform	1.24	1.66	ND	12.81	17.19	ND	
95-47-6	o-Xylene	2.56	6.39	ND	11.10	27.75	ND	
79-34-5	1,1,2,2-Tetrachloroethane	1.23	3.07	ND	8.42	21.06	ND	
622-96-8	4-Ethyltoluene	4.11	10.28	ND	20.20	50.49	ND	
108-67-8	1,3,5-Trimethylbenzene	2.56	6.41	ND	12.59	31.48	ND	
95-63-6	1,2,4-Trimethylbenzene	2.52	6.30	ND	12.39	30.96	ND	
541-73-1	1,3-Dichlorobenzene	2.48	4.59	ND	14.90	27.57	ND	
100-44-7	Benzyl chloride	2.48	15.03	ND	12.83	77.78	ND	
106-46-7	1,4-Dichlorobenzene	2.48	4.29	ND	14.90	25.78	ND	
95-50-1	1,2-Dichlorobenzene	2.48	4.02	ND	14.90	24.14	ND	
120-82-1	1,2,4-Trichlorobenzene	6.20	8.53	ND	45.98	63.26	ND	
91-20-3	Naphthalene	1.26	1.98	ND	6.63	10.40	ND	
87-68-3	Hexachlorobutadiene	6.20	6.57	ND	66.10	70.07	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				96	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217607

Laboratory Number: 08

File Name: 1760708A
Description: T - 708
Canister: 507
QC_Batch: 111617-GCK

Date Sampled: 11/01/17 Time: 16:22
Date Analyzed: 11/16/17 Time: 15:47
Can Factor: 1.24
Air Volume: 100 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2.48	7.44	ND	2.86	8.57	ND	ND
74-86-2	Acetylene	2.48	7.44	ND	2.64	7.93	ND	ND
74-84-0	Ethane	2.48	7.44	11.83	3.06	9.18	14.59	
115-07-1	Propene	1.65	4.96	ND	2.85	8.56	ND	ND
74-98-6	Propane	1.65	4.96	5.01	2.99	8.96	9.06	
75-28-5	i-Butane	1.24	3.72	ND	2.95	8.86	ND	ND
106-98-9	1-Butene	1.24	3.72	ND	2.85	8.55	ND	ND
106-97-8	n-Butane	1.24	3.72	ND	2.95	8.86	ND	ND
624-64-6	t-2-Butene	1.24	3.72	ND	2.85	8.55	ND	ND
590-18-1	c-2-Butene	1.24	3.72	ND	2.85	8.55	ND	ND
78-78-4	i-Pentane	0.99	2.98	14.25	2.94	8.81	42.17	
109-67-1	1-Pentene	0.99	2.98	ND	2.85	8.55	ND	ND
109-66-0	n-Pentane	0.99	2.98	5.82	2.93	8.79	17.20	
78-79-5	Isoprene	0.99	2.98	ND	2.77	8.31	ND	ND
646-04-8	t-2-Pentene	0.99	2.98	ND	2.85	8.55	ND	ND
627-20-3	c-2-Pentene	0.99	2.98	ND	2.85	8.55	ND	ND
75-83-2	2,2-Dimethylbutane	0.83	2.48	ND	2.92	8.76	ND	ND
287-92-3	Cyclopentane	0.99	2.98	ND	2.85	8.55	ND	ND
79-29-8	2,3-Dimethylbutane	0.83	2.48	ND	2.92	8.76	ND	ND
107-83-5	2-Methylpentane	0.83	2.48	9.43	2.92	8.76	33.30	
96-14-0	3-Methylpentane	0.83	2.48	10.16	2.92	8.76	35.90	
110-54-3	n-Hexane	0.83	2.48	5.69	2.92	8.76	20.11	
96-37-7	Methylcyclopentane	0.83	2.48	ND	2.85	8.56	ND	ND
108-08-7	2,4-Dimethylpentane	0.71	2.13	18.95	2.91	8.73	77.82	
71-43-2	Benzene	0.83	2.48	18.15	2.65	7.94	58.11	
110-82-7	Cyclohexane	0.83	2.48	1.13	2.85	8.56	3.91	J
591-76-4	2-Methylhexane	0.71	2.13	5.20	2.91	8.73	21.34	
565-59-3	2,3-Dimethylpentane	0.71	2.13	6.41	2.91	8.73	26.32	
589-34-4	3-Methylhexane	0.71	2.13	11.07	2.91	8.73	45.48	
540-84-1	2,2,4-Trimethylpentane	0.62	1.86	18.69	2.90	8.71	87.49	
142-82-5	n-Heptane	0.71	2.13	6.62	2.91	8.73	27.19	
108-87-2	Methylcyclohexane	0.71	2.13	ND	2.85	8.56	ND	ND
592-13-2	2,5-Dimethylhexane	0.62	1.86	1.03	2.90	8.71	4.80	J
589-43-5	2,4-Dimethylhexane	0.62	1.86	7.60	2.90	8.71	35.56	
565-75-3	2,3,4-Trimethylpentane	0.62	1.86	17.66	2.90	8.71	82.67	
108-88-3	Toluene	0.71	2.13	ND	2.67	8.02	ND	ND
584-94-1	2,3-Dimethylhexane	0.62	1.86	3.89	2.90	8.71	18.19	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.62	1.86	19.61	2.90	8.71	91.80	
589-81-1	3-Methylheptane	0.62	1.86	9.58	2.90	8.71	44.84	
111-65-9	n-Octane	0.62	1.86	6.88	2.90	8.71	32.19	
100-41-4	Ethylbenzene	0.62	1.86	11.44	2.70	8.10	49.81	
108-38-3	m,p-xylene	0.62	1.86	16.47	2.70	8.10	71.68	
100-42-5	Styrene	0.62	1.86	5.30	2.65	7.94	22.65	
95-47-6	o-xylene	0.62	1.86	7.96	2.70	8.10	34.65	
111-84-2	n-Nonane	0.55	1.65	11.56	2.90	8.69	60.76	
98-82-8	i-Propylbenzene	0.55	1.65	7.72	2.71	8.14	38.05	
103-65-1	n-propylbenzene	0.55	1.65	7.58	2.71	8.14	37.32	
80-56-8	a-Pinene	0.50	1.49	ND	2.77	8.31	ND	ND
620-14-4	3-Ethyltoluene	0.55	1.65	5.65	2.71	8.14	27.84	
622-96-8	4-Ethyltoluene	0.55	1.65	9.01	2.71	8.14	44.39	
108-67-8	1,3,5-Trimethylbenzene	0.55	1.65	6.25	2.71	8.14	30.78	
611-14-3	2-Ethyltoluene	0.55	1.65	23.45	2.71	8.14	115.50	
127-91-3	b-Pinene	0.50	1.49	ND	2.77	8.31	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.55	1.65	13.79	2.71	8.14	67.92	
124-18-5	n-Decane	0.50	1.49	12.45	2.89	8.68	72.62	
526-73-8	1,2,3-Trimethylbenzene	0.55	1.65	10.37	2.71	8.14	51.08	
5989-27-5	d-Limonene	0.50	1.49	ND	2.77	8.31	ND	ND
141-93-5	1,3-Diethylbenzene	0.50	1.49	ND	2.73	8.18	ND	ND
105-05-5	1,4-Diethylbenzene	0.50	1.49	ND	2.73	8.18	ND	ND
104-51-8	n-Butylbenzene	0.50	1.49	ND	2.73	8.18	ND	ND
1120-21-4	Undecane	0.45	1.35	18.38	2.89	8.67	117.74	
112-40-3	Dodecane	0.41	1.24	9.02	2.88	8.65	62.95	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	18.60	55.80	1,532.49	65.71	197.13	5,413.95	
TNMHC - C1	Total Non-Methane Hydrocarbons	111.60	334.80	9,194.93	73.18	219.54	6,029.46	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217607

Laboratory Number: 08

File Name: 760708PA

Date Sampled: 11/01/17 Time: 16:22

Description: T - 708

Date Analyzed: 11/15/17 Time: 13:02

Can/Tube#: 507

Can Dilution Factor: 1.24

QC_Batch: 111517-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.02	ND	124	248	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 217607
Laboratory Number: 08

File Name: 1760708A
Description: T - 708
Can/Tube#: 507
QC_Batch: 111517-GCL

Date Sampled: 11/01/17 Time: 16:22
Date Analyzed: 11/15/17 Time: 11:38
Dilution Factor: 1.24

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.74	4.40	0.17	0.50	2.97	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217607

Analytical Method: TO-15

Laboratory ID: 09

File Name: 1760709A.D

Date Sampled: 11/01/17

Time: 17:11

Description: T-709

Date Analyzed: 11/17/17

Time: 16:31

Canister: 772

Can Dilution Factor: 1.25

QC_Batch: 111717-MA1

Air Volume: 50 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	1.25	6.29	ND	6.18	31.08	ND	
74-87-3	Chloromethane	1.25	6.29	ND	2.58	12.98	ND	
76-14-2	Freon 114	1.25	6.29	ND	8.73	43.93	ND	
75-01-4	Vinyl chloride	1.25	6.29	ND	3.19	16.06	ND	
106-99-0	1,3-Butadiene	1.25	6.29	ND	2.76	13.91	ND	
74-83-9	Bromomethane	1.25	6.29	ND	4.85	24.39	ND	
75-00-3	Chloroethane	1.25	6.29	ND	3.30	16.58	ND	
64-17-5	Ethanol	6.25	18.75	ND	11.78	35.34	ND	
75-69-4	Trichlorofluoromethane	1.25	6.00	ND	7.02	33.71	ND	
67-64-1	Acetone	6.25	15.38	9.39	14.84	36.52	22.31	J
67-63-0	2-propanol	6.25	14.35	ND	15.36	35.26	ND	
75-35-4	1,1-Dichloroethene	1.25	6.20	ND	4.95	24.56	ND	
76-13-1	Freon 113	1.25	5.98	ND	9.58	45.81	ND	
75-09-2	Dichloromethane	2.50	6.02	ND	8.68	20.89	ND	
75-15-0	Carbon disulfide	6.25	11.60	ND	19.44	36.09	ND	
156-60-5	trans-1,2-Dichloroethene	1.25	4.51	ND	4.95	17.88	ND	
1634-04-4	Methyl tert butyl ether	1.25	4.61	ND	4.50	16.60	ND	
75-34-3	1,1-Dichloroethane	1.25	6.23	ND	5.06	25.23	ND	
108-05-4	Vinyl acetate	1.25	5.49	ND	4.40	19.33	ND	
78-93-3	2-Butanone	5.00	12.73	ND	14.74	37.51	ND	
141-78-6	Ethyl acetate	2.50	5.48	ND	9.00	19.72	ND	
74-97-5	Bromochloromethane	1.25	3.33	ND	6.61	17.61	ND	
109-99-9	Tetrahydrofuran	2.50	6.29	ND	7.37	18.53	ND	
156-59-2	cis-1,2-Dichloroethene	2.50	6.73	ND	9.90	26.64	ND	
67-66-3	Chloroform	1.25	6.27	ND	6.10	30.60	ND	
71-55-6	1,1,1-Trichloroethane	1.25	5.55	ND	6.82	30.27	ND	
107-06-2	1,2-Dichloroethane	1.25	5.70	ND	5.06	23.08	ND	
110-82-7	Cyclohexane	1.26	4.80	ND	4.32	16.52	ND	
71-43-2	Benzene	1.25	6.35	6.84	3.99	20.27	21.85	
56-23-5	Carbon tetrachloride	1.25	5.93	ND	7.86	37.25	ND	
142-82-5	n-Heptane	6.25	15.15	8.41	25.60	62.06	34.46	J
78-87-5	1,2-Dichloropropane	1.25	6.02	ND	5.77	27.79	ND	
123-91-1	1,4 Dioxane	5.00	10.23	ND	18.01	36.83	ND	
79-01-6	Trichloroethene	0.75	5.82	ND	4.03	31.28	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-27-4	Bromodichloromethane	1.25	2.53	ND	8.37	16.91	ND	
80-62-6	Methyl methacrylate	5.00	16.90	ND	20.46	69.16	ND	
108-10-1	4-Methyl-2-pentanone	5.00	18.93	ND	20.48	77.52	ND	
10061-01-5	cis-1,3-Dichloropropene	1.25	6.48	ND	5.67	29.39	ND	
108-88-3	Toluene	2.50	6.53	ND	9.41	24.57	ND	
10061-02-6	trans-1,3-Dichloropropene	1.25	6.48	ND	5.67	29.42	ND	
79-00-5	1,1,2-Trichloroethane	1.25	6.43	ND	6.82	35.05	ND	
591-78-6	2-Hexanone	6.25	17.73	ND	25.60	72.60	ND	
124-48-1	Dibromochloromethane	1.25	2.50	ND	10.64	21.25	ND	
106-93-4	1,2-Dibromoethane	1.25	3.03	ND	9.60	23.30	ND	
127-18-4	Tetrachloroethene	0.75	3.04	ND	5.08	20.62	ND	
108-90-7	Chlorobenzene	1.25	5.69	ND	5.75	26.18	ND	
100-41-4	Ethylbenzene	2.64	6.61	ND	11.47	28.69	ND	
1330-20-7	m,p-Xylenes	2.65	6.62	ND	11.50	28.76	ND	
100-42-5	Styrene	2.59	6.47	ND	11.03	27.57	ND	
75-25-2	Bromoform	1.25	1.68	ND	12.91	17.33	ND	
95-47-6	o-Xylene	2.58	6.44	ND	11.19	27.97	ND	
79-34-5	1,1,2,2-Tetrachloroethane	1.24	3.09	ND	8.49	21.23	ND	
622-96-8	4-Ethyltoluene	4.14	10.36	ND	20.36	50.90	ND	
108-67-8	1,3,5-Trimethylbenzene	2.58	6.46	ND	12.69	31.73	ND	
95-63-6	1,2,4-Trimethylbenzene	2.54	6.35	2.61	12.49	31.21	12.85	J
541-73-1	1,3-Dichlorobenzene	2.50	4.63	ND	15.02	27.79	ND	
100-44-7	Benzyl chloride	2.50	15.15	ND	12.94	78.41	ND	
106-46-7	1,4-Dichlorobenzene	2.50	4.33	ND	15.02	25.99	ND	
95-50-1	1,2-Dichlorobenzene	2.50	4.05	ND	15.02	24.34	ND	
120-82-1	1,2,4-Trichlorobenzene	6.25	8.60	ND	46.35	63.77	ND	
91-20-3	Naphthalene	1.28	2.00	ND	6.68	10.48	ND	
87-68-3	Hexachlorobutadiene	6.25	6.63	ND	66.63	70.63	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				92	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217607
Laboratory Number: 09

File Name: 1760709A
Description: T - 709
Canister: 772
QC_Batch: 111617-GCK

Date Sampled: 11/01/17 Time: 17:11
Date Analyzed: 11/16/17 Time: 15:01
Can Factor: 1.25
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.25	3.75	ND	1.44	4.32	ND	ND
74-86-2	Acetylene	1.25	3.75	ND	1.33	4.00	ND	ND
74-84-0	Ethane	1.25	3.75	6.25	1.54	4.63	7.71	
115-07-1	Propene	0.83	2.50	ND	1.44	4.31	ND	ND
74-98-6	Propane	0.83	2.50	2.34	1.51	4.52	4.23	J
75-28-5	i-Butane	0.63	1.88	1.43	1.49	4.46	3.40	J
106-98-9	1-Butene	0.63	1.88	ND	1.44	4.31	ND	ND
106-97-8	n-Butane	0.63	1.88	2.63	1.49	4.46	6.26	
624-64-6	t-2-Butene	0.63	1.88	ND	1.44	4.31	ND	ND
590-18-1	c-2-Butene	0.63	1.88	ND	1.44	4.31	ND	ND
78-78-4	i-Pentane	0.50	1.50	13.59	1.48	4.44	40.22	
109-67-1	1-Pentene	0.50	1.50	ND	1.44	4.31	ND	ND
109-66-0	n-Pentane	0.50	1.50	7.10	1.48	4.43	20.97	
78-79-5	Isoprene	0.50	1.50	ND	1.40	4.19	ND	ND
646-04-8	t-2-Pentene	0.50	1.50	ND	1.44	4.31	ND	ND
627-20-3	c-2-Pentene	0.50	1.50	ND	1.44	4.31	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.25	ND	1.47	4.42	ND	ND
287-92-3	Cyclopentane	0.50	1.50	ND	1.44	4.31	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.25	ND	1.47	4.42	ND	ND
107-83-5	2-Methylpentane	0.42	1.25	18.80	1.47	4.42	66.43	
96-14-0	3-Methylpentane	0.42	1.25	17.51	1.47	4.42	61.86	
110-54-3	n-Hexane	0.42	1.25	11.00	1.47	4.42	38.87	
96-37-7	Methylcyclopentane	0.42	1.25	ND	1.44	4.31	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.07	23.06	1.47	4.40	94.68	
71-43-2	Benzene	0.42	1.25	18.63	1.33	4.00	59.64	
110-82-7	Cyclohexane	0.42	1.25	0.58	1.44	4.31	2.00	J
591-76-4	2-Methylhexane	0.36	1.07	10.29	1.47	4.40	42.25	
565-59-3	2,3-Dimethylpentane	0.36	1.07	10.22	1.47	4.40	41.99	
589-34-4	3-Methylhexane	0.36	1.07	20.60	1.47	4.40	84.60	
540-84-1	2,2,4-Trimethylpentane	0.31	0.94	29.02	1.46	4.39	135.80	
142-82-5	n-Heptane	0.36	1.07	11.81	1.47	4.40	48.50	
108-87-2	Methylcyclohexane	0.36	1.07	57.81	1.44	4.31	232.66	
592-13-2	2,5-Dimethylhexane	0.31	0.94	13.27	1.46	4.39	62.10	
589-43-5	2,4-Dimethylhexane	0.31	0.94	14.72	1.46	4.39	68.90	
565-75-3	2,3,4-Trimethylpentane	0.31	0.94	27.46	1.46	4.39	128.53	
108-88-3	Toluene	0.36	1.07	ND	1.35	4.04	ND	ND
584-94-1	2,3-Dimethylhexane	0.31	0.94	3.87	1.46	4.39	18.11	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.94	31.80	1.46	4.39	148.82	
589-81-1	3-Methylheptane	0.31	0.94	15.13	1.46	4.39	70.80	
111-65-9	n-Octane	0.31	0.94	13.37	1.46	4.39	62.60	
100-41-4	Ethylbenzene	0.31	0.94	17.65	1.36	4.08	76.83	
108-38-3	m,p-xylene	0.31	0.94	22.54	1.36	4.08	98.12	
100-42-5	Styrene	0.31	0.94	8.02	1.33	4.00	34.25	
95-47-6	o-xylene	0.31	0.94	12.29	1.36	4.08	53.49	
111-84-2	n-Nonane	0.28	0.83	16.67	1.46	4.38	87.67	
98-82-8	i-Propylbenzene	0.28	0.83	6.66	1.37	4.11	32.80	
103-65-1	n-propylbenzene	0.28	0.83	11.84	1.37	4.11	58.34	
80-56-8	a-Pinene	0.25	0.75	ND	1.40	4.19	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.83	9.85	1.37	4.11	48.50	
622-96-8	4-Ethyltoluene	0.28	0.83	14.78	1.37	4.11	72.80	
108-67-8	1,3,5-Trimethylbenzene	0.28	0.83	6.94	1.37	4.11	34.16	
611-14-3	2-Ethyltoluene	0.28	0.83	34.93	1.37	4.11	172.08	
127-91-3	b-Pinene	0.25	0.75	ND	1.40	4.19	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.83	21.72	1.37	4.11	107.01	
124-18-5	n-Decane	0.25	0.75	20.00	1.46	4.37	116.64	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.83	17.39	1.37	4.11	85.65	
5989-27-5	d-Limonene	0.25	0.75	ND	1.40	4.19	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.75	9.17	1.38	4.13	50.44	
105-05-5	1,4-Diethylbenzene	0.25	0.75	34.69	1.38	4.13	190.81	
104-51-8	n-Butylbenzene	0.25	0.75	ND	1.38	4.13	ND	ND
1120-21-4	Undecane	0.23	0.68	31.85	1.46	4.37	204.04	
112-40-3	Dodecane	0.21	0.63	13.85	1.45	4.36	96.67	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.38	28.13	2,453.00	33.12	99.36	8,665.92
TNMHC - C1	Total Non-Methane Hydrocarbons	56.25	168.75	14,718.00	36.89	110.66	9,651.14

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217607

Laboratory Number: 09

File Name: 760709PA

Date Sampled: 11/01/17 Time: 17:11

Description: T - 709

Date Analyzed: 11/15/17 Time: 12:56

Can/Tube#: 772

Can Dilution Factor: 1.25

QC_Batch: 111517-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.02	ND	125	250	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 217607

Laboratory Number: 09

File Name: 1760709A

Date Sampled: 11/01/17 Time: 17:11

Description: T - 709

Date Analyzed: 11/15/17 Time: 11:34

Can/Tube#: 772

Dilution Factor: 1.25

QC_Batch: 111517-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.25	0.75	1.91	0.17	0.51	1.29	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 217607

Analytical Method: TO-15

Laboratory ID: 10

File Name: 17607A.D

Date Sampled: 11/01/17

Time: 17:26

Description: T-710

Date Analyzed: 11/17/17

Time: 15:55

Canister: 805

Can Dilution Factor: 1.12

QC_Batch: 111717-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.28	1.41	ND	1.38	6.96	ND	
74-87-3	Chloromethane	0.28	1.41	ND	0.58	2.91	ND	
76-14-2	Freon 114	0.28	1.41	ND	1.96	9.84	ND	
75-01-4	Vinyl chloride	0.28	1.41	ND	0.72	3.60	ND	
106-99-0	1,3-Butadiene	0.28	1.41	ND	0.62	3.11	ND	
74-83-9	Bromomethane	0.28	1.41	ND	1.09	5.46	ND	
75-00-3	Chloroethane	0.28	1.41	ND	0.74	3.71	ND	
64-17-5	Ethanol	1.40	4.20	ND	2.64	7.92	ND	
75-69-4	Trichlorofluoromethane	0.28	1.34	ND	1.57	7.55	ND	
67-64-1	Acetone	1.40	3.44	2.21	3.33	8.18	5.25	J
67-63-0	2-propanol	1.40	3.21	ND	3.44	7.90	ND	
75-35-4	1,1-Dichloroethene	0.28	1.39	ND	1.11	5.50	ND	
76-13-1	Freon 113	0.28	1.34	ND	2.15	10.26	ND	
75-09-2	Dichloromethane	0.56	1.35	ND	1.94	4.68	ND	
75-15-0	Carbon disulfide	1.40	2.60	ND	4.36	8.08	ND	
156-60-5	trans-1,2-Dichloroethene	0.28	1.01	ND	1.11	4.00	ND	
1634-04-4	Methyl tert butyl ether	0.28	1.03	ND	1.01	3.72	ND	
75-34-3	1,1-Dichloroethane	0.28	1.40	ND	1.13	5.65	ND	
108-05-4	Vinyl acetate	0.28	1.23	ND	0.99	4.33	ND	
78-93-3	2-Butanone	1.12	2.85	ND	3.30	8.40	ND	
141-78-6	Ethyl acetate	0.56	1.23	ND	2.02	4.42	ND	
74-97-5	Bromochloromethane	0.28	0.75	ND	1.48	3.95	ND	
109-99-9	Tetrahydrofuran	0.56	1.41	ND	1.65	4.15	ND	
156-59-2	cis-1,2-Dichloroethene	0.56	1.51	ND	2.22	5.97	ND	
67-66-3	Chloroform	0.28	1.40	ND	1.37	6.85	ND	
71-55-6	1,1,1-Trichloroethane	0.28	1.24	ND	1.53	6.78	ND	
107-06-2	1,2-Dichloroethane	0.28	1.28	ND	1.13	5.17	ND	
110-82-7	Cyclohexane	0.28	1.08	ND	0.97	3.70	ND	
71-43-2	Benzene	0.28	1.42	1.20	0.89	4.54	3.84	J
56-23-5	Carbon tetrachloride	0.28	1.33	ND	1.76	8.34	ND	
142-82-5	n-Heptane	1.40	3.39	ND	5.73	13.90	ND	
78-87-5	1,2-Dichloropropane	0.28	1.35	ND	1.29	6.22	ND	
123-91-1	1,4 Dioxane	1.12	2.29	ND	4.03	8.25	ND	
79-01-6	Trichloroethene	0.17	1.30	ND	0.90	7.01	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-27-4	Bromodichloromethane	0.28	0.57	ND	1.87	3.79	ND	
80-62-6	Methyl methacrylate	1.12	3.79	ND	4.58	15.49	ND	
108-10-1	4-Methyl-2-pentanone	1.12	4.24	ND	4.59	17.36	ND	
10061-01-5	cis-1,3-Dichloropropene	0.28	1.45	ND	1.27	6.58	ND	
108-88-3	Toluene	0.56	1.46	ND	2.11	5.50	ND	
10061-02-6	trans-1,3-Dichloropropene	0.28	1.45	ND	1.27	6.59	ND	
79-00-5	1,1,2-Trichloroethane	0.28	1.44	ND	1.53	7.85	ND	
591-78-6	2-Hexanone	1.40	3.97	ND	5.73	16.26	ND	
124-48-1	Dibromochloromethane	0.28	0.56	ND	2.38	4.76	ND	
106-93-4	1,2-Dibromoethane	0.28	0.68	ND	2.15	5.22	ND	
127-18-4	Tetrachloroethene	0.17	0.68	ND	1.14	4.62	ND	
108-90-7	Chlorobenzene	0.28	1.27	ND	1.29	5.87	ND	
100-41-4	Ethylbenzene	0.59	1.48	ND	2.57	6.43	ND	
1330-20-7	m,p-Xylenes	0.59	1.48	ND	2.58	6.44	ND	
100-42-5	Styrene	0.58	1.45	ND	2.47	6.17	ND	
75-25-2	Bromoform	0.28	0.38	ND	2.89	3.88	ND	
95-47-6	o-Xylene	0.58	1.44	ND	2.51	6.27	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.28	0.69	ND	1.90	4.75	ND	
622-96-8	4-Ethyltoluene	0.93	2.32	ND	4.56	11.40	ND	
108-67-8	1,3,5-Trimethylbenzene	0.58	1.45	ND	2.84	7.11	ND	
95-63-6	1,2,4-Trimethylbenzene	0.57	1.42	ND	2.80	6.99	ND	
541-73-1	1,3-Dichlorobenzene	0.56	1.04	ND	3.37	6.23	ND	
100-44-7	Benzyl chloride	0.56	3.39	ND	2.90	17.56	ND	
106-46-7	1,4-Dichlorobenzene	0.56	0.97	ND	3.37	5.82	ND	
95-50-1	1,2-Dichlorobenzene	0.56	0.91	ND	3.37	5.45	ND	
120-82-1	1,2,4-Trichlorobenzene	1.40	1.93	ND	10.38	14.29	ND	
91-20-3	Naphthalene	0.29	0.45	ND	1.50	2.35	ND	
87-68-3	Hexachlorobutadiene	1.40	1.48	ND	14.93	15.82	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	88	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 217607

Laboratory Number: 10

File Name: 1760710A
Description: T - 710
Canister: 805
QC_Batch: 111617-GCK

Date Sampled: 11/01/17 Time: 17:26
Date Analyzed: 11/16/17 Time: 14:15
Can Factor: 1.12
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.12	3.36	ND	1.29	3.87	ND	ND
74-86-2	Acetylene	1.12	3.36	ND	1.19	3.58	ND	ND
74-84-0	Ethane	1.12	3.36	ND	1.38	4.14	ND	ND
115-07-1	Propene	0.75	2.24	ND	1.29	3.86	ND	ND
74-98-6	Propane	0.75	2.24	ND	1.35	4.05	ND	ND
75-28-5	i-Butane	0.56	1.68	ND	1.33	4.00	ND	ND
106-98-9	1-Butene	0.56	1.68	ND	1.29	3.86	ND	ND
106-97-8	n-Butane	0.56	1.68	ND	1.33	4.00	ND	ND
624-64-6	t-2-Butene	0.56	1.68	ND	1.29	3.86	ND	ND
590-18-1	c-2-Butene	0.56	1.68	ND	1.29	3.86	ND	ND
78-78-4	i-Pentane	0.45	1.34	ND	1.33	3.98	ND	ND
109-67-1	1-Pentene	0.45	1.34	ND	1.29	3.86	ND	ND
109-66-0	n-Pentane	0.45	1.34	ND	1.32	3.97	ND	ND
78-79-5	Isoprene	0.45	1.34	ND	1.25	3.75	ND	ND
646-04-8	t-2-Pentene	0.45	1.34	ND	1.29	3.86	ND	ND
627-20-3	c-2-Pentene	0.45	1.34	ND	1.29	3.86	ND	ND
75-83-2	2,2-Dimethylbutane	0.37	1.12	ND	1.32	3.96	ND	ND
287-92-3	Cyclopentane	0.45	1.34	ND	1.29	3.86	ND	ND
79-29-8	2,3-Dimethylbutane	0.37	1.12	ND	1.32	3.96	ND	ND
107-83-5	2-Methylpentane	0.37	1.12	ND	1.32	3.96	ND	ND
96-14-0	3-Methylpentane	0.37	1.12	ND	1.32	3.96	ND	ND
110-54-3	n-Hexane	0.37	1.12	ND	1.32	3.96	ND	ND
96-37-7	Methylcyclopentane	0.37	1.12	ND	1.29	3.86	ND	ND
108-08-7	2,4-Dimethylpentane	0.32	0.96	ND	1.31	3.94	ND	ND
71-43-2	Benzene	0.37	1.12	ND	1.19	3.58	ND	ND
110-82-7	Cyclohexane	0.37	1.12	ND	1.29	3.86	ND	ND
591-76-4	2-Methylhexane	0.32	0.96	ND	1.31	3.94	ND	ND
565-59-3	2,3-Dimethylpentane	0.32	0.96	ND	1.31	3.94	ND	ND
589-34-4	3-Methylhexane	0.32	0.96	ND	1.31	3.94	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.28	0.84	ND	1.31	3.93	ND	ND
142-82-5	n-Heptane	0.32	0.96	ND	1.31	3.94	ND	ND
108-87-2	Methylcyclohexane	0.32	0.96	ND	1.29	3.86	ND	ND
592-13-2	2,5-Dimethylhexane	0.28	0.84	ND	1.31	3.93	ND	ND
589-43-5	2,4-Dimethylhexane	0.28	0.84	ND	1.31	3.93	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.28	0.84	ND	1.31	3.93	ND	ND
108-88-3	Toluene	0.32	0.96	ND	1.21	3.62	ND	ND
584-94-1	2,3-Dimethylhexane	0.28	0.84	ND	1.31	3.93	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.28	0.84	ND	1.31	3.93	ND	ND
589-81-1	3-Methylheptane	0.28	0.84	ND	1.31	3.93	ND	ND
111-65-9	n-Octane	0.28	0.84	ND	1.31	3.93	ND	ND
100-41-4	Ethylbenzene	0.28	0.84	ND	1.22	3.66	ND	ND
108-38-3	m,p-xylene	0.28	0.84	ND	1.22	3.66	ND	ND
100-42-5	Styrene	0.28	0.84	ND	1.20	3.59	ND	ND
95-47-6	o-xylene	0.28	0.84	ND	1.22	3.66	ND	ND
111-84-2	n-Nonane	0.25	0.75	ND	1.31	3.93	ND	ND
98-82-8	i-Propylbenzene	0.25	0.75	ND	1.23	3.68	ND	ND
103-65-1	n-propylbenzene	0.25	0.75	ND	1.23	3.68	ND	ND
80-56-8	a-Pinene	0.22	0.67	ND	1.25	3.75	ND	ND
620-14-4	3-Ethyltoluene	0.25	0.75	ND	1.23	3.68	ND	ND
622-96-8	4-Ethyltoluene	0.25	0.75	ND	1.23	3.68	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.25	0.75	ND	1.23	3.68	ND	ND
611-14-3	2-Ethyltoluene	0.25	0.75	ND	1.23	3.68	ND	ND
127-91-3	b-Pinene	0.22	0.67	ND	1.25	3.75	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.25	0.75	ND	1.23	3.68	ND	ND
124-18-5	n-Decane	0.22	0.67	ND	1.31	3.92	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.25	0.75	ND	1.23	3.68	ND	ND
5989-27-5	d-Limonene	0.22	0.67	ND	1.25	3.75	ND	ND
141-93-5	1,3-Diethylbenzene	0.22	0.67	ND	1.23	3.70	ND	ND
105-05-5	1,4-Diethylbenzene	0.22	0.67	ND	1.23	3.70	ND	ND
104-51-8	n-Butylbenzene	0.22	0.67	ND	1.23	3.70	ND	ND
1120-21-4	Undecane	0.20	0.61	ND	1.30	3.91	ND	ND
112-40-3	Dodecane	0.19	0.56	ND	1.30	3.91	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.40	25.20	ND	29.68	89.03	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	50.40	151.20	ND	33.05	99.15	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 217607

Laboratory Number: 10

File Name: 760710PA

Date Sampled: 11/01/17

Time: 17:26

Description: T - 710

Date Analyzed: 11/15/17

Time: 12:49

Can/Tube#: 805

Can Dilution Factor: 1.12

QC_Batch: 111517-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.02	ND	112	224	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 217607

Laboratory Number: 10

File Name: 1760710A

Date Sampled: 11/01/17

Time: 17:26

Description: T - 710

Date Analyzed: 11/15/17

Time: 11:31

Can/Tube#: 805

Dilution Factor: 1.12

QC_Batch: 111517-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.22	0.67	0.59	0.15	0.45	0.40	J



Date of Report: 10/18/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1727588
Invoice ID: B281656

Enclosed are the results of analyses for samples received by the laboratory on 9/27/2017. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000657622

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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00b Day 1

CE Schmidt, P.L., Environmental Consultant
Chain of Custody Record

Form Serial Number: CES F1-02106
 Client Name: Dr. Charles E. Schmidt
 Air Resources Board
 Oilfield WW Emissions Assessment
 Project Manager: Luis Leyva
 916.323.1079
 Requested Completion Date: _____

For Information Regarding These Samples
 Please Contact:
 Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

Client Address and Phone Number
 1001 I Street
 Sacramento, CA 95814 800-242-4450

Laboratory Name: BC Laboratories
 Laboratory Address: 4100 Atlas Court
 Bakersfield, CA 93308
 Laboratory Phone: 661-327-4911
 Laboratory Contact: Ms. Kerrie Vaughn
 Kerrie.vaughn@bclabs.com

Station Number	Date	Time	C O R			Sample ID Number	#	Sample Container			Remarks	
			M	A	P			Val	Jar	Tube		
-1	9/26/2017	840	X			V-101	3	X				
-2	9/26/2017	933	X			V-102	3	X				
-3	9/26/2017	1125	X			V-103	3	X				
-4	9/26/2017	1330	X			V-104	3	X				
-5	9/26/2017	1330	X			V-105	3	X				
	9/26/2017		X			V-106	3	X				
	9/26/2017		X			V-107	3	X				
	9/26/2017		X			V-108	3	X				
	9/26/2017		X			V-109	3	X				

Analysis Requested: USEPA Method 8260b, USEPA Method 1664

HAZWRAP/NEESA Y N
 QC Level 1 2 3
 COC
 Ana Req
 Cust Seal
 Sample Condition

Relinquished by: [Signature] Date/Time: 9/27/17 1400
 Relinquished by: [Signature] Date/Time: 9/27/17 14:00
 Relinquished by: [Signature] Date/Time: 9/27/17 14:00

Sample Shipped Via: UPS, FEDEX, BUS, Other

Remarks: All Samples are in a Wastewater Matrix

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 17-27588

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Intact? Yes No Intact? Yes No Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 0.97 Container: VOA Thermometer ID: TH208 Date/Time: 9/27/17 14:00
 Temperature: (A) 9.7 °C / (C) 9.9 °C Analyst Init: YSV

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABC	ABC	ABC	ABC	ABC					
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____
 Sample Numbering Completed By: MA Date/Time: 9.29 0940 Rev 21 05/23/2016
 A = Actual / C = Corrected [S:\WPDoc\WordPerfect\LAB_DOC\FORMS\ISAMRECrev 20]



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1727588-01	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/26/2017 08:40
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-101	Lab Matrix:	Water
	Sampled By:	---	Sample Type:	Water
1727588-02	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/26/2017 09:33
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-102	Lab Matrix:	Water
	Sampled By:	---	Sample Type:	Water
1727588-03	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/26/2017 12:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-103	Lab Matrix:	Water
	Sampled By:	---	Sample Type:	Water
1727588-04	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/26/2017 13:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-104	Lab Matrix:	Water
	Sampled By:	---	Sample Type:	Water
1727588-05	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/26/2017 13:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-105	Lab Matrix:	Water
	Sampled By:	---	Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-01	Client Sample Name: V-101, 9/26/2017 8:40:00AM
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	2.2	ug/L	0.50	0.083	EPA-8260B	ND	Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-01		Client Sample Name: V-101, 9/26/2017 8:40:00AM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND	Z1	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
p-Isopropyltoluene	0.41	ug/L	0.50	0.12	EPA-8260B	ND	J,Z1	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Toluene	0.36	ug/L	0.50	0.093	EPA-8260B	ND	J,Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Total Xylenes	1.2	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	1.1	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	94.1	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-01 **Client Sample Name:** V-101, 9/26/2017 8:40:00AM

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8260B	10/05/17	10/06/17 08:28	AKM	MS-V14	1	BJ0482

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-02	Client Sample Name: V-102, 9/26/2017 9:33:00AM
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	290	ug/L	10	1.7	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01	2
Bromochloromethane	ND	ug/L	1.0	0.48	EPA-8260B	ND	A01	2
Bromodichloromethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01	2
Bromoform	ND	ug/L	1.0	0.54	EPA-8260B	ND	A01	2
Bromomethane	ND	ug/L	2.0	0.50	EPA-8260B	ND	A01	2
n-Butylbenzene	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01	2
sec-Butylbenzene	2.7	ug/L	1.0	0.30	EPA-8260B	ND	A01	2
tert-Butylbenzene	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01	2
Carbon tetrachloride	ND	ug/L	1.0	0.36	EPA-8260B	ND	A01	2
Chlorobenzene	ND	ug/L	1.0	0.19	EPA-8260B	ND	A01	2
Chloroethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01	2
Chloroform	ND	ug/L	1.0	0.24	EPA-8260B	ND	A01	2
Chloromethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01	2
2-Chlorotoluene	ND	ug/L	1.0	0.40	EPA-8260B	ND	A01	2
4-Chlorotoluene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01	2
Dibromochloromethane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01	2
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.88	EPA-8260B	ND	A01	2
1,2-Dibromoethane	ND	ug/L	1.0	0.32	EPA-8260B	ND	A01	2
Dibromomethane	ND	ug/L	1.0	0.48	EPA-8260B	ND	A01	2
1,2-Dichlorobenzene	ND	ug/L	1.0	0.14	EPA-8260B	ND	A01	2
1,3-Dichlorobenzene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01	2
1,4-Dichlorobenzene	ND	ug/L	1.0	0.12	EPA-8260B	ND	A01	2
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	EPA-8260B	ND	A01	2
1,1-Dichloroethane	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01	2
1,2-Dichloroethane	ND	ug/L	1.0	0.34	EPA-8260B	ND	A01	2
1,1-Dichloroethene	ND	ug/L	1.0	0.36	EPA-8260B	ND	A01	2
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01	2
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01	2
1,2-Dichloropropane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01	2
1,3-Dichloropropane	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01	2
2,2-Dichloropropane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01	2
1,1-Dichloropropene	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01	2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-02		Client Sample Name: V-102, 9/26/2017 9:33:00AM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01	2
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.16	EPA-8260B	ND	A01	2
Ethylbenzene	34	ug/L	1.0	0.20	EPA-8260B	ND	A01	2
Hexachlorobutadiene	ND	ug/L	1.0	0.34	EPA-8260B	ND	A01	2
Isopropylbenzene	9.9	ug/L	1.0	0.28	EPA-8260B	ND	A01	2
p-Isopropyltoluene	2.2	ug/L	1.0	0.24	EPA-8260B	ND	A01	2
Methylene chloride	ND	ug/L	2.0	0.96	EPA-8260B	ND	A01	2
Methyl t-butyl ether	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01	2
Naphthalene	71	ug/L	1.0	0.72	EPA-8260B	ND	A01	2
n-Propylbenzene	4.7	ug/L	1.0	0.22	EPA-8260B	ND	A01	2
Styrene	ND	ug/L	1.0	0.14	EPA-8260B	ND	A01	2
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.36	EPA-8260B	ND	A01	2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.34	EPA-8260B	ND	A01	2
Tetrachloroethene	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01	2
Toluene	110	ug/L	1.0	0.19	EPA-8260B	ND	A01	2
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.32	EPA-8260B	ND	A01	2
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.38	EPA-8260B	ND	A01	2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01	2
1,1,2-Trichloroethane	ND	ug/L	1.0	0.32	EPA-8260B	ND	A01	2
Trichloroethene	0.90	ug/L	1.0	0.17	EPA-8260B	ND	J,A01	2
Trichlorofluoromethane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01	2
1,2,3-Trichloropropane	ND	ug/L	2.0	0.48	EPA-8260B	ND	A01	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01	2
1,2,4-Trimethylbenzene	37	ug/L	1.0	0.24	EPA-8260B	ND	A01	2
1,3,5-Trimethylbenzene	9.9	ug/L	1.0	0.24	EPA-8260B	ND	A01	2
Vinyl chloride	ND	ug/L	1.0	0.24	EPA-8260B	ND	A01	2
Total Xylenes	150	ug/L	2.0	0.72	EPA-8260B	ND	A01	2
p- & m-Xylenes	110	ug/L	1.0	0.56	EPA-8260B	ND	A01	2
o-Xylene	42	ug/L	1.0	0.16	EPA-8260B	ND	A01	2
1,2-Dichloroethane-d4 (Surrogate)	78.5	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	88.9	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-02	Client Sample Name: V-102, 9/26/2017 9:33:00AM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	95.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/05/17	10/06/17 10:00	AKM	MS-V14	20	BJ0482
2	EPA-8260B	10/05/17	10/06/17 22:43	AKM	MS-V14	2	BJ0482

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Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-03	Client Sample Name: V-103, 9/26/2017 12:25:00PM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND	Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1

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Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-03		Client Sample Name: V-103, 9/26/2017 12:25:00PM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND	Z1	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Isopropylbenzene	0.14	ug/L	0.50	0.14	EPA-8260B	ND	J,Z1	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
n-Propylbenzene	0.19	ug/L	0.50	0.11	EPA-8260B	ND	J,Z1	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
1,3,5-Trimethylbenzene	0.14	ug/L	0.50	0.12	EPA-8260B	ND	J,Z1	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	93.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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19200 Live Oak Road
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Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-03 **Client Sample Name:** V-103, 9/26/2017 12:25:00PM

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8260B	10/05/17	10/06/17 08:51	AKM	MS-V14	1	BJ0482

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Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-04	Client Sample Name: V-104, 9/26/2017 1:30:00PM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND	Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1

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Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-04		Client Sample Name: V-104, 9/26/2017 1:30:00PM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND	Z1	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Isopropylbenzene	0.16	ug/L	0.50	0.14	EPA-8260B	ND	J,Z1	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
n-Propylbenzene	0.24	ug/L	0.50	0.11	EPA-8260B	ND	J,Z1	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
1,3,5-Trimethylbenzene	0.16	ug/L	0.50	0.12	EPA-8260B	ND	J,Z1	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	92.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-04	Client Sample Name: V-104, 9/26/2017 1:30:00PM
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/05/17	10/06/17 09:14	AKM	MS-V14	1	BJ0482

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Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-05	Client Sample Name: V-105, 9/26/2017 1:30:00PM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND	Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-05		Client Sample Name: V-105, 9/26/2017 1:30:00PM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND	Z1	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Isopropylbenzene	0.16	ug/L	0.50	0.14	EPA-8260B	ND	J,Z1	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
n-Propylbenzene	0.23	ug/L	0.50	0.11	EPA-8260B	ND	J,Z1	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
1,3,5-Trimethylbenzene	0.16	ug/L	0.50	0.12	EPA-8260B	ND	J,Z1	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	93.7	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727588-05 **Client Sample Name:** V-105, 9/26/2017 1:30:00PM

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8260B	10/05/17	10/06/17 09:37	AKM	MS-V14	1	BJ0482

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J0482						
Benzene	B[J0482-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B[J0482-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B[J0482-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B[J0482-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B[J0482-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B[J0482-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B[J0482-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B[J0482-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B[J0482-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B[J0482-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B[J0482-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B[J0482-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B[J0482-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B[J0482-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B[J0482-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B[J0482-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B[J0482-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B[J0482-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B[J0482-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B[J0482-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B[J0482-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B[J0482-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B[J0482-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B[J0482-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B[J0482-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B[J0482-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B[J0482-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B[J0482-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B[J0482-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B[J0482-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B[J0482-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B[J0482-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B[J0482-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B[J0482-BLK1	ND	ug/L	0.50	0.14	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J0482						
trans-1,3-Dichloropropene	B[J0482-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B[J0482-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B[J0482-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B[J0482-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B[J0482-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B[J0482-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B[J0482-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B[J0482-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B[J0482-BLK1	ND	ug/L	0.50	0.11	
Styrene	B[J0482-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B[J0482-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	B[J0482-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B[J0482-BLK1	ND	ug/L	0.50	0.13	
Toluene	B[J0482-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B[J0482-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B[J0482-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B[J0482-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B[J0482-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B[J0482-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B[J0482-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B[J0482-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B[J0482-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B[J0482-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B[J0482-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B[J0482-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B[J0482-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B[J0482-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B[J0482-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B[J0482-BLK1	97.4	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B[J0482-BLK1	100	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B[J0482-BLK1	97.2	%	80 - 120 (LCL - UCL)		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab	Quals
								Percent Recovery	RPD		
QC Batch ID: B[J0482											
Benzene	B[J0482-BS1	LCS	23.581	25.000	ug/L	94.3		70 - 130			
Bromodichloromethane	B[J0482-BS1	LCS	22.812	25.000	ug/L	91.2		70 - 130			
Chlorobenzene	B[J0482-BS1	LCS	25.228	25.000	ug/L	101		70 - 130			
Chloroethane	B[J0482-BS1	LCS	19.672	25.000	ug/L	78.7		70 - 130			
1,4-Dichlorobenzene	B[J0482-BS1	LCS	23.478	25.000	ug/L	93.9		70 - 130			
1,1-Dichloroethane	B[J0482-BS1	LCS	25.460	25.000	ug/L	102		70 - 130			
1,1-Dichloroethene	B[J0482-BS1	LCS	27.121	25.000	ug/L	108		70 - 130			
Toluene	B[J0482-BS1	LCS	24.000	25.000	ug/L	96.0		70 - 130			
Trichloroethene	B[J0482-BS1	LCS	26.420	25.000	ug/L	106		70 - 130			
1,2-Dichloroethane-d4 (Surrogate)	B[J0482-BS1	LCS	9.9000	10.000	ug/L	99.0		75 - 125			
Toluene-d8 (Surrogate)	B[J0482-BS1	LCS	9.8600	10.000	ug/L	98.6		80 - 120			
4-Bromofluorobenzene (Surrogate)	B[J0482-BS1	LCS	9.8000	10.000	ug/L	98.0		80 - 120			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[J0482		Used client sample: N								
Benzene	MS	1727393-01	ND	24.391	25.000	ug/L		97.6		70 - 130
	MSD	1727393-01	ND	24.729	25.000	ug/L	1.4	98.9	20	70 - 130
Bromodichloromethane	MS	1727393-01	ND	23.825	25.000	ug/L		95.3		70 - 130
	MSD	1727393-01	ND	24.367	25.000	ug/L	2.2	97.5	20	70 - 130
Chlorobenzene	MS	1727393-01	ND	25.511	25.000	ug/L		102		70 - 130
	MSD	1727393-01	ND	26.608	25.000	ug/L	4.2	106	20	70 - 130
Chloroethane	MS	1727393-01	ND	23.699	25.000	ug/L		94.8		70 - 130
	MSD	1727393-01	ND	20.037	25.000	ug/L	16.7	80.1	20	70 - 130
1,4-Dichlorobenzene	MS	1727393-01	ND	23.730	25.000	ug/L		94.9		70 - 130
	MSD	1727393-01	ND	25.153	25.000	ug/L	5.8	101	20	70 - 130
1,1-Dichloroethane	MS	1727393-01	ND	26.276	25.000	ug/L		105		70 - 130
	MSD	1727393-01	ND	26.564	25.000	ug/L	1.1	106	20	70 - 130
1,1-Dichloroethene	MS	1727393-01	ND	27.649	25.000	ug/L		111		70 - 130
	MSD	1727393-01	ND	28.611	25.000	ug/L	3.4	114	20	70 - 130
Toluene	MS	1727393-01	ND	24.841	25.000	ug/L		99.4		70 - 130
	MSD	1727393-01	ND	25.412	25.000	ug/L	2.3	102	20	70 - 130
Trichloroethene	MS	1727393-01	ND	26.009	25.000	ug/L		104		70 - 130
	MSD	1727393-01	ND	26.099	25.000	ug/L	0.3	104	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1727393-01	ND	9.7300	10.000	ug/L		97.3		75 - 125
	MSD	1727393-01	ND	9.8300	10.000	ug/L	1.0	98.3		75 - 125
Toluene-d8 (Surrogate)	MS	1727393-01	ND	9.8600	10.000	ug/L		98.6		80 - 120
	MSD	1727393-01	ND	10.020	10.000	ug/L	1.6	100		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1727393-01	ND	9.6800	10.000	ug/L		96.8		80 - 120
	MSD	1727393-01	ND	9.8700	10.000	ug/L	1.9	98.7		80 - 120

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A01 Detection and quantitation limits are raised due to sample dilution.
- Z1 10uL OF ANTIFAOMER SOLUTION ADDED TO SAMPLE VOA



Date of Report: 10/18/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1727589
Invoice ID: B281695

Enclosed are the results of analyses for samples received by the laboratory on 9/27/2017. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000657801

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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BC LABORATORIES INC. COOLER RECEIPT FORM Page () Of ()

Submission #: 1727589

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Intact? Yes No Intact? Yes No Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 0.97 Container: VOAs Thermometer ID: TH208 Date/Time: 9/27/17 14:00

Temperature: (A) 9.7 °C / (C) 9.9 °C Analyst Init: YSV

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABC	ABC	ABC	ABC	ABC	ABC	ABC	ABC		
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FEDLAR BAG										
FERROUS IRON										
INCORE										
MART KIT										
UMMA CANISTER										

Comments: _____

Sample Numbering Completed By: _____ Date/Time: 9/29 0940

= Actual / C = Corrected

Rev 21 05/23/2016 [S:\WPDoc\WordPerfect\LAB_DCS\FORMS\SAMRECrev 20]



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1727589-01	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/27/2017 08:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-201	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1727589-02	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/27/2017 10:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-202	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1727589-03	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/27/2017 10:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-203	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1727589-04	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/27/2017 12:47
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-204	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1727589-05	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/27/2017 14:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-205	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1727589-06	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/27/2017 14:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-206	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1727589-07	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/27/2017 14:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-207	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1727589-08	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/27/2017 15:20
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-208	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-01	Client Sample Name: V-201, 9/27/2017 8:55:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.48	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	0.35	ug/L	0.50	0.11	EPA-8260B	ND	J	1
sec-Butylbenzene	0.76	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-01		Client Sample Name: V-201, 9/27/2017 8:55:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.96	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	1.5	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.51	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	4.2	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	4.2	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	1.1	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	37	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	11	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	6.3	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	3.0	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	3.3	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-01	Client Sample Name: V-201, 9/27/2017 8:55:00AM, Chuck Schmidt
----------------------------------	--

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/06/17	10/07/17 17:08	MGC	MS-V5	1	BJ0625

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Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-02	Client Sample Name: V-202, 9/27/2017 10:00:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.19	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.22	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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19200 Live Oak Road
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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-02		Client Sample Name: V-202, 9/27/2017 10:00:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.53	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.41	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	0.92	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.42	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.32	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	1.1	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.26	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.16	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-02 **Client Sample Name:** V-202, 9/27/2017 10:00:00AM, Chuck Schmidt

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8260B	10/06/17	10/07/17 17:54	MGC	MS-V5	1	BJ0625

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Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-03	Client Sample Name: V-203, 9/27/2017 10:55:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.16	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.17	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-03		Client Sample Name: V-203, 9/27/2017 10:55:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.39	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.31	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.31	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.23	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.87	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.26	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.12	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-03	Client Sample Name: V-203, 9/27/2017 10:55:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/06/17	10/07/17 18:17	MGC	MS-V5	1	BJ0625

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-04	Client Sample Name: V-204, 9/27/2017 12:47:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.16	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-04		Client Sample Name: V-204, 9/27/2017 12:47:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.25	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.12	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-04	Client Sample Name: V-204, 9/27/2017 12:47:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/06/17	10/07/17 18:40	MGC	MS-V5	1	BJ0625

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-05	Client Sample Name: V-205, 9/27/2017 2:00:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.27	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-05		Client Sample Name: V-205, 9/27/2017 2:00:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.90	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.14	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.29	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.61	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	1.6	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.39	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	3.0	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	1.7	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	1.3	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.7	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-05 **Client Sample Name:** V-205, 9/27/2017 2:00:00PM, Chuck Schmidt

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/06/17	10/07/17	19:04	MGC	MS-V5	1	BJ0625

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-06	Client Sample Name: V-206, 9/27/2017 2:55:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.22	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-06		Client Sample Name: V-206, 9/27/2017 2:55:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.85	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.25	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.58	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	1.4	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.34	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	2.9	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	1.6	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	1.2	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-06	Client Sample Name: V-206, 9/27/2017 2:55:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/06/17	10/07/17	19:27	MGC	MS-V5	1	BJ0625

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-07	Client Sample Name: V-207, 9/27/2017 2:55:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.26	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-07		Client Sample Name: V-207, 9/27/2017 2:55:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	1.0	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.14	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.28	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.66	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	1.5	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.34	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	2.9	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	1.6	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	1.3	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.4	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-07	Client Sample Name: V-207, 9/27/2017 2:55:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/06/17	10/07/17 19:50	MGC	MS-V5	1	BJ0625

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-08	Client Sample Name: V-208, 9/27/2017 3:20:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	0.33	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-08		Client Sample Name: V-208, 9/27/2017 3:20:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	1.8	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727589-08	Client Sample Name: V-208, 9/27/2017 3:20:00PM, Chuck Schmidt
----------------------------------	--

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/06/17	10/07/17 20:13	MGC	MS-V5	1	BJ0625

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J0625						
Benzene	B[J0625-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B[J0625-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B[J0625-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B[J0625-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B[J0625-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B[J0625-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B[J0625-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B[J0625-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B[J0625-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B[J0625-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B[J0625-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B[J0625-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B[J0625-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B[J0625-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B[J0625-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B[J0625-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B[J0625-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B[J0625-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B[J0625-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B[J0625-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B[J0625-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B[J0625-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B[J0625-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B[J0625-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B[J0625-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B[J0625-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B[J0625-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B[J0625-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B[J0625-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B[J0625-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B[J0625-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B[J0625-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B[J0625-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B[J0625-BLK1	ND	ug/L	0.50	0.14	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J0625]						
trans-1,3-Dichloropropene	B[J0625-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B[J0625-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B[J0625-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B[J0625-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B[J0625-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B[J0625-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B[J0625-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B[J0625-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B[J0625-BLK1	ND	ug/L	0.50	0.11	
Styrene	B[J0625-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B[J0625-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	B[J0625-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B[J0625-BLK1	ND	ug/L	0.50	0.13	
Toluene	B[J0625-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B[J0625-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B[J0625-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B[J0625-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B[J0625-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B[J0625-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B[J0625-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B[J0625-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B[J0625-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B[J0625-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B[J0625-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B[J0625-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B[J0625-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B[J0625-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B[J0625-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B[J0625-BLK1	99.0	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B[J0625-BLK1	102	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B[J0625-BLK1	98.3	%	80 - 120 (LCL - UCL)		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[J0625										
Benzene	B[J0625-BS1	LCS	25.490	25.000	ug/L	102		70 - 130		
Bromodichloromethane	B[J0625-BS1	LCS	25.410	25.000	ug/L	102		70 - 130		
Chlorobenzene	B[J0625-BS1	LCS	24.310	25.000	ug/L	97.2		70 - 130		
Chloroethane	B[J0625-BS1	LCS	28.330	25.000	ug/L	113		70 - 130		
1,4-Dichlorobenzene	B[J0625-BS1	LCS	23.490	25.000	ug/L	94.0		70 - 130		
1,1-Dichloroethane	B[J0625-BS1	LCS	26.480	25.000	ug/L	106		70 - 130		
1,1-Dichloroethene	B[J0625-BS1	LCS	27.150	25.000	ug/L	109		70 - 130		
Toluene	B[J0625-BS1	LCS	25.690	25.000	ug/L	103		70 - 130		
Trichloroethene	B[J0625-BS1	LCS	24.940	25.000	ug/L	99.8		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B[J0625-BS1	LCS	9.2500	10.000	ug/L	92.5		75 - 125		
Toluene-d8 (Surrogate)	B[J0625-BS1	LCS	9.9700	10.000	ug/L	99.7		80 - 120		
4-Bromofluorobenzene (Surrogate)	B[J0625-BS1	LCS	10.080	10.000	ug/L	101		80 - 120		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
QC Batch ID: B[J0625		Used client sample: N								
Benzene	MS	1727406-04	ND	25.960	25.000	ug/L		104		70 - 130
	MSD	1727406-04	ND	26.460	25.000	ug/L	1.9	106	20	70 - 130
Bromodichloromethane	MS	1727406-04	ND	26.190	25.000	ug/L		105		70 - 130
	MSD	1727406-04	ND	25.880	25.000	ug/L	1.2	104	20	70 - 130
Chlorobenzene	MS	1727406-04	ND	22.900	25.000	ug/L		91.6		70 - 130
	MSD	1727406-04	ND	24.430	25.000	ug/L	6.5	97.7	20	70 - 130
Chloroethane	MS	1727406-04	ND	28.460	25.000	ug/L		114		70 - 130
	MSD	1727406-04	ND	29.010	25.000	ug/L	1.9	116	20	70 - 130
1,4-Dichlorobenzene	MS	1727406-04	ND	22.800	25.000	ug/L		91.2		70 - 130
	MSD	1727406-04	ND	23.630	25.000	ug/L	3.6	94.5	20	70 - 130
1,1-Dichloroethane	MS	1727406-04	ND	26.650	25.000	ug/L		107		70 - 130
	MSD	1727406-04	ND	27.480	25.000	ug/L	3.1	110	20	70 - 130
1,1-Dichloroethene	MS	1727406-04	ND	27.670	25.000	ug/L		111		70 - 130
	MSD	1727406-04	ND	28.370	25.000	ug/L	2.5	113	20	70 - 130
Toluene	MS	1727406-04	ND	25.750	25.000	ug/L		103		70 - 130
	MSD	1727406-04	ND	25.850	25.000	ug/L	0.4	103	20	70 - 130
Trichloroethene	MS	1727406-04	ND	25.290	25.000	ug/L		101		70 - 130
	MSD	1727406-04	ND	25.540	25.000	ug/L	1.0	102	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1727406-04	ND	9.5200	10.000	ug/L		95.2		75 - 125
	MSD	1727406-04	ND	9.7200	10.000	ug/L	2.1	97.2		75 - 125
Toluene-d8 (Surrogate)	MS	1727406-04	ND	9.9800	10.000	ug/L		99.8		80 - 120
	MSD	1727406-04	ND	10.000	10.000	ug/L	0.2	100		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1727406-04	ND	9.5500	10.000	ug/L		95.5		80 - 120
	MSD	1727406-04	ND	10.110	10.000	ug/L	5.7	101		80 - 120

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit

Date of Report: 10/18/2017

Chuck Schmidt

CE Schmidt

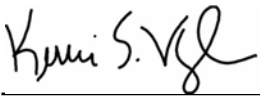
19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1727590
Invoice ID: B281696

Enclosed are the results of analyses for samples received by the laboratory on 9/28/2017. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000657825

Sincerely,



Contact Person: Kerrie Vaughan
Client Services



Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Job Day 3

CE Schmidt, P.E., Environmental Consultant Chain of Custody Record Form Serial Number CE5 F1-02106 Client Name Air Resources Board Offroad W/W Emissions Assessment Project Manager Luis Leyva 916.323.1079 Requested Completion Date		For information Regarding These Samples Please Contact: Dr. Charles E. Schmidt 19200 Live Oak Road, Red Bluff, CA 96080 530-529-4256 E-Mail: SCHMIDTCE@aol.com		Client Address and Phone Number 1007 I Street Sacramento, CA 95814 800-242-4450 Analysis Requested USEPA Method 1664 USEPA Method 8260b		Laboratory Name BC Laboratories Laboratory Address 4100 Atlas Court Bakersfield, CA 93308 Laboratory Phone 661-327-4911 Laboratory Contact Ms. Kerrie Vaughn Kerrie.vaughn@bclabs.com		Laboratory Name BC Laboratories Laboratory Address 4100 Atlas Court Bakersfield, CA 93308 Laboratory Phone 661-327-4911 Laboratory Contact Ms. Kerrie Vaughn Kerrie.vaughn@bclabs.com			
Station Number	Date	Time	C G	O R	M I A	P B	Sample ID Number	Sample Container			Remarks
								S	Vial	Tube	
1	9/28/2017	7:55	X				V-301 a/b/c	X	X		
2	9/28/2017	9:00	X				V-302 a/b/c	X	X		
3	9/28/2017	10:30	X				V-303 a/b/c	X	X		
4	9/28/2017	11:30	X				V-304 a/b/c	X	X		
5	9/28/2017	12:45	X				V-305 a/b/c	X	X		
6	9/28/2017	12:45	X				V-306 a/b/c	X	X		
7	9/28/2017	1:30	X				V-307 a/b/c	X	X		
	9/28/2017		X				V-308 a/b/c	X	X		
	9/28/2017		X				V-309 a/b/c	X	X		
Sampler	Date/Time	9/28/17 1:40									Relinquished by CSM
Received by	Date/Time	9/28/17 1:40									Relinquished by CSM
Received by	Date/Time	9/28/17 15:00									Relinquished by CSM
Received by Laboratory	Date/Time										Sample Shipped Via UPS FEDEX BUS Other
Remarks All Samples are in a Wastewater Matrix											

CHECK BY
 SUB-OUT
 DISTRIBUTION

File: ARB Forms 01.xisb Form: COC 8260b D3

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 2

Submission #: 17-27590

SHIPPING INFORMATION
Fed Ex [] UPS [] Ontrac [] Hand Delivery [X]
BC Lab Field Service [] Other [] (Specify) _____

SHIPPING CONTAINER
Ice Chest [X] None [] Box []
Other [] (Specify) _____

FREE LIQUID
YES [] NO []
(W) / S

Refrigerant: Ice [X] Blue Ice [] None [] Other [] Comments:

Custody Seals Ice Chest [] Containers [] None [X] Comments:
Intact? Yes [] No [] Intact? Yes [] No []

All samples received? Yes [X] No [] All samples containers intact? Yes [X] No [] Description(s) match COC? Yes [X] No []

COC Received
[X] YES [] NO

Emissivity: 95 Container: Amber Thermometer ID: 274 Date/Time: 9-28-17
Temperature: (A) 12.0 °C / (C) 11.4 °C Analyst Init: [Signature]

Table with columns for Sample Containers and Sample Numbers (1-10). Rows include various sample types like QT PE UNPRES, PT CYANIDE, etc. Handwritten 'ABC' is present in some cells.

Comments:
Sample Numbering Completed By: [Signature] Date/Time: 9-29-17 0945
= Actual / C = Corrected



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1727590-01	COC Number:	---	Receive Date:	09/28/2017 15:00
	Project Number:	---	Sampling Date:	09/28/2017 07:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-301	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1727590-02	COC Number:	---	Receive Date:	09/28/2017 15:00
	Project Number:	---	Sampling Date:	09/28/2017 09:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-302	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1727590-03	COC Number:	---	Receive Date:	09/28/2017 15:00
	Project Number:	---	Sampling Date:	09/28/2017 10:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-303	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1727590-04	COC Number:	---	Receive Date:	09/28/2017 15:00
	Project Number:	---	Sampling Date:	09/28/2017 11:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-304	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1727590-05	COC Number:	---	Receive Date:	09/28/2017 15:00
	Project Number:	---	Sampling Date:	09/28/2017 12:45
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-305	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1727590-06	COC Number:	---	Receive Date:	09/28/2017 15:00
	Project Number:	---	Sampling Date:	09/28/2017 12:45
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-306	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1727590-07	COC Number:	---	Receive Date:	09/28/2017 15:00
	Project Number:	---	Sampling Date:	09/28/2017 13:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-307	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-01	Client Sample Name: V-301, 9/28/2017 7:55:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.18	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-01		Client Sample Name: V-301, 9/28/2017 7:55:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.23	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.37	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	1.6	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	2.8	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.55	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	2.0	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	1.0	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.96	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-01	Client Sample Name: V-301, 9/28/2017 7:55:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/06/17	10/07/17 20:36	MGC	MS-V5	1	BJ0627

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-02	Client Sample Name: V-302, 9/28/2017 9:00:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.11	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-02		Client Sample Name: V-302, 9/28/2017 9:00:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.15	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.22	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.91	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	1.8	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.38	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	1.3	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	0.65	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.64	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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19200 Live Oak Road
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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-02	Client Sample Name: V-302, 9/28/2017 9:00:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/06/17	10/07/17 21:00	MGC	MS-V5	1	BJ0627

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-03	Client Sample Name: V-303, 9/28/2017 10:30:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.10	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-03		Client Sample Name: V-303, 9/28/2017 10:30:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-03	Client Sample Name: V-303, 9/28/2017 10:30:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/06/17	10/07/17 21:23	MGC	MS-V5	1	BJ0627

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-04	Client Sample Name: V-304, 9/28/2017 11:30:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-04		Client Sample Name: V-304, 9/28/2017 11:30:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	0.40	ug/L	1.0	0.36	EPA-8260B	ND	J	1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.14	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-04	Client Sample Name: V-304, 9/28/2017 11:30:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/06/17	10/07/17 22:56	MGC	MS-V5	1	BJ0627

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-05	Client Sample Name: V-305, 9/28/2017 12:45:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-05		Client Sample Name: V-305, 9/28/2017 12:45:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.12	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.10	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-05 **Client Sample Name:** V-305, 9/28/2017 12:45:00PM, Chuck Schmidt

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8260B	10/06/17	10/07/17 21:46	MGC	MS-V5	1	BJ0627

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-06	Client Sample Name: V-306, 9/28/2017 12:45:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-06		Client Sample Name: V-306, 9/28/2017 12:45:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.10	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.10	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-06	Client Sample Name: V-306, 9/28/2017 12:45:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/06/17	10/07/17 22:09	MGC	MS-V5	1	BJ0627

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-07	Client Sample Name: V-307, 9/28/2017 1:10:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-07		Client Sample Name: V-307, 9/28/2017 1:10:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1727590-07	Client Sample Name: V-307, 9/28/2017 1:10:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/06/17	10/07/17 22:32	MGC	MS-V5	1	BJ0627

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J0627						
Benzene	B[J0627-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B[J0627-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B[J0627-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B[J0627-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B[J0627-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B[J0627-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B[J0627-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B[J0627-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B[J0627-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B[J0627-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B[J0627-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B[J0627-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B[J0627-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B[J0627-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B[J0627-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B[J0627-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B[J0627-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B[J0627-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B[J0627-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B[J0627-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B[J0627-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B[J0627-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B[J0627-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B[J0627-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B[J0627-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B[J0627-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B[J0627-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B[J0627-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B[J0627-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B[J0627-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B[J0627-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B[J0627-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B[J0627-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B[J0627-BLK1	ND	ug/L	0.50	0.14	

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J0627						
trans-1,3-Dichloropropene	B[J0627-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B[J0627-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B[J0627-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B[J0627-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B[J0627-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B[J0627-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B[J0627-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B[J0627-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B[J0627-BLK1	ND	ug/L	0.50	0.11	
Styrene	B[J0627-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B[J0627-BLK1	ND	ug/L	0.50	0.18	
1,1,1,2,2-Tetrachloroethane	B[J0627-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B[J0627-BLK1	ND	ug/L	0.50	0.13	
Toluene	B[J0627-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B[J0627-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B[J0627-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B[J0627-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B[J0627-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B[J0627-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B[J0627-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B[J0627-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B[J0627-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B[J0627-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B[J0627-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B[J0627-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B[J0627-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B[J0627-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B[J0627-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B[J0627-BLK1	104	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B[J0627-BLK1	102	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B[J0627-BLK1	102	%	80 - 120 (LCL - UCL)		

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Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[J0627										
Benzene	B[J0627-BS1	LCS	24.610	25.000	ug/L	98.4		70 - 130		
Bromodichloromethane	B[J0627-BS1	LCS	25.480	25.000	ug/L	102		70 - 130		
Chlorobenzene	B[J0627-BS1	LCS	23.430	25.000	ug/L	93.7		70 - 130		
Chloroethane	B[J0627-BS1	LCS	26.190	25.000	ug/L	105		70 - 130		
1,4-Dichlorobenzene	B[J0627-BS1	LCS	22.950	25.000	ug/L	91.8		70 - 130		
1,1-Dichloroethane	B[J0627-BS1	LCS	25.700	25.000	ug/L	103		70 - 130		
1,1-Dichloroethene	B[J0627-BS1	LCS	26.370	25.000	ug/L	105		70 - 130		
Toluene	B[J0627-BS1	LCS	24.370	25.000	ug/L	97.5		70 - 130		
Trichloroethene	B[J0627-BS1	LCS	28.710	25.000	ug/L	115		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B[J0627-BS1	LCS	10.150	10.000	ug/L	102		75 - 125		
Toluene-d8 (Surrogate)	B[J0627-BS1	LCS	9.8400	10.000	ug/L	98.4		80 - 120		
4-Bromofluorobenzene (Surrogate)	B[J0627-BS1	LCS	10.320	10.000	ug/L	103		80 - 120		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	Percent Recovery		Control Limits		Lab Quals
							RPD	Percent Recovery	RPD	Percent Recovery	
QC Batch ID: B[J0627		Used client sample: N									
Benzene	MS	1728213-02	ND	26.550	25.000	ug/L		106		70 - 130	
	MSD	1728213-02	ND	26.660	25.000	ug/L	0.4	107	20	70 - 130	
Bromodichloromethane	MS	1728213-02	1.9200	28.610	25.000	ug/L		107		70 - 130	
	MSD	1728213-02	1.9200	30.340	25.000	ug/L	5.9	114	20	70 - 130	
Chlorobenzene	MS	1728213-02	ND	24.950	25.000	ug/L		99.8		70 - 130	
	MSD	1728213-02	ND	24.620	25.000	ug/L	1.3	98.5	20	70 - 130	
Chloroethane	MS	1728213-02	ND	27.890	25.000	ug/L		112		70 - 130	
	MSD	1728213-02	ND	28.020	25.000	ug/L	0.5	112	20	70 - 130	
1,4-Dichlorobenzene	MS	1728213-02	ND	24.010	25.000	ug/L		96.0		70 - 130	
	MSD	1728213-02	ND	23.760	25.000	ug/L	1.0	95.0	20	70 - 130	
1,1-Dichloroethane	MS	1728213-02	ND	27.150	25.000	ug/L		109		70 - 130	
	MSD	1728213-02	ND	27.920	25.000	ug/L	2.8	112	20	70 - 130	
1,1-Dichloroethene	MS	1728213-02	ND	28.330	25.000	ug/L		113		70 - 130	
	MSD	1728213-02	ND	28.440	25.000	ug/L	0.4	114	20	70 - 130	
Toluene	MS	1728213-02	ND	25.630	25.000	ug/L		103		70 - 130	
	MSD	1728213-02	ND	26.980	25.000	ug/L	5.1	108	20	70 - 130	
Trichloroethene	MS	1728213-02	ND	24.680	25.000	ug/L		98.7		70 - 130	
	MSD	1728213-02	ND	25.980	25.000	ug/L	5.1	104	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1728213-02	ND	10.090	10.000	ug/L		101		75 - 125	
	MSD	1728213-02	ND	10.040	10.000	ug/L	0.5	100		75 - 125	
Toluene-d8 (Surrogate)	MS	1728213-02	ND	9.5800	10.000	ug/L		95.8		80 - 120	
	MSD	1728213-02	ND	9.9000	10.000	ug/L	3.3	99.0		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1728213-02	ND	10.330	10.000	ug/L		103		80 - 120	
	MSD	1728213-02	ND	9.9300	10.000	ug/L	3.9	99.3		80 - 120	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 17:22
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 10/23/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1729087
Invoice ID: B283041

Enclosed are the results of analyses for samples received by the laboratory on 10/11/2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 17-29087

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____

Intact? Yes No Intact? Yes No

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 0.7 Container: VOA Thermometer ID: 274 Date/Time: 10.11.17

Temperature: (A) 12.8 °C / (C) 13.0 °C Analyst Init: AD 11.24

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABC	ABC	ABC	ABC	ABC	ABC	ABC	ABC		
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: M Date/Time: 10/11 0914 Rev 21 05/23/2016

A = Actual / C = Corrected (S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMRECrev 20)



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1729087-01	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 11:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-401 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729087-02	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 11:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-402 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729087-03	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 12:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-403 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729087-04	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 12:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-404 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729087-05	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 15:07
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-405 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729087-06	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 15:07
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-406 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729087-07	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 16:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-407 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1729087-08	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 16:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-408 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-01	Client Sample Name: V-401 a/b/c, 10/10/2017 11:00:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	2.0	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-01		Client Sample Name: V-401 a/b/c, 10/10/2017 11:00:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.46	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	1.0	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.35	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.14	ug/L	0.50	0.12	EPA-8260B	ND	J	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	0.44	ug/L	1.0	0.36	EPA-8260B	ND	J	1
p- & m-Xylenes	0.29	ug/L	0.50	0.28	EPA-8260B	ND	J	1
o-Xylene	0.15	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-01	Client Sample Name: V-401 a/b/c, 10/10/2017 11:00:00AM, Chuck Schmidt
----------------------------------	--

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/18/17	10/21/17 09:03	MGC	MS-V5	1	BJ1896

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-02	Client Sample Name: V-402 a/b/c, 10/10/2017 11:00:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	1.1	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-02		Client Sample Name: V-402 a/b/c, 10/10/2017 11:00:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.29	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.24	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.11	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	107	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-02	Client Sample Name: V-402 a/b/c, 10/10/2017 11:00:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/18/17	10/21/17 09:26	MGC	MS-V5	1	BJ1896

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-03	Client Sample Name: V-403 a/b/c, 10/10/2017 12:05:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	8.2	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-03		Client Sample Name: V-403 a/b/c, 10/10/2017 12:05:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	2.0	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.59	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	2.5	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	1.5	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.21	ug/L	0.50	0.12	EPA-8260B	ND	J	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	0.95	ug/L	1.0	0.36	EPA-8260B	ND	J	1
p- & m-Xylenes	0.60	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.35	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	107	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-03	Client Sample Name: V-403 a/b/c, 10/10/2017 12:05:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/18/17	10/21/17 09:49	MGC	MS-V5	1	BJ1896

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-04	Client Sample Name: V-404 a/b/c, 10/10/2017 12:05:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	7.3	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-04		Client Sample Name: V-404 a/b/c, 10/10/2017 12:05:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	1.7	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.41	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	2.2	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.23	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	1.5	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.20	ug/L	0.50	0.12	EPA-8260B	ND	J	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	0.77	ug/L	1.0	0.36	EPA-8260B	ND	J	1
p- & m-Xylenes	0.47	ug/L	0.50	0.28	EPA-8260B	ND	J	1
o-Xylene	0.30	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-04	Client Sample Name: V-404 a/b/c, 10/10/2017 12:05:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/18/17	10/21/17	10:12	MGC	MS-V5	1	BJ1896

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-05	Client Sample Name: V-405 a/b/c, 10/10/2017 3:07:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	2.0	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	0.11	ug/L	0.50	0.11	EPA-8260B	ND	J	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-05	Client Sample Name: V-405 a/b/c, 10/10/2017 3:07:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	3.6	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.34	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	0.98	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.32	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	1.4	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	2.1	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.52	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	15	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	10	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	4.8	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-05	Client Sample Name: V-405 a/b/c, 10/10/2017 3:07:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/18/17	10/21/17	10:36	MGC	MS-V5	1	BJ1896

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-06	Client Sample Name: V-406 a/b/c, 10/10/2017 3:07:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	1.9	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	0.13	ug/L	0.50	0.11	EPA-8260B	ND	J	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-06		Client Sample Name: V-406 a/b/c, 10/10/2017 3:07:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	3.5	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.34	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	0.98	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.31	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	1.3	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	2.2	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.44	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	15	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	11	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	4.8	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-06	Client Sample Name: V-406 a/b/c, 10/10/2017 3:07:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/18/17	10/21/17	10:59	MGC	MS-V5	1	BJ1896

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Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-07	Client Sample Name: V-407 a/b/c, 10/10/2017 4:10:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	1.2	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-07		Client Sample Name: V-407 a/b/c, 10/10/2017 4:10:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	1.5	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	1.1	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.69	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.54	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.12	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	7.1	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	4.8	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	2.2	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-07 **Client Sample Name:** V-407 a/b/c, 10/10/2017 4:10:00PM, Chuck Schmidt

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/18/17	10/21/17	11:22	MGC	MS-V5	1	BJ1896

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-08	Client Sample Name: V-408 a/b/c, 10/10/2017 4:10:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	1.0	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-08		Client Sample Name: V-408 a/b/c, 10/10/2017 4:10:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	1.2	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	1.2	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.59	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.59	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	6.3	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	4.3	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	2.0	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729087-08	Client Sample Name: V-408 a/b/c, 10/10/2017 4:10:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/18/17	10/21/17 11:45	MGC	MS-V5	1	BJ1896

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J1896						
Benzene	B[J1896-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B[J1896-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B[J1896-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B[J1896-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B[J1896-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B[J1896-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B[J1896-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B[J1896-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B[J1896-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B[J1896-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B[J1896-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B[J1896-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B[J1896-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B[J1896-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B[J1896-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B[J1896-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B[J1896-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B[J1896-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B[J1896-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B[J1896-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B[J1896-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B[J1896-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B[J1896-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B[J1896-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B[J1896-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B[J1896-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B[J1896-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B[J1896-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B[J1896-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B[J1896-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B[J1896-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B[J1896-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B[J1896-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B[J1896-BLK1	ND	ug/L	0.50	0.14	

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J1896						
trans-1,3-Dichloropropene	B[J1896-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B[J1896-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B[J1896-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B[J1896-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B[J1896-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B[J1896-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B[J1896-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B[J1896-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B[J1896-BLK1	ND	ug/L	0.50	0.11	
Styrene	B[J1896-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B[J1896-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	B[J1896-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B[J1896-BLK1	ND	ug/L	0.50	0.13	
Toluene	B[J1896-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B[J1896-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B[J1896-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B[J1896-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B[J1896-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B[J1896-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B[J1896-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B[J1896-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B[J1896-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B[J1896-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B[J1896-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B[J1896-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B[J1896-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B[J1896-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B[J1896-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B[J1896-BLK1	114	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B[J1896-BLK1	99.3	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B[J1896-BLK1	101	%	80 - 120 (LCL - UCL)		

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[J1896										
Benzene	B[J1896-BS1	LCS	25.650	25.000	ug/L	103		70 - 130		
Bromodichloromethane	B[J1896-BS1	LCS	26.820	25.000	ug/L	107		70 - 130		
Chlorobenzene	B[J1896-BS1	LCS	25.100	25.000	ug/L	100		70 - 130		
Chloroethane	B[J1896-BS1	LCS	26.960	25.000	ug/L	108		70 - 130		
1,4-Dichlorobenzene	B[J1896-BS1	LCS	24.510	25.000	ug/L	98.0		70 - 130		
1,1-Dichloroethane	B[J1896-BS1	LCS	25.670	25.000	ug/L	103		70 - 130		
1,1-Dichloroethene	B[J1896-BS1	LCS	26.000	25.000	ug/L	104		70 - 130		
Toluene	B[J1896-BS1	LCS	25.890	25.000	ug/L	104		70 - 130		
Trichloroethene	B[J1896-BS1	LCS	28.810	25.000	ug/L	115		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B[J1896-BS1	LCS	10.730	10.000	ug/L	107		75 - 125		
Toluene-d8 (Surrogate)	B[J1896-BS1	LCS	10.210	10.000	ug/L	102		80 - 120		
4-Bromofluorobenzene (Surrogate)	B[J1896-BS1	LCS	10.160	10.000	ug/L	102		80 - 120		

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Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery		Lab
								RPD	Percent Recovery	
QC Batch ID: BJ1896		Used client sample: N								
Benzene	MS	1728792-01	ND	27.070	25.000	ug/L		108		70 - 130
	MSD	1728792-01	ND	26.800	25.000	ug/L	1.0	107	20	70 - 130
Bromodichloromethane	MS	1728792-01	ND	28.220	25.000	ug/L		113		70 - 130
	MSD	1728792-01	ND	27.890	25.000	ug/L	1.2	112	20	70 - 130
Chlorobenzene	MS	1728792-01	ND	26.280	25.000	ug/L		105		70 - 130
	MSD	1728792-01	ND	25.620	25.000	ug/L	2.5	102	20	70 - 130
Chloroethane	MS	1728792-01	ND	28.700	25.000	ug/L		115		70 - 130
	MSD	1728792-01	ND	28.900	25.000	ug/L	0.7	116	20	70 - 130
1,4-Dichlorobenzene	MS	1728792-01	ND	25.690	25.000	ug/L		103		70 - 130
	MSD	1728792-01	ND	25.510	25.000	ug/L	0.7	102	20	70 - 130
1,1-Dichloroethane	MS	1728792-01	1.5400	28.780	25.000	ug/L		109		70 - 130
	MSD	1728792-01	1.5400	28.360	25.000	ug/L	1.5	107	20	70 - 130
1,1-Dichloroethene	MS	1728792-01	ND	27.380	25.000	ug/L		110		70 - 130
	MSD	1728792-01	ND	27.900	25.000	ug/L	1.9	112	20	70 - 130
Toluene	MS	1728792-01	ND	26.500	25.000	ug/L		106		70 - 130
	MSD	1728792-01	ND	26.670	25.000	ug/L	0.6	107	20	70 - 130
Trichloroethene	MS	1728792-01	0.57000	26.330	25.000	ug/L		103		70 - 130
	MSD	1728792-01	0.57000	26.110	25.000	ug/L	0.8	102	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1728792-01	ND	11.460	10.000	ug/L		115		75 - 125
	MSD	1728792-01	ND	10.770	10.000	ug/L	6.2	108		75 - 125
Toluene-d8 (Surrogate)	MS	1728792-01	ND	10.430	10.000	ug/L		104		80 - 120
	MSD	1728792-01	ND	10.250	10.000	ug/L	1.7	102		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1728792-01	ND	10.270	10.000	ug/L		103		80 - 120
	MSD	1728792-01	ND	10.040	10.000	ug/L	2.3	100		80 - 120

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/23/2017 12:42
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 10/25/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1729085
Invoice ID: B283371

Enclosed are the results of analyses for samples received by the laboratory on 10/11/2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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---30b Day 2

CE Schmidt, P.E., Environmental Consultant

Form Serial Number CES-FI-02106
Client Name Air Resources Board
Project Manager Luis Loyva
Requested Completion Date 17-29085

Client Address and Phone Number 1001 I Street Sacramento, CA 95814 800-242-4450
Laboratory Name BC Laboratories
Laboratory Address 4100 Atlas Court Bakersfield, CA 93308

Table with columns for Station Number, Date, Time, Sample ID Number, and Remarks. Includes handwritten entries for stations 1-7 and a 'CHECK BY DISTRIBUTION' stamp.

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3C LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 1729085

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____

Intact? Yes No Intact? Yes No

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 0.7 Container: VOA Thermometer ID: 274 Date/Time: 10.11.17

Temperature: (A) 12.8 °C / (C) 13.0 °C Analyst Init: AD 10.24

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	ABC	ABC	ABC	ABC	ABC	ABC	ABC			
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: M Date/Time: 10/11 0919

A = Actual / C = Corrected

Rev 21 05/23/2016 [S:\WP\Doc\WordPerfect\LAB_DOCS\FORMS\SAMRECrev 20]



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	
1729085-01	COC Number:	---		10/11/2017 16:24	
	Project Number:	---		Sampling Date:	10/11/2017 08:55
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-501 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1729085-02	COC Number:	---		10/11/2017 16:24	
	Project Number:	---		Sampling Date:	10/11/2017 09:25
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-502 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1729085-03	COC Number:	---		10/11/2017 16:24	
	Project Number:	---		Sampling Date:	10/11/2017 11:30
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-503 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1729085-04	COC Number:	---		10/11/2017 16:24	
	Project Number:	---		Sampling Date:	10/11/2017 13:30
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-504 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1729085-05	COC Number:	---		10/11/2017 16:24	
	Project Number:	---		Sampling Date:	10/11/2017 13:30
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-505 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1729085-06	COC Number:	---		10/11/2017 16:24	
	Project Number:	---		Sampling Date:	10/11/2017 14:25
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-506 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1729085-07	COC Number:	---		10/11/2017 16:24	
	Project Number:	---		Sampling Date:	10/11/2017 14:45
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-507 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-01	Client Sample Name: V-501 a/b/c, 10/11/2017 8:55:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	22	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.22	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-01		Client Sample Name: V-501 a/b/c, 10/11/2017 8:55:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	9.9	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	1.2	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.34	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	10	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	1.2	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	52	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	7.2	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	1.8	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	36	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	23	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	13	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-01	Client Sample Name: V-501 a/b/c, 10/11/2017 8:55:00AM, Chuck Schmidt
----------------------------------	---

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/24/17	10/24/17	13:12	MGC	MS-V5	1	BJJ2450

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-02	Client Sample Name: V-502 a/b/c, 10/11/2017 9:25:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	36	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.38	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-02		Client Sample Name: V-502 a/b/c, 10/11/2017 9:25:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	18	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	2.2	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.63	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	13	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	2.2	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	72	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	12	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	3.2	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	61	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	41	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	21	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-02	Client Sample Name: V-502 a/b/c, 10/11/2017 9:25:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/24/17	10/24/17	13:35	MGC	MS-V5	1	BJJ2450

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-03	Client Sample Name: V-503 a/b/c, 10/11/2017 11:30:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	13	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.33	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	0.24	ug/L	0.50	0.13	EPA-8260B	ND	J	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-03		Client Sample Name: V-503 a/b/c, 10/11/2017 11:30:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	12	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	1.8	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	11	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.52	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	3.6	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.73	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.16	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	24	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	16	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	7.4	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-03	Client Sample Name: V-503 a/b/c, 10/11/2017 11:30:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/24/17	10/24/17	13:58	MGC	MS-V5	1	BJJ2450

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-04	Client Sample Name: V-504 a/b/c, 10/11/2017 1:30:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	12	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.23	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-04		Client Sample Name: V-504 a/b/c, 10/11/2017 1:30:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	11	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	1.3	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.15	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	14	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	1.0	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	8.6	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	4.6	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	1.1	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	11	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	6.1	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	4.9	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.2	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-04	Client Sample Name: V-504 a/b/c, 10/11/2017 1:30:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/24/17	10/24/17	14:22	MGC	MS-V5	1	BJJ2450

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-05	Client Sample Name: V-505 a/b/c, 10/11/2017 1:30:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	12	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.23	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Red Bluff, CA 96080

Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-05		Client Sample Name: V-505 a/b/c, 10/11/2017 1:30:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	11	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	1.5	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.15	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	14	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	1.0	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	9.1	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	4.8	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	1.1	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	12	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	6.4	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	5.1	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	92.9	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-05	Client Sample Name: V-505 a/b/c, 10/11/2017 1:30:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/24/17	10/24/17 14:45	MGC	MS-V5	1	BJJ2450

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-06	Client Sample Name: V-506 a/b/c, 10/11/2017 2:25:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	12	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.24	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-06		Client Sample Name: V-506 a/b/c, 10/11/2017 2:25:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	12	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	1.6	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.18	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	15	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	1.2	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	9.2	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	5.1	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	1.3	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	11	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	6.1	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	5.0	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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19200 Live Oak Road
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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-06 **Client Sample Name:** V-506 a/b/c, 10/11/2017 2:25:00PM, Chuck Schmidt

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/24/17	10/24/17	15:08	MGC	MS-V5	1	BJJ2450

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-07	Client Sample Name: V-507 a/b/c, 10/11/2017 2:45:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	0.30	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-07	Client Sample Name: V-507 a/b/c, 10/11/2017 2:45:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	1.2	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	91.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729085-07	Client Sample Name: V-507 a/b/c, 10/11/2017 2:45:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/24/17	10/24/17	15:31	MGC	MS-V5	1	BJJ2450

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J2450						
Benzene	B[J2450-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B[J2450-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B[J2450-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B[J2450-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B[J2450-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B[J2450-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B[J2450-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B[J2450-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B[J2450-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B[J2450-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B[J2450-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B[J2450-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B[J2450-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B[J2450-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B[J2450-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B[J2450-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B[J2450-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B[J2450-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B[J2450-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B[J2450-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B[J2450-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B[J2450-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B[J2450-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B[J2450-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B[J2450-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B[J2450-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B[J2450-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B[J2450-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B[J2450-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B[J2450-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B[J2450-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B[J2450-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B[J2450-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B[J2450-BLK1	ND	ug/L	0.50	0.14	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J2450						
trans-1,3-Dichloropropene	B[J2450-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B[J2450-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B[J2450-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B[J2450-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B[J2450-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B[J2450-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B[J2450-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B[J2450-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B[J2450-BLK1	ND	ug/L	0.50	0.11	
Styrene	B[J2450-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B[J2450-BLK1	ND	ug/L	0.50	0.18	
1,1,1,2-Tetrachloroethane	B[J2450-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethane	B[J2450-BLK1	ND	ug/L	0.50	0.13	
Toluene	B[J2450-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B[J2450-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B[J2450-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B[J2450-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B[J2450-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B[J2450-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B[J2450-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B[J2450-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B[J2450-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B[J2450-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B[J2450-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B[J2450-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B[J2450-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B[J2450-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B[J2450-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B[J2450-BLK1	101	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B[J2450-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B[J2450-BLK1	95.9	%	80 - 120 (LCL - UCL)		

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[J2450										
Benzene	B[J2450-BS1	LCS	25.290	25.000	ug/L	101		70 - 130		
Bromodichloromethane	B[J2450-BS1	LCS	24.790	25.000	ug/L	99.2		70 - 130		
Chlorobenzene	B[J2450-BS1	LCS	23.740	25.000	ug/L	95.0		70 - 130		
Chloroethane	B[J2450-BS1	LCS	28.810	25.000	ug/L	115		70 - 130		
1,4-Dichlorobenzene	B[J2450-BS1	LCS	22.410	25.000	ug/L	89.6		70 - 130		
1,1-Dichloroethane	B[J2450-BS1	LCS	25.870	25.000	ug/L	103		70 - 130		
1,1-Dichloroethene	B[J2450-BS1	LCS	26.470	25.000	ug/L	106		70 - 130		
Toluene	B[J2450-BS1	LCS	25.580	25.000	ug/L	102		70 - 130		
Trichloroethene	B[J2450-BS1	LCS	27.020	25.000	ug/L	108		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B[J2450-BS1	LCS	9.1900	10.000	ug/L	91.9		75 - 125		
Toluene-d8 (Surrogate)	B[J2450-BS1	LCS	10.200	10.000	ug/L	102		80 - 120		
4-Bromofluorobenzene (Surrogate)	B[J2450-BS1	LCS	9.8400	10.000	ug/L	98.4		80 - 120		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery		Lab Quals
								RPD	Percent	
QC Batch ID: B[J2450		Used client sample: N								
Benzene	MS	1729802-02	ND	26.560	25.000	ug/L		106		70 - 130
	MSD	1729802-02	ND	26.670	25.000	ug/L	0.4	107	20	70 - 130
Bromodichloromethane	MS	1729802-02	ND	26.360	25.000	ug/L		105		70 - 130
	MSD	1729802-02	ND	25.300	25.000	ug/L	4.1	101	20	70 - 130
Chlorobenzene	MS	1729802-02	ND	23.670	25.000	ug/L		94.7		70 - 130
	MSD	1729802-02	ND	23.060	25.000	ug/L	2.6	92.2	20	70 - 130
Chloroethane	MS	1729802-02	ND	29.300	25.000	ug/L		117		70 - 130
	MSD	1729802-02	ND	28.820	25.000	ug/L	1.7	115	20	70 - 130
1,4-Dichlorobenzene	MS	1729802-02	ND	22.580	25.000	ug/L		90.3		70 - 130
	MSD	1729802-02	ND	22.230	25.000	ug/L	1.6	88.9	20	70 - 130
1,1-Dichloroethane	MS	1729802-02	ND	27.310	25.000	ug/L		109		70 - 130
	MSD	1729802-02	ND	27.680	25.000	ug/L	1.3	111	20	70 - 130
1,1-Dichloroethene	MS	1729802-02	ND	27.960	25.000	ug/L		112		70 - 130
	MSD	1729802-02	ND	27.770	25.000	ug/L	0.7	111	20	70 - 130
Toluene	MS	1729802-02	ND	26.960	25.000	ug/L		108		70 - 130
	MSD	1729802-02	ND	25.580	25.000	ug/L	5.3	102	20	70 - 130
Trichloroethene	MS	1729802-02	ND	26.140	25.000	ug/L		105		70 - 130
	MSD	1729802-02	ND	24.780	25.000	ug/L	5.3	99.1	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1729802-02	ND	9.5100	10.000	ug/L		95.1		75 - 125
	MSD	1729802-02	ND	9.8100	10.000	ug/L	3.1	98.1		75 - 125
Toluene-d8 (Surrogate)	MS	1729802-02	ND	10.180	10.000	ug/L		102		80 - 120
	MSD	1729802-02	ND	10.050	10.000	ug/L	1.3	100		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1729802-02	ND	9.8500	10.000	ug/L		98.5		80 - 120
	MSD	1729802-02	ND	9.3000	10.000	ug/L	5.7	93.0		80 - 120

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 11:12
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 10/25/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1729388
Invoice ID: B283455

Enclosed are the results of analyses for samples received by the laboratory on 10/12/2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 17-29388

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Intact? Yes No Intact? Yes No Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 9.5 Container: Amber Thermometer ID: 274 Date/Time: 10-12-17
 Temperature: (A) 23.0 °C / (C) 22.4 °C 10/12 Analyst: JMB

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	006	ABC	ABC	ABC	ABC	ABC	ABC	ABC		
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: JMB Date/Time: 10-16-17

Actual / Corrected

Rev 21 05/23/2016 IS:\WPDoc\WordPerfect\LAB DOCS\FORMS\SAMRECrev 201



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1729388-01	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 08:45
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V- 601 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729388-02	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 09:40
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V- 602 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729388-03	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 10:50
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V- 603 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729388-04	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 12:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V- 604 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729388-05	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 13:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V- 605 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729388-06	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 13:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V- 606 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729388-07	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 14:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V- 607 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1729388-08	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 14:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V- 608 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-01	Client Sample Name: V- 601 a/b/c, 10/12/2017 8:45:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	4.9	ug/L	0.50	0.083	EPA-8260B	ND	Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	1
n-Butylbenzene	0.51	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
sec-Butylbenzene	0.72	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-01		Client Sample Name: V- 601 a/b/c, 10/12/2017 8:45:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	1
Ethylbenzene	10	ug/L	0.50	0.098	EPA-8260B	ND	Z1	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Isopropylbenzene	2.4	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
p-Isopropyltoluene	0.53	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	9.9	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
n-Propylbenzene	2.3	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Toluene	19	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2,4-Trimethylbenzene	8.8	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
1,3,5-Trimethylbenzene	2.4	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Total Xylenes	23	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	11	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	12	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	85.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-01	Client Sample Name: V- 601 a/b/c, 10/12/2017 8:45:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8260B	10/22/17	10/23/17 06:23	AKM	MS-V14	1	BJJ2215

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Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-02	Client Sample Name: V- 602 a/b/c, 10/12/2017 9:40:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	2.4	ug/L	0.50	0.083	EPA-8260B	ND	Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	1
n-Butylbenzene	0.22	ug/L	0.50	0.11	EPA-8260B	ND	J,Z1	1
sec-Butylbenzene	0.31	ug/L	0.50	0.15	EPA-8260B	ND	J,Z1	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-02		Client Sample Name: V- 602 a/b/c, 10/12/2017 9:40:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	1
Ethylbenzene	4.7	ug/L	0.50	0.098	EPA-8260B	ND	Z1	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Isopropylbenzene	1.1	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
p-Isopropyltoluene	0.16	ug/L	0.50	0.12	EPA-8260B	ND	J,Z1	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	6.2	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
n-Propylbenzene	1.1	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Toluene	9.2	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
1,3,5-Trimethylbenzene	1.1	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Total Xylenes	12	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	5.7	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	6.2	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	84.7	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-02	Client Sample Name: V- 602 a/b/c, 10/12/2017 9:40:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/22/17	10/23/17	06:46	AKM	MS-V14	1	BJJ2215

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Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-03	Client Sample Name: V- 603 a/b/c, 10/12/2017 10:50:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	6.0	ug/L	0.50	0.083	EPA-8260B	ND	Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	1
n-Butylbenzene	0.44	ug/L	0.50	0.11	EPA-8260B	ND	J,Z1	1
sec-Butylbenzene	0.73	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-03		Client Sample Name: V- 603 a/b/c, 10/12/2017 10:50:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	1
Ethylbenzene	12	ug/L	0.50	0.098	EPA-8260B	ND	Z1	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Isopropylbenzene	2.5	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
p-Isopropyltoluene	0.56	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	11	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
n-Propylbenzene	2.5	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Toluene	22	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2,4-Trimethylbenzene	9.6	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
1,3,5-Trimethylbenzene	2.5	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Total Xylenes	28	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	14	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	14	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	86.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-03	Client Sample Name: V- 603 a/b/c, 10/12/2017 10:50:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/22/17	10/23/17	05:59	AKM	MS-V14	1	BJJ2215

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-04	Client Sample Name: V- 604 a/b/c, 10/12/2017 12:10:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	830	ug/L	5.0	0.83	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	2
n-Butylbenzene	1.5	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
sec-Butylbenzene	1.7	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-04		Client Sample Name: V- 604 a/b/c, 10/12/2017 12:10:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	2
Ethylbenzene	96	ug/L	0.50	0.098	EPA-8260B	ND	Z1	2
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Isopropylbenzene	9.4	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
p-Isopropyltoluene	3.6	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Naphthalene	68	ug/L	0.50	0.36	EPA-8260B	ND	Z1	2
n-Propylbenzene	11	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Toluene	960	ug/L	5.0	0.93	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2,4-Trimethylbenzene	57	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
1,3,5-Trimethylbenzene	9.4	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Total Xylenes	510	ug/L	10	3.6	EPA-8260B	ND	A01	1
p- & m-Xylenes	320	ug/L	5.0	2.8	EPA-8260B	ND	A01	1
o-Xylene	190	ug/L	5.0	0.82	EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	75.0	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	81.4	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	95.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-04	Client Sample Name: V- 604 a/b/c, 10/12/2017 12:10:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	95.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.1	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC	
			Date/Time	Analyst			Batch ID	
1	EPA-8260B	10/22/17	10/24/17 20:01	AKM	MS-V14	10	BjJ2215	
2	EPA-8260B	10/22/17	10/23/17 05:36	AKM	MS-V14	1	BjJ2215	

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Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-05	Client Sample Name: V- 605 a/b/c, 10/12/2017 1:00:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	390	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	2
n-Butylbenzene	0.59	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
sec-Butylbenzene	0.61	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-05	Client Sample Name: V- 605 a/b/c, 10/12/2017 1:00:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	2
Ethylbenzene	37	ug/L	0.50	0.098	EPA-8260B	ND	Z1	2
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Isopropylbenzene	3.2	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
p-Isopropyltoluene	1.2	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Naphthalene	25	ug/L	0.50	0.36	EPA-8260B	ND	Z1	2
n-Propylbenzene	4.0	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Toluene	450	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2,4-Trimethylbenzene	23	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
1,3,5-Trimethylbenzene	3.2	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Total Xylenes	240	ug/L	5.0	1.8	EPA-8260B	ND	A01	1
p- & m-Xylenes	150	ug/L	2.5	1.4	EPA-8260B	ND	A01	1
o-Xylene	87	ug/L	2.5	0.41	EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	85.5	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	83.7	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	96.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.0	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-05	Client Sample Name: V- 605 a/b/c, 10/12/2017 1:00:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	96.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	91.8	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8260B	10/23/17	10/23/17 17:31	AKM	MS-V14	5	BjJ2215
2	EPA-8260B	10/22/17	10/23/17 04:27	AKM	MS-V14	1	BjJ2215

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-06	Client Sample Name: V- 606 a/b/c, 10/12/2017 1:00:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	350	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	2
n-Butylbenzene	0.67	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2

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19200 Live Oak Road
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Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-06		Client Sample Name: V- 606 a/b/c, 10/12/2017 1:00:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	2
Ethylbenzene	38	ug/L	0.50	0.098	EPA-8260B	ND	Z1	2
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Isopropylbenzene	3.5	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
p-Isopropyltoluene	1.4	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Naphthalene	29	ug/L	0.50	0.36	EPA-8260B	ND	Z1	2
n-Propylbenzene	4.4	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Toluene	410	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2,4-Trimethylbenzene	26	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
1,3,5-Trimethylbenzene	3.5	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Total Xylenes	210	ug/L	5.0	1.8	EPA-8260B	ND	A01	1
p- & m-Xylenes	140	ug/L	2.5	1.4	EPA-8260B	ND	A01	1
o-Xylene	78	ug/L	2.5	0.41	EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	83.9	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	89.2	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	97.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.0	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-06	Client Sample Name: V- 606 a/b/c, 10/12/2017 1:00:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	95.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.9	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8260B	10/23/17	10/23/17 17:54	AKM	MS-V14	5	B J2215
2	EPA-8260B	10/22/17	10/23/17 04:50	AKM	MS-V14	1	B J2215

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Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-07	Client Sample Name: V- 607 a/b/c, 10/12/2017 2:05:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	870	ug/L	5.0	0.83	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	2
n-Butylbenzene	1.6	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
sec-Butylbenzene	1.7	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2

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Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-07		Client Sample Name: V- 607 a/b/c, 10/12/2017 2:05:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	2
Ethylbenzene	98	ug/L	0.50	0.098	EPA-8260B	ND	Z1	2
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Isopropylbenzene	9.4	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
p-Isopropyltoluene	3.4	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Naphthalene	64	ug/L	0.50	0.36	EPA-8260B	ND	Z1	2
n-Propylbenzene	11	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Tetrachloroethene	0.13	ug/L	0.50	0.13	EPA-8260B	ND	J,Z1	2
Toluene	1100	ug/L	10	1.9	EPA-8260B	ND	A01	3
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2,4-Trimethylbenzene	56	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
1,3,5-Trimethylbenzene	9.4	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Total Xylenes	610	ug/L	10	3.6	EPA-8260B	ND	A01	1
p- & m-Xylenes	390	ug/L	5.0	2.8	EPA-8260B	ND	A01	1
o-Xylene	220	ug/L	5.0	0.82	EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	75.1	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	81.6	%	75 - 125 (LCL - UCL)		EPA-8260B			2
1,2-Dichloroethane-d4 (Surrogate)	73.7	%	75 - 125 (LCL - UCL)		EPA-8260B		S09	3
Toluene-d8 (Surrogate)	95.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-07	Client Sample Name: V- 607 a/b/c, 10/12/2017 2:05:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-8260B			3
4-Bromofluorobenzene (Surrogate)	94.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.7	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	98.4	%	80 - 120 (LCL - UCL)		EPA-8260B			3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/22/17	10/24/17 19:38	AKM	MS-V14	10	B[J2215
2	EPA-8260B	10/22/17	10/23/17 05:13	AKM	MS-V14	1	B[J2215
3	EPA-8260B	10/22/17	10/25/17 09:52	AKM	MS-V14	20	B[J2215

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Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-08	Client Sample Name: V- 608 a/b/c, 10/12/2017 2:25:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-08		Client Sample Name: V- 608 a/b/c, 10/12/2017 2:25:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	85.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1729388-08	Client Sample Name: V- 608 a/b/c, 10/12/2017 2:25:00PM, Chuck Schmidt
----------------------------------	--

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/22/17	10/23/17 04:04	AKM	MS-V14	1	BJJ2215

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J2215						
Benzene	B[J2215-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B[J2215-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B[J2215-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B[J2215-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B[J2215-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B[J2215-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B[J2215-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B[J2215-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B[J2215-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B[J2215-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B[J2215-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B[J2215-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B[J2215-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B[J2215-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B[J2215-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B[J2215-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B[J2215-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B[J2215-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B[J2215-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B[J2215-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B[J2215-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B[J2215-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B[J2215-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B[J2215-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B[J2215-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B[J2215-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B[J2215-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B[J2215-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B[J2215-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B[J2215-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B[J2215-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B[J2215-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B[J2215-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B[J2215-BLK1	ND	ug/L	0.50	0.14	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J2215						
trans-1,3-Dichloropropene	B[J2215-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B[J2215-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B[J2215-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B[J2215-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B[J2215-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B[J2215-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B[J2215-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B[J2215-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B[J2215-BLK1	ND	ug/L	0.50	0.11	
Styrene	B[J2215-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B[J2215-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	B[J2215-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B[J2215-BLK1	ND	ug/L	0.50	0.13	
Toluene	B[J2215-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B[J2215-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B[J2215-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B[J2215-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B[J2215-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B[J2215-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B[J2215-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B[J2215-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B[J2215-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B[J2215-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B[J2215-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B[J2215-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B[J2215-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B[J2215-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B[J2215-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B[J2215-BLK1	83.1	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B[J2215-BLK1	96.3	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B[J2215-BLK1	93.9	%	80 - 120 (LCL - UCL)		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[J2215										
Benzene	B[J2215-BS1	LCS	23.227	25.000	ug/L	92.9		70 - 130		
Bromodichloromethane	B[J2215-BS1	LCS	23.949	25.000	ug/L	95.8		70 - 130		
Chlorobenzene	B[J2215-BS1	LCS	27.968	25.000	ug/L	112		70 - 130		
Chloroethane	B[J2215-BS1	LCS	19.434	25.000	ug/L	77.7		70 - 130		
1,4-Dichlorobenzene	B[J2215-BS1	LCS	25.483	25.000	ug/L	102		70 - 130		
1,1-Dichloroethane	B[J2215-BS1	LCS	23.321	25.000	ug/L	93.3		70 - 130		
1,1-Dichloroethene	B[J2215-BS1	LCS	21.473	25.000	ug/L	85.9		70 - 130		
Toluene	B[J2215-BS1	LCS	25.822	25.000	ug/L	103		70 - 130		
Trichloroethene	B[J2215-BS1	LCS	29.131	25.000	ug/L	117		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B[J2215-BS1	LCS	8.3900	10.000	ug/L	83.9		75 - 125		
Toluene-d8 (Surrogate)	B[J2215-BS1	LCS	9.5600	10.000	ug/L	95.6		80 - 120		
4-Bromofluorobenzene (Surrogate)	B[J2215-BS1	LCS	9.2600	10.000	ug/L	92.6		80 - 120		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
QC Batch ID: B[J2215		Used client sample: N								
Benzene	MS	1729913-01	ND	24.748	25.000	ug/L		99.0		70 - 130
	MSD	1729913-01	ND	24.610	25.000	ug/L	0.6	98.4	20	70 - 130
Bromodichloromethane	MS	1729913-01	ND	26.268	25.000	ug/L		105		70 - 130
	MSD	1729913-01	ND	26.260	25.000	ug/L	0.0	105	20	70 - 130
Chlorobenzene	MS	1729913-01	ND	30.149	25.000	ug/L		121		70 - 130
	MSD	1729913-01	ND	30.337	25.000	ug/L	0.6	121	20	70 - 130
Chloroethane	MS	1729913-01	ND	20.211	25.000	ug/L		80.8		70 - 130
	MSD	1729913-01	ND	19.784	25.000	ug/L	2.1	79.1	20	70 - 130
1,4-Dichlorobenzene	MS	1729913-01	ND	28.334	25.000	ug/L		113		70 - 130
	MSD	1729913-01	ND	28.442	25.000	ug/L	0.4	114	20	70 - 130
1,1-Dichloroethane	MS	1729913-01	ND	24.566	25.000	ug/L		98.3		70 - 130
	MSD	1729913-01	ND	24.399	25.000	ug/L	0.7	97.6	20	70 - 130
1,1-Dichloroethene	MS	1729913-01	ND	22.589	25.000	ug/L		90.4		70 - 130
	MSD	1729913-01	ND	22.213	25.000	ug/L	1.7	88.9	20	70 - 130
Toluene	MS	1729913-01	ND	28.141	25.000	ug/L		113		70 - 130
	MSD	1729913-01	ND	27.708	25.000	ug/L	1.6	111	20	70 - 130
Trichloroethene	MS	1729913-01	ND	29.325	25.000	ug/L		117		70 - 130
	MSD	1729913-01	ND	29.266	25.000	ug/L	0.2	117	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1729913-01	ND	8.5100	10.000	ug/L		85.1		75 - 125
	MSD	1729913-01	ND	8.4700	10.000	ug/L	0.5	84.7		75 - 125
Toluene-d8 (Surrogate)	MS	1729913-01	ND	9.4300	10.000	ug/L		94.3		80 - 120
	MSD	1729913-01	ND	9.5000	10.000	ug/L	0.7	95.0		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1729913-01	ND	9.3900	10.000	ug/L		93.9		80 - 120
	MSD	1729913-01	ND	9.3500	10.000	ug/L	0.4	93.5		80 - 120

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/25/2017 15:11
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A01 Detection and quantitation limits are raised due to sample dilution.
- S09 The surrogate recovery on the sample for this compound was not within the control limits.
- Z1 10UL OF ANTIFOAMER SOLUTION ADDED TO SAMPLE VOA



Date of Report: 11/17/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1731162
Invoice ID: B285623

Enclosed are the results of analyses for samples received by the laboratory on 11/2/2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 17-31162

SHIPPING INFORMATION: Fed Ex, UPS, Ontrac, Hand Delivery, BC Lab Field Service. SHIPPING CONTAINER: Ice Chest, None, Box, Other. FREE LIQUID: YES, NO, W, S.

Refrigerant: Ice, Blue Ice, None, Other. Comments:

Custody Seals: Ice Chest, Containers, None. Intact? Yes, No.

All samples received? Yes, No. All samples containers intact? Yes, No. Description(s) match COC? Yes, No.

COC Received: YES, NO. Emissivity: 0.97. Container: VOA. Thermometer ID: 112170. Date/Time: 11/2/11. Analyst Init: YRM.

SAMPLE CONTAINERS SAMPLE NUMBERS 11043

Table with columns for Sample Containers and Sample Numbers (1-10). Rows include various sample types like QT PE UNPRES, PT CYANIDE, etc.

Comments: Sample Numbering Completed By: [Signature] Date/Time: 11/2/11 1527 Rev 21 05/23/2016



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	Sampling Date:	Sample Depth:	Lab Matrix:	Sample Type:
1731162-01	COC Number:	---		11/02/2017 16:30	11/01/2017 08:15	---	Water	Water
	Project Number:	---						
	Sampling Location:	---						
	Sampling Point:	V-701 a/b/c						
	Sampled By:	Chuck Schmidt						
1731162-02	COC Number:	---		11/02/2017 16:30	11/01/2017 08:40	---	Water	Water
	Project Number:	---						
	Sampling Location:	---						
	Sampling Point:	V-702 a/b/c						
	Sampled By:	Chuck Schmidt						
1731162-03	COC Number:	---		11/02/2017 16:30	11/01/2017 10:15	---	Solids	Oil
	Project Number:	---						
	Sampling Location:	---						
	Sampling Point:	V-703 a/b/c						
	Sampled By:	Chuck Schmidt						
1731162-04	COC Number:	---		11/02/2017 16:30	11/01/2017 12:15	---	Water	Water
	Project Number:	---						
	Sampling Location:	---						
	Sampling Point:	V-704 a/b/c						
	Sampled By:	Chuck Schmidt						
1731162-05	COC Number:	---		11/02/2017 16:30	11/01/2017 12:15	---	Water	Water
	Project Number:	---						
	Sampling Location:	---						
	Sampling Point:	V-705 a/b/c						
	Sampled By:	Chuck Schmidt						
1731162-06	COC Number:	---		11/02/2017 16:30	11/01/2017 13:15	---	Solids	Oil
	Project Number:	---						
	Sampling Location:	---						
	Sampling Point:	V-706 a/b/c						
	Sampled By:	Chuck Schmidt						
1731162-07	COC Number:	---		11/02/2017 16:30	11/01/2017 14:40	---	Water	Water
	Project Number:	---						
	Sampling Location:	---						
	Sampling Point:	V-707 a/b/c						
	Sampled By:	Chuck Schmidt						

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1731162-08	COC Number:	---	Receive Date:	11/02/2017 16:30
	Project Number:	---	Sampling Date:	11/01/2017 16:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-708 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
	1731162-09	COC Number:	---	Receive Date:
Project Number:		---	Sampling Date:	11/01/2017 11:50
Sampling Location:		---	Sample Depth:	---
Sampling Point:		V-709 a/b/c	Lab Matrix:	Water
Sampled By:		Chuck Schmidt	Sample Type:	Water
<hr/>				
1731162-10		COC Number:	---	Receive Date:
	Project Number:	---	Sampling Date:	11/01/2017 12:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-710 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-01	Client Sample Name: V-701 a/b/c, 11/1/2017 8:15:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	7.9	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-01		Client Sample Name: V-701 a/b/c, 11/1/2017 8:15:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	5.4	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.76	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.34	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	7.9	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	1.3	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	6.5	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	3.6	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.67	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	12	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	6.2	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	6.0	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-01	Client Sample Name: V-701 a/b/c, 11/1/2017 8:15:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/10/17	11/11/17 11:39	JPT	MS-V13	1	B[K0935

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-02	Client Sample Name: V-702 a/b/c, 11/1/2017 8:40:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	8.7	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-02		Client Sample Name: V-702 a/b/c, 11/1/2017 8:40:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	5.9	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.78	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.32	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	8.8	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	1.2	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	7.2	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	3.7	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.72	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	13	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	6.8	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	6.6	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.0	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-02	Client Sample Name: V-702 a/b/c, 11/1/2017 8:40:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/10/17	11/11/17 12:03	JPT	MS-V13	1	B[K0935

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-03	Client Sample Name: V-703 a/b/c, 11/1/2017 10:15:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	74	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
Bromobenzene	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
Bromochloromethane	ND	mg/kg	25	4.6	EPA-8260B	ND	A01,S05	1
Bromodichloromethane	ND	mg/kg	25	4.2	EPA-8260B	ND	A01,S05	1
Bromoform	ND	mg/kg	25	7.5	EPA-8260B	ND	A01,S05	1
Bromomethane	ND	mg/kg	25	8.0	EPA-8260B	ND	A01,S05	1
n-Butylbenzene	250	mg/kg	25	7.5	EPA-8260B	ND	A01,S05	1
sec-Butylbenzene	190	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1
tert-Butylbenzene	ND	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1
Carbon tetrachloride	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
Chlorobenzene	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
Chloroethane	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
Chloroform	ND	mg/kg	25	3.2	EPA-8260B	ND	A01,S05	1
Chloromethane	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
2-Chlorotoluene	ND	mg/kg	25	9.0	EPA-8260B	ND	A01,S05	1
4-Chlorotoluene	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
Dibromochloromethane	ND	mg/kg	25	5.0	EPA-8260B	ND	A01,S05	1
1,2-Dibromo-3-chloropropane	ND	mg/kg	25	8.5	EPA-8260B	ND	A01,S05	1
1,2-Dibromoethane	ND	mg/kg	25	5.0	EPA-8260B	ND	A01,S05	1
Dibromomethane	ND	mg/kg	25	9.0	EPA-8260B	ND	A01,S05	1
1,2-Dichlorobenzene	ND	mg/kg	25	4.0	EPA-8260B	ND	A01,S05	1
1,3-Dichlorobenzene	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
1,4-Dichlorobenzene	ND	mg/kg	25	7.5	EPA-8260B	ND	A01,S05	1
Dichlorodifluoromethane	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
1,1-Dichloroethane	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
1,2-Dichloroethane	ND	mg/kg	25	4.2	EPA-8260B	ND	A01,S05	1
1,1-Dichloroethene	ND	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1
cis-1,2-Dichloroethene	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
trans-1,2-Dichloroethene	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
1,2-Dichloropropane	ND	mg/kg	25	4.0	EPA-8260B	ND	A01,S05	1
1,3-Dichloropropane	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
2,2-Dichloropropane	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
1,1-Dichloropropene	ND	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-03		Client Sample Name: V-703 a/b/c, 11/1/2017 10:15:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
trans-1,3-Dichloropropene	ND	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1
Ethylbenzene	720	mg/kg	25	7.5	EPA-8260B	ND	A01,S05	1
Hexachlorobutadiene	ND	mg/kg	25	8.5	EPA-8260B	ND	A01,S05	1
Isopropylbenzene	240	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
p-Isopropyltoluene	200	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
Methylene chloride	ND	mg/kg	50	12	EPA-8260B	ND	A01,S05	1
Methyl t-butyl ether	ND	mg/kg	25	2.5	EPA-8260B	ND	A01,S05	1
Naphthalene	280	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
n-Propylbenzene	500	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
Styrene	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
1,1,1,2-Tetrachloroethane	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
1,1,2,2-Tetrachloroethane	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
Tetrachloroethene	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
Toluene	590	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1
1,2,3-Trichlorobenzene	ND	mg/kg	25	10	EPA-8260B	ND	A01,S05	1
1,2,4-Trichlorobenzene	ND	mg/kg	25	10	EPA-8260B	ND	A01,S05	1
1,1,1-Trichloroethane	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
1,1,2-Trichloroethane	ND	mg/kg	25	3.8	EPA-8260B	ND	A01,S05	1
Trichloroethene	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
Trichlorofluoromethane	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
1,2,3-Trichloropropane	ND	mg/kg	25	8.0	EPA-8260B	ND	A01,S05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
1,2,4-Trimethylbenzene	1200	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
1,3,5-Trimethylbenzene	300	mg/kg	25	7.5	EPA-8260B	ND	A01,S05	1
Vinyl chloride	ND	mg/kg	25	8.0	EPA-8260B	ND	A01,S05	1
Total Xylenes	2100	mg/kg	50	17	EPA-8260B	ND	A01,S05	1
p- & m-Xylenes	1300	mg/kg	25	11	EPA-8260B	ND	A01,S05	1
o-Xylene	790	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1
1,2-Dichloroethane-d4 (Surrogate)	99.7	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	109	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.1	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-03	Client Sample Name: V-703 a/b/c, 11/1/2017 10:15:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8260B	11/15/17	11/16/17 19:18	BEP	MS-V3	5000	B[K1638

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-04	Client Sample Name: V-704 a/b/c, 11/1/2017 12:15:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	190	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
Bromochloromethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01	1
Bromodichloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
Bromoform	ND	ug/L	2.5	1.4	EPA-8260B	ND	A01	1
Bromomethane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01	1
n-Butylbenzene	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
sec-Butylbenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
tert-Butylbenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
Carbon tetrachloride	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01	1
Chlorobenzene	ND	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
Chloroethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
Chloroform	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01	1
Chloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
2-Chlorotoluene	ND	ug/L	2.5	1.0	EPA-8260B	ND	A01	1
4-Chlorotoluene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
Dibromochloromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.2	EPA-8260B	ND	A01	1
1,2-Dibromoethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01	1
Dibromomethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01	1
1,2-Dichlorobenzene	ND	ug/L	2.5	0.36	EPA-8260B	ND	A01	1
1,3-Dichlorobenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
1,4-Dichlorobenzene	ND	ug/L	2.5	0.31	EPA-8260B	ND	A01	1
Dichlorodifluoromethane	ND	ug/L	2.5	0.50	EPA-8260B	ND	A01	1
1,1-Dichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
1,2-Dichloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01	1
1,1-Dichloroethene	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01	1
cis-1,2-Dichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
trans-1,2-Dichloroethene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
1,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
1,3-Dichloropropane	ND	ug/L	2.5	0.43	EPA-8260B	ND	A01	1
2,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
1,1-Dichloropropene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01	1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-04		Client Sample Name: V-704 a/b/c, 11/1/2017 12:15:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
trans-1,3-Dichloropropene	ND	ug/L	2.5	0.40	EPA-8260B	ND	A01	1
Ethylbenzene	38	ug/L	2.5	0.49	EPA-8260B	ND	A01	1
Hexachlorobutadiene	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01	1
Isopropylbenzene	3.8	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
p-Isopropyltoluene	1.6	ug/L	2.5	0.60	EPA-8260B	ND	J,A01	1
Methylene chloride	ND	ug/L	5.0	2.4	EPA-8260B	ND	A01	1
Methyl t-butyl ether	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
Naphthalene	23	ug/L	2.5	1.8	EPA-8260B	ND	A01	1
n-Propylbenzene	6.8	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
Styrene	ND	ug/L	2.5	0.34	EPA-8260B	ND	A01	1
1,1,1,2-Tetrachloroethane	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01	1
1,1,2,2-Tetrachloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01	1
Tetrachloroethene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
Toluene	160	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01	1
1,2,4-Trichlorobenzene	ND	ug/L	2.5	0.95	EPA-8260B	ND	A01	1
1,1,1-Trichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
1,1,2-Trichloroethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01	1
Trichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Trichlorofluoromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
1,2,3-Trichloropropane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
1,2,4-Trimethylbenzene	21	ug/L	2.5	0.60	EPA-8260B	ND	A01	1
1,3,5-Trimethylbenzene	4.9	ug/L	2.5	0.60	EPA-8260B	ND	A01	1
Vinyl chloride	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01	1
Total Xylenes	110	ug/L	5.0	1.8	EPA-8260B	ND	A01	1
p- & m-Xylenes	63	ug/L	2.5	1.4	EPA-8260B	ND	A01	1
o-Xylene	46	ug/L	2.5	0.41	EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-04	Client Sample Name: V-704 a/b/c, 11/1/2017 12:15:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/10/17	11/11/17 05:50	JPT	MS-V13	5	B[K0935

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-05	Client Sample Name: V-705 a/b/c, 11/1/2017 12:15:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	180	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
Bromochloromethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01	1
Bromodichloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
Bromoform	ND	ug/L	2.5	1.4	EPA-8260B	ND	A01	1
Bromomethane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01	1
n-Butylbenzene	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
sec-Butylbenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
tert-Butylbenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
Carbon tetrachloride	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01	1
Chlorobenzene	ND	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
Chloroethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
Chloroform	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01	1
Chloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
2-Chlorotoluene	ND	ug/L	2.5	1.0	EPA-8260B	ND	A01	1
4-Chlorotoluene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
Dibromochloromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.2	EPA-8260B	ND	A01	1
1,2-Dibromoethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01	1
Dibromomethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01	1
1,2-Dichlorobenzene	ND	ug/L	2.5	0.36	EPA-8260B	ND	A01	1
1,3-Dichlorobenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
1,4-Dichlorobenzene	ND	ug/L	2.5	0.31	EPA-8260B	ND	A01	1
Dichlorodifluoromethane	ND	ug/L	2.5	0.50	EPA-8260B	ND	A01	1
1,1-Dichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
1,2-Dichloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01	1
1,1-Dichloroethene	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01	1
cis-1,2-Dichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
trans-1,2-Dichloroethene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
1,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
1,3-Dichloropropane	ND	ug/L	2.5	0.43	EPA-8260B	ND	A01	1
2,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
1,1-Dichloropropene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01	1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-05		Client Sample Name: V-705 a/b/c, 11/1/2017 12:15:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
trans-1,3-Dichloropropene	ND	ug/L	2.5	0.40	EPA-8260B	ND	A01	1
Ethylbenzene	36	ug/L	2.5	0.49	EPA-8260B	ND	A01	1
Hexachlorobutadiene	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01	1
Isopropylbenzene	3.7	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
p-Isopropyltoluene	1.5	ug/L	2.5	0.60	EPA-8260B	ND	J,A01	1
Methylene chloride	ND	ug/L	5.0	2.4	EPA-8260B	ND	A01	1
Methyl t-butyl ether	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
Naphthalene	22	ug/L	2.5	1.8	EPA-8260B	ND	A01	1
n-Propylbenzene	6.6	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
Styrene	ND	ug/L	2.5	0.34	EPA-8260B	ND	A01	1
1,1,1,2-Tetrachloroethane	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01	1
1,1,2,2-Tetrachloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01	1
Tetrachloroethene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
Toluene	170	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01	1
1,2,4-Trichlorobenzene	ND	ug/L	2.5	0.95	EPA-8260B	ND	A01	1
1,1,1-Trichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
1,1,2-Trichloroethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01	1
Trichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Trichlorofluoromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
1,2,3-Trichloropropane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
1,2,4-Trimethylbenzene	21	ug/L	2.5	0.60	EPA-8260B	ND	A01	1
1,3,5-Trimethylbenzene	4.8	ug/L	2.5	0.60	EPA-8260B	ND	A01	1
Vinyl chloride	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01	1
Total Xylenes	110	ug/L	5.0	1.8	EPA-8260B	ND	A01	1
p- & m-Xylenes	61	ug/L	2.5	1.4	EPA-8260B	ND	A01	1
o-Xylene	45	ug/L	2.5	0.41	EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-05	Client Sample Name: V-705 a/b/c, 11/1/2017 12:15:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/10/17	11/11/17 06:15	JPT	MS-V13	5	B[K0935

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-06	Client Sample Name: V-706 a/b/c, 11/1/2017 1:15:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	160	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
Bromobenzene	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
Bromochloromethane	ND	mg/kg	25	4.6	EPA-8260B	ND	A01,S05	1
Bromodichloromethane	ND	mg/kg	25	4.2	EPA-8260B	ND	A01,S05	1
Bromoform	ND	mg/kg	25	7.5	EPA-8260B	ND	A01,S05	1
Bromomethane	ND	mg/kg	25	8.0	EPA-8260B	ND	A01,S05	1
n-Butylbenzene	66	mg/kg	25	7.5	EPA-8260B	ND	A01,S05	1
sec-Butylbenzene	70	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1
tert-Butylbenzene	ND	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1
Carbon tetrachloride	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
Chlorobenzene	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
Chloroethane	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
Chloroform	ND	mg/kg	25	3.2	EPA-8260B	ND	A01,S05	1
Chloromethane	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
2-Chlorotoluene	ND	mg/kg	25	9.0	EPA-8260B	ND	A01,S05	1
4-Chlorotoluene	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
Dibromochloromethane	ND	mg/kg	25	5.0	EPA-8260B	ND	A01,S05	1
1,2-Dibromo-3-chloropropane	ND	mg/kg	25	8.5	EPA-8260B	ND	A01,S05	1
1,2-Dibromoethane	ND	mg/kg	25	5.0	EPA-8260B	ND	A01,S05	1
Dibromomethane	ND	mg/kg	25	9.0	EPA-8260B	ND	A01,S05	1
1,2-Dichlorobenzene	ND	mg/kg	25	4.0	EPA-8260B	ND	A01,S05	1
1,3-Dichlorobenzene	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
1,4-Dichlorobenzene	ND	mg/kg	25	7.5	EPA-8260B	ND	A01,S05	1
Dichlorodifluoromethane	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
1,1-Dichloroethane	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
1,2-Dichloroethane	ND	mg/kg	25	4.2	EPA-8260B	ND	A01,S05	1
1,1-Dichloroethene	ND	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1
cis-1,2-Dichloroethene	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
trans-1,2-Dichloroethene	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
1,2-Dichloropropane	ND	mg/kg	25	4.0	EPA-8260B	ND	A01,S05	1
1,3-Dichloropropane	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
2,2-Dichloropropane	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
1,1-Dichloropropene	ND	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-06		Client Sample Name: V-706 a/b/c, 11/1/2017 1:15:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
trans-1,3-Dichloropropene	ND	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1
Ethylbenzene	1000	mg/kg	25	7.5	EPA-8260B	ND	A01,S05	1
Hexachlorobutadiene	ND	mg/kg	25	8.5	EPA-8260B	ND	A01,S05	1
Isopropylbenzene	160	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
p-Isopropyltoluene	62	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
Methylene chloride	ND	mg/kg	50	12	EPA-8260B	ND	A01,S05	1
Methyl t-butyl ether	ND	mg/kg	25	2.5	EPA-8260B	ND	A01,S05	1
Naphthalene	92	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
n-Propylbenzene	310	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
Styrene	ND	mg/kg	25	7.0	EPA-8260B	ND	A01,S05	1
1,1,1,2-Tetrachloroethane	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
1,1,2,2-Tetrachloroethane	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
Tetrachloroethene	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
Toluene	1300	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1
1,2,3-Trichlorobenzene	ND	mg/kg	25	10	EPA-8260B	ND	A01,S05	1
1,2,4-Trichlorobenzene	ND	mg/kg	25	10	EPA-8260B	ND	A01,S05	1
1,1,1-Trichloroethane	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
1,1,2-Trichloroethane	ND	mg/kg	25	3.8	EPA-8260B	ND	A01,S05	1
Trichloroethene	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
Trichlorofluoromethane	ND	mg/kg	25	5.5	EPA-8260B	ND	A01,S05	1
1,2,3-Trichloropropane	51	mg/kg	25	8.0	EPA-8260B	ND	A01,S05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
1,2,4-Trimethylbenzene	430	mg/kg	25	6.5	EPA-8260B	ND	A01,S05	1
1,3,5-Trimethylbenzene	110	mg/kg	25	7.5	EPA-8260B	ND	A01,S05	1
Vinyl chloride	ND	mg/kg	25	8.0	EPA-8260B	ND	A01,S05	1
Total Xylenes	2100	mg/kg	50	17	EPA-8260B	ND	A01,S05	1
p- & m-Xylenes	1300	mg/kg	25	11	EPA-8260B	ND	A01,S05	1
o-Xylene	760	mg/kg	25	6.0	EPA-8260B	ND	A01,S05	1
1,2-Dichloroethane-d4 (Surrogate)	99.2	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	118	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.3	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-06 **Client Sample Name:** V-706 a/b/c, 11/1/2017 1:15:00PM, Chuck Schmidt

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	11/15/17	11/16/17	19:40	BEP	MS-V3	5000	B[K1638

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-07	Client Sample Name: V-707 a/b/c, 11/1/2017 2:40:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	240	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
Bromochloromethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01	1
Bromodichloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
Bromoform	ND	ug/L	2.5	1.4	EPA-8260B	ND	A01	1
Bromomethane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01	1
n-Butylbenzene	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
sec-Butylbenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
tert-Butylbenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
Carbon tetrachloride	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01	1
Chlorobenzene	ND	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
Chloroethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
Chloroform	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01	1
Chloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
2-Chlorotoluene	ND	ug/L	2.5	1.0	EPA-8260B	ND	A01	1
4-Chlorotoluene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
Dibromochloromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.2	EPA-8260B	ND	A01	1
1,2-Dibromoethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01	1
Dibromomethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01	1
1,2-Dichlorobenzene	ND	ug/L	2.5	0.36	EPA-8260B	ND	A01	1
1,3-Dichlorobenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
1,4-Dichlorobenzene	ND	ug/L	2.5	0.31	EPA-8260B	ND	A01	1
Dichlorodifluoromethane	ND	ug/L	2.5	0.50	EPA-8260B	ND	A01	1
1,1-Dichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
1,2-Dichloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01	1
1,1-Dichloroethene	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01	1
cis-1,2-Dichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
trans-1,2-Dichloroethene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
1,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
1,3-Dichloropropane	ND	ug/L	2.5	0.43	EPA-8260B	ND	A01	1
2,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
1,1-Dichloropropene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01	1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-07		Client Sample Name: V-707 a/b/c, 11/1/2017 2:40:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
trans-1,3-Dichloropropene	ND	ug/L	2.5	0.40	EPA-8260B	ND	A01	1
Ethylbenzene	46	ug/L	2.5	0.49	EPA-8260B	ND	A01	1
Hexachlorobutadiene	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01	1
Isopropylbenzene	4.7	ug/L	2.5	0.70	EPA-8260B	ND	A01	1
p-Isopropyltoluene	1.6	ug/L	2.5	0.60	EPA-8260B	ND	J,A01	1
Methylene chloride	ND	ug/L	5.0	2.4	EPA-8260B	ND	A01	1
Methyl t-butyl ether	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
Naphthalene	27	ug/L	2.5	1.8	EPA-8260B	ND	A01	1
n-Propylbenzene	8.0	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
Styrene	ND	ug/L	2.5	0.34	EPA-8260B	ND	A01	1
1,1,1,2-Tetrachloroethane	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01	1
1,1,2,2-Tetrachloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01	1
Tetrachloroethene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
Toluene	180	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01	1
1,2,4-Trichlorobenzene	ND	ug/L	2.5	0.95	EPA-8260B	ND	A01	1
1,1,1-Trichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
1,1,2-Trichloroethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01	1
Trichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Trichlorofluoromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01	1
1,2,3-Trichloropropane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01	1
1,2,4-Trimethylbenzene	30	ug/L	2.5	0.60	EPA-8260B	ND	A01	1
1,3,5-Trimethylbenzene	5.8	ug/L	2.5	0.60	EPA-8260B	ND	A01	1
Vinyl chloride	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01	1
Total Xylenes	140	ug/L	5.0	1.8	EPA-8260B	ND	A01	1
p- & m-Xylenes	82	ug/L	2.5	1.4	EPA-8260B	ND	A01	1
o-Xylene	62	ug/L	2.5	0.41	EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-07	Client Sample Name: V-707 a/b/c, 11/1/2017 2:40:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/10/17	11/11/17 06:39	JPT	MS-V13	5	B[K0935

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-08	Client Sample Name: V-708 a/b/c, 11/1/2017 4:00:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	1.2	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-08		Client Sample Name: V-708 a/b/c, 11/1/2017 4:00:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	2.5	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.47	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	0.53	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	1.1	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.38	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	2.5	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	3.4	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	2.0	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	13	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	5.9	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	7.2	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-08	Client Sample Name: V-708 a/b/c, 11/1/2017 4:00:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/10/17	11/11/17 12:28	JPT	MS-V13	1	B[K0935

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-09	Client Sample Name: V-709 a/b/c, 11/1/2017 11:50:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-09		Client Sample Name: V-709 a/b/c, 11/1/2017 11:50:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.66	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.20	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	0.27	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.19	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.51	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.52	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	1.2	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	2.3	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	0.54	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	1.8	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-09	Client Sample Name: V-709 a/b/c, 11/1/2017 11:50:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/10/17	11/11/17 04:37	JPT	MS-V13	1	B[K0935

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-10	Client Sample Name: V-710 a/b/c, 11/1/2017 12:00:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-10		Client Sample Name: V-710 a/b/c, 11/1/2017 12:00:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1731162-10	Client Sample Name: V-710 a/b/c, 11/1/2017 12:00:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/10/17	11/11/17 04:13	JPT	MS-V13	1	B[K0935

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Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[K0935]						
Benzene	B[K0935-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B[K0935-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B[K0935-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B[K0935-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B[K0935-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B[K0935-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B[K0935-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B[K0935-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B[K0935-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B[K0935-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B[K0935-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B[K0935-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B[K0935-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B[K0935-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B[K0935-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B[K0935-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B[K0935-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B[K0935-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B[K0935-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B[K0935-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B[K0935-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B[K0935-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B[K0935-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B[K0935-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B[K0935-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B[K0935-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B[K0935-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B[K0935-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B[K0935-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B[K0935-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B[K0935-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B[K0935-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B[K0935-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B[K0935-BLK1	ND	ug/L	0.50	0.14	

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Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
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QC Batch ID: B[K0935]

trans-1,3-Dichloropropene	B[K0935-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B[K0935-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B[K0935-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B[K0935-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B[K0935-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B[K0935-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B[K0935-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B[K0935-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B[K0935-BLK1	ND	ug/L	0.50	0.11	
Styrene	B[K0935-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B[K0935-BLK1	ND	ug/L	0.50	0.18	
1,1,1,2-Tetrachloroethane	B[K0935-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethane	B[K0935-BLK1	ND	ug/L	0.50	0.13	
Toluene	B[K0935-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B[K0935-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B[K0935-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B[K0935-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B[K0935-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B[K0935-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B[K0935-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B[K0935-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B[K0935-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B[K0935-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B[K0935-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B[K0935-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B[K0935-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B[K0935-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B[K0935-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B[K0935-BLK1	104	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B[K0935-BLK1	98.6	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B[K0935-BLK1	97.3	%	80 - 120 (LCL - UCL)		

QC Batch ID: B[K1638]

Benzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0013	
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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[K1638						
Bromobenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0013	
Bromochloromethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.00092	
Bromodichloromethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.00084	
Bromoform	B[K1638-BLK1	ND	mg/kg	0.0050	0.0015	
Bromomethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0016	
n-Butylbenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0015	
sec-Butylbenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0012	
tert-Butylbenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0012	
Carbon tetrachloride	B[K1638-BLK1	ND	mg/kg	0.0050	0.0011	
Chlorobenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0013	
Chloroethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0014	
Chloroform	B[K1638-BLK1	ND	mg/kg	0.0050	0.00063	
Chloromethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0014	
2-Chlorotoluene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0018	
4-Chlorotoluene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0014	
Dibromochloromethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.00099	
1,2-Dibromo-3-chloropropane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0017	
1,2-Dibromoethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0010	
Dibromomethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0018	
1,2-Dichlorobenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.00081	
1,3-Dichlorobenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0014	
1,4-Dichlorobenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0015	
Dichlorodifluoromethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0013	
1,1-Dichloroethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0014	
1,2-Dichloroethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.00085	
1,1-Dichloroethene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0012	
cis-1,2-Dichloroethene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0013	
trans-1,2-Dichloroethene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0014	
1,2-Dichloropropane	B[K1638-BLK1	ND	mg/kg	0.0050	0.00081	
1,3-Dichloropropane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0011	
2,2-Dichloropropane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0013	
1,1-Dichloropropene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0012	
cis-1,3-Dichloropropene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0011	
trans-1,3-Dichloropropene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0012	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[K1638]						
Ethylbenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0015	
Hexachlorobutadiene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0017	
Isopropylbenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0013	
p-Isopropyltoluene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0013	
Methylene chloride	B[K1638-BLK1	ND	mg/kg	0.010	0.0024	
Methyl t-butyl ether	B[K1638-BLK1	ND	mg/kg	0.0050	0.00050	
Naphthalene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0014	
n-Propylbenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0013	
Styrene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0014	
1,1,1,2-Tetrachloroethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0011	
1,1,2,2-Tetrachloroethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0011	
Tetrachloroethene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0013	
Toluene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0012	
1,2,3-Trichlorobenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0021	
1,2,4-Trichlorobenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0020	
1,1,1-Trichloroethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0011	
1,1,2-Trichloroethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.00077	
Trichloroethene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0011	
Trichlorofluoromethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0011	
1,2,3-Trichloropropane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0016	
1,1,2-Trichloro-1,2,2-trifluoroethane	B[K1638-BLK1	ND	mg/kg	0.0050	0.0013	
1,2,4-Trimethylbenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0013	
1,3,5-Trimethylbenzene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0015	
Vinyl chloride	B[K1638-BLK1	ND	mg/kg	0.0050	0.0016	
Total Xylenes	B[K1638-BLK1	ND	mg/kg	0.010	0.0034	
p- & m-Xylenes	B[K1638-BLK1	ND	mg/kg	0.0050	0.0022	
o-Xylene	B[K1638-BLK1	ND	mg/kg	0.0050	0.0012	
1,2-Dichloroethane-d4 (Surrogate)	B[K1638-BLK1	96.0	%	70 - 121 (LCL - UCL)		
Toluene-d8 (Surrogate)	B[K1638-BLK1	99.7	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B[K1638-BLK1	100	%	74 - 121 (LCL - UCL)		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: B[K0935]										
Benzene	B[K0935-BS1]	LCS	25.040	25.000	ug/L	100		70 - 130		
Bromodichloromethane	B[K0935-BS1]	LCS	24.400	25.000	ug/L	97.6		70 - 130		
Chlorobenzene	B[K0935-BS1]	LCS	24.530	25.000	ug/L	98.1		70 - 130		
Chloroethane	B[K0935-BS1]	LCS	24.610	25.000	ug/L	98.4		70 - 130		
1,4-Dichlorobenzene	B[K0935-BS1]	LCS	24.040	25.000	ug/L	96.2		70 - 130		
1,1-Dichloroethane	B[K0935-BS1]	LCS	24.650	25.000	ug/L	98.6		70 - 130		
1,1-Dichloroethene	B[K0935-BS1]	LCS	26.440	25.000	ug/L	106		70 - 130		
Toluene	B[K0935-BS1]	LCS	24.400	25.000	ug/L	97.6		70 - 130		
Trichloroethene	B[K0935-BS1]	LCS	25.090	25.000	ug/L	100		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B[K0935-BS1]	LCS	9.8400	10.000	ug/L	98.4		75 - 125		
Toluene-d8 (Surrogate)	B[K0935-BS1]	LCS	9.9100	10.000	ug/L	99.1		80 - 120		
4-Bromofluorobenzene (Surrogate)	B[K0935-BS1]	LCS	9.5800	10.000	ug/L	95.8		80 - 120		

QC Batch ID: B[K1638]										
Benzene	B[K1638-BS1]	LCS	0.13426	0.12500	mg/kg	107		70 - 130		
Bromodichloromethane	B[K1638-BS1]	LCS	0.11294	0.12500	mg/kg	90.4		70 - 130		
Chlorobenzene	B[K1638-BS1]	LCS	0.12484	0.12500	mg/kg	99.9		70 - 130		
Chloroethane	B[K1638-BS1]	LCS	0.10516	0.12500	mg/kg	84.1		70 - 130		
1,4-Dichlorobenzene	B[K1638-BS1]	LCS	0.12655	0.12500	mg/kg	101		70 - 130		
1,1-Dichloroethane	B[K1638-BS1]	LCS	0.12472	0.12500	mg/kg	99.8		70 - 130		
1,1-Dichloroethene	B[K1638-BS1]	LCS	0.13854	0.12500	mg/kg	111		70 - 130		
Toluene	B[K1638-BS1]	LCS	0.12658	0.12500	mg/kg	101		70 - 130		
Trichloroethene	B[K1638-BS1]	LCS	0.12215	0.12500	mg/kg	97.7		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B[K1638-BS1]	LCS	0.047380	0.050000	mg/kg	94.8		70 - 121		
Toluene-d8 (Surrogate)	B[K1638-BS1]	LCS	0.048970	0.050000	mg/kg	97.9		81 - 117		
4-Bromofluorobenzene (Surrogate)	B[K1638-BS1]	LCS	0.048810	0.050000	mg/kg	97.6		74 - 121		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
QC Batch ID: B[K0935]		Used client sample: N								
Benzene	MS	1731097-01	ND	22.290	25.000	ug/L		89.2		70 - 130
	MSD	1731097-01	ND	21.590	25.000	ug/L	3.2	86.4	20	70 - 130
Bromodichloromethane	MS	1731097-01	ND	21.390	25.000	ug/L		85.6		70 - 130
	MSD	1731097-01	ND	21.490	25.000	ug/L	0.5	86.0	20	70 - 130
Chlorobenzene	MS	1731097-01	ND	21.690	25.000	ug/L		86.8		70 - 130
	MSD	1731097-01	ND	21.570	25.000	ug/L	0.6	86.3	20	70 - 130
Chloroethane	MS	1731097-01	ND	21.560	25.000	ug/L		86.2		70 - 130
	MSD	1731097-01	ND	20.750	25.000	ug/L	3.8	83.0	20	70 - 130
1,4-Dichlorobenzene	MS	1731097-01	ND	21.880	25.000	ug/L		87.5		70 - 130
	MSD	1731097-01	ND	21.020	25.000	ug/L	4.0	84.1	20	70 - 130
1,1-Dichloroethane	MS	1731097-01	ND	21.310	25.000	ug/L		85.2		70 - 130
	MSD	1731097-01	ND	20.930	25.000	ug/L	1.8	83.7	20	70 - 130
1,1-Dichloroethene	MS	1731097-01	ND	22.920	25.000	ug/L		91.7		70 - 130
	MSD	1731097-01	ND	22.430	25.000	ug/L	2.2	89.7	20	70 - 130
Toluene	MS	1731097-01	ND	21.520	25.000	ug/L		86.1		70 - 130
	MSD	1731097-01	ND	21.370	25.000	ug/L	0.7	85.5	20	70 - 130
Trichloroethene	MS	1731097-01	ND	21.920	25.000	ug/L		87.7		70 - 130
	MSD	1731097-01	ND	21.190	25.000	ug/L	3.4	84.8	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1731097-01	ND	9.6600	10.000	ug/L		96.6		75 - 125
	MSD	1731097-01	ND	10.310	10.000	ug/L	6.5	103		75 - 125
Toluene-d8 (Surrogate)	MS	1731097-01	ND	9.9500	10.000	ug/L		99.5		80 - 120
	MSD	1731097-01	ND	10.020	10.000	ug/L	0.7	100		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1731097-01	ND	9.9400	10.000	ug/L		99.4		80 - 120
	MSD	1731097-01	ND	9.8400	10.000	ug/L	1.0	98.4		80 - 120

QC Batch ID: B[K1638]		Used client sample: N								
Benzene	MS	1730221-65	ND	0.12277	0.12500	mg/kg		98.2		70 - 130
	MSD	1730221-65	ND	0.12556	0.12500	mg/kg	2.2	100	20	70 - 130
Bromodichloromethane	MS	1730221-65	ND	0.10710	0.12500	mg/kg		85.7		70 - 130
	MSD	1730221-65	ND	0.11502	0.12500	mg/kg	7.1	92.0	20	70 - 130
Chlorobenzene	MS	1730221-65	ND	0.11487	0.12500	mg/kg		91.9		70 - 130
	MSD	1730221-65	ND	0.11951	0.12500	mg/kg	4.0	95.6	20	70 - 130
Chloroethane	MS	1730221-65	ND	0.10117	0.12500	mg/kg		80.9		70 - 130
	MSD	1730221-65	ND	0.10202	0.12500	mg/kg	0.8	81.6	20	70 - 130
1,4-Dichlorobenzene	MS	1730221-65	ND	0.11445	0.12500	mg/kg		91.6		70 - 130
	MSD	1730221-65	ND	0.12419	0.12500	mg/kg	8.2	99.4	20	70 - 130
1,1-Dichloroethane	MS	1730221-65	ND	0.11953	0.12500	mg/kg		95.6		70 - 130
	MSD	1730221-65	ND	0.12070	0.12500	mg/kg	1.0	96.6	20	70 - 130

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[K1638]		Used client sample: N								
1,1-Dichloroethene	MS	1730221-65	ND	0.12515	0.12500	mg/kg		100		70 - 130
	MSD	1730221-65	ND	0.12654	0.12500	mg/kg	1.1	101	20	70 - 130
Toluene	MS	1730221-65	ND	0.11744	0.12500	mg/kg		94.0		70 - 130
	MSD	1730221-65	ND	0.12182	0.12500	mg/kg	3.7	97.5	20	70 - 130
Trichloroethene	MS	1730221-65	ND	0.11384	0.12500	mg/kg		91.1		70 - 130
	MSD	1730221-65	ND	0.11577	0.12500	mg/kg	1.7	92.6	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1730221-65	ND	0.044570	0.050000	mg/kg		89.1		70 - 121
	MSD	1730221-65	ND	0.045930	0.050000	mg/kg	3.0	91.9		70 - 121
Toluene-d8 (Surrogate)	MS	1730221-65	ND	0.050650	0.050000	mg/kg		101		81 - 117
	MSD	1730221-65	ND	0.051910	0.050000	mg/kg	2.5	104		81 - 117
4-Bromofluorobenzene (Surrogate)	MS	1730221-65	ND	0.047760	0.050000	mg/kg		95.5		74 - 121
	MSD	1730221-65	ND	0.048390	0.050000	mg/kg	1.3	96.8		74 - 121

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/17/2017 13:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A01 Detection and quantitation limits are raised due to sample dilution.
- S05 The sample holding time was exceeded.



Date of Report: 11/06/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1727591
Invoice ID: B281441

Enclosed are the results of analyses for samples received by the laboratory on 9/27/2017. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000656858

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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BC LABORATORIES INC. COOLER RECEIPT FORM Page Of

Submission #: 17-27591

SHIPPING INFORMATION
 Fed Ex UPS Ontrac Hand Delivery
 BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER
 Ice Chest None Box
 Other (Specify) _____

FREE LIQUID
 YES NO W / S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers: None Comments: _____

All samples received? Yes No All samples containers-intact? Yes No Description(s) match COC? Yes No

COC Received YES NO

Emissivity: 95 Container: Amber Thermometer ID: 274 Date/Time: 9/27/17
 Temperature: (A) 12.7 °C, (C) 12.1 °C ANALYST: JL Analyst Initials: JL

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664	A	A	A	A	A					
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: Date/Time: 9/29/17 0950

= Actual / C = Corrected

Rev 21 05/23/2016
 (S:\WPDoc\Word\Perfect\LAB DOCS\FORMS\IS\AMBER...)



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1727591-01	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/26/2017 08:40
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-101	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
1727591-02	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/26/2017 09:33
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-102	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
1727591-03	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/26/2017 12:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-103	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
1727591-04	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/26/2017 13:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-104	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
1727591-05	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/26/2017 13:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-105	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727591-01	Client Sample Name: J-101, 9/26/2017 8:40:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	8.6	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/02/17	10/02/17 11:00	MAM	MAN-SV	1	BJ0094

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727591-02	Client Sample Name: J-102, 9/26/2017 9:33:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	41	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/02/17	10/02/17 11:00	MAM	MAN-SV	1	BJ0094

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727591-03	Client Sample Name: J-103, 9/26/2017 12:25:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	7.2	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/02/17	10/02/17 11:00	MAM	MAN-SV	1	BJ0094

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727591-04	Client Sample Name: J-104, 9/26/2017 1:30:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	9.1	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/02/17	10/02/17 11:00	MAM	MAN-SV	1	BJ0094

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727591-05	Client Sample Name: J-105, 9/26/2017 1:30:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	8.9	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/02/17	10/02/17 11:00	MAM	MAN-SV	1	BJ0094

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J0094						
Oil and Grease	B[J0094-BLK1	ND	mg/L	5.0	0.86	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[J0094										
Oil and Grease	B[J0094-BS1	LCS	38.900	40.400	mg/L	96.3		78	114	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent		Lab Quals
								Recovery	RPD	
QC Batch ID: B[J0094		Used client sample: N								
Oil and Grease	DUP	1722106-61	ND	ND		mg/L				18
	MS	1722106-61	ND	39.100	40.400	mg/L		96.8		78 - 114
	MSD	1722106-61	ND	38.500	40.400	mg/L	1.5	95.3	18	78 - 114

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:49
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit

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Date of Report: 11/06/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1727592
Invoice ID: B281323

Enclosed are the results of analyses for samples received by the laboratory on 9/27/2017. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000656412

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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064 Day 2

CE Schmidt, Ph.D., Environmental Consultant

Form Serial Number: CES F1-02106
 Client Name: Air Resources Board
 Project: Oilfield WVI Emissions Assessment
 Project Manager: Luis Leyva
 E-Mail: SCHMIDTCE@aol.com

For Information Regarding These Samples Please Contact:
 Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

Client Address and Phone Number:
 10071 Street
 Sacramento, CA 95814 800-242-4450

Laboratory Name: BC Laboratories
 Laboratory Address: 4100 Atlas Court
 Bakersfield, CA 93308
 Laboratory Phone: 661-327-4911
 Laboratory Contact: Ms. Kerrie Vaughan
 kerrie.vaughan@bcclabs.com

Station Number	Date	Time	CIG			Sample ID Number	#	O	F	C	O	N	T	A	I	N	E	R	S	Sample Container			Remarks		
			M	A	P															S	Jar	Tube			
-1	9/27/2017	855	X			J-201	1																		
-2	9/27/2017	1000	X			J-202	1																		
-3	9/27/2017	1055	X			J-203	1																		
-4	9/27/2017	1247	X			J-204	1																		
-5	9/27/2017	1400	X			J-205	1																		
-6	9/27/2017	1455	X			J-206	1																		
-7	9/27/2017	1455	X			J-207	1																		
-8	9/27/2017	1520	X			J-208	1																		
	9/27/2017		X			J-209	1																		

Analysis Requested: USEPA Method 8260b, USEPA Method 1664

Relinquished by: [Signature] Date/Time: 9/27/17 1600

Relinquished by: [Signature] Date/Time: 9/27/17 1600

Relinquished by: [Signature] Date/Time: 9/27/17 16:00

Relinquished by: [Signature] Date/Time: 9/27/17 16:00

Sample Shipped Via: BUS

Remarks: All Samples are in a Wastewater Matrix

CLERK BY: [Signature]

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BC LABORATORIES INC. COOLER RECEIPT FORM Page Of

Submission #: 17-27592

SHIPPING INFORMATION
 Fed Ex UPS Ontrac Hand Delivery
 BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER
 Ice Chest None Box
 Other (Specify) _____

FREE LIQUID
 YES NO W / S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals Ice Chest Containers None Comments: _____
 Intact? Yes No Intact? Yes No

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received YES NO

Emissivity: 0.95 Container: Amber Thermometer ID: 274 Date/Time: 9/27/17
 Temperature: (A) 12.7 °C / (C) 12.1 °C Analyst Ipt: D 10:00

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr*										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664	A	A	A	A	A	A	A	A		
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____
 Sample Numbering Completed By: Date/Time: 9/29 0950 Rev 21 05/23/2016
 A = Actual / C = Corrected



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1727592-01	COC Number:	---	Receive Date: 09/27/2017 16:00
	Project Number:	---	Sampling Date: 09/27/2017 08:55
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-201	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1727592-02	COC Number:	---	Receive Date: 09/27/2017 16:00
	Project Number:	---	Sampling Date: 09/27/2017 10:00
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-202	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1727592-03	COC Number:	---	Receive Date: 09/27/2017 16:00
	Project Number:	---	Sampling Date: 09/27/2017 10:55
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-203	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1727592-04	COC Number:	---	Receive Date: 09/27/2017 16:00
	Project Number:	---	Sampling Date: 09/27/2017 12:47
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-204	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1727592-05	COC Number:	---	Receive Date: 09/27/2017 16:00
	Project Number:	---	Sampling Date: 09/27/2017 14:00
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-205	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1727592-06	COC Number:	---	Receive Date: 09/27/2017 16:00
	Project Number:	---	Sampling Date: 09/27/2017 14:55
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-206	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1727592-07	COC Number:	---	Receive Date: 09/27/2017 16:00
	Project Number:	---	Sampling Date: 09/27/2017 14:55
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-207	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1727592-08	COC Number:	---	Receive Date:	09/27/2017 16:00
	Project Number:	---	Sampling Date:	09/27/2017 15:20
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-208	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727592-01	Client Sample Name: J-201, 9/27/2017 8:55:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	180	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	09/28/17	09/28/17 08:00	MAM	MAN-SV	1	B[12676

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727592-02	Client Sample Name: J-202, 9/27/2017 10:00:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	9.2	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	09/28/17	09/28/17 08:00	MAM	MAN-SV	1	B[12676

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727592-03	Client Sample Name: J-203, 9/27/2017 10:55:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	7.9	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	09/28/17	09/28/17 08:00	MAM	MAN-SV	1	B[12676

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727592-04	Client Sample Name: J-204, 9/27/2017 12:47:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	11	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	09/28/17	09/28/17 08:00	MAM	MAN-SV	1	B[12676

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727592-05	Client Sample Name: J-205, 9/27/2017 2:00:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	4.2	mg/L	5.0	0.86	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	09/28/17	09/28/17 08:00	MAM	MAN-SV	1	B[12676

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727592-06	Client Sample Name: J-206, 9/27/2017 2:55:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	3.5	mg/L	5.0	0.86	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	09/28/17	09/28/17 08:00	MAM	MAN-SV	1	B[12676

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727592-07	Client Sample Name: J-207, 9/27/2017 2:55:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	2.2	mg/L	5.0	0.86	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	09/28/17	09/28/17 08:00	MAM	MAN-SV	1	B[12676

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727592-08	Client Sample Name: J-208, 9/27/2017 3:20:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	ND	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	09/28/17	09/28/17 08:00	MAM	MAN-SV	1	B[12676

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[12676						
Oil and Grease	B[12676-BLK1	ND	mg/L	5.0	0.86	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B 2676										
Oil and Grease	B 2676-BS1	LCS	39.300	38.500	mg/L	102		78	114	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent		Lab Quals
								Recovery	RPD	
QC Batch ID: B[12676		Used client sample: N								
Oil and Grease	DUP	1722106-60	ND	ND		mg/L				18
	MS	1722106-60	ND	38.250	38.500	mg/L		99.4		78 - 114
	MSD	1722106-60	ND	38.050	38.500	mg/L	0.5	98.8	18	78 - 114

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 11/06/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1727593
Invoice ID: B281444

Enclosed are the results of analyses for samples received by the laboratory on 9/28/2017. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000656865

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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BC LABORATORIES INC.		COOLER RECEIPT FORM		Page <u>1</u> Of <u>1</u>							
Submission #: <u>17-27593</u>											
SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input checked="" type="checkbox"/> BC Lab Field Service <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____			SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> <u>W</u> / <u>S</u>						
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments: _____											
Custody Seals Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> None <input checked="" type="checkbox"/> Comments: _____ Intact? Yes <input type="checkbox"/> No <input type="checkbox"/> Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>											
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>95</u> Container: <u>Amber</u> Thermometer ID: <u>274</u> Temperature: (A) <u>12.0</u> °C / (C) <u>11.4</u> °C		Date/Time <u>9.28.17</u> Analyst Init <u>AS</u>							
SAMPLE CONTAINERS		SAMPLE NUMBERS									
		1	2	3	4	5	6	7	8	9	10
QT PE UNPRES											
4oz / 8oz / 16oz PE UNPRES											
2oz Cr ⁶											
QT INORGANIC CHEMICAL METALS											
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz											
PT CYANIDE											
PT NITROGEN FORMS											
PT TOTAL SULFIDE											
2oz. NITRATE / NITRITE											
PT TOTAL ORGANIC CARBON											
PT CHEMICAL OXYGEN DEMAND											
PIA PHENOLICS											
40ml VOA VIAL TRAVEL BLANK											
40ml VOA VIAL											
QT EPA 1664		A	A	A	A	A	A	A			
PT ODOR											
RADIOLOGICAL											
BACTERIOLOGICAL											
40 ml VOA VIAL- 504											
QT EPA 508/608/8080											
QT EPA 515.1/8150											
QT EPA 525											
QT EPA 525 TRAVEL BLANK											
40ml EPA 547											
40ml EPA 531.1											
8oz EPA 548											
QT EPA 549											
QT EPA 8015M											
QT EPA 8270											
8oz / 16oz / 32oz AMBER											
8oz / 16oz / 32oz JAR											
SOIL SLEEVE											
PCB VIAL											
PLASTIC BAG											
TEDLAR BAG											
FERROUS IRON											
ENCORE											
SMART KIT											
SUMMA CANISTER											

Comments: _____
 Sample Numbering Completed By: A Date/Time: 9.20 0945
 = Actual / C = Corrected

Rev 21 05/23/2016
 (S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMRECrev 20)

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	
1727593-01	COC Number:	---		09/28/2017	15:00
	Project Number:	---		Sampling Date:	09/28/2017 07:55
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	J-301		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1727593-02	COC Number:	---		09/28/2017	15:00
	Project Number:	---		Sampling Date:	09/28/2017 09:00
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	J-302		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1727593-03	COC Number:	---		09/28/2017	15:00
	Project Number:	---		Sampling Date:	09/28/2017 10:30
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	J-303		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1727593-04	COC Number:	---		09/28/2017	15:00
	Project Number:	---		Sampling Date:	09/28/2017 11:30
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	J-304		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1727593-05	COC Number:	---		09/28/2017	15:00
	Project Number:	---		Sampling Date:	09/28/2017 12:45
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	J-305		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1727593-06	COC Number:	---		09/28/2017	15:00
	Project Number:	---		Sampling Date:	09/28/2017 12:45
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	J-306		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1727593-07	COC Number:	---		09/28/2017	15:00
	Project Number:	---		Sampling Date:	09/28/2017 13:10
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	J-307		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727593-01	Client Sample Name: J-301, 9/28/2017 7:55:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	7.6	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/02/17	10/02/17 11:00	MAM	MAN-SV	1	BJ0094

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727593-02	Client Sample Name: J-302, 9/28/2017 9:00:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	7.4	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/02/17	10/02/17 11:00	MAM	MAN-SV	1	BJ0094

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727593-03	Client Sample Name: J-303, 9/28/2017 10:30:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	2.5	mg/L	5.0	0.86	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/02/17	10/02/17 11:00	MAM	MAN-SV	1	BJ0094

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727593-04	Client Sample Name: J-304, 9/28/2017 11:30:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	1200	mg/L	7.2	1.2	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/02/17	10/02/17 11:00	MAM	MAN-SV	1.449	BJ0094

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727593-05	Client Sample Name: J-305, 9/28/2017 12:45:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	53	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/02/17	10/02/17 11:00	MAM	MAN-SV	1	BJJ0094

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727593-06	Client Sample Name: J-306, 9/28/2017 12:45:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	65	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/02/17	10/02/17 11:00	MAM	MAN-SV	1	BJ0094

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1727593-07	Client Sample Name: J-307, 9/28/2017 1:10:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	ND	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/02/17	10/02/17 11:00	MAM	MAN-SV	1	BJ0094

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J0094						
Oil and Grease	B[J0094-BLK1	ND	mg/L	5.0	0.86	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[J0094										
Oil and Grease	B[J0094-BS1	LCS	38.900	40.400	mg/L	96.3		78	114	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent		Lab Quals
								Recovery	RPD	
QC Batch ID: B[J0094		Used client sample: N								
Oil and Grease	DUP	1722106-61	ND	ND		mg/L				18
	MS	1722106-61	ND	39.100	40.400	mg/L		96.8		78 - 114
	MSD	1722106-61	ND	38.500	40.400	mg/L	1.5	95.3	18	78 - 114

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/06/2017 15:50
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 10/18/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1729088
Invoice ID: B282775

Enclosed are the results of analyses for samples received by the laboratory on 10/11/2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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064 Day 1

CE Schmidt, Ph.D., Environmental Consultant

Form Serial Number CES F1-02106
Client Name Air Resources Board
Project Manager Luis Leyva
Requested Completion Date 17-29088

Client Address and Phone Number
1001 / Street
Sacramento, CA 95814 800-242-4450

Laboratory Name BC Laboratories
Laboratory Address 4100 Atlas Court
Laboratory Phone 661-327-4911

Table with columns for Station Number, Date, Time, Sample ID Number, Container, and Analysis Requested. Includes handwritten entries for samples 1-8 and a 'COK BY DISTRIBUTION' stamp.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 17-29088

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO (W/S)

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 95 Container: Amber Thermometer ID: 274 Date/Time: 10-11-17

Temperature: (A) 10.4 °C / (C) 50.8 °C Analyst Init: [Signature]

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664	A	A	A	A	A	A	A	A		
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: MA Date/Time: 10/12 930

Rev 21 05/23/2016 [S:\WP\Doc\WordPerfect\LAB_DOCS\FORMS\SAMRECrev 20]



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1729088-01	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 11:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-401	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729088-02	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 11:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-402	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729088-03	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 12:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-403	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729088-04	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 12:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-404	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729088-05	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 15:07
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-405	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729088-06	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 15:07
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-406	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729088-07	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 16:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-407	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1729088-08	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/10/2017 16:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-408	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729088-01	Client Sample Name: J-401, 10/10/2017 11:00:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	28	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 08:00	MAM	MAN-SV	1	BJ1711

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729088-02	Client Sample Name: J-402, 10/10/2017 11:00:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	30	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 08:00	MAM	MAN-SV	1	BJ1711

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729088-03	Client Sample Name: J-403, 10/10/2017 12:05:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	66	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 08:00	MAM	MAN-SV	1	BJ1711

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729088-04	Client Sample Name: J-404, 10/10/2017 12:25:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	58	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 08:00	MAM	MAN-SV	1	BJ1711

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729088-05	Client Sample Name: J-405, 10/10/2017 3:07:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	15	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 08:00	MAM	MAN-SV	1	BJ1711

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729088-06	Client Sample Name: J-406, 10/10/2017 3:07:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	15	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 08:00	MAM	MAN-SV	1	BJ1711

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729088-07	Client Sample Name: J-407, 10/10/2017 4:10:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	96	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 08:00	MAM	MAN-SV	1	BJ1711

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729088-08	Client Sample Name: J-408, 10/10/2017 4:10:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	3500	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 08:00	MAM	MAN-SV	1	BJ1711

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J1711						
Oil and Grease	BJ1711-BLK1	ND	mg/L	5.0	0.86	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[J1711										
Oil and Grease	B[J1711-BS1	LCS	42.550	40.800	mg/L	104		78	114	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: B[J1711		Used client sample: N								
Oil and Grease	DUP	1724840-73	ND	ND		mg/L				18
	MS	1724840-73	ND	38.400	40.800	mg/L		94.1		78 - 114
	MSD	1724840-73	ND	39.850	40.800	mg/L	3.7	97.7	18	78 - 114

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/18/2017 16:02
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 10/19/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1729086
Invoice ID: B282898

Enclosed are the results of analyses for samples received by the laboratory on 10/11/2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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----------------------------	----



064 Day 2

CE Schmidt, Plc., Environmental Consultant

Form Serial Number CES-FI-02106
Client Name Air Resources Board
Project Manager Luis Leyva
Requested Completion Date 17-29086

Client Address and Phone Number 1001 I Street Sacramento, CA 95814 800-242-4450
Laboratory Name BC Laboratories
Laboratory Address 4100 Atlas Court Bakersfield, CA 93308
Laboratory Phone 661-327-4911
Laboratory Contact Ms. Kerrie Vaughn

Table with columns: Station Number, Date, Time, CIP, OIR, MAA, PAB, Sample ID Number, Sample Container (Vial, Jar, Tube), and Remarks. Contains handwritten entries for samples 1 through 7.

Relinquished by Date/Time
Relinquished by Date/Time
Relinquished by Date/Time
Sample Shipped Via UPS FEDEX BUS Other

File: ARB Forms 2.xiso Form: COC 1664 D2

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BC LABORATORIES INC. Submission #: 17-29086 COOLER RECEIPT FORM Page 2 Of 2

SHIPPING INFORMATION
 Fed Ex UPS Ontrac Hand Delivery
 BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER
 Ice Chest None Box
 Other (Specify) _____

FREE LIQUID
 YES NO
 (W / S)

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals Ice Chest Containers
 Intact? Yes No Intact? Yes No None Comments: _____

All samples received? Yes No All samples containers intact? Yes No

COC Received YES NO Emissivity: 05 Container: Amber Description(s) match COC? Yes No
 Temperature: (A) 10.4 °C / (C) 5.8 °C Thermometer ID: 274 Date/Time: 10-11-17
 Analyst Init: SD 10:24

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr*										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR	A	A	A	A	A	A	A			
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
YT EPA 525										
YT EPA 525 TRAVEL BLANK										
Qml EPA 547										
Qml EPA 531.1										
z EPA 548										
EPA 549										
EPA 8015M										
EPA 8270										
/16oz / 32oz AMBER										
/16oz / 32oz JAR										
L SLEEVE										
VIAL										
STIC BAG										
LAR BAG										
ROUS IRON										
DRE										
KT KIT										
IA CANISTER										

Numbering Completed By: MA Date/Time: 10/12 9:57
 Actual / C = Corrected



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:14
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1729086-01	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/11/2017 08:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-501	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729086-02	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/11/2017 09:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-502	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729086-03	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/11/2017 11:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-503	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729086-04	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/11/2017 13:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-504	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729086-05	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/11/2017 13:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-505	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729086-06	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/11/2017 14:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-506	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729086-07	COC Number:	---	Receive Date:	10/11/2017 16:24
	Project Number:	---	Sampling Date:	10/11/2017 14:45
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-507	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:14
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729086-01	Client Sample Name: J-501, 10/11/2017 8:55:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	22	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:14
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729086-02	Client Sample Name: J-502, 10/11/2017 9:25:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	30	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:14
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729086-03	Client Sample Name: J-503, 10/11/2017 11:30:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	13	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:14
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729086-04	Client Sample Name: J-504, 10/11/2017 1:30:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	28	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:14
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729086-05	Client Sample Name: J-505, 10/11/2017 1:30:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	15	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:14
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729086-06	Client Sample Name: J-506, 10/11/2017 2:25:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	47	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:14
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729086-07	Client Sample Name: J-507, 10/11/2017 2:45:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	ND	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:14
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J2035						
Oil and Grease	B[J2035-BLK1	ND	mg/L	5.0	0.86	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:14
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[J2035										
Oil and Grease	B[J2035-BS1	LCS	39.000	40.800	mg/L	95.6		78	114	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:14
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
QC Batch ID: B[J2035		Used client sample: N									
Oil and Grease	DUP	1724840-75	ND	ND		mg/L			18		
	MS	1724840-75	ND	37.100	40.800	mg/L		90.9		78 - 114	
	MSD	1724840-75	ND	38.550	40.800	mg/L	3.8	94.5	18	78 - 114	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:14
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit

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Date of Report: 10/19/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1729387
Invoice ID: B282902

Enclosed are the results of analyses for samples received by the laboratory on 10/12/2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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064 Day 3

CE Schmidt, P.I., Environmental Consultant

Chain of Custody Record

Form Serial Number CES F1-02106
Client Name Air Resources Board
Project Manager Lili Leyva
Requested Completion Date

17-29387

Client Address and Phone Number
1007 I Street
Sacramento, CA 95814 800-242-4450

Laboratory Name BC Laboratories
Laboratory Address 4100 Atlas Court
Laboratory Phone 661-327-4911

Laboratory Contact Ms. Kerrie Vaughan
Kerrie.vaughan@bclabs.com

Remarks

Table with columns: Station Number, Date, Time, C O R M A P B, Sample ID Number, Sample Container, USEPA Method 8260, USEPA Method 1664, Date/Time, Requisitioned by, Date/Time, Requisitioned by, Date/Time, Requisitioned by, Date/Time, Sample Shipped Via, Other.

Sampler Received by Date/Time 10/12/17 0800
Received by Date/Time 10/12/17 1700
Received by Date/Time 10-12-17 16:00
Remarks All Samples are in a Wastewater Matrix

File: ARB Forms 2.xlsb Form: COC-1664.D3

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 1

Submission #: 7-29387

SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input checked="" type="checkbox"/> BC Lab Field Service <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____	FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
---	--	---	---

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____
 Intact? Yes No Intact? Yes No

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received YES NO

Emissivity: 95 Container: Amber Thermometer ID: 274 Date/Time: 10-12-17
 Temperature: (A) 23.0 °C / (C) 22.4 °C VMB 10/12 Analyst: JLH

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664	A	A	A	A	A	A	A	A		
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: JLH Date/Time: 10-16-17 0821

A = Actual / C = Corrected

Rev 21 05/23/2016 (S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMRECrev 20)



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1729387-01	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 08:45
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 601	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729387-02	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 09:40
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 602	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729387-03	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 10:50
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 603	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729387-04	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 12:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 604	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729387-05	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 13:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 605	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729387-06	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 13:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 606	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1729387-07	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 14:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 607	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1729387-08	COC Number:	---	Receive Date:	10/12/2017 16:00
	Project Number:	---	Sampling Date:	10/12/2017 14:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 608	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729387-01	Client Sample Name: J - 601, 10/12/2017 8:45:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	55	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729387-02	Client Sample Name: J - 602, 10/12/2017 9:40:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	43	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729387-03	Client Sample Name: J - 603, 10/12/2017 10:50:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	62	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729387-04	Client Sample Name: J - 604, 10/12/2017 12:10:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	8.4	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729387-05	Client Sample Name: J - 605, 10/12/2017 1:00:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	6.4	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729387-06 **Client Sample Name:** J - 606, 10/12/2017 1:00:00PM, Chuck Schmidt

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	5.3	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729387-07	Client Sample Name: J - 607, 10/12/2017 2:05:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	30	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1729387-08	Client Sample Name: J - 608, 10/12/2017 2:25:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	0.95	mg/L	5.0	0.86	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/17/17	10/17/17 14:00	MAM	MAN-SV	1	BJJ2035

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[J2035						
Oil and Grease	B[J2035-BLK1	ND	mg/L	5.0	0.86	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[J2035										
Oil and Grease	B[J2035-BS1	LCS	39.000	40.800	mg/L	95.6		78	114	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
QC Batch ID: B[J2035		Used client sample: N									
Oil and Grease	DUP	1724840-75	ND	ND		mg/L			18		
	MS	1724840-75	ND	37.100	40.800	mg/L		90.9		78 - 114	
	MSD	1724840-75	ND	38.550	40.800	mg/L	3.8	94.5	18	78 - 114	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/19/2017 17:21
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 11/14/2017

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1731163
Invoice ID: B285230

Enclosed are the results of analyses for samples received by the laboratory on 11/2/2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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----------------------------	----



0.64 Day 1

17-31163

CE Schmidt, Ph., Environmental Consultant
Chain of Custody Record

Station Number	Date	Time	For Information Regarding These Samples			Sample ID Number	Sample Container	Analysis Requested	Client Address and Phone Number	Laboratory Name	Laboratory Address	Laboratory Phone	Laboratory Contact	Remarks
			CG	OR	MA									
F	11/1/2017	8:15	X			J-701	1	X	1007 / Street Sacramento, CA 95814, 800-242-4450	BC Laboratories	4100 Atlas Court Bakersfield, CA 93308	661-327-4911	Ms. Kerrie Vaughn Kerrie.vaughan@bclabs.com	
S	11/1/2017	8:40	X			J-702	1	X						
S	11/1/2017	10:15	X			J-703	1	X						
-4	11/1/2017	12:15	X			J-704	1	X						
-5	11/1/2017	12:15	X			J-705	1	X						
-6	11/1/2017	13:15	X			J-706	1	X						
-7	11/1/2017	14:40	X			J-707	1	X						
-8	11/1/2017	16:00	X			J-708	1	X						
-9	11/1/2017	16:50	X			J-709	1	X						
-10	11/1/2017	17:00	X			J-710	1	X						
	4/4/2017		X			J-711	1	X						
	11/1/2017		X			J-712	1	X						
	11/1/2017		X			J-713	1	X						
	11/1/2017		X			J-714	1	X						
	11/1/2017		X			J-715	1	X						

CHINA DISTRIBUTION
SUB-OUTLET
KMS
Boa

Sampler	Date/Time	Relinquished by	Date/Time	HAZWRAP/NEESA	Y	N	
Received by	Date/Time	Relinquished by	Date/Time	GC Level	1	2	3
Received by <i>Megan Stang</i>	Date/Time 11/17 18:15	Relinquished by	Date/Time	COC			
Received by <i>Ken</i>	Date/Time 4/2/17 @ 16:30	Relinquished by	Date/Time	Ana Req			
Remarks: All Samples are in a Wastewater Matrix		Sample Shipped Via		Cust Seal			
		LFS	FEDEX	BUS			
		Other:		Sample Condition			

File: ARB Forms 3.xlsb Form: COC 1664 D1

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 17-31163

SHIPPING INFORMATION
 Fed Ex UPS Ontrac Hand Delivery
 BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER
 Ice Chest None Box
 Other (Specify) _____

FREE LIQUID
 YES NO
 W / S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals Ice Chest Containers None
 Intact? Yes No Intact? Yes No Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received
 YES NO

Emissivity: 0.95 Container: QTA Thermometer ID: THZTA
 Temperature: (A) 4.6 °C / (C) 4.0 °C Date/Time: 11/21/17
 Analyst Initial: PML/1646

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664	A	A	A	A	A	A	A	A	A	A
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____
 Sample Numbering Completed By: WKC Date/Time: 11/21/17 10:33
 A = Actual / C = Corrected Rev 21 05/23/2016
(S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMRECrev 20)



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1731163-01	COC Number:	---	Receive Date: 11/02/2017 16:30
	Project Number:	---	Sampling Date: 11/01/2017 08:15
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-701	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1731163-02	COC Number:	---	Receive Date: 11/02/2017 16:30
	Project Number:	---	Sampling Date: 11/01/2017 08:40
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-702	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1731163-03	COC Number:	---	Receive Date: 11/02/2017 16:30
	Project Number:	---	Sampling Date: 11/01/2017 10:15
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-703	Lab Matrix: Solids
	Sampled By:	Chuck Schmidt	Sample Type: Oil
1731163-04	COC Number:	---	Receive Date: 11/02/2017 16:30
	Project Number:	---	Sampling Date: 11/01/2017 12:15
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-704	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1731163-05	COC Number:	---	Receive Date: 11/02/2017 16:30
	Project Number:	---	Sampling Date: 11/01/2017 12:15
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-705	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1731163-06	COC Number:	---	Receive Date: 11/02/2017 16:30
	Project Number:	---	Sampling Date: 11/01/2017 13:15
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-706	Lab Matrix: Solids
	Sampled By:	Chuck Schmidt	Sample Type: Oil
1731163-07	COC Number:	---	Receive Date: 11/02/2017 16:30
	Project Number:	---	Sampling Date: 11/01/2017 14:40
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-707	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1731163-08	COC Number:	---	Receive Date:	11/02/2017 16:30
	Project Number:	---	Sampling Date:	11/01/2017 16:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-708	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1731163-09	COC Number:	---	Receive Date:	11/02/2017 16:30
	Project Number:	---	Sampling Date:	11/01/2017 16:50
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-709	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1731163-10	COC Number:	---	Receive Date:	11/02/2017 16:30
	Project Number:	---	Sampling Date:	11/01/2017 17:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-710	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1731163-01	Client Sample Name: J-701, 11/1/2017 8:15:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	11	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	11/08/17	11/08/17 06:30	MAM	MAN-SV	1	B[K0785

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1731163-02	Client Sample Name: J-702, 11/1/2017 8:40:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	12	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	11/08/17	11/08/17 06:30	MAM	MAN-SV	1	B[K0785

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1731163-03	Client Sample Name: J-703, 11/1/2017 10:15:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	540000	mg/kg	2100	880	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	11/09/17	11/09/17 16:00	MAM	MAN-SV	41.667	B[K1137

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1731163-04	Client Sample Name: J-704, 11/1/2017 12:15:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	31	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	11/08/17	11/08/17 06:30	MAM	MAN-SV	1	B[K0785

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1731163-05	Client Sample Name: J-705, 11/1/2017 12:15:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	36	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	11/08/17	11/08/17 06:30	MAM	MAN-SV	1	B[K0785

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1731163-06	Client Sample Name: J-706, 11/1/2017 1:15:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	460000	mg/kg	1900	810	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	11/09/17	11/09/17 16:00	MAM	MAN-SV	38.462	B[K1137

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1731163-07	Client Sample Name: J-707, 11/1/2017 2:40:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	17	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	11/08/17	11/08/17 06:30	MAM	MAN-SV	1	B[K0785

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1731163-08	Client Sample Name: J-708, 11/1/2017 4:00:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	37	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	11/08/17	11/08/17 06:30	MAM	MAN-SV	1	B[K0785

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1731163-09 **Client Sample Name:** J-709, 11/1/2017 4:50:00PM, Chuck Schmidt

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	20	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	11/08/17	11/08/17 06:30	MAM	MAN-SV	1	B[K0785

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1731163-10	Client Sample Name: J-710, 11/1/2017 5:00:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	ND	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	11/08/17	11/08/17 06:30	MAM	MAN-SV	1	B[K0785

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[K0785]						
Oil and Grease	B[K0785-BLK1	ND	mg/L	5.0	0.86	
QC Batch ID: B[K1137]						
Oil and Grease	B[K1137-BLK1	ND	mg/kg	50	21	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[K0785]										
Oil and Grease	B[K0785-BS1	LCS	41.200	38.100	mg/L	108		78 - 114		
QC Batch ID: B[K1137]										
Oil and Grease	B[K1137-BS1	LCS	755.47	761.43	mg/kg	99.2		59 - 117		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
QC Batch ID: B[K0785]		Used client sample: N								
Oil and Grease	DUP	1730221-32	ND	ND		mg/L			18	
	MS	1730221-32	ND	38.800	38.100	mg/L		102		78 - 114
	MSD	1730221-32	ND	40.350	38.100	mg/L	3.9	106	18	78 - 114
QC Batch ID: B[K1137]		Used client sample: N								
Oil and Grease	DUP	1730679-05	ND	ND		mg/kg			30	
	MS	1730679-05	ND	782.74	759.92	mg/kg		103		56 - 111
	MSD	1730679-05	ND	763.47	764.47	mg/kg	2.5	99.9	30	56 - 111

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 11/14/2017 17:00
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit

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California Air Resources Board
RFP No. 161SD005

Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations

Data Validation Technical Memorandum Addendum- Phase 1



February 2018

Submitted by

Primary Contact:

Dr. Charles Schmidt
19200 Live Oak Road, Red Bluff, CA 96080
530.529.4256 schmidtce@aol.com

Thomas R. Card, PE

Environmental Management Consulting
41125 278th Way SE, Enumclaw, WA 98022 USA
360-802-5540 trcard@earthlink.net

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References

EXECUTIVE SUMMARY

This Technical Memorandum describes the methodology, sampling procedures and test results for Phase 1 of the Air Resources Board project titled *Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations (No. 161SD005)*.

The purpose of this testing effort was to complete the Phase 1 screening effort for the project which was focused on natural gas production facilities located in the north state. A total of five facilities in Willows, CA and Live Oak, CA were sampled on January 18, 2018 shown below.

Project Region	Dates	Facilities
North State	01/18/2018 (Field Trip #4)	N8, N10, N6, N5, N3,

In total, one sample was collected, along with Quality Control sampling, at these facilities for a total of 7 sample sets. Sample collection included air emission sampling and produced water sampling.

The assessment included using the US EPA flux chamber technology complete with all test equipment as specified in the US EPA Flux Chamber User's and measurement protocol, to measure the 'flux' of study compounds from selected sources on these facilities. Testing included using a fixed sweep air flow rate of 5.0 liters per minute and a 30 liter dynamic flux chamber as per the User's guidance document. Gas phase measurements were performed for volatile organic compounds (VOCs) and toxic air contaminants (TACs) using US EPA Methods TO-14/TO-15, and fixed gases carbon dioxide and methane by ASTM Methods 1945 and 3416, respectively. Liquid phase measurements were performed by liquid sample collection and analysis for dissolved phase VOCs by US EPA Method 8260b, and for oil and grease by US EPA Method 1664 as described in the attached project Test Plan.

A summary of the final Phase 1 field testing, complete with data summary and QC report is provided.

I. INTRODUCTION

This Technical Memorandum Addendum describes the field testing that was conducted in order to complete a large data base at the screening level with regard to air emissions from crude oil and natural gas operations in California. Testing was conducted by Mr. Tom Card, Dr. C.E. Schmidt, a field technician, and CARB staff. The final Phase 1 testing was conducted on January 18, 2017. Produced water operations included in the Phase 1 screening effort were selected by the Site Manager; the selection process involved identifying operating facilities, contacting facility owners/operators and the regional water boards for permission and access for testing and arranging for access to facilities on the days of testing. Testing included making arrangements for testing, equipment preparation, travel to the facilities, obtaining access to the specific test locations, testing, preparing and shipping air and water samples to the laboratories. Testing activities were observed by one or more representatives from the facilities and the regional water boards.

The objective of the Phase 1 effort was to obtain a wide-reaching data base with regard to emissions or the potential to emit volatile organic compounds (VOCs) from crude oil and natural gas produced water treatment operations in California. The prior Phase 1 testing focused on crude oil produced water treatment operations; this testing event focused on natural gas produced water treatment operations. Phase 1 of this project provided data intended to describe the nature and extent of VOC emissions from these operations, and select several facilities that are representative of these operations for more in-depth testing and analysis scheduled for Phase 2 of the program.

This memorandum includes a discussion of the testing methodology, quality control procedures, results, discussion of the results, and summary statements. The actual facility emissions estimates and control efficiency calculations are reported elsewhere.

II. TEST METHODOLOGY

Testing for surface flux was conducted using the US EPA recommended Surface Isolation Flux Chamber (Radian Corporation, February 1986) following the project Test Plan. Flux chamber sampling was performed on the wastewater surface of selected unit processes or on produced water extracted from processes and placed in a 30-gallon wash tub. At equilibrium in the flux chamber, gas samples were collected using evacuated Summa polished canisters sampled as grab samples to atmospheric pressure. Process produced water was collected directly from the separation tank by opening the valve on a port intended for sample collection. Produced water was collected and placed in a plastic-lined wash tub where flux chamber emissions testing was performed. Produced water was also transferred to a container where pH and total dissolved solids (TDS) were measured, then the waste water was poured into method-specific sample containers for per method.

The operation of the surface flux chamber and gas sample collection is given below:

- 1) Flux chamber, sweep air, sample collection equipment, and field documents were located on-site.
- 2) The facility information, location information, equipment information, date, and proposed time of testing were documented on the Emissions Measurement Field Data Sheet.
- 3) Produced water was collected from the separator tank, transferred to a wash tub, and the chamber was suspended over the wash tub for testing. The chamber was suspended about 0.5" to 1" into the liquid surface sealing the chamber bottom edge for testing.
- 4) The sweep air flow rate (ultra-high purity- UHP air) was initiated and the calibrated rotameter, which controls the sweep air flow rate, was set at 5.0 liters per minute. A constant sweep air flow rate was maintained throughout the measurement for each sampling location.
- 5) Flux chamber data were recorded every residence interval (6 minutes) for five intervals, or 30 minutes. Source temperature and ambient temperature, along with source description and UTM coordinates were recorded during the equilibration time period.
- 6) At steady-state (greater than 5 residence intervals per method), the sample line was purged preparing for sample collection. Sample collection was performed by interfacing the sample canister to the purged, sample line and filling the sampling media with sample gas or collecting the desired sample following sample collection protocols as per the Test Plan. The canisters were filled to atmospheric pressure and then sealed.

- 7) After sample collection, the sample collection information was documented on the field data sheet and sample collection Chain of Custody sheet.
- 8) After sampling, the flux measurement was discontinued by shutting off the sweep air, removing the chamber, and securing the equipment. The sample line was back-flushed with UHP clean air, and the flux chamber was cleaned by dry wipe with a clean paper towel and then washed as needed with soap and water.
- 9) The sampling location was recorded on the field data sheet. The equipment was then relocated to the next test location and steps 1) through 8) were repeated.

Sample collection information is provided in Table 1.

Photo Showing Liquid Sample Collection.



Photo Showing Flux Chamber Testing.



III. QUALITY CONTROL

Control procedures that were used to ensure compliance to the data quality specifications as stated in Test Plan and are listed and described below. The application and frequency of these procedures were developed to meet the program data quality objectives and were executed without exception. QC data for air analyses are found on Tables 2 and 3 (field blank data and precision data respectively), and for liquid analyses on Tables 4 and 5 (field blank and precision data, respectively).

Field Documentation -- A field notebook containing data forms, including sample chain-of-custody (COC) forms, was maintained for the testing program. Attachment A contains the Emission Measurement Data Sheets.

Chain-of-Custody -- COC forms were used for field data collection; all samples were logged daily. Field data were recorded on the COC forms provided in Attachment B.

VOC Analysis by US EPA Method TO-14

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds. These data are reported in the method specific lab reports (footnoted on each lab report showing compliance with the methods).

Laboratory Method Blank- A total of two laboratory method blank samples were performed by the laboratory. No compounds were detected in any of the 16 samples above detection, and likewise there were no detections of TNMNH₂C above the MDL. These data indicate acceptable method performance.

Laboratory Precision- Two laboratory Lab Control Duplicate (LCD) samples including nine compounds were performed by the laboratory. Both LCD samples were reported within the criteria of 25 relative percent difference (RPD). These data indicate acceptable method performance.

Laboratory Accuracy- Two laboratory Lab Control Samples (LCS) including nine compounds were performed by the laboratory. Both LCS samples were reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – One media (field) blank sample was prepared in the field (T-807) and was analyzed as field sample (blind QC sample). No compounds were detected in the field blank sample. These data demonstrate acceptable method performance.

Field Method Precision – One field sample was collected in replicate and analyzed for the flux chamber testing (T-805/-806). The replicate samples showed RPD values, when detected in sample an replicate, as follows: TNMHC 129 RPD, benzene/toluene/ethylbenzene/xylene (BTEX)

20RPD, and other TO-14 compounds 0.3 to 109 RPD with a group average of 31 RPD. Individual RPD values are found on Table 3. The criteria for field precision is RPD 50. As such, many of the individual values exceed the precision criteria. This was not unexpected given the matrix of compounds in the flux chamber samples. These precision data do not necessarily indicate unacceptable method performance given the challenge a complex composition of these samples. Qualifiers can be added to these data for reporting regarding field precision if so desired, however the laboratory precision data as well as the method average precision and the precision criteria achieved for BTEX compounds do indicate acceptable method performance.

VOC Analysis by US EPA Method TO-15

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of two laboratory method blank samples were performed by the laboratory. One sample was analyzed without humid air, the other with humid air. The non-humidified blank sample showed no detections, and the humidified blank sample showed two compounds, benzene at 2.39 $\mu\text{g}/\text{m}^3$, and chlorobenzene at 1.59 $\mu\text{g}/\text{m}^3$. This dry and moist lab blank sample set indicates that there is some contamination or compound carry-over in the instrument at low levels, which does not negatively affect data usage. However, that balance of these data showing non-detect indicate acceptable method performance.

Laboratory Precision- A total of three laboratory LCD samples including 16 compounds were performed by the laboratory. All of the LCD samples were reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- A total of three laboratory LCS samples including nine compounds were performed by the laboratory. All three of the LCS samples were reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – One media (field) blank sample was prepared in the field (T-807) was analyzed as a field sample (blind QC sample). No compounds were detected in the blank sample. These data demonstrate acceptable method performance.

Field Method Precision – One field sample was collected in replicate and analyzed for the flux chamber testing (T-805/-806). BTEX compounds were summed from the full compound list, and when detected as sample and replicate pair, the individual BTEX values ranged from 0.0 to 12 RPD with a average RPD for BTEX compounds of 6.2. For all other compounds, the range was 0.1 to 53, with an average RPD of 13. These data indicate acceptable method performance.

Methane Analysis by ASTM Method 3416

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of one laboratory method blank sample was performed by the laboratory. Methane was not detected in the blank sample. These data indicate acceptable method performance.

Laboratory Precision- One LCD sample was performed by the laboratory. The sample was reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- One LCS sample was performed by the laboratory. The sample was reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – One media (field) blank sample was prepared in the field (T-807) and was analyzed as field sample (blind QC sample). Methane was not detected in the blank sample. These data demonstrate acceptable method performance.

Field Method Precision – One field sample was collected in replicate and analyzed for the flux chamber testing (T-805/-806). The RPD for methane in the replicate sample data set was 1.9 (criteria RPD 50). These data indicate acceptable method performance.

Carbon Dioxide Analysis by ASTM Method 1945

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of one laboratory method blank sample was performed by the laboratory. Carbon Dioxide was not detected in the blank sample. These data indicate acceptable method performance.

Laboratory Precision- One LCD sample was performed by the laboratory. The sample was reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- One LCS sample was performed by the laboratory. The sample was reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – One media (field) blank sample was prepared in the field (T-807) and was analyzed as field sample (blind QC sample). Carbon dioxide was not detected in the blank sample. These data demonstrate acceptable method performance.

Field Method Precision – One field samples was collected in replicate and analyzed for the flux chamber testing (T-805/-806). Carbon dioxide was not detected in either the sample or the replicate sample. No comment can be made regarding the field sample precision, however, the laboratory precision data indicated acceptable method performance.

Liquid Sample VOC Analysis by US EPA Method 8260b

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds, matrix spike samples, and matrix spike duplicate samples. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of two laboratory method blank samples were performed by the laboratory. No compounds were detected in any of the samples above detection. These data indicate acceptable method performance.

Laboratory Precision- A total of two laboratory Lab Control Duplicate (LCD) samples including nine compounds and three surrogates were performed by the laboratory. All six LCD samples were reported within the criteria of 20 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- A total of two laboratory Lab Control Samples (LCS) including nine compounds and three surrogates were performed by the laboratory. Both LCS samples were reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – One media (field) blank sample was prepared in the field (V-807) was analyzed as a field sample (blind QC sample). No compounds were detected in the field blank sample. These data demonstrate acceptable method performance.

Field Method Precision – One field sample was collected in replicate and analyzed for the flux chamber testing (V-805/-806). In total, seven compounds were detected in both the sample and the sample replicate. The replicate samples showed RPD values that ranged from 0.0 to 12. These data indicate acceptable method performance.

Liquid Sample Oil and Grease Analysis by US EPA Method 1664

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- One laboratory method blank sample was performed by the laboratory. No detection of oil and grease was reported. These data indicate acceptable method performance.

Laboratory Precision- One laboratory Lab Control Duplicate (LCD) sample pair was performed by the laboratory. The reported precision was 0.8 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- One laboratory Lab Control Samples (LCS) was performed by the laboratory. The LCS sample reported a 93 percent recovery. These data indicate acceptable method performance.

Field System Blank – One media (field) blank sample was prepared in the field (J-807) and was analyzed as field sample (blind QC sample). The blank sample showed non-detect at 0.86 mg/L (MDL 0.86 mg/L). These data demonstrate acceptable method performance.

Field Method Precision – One field sample was collected in replicate and analyzed for the flux chamber testing (J-805/-806). The replicate sample showed a RPD of 15. These data indicate an acceptable method performance.

IV. RESULTS AND DISCUSSIONS

A summary of the field sample collection data and information for the testing conducted during this source test is provided in Table 1. All field data for the on-site surface flux chamber testing for temperature, along with sample identification and sample ID data and information on the liquid sample collection are presented in Table 1.

Quality control data for both air and liquid samples is reported in Tables 2 through 5; blank and replicate QC data for air samples is found in Tables 2 and 3, respectively, and blank and replicate QC data for liquid samples is found in Tables 4 and 5, respectively.

Laboratory data for air samples are summarized in Table 6 and reported in concentration units, and in flux units in Table 7. All liquid sample data are summarized in Table 7 and are reported in concentration units.

Surface flux data for surface area sources are calculated using measured target compound concentrations and flux chamber operating parameter data (i.e., sweep air flow rate of 5.0 liters per minute, and surface area of 0.13 square meters [m^2]). The facility emissions can be calculated by multiplying the flux by the surface area of the source. The flux is calculated from the sweep air flow rate Q (cubic meters per minute [m^3/min]), the species concentration Y_i (micrograms or milligrams per cubic meter [$\mu g/m^3$; mg/m^3], and exposure to the chamber surface area A (square meters [m^2]), as follows:

$$F_i = (Q) (Y_i) / (A)$$

V. SUMMARY

An extensive screening study was conducted as Phase 1 of a multi-phased program. This testing effort (Trip #4) focused on natural gas production produced water operations in Northern California. This effort (Trip #4 of Phase 1) was conducted with the intent of understanding the nature and extent of VOC emissions from natural gas produced water treatment operations which are operationally different from crude oil produced water treatment operations. The following is a summary of activities and results associated with this objective:

- A total of 7 flux samples (including QC samples) were conducted using the US EPA Surface Emission Isolation flux chamber technology. The technology, coupled with regulatory approved analytical methods, quantitatively measures flux of VOCs and fixed gases at the test surface of study compounds. In addition, liquid samples were taken at each test location to determine the content of VOCs and oil/grease; the sample collection was co-located so that a relationship between VOC flux and dissolved phase VOCs in waste water could be established.
- Field and laboratory quality control data indicate acceptable data quality for the air methods, including US EPA Method TO-14 (GC/FID), US EPA Method TO-15 (GC/MS), and ASTM 1945 for carbon dioxide and ASTM Method 3416 for methane. No compounds were detected in the lab or field blanks for all the analytical methods, except that low levels of benzene and chlorobenzene were found in a humidified air blank sample conducted in the laboratory analyzed by TO-15 (GC/MS). These compounds were not detected in a standard lab blank (dry air) and were not detected in the field blank sample. Data qualifiers can be used for these compounds if necessary, however given non-detects in the field blanks, this is not needed or recommended. Other QC parameters indicated acceptable method performance.
- Field and laboratory quality control data indicate acceptable data quality for the liquid methods, including US EPA Method 8260b (GC/MS) for dissolved phase VOCs and US EPA Method 1664 for oil and grease. No compounds were detected in the field blank samples for the analytical methods used. Other QC parameters indicated acceptable method performance.
- The flux data can be used to estimate VOC and fixed gas (methane and carbon dioxide) emissions from those operations tested. Likewise the liquid sample data can be used to describe the VOC and oil/grease content of the produced water sources tested. Further, these data can be used to correlate produced water concentration data to VOC flux data.

REFERENCES

US EPA. 1986. ***"Measurement of Gaseous Emission Rates From Land Surfaces Using an Emission Isolation Flux Chamber, Users Guide."*** EPA Environmental Monitoring Systems Laboratory, Las Vegas, Nevada, EPA Contract No. 68-02-3889, Work Assignment No. 18, Radian Corporation, February 1986. NTIS # PB 86-223161.

Card, TR, and CE Schmidt, Test Plan. August 17, 2017. ***"Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations"***.

Attachment 1
Field Notes

SURFACE FLUX MEASUREMENT DATA FORM

DATE 2/18/18 SAMPLERS CB TLC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. N8

SURFACE DESCRIPTION _____

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

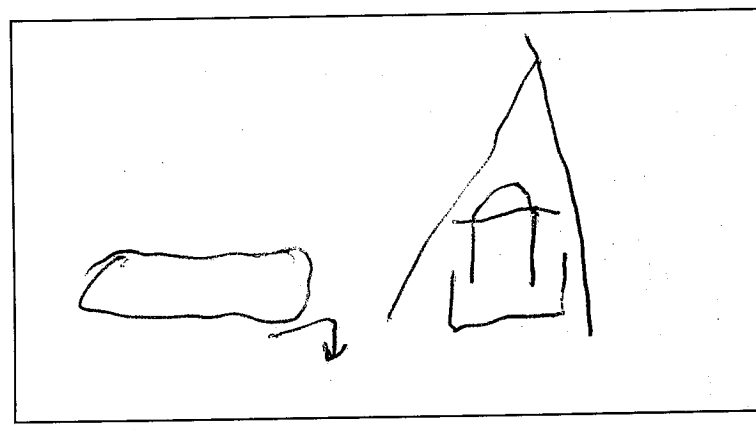
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR UHP CC 73017 SUPPLIER PA PSIG START 750 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0738	5.0	0								
		1								
		2						T801	#618	
0756		3	52	50	52	51		0809	AT 6102	
0808		4						0817		
		5								

COMMENTS:
 ETR: 39.539955
 LAT/LON -122.089363

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 2/18/18 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. N10

SURFACE DESCRIPTION _____

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

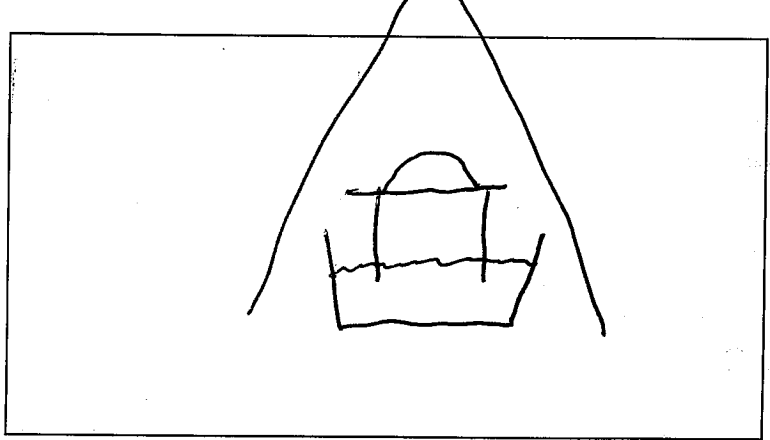
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR LHP CC 73017 SUPPLIER 73017 PA PSIG START 650 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0850	5.0	0								
↓		1								
↓		2								
0908		3	51	52	51	52			T802 #6A AT 4:19	
		4							0920 0924	
0920	5									

COMMENTS:
 LAT/LON 39.529026
-122.066055
7600 COUNTY RD
WILLOWS

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 2/18/18 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. N6

SURFACE DESCRIPTION _____

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

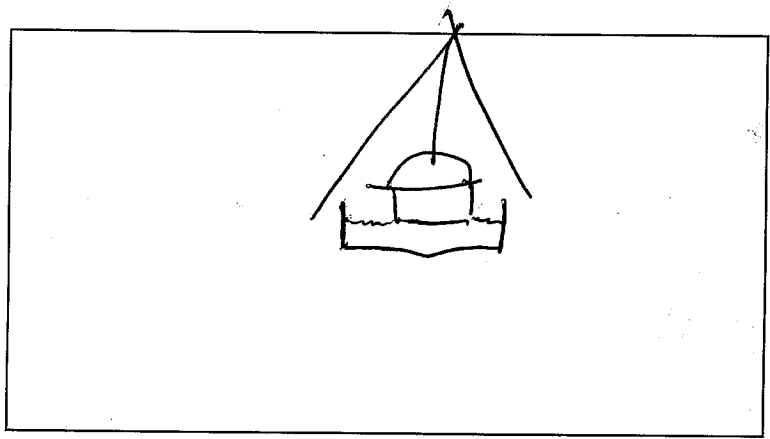
SWEEP AIR UHP CC 73017 SUPPLIER PA PSIG START 550 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>0956</u>	↓ 5.0 ↓	0								
		1								
		2								
<u>1014</u>		3	<u>51</u>	<u>52</u>	<u>61</u>	<u>52</u>			<u>T803</u> <u># 776</u> <u>AT 3:29</u>	
		4							<u>1028</u>	
<u>1026</u>		5							<u>1031</u>	

COMMENTS:

LAT/LOW 39.577 003
-122.111 754

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 2/18/18 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. N5

SURFACE DESCRIPTION _____

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

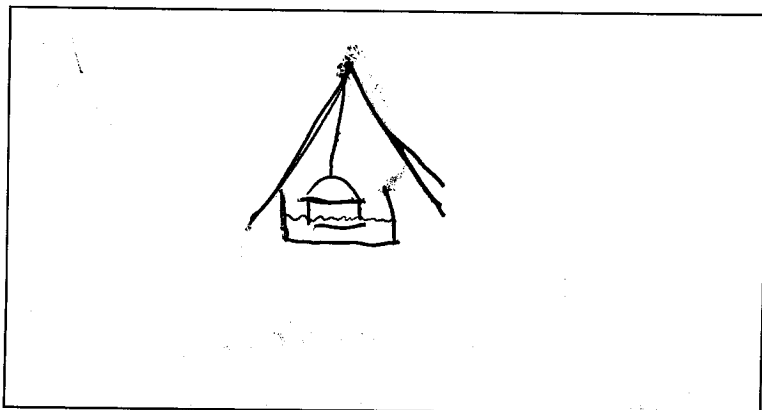
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR _____ CC 73017 SUPPLIER DA PSIG START 450 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1209	5.0	0								
↓		1								
↓		2						1804	#735	
1227		3	53	52	53	52		1239	AT 4:37	
		4						1243		
1239	↓	5								

COMMENTS:
 LAT/LON 39.179081
-121.871422

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 2/18/18 SAMPLERS CRS TRC JOA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Site No. N3

SURFACE DESCRIPTION _____

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

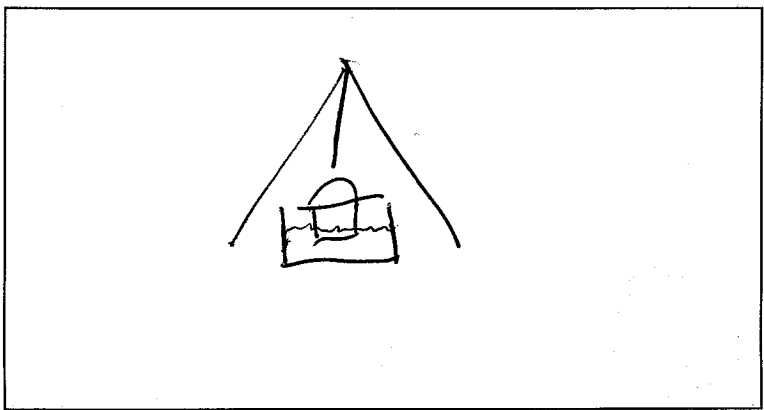
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR LHP CC 73017 SUPPLIER PA PSIG START 400 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1338	5.0	0								
		1								
		2								
1356		3	53	57	53	57			T805 #644 1408/1411 AT 4:05	
		4							T806 #882	
1408		5						1413/1417 AT 4:16		

COMMENTS:
LEAST FOAM TODAY
LAT/LON 29.120518
-121.828865
1420 - METHOD BLANK
T807 #417

SITE DIAGRAM



Attachment 2
Chain of Custody Forms

Attachment 3
Laboratory Reports

Laboratory Report

Project Name:

CARB Oil and Water Separator Ponds

EAS SDG Number: **218037**

Client Project Manager: Chuck Schmidt

Task:

Prepared For:

Project Number: 17198

C.E. Schmidt

Sample Event Date: 01/18/18

19200 Live Oak Road

Received Date: 1/23/2018

Red Bluff

CA 96080

Report Date: 2/12/2018

Project Number: None Given

PO Number: None Given

This is the Laboratory Report for the samples in the indicated Sample Delivery Group (SDG). Each sample received in the group is assigned a Laboratory ID number. The combination of the SDG number and the Lab ID number is a unique identifier for the sample.

This Report Contains:

Laboratory Work Order

Project Sample Media

Laboratory Case Narrative and Chain of Custody

Method Description (when applicable)

Quality Control Reports

Analytical Reports

NELAC Certification: Florida E871125

173 Cross Street, San Luis Obispo, CA 93401 (805) 781-3585

Laboratory Work Order

SDG Number: 218037

Project Number: 17198

Client: Chuck Schmidt

Received: 1/23/2018

CE Schmidt

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T-801	218037 1	ASTM D3416 Methane, MDL 0.5 ppmv	1/18/2018
T-801	218037 1	EPA TO-14 DHA with TNMHC	1/18/2018
T-801	218037 1	EPA TO-15 VOC + TIC	1/18/2018
T-801	218037 1	ASTM D1945 Carbon Dioxide	1/18/2018
T-802	218037 2	ASTM D1945 Carbon Dioxide	1/18/2018
T-802	218037 2	ASTM D3416 Methane, MDL 0.5 ppmv	1/18/2018
T-802	218037 2	EPA TO-14 DHA with TNMHC	1/18/2018
T-802	218037 2	EPA TO-15 VOC + TIC	1/18/2018
T-803	218037 3	ASTM D1945 Carbon Dioxide	1/18/2018
T-803	218037 3	ASTM D3416 Methane, MDL 0.5 ppmv	1/18/2018
T-803	218037 3	EPA TO-14 DHA with TNMHC	1/18/2018
T-803	218037 3	EPA TO-15 VOC + TIC	1/18/2018
T-804	218037 4	EPA TO-14 DHA with TNMHC	1/18/2018
T-804	218037 4	ASTM D3416 Methane, MDL 0.5 ppmv	1/18/2018
T-804	218037 4	EPA TO-15 VOC + TIC	1/18/2018
T-804	218037 4	ASTM D1945 Carbon Dioxide	1/18/2018
T-805	218037 5	ASTM D1945 Carbon Dioxide	1/18/2018
T-805	218037 5	ASTM D3416 Methane, MDL 0.5 ppmv	1/18/2018
T-805	218037 5	EPA TO-14 DHA with TNMHC	1/18/2018
T-805	218037 5	EPA TO-15 VOC + TIC	1/18/2018
T-806	218037 6	ASTM D1945 Carbon Dioxide	1/18/2018
T-806	218037 6	ASTM D3416 Methane, MDL 0.5 ppmv	1/18/2018
T-806	218037 6	EPA TO-14 DHA with TNMHC	1/18/2018

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T-806	218037 6	EPA TO-15 VOC + TIC	1/18/2018
T-807	218037 7	EPA TO-15 VOC + TIC	1/18/2018
T-807	218037 7	ASTM D1945 Carbon Dioxide	1/18/2018
T-807	218037 7	ASTM D3416 Methane, MDL 0.5 ppmv	1/18/2018
T-807	218037 7	EPA TO-14 DHA with TNMHC	1/18/2018

Project Sample Media

SDG Number: 218037

The following sample media was used for this Sample Delivery Group (SDG). The Sample Media column identifies the type of media. For canisters, the Sample Media Batch gives the canister number followed by the cleaning batch number, which is a unique identification. Canisters that are received with sub-ambient pressures are pressurized to about 5 psig. The initial pressure of the canister when it is received is recorded along with the final pressure after pressurization. The canister dilution factor is the ratio of the final to initial pressure. The results are adjusted for the can dilution factor.

SDG	Lab ID	Client Sample No.	Sample		Pressure, torr		Can Factor
			Media	Batch	Initial	Final	
218037	1	T-801	618	122917A	792	914	1.15
218037	2	T-802	619	122717A	788	910	1.15
218037	3	T-803	776	122717A	792	904	1.14
218037	4	T-804	735	122917A	786	900	1.15
218037	5	T-805	644	122717A	775	913	1.18
218037	6	T-806	882	122717A	779	899	1.15
218037	7	T-807	417	122717A	992	992	1.00

Laboratory Case Narrative

EAS SDG Number: 218037

Project Number: 17198

Client: CE Schmidt

The Laboratory Case Narrative for the SDG is below. The Chain of Custody form(s) follow the Laboratory Case Narrative.

Sample Control Narrative

The samples were all received in good condition and with proper preservation.

Analytical Methods

The methods used for sample analysis are listed on the Analytical Report header, and have been modified as described in the EAS Quality Manual..

Case Narrative

QC Narrative

All analyses met EAS method criteria as defined in the Quality Manual, except as noted in the report or QC reports with data qualifiers.

Subcontract Narrative

No sample analysis was subcontracted for this project

Laboratory Certification

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness other than the condition(s) noted above. The Laboratory Report is property of EAS and its client. The entire report has been reviewed and approved.



Date Approved: 2/12/2018

Steven D. Hoyt, Ph.D.
Environmental Analytical Service
Laboratory Director

CE Schmidt, Ph., Environmental Consultant

Chain of Custody Record

Form Serial Number: CES F1-02106
 Client Name: Air Resources Board
 Oilfield WW Emissions Assessment
 Project Manager: Luis Leyva
 916.323.1079
 Requested Completion Date: _____

For Information Regarding These Samples
 Please Contact:
 Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

Laboratory Name: EAS
 Laboratory Address: 173 Cross Street
 San Luis Obispo, CA 93401
 Laboratory Phone: 805-781-3585
 Laboratory Contact: Dr. Steve Hoyt

Station Number	Date	Time	COR			Sample ID Number	Can ID Number	Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Analysis Requested				Remarks
			C	O	R					TO-14 FID (TMMHC)	TO-14 FID (Target List)	ASTM D-1945 (CH4, CO2)	TO-15 (Target List)	
1	1/18/2018	809	X			T-801	618	-27		X	X	X	X	218037-01
1	1/18/2018	910	X			T-802	619	-24		X	X	X	X	-02
1	1/18/2018	1024	X			T-803	620	-29		X	X	X	X	-03
1	1/18/2018	1135	X			T-804	735	-24		X	X	X	X	-04
1	1/18/2018	1408	X			T-805	644	-24		X	X	X	X	-05
1	1/18/2018	1418	X			T-806	645	-25		X	X	X	X	-06
1	1/18/2018	1420	X			T-807	646	-23		X	X	X	X	-07
Page 6 of 69			X			T-808	647			X	X	X	X	
1	1/18/2018		X			T-809				X	X	X	X	
1	1/18/2018		X			T-810				X	X	X	X	
1	1/18/2018		X			T-811				X	X	X	X	
1	1/18/2018		X			T-812				X	X	X	X	

Relinquished by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____

Sample Shipped Via: FEDEX BUS Other: _____

Received by: Luis Leyva Date/Time: 01/23/18 12:38

Remarks: Sample ID 218037-01

Quality Control Report

EAS SDG Number 218037

Project Number: 17198

QC Narrative

Samples were analyzed in a daily analytical batch (DAB) designated by a QC batch number, and were analyzed using EAS standard laboratory QC specified in the EAS Quality Manual which may be different than the referenced agency method. Any deviations from the EAS QC criteria are flagged in the Laboratory Control Reports or in the sample Analytical Reports.

Standard Laboratory QC Report

Unless project specific QC was requested, this Section containing the standard laboratory QC (Level 2) supplied with the Analytical Reports. Each sample is analyzed in a Daily Analytical Batch (DAB) which includes the method blank, a laboratory control spike (LCS) and a laboratory control duplicate (LCD). A Daily Analytical Batch QC report is supplied for each method requested.

Method Blank

A method blank is a laboratory generated sample which assesses the degree to which laboratory operations and procedures cause a false positive. In the method blank, compounds should be present below the reporting limit (RL). Compounds present above the RL are flagged with a "B" in the Analytical Reports in that batch unless the result is greater than ten times the blank value..

Laboratory Control Spike

A laboratory control spike is a well characterized matrix similar to the sample which is spiked and run in duplicate with each Daily Analytical Batch. The laboratory control spike results are reported as a percent recovery. The QC Criteria for the control spike is listed in the Laboratory Control Report. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report. The control spike contains an abbreviated list of compounds in the method, and may contain compounds not on the target list for the specified report.

Laboratory Control Duplicate

The laboratory control duplicate is a duplicate analysis of the laboratory control spike, a standard, or a sample depending on the method. The results are reported as a relative percent difference (RPD). The criteria for the duplicate is in the Laboratory Control Report for the Daily Analytical Batch. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report.

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B02058

File Name: B02058C.D
Description: METHOD BLANK
Canister:
QC_Batch: 020518-MA1

Date Sampled:
Date Analyzed: 02/05/18
Can Dilution Factor: 1.00
Air Volume: 200 ml
Time:
Time: 16:07

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	ND	0.80	4.05	ND	
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				87	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B02068

File Name: B02068B.D

Description: HUMID AIR BLANK

Canister:

QC_Batch: 020618-MA1

Date Sampled:

Date Analyzed: 02/06/18

Can Dilution Factor: 1.00

Air Volume: 200 ml

Time:

Time: 19:44

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	0.75	0.80	4.05	2.39	J
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	0.35	1.15	5.24	1.59	J
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	126	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B02078

File Name: B02078B.D
Description: METHOD BLANK
Canister:
QC_Batch: 020718-MA1

Date Sampled:
Date Analyzed: 02/07/18
Can Dilution Factor: 1.00
Air Volume: 200 ml
Time: 15:11

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	ND	0.80	4.05	ND	
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	121	70	130	

METHOD BLANK REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B01298

File Name: B01298B
Description: METHOD BLANK
Canister:
QC_Batch: 012918-GCK

Date Sampled:
Date Analyzed: 01/29/18
Can Factor: 1.00
Air Volume: 200 ml
Time: 16:05

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B01308

File Name: B01308A
Description: METHOD BLANK
Canister:
QC_Batch: 013018-GCK

Date Sampled:
Date Analyzed: 01/30/18
Can Factor: 1.00
Air Volume: 100 ml
Time: 10:42

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2.00	6.00	ND	2.30	6.91	ND	ND
74-86-2	Acetylene	2.00	6.00	ND	2.13	6.39	ND	ND
74-84-0	Ethane	2.00	6.00	ND	2.47	7.40	ND	ND
115-07-1	Propene	1.33	4.00	ND	2.30	6.90	ND	ND
74-98-6	Propane	1.33	4.00	ND	2.41	7.23	ND	ND
75-28-5	i-Butane	1.00	3.00	ND	2.38	7.14	ND	ND
106-98-9	1-Butene	1.00	3.00	ND	2.30	6.90	ND	ND
106-97-8	n-Butane	1.00	3.00	ND	2.38	7.14	ND	ND
624-64-6	t-2-Butene	1.00	3.00	ND	2.30	6.90	ND	ND
590-18-1	c-2-Butene	1.00	3.00	ND	2.30	6.90	ND	ND
78-78-4	i-Pentane	0.80	2.40	ND	2.37	7.10	ND	ND
109-67-1	1-Pentene	0.80	2.40	ND	2.30	6.90	ND	ND
109-66-0	n-Pentane	0.80	2.40	ND	2.36	7.09	ND	ND
78-79-5	Isoprene	0.80	2.40	ND	2.23	6.70	ND	ND
646-04-8	t-2-Pentene	0.80	2.40	ND	2.30	6.90	ND	ND
627-20-3	c-2-Pentene	0.80	2.40	ND	2.30	6.90	ND	ND
75-83-2	2,2-Dimethylbutane	0.67	2.00	ND	2.36	7.07	ND	ND
287-92-3	Cyclopentane	0.80	2.40	ND	2.30	6.90	ND	ND
79-29-8	2,3-Dimethylbutane	0.67	2.00	ND	2.36	7.07	ND	ND
107-83-5	2-Methylpentane	0.67	2.00	ND	2.36	7.07	ND	ND
96-14-0	3-Methylpentane	0.67	2.00	ND	2.36	7.07	ND	ND
110-54-3	n-Hexane	0.67	2.00	ND	2.36	7.07	ND	ND
96-37-7	Methylcyclopentane	0.67	2.00	ND	2.30	6.90	ND	ND
108-08-7	2,4-Dimethylpentane	0.57	1.71	ND	2.35	7.04	ND	ND
71-43-2	Benzene	0.67	2.00	ND	2.13	6.40	ND	ND
110-82-7	Cyclohexane	0.67	2.00	ND	2.30	6.90	ND	ND
591-76-4	2-Methylhexane	0.57	1.71	ND	2.35	7.04	ND	ND
565-59-3	2,3-Dimethylpentane	0.57	1.71	ND	2.35	7.04	ND	ND
589-34-4	3-Methylhexane	0.57	1.71	ND	2.35	7.04	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.50	1.50	ND	2.34	7.02	ND	ND
142-82-5	n-Heptane	0.57	1.71	ND	2.35	7.04	ND	ND
108-87-2	Methylcyclohexane	0.57	1.71	ND	2.30	6.90	ND	ND
592-13-2	2,5-Dimethylhexane	0.50	1.50	ND	2.34	7.02	ND	ND
589-43-5	2,4-Dimethylhexane	0.50	1.50	ND	2.34	7.02	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.50	1.50	ND	2.34	7.02	ND	ND
108-88-3	Toluene	0.57	1.71	ND	2.16	6.47	ND	ND
584-94-1	2,3-Dimethylhexane	0.50	1.50	ND	2.34	7.02	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.50	1.50	ND	2.34	7.02	ND	ND
589-81-1	3-Methylheptane	0.50	1.50	ND	2.34	7.02	ND	ND
111-65-9	n-Octane	0.50	1.50	ND	2.34	7.02	ND	ND
100-41-4	Ethylbenzene	0.50	1.50	ND	2.18	6.53	ND	ND
108-38-3	m,p-xylene	0.50	1.50	ND	2.18	6.53	ND	ND
100-42-5	Styrene	0.50	1.50	ND	2.14	6.41	ND	ND
95-47-6	o-xylene	0.50	1.50	ND	2.18	6.53	ND	ND
111-84-2	n-Nonane	0.44	1.33	ND	2.34	7.01	ND	ND
98-82-8	i-Propylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
103-65-1	n-propylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
80-56-8	a-Pinene	0.40	1.20	ND	2.23	6.70	ND	ND
620-14-4	3-Ethyltoluene	0.44	1.33	ND	2.19	6.57	ND	ND
622-96-8	4-Ethyltoluene	0.44	1.33	ND	2.19	6.57	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
611-14-3	2-Ethyltoluene	0.44	1.33	ND	2.19	6.57	ND	ND
127-91-3	b-Pinene	0.40	1.20	ND	2.23	6.70	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
124-18-5	n-Decane	0.40	1.20	ND	2.33	7.00	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
5989-27-5	d-Limonene	0.40	1.20	ND	2.23	6.70	ND	ND
141-93-5	1,3-Diethylbenzene	0.40	1.20	ND	2.20	6.60	ND	ND
105-05-5	1,4-Diethylbenzene	0.40	1.20	ND	2.20	6.60	ND	ND
104-51-8	n-Butylbenzene	0.40	1.20	ND	2.20	6.60	ND	ND
1120-21-4	Undecane	0.36	1.09	ND	2.33	6.99	ND	ND
112-40-3	Dodecane	0.33	1.00	ND	2.33	6.98	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	15.00	45.00	ND	52.99	158.98	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	90.00	270.00	ND	59.02	177.05	ND	ND

METHOD BLANK REPORT

ASTM D 1945 GC/TCO

Analytical Method:

D1945

SDG: LABQC

Laboratory Number: B01258

File Name: B01258B

Date Sampled:

Time:

Description: METHOD BLANK

Date Analyzed: 01/25/18

Time: 16:45

Can/Tube#:

Can Dilution Factor: 1.00

QC_Batch: 012518-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	100	300	ND	ND

METHOD BLANK REPORT

ASTM D3416 Methane by GC/FIDModified Analytical Method: **ASTM D3416**SDG: **LABQC**
Laboratory Number: **B01258**File Name: **B01258A**
Description: **METHOD BLANK**
Can/Tube#:
QC_Batch: **012518-GCL**Date Sampled:
Date Analyzed: **01/25/18** Time: **16:20**
Dilution Factor: **1.00**

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.10	0.30	ND	0.07	0.20	ND	

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 020518-MA1

Date: 02/05/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate	
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %
75-01-4	Vinyl chloride	81		88		70	130	9	25
75-35-4	1,1-Dichloroethene	99		115		70	130	15	25
75-09-2	Dichloromethane	96		108		70	130	11	25
75-34-3	1,1-Dichloroethane	102		109		70	130	7	25
67-66-3	Chloroform	97		107		70	130	10	25
71-55-6	1,1,1-Trichloroethane	98		111		70	130	13	25
107-06-2	1,2-Dichloroethane	99		108		70	130	9	25
71-43-2	Benzene	97		114		70	130	16	25
56-23-5	Carbon tetrachloride	106		113		70	130	6	25
79-01-6	Trichloroethene	92		108		70	130	17	25
108-88-3	Toluene	95		115		70	130	19	25
127-18-4	Tetrachloroethene	96		114		70	130	17	25
100-41-4	Ethylbenzene	100		115		70	130	14	25
1330-20-7	m,p-Xylenes	101		118		70	130	16	25
95-47-6	o-Xylene	96		116		70	130	19	25
108-67-8	1,3,5-Trimethylbenzene	70		88		70	130	22	25

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 020618-MA1

Date: 02/06/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	96		102		70	130	7	25	
75-35-4	1,1-Dichloroethene	102		93		70	130	8	25	
75-09-2	Dichloromethane	105		90		70	130	15	25	
75-34-3	1,1-Dichloroethane	97		102		70	130	5	25	
67-66-3	Chloroform	97		104		70	130	7	25	
71-55-6	1,1,1-Trichloroethane	93		96		70	130	4	25	
107-06-2	1,2-Dichloroethane	97		101		70	130	4	25	
71-43-2	Benzene	95		97		70	130	2	25	
56-23-5	Carbon tetrachloride	87		86		70	130	1	25	
79-01-6	Trichloroethene	90		95		70	130	5	25	
108-88-3	Toluene	93		99		70	130	6	25	
127-18-4	Tetrachloroethene	91		97		70	130	6	25	
100-41-4	Ethylbenzene	98		102		70	130	5	25	
1330-20-7	m,p-Xylenes	96		103		70	130	7	25	
95-47-6	o-Xylene	97		103		70	130	7	25	
108-67-8	1,3,5-Trimethylbenzene	103		110		70	130	7	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 020718-MA1

Date: 02/07/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	Flag
75-01-4	Vinyl chloride	75		86		70	130	13	25	
75-35-4	1,1-Dichloroethene	84		81		70	130	4	25	
75-09-2	Dichloromethane	83		81		70	130	2	25	
75-34-3	1,1-Dichloroethane	94		86		70	130	9	25	
67-66-3	Chloroform	95		96		70	130	1	25	
71-55-6	1,1,1-Trichloroethane	89		104		70	130	15	25	
107-06-2	1,2-Dichloroethane	94		106		70	130	12	25	
71-43-2	Benzene	95		104		70	130	9	25	
56-23-5	Carbon tetrachloride	91		102		70	130	12	25	
79-01-6	Trichloroethene	96		108		70	130	11	25	
108-88-3	Toluene	98		115		70	130	16	25	
127-18-4	Tetrachloroethene	96		116		70	130	19	25	
100-41-4	Ethylbenzene	97		108		70	130	10	25	
1330-20-7	m,p-Xylenes	96		108		70	130	11	25	
95-47-6	o-Xylene	97		107		70	130	10	25	
108-67-8	1,3,5-Trimethylbenzene	100		107		70	130	7	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 012918-GCK

Date: 01/29/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	Flag
109-66-0	n-Pentane	95		94		70	130	2	25	
110-54-3	n-Hexane	128		108		70	130	20	25	
71-43-2	Benzene	101		96		70	130	6	25	
142-82-5	n-Heptane	94		90		70	130	3	25	
108-88-3	Toluene	89		84		70	130	5	25	
111-65-9	n-Octane	92		89		70	130	4	25	
108-38-3	m,p-xylene	77		71		70	130	6	25	
95-47-6	o-xylene	80		78		70	130	3	25	
108-67-8	1,3,5-Trimethylbenzene	77		78		70	130	1	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 013018-GCK

Date: 01/30/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	Flag
109-66-0	n-Pentane	98		95		70	130	3	25	
110-54-3	n-Hexane	115		99		70	130	16	25	
71-43-2	Benzene	105		102		70	130	3	25	
142-82-5	n-Heptane	100		94		70	130	5	25	
108-88-3	Toluene	98		92		70	130	7	25	
111-65-9	n-Octane	103		97		70	130	5	25	
108-38-3	m,p-xylene	86		79		70	130	7	25	
95-47-6	o-xylene	88		85		70	130	3	25	
108-67-8	1,3,5-Trimethylbenzene	87		87		70	130	0	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D 1945 GC/TCD

Analytical Method: D1945

QC_Batch: 012518-GCO

Date Analyzed: 01/25/18

CAS#	Compound	LCS Recovery		LCD Recovery		Spike Limit		Duplicate		Flag
		%	Flag	%	Flag	LCL	UCL	Duplicate	Limit	
124-38-9	Carbon Dioxide	103		103		70	130	0	25	

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D3416 Methane by GC/FID

Analytical Method: ASTM D3416

Date: 01/25/18

QC_Batch: 012518-GCL

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
74-82-8	Methane	103		104		70	130	0	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

Analytical Reports

EAS SDG Number 218037

Project Number: 17198

The following pages contain the certified Analytical Reports for the samples submitted in the Sample Delivery Group (SDG) and are in order of the EAS Lab ID number. All of the analytical methods used are modifications of the published methods. Procedural method modifications are listed in the method descriptions, and the QC modifications are in the QC Criteria table in the EAS Quality Manual.

The Analytical Report has columns for the method detection limit (MDL), the reporting limit (RL), and the Amount. The Amount is the concentration of the compound in the sample. The report usually has the results reported with two commonly used units. The MDL, RL, and Amount are adjusted for the canister dilution factor and any dilution caused by sample matrix effects.

DETECTION LIMITS

MDL: The MDL is initially determined from the standard deviation of seven replicate measurements, but the value in the report is set from a MDL verification sample run at a level near the calculated MDL.

RL: The reporting limit (RL) is usually the lowest concentration standard on the calibration curve, and represents the lowest concentration that can be measured that will meet all of the QC Criteria for the method.

DATA FLAGS

In the standard report, if a compound is not detected above the method detection limit, a "ND" is in the Amount column. The flag column is used for both the not detect flag and for any data flags. The not detect flag is either a "ND" or a "U". If the "U" flag is selected, the MDL for the compound is reported in the Amount column instead of "ND". Other flags are listed below:

B - This compound was detected in the batch method blank above the reporting limit.

E - This compound exceeds the calibration range for this sample volume.

J - The amount reported is estimated because it was below the RL and above the MDL

F - Higher detection limits because of matrix interference

UNITS

PPBV or PPMV: Parts-per-billion (or million) by volume is a mole (volume) ratio of the moles of analyte divided by the moles of air (gas). This is the primary unit used to report air or gas concentrations and is independent of temperature and pressure. It is different from the ppb unit used to report water or soil data, which is a mass ratio.

UG/M3 OR MG/M3: Micrograms (or milligrams) per cubic meter is a mass/volume ratio and does depend on temperature and pressure of the source at time of sample collection. The reported result was calculated based on 1 atm pressure and a temperature of 25C. The conversion from PPBV is: $UG/M3 = PPBV \times MW/24.46$ where 24.46 is the gas constant and MW is the Compounds Molecular Weight (sometimes called Formula Weight)

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218037

Analytical Method: TO-15

Laboratory ID: 01

File Name: 1803701A.D

Date Sampled: 01/18/18

Time: 08:09

Description: T-801

Date Analyzed: 02/06/18

Time: 20:52

Canister: 618

Can Dilution Factor: 1.15

QC_Batch: 020618-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.29	1.45	ND	1.42	7.15	ND	
74-87-3	Chloromethane	0.29	1.45	9.15	0.59	2.99	18.89	
76-14-2	Freon 114	0.29	1.45	ND	2.01	10.10	ND	
75-01-4	Vinyl chloride	0.29	1.45	ND	0.73	3.69	ND	
106-99-0	1,3-Butadiene	0.29	1.45	ND	0.64	3.20	ND	
74-83-9	Bromomethane	0.29	1.45	ND	1.12	5.61	ND	
75-00-3	Chloroethane	0.29	1.45	ND	0.76	3.81	ND	
64-17-5	Ethanol	1.44	4.31	25.51	2.71	8.13	48.08	
75-69-4	Trichlorofluoromethane	0.29	1.38	ND	1.61	7.75	ND	
67-64-1	Acetone	1.44	3.54	17.76	3.41	8.40	42.18	
67-63-0	2-propanol	1.44	3.30	ND	3.53	8.11	ND	
75-35-4	1,1-Dichloroethene	0.29	1.43	ND	1.14	5.65	ND	
76-13-1	Freon 113	0.29	1.38	ND	2.20	10.54	ND	
75-09-2	Dichloromethane	0.58	1.38	ND	2.00	4.81	ND	
75-15-0	Carbon disulfide	1.44	2.67	ND	4.47	8.30	ND	
156-60-5	trans-1,2-Dichloroethene	0.29	1.04	ND	1.14	4.11	ND	
1634-04-4	Methyl tert butyl ether	0.29	1.06	ND	1.04	3.82	ND	
75-34-3	1,1-Dichloroethane	0.29	1.43	ND	1.16	5.80	ND	
108-05-4	Vinyl acetate	0.29	1.26	ND	1.01	4.45	ND	
78-93-3	2-Butanone	1.15	2.93	ND	3.39	8.63	ND	
141-78-6	Ethyl acetate	0.58	1.26	ND	2.07	4.54	ND	
74-97-5	Bromochloromethane	0.29	0.77	ND	1.52	4.05	ND	
109-99-9	Tetrahydrofuran	0.58	1.45	ND	1.69	4.26	ND	
156-59-2	cis-1,2-Dichloroethene	0.58	1.55	ND	2.28	6.13	ND	
67-66-3	Chloroform	0.29	1.44	ND	1.40	7.04	ND	
71-55-6	1,1,1-Trichloroethane	0.29	1.28	ND	1.57	6.96	ND	
107-06-2	1,2-Dichloroethane	0.29	1.31	ND	1.16	5.31	ND	
110-82-7	Cyclohexane	0.29	1.10	ND	0.99	3.80	ND	
71-43-2	Benzene	0.29	1.46	48.51	0.92	4.66	154.89	
56-23-5	Carbon tetrachloride	0.29	1.36	ND	1.81	8.57	ND	
142-82-5	n-Heptane	1.44	3.48	8.81	5.89	14.27	36.10	
78-87-5	1,2-Dichloropropane	0.29	1.38	ND	1.33	6.39	ND	
123-91-1	1,4 Dioxane	1.15	2.35	ND	4.14	8.47	ND	
79-01-6	Trichloroethene	0.17	1.34	ND	0.93	7.19	ND	
75-27-4	Bromodichloromethane	0.29	0.58	ND	1.93	3.89	ND	
80-62-6	Methyl methacrylate	1.15	3.89	ND	4.71	15.91	ND	
108-10-1	4-Methyl-2-pentanone	1.15	4.35	ND	4.71	17.83	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag	
10061-01-5	cis-1,3-Dichloropropene	0.29	1.49	ND	1.30	6.76	ND		
108-88-3	Toluene	0.58	1.50	24.07	2.16	5.65	90.63		
10061-02-6	trans-1,3-Dichloropropene	0.29	1.49	ND	1.30	6.77	ND		
79-00-5	1,1,2-Trichloroethane	0.29	1.48	ND	1.57	8.06	ND		
591-78-6	2-Hexanone	1.44	4.08	ND	5.89	16.70	ND		
124-48-1	Dibromochloromethane	0.29	0.57	ND	2.45	4.89	ND		
106-93-4	1,2-Dibromoethane	0.29	0.70	0.65	2.21	5.36	5.00	J	
127-18-4	Tetrachloroethene	0.17	0.70	0.55	1.17	4.74	3.74	J	
108-90-7	Chlorobenzene	0.29	1.31	ND	1.32	6.02	ND		
100-41-4	Ethylbenzene	0.61	1.52	3.26	2.64	6.60	14.14		
1330-20-7	m,p-Xylenes	0.61	1.52	5.41	2.65	6.61	23.48		
100-42-5	Styrene	0.60	1.49	ND	2.54	6.34	ND		
75-25-2	Bromoform	0.29	0.39	ND	2.97	3.98	ND		
95-47-6	o-Xylene	0.59	1.48	3.52	2.57	6.43	15.29		
79-34-5	1,1,2,2-Tetrachloroethane	0.28	0.71	ND	1.95	4.88	ND		
622-96-8	4-Ethyltoluene	0.95	2.38	ND	4.68	11.71	ND		
108-67-8	1,3,5-Trimethylbenzene	0.59	1.49	1.63	2.92	7.30	8.01		
95-63-6	1,2,4-Trimethylbenzene	0.58	1.46	2.68	2.87	7.18	13.19		
541-73-1	1,3-Dichlorobenzene	0.58	1.06	ND	3.46	6.39	ND		
100-44-7	Benzyl chloride	0.58	3.48	ND	2.98	18.03	ND		
106-46-7	1,4-Dichlorobenzene	0.58	0.99	ND	3.46	5.98	ND		
95-50-1	1,2-Dichlorobenzene	0.58	0.93	0.98	3.46	5.60	5.88		
120-82-1	1,2,4-Trichlorobenzene	1.44	1.98	ND	10.66	14.67	ND		
91-20-3	Naphthalene	0.29	0.46	0.35	1.54	2.41	1.84	J	
87-68-3	Hexachlorobutadiene	1.44	1.52	ND	15.33	16.25	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				108	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218037
Laboratory Number: 01

File Name: 1803701A
Description: T-801
Canister: 618
QC_Batch: 012918-GCK

Date Sampled: 01/18/18 Time: 8:09
Date Analyzed: 01/29/18 Time: 16:42
Can Factor: 1.15
Air Volume: 10 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	23.00	69.00	302.49	26.49	79.46	348.36	
74-86-2	Acetylene	23.00	69.00	ND	24.51	73.52	ND	ND
74-84-0	Ethane	23.00	69.00	2,132.68	28.37	85.12	2,630.89	
115-07-1	Propene	15.33	46.00	ND	26.46	79.37	ND	ND
74-98-6	Propane	15.33	46.00	779.63	27.71	83.14	1,409.08	
75-28-5	i-Butane	11.50	34.50	161.51	27.38	82.15	384.58	
106-98-9	1-Butene	11.50	34.50	ND	26.44	79.32	ND	ND
106-97-8	n-Butane	11.50	34.50	159.91	27.38	82.15	380.77	
624-64-6	t-2-Butene	11.50	34.50	ND	26.44	79.32	ND	ND
590-18-1	c-2-Butene	11.50	34.50	ND	26.44	79.32	ND	ND
78-78-4	i-Pentane	9.20	27.60	50.58	27.22	81.67	149.66	
109-67-1	1-Pentene	9.20	27.60	ND	26.43	79.29	ND	ND
109-66-0	n-Pentane	9.20	27.60	66.62	27.19	81.56	196.86	
78-79-5	Isoprene	9.20	27.60	ND	25.68	77.03	ND	ND
646-04-8	t-2-Pentene	9.20	27.60	ND	26.43	79.29	ND	ND
627-20-3	c-2-Pentene	9.20	27.60	ND	26.43	79.29	ND	ND
75-83-2	2,2-Dimethylbutane	7.67	23.00	ND	27.08	81.25	ND	ND
287-92-3	Cyclopentane	9.20	27.60	ND	26.43	79.29	ND	ND
79-29-8	2,3-Dimethylbutane	7.67	23.00	ND	27.08	81.25	ND	ND
107-83-5	2-Methylpentane	7.67	23.00	11.98	27.08	81.25	42.33	J
96-14-0	3-Methylpentane	7.67	23.00	ND	27.08	81.25	ND	ND
110-54-3	n-Hexane	7.67	23.00	23.78	27.08	81.25	84.01	
96-37-7	Methylcyclopentane	7.67	23.00	ND	26.46	79.37	ND	ND
108-08-7	2,4-Dimethylpentane	6.57	19.71	18.77	26.99	80.96	77.06	J
71-43-2	Benzene	7.67	23.00	96.65	24.54	73.62	309.36	
110-82-7	Cyclohexane	7.67	23.00	ND	26.46	79.37	ND	ND
591-76-4	2-Methylhexane	6.57	19.71	ND	26.99	80.96	ND	ND
565-59-3	2,3-Dimethylpentane	6.57	19.71	ND	26.99	80.96	ND	ND
589-34-4	3-Methylhexane	6.57	19.71	ND	26.99	80.96	ND	ND
540-84-1	2,2,4-Trimethylpentane	5.75	17.25	16.00	26.91	80.74	74.90	J
142-82-5	n-Heptane	6.57	19.71	13.46	26.99	80.96	55.27	J
108-87-2	Methylcyclohexane	6.57	19.71	38.84	26.45	79.34	156.32	
592-13-2	2,5-Dimethylhexane	5.75	17.25	ND	26.91	80.74	ND	ND
589-43-5	2,4-Dimethylhexane	5.75	17.25	ND	26.91	80.74	ND	ND
565-75-3	2,3,4-Trimethylpentane	5.75	17.25	ND	26.91	80.74	ND	ND
108-88-3	Toluene	6.57	19.71	34.19	24.80	74.41	129.04	
584-94-1	2,3-Dimethylhexane	5.75	17.25	ND	26.91	80.74	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	5.75	17.25	8.04	26.91	80.74	37.62	J
589-81-1	3-Methylheptane	5.75	17.25	14.40	26.91	80.74	67.40	J
111-65-9	n-Octane	5.75	17.25	ND	26.91	80.74	ND	ND
100-41-4	Ethylbenzene	5.75	17.25	8.07	25.03	75.08	35.12	J
108-38-3	m,p-xylene	5.75	17.25	9.95	25.03	75.08	43.32	J
100-42-5	Styrene	5.75	17.25	ND	24.56	73.67	ND	ND
95-47-6	o-xylene	5.75	17.25	9.66	25.03	75.08	42.06	J
111-84-2	n-Nonane	5.11	15.33	18.17	26.88	80.63	95.53	
98-82-8	i-Propylbenzene	5.11	15.33	ND	25.18	75.54	ND	ND
103-65-1	n-propylbenzene	5.11	15.33	ND	25.18	75.54	ND	ND
80-56-8	a-Pinene	4.60	13.80	ND	25.68	77.03	ND	ND
620-14-4	3-Ethyltoluene	5.11	15.33	ND	25.18	75.54	ND	ND
622-96-8	4-Ethyltoluene	5.11	15.33	ND	25.18	75.54	ND	ND
108-67-8	1,3,5-Trimethylbenzene	5.11	15.33	11.74	25.18	75.54	57.86	J
611-14-3	2-Ethyltoluene	5.11	15.33	10.86	25.18	75.54	53.48	J
127-91-3	b-Pinene	4.60	13.80	ND	25.68	77.03	ND	ND
95-63-6	1,2,4-Trimethylbenzene	5.11	15.33	8.86	25.18	75.54	43.63	J
124-18-5	n-Decane	4.60	13.80	24.81	26.83	80.48	144.71	
526-73-8	1,2,3-Trimethylbenzene	5.11	15.33	ND	25.18	75.54	ND	ND
5989-27-5	d-Limonene	4.60	13.80	ND	25.68	77.03	ND	ND
141-93-5	1,3-Diethylbenzene	4.60	13.80	ND	25.30	75.90	ND	ND
105-05-5	1,4-Diethylbenzene	4.60	13.80	ND	25.30	75.90	ND	ND
104-51-8	n-Butylbenzene	4.60	13.80	4.63	25.30	75.90	25.47	J
1120-21-4	Undecane	4.18	12.55	20.83	26.79	80.36	133.44	
112-40-3	Dodecane	3.83	11.50	8.07	26.75	80.26	56.30	J

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	172.50	517.50	2,787.05	609.41	1,828.22	9,846.04	
TNMHC - C1	Total Non-Methane Hydrocarbons	1,035.00	3,105.00	16,722.28	678.69	2,036.07	10,965.43	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218037

Laboratory Number: 01

File Name: 1803701A

Date Sampled: 01/18/18

Time: 8:09

Description: T-801

Date Analyzed: 01/25/18

Time: 16:56

Can/Tube#: 618

Can Dilution Factor: 1.15

QC_Batch: 012518-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	115	345	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 218037

Laboratory Number: 01

File Name: 1803701A
Description: T-801
Can/Tube#: 618
QC_Batch: 012518-GCL

Date Sampled: 01/18/18 Time: 8:09
Date Analyzed: 01/25/18 Time: 16:26
Dilution Factor: 1.15

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.35	240.44	0.08	0.23	162.46	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218037

Analytical Method: TO-15

Laboratory ID: 02

File Name: 1803702A.D

Date Sampled: 01/18/18

Time: 09:20

Description: T-802

Date Analyzed: 02/06/18

Time: 21:27

Canister: 619

Can Dilution Factor: 1.15

QC_Batch: 020618-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.29	1.45	ND	1.42	7.15	ND	
74-87-3	Chloromethane	0.29	1.45	6.69	0.59	2.99	13.81	
76-14-2	Freon 114	0.29	1.45	ND	2.01	10.10	ND	
75-01-4	Vinyl chloride	0.29	1.45	ND	0.73	3.69	ND	
106-99-0	1,3-Butadiene	0.29	1.45	ND	0.64	3.20	ND	
74-83-9	Bromomethane	0.29	1.45	6.39	1.12	5.61	24.79	
75-00-3	Chloroethane	0.29	1.45	ND	0.76	3.81	ND	
64-17-5	Ethanol	1.44	4.31	ND	2.71	8.13	ND	
75-69-4	Trichlorofluoromethane	0.29	1.38	ND	1.61	7.75	ND	
67-64-1	Acetone	1.44	3.54	79.46	3.41	8.40	188.72	
67-63-0	2-propanol	1.44	3.30	513.74	3.53	8.11	1,262.19	E
75-35-4	1,1-Dichloroethene	0.29	1.43	ND	1.14	5.65	ND	
76-13-1	Freon 113	0.29	1.38	ND	2.20	10.54	ND	
75-09-2	Dichloromethane	0.58	1.38	ND	2.00	4.81	ND	
75-15-0	Carbon disulfide	1.44	2.67	8.19	4.47	8.30	25.49	
156-60-5	trans-1,2-Dichloroethene	0.29	1.04	ND	1.14	4.11	ND	
1634-04-4	Methyl tert butyl ether	0.29	1.06	ND	1.04	3.82	ND	
75-34-3	1,1-Dichloroethane	0.29	1.43	ND	1.16	5.80	ND	
108-05-4	Vinyl acetate	0.29	1.26	ND	1.01	4.45	ND	
78-93-3	2-Butanone	1.15	2.93	ND	3.39	8.63	ND	
141-78-6	Ethyl acetate	0.58	1.26	ND	2.07	4.54	ND	
74-97-5	Bromochloromethane	0.29	0.77	ND	1.52	4.05	ND	
109-99-9	Tetrahydrofuran	0.58	1.45	ND	1.69	4.26	ND	
156-59-2	cis-1,2-Dichloroethene	0.58	1.55	ND	2.28	6.13	ND	
67-66-3	Chloroform	0.29	1.44	ND	1.40	7.04	ND	
71-55-6	1,1,1-Trichloroethane	0.29	1.28	ND	1.57	6.96	ND	
107-06-2	1,2-Dichloroethane	0.29	1.31	ND	1.16	5.31	ND	
110-82-7	Cyclohexane	0.29	1.10	ND	0.99	3.80	ND	
71-43-2	Benzene	0.29	1.46	132.03	0.92	4.66	421.52	E
56-23-5	Carbon tetrachloride	0.29	1.36	ND	1.81	8.57	ND	
142-82-5	n-Heptane	1.44	3.48	14.14	5.89	14.27	57.92	
78-87-5	1,2-Dichloropropane	0.29	1.38	ND	1.33	6.39	ND	
123-91-1	1,4 Dioxane	1.15	2.35	ND	4.14	8.47	ND	
79-01-6	Trichloroethene	0.17	1.34	ND	0.93	7.19	ND	
75-27-4	Bromodichloromethane	0.29	0.58	ND	1.93	3.89	ND	
80-62-6	Methyl methacrylate	1.15	3.89	ND	4.71	15.91	ND	
108-10-1	4-Methyl-2-pentanone	1.15	4.35	ND	4.71	17.83	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.29	1.49	ND	1.30	6.76	ND	
108-88-3	Toluene	0.58	1.50	77.88	2.16	5.65	293.23	
10061-02-6	trans-1,3-Dichloropropene	0.29	1.49	ND	1.30	6.77	ND	
79-00-5	1,1,2-Trichloroethane	0.29	1.48	ND	1.57	8.06	ND	
591-78-6	2-Hexanone	1.44	4.08	ND	5.89	16.70	ND	
124-48-1	Dibromochloromethane	0.29	0.57	ND	2.45	4.89	ND	
106-93-4	1,2-Dibromoethane	0.29	0.70	ND	2.21	5.36	ND	
127-18-4	Tetrachloroethene	0.17	0.70	ND	1.17	4.74	ND	
108-90-7	Chlorobenzene	0.29	1.31	ND	1.32	6.02	ND	
100-41-4	Ethylbenzene	0.61	1.52	8.55	2.64	6.60	37.13	
1330-20-7	m,p-Xylenes	0.61	1.52	17.21	2.65	6.61	74.70	
100-42-5	Styrene	0.60	1.49	ND	2.54	6.34	ND	
75-25-2	Bromoform	0.29	0.39	ND	2.97	3.98	ND	
95-47-6	o-Xylene	0.59	1.48	9.95	2.57	6.43	43.18	
79-34-5	1,1,2,2-Tetrachloroethane	0.28	0.71	ND	1.95	4.88	ND	
622-96-8	4-Ethyltoluene	0.95	2.38	2.70	4.68	11.71	13.26	
108-67-8	1,3,5-Trimethylbenzene	0.59	1.49	2.25	2.92	7.30	11.06	
95-63-6	1,2,4-Trimethylbenzene	0.58	1.46	6.13	2.87	7.18	30.13	
541-73-1	1,3-Dichlorobenzene	0.58	1.06	ND	3.46	6.39	ND	
100-44-7	Benzyl chloride	0.58	3.48	ND	2.98	18.03	ND	
106-46-7	1,4-Dichlorobenzene	0.58	0.99	ND	3.46	5.98	ND	
95-50-1	1,2-Dichlorobenzene	0.58	0.93	0.62	3.46	5.60	3.73	J
120-82-1	1,2,4-Trichlorobenzene	1.44	1.98	ND	10.66	14.67	ND	
91-20-3	Naphthalene	0.29	0.46	0.81	1.54	2.41	4.24	
87-68-3	Hexachlorobutadiene	1.44	1.52	ND	15.33	16.25	ND	
					QC		Limits	
Surrogate Recovery					% Rec.	LCL	UCL	Flag
2037-26-5	Toluene-d8				123	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218037
Laboratory Number: 02

File Name: 1803702A
Description: T-802
Canister: 619
QC_Batch: 013018-GCK

Date Sampled: 01/18/18 Time: 9:20
Date Analyzed: 01/30/18 Time: 15:07
Can Factor: 1.15
Air Volume: 20 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	11.50	34.50	ND	13.24	39.73	ND	ND
74-86-2	Acetylene	11.50	34.50	ND	12.25	36.76	ND	ND
74-84-0	Ethane	11.50	34.50	3,286.61	14.19	42.56	4,054.38	
115-07-1	Propene	7.67	23.00	ND	13.23	39.68	ND	ND
74-98-6	Propane	7.67	23.00	537.21	13.86	41.57	970.93	
75-28-5	i-Butane	5.75	17.25	63.23	13.69	41.07	150.55	
106-98-9	1-Butene	5.75	17.25	ND	13.22	39.66	ND	ND
106-97-8	n-Butane	5.75	17.25	43.89	13.69	41.07	104.52	
624-64-6	t-2-Butene	5.75	17.25	ND	13.22	39.66	ND	ND
590-18-1	c-2-Butene	5.75	17.25	ND	13.22	39.66	ND	ND
78-78-4	i-Pentane	4.60	13.80	27.69	13.61	40.83	81.94	
109-67-1	1-Pentene	4.60	13.80	ND	13.22	39.65	ND	ND
109-66-0	n-Pentane	4.60	13.80	21.77	13.59	40.78	64.32	
78-79-5	Isoprene	4.60	13.80	ND	12.84	38.52	ND	ND
646-04-8	t-2-Pentene	4.60	13.80	ND	13.22	39.65	ND	ND
627-20-3	c-2-Pentene	4.60	13.80	ND	13.22	39.65	ND	ND
75-83-2	2,2-Dimethylbutane	3.83	11.50	ND	13.54	40.63	ND	ND
287-92-3	Cyclopentane	4.60	13.80	ND	13.22	39.65	ND	ND
79-29-8	2,3-Dimethylbutane	3.83	11.50	ND	13.54	40.63	ND	ND
107-83-5	2-Methylpentane	3.83	11.50	9.95	13.54	40.63	35.14	J
96-14-0	3-Methylpentane	3.83	11.50	5.04	13.54	40.63	17.82	J
110-54-3	n-Hexane	3.83	11.50	14.96	13.54	40.63	52.87	
96-37-7	Methylcyclopentane	3.83	11.50	ND	13.23	39.68	ND	ND
108-08-7	2,4-Dimethylpentane	3.29	9.86	7.84	13.49	40.48	32.20	J
71-43-2	Benzene	3.83	11.50	154.09	12.27	36.81	493.22	
110-82-7	Cyclohexane	3.83	11.50	11.47	13.23	39.68	39.58	J
591-76-4	2-Methylhexane	3.29	9.86	ND	13.49	40.48	ND	ND
565-59-3	2,3-Dimethylpentane	3.29	9.86	ND	13.49	40.48	ND	ND
589-34-4	3-Methylhexane	3.29	9.86	ND	13.49	40.48	ND	ND
540-84-1	2,2,4-Trimethylpentane	2.88	8.63	6.40	13.46	40.37	29.94	J
142-82-5	n-Heptane	3.29	9.86	12.05	13.49	40.48	49.49	
108-87-2	Methylcyclohexane	3.29	9.86	17.83	13.22	39.67	71.75	
592-13-2	2,5-Dimethylhexane	2.88	8.63	ND	13.46	40.37	ND	ND
589-43-5	2,4-Dimethylhexane	2.88	8.63	ND	13.46	40.37	ND	ND
565-75-3	2,3,4-Trimethylpentane	2.88	8.63	3.17	13.46	40.37	14.83	J
108-88-3	Toluene	3.29	9.86	69.93	12.40	37.21	263.97	
584-94-1	2,3-Dimethylhexane	2.88	8.63	ND	13.46	40.37	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	2.88	8.63	7.40	13.46	40.37	34.64	J
589-81-1	3-Methylheptane	2.88	8.63	6.89	13.46	40.37	32.25	J
111-65-9	n-Octane	2.88	8.63	12.03	13.46	40.37	56.31	
100-41-4	Ethylbenzene	2.88	8.63	9.65	12.51	37.54	42.01	
108-38-3	m,p-xylene	2.88	8.63	25.78	12.51	37.54	112.21	
100-42-5	Styrene	2.88	8.63	ND	12.28	36.83	ND	ND
95-47-6	o-xylene	2.88	8.63	14.36	12.51	37.54	62.49	
111-84-2	n-Nonane	2.56	7.67	11.87	13.44	40.31	62.44	
98-82-8	i-Propylbenzene	2.56	7.67	ND	12.59	37.77	ND	ND
103-65-1	n-propylbenzene	2.56	7.67	ND	12.59	37.77	ND	ND
80-56-8	a-Pinene	2.30	6.90	ND	12.84	38.52	ND	ND
620-14-4	3-Ethyltoluene	2.56	7.67	6.45	12.59	37.77	31.79	J
622-96-8	4-Ethyltoluene	2.56	7.67	4.50	12.59	37.77	22.16	J
108-67-8	1,3,5-Trimethylbenzene	2.56	7.67	11.23	12.59	37.77	55.33	
611-14-3	2-Ethyltoluene	2.56	7.67	8.18	12.59	37.77	40.29	
127-91-3	b-Pinene	2.30	6.90	ND	12.84	38.52	ND	ND
95-63-6	1,2,4-Trimethylbenzene	2.56	7.67	16.55	12.59	37.77	81.55	
124-18-5	n-Decane	2.30	6.90	13.80	13.41	40.24	80.49	
526-73-8	1,2,3-Trimethylbenzene	2.56	7.67	ND	12.59	37.77	ND	ND
5989-27-5	d-Limonene	2.30	6.90	ND	12.84	38.52	ND	ND
141-93-5	1,3-Diethylbenzene	2.30	6.90	5.30	12.65	37.95	29.16	J
105-05-5	1,4-Diethylbenzene	2.30	6.90	7.18	12.65	37.95	39.50	
104-51-8	n-Butylbenzene	2.30	6.90	7.06	12.65	37.95	38.84	
1120-21-4	Undecane	2.09	6.27	10.72	13.39	40.18	68.68	
112-40-3	Dodecane	1.92	5.75	7.64	13.38	40.13	53.29	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	86.25	258.75	4,126.68	304.70	914.11	14,578.66	
TNMHC - C1	Total Non-Methane Hydrocarbons	517.50	1,552.50	24,760.05	339.34	1,018.03	16,236.10	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218037

Laboratory Number: 02

File Name: 1803702A

Date Sampled: 01/18/18

Time: 9:20

Description: T-802

Date Analyzed: 01/25/18

Time: 17:06

Can/Tube#: 619

Can Dilution Factor: 1.15

QC_Batch: 012518-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	115	345	ND	ND

ANALYTICAL REPORT

ASTM D3416 Methane by GC/FID

SDG: 218037

Modified Analytical Method:

ASTM D3416

Laboratory Number:

02

File Name: 1803702A

Date Sampled: 01/18/18

Time: 9:20

Description: T-802

Date Analyzed: 01/25/18

Time: 16:31

Can/Tube#: 619

Dilution Factor: 1.15

QC_Batch: 012518-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.35	474.57	0.08	0.23	320.66	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218037

Analytical Method: TO-15

Laboratory ID: 03

File Name: 1803703A.D

Date Sampled: 01/18/18

Time: 10:28

Description: T-803

Date Analyzed: 02/07/18

Time: 21:26

Canister: 776

Can Dilution Factor: 1.14

QC_Batch: 020718-MA1

Air Volume: 50 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	1.14	5.73	ND	5.63	28.34	ND	
74-87-3	Chloromethane	1.14	5.73	ND	2.35	11.84	ND	
76-14-2	Freon 114	1.14	5.73	ND	7.96	40.06	ND	
75-01-4	Vinyl chloride	1.14	5.73	ND	2.91	14.65	ND	
106-99-0	1,3-Butadiene	1.14	5.73	ND	2.52	12.68	ND	
74-83-9	Bromomethane	1.14	5.73	ND	4.42	22.25	ND	
75-00-3	Chloroethane	1.14	5.73	ND	3.01	15.12	ND	
64-17-5	Ethanol	5.70	17.10	ND	10.74	32.23	ND	
75-69-4	Trichlorofluoromethane	1.14	5.47	ND	6.40	30.75	ND	
67-64-1	Acetone	5.70	14.02	328.17	13.54	33.30	779.44	
67-63-0	2-propanol	5.70	13.09	773.09	14.00	32.15	1,899.38	E
75-35-4	1,1-Dichloroethene	1.14	5.65	ND	4.52	22.40	ND	
76-13-1	Freon 113	1.14	5.45	ND	8.73	41.78	ND	
75-09-2	Dichloromethane	2.28	5.49	ND	7.91	19.06	ND	
75-15-0	Carbon disulfide	5.70	10.58	ND	17.73	32.91	ND	
156-60-5	trans-1,2-Dichloroethene	1.14	4.12	ND	4.52	16.30	ND	
1634-04-4	Methyl tert butyl ether	1.14	4.20	ND	4.11	15.14	ND	
75-34-3	1,1-Dichloroethane	1.14	5.69	ND	4.61	23.01	ND	
108-05-4	Vinyl acetate	1.14	5.01	111.85	4.01	17.63	393.68	
78-93-3	2-Butanone	4.56	11.61	ND	13.44	34.21	ND	
141-78-6	Ethyl acetate	2.28	4.99	ND	8.21	17.98	ND	
74-97-5	Bromochloromethane	1.14	3.04	ND	6.03	16.06	ND	
109-99-9	Tetrahydrofuran	2.28	5.73	ND	6.72	16.90	ND	
156-59-2	cis-1,2-Dichloroethene	2.28	6.13	ND	9.03	24.29	ND	
67-66-3	Chloroform	1.14	5.72	ND	5.56	27.91	ND	
71-55-6	1,1,1-Trichloroethane	1.14	5.06	ND	6.22	27.60	ND	
107-06-2	1,2-Dichloroethane	1.14	5.20	ND	4.61	21.05	ND	
110-82-7	Cyclohexane	1.14	4.38	ND	3.94	15.07	ND	
71-43-2	Benzene	1.14	5.79	38.08	3.64	18.49	121.58	
56-23-5	Carbon tetrachloride	1.14	5.40	ND	7.17	33.97	ND	
142-82-5	n-Heptane	5.70	13.82	125.88	23.35	56.60	515.62	
78-87-5	1,2-Dichloropropane	1.14	5.49	ND	5.27	25.34	ND	
123-91-1	1,4 Dioxane	4.56	9.33	ND	16.42	33.58	ND	
79-01-6	Trichloroethene	0.68	5.31	ND	3.67	28.52	ND	
75-27-4	Bromodichloromethane	1.14	2.30	ND	7.63	15.42	ND	
80-62-6	Methyl methacrylate	4.56	15.41	ND	18.66	63.07	ND	
108-10-1	4-Methyl-2-pentanone	4.56	17.26	ND	18.68	70.70	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	1.14	5.91	ND	5.17	26.81	ND		
108-88-3	Toluene	2.28	5.95	13.46	8.58	22.40	50.68		
10061-02-6	trans-1,3-Dichloropropene	1.14	5.91	ND	5.17	26.83	ND		
79-00-5	1,1,2-Trichloroethane	1.14	5.86	ND	6.22	31.97	ND		
591-78-6	2-Hexanone	5.70	16.17	ND	23.35	66.21	ND		
124-48-1	Dibromochloromethane	1.14	2.28	ND	9.71	19.38	ND		
106-93-4	1,2-Dibromoethane	1.14	2.77	ND	8.76	21.25	ND		
127-18-4	Tetrachloroethene	0.68	2.77	ND	4.64	18.81	ND		
108-90-7	Chlorobenzene	1.14	5.19	ND	5.25	23.88	ND		
100-41-4	Ethylbenzene	2.41	6.03	7.39	10.47	26.16	32.09		
1330-20-7	m,p-Xylenes	2.42	6.04	9.29	10.49	26.23	40.32		
100-42-5	Styrene	2.36	5.90	ND	10.06	25.14	ND		
75-25-2	Bromoform	1.14	1.53	ND	11.78	15.80	ND		
95-47-6	o-Xylene	2.35	5.88	4.48	10.20	25.51	19.44	J	
79-34-5	1,1,2,2-Tetrachloroethane	1.13	2.82	ND	7.74	19.36	ND		
622-96-8	4-Ethyltoluene	3.78	9.45	4.48	18.57	46.42	21.99	J	
108-67-8	1,3,5-Trimethylbenzene	2.36	5.89	4.75	11.58	28.94	23.32	J	
95-63-6	1,2,4-Trimethylbenzene	2.32	5.79	10.71	11.39	28.47	52.64		
541-73-1	1,3-Dichlorobenzene	2.28	4.22	ND	13.70	25.35	ND		
100-44-7	Benzyl chloride	2.28	13.82	ND	11.80	71.51	ND		
106-46-7	1,4-Dichlorobenzene	2.28	3.94	ND	13.70	23.70	ND		
95-50-1	1,2-Dichlorobenzene	2.28	3.69	ND	13.70	22.20	ND		
120-82-1	1,2,4-Trichlorobenzene	5.70	7.84	ND	42.27	58.16	ND		
91-20-3	Naphthalene	1.16	1.82	2.02	6.09	9.56	10.60		
87-68-3	Hexachlorobutadiene	5.70	6.04	ND	60.77	64.42	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				86	70	130		

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218037
Laboratory Number: 03

File Name: 1803703A
Description: T-803
Canister: 776
QC_Batch: 013018-GCK

Date Sampled: 01/18/18 Time: 10:28
Date Analyzed: 01/30/18 Time: 18:29
Can Factor: 1.14
Air Volume: 10 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	22.80	68.40	ND	26.26	78.77	ND	ND
74-86-2	Acetylene	22.80	68.40	ND	24.30	72.89	ND	ND
74-84-0	Ethane	22.80	68.40	4,784.73	28.13	84.38	5,902.48	
115-07-1	Propene	15.20	45.60	ND	26.23	78.68	ND	ND
74-98-6	Propane	15.20	45.60	659.64	27.47	82.42	1,192.21	
75-28-5	i-Butane	11.40	34.20	99.21	27.15	81.44	236.24	
106-98-9	1-Butene	11.40	34.20	ND	26.21	78.63	ND	ND
106-97-8	n-Butane	11.40	34.20	329.58	27.15	81.44	784.78	
624-64-6	t-2-Butene	11.40	34.20	ND	26.21	78.63	ND	ND
590-18-1	c-2-Butene	11.40	34.20	ND	26.21	78.63	ND	ND
78-78-4	i-Pentane	9.12	27.36	52.57	26.99	80.96	155.56	
109-67-1	1-Pentene	9.12	27.36	ND	26.20	78.60	ND	ND
109-66-0	n-Pentane	9.12	27.36	37.63	26.95	80.85	111.19	
78-79-5	Isoprene	9.12	27.36	ND	25.45	76.36	ND	ND
646-04-8	t-2-Pentene	9.12	27.36	ND	26.20	78.60	ND	ND
627-20-3	c-2-Pentene	9.12	27.36	ND	26.20	78.60	ND	ND
75-83-2	2,2-Dimethylbutane	7.60	22.80	ND	26.85	80.55	ND	ND
287-92-3	Cyclopentane	9.12	27.36	ND	26.20	78.60	ND	ND
79-29-8	2,3-Dimethylbutane	7.60	22.80	ND	26.85	80.55	ND	ND
107-83-5	2-Methylpentane	7.60	22.80	24.25	26.85	80.55	85.66	
96-14-0	3-Methylpentane	7.60	22.80	11.27	26.85	80.55	39.80	J
110-54-3	n-Hexane	7.60	22.80	30.95	26.85	80.55	109.33	
96-37-7	Methylcyclopentane	7.60	22.80	ND	26.23	78.68	ND	ND
108-08-7	2,4-Dimethylpentane	6.51	19.54	21.07	26.75	80.25	86.51	
71-43-2	Benzene	7.60	22.80	9.89	24.33	72.98	31.67	J
110-82-7	Cyclohexane	7.60	22.80	10.08	26.23	78.68	34.78	J
591-76-4	2-Methylhexane	6.51	19.54	7.80	26.75	80.25	32.04	J
565-59-3	2,3-Dimethylpentane	6.51	19.54	8.44	26.75	80.25	34.64	J
589-34-4	3-Methylhexane	6.51	19.54	10.84	26.75	80.25	44.53	J
540-84-1	2,2,4-Trimethylpentane	5.70	17.10	36.44	26.68	80.03	170.54	
142-82-5	n-Heptane	6.51	19.54	28.10	26.75	80.25	115.39	
108-87-2	Methylcyclohexane	6.51	19.54	43.15	26.22	78.65	173.65	
592-13-2	2,5-Dimethylhexane	5.70	17.10	ND	26.68	80.03	ND	ND
589-43-5	2,4-Dimethylhexane	5.70	17.10	ND	26.68	80.03	ND	ND
565-75-3	2,3,4-Trimethylpentane	5.70	17.10	28.95	26.68	80.03	135.49	
108-88-3	Toluene	6.51	19.54	ND	24.59	73.77	ND	ND
584-94-1	2,3-Dimethylhexane	5.70	17.10	ND	26.68	80.03	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	5.70	17.10	26.03	26.68	80.03	121.83	
589-81-1	3-Methylheptane	5.70	17.10	35.37	26.68	80.03	165.54	
111-65-9	n-Octane	5.70	17.10	14.37	26.68	80.03	67.24	J
100-41-4	Ethylbenzene	5.70	17.10	19.23	24.81	74.43	83.71	
108-38-3	m,p-xylene	5.70	17.10	11.87	24.81	74.43	51.67	J
100-42-5	Styrene	5.70	17.10	8.11	24.34	73.03	34.65	J
95-47-6	o-xylene	5.70	17.10	13.60	24.81	74.43	59.21	J
111-84-2	n-Nonane	5.07	15.20	25.39	26.64	79.92	133.50	
98-82-8	i-Propylbenzene	5.07	15.20	16.78	24.96	74.88	82.66	
103-65-1	n-propylbenzene	5.07	15.20	13.43	24.96	74.88	66.15	J
80-56-8	a-Pinene	4.56	13.68	ND	25.45	76.36	ND	ND
620-14-4	3-Ethyltoluene	5.07	15.20	11.98	24.96	74.88	59.01	J
622-96-8	4-Ethyltoluene	5.07	15.20	10.59	24.96	74.88	52.16	J
108-67-8	1,3,5-Trimethylbenzene	5.07	15.20	17.34	24.96	74.88	85.43	
611-14-3	2-Ethyltoluene	5.07	15.20	38.70	24.96	74.88	190.62	
127-91-3	b-Pinene	4.56	13.68	ND	25.45	76.36	ND	ND
95-63-6	1,2,4-Trimethylbenzene	5.07	15.20	8.47	24.96	74.88	41.72	J
124-18-5	n-Decane	4.56	13.68	31.91	26.59	79.78	186.12	
526-73-8	1,2,3-Trimethylbenzene	5.07	15.20	8.92	24.96	74.88	43.93	J
5989-27-5	d-Limonene	4.56	13.68	ND	25.45	76.36	ND	ND
141-93-5	1,3-Diethylbenzene	4.56	13.68	14.03	25.08	75.24	77.14	
105-05-5	1,4-Diethylbenzene	4.56	13.68	15.85	25.08	75.24	87.15	
104-51-8	n-Butylbenzene	4.56	13.68	9.64	25.08	75.24	53.02	J
1120-21-4	Undecane	4.15	12.44	23.64	26.55	79.66	151.41	
112-40-3	Dodecane	3.80	11.40	23.16	26.52	79.57	161.63	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	171.00	513.00	4,796.37	604.11	1,812.32	16,944.54	
TNMHC - C1	Total Non-Methane Hydrocarbons	1,026.00	3,078.00	28,778.20	672.79	2,018.36	18,870.95	

ANALYTICAL REPORT

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218037

Laboratory Number: 03

File Name: 1803703A

Date Sampled: 01/18/18

Time: 10:28

Description: T-803

Date Analyzed: 01/25/18

Time: 17:15

Can/Tube#: 776

Can Dilution Factor: 1.14

QC_Batch: 012518-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	114	342	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 218037

Laboratory Number: 03

File Name: 1803703A

Date Sampled: 01/18/18 Time: 10:28

Description: T-803

Date Analyzed: 01/25/18 Time: 16:38

Can/Tube#: 776

Dilution Factor: 1.14

QC_Batch: 012518-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.11	0.34	1,349.82	0.08	0.23	912.04	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218037

Laboratory ID: 04

File Name: 1803704A.D
Description: T-804
Canister: 735
QC_Batch: 020718-MA1

Date Sampled: 01/18/18 Time: 12:35
Date Analyzed: 02/07/18 Time: 19:39
Can Dilution Factor: 1.15
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.29	1.45	ND	1.42	7.15	ND	
74-87-3	Chloromethane	0.29	1.45	37.43	0.59	2.99	77.27	
76-14-2	Freon 114	0.29	1.45	ND	2.01	10.10	ND	
75-01-4	Vinyl chloride	0.29	1.45	ND	0.73	3.69	ND	
106-99-0	1,3-Butadiene	0.29	1.45	ND	0.64	3.20	ND	
74-83-9	Bromomethane	0.29	1.45	6.74	1.12	5.61	26.16	
75-00-3	Chloroethane	0.29	1.45	ND	0.76	3.81	ND	
64-17-5	Ethanol	1.44	4.31	ND	2.71	8.13	ND	
75-69-4	Trichlorofluoromethane	0.29	1.38	ND	1.61	7.75	ND	
67-64-1	Acetone	1.44	3.54	48.82	3.41	8.40	115.96	
67-63-0	2-propanol	1.44	3.30	195.92	3.53	8.11	481.34	E
75-35-4	1,1-Dichloroethene	0.29	1.43	ND	1.14	5.65	ND	
76-13-1	Freon 113	0.29	1.38	ND	2.20	10.54	ND	
75-09-2	Dichloromethane	0.58	1.38	ND	2.00	4.81	ND	
75-15-0	Carbon disulfide	1.44	2.67	ND	4.47	8.30	ND	
156-60-5	trans-1,2-Dichloroethene	0.29	1.04	ND	1.14	4.11	ND	
1634-04-4	Methyl tert butyl ether	0.29	1.06	ND	1.04	3.82	ND	
75-34-3	1,1-Dichloroethane	0.29	1.43	ND	1.16	5.80	ND	
108-05-4	Vinyl acetate	0.29	1.26	ND	1.01	4.45	ND	
78-93-3	2-Butanone	1.15	2.93	2.31	3.39	8.63	6.80	J
141-78-6	Ethyl acetate	0.58	1.26	ND	2.07	4.54	ND	
74-97-5	Bromochloromethane	0.29	0.77	ND	1.52	4.05	ND	
109-99-9	Tetrahydrofuran	0.58	1.45	ND	1.69	4.26	ND	
156-59-2	cis-1,2-Dichloroethene	0.58	1.55	ND	2.28	6.13	ND	
67-66-3	Chloroform	0.29	1.44	ND	1.40	7.04	ND	
71-55-6	1,1,1-Trichloroethane	0.29	1.28	ND	1.57	6.96	ND	
107-06-2	1,2-Dichloroethane	0.29	1.31	ND	1.16	5.31	ND	
110-82-7	Cyclohexane	0.29	1.10	0.39	0.99	3.80	1.33	J
71-43-2	Benzene	0.29	1.46	30.51	0.92	4.66	97.41	
56-23-5	Carbon tetrachloride	0.29	1.36	ND	1.81	8.57	ND	
142-82-5	n-Heptane	1.44	3.48	ND	5.89	14.27	ND	
78-87-5	1,2-Dichloropropane	0.29	1.38	ND	1.33	6.39	ND	
123-91-1	1,4 Dioxane	1.15	2.35	ND	4.14	8.47	ND	
79-01-6	Trichloroethene	0.17	1.34	ND	0.93	7.19	ND	
75-27-4	Bromodichloromethane	0.29	0.58	ND	1.93	3.89	ND	
80-62-6	Methyl methacrylate	1.15	3.89	ND	4.71	15.91	ND	
108-10-1	4-Methyl-2-pentanone	1.15	4.35	ND	4.71	17.83	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	0.29	1.49	ND	1.30	6.76	ND		
108-88-3	Toluene	0.58	1.50	5.31	2.16	5.65	19.98		
10061-02-6	trans-1,3-Dichloropropene	0.29	1.49	ND	1.30	6.77	ND		
79-00-5	1,1,2-Trichloroethane	0.29	1.48	ND	1.57	8.06	ND		
591-78-6	2-Hexanone	1.44	4.08	ND	5.89	16.70	ND		
124-48-1	Dibromochloromethane	0.29	0.57	ND	2.45	4.89	ND		
106-93-4	1,2-Dibromoethane	0.29	0.70	ND	2.21	5.36	ND		
127-18-4	Tetrachloroethene	0.17	0.70	ND	1.17	4.74	ND		
108-90-7	Chlorobenzene	0.29	1.31	ND	1.32	6.02	ND		
100-41-4	Ethylbenzene	0.61	1.52	1.33	2.64	6.60	5.76	J	
1330-20-7	m,p-Xylenes	0.61	1.52	1.87	2.65	6.61	8.14		
100-42-5	Styrene	0.60	1.49	ND	2.54	6.34	ND		
75-25-2	Bromoform	0.29	0.39	ND	2.97	3.98	ND		
95-47-6	o-Xylene	0.59	1.48	0.97	2.57	6.43	4.22	J	
79-34-5	1,1,2,2-Tetrachloroethane	0.28	0.71	ND	1.95	4.88	ND		
622-96-8	4-Ethyltoluene	0.95	2.38	ND	4.68	11.71	ND		
108-67-8	1,3,5-Trimethylbenzene	0.59	1.49	ND	2.92	7.30	ND		
95-63-6	1,2,4-Trimethylbenzene	0.58	1.46	0.93	2.87	7.18	4.58	J	
541-73-1	1,3-Dichlorobenzene	0.58	1.06	ND	3.46	6.39	ND		
100-44-7	Benzyl chloride	0.58	3.48	ND	2.98	18.03	ND		
106-46-7	1,4-Dichlorobenzene	0.58	0.99	ND	3.46	5.98	ND		
95-50-1	1,2-Dichlorobenzene	0.58	0.93	ND	3.46	5.60	ND		
120-82-1	1,2,4-Trichlorobenzene	1.44	1.98	ND	10.66	14.67	ND		
91-20-3	Naphthalene	0.29	0.46	ND	1.54	2.41	ND		
87-68-3	Hexachlorobutadiene	1.44	1.52	ND	15.33	16.25	ND		
					QC		Limits		
Surrogate Recovery				% Rec.	LCL	UCL	Flag		
2037-26-5	Toluene-d8			103	70	130			

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218037
Laboratory Number: 04

File Name: 1803704A
Description: T-804
Canister: 735
QC_Batch: 013018-GCK

Date Sampled: 01/18/18 Time: 12:35
Date Analyzed: 01/30/18 Time: 14:18
Can Factor: 1.15
Air Volume: 20 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	11.50	34.50	ND	13.24	39.73	ND	ND
74-86-2	Acetylene	11.50	34.50	ND	12.25	36.76	ND	ND
74-84-0	Ethane	11.50	34.50	1,510.83	14.19	42.56	1,863.77	
115-07-1	Propene	7.67	23.00	ND	13.23	39.68	ND	ND
74-98-6	Propane	7.67	23.00	79.84	13.86	41.57	144.31	
75-28-5	i-Butane	5.75	17.25	13.85	13.69	41.07	32.99	J
106-98-9	1-Butene	5.75	17.25	ND	13.22	39.66	ND	ND
106-97-8	n-Butane	5.75	17.25	9.86	13.69	41.07	23.48	J
624-64-6	t-2-Butene	5.75	17.25	ND	13.22	39.66	ND	ND
590-18-1	c-2-Butene	5.75	17.25	ND	13.22	39.66	ND	ND
78-78-4	i-Pentane	4.60	13.80	43.44	13.61	40.83	128.53	
109-67-1	1-Pentene	4.60	13.80	ND	13.22	39.65	ND	ND
109-66-0	n-Pentane	4.60	13.80	18.09	13.59	40.78	53.46	
78-79-5	Isoprene	4.60	13.80	ND	12.84	38.52	ND	ND
646-04-8	t-2-Pentene	4.60	13.80	ND	13.22	39.65	ND	ND
627-20-3	c-2-Pentene	4.60	13.80	ND	13.22	39.65	ND	ND
75-83-2	2,2-Dimethylbutane	3.83	11.50	ND	13.54	40.63	ND	ND
287-92-3	Cyclopentane	4.60	13.80	ND	13.22	39.65	ND	ND
79-29-8	2,3-Dimethylbutane	3.83	11.50	ND	13.54	40.63	ND	ND
107-83-5	2-Methylpentane	3.83	11.50	ND	13.54	40.63	ND	ND
96-14-0	3-Methylpentane	3.83	11.50	ND	13.54	40.63	ND	ND
110-54-3	n-Hexane	3.83	11.50	4.75	13.54	40.63	16.78	J
96-37-7	Methylcyclopentane	3.83	11.50	ND	13.23	39.68	ND	ND
108-08-7	2,4-Dimethylpentane	3.29	9.86	ND	13.49	40.48	ND	ND
71-43-2	Benzene	3.83	11.50	54.31	12.27	36.81	173.85	
110-82-7	Cyclohexane	3.83	11.50	ND	13.23	39.68	ND	ND
591-76-4	2-Methylhexane	3.29	9.86	ND	13.49	40.48	ND	ND
565-59-3	2,3-Dimethylpentane	3.29	9.86	ND	13.49	40.48	ND	ND
589-34-4	3-Methylhexane	3.29	9.86	ND	13.49	40.48	ND	ND
540-84-1	2,2,4-Trimethylpentane	2.88	8.63	ND	13.46	40.37	ND	ND
142-82-5	n-Heptane	3.29	9.86	ND	13.49	40.48	ND	ND
108-87-2	Methylcyclohexane	3.29	9.86	ND	13.22	39.67	ND	ND
592-13-2	2,5-Dimethylhexane	2.88	8.63	ND	13.46	40.37	ND	ND
589-43-5	2,4-Dimethylhexane	2.88	8.63	ND	13.46	40.37	ND	ND
565-75-3	2,3,4-Trimethylpentane	2.88	8.63	2.89	13.46	40.37	13.55	J
108-88-3	Toluene	3.29	9.86	9.89	12.40	37.21	37.35	
584-94-1	2,3-Dimethylhexane	2.88	8.63	ND	13.46	40.37	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	2.88	8.63	ND	13.46	40.37	ND	ND
589-81-1	3-Methylheptane	2.88	8.63	ND	13.46	40.37	ND	ND
111-65-9	n-Octane	2.88	8.63	3.73	13.46	40.37	17.45	J
100-41-4	Ethylbenzene	2.88	8.63	ND	12.51	37.54	ND	ND
108-38-3	m,p-xylene	2.88	8.63	3.87	12.51	37.54	16.85	J
100-42-5	Styrene	2.88	8.63	ND	12.28	36.83	ND	ND
95-47-6	o-xylene	2.88	8.63	3.63	12.51	37.54	15.79	J
111-84-2	n-Nonane	2.56	7.67	ND	13.44	40.31	ND	ND
98-82-8	i-Propylbenzene	2.56	7.67	2.81	12.59	37.77	13.85	J
103-65-1	n-propylbenzene	2.56	7.67	ND	12.59	37.77	ND	ND
80-56-8	a-Pinene	2.30	6.90	ND	12.84	38.52	ND	ND
620-14-4	3-Ethyltoluene	2.56	7.67	2.91	12.59	37.77	14.36	J
622-96-8	4-Ethyltoluene	2.56	7.67	ND	12.59	37.77	ND	ND
108-67-8	1,3,5-Trimethylbenzene	2.56	7.67	5.86	12.59	37.77	28.89	J
611-14-3	2-Ethyltoluene	2.56	7.67	9.63	12.59	37.77	47.42	
127-91-3	b-Pinene	2.30	6.90	ND	12.84	38.52	ND	ND
95-63-6	1,2,4-Trimethylbenzene	2.56	7.67	ND	12.59	37.77	ND	ND
124-18-5	n-Decane	2.30	6.90	7.70	13.41	40.24	44.91	
526-73-8	1,2,3-Trimethylbenzene	2.56	7.67	2.69	12.59	37.77	13.24	J
5989-27-5	d-Limonene	2.30	6.90	ND	12.84	38.52	ND	ND
141-93-5	1,3-Diethylbenzene	2.30	6.90	2.88	12.65	37.95	15.85	J
105-05-5	1,4-Diethylbenzene	2.30	6.90	3.37	12.65	37.95	18.51	J
104-51-8	n-Butylbenzene	2.30	6.90	ND	12.65	37.95	ND	ND
1120-21-4	Undecane	2.09	6.27	10.11	13.39	40.18	64.75	
112-40-3	Dodecane	1.92	5.75	6.76	13.38	40.13	47.18	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	86.25	258.75	1,938.34	304.70	914.11	6,847.76	
TNMHC - C1	Total Non-Methane Hydrocarbons	517.50	1,552.50	11,630.07	339.34	1,018.03	7,626.27	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218037

Laboratory Number: 04

File Name: 1803704A

Date Sampled: 01/18/18

Time: 12:35

Description: T-804

Date Analyzed: 01/25/18

Time: 17:22

Can/Tube#: 735

Can Dilution Factor: 1.15

QC_Batch: 012518-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	115	345	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: **ASTM D3416**

SDG: **218037**

Laboratory Number: **04**

File Name: 1803704A

Description: T-804

Can/Tube#: 735

QC_Batch: 012518-GCL

Date Sampled: 01/18/18

Time: 12:35

Date Analyzed: 01/25/18

Time: 16:43

Dilution Factor: 1.15

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.35	400.74	0.08	0.23	270.77	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218037

Laboratory ID: 05

File Name: 1803705A.D

Date Sampled: 01/18/18

Time: 14:08

Description: T-805

Date Analyzed: 02/07/18

Time: 20:15

Canister: 644

Can Dilution Factor: 1.18

QC_Batch: 020718-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.30	1.48	ND	1.46	7.33	ND	
74-87-3	Chloromethane	0.30	1.48	11.76	0.61	3.06	24.27	
76-14-2	Freon 114	0.30	1.48	ND	2.06	10.37	ND	
75-01-4	Vinyl chloride	0.30	1.48	ND	0.75	3.79	ND	
106-99-0	1,3-Butadiene	0.30	1.48	ND	0.65	3.28	ND	
74-83-9	Bromomethane	0.30	1.48	4.94	1.14	5.76	19.16	
75-00-3	Chloroethane	0.30	1.48	ND	0.78	3.91	ND	
64-17-5	Ethanol	1.48	4.43	ND	2.78	8.34	ND	
75-69-4	Trichlorofluoromethane	0.30	1.42	ND	1.66	7.96	ND	
67-64-1	Acetone	1.48	3.63	44.63	3.50	8.62	106.00	
67-63-0	2-propanol	1.48	3.39	61.96	3.62	8.32	152.23	
75-35-4	1,1-Dichloroethene	0.30	1.46	ND	1.17	5.80	ND	
76-13-1	Freon 113	0.30	1.41	ND	2.26	10.81	ND	
75-09-2	Dichloromethane	0.59	1.42	ND	2.05	4.93	ND	
75-15-0	Carbon disulfide	1.48	2.74	ND	4.59	8.52	ND	
156-60-5	trans-1,2-Dichloroethene	0.30	1.07	ND	1.17	4.22	ND	
1634-04-4	Methyl tert butyl ether	0.30	1.09	ND	1.06	3.92	ND	
75-34-3	1,1-Dichloroethane	0.30	1.47	ND	1.19	5.95	ND	
108-05-4	Vinyl acetate	0.30	1.30	ND	1.04	4.56	ND	
78-93-3	2-Butanone	1.18	3.00	7.09	3.48	8.85	20.89	
141-78-6	Ethyl acetate	0.59	1.29	ND	2.12	4.65	ND	
74-97-5	Bromochloromethane	0.30	0.79	ND	1.56	4.16	ND	
109-99-9	Tetrahydrofuran	0.59	1.48	ND	1.74	4.37	ND	
156-59-2	cis-1,2-Dichloroethene	0.59	1.59	ND	2.34	6.29	ND	
67-66-3	Chloroform	0.30	1.48	ND	1.44	7.22	ND	
71-55-6	1,1,1-Trichloroethane	0.30	1.31	ND	1.61	7.14	ND	
107-06-2	1,2-Dichloroethane	0.30	1.35	ND	1.19	5.45	ND	
110-82-7	Cyclohexane	0.30	1.13	ND	1.02	3.90	ND	
71-43-2	Benzene	0.30	1.50	5.05	0.94	4.78	16.13	
56-23-5	Carbon tetrachloride	0.30	1.40	ND	1.85	8.79	ND	
142-82-5	n-Heptane	1.48	3.58	ND	6.04	14.65	ND	
78-87-5	1,2-Dichloropropane	0.30	1.42	ND	1.36	6.56	ND	
123-91-1	1,4 Dioxane	1.18	2.41	ND	4.25	8.69	ND	
79-01-6	Trichloroethene	0.18	1.37	ND	0.95	7.38	ND	
75-27-4	Bromodichloromethane	0.30	0.60	ND	1.98	3.99	ND	
80-62-6	Methyl methacrylate	1.18	3.99	ND	4.83	16.32	ND	
108-10-1	4-Methyl-2-pentanone	1.18	4.47	ND	4.83	18.29	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	0.30	1.53	ND	1.34	6.94	ND		
108-88-3	Toluene	0.59	1.54	2.98	2.22	5.80	11.23		
10061-02-6	trans-1,3-Dichloropropene	0.30	1.53	ND	1.34	6.94	ND		
79-00-5	1,1,2-Trichloroethane	0.30	1.52	ND	1.61	8.27	ND		
591-78-6	2-Hexanone	1.48	4.18	ND	6.04	17.13	ND		
124-48-1	Dibromochloromethane	0.30	0.59	ND	2.51	5.02	ND		
106-93-4	1,2-Dibromoethane	0.30	0.72	ND	2.27	5.50	ND		
127-18-4	Tetrachloroethene	0.18	0.72	ND	1.20	4.87	ND		
108-90-7	Chlorobenzene	0.30	1.34	ND	1.36	6.18	ND		
100-41-4	Ethylbenzene	0.62	1.56	1.22	2.71	6.77	5.28	J	
1330-20-7	m,p-Xylenes	0.63	1.56	0.90	2.71	6.79	3.93	J	
100-42-5	Styrene	0.61	1.53	ND	2.60	6.51	ND		
75-25-2	Bromoform	0.30	0.40	ND	3.05	4.09	ND		
95-47-6	o-Xylene	0.61	1.52	ND	2.64	6.60	ND		
79-34-5	1,1,2,2-Tetrachloroethane	0.29	0.73	ND	2.00	5.01	ND		
622-96-8	4-Ethyltoluene	0.98	2.44	ND	4.81	12.01	ND		
108-67-8	1,3,5-Trimethylbenzene	0.61	1.52	ND	3.00	7.49	ND		
95-63-6	1,2,4-Trimethylbenzene	0.60	1.50	ND	2.95	7.37	ND		
541-73-1	1,3-Dichlorobenzene	0.59	1.09	ND	3.55	6.56	ND		
100-44-7	Benzyl chloride	0.59	3.58	ND	3.05	18.50	ND		
106-46-7	1,4-Dichlorobenzene	0.59	1.02	ND	3.55	6.13	ND		
95-50-1	1,2-Dichlorobenzene	0.59	0.96	ND	3.55	5.74	ND		
120-82-1	1,2,4-Trichlorobenzene	1.48	2.03	ND	10.94	15.05	ND		
91-20-3	Naphthalene	0.30	0.47	ND	1.58	2.47	ND		
87-68-3	Hexachlorobutadiene	1.48	1.56	ND	15.73	16.67	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				125	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218037
Laboratory Number: 05

File Name: 1803705A
Description: T-805
Canister: 644
QC_Batch: 013018-GCK

Date Sampled: 01/18/18 Time: 14:08
Date Analyzed: 01/30/18 Time: 12:48
Can Factor: 1.18
Air Volume: 50 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	4.72	14.16	ND	5.44	16.31	ND	ND
74-86-2	Acetylene	4.72	14.16	ND	5.03	15.09	ND	ND
74-84-0	Ethane	4.72	14.16	457.80	5.82	17.47	564.75	
115-07-1	Propene	3.15	9.44	ND	5.43	16.29	ND	ND
74-98-6	Propane	3.15	9.44	21.81	5.69	17.06	39.42	
75-28-5	i-Butane	2.36	7.08	2.43	5.62	16.86	5.79	J
106-98-9	1-Butene	2.36	7.08	ND	5.43	16.28	ND	ND
106-97-8	n-Butane	2.36	7.08	45.69	5.62	16.86	108.81	
624-64-6	t-2-Butene	2.36	7.08	ND	5.43	16.28	ND	ND
590-18-1	c-2-Butene	2.36	7.08	ND	5.43	16.28	ND	ND
78-78-4	i-Pentane	1.89	5.66	2.17	5.59	16.76	6.43	J
109-67-1	1-Pentene	1.89	5.66	ND	5.42	16.27	ND	ND
109-66-0	n-Pentane	1.89	5.66	ND	5.58	16.74	ND	ND
78-79-5	Isoprene	1.89	5.66	ND	5.27	15.81	ND	ND
646-04-8	t-2-Pentene	1.89	5.66	ND	5.42	16.27	ND	ND
627-20-3	c-2-Pentene	1.89	5.66	ND	5.42	16.27	ND	ND
75-83-2	2,2-Dimethylbutane	1.57	4.72	ND	5.56	16.67	ND	ND
287-92-3	Cyclopentane	1.89	5.66	ND	5.42	16.27	ND	ND
79-29-8	2,3-Dimethylbutane	1.57	4.72	ND	5.56	16.67	ND	ND
107-83-5	2-Methylpentane	1.57	4.72	ND	5.56	16.67	ND	ND
96-14-0	3-Methylpentane	1.57	4.72	ND	5.56	16.67	ND	ND
110-54-3	n-Hexane	1.57	4.72	ND	5.56	16.67	ND	ND
96-37-7	Methylcyclopentane	1.57	4.72	ND	5.43	16.29	ND	ND
108-08-7	2,4-Dimethylpentane	1.35	4.05	3.14	5.54	16.61	12.88	J
71-43-2	Benzene	1.57	4.72	7.46	5.04	15.11	23.87	
110-82-7	Cyclohexane	1.57	4.72	ND	5.43	16.29	ND	ND
591-76-4	2-Methylhexane	1.35	4.05	ND	5.54	16.61	ND	ND
565-59-3	2,3-Dimethylpentane	1.35	4.05	ND	5.54	16.61	ND	ND
589-34-4	3-Methylhexane	1.35	4.05	ND	5.54	16.61	ND	ND
540-84-1	2,2,4-Trimethylpentane	1.18	3.54	2.24	5.52	16.57	10.49	J
142-82-5	n-Heptane	1.35	4.05	ND	5.54	16.61	ND	ND
108-87-2	Methylcyclohexane	1.35	4.05	3.85	5.43	16.28	15.51	J
592-13-2	2,5-Dimethylhexane	1.18	3.54	ND	5.52	16.57	ND	ND
589-43-5	2,4-Dimethylhexane	1.18	3.54	2.02	5.52	16.57	9.47	J
565-75-3	2,3,4-Trimethylpentane	1.18	3.54	ND	5.52	16.57	ND	ND
108-88-3	Toluene	1.35	4.05	3.49	5.09	15.27	13.16	J
584-94-1	2,3-Dimethylhexane	1.18	3.54	ND	5.52	16.57	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	1.18	3.54	ND	5.52	16.57	ND	ND
589-81-1	3-Methylheptane	1.18	3.54	ND	5.52	16.57	ND	ND
111-65-9	n-Octane	1.18	3.54	1.22	5.52	16.57	5.71	J
100-41-4	Ethylbenzene	1.18	3.54	2.84	5.14	15.41	12.36	J
108-38-3	m,p-xylene	1.18	3.54	2.82	5.14	15.41	12.28	J
100-42-5	Styrene	1.18	3.54	3.32	5.04	15.12	14.17	J
95-47-6	o-xylene	1.18	3.54	4.86	5.14	15.41	21.15	
111-84-2	n-Nonane	1.05	3.15	4.04	5.52	16.55	21.25	
98-82-8	i-Propylbenzene	1.05	3.15	3.88	5.17	15.50	19.11	
103-65-1	n-propylbenzene	1.05	3.15	7.46	5.17	15.50	36.74	
80-56-8	a-Pinene	0.94	2.83	ND	5.27	15.81	ND	ND
620-14-4	3-Ethyltoluene	1.05	3.15	4.29	5.17	15.50	21.13	
622-96-8	4-Ethyltoluene	1.05	3.15	3.63	5.17	15.50	17.90	
108-67-8	1,3,5-Trimethylbenzene	1.05	3.15	5.11	5.17	15.50	25.18	
611-14-3	2-Ethyltoluene	1.05	3.15	10.17	5.17	15.50	50.11	
127-91-3	b-Pinene	0.94	2.83	ND	5.27	15.81	ND	ND
95-63-6	1,2,4-Trimethylbenzene	1.05	3.15	ND	5.17	15.50	ND	ND
124-18-5	n-Decane	0.94	2.83	8.50	5.51	16.52	49.59	
526-73-8	1,2,3-Trimethylbenzene	1.05	3.15	ND	5.17	15.50	ND	ND
5989-27-5	d-Limonene	0.94	2.83	ND	5.27	15.81	ND	ND
141-93-5	1,3-Diethylbenzene	0.94	2.83	5.00	5.19	15.58	27.48	
105-05-5	1,4-Diethylbenzene	0.94	2.83	10.46	5.19	15.58	57.51	
104-51-8	n-Butylbenzene	0.94	2.83	ND	5.19	15.58	ND	ND
1120-21-4	Undecane	0.86	2.57	8.68	5.50	16.49	55.61	
112-40-3	Dodecane	0.79	2.36	3.91	5.49	16.47	27.31	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	35.40	106.20	1,171.96	125.06	375.18	4,140.30	
TNMHC - C1	Total Non-Methane Hydrocarbons	212.40	637.20	7,031.79	139.28	417.84	4,611.01	

ANALYTICAL REPORT

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218037

Laboratory Number: 05

File Name: 1803705A

Date Sampled: 01/18/18

Time: 14:08

Description: T-805

Date Analyzed: 01/25/18

Time: 17:36

Can/Tube#: 644

Can Dilution Factor: 1.18

QC_Batch: 012518-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	118	354	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 218037

Laboratory Number: 05

File Name: 1803705A

Date Sampled: 01/18/18 Time: 14:08

Description: T-805

Date Analyzed: 01/25/18 Time: 16:49

Can/Tube#: 644

Dilution Factor: 1.18

QC_Batch: 012518-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.35	73.27	0.08	0.24	49.51	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218037

Analytical Method: TO-15

Laboratory ID: 06

File Name: 1803706A.D
Description: T-806
Canister: 882
QC_Batch: 020718-MA1

Date Sampled: 01/18/18 Time: 14:18
Date Analyzed: 02/07/18 Time: 20:51
Can Dilution Factor: 1.15
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.29	1.45	ND	1.42	7.15	ND	
74-87-3	Chloromethane	0.29	1.45	6.86	0.59	2.99	14.17	
76-14-2	Freon 114	0.29	1.45	ND	2.01	10.10	ND	
75-01-4	Vinyl chloride	0.29	1.45	ND	0.73	3.69	ND	
106-99-0	1,3-Butadiene	0.29	1.45	ND	0.64	3.20	ND	
74-83-9	Bromomethane	0.29	1.45	3.85	1.12	5.61	14.94	
75-00-3	Chloroethane	0.29	1.45	ND	0.76	3.81	ND	
64-17-5	Ethanol	1.44	4.31	ND	2.71	8.13	ND	
75-69-4	Trichlorofluoromethane	0.29	1.38	ND	1.61	7.75	ND	
67-64-1	Acetone	1.44	3.54	50.67	3.41	8.40	120.34	
67-63-0	2-propanol	1.44	3.30	68.01	3.53	8.11	167.09	
75-35-4	1,1-Dichloroethene	0.29	1.43	ND	1.14	5.65	ND	
76-13-1	Freon 113	0.29	1.38	ND	2.20	10.54	ND	
75-09-2	Dichloromethane	0.58	1.38	ND	2.00	4.81	ND	
75-15-0	Carbon disulfide	1.44	2.67	ND	4.47	8.30	ND	
156-60-5	trans-1,2-Dichloroethene	0.29	1.04	ND	1.14	4.11	ND	
1634-04-4	Methyl tert butyl ether	0.29	1.06	ND	1.04	3.82	ND	
75-34-3	1,1-Dichloroethane	0.29	1.43	ND	1.16	5.80	ND	
108-05-4	Vinyl acetate	0.29	1.26	ND	1.01	4.45	ND	
78-93-3	2-Butanone	1.15	2.93	7.08	3.39	8.63	20.87	
141-78-6	Ethyl acetate	0.58	1.26	ND	2.07	4.54	ND	
74-97-5	Bromochloromethane	0.29	0.77	ND	1.52	4.05	ND	
109-99-9	Tetrahydrofuran	0.58	1.45	ND	1.69	4.26	ND	
156-59-2	cis-1,2-Dichloroethene	0.58	1.55	ND	2.28	6.13	ND	
67-66-3	Chloroform	0.29	1.44	ND	1.40	7.04	ND	
71-55-6	1,1,1-Trichloroethane	0.29	1.28	ND	1.57	6.96	ND	
107-06-2	1,2-Dichloroethane	0.29	1.31	ND	1.16	5.31	ND	
110-82-7	Cyclohexane	0.29	1.10	ND	0.99	3.80	ND	
71-43-2	Benzene	0.29	1.46	4.93	0.92	4.66	15.76	
56-23-5	Carbon tetrachloride	0.29	1.36	ND	1.81	8.57	ND	
142-82-5	n-Heptane	1.44	3.48	ND	5.89	14.27	ND	
78-87-5	1,2-Dichloropropane	0.29	1.38	ND	1.33	6.39	ND	
123-91-1	1,4 Dioxane	1.15	2.35	ND	4.14	8.47	ND	
79-01-6	Trichloroethene	0.17	1.34	ND	0.93	7.19	ND	
75-27-4	Bromodichloromethane	0.29	0.58	ND	1.93	3.89	ND	
80-62-6	Methyl methacrylate	1.15	3.89	ND	4.71	15.91	ND	
108-10-1	4-Methyl-2-pentanone	1.15	4.35	ND	4.71	17.83	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	0.29	1.49	ND	1.30	6.76	ND		
108-88-3	Toluene	0.58	1.50	3.35	2.16	5.65	12.63		
10061-02-6	trans-1,3-Dichloropropene	0.29	1.49	ND	1.30	6.77	ND		
79-00-5	1,1,2-Trichloroethane	0.29	1.48	ND	1.57	8.06	ND		
591-78-6	2-Hexanone	1.44	4.08	ND	5.89	16.70	ND		
124-48-1	Dibromochloromethane	0.29	0.57	ND	2.45	4.89	ND		
106-93-4	1,2-Dibromoethane	0.29	0.70	ND	2.21	5.36	ND		
127-18-4	Tetrachloroethene	0.17	0.70	ND	1.17	4.74	ND		
108-90-7	Chlorobenzene	0.29	1.31	ND	1.32	6.02	ND		
100-41-4	Ethylbenzene	0.61	1.52	1.27	2.64	6.60	5.50	J	
1330-20-7	m,p-Xylenes	0.61	1.52	0.89	2.65	6.61	3.88	J	
100-42-5	Styrene	0.60	1.49	ND	2.54	6.34	ND		
75-25-2	Bromoform	0.29	0.39	ND	2.97	3.98	ND		
95-47-6	o-Xylene	0.59	1.48	ND	2.57	6.43	ND		
79-34-5	1,1,2,2-Tetrachloroethane	0.28	0.71	ND	1.95	4.88	ND		
622-96-8	4-Ethyltoluene	0.95	2.38	ND	4.68	11.71	ND		
108-67-8	1,3,5-Trimethylbenzene	0.59	1.49	ND	2.92	7.30	ND		
95-63-6	1,2,4-Trimethylbenzene	0.58	1.46	ND	2.87	7.18	ND		
541-73-1	1,3-Dichlorobenzene	0.58	1.06	ND	3.46	6.39	ND		
100-44-7	Benzyl chloride	0.58	3.48	ND	2.98	18.03	ND		
106-46-7	1,4-Dichlorobenzene	0.58	0.99	ND	3.46	5.98	ND		
95-50-1	1,2-Dichlorobenzene	0.58	0.93	ND	3.46	5.60	ND		
120-82-1	1,2,4-Trichlorobenzene	1.44	1.98	ND	10.66	14.67	ND		
91-20-3	Naphthalene	0.29	0.46	ND	1.54	2.41	ND		
87-68-3	Hexachlorobutadiene	1.44	1.52	ND	15.33	16.25	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				127	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218037
Laboratory Number: 06

File Name: 1803706A
Description: T-806
Canister: 882
QC_Batch: 013018-GCK

Date Sampled: 01/18/18 Time: 14:18
Date Analyzed: 01/30/18 Time: 12:05
Can Factor: 1.15
Air Volume: 50 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	4.60	13.80	ND	5.30	15.89	ND	ND
74-86-2	Acetylene	4.60	13.80	ND	4.90	14.70	ND	ND
74-84-0	Ethane	4.60	13.80	501.57	5.67	17.02	618.73	
115-07-1	Propene	3.07	9.20	ND	5.29	15.87	ND	ND
74-98-6	Propane	3.07	9.20	24.42	5.54	16.63	44.13	
75-28-5	i-Butane	2.30	6.90	2.34	5.48	16.43	5.57	J
106-98-9	1-Butene	2.30	6.90	ND	5.29	15.86	ND	ND
106-97-8	n-Butane	2.30	6.90	13.47	5.48	16.43	32.07	
624-64-6	t-2-Butene	2.30	6.90	ND	5.29	15.86	ND	ND
590-18-1	c-2-Butene	2.30	6.90	ND	5.29	15.86	ND	ND
78-78-4	i-Pentane	1.84	5.52	2.97	5.44	16.33	8.78	J
109-67-1	1-Pentene	1.84	5.52	ND	5.29	15.86	ND	ND
109-66-0	n-Pentane	1.84	5.52	2.50	5.44	16.31	7.38	J
78-79-5	Isoprene	1.84	5.52	ND	5.14	15.41	ND	ND
646-04-8	t-2-Pentene	1.84	5.52	ND	5.29	15.86	ND	ND
627-20-3	c-2-Pentene	1.84	5.52	ND	5.29	15.86	ND	ND
75-83-2	2,2-Dimethylbutane	1.53	4.60	ND	5.42	16.25	ND	ND
287-92-3	Cyclopentane	1.84	5.52	ND	5.29	15.86	ND	ND
79-29-8	2,3-Dimethylbutane	1.53	4.60	ND	5.42	16.25	ND	ND
107-83-5	2-Methylpentane	1.53	4.60	ND	5.42	16.25	ND	ND
96-14-0	3-Methylpentane	1.53	4.60	ND	5.42	16.25	ND	ND
110-54-3	n-Hexane	1.53	4.60	ND	5.42	16.25	ND	ND
96-37-7	Methylcyclopentane	1.53	4.60	ND	5.29	15.87	ND	ND
108-08-7	2,4-Dimethylpentane	1.31	3.94	3.30	5.40	16.19	13.55	J
71-43-2	Benzene	1.53	4.60	7.48	4.91	14.72	23.93	
110-82-7	Cyclohexane	1.53	4.60	ND	5.29	15.87	ND	ND
591-76-4	2-Methylhexane	1.31	3.94	ND	5.40	16.19	ND	ND
565-59-3	2,3-Dimethylpentane	1.31	3.94	ND	5.40	16.19	ND	ND
589-34-4	3-Methylhexane	1.31	3.94	ND	5.40	16.19	ND	ND
540-84-1	2,2,4-Trimethylpentane	1.15	3.45	2.58	5.38	16.15	12.07	J
142-82-5	n-Heptane	1.31	3.94	ND	5.40	16.19	ND	ND
108-87-2	Methylcyclohexane	1.31	3.94	3.86	5.29	15.87	15.55	J
592-13-2	2,5-Dimethylhexane	1.15	3.45	1.38	5.38	16.15	6.47	J
589-43-5	2,4-Dimethylhexane	1.15	3.45	1.55	5.38	16.15	7.25	J
565-75-3	2,3,4-Trimethylpentane	1.15	3.45	ND	5.38	16.15	ND	ND
108-88-3	Toluene	1.31	3.94	4.08	4.96	14.88	15.39	
584-94-1	2,3-Dimethylhexane	1.15	3.45	ND	5.38	16.15	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	1.15	3.45	ND	5.38	16.15	ND	ND
589-81-1	3-Methylheptane	1.15	3.45	ND	5.38	16.15	ND	ND
111-65-9	n-Octane	1.15	3.45	2.36	5.38	16.15	11.03	J
100-41-4	Ethylbenzene	1.15	3.45	3.43	5.01	15.02	14.92	J
108-38-3	m,p-xylene	1.15	3.45	3.40	5.01	15.02	14.79	J
100-42-5	Styrene	1.15	3.45	2.74	4.91	14.73	11.72	J
95-47-6	o-xylene	1.15	3.45	2.49	5.01	15.02	10.83	J
111-84-2	n-Nonane	1.02	3.07	2.07	5.38	16.13	10.90	J
98-82-8	i-Propylbenzene	1.02	3.07	2.37	5.04	15.11	11.70	J
103-65-1	n-propylbenzene	1.02	3.07	4.47	5.04	15.11	22.04	
80-56-8	a-Pinene	0.92	2.76	ND	5.14	15.41	ND	ND
620-14-4	3-Ethyltoluene	1.02	3.07	2.25	5.04	15.11	11.10	J
622-96-8	4-Ethyltoluene	1.02	3.07	2.13	5.04	15.11	10.47	J
108-67-8	1,3,5-Trimethylbenzene	1.02	3.07	3.42	5.04	15.11	16.87	
611-14-3	2-Ethyltoluene	1.02	3.07	7.40	5.04	15.11	36.43	
127-91-3	b-Pinene	0.92	2.76	ND	5.14	15.41	ND	ND
95-63-6	1,2,4-Trimethylbenzene	1.02	3.07	2.29	5.04	15.11	11.29	J
124-18-5	n-Decane	0.92	2.76	10.50	5.37	16.10	61.22	
526-73-8	1,2,3-Trimethylbenzene	1.02	3.07	ND	5.04	15.11	ND	ND
5989-27-5	d-Limonene	0.92	2.76	ND	5.14	15.41	ND	ND
141-93-5	1,3-Diethylbenzene	0.92	2.76	2.87	5.06	15.18	15.80	
105-05-5	1,4-Diethylbenzene	0.92	2.76	8.33	5.06	15.18	45.80	
104-51-8	n-Butylbenzene	0.92	2.76	ND	5.06	15.18	ND	ND
1120-21-4	Undecane	0.84	2.51	7.37	5.36	16.07	47.24	
112-40-3	Dodecane	0.77	2.30	3.81	5.35	16.05	26.57	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	34.50	103.50	1,042.85	121.88	365.64	3,684.15
TNMHC - C1	Total Non-Methane Hydrocarbons	207.00	621.00	6,257.07	135.74	407.21	4,103.00

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218037

Laboratory Number: 06

File Name: 1803706A

Date Sampled: 01/18/18

Time: 14:13

Description: T-806

Date Analyzed: 01/25/18

Time: 17:42

Can/Tube#: 882

Can Dilution Factor: 1.15

QC_Batch: 012518-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	115	345	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method:

ASTM D3416

SDG: 218037

Laboratory Number: 06

File Name: 1803706A
Description: T-806
Can/Tube#: 882
QC_Batch: 012518-GCL

Date Sampled: 01/18/18 Time: 14:13
Date Analyzed: 01/25/18 Time: 16:53
Dilution Factor: 1.15

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.35	74.65	0.08	0.23	50.44	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218037

Laboratory ID: 07

File Name: 1803707A.D

Date Sampled: 01/18/18

Time: 14:20

Description: T-807

Date Analyzed: 02/05/18

Time: 16:41

Canister: 417

Can Dilution Factor: 1.00

QC_Batch: 020518-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	ND	0.80	4.05	ND	
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	84	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218037
Laboratory Number: 07

File Name: 1803707A
Description: T-807
Canister: 417
QC_Batch: 013018-GCK

Date Sampled: 01/18/18 Time: 14:20
Date Analyzed: 01/30/18 Time: 11:24
Can Factor: 1.00
Air Volume: 100 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2.00	6.00	ND	2.30	6.91	ND	ND
74-86-2	Acetylene	2.00	6.00	ND	2.13	6.39	ND	ND
74-84-0	Ethane	2.00	6.00	ND	2.47	7.40	ND	ND
115-07-1	Propene	1.33	4.00	ND	2.30	6.90	ND	ND
74-98-6	Propane	1.33	4.00	ND	2.41	7.23	ND	ND
75-28-5	i-Butane	1.00	3.00	ND	2.38	7.14	ND	ND
106-98-9	1-Butene	1.00	3.00	ND	2.30	6.90	ND	ND
106-97-8	n-Butane	1.00	3.00	ND	2.38	7.14	ND	ND
624-64-6	t-2-Butene	1.00	3.00	ND	2.30	6.90	ND	ND
590-18-1	c-2-Butene	1.00	3.00	ND	2.30	6.90	ND	ND
78-78-4	i-Pentane	0.80	2.40	ND	2.37	7.10	ND	ND
109-67-1	1-Pentene	0.80	2.40	ND	2.30	6.90	ND	ND
109-66-0	n-Pentane	0.80	2.40	ND	2.36	7.09	ND	ND
78-79-5	Isoprene	0.80	2.40	ND	2.23	6.70	ND	ND
646-04-8	t-2-Pentene	0.80	2.40	ND	2.30	6.90	ND	ND
627-20-3	c-2-Pentene	0.80	2.40	ND	2.30	6.90	ND	ND
75-83-2	2,2-Dimethylbutane	0.67	2.00	ND	2.36	7.07	ND	ND
287-92-3	Cyclopentane	0.80	2.40	ND	2.30	6.90	ND	ND
79-29-8	2,3-Dimethylbutane	0.67	2.00	ND	2.36	7.07	ND	ND
107-83-5	2-Methylpentane	0.67	2.00	ND	2.36	7.07	ND	ND
96-14-0	3-Methylpentane	0.67	2.00	ND	2.36	7.07	ND	ND
110-54-3	n-Hexane	0.67	2.00	ND	2.36	7.07	ND	ND
96-37-7	Methylcyclopentane	0.67	2.00	ND	2.30	6.90	ND	ND
108-08-7	2,4-Dimethylpentane	0.57	1.71	ND	2.35	7.04	ND	ND
71-43-2	Benzene	0.67	2.00	ND	2.13	6.40	ND	ND
110-82-7	Cyclohexane	0.67	2.00	ND	2.30	6.90	ND	ND
591-76-4	2-Methylhexane	0.57	1.71	ND	2.35	7.04	ND	ND
565-59-3	2,3-Dimethylpentane	0.57	1.71	ND	2.35	7.04	ND	ND
589-34-4	3-Methylhexane	0.57	1.71	ND	2.35	7.04	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.50	1.50	ND	2.34	7.02	ND	ND
142-82-5	n-Heptane	0.57	1.71	ND	2.35	7.04	ND	ND
108-87-2	Methylcyclohexane	0.57	1.71	ND	2.30	6.90	ND	ND
592-13-2	2,5-Dimethylhexane	0.50	1.50	ND	2.34	7.02	ND	ND
589-43-5	2,4-Dimethylhexane	0.50	1.50	ND	2.34	7.02	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.50	1.50	ND	2.34	7.02	ND	ND
108-88-3	Toluene	0.57	1.71	ND	2.16	6.47	ND	ND
584-94-1	2,3-Dimethylhexane	0.50	1.50	ND	2.34	7.02	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.50	1.50	ND	2.34	7.02	ND	ND
589-81-1	3-Methylheptane	0.50	1.50	ND	2.34	7.02	ND	ND
111-65-9	n-Octane	0.50	1.50	ND	2.34	7.02	ND	ND
100-41-4	Ethylbenzene	0.50	1.50	ND	2.18	6.53	ND	ND
108-38-3	m,p-xylene	0.50	1.50	ND	2.18	6.53	ND	ND
100-42-5	Styrene	0.50	1.50	ND	2.14	6.41	ND	ND
95-47-6	o-xylene	0.50	1.50	ND	2.18	6.53	ND	ND
111-84-2	n-Nonane	0.44	1.33	ND	2.34	7.01	ND	ND
98-82-8	i-Propylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
103-65-1	n-propylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
80-56-8	a-Pinene	0.40	1.20	ND	2.23	6.70	ND	ND
620-14-4	3-Ethyltoluene	0.44	1.33	ND	2.19	6.57	ND	ND
622-96-8	4-Ethyltoluene	0.44	1.33	ND	2.19	6.57	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
611-14-3	2-Ethyltoluene	0.44	1.33	ND	2.19	6.57	ND	ND
127-91-3	b-Pinene	0.40	1.20	ND	2.23	6.70	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
124-18-5	n-Decane	0.40	1.20	ND	2.33	7.00	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.44	1.33	ND	2.19	6.57	ND	ND
5989-27-5	d-Limonene	0.40	1.20	ND	2.23	6.70	ND	ND
141-93-5	1,3-Diethylbenzene	0.40	1.20	ND	2.20	6.60	ND	ND
105-05-5	1,4-Diethylbenzene	0.40	1.20	ND	2.20	6.60	ND	ND
104-51-8	n-Butylbenzene	0.40	1.20	ND	2.20	6.60	ND	ND
1120-21-4	Undecane	0.36	1.09	ND	2.33	6.99	ND	ND
112-40-3	Dodecane	0.33	1.00	ND	2.33	6.98	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	15.00	45.00	ND	52.99	158.98	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	90.00	270.00	ND	59.02	177.05	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

Laboratory Number:

SDG: 218037

07

File Name: 1803707A

Date Sampled: 01/18/18

Time: 14:20

Description: T-807

Date Analyzed: 01/25/18

Time: 17:48

Can/Tube#: 417

Can Dilution Factor: 1.00

QC_Batch: 012518-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	100	300	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

SDG: 218037

Modified Analytical Method:

ASTM D3416

Laboratory Number:

07

File Name: 1803707A

Date Sampled: 01/18/18

Time: 14:20

Description: T-807

Date Analyzed: 01/25/18

Time: 16:58

Can/Tube#: 417

Dilution Factor: 1.00

QC_Batch: 012518-GCL

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.10	0.30	ND	0.07	0.20	ND	



Date of Report: 01/31/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1802252
Invoice ID: B292811

Enclosed are the results of analyses for samples received by the laboratory on 1/19/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Job Day 1

17-02252

CE Schmidt, Ph.D., Environmental Consultant
Chain of Custody Record

Station Number	Date	Time	Client Name			Sample ID Number	Sample Container	S	Vial	Jar	Tube	Remarks
			C	I	G							
1	1/18/2018	7:40	X			V-801	a/b/c	X				
2	1/18/2018	8:55	X			V-802	a/b/c	X				
3	1/18/2018	9:55	X			V-803	a/b/c	X				
4	1/18/2018	12:00	X			V-804	a/b/c	X				
5	1/18/2018	1:30	X			V-805	a/b/c	X				
6	1/18/2018	1:30	X			V-806	a/b/c	X				
7	1/18/2018	H2O	X			V-807	a/b/c	X				
	1/18/2018		X			V-808	a/b/c	X				
	1/18/2018		X			V-809	a/b/c	X				
	1/18/2018		X			V-810	a/b/c	X				
	1/18/2018		X			V-811	a/b/c	X				
	1/18/2018		X			V-812	a/b/c	X				

Sampler	Date/Time	1/18/18	1440
Received by	Signature	[Signature]	1440
Received by	Signature	[Signature]	1600
Received by Laboratory	Date/Time	1/18/18	8:47

Client Name	19200 Live Oak Road, Reed Bluff, CA 96080
Project Manager	Luis Leyva
Requested Completion Date	

Client Address and Phone Number	1001 J Street Sacramento, CA 95814 866-242-4450
Analysis Requested	
USEPA Method 8260	
USEPA Method 1664	

Relinquished by	Signature	Date/Time	1/18/18	1440
Relinquished by	Signature	Date/Time	1/18/18	1600
Relinquished by	Signature	Date/Time	1/18/18	8:47

HAZARDOUSNESS	Y	N	
QC Level	1	2	3
COC			
Area Req			
Seal			
Sample Condition			

Heavy Sulfur Content
May not be zero headspace
Still Analyze

File: ARB Forms 4 x8b Form: COC 6260b D1

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 8-02252

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) GSD

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S _____

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Intact? Yes No Intact? Yes No Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO

Emissivity: 0.95 Container: DTP Thermometer ID: TH274 Date/Time: 1/19/18 Analyst Init: JMC

Temperature: (A) 3.0 °C (C) 3.2 °C

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁴⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL <u>0910</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>			
QT EPA 1664	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>			
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: Description dont match

Sample Numbering Completed By: JMC Date/Time: 1-19-18 0957 Rev 21 05/23/2016

A = Actual / C = Corrected

(S:\WPDoc\Word\FacFac\LAB_DOCS\FORMS\SANREC\rev 20)



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	
1802252-01	COC Number:	---		01/19/2018 08:47	
	Project Number:	---		Sampling Date:	01/18/2018 07:40
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V - 801 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1802252-02	COC Number:	---		01/19/2018 08:47	
	Project Number:	---		Sampling Date:	01/18/2018 08:45
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V - 802 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1802252-03	COC Number:	---		01/19/2018 08:47	
	Project Number:	---		Sampling Date:	01/18/2018 09:55
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V - 803 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1802252-04	COC Number:	---		01/19/2018 08:47	
	Project Number:	---		Sampling Date:	01/18/2018 12:20
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V - 804 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1802252-05	COC Number:	---		01/19/2018 08:47	
	Project Number:	---		Sampling Date:	01/18/2018 13:30
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V - 805 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1802252-06	COC Number:	---		01/19/2018 08:47	
	Project Number:	---		Sampling Date:	01/18/2018 13:30
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V - 806 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1802252-07	COC Number:	---		01/19/2018 08:47	
	Project Number:	---		Sampling Date:	01/18/2018 14:00
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V - 807 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1802252-01							
Client Sample Name:	V - 801 a/b/c, 1/18/2018 7:40:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	220	ug/L	2.5	0.42	EPA-8260B	ND	A01,Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1a	2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1a	2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1a	2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1a	2
n-Butylbenzene	0.45	ug/L	0.50	0.11	EPA-8260B	ND	J,Z1a	2
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1a	2
tert-Butylbenzene	0.25	ug/L	0.50	0.13	EPA-8260B	ND	J,Z1a	2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1a	2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1a	2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1a	2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1a	2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1a	2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1a	2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1a	2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1a	2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1a	2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1a	2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1a	2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1a	2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1a	2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1a	2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1a	2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1a	2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1a	2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1a	2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1a	2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1a	2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1a	2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1802252-01		Client Sample Name: V - 801 a/b/c, 1/18/2018 7:40:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1a	2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1a	2
Ethylbenzene	23	ug/L	0.50	0.098	EPA-8260B	ND	Z1a	2
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1a	2
Isopropylbenzene	1.7	ug/L	0.50	0.14	EPA-8260B	ND	Z1a	2
p-Isopropyltoluene	3.4	ug/L	0.50	0.12	EPA-8260B	ND	Z1a	2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1a	2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1a	2
Naphthalene	3.3	ug/L	0.50	0.36	EPA-8260B	ND	Z1a	2
n-Propylbenzene	1.6	ug/L	0.50	0.11	EPA-8260B	ND	Z1a	2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1a	2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1a	2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1a	2
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	2
Toluene	150	ug/L	2.5	0.46	EPA-8260B	ND	A01,Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1a	2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1a	2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1a	2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1a	2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1a	2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1a	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1a	2
1,2,4-Trimethylbenzene	14	ug/L	0.50	0.12	EPA-8260B	ND	Z1a	2
1,3,5-Trimethylbenzene	1.6	ug/L	0.50	0.12	EPA-8260B	ND	Z1a	2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1a	2
Total Xylenes	71	ug/L	1.0	0.36	EPA-8260B	ND	Z1a	2
p- & m-Xylenes	45	ug/L	0.50	0.28	EPA-8260B	ND	Z1a	2
o-Xylene	26	ug/L	0.50	0.082	EPA-8260B	ND	Z1a	2
1,2-Dichloroethane-d4 (Surrogate)	78.7	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	113	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1802252-01	Client Sample Name: V - 801 a/b/c, 1/18/2018 7:40:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/30/18 08:22	01/31/18 03:47	AKM	MS-V14	5	B003007
2	EPA-8260B	01/26/18 08:22	01/26/18 16:43	AKM	MS-V14	1	B003007

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1802252-02	Client Sample Name:	V - 802 a/b/c, 1/18/2018 8:45:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Benzene	210	ug/L	2.5	0.42	EPA-8260B	ND	A01,Z1	1	
Bromobenzene	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	2	
Bromochloromethane	ND	ug/L	1.0	0.48	EPA-8260B	ND	A01,Z1a	2	
Bromodichloromethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	2	
Bromoform	ND	ug/L	1.0	0.54	EPA-8260B	ND	A01,Z1a	2	
Bromomethane	ND	ug/L	2.0	0.50	EPA-8260B	ND	A01,Z1a	2	
n-Butylbenzene	9.5	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	2	
sec-Butylbenzene	5.8	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	2	
tert-Butylbenzene	3.6	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	2	
Carbon tetrachloride	ND	ug/L	1.0	0.36	EPA-8260B	ND	A01,Z1a	2	
Chlorobenzene	ND	ug/L	1.0	0.19	EPA-8260B	ND	A01,Z1a	2	
Chloroethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	2	
Chloroform	ND	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	2	
Chloromethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	2	
2-Chlorotoluene	ND	ug/L	1.0	0.40	EPA-8260B	ND	A01,Z1a	2	
4-Chlorotoluene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	2	
Dibromochloromethane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	2	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.88	EPA-8260B	ND	A01,Z1a	2	
1,2-Dibromoethane	ND	ug/L	1.0	0.32	EPA-8260B	ND	A01,Z1a	2	
Dibromomethane	ND	ug/L	1.0	0.48	EPA-8260B	ND	A01,Z1a	2	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.14	EPA-8260B	ND	A01,Z1a	2	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	2	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.12	EPA-8260B	ND	A01,Z1a	2	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	EPA-8260B	ND	A01,Z1a	2	
1,1-Dichloroethane	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	2	
1,2-Dichloroethane	ND	ug/L	1.0	0.34	EPA-8260B	ND	A01,Z1a	2	
1,1-Dichloroethene	ND	ug/L	1.0	0.36	EPA-8260B	ND	A01,Z1a	2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	2	
1,2-Dichloropropane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	2	
1,3-Dichloropropane	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	2	
2,2-Dichloropropane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	2	
1,1-Dichloropropene	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	2	

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19200 Live Oak Road
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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1802252-02							
Client Sample Name:	V - 802 a/b/c, 1/18/2018 8:45:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	2
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.16	EPA-8260B	ND	A01,Z1a	2
Ethylbenzene	95	ug/L	1.0	0.20	EPA-8260B	ND	A01,Z1a	2
Hexachlorobutadiene	ND	ug/L	1.0	0.34	EPA-8260B	ND	A01,Z1a	2
Isopropylbenzene	13	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	2
p-Isopropyltoluene	55	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	2
Methylene chloride	ND	ug/L	2.0	0.96	EPA-8260B	ND	A01,Z1a	2
Methyl t-butyl ether	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	2
Naphthalene	20	ug/L	1.0	0.72	EPA-8260B	ND	A01,Z1a	2
n-Propylbenzene	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	2
Styrene	ND	ug/L	1.0	0.14	EPA-8260B	ND	A01,Z1a	2
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.36	EPA-8260B	ND	A01,Z1a	2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.34	EPA-8260B	ND	A01,Z1a	2
Tetrachloroethene	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	2
Toluene	200	ug/L	2.5	0.46	EPA-8260B	ND	A01,Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.32	EPA-8260B	ND	A01,Z1a	2
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.38	EPA-8260B	ND	A01,Z1a	2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	2
1,1,2-Trichloroethane	ND	ug/L	1.0	0.32	EPA-8260B	ND	A01,Z1a	2
Trichloroethene	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	2
Trichlorofluoromethane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	2
1,2,3-Trichloropropane	ND	ug/L	2.0	0.48	EPA-8260B	ND	A01,Z1a	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	2
1,2,4-Trimethylbenzene	130	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	2
1,3,5-Trimethylbenzene	13	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	2
Vinyl chloride	ND	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	2
Total Xylenes	340	ug/L	2.0	0.72	EPA-8260B	ND	A01,Z1a	2
p- & m-Xylenes	230	ug/L	1.0	0.56	EPA-8260B	ND	A01,Z1a	2
o-Xylene	110	ug/L	1.0	0.16	EPA-8260B	ND	A01,Z1a	2
1,2-Dichloroethane-d4 (Surrogate)	84.7	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	113	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1802252-02	Client Sample Name: V - 802 a/b/c, 1/18/2018 8:45:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	85.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/30/18 08:22	01/31/18 04:10	AKM	MS-V14	5	B003007
2	EPA-8260B	01/26/18 08:22	01/26/18 18:15	AKM	MS-V14	2	B003007

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1802252-03	Client Sample Name: V - 803 a/b/c, 1/18/2018 9:55:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	55	ug/L	0.50	0.083	EPA-8260B	ND	Z1a	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1a	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1a	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1a	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1a	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1a	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1a	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1a	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1a	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1a	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1a	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1a	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1a	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1a	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1a	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1a	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1a	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1a	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1a	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1a	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1a	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1a	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1a	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1a	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1a	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1a	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1a	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1a	1

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1802252-03		Client Sample Name:	V - 803 a/b/c, 1/18/2018 9:55:00AM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1a	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1a	1
Ethylbenzene	13	ug/L	0.50	0.098	EPA-8260B	ND	Z1a	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1a	1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1a	1
p-Isopropyltoluene	8.9	ug/L	0.50	0.12	EPA-8260B	ND	Z1a	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1a	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1a	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND	Z1a	1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1a	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1a	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1a	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1a	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	1
Toluene	23	ug/L	0.50	0.093	EPA-8260B	ND	Z1a	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1a	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1a	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1a	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1a	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1a	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1a	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1a	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1a	1
1,2,4-Trimethylbenzene	15	ug/L	0.50	0.12	EPA-8260B	ND	Z1a	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1a	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1a	1
Total Xylenes	21	ug/L	1.0	0.36	EPA-8260B	ND	Z1a	1
p- & m-Xylenes	14	ug/L	0.50	0.28	EPA-8260B	ND	Z1a	1
o-Xylene	6.6	ug/L	0.50	0.082	EPA-8260B	ND	Z1a	1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	110	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1802252-03	Client Sample Name: V - 803 a/b/c, 1/18/2018 9:55:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	01/26/18 08:27	01/26/18 17:06		AKM	MS-V14	1	B003008

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1802252-04	Client Sample Name: V - 804 a/b/c, 1/18/2018 12:20:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	92	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	1
Bromobenzene	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1
Bromochloromethane	ND	ug/L	1.0	0.48	EPA-8260B	ND	A01,Z1a	1
Bromodichloromethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	1
Bromoform	ND	ug/L	1.0	0.54	EPA-8260B	ND	A01,Z1a	1
Bromomethane	ND	ug/L	2.0	0.50	EPA-8260B	ND	A01,Z1a	1
n-Butylbenzene	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	1
sec-Butylbenzene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	1
tert-Butylbenzene	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1
Carbon tetrachloride	ND	ug/L	1.0	0.36	EPA-8260B	ND	A01,Z1a	1
Chlorobenzene	ND	ug/L	1.0	0.19	EPA-8260B	ND	A01,Z1a	1
Chloroethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	1
Chloroform	ND	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	1
Chloromethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	1
2-Chlorotoluene	ND	ug/L	1.0	0.40	EPA-8260B	ND	A01,Z1a	1
4-Chlorotoluene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	1
Dibromochloromethane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.88	EPA-8260B	ND	A01,Z1a	1
1,2-Dibromoethane	ND	ug/L	1.0	0.32	EPA-8260B	ND	A01,Z1a	1
Dibromomethane	ND	ug/L	1.0	0.48	EPA-8260B	ND	A01,Z1a	1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.14	EPA-8260B	ND	A01,Z1a	1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.12	EPA-8260B	ND	A01,Z1a	1
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	EPA-8260B	ND	A01,Z1a	1
1,1-Dichloroethane	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	1
1,2-Dichloroethane	ND	ug/L	1.0	0.34	EPA-8260B	ND	A01,Z1a	1
1,1-Dichloroethene	ND	ug/L	1.0	0.36	EPA-8260B	ND	A01,Z1a	1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	1
1,2-Dichloropropane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1
1,3-Dichloropropane	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	1
2,2-Dichloropropane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1
1,1-Dichloropropene	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	1

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1802252-04							
Client Sample Name:	V - 804 a/b/c, 1/18/2018 12:20:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.16	EPA-8260B	ND	A01,Z1a	1
Ethylbenzene	10	ug/L	1.0	0.20	EPA-8260B	ND	A01,Z1a	1
Hexachlorobutadiene	ND	ug/L	1.0	0.34	EPA-8260B	ND	A01,Z1a	1
Isopropylbenzene	1.1	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	1
p-Isopropyltoluene	4.8	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	1
Methylene chloride	ND	ug/L	2.0	0.96	EPA-8260B	ND	A01,Z1a	1
Methyl t-butyl ether	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	1
Naphthalene	ND	ug/L	1.0	0.72	EPA-8260B	ND	A01,Z1a	1
n-Propylbenzene	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	1
Styrene	ND	ug/L	1.0	0.14	EPA-8260B	ND	A01,Z1a	1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.36	EPA-8260B	ND	A01,Z1a	1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.34	EPA-8260B	ND	A01,Z1a	1
Tetrachloroethene	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1
Toluene	26	ug/L	1.0	0.19	EPA-8260B	ND	A01,Z1a	1
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.32	EPA-8260B	ND	A01,Z1a	1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.38	EPA-8260B	ND	A01,Z1a	1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.32	EPA-8260B	ND	A01,Z1a	1
Trichloroethene	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	1
Trichlorofluoromethane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1
1,2,3-Trichloropropane	ND	ug/L	2.0	0.48	EPA-8260B	ND	A01,Z1a	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	1
1,2,4-Trimethylbenzene	11	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	1
1,3,5-Trimethylbenzene	0.84	ug/L	1.0	0.24	EPA-8260B	ND	J,A01,Z1a	1
Vinyl chloride	ND	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	1
Total Xylenes	26	ug/L	2.0	0.72	EPA-8260B	ND	A01,Z1a	1
p- & m-Xylenes	17	ug/L	1.0	0.56	EPA-8260B	ND	A01,Z1a	1
o-Xylene	8.7	ug/L	1.0	0.16	EPA-8260B	ND	A01,Z1a	1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1802252-04	Client Sample Name: V - 804 a/b/c, 1/18/2018 12:20:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	01/26/18 08:27	01/26/18 18:38		AKM	MS-V14	2	B003008

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1802252-05	Client Sample Name: V - 805 a/b/c, 1/18/2018 1:30:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	7.2	ug/L	1.0	0.17	EPA-8260B	ND	Z1a	1
Bromobenzene	ND	ug/L	1.0	0.26	EPA-8260B	ND	Z1a	1
Bromochloromethane	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1a	1
Bromodichloromethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	Z1a	1
Bromoform	ND	ug/L	1.0	0.54	EPA-8260B	ND	Z1a	1
Bromomethane	ND	ug/L	2.0	0.50	EPA-8260B	ND	Z1a	1
n-Butylbenzene	ND	ug/L	1.0	0.22	EPA-8260B	ND	Z1a	1
sec-Butylbenzene	ND	ug/L	1.0	0.30	EPA-8260B	ND	Z1a	1
tert-Butylbenzene	ND	ug/L	1.0	0.26	EPA-8260B	ND	Z1a	1
Carbon tetrachloride	ND	ug/L	1.0	0.36	EPA-8260B	ND	Z1a	1
Chlorobenzene	ND	ug/L	1.0	0.19	EPA-8260B	ND	Z1a	1
Chloroethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	Z1a	1
Chloroform	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1a	1
Chloromethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	Z1a	1
2-Chlorotoluene	ND	ug/L	1.0	0.40	EPA-8260B	ND	Z1a	1
4-Chlorotoluene	ND	ug/L	1.0	0.30	EPA-8260B	ND	Z1a	1
Dibromochloromethane	ND	ug/L	1.0	0.26	EPA-8260B	ND	Z1a	1
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.88	EPA-8260B	ND	Z1a	1
1,2-Dibromoethane	ND	ug/L	1.0	0.32	EPA-8260B	ND	Z1a	1
Dibromomethane	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1a	1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.14	EPA-8260B	ND	Z1a	1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.30	EPA-8260B	ND	Z1a	1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.12	EPA-8260B	ND	Z1a	1
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	EPA-8260B	ND	Z1a	1
1,1-Dichloroethane	ND	ug/L	1.0	0.22	EPA-8260B	ND	Z1a	1
1,2-Dichloroethane	ND	ug/L	1.0	0.34	EPA-8260B	ND	Z1a	1
1,1-Dichloroethene	ND	ug/L	1.0	0.36	EPA-8260B	ND	Z1a	1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.17	EPA-8260B	ND	Z1a	1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.30	EPA-8260B	ND	Z1a	1
1,2-Dichloropropane	ND	ug/L	1.0	0.26	EPA-8260B	ND	Z1a	1
1,3-Dichloropropane	ND	ug/L	1.0	0.17	EPA-8260B	ND	Z1a	1
2,2-Dichloropropane	ND	ug/L	1.0	0.26	EPA-8260B	ND	Z1a	1
1,1-Dichloropropene	ND	ug/L	1.0	0.17	EPA-8260B	ND	Z1a	1

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1802252-05							
Client Sample Name:	V - 805 a/b/c, 1/18/2018 1:30:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.28	EPA-8260B	ND	Z1a	1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.16	EPA-8260B	ND	Z1a	1
Ethylbenzene	5.0	ug/L	1.0	0.20	EPA-8260B	ND	Z1a	1
Hexachlorobutadiene	ND	ug/L	1.0	0.34	EPA-8260B	ND	Z1a	1
Isopropylbenzene	ND	ug/L	1.0	0.28	EPA-8260B	ND	Z1a	1
p-Isopropyltoluene	5.1	ug/L	1.0	0.24	EPA-8260B	ND	Z1a	1
Methylene chloride	ND	ug/L	2.0	0.96	EPA-8260B	ND	Z1a	1
Methyl t-butyl ether	ND	ug/L	1.0	0.22	EPA-8260B	ND	Z1a	1
Naphthalene	ND	ug/L	1.0	0.72	EPA-8260B	ND	Z1a	1
n-Propylbenzene	ND	ug/L	1.0	0.22	EPA-8260B	ND	Z1a	1
Styrene	ND	ug/L	1.0	0.14	EPA-8260B	ND	Z1a	1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.36	EPA-8260B	ND	Z1a	1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.34	EPA-8260B	ND	Z1a	1
Tetrachloroethene	ND	ug/L	1.0	0.26	EPA-8260B	ND	Z1a	1
Toluene	5.2	ug/L	1.0	0.19	EPA-8260B	ND	Z1a	1
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.32	EPA-8260B	ND	Z1a	1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.38	EPA-8260B	ND	Z1a	1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.22	EPA-8260B	ND	Z1a	1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.32	EPA-8260B	ND	Z1a	1
Trichloroethene	ND	ug/L	1.0	0.17	EPA-8260B	ND	Z1a	1
Trichlorofluoromethane	ND	ug/L	1.0	0.26	EPA-8260B	ND	Z1a	1
1,2,3-Trichloropropane	ND	ug/L	2.0	0.48	EPA-8260B	ND	Z1a	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	1.0	0.30	EPA-8260B	ND	Z1a	1
1,2,4-Trimethylbenzene	4.3	ug/L	1.0	0.24	EPA-8260B	ND	Z1a	1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1a	1
Vinyl chloride	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1a	1
Total Xylenes	6.2	ug/L	2.0	0.72	EPA-8260B	ND	Z1a	1
p- & m-Xylenes	4.5	ug/L	1.0	0.56	EPA-8260B	ND	Z1a	1
o-Xylene	1.6	ug/L	1.0	0.16	EPA-8260B	ND	Z1a	1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	109	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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19200 Live Oak Road
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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1802252-05	Client Sample Name: V - 805 a/b/c, 1/18/2018 1:30:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	01/26/18 08:27	01/26/18 17:52		AKM	MS-V14	2	B003008

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1802252-06	Client Sample Name: V - 806 a/b/c, 1/18/2018 1:30:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	7.9	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	1
Bromobenzene	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1
Bromochloromethane	ND	ug/L	1.0	0.48	EPA-8260B	ND	A01,Z1a	1
Bromodichloromethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	1
Bromoform	ND	ug/L	1.0	0.54	EPA-8260B	ND	A01,Z1a	1
Bromomethane	ND	ug/L	2.0	0.50	EPA-8260B	ND	A01,Z1a	1
n-Butylbenzene	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	1
sec-Butylbenzene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	1
tert-Butylbenzene	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1
Carbon tetrachloride	ND	ug/L	1.0	0.36	EPA-8260B	ND	A01,Z1a	1
Chlorobenzene	ND	ug/L	1.0	0.19	EPA-8260B	ND	A01,Z1a	1
Chloroethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	1
Chloroform	ND	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	1
Chloromethane	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	1
2-Chlorotoluene	ND	ug/L	1.0	0.40	EPA-8260B	ND	A01,Z1a	1
4-Chlorotoluene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	1
Dibromochloromethane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.88	EPA-8260B	ND	A01,Z1a	1
1,2-Dibromoethane	ND	ug/L	1.0	0.32	EPA-8260B	ND	A01,Z1a	1
Dibromomethane	ND	ug/L	1.0	0.48	EPA-8260B	ND	A01,Z1a	1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.14	EPA-8260B	ND	A01,Z1a	1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.12	EPA-8260B	ND	A01,Z1a	1
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	EPA-8260B	ND	A01,Z1a	1
1,1-Dichloroethane	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	1
1,2-Dichloroethane	ND	ug/L	1.0	0.34	EPA-8260B	ND	A01,Z1a	1
1,1-Dichloroethene	ND	ug/L	1.0	0.36	EPA-8260B	ND	A01,Z1a	1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	1
1,2-Dichloropropane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1
1,3-Dichloropropane	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	1
2,2-Dichloropropane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1
1,1-Dichloropropene	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	1

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19200 Live Oak Road
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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1802252-06	Client Sample Name:	V - 806 a/b/c, 1/18/2018 1:30:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	1	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.16	EPA-8260B	ND	A01,Z1a	1	
Ethylbenzene	5.4	ug/L	1.0	0.20	EPA-8260B	ND	A01,Z1a	1	
Hexachlorobutadiene	ND	ug/L	1.0	0.34	EPA-8260B	ND	A01,Z1a	1	
Isopropylbenzene	ND	ug/L	1.0	0.28	EPA-8260B	ND	A01,Z1a	1	
p-Isopropyltoluene	5.4	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	1	
Methylene chloride	ND	ug/L	2.0	0.96	EPA-8260B	ND	A01,Z1a	1	
Methyl t-butyl ether	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	1	
Naphthalene	ND	ug/L	1.0	0.72	EPA-8260B	ND	A01,Z1a	1	
n-Propylbenzene	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	1	
Styrene	ND	ug/L	1.0	0.14	EPA-8260B	ND	A01,Z1a	1	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.36	EPA-8260B	ND	A01,Z1a	1	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.34	EPA-8260B	ND	A01,Z1a	1	
Tetrachloroethene	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1	
Toluene	5.3	ug/L	1.0	0.19	EPA-8260B	ND	A01,Z1a	1	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.32	EPA-8260B	ND	A01,Z1a	1	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.38	EPA-8260B	ND	A01,Z1a	1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.22	EPA-8260B	ND	A01,Z1a	1	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.32	EPA-8260B	ND	A01,Z1a	1	
Trichloroethene	ND	ug/L	1.0	0.17	EPA-8260B	ND	A01,Z1a	1	
Trichlorofluoromethane	ND	ug/L	1.0	0.26	EPA-8260B	ND	A01,Z1a	1	
1,2,3-Trichloropropane	ND	ug/L	2.0	0.48	EPA-8260B	ND	A01,Z1a	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	1.0	0.30	EPA-8260B	ND	A01,Z1a	1	
1,2,4-Trimethylbenzene	4.3	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	1	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	1	
Vinyl chloride	ND	ug/L	1.0	0.24	EPA-8260B	ND	A01,Z1a	1	
Total Xylenes	6.3	ug/L	2.0	0.72	EPA-8260B	ND	A01,Z1a	1	
p- & m-Xylenes	4.5	ug/L	1.0	0.56	EPA-8260B	ND	A01,Z1a	1	
o-Xylene	1.8	ug/L	1.0	0.16	EPA-8260B	ND	A01,Z1a	1	
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-8260B			1	
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1	
4-Bromofluorobenzene (Surrogate)	113	%	80 - 120 (LCL - UCL)		EPA-8260B			1	

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1802252-06	Client Sample Name: V - 806 a/b/c, 1/18/2018 1:30:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	01/26/18 08:27	01/26/18 19:01		AKM	MS-V14	2	B003008

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Red Bluff, CA 96080

Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1802252-07							
Client Sample Name:	V - 807 a/b/c, 1/18/2018 2:00:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1802252-07	Client Sample Name:	V - 807 a/b/c, 1/18/2018 2:00:00PM, Chuck Schmidt					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1802252-07	Client Sample Name: V - 807 a/b/c, 1/18/2018 2:00:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	01/26/18 08:27	01/26/18 17:29		AKM	MS-V14	1	B003008

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B003007						
Benzene	B003007-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B003007-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B003007-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B003007-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B003007-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B003007-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B003007-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B003007-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B003007-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B003007-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B003007-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B003007-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B003007-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B003007-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B003007-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B003007-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B003007-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B003007-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B003007-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B003007-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B003007-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B003007-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B003007-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B003007-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B003007-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B003007-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B003007-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B003007-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B003007-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B003007-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B003007-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B003007-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B003007-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B003007-BLK1	ND	ug/L	0.50	0.14	

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B003007						
trans-1,3-Dichloropropene	B003007-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B003007-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B003007-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B003007-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B003007-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B003007-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B003007-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B003007-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B003007-BLK1	ND	ug/L	0.50	0.11	
Styrene	B003007-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B003007-BLK1	ND	ug/L	0.50	0.18	
1,1,1,2-Tetrachloroethane	B003007-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B003007-BLK1	ND	ug/L	0.50	0.13	
Toluene	B003007-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B003007-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B003007-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B003007-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B003007-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B003007-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B003007-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B003007-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B003007-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B003007-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B003007-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B003007-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B003007-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B003007-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B003007-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B003007-BLK1	114	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B003007-BLK1	104	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B003007-BLK1	101	%	80 - 120 (LCL - UCL)		
QC Batch ID: B003008						
Benzene	B003008-BLK1	ND	ug/L	0.50	0.083	

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B003008						
Bromobenzene	B003008-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B003008-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B003008-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B003008-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B003008-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B003008-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B003008-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B003008-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B003008-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B003008-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B003008-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B003008-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B003008-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B003008-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B003008-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B003008-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B003008-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B003008-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B003008-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B003008-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B003008-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B003008-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B003008-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B003008-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B003008-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B003008-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B003008-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B003008-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B003008-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B003008-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B003008-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B003008-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B003008-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	B003008-BLK1	ND	ug/L	0.50	0.079	

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B003008						
Ethylbenzene	B003008-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B003008-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B003008-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B003008-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B003008-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B003008-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B003008-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B003008-BLK1	ND	ug/L	0.50	0.11	
Styrene	B003008-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B003008-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	B003008-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B003008-BLK1	ND	ug/L	0.50	0.13	
Toluene	B003008-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B003008-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B003008-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B003008-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B003008-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B003008-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B003008-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B003008-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B003008-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B003008-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B003008-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B003008-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B003008-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B003008-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B003008-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B003008-BLK1	117	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B003008-BLK1	103	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B003008-BLK1	104	%	80 - 120 (LCL - UCL)		

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Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: B003007										
Benzene	B003007-BS1	LCS	20.309	25.000	ug/L	81.2		70 - 130		
Bromodichloromethane	B003007-BS1	LCS	21.113	25.000	ug/L	84.5		70 - 130		
Chlorobenzene	B003007-BS1	LCS	19.410	25.000	ug/L	77.6		70 - 130		
Chloroethane	B003007-BS1	LCS	24.250	25.000	ug/L	97.0		70 - 130		
1,4-Dichlorobenzene	B003007-BS1	LCS	18.103	25.000	ug/L	72.4		70 - 130		
1,1-Dichloroethane	B003007-BS1	LCS	21.146	25.000	ug/L	84.6		70 - 130		
1,1-Dichloroethene	B003007-BS1	LCS	22.837	25.000	ug/L	91.3		70 - 130		
Toluene	B003007-BS1	LCS	19.373	25.000	ug/L	77.5		70 - 130		
Trichloroethene	B003007-BS1	LCS	18.737	25.000	ug/L	74.9		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B003007-BS1	LCS	12.090	10.000	ug/L	121		75 - 125		
Toluene-d8 (Surrogate)	B003007-BS1	LCS	10.320	10.000	ug/L	103		80 - 120		
4-Bromofluorobenzene (Surrogate)	B003007-BS1	LCS	10.390	10.000	ug/L	104		80 - 120		

QC Batch ID: B003008										
Benzene	B003008-BS1	LCS	23.320	25.000	ug/L	93.3		70 - 130		
Bromodichloromethane	B003008-BS1	LCS	23.893	25.000	ug/L	95.6		70 - 130		
Chlorobenzene	B003008-BS1	LCS	22.101	25.000	ug/L	88.4		70 - 130		
Chloroethane	B003008-BS1	LCS	26.706	25.000	ug/L	107		70 - 130		
1,4-Dichlorobenzene	B003008-BS1	LCS	20.486	25.000	ug/L	81.9		70 - 130		
1,1-Dichloroethane	B003008-BS1	LCS	24.721	25.000	ug/L	98.9		70 - 130		
1,1-Dichloroethene	B003008-BS1	LCS	25.992	25.000	ug/L	104		70 - 130		
Toluene	B003008-BS1	LCS	22.017	25.000	ug/L	88.1		70 - 130		
Trichloroethene	B003008-BS1	LCS	22.294	25.000	ug/L	89.2		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B003008-BS1	LCS	12.120	10.000	ug/L	121		75 - 125		
Toluene-d8 (Surrogate)	B003008-BS1	LCS	10.170	10.000	ug/L	102		80 - 120		
4-Bromofluorobenzene (Surrogate)	B003008-BS1	LCS	10.120	10.000	ug/L	101		80 - 120		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
QC Batch ID: B003007		Used client sample: N								
Benzene	MS	1801373-45	ND	21.104	25.000	ug/L		84.4		70 - 130
	MSD	1801373-45	ND	22.984	25.000	ug/L	8.5	91.9	20	70 - 130
Bromodichloromethane	MS	1801373-45	ND	22.992	25.000	ug/L		92.0		70 - 130
	MSD	1801373-45	ND	24.024	25.000	ug/L	4.4	96.1	20	70 - 130
Chlorobenzene	MS	1801373-45	ND	20.856	25.000	ug/L		83.4		70 - 130
	MSD	1801373-45	ND	22.650	25.000	ug/L	8.2	90.6	20	70 - 130
Chloroethane	MS	1801373-45	ND	24.177	25.000	ug/L		96.7		70 - 130
	MSD	1801373-45	ND	27.660	25.000	ug/L	13.4	111	20	70 - 130
1,4-Dichlorobenzene	MS	1801373-45	ND	19.716	25.000	ug/L		78.9		70 - 130
	MSD	1801373-45	ND	20.951	25.000	ug/L	6.1	83.8	20	70 - 130
1,1-Dichloroethane	MS	1801373-45	ND	22.119	25.000	ug/L		88.5		70 - 130
	MSD	1801373-45	ND	24.193	25.000	ug/L	9.0	96.8	20	70 - 130
1,1-Dichloroethene	MS	1801373-45	ND	22.022	25.000	ug/L		88.1		70 - 130
	MSD	1801373-45	ND	25.156	25.000	ug/L	13.3	101	20	70 - 130
Toluene	MS	1801373-45	ND	20.352	25.000	ug/L		81.4		70 - 130
	MSD	1801373-45	ND	21.980	25.000	ug/L	7.7	87.9	20	70 - 130
Trichloroethene	MS	1801373-45	ND	19.494	25.000	ug/L		78.0		70 - 130
	MSD	1801373-45	ND	21.565	25.000	ug/L	10.1	86.3	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1801373-45	ND	11.980	10.000	ug/L		120		75 - 125
	MSD	1801373-45	ND	11.660	10.000	ug/L	2.7	117		75 - 125
Toluene-d8 (Surrogate)	MS	1801373-45	ND	10.220	10.000	ug/L		102		80 - 120
	MSD	1801373-45	ND	10.150	10.000	ug/L	0.7	102		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1801373-45	ND	10.240	10.000	ug/L		102		80 - 120
	MSD	1801373-45	ND	10.450	10.000	ug/L	2.0	104		80 - 120
QC Batch ID: B003008		Used client sample: N								
Benzene	MS	1801373-46	ND	22.671	25.000	ug/L		90.7		70 - 130
	MSD	1801373-46	ND	22.754	25.000	ug/L	0.4	91.0	20	70 - 130
Bromodichloromethane	MS	1801373-46	ND	24.200	25.000	ug/L		96.8		70 - 130
	MSD	1801373-46	ND	24.306	25.000	ug/L	0.4	97.2	20	70 - 130
Chlorobenzene	MS	1801373-46	ND	22.535	25.000	ug/L		90.1		70 - 130
	MSD	1801373-46	ND	22.692	25.000	ug/L	0.7	90.8	20	70 - 130
Chloroethane	MS	1801373-46	ND	26.469	25.000	ug/L		106		70 - 130
	MSD	1801373-46	ND	26.520	25.000	ug/L	0.2	106	20	70 - 130
1,4-Dichlorobenzene	MS	1801373-46	ND	21.046	25.000	ug/L		84.2		70 - 130
	MSD	1801373-46	ND	21.019	25.000	ug/L	0.1	84.1	20	70 - 130
1,1-Dichloroethane	MS	1801373-46	ND	23.834	25.000	ug/L		95.3		70 - 130
	MSD	1801373-46	ND	24.182	25.000	ug/L	1.4	96.7	20	70 - 130

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B003008		Used client sample: N								
1,1-Dichloroethene	MS	1801373-46	ND	24.988	25.000	ug/L		100		70 - 130
	MSD	1801373-46	ND	25.281	25.000	ug/L	1.2	101	20	70 - 130
Toluene	MS	1801373-46	ND	22.319	25.000	ug/L		89.3		70 - 130
	MSD	1801373-46	ND	22.161	25.000	ug/L	0.7	88.6	20	70 - 130
Trichloroethene	MS	1801373-46	ND	22.740	25.000	ug/L		91.0		70 - 130
	MSD	1801373-46	ND	22.018	25.000	ug/L	3.2	88.1	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1801373-46	ND	11.670	10.000	ug/L		117		75 - 125
	MSD	1801373-46	ND	11.860	10.000	ug/L	1.6	119		75 - 125
Toluene-d8 (Surrogate)	MS	1801373-46	ND	10.160	10.000	ug/L		102		80 - 120
	MSD	1801373-46	ND	10.250	10.000	ug/L	0.9	102		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1801373-46	ND	10.490	10.000	ug/L		105		80 - 120
	MSD	1801373-46	ND	10.470	10.000	ug/L	0.2	105		80 - 120

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 01/31/2018 16:34
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A01 Detection and quantitation limits are raised due to sample dilution.
- Z1 10uL OF ANTIFOAMER SOLUTION ADDED TO SAMPLE VOA
- Z1a 10uL OF ANTIFOAMER SOLUTION ADDED TO SAMPLE VOA



Date of Report: 02/15/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: 15669
BCL Project: O&G/8260
BCL Work Order: 1805210
Invoice ID: B294340

Enclosed are the results of analyses for samples received by the laboratory on 1/19/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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1864

CE Schmidt, P.I., Environmental Consultant
 Chain of Custody Record
 Form Serial Number: 18-05210
 For Information Regarding These Samples
 Please Contact:
 Dr. Charles E. Schmidt
 16200 Live Oak Road, Red Bluff, CA 96080
 530-528-4296
 E-Mail: CE@MUTICE@aol.com

Client Address and Phone Number
 1001 J Street
 Sacramento, CA 95814 916-342-4420

Analysts Requested

Laboratory Name
 BC Laboratories

Laboratory Address
 4100 Atlas Court
 Bakersfield, CA 93308
 Laboratory Phone: 661-327-4911

Laboratory Contact
 Ms. Kerri Vaughn
Kerri.Vaughn@bclabs.com

Remarks
 NONE
 9/18/18

Station Number	Date	Time	CMAA			Sample ID Number	Sample Container		US EPA Method 8200	US EPA Method 1664	Date/Time	Date/Time	Other
			C	M	A		A	1 Jar					
1	1/18/2018	7:45	X	X	X	J-801	X		X	X	11/19/18 1440	11/19/18 0847	
2	1/18/2018	8:15	X	X	X	J-802	X		X	X	11/19/18 1440	11/19/18 0847	
3	1/18/2018	9:55	X	X	X	J-803	X		X	X	11/19/18 1440	11/19/18 0847	
4	1/18/2018	12:20	X	X	X	J-804	X		X	X	11/19/18 1440	11/19/18 0847	
5	1/18/2018	1:50	X	X	X	J-805	X		X	X	11/19/18 1440	11/19/18 0847	
6	1/18/2018	1:30	X	X	X	J-806	X		X	X	11/19/18 1440	11/19/18 0847	
7	1/18/2018	1:40	X	X	X	J-807	X		X	X	11/19/18 1440	11/19/18 0847	
	1/18/2018		X	X	X	J-808	X		X	X	11/19/18 1440	11/19/18 0847	
	1/18/2018		X	X	X	J-809	X		X	X	11/19/18 1440	11/19/18 0847	
	1/18/2018		X	X	X	J-810	X		X	X	11/19/18 1440	11/19/18 0847	
	1/18/2018		X	X	X	J-811	X		X	X	11/19/18 1440	11/19/18 0847	
	1/18/2018		X	X	X	J-812	X		X	X	11/19/18 1440	11/19/18 0847	

Signature [Signature] **Date/Time** 11/19/18 1440

Signature [Signature] **Date/Time** 11/19/18 0847

Signature [Signature] **Date/Time** 11/19/18 1440

Signature [Signature] **Date/Time** 11/19/18 0847

This AQB Form 1-11-18 Form 000-1014

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Laboratories, Inc.

Environmental Testing Laboratory Since 1949

BC LABORATORIES INC. DL 21517 COOLER RECEIPT FORM Page 1 Of 1

Submission #: 18-02252 18-05210

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) G30

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S _____

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Intact? Yes No Intact? Yes No Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 0.95 Container: DTP Thermometer ID: TH270 Date/Time: 1/14/18 Analyst Init: RAW

Temperature: (A) 3.0 °C + (C) 3.2 °C

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL <u>0910</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>
QT EPA 1664	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 600/600/300 <u>1664</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8370										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCR VIAL										
PLASTIC BAG										
TEFLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: Description don't match. 215-18-0745

Sample Numbering Completed By: JM Date/Time: 1-14-18 0907 Rev 21 05/23/2016

A = Actual / C = Corrected

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 02/15/2018 16:12
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1805210-01	COC Number:	---	Receive Date:	01/19/2018 08:47
	Project Number:	---	Sampling Date:	01/18/2018 07:40
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-801	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1805210-02	COC Number:	---	Receive Date:	01/19/2018 08:47
	Project Number:	---	Sampling Date:	01/18/2018 08:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-802	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1805210-03	COC Number:	---	Receive Date:	01/19/2018 08:47
	Project Number:	---	Sampling Date:	01/18/2018 09:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-803	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1805210-04	COC Number:	---	Receive Date:	01/19/2018 08:47
	Project Number:	---	Sampling Date:	01/18/2018 12:20
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-804	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1805210-05	COC Number:	---	Receive Date:	01/19/2018 08:47
	Project Number:	---	Sampling Date:	01/18/2018 13:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-805	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1805210-06	COC Number:	---	Receive Date:	01/19/2018 08:47
	Project Number:	---	Sampling Date:	01/18/2018 13:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-806	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1805210-07	COC Number:	---	Receive Date:	01/19/2018 08:47
	Project Number:	---	Sampling Date:	01/18/2018 14:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-807	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 02/15/2018 16:12
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1805210-01	Client Sample Name: J-801, 1/18/2018 7:40:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	14	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	02/15/18 08:30	02/15/18 08:30	MAM	MAN-SV	1	B005057

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 02/15/2018 16:12
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1805210-02	Client Sample Name: J-802, 1/18/2018 8:15:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	28	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	02/15/18 08:30	02/15/18 08:30	MAM	MAN-SV	1	B005057

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 02/15/2018 16:12
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1805210-03	Client Sample Name: J-803, 1/18/2018 9:55:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	9.5	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	02/15/18 08:30	02/15/18 08:30	MAM	MAN-SV	1	B005057

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 02/15/2018 16:12
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1805210-04	Client Sample Name: J-804, 1/18/2018 12:20:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	6.1	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	02/15/18 08:30	02/15/18 08:30	MAM	MAN-SV	1	B005057

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 02/15/2018 16:12
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1805210-05	Client Sample Name: J-805, 1/18/2018 1:30:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	5.4	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	02/15/18 08:30	02/15/18 08:30	MAM	MAN-SV	1	B005057

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 02/15/2018 16:12
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1805210-06	Client Sample Name: J-806, 1/18/2018 1:30:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	6.3	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	02/15/18 08:30	02/15/18 08:30	MAM	MAN-SV	1	B005057

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CE Schmidt
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Red Bluff, CA 96080

Reported: 02/15/2018 16:12
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1805210-07	Client Sample Name: J-807, 1/18/2018 2:00:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	ND	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	02/15/18 08:30	02/15/18 08:30	MAM	MAN-SV	1	B005057

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Reported: 02/15/2018 16:12
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B005057						
Oil and Grease	B005057-BLK1	ND	mg/L	5.0	0.86	

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Reported: 02/15/2018 16:12
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B005057										
Oil and Grease	B005057-BS1	LCS	37.400	40.200	mg/L	93.0		78	114	

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CE Schmidt
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Red Bluff, CA 96080

Reported: 02/15/2018 16:12
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
QC Batch ID: B005057		Used client sample: N									
Oil and Grease	DUP	1801373-44	ND	ND		mg/L			18		
	MS	1801373-44	ND	37.200	40.200	mg/L		92.5		78 - 114	
	MSD	1801373-44	ND	37.500	40.200	mg/L	0.8	93.3	18	78 - 114	

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CE Schmidt
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Reported: 02/15/2018 16:12
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Notes And Definitions

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit

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California Air Resources Board
RFP No. 161SD005

Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations

Data Validation Technical Memorandum- Phase 2, Trip #1



May 2018

Submitted by

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EXECUTIVE SUMMARY

This Technical Memorandum describes the methodology, sampling procedures and test results for Phase 2, Test No. 1 of the Air Resources Board project titled *Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations (No. 161SD005)*.

The purpose of this testing effort was to conduct a more detailed assessment of selected ponds based on the data collected in the screening effort conducted in Phase 1. Four pond systems were selected for Test No. 1 in Phase 2 as shown below.

Project Region	Dates	Facilities
R5 S3	04/10/2018 (Field Trip #1)	CP1, P1, P2, P7, P8
R5 S4	04/10/2018 (Field Trip #1)	CP4, P1A, P2B, P9
R5 S1B	04/11/2018 (Field Trip #1)	CP4, P2, P3A
R5S1	04/11/2018 (Field Trip #1)	CP1, P2, P3A

In total, one or more samples were collected, along with Quality Control sampling, at these facilities for a total of 24 sample sets. Sample collection included air emission sampling and produced water sampling.

The assessment included using the US EPA flux chamber technology complete with all test equipment as specified in the US EPA Flux Chamber User's and measurement protocol, to measure the 'flux' of study compounds from selected sources on these facilities. Testing included using a fixed sweep air flow rate of 5.0 liters per minute and a 30 liter dynamic flux chamber as per the User's guidance document. Gas phase measurements were performed for volatile organic compounds (VOCs) and toxic air contaminants (TACs) using US EPA Methods TO-14/TO-15, and fixed gases carbon dioxide and methane by ASTM Methods 1945 and 3416, respectively. Liquid phase measurements were performed by liquid sample collection and analysis for dissolved phase VOCs by US EPA Method 8260b, and for oil and grease by US EPA Method 1664 as described in the attached project Test Plan.

A summary of the Test No. 1, Phase 2 testing program, complete with data summary and QC report is provided.

I. INTRODUCTION

This Technical Memorandum describes the field testing that was conducted in order to collect more detailed data from a limited selection of facilities screened in Phase 1. Testing was conducted by Mr. Tom Card, Dr. C.E. Schmidt, a field technician, and CARB staff. The testing was conducted over a two-day time period, April 10, 2018 and April 11, 2018. Produced water treatment operations included in the Phase 2 testing effort were selected by the Facility Manager using Phase 1 data; the selection process involved identifying operating facilities, contacting facility owners/operators and the regional water boards for permission and access for testing and arranging for access to facilities on the days of testing. Testing included making arrangements for testing, equipment preparation, travel to the facilities, obtaining access to the specific test locations, testing, preparing and shipping air and water samples to the laboratories. Testing activities were observed by one or more representatives from the facilities and the regional water boards.

The objective of this effort was to obtain a more detailed estimate for pond emissions for selected ponds that were tested in Phase 1. This memorandum includes a discussion of the testing methodology, quality control procedures, results, discussion of the results, and summary statements. The actual facility emissions estimates and control efficiency calculations are reported elsewhere.

II. TEST METHODOLOGY

Testing for surface flux was conducted using the US EPA recommended Surface Isolation Flux Chamber (Radian Corporation, February 1986) following the project Test Plan. Flux chamber sampling was performed on the wastewater surface of selected unit processes or on produced water extracted from processes and placed in a 30-gallon wash tub. At equilibrium in the flux chamber, gas samples were collected using evacuated Summa polished canisters sampled as grab samples to atmospheric pressure. Produced water was collected using a long-handle 'dipper' following the Test Plan protocol. Produced water was transferred to a container where pH and total dissolved solids (TDS) were measured, then the waste water was poured into method-specific sample containers for per method.

The operation of the surface flux chamber and gas sample collection is given below:

- 1) Flux chamber, sweep air, sample collection equipment, and field documents were located on-site.
- 2) The facility information, location information, equipment information, date, and proposed time of testing were documented on the Emissions Measurement Field Data Sheet.
- 3) The exact test location was selected and placed about 0.5" to 1" into the liquid or oil surface sealing the chamber bottom edge for testing.
- 4) The sweep air flow rate (ultra-high purity- UHP air) was initiated and the calibrated rotameter, which controls the sweep air flow rate, was set at 5.0 liters per minute. A constant sweep air flow rate was maintained throughout the measurement for each sampling location.
- 5) Flux chamber data were recorded every residence interval (6 minutes) for five intervals, or 30 minutes. Source temperature and ambient temperature, along with source description and UTM coordinates were recorded during the equilibration time period.
- 6) At steady-state (greater than 5 residence intervals per method), the sample line was purged preparing for sample collection. Sample collection was performed by interfacing the sample canister to the purged, sample line and filling the sampling media with sample gas or collecting the desired sample following sample collection protocols as per the Test Plan. The canisters were filled to atmospheric pressure and then sealed.
- 7) After sample collection, the sample collection information was documented on the field data sheet and sample collection Chain of Custody sheet.
- 8) After sampling, the flux measurement was discontinued by shutting off the sweep air, removing the chamber, and securing the equipment. The sample line was back-flushed

with UHP clean air, and the flux chamber was cleaned by dry wipe with a clean paper towel and then washed as needed with soap and water.

- 9) The sampling location was recorded on the field data sheet. The equipment was then relocated to the next test location and steps 1) through 8) were repeated.

The operation of the liquid 'dipper' and liquid sample collection is given below:

- 1) The long-handle dipper and collection container, field analyzers, and field documents were located on-site at the selected test location. Note- screening surveys were conducted at multiple locations for each operations tested supporting the flux chamber and liquid sample collection locations.
- 2) The facility information, location information, equipment information, date, and proposed time of testing were documented on the sample collection log sheets.
- 3) A location near the flux chamber test (1' to 2') was selected for liquid sampling and the dipper was rinsed with produced water, then a sample was taken below the produced water surface by filling the dipper and retrieving the sample catch as shown below.
- 4) Once collected, the sample catch was tested for pH and TDS using calibrated real-time instruments, then the sample vials were filled as per the method specifications, sealed, and stored following the sample preservation requirements.
- 5) After sample collection, the dipper and sampling containers were cleaned by washing and drying as was appropriate.
- 6) Samples were sealed, labels were applied, sample collection was recorded on Chain of Custody sheets, and samples were prepared for shipping to the laboratory.

Sample collection information is provided in Table 1.

Photo Showing Liquid Sample Collection.



III. QUALITY CONTROL

Control procedures that were used to ensure compliance to the data quality specifications as stated in Test Plan and are listed and described below. The application and frequency of these procedures were developed to meet the program data quality objectives and were executed without exception. QC data for air analyses are found on Table 2 (field blank data and precision data), and for liquid analyses on Table 3 (field blank and precision data).

Field Documentation -- A field notebook containing data forms, including sample chain-of-custody (COC) forms, was maintained for the testing program. Attachment A contains the Emission Measurement Data Sheets.

Chain-of-Custody -- COC forms were used for field data collection; all samples were logged daily. Field data were recorded on the COC forms provided in Attachment B.

VOC Analysis by US EPA Method TO-14

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds. These data are reported in the method specific lab reports (footnoted on each lab report showing compliance with the methods).

Laboratory Method Blank- A total of two laboratory method blank samples were performed by the laboratory. No compounds were detected in either blank sample. These data indicate acceptable method performance.

Laboratory Precision- A total of four laboratory Lab Control Duplicate (LCD) samples including nine compounds were performed by the laboratory. All six LCD samples were reported within the criteria of 25 relative percent difference (RPD). These data indicate acceptable method performance.

Laboratory Accuracy- A total of four laboratory Lab Control Samples (LCS) including nine compounds were performed by the laboratory. All six LCS samples were reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Two media (field) blank samples were prepared in the field (T-114 and T-210) were analyzed as field samples (blind QC samples). No compounds were detected above the method detection limits. These data demonstrate acceptable method performance.

Field Method Precision – Two field samples were collected in replicate and analyzed for the flux chamber testing (T-110/-111 and T-206/-207). The sample/replicate pair T-110/T-111 were not true 'replicate samples' in that there was a water level change that resulted in a breaking seal (air intrusion) resulting in a compromise in sample T-110 (low values compared to T-111). As such, this sample/replicate pair is excluded from the QC data set and T-111 should be used for

the sample flux at this location. The second sample/replicate pair (T-206/T-207) showed 33 compound pairs and all but two pairs were within criteria. The criteria for field precision is RPD 50. As such, most of these values were within the precision criteria. These data indicate acceptable method performance.

VOC Analysis by US EPA Method TO-15

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of four laboratory method blank samples were performed by the laboratory. No compounds were detected in the blank samples. These data indicate acceptable method performance.

Laboratory Precision- A total of five laboratory LCD samples including 16 compounds were performed by the laboratory. All six LCD samples were reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- A total of five laboratory LCS samples including nine compounds were performed by the laboratory. All six LCS samples were reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Two media (field) blank samples were prepared in the field (T-114 and T-210) were analyzed as field samples (blind QC samples). No compounds were detected above the method detection limits. These data demonstrate acceptable method performance.

Field Method Precision – Two field samples were collected in replicate and analyzed for the flux chamber testing (T-110/-111 and T-206/-207). The sample/replicate pair T-110/T-111 were not true 'replicate samples' in that there was a water level change that resulted in a breaking seal (air intrusion) resulting in a compromise in sample T-110 (low values compared to T-111. As such, this sample/replicate pair is excluded from the QC data set and T-111 should be used for the sample flux at this location. The second sample/replicate pair (T-206/T-207) had 10 sample/replicate pairs with 7 of the 10 within RPD criteria. The dominant compounds (benzene, ethylbenzene, toluene and xylenes) were all within the QC criteria. These data indicate acceptable laboratory method performance.

Methane Analysis by ASTM Method 3416

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of two laboratory method blank samples were performed by the laboratory. Methane was not detected in the blank samples. These data indicate acceptable method performance.

Laboratory Precision- One LCD sample was performed by the laboratory. The sample was reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- One LCS sample was performed by the laboratory. The sample was reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Two media (field) blank samples were prepared in the field (T-114 and T-210) were analyzed as field samples (blind QC samples). Methane was not detected above method detection limit. These data demonstrate acceptable method performance.

Field Method Precision – Two field samples were collected in replicate and analyzed for the flux chamber testing (T-110/-111 and T-206/-207). The sample/replicate pair T-110/T-111 were not true 'replicate samples' in that there was a water level change that resulted in a breaking seal (air intrusion) resulting in a compromise in sample T-110 (low values compared to T-111. As such, this sample/replicate pair is excluded from the QC data set and T-111 should be used for the sample flux at this location. The second sample/replicate pair (T-206/T-207) showed that methane was within the RPD criteria of 50. These data indicate acceptable method performance.

Carbon Dioxide Analysis by ASTM Method 1946

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of two laboratory method blank samples were performed by the laboratory. Carbon Dioxide was not detected in the blank samples. These data indicate acceptable method performance.

Laboratory Precision- One LCD sample was performed by the laboratory. The sample was reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- One LCS sample was performed by the laboratory. The sample was reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Two media (field) blank samples were prepared in the field (T-114 and T-210) were analyzed as field samples (blind QC samples). Carbon dioxide was not detected above method detection limit. These data demonstrate acceptable method performance.

Field Method Precision – Two sample/replicate pairs were collected in replicate and analyzed for the flux chamber testing (T-110/-111 and T-206/-207). The sample/replicate pair T-110/T-111 were not true 'replicate samples' in that there was a water level change that resulted in a

breaking seal (air intrusion) resulting in a compromise in sample T-110 (low values compared to T-111). As such, this sample/replicate pair is excluded from the QC data set and T-111 should be used for the sample flux at this location. The second sample/replicate pair (T-206/T-207) showed that carbon dioxide was not detected in either sample, which indicates good reproducibility. However, carbon dioxide was not detected in these samples and no comment can be made about field precision, but the laboratory precision was within specifications indicating acceptable method performance.

Liquid Sample VOC Analysis by US EPA Method 8260b

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds, matrix spike samples, and matrix spike duplicate samples. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of two laboratory method blank samples were performed by the laboratory. No compounds were detected in any of the samples above detection. These data indicate acceptable method performance.

Laboratory Precision- A total of two laboratory LCD samples including nine compounds and three surrogates were performed by the laboratory. Both LCD samples were reported within the criteria of 20 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- A total of two LCS including nine compounds and three surrogates were performed by the laboratory. Both LCS samples were reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Two media (field) blank samples were prepared in the field (V-114 and V-210) were analyzed as field samples (blind QC samples). In total, one compound, toluene at 0.3 ug/L was detected in two samples. These data demonstrate acceptable method performance.

Field Method Precision – Two field samples were collected in replicate and analyzed for the flux chamber testing (V-110/-111 and V-206/-207). In total, 11 compounds were detected in one or more samples. The replicate samples showed RPD values less than the criteria for acceptable precision. These data indicate acceptable method performance.

Liquid Sample Oil and Grease Analysis by US EPA Method 1664

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of two laboratory method blank samples were performed by the laboratory. No compounds were detected in any of the samples above detection. These data indicate acceptable method performance.

Laboratory Precision- A total of seven LCD samples including nine compounds and three surrogates were performed by the laboratory. All six LCD samples were reported within the criteria of 18 RPD. Two field samples were analyzed as oil/tar samples (solid), and one LCD sample was prepared and reported as such with no detections in the sample. These data indicate acceptable method performance.

Laboratory Accuracy- A total of two laboratory LCS samples were performed by the laboratory. Both LCS samples were reported within the criteria of 78-to-114 percent recovery. These data indicate acceptable method performance.

Field System Blank – Two media (field) blank samples were prepared in the field (J-114 and J-210) were analyzed as field samples (blind QC samples). Both samples were non-detect. These data demonstrate acceptable method performance.

Field Method Precision – Two field samples were collected in replicate and analyzed for the flux chamber testing (J-110/-111 and J-206/-207). The replicate samples showed one sample set within precision criteria, and one sample exceeding criteria at 91 RPD. It is likely that this variable is related to the process of 'decanting' or 'separating' any oil layer from the water layer in the field given that the goal is to collect a water sample free from oil meeting the charter of the method. This precision performance give the reader pause when making decisions regarding high detections with this method given the sample matrix issues. Note that these data do not indicate an unacceptable method performance.

IV. RESULTS AND DISCUSSIONS

A summary of the field sample collection data and information for the testing conducted during this source test is provided in Table 1. All field data for the on-site surface flux chamber testing for temperature, along with sample identification and sample ID data and information on the liquid sample collection are presented in Table 1.

Quality control data for both air and liquid samples is reported in Tables 2 through 5; blank and replicate QC data for air samples is found in Table 2, and blank and replicate QC data for liquid samples is found in Table 3.

Laboratory data for air samples are summarized in Table 4 and reported in concentration units, and in flux units in Table 5. All liquid sample data are summarized in Table 6, and are reported in concentration units.

A sampling error was discovered while testing Pond P2B at R5S4 produced water treatment system. Sometime during the flux chamber equilibration time period (1445 to 1519 on 4/10/2018) the water level in the pond dropped below the bottom of the flux chamber breaking the seal and allowing for the infiltration of ambient air thus diluting the sample. This particular location had been selected for a replicate sample (T-110/T-111) and the seal break was noticed on taking the replicate sample (T-111). The chamber was repositioned and the replicate sample T-111 was re-taken, however it was not known at the time that T-110 was compromised until the receipt of the lab data. As such, these data could not be used as a sample replicate pair, T-110 was invalidated, and T-111 is taken as the sample at this location. Sample/replicate pair T-206/T-207 serves as the field precision data set for the sampling effort and the precision testing criteria of 5% was achieved.

Surface flux data for surface area sources are calculated using measured target compound concentrations and flux chamber operating parameter data (i.e., sweep air flow rate of 5.0 liters per minute, and surface area of 0.13 square meters [m²]). The facility emissions can be calculated by multiplying the flux by the surface area of the source. The flux is calculated from the sweep air flow rate Q (cubic meters per minute [m³/min]), the species concentration Y_i (micrograms or milligrams per cubic meter [μg/m³; mg/m³], and exposure to the chamber surface area A (square meters [m²]), as follows:

$$F_i = (Q) (Y_i) / (A)$$

V. SUMMARY

A more detailed investigation was performed on four produced water systems in Test No. 1 of Phase 2. Testing was conducted with the intent of understanding at a higher level of certainty, the nature and extent of VOC emissions from these facilities which are operationally different. The following is a summary of activities and results associated with this objective:

- A total of 24 flux samples (including QC samples) were conducted using the US EPA Surface Emission Isolation flux chamber technology. The technology, coupled with regulatory approved analytical methods, quantitatively measures flux of VOCs and fixed gases at the test surface of study compounds. In addition, liquid samples were taken at each test location to determine the content of VOCs and oil/grease; the sample collection was co-located so that a relationship between VOC flux and dissolved phase VOCs in waste water could be established.
- Field and laboratory quality control data indicate acceptable data quality for the air methods, including US EPA Method TO-14 (GC/FID), US EPA Method TO-15 (GC/MS), and ASTM 1945 for carbon dioxide and ASTM Method 3416 for methane. Method and media blank samples were non-detection for study compounds and precision was acceptable (compounds generally within method limits). Other QC parameters indicated acceptable method performance.
- A sampling error caused the invalidation of sample T-110. This was caused by a water level change in the pond during the testing event. Fortunately, this location was selected as a replicate sampling location and the replicate T-111 can serve as the flux sample for this location.
- Field and laboratory quality control data indicate acceptable data quality for the liquid methods, including US EPA Method 8260b (GC/MS) for dissolved phase VOCs and US EPA Method 1664 for oil and grease. Low levels of one compound, toluene, was detected in one field blank, and oil and grease field blanks non-detect. Other QC parameters indicated acceptable method performance.
- The flux data can be used to estimate VOC and fixed gas (methane and carbon dioxide) emissions from those operations tested. Likewise the liquid sample data can be used to describe the VOC and oil/grease content of the produced water sources tested. Further, these data can be used to correlate produced water concentration data to VOC flux data.

REFERENCES

US EPA. 1986. ***"Measurement of Gaseous Emission Rates From Land Surfaces Using an Emission Isolation Flux Chamber, Users Guide."*** EPA Environmental Monitoring Systems Laboratory, Las Vegas, Nevada, EPA Contract No. 68-02-3889, Work Assignment No. 18, Radian Corporation, February 1986. NTIS # PB 86-223161.

Card, TR, and CE Schmidt, Test Plan. August 17, 2017. ***"Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations"***.

Attachment 1
Field Notes

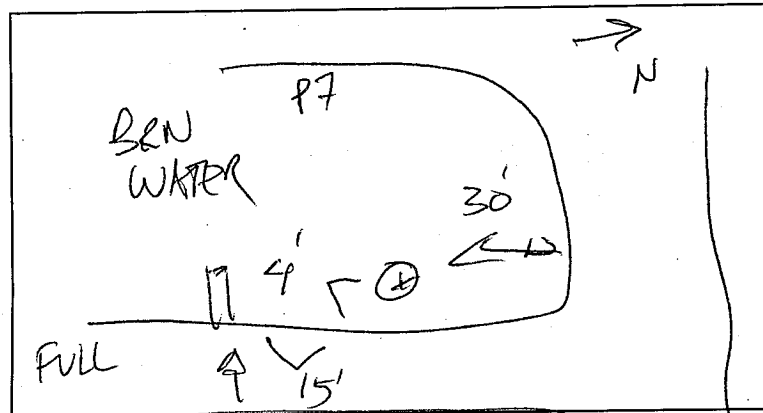
SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/10/18 SAMPLERS LES JRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. P7 R5 S3
 SURFACE DESCRIPTION BROWN WATER / FILM FREE
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL V CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UAP CA 3024 SUPPLIER PA PSIG START 1050 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>0739</u>	<u>5.0</u>	<u>0</u>							<u>LID 75</u>	
<u>↓</u>	<u>↓</u>	<u>1</u>								
<u>↓</u>	<u>↓</u>	<u>2</u>								
<u>0757</u>	<u>↓</u>	<u>3</u>								
<u>↓</u>	<u>↓</u>	<u>4</u>			<u>75</u>	<u>72</u>	<u>7.99</u>	<u>14200</u>	<u>T-10Z</u>	
<u>0809</u>	<u>↓</u>	<u>5</u>							<u>#69Z</u> <u>AT-4:10</u>	

COMMENTS:

SITE DIAGRAM



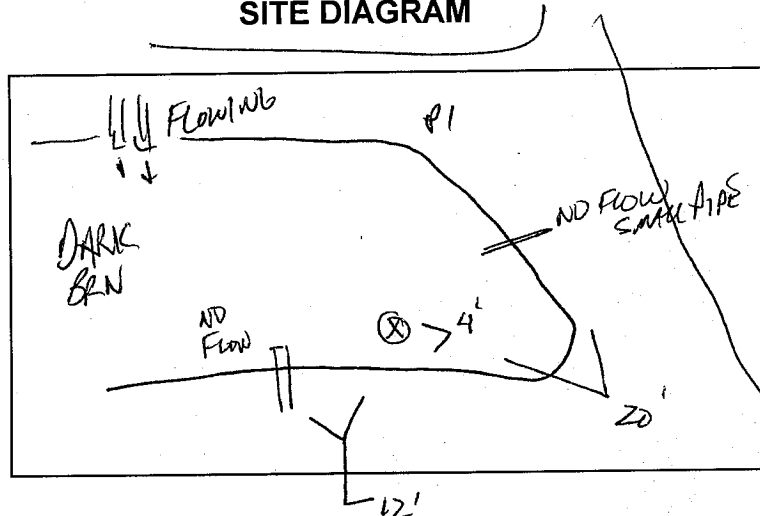
SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/10/18 SAMPLERS LES TPC SOA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. (P1) RSS3
 SURFACE DESCRIPTION Brown water
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 1479 SUPPLIER SM PSIG START 1450 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0853	5.0	0								
↓		1								
↓		2								
0911		3			75	75	8.25	15300	T103	# 755
↓		4			68					AT-
0923	↓	5								
0925	START									
0930	STOP									

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/10/18 SAMPLERS CES TRC SDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. R5 S3 P2

SURFACE DESCRIPTION Brown water w/ slight sheen

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. _____ PHOTO TAKEN: Yes No

CHAMBER SEAL ✓ CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

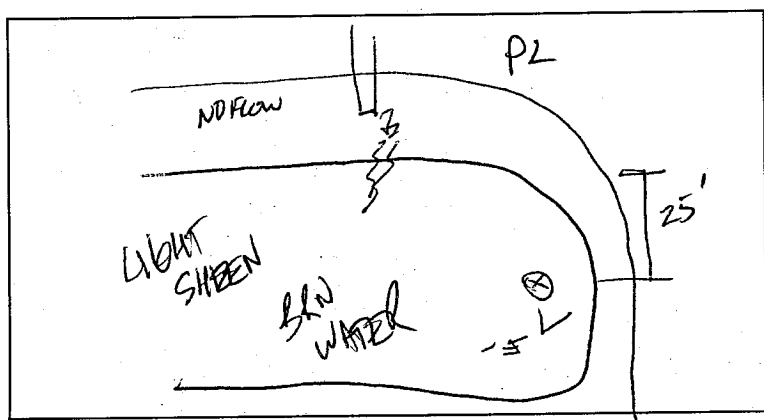
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR VHQ CC SM SUPPLIER 03624 PSIG START 900 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>0855</u>	<u>5.0</u>	<u>0</u>								
		<u>1</u>								
		<u>2</u>								
<u>0913</u>		<u>3</u>			<u>73</u>	<u>75</u>	<u>8.23</u>	<u>16000</u>	<u>T104 #631</u> <u>ΔT 3:30</u>	
		<u>4</u>								
<u>0925</u>	<u>✓</u>	<u>5</u>								

COMMENTS:

SITE DIAGRAM



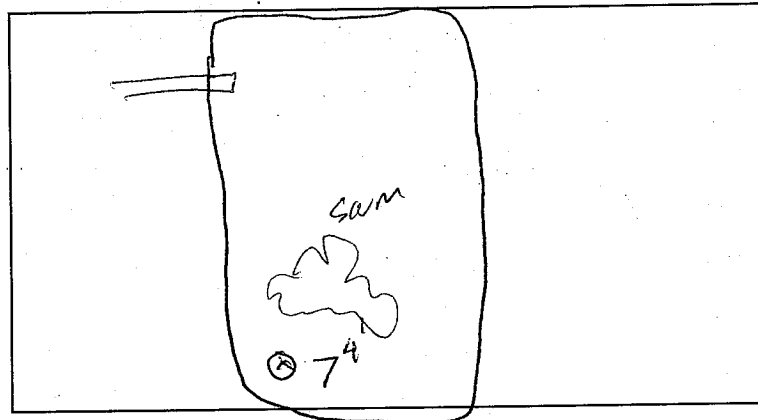
SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/10/18 SAMPLERS LES TOL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. R553 P2
 SURFACE DESCRIPTION Brown WATER w/ 5% GREEN/SLURRY
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. 9 PHOTO TAKEN: Yes No
 CHAMBER SEAL _____ CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 1479 SUPPLIER PA PSIG START 1450 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1003	S.O ↓ V	0								
		1								
		2								
1021		3			77	82	8.19	16000	T105 # 759	
		4							ΔT: 3:24	
1033		5								

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/10/18 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 255301

SURFACE DESCRIPTION BLOWN WATER w/ S ABEW (2%)

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL V CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

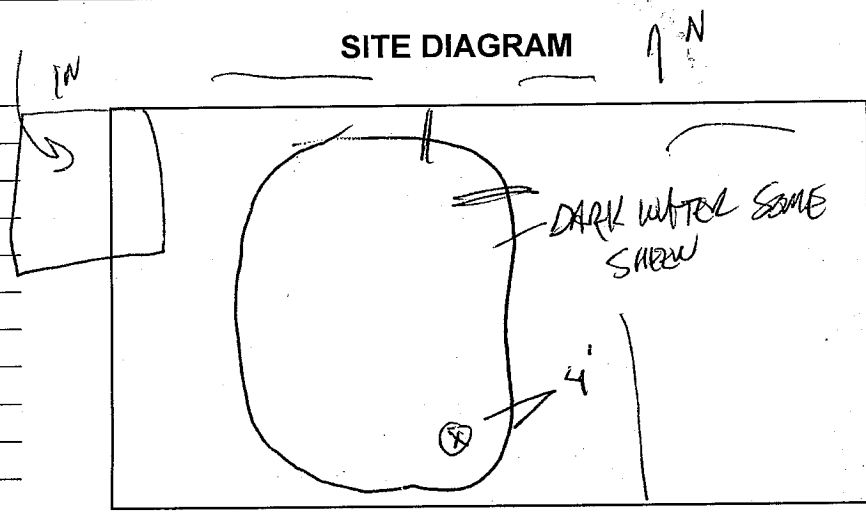
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR VAP CC 03624 SUPPLIER SM PSIG START 800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1006	5.0	0								
↓		1								
↓		2								
1024		3			76	82	8.21	15100	106	# 778 AT
		4								
1036	✓	5								
1036	START									
1040	STOP									

COMMENTS:

SITE DIAGRAM



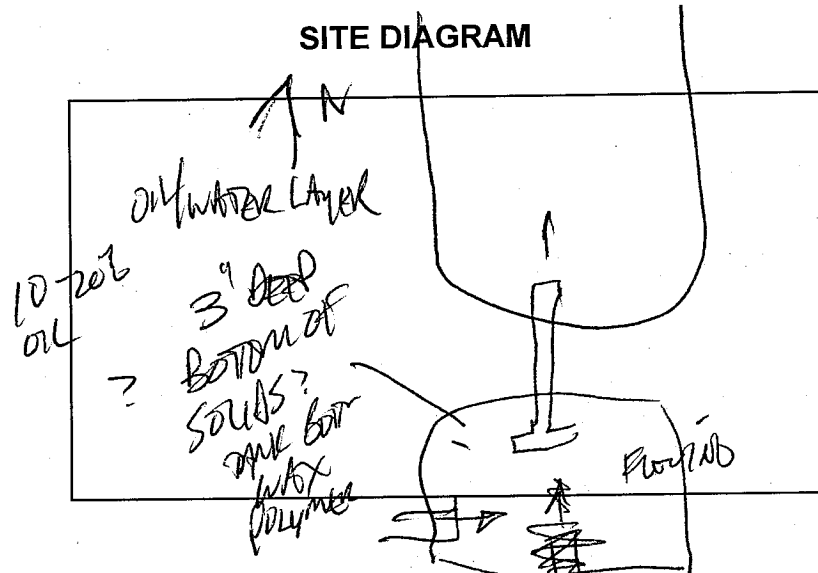
SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/10/18 SAMPLERS LES TRC JOA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. R25 S3 CP1
 SURFACE DESCRIPTION CLEARWATER w/ GLOBULES 3" OVER MUD*
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. 700 G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UAP CC 03624 SUPPLIER SM PSIG START 700 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1105	5.0 ↓ ↓ ↓ ↓	0								
		1								
		2								
1123		3			36.1	84	7.48	12900	T107 #511 AT 5:00	
1135		5								

COMMENTS:

SITE DIAGRAM



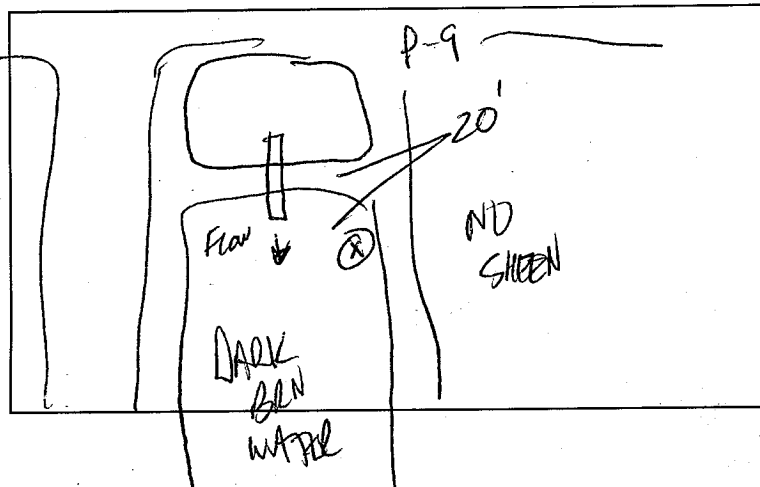
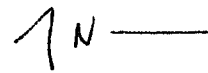
SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/10/18 SAMPLERS LES TRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. R554
 SURFACE DESCRIPTION BLOWN WATER P-9
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL V CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 114719 SUPPLIER DA PSIG START 1800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1257	5.0 ↓ ↓ ↓ ↓	0								
		1								
		2								
1315		3			76	90	8.52	7.230	T108	#884 AT 3:26
1327		4								
		5								

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/10/18 SAMPLERS LES TBC SOA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. R5 S4 P9

SURFACE DESCRIPTION Brown water w/ slight slum

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

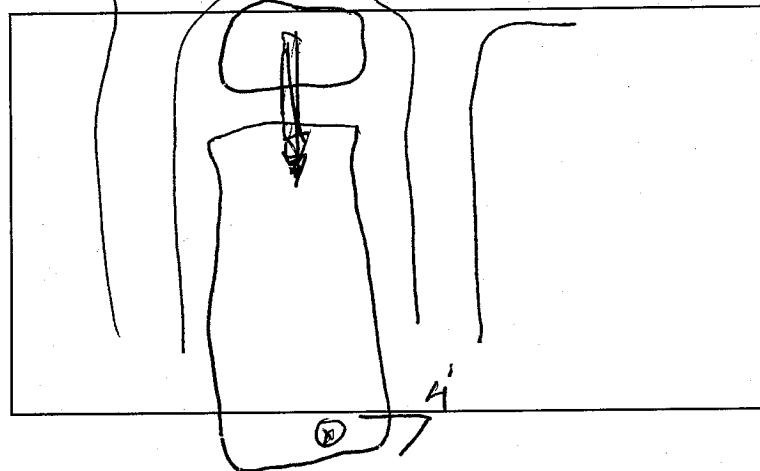
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR UHP CC 114719 SUPPLIER PA PSIG START 700 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1351	S.D.	0								
		1								
		2								
1409		3			91	88	8.74	7.600	T1091	# 783
		4								AT
1421		5								
1424										
DT 2:30										

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/10/18 SAMPLERS LBS TRLC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. P5 S4 P2B

SURFACE DESCRIPTION BROWN WATER

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

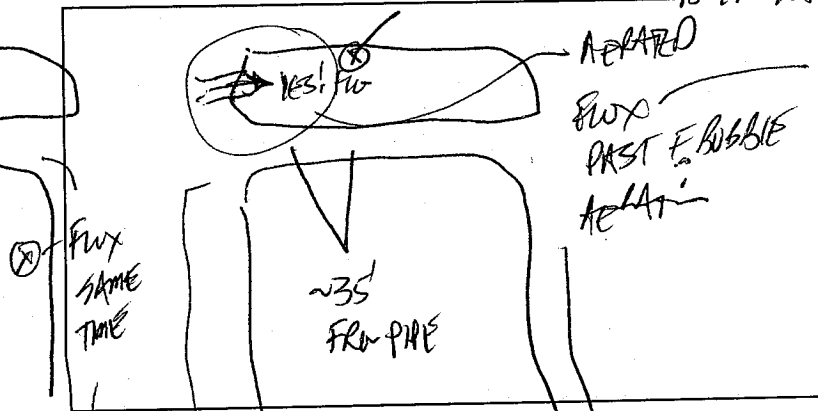
SWEEP AIR VAP CC 03624 SUPPLIER SM PSIG START 300 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>1445</u>	<u>5.0</u>	<u>0</u>							<u>LQ 104</u>	
		<u>1</u>								
		<u>2</u>						<u>T110</u>	<u>#772</u>	
<u>1503</u>		<u>3</u>							<u>AT</u>	
		<u>4</u>			<u>104°</u>	<u>07°</u>	<u>7.34</u>	<u>7.610</u>	<u>T111</u>	
<u>1515</u>	<u>START</u>	<u>5</u>							<u>#802</u>	
<u>1519</u>	<u>STOP</u>	<u>Δ 3'30"</u>							<u>AT</u>	
<u>1519</u>	<u>START</u>								<u>REDO</u>	
<u>1523</u>		<u>Δ 4'</u>							<u>REDO</u>	

COMMENTS:

SITE DIAGRAM TULL # 512
L3C TIME 1538 1541

3000 PER MINUTE FILLING
DARK
BRN
AD
SOME SHEEN
5% FOAM



SURFACE FLUX MEASUREMENT DATA FORM

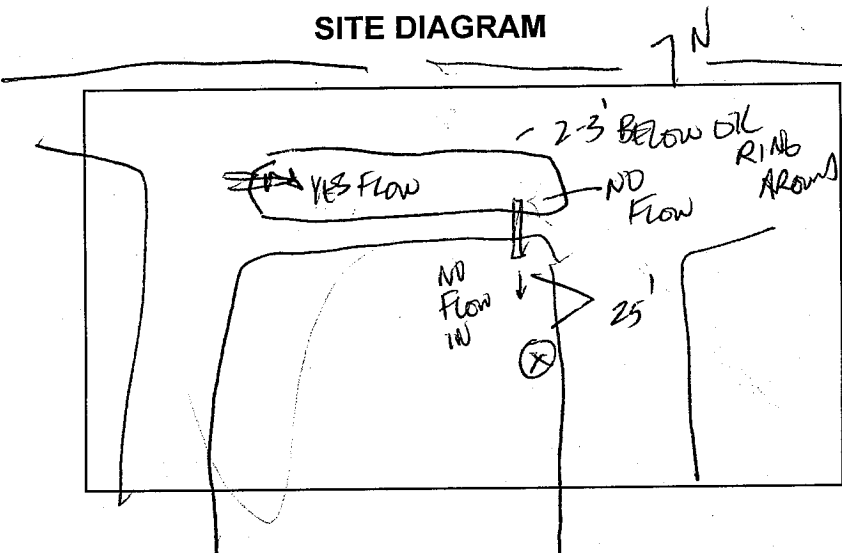
DATE 4/10/18 SAMPLERS LES TPC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. R5 507 PIA
 SURFACE DESCRIPTION Brown water
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. _____ PHOTO TAKEN: Yes No
 CHAMBER SEAL _____ CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 114719 SUPPLIER PA PSIG START 1650 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>1453</u>	<u>5.0</u>	<u>0</u>								
<u>↓</u>		<u>1</u>								
<u>1511</u>		<u>2</u>						<u>7112</u>	<u>#548</u>	
		<u>3</u>			<u>82</u>	<u>96</u>	<u>8.27</u>	<u>3700</u>	<u>AT 3:45</u>	
		<u>4</u>								
<u>1523</u>	<u>↓</u>	<u>5</u>								

COMMENTS:

PA
Not filling, long term storage

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/10/18 SAMPLERS LES JMC JOA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. R5 S4 CP4

SURFACE DESCRIPTION BROWN WATER w/SHEEN

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

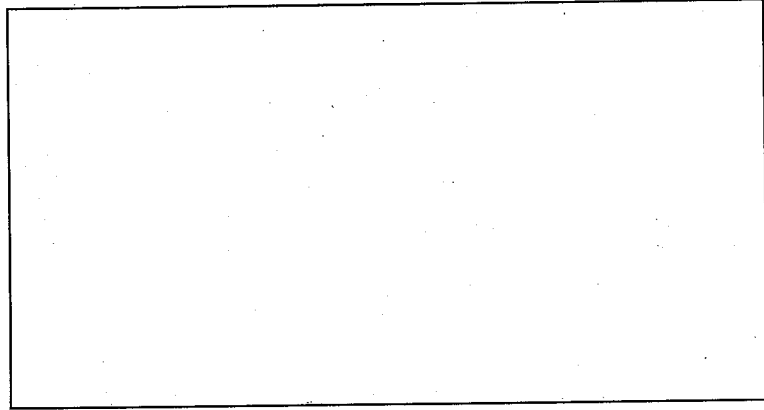
SWEEP AIR UHP CC 03624 SUPPLIER SM PSIG START 700 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>1608</u>	<u>5.0</u>	<u>0</u>								
<u>↓</u>	<u>↓</u>	<u>1</u>								
<u>↓</u>	<u>↓</u>	<u>2</u>						T-14	#638	
<u>1626</u>	<u>↓</u>	<u>3</u>			<u>121</u>	<u>87</u>	<u>6.77</u>	<u>7200</u>	<u>T-13</u>	<u>AT</u>
<u>↓</u>	<u>↓</u>	<u>4</u>								
<u>1638</u>	<u>↓</u>	<u>5</u>								

COMMENTS:

SITE DIAGRAM

BLANK
T-14 1649
#638 R



SURFACE FLUX MEASUREMENT DATA FORM

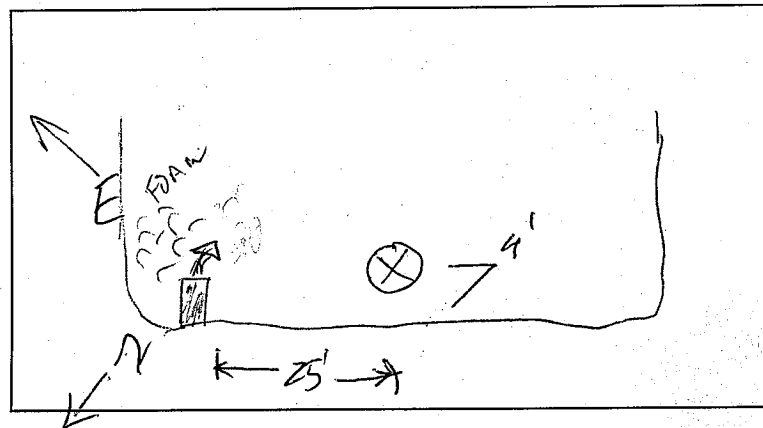
DATE 4/11/18 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. P5 S1B P2
 SURFACE DESCRIPTION BROWN WATER w/ SLIGHT SHEEN ON EX
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL ✓ CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 03624 SUPPLIER SM PSIG START 200 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0737	5.0	0								
↓		1								
↓		2								
0755		3			82	64	8.72	12300	T201	#791
		4								AT 3:19
0807	↓	5								

COMMENTS:

~ 2000 gpm FILLING

SITE DIAGRAM

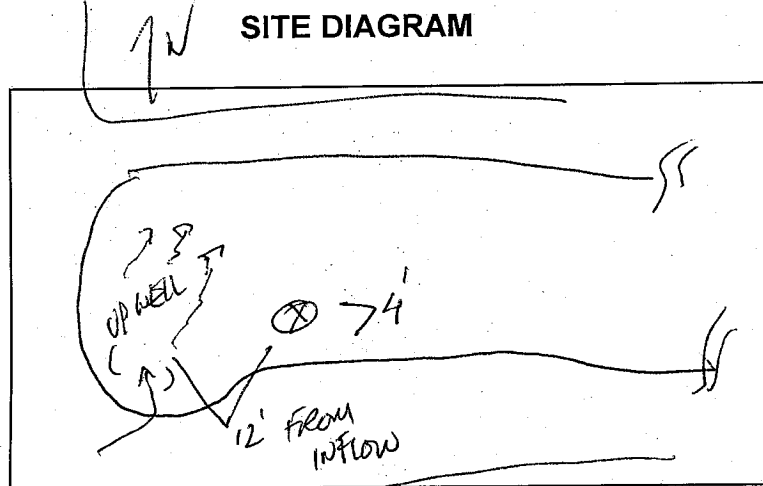


SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/11/18 SAMPLERS LES JRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 25 #51B P36
 SURFACE DESCRIPTION BROWN WATER - MORE LIKE
 CURRENT ACTIVITY PERSON FRUIT DRINK
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC _____ SUPPLIER PA PSIG START 1300 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0743	5.0	0							40 96	
↓	↓	1								
↓	↓	2								
0801	↓	3						T202	#732	
		4			96	66	8.12	12200	ΔT:	
0813	V START	5						12200		
0916	STOP									
ΔT	3 MIN									

COMMENTS:



SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/11/18 SAMPLERS LES TOL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. _____

SURFACE DESCRIPTION BROWN/PURPLE WATER w/ BLACK GLASS ON EDGE

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. X 9 PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

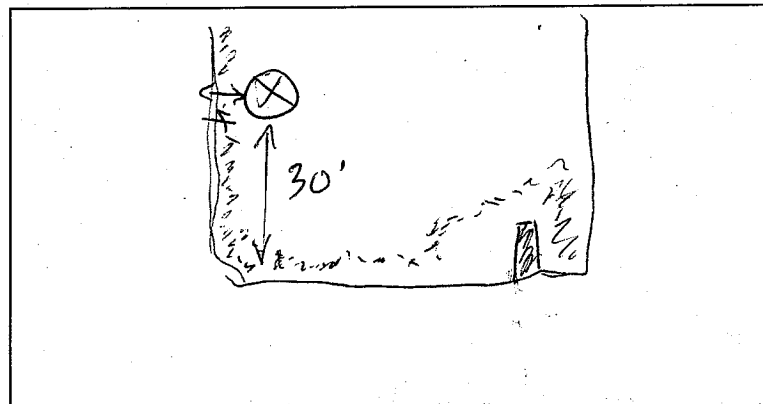
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR UHP CC 122584 SUPPLIER SM PSIG START 200 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>0839</u>	<u>5.0</u>	<u>0</u>								
<u>↓</u>	<u>↓</u>	<u>1</u>								
<u>↓</u>	<u>↓</u>	<u>2</u>								
<u>0907</u>	<u>↓</u>	<u>3</u>			<u>80</u>	<u>66</u>	<u>8.24</u>	<u>2300</u>	<u>203</u>	<u>#882</u>
	<u>↓</u>	<u>4</u>							<u>AT</u>	
<u>0919</u>	<u>↓</u>	<u>5</u>								

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

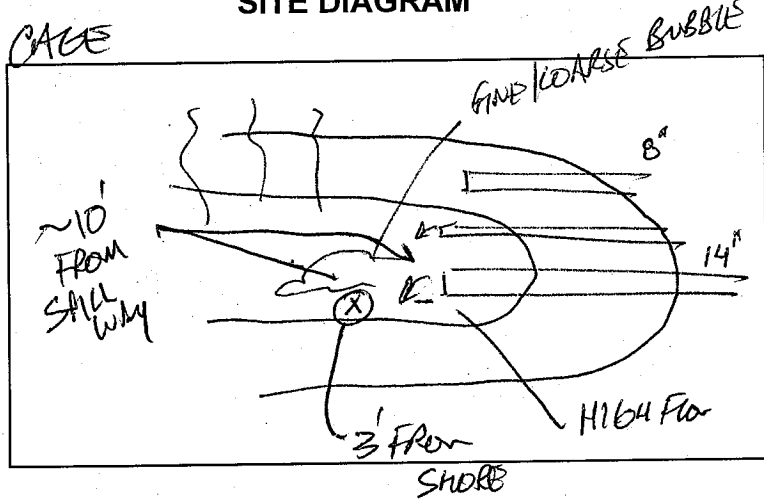
DATE 4/4/18 SAMPLERS CP/JDA/TRE/LL
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No.
 SURFACE DESCRIPTION REGION 5 SITE 1B CP-4
 CURRENT ACTIVITY OIL GLOBS - SMALL, SOME GREEN
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR _____ CC 114769 SUPPLIER PSIG START _____ PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0909	5.0	0								
0915	↓	1								
0921		2								
0927		3				72				
0933		4				7.21	11600			
0939	START	5						T-204	# 0916	
0941	STOP									
	AT 3'									

COMMENTS:

Not CP-4 by placard
CP-4 by drawing

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/11/18 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. P5 S1 P3

SURFACE DESCRIPTION BROWN & PURPLE WATER w/ ALGAE FLOWING

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL V CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

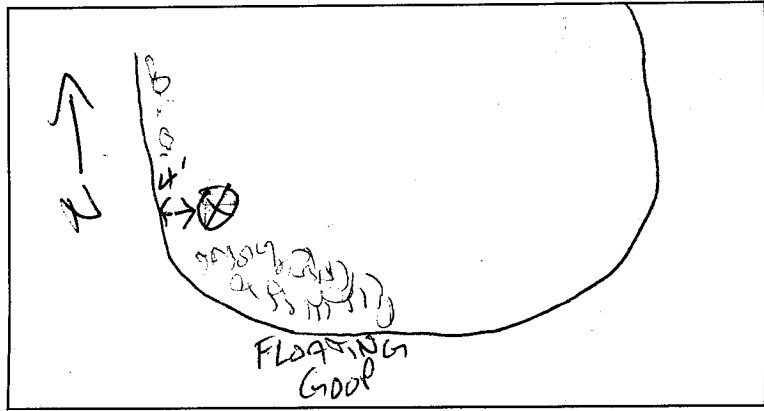
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR UHP CC 122584 SUPPLIER PA PSIG START 2000 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>1043</u>	<u>5.0</u>	<u>0</u>								
		<u>1</u>								
		<u>2</u>								
<u>1101</u>		<u>3</u>			<u>81</u>	<u>67</u>	<u>8.02</u>	<u>24.80</u>	<u>T205</u>	<u>#627</u>
		<u>4</u>							<u>AT 3:20</u>	
<u>1113</u>		<u>5</u>								

COMMENTS:

SITE DIAGRAM



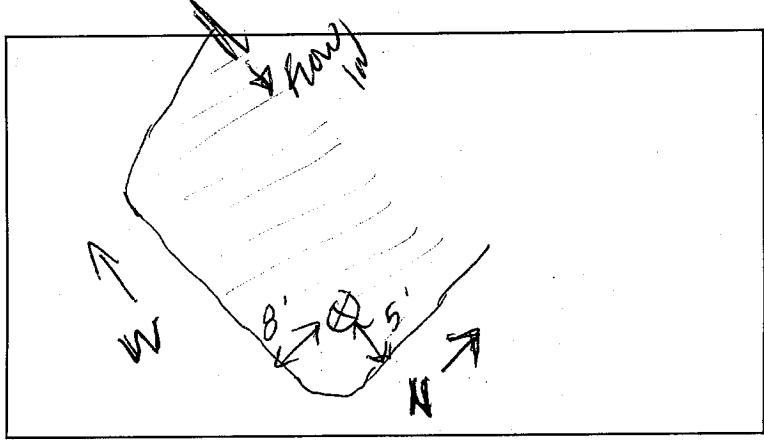
SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/11/18 SAMPLERS LES TRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. R551P2
 SURFACE DESCRIPTION BLACK WATER w/SHAWN
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P. Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHR CC 1147A SUPPLIER PA PSIG START 1400 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1049	5.0	0								
↓		1								
↓		2								
1107		3			77	70	8.29	29.00	T200	#838 ΔT
		4							T207	#886 ΔT
1119	↓	5							ΔT	
1119	START	ΔT 3'								
1121	STOP									
1123	START	ΔT 5'								

1127 STOP
 COMMENTS:

SITE DIAGRAM



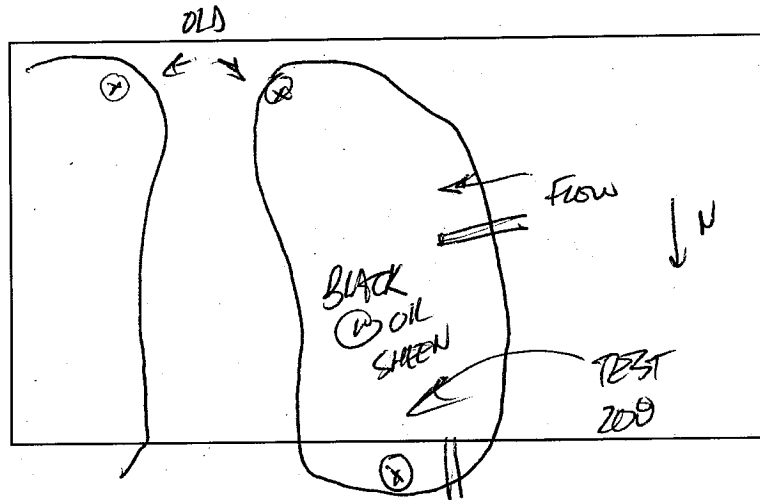
SURFACE FLUX MEASUREMENT DATA FORM

DATE 4/11/18 SAMPLERS LES TDC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. R5 S1 P2
 SURFACE DESCRIPTION BLACK WATER w/SHEEN
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 114719 SUPPLIER PA PSIG START 1300 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1201	5.0 ↓ ↓ ↓ ↓	0							4069	
		1								
		2								
1219		3			69	70	8.30	28.10	T208	#508 AT
		4								
1231		5								
1235	ST 4									

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

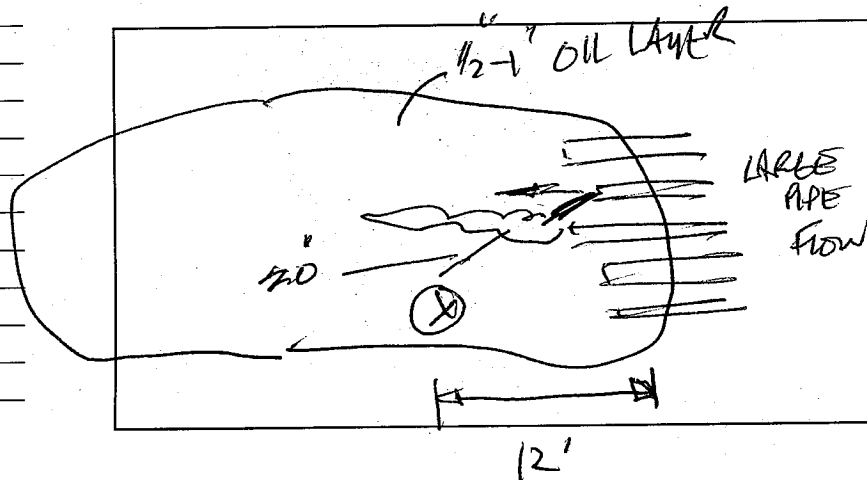
DATE 4/11/18 SAMPLERS LES TRE JOA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. R3 S1 CP1
 SURFACE DESCRIPTION BLACK OIL LAYER OVER WATER
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 122584 SUPPLIER PA PSIG START 1800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1306	5.0 ↓ V	0								
		1								
		2								
1324		3					7.30	27.70	T209 #690 AT338	
		4			93	83				
1336		5								

COMMENTS:

BLANK
T210
619
1350
CC122584

SITE DIAGRAM



Air Resources Board - Oilfield Wastewater Emissions Assessment
Liquid Screening/Sampling Log

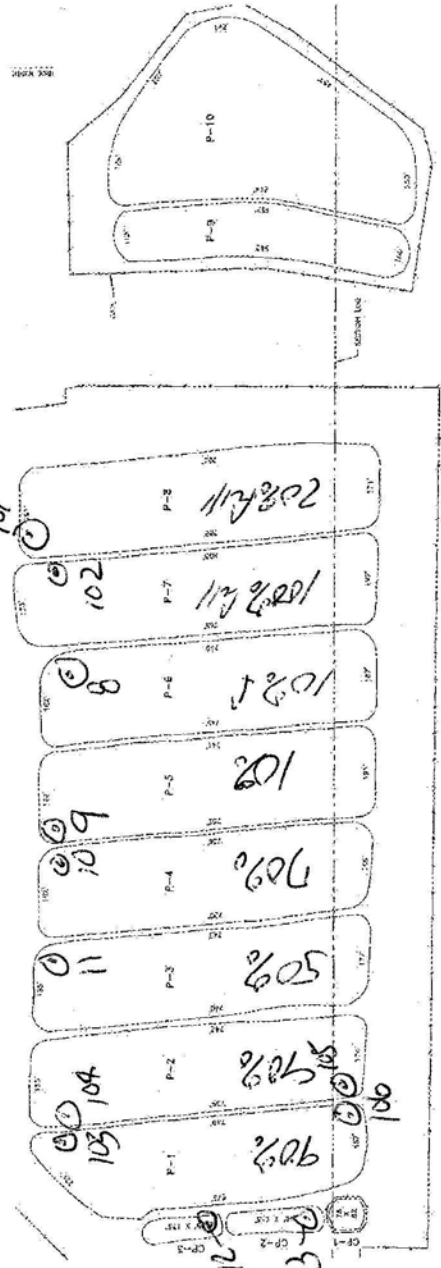
Site # 3

Data taken by ML

Date Time Temp (oF) pH TDS (mg/l) Sample ID UTM East North Comments

Location	Date	Time	Temp (oF)	pH	TDS (mg/l)	Sample ID	UTM East	UTM North	Comments
1 P-8	4/16	7:52	20.2	7.96	14,800	101			
2 P-7		7:55	22.8	7.99	14,200	102			
3 P-1		9:00	21.1	8.25	15,300	103			
4 P-2		9:05	23.7	8.23	16,000	104			
5 P-2		10:10	24.1	8.19	16,000	105			
6 P-1		10:15	22.1	8.21	15,100	106			
7 CP-1		11:15	36.1	7.48	12,900	107			
8 P-6		7:35	18.5	8.23	15,800				
9 P-5		8:40	23.7	7.89	15,400				
10 P-4		8:45	20.7	8.03	15,000				
11 P-3		8:50	20.7	8.31	16,000				
12 CP-3		9:50	25.5	7.89	14,100				
13 CP-2		9:55	37	7.30	13,000				

Drawing



Attachment 2
Chain of Custody Forms

CE Schmidt, Ph.D. Environmental Consultant
Chain of Custody Record

Form Serial Number CES-FI-02/106	For Information Regarding These Samples Please Contact:	Client Address and Phone Number 1001 I Street Sacramento, CA 95814 800-242-4450	Laboratory Name EAS
Client Name Air Resources Board	D. Charles E. Schmidt 19200 Live Oak Road, Red Bluff, CA 96080	Analysis Requested TO-14 FID (Target List/Groups) TO-15 (Target List) ASTM D-1945 (CH4, CO2)	Laboratory Address 173 Cross Street San Luis Obispo, CA 93401
Project Manager Luis Leyva	E-Mail: SCHMIDTCE@aol.com	Can Pressure In (Inches Hg)	Laboratory Phone 805-781-5885
Requested Completion Date		Can Pressure Out (Inches)	Laboratory Contact Dr. Steve Hoyt

Station Number	Date	Time	C G	O R	M A	P B	Sample ID Number	Can ID Number	#	CONTAINER				Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
										S	V	E	N			
410/2018		800	X				T-101	977	1	X	X	X	X	-29		
410/2018		808	X				T-102	692	1	X	X	X	X	-29		
410/2018		923	X				T-103	955	1	X	X	X	X	-29		
410/2018		926	X				T-104	631	1	X	X	X	X	-29		
410/2018		1033	X				T-105	759	1	X	X	X	X	-29		
410/2018		1036	X				T-106	978	1	X	X	X	X	-29		
410/2018		1135	X				T-107	511	1	X	X	X	X	-29		
410/2018		1327	X				T-108	884	1	X	X	X	X	-29		
410/2018		1422	X				T-109	983	1	X	X	X	X	-29		
410/2018		155	X				T-110	972	1	X	X	X	X	-29		
410/2018		1538	X				T-111	512	1	X	X	X	X	-29		
410/2018		1523	X				T-112	948	1	X	X	X	X	-29		
410/2018		1638	X				T-113	687	1	X	X	X	X	-29		
410/2018		1649	X				T-114	638	1	X	X	X	X	-29		
410/2018			X				T-115		1	X	X	X	X	-29		

Received by	Date/Time	Relinquished by	Date/Time
Received by	Date/Time	Relinquished by	Date/Time
Received by	Date/Time	Relinquished by	Date/Time
Received by Laboratory	Date/Time	Sample Shipped Via	Other
Remarks		UPS	FEDEX
		BUS	

CE Schmidt, Phyc Environmental Consultant

Chain of Custody Record

Form Serial Number: **GES-FI-02106**
 For Information Regarding These Samples Please Contact:

Client Name: **Air Resources Board**
Oilfield WW Emissions Assessment
 Project Manager: **Luis Leyva**
 916.823.1079
 Requested Completion Date: _____

Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

Client Address and Phone Number
1001 I Street
Sacramento, CA 95814 800-242-4450

Laboratory Name: **EAS**
 Laboratory Address: **173 Cross Street**
San Luis Obispo, CA 93401
 Laboratory Phone: **805-781-3585**
 Laboratory Contact: **Dr. Steve Hoyt**

Station Number	Date	Time	CG OR MA P B	Sample ID Number	Can ID Number	#	O F C O N T A I N E R	Analysis Requested				Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
								TO-14 FID (TNMHC)	TO-14 FID (Target List/Groups)	TO-15 (Target List)	ASTM D-1945 (CH4, CO2)			
	4/11/2018	801	X	T-201	171 141	1	X	X	X	X	X	-29		
	4/11/2018	813	X	T-202	173 1732	1	X	X	X	X	X	-29		
	4/11/2018	914	X	T-203	180 180	1	X	X	X	X	X	-29		
	4/11/2018	935	X	T-204	196 127	1	X	X	X	X	X	-29		
	4/11/2018	1113	X	T-205	138	1	X	X	X	X	X	-29		
	4/11/2018	1119	X	T-206	138	1	X	X	X	X	X	-29		
	4/11/2018	1123	X	T-207	138	1	X	X	X	X	X	-29		
	4/11/2018	1233	X	T-208	508	1	X	X	X	X	X	-29		
	4/11/2018	1336	X	T-209	670	1	X	X	X	X	X	-29		
	4/11/2018	1350	X	T-210	618	1	X	X	X	X	X	-29		
	4/11/2018		X	T-211		1	X	X	X	X	X			
	4/11/2018		X	T-212		1	X	X	X	X	X			
	4/11/2018		X	T-213		1	X	X	X	X	X			
	4/11/2018		X	T-214		1	X	X	X	X	X			
	4/11/2018		X	T-215		1	X	X	X	X	X			

Sampler: **CE SCHMIDT** Date/Time: **4/11/18 1400** Relinquished by: **CE SCHMIDT** Date/Time: **4/11/18 1400**
 Received by: **OKS** Date/Time: _____ Relinquished by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____

Receiver Laboratory: **HAZWRAP/NEESA Y N**
 Date/Time: **04/11/18 14:00**
 Sample Shipped Via: **UPS FEDEX BUS** Other: _____
 Remarks: **HAZWRAP/NEESA Y N**

Administrators Day 2

CE Schmidt, Ph., Environmental Consultant

Chain of Custody Record

Form Serial Number

Client Name

Air Resources Board

Official VWV Emissions Assessment

Luis Leyva

Requested Completion Date

Please Contact:
Dr. Charles E. Schmidt
19200 Live Oak Road, Red Bluff, CA 95080
530-529-4295
E-Mail: SCHMIDTCE@aol.com

Client Address and Phone Number

1001 I Street
Sacramento, CA 95814 800-242-4450

Laboratory Name

BC Laboratories

Laboratory Address

4400 Atlas Court
Bakersfield, CA 93308

Laboratory Phone

681-327-4911

Laboratory Contact

Ms. Kertie Vaughn

Kertie.vaughan@bclabs.com

Remarks

Analysis Requested
USEPA Method 8260b
USEPA Method 1664

Station Number	Date	Time	C/G O/R M/A P/B	Sample ID Number	#	Sample Container		Analysis Requested	Laboratory Name
						S	R		
4/10/2018	7:52		X	V-101 a/b/c	3	X		USEPA Method 8260b	
4/10/2018	7:55		X	V-102 a/b/c	3	X		USEPA Method 1664	
4/10/2018	9:00		X	V-103 a/b/c	3	X			
4/10/2018	9:05		X	V-104 a/b/c	3	X			
4/10/2018	10:10		X	V-105 a/b/c	3	X			
4/10/2018	10:15		X	V-106 a/b/c	3	X			
4/10/2018	11:15		X	V-107 a/b/c	3	X			No Preservation in this sample
4/10/2018	13:05		X	V-108 a/b/c	3	X			
4/10/2018	14:00		X	V-109 a/b/c	3	X			
4/10/2018	15:00		X	V-110 a/b/c	3	X			
4/10/2018	15:00		X	V-111 a/b/c	3	X			
4/10/2018	15:05		X	V-112 a/b/c	3	X			
4/10/2018	16:15		X	V-113 a/b/c	3	X			
4/10/2018	16:25		X	V-114 a/b/c	3	X			
4/10/2018			X	V-115 a/b/c	3	X			

Sampler
Reviewed by
Date/Time

4/10/18 18:00

Relinquished by

4/10/18

HAZWAP/NEESA Y N
OC Level 1 2 3
COC
Airt Seal
Sample Condition

Received by
Date/Time

4/10/18 18:00

Relinquished by

4/10/18

HAZWAP/NEESA Y N
OC Level 1 2 3
COC
Airt Seal
Sample Condition

Received by Laboratory
Date/Time

4/10/18 18:00

Sample Shipped Via
UPS FEDEX BUS Other

4/10/18

HAZWAP/NEESA Y N
OC Level 1 2 3
COC
Airt Seal
Sample Condition

CE Schmidt, Ph.D., Environmental Consultant
Chain of Custody Record

164 DAY

Form Serial Number
 CES F-02106

For Information Regarding These Samples
 Please Contact:

Client Name
 Air Resources Board
 Oilfield Ww Emissions Assessment
 Project Manager
 Luis Leyva
 916.323.1079
 Requested Completion Date

Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96090
 530.529.4255
 E-Mail: SCHMIDT.CE@aol.com

Client Address and Phone Number
 1001 J Street
 Sacramento, CA 95814 800-242-4450

Laboratory Name
 BC Laboratories

Laboratory Address
 4100 Alvar Court
 Bakerfield, CA 93308
 Laboratory Phone
 661-327-4911

Laboratory Contact
 Ms. Kerrie Vaughn
 Kerrie.vaughn@bc labs.com

Station Number	Date	Time	C O G			Sample ID Number	# O F			Sample Container	Val	Lbr	Tube	USEPA Method 8260b		USEPA Method 1664		Analysis Requested	Remarks
			M	A	P		S	A	N					E	R				

	4/10/2018	2:12	X			J-101				X									
	4/10/2018	7:55	X			J-102				X									
	4/10/2018	9:00	X			J-103				X									
	4/10/2018	9:25	X			J-104				X									
	4/10/2018	10:10	X			J-105				X									
	4/10/2018	10:25	X			J-106				X									
	4/10/2018	11:15	X			J-107				X									
	4/10/2018	1:35	X			J-108				X									
	4/10/2018	1:50	X			J-109				X									
	4/10/2018	1:50	X			J-110				X									
	4/10/2018	1:50	X			J-111				X									
	4/10/2018	1:50	X			J-112				X									
	4/10/2018	1:45	X			J-113				X									
	4/10/2018	1:25	X			J-114				X									
	4/10/2018		X			J-115				X									

Sampler: AS SAM101 Date/Time: 4/10/18 1800 Relinquished by: AS SAM101 Date/Time: 4/10/18 1800
 HAZWOPER/NIOSH Y N
 CG Level: 1 2 3
 COC
 Anti-Red
 Cust Seal
 Sample Condition

Received by: [Signature] Date/Time: 4/10/18 1800 Relinquished by: AS SAM101 Date/Time: 4/10/18 1800
 Received by Laboratory: [Signature] Date/Time: 4/10/18 1800 Sample Shipped Via: UPS - FEDEX BUS Other: Other

Remarks: All Samples are in Masterwater Matrix

CE Schmidt, Ph.D., Environmental Consultant

Chain of Custody Record

Form Serial Number
CES F1-02106

For Information Regarding These Samples
Please Contact:

Client Name
Air Resources Board
Office: **WW Emissions Assessment**
Project Manager
Luis Leyva
916-322-1079
Requested Completion Date

Dr. Charles E. Schmidt
19200 Live Oak Road, Red Bluff, CA 96086
930-529-4256
E-Mail: SCHMIDCE@aol.com

Client Address and Phone Number
1001 J Street
Sacramento, CA 95814 800-242-4450

Analysis Requested
USEPA Method 8280b
USEPA Method 1664

Laboratory Name
BC Laboratories
Laboratory Address
4100 Alisa Court
Bakersfield, CA 93308
Laboratory Phone
661-327-4911

Laboratory Contact
Mrs. Kerrie Vaughn
Kerrie.Vaughn@bc labs.com

Station Number	Date	Time	C/G O/R M/A	P	Sample ID Number	#	D	O	F	N	I	A	T	T	A	I	N	E	R	Sample Container		Analysis Requested	Remarks	
																				Vial	Jar			Tube
	4/11/2018	7:55	X		J - 201	1															X			
	4/11/2018	8:05	X		J - 202	1															X			
	4/11/2018	8:55	X		J - 203	1															X			
	4/11/2018	9:25	X		J - 204	1															X			
	4/11/2018	10:50	X		J - 205	1															X			
	4/11/2018	11:10	X		J - 206	1															X			
	4/11/2018	11:10	X		J - 207	1															X			
	4/11/2018	12:15	X		J - 208	1															X			
	4/11/2018	13:00	X		J - 209	1															X			
	4/11/2018	13:50	X		J - 210	1															X			
	4/11/2018		X		J - 211	1															X			
	4/11/2018		X		J - 212	1															X			
	4/11/2018		X		J - 213	1															X			
	4/11/2018		X		J - 214	1															X			
	4/11/2018		X		J - 215	1															X			
Sampler																								
Retrieved by	<i>CE Schmidt</i>	Date/Time			4/11/18 14:02																			
Retrieved by	<i>K. Leyva</i>	Date/Time			4/11/18 15:00																			
Retrieved by Laboratory	<i>K. Leyva</i>	Date/Time			4/11/18 15:00																			
Remarks	All Samples are in a Wastewater Matrix																							

Attachment 3
Laboratory Reports

Laboratory Report

Project Name:

CARB Project

EAS SDG Number: **218205**

Task:

Client Project Manager: Chuck Schmidt

Prepared For:

C.E. Schmidt

19200 Live Oak Road

Red Bluff

CA 96080

Project Number: 17198

Sample Event Date: 04/10/18 & 04/11/18

Received Date: 4/11/2018

Report Date: 4/27/2018

Project Number: None Given

PO Number: None Given

This is the Laboratory Report for the samples in the indicated Sample Delivery Group (SDG). Each sample received in the group is assigned a Laboratory ID number. The combination of the SDG number and the Lab ID number is a unique identifier for the sample.

This Report Contains:

Laboratory Work Order

Project Sample Media

Laboratory Case Narrative and Chain of Custody

Method Description (when applicable)

Quality Control Reports

Analytical Reports

NELAC Certification: Florida E871125

173 Cross Street, San Luis Obispo, CA 93401 (805) 781-3585

Laboratory Work Order

SDG Number: 218205

Project Number: 17198

Client: Chuck Schmidt

Received: 4/11/2018

CE Schmidt

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T-101	218205 1	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-101	218205 1	EPA TO-14 DHA with TNMHC	4/10/2018
T-101	218205 1	EPA TO-15 VOC + TIC	4/10/2018
T-101	218205 1	ASTM D1945 Carbon Dioxide	4/10/2018
T-102	218205 2	ASTM D1945 Carbon Dioxide	4/10/2018
T-102	218205 2	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-102	218205 2	EPA TO-14 DHA with TNMHC	4/10/2018
T-102	218205 2	EPA TO-15 VOC + TIC	4/10/2018
T-103	218205 3	ASTM D1945 Carbon Dioxide	4/10/2018
T-103	218205 3	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-103	218205 3	EPA TO-14 DHA with TNMHC	4/10/2018
T-103	218205 3	EPA TO-15 VOC + TIC	4/10/2018
T-104	218205 4	ASTM D1945 Carbon Dioxide	4/10/2018
T-104	218205 4	EPA TO-15 VOC + TIC	4/10/2018
T-104	218205 4	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-104	218205 4	EPA TO-14 DHA with TNMHC	4/10/2018
T-105	218205 5	ASTM D1945 Carbon Dioxide	4/10/2018
T-105	218205 5	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-105	218205 5	EPA TO-14 DHA with TNMHC	4/10/2018
T-105	218205 5	EPA TO-15 VOC + TIC	4/10/2018
T-106	218205 6	ASTM D1945 Carbon Dioxide	4/10/2018
T-106	218205 6	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-106	218205 6	EPA TO-14 DHA with TNMHC	4/10/2018

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T-106	218205 6	EPA TO-15 VOC + TIC	4/10/2018
T-107	218205 7	EPA TO-14 DHA with TNMHC	4/10/2018
T-107	218205 7	EPA TO-15 VOC + TIC	4/10/2018
T-107	218205 7	ASTM D1945 Carbon Dioxide	4/10/2018
T-107	218205 7	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-108	218205 8	ASTM D1945 Carbon Dioxide	4/10/2018
T-108	218205 8	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-108	218205 8	EPA TO-14 DHA with TNMHC	4/10/2018
T-108	218205 8	EPA TO-15 VOC + TIC	4/10/2018
T-109	218205 9	ASTM D1945 Carbon Dioxide	4/10/2018
T-109	218205 9	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-109	218205 9	EPA TO-14 DHA with TNMHC	4/10/2018
T-109	218205 9	EPA TO-15 VOC + TIC	4/10/2018
T-110	218205 10	ASTM D1945 Carbon Dioxide	4/10/2018
T-110	218205 10	EPA TO-15 VOC + TIC	4/10/2018
T-110	218205 10	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-110	218205 10	EPA TO-14 DHA with TNMHC	4/10/2018
T-111	218205 11	ASTM D1945 Carbon Dioxide	4/10/2018
T-111	218205 11	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-111	218205 11	EPA TO-14 DHA with TNMHC	4/10/2018
T-111	218205 11	EPA TO-15 VOC + TIC	4/10/2018
T-112	218205 12	EPA TO-14 DHA with TNMHC	4/10/2018
T-112	218205 12	ASTM D1945 Carbon Dioxide	4/10/2018
T-112	218205 12	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-112	218205 12	EPA TO-15 VOC + TIC	4/10/2018
T-113	218205 13	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-113	218205 13	EPA TO-14 DHA with TNMHC	4/10/2018
T-113	218205 13	EPA TO-15 VOC + TIC	4/10/2018
T-113	218205 13	ASTM D1945 Carbon Dioxide	4/10/2018
T-114	218205 14	ASTM D1945 Carbon Dioxide	4/10/2018

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T-114	218205 14	ASTM D3416 Methane, MDL 0.5 ppmv	4/10/2018
T-114	218205 14	EPA TO-14 DHA with TNMHC	4/10/2018
T-114	218205 14	EPA TO-15 VOC + TIC	4/10/2018
T-201	218205 15	ASTM D1945 Carbon Dioxide	4/11/2018
T-201	218205 15	ASTM D3416 Methane, MDL 0.5 ppmv	4/11/2018
T-201	218205 15	EPA TO-14 DHA with TNMHC	4/11/2018
T-201	218205 15	EPA TO-15 VOC + TIC	4/11/2018
T-202	218205 16	ASTM D1945 Carbon Dioxide	4/11/2018
T-202	218205 16	EPA TO-15 VOC + TIC	4/11/2018
T-202	218205 16	ASTM D3416 Methane, MDL 0.5 ppmv	4/11/2018
T-202	218205 16	EPA TO-14 DHA with TNMHC	4/11/2018
T-203	218205 17	ASTM D1945 Carbon Dioxide	4/11/2018
T-203	218205 17	ASTM D3416 Methane, MDL 0.5 ppmv	4/11/2018
T-203	218205 17	EPA TO-14 DHA with TNMHC	4/11/2018
T-203	218205 17	EPA TO-15 VOC + TIC	4/11/2018
T-204	218205 18	EPA TO-15 VOC + TIC	4/11/2018
T-204	218205 18	ASTM D1945 Carbon Dioxide	4/11/2018
T-204	218205 18	ASTM D3416 Methane, MDL 0.5 ppmv	4/11/2018
T-204	218205 18	EPA TO-14 DHA with TNMHC	4/11/2018
T-205	218205 19	EPA TO-15 VOC + TIC	4/11/2018
T-205	218205 19	EPA TO-14 DHA with TNMHC	4/11/2018
T-205	218205 19	ASTM D1945 Carbon Dioxide	4/11/2018
T-205	218205 19	ASTM D3416 Methane, MDL 0.5 ppmv	4/11/2018
T-206	218205 20	ASTM D1945 Carbon Dioxide	4/11/2018
T-206	218205 20	ASTM D3416 Methane, MDL 0.5 ppmv	4/11/2018
T-206	218205 20	EPA TO-14 DHA with TNMHC	4/11/2018
T-206	218205 20	EPA TO-15 VOC + TIC	4/11/2018
T-207	218205 21	ASTM D1945 Carbon Dioxide	4/11/2018
T-207	218205 21	ASTM D3416 Methane, MDL 0.5 ppmv	4/11/2018
T-207	218205 21	EPA TO-14 DHA with TNMHC	4/11/2018

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T-207	218205 21	EPA TO-15 VOC + TIC	4/11/2018
T-208	218205 22	ASTM D1945 Carbon Dioxide	4/11/2018
T-208	218205 22	EPA TO-15 VOC + TIC	4/11/2018
T-208	218205 22	ASTM D3416 Methane, MDL 0.5 ppmv	4/11/2018
T-208	218205 22	EPA TO-14 DHA with TNMHC	4/11/2018
T-209	218205 23	ASTM D1945 Carbon Dioxide	4/11/2018
T-209	218205 23	ASTM D3416 Methane, MDL 0.5 ppmv	4/11/2018
T-209	218205 23	EPA TO-14 DHA with TNMHC	4/11/2018
T-209	218205 23	EPA TO-15 VOC + TIC	4/11/2018
T-210	218205 24	EPA TO-15 VOC + TIC	4/11/2018
T-210	218205 24	ASTM D1945 Carbon Dioxide	4/11/2018
T-210	218205 24	ASTM D3416 Methane, MDL 0.5 ppmv	4/11/2018
T-210	218205 24	EPA TO-14 DHA with TNMHC	4/11/2018

Project Sample Media

SDG Number: 218205

The following sample media was used for this Sample Delivery Group (SDG). The Sample Media column identifies the type of media. For canisters, the Sample Media Batch gives the canister number followed by the cleaning batch number, which is a unique identification. Canisters that are received with sub-ambient pressures are pressurized to about 5 psig. The initial pressure of the canister when it is received is recorded along with the final pressure after pressurization. The canister dilution factor is the ratio of the final to initial pressure. The results are adjusted for the can dilution factor.

SDG	Lab ID	Client Sample No.	Sample		Pressure, torr		Can Factor
			Media	Batch	Initial	Final	
218205	1	T-101	777	031518C	727	899	1.24
218205	2	T-102	692	031518C	730	901	1.23
218205	3	T-103	755	031518C	721	902	1.25
218205	4	T-104	631	031518C	702	901	1.28
218205	5	T-105	759	031918B	709	900	1.27
218205	6	T-106	778	031918B	712	902	1.27
218205	7	T-107	511	031918B	704	901	1.28
218205	8	T-108	884	031918B	696	901	1.29
218205	9	T-109	783	031918B	677	900	1.33
218205	10	T-110	772	031918B	681	901	1.32
218205	11	T-111	512	031918B	681	901	1.32
218205	12	T-112	548	031918B	686	900	1.31
218205	13	T-113	687	031518B	683	900	1.32
218205	14	T-114	638	031518B	777	900	1.16
218205	15	T-201	791	031518B	741	901	1.22
218205	16	T-202	732	031518B	739	902	1.22
218205	17	T-203	882	031518B	730	900	1.23
218205	18	T-204	696	031518B	687	902	1.31
218205	19	T-205	627	032118A	716	900	1.26
218205	20	T-206	838	032118A	710	903	1.27
218205	21	T-207	886	032118A	712	903	1.27
218205	22	T-208	508	032118A	725	901	1.24
218205	23	T-209	690	032118A	713	903	1.27
218205	24	T-210	618	032118A	1086	1086	1.00

Laboratory Case Narrative

EAS SDG Number: 218205

Project Number: 17198

Client: CE Schmidt

The Laboratory Case Narrative for the SDG is below. The Chain of Custody form(s) follow the Laboratory Case Narrative.

Sample Control Narrative

The samples were all received in good condition and with proper preservation.

Analytical Methods

The methods used for sample analysis are listed on the Analytical Report header, and have been modified as described in the EAS Quality Manual..

Case Narrative

QC Narrative

All analyses met EAS method criteria as defined in the Quality Manual, except as noted in the report or QC reports with data qualifiers.

Subcontract Narrative

No sample analysis was subcontracted for this project

Laboratory Certification

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness other than the condition(s) noted above. The Laboratory Report is property of EAS and its client. The entire report has been reviewed and approved.



Date Approved: 4/27/2018

Steven D. Hoyt, Ph.D.
Environmental Analytical Service
Laboratory Director

Quality Control Report

EAS SDG Number 218205

Project Number: 17198

QC Narrative

Samples were analyzed in a daily analytical batch (DAB) designated by a QC batch number, and were analyzed using EAS standard laboratory QC specified in the EAS Quality Manual which may be different than the referenced agency method. Any deviations from the EAS QC criteria are flagged in the Laboratory Control Reports or in the sample Analytical Reports.

Standard Laboratory QC Report

Unless project specific QC was requested, this Section containing the standard laboratory QC (Level 2) supplied with the Analytical Reports. Each sample is analyzed in a Daily Analytical Batch (DAB) which includes the method blank, a laboratory control spike (LCS) and a laboratory control duplicate (LCD). A Daily Analytical Batch QC report is supplied for each method requested.

Method Blank

A method blank is a laboratory generated sample which assesses the degree to which laboratory operations and procedures cause a false positive. In the method blank, compounds should be present below the reporting limit (RL). Compounds present above the RL are flagged with a "B" in the Analytical Reports in that batch unless the result is greater than ten times the blank value..

Laboratory Control Spike

A laboratory control spike is a well characterized matrix similar to the sample which is spiked and run in duplicate with each Daily Analytical Batch. The laboratory control spike results are reported as a percent recovery. The QC Criteria for the control spike is listed in the Laboratory Control Report. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report. The control spike contains an abbreviated list of compounds in the method, and may contain compounds not on the target list for the specified report.

Laboratory Control Duplicate

The laboratory control duplicate is a duplicate analysis of the laboratory control spike, a standard, or a sample depending on the method. The results are reported as a relative percent difference (RPD). The criteria for the duplicate is in the Laboratory Control Report for the Daily Analytical Batch. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report.

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B04198

File Name: B04198D.D
Description: METHOD BLANK
Canister:
QC_Batch: 041918-MA1

Date Sampled:
Date Analyzed: 04/19/18
Can Dilution Factor: 1.00
Air Volume: 200 ml
Time:
Time: 16:43

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	ND	0.80	4.05	ND	
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	102	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B04208

File Name: B04208C.D
Description: METHOD BLANK
Canister:
QC_Batch: 042018-MA1

Date Sampled:
Date Analyzed: 04/20/18
Can Dilution Factor: 1.00
Air Volume: 200 ml
Time: 13:11

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	ND	0.80	4.05	ND	
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	104	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC

Analytical Method: TO-15

Laboratory ID: B04248

File Name: B04248C.D
Description: METHOD BLANK
Canister:
QC_Batch: 042418-MA1

Date Sampled:
Date Analyzed: 04/24/18
Can Dilution Factor: 1.00
Air Volume: 100 ml
Time:
Time: 14:00

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.50	2.52	ND	2.47	12.43	ND	
74-87-3	Chloromethane	0.50	2.52	ND	1.03	5.19	ND	
76-14-2	Freon 114	0.50	2.52	ND	3.49	17.57	ND	
75-01-4	Vinyl chloride	0.50	2.52	ND	1.28	6.43	ND	
106-99-0	1,3-Butadiene	0.50	2.52	ND	1.11	5.56	ND	
74-83-9	Bromomethane	0.50	2.52	ND	1.94	9.76	ND	
75-00-3	Chloroethane	0.50	2.52	ND	1.32	6.63	ND	
64-17-5	Ethanol	2.50	7.50	ND	4.71	14.13	ND	
75-69-4	Trichlorofluoromethane	0.50	2.40	ND	2.81	13.49	ND	
67-64-1	Acetone	2.50	6.15	ND	5.94	14.61	ND	
67-63-0	2-propanol	2.50	5.74	ND	6.14	14.10	ND	
75-35-4	1,1-Dichloroethene	0.50	2.48	ND	1.98	9.82	ND	
76-13-1	Freon 113	0.50	2.39	ND	3.83	18.33	ND	
75-09-2	Dichloromethane	1.00	2.41	ND	3.47	8.36	ND	
75-15-0	Carbon disulfide	2.50	4.64	ND	7.78	14.43	ND	
156-60-5	trans-1,2-Dichloroethene	0.50	1.81	ND	1.98	7.15	ND	
1634-04-4	Methyl tert butyl ether	0.50	1.84	ND	1.80	6.64	ND	
75-34-3	1,1-Dichloroethane	0.50	2.49	ND	2.02	10.09	ND	
108-05-4	Vinyl acetate	0.50	2.20	ND	1.76	7.73	ND	
78-93-3	2-Butanone	2.00	5.09	ND	5.89	15.00	ND	
141-78-6	Ethyl acetate	1.00	2.19	ND	3.60	7.89	ND	
74-97-5	Bromochloromethane	0.50	1.33	ND	2.64	7.04	ND	
109-99-9	Tetrahydrofuran	1.00	2.52	ND	2.95	7.41	ND	
156-59-2	cis-1,2-Dichloroethene	1.00	2.69	ND	3.96	10.66	ND	
67-66-3	Chloroform	0.50	2.51	ND	2.44	12.24	ND	
71-55-6	1,1,1-Trichloroethane	0.50	2.22	ND	2.73	12.11	ND	
107-06-2	1,2-Dichloroethane	0.50	2.28	ND	2.02	9.23	ND	
110-82-7	Cyclohexane	0.50	1.92	ND	1.73	6.61	ND	
71-43-2	Benzene	0.50	2.54	ND	1.60	8.11	ND	
56-23-5	Carbon tetrachloride	0.50	2.37	ND	3.14	14.90	ND	
142-82-5	n-Heptane	2.50	6.06	ND	10.24	24.82	ND	
78-87-5	1,2-Dichloropropane	0.50	2.41	ND	2.31	11.12	ND	
123-91-1	1,4 Dioxane	2.00	4.09	ND	7.20	14.73	ND	
79-01-6	Trichloroethene	0.30	2.33	ND	1.61	12.51	ND	
75-27-4	Bromodichloromethane	0.50	1.01	ND	3.35	6.76	ND	
80-62-6	Methyl methacrylate	2.00	6.76	ND	8.18	27.66	ND	
108-10-1	4-Methyl-2-pentanone	2.00	7.57	ND	8.19	31.01	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.50	2.59	ND	2.27	11.76	ND	
108-88-3	Toluene	1.00	2.61	ND	3.76	9.83	ND	
10061-02-6	trans-1,3-Dichloropropene	0.50	2.59	ND	2.27	11.77	ND	
79-00-5	1,1,2-Trichloroethane	0.50	2.57	ND	2.73	14.02	ND	
591-78-6	2-Hexanone	2.50	7.09	ND	10.24	29.04	ND	
124-48-1	Dibromochloromethane	0.50	1.00	ND	4.26	8.50	ND	
106-93-4	1,2-Dibromoethane	0.50	1.21	ND	3.84	9.32	ND	
127-18-4	Tetrachloroethene	0.30	1.22	ND	2.03	8.25	ND	
108-90-7	Chlorobenzene	0.50	2.28	ND	2.30	10.47	ND	
100-41-4	Ethylbenzene	1.06	2.64	ND	4.59	11.47	ND	
1330-20-7	m,p-Xylenes	1.06	2.65	ND	4.60	11.50	ND	
100-42-5	Styrene	1.04	2.59	ND	4.41	11.03	ND	
75-25-2	Bromoform	0.50	0.67	ND	5.17	6.93	ND	
95-47-6	o-Xylene	1.03	2.58	ND	4.48	11.19	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.50	1.24	ND	3.40	8.49	ND	
622-96-8	4-Ethyltoluene	1.66	4.14	ND	8.14	20.36	ND	
108-67-8	1,3,5-Trimethylbenzene	1.03	2.58	ND	5.08	12.69	ND	
95-63-6	1,2,4-Trimethylbenzene	1.02	2.54	ND	4.99	12.49	ND	
541-73-1	1,3-Dichlorobenzene	1.00	1.85	ND	6.01	11.12	ND	
100-44-7	Benzyl chloride	1.00	6.06	ND	5.18	31.36	ND	
106-46-7	1,4-Dichlorobenzene	1.00	1.73	ND	6.01	10.40	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.62	ND	6.01	9.74	ND	
120-82-1	1,2,4-Trichlorobenzene	2.50	3.44	ND	18.54	25.51	ND	
91-20-3	Naphthalene	0.51	0.80	ND	2.67	4.19	ND	
87-68-3	Hexachlorobutadiene	2.50	2.65	ND	26.65	28.25	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	99	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC
Laboratory ID: B04258

File Name: B04258F.D
Description: METHOD BLANK
Canister:
QC_Batch: 042518-MA1

Date Sampled:
Date Analyzed: 04/25/18
Can Dilution Factor: 1.00
Air Volume: 100 ml
Time: 16:31

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.50	2.52	ND	2.47	12.43	ND	
74-87-3	Chloromethane	0.50	2.52	ND	1.03	5.19	ND	
76-14-2	Freon 114	0.50	2.52	ND	3.49	17.57	ND	
75-01-4	Vinyl chloride	0.50	2.52	ND	1.28	6.43	ND	
106-99-0	1,3-Butadiene	0.50	2.52	ND	1.11	5.56	ND	
74-83-9	Bromomethane	0.50	2.52	ND	1.94	9.76	ND	
75-00-3	Chloroethane	0.50	2.52	ND	1.32	6.63	ND	
64-17-5	Ethanol	2.50	7.50	ND	4.71	14.13	ND	
75-69-4	Trichlorofluoromethane	0.50	2.40	ND	2.81	13.49	ND	
67-64-1	Acetone	2.50	6.15	ND	5.94	14.61	ND	
67-63-0	2-propanol	2.50	5.74	ND	6.14	14.10	ND	
75-35-4	1,1-Dichloroethene	0.50	2.48	ND	1.98	9.82	ND	
76-13-1	Freon 113	0.50	2.39	ND	3.83	18.33	ND	
75-09-2	Dichloromethane	1.00	2.41	ND	3.47	8.36	ND	
75-15-0	Carbon disulfide	2.50	4.64	ND	7.78	14.43	ND	
156-60-5	trans-1,2-Dichloroethene	0.50	1.81	ND	1.98	7.15	ND	
1634-04-4	Methyl tert butyl ether	0.50	1.84	ND	1.80	6.64	ND	
75-34-3	1,1-Dichloroethane	0.50	2.49	ND	2.02	10.09	ND	
108-05-4	Vinyl acetate	0.50	2.20	ND	1.76	7.73	ND	
78-93-3	2-Butanone	2.00	5.09	ND	5.89	15.00	ND	
141-78-6	Ethyl acetate	1.00	2.19	ND	3.60	7.89	ND	
74-97-5	Bromochloromethane	0.50	1.33	ND	2.64	7.04	ND	
109-99-9	Tetrahydrofuran	1.00	2.52	ND	2.95	7.41	ND	
156-59-2	cis-1,2-Dichloroethene	1.00	2.69	ND	3.96	10.66	ND	
67-66-3	Chloroform	0.50	2.51	ND	2.44	12.24	ND	
71-55-6	1,1,1-Trichloroethane	0.50	2.22	ND	2.73	12.11	ND	
107-06-2	1,2-Dichloroethane	0.50	2.28	ND	2.02	9.23	ND	
110-82-7	Cyclohexane	0.50	1.92	ND	1.73	6.61	ND	
71-43-2	Benzene	0.50	2.54	ND	1.60	8.11	ND	
56-23-5	Carbon tetrachloride	0.50	2.37	ND	3.14	14.90	ND	
142-82-5	n-Heptane	2.50	6.06	ND	10.24	24.82	ND	
78-87-5	1,2-Dichloropropane	0.50	2.41	ND	2.31	11.12	ND	
123-91-1	1,4 Dioxane	2.00	4.09	ND	7.20	14.73	ND	
79-01-6	Trichloroethene	0.30	2.33	ND	1.61	12.51	ND	
75-27-4	Bromodichloromethane	0.50	1.01	ND	3.35	6.76	ND	
80-62-6	Methyl methacrylate	2.00	6.76	ND	8.18	27.66	ND	
108-10-1	4-Methyl-2-pentanone	2.00	7.57	ND	8.19	31.01	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.50	2.59	ND	2.27	11.76	ND	
108-88-3	Toluene	1.00	2.61	ND	3.76	9.83	ND	
10061-02-6	trans-1,3-Dichloropropene	0.50	2.59	ND	2.27	11.77	ND	
79-00-5	1,1,2-Trichloroethane	0.50	2.57	ND	2.73	14.02	ND	
591-78-6	2-Hexanone	2.50	7.09	ND	10.24	29.04	ND	
124-48-1	Dibromochloromethane	0.50	1.00	ND	4.26	8.50	ND	
106-93-4	1,2-Dibromoethane	0.50	1.21	ND	3.84	9.32	ND	
127-18-4	Tetrachloroethene	0.30	1.22	ND	2.03	8.25	ND	
108-90-7	Chlorobenzene	0.50	2.28	ND	2.30	10.47	ND	
100-41-4	Ethylbenzene	1.06	2.64	ND	4.59	11.47	ND	
1330-20-7	m,p-Xylenes	1.06	2.65	ND	4.60	11.50	ND	
100-42-5	Styrene	1.04	2.59	ND	4.41	11.03	ND	
75-25-2	Bromoform	0.50	0.67	ND	5.17	6.93	ND	
95-47-6	o-Xylene	1.03	2.58	ND	4.48	11.19	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.50	1.24	ND	3.40	8.49	ND	
622-96-8	4-Ethyltoluene	1.66	4.14	ND	8.14	20.36	ND	
108-67-8	1,3,5-Trimethylbenzene	1.03	2.58	ND	5.08	12.69	ND	
95-63-6	1,2,4-Trimethylbenzene	1.02	2.54	ND	4.99	12.49	ND	
541-73-1	1,3-Dichlorobenzene	1.00	1.85	ND	6.01	11.12	ND	
100-44-7	Benzyl chloride	1.00	6.06	ND	5.18	31.36	ND	
106-46-7	1,4-Dichlorobenzene	1.00	1.73	ND	6.01	10.40	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.62	ND	6.01	9.74	ND	
120-82-1	1,2,4-Trichlorobenzene	2.50	3.44	ND	18.54	25.51	ND	
91-20-3	Naphthalene	0.51	0.80	ND	2.67	4.19	ND	
87-68-3	Hexachlorobutadiene	2.50	2.65	ND	26.65	28.25	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	98	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B04268

File Name: B04268B.D
Description: METHOD BLANK
Canister:
QC_Batch: 042618-MA1

Date Sampled:
Date Analyzed: 04/26/18
Can Dilution Factor: 1.00
Air Volume: 200 ml
Time: 14:19

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	ND	0.80	4.05	ND	
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	109	70	130	

METHOD BLANK REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B04178

File Name: B04178B
Description: METHOD BLANK
Canister:
QC_Batch: 041718-GCK

Date Sampled:
Date Analyzed: 04/17/18
Can Factor: 1.00
Air Volume: 200 ml
Time: 13:10

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B04188

File Name: B04188B
Description: METHOD BLANK
Canister:
QC_Batch: 041818-GCK

Date Sampled:
Date Analyzed: 04/18/18
Can Factor: 1.00
Air Volume: 200 ml
Time: 11:59

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B04198

File Name: B04198B
Description: METHOD BLANK
Canister:
QC_Batch: 041918-GCK

Date Sampled:
Date Analyzed: 04/19/18
Can Factor: 1.00
Air Volume: 200 ml
Time: 12:17

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B04268

File Name: B04268A
Description: METHOD BLANK
Canister:
QC_Batch: 042618-GCK

Date Sampled:
Date Analyzed: 04/26/18
Can Factor: 1.00
Air Volume: 200 ml
Time: 13:36

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: LABQC

Laboratory Number: B04138A

File Name: B04138A

Date Sampled:

Time:

Description: METHOD BLANK

Date Analyzed: 04/13/18

Time: 17:33

Can/Tube#:

Can Dilution Factor: 1.00

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	100	300	ND	ND

METHOD BLANK REPORT

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: LABQC

Laboratory Number: B04168

File Name: B04168D

Date Sampled:

Time:

Description: METHOD BLANK

Date Analyzed: 04/16/18

Time: 17:47

Can/Tube#:

Can Dilution Factor: 1.00

QC_Batch: 041618-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	100	300	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: LABQC
Laboratory Number: B04178

File Name: B04178A
Description: METHOD BLANK
Can/Tube#:
QC_Batch: 041718-GCL

Date Sampled:
Date Analyzed: 04/17/18
Dilution Factor: 1.00
Time: 11:26

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.10	0.30	ND	0.07	0.20	ND	

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 041918-MA1

Date: 04/19/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	Flag
75-01-4	Vinyl chloride	98		107		70	130	9	25	
75-35-4	1,1-Dichloroethene	100		108		70	130	7	25	
75-09-2	Dichloromethane	97		102		70	130	4	25	
75-34-3	1,1-Dichloroethane	95		104		70	130	9	25	
67-66-3	Chloroform	97		103		70	130	7	25	
71-55-6	1,1,1-Trichloroethane	96		97		70	130	1	25	
107-06-2	1,2-Dichloroethane	97		99		70	130	1	25	
71-43-2	Benzene	109		106		70	130	3	25	
56-23-5	Carbon tetrachloride	121		110		70	130	10	25	
79-01-6	Trichloroethene	96		96		70	130	0	25	
108-88-3	Toluene	98		96		70	130	3	25	
127-18-4	Tetrachloroethene	99		95		70	130	4	25	
100-41-4	Ethylbenzene	97		105		70	130	8	25	
1330-20-7	m,p-Xylenes	99		104		70	130	5	25	
95-47-6	o-Xylene	102		103		70	130	1	25	
108-67-8	1,3,5-Trimethylbenzene	98		98		70	130	0	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 042018-MA1

Date: 04/20/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	Flag
75-01-4	Vinyl chloride	90		105		70	130	16	25	
75-35-4	1,1-Dichloroethene	103		108		70	130	5	25	
75-09-2	Dichloromethane	103		107		70	130	4	25	
75-34-3	1,1-Dichloroethane	103		109		70	130	5	25	
67-66-3	Chloroform	103		108		70	130	5	25	
71-55-6	1,1,1-Trichloroethane	98		100		70	130	1	25	
107-06-2	1,2-Dichloroethane	97		98		70	130	1	25	
71-43-2	Benzene	105		104		70	130	1	25	
56-23-5	Carbon tetrachloride	106		106		70	130	0	25	
79-01-6	Trichloroethene	95		97		70	130	2	25	
108-88-3	Toluene	97		101		70	130	4	25	
127-18-4	Tetrachloroethene	92		90		70	130	2	25	
100-41-4	Ethylbenzene	105		106		70	130	1	25	
1330-20-7	m,p-Xylenes	104		109		70	130	5	25	
95-47-6	o-Xylene	103		107		70	130	4	25	
108-67-8	1,3,5-Trimethylbenzene	98		99		70	130	2	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 042418-MA1

Date: 04/24/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate	
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %
75-01-4	Vinyl chloride	102		104		70	130	2	25
75-35-4	1,1-Dichloroethene	109		112		70	130	3	25
75-09-2	Dichloromethane	109		112		70	130	3	25
75-34-3	1,1-Dichloroethane	112		111		70	130	1	25
67-66-3	Chloroform	112		107		70	130	4	25
71-55-6	1,1,1-Trichloroethane	103		103		70	130	0	25
107-06-2	1,2-Dichloroethane	106		107		70	130	1	25
71-43-2	Benzene	110		109		70	130	1	25
56-23-5	Carbon tetrachloride	116		103		70	130	12	25
79-01-6	Trichloroethene	103		100		70	130	3	25
108-88-3	Toluene	104		103		70	130	1	25
127-18-4	Tetrachloroethene	98		95		70	130	3	25
100-41-4	Ethylbenzene	116		110		70	130	6	25
1330-20-7	m,p-Xylenes	115		109		70	130	6	25
95-47-6	o-Xylene	116		110		70	130	5	25
108-67-8	1,3,5-Trimethylbenzene	114		107		70	130	6	25

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 042518-MA1

Date: 04/25/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
75-01-4	Vinyl chloride	97		110		70	130	12	25	
75-35-4	1,1-Dichloroethene	111		123		70	130	10	25	
75-09-2	Dichloromethane	108		115		70	130	6	25	
75-34-3	1,1-Dichloroethane	109		115		70	130	5	25	
67-66-3	Chloroform	100		110		70	130	10	25	
71-55-6	1,1,1-Trichloroethane	103		99		70	130	5	25	
107-06-2	1,2-Dichloroethane	102		102		70	130	1	25	
71-43-2	Benzene	110		107		70	130	3	25	
56-23-5	Carbon tetrachloride	112		104		70	130	8	25	
79-01-6	Trichloroethene	101		96		70	130	5	25	
108-88-3	Toluene	99		96		70	130	4	25	
127-18-4	Tetrachloroethene	105		92		70	130	13	25	
100-41-4	Ethylbenzene	102		98		70	130	3	25	
1330-20-7	m,p-Xylenes	102		97		70	130	5	25	
95-47-6	o-Xylene	98		96		70	130	2	25	
108-67-8	1,3,5-Trimethylbenzene	97		97		70	130	0	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 042618-MA1

Date: 04/26/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	Flag
75-01-4	Vinyl chloride	128		107		70	130	18	25	
75-35-4	1,1-Dichloroethene	113		109		70	130	3	25	
75-09-2	Dichloromethane	106		105		70	130	0	25	
75-34-3	1,1-Dichloroethane	109		106		70	130	3	25	
67-66-3	Chloroform	109		103		70	130	5	25	
71-55-6	1,1,1-Trichloroethane	90		97		70	130	8	25	
107-06-2	1,2-Dichloroethane	102		103		70	130	1	25	
71-43-2	Benzene	99		101		70	130	2	25	
56-23-5	Carbon tetrachloride	102		104		70	130	2	25	
79-01-6	Trichloroethene	97		97		70	130	1	25	
108-88-3	Toluene	101		97		70	130	4	25	
127-18-4	Tetrachloroethene	99		93		70	130	7	25	
100-41-4	Ethylbenzene	99		91		70	130	9	25	
1330-20-7	m,p-Xylenes	98		91		70	130	7	25	
95-47-6	o-Xylene	98		90		70	130	9	25	
108-67-8	1,3,5-Trimethylbenzene	94		89		70	130	6	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 041718-GCK

Date: 04/17/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	Flag
		%		%		%	%	%	%	
109-66-0	n-Pentane	122		103		70	130	20	25	
110-54-3	n-Hexane	124		105		70	130	19	25	
71-43-2	Benzene	100		102		70	130	2	25	
142-82-5	n-Heptane	101		101		70	130	0	25	
108-88-3	Toluene	97		100		70	130	3	25	
111-65-9	n-Octane	97		102		70	130	5	25	
108-38-3	m,p-xylene	86		103		70	130	16	25	
95-47-6	o-xylene	90		103		70	130	13	25	
108-67-8	1,3,5-Trimethylbenzene	84		103		70	130	19	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 041818-GCK

Date: 04/18/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	Flag
		%		%		%	%	%	%	
109-66-0	n-Pentane	114		104		70	130	10	25	
110-54-3	n-Hexane	92		90		70	130	2	25	
71-43-2	Benzene	92		91		70	130	1	25	
142-82-5	n-Heptane	93		93		70	130	1	25	
108-88-3	Toluene	81		81		70	130	0	25	
111-65-9	n-Octane	88		89		70	130	1	25	
108-38-3	m,p-xylene	80		87		70	130	7	25	
95-47-6	o-xylene	82		92		70	130	10	25	
108-67-8	1,3,5-Trimethylbenzene	77		93		70	130	15	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 041918-GCK

Date: 04/19/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate	
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit
		%		%		%	%	%	Flag
109-66-0	n-Pentane	105		99		70	130	5	25
110-54-3	n-Hexane	91		87		70	130	5	25
71-43-2	Benzene	92		90		70	130	3	25
142-82-5	n-Heptane	94		94		70	130	0	25
108-88-3	Toluene	83		85		70	130	2	25
111-65-9	n-Octane	89		99		70	130	9	25
108-38-3	m,p-xylene	85		90		70	130	4	25
95-47-6	o-xylene	88		95		70	130	7	25
108-67-8	1,3,5-Trimethylbenzene	84		95		70	130	11	25

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-03 Modified GC/FID

QC_Batch: 042618-GCK

Date: 04/26/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
109-66-0	n-Pentane	103		108		70	130	5	25	
110-54-3	n-Hexane	111		94		70	130	17	25	
71-43-2	Benzene	104		103		70	130	1	25	
142-82-5	n-Heptane	99		98		70	130	1	25	
108-88-3	Toluene	94		101		70	130	7	25	
111-65-9	n-Octane	97		101		70	130	3	25	
108-38-3	m,p-xylene	93		102		70	130	9	25	
95-47-6	o-xylene	92		101		70	130	9	25	
108-67-8	1,3,5-Trimethylbenzene	85		93		70	130	9	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL REPORT

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D 1945 GC/TCD

Analytical Method: D1945

QC_Batch: 041318-GCO

Date Analyzed: 04/13/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	Flag
7782-44-7	Oxygen	91		92		70	130	1	25	
7727-37-9	Nitrogen	85		84		70	130	1	25	
74-82-8	Methane	111		110		70	130	1	25	
630-08-0	Carbon Monoxide	92		91		70	130	1	25	
124-38-9	Carbon Dioxide	101		101		70	130	0	25	

QUALITY CONTROL REPORT

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D 1945 GC/TCD

Analytical Method: D1945

QC_Batch: 041618-GCO

Date Analyzed: 04/16/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
7782-44-7	Oxygen	96		97		70	130	2	25	
7727-37-9	Nitrogen	83		83		70	130	0	25	
74-82-8	Methane	107		107		70	130	1	25	
630-08-0	Carbon Monoxide	90		89		70	130	1	25	
124-38-9	Carbon Dioxide	101		100		70	130	0	25	

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D3416 Methane by GC/FID

Analytical Method: ASTM D3416

Date: 04/17/18

QC_Batch: 041718-GCL

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
74-82-8	Methane	96		99		70	130	3	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

Analytical Reports

EAS SDG Number 218205

Project Number: 17198

The following pages contain the certified Analytical Reports for the samples submitted in the Sample Delivery Group (SDG) and are in order of the EAS Lab ID number. All of the analytical methods used are modifications of the published methods. Procedural method modifications are listed in the method descriptions, and the QC modifications are in the QC Criteria table in the EAS Quality Manual.

The Analytical Report has columns for the method detection limit (MDL), the reporting limit (RL), and the Amount. The Amount is the concentration of the compound in the sample. The report usually has the results reported with two commonly used units. The MDL, RL, and Amount are adjusted for the canister dilution factor and any dilution caused by sample matrix effects.

DETECTION LIMITS

MDL: The MDL is initially determined from the standard deviation of seven replicate measurements, but the value in the report is set from a MDL verification sample run at a level near the calculated MDL.

RL: The reporting limit (RL) is usually the lowest concentration standard on the calibration curve, and represents the lowest concentration that can be measured that will meet all of the QC Criteria for the method.

DATA FLAGS

In the standard report, if a compound is not detected above the method detection limit, a "ND" is in the Amount column. The flag column is used for both the not detect flag and for any data flags. The not detect flag is either a "ND" or a "U". If the "U" flag is selected, the MDL for the compound is reported in the Amount column instead of "ND". Other flags are listed below:

B - This compound was detected in the batch method blank above the reporting limit.

E - This compound exceeds the calibration range for this sample volume.

J - The amount reported is estimated because it was below the RL and above the MDL

F - Higher detection limits because of matrix interference

UNITS

PPBV or PPMV: Parts-per-billion (or million) by volume is a mole (volume) ratio of the moles of analyte divided by the moles of air (gas). This is the primary unit used to report air or gas concentrations and is independent of temperature and pressure. It is different from the ppb unit used to report water or soil data, which is a mass ratio.

UG/M3 OR MG/M3: Micrograms (or milligrams) per cubic meter is a mass/volume ratio and does depend on temperature and pressure of the source at time of sample collection. The reported result was calculated based on 1 atm pressure and a temperature of 25C. The conversion from PPBV is: $UG/M3 = PPBV \times MW/24.46$ where 24.26 is the gas constant and MW is the Compounds Molecular Weight (sometimes called Formula Weight)

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 01

File Name: 1820501A.D
Description: T-101
Canister: 777
QC_Batch: 041918-MA1

Date Sampled: 04/10/18 Time: 08:00
Date Analyzed: 04/19/18 Time: 17:17
Can Dilution Factor: 1.24
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.31	1.56	ND	1.53	7.71	ND	
74-87-3	Chloromethane	0.31	1.56	ND	0.64	3.22	ND	
76-14-2	Freon 114	0.31	1.56	ND	2.17	10.89	ND	
75-01-4	Vinyl chloride	0.31	1.56	ND	0.79	3.98	ND	
106-99-0	1,3-Butadiene	0.31	1.56	ND	0.69	3.45	ND	
74-83-9	Bromomethane	0.31	1.56	ND	1.20	6.05	ND	
75-00-3	Chloroethane	0.31	1.56	ND	0.82	4.11	ND	
64-17-5	Ethanol	1.55	4.65	ND	2.92	8.76	ND	
75-69-4	Trichlorofluoromethane	0.31	1.49	ND	1.74	8.36	ND	
67-64-1	Acetone	1.55	3.81	199.47	3.68	9.06	473.75	E
67-63-0	2-propanol	1.55	3.56	ND	3.81	8.74	ND	
75-35-4	1,1-Dichloroethene	0.31	1.54	ND	1.23	6.09	ND	
76-13-1	Freon 113	0.31	1.48	ND	2.37	11.36	ND	
75-09-2	Dichloromethane	0.62	1.49	ND	2.15	5.18	ND	
75-15-0	Carbon disulfide	1.55	2.88	ND	4.82	8.95	ND	
156-60-5	trans-1,2-Dichloroethene	0.31	1.12	ND	1.23	4.43	ND	
1634-04-4	Methyl tert butyl ether	0.31	1.14	ND	1.12	4.12	ND	
75-34-3	1,1-Dichloroethane	0.31	1.55	ND	1.25	6.26	ND	
108-05-4	Vinyl acetate	0.31	1.36	ND	1.09	4.79	ND	
78-93-3	2-Butanone	1.24	3.16	48.48	3.65	9.30	142.88	
141-78-6	Ethyl acetate	0.62	1.36	ND	2.23	4.89	ND	
74-97-5	Bromochloromethane	0.31	0.83	ND	1.64	4.37	ND	
109-99-9	Tetrahydrofuran	0.62	1.56	ND	1.83	4.60	ND	
156-59-2	cis-1,2-Dichloroethene	0.62	1.67	ND	2.46	6.61	ND	
67-66-3	Chloroform	0.31	1.55	ND	1.51	7.59	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.38	ND	1.69	7.51	ND	
107-06-2	1,2-Dichloroethane	0.31	1.41	ND	1.25	5.72	ND	
110-82-7	Cyclohexane	0.31	1.19	ND	1.07	4.10	ND	
71-43-2	Benzene	0.31	1.57	3.60	0.99	5.03	11.49	
56-23-5	Carbon tetrachloride	0.31	1.47	ND	1.95	9.24	ND	
142-82-5	n-Heptane	1.55	3.76	ND	6.35	15.39	ND	
78-87-5	1,2-Dichloropropane	0.31	1.49	ND	1.43	6.89	ND	
123-91-1	1,4 Dioxane	1.24	2.54	ND	4.47	9.13	ND	
79-01-6	Trichloroethene	0.19	1.44	ND	1.00	7.76	ND	
75-27-4	Bromodichloromethane	0.31	0.63	ND	2.08	4.19	ND	
80-62-6	Methyl methacrylate	1.24	4.19	ND	5.07	17.15	ND	
108-10-1	4-Methyl-2-pentanone	1.24	4.69	1.58	5.08	19.22	6.45	J

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.31	1.61	ND	1.41	7.29	ND	
108-88-3	Toluene	0.62	1.62	0.86	2.33	6.09	3.24	J
10061-02-6	trans-1,3-Dichloropropene	0.31	1.61	ND	1.41	7.30	ND	
79-00-5	1,1,2-Trichloroethane	0.31	1.59	ND	1.69	8.69	ND	
591-78-6	2-Hexanone	1.55	4.40	ND	6.35	18.01	ND	
124-48-1	Dibromochloromethane	0.31	0.62	ND	2.64	5.27	ND	
106-93-4	1,2-Dibromoethane	0.31	0.75	ND	2.38	5.78	ND	
127-18-4	Tetrachloroethene	0.19	0.75	ND	1.26	5.11	ND	
108-90-7	Chlorobenzene	0.31	1.41	ND	1.43	6.49	ND	
100-41-4	Ethylbenzene	0.66	1.64	ND	2.85	7.11	ND	
1330-20-7	m,p-Xylenes	0.66	1.64	0.69	2.85	7.13	2.98	J
100-42-5	Styrene	0.64	1.60	ND	2.73	6.84	ND	
75-25-2	Bromoform	0.31	0.42	ND	3.20	4.30	ND	
95-47-6	o-Xylene	0.64	1.60	ND	2.77	6.94	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.77	ND	2.11	5.26	ND	
622-96-8	4-Ethyltoluene	1.03	2.57	ND	5.05	12.62	ND	
108-67-8	1,3,5-Trimethylbenzene	0.64	1.60	ND	3.15	7.87	ND	
95-63-6	1,2,4-Trimethylbenzene	0.63	1.58	ND	3.10	7.74	ND	
541-73-1	1,3-Dichlorobenzene	0.62	1.15	ND	3.73	6.89	ND	
100-44-7	Benzyl chloride	0.62	3.76	ND	3.21	19.44	ND	
106-46-7	1,4-Dichlorobenzene	0.62	1.07	ND	3.73	6.45	ND	
95-50-1	1,2-Dichlorobenzene	0.62	1.00	ND	3.73	6.04	ND	
120-82-1	1,2,4-Trichlorobenzene	1.55	2.13	ND	11.49	15.82	ND	
91-20-3	Naphthalene	0.32	0.50	ND	1.66	2.60	ND	
87-68-3	Hexachlorobutadiene	1.55	1.64	ND	16.53	17.52	ND	
Surrogate Recovery					% Rec.	QC	Limits	Flag
2037-26-5	Toluene-d8				102	LCL 70	UCL 130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205

Laboratory Number: 01

File Name: 1820501A
Description: T-101
Canister: 777
QC_Batch: 041718-GCK

Date Sampled: 04/10/18 Time: 8:00
Date Analyzed: 04/17/18 Time: 13:52
Can Factor: 1.24
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.24	3.72	ND	1.43	4.28	ND	ND
74-86-2	Acetylene	1.24	3.72	ND	1.32	3.96	ND	ND
74-84-0	Ethane	1.24	3.72	4.53	1.53	4.59	5.59	
115-07-1	Propene	0.83	2.48	ND	1.43	4.28	ND	ND
74-98-6	Propane	0.83	2.48	ND	1.49	4.48	ND	ND
75-28-5	i-Butane	0.62	1.86	ND	1.48	4.43	ND	ND
106-98-9	1-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
106-97-8	n-Butane	0.62	1.86	0.68	1.48	4.43	1.62	J
624-64-6	t-2-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
590-18-1	c-2-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
78-78-4	i-Pentane	0.50	1.49	ND	1.47	4.40	ND	ND
109-67-1	1-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
109-66-0	n-Pentane	0.50	1.49	1.53	1.47	4.40	4.53	
78-79-5	Isoprene	0.50	1.49	ND	1.38	4.15	ND	ND
646-04-8	t-2-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
627-20-3	c-2-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.24	ND	1.46	4.38	ND	ND
287-92-3	Cyclopentane	0.50	1.49	ND	1.42	4.27	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.24	ND	1.46	4.38	ND	ND
107-83-5	2-Methylpentane	0.41	1.24	ND	1.46	4.38	ND	ND
96-14-0	3-Methylpentane	0.41	1.24	ND	1.46	4.38	ND	ND
110-54-3	n-Hexane	0.41	1.24	1.34	1.46	4.38	4.73	
96-37-7	Methylcyclopentane	0.41	1.24	ND	1.43	4.28	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.06	ND	1.45	4.36	ND	ND
71-43-2	Benzene	0.41	1.24	1.77	1.32	3.97	5.65	
110-82-7	Cyclohexane	0.41	1.24	ND	1.43	4.28	ND	ND
591-76-4	2-Methylhexane	0.35	1.06	4.97	1.45	4.36	20.42	
565-59-3	2,3-Dimethylpentane	0.35	1.06	ND	1.45	4.36	ND	ND
589-34-4	3-Methylhexane	0.35	1.06	3.18	1.45	4.36	13.04	
540-84-1	2,2,4-Trimethylpentane	0.31	0.93	ND	1.45	4.35	ND	ND
142-82-5	n-Heptane	0.35	1.06	1.42	1.45	4.36	5.84	
108-87-2	Methylcyclohexane	0.35	1.06	ND	1.43	4.28	ND	ND
592-13-2	2,5-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND
589-43-5	2,4-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.31	0.93	ND	1.45	4.35	ND	ND
108-88-3	Toluene	0.35	1.06	0.74	1.34	4.01	2.79	J
584-94-1	2,3-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.93	ND	1.45	4.35	ND	ND
589-81-1	3-Methylheptane	0.31	0.93	ND	1.45	4.35	ND	ND
111-65-9	n-Octane	0.31	0.93	2.02	1.45	4.35	9.44	
100-41-4	Ethylbenzene	0.31	0.93	0.65	1.35	4.05	2.85	J
108-38-3	m,p-xylene	0.31	0.93	1.13	1.35	4.05	4.91	
100-42-5	Styrene	0.31	0.93	ND	1.32	3.97	ND	ND
95-47-6	o-xylene	0.31	0.93	0.77	1.35	4.05	3.34	J
111-84-2	n-Nonane	0.28	0.83	2.51	1.45	4.35	13.21	
98-82-8	i-Propylbenzene	0.28	0.83	ND	1.36	4.07	ND	ND
103-65-1	n-propylbenzene	0.28	0.83	ND	1.36	4.07	ND	ND
80-56-8	a-Pinene	0.25	0.74	ND	1.38	4.15	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.83	ND	1.36	4.07	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.83	ND	1.36	4.07	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.83	ND	1.36	4.07	ND	ND
611-14-3	2-Ethyltoluene	0.28	0.83	ND	1.36	4.07	ND	ND
127-91-3	b-Pinene	0.25	0.74	ND	1.38	4.15	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.83	2.81	1.36	4.07	13.82	
124-18-5	n-Decane	0.25	0.74	0.69	1.45	4.34	4.04	J
526-73-8	1,2,3-Trimethylbenzene	0.28	0.83	ND	1.36	4.07	ND	ND
5989-27-5	d-Limonene	0.25	0.74	ND	1.38	4.15	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.74	1.13	1.36	4.09	6.19	
105-05-5	1,4-Diethylbenzene	0.25	0.74	2.47	1.36	4.09	13.59	
104-51-8	n-Butylbenzene	0.25	0.74	ND	1.36	4.09	ND	ND
1120-21-4	Undecane	0.23	0.68	1.02	1.44	4.33	6.53	
112-40-3	Dodecane	0.21	0.62	ND	1.44	4.33	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.30	27.90	294.89	32.85	98.56	1,041.79	
TNMHC - C1	Total Non-Methane Hydrocarbons	55.80	167.40	1,769.35	36.59	109.77	1,160.23	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 01

File Name: 1820501A

Date Sampled: 04/10/18

Time: 8:00

Description: T-101

Date Analyzed: 04/13/18

Time: 18:20

Can/Tube#: 777

Can Dilution Factor: 1.24

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	124	372	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 01

File Name: 1820501A
Description: T-101
Can/Tube#: 777
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 Time: 8:00
Date Analyzed: 04/17/18 Time: 12:02
Dilution Factor: 1.24

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.37	ND	0.08	0.25	ND	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 02

File Name: 1820502A.D
Description: T-102
Canister: 692
QC_Batch: 041918-MA1

Date Sampled: 04/10/18 Time: 08:08
Date Analyzed: 04/19/18 Time: 17:52
Can Dilution Factor: 1.23
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.31	1.55	ND	1.52	7.64	ND	
74-87-3	Chloromethane	0.31	1.55	ND	0.63	3.19	ND	
76-14-2	Freon 114	0.31	1.55	ND	2.15	10.81	ND	
75-01-4	Vinyl chloride	0.31	1.55	ND	0.79	3.95	ND	
106-99-0	1,3-Butadiene	0.31	1.55	ND	0.68	3.42	ND	
74-83-9	Bromomethane	0.31	1.55	ND	1.19	6.00	ND	
75-00-3	Chloroethane	0.31	1.55	ND	0.81	4.08	ND	
64-17-5	Ethanol	1.54	4.61	ND	2.90	8.69	ND	
75-69-4	Trichlorofluoromethane	0.31	1.48	ND	1.73	8.29	ND	
67-64-1	Acetone	1.54	3.78	641.68	3.65	8.98	1,524.05	E
67-63-0	2-propanol	1.54	3.53	ND	3.78	8.67	ND	
75-35-4	1,1-Dichloroethene	0.31	1.53	ND	1.22	6.04	ND	
76-13-1	Freon 113	0.31	1.47	ND	2.36	11.27	ND	
75-09-2	Dichloromethane	0.62	1.48	ND	2.13	5.14	ND	
75-15-0	Carbon disulfide	1.54	2.85	ND	4.78	8.88	ND	
156-60-5	trans-1,2-Dichloroethene	0.31	1.11	ND	1.22	4.40	ND	
1634-04-4	Methyl tert butyl ether	0.31	1.13	ND	1.11	4.08	ND	
75-34-3	1,1-Dichloroethane	0.31	1.53	ND	1.24	6.21	ND	
108-05-4	Vinyl acetate	0.31	1.35	ND	1.08	4.76	ND	
78-93-3	2-Butanone	1.23	3.13	242.67	3.63	9.23	715.24	E
141-78-6	Ethyl acetate	0.62	1.35	ND	2.21	4.85	ND	
74-97-5	Bromochloromethane	0.31	0.82	ND	1.63	4.33	ND	
109-99-9	Tetrahydrofuran	0.62	1.55	ND	1.81	4.56	ND	
156-59-2	cis-1,2-Dichloroethene	0.62	1.65	ND	2.44	6.55	ND	
67-66-3	Chloroform	0.31	1.54	ND	1.50	7.53	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.37	ND	1.68	7.45	ND	
107-06-2	1,2-Dichloroethane	0.31	1.40	ND	1.24	5.68	ND	
110-82-7	Cyclohexane	0.31	1.18	ND	1.06	4.06	ND	
71-43-2	Benzene	0.31	1.56	7.73	0.98	4.99	24.69	
56-23-5	Carbon tetrachloride	0.31	1.46	ND	1.93	9.16	ND	
142-82-5	n-Heptane	1.54	3.73	ND	6.30	15.27	ND	
78-87-5	1,2-Dichloropropane	0.31	1.48	ND	1.42	6.84	ND	
123-91-1	1,4 Dioxane	1.23	2.52	ND	4.43	9.06	ND	
79-01-6	Trichloroethene	0.18	1.43	ND	0.99	7.69	ND	
75-27-4	Bromodichloromethane	0.31	0.62	ND	2.06	4.16	ND	
80-62-6	Methyl methacrylate	1.23	4.16	ND	5.03	17.01	ND	
108-10-1	4-Methyl-2-pentanone	1.23	4.66	2.81	5.04	19.07	11.52	J

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.31	1.59	ND	1.40	7.23	ND	
108-88-3	Toluene	0.62	1.61	2.41	2.32	6.04	9.08	
10061-02-6	trans-1,3-Dichloropropene	0.31	1.59	ND	1.40	7.24	ND	
79-00-5	1,1,2-Trichloroethane	0.31	1.58	ND	1.68	8.62	ND	
591-78-6	2-Hexanone	1.54	4.36	1.74	6.30	17.86	7.12	J
124-48-1	Dibromochloromethane	0.31	0.61	ND	2.62	5.23	ND	
106-93-4	1,2-Dibromoethane	0.31	0.75	ND	2.36	5.73	ND	
127-18-4	Tetrachloroethene	0.18	0.75	ND	1.25	5.07	ND	
108-90-7	Chlorobenzene	0.31	1.40	ND	1.42	6.44	ND	
100-41-4	Ethylbenzene	0.65	1.63	1.58	2.82	7.06	6.84	J
1330-20-7	m,p-Xylenes	0.65	1.63	1.42	2.83	7.07	6.17	J
100-42-5	Styrene	0.64	1.59	ND	2.71	6.78	ND	
75-25-2	Bromoform	0.31	0.41	ND	3.18	4.26	ND	
95-47-6	o-Xylene	0.63	1.58	1.00	2.75	6.88	4.36	J
79-34-5	1,1,2,2-Tetrachloroethane	0.30	0.76	ND	2.09	5.22	ND	
622-96-8	4-Ethyltoluene	1.02	2.55	ND	5.01	12.52	ND	
108-67-8	1,3,5-Trimethylbenzene	0.64	1.59	ND	3.12	7.81	ND	
95-63-6	1,2,4-Trimethylbenzene	0.63	1.56	ND	3.07	7.68	ND	
541-73-1	1,3-Dichlorobenzene	0.62	1.14	ND	3.70	6.84	ND	
100-44-7	Benzyl chloride	0.62	3.73	ND	3.18	19.29	ND	
106-46-7	1,4-Dichlorobenzene	0.62	1.06	ND	3.70	6.39	ND	
95-50-1	1,2-Dichlorobenzene	0.62	1.00	ND	3.70	5.99	ND	
120-82-1	1,2,4-Trichlorobenzene	1.54	2.12	ND	11.40	15.69	ND	
91-20-3	Naphthalene	0.31	0.49	0.31	1.64	2.58	1.64	J
87-68-3	Hexachlorobutadiene	1.54	1.63	ND	16.39	17.38	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	115	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 02

File Name: 1820502A
Description: T-102
Canister: 692
QC_Batch: 041718-GCK

Date Sampled: 04/10/18 Time: 8:08
Date Analyzed: 04/17/18 Time: 14:34
Can Factor: 1.23
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.23	3.69	ND	1.42	4.25	ND	ND
74-86-2	Acetylene	1.23	3.69	ND	1.31	3.93	ND	ND
74-84-0	Ethane	1.23	3.69	10.28	1.52	4.55	12.68	
115-07-1	Propene	0.82	2.46	ND	1.41	4.24	ND	ND
74-98-6	Propane	0.82	2.46	2.87	1.48	4.45	5.18	
75-28-5	i-Butane	0.62	1.85	ND	1.46	4.39	ND	ND
106-98-9	1-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
106-97-8	n-Butane	0.62	1.85	ND	1.46	4.39	ND	ND
624-64-6	t-2-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
590-18-1	c-2-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
78-78-4	i-Pentane	0.49	1.48	ND	1.46	4.37	ND	ND
109-67-1	1-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
109-66-0	n-Pentane	0.49	1.48	3.87	1.45	4.36	11.42	
78-79-5	Isoprene	0.49	1.48	ND	1.37	4.12	ND	ND
646-04-8	t-2-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
627-20-3	c-2-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.23	ND	1.45	4.35	ND	ND
287-92-3	Cyclopentane	0.49	1.48	ND	1.41	4.24	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.23	ND	1.45	4.35	ND	ND
107-83-5	2-Methylpentane	0.41	1.23	ND	1.45	4.35	ND	ND
96-14-0	3-Methylpentane	0.41	1.23	ND	1.45	4.35	ND	ND
110-54-3	n-Hexane	0.41	1.23	1.06	1.45	4.35	3.74	J
96-37-7	Methylcyclopentane	0.41	1.23	ND	1.41	4.24	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.05	ND	1.44	4.33	ND	ND
71-43-2	Benzene	0.41	1.23	5.84	1.31	3.94	18.71	
110-82-7	Cyclohexane	0.41	1.23	ND	1.41	4.24	ND	ND
591-76-4	2-Methylhexane	0.35	1.05	23.11	1.44	4.33	94.90	
565-59-3	2,3-Dimethylpentane	0.35	1.05	ND	1.44	4.33	ND	ND
589-34-4	3-Methylhexane	0.35	1.05	11.52	1.44	4.33	47.33	
540-84-1	2,2,4-Trimethylpentane	0.31	0.92	ND	1.44	4.32	ND	ND
142-82-5	n-Heptane	0.35	1.05	ND	1.44	4.33	ND	ND
108-87-2	Methylcyclohexane	0.35	1.05	ND	1.41	4.24	ND	ND
592-13-2	2,5-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND
589-43-5	2,4-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.31	0.92	ND	1.44	4.32	ND	ND
108-88-3	Toluene	0.35	1.05	1.84	1.33	3.98	6.93	
584-94-1	2,3-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.92	ND	1.44	4.32	ND	ND
589-81-1	3-Methylheptane	0.31	0.92	ND	1.44	4.32	ND	ND
111-65-9	n-Octane	0.31	0.92	0.70	1.44	4.32	3.29	J
100-41-4	Ethylbenzene	0.31	0.92	1.38	1.34	4.02	6.01	
108-38-3	m,p-xylene	0.31	0.92	6.18	1.34	4.02	26.88	
100-42-5	Styrene	0.31	0.92	ND	1.31	3.94	ND	ND
95-47-6	o-xylene	0.31	0.92	1.93	1.34	4.02	8.40	
111-84-2	n-Nonane	0.27	0.82	1.16	1.44	4.31	6.08	
98-82-8	i-Propylbenzene	0.27	0.82	ND	1.35	4.04	ND	ND
103-65-1	n-propylbenzene	0.27	0.82	ND	1.35	4.04	ND	ND
80-56-8	a-Pinene	0.25	0.74	ND	1.37	4.12	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.82	ND	1.35	4.04	ND	ND
622-96-8	4-Ethyltoluene	0.27	0.82	0.57	1.35	4.04	2.80	J
108-67-8	1,3,5-Trimethylbenzene	0.27	0.82	0.58	1.35	4.04	2.87	J
611-14-3	2-Ethyltoluene	0.27	0.82	ND	1.35	4.04	ND	ND
127-91-3	b-Pinene	0.25	0.74	ND	1.37	4.12	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.82	0.94	1.35	4.04	4.64	
124-18-5	n-Decane	0.25	0.74	ND	1.43	4.30	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.27	0.82	ND	1.35	4.04	ND	ND
5989-27-5	d-Limonene	0.25	0.74	ND	1.37	4.12	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.74	ND	1.35	4.06	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.74	ND	1.35	4.06	ND	ND
104-51-8	n-Butylbenzene	0.25	0.74	ND	1.35	4.06	ND	ND
1120-21-4	Undecane	0.22	0.67	0.43	1.43	4.30	2.78	J
112-40-3	Dodecane	0.21	0.62	ND	1.43	4.29	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.23	27.68	579.89	32.59	97.77	2,048.63	
TNMHC - C1	Total Non-Methane Hydrocarbons	55.35	166.05	3,479.34	36.30	108.89	2,281.53	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 02

File Name: 1820502A

Date Sampled: 04/10/18 Time: 8:08

Description: T-102

Date Analyzed: 04/13/18 Time: 18:27

Can/Tube#: 692

Can Dilution Factor: 1.23

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	123	369	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 02

File Name: 1820502A
Description: T-102
Can/Tube#: 692
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 Time: 8:08
Date Analyzed: 04/17/18 Time: 12:08
Dilution Factor: 1.23

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.37	0.55	0.08	0.25	0.37	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 03

File Name: 1820503A.D
Description: T-103
Canister: 755
QC_Batch: 041918-MA1

Date Sampled: 04/10/18 Time: 09:23
Date Analyzed: 04/19/18 Time: 18:26
Can Dilution Factor: 1.25
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.31	1.57	ND	1.54	7.77	ND	
74-87-3	Chloromethane	0.31	1.57	ND	0.65	3.25	ND	
76-14-2	Freon 114	0.31	1.57	ND	2.18	10.98	ND	
75-01-4	Vinyl chloride	0.31	1.57	ND	0.80	4.02	ND	
106-99-0	1,3-Butadiene	0.31	1.57	ND	0.69	3.48	ND	
74-83-9	Bromomethane	0.31	1.57	ND	1.21	6.10	ND	
75-00-3	Chloroethane	0.31	1.57	ND	0.82	4.14	ND	
64-17-5	Ethanol	1.56	4.69	ND	2.94	8.83	ND	
75-69-4	Trichlorofluoromethane	0.31	1.50	ND	1.76	8.43	ND	
67-64-1	Acetone	1.56	3.84	14.53	3.71	9.13	34.52	
67-63-0	2-propanol	1.56	3.59	ND	3.84	8.81	ND	
75-35-4	1,1-Dichloroethene	0.31	1.55	ND	1.24	6.14	ND	
76-13-1	Freon 113	0.31	1.50	ND	2.39	11.45	ND	
75-09-2	Dichloromethane	0.63	1.51	ND	2.17	5.22	ND	
75-15-0	Carbon disulfide	1.56	2.90	ND	4.86	9.02	ND	
156-60-5	trans-1,2-Dichloroethene	0.31	1.13	ND	1.24	4.47	ND	
1634-04-4	Methyl tert butyl ether	0.31	1.15	ND	1.13	4.15	ND	
75-34-3	1,1-Dichloroethane	0.31	1.56	ND	1.26	6.31	ND	
108-05-4	Vinyl acetate	0.31	1.37	ND	1.10	4.83	ND	
78-93-3	2-Butanone	1.25	3.18	ND	3.68	9.38	ND	
141-78-6	Ethyl acetate	0.63	1.37	ND	2.25	4.93	ND	
74-97-5	Bromochloromethane	0.31	0.83	ND	1.65	4.40	ND	
109-99-9	Tetrahydrofuran	0.63	1.57	ND	1.84	4.63	ND	
156-59-2	cis-1,2-Dichloroethene	0.63	1.68	ND	2.48	6.66	ND	
67-66-3	Chloroform	0.31	1.57	ND	1.53	7.65	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.39	ND	1.70	7.57	ND	
107-06-2	1,2-Dichloroethane	0.31	1.43	ND	1.26	5.77	ND	
110-82-7	Cyclohexane	0.31	1.20	ND	1.08	4.13	ND	
71-43-2	Benzene	0.31	1.59	4.39	1.00	5.07	14.00	
56-23-5	Carbon tetrachloride	0.31	1.48	ND	1.96	9.31	ND	
142-82-5	n-Heptane	1.56	3.79	ND	6.40	15.51	ND	
78-87-5	1,2-Dichloropropane	0.31	1.50	ND	1.44	6.95	ND	
123-91-1	1,4 Dioxane	1.25	2.56	ND	4.50	9.21	ND	
79-01-6	Trichloroethene	0.19	1.46	ND	1.01	7.82	ND	
75-27-4	Bromodichloromethane	0.31	0.63	ND	2.09	4.23	ND	
80-62-6	Methyl methacrylate	1.25	4.23	ND	5.12	17.29	ND	
108-10-1	4-Methyl-2-pentanone	1.25	4.73	ND	5.12	19.38	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.31	1.62	ND	1.42	7.35	ND	
108-88-3	Toluene	0.63	1.63	1.35	2.35	6.14	5.07	J
10061-02-6	trans-1,3-Dichloropropene	0.31	1.62	ND	1.42	7.35	ND	
79-00-5	1,1,2-Trichloroethane	0.31	1.61	ND	1.70	8.76	ND	
591-78-6	2-Hexanone	1.56	4.43	ND	6.40	18.15	ND	
124-48-1	Dibromochloromethane	0.31	0.62	ND	2.66	5.31	ND	
106-93-4	1,2-Dibromoethane	0.31	0.76	ND	2.40	5.83	ND	
127-18-4	Tetrachloroethene	0.19	0.76	ND	1.27	5.16	ND	
108-90-7	Chlorobenzene	0.31	1.42	ND	1.44	6.55	ND	
100-41-4	Ethylbenzene	0.66	1.65	ND	2.87	7.17	ND	
1330-20-7	m,p-Xylenes	0.66	1.66	ND	2.88	7.19	ND	
100-42-5	Styrene	0.65	1.62	ND	2.76	6.89	ND	
75-25-2	Bromoform	0.31	0.42	ND	3.23	4.33	ND	
95-47-6	o-Xylene	0.64	1.61	ND	2.80	6.99	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.77	ND	2.12	5.31	ND	
622-96-8	4-Ethyltoluene	1.04	2.59	ND	5.09	12.73	ND	
108-67-8	1,3,5-Trimethylbenzene	0.65	1.61	ND	3.17	7.93	ND	
95-63-6	1,2,4-Trimethylbenzene	0.64	1.59	ND	3.12	7.80	ND	
541-73-1	1,3-Dichlorobenzene	0.63	1.16	ND	3.76	6.95	ND	
100-44-7	Benzyl chloride	0.63	3.79	ND	3.23	19.60	ND	
106-46-7	1,4-Dichlorobenzene	0.63	1.08	ND	3.76	6.50	ND	
95-50-1	1,2-Dichlorobenzene	0.63	1.01	ND	3.76	6.08	ND	
120-82-1	1,2,4-Trichlorobenzene	1.56	2.15	ND	11.59	15.94	ND	
91-20-3	Naphthalene	0.32	0.50	ND	1.67	2.62	ND	
87-68-3	Hexachlorobutadiene	1.56	1.66	ND	16.66	17.66	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	107	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 03

File Name: 1820503A
Description: T-103
Canister: 755
QC_Batch: 041718-GCK

Date Sampled: 04/10/18 Time: 9:23
Date Analyzed: 04/17/18 Time: 15:21
Can Factor: 1.25
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.25	3.75	ND	1.44	4.32	ND	ND
74-86-2	Acetylene	1.25	3.75	ND	1.33	4.00	ND	ND
74-84-0	Ethane	1.25	3.75	8.80	1.54	4.63	10.85	
115-07-1	Propene	0.83	2.50	ND	1.44	4.31	ND	ND
74-98-6	Propane	0.83	2.50	ND	1.51	4.52	ND	ND
75-28-5	i-Butane	0.63	1.88	ND	1.49	4.46	ND	ND
106-98-9	1-Butene	0.63	1.88	ND	1.44	4.31	ND	ND
106-97-8	n-Butane	0.63	1.88	ND	1.49	4.46	ND	ND
624-64-6	t-2-Butene	0.63	1.88	ND	1.44	4.31	ND	ND
590-18-1	c-2-Butene	0.63	1.88	ND	1.44	4.31	ND	ND
78-78-4	i-Pentane	0.50	1.50	ND	1.48	4.44	ND	ND
109-67-1	1-Pentene	0.50	1.50	ND	1.44	4.31	ND	ND
109-66-0	n-Pentane	0.50	1.50	ND	1.48	4.43	ND	ND
78-79-5	Isoprene	0.50	1.50	ND	1.40	4.19	ND	ND
646-04-8	t-2-Pentene	0.50	1.50	ND	1.44	4.31	ND	ND
627-20-3	c-2-Pentene	0.50	1.50	ND	1.44	4.31	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.25	ND	1.47	4.42	ND	ND
287-92-3	Cyclopentane	0.50	1.50	ND	1.44	4.31	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.25	ND	1.47	4.42	ND	ND
107-83-5	2-Methylpentane	0.42	1.25	ND	1.47	4.42	ND	ND
96-14-0	3-Methylpentane	0.42	1.25	ND	1.47	4.42	ND	ND
110-54-3	n-Hexane	0.42	1.25	1.10	1.47	4.42	3.89	J
96-37-7	Methylcyclopentane	0.42	1.25	ND	1.44	4.31	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.07	ND	1.47	4.40	ND	ND
71-43-2	Benzene	0.42	1.25	0.74	1.33	4.00	2.36	J
110-82-7	Cyclohexane	0.42	1.25	ND	1.44	4.31	ND	ND
591-76-4	2-Methylhexane	0.36	1.07	ND	1.47	4.40	ND	ND
565-59-3	2,3-Dimethylpentane	0.36	1.07	ND	1.47	4.40	ND	ND
589-34-4	3-Methylhexane	0.36	1.07	ND	1.47	4.40	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.31	0.94	ND	1.46	4.39	ND	ND
142-82-5	n-Heptane	0.36	1.07	ND	1.47	4.40	ND	ND
108-87-2	Methylcyclohexane	0.36	1.07	ND	1.44	4.31	ND	ND
592-13-2	2,5-Dimethylhexane	0.31	0.94	ND	1.46	4.39	ND	ND
589-43-5	2,4-Dimethylhexane	0.31	0.94	ND	1.46	4.39	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.31	0.94	ND	1.46	4.39	ND	ND
108-88-3	Toluene	0.36	1.07	1.04	1.35	4.04	3.91	J
584-94-1	2,3-Dimethylhexane	0.31	0.94	ND	1.46	4.39	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.94	ND	1.46	4.39	ND	ND
589-81-1	3-Methylheptane	0.31	0.94	ND	1.46	4.39	ND	ND
111-65-9	n-Octane	0.31	0.94	ND	1.46	4.39	ND	ND
100-41-4	Ethylbenzene	0.31	0.94	ND	1.36	4.08	ND	ND
108-38-3	m,p-xylene	0.31	0.94	ND	1.36	4.08	ND	ND
100-42-5	Styrene	0.31	0.94	ND	1.33	4.00	ND	ND
95-47-6	o-xylene	0.31	0.94	ND	1.36	4.08	ND	ND
111-84-2	n-Nonane	0.28	0.83	0.33	1.46	4.38	1.76	J
98-82-8	i-Propylbenzene	0.28	0.83	ND	1.37	4.11	ND	ND
103-65-1	n-propylbenzene	0.28	0.83	ND	1.37	4.11	ND	ND
80-56-8	a-Pinene	0.25	0.75	ND	1.40	4.19	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.83	ND	1.37	4.11	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.83	ND	1.37	4.11	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.83	ND	1.37	4.11	ND	ND
611-14-3	2-Ethyltoluene	0.28	0.83	ND	1.37	4.11	ND	ND
127-91-3	b-Pinene	0.25	0.75	ND	1.40	4.19	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.83	ND	1.37	4.11	ND	ND
124-18-5	n-Decane	0.25	0.75	ND	1.46	4.37	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.28	0.83	ND	1.37	4.11	ND	ND
5989-27-5	d-Limonene	0.25	0.75	ND	1.40	4.19	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.75	ND	1.38	4.13	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.75	ND	1.38	4.13	ND	ND
104-51-8	n-Butylbenzene	0.25	0.75	ND	1.38	4.13	ND	ND
1120-21-4	Undecane	0.23	0.68	ND	1.46	4.37	ND	ND
112-40-3	Dodecane	0.21	0.63	ND	1.45	4.36	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.38	28.13	405.58	33.12	99.36	1,432.81
TNMHC - C1	Total Non-Methane Hydrocarbons	56.25	168.75	2,433.45	36.89	110.66	1,595.71

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 03

File Name: 1820503A

Date Sampled: 04/10/18 Time: 9:23

Description: T-103

Date Analyzed: 04/13/18 Time: 18:52

Can/Tube#: 755

Can Dilution Factor: 1.25

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	125	375	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 03

File Name: 1820503A
Description: T-103
Can/Tube#: 755
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 Time: 9:23
Date Analyzed: 04/17/18 Time: 12:14
Dilution Factor: 1.25

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	ND	0.08	0.25	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 04

File Name: 1820504A.D

Date Sampled: 04/10/18

Time: 09:26

Description: T-104

Date Analyzed: 04/19/18

Time: 19:00

Canister: 631

Can Dilution Factor: 1.28

QC_Batch: 041918-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.61	ND	1.58	7.96	ND	
74-87-3	Chloromethane	0.32	1.61	ND	0.66	3.32	ND	
76-14-2	Freon 114	0.32	1.61	ND	2.24	11.25	ND	
75-01-4	Vinyl chloride	0.32	1.61	ND	0.82	4.11	ND	
106-99-0	1,3-Butadiene	0.32	1.61	ND	0.71	3.56	ND	
74-83-9	Bromomethane	0.32	1.61	ND	1.24	6.24	ND	
75-00-3	Chloroethane	0.32	1.61	ND	0.84	4.24	ND	
64-17-5	Ethanol	1.60	4.80	ND	3.02	9.05	ND	
75-69-4	Trichlorofluoromethane	0.32	1.54	ND	1.80	8.63	ND	
67-64-1	Acetone	1.60	3.94	ND	3.80	9.35	ND	
67-63-0	2-propanol	1.60	3.67	ND	3.93	9.03	ND	
75-35-4	1,1-Dichloroethene	0.32	1.59	ND	1.27	6.29	ND	
76-13-1	Freon 113	0.32	1.53	ND	2.45	11.73	ND	
75-09-2	Dichloromethane	0.64	1.54	ND	2.22	5.35	ND	
75-15-0	Carbon disulfide	1.60	2.97	ND	4.98	9.24	ND	
156-60-5	trans-1,2-Dichloroethene	0.32	1.16	ND	1.27	4.58	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.18	ND	1.15	4.25	ND	
75-34-3	1,1-Dichloroethane	0.32	1.60	ND	1.30	6.46	ND	
108-05-4	Vinyl acetate	0.32	1.41	ND	1.13	4.95	ND	
78-93-3	2-Butanone	1.28	3.26	ND	3.77	9.60	ND	
141-78-6	Ethyl acetate	0.64	1.40	ND	2.30	5.05	ND	
74-97-5	Bromochloromethane	0.32	0.85	ND	1.69	4.51	ND	
109-99-9	Tetrahydrofuran	0.64	1.61	ND	1.89	4.74	ND	
156-59-2	cis-1,2-Dichloroethene	0.64	1.72	ND	2.54	6.82	ND	
67-66-3	Chloroform	0.32	1.60	ND	1.56	7.83	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.42	ND	1.75	7.75	ND	
107-06-2	1,2-Dichloroethane	0.32	1.46	ND	1.30	5.91	ND	
110-82-7	Cyclohexane	0.32	1.23	ND	1.11	4.23	ND	
71-43-2	Benzene	0.32	1.63	4.42	1.02	5.19	14.12	
56-23-5	Carbon tetrachloride	0.32	1.52	ND	2.01	9.54	ND	
142-82-5	n-Heptane	1.60	3.88	ND	6.55	15.89	ND	
78-87-5	1,2-Dichloropropane	0.32	1.54	ND	1.48	7.11	ND	
123-91-1	1,4 Dioxane	1.28	2.62	ND	4.61	9.43	ND	
79-01-6	Trichloroethene	0.19	1.49	ND	1.03	8.01	ND	
75-27-4	Bromodichloromethane	0.32	0.65	ND	2.14	4.33	ND	
80-62-6	Methyl methacrylate	1.28	4.33	ND	5.24	17.70	ND	
108-10-1	4-Methyl-2-pentanone	1.28	4.84	ND	5.24	19.84	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.32	1.66	ND	1.45	7.52	ND	
108-88-3	Toluene	0.64	1.67	6.07	2.41	6.29	22.85	
10061-02-6	trans-1,3-Dichloropropene	0.32	1.66	ND	1.45	7.53	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.65	ND	1.75	8.97	ND	
591-78-6	2-Hexanone	1.60	4.54	ND	6.55	18.59	ND	
124-48-1	Dibromochloromethane	0.32	0.64	ND	2.72	5.44	ND	
106-93-4	1,2-Dibromoethane	0.32	0.78	ND	2.46	5.97	ND	
127-18-4	Tetrachloroethene	0.19	0.78	ND	1.30	5.28	ND	
108-90-7	Chlorobenzene	0.32	1.46	ND	1.47	6.70	ND	
100-41-4	Ethylbenzene	0.68	1.69	ND	2.94	7.34	ND	
1330-20-7	m,p-Xylenes	0.68	1.70	ND	2.94	7.36	ND	
100-42-5	Styrene	0.66	1.66	ND	2.82	7.06	ND	
75-25-2	Bromoform	0.32	0.43	ND	3.31	4.44	ND	
95-47-6	o-Xylene	0.66	1.65	ND	2.86	7.16	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.32	0.79	ND	2.17	5.43	ND	
622-96-8	4-Ethyltoluene	1.06	2.65	ND	5.21	13.03	ND	
108-67-8	1,3,5-Trimethylbenzene	0.66	1.65	ND	3.25	8.12	ND	
95-63-6	1,2,4-Trimethylbenzene	0.65	1.63	ND	3.20	7.99	ND	
541-73-1	1,3-Dichlorobenzene	0.64	1.18	ND	3.85	7.11	ND	
100-44-7	Benzyl chloride	0.64	3.88	ND	3.31	20.07	ND	
106-46-7	1,4-Dichlorobenzene	0.64	1.11	ND	3.85	6.65	ND	
95-50-1	1,2-Dichlorobenzene	0.64	1.04	ND	3.85	6.23	ND	
120-82-1	1,2,4-Trichlorobenzene	1.60	2.20	ND	11.86	16.33	ND	
91-20-3	Naphthalene	0.33	0.51	ND	1.71	2.68	ND	
87-68-3	Hexachlorobutadiene	1.60	1.70	ND	17.06	18.08	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	134	70	130	Q

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 04

File Name: 1820504A
Description: T-104
Canister: 631
QC_Batch: 041718-GCK

Date Sampled: 04/10/18 Time: 9:26
Date Analyzed: 04/17/18 Time: 16:08
Can Factor: 1.28
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.28	3.84	ND	1.47	4.42	ND	ND
74-86-2	Acetylene	1.28	3.84	ND	1.36	4.09	ND	ND
74-84-0	Ethane	1.28	3.84	ND	1.58	4.74	ND	ND
115-07-1	Propene	0.85	2.56	ND	1.47	4.42	ND	ND
74-98-6	Propane	0.85	2.56	2.67	1.54	4.63	4.83	
75-28-5	i-Butane	0.64	1.92	ND	1.52	4.57	ND	ND
106-98-9	1-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
106-97-8	n-Butane	0.64	1.92	ND	1.52	4.57	ND	ND
624-64-6	t-2-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
590-18-1	c-2-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
78-78-4	i-Pentane	0.51	1.54	1.17	1.52	4.55	3.46	J
109-67-1	1-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
109-66-0	n-Pentane	0.51	1.54	2.44	1.51	4.54	7.22	
78-79-5	Isoprene	0.51	1.54	ND	1.43	4.29	ND	ND
646-04-8	t-2-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
627-20-3	c-2-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
75-83-2	2,2-Dimethylbutane	0.43	1.28	ND	1.51	4.52	ND	ND
287-92-3	Cyclopentane	0.51	1.54	ND	1.47	4.41	ND	ND
79-29-8	2,3-Dimethylbutane	0.43	1.28	ND	1.51	4.52	ND	ND
107-83-5	2-Methylpentane	0.43	1.28	ND	1.51	4.52	ND	ND
96-14-0	3-Methylpentane	0.43	1.28	ND	1.51	4.52	ND	ND
110-54-3	n-Hexane	0.43	1.28	1.28	1.51	4.52	4.52	
96-37-7	Methylcyclopentane	0.43	1.28	ND	1.47	4.42	ND	ND
108-08-7	2,4-Dimethylpentane	0.37	1.10	ND	1.50	4.51	ND	ND
71-43-2	Benzene	0.43	1.28	ND	1.37	4.10	ND	ND
110-82-7	Cyclohexane	0.43	1.28	ND	1.47	4.42	ND	ND
591-76-4	2-Methylhexane	0.37	1.10	ND	1.50	4.51	ND	ND
565-59-3	2,3-Dimethylpentane	0.37	1.10	ND	1.50	4.51	ND	ND
589-34-4	3-Methylhexane	0.37	1.10	ND	1.50	4.51	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.96	ND	1.50	4.49	ND	ND
142-82-5	n-Heptane	0.37	1.10	0.45	1.50	4.51	1.84	J
108-87-2	Methylcyclohexane	0.37	1.10	ND	1.47	4.42	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.96	ND	1.50	4.49	ND	ND
108-88-3	Toluene	0.37	1.10	ND	1.38	4.14	ND	ND
584-94-1	2,3-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.96	ND	1.50	4.49	ND	ND
589-81-1	3-Methylheptane	0.32	0.96	ND	1.50	4.49	ND	ND
111-65-9	n-Octane	0.32	0.96	ND	1.50	4.49	ND	ND
100-41-4	Ethylbenzene	0.32	0.96	ND	1.39	4.18	ND	ND
108-38-3	m,p-xylene	0.32	0.96	ND	1.39	4.18	ND	ND
100-42-5	Styrene	0.32	0.96	ND	1.37	4.10	ND	ND
95-47-6	o-xylene	0.32	0.96	ND	1.39	4.18	ND	ND
111-84-2	n-Nonane	0.28	0.85	ND	1.50	4.49	ND	ND
98-82-8	i-Propylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
103-65-1	n-propylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
80-56-8	a-Pinene	0.26	0.77	ND	1.43	4.29	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
611-14-3	2-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
127-91-3	b-Pinene	0.26	0.77	ND	1.43	4.29	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
124-18-5	n-Decane	0.26	0.77	ND	1.49	4.48	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
5989-27-5	d-Limonene	0.26	0.77	ND	1.43	4.29	ND	ND
141-93-5	1,3-Diethylbenzene	0.26	0.77	ND	1.41	4.22	ND	ND
105-05-5	1,4-Diethylbenzene	0.26	0.77	ND	1.41	4.22	ND	ND
104-51-8	n-Butylbenzene	0.26	0.77	ND	1.41	4.22	ND	ND
1120-21-4	Undecane	0.23	0.70	ND	1.49	4.47	ND	ND
112-40-3	Dodecane	0.21	0.64	ND	1.49	4.47	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.60	28.80	55.82	33.91	101.74	197.21
TNMHC - C1	Total Non-Methane Hydrocarbons	57.60	172.80	334.94	37.77	113.31	219.63

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 04

File Name: 1820504A

Date Sampled: 04/10/18 Time: 9:26

Description: T-104

Date Analyzed: 04/13/18 Time: 19:11

Can/Tube#: 631

Can Dilution Factor: 1.28

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	128	384	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 04

File Name: 1820504A
Description: T-104
Can/Tube#: 631
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 Time: 9:26
Date Analyzed: 04/17/18 Time: 12:27
Dilution Factor: 1.28

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	0.69	0.09	0.26	0.46	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 05

File Name: 1820505A.D

Date Sampled: 04/10/18

Time: 10:33

Description: T-105

Date Analyzed: 04/19/18

Time: 19:34

Canister: 759

Can Dilution Factor: 1.27

QC_Batch: 041918-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.60	ND	1.57	7.89	ND	
74-87-3	Chloromethane	0.32	1.60	ND	0.66	3.30	ND	
76-14-2	Freon 114	0.32	1.60	ND	2.22	11.16	ND	
75-01-4	Vinyl chloride	0.32	1.60	ND	0.81	4.08	ND	
106-99-0	1,3-Butadiene	0.32	1.60	ND	0.70	3.53	ND	
74-83-9	Bromomethane	0.32	1.60	ND	1.23	6.20	ND	
75-00-3	Chloroethane	0.32	1.60	ND	0.84	4.21	ND	
64-17-5	Ethanol	1.59	4.76	ND	2.99	8.98	ND	
75-69-4	Trichlorofluoromethane	0.32	1.52	ND	1.78	8.56	ND	
67-64-1	Acetone	1.59	3.91	ND	3.77	9.28	ND	
67-63-0	2-propanol	1.59	3.64	ND	3.90	8.95	ND	
75-35-4	1,1-Dichloroethene	0.32	1.57	ND	1.26	6.24	ND	
76-13-1	Freon 113	0.32	1.52	ND	2.43	11.64	ND	
75-09-2	Dichloromethane	0.64	1.53	ND	2.20	5.31	ND	
75-15-0	Carbon disulfide	1.59	2.95	ND	4.94	9.17	ND	
156-60-5	trans-1,2-Dichloroethene	0.32	1.15	ND	1.26	4.54	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.17	ND	1.14	4.22	ND	
75-34-3	1,1-Dichloroethane	0.32	1.58	ND	1.28	6.41	ND	
108-05-4	Vinyl acetate	0.32	1.39	ND	1.12	4.91	ND	
78-93-3	2-Butanone	1.27	3.23	ND	3.74	9.53	ND	
141-78-6	Ethyl acetate	0.64	1.39	ND	2.29	5.01	ND	
74-97-5	Bromochloromethane	0.32	0.85	ND	1.68	4.47	ND	
109-99-9	Tetrahydrofuran	0.64	1.60	ND	1.87	4.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.64	1.71	ND	2.52	6.77	ND	
67-66-3	Chloroform	0.32	1.59	ND	1.55	7.77	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.41	ND	1.73	7.69	ND	
107-06-2	1,2-Dichloroethane	0.32	1.45	ND	1.28	5.86	ND	
110-82-7	Cyclohexane	0.32	1.22	ND	1.10	4.20	ND	
71-43-2	Benzene	0.32	1.61	5.07	1.01	5.15	16.18	
56-23-5	Carbon tetrachloride	0.32	1.50	ND	2.00	9.46	ND	
142-82-5	n-Heptane	1.59	3.85	ND	6.50	15.76	ND	
78-87-5	1,2-Dichloropropane	0.32	1.53	ND	1.47	7.06	ND	
123-91-1	1,4 Dioxane	1.27	2.60	ND	4.57	9.35	ND	
79-01-6	Trichloroethene	0.19	1.48	ND	1.02	7.94	ND	
75-27-4	Bromodichloromethane	0.32	0.64	ND	2.13	4.29	ND	
80-62-6	Methyl methacrylate	1.27	4.29	ND	5.20	17.57	ND	
108-10-1	4-Methyl-2-pentanone	1.27	4.81	ND	5.20	19.69	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.32	1.65	ND	1.44	7.47	ND	
108-88-3	Toluene	0.64	1.66	1.59	2.39	6.24	5.98	J
10061-02-6	trans-1,3-Dichloropropene	0.32	1.65	ND	1.44	7.47	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.63	ND	1.73	8.90	ND	
591-78-6	2-Hexanone	1.59	4.50	ND	6.50	18.44	ND	
124-48-1	Dibromochloromethane	0.32	0.63	ND	2.70	5.40	ND	
106-93-4	1,2-Dibromoethane	0.32	0.77	ND	2.44	5.92	ND	
127-18-4	Tetrachloroethene	0.19	0.77	ND	1.29	5.24	ND	
108-90-7	Chlorobenzene	0.32	1.44	ND	1.46	6.65	ND	
100-41-4	Ethylbenzene	0.67	1.68	ND	2.91	7.29	ND	
1330-20-7	m,p-Xylenes	0.67	1.68	0.84	2.92	7.30	3.63	J
100-42-5	Styrene	0.66	1.64	ND	2.80	7.00	ND	
75-25-2	Bromoform	0.32	0.43	ND	3.28	4.40	ND	
95-47-6	o-Xylene	0.65	1.64	ND	2.84	7.10	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.79	ND	2.16	5.39	ND	
622-96-8	4-Ethyltoluene	1.05	2.63	ND	5.17	12.93	ND	
108-67-8	1,3,5-Trimethylbenzene	0.66	1.64	ND	3.22	8.06	ND	
95-63-6	1,2,4-Trimethylbenzene	0.65	1.61	ND	3.17	7.93	ND	
541-73-1	1,3-Dichlorobenzene	0.64	1.17	ND	3.82	7.06	ND	
100-44-7	Benzyl chloride	0.64	3.85	ND	3.29	19.92	ND	
106-46-7	1,4-Dichlorobenzene	0.64	1.10	ND	3.82	6.60	ND	
95-50-1	1,2-Dichlorobenzene	0.64	1.03	ND	3.82	6.18	ND	
120-82-1	1,2,4-Trichlorobenzene	1.59	2.18	ND	11.77	16.20	ND	
91-20-3	Naphthalene	0.32	0.51	ND	1.70	2.66	ND	
87-68-3	Hexachlorobutadiene	1.59	1.68	ND	16.92	17.94	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	103	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 05

File Name: 1820505A
Description: T-105
Canister: 759
QC_Batch: 041718-GCK

Date Sampled: 04/10/18 Time: 10:33
Date Analyzed: 04/17/18 Time: 16:55
Can Factor: 1.27
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.27	3.81	1.83	1.46	4.39	2.11	J
74-86-2	Acetylene	1.27	3.81	ND	1.35	4.06	ND	ND
74-84-0	Ethane	1.27	3.81	2.70	1.57	4.70	3.33	J
115-07-1	Propene	0.85	2.54	ND	1.46	4.38	ND	ND
74-98-6	Propane	0.85	2.54	8.51	1.53	4.59	15.37	
75-28-5	i-Butane	0.64	1.91	ND	1.51	4.54	ND	ND
106-98-9	1-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
106-97-8	n-Butane	0.64	1.91	ND	1.51	4.54	ND	ND
624-64-6	t-2-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
590-18-1	c-2-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
78-78-4	i-Pentane	0.51	1.52	ND	1.50	4.51	ND	ND
109-67-1	1-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
109-66-0	n-Pentane	0.51	1.52	1.26	1.50	4.50	3.72	J
78-79-5	Isoprene	0.51	1.52	ND	1.42	4.25	ND	ND
646-04-8	t-2-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
627-20-3	c-2-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.27	ND	1.50	4.49	ND	ND
287-92-3	Cyclopentane	0.51	1.52	ND	1.46	4.38	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.27	ND	1.50	4.49	ND	ND
107-83-5	2-Methylpentane	0.42	1.27	ND	1.50	4.49	ND	ND
96-14-0	3-Methylpentane	0.42	1.27	ND	1.50	4.49	ND	ND
110-54-3	n-Hexane	0.42	1.27	0.51	1.50	4.49	1.81	J
96-37-7	Methylcyclopentane	0.42	1.27	ND	1.46	4.38	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.09	ND	1.49	4.47	ND	ND
71-43-2	Benzene	0.42	1.27	ND	1.36	4.07	ND	ND
110-82-7	Cyclohexane	0.42	1.27	ND	1.46	4.38	ND	ND
591-76-4	2-Methylhexane	0.36	1.09	ND	1.49	4.47	ND	ND
565-59-3	2,3-Dimethylpentane	0.36	1.09	ND	1.49	4.47	ND	ND
589-34-4	3-Methylhexane	0.36	1.09	ND	1.49	4.47	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	ND	1.49	4.46	ND	ND
142-82-5	n-Heptane	0.36	1.09	ND	1.49	4.47	ND	ND
108-87-2	Methylcyclohexane	0.36	1.09	ND	1.46	4.38	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.95	ND	1.49	4.46	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.95	ND	1.49	4.46	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	ND	1.49	4.46	ND	ND
108-88-3	Toluene	0.36	1.09	ND	1.37	4.11	ND	ND
584-94-1	2,3-Dimethylhexane	0.32	0.95	ND	1.49	4.46	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	ND	1.49	4.46	ND	ND
589-81-1	3-Methylheptane	0.32	0.95	ND	1.49	4.46	ND	ND
111-65-9	n-Octane	0.32	0.95	ND	1.49	4.46	ND	ND
100-41-4	Ethylbenzene	0.32	0.95	ND	1.38	4.15	ND	ND
108-38-3	m,p-xylene	0.32	0.95	ND	1.38	4.15	ND	ND
100-42-5	Styrene	0.32	0.95	ND	1.36	4.07	ND	ND
95-47-6	o-xylene	0.32	0.95	ND	1.38	4.15	ND	ND
111-84-2	n-Nonane	0.28	0.85	ND	1.48	4.45	ND	ND
98-82-8	i-Propylbenzene	0.28	0.85	ND	1.39	4.17	ND	ND
103-65-1	n-propylbenzene	0.28	0.85	ND	1.39	4.17	ND	ND
80-56-8	a-Pinene	0.25	0.76	ND	1.42	4.25	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.85	ND	1.39	4.17	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.85	ND	1.39	4.17	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.85	ND	1.39	4.17	ND	ND
611-14-3	2-Ethyltoluene	0.28	0.85	ND	1.39	4.17	ND	ND
127-91-3	b-Pinene	0.25	0.76	ND	1.42	4.25	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.85	ND	1.39	4.17	ND	ND
124-18-5	n-Decane	0.25	0.76	ND	1.48	4.44	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.28	0.85	ND	1.39	4.17	ND	ND
5989-27-5	d-Limonene	0.25	0.76	ND	1.42	4.25	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.76	ND	1.40	4.19	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.76	ND	1.40	4.19	ND	ND
104-51-8	n-Butylbenzene	0.25	0.76	ND	1.40	4.19	ND	ND
1120-21-4	Undecane	0.23	0.69	ND	1.48	4.44	ND	ND
112-40-3	Dodecane	0.21	0.64	ND	1.48	4.43	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.53	28.58	26.26	33.65	100.95	92.78	J
TNMHC - C1	Total Non-Methane Hydrocarbons	57.15	171.45	157.57	37.48	112.43	103.33	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 05

File Name: 1820505A

Date Sampled: 04/10/18

Time: 10:33

Description: T-105

Date Analyzed: 04/13/18

Time: 19:17

Can/Tube#: 759

Can Dilution Factor: 1.27

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	127	381	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 05

File Name: 1820505A
Description: T-105
Can/Tube#: 759
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 Time: 10:33
Date Analyzed: 04/17/18 Time: 12:58
Dilution Factor: 1.27

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	0.98	0.09	0.26	0.67	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 06

File Name: 1820506A.D
Description: T-106
Canister: 778
QC_Batch: 041918-MA1

Date Sampled: 04/10/18 Time: 10:36
Date Analyzed: 04/19/18 Time: 20:08
Can Dilution Factor: 1.27
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.60	ND	1.57	7.89	ND	
74-87-3	Chloromethane	0.32	1.60	ND	0.66	3.30	ND	
76-14-2	Freon 114	0.32	1.60	ND	2.22	11.16	ND	
75-01-4	Vinyl chloride	0.32	1.60	ND	0.81	4.08	ND	
106-99-0	1,3-Butadiene	0.32	1.60	ND	0.70	3.53	ND	
74-83-9	Bromomethane	0.32	1.60	ND	1.23	6.20	ND	
75-00-3	Chloroethane	0.32	1.60	ND	0.84	4.21	ND	
64-17-5	Ethanol	1.59	4.76	ND	2.99	8.98	ND	
75-69-4	Trichlorofluoromethane	0.32	1.52	ND	1.78	8.56	ND	
67-64-1	Acetone	1.59	3.91	ND	3.77	9.28	ND	
67-63-0	2-propanol	1.59	3.64	ND	3.90	8.95	ND	
75-35-4	1,1-Dichloroethene	0.32	1.57	ND	1.26	6.24	ND	
76-13-1	Freon 113	0.32	1.52	ND	2.43	11.64	ND	
75-09-2	Dichloromethane	0.64	1.53	ND	2.20	5.31	ND	
75-15-0	Carbon disulfide	1.59	2.95	ND	4.94	9.17	ND	
156-60-5	trans-1,2-Dichloroethene	0.32	1.15	ND	1.26	4.54	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.17	ND	1.14	4.22	ND	
75-34-3	1,1-Dichloroethane	0.32	1.58	ND	1.28	6.41	ND	
108-05-4	Vinyl acetate	0.32	1.39	ND	1.12	4.91	ND	
78-93-3	2-Butanone	1.27	3.23	ND	3.74	9.53	ND	
141-78-6	Ethyl acetate	0.64	1.39	ND	2.29	5.01	ND	
74-97-5	Bromochloromethane	0.32	0.85	ND	1.68	4.47	ND	
109-99-9	Tetrahydrofuran	0.64	1.60	ND	1.87	4.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.64	1.71	ND	2.52	6.77	ND	
67-66-3	Chloroform	0.32	1.59	ND	1.55	7.77	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.41	ND	1.73	7.69	ND	
107-06-2	1,2-Dichloroethane	0.32	1.45	ND	1.28	5.86	ND	
110-82-7	Cyclohexane	0.32	1.22	ND	1.10	4.20	ND	
71-43-2	Benzene	0.32	1.61	5.37	1.01	5.15	17.16	
56-23-5	Carbon tetrachloride	0.32	1.50	ND	2.00	9.46	ND	
142-82-5	n-Heptane	1.59	3.85	ND	6.50	15.76	ND	
78-87-5	1,2-Dichloropropane	0.32	1.53	ND	1.47	7.06	ND	
123-91-1	1,4 Dioxane	1.27	2.60	ND	4.57	9.35	ND	
79-01-6	Trichloroethene	0.19	1.48	ND	1.02	7.94	ND	
75-27-4	Bromodichloromethane	0.32	0.64	ND	2.13	4.29	ND	
80-62-6	Methyl methacrylate	1.27	4.29	ND	5.20	17.57	ND	
108-10-1	4-Methyl-2-pentanone	1.27	4.81	ND	5.20	19.69	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.32	1.65	ND	1.44	7.47	ND	
108-88-3	Toluene	0.64	1.66	ND	2.39	6.24	ND	
10061-02-6	trans-1,3-Dichloropropene	0.32	1.65	ND	1.44	7.47	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.63	ND	1.73	8.90	ND	
591-78-6	2-Hexanone	1.59	4.50	ND	6.50	18.44	ND	
124-48-1	Dibromochloromethane	0.32	0.63	ND	2.70	5.40	ND	
106-93-4	1,2-Dibromoethane	0.32	0.77	ND	2.44	5.92	ND	
127-18-4	Tetrachloroethene	0.19	0.77	ND	1.29	5.24	ND	
108-90-7	Chlorobenzene	0.32	1.44	ND	1.46	6.65	ND	
100-41-4	Ethylbenzene	0.67	1.68	ND	2.91	7.29	ND	
1330-20-7	m,p-Xylenes	0.67	1.68	ND	2.92	7.30	ND	
100-42-5	Styrene	0.66	1.64	ND	2.80	7.00	ND	
75-25-2	Bromoform	0.32	0.43	ND	3.28	4.40	ND	
95-47-6	o-Xylene	0.65	1.64	ND	2.84	7.10	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.79	ND	2.16	5.39	ND	
622-96-8	4-Ethyltoluene	1.05	2.63	ND	5.17	12.93	ND	
108-67-8	1,3,5-Trimethylbenzene	0.66	1.64	ND	3.22	8.06	ND	
95-63-6	1,2,4-Trimethylbenzene	0.65	1.61	ND	3.17	7.93	ND	
541-73-1	1,3-Dichlorobenzene	0.64	1.17	ND	3.82	7.06	ND	
100-44-7	Benzyl chloride	0.64	3.85	ND	3.29	19.92	ND	
106-46-7	1,4-Dichlorobenzene	0.64	1.10	ND	3.82	6.60	ND	
95-50-1	1,2-Dichlorobenzene	0.64	1.03	ND	3.82	6.18	ND	
120-82-1	1,2,4-Trichlorobenzene	1.59	2.18	ND	11.77	16.20	ND	
91-20-3	Naphthalene	0.32	0.51	ND	1.70	2.66	ND	
87-68-3	Hexachlorobutadiene	1.59	1.68	ND	16.92	17.94	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				103	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 06

File Name: 1820506A
Description: T-106
Canister: 778
QC_Batch: 041718-GCK

Date Sampled: 04/10/18 Time: 10:36
Date Analyzed: 04/17/18 Time: 17:38
Can Factor: 1.27
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.27	3.81	1.99	1.46	4.39	2.29	J
74-86-2	Acetylene	1.27	3.81	ND	1.35	4.06	ND	ND
74-84-0	Ethane	1.27	3.81	3.33	1.57	4.70	4.10	J
115-07-1	Propene	0.85	2.54	ND	1.46	4.38	ND	ND
74-98-6	Propane	0.85	2.54	ND	1.53	4.59	ND	ND
75-28-5	i-Butane	0.64	1.91	ND	1.51	4.54	ND	ND
106-98-9	1-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
106-97-8	n-Butane	0.64	1.91	ND	1.51	4.54	ND	ND
624-64-6	t-2-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
590-18-1	c-2-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
78-78-4	i-Pentane	0.51	1.52	ND	1.50	4.51	ND	ND
109-67-1	1-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
109-66-0	n-Pentane	0.51	1.52	ND	1.50	4.50	ND	ND
78-79-5	Isoprene	0.51	1.52	ND	1.42	4.25	ND	ND
646-04-8	t-2-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
627-20-3	c-2-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.27	ND	1.50	4.49	ND	ND
287-92-3	Cyclopentane	0.51	1.52	ND	1.46	4.38	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.27	ND	1.50	4.49	ND	ND
107-83-5	2-Methylpentane	0.42	1.27	ND	1.50	4.49	ND	ND
96-14-0	3-Methylpentane	0.42	1.27	ND	1.50	4.49	ND	ND
110-54-3	n-Hexane	0.42	1.27	ND	1.50	4.49	ND	ND
96-37-7	Methylcyclopentane	0.42	1.27	ND	1.46	4.38	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.09	ND	1.49	4.47	ND	ND
71-43-2	Benzene	0.42	1.27	ND	1.36	4.07	ND	ND
110-82-7	Cyclohexane	0.42	1.27	ND	1.46	4.38	ND	ND
591-76-4	2-Methylhexane	0.36	1.09	ND	1.49	4.47	ND	ND
565-59-3	2,3-Dimethylpentane	0.36	1.09	ND	1.49	4.47	ND	ND
589-34-4	3-Methylhexane	0.36	1.09	ND	1.49	4.47	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	ND	1.49	4.46	ND	ND
142-82-5	n-Heptane	0.36	1.09	ND	1.49	4.47	ND	ND
108-87-2	Methylcyclohexane	0.36	1.09	ND	1.46	4.38	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.95	ND	1.49	4.46	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.95	ND	1.49	4.46	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	ND	1.49	4.46	ND	ND
108-88-3	Toluene	0.36	1.09	ND	1.37	4.11	ND	ND
584-94-1	2,3-Dimethylhexane	0.32	0.95	ND	1.49	4.46	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	ND	1.49	4.46	ND	ND
589-81-1	3-Methylheptane	0.32	0.95	ND	1.49	4.46	ND	ND
111-65-9	n-Octane	0.32	0.95	ND	1.49	4.46	ND	ND
100-41-4	Ethylbenzene	0.32	0.95	ND	1.38	4.15	ND	ND
108-38-3	m,p-xylene	0.32	0.95	ND	1.38	4.15	ND	ND
100-42-5	Styrene	0.32	0.95	ND	1.36	4.07	ND	ND
95-47-6	o-xylene	0.32	0.95	ND	1.38	4.15	ND	ND
111-84-2	n-Nonane	0.28	0.85	ND	1.48	4.45	ND	ND
98-82-8	i-Propylbenzene	0.28	0.85	ND	1.39	4.17	ND	ND
103-65-1	n-propylbenzene	0.28	0.85	ND	1.39	4.17	ND	ND
80-56-8	a-Pinene	0.25	0.76	ND	1.42	4.25	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.85	ND	1.39	4.17	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.85	ND	1.39	4.17	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.85	ND	1.39	4.17	ND	ND
611-14-3	2-Ethyltoluene	0.28	0.85	ND	1.39	4.17	ND	ND
127-91-3	b-Pinene	0.25	0.76	ND	1.42	4.25	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.85	ND	1.39	4.17	ND	ND
124-18-5	n-Decane	0.25	0.76	ND	1.48	4.44	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.28	0.85	ND	1.39	4.17	ND	ND
5989-27-5	d-Limonene	0.25	0.76	ND	1.42	4.25	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.76	ND	1.40	4.19	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.76	ND	1.40	4.19	ND	ND
104-51-8	n-Butylbenzene	0.25	0.76	ND	1.40	4.19	ND	ND
1120-21-4	Undecane	0.23	0.69	ND	1.48	4.44	ND	ND
112-40-3	Dodecane	0.21	0.64	ND	1.48	4.43	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.53	28.58	ND	33.65	100.95	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	57.15	171.45	ND	37.48	112.43	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 06

File Name: 1820506A

Date Sampled: 04/10/18 Time: 10:36

Description: T-106

Date Analyzed: 04/13/18 Time: 19:24

Can/Tube#: 778

Can Dilution Factor: 1.27

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	127	381	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: **ASTM D3416**

SDG: 218205
Laboratory Number: 06

File Name: 1820506A
Description: T-106
Can/Tube#: 778
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 **Time:** 10:36
Date Analyzed: 04/17/18 **Time:** 13:02
Dilution Factor: 1.27

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	ND	0.09	0.26	ND	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 07

File Name: 1820507A.D

Date Sampled: 04/10/18

Time: 11:35

Description: T-107

Date Analyzed: 04/19/18

Time: 20:40

Canister: 511

Can Dilution Factor: 1.28

QC_Batch: 041918-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.61	ND	1.58	7.96	ND	
74-87-3	Chloromethane	0.32	1.61	ND	0.66	3.32	ND	
76-14-2	Freon 114	0.32	1.61	ND	2.24	11.25	ND	
75-01-4	Vinyl chloride	0.32	1.61	ND	0.82	4.11	ND	
106-99-0	1,3-Butadiene	0.32	1.61	ND	0.71	3.56	ND	
74-83-9	Bromomethane	0.32	1.61	ND	1.24	6.24	ND	
75-00-3	Chloroethane	0.32	1.61	ND	0.84	4.24	ND	
64-17-5	Ethanol	1.60	4.80	ND	3.02	9.05	ND	
75-69-4	Trichlorofluoromethane	0.32	1.54	ND	1.80	8.63	ND	
67-64-1	Acetone	1.60	3.94	4,344.09	3.80	9.35	10,317.62	E
67-63-0	2-propanol	1.60	3.67	ND	3.93	9.03	ND	
75-35-4	1,1-Dichloroethene	0.32	1.59	ND	1.27	6.29	ND	
76-13-1	Freon 113	0.32	1.53	ND	2.45	11.73	ND	
75-09-2	Dichloromethane	0.64	1.54	ND	2.22	5.35	ND	
75-15-0	Carbon disulfide	1.60	2.97	32.79	4.98	9.24	102.01	
156-60-5	trans-1,2-Dichloroethene	0.32	1.16	ND	1.27	4.58	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.18	ND	1.15	4.25	ND	
75-34-3	1,1-Dichloroethane	0.32	1.60	ND	1.30	6.46	ND	
108-05-4	Vinyl acetate	0.32	1.41	ND	1.13	4.95	ND	
78-93-3	2-Butanone	1.28	3.26	1,392.24	3.77	9.60	4,103.51	E
141-78-6	Ethyl acetate	0.64	1.40	ND	2.30	5.05	ND	
74-97-5	Bromochloromethane	0.32	0.85	ND	1.69	4.51	ND	
109-99-9	Tetrahydrofuran	0.64	1.61	ND	1.89	4.74	ND	
156-59-2	cis-1,2-Dichloroethene	0.64	1.72	ND	2.54	6.82	ND	
67-66-3	Chloroform	0.32	1.60	ND	1.56	7.83	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.42	ND	1.75	7.75	ND	
107-06-2	1,2-Dichloroethane	0.32	1.46	ND	1.30	5.91	ND	
110-82-7	Cyclohexane	0.32	1.23	ND	1.11	4.23	ND	
71-43-2	Benzene	0.32	1.63	25.30	1.02	5.19	80.79	
56-23-5	Carbon tetrachloride	0.32	1.52	ND	2.01	9.54	ND	
142-82-5	n-Heptane	1.60	3.88	ND	6.55	15.89	ND	
78-87-5	1,2-Dichloropropane	0.32	1.54	ND	1.48	7.11	ND	
123-91-1	1,4 Dioxane	1.28	2.62	ND	4.61	9.43	ND	
79-01-6	Trichloroethene	0.19	1.49	ND	1.03	8.01	ND	
75-27-4	Bromodichloromethane	0.32	0.65	ND	2.14	4.33	ND	
80-62-6	Methyl methacrylate	1.28	4.33	ND	5.24	17.70	ND	
108-10-1	4-Methyl-2-pentanone	1.28	4.84	10.73	5.24	19.84	43.95	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	0.32	1.66	ND	1.45	7.52	ND		
108-88-3	Toluene	0.64	1.67	9.52	2.41	6.29	35.85		
10061-02-6	trans-1,3-Dichloropropene	0.32	1.66	ND	1.45	7.53	ND		
79-00-5	1,1,2-Trichloroethane	0.32	1.65	ND	1.75	8.97	ND		
591-78-6	2-Hexanone	1.60	4.54	13.18	6.55	18.59	53.98		
124-48-1	Dibromochloromethane	0.32	0.64	ND	2.72	5.44	ND		
106-93-4	1,2-Dibromoethane	0.32	0.78	ND	2.46	5.97	ND		
127-18-4	Tetrachloroethene	0.19	0.78	ND	1.30	5.28	ND		
108-90-7	Chlorobenzene	0.32	1.46	ND	1.47	6.70	ND		
100-41-4	Ethylbenzene	0.68	1.69	9.24	2.94	7.34	40.10		
1330-20-7	m,p-Xylenes	0.68	1.70	5.44	2.94	7.36	23.63		
100-42-5	Styrene	0.66	1.66	ND	2.82	7.06	ND		
75-25-2	Bromoform	0.32	0.43	ND	3.31	4.44	ND		
95-47-6	o-Xylene	0.66	1.65	3.42	2.86	7.16	14.87		
79-34-5	1,1,2,2-Tetrachloroethane	0.32	0.79	ND	2.17	5.43	ND		
622-96-8	4-Ethyltoluene	1.06	2.65	1.38	5.21	13.03	6.79	J	
108-67-8	1,3,5-Trimethylbenzene	0.66	1.65	0.69	3.25	8.12	3.38	J	
95-63-6	1,2,4-Trimethylbenzene	0.65	1.63	2.05	3.20	7.99	10.07		
541-73-1	1,3-Dichlorobenzene	0.64	1.18	ND	3.85	7.11	ND		
100-44-7	Benzyl chloride	0.64	3.88	ND	3.31	20.07	ND		
106-46-7	1,4-Dichlorobenzene	0.64	1.11	ND	3.85	6.65	ND		
95-50-1	1,2-Dichlorobenzene	0.64	1.04	ND	3.85	6.23	ND		
120-82-1	1,2,4-Trichlorobenzene	1.60	2.20	ND	11.86	16.33	ND		
91-20-3	Naphthalene	0.33	0.51	2.53	1.71	2.68	13.25		
87-68-3	Hexachlorobutadiene	1.60	1.70	ND	17.06	18.08	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				107	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 07

File Name: 1820507A
Description: T-107
Canister: 511
QC_Batch: 041718-GCK

Date Sampled: 04/10/18 Time: 11:35
Date Analyzed: 04/17/18 Time: 18:22
Can Factor: 1.28
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.28	3.84	ND	1.47	4.42	ND	ND
74-86-2	Acetylene	1.28	3.84	ND	1.36	4.09	ND	ND
74-84-0	Ethane	1.28	3.84	19.36	1.58	4.74	23.88	
115-07-1	Propene	0.85	2.56	ND	1.47	4.42	ND	ND
74-98-6	Propane	0.85	2.56	18.11	1.54	4.63	32.73	
75-28-5	i-Butane	0.64	1.92	1.37	1.52	4.57	3.25	J
106-98-9	1-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
106-97-8	n-Butane	0.64	1.92	3.26	1.52	4.57	7.76	
624-64-6	t-2-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
590-18-1	c-2-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
78-78-4	i-Pentane	0.51	1.54	1.22	1.52	4.55	3.62	J
109-67-1	1-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
109-66-0	n-Pentane	0.51	1.54	3.45	1.51	4.54	10.20	
78-79-5	Isoprene	0.51	1.54	ND	1.43	4.29	ND	ND
646-04-8	t-2-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
627-20-3	c-2-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
75-83-2	2,2-Dimethylbutane	0.43	1.28	ND	1.51	4.52	ND	ND
287-92-3	Cyclopentane	0.51	1.54	ND	1.47	4.41	ND	ND
79-29-8	2,3-Dimethylbutane	0.43	1.28	ND	1.51	4.52	ND	ND
107-83-5	2-Methylpentane	0.43	1.28	ND	1.51	4.52	ND	ND
96-14-0	3-Methylpentane	0.43	1.28	ND	1.51	4.52	ND	ND
110-54-3	n-Hexane	0.43	1.28	12.91	1.51	4.52	45.61	
96-37-7	Methylcyclopentane	0.43	1.28	ND	1.47	4.42	ND	ND
108-08-7	2,4-Dimethylpentane	0.37	1.10	ND	1.50	4.51	ND	ND
71-43-2	Benzene	0.43	1.28	18.13	1.37	4.10	58.04	
110-82-7	Cyclohexane	0.43	1.28	ND	1.47	4.42	ND	ND
591-76-4	2-Methylhexane	0.37	1.10	ND	1.50	4.51	ND	ND
565-59-3	2,3-Dimethylpentane	0.37	1.10	ND	1.50	4.51	ND	ND
589-34-4	3-Methylhexane	0.37	1.10	ND	1.50	4.51	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.96	ND	1.50	4.49	ND	ND
142-82-5	n-Heptane	0.37	1.10	2.47	1.50	4.51	10.15	
108-87-2	Methylcyclohexane	0.37	1.10	ND	1.47	4.42	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.96	ND	1.50	4.49	ND	ND
108-88-3	Toluene	0.37	1.10	7.35	1.38	4.14	27.73	
584-94-1	2,3-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.96	ND	1.50	4.49	ND	ND
589-81-1	3-Methylheptane	0.32	0.96	ND	1.50	4.49	ND	ND
111-65-9	n-Octane	0.32	0.96	ND	1.50	4.49	ND	ND
100-41-4	Ethylbenzene	0.32	0.96	9.92	1.39	4.18	43.16	
108-38-3	m,p-xylene	0.32	0.96	5.96	1.39	4.18	25.93	
100-42-5	Styrene	0.32	0.96	ND	1.37	4.10	ND	ND
95-47-6	o-xylene	0.32	0.96	ND	1.39	4.18	ND	ND
111-84-2	n-Nonane	0.28	0.85	3.25	1.50	4.49	17.11	
98-82-8	i-Propylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
103-65-1	n-propylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
80-56-8	a-Pinene	0.26	0.77	ND	1.43	4.29	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.85	2.79	1.40	4.20	13.75	
108-67-8	1,3,5-Trimethylbenzene	0.28	0.85	1.60	1.40	4.20	7.87	
611-14-3	2-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
127-91-3	b-Pinene	0.26	0.77	ND	1.43	4.29	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.85	8.04	1.40	4.20	39.59	
124-18-5	n-Decane	0.26	0.77	3.61	1.49	4.48	21.06	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
5989-27-5	d-Limonene	0.26	0.77	ND	1.43	4.29	ND	ND
141-93-5	1,3-Diethylbenzene	0.26	0.77	18.76	1.41	4.22	103.17	
105-05-5	1,4-Diethylbenzene	0.26	0.77	6.79	1.41	4.22	37.36	
104-51-8	n-Butylbenzene	0.26	0.77	ND	1.41	4.22	ND	ND
1120-21-4	Undecane	0.23	0.70	1.87	1.49	4.47	11.97	
112-40-3	Dodecane	0.21	0.64	1.11	1.49	4.47	7.78	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.60	28.80	3,325.48	33.91	101.74	11,748.20	
TNMHC - C1	Total Non-Methane Hydrocarbons	57.60	172.80	19,952.86	37.77	113.31	13,083.85	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 07

File Name: 1820507A

Date Sampled: 04/10/18 Time: 11:35

Description: T-107

Date Analyzed: 04/13/18 Time: 19:33

Can/Tube#: 511

Can Dilution Factor: 1.28

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.04	128	384	355	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: **ASTM D3416**

SDG: 218205
Laboratory Number: 07

File Name: 1820507A
Description: T-107
Can/Tube#: 511
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 **Time:** 11:35
Date Analyzed: 04/17/18 **Time:** 13:50
Dilution Factor: 1.28

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	4.53	0.09	0.26	3.06	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 08

File Name: 1820508A.D
Description: T-108
Canister: 884
QC_Batch: 042018-MA1

Date Sampled: 04/10/18 Time: 13:27
Date Analyzed: 04/20/18 Time: 15:07
Can Dilution Factor: 1.29
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.62	ND	1.59	8.02	ND	
74-87-3	Chloromethane	0.32	1.62	ND	0.67	3.35	ND	
76-14-2	Freon 114	0.32	1.62	ND	2.25	11.33	ND	
75-01-4	Vinyl chloride	0.32	1.62	ND	0.82	4.14	ND	
106-99-0	1,3-Butadiene	0.32	1.62	ND	0.71	3.59	ND	
74-83-9	Bromomethane	0.32	1.62	ND	1.25	6.29	ND	
75-00-3	Chloroethane	0.32	1.62	ND	0.85	4.28	ND	
64-17-5	Ethanol	1.61	4.84	ND	3.04	9.12	ND	
75-69-4	Trichlorofluoromethane	0.32	1.55	ND	1.81	8.70	ND	
67-64-1	Acetone	1.61	3.97	356.19	3.83	9.42	846.00	E
67-63-0	2-propanol	1.61	3.70	ND	3.96	9.10	ND	
75-35-4	1,1-Dichloroethene	0.32	1.60	ND	1.28	6.34	ND	
76-13-1	Freon 113	0.32	1.54	ND	2.47	11.82	ND	
75-09-2	Dichloromethane	0.65	1.55	ND	2.24	5.39	ND	
75-15-0	Carbon disulfide	1.61	2.99	ND	5.02	9.31	ND	
156-60-5	trans-1,2-Dichloroethene	0.32	1.16	ND	1.28	4.61	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.19	ND	1.16	4.28	ND	
75-34-3	1,1-Dichloroethane	0.32	1.61	ND	1.31	6.51	ND	
108-05-4	Vinyl acetate	0.32	1.42	ND	1.14	4.99	ND	
78-93-3	2-Butanone	1.29	3.28	118.31	3.80	9.68	348.72	
141-78-6	Ethyl acetate	0.65	1.41	ND	2.32	5.09	ND	
74-97-5	Bromochloromethane	0.32	0.86	ND	1.71	4.54	ND	
109-99-9	Tetrahydrofuran	0.65	1.62	ND	1.90	4.78	ND	
156-59-2	cis-1,2-Dichloroethene	0.65	1.74	ND	2.55	6.87	ND	
67-66-3	Chloroform	0.32	1.62	ND	1.57	7.89	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.43	ND	1.76	7.81	ND	
107-06-2	1,2-Dichloroethane	0.32	1.47	ND	1.31	5.95	ND	
110-82-7	Cyclohexane	0.32	1.24	ND	1.11	4.26	ND	
71-43-2	Benzene	0.32	1.64	14.55	1.03	5.23	46.44	
56-23-5	Carbon tetrachloride	0.32	1.53	ND	2.03	9.61	ND	
142-82-5	n-Heptane	1.61	3.91	ND	6.60	16.01	ND	
78-87-5	1,2-Dichloropropane	0.32	1.55	ND	1.49	7.17	ND	
123-91-1	1,4 Dioxane	1.29	2.64	ND	4.65	9.50	ND	
79-01-6	Trichloroethene	0.19	1.50	ND	1.04	8.07	ND	
75-27-4	Bromodichloromethane	0.32	0.65	ND	2.16	4.36	ND	
80-62-6	Methyl methacrylate	1.29	4.36	ND	5.28	17.84	ND	
108-10-1	4-Methyl-2-pentanone	1.29	4.88	ND	5.28	20.00	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	0.32	1.67	ND	1.46	7.58	ND		
108-88-3	Toluene	0.65	1.68	13.81	2.43	6.34	51.98		
10061-02-6	trans-1,3-Dichloropropene	0.32	1.67	ND	1.46	7.59	ND		
79-00-5	1,1,2-Trichloroethane	0.32	1.66	ND	1.76	9.04	ND		
591-78-6	2-Hexanone	1.61	4.57	ND	6.60	18.73	ND		
124-48-1	Dibromochloromethane	0.32	0.64	ND	2.75	5.48	ND		
106-93-4	1,2-Dibromoethane	0.32	0.78	ND	2.48	6.01	ND		
127-18-4	Tetrachloroethene	0.19	0.78	ND	1.31	5.32	ND		
108-90-7	Chlorobenzene	0.32	1.47	ND	1.48	6.76	ND		
100-41-4	Ethylbenzene	0.68	1.70	1.12	2.96	7.40	4.85	J	
1330-20-7	m,p-Xylenes	0.68	1.71	4.28	2.97	7.42	18.59		
100-42-5	Styrene	0.67	1.67	ND	2.84	7.11	ND		
75-25-2	Bromoform	0.32	0.43	ND	3.33	4.47	ND		
95-47-6	o-Xylene	0.66	1.66	2.24	2.89	7.22	9.71		
79-34-5	1,1,2,2-Tetrachloroethane	0.32	0.80	ND	2.19	5.48	ND		
622-96-8	4-Ethyltoluene	1.07	2.67	ND	5.25	13.13	ND		
108-67-8	1,3,5-Trimethylbenzene	0.67	1.67	ND	3.27	8.19	ND		
95-63-6	1,2,4-Trimethylbenzene	0.66	1.64	1.02	3.22	8.05	5.02	J	
541-73-1	1,3-Dichlorobenzene	0.65	1.19	ND	3.88	7.17	ND		
100-44-7	Benzyl chloride	0.65	3.91	ND	3.34	20.23	ND		
106-46-7	1,4-Dichlorobenzene	0.65	1.12	ND	3.88	6.71	ND		
95-50-1	1,2-Dichlorobenzene	0.65	1.04	ND	3.88	6.28	ND		
120-82-1	1,2,4-Trichlorobenzene	1.61	2.22	ND	11.96	16.45	ND		
91-20-3	Naphthalene	0.33	0.52	0.76	1.72	2.70	4.01		
87-68-3	Hexachlorobutadiene	1.61	1.71	ND	17.19	18.22	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				104	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 08

File Name: 1820508A
Description: T-108
Canister: 884
QC_Batch: 041718-GCK

Date Sampled: 04/10/18 Time: 13:27
Date Analyzed: 04/17/18 Time: 19:06
Can Factor: 1.29
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.29	3.87	3.40	1.49	4.46	3.92	J
74-86-2	Acetylene	1.29	3.87	ND	1.37	4.12	ND	ND
74-84-0	Ethane	1.29	3.87	19.97	1.59	4.77	24.64	
115-07-1	Propene	0.86	2.58	ND	1.48	4.45	ND	ND
74-98-6	Propane	0.86	2.58	3.86	1.55	4.66	6.97	
75-28-5	i-Butane	0.65	1.94	ND	1.54	4.61	ND	ND
106-98-9	1-Butene	0.65	1.94	ND	1.48	4.45	ND	ND
106-97-8	n-Butane	0.65	1.94	ND	1.54	4.61	ND	ND
624-64-6	t-2-Butene	0.65	1.94	ND	1.48	4.45	ND	ND
590-18-1	c-2-Butene	0.65	1.94	ND	1.48	4.45	ND	ND
78-78-4	i-Pentane	0.52	1.55	ND	1.53	4.58	ND	ND
109-67-1	1-Pentene	0.52	1.55	ND	1.48	4.45	ND	ND
109-66-0	n-Pentane	0.52	1.55	1.05	1.52	4.57	3.11	J
78-79-5	Isoprene	0.52	1.55	ND	1.44	4.32	ND	ND
646-04-8	t-2-Pentene	0.52	1.55	ND	1.48	4.45	ND	ND
627-20-3	c-2-Pentene	0.52	1.55	ND	1.48	4.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.43	1.29	ND	1.52	4.56	ND	ND
287-92-3	Cyclopentane	0.52	1.55	ND	1.48	4.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.43	1.29	ND	1.52	4.56	ND	ND
107-83-5	2-Methylpentane	0.43	1.29	ND	1.52	4.56	ND	ND
96-14-0	3-Methylpentane	0.43	1.29	ND	1.52	4.56	ND	ND
110-54-3	n-Hexane	0.43	1.29	0.56	1.52	4.56	1.96	J
96-37-7	Methylcyclopentane	0.43	1.29	ND	1.48	4.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.37	1.11	0.80	1.51	4.54	3.28	J
71-43-2	Benzene	0.43	1.29	14.20	1.38	4.13	45.46	
110-82-7	Cyclohexane	0.43	1.29	ND	1.48	4.45	ND	ND
591-76-4	2-Methylhexane	0.37	1.11	12.42	1.51	4.54	51.02	
565-59-3	2,3-Dimethylpentane	0.37	1.11	ND	1.51	4.54	ND	ND
589-34-4	3-Methylhexane	0.37	1.11	7.36	1.51	4.54	30.21	
540-84-1	2,2,4-Trimethylpentane	0.32	0.97	ND	1.51	4.53	ND	ND
142-82-5	n-Heptane	0.37	1.11	ND	1.51	4.54	ND	ND
108-87-2	Methylcyclohexane	0.37	1.11	ND	1.48	4.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.97	ND	1.51	4.53	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.97	ND	1.51	4.53	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.97	ND	1.51	4.53	ND	ND
108-88-3	Toluene	0.37	1.11	14.88	1.39	4.17	56.18	
584-94-1	2,3-Dimethylhexane	0.32	0.97	ND	1.51	4.53	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.97	3.96	1.51	4.53	18.52	
589-81-1	3-Methylheptane	0.32	0.97	1.21	1.51	4.53	5.65	
111-65-9	n-Octane	0.32	0.97	1.47	1.51	4.53	6.86	
100-41-4	Ethylbenzene	0.32	0.97	0.99	1.40	4.21	4.32	
108-38-3	m,p-xylene	0.32	0.97	4.20	1.40	4.21	18.29	
100-42-5	Styrene	0.32	0.97	ND	1.38	4.13	ND	ND
95-47-6	o-xylene	0.32	0.97	2.31	1.40	4.21	10.04	
111-84-2	n-Nonane	0.29	0.86	1.42	1.51	4.52	7.45	
98-82-8	i-Propylbenzene	0.29	0.86	ND	1.41	4.24	ND	ND
103-65-1	n-propylbenzene	0.29	0.86	ND	1.41	4.24	ND	ND
80-56-8	a-Pinene	0.26	0.77	ND	1.44	4.32	ND	ND
620-14-4	3-Ethyltoluene	0.29	0.86	ND	1.41	4.24	ND	ND
622-96-8	4-Ethyltoluene	0.29	0.86	0.30	1.41	4.24	1.49	J
108-67-8	1,3,5-Trimethylbenzene	0.29	0.86	0.62	1.41	4.24	3.03	J
611-14-3	2-Ethyltoluene	0.29	0.86	ND	1.41	4.24	ND	ND
127-91-3	b-Pinene	0.26	0.77	ND	1.44	4.32	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.29	0.86	1.06	1.41	4.24	5.23	
124-18-5	n-Decane	0.26	0.77	ND	1.50	4.51	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.29	0.86	ND	1.41	4.24	ND	ND
5989-27-5	d-Limonene	0.26	0.77	ND	1.44	4.32	ND	ND
141-93-5	1,3-Diethylbenzene	0.26	0.77	1.21	1.42	4.26	6.65	
105-05-5	1,4-Diethylbenzene	0.26	0.77	1.04	1.42	4.26	5.71	
104-51-8	n-Butylbenzene	0.26	0.77	ND	1.42	4.26	ND	ND
1120-21-4	Undecane	0.23	0.70	0.99	1.50	4.51	6.34	
112-40-3	Dodecane	0.22	0.65	0.58	1.50	4.50	4.08	J

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.68	29.03	353.77	34.18	102.54	1,249.80	
TNMHC - C1	Total Non-Methane Hydrocarbons	58.05	174.15	2,122.64	38.07	114.20	1,391.89	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 08

File Name: 1820508A

Date Sampled: 04/10/18

Time: 13:27

Description: T-108

Date Analyzed: 04/13/18

Time: 19:39

Can/Tube#: 884

Can Dilution Factor: 1.29

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	129	387	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 08

File Name: 1820508A
Description: T-108
Can/Tube#: 884
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 Time: 13:27
Date Analyzed: 04/17/18 Time: 13:54
Dilution Factor: 1.29

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.39	1.81	0.09	0.26	1.22	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 09

File Name: 1820509A.D

Date Sampled: 04/10/18

Time: 14:22

Description: T-109

Date Analyzed: 04/20/18

Time: 15:45

Canister: 783

Can Dilution Factor: 1.33

QC_Batch: 042018-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.33	1.67	ND	1.64	8.27	ND	
74-87-3	Chloromethane	0.33	1.67	ND	0.69	3.45	ND	
76-14-2	Freon 114	0.33	1.67	ND	2.32	11.68	ND	
75-01-4	Vinyl chloride	0.33	1.67	ND	0.85	4.27	ND	
106-99-0	1,3-Butadiene	0.33	1.67	ND	0.74	3.70	ND	
74-83-9	Bromomethane	0.33	1.67	ND	1.29	6.49	ND	
75-00-3	Chloroethane	0.33	1.67	ND	0.88	4.41	ND	
64-17-5	Ethanol	1.66	4.99	ND	3.13	9.40	ND	
75-69-4	Trichlorofluoromethane	0.33	1.60	ND	1.87	8.97	ND	
67-64-1	Acetone	1.66	4.09	ND	3.95	9.71	ND	
67-63-0	2-propanol	1.66	3.82	ND	4.08	9.38	ND	
75-35-4	1,1-Dichloroethene	0.33	1.65	ND	1.32	6.53	ND	
76-13-1	Freon 113	0.33	1.59	ND	2.55	12.19	ND	
75-09-2	Dichloromethane	0.67	1.60	ND	2.31	5.56	ND	
75-15-0	Carbon disulfide	1.66	3.09	ND	5.17	9.60	ND	
156-60-5	trans-1,2-Dichloroethene	0.33	1.20	ND	1.32	4.76	ND	
1634-04-4	Methyl tert butyl ether	0.33	1.23	ND	1.20	4.42	ND	
75-34-3	1,1-Dichloroethane	0.33	1.66	ND	1.35	6.71	ND	
108-05-4	Vinyl acetate	0.33	1.46	ND	1.17	5.14	ND	
78-93-3	2-Butanone	1.33	3.38	ND	3.92	9.98	ND	
141-78-6	Ethyl acetate	0.67	1.46	ND	2.39	5.25	ND	
74-97-5	Bromochloromethane	0.33	0.89	ND	1.76	4.68	ND	
109-99-9	Tetrahydrofuran	0.67	1.67	ND	1.96	4.93	ND	
156-59-2	cis-1,2-Dichloroethene	0.67	1.79	ND	2.63	7.09	ND	
67-66-3	Chloroform	0.33	1.67	ND	1.62	8.14	ND	
71-55-6	1,1,1-Trichloroethane	0.33	1.48	ND	1.81	8.05	ND	
107-06-2	1,2-Dichloroethane	0.33	1.52	ND	1.35	6.14	ND	
110-82-7	Cyclohexane	0.33	1.28	ND	1.15	4.39	ND	
71-43-2	Benzene	0.33	1.69	4.68	1.06	5.39	14.93	
56-23-5	Carbon tetrachloride	0.33	1.58	ND	2.09	9.91	ND	
142-82-5	n-Heptane	1.66	4.03	ND	6.81	16.51	ND	
78-87-5	1,2-Dichloropropane	0.33	1.60	ND	1.54	7.39	ND	
123-91-1	1,4 Dioxane	1.33	2.72	ND	4.79	9.80	ND	
79-01-6	Trichloroethene	0.20	1.55	ND	1.07	8.32	ND	
75-27-4	Bromodichloromethane	0.33	0.67	ND	2.23	4.50	ND	
80-62-6	Methyl methacrylate	1.33	4.50	ND	5.44	18.40	ND	
108-10-1	4-Methyl-2-pentanone	1.33	5.03	ND	5.45	20.62	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.33	1.72	ND	1.51	7.82	ND	
108-88-3	Toluene	0.67	1.74	0.85	2.50	6.53	3.22	J
10061-02-6	trans-1,3-Dichloropropene	0.33	1.72	ND	1.51	7.82	ND	
79-00-5	1,1,2-Trichloroethane	0.33	1.71	ND	1.81	9.32	ND	
591-78-6	2-Hexanone	1.66	4.71	ND	6.81	19.31	ND	
124-48-1	Dibromochloromethane	0.33	0.66	ND	2.83	5.65	ND	
106-93-4	1,2-Dibromoethane	0.33	0.81	ND	2.55	6.20	ND	
127-18-4	Tetrachloroethene	0.20	0.81	ND	1.35	5.49	ND	
108-90-7	Chlorobenzene	0.33	1.51	ND	1.53	6.96	ND	
100-41-4	Ethylbenzene	0.70	1.76	ND	3.05	7.63	ND	
1330-20-7	m,p-Xylenes	0.70	1.76	ND	3.06	7.65	ND	
100-42-5	Styrene	0.69	1.72	ND	2.93	7.33	ND	
75-25-2	Bromoform	0.33	0.45	ND	3.43	4.61	ND	
95-47-6	o-Xylene	0.69	1.71	ND	2.98	7.44	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.82	ND	2.26	5.65	ND	
622-96-8	4-Ethyltoluene	1.10	2.76	ND	5.42	13.54	ND	
108-67-8	1,3,5-Trimethylbenzene	0.69	1.72	ND	3.38	8.44	ND	
95-63-6	1,2,4-Trimethylbenzene	0.68	1.69	ND	3.32	8.30	ND	
541-73-1	1,3-Dichlorobenzene	0.67	1.23	ND	4.00	7.39	ND	
100-44-7	Benzyl chloride	0.67	4.03	ND	3.44	20.86	ND	
106-46-7	1,4-Dichlorobenzene	0.67	1.15	ND	4.00	6.91	ND	
95-50-1	1,2-Dichlorobenzene	0.67	1.08	ND	4.00	6.47	ND	
120-82-1	1,2,4-Trichlorobenzene	1.66	2.29	ND	12.33	16.96	ND	
91-20-3	Naphthalene	0.34	0.53	0.61	1.78	2.79	3.19	
87-68-3	Hexachlorobutadiene	1.66	1.76	ND	17.72	18.79	ND	
Surrogate Recovery					% Rec.	QC	Limits	
2037-26-5	Toluene-d8				104	LCL 70	UCL 130	Flag

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 09

File Name: 1820509A
Description: T-109
Canister: 783
QC_Batch: 041718-GCK

Date Sampled: 04/10/18 Time: 14:22
Date Analyzed: 04/17/18 Time: 19:51
Can Factor: 1.33
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.33	3.99	ND	1.53	4.60	ND	ND
74-86-2	Acetylene	1.33	3.99	ND	1.42	4.25	ND	ND
74-84-0	Ethane	1.33	3.99	ND	1.64	4.92	ND	ND
115-07-1	Propene	0.89	2.66	ND	1.53	4.59	ND	ND
74-98-6	Propane	0.89	2.66	ND	1.60	4.81	ND	ND
75-28-5	i-Butane	0.67	2.00	ND	1.58	4.75	ND	ND
106-98-9	1-Butene	0.67	2.00	ND	1.53	4.59	ND	ND
106-97-8	n-Butane	0.67	2.00	ND	1.58	4.75	ND	ND
624-64-6	t-2-Butene	0.67	2.00	ND	1.53	4.59	ND	ND
590-18-1	c-2-Butene	0.67	2.00	ND	1.53	4.59	ND	ND
78-78-4	i-Pentane	0.53	1.60	ND	1.57	4.72	ND	ND
109-67-1	1-Pentene	0.53	1.60	ND	1.53	4.59	ND	ND
109-66-0	n-Pentane	0.53	1.60	ND	1.57	4.72	ND	ND
78-79-5	Isoprene	0.53	1.60	ND	1.48	4.45	ND	ND
646-04-8	t-2-Pentene	0.53	1.60	ND	1.53	4.59	ND	ND
627-20-3	c-2-Pentene	0.53	1.60	ND	1.53	4.59	ND	ND
75-83-2	2,2-Dimethylbutane	0.44	1.33	ND	1.57	4.70	ND	ND
287-92-3	Cyclopentane	0.53	1.60	ND	1.53	4.59	ND	ND
79-29-8	2,3-Dimethylbutane	0.44	1.33	ND	1.57	4.70	ND	ND
107-83-5	2-Methylpentane	0.44	1.33	ND	1.57	4.70	ND	ND
96-14-0	3-Methylpentane	0.44	1.33	ND	1.57	4.70	ND	ND
110-54-3	n-Hexane	0.44	1.33	ND	1.57	4.70	ND	ND
96-37-7	Methylcyclopentane	0.44	1.33	ND	1.53	4.59	ND	ND
108-08-7	2,4-Dimethylpentane	0.38	1.14	ND	1.56	4.68	ND	ND
71-43-2	Benzene	0.44	1.33	ND	1.42	4.26	ND	ND
110-82-7	Cyclohexane	0.44	1.33	ND	1.53	4.59	ND	ND
591-76-4	2-Methylhexane	0.38	1.14	ND	1.56	4.68	ND	ND
565-59-3	2,3-Dimethylpentane	0.38	1.14	ND	1.56	4.68	ND	ND
589-34-4	3-Methylhexane	0.38	1.14	ND	1.56	4.68	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.33	1.00	ND	1.56	4.67	ND	ND
142-82-5	n-Heptane	0.38	1.14	ND	1.56	4.68	ND	ND
108-87-2	Methylcyclohexane	0.38	1.14	ND	1.53	4.59	ND	ND
592-13-2	2,5-Dimethylhexane	0.33	1.00	ND	1.56	4.67	ND	ND
589-43-5	2,4-Dimethylhexane	0.33	1.00	ND	1.56	4.67	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.33	1.00	ND	1.56	4.67	ND	ND
108-88-3	Toluene	0.38	1.14	ND	1.43	4.30	ND	ND
584-94-1	2,3-Dimethylhexane	0.33	1.00	ND	1.56	4.67	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.33	1.00	ND	1.56	4.67	ND	ND
589-81-1	3-Methylheptane	0.33	1.00	ND	1.56	4.67	ND	ND
111-65-9	n-Octane	0.33	1.00	ND	1.56	4.67	ND	ND
100-41-4	Ethylbenzene	0.33	1.00	ND	1.45	4.34	ND	ND
108-38-3	m,p-xylene	0.33	1.00	ND	1.45	4.34	ND	ND
100-42-5	Styrene	0.33	1.00	ND	1.42	4.26	ND	ND
95-47-6	o-xylene	0.33	1.00	ND	1.45	4.34	ND	ND
111-84-2	n-Nonane	0.30	0.89	ND	1.55	4.66	ND	ND
98-82-8	i-Propylbenzene	0.30	0.89	ND	1.46	4.37	ND	ND
103-65-1	n-propylbenzene	0.30	0.89	ND	1.46	4.37	ND	ND
80-56-8	a-Pinene	0.27	0.80	ND	1.48	4.45	ND	ND
620-14-4	3-Ethyltoluene	0.30	0.89	ND	1.46	4.37	ND	ND
622-96-8	4-Ethyltoluene	0.30	0.89	ND	1.46	4.37	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.30	0.89	ND	1.46	4.37	ND	ND
611-14-3	2-Ethyltoluene	0.30	0.89	ND	1.46	4.37	ND	ND
127-91-3	b-Pinene	0.27	0.80	ND	1.48	4.45	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.30	0.89	ND	1.46	4.37	ND	ND
124-18-5	n-Decane	0.27	0.80	ND	1.55	4.65	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.30	0.89	ND	1.46	4.37	ND	ND
5989-27-5	d-Limonene	0.27	0.80	ND	1.48	4.45	ND	ND
141-93-5	1,3-Diethylbenzene	0.27	0.80	ND	1.46	4.39	ND	ND
105-05-5	1,4-Diethylbenzene	0.27	0.80	ND	1.46	4.39	ND	ND
104-51-8	n-Butylbenzene	0.27	0.80	ND	1.46	4.39	ND	ND
1120-21-4	Undecane	0.24	0.73	ND	1.55	4.65	ND	ND
112-40-3	Dodecane	0.22	0.67	ND	1.55	4.64	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.98	29.93	ND	35.24	105.72	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	59.85	179.55	ND	39.25	117.74	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 09

File Name: 1820509A

Date Sampled: 04/10/18

Time: 14:22

Description: T-109

Date Analyzed: 04/13/18

Time: 19:45

Can/Tube#: 783

Can Dilution Factor: 1.33

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	133	399	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 09

File Name: 1820509A
Description: T-109
Can/Tube#: 783
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 Time: 14:22
Date Analyzed: 04/17/18 Time: 13:58
Dilution Factor: 1.33

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.40	ND	0.09	0.27	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 10

File Name: 1820510A.D
Description: T-110
Canister: 772
QC_Batch: 042018-MA1

Date Sampled: 04/10/18 Time: 15:15
Date Analyzed: 04/20/18 Time: 16:22
Can Dilution Factor: 1.32
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.33	1.66	ND	1.63	8.20	ND	
74-87-3	Chloromethane	0.33	1.66	ND	0.68	3.43	ND	
76-14-2	Freon 114	0.33	1.66	ND	2.31	11.60	ND	
75-01-4	Vinyl chloride	0.33	1.66	ND	0.84	4.24	ND	
106-99-0	1,3-Butadiene	0.33	1.66	ND	0.73	3.67	ND	
74-83-9	Bromomethane	0.33	1.66	ND	1.28	6.44	ND	
75-00-3	Chloroethane	0.33	1.66	ND	0.87	4.38	ND	
64-17-5	Ethanol	1.65	4.95	ND	3.11	9.33	ND	
75-69-4	Trichlorofluoromethane	0.33	1.58	ND	1.85	8.90	ND	
67-64-1	Acetone	1.65	4.06	1,083.61	3.92	9.64	2,573.67	E
67-63-0	2-propanol	1.65	3.79	ND	4.05	9.31	ND	
75-35-4	1,1-Dichloroethene	0.33	1.64	ND	1.31	6.48	ND	
76-13-1	Freon 113	0.33	1.58	ND	2.53	12.10	ND	
75-09-2	Dichloromethane	0.66	1.59	ND	2.29	5.52	ND	
75-15-0	Carbon disulfide	1.65	3.06	30.06	5.13	9.53	93.52	
156-60-5	trans-1,2-Dichloroethene	0.33	1.19	ND	1.31	4.72	ND	
1634-04-4	Methyl tert butyl ether	0.33	1.22	ND	1.19	4.38	ND	
75-34-3	1,1-Dichloroethane	0.33	1.65	ND	1.34	6.66	ND	
108-05-4	Vinyl acetate	0.33	1.45	ND	1.16	5.10	ND	
78-93-3	2-Butanone	1.32	3.36	393.45	3.89	9.90	1,159.66	E
141-78-6	Ethyl acetate	0.66	1.45	ND	2.38	5.21	ND	
74-97-5	Bromochloromethane	0.33	0.88	ND	1.75	4.65	ND	
109-99-9	Tetrahydrofuran	0.66	1.66	ND	1.95	4.89	ND	
156-59-2	cis-1,2-Dichloroethene	0.66	1.78	ND	2.61	7.03	ND	
67-66-3	Chloroform	0.33	1.66	ND	1.61	8.08	ND	
71-55-6	1,1,1-Trichloroethane	0.33	1.47	ND	1.80	7.99	ND	
107-06-2	1,2-Dichloroethane	0.33	1.51	ND	1.34	6.09	ND	
110-82-7	Cyclohexane	0.33	1.27	ND	1.14	4.36	ND	
71-43-2	Benzene	0.33	1.68	31.76	1.05	5.35	101.40	
56-23-5	Carbon tetrachloride	0.33	1.56	ND	2.07	9.83	ND	
142-82-5	n-Heptane	1.65	4.00	ND	6.76	16.38	ND	
78-87-5	1,2-Dichloropropane	0.33	1.59	ND	1.52	7.34	ND	
123-91-1	1,4 Dioxane	1.32	2.70	ND	4.75	9.72	ND	
79-01-6	Trichloroethene	0.20	1.54	ND	1.06	8.26	ND	
75-27-4	Bromodichloromethane	0.33	0.67	ND	2.21	4.46	ND	
80-62-6	Methyl methacrylate	1.32	4.46	ND	5.40	18.26	ND	
108-10-1	4-Methyl-2-pentanone	1.32	5.00	2.57	5.41	20.47	10.52	J

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.33	1.71	ND	1.50	7.76	ND	
108-88-3	Toluene	0.66	1.72	27.34	2.48	6.49	102.95	
10061-02-6	trans-1,3-Dichloropropene	0.33	1.71	ND	1.50	7.77	ND	
79-00-5	1,1,2-Trichloroethane	0.33	1.70	ND	1.80	9.25	ND	
591-78-6	2-Hexanone	1.65	4.68	3.60	6.76	19.17	14.76	J
124-48-1	Dibromochloromethane	0.33	0.66	ND	2.81	5.61	ND	
106-93-4	1,2-Dibromoethane	0.33	0.80	ND	2.53	6.15	ND	
127-18-4	Tetrachloroethene	0.20	0.80	ND	1.34	5.44	ND	
108-90-7	Chlorobenzene	0.33	1.50	ND	1.52	6.91	ND	
100-41-4	Ethylbenzene	0.70	1.74	2.04	3.03	7.57	8.84	
1330-20-7	m,p-Xylenes	0.70	1.75	6.13	3.04	7.59	26.62	
100-42-5	Styrene	0.68	1.71	ND	2.91	7.28	ND	
75-25-2	Bromoform	0.33	0.44	ND	3.41	4.57	ND	
95-47-6	o-Xylene	0.68	1.70	3.13	2.95	7.38	13.57	
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.82	ND	2.24	5.60	ND	
622-96-8	4-Ethyltoluene	1.09	2.73	ND	5.38	13.44	ND	
108-67-8	1,3,5-Trimethylbenzene	0.68	1.70	ND	3.35	8.38	ND	
95-63-6	1,2,4-Trimethylbenzene	0.67	1.68	1.13	3.30	8.24	5.53	J
541-73-1	1,3-Dichlorobenzene	0.66	1.22	ND	3.97	7.34	ND	
100-44-7	Benzyl chloride	0.66	4.00	ND	3.42	20.70	ND	
106-46-7	1,4-Dichlorobenzene	0.66	1.14	ND	3.97	6.86	ND	
95-50-1	1,2-Dichlorobenzene	0.66	1.07	ND	3.97	6.43	ND	
120-82-1	1,2,4-Trichlorobenzene	1.65	2.27	ND	12.24	16.84	ND	
91-20-3	Naphthalene	0.34	0.53	0.65	1.76	2.77	3.43	
87-68-3	Hexachlorobutadiene	1.65	1.75	ND	17.59	18.65	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				105	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 10

File Name: 1820510A
Description: T-110
Canister: 772
QC_Batch: 041718-GCK

Date Sampled: 04/10/18 Time: 15:15
Date Analyzed: 04/17/18 Time: 20:33
Can Factor: 1.32
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.32	3.96	ND	1.52	4.56	ND	ND
74-86-2	Acetylene	1.32	3.96	ND	1.41	4.22	ND	ND
74-84-0	Ethane	1.32	3.96	15.20	1.63	4.89	18.75	
115-07-1	Propene	0.88	2.64	ND	1.52	4.56	ND	ND
74-98-6	Propane	0.88	2.64	8.76	1.59	4.77	15.84	
75-28-5	i-Butane	0.66	1.98	ND	1.57	4.71	ND	ND
106-98-9	1-Butene	0.66	1.98	ND	1.52	4.55	ND	ND
106-97-8	n-Butane	0.66	1.98	1.39	1.57	4.71	3.30	J
624-64-6	t-2-Butene	0.66	1.98	ND	1.52	4.55	ND	ND
590-18-1	c-2-Butene	0.66	1.98	ND	1.52	4.55	ND	ND
78-78-4	i-Pentane	0.53	1.58	1.47	1.56	4.69	4.35	J
109-67-1	1-Pentene	0.53	1.58	ND	1.52	4.55	ND	ND
109-66-0	n-Pentane	0.53	1.58	2.34	1.56	4.68	6.92	
78-79-5	Isoprene	0.53	1.58	ND	1.47	4.42	ND	ND
646-04-8	t-2-Pentene	0.53	1.58	ND	1.52	4.55	ND	ND
627-20-3	c-2-Pentene	0.53	1.58	ND	1.52	4.55	ND	ND
75-83-2	2,2-Dimethylbutane	0.44	1.32	ND	1.55	4.66	ND	ND
287-92-3	Cyclopentane	0.53	1.58	ND	1.52	4.55	ND	ND
79-29-8	2,3-Dimethylbutane	0.44	1.32	ND	1.55	4.66	ND	ND
107-83-5	2-Methylpentane	0.44	1.32	ND	1.55	4.66	ND	ND
96-14-0	3-Methylpentane	0.44	1.32	ND	1.55	4.66	ND	ND
110-54-3	n-Hexane	0.44	1.32	12.50	1.55	4.66	44.17	
96-37-7	Methylcyclopentane	0.44	1.32	ND	1.52	4.56	ND	ND
108-08-7	2,4-Dimethylpentane	0.38	1.13	2.74	1.55	4.65	11.25	
71-43-2	Benzene	0.44	1.32	26.31	1.41	4.23	84.22	
110-82-7	Cyclohexane	0.44	1.32	ND	1.52	4.56	ND	ND
591-76-4	2-Methylhexane	0.38	1.13	38.80	1.55	4.65	159.35	
565-59-3	2,3-Dimethylpentane	0.38	1.13	1.72	1.55	4.65	7.05	
589-34-4	3-Methylhexane	0.38	1.13	18.67	1.55	4.65	76.67	
540-84-1	2,2,4-Trimethylpentane	0.33	0.99	ND	1.54	4.63	ND	ND
142-82-5	n-Heptane	0.38	1.13	0.84	1.55	4.65	3.44	J
108-87-2	Methylcyclohexane	0.38	1.13	ND	1.52	4.55	ND	ND
592-13-2	2,5-Dimethylhexane	0.33	0.99	ND	1.54	4.63	ND	ND
589-43-5	2,4-Dimethylhexane	0.33	0.99	ND	1.54	4.63	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.33	0.99	ND	1.54	4.63	ND	ND
108-88-3	Toluene	0.38	1.13	26.59	1.42	4.27	100.36	
584-94-1	2,3-Dimethylhexane	0.33	0.99	ND	1.54	4.63	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.33	0.99	6.87	1.54	4.63	32.13	
589-81-1	3-Methylheptane	0.33	0.99	5.16	1.54	4.63	24.14	
111-65-9	n-Octane	0.33	0.99	2.39	1.54	4.63	11.20	
100-41-4	Ethylbenzene	0.33	0.99	3.00	1.44	4.31	13.04	
108-38-3	m,p-xylene	0.33	0.99	7.26	1.44	4.31	31.61	
100-42-5	Styrene	0.33	0.99	ND	1.41	4.23	ND	ND
95-47-6	o-xylene	0.33	0.99	4.41	1.44	4.31	19.17	
111-84-2	n-Nonane	0.29	0.88	1.01	1.54	4.63	5.30	
98-82-8	i-Propylbenzene	0.29	0.88	ND	1.45	4.34	ND	ND
103-65-1	n-propylbenzene	0.29	0.88	ND	1.45	4.34	ND	ND
80-56-8	a-Pinene	0.26	0.79	ND	1.47	4.42	ND	ND
620-14-4	3-Ethyltoluene	0.29	0.88	ND	1.45	4.34	ND	ND
622-96-8	4-Ethyltoluene	0.29	0.88	0.67	1.45	4.34	3.28	J
108-67-8	1,3,5-Trimethylbenzene	0.29	0.88	0.49	1.45	4.34	2.41	J
611-14-3	2-Ethyltoluene	0.29	0.88	ND	1.45	4.34	ND	ND
127-91-3	b-Pinene	0.26	0.79	ND	1.47	4.42	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.29	0.88	2.69	1.45	4.34	13.24	
124-18-5	n-Decane	0.26	0.79	1.21	1.54	4.62	7.06	
526-73-8	1,2,3-Trimethylbenzene	0.29	0.88	ND	1.45	4.34	ND	ND
5989-27-5	d-Limonene	0.26	0.79	ND	1.47	4.42	ND	ND
141-93-5	1,3-Diethylbenzene	0.26	0.79	1.20	1.45	4.36	6.61	
105-05-5	1,4-Diethylbenzene	0.26	0.79	1.75	1.45	4.36	9.64	
104-51-8	n-Butylbenzene	0.26	0.79	ND	1.45	4.36	ND	ND
1120-21-4	Undecane	0.24	0.72	0.64	1.54	4.61	4.12	J
112-40-3	Dodecane	0.22	0.66	0.50	1.54	4.61	3.46	J

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.90	29.70	985.08	34.97	104.92	3,480.06	
TNMHC - C1	Total Non-Methane Hydrocarbons	59.40	178.20	5,910.46	38.95	116.85	3,875.71	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 10

File Name: 1820510A

Date Sampled: 04/10/18

Time: 15:15

Description: T-110

Date Analyzed: 04/13/18

Time: 20:02

Can/Tube#: 772

Can Dilution Factor: 1.32

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.02	132	396	206	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 10

File Name: 1820510A
Description: T-110
Can/Tube#: 772
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 Time: 15:15
Date Analyzed: 04/17/18 Time: 14:02
Dilution Factor: 1.32

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.40	3.16	0.09	0.27	2.14	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 11

File Name: 1820511A.D

Date Sampled: 04/10/18

Time: 15:38

Description: T-111

Date Analyzed: 04/20/18

Time: 16:59

Canister: 512

Can Dilution Factor: 1.32

QC_Batch: 042018-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.33	1.66	ND	1.63	8.20	ND	
74-87-3	Chloromethane	0.33	1.66	ND	0.68	3.43	ND	
76-14-2	Freon 114	0.33	1.66	ND	2.31	11.60	ND	
75-01-4	Vinyl chloride	0.33	1.66	ND	0.84	4.24	ND	
106-99-0	1,3-Butadiene	0.33	1.66	ND	0.73	3.67	ND	
74-83-9	Bromomethane	0.33	1.66	ND	1.28	6.44	ND	
75-00-3	Chloroethane	0.33	1.66	ND	0.87	4.38	ND	
64-17-5	Ethanol	1.65	4.95	ND	3.11	9.33	ND	
75-69-4	Trichlorofluoromethane	0.33	1.58	ND	1.85	8.90	ND	
67-64-1	Acetone	1.65	4.06	2,729.34	3.92	9.64	6,482.43	E
67-63-0	2-propanol	1.65	3.79	ND	4.05	9.31	ND	
75-35-4	1,1-Dichloroethene	0.33	1.64	ND	1.31	6.48	ND	
76-13-1	Freon 113	0.33	1.58	ND	2.53	12.10	ND	
75-09-2	Dichloromethane	0.66	1.59	ND	2.29	5.52	ND	
75-15-0	Carbon disulfide	1.65	3.06	64.16	5.13	9.53	199.59	
156-60-5	trans-1,2-Dichloroethene	0.33	1.19	ND	1.31	4.72	ND	
1634-04-4	Methyl tert butyl ether	0.33	1.22	ND	1.19	4.38	ND	
75-34-3	1,1-Dichloroethane	0.33	1.65	ND	1.34	6.66	ND	
108-05-4	Vinyl acetate	0.33	1.45	ND	1.16	5.10	ND	
78-93-3	2-Butanone	1.32	3.36	1,096.75	3.89	9.90	3,232.57	E
141-78-6	Ethyl acetate	0.66	1.45	ND	2.38	5.21	ND	
74-97-5	Bromochloromethane	0.33	0.88	ND	1.75	4.65	ND	
109-99-9	Tetrahydrofuran	0.66	1.66	ND	1.95	4.89	ND	
156-59-2	cis-1,2-Dichloroethene	0.66	1.78	ND	2.61	7.03	ND	
67-66-3	Chloroform	0.33	1.66	ND	1.61	8.08	ND	
71-55-6	1,1,1-Trichloroethane	0.33	1.47	ND	1.80	7.99	ND	
107-06-2	1,2-Dichloroethane	0.33	1.51	ND	1.34	6.09	ND	
110-82-7	Cyclohexane	0.33	1.27	ND	1.14	4.36	ND	
71-43-2	Benzene	0.33	1.68	162.23	1.05	5.35	517.94	
56-23-5	Carbon tetrachloride	0.33	1.56	ND	2.07	9.83	ND	
142-82-5	n-Heptane	1.65	4.00	ND	6.76	16.38	ND	
78-87-5	1,2-Dichloropropane	0.33	1.59	ND	1.52	7.34	ND	
123-91-1	1,4 Dioxane	1.32	2.70	ND	4.75	9.72	ND	
79-01-6	Trichloroethene	0.20	1.54	ND	1.06	8.26	ND	
75-27-4	Bromodichloromethane	0.33	0.67	ND	2.21	4.46	ND	
80-62-6	Methyl methacrylate	1.32	4.46	ND	5.40	18.26	ND	
108-10-1	4-Methyl-2-pentanone	1.32	5.00	12.93	5.41	20.47	52.98	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.33	1.71	ND	1.50	7.76	ND	
108-88-3	Toluene	0.66	1.72	146.81	2.48	6.49	552.74	
10061-02-6	trans-1,3-Dichloropropene	0.33	1.71	ND	1.50	7.77	ND	
79-00-5	1,1,2-Trichloroethane	0.33	1.70	ND	1.80	9.25	ND	
591-78-6	2-Hexanone	1.65	4.68	18.63	6.76	19.17	76.33	
124-48-1	Dibromochloromethane	0.33	0.66	ND	2.81	5.61	ND	
106-93-4	1,2-Dibromoethane	0.33	0.80	ND	2.53	6.15	ND	
127-18-4	Tetrachloroethene	0.20	0.80	ND	1.34	5.44	ND	
108-90-7	Chlorobenzene	0.33	1.50	ND	1.52	6.91	ND	
100-41-4	Ethylbenzene	0.70	1.74	13.31	3.03	7.57	57.80	
1330-20-7	m,p-Xylenes	0.70	1.75	37.01	3.04	7.59	160.69	
100-42-5	Styrene	0.68	1.71	ND	2.91	7.28	ND	
75-25-2	Bromoform	0.33	0.44	ND	3.41	4.57	ND	
95-47-6	o-Xylene	0.68	1.70	17.56	2.95	7.38	76.22	
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.82	ND	2.24	5.60	ND	
622-96-8	4-Ethyltoluene	1.09	2.73	3.25	5.38	13.44	15.99	
108-67-8	1,3,5-Trimethylbenzene	0.68	1.70	1.92	3.35	8.38	9.44	
95-63-6	1,2,4-Trimethylbenzene	0.67	1.68	7.40	3.30	8.24	36.34	
541-73-1	1,3-Dichlorobenzene	0.66	1.22	ND	3.97	7.34	ND	
100-44-7	Benzyl chloride	0.66	4.00	ND	3.42	20.70	ND	
106-46-7	1,4-Dichlorobenzene	0.66	1.14	ND	3.97	6.86	ND	
95-50-1	1,2-Dichlorobenzene	0.66	1.07	ND	3.97	6.43	ND	
120-82-1	1,2,4-Trichlorobenzene	1.65	2.27	ND	12.24	16.84	ND	
91-20-3	Naphthalene	0.34	0.53	3.76	1.76	2.77	19.70	
87-68-3	Hexachlorobutadiene	1.65	1.75	ND	17.59	18.65	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				105	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 11

File Name: 1820511A
Description: T-111
Canister: 512
QC_Batch: 041718-GCK

Date Sampled: 04/10/18 Time: 15:38
Date Analyzed: 04/17/18 Time: 21:14
Can Factor: 1.32
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.32	3.96	1.98	1.52	4.56	2.27	J
74-86-2	Acetylene	1.32	3.96	ND	1.41	4.22	ND	ND
74-84-0	Ethane	1.32	3.96	43.39	1.63	4.89	53.53	
115-07-1	Propene	0.88	2.64	ND	1.52	4.56	ND	ND
74-98-6	Propane	0.88	2.64	27.23	1.59	4.77	49.22	
75-28-5	i-Butane	0.66	1.98	3.80	1.57	4.71	9.05	
106-98-9	1-Butene	0.66	1.98	ND	1.52	4.55	ND	ND
106-97-8	n-Butane	0.66	1.98	8.43	1.57	4.71	20.08	
624-64-6	t-2-Butene	0.66	1.98	ND	1.52	4.55	ND	ND
590-18-1	c-2-Butene	0.66	1.98	ND	1.52	4.55	ND	ND
78-78-4	i-Pentane	0.53	1.58	5.92	1.56	4.69	17.51	
109-67-1	1-Pentene	0.53	1.58	ND	1.52	4.55	ND	ND
109-66-0	n-Pentane	0.53	1.58	5.88	1.56	4.68	17.38	
78-79-5	Isoprene	0.53	1.58	ND	1.47	4.42	ND	ND
646-04-8	t-2-Pentene	0.53	1.58	ND	1.52	4.55	ND	ND
627-20-3	c-2-Pentene	0.53	1.58	ND	1.52	4.55	ND	ND
75-83-2	2,2-Dimethylbutane	0.44	1.32	ND	1.55	4.66	ND	ND
287-92-3	Cyclopentane	0.53	1.58	ND	1.52	4.55	ND	ND
79-29-8	2,3-Dimethylbutane	0.44	1.32	ND	1.55	4.66	ND	ND
107-83-5	2-Methylpentane	0.44	1.32	ND	1.55	4.66	ND	ND
96-14-0	3-Methylpentane	0.44	1.32	ND	1.55	4.66	ND	ND
110-54-3	n-Hexane	0.44	1.32	7.98	1.55	4.66	28.21	
96-37-7	Methylcyclopentane	0.44	1.32	ND	1.52	4.56	ND	ND
108-08-7	2,4-Dimethylpentane	0.38	1.13	12.80	1.55	4.65	52.57	
71-43-2	Benzene	0.44	1.32	106.45	1.41	4.23	340.72	
110-82-7	Cyclohexane	0.44	1.32	ND	1.52	4.56	ND	ND
591-76-4	2-Methylhexane	0.38	1.13	162.69	1.55	4.65	668.11	
565-59-3	2,3-Dimethylpentane	0.38	1.13	3.51	1.55	4.65	14.40	
589-34-4	3-Methylhexane	0.38	1.13	82.16	1.55	4.65	337.38	
540-84-1	2,2,4-Trimethylpentane	0.33	0.99	ND	1.54	4.63	ND	ND
142-82-5	n-Heptane	0.38	1.13	3.91	1.55	4.65	16.04	
108-87-2	Methylcyclohexane	0.38	1.13	ND	1.52	4.55	ND	ND
592-13-2	2,5-Dimethylhexane	0.33	0.99	6.15	1.54	4.63	28.79	
589-43-5	2,4-Dimethylhexane	0.33	0.99	13.35	1.54	4.63	62.47	
565-75-3	2,3,4-Trimethylpentane	0.33	0.99	ND	1.54	4.63	ND	ND
108-88-3	Toluene	0.38	1.13	116.46	1.42	4.27	439.61	
584-94-1	2,3-Dimethylhexane	0.33	0.99	ND	1.54	4.63	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.33	0.99	24.69	1.54	4.63	115.57	
589-81-1	3-Methylheptane	0.33	0.99	23.61	1.54	4.63	110.49	
111-65-9	n-Octane	0.33	0.99	2.13	1.54	4.63	9.98	
100-41-4	Ethylbenzene	0.33	0.99	13.51	1.44	4.31	58.81	
108-38-3	m,p-xylene	0.33	0.99	36.54	1.44	4.31	159.02	
100-42-5	Styrene	0.33	0.99	ND	1.41	4.23	ND	ND
95-47-6	o-xylene	0.33	0.99	17.52	1.44	4.31	76.25	
111-84-2	n-Nonane	0.29	0.88	4.58	1.54	4.63	24.06	
98-82-8	i-Propylbenzene	0.29	0.88	ND	1.45	4.34	ND	ND
103-65-1	n-propylbenzene	0.29	0.88	ND	1.45	4.34	ND	ND
80-56-8	a-Pinene	0.26	0.79	3.80	1.47	4.42	21.22	
620-14-4	3-Ethyltoluene	0.29	0.88	6.35	1.45	4.34	31.27	
622-96-8	4-Ethyltoluene	0.29	0.88	4.90	1.45	4.34	24.16	
108-67-8	1,3,5-Trimethylbenzene	0.29	0.88	5.50	1.45	4.34	27.11	
611-14-3	2-Ethyltoluene	0.29	0.88	9.56	1.45	4.34	47.07	
127-91-3	b-Pinene	0.26	0.79	ND	1.47	4.42	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.29	0.88	18.63	1.45	4.34	91.76	
124-18-5	n-Decane	0.26	0.79	3.51	1.54	4.62	20.44	
526-73-8	1,2,3-Trimethylbenzene	0.29	0.88	ND	1.45	4.34	ND	ND
5989-27-5	d-Limonene	0.26	0.79	ND	1.47	4.42	ND	ND
141-93-5	1,3-Diethylbenzene	0.26	0.79	7.70	1.45	4.36	42.36	
105-05-5	1,4-Diethylbenzene	0.26	0.79	13.38	1.45	4.36	73.59	
104-51-8	n-Butylbenzene	0.26	0.79	ND	1.45	4.36	ND	ND
1120-21-4	Undecane	0.24	0.72	6.76	1.54	4.61	43.32	
112-40-3	Dodecane	0.22	0.66	4.14	1.54	4.61	28.87	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.90	29.70	4,218.44	34.97	104.92	14,902.86
TNMHC - C1	Total Non-Methane Hydrocarbons	59.40	178.20	25,310.66	38.95	116.85	16,597.15

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 11

File Name: 1820511A

Date Sampled: 04/10/18 Time: 15:38

Description: T-111

Date Analyzed: 04/13/18 Time: 20:09

Can/Tube#: 512

Can Dilution Factor: 1.32

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	132	396	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 11

File Name: 1820511A
Description: T-111
Can/Tube#: 512
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 Time: 15:38
Date Analyzed: 04/17/18 Time: 14:05
Dilution Factor: 1.32

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.40	12.44	0.09	0.27	8.41	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 12

File Name: 1820512A.D

Date Sampled: 04/10/18

Time: 15:23

Description: T-112

Date Analyzed: 04/26/18

Time: 19:42

Canister: 548

Can Dilution Factor: 1.31

QC_Batch: 042618-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.33	1.65	ND	1.62	8.14	ND	
74-87-3	Chloromethane	0.33	1.65	ND	0.68	3.40	ND	
76-14-2	Freon 114	0.33	1.65	ND	2.29	11.51	ND	
75-01-4	Vinyl chloride	0.33	1.65	ND	0.84	4.21	ND	
106-99-0	1,3-Butadiene	0.33	1.65	ND	0.72	3.64	ND	
74-83-9	Bromomethane	0.33	1.65	ND	1.27	6.39	ND	
75-00-3	Chloroethane	0.33	1.65	ND	0.86	4.34	ND	
64-17-5	Ethanol	1.64	4.91	ND	3.09	9.26	ND	
75-69-4	Trichlorofluoromethane	0.33	1.57	ND	1.84	8.83	ND	
67-64-1	Acetone	1.64	4.03	821.39	3.89	9.57	1,950.87	E
67-63-0	2-propanol	1.64	3.76	ND	4.02	9.24	ND	
75-35-4	1,1-Dichloroethene	0.33	1.62	ND	1.30	6.43	ND	
76-13-1	Freon 113	0.33	1.57	ND	2.51	12.00	ND	
75-09-2	Dichloromethane	0.66	1.58	ND	2.27	5.47	ND	
75-15-0	Carbon disulfide	1.64	3.04	14.30	5.09	9.45	44.50	
156-60-5	trans-1,2-Dichloroethene	0.33	1.18	ND	1.30	4.68	ND	
1634-04-4	Methyl tert butyl ether	0.33	1.21	ND	1.18	4.35	ND	
75-34-3	1,1-Dichloroethane	0.33	1.63	ND	1.33	6.61	ND	
108-05-4	Vinyl acetate	0.33	1.44	ND	1.15	5.06	ND	
78-93-3	2-Butanone	1.31	3.33	344.37	3.86	9.83	1,014.99	E
141-78-6	Ethyl acetate	0.66	1.43	ND	2.36	5.17	ND	
74-97-5	Bromochloromethane	0.33	0.87	ND	1.73	4.61	ND	
109-99-9	Tetrahydrofuran	0.66	1.65	ND	1.93	4.86	ND	
156-59-2	cis-1,2-Dichloroethene	0.66	1.76	ND	2.59	6.98	ND	
67-66-3	Chloroform	0.33	1.64	ND	1.60	8.02	ND	
71-55-6	1,1,1-Trichloroethane	0.33	1.45	ND	1.79	7.93	ND	
107-06-2	1,2-Dichloroethane	0.33	1.49	ND	1.33	6.05	ND	
110-82-7	Cyclohexane	0.33	1.26	ND	1.13	4.33	ND	
71-43-2	Benzene	0.33	1.66	30.09	1.05	5.31	96.05	
56-23-5	Carbon tetrachloride	0.33	1.55	ND	2.06	9.76	ND	
142-82-5	n-Heptane	1.64	3.97	ND	6.71	16.26	ND	
78-87-5	1,2-Dichloropropane	0.33	1.58	ND	1.51	7.28	ND	
123-91-1	1,4 Dioxane	1.31	2.68	ND	4.72	9.65	ND	
79-01-6	Trichloroethene	0.20	1.53	ND	1.06	8.19	ND	
75-27-4	Bromodichloromethane	0.33	0.66	ND	2.19	4.43	ND	
80-62-6	Methyl methacrylate	1.31	4.43	ND	5.36	18.12	ND	
108-10-1	4-Methyl-2-pentanone	1.31	4.96	2.15	5.37	20.31	8.80	J

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.33	1.70	ND	1.49	7.70	ND	
108-88-3	Toluene	0.66	1.71	30.95	2.47	6.44	116.52	
10061-02-6	trans-1,3-Dichloropropene	0.33	1.70	ND	1.49	7.71	ND	
79-00-5	1,1,2-Trichloroethane	0.33	1.68	ND	1.79	9.18	ND	
591-78-6	2-Hexanone	1.64	4.64	2.91	6.71	19.02	11.94	J
124-48-1	Dibromochloromethane	0.33	0.65	ND	2.79	5.57	ND	
106-93-4	1,2-Dibromoethane	0.33	0.79	ND	2.52	6.11	ND	
127-18-4	Tetrachloroethene	0.20	0.80	ND	1.33	5.40	ND	
108-90-7	Chlorobenzene	0.33	1.49	ND	1.51	6.86	ND	
100-41-4	Ethylbenzene	0.69	1.73	1.89	3.01	7.52	8.21	
1330-20-7	m,p-Xylenes	0.69	1.74	5.56	3.01	7.53	24.13	
100-42-5	Styrene	0.68	1.70	ND	2.89	7.22	ND	
75-25-2	Bromoform	0.33	0.44	ND	3.38	4.54	ND	
95-47-6	o-Xylene	0.68	1.69	2.81	2.93	7.33	12.19	
79-34-5	1,1,2,2-Tetrachloroethane	0.32	0.81	ND	2.22	5.56	ND	
622-96-8	4-Ethyltoluene	1.09	2.71	ND	5.33	13.34	ND	
108-67-8	1,3,5-Trimethylbenzene	0.68	1.69	ND	3.33	8.31	ND	
95-63-6	1,2,4-Trimethylbenzene	0.67	1.66	0.89	3.27	8.18	4.37	J
541-73-1	1,3-Dichlorobenzene	0.66	1.21	ND	3.94	7.28	ND	
100-44-7	Benzyl chloride	0.66	3.97	ND	3.39	20.54	ND	
106-46-7	1,4-Dichlorobenzene	0.66	1.13	ND	3.94	6.81	ND	
95-50-1	1,2-Dichlorobenzene	0.66	1.06	ND	3.94	6.38	ND	
120-82-1	1,2,4-Trichlorobenzene	1.64	2.25	ND	12.14	16.71	ND	
91-20-3	Naphthalene	0.33	0.52	ND	1.75	2.75	ND	
87-68-3	Hexachlorobutadiene	1.64	1.74	ND	17.46	18.51	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				109	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 12

File Name: 1820512A
Description: T-112
Canister: 548
QC_Batch: 041818-GCK

Date Sampled: 04/10/18 Time: 15:23
Date Analyzed: 04/18/18 Time: 12:41
Can Factor: 1.31
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.31	3.93	ND	1.51	4.53	ND	ND
74-86-2	Acetylene	1.31	3.93	ND	1.40	4.19	ND	ND
74-84-0	Ethane	1.31	3.93	56.29	1.62	4.85	69.44	
115-07-1	Propene	0.87	2.62	ND	1.51	4.52	ND	ND
74-98-6	Propane	0.87	2.62	25.82	1.58	4.74	46.67	
75-28-5	i-Butane	0.66	1.97	3.18	1.56	4.68	7.56	
106-98-9	1-Butene	0.66	1.97	ND	1.51	4.52	ND	ND
106-97-8	n-Butane	0.66	1.97	1.46	1.56	4.68	3.49	J
624-64-6	t-2-Butene	0.66	1.97	ND	1.51	4.52	ND	ND
590-18-1	c-2-Butene	0.66	1.97	ND	1.51	4.52	ND	ND
78-78-4	i-Pentane	0.52	1.57	3.86	1.55	4.65	11.43	
109-67-1	1-Pentene	0.52	1.57	ND	1.51	4.52	ND	ND
109-66-0	n-Pentane	0.52	1.57	4.37	1.55	4.65	12.90	
78-79-5	Isoprene	0.52	1.57	ND	1.46	4.39	ND	ND
646-04-8	t-2-Pentene	0.52	1.57	ND	1.51	4.52	ND	ND
627-20-3	c-2-Pentene	0.52	1.57	ND	1.51	4.52	ND	ND
75-83-2	2,2-Dimethylbutane	0.44	1.31	ND	1.54	4.63	ND	ND
287-92-3	Cyclopentane	0.52	1.57	ND	1.51	4.52	ND	ND
79-29-8	2,3-Dimethylbutane	0.44	1.31	ND	1.54	4.63	ND	ND
107-83-5	2-Methylpentane	0.44	1.31	ND	1.54	4.63	ND	ND
96-14-0	3-Methylpentane	0.44	1.31	ND	1.54	4.63	ND	ND
110-54-3	n-Hexane	0.44	1.31	5.24	1.54	4.63	18.50	
96-37-7	Methylcyclopentane	0.44	1.31	ND	1.51	4.52	ND	ND
108-08-7	2,4-Dimethylpentane	0.37	1.12	7.22	1.54	4.61	29.63	
71-43-2	Benzene	0.44	1.31	2.79	1.40	4.19	8.93	
110-82-7	Cyclohexane	0.44	1.31	ND	1.51	4.52	ND	ND
591-76-4	2-Methylhexane	0.37	1.12	68.49	1.54	4.61	281.25	
565-59-3	2,3-Dimethylpentane	0.37	1.12	2.36	1.54	4.61	9.70	
589-34-4	3-Methylhexane	0.37	1.12	35.90	1.54	4.61	147.45	
540-84-1	2,2,4-Trimethylpentane	0.33	0.98	ND	1.53	4.60	ND	ND
142-82-5	n-Heptane	0.37	1.12	1.78	1.54	4.61	7.30	
108-87-2	Methylcyclohexane	0.37	1.12	ND	1.51	4.52	ND	ND
592-13-2	2,5-Dimethylhexane	0.33	0.98	6.10	1.53	4.60	28.55	
589-43-5	2,4-Dimethylhexane	0.33	0.98	1.15	1.53	4.60	5.36	
565-75-3	2,3,4-Trimethylpentane	0.33	0.98	ND	1.53	4.60	ND	ND
108-88-3	Toluene	0.37	1.12	12.44	1.41	4.24	46.96	
584-94-1	2,3-Dimethylhexane	0.33	0.98	8.70	1.53	4.60	40.70	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.33	0.98	ND	1.53	4.60	ND	ND
589-81-1	3-Methylheptane	0.33	0.98	ND	1.53	4.60	ND	ND
111-65-9	n-Octane	0.33	0.98	1.75	1.53	4.60	8.21	
100-41-4	Ethylbenzene	0.33	0.98	18.40	1.43	4.28	80.09	
108-38-3	m,p-xylene	0.33	0.98	19.38	1.43	4.28	84.35	
100-42-5	Styrene	0.33	0.98	ND	1.40	4.20	ND	ND
95-47-6	o-xylene	0.33	0.98	6.59	1.43	4.28	28.69	
111-84-2	n-Nonane	0.29	0.87	2.61	1.53	4.59	13.73	
98-82-8	i-Propylbenzene	0.29	0.87	4.17	1.43	4.30	20.52	
103-65-1	n-propylbenzene	0.29	0.87	2.10	1.43	4.30	10.34	
80-56-8	a-Pinene	0.26	0.79	ND	1.46	4.39	ND	ND
620-14-4	3-Ethyltoluene	0.29	0.87	3.84	1.43	4.30	18.92	
622-96-8	4-Ethyltoluene	0.29	0.87	1.07	1.43	4.30	5.25	
108-67-8	1,3,5-Trimethylbenzene	0.29	0.87	3.63	1.43	4.30	17.88	
611-14-3	2-Ethyltoluene	0.29	0.87	3.53	1.43	4.30	17.39	
127-91-3	b-Pinene	0.26	0.79	ND	1.46	4.39	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.29	0.87	ND	1.43	4.30	ND	ND
124-18-5	n-Decane	0.26	0.79	1.06	1.53	4.58	6.16	
526-73-8	1,2,3-Trimethylbenzene	0.29	0.87	5.84	1.43	4.30	28.76	
5989-27-5	d-Limonene	0.26	0.79	ND	1.46	4.39	ND	ND
141-93-5	1,3-Diethylbenzene	0.26	0.79	ND	1.44	4.32	ND	ND
105-05-5	1,4-Diethylbenzene	0.26	0.79	ND	1.44	4.32	ND	ND
104-51-8	n-Butylbenzene	0.26	0.79	ND	1.44	4.32	ND	ND
1120-21-4	Undecane	0.24	0.71	0.55	1.53	4.58	3.50	J
112-40-3	Dodecane	0.22	0.66	0.27	1.52	4.57	1.90	J

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.83	29.48	1,635.74	34.71	104.13	5,778.72	
TNMHC - C1	Total Non-Methane Hydrocarbons	58.95	176.85	9,814.44	38.66	115.97	6,435.70	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 12

File Name: 1820512A

Date Sampled: 04/10/18

Time: 15:23

Description: T-112

Date Analyzed: 04/13/18

Time: 21:28

Can/Tube#: 548

Can Dilution Factor: 1.31

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	131	393	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: **ASTM D3416**

SDG: 218205
Laboratory Number: 12

File Name: 1820512A
Description: T-112
Can/Tube#: 548
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 **Time:** 15:23
Date Analyzed: 04/17/18 **Time:** 14:09
Dilution Factor: 1.31

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.39	3.35	0.09	0.27	2.26	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 13

File Name: 1820513A.D

Date Sampled: 04/10/18

Time: 16:38

Description: T-113

Date Analyzed: 04/24/18

Time: 16:40

Canister: 687

Can Dilution Factor: 1.32

QC_Batch: 042418-MA1

Air Volume: 10.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	6.60	33.20	ND	32.62	164.08	ND	
74-87-3	Chloromethane	6.60	33.20	ND	13.63	68.54	ND	
76-14-2	Freon 114	6.60	33.20	ND	46.11	231.94	ND	
75-01-4	Vinyl chloride	6.60	33.20	ND	16.86	84.82	ND	
106-99-0	1,3-Butadiene	6.60	33.20	ND	14.60	73.42	ND	
74-83-9	Bromomethane	6.60	33.20	ND	25.60	128.79	ND	
75-00-3	Chloroethane	6.60	33.20	ND	17.40	87.54	ND	
64-17-5	Ethanol	33.00	99.00	ND	62.19	186.57	ND	
75-69-4	Trichlorofluoromethane	6.60	31.69	ND	37.07	178.01	ND	
67-64-1	Acetone	33.00	81.18	7,004.73	78.38	192.81	16,636.88	E
67-63-0	2-propanol	33.00	75.77	ND	81.08	186.15	ND	
75-35-4	1,1-Dichloroethene	6.60	32.74	ND	26.14	129.67	ND	
76-13-1	Freon 113	6.60	31.58	ND	50.56	241.90	ND	
75-09-2	Dichloromethane	13.20	31.79	ND	45.81	110.32	ND	
75-15-0	Carbon disulfide	33.00	61.25	119.04	102.66	190.54	370.32	
156-60-5	trans-1,2-Dichloroethene	6.60	23.83	ND	26.14	94.39	ND	
1634-04-4	Methyl tert butyl ether	6.60	24.33	ND	23.77	87.64	ND	
75-34-3	1,1-Dichloroethane	6.60	32.92	ND	26.71	133.22	ND	
108-05-4	Vinyl acetate	6.60	29.00	ND	23.23	102.07	ND	
78-93-3	2-Butanone	26.40	67.19	3,114.74	77.81	198.03	9,180.40	E
141-78-6	Ethyl acetate	13.20	28.91	ND	47.54	104.11	ND	
74-97-5	Bromochloromethane	6.60	17.58	ND	34.91	92.99	ND	
109-99-9	Tetrahydrofuran	13.20	33.20	ND	38.91	97.85	ND	
156-59-2	cis-1,2-Dichloroethene	13.20	35.51	ND	52.29	140.65	ND	
67-66-3	Chloroform	6.60	33.10	ND	32.21	161.57	ND	
71-55-6	1,1,1-Trichloroethane	6.60	29.30	ND	35.99	159.80	ND	
107-06-2	1,2-Dichloroethane	6.60	30.11	ND	26.71	121.84	ND	
110-82-7	Cyclohexane	6.63	25.34	ND	22.81	87.24	ND	
71-43-2	Benzene	6.60	33.53	560.06	21.07	107.05	1,788.09	
56-23-5	Carbon tetrachloride	6.60	31.28	ND	41.50	196.69	ND	
142-82-5	n-Heptane	33.00	79.99	ND	135.17	327.66	ND	
78-87-5	1,2-Dichloropropane	6.60	31.76	ND	30.49	146.73	ND	
123-91-1	1,4 Dioxane	26.40	53.99	ND	95.08	194.44	ND	
79-01-6	Trichloroethene	3.96	30.74	ND	21.27	165.13	ND	
75-27-4	Bromodichloromethane	6.60	13.33	ND	44.19	89.27	ND	
80-62-6	Methyl methacrylate	26.40	89.23	ND	108.03	365.14	ND	
108-10-1	4-Methyl-2-pentanone	26.40	99.92	ND	108.14	409.30	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	6.60	34.20	ND	29.95	155.19	ND		
108-88-3	Toluene	13.20	34.45	553.24	49.70	129.71	2,082.95		
10061-02-6	trans-1,3-Dichloropropene	6.60	34.23	ND	29.95	155.31	ND		
79-00-5	1,1,2-Trichloroethane	6.60	33.94	ND	35.99	185.06	ND		
591-78-6	2-Hexanone	33.00	93.59	35.24	135.17	383.35	144.34	J	
124-48-1	Dibromochloromethane	6.60	13.18	ND	56.20	112.21	ND		
106-93-4	1,2-Dibromoethane	6.60	16.02	ND	50.70	123.05	ND		
127-18-4	Tetrachloroethene	3.96	16.06	34.51	26.84	108.88	233.88		
108-90-7	Chlorobenzene	6.60	30.03	ND	30.38	138.25	ND		
100-41-4	Ethylbenzene	13.96	34.89	51.84	60.59	151.47	225.06		
1330-20-7	m,p-Xylenes	13.99	34.98	151.22	60.74	151.85	656.51		
100-42-5	Styrene	13.67	34.17	ND	58.22	145.55	ND		
75-25-2	Bromoform	6.60	8.86	ND	68.18	91.48	ND		
95-47-6	o-Xylene	13.61	34.02	71.79	59.07	147.68	311.66		
79-34-5	1,1,2,2-Tetrachloroethane	6.54	16.34	ND	44.83	112.08	ND		
622-96-8	4-Ethyltoluene	21.88	54.70	ND	107.51	268.76	ND		
108-67-8	1,3,5-Trimethylbenzene	13.64	34.10	ND	67.02	167.54	ND		
95-63-6	1,2,4-Trimethylbenzene	13.42	33.54	34.36	65.93	164.81	168.83		
541-73-1	1,3-Dichlorobenzene	13.20	24.42	ND	79.32	146.75	ND		
100-44-7	Benzyl chloride	13.20	79.99	ND	68.31	413.99	ND		
106-46-7	1,4-Dichlorobenzene	13.20	22.84	ND	79.32	137.23	ND		
95-50-1	1,2-Dichlorobenzene	13.20	21.38	ND	79.32	128.50	ND		
120-82-1	1,2,4-Trichlorobenzene	33.00	45.41	ND	244.71	336.72	ND		
91-20-3	Naphthalene	6.73	10.56	12.97	35.28	55.34	67.96		
87-68-3	Hexachlorobutadiene	33.00	34.98	ND	351.82	372.93	ND		
					QC		Limits		
Surrogate Recovery				% Rec.	LCL	UCL	Flag		
2037-26-5	Toluene-d8			106	70	130			

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 13

File Name: 1820513A
Description: T-113
Canister: 687
QC_Batch: 041818-GCK

Date Sampled: 04/10/18 Time: 16:38
Date Analyzed: 04/18/18 Time: 9:18
Can Factor: 1.32
Air Volume: 10 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	26.40	79.20	ND	30.40	91.21	ND	ND
74-86-2	Acetylene	26.40	79.20	ND	28.13	84.39	ND	ND
74-84-0	Ethane	26.40	79.20	472.08	32.57	97.70	582.36	
115-07-1	Propene	17.60	52.80	ND	30.37	91.10	ND	ND
74-98-6	Propane	17.60	52.80	261.23	31.81	95.43	472.15	
75-28-5	i-Butane	13.20	39.60	32.24	31.43	94.29	76.76	J
106-98-9	1-Butene	13.20	39.60	ND	30.35	91.05	ND	ND
106-97-8	n-Butane	13.20	39.60	63.24	31.43	94.29	150.59	
624-64-6	t-2-Butene	13.20	39.60	ND	30.35	91.05	ND	ND
590-18-1	c-2-Butene	13.20	39.60	ND	30.35	91.05	ND	ND
78-78-4	i-Pentane	10.56	31.68	62.28	31.25	93.74	184.28	
109-67-1	1-Pentene	10.56	31.68	ND	30.34	91.02	ND	ND
109-66-0	n-Pentane	10.56	31.68	53.45	31.20	93.61	157.94	
78-79-5	Isoprene	10.56	31.68	ND	29.47	88.42	ND	ND
646-04-8	t-2-Pentene	10.56	31.68	ND	30.34	91.02	ND	ND
627-20-3	c-2-Pentene	10.56	31.68	ND	30.34	91.02	ND	ND
75-83-2	2,2-Dimethylbutane	8.80	26.40	ND	31.09	93.27	ND	ND
287-92-3	Cyclopentane	10.56	31.68	ND	30.34	91.02	ND	ND
79-29-8	2,3-Dimethylbutane	8.80	26.40	ND	31.09	93.27	ND	ND
107-83-5	2-Methylpentane	8.80	26.40	ND	31.09	93.27	ND	ND
96-14-0	3-Methylpentane	8.80	26.40	ND	31.09	93.27	ND	ND
110-54-3	n-Hexane	8.80	26.40	100.27	31.09	93.27	354.22	
96-37-7	Methylcyclopentane	8.80	26.40	ND	30.37	91.10	ND	ND
108-08-7	2,4-Dimethylpentane	7.54	22.63	134.29	30.98	92.93	551.48	
71-43-2	Benzene	8.80	26.40	583.91	28.17	84.50	1,868.99	
110-82-7	Cyclohexane	8.80	26.40	ND	30.37	91.10	ND	ND
591-76-4	2-Methylhexane	7.54	22.63	467.87	30.98	92.93	1,921.33	
565-59-3	2,3-Dimethylpentane	7.54	22.63	38.14	30.98	92.93	156.64	
589-34-4	3-Methylhexane	7.54	22.63	209.75	30.98	92.93	861.34	
540-84-1	2,2,4-Trimethylpentane	6.60	19.80	ND	30.89	92.67	ND	ND
142-82-5	n-Heptane	7.54	22.63	25.66	30.98	92.93	105.39	
108-87-2	Methylcyclohexane	7.54	22.63	ND	30.36	91.07	ND	ND
592-13-2	2,5-Dimethylhexane	6.60	19.80	15.11	30.89	92.67	70.74	J
589-43-5	2,4-Dimethylhexane	6.60	19.80	25.80	30.89	92.67	120.74	
565-75-3	2,3,4-Trimethylpentane	6.60	19.80	ND	30.89	92.67	ND	ND
108-88-3	Toluene	7.54	22.63	659.23	28.47	85.41	2,488.33	
584-94-1	2,3-Dimethylhexane	6.60	19.80	92.57	30.89	92.67	433.26	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	6.60	19.80	ND	30.89	92.67	ND	ND
589-81-1	3-Methylheptane	6.60	19.80	ND	30.89	92.67	ND	ND
111-65-9	n-Octane	6.60	19.80	31.37	30.89	92.67	146.80	
100-41-4	Ethylbenzene	6.60	19.80	101.44	28.73	86.18	441.51	
108-38-3	m,p-xylene	6.60	19.80	227.13	28.73	86.18	988.57	
100-42-5	Styrene	6.60	19.80	ND	28.19	84.56	ND	ND
95-47-6	o-xylene	6.60	19.80	160.19	28.73	86.18	697.23	
111-84-2	n-Nonane	5.87	17.60	44.82	30.85	92.54	235.65	
98-82-8	i-Propylbenzene	5.87	17.60	54.70	28.90	86.70	269.49	
103-65-1	n-propylbenzene	5.87	17.60	23.92	28.90	86.70	117.82	
80-56-8	a-Pinene	5.28	15.84	ND	29.47	88.42	ND	ND
620-14-4	3-Ethyltoluene	5.87	17.60	ND	28.90	86.70	ND	ND
622-96-8	4-Ethyltoluene	5.87	17.60	33.79	28.90	86.70	166.44	
108-67-8	1,3,5-Trimethylbenzene	5.87	17.60	25.25	28.90	86.70	124.37	
611-14-3	2-Ethyltoluene	5.87	17.60	ND	28.90	86.70	ND	ND
127-91-3	b-Pinene	5.28	15.84	ND	29.47	88.42	ND	ND
95-63-6	1,2,4-Trimethylbenzene	5.87	17.60	ND	28.90	86.70	ND	ND
124-18-5	n-Decane	5.28	15.84	52.45	30.79	92.38	305.88	
526-73-8	1,2,3-Trimethylbenzene	5.87	17.60	83.22	28.90	86.70	409.98	
5989-27-5	d-Limonene	5.28	15.84	ND	29.47	88.42	ND	ND
141-93-5	1,3-Diethylbenzene	5.28	15.84	ND	29.04	87.12	ND	ND
105-05-5	1,4-Diethylbenzene	5.28	15.84	ND	29.04	87.12	ND	ND
104-51-8	n-Butylbenzene	5.28	15.84	ND	29.04	87.12	ND	ND
1120-21-4	Undecane	4.80	14.40	13.77	30.75	92.24	88.18	J
112-40-3	Dodecane	4.40	13.20	12.19	30.71	92.13	85.07	J

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	198.00	594.00	11,911.58	699.49	2,098.48	42,081.07
TNMHC - C1	Total Non-Methane Hydrocarbons	1,188.00	3,564.00	71,469.47	779.02	2,337.05	46,865.23

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 13

File Name: 1820513A

Date Sampled: 04/10/18 Time: 16:38

Description: T-113

Date Analyzed: 04/13/18 Time: 21:34

Can/Tube#: 687

Can Dilution Factor: 1.32

QC_Batch: 041318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.13	132	396	1,251	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 13

File Name: 1820513A
Description: T-113
Can/Tube#: 687
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 Time: 16:38
Date Analyzed: 04/17/18 Time: 14:22
Dilution Factor: 1.32

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.40	94.01	0.09	0.27	63.52	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 14

File Name: 1820514A.D

Date Sampled: 04/10/18

Time: 16:49

Description: T-114

Date Analyzed: 04/26/18

Time: 20:13

Canister: 638

Can Dilution Factor: 1.16

QC_Batch: 042618-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.29	1.46	ND	1.43	7.21	ND	
74-87-3	Chloromethane	0.29	1.46	ND	0.60	3.01	ND	
76-14-2	Freon 114	0.29	1.46	ND	2.03	10.19	ND	
75-01-4	Vinyl chloride	0.29	1.46	ND	0.74	3.73	ND	
106-99-0	1,3-Butadiene	0.29	1.46	ND	0.64	3.23	ND	
74-83-9	Bromomethane	0.29	1.46	ND	1.13	5.66	ND	
75-00-3	Chloroethane	0.29	1.46	ND	0.76	3.85	ND	
64-17-5	Ethanol	1.45	4.35	ND	2.73	8.20	ND	
75-69-4	Trichlorofluoromethane	0.29	1.39	ND	1.63	7.82	ND	
67-64-1	Acetone	1.45	3.57	ND	3.44	8.47	ND	
67-63-0	2-propanol	1.45	3.33	ND	3.56	8.18	ND	
75-35-4	1,1-Dichloroethene	0.29	1.44	ND	1.15	5.70	ND	
76-13-1	Freon 113	0.29	1.39	ND	2.22	10.63	ND	
75-09-2	Dichloromethane	0.58	1.40	ND	2.01	4.85	ND	
75-15-0	Carbon disulfide	1.45	2.69	ND	4.51	8.37	ND	
156-60-5	trans-1,2-Dichloroethene	0.29	1.05	ND	1.15	4.15	ND	
1634-04-4	Methyl tert butyl ether	0.29	1.07	ND	1.04	3.85	ND	
75-34-3	1,1-Dichloroethane	0.29	1.45	ND	1.17	5.85	ND	
108-05-4	Vinyl acetate	0.29	1.27	ND	1.02	4.48	ND	
78-93-3	2-Butanone	1.16	2.95	ND	3.42	8.70	ND	
141-78-6	Ethyl acetate	0.58	1.27	ND	2.09	4.57	ND	
74-97-5	Bromochloromethane	0.29	0.77	ND	1.53	4.09	ND	
109-99-9	Tetrahydrofuran	0.58	1.46	ND	1.71	4.30	ND	
156-59-2	cis-1,2-Dichloroethene	0.58	1.56	ND	2.30	6.18	ND	
67-66-3	Chloroform	0.29	1.45	ND	1.42	7.10	ND	
71-55-6	1,1,1-Trichloroethane	0.29	1.29	ND	1.58	7.02	ND	
107-06-2	1,2-Dichloroethane	0.29	1.32	ND	1.17	5.35	ND	
110-82-7	Cyclohexane	0.29	1.11	ND	1.00	3.83	ND	
71-43-2	Benzene	0.29	1.47	ND	0.93	4.70	ND	
56-23-5	Carbon tetrachloride	0.29	1.37	ND	1.82	8.64	ND	
142-82-5	n-Heptane	1.45	3.51	ND	5.94	14.40	ND	
78-87-5	1,2-Dichloropropane	0.29	1.40	ND	1.34	6.45	ND	
123-91-1	1,4 Dioxane	1.16	2.37	ND	4.18	8.54	ND	
79-01-6	Trichloroethene	0.17	1.35	ND	0.93	7.26	ND	
75-27-4	Bromodichloromethane	0.29	0.59	ND	1.94	3.92	ND	
80-62-6	Methyl methacrylate	1.16	3.92	ND	4.75	16.04	ND	
108-10-1	4-Methyl-2-pentanone	1.16	4.39	ND	4.75	17.98	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.29	1.50	ND	1.32	6.82	ND	
108-88-3	Toluene	0.58	1.51	ND	2.18	5.70	ND	
10061-02-6	trans-1,3-Dichloropropene	0.29	1.50	ND	1.32	6.82	ND	
79-00-5	1,1,2-Trichloroethane	0.29	1.49	ND	1.58	8.13	ND	
591-78-6	2-Hexanone	1.45	4.11	ND	5.94	16.84	ND	
124-48-1	Dibromochloromethane	0.29	0.58	ND	2.47	4.93	ND	
106-93-4	1,2-Dibromoethane	0.29	0.70	ND	2.23	5.41	ND	
127-18-4	Tetrachloroethene	0.17	0.71	ND	1.18	4.78	ND	
108-90-7	Chlorobenzene	0.29	1.32	ND	1.33	6.07	ND	
100-41-4	Ethylbenzene	0.61	1.53	ND	2.66	6.66	ND	
1330-20-7	m,p-Xylenes	0.61	1.54	ND	2.67	6.67	ND	
100-42-5	Styrene	0.60	1.50	ND	2.56	6.40	ND	
75-25-2	Bromoform	0.29	0.39	ND	3.00	4.02	ND	
95-47-6	o-Xylene	0.60	1.49	ND	2.60	6.49	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.29	0.72	ND	1.97	4.92	ND	
622-96-8	4-Ethyltoluene	0.96	2.40	ND	4.72	11.81	ND	
108-67-8	1,3,5-Trimethylbenzene	0.60	1.50	ND	2.94	7.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.59	1.47	ND	2.90	7.24	ND	
541-73-1	1,3-Dichlorobenzene	0.58	1.07	ND	3.49	6.45	ND	
100-44-7	Benzyl chloride	0.58	3.51	ND	3.00	18.19	ND	
106-46-7	1,4-Dichlorobenzene	0.58	1.00	ND	3.49	6.03	ND	
95-50-1	1,2-Dichlorobenzene	0.58	0.94	ND	3.49	5.65	ND	
120-82-1	1,2,4-Trichlorobenzene	1.45	2.00	ND	10.75	14.80	ND	
91-20-3	Naphthalene	0.30	0.46	ND	1.55	2.43	ND	
87-68-3	Hexachlorobutadiene	1.45	1.54	ND	15.46	16.39	ND	
					QC	Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag
2037-26-5	Toluene-d8				107	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205

Laboratory Number: 14

File Name: 1820514A
Description: T-114
Canister: 638
QC_Batch: 041818-GCK

Date Sampled: 04/10/18 Time: 16:49
Date Analyzed: 04/18/18 Time: 13:31
Can Factor: 1.16
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.16	3.48	ND	1.34	4.01	ND	ND
74-86-2	Acetylene	1.16	3.48	ND	1.24	3.71	ND	ND
74-84-0	Ethane	1.16	3.48	ND	1.43	4.29	ND	ND
115-07-1	Propene	0.77	2.32	ND	1.33	4.00	ND	ND
74-98-6	Propane	0.77	2.32	ND	1.40	4.19	ND	ND
75-28-5	i-Butane	0.58	1.74	ND	1.38	4.14	ND	ND
106-98-9	1-Butene	0.58	1.74	ND	1.33	4.00	ND	ND
106-97-8	n-Butane	0.58	1.74	ND	1.38	4.14	ND	ND
624-64-6	t-2-Butene	0.58	1.74	ND	1.33	4.00	ND	ND
590-18-1	c-2-Butene	0.58	1.74	ND	1.33	4.00	ND	ND
78-78-4	i-Pentane	0.46	1.39	ND	1.37	4.12	ND	ND
109-67-1	1-Pentene	0.46	1.39	ND	1.33	4.00	ND	ND
109-66-0	n-Pentane	0.46	1.39	ND	1.37	4.11	ND	ND
78-79-5	Isoprene	0.46	1.39	ND	1.30	3.89	ND	ND
646-04-8	t-2-Pentene	0.46	1.39	ND	1.33	4.00	ND	ND
627-20-3	c-2-Pentene	0.46	1.39	ND	1.33	4.00	ND	ND
75-83-2	2,2-Dimethylbutane	0.39	1.16	ND	1.37	4.10	ND	ND
287-92-3	Cyclopentane	0.46	1.39	ND	1.33	4.00	ND	ND
79-29-8	2,3-Dimethylbutane	0.39	1.16	ND	1.37	4.10	ND	ND
107-83-5	2-Methylpentane	0.39	1.16	ND	1.37	4.10	ND	ND
96-14-0	3-Methylpentane	0.39	1.16	ND	1.37	4.10	ND	ND
110-54-3	n-Hexane	0.39	1.16	ND	1.37	4.10	ND	ND
96-37-7	Methylcyclopentane	0.39	1.16	ND	1.33	4.00	ND	ND
108-08-7	2,4-Dimethylpentane	0.33	0.99	ND	1.36	4.08	ND	ND
71-43-2	Benzene	0.39	1.16	ND	1.24	3.71	ND	ND
110-82-7	Cyclohexane	0.39	1.16	ND	1.33	4.00	ND	ND
591-76-4	2-Methylhexane	0.33	0.99	ND	1.36	4.08	ND	ND
565-59-3	2,3-Dimethylpentane	0.33	0.99	ND	1.36	4.08	ND	ND
589-34-4	3-Methylhexane	0.33	0.99	ND	1.36	4.08	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.29	0.87	ND	1.36	4.07	ND	ND
142-82-5	n-Heptane	0.33	0.99	ND	1.36	4.08	ND	ND
108-87-2	Methylcyclohexane	0.33	0.99	ND	1.33	4.00	ND	ND
592-13-2	2,5-Dimethylhexane	0.29	0.87	ND	1.36	4.07	ND	ND
589-43-5	2,4-Dimethylhexane	0.29	0.87	ND	1.36	4.07	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.29	0.87	ND	1.36	4.07	ND	ND
108-88-3	Toluene	0.33	0.99	ND	1.25	3.75	ND	ND
584-94-1	2,3-Dimethylhexane	0.29	0.87	ND	1.36	4.07	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.87	ND	1.36	4.07	ND	ND
589-81-1	3-Methylheptane	0.29	0.87	ND	1.36	4.07	ND	ND
111-65-9	n-Octane	0.29	0.87	ND	1.36	4.07	ND	ND
100-41-4	Ethylbenzene	0.29	0.87	ND	1.26	3.79	ND	ND
108-38-3	m,p-xylene	0.29	0.87	ND	1.26	3.79	ND	ND
100-42-5	Styrene	0.29	0.87	ND	1.24	3.72	ND	ND
95-47-6	o-xylene	0.29	0.87	ND	1.26	3.79	ND	ND
111-84-2	n-Nonane	0.26	0.77	ND	1.36	4.07	ND	ND
98-82-8	i-Propylbenzene	0.26	0.77	ND	1.27	3.81	ND	ND
103-65-1	n-propylbenzene	0.26	0.77	ND	1.27	3.81	ND	ND
80-56-8	a-Pinene	0.23	0.70	ND	1.30	3.89	ND	ND
620-14-4	3-Ethyltoluene	0.26	0.77	ND	1.27	3.81	ND	ND
622-96-8	4-Ethyltoluene	0.26	0.77	ND	1.27	3.81	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.26	0.77	ND	1.27	3.81	ND	ND
611-14-3	2-Ethyltoluene	0.26	0.77	ND	1.27	3.81	ND	ND
127-91-3	b-Pinene	0.23	0.70	ND	1.30	3.89	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.26	0.77	ND	1.27	3.81	ND	ND
124-18-5	n-Decane	0.23	0.70	ND	1.35	4.06	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.26	0.77	ND	1.27	3.81	ND	ND
5989-27-5	d-Limonene	0.23	0.70	ND	1.30	3.89	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.70	ND	1.28	3.83	ND	ND
105-05-5	1,4-Diethylbenzene	0.23	0.70	ND	1.28	3.83	ND	ND
104-51-8	n-Butylbenzene	0.23	0.70	ND	1.28	3.83	ND	ND
1120-21-4	Undecane	0.21	0.63	ND	1.35	4.05	ND	ND
112-40-3	Dodecane	0.19	0.58	ND	1.35	4.05	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.70	26.10	ND	30.74	92.21	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	52.20	156.60	ND	34.23	102.69	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 14

File Name: 1820514A

Date Sampled: 04/10/18

Time: 16:49

Description: T-114

Date Analyzed: 04/16/18

Time: 18:20

Can/Tube#: 638

Can Dilution Factor: 1.16

QC_Batch: 041618-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	116	348	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 14

File Name: 1820514A
Description: T-114
Can/Tube#: 638
QC_Batch: 041718-GCL

Date Sampled: 04/10/18 Time: 16:49
Date Analyzed: 04/17/18 Time: 14:32
Dilution Factor: 1.16

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.35	ND	0.08	0.24	ND	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 15

File Name: 1820515A.D

Date Sampled: 04/11/18

Time: 08:07

Description: T-201

Date Analyzed: 04/20/18

Time: 19:38

Canister: 791

Can Dilution Factor: 1.22

QC_Batch: 042018-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.31	1.53	ND	1.51	7.58	ND	
74-87-3	Chloromethane	0.31	1.53	ND	0.63	3.17	ND	
76-14-2	Freon 114	0.31	1.53	ND	2.13	10.72	ND	
75-01-4	Vinyl chloride	0.31	1.53	ND	0.78	3.92	ND	
106-99-0	1,3-Butadiene	0.31	1.53	ND	0.67	3.39	ND	
74-83-9	Bromomethane	0.31	1.53	ND	1.18	5.95	ND	
75-00-3	Chloroethane	0.31	1.53	ND	0.80	4.05	ND	
64-17-5	Ethanol	1.53	4.58	ND	2.87	8.62	ND	
75-69-4	Trichlorofluoromethane	0.31	1.46	ND	1.71	8.23	ND	
67-64-1	Acetone	1.53	3.75	519.02	3.62	8.91	1,232.72	E
67-63-0	2-propanol	1.53	3.50	ND	3.75	8.60	ND	
75-35-4	1,1-Dichloroethene	0.31	1.51	ND	1.21	5.99	ND	
76-13-1	Freon 113	0.31	1.46	ND	2.34	11.18	ND	
75-09-2	Dichloromethane	0.61	1.47	ND	2.12	5.10	ND	
75-15-0	Carbon disulfide	1.53	2.83	ND	4.74	8.81	ND	
156-60-5	trans-1,2-Dichloroethene	0.31	1.10	ND	1.21	4.36	ND	
1634-04-4	Methyl tert butyl ether	0.31	1.12	ND	1.10	4.05	ND	
75-34-3	1,1-Dichloroethane	0.31	1.52	ND	1.23	6.16	ND	
108-05-4	Vinyl acetate	0.31	1.34	ND	1.07	4.72	ND	
78-93-3	2-Butanone	1.22	3.10	200.01	3.60	9.15	589.50	E
141-78-6	Ethyl acetate	0.61	1.34	ND	2.20	4.81	ND	
74-97-5	Bromochloromethane	0.31	0.81	ND	1.61	4.30	ND	
109-99-9	Tetrahydrofuran	0.61	1.53	ND	1.80	4.52	ND	
156-59-2	cis-1,2-Dichloroethene	0.61	1.64	ND	2.42	6.50	ND	
67-66-3	Chloroform	0.31	1.53	ND	1.49	7.47	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.35	ND	1.66	7.38	ND	
107-06-2	1,2-Dichloroethane	0.31	1.39	ND	1.23	5.63	ND	
110-82-7	Cyclohexane	0.31	1.17	ND	1.05	4.03	ND	
71-43-2	Benzene	0.31	1.55	2.33	0.97	4.95	7.45	
56-23-5	Carbon tetrachloride	0.31	1.45	ND	1.92	9.09	ND	
142-82-5	n-Heptane	1.53	3.70	ND	6.25	15.14	ND	
78-87-5	1,2-Dichloropropane	0.31	1.47	ND	1.41	6.78	ND	
123-91-1	1,4 Dioxane	1.22	2.49	ND	4.39	8.99	ND	
79-01-6	Trichloroethene	0.18	1.42	ND	0.98	7.63	ND	
75-27-4	Bromodichloromethane	0.31	0.62	ND	2.04	4.13	ND	
80-62-6	Methyl methacrylate	1.22	4.12	ND	4.99	16.87	ND	
108-10-1	4-Methyl-2-pentanone	1.22	4.62	2.88	5.00	18.91	11.79	J

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.31	1.58	ND	1.38	7.17	ND	
108-88-3	Toluene	0.61	1.59	1.80	2.30	5.99	6.78	
10061-02-6	trans-1,3-Dichloropropene	0.31	1.58	ND	1.38	7.18	ND	
79-00-5	1,1,2-Trichloroethane	0.31	1.57	ND	1.66	8.55	ND	
591-78-6	2-Hexanone	1.53	4.32	1.93	6.25	17.72	7.90	J
124-48-1	Dibromochloromethane	0.31	0.61	ND	2.60	5.19	ND	
106-93-4	1,2-Dibromoethane	0.31	0.74	ND	2.34	5.69	ND	
127-18-4	Tetrachloroethene	0.18	0.74	ND	1.24	5.03	ND	
108-90-7	Chlorobenzene	0.31	1.39	ND	1.40	6.39	ND	
100-41-4	Ethylbenzene	0.64	1.61	ND	2.80	7.00	ND	
1330-20-7	m,p-Xylenes	0.65	1.62	0.65	2.81	7.02	2.81	J
100-42-5	Styrene	0.63	1.58	ND	2.69	6.73	ND	
75-25-2	Bromoform	0.31	0.41	ND	3.15	4.23	ND	
95-47-6	o-Xylene	0.63	1.57	ND	2.73	6.82	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.30	0.76	ND	2.07	5.18	ND	
622-96-8	4-Ethyltoluene	1.01	2.53	ND	4.97	12.42	ND	
108-67-8	1,3,5-Trimethylbenzene	0.63	1.58	ND	3.10	7.74	ND	
95-63-6	1,2,4-Trimethylbenzene	0.62	1.55	0.72	3.05	7.62	3.53	J
541-73-1	1,3-Dichlorobenzene	0.61	1.13	ND	3.67	6.78	ND	
100-44-7	Benzyl chloride	0.61	3.70	ND	3.16	19.13	ND	
106-46-7	1,4-Dichlorobenzene	0.61	1.06	ND	3.67	6.34	ND	
95-50-1	1,2-Dichlorobenzene	0.61	0.99	ND	3.67	5.94	ND	
120-82-1	1,2,4-Trichlorobenzene	1.53	2.10	ND	11.31	15.56	ND	
91-20-3	Naphthalene	0.31	0.49	ND	1.63	2.56	ND	
87-68-3	Hexachlorobutadiene	1.53	1.62	ND	16.26	17.23	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	125	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 15

File Name: 1820515A
Description: T-201
Canister: 791
QC_Batch: 041818-GCK

Date Sampled: 04/11/18 Time: 8:07
Date Analyzed: 04/18/18 Time: 15:33
Can Factor: 1.22
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.22	3.66	1.64	1.41	4.22	1.89	J
74-86-2	Acetylene	1.22	3.66	ND	1.30	3.90	ND	ND
74-84-0	Ethane	1.22	3.66	15.16	1.51	4.52	18.70	
115-07-1	Propene	0.81	2.44	ND	1.40	4.21	ND	ND
74-98-6	Propane	0.81	2.44	2.17	1.47	4.41	3.93	J
75-28-5	i-Butane	0.61	1.83	ND	1.45	4.36	ND	ND
106-98-9	1-Butene	0.61	1.83	ND	1.40	4.21	ND	ND
106-97-8	n-Butane	0.61	1.83	ND	1.45	4.36	ND	ND
624-64-6	t-2-Butene	0.61	1.83	ND	1.40	4.21	ND	ND
590-18-1	c-2-Butene	0.61	1.83	ND	1.40	4.21	ND	ND
78-78-4	i-Pentane	0.49	1.46	ND	1.44	4.33	ND	ND
109-67-1	1-Pentene	0.49	1.46	ND	1.40	4.21	ND	ND
109-66-0	n-Pentane	0.49	1.46	11.47	1.44	4.33	33.90	
78-79-5	Isoprene	0.49	1.46	ND	1.36	4.09	ND	ND
646-04-8	t-2-Pentene	0.49	1.46	ND	1.40	4.21	ND	ND
627-20-3	c-2-Pentene	0.49	1.46	ND	1.40	4.21	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.22	ND	1.44	4.31	ND	ND
287-92-3	Cyclopentane	0.49	1.46	ND	1.40	4.21	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.22	ND	1.44	4.31	ND	ND
107-83-5	2-Methylpentane	0.41	1.22	ND	1.44	4.31	ND	ND
96-14-0	3-Methylpentane	0.41	1.22	ND	1.44	4.31	ND	ND
110-54-3	n-Hexane	0.41	1.22	0.93	1.44	4.31	3.30	J
96-37-7	Methylcyclopentane	0.41	1.22	ND	1.40	4.21	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.05	0.44	1.43	4.29	1.80	J
71-43-2	Benzene	0.41	1.22	1.08	1.30	3.91	3.45	J
110-82-7	Cyclohexane	0.41	1.22	ND	1.40	4.21	ND	ND
591-76-4	2-Methylhexane	0.35	1.05	17.51	1.43	4.29	71.91	
565-59-3	2,3-Dimethylpentane	0.35	1.05	ND	1.43	4.29	ND	ND
589-34-4	3-Methylhexane	0.35	1.05	9.14	1.43	4.29	37.52	
540-84-1	2,2,4-Trimethylpentane	0.31	0.92	ND	1.43	4.28	ND	ND
142-82-5	n-Heptane	0.35	1.05	ND	1.43	4.29	ND	ND
108-87-2	Methylcyclohexane	0.35	1.05	ND	1.40	4.21	ND	ND
592-13-2	2,5-Dimethylhexane	0.31	0.92	ND	1.43	4.28	ND	ND
589-43-5	2,4-Dimethylhexane	0.31	0.92	ND	1.43	4.28	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.31	0.92	ND	1.43	4.28	ND	ND
108-88-3	Toluene	0.35	1.05	10.23	1.32	3.95	38.61	
584-94-1	2,3-Dimethylhexane	0.31	0.92	ND	1.43	4.28	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.92	ND	1.43	4.28	ND	ND
589-81-1	3-Methylheptane	0.31	0.92	ND	1.43	4.28	ND	ND
111-65-9	n-Octane	0.31	0.92	ND	1.43	4.28	ND	ND
100-41-4	Ethylbenzene	0.31	0.92	0.63	1.33	3.98	2.75	J
108-38-3	m,p-xylene	0.31	0.92	8.11	1.33	3.98	35.31	
100-42-5	Styrene	0.31	0.92	ND	1.30	3.91	ND	ND
95-47-6	o-xylene	0.31	0.92	6.42	1.33	3.98	27.95	
111-84-2	n-Nonane	0.27	0.81	ND	1.43	4.28	ND	ND
98-82-8	i-Propylbenzene	0.27	0.81	0.48	1.34	4.01	2.36	J
103-65-1	n-propylbenzene	0.27	0.81	0.44	1.34	4.01	2.16	J
80-56-8	a-Pinene	0.24	0.73	ND	1.36	4.09	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.81	ND	1.34	4.01	ND	ND
622-96-8	4-Ethyltoluene	0.27	0.81	ND	1.34	4.01	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.27	0.81	1.39	1.34	4.01	6.86	
611-14-3	2-Ethyltoluene	0.27	0.81	ND	1.34	4.01	ND	ND
127-91-3	b-Pinene	0.24	0.73	ND	1.36	4.09	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.81	ND	1.34	4.01	ND	ND
124-18-5	n-Decane	0.24	0.73	ND	1.42	4.27	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.27	0.81	1.65	1.34	4.01	8.12	
5989-27-5	d-Limonene	0.24	0.73	ND	1.36	4.09	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.73	ND	1.34	4.03	ND	ND
105-05-5	1,4-Diethylbenzene	0.24	0.73	ND	1.34	4.03	ND	ND
104-51-8	n-Butylbenzene	0.24	0.73	ND	1.34	4.03	ND	ND
1120-21-4	Undecane	0.22	0.67	ND	1.42	4.26	ND	ND
112-40-3	Dodecane	0.20	0.61	ND	1.42	4.26	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.15	27.45	452.05	32.33	96.98	1,597.01	
TNMHC - C1	Total Non-Methane Hydrocarbons	54.90	164.70	2,712.31	36.00	108.00	1,778.57	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 15

File Name: 1820515A

Date Sampled: 04/11/18

Time: 8:07

Description: T-201

Date Analyzed: 04/16/18

Time: 18:34

Can/Tube#: 791

Can Dilution Factor: 1.22

QC_Batch: 041618-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	122	366	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: **ASTM D3416**

SDG: 218205
Laboratory Number: 15

File Name: 1820515A
Description: T-201
Can/Tube#: 791
QC_Batch: 041718-GCL

Date Sampled: 04/11/18 **Time:** 8:07
Date Analyzed: 04/17/18 **Time:** 14:37
Dilution Factor: 1.22

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.37	2.88	0.08	0.25	1.95	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 16

File Name: 1820516A.D
Description: T-202
Canister: 732
QC_Batch: 042018-MA1

Date Sampled: 04/11/18 Time: 08:13
Date Analyzed: 04/20/18 Time: 20:15
Can Dilution Factor: 1.22
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.31	1.53	ND	1.51	7.58	ND	
74-87-3	Chloromethane	0.31	1.53	ND	0.63	3.17	ND	
76-14-2	Freon 114	0.31	1.53	ND	2.13	10.72	ND	
75-01-4	Vinyl chloride	0.31	1.53	ND	0.78	3.92	ND	
106-99-0	1,3-Butadiene	0.31	1.53	ND	0.67	3.39	ND	
74-83-9	Bromomethane	0.31	1.53	ND	1.18	5.95	ND	
75-00-3	Chloroethane	0.31	1.53	ND	0.80	4.05	ND	
64-17-5	Ethanol	1.53	4.58	ND	2.87	8.62	ND	
75-69-4	Trichlorofluoromethane	0.31	1.46	ND	1.71	8.23	ND	
67-64-1	Acetone	1.53	3.75	1,705.56	3.62	8.91	4,050.85	E
67-63-0	2-propanol	1.53	3.50	ND	3.75	8.60	ND	
75-35-4	1,1-Dichloroethene	0.31	1.51	ND	1.21	5.99	ND	
76-13-1	Freon 113	0.31	1.46	ND	2.34	11.18	ND	
75-09-2	Dichloromethane	0.61	1.47	ND	2.12	5.10	ND	
75-15-0	Carbon disulfide	1.53	2.83	19.19	4.74	8.81	59.69	
156-60-5	trans-1,2-Dichloroethene	0.31	1.10	ND	1.21	4.36	ND	
1634-04-4	Methyl tert butyl ether	0.31	1.12	ND	1.10	4.05	ND	
75-34-3	1,1-Dichloroethane	0.31	1.52	ND	1.23	6.16	ND	
108-05-4	Vinyl acetate	0.31	1.34	ND	1.07	4.72	ND	
78-93-3	2-Butanone	1.22	3.10	548.33	3.60	9.15	1,616.16	E
141-78-6	Ethyl acetate	0.61	1.34	ND	2.20	4.81	ND	
74-97-5	Bromochloromethane	0.31	0.81	ND	1.61	4.30	ND	
109-99-9	Tetrahydrofuran	0.61	1.53	ND	1.80	4.52	ND	
156-59-2	cis-1,2-Dichloroethene	0.61	1.64	ND	2.42	6.50	ND	
67-66-3	Chloroform	0.31	1.53	ND	1.49	7.47	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.35	ND	1.66	7.38	ND	
107-06-2	1,2-Dichloroethane	0.31	1.39	ND	1.23	5.63	ND	
110-82-7	Cyclohexane	0.31	1.17	ND	1.05	4.03	ND	
71-43-2	Benzene	0.31	1.55	3.88	0.97	4.95	12.40	
56-23-5	Carbon tetrachloride	0.31	1.45	ND	1.92	9.09	ND	
142-82-5	n-Heptane	1.53	3.70	ND	6.25	15.14	ND	
78-87-5	1,2-Dichloropropane	0.31	1.47	ND	1.41	6.78	ND	
123-91-1	1,4 Dioxane	1.22	2.49	ND	4.39	8.99	ND	
79-01-6	Trichloroethene	0.18	1.42	ND	0.98	7.63	ND	
75-27-4	Bromodichloromethane	0.31	0.62	ND	2.04	4.13	ND	
80-62-6	Methyl methacrylate	1.22	4.12	ND	4.99	16.87	ND	
108-10-1	4-Methyl-2-pentanone	1.22	4.62	12.15	5.00	18.91	49.79	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.31	1.58	ND	1.38	7.17	ND	
108-88-3	Toluene	0.61	1.59	7.35	2.30	5.99	27.67	
10061-02-6	trans-1,3-Dichloropropene	0.31	1.58	ND	1.38	7.18	ND	
79-00-5	1,1,2-Trichloroethane	0.31	1.57	ND	1.66	8.55	ND	
591-78-6	2-Hexanone	1.53	4.32	7.01	6.25	17.72	28.70	
124-48-1	Dibromochloromethane	0.31	0.61	ND	2.60	5.19	ND	
106-93-4	1,2-Dibromoethane	0.31	0.74	ND	2.34	5.69	ND	
127-18-4	Tetrachloroethene	0.18	0.74	ND	1.24	5.03	ND	
108-90-7	Chlorobenzene	0.31	1.39	ND	1.40	6.39	ND	
100-41-4	Ethylbenzene	0.64	1.61	1.04	2.80	7.00	4.53	J
1330-20-7	m,p-Xylenes	0.65	1.62	3.43	2.81	7.02	14.91	
100-42-5	Styrene	0.63	1.58	ND	2.69	6.73	ND	
75-25-2	Bromoform	0.31	0.41	ND	3.15	4.23	ND	
95-47-6	o-Xylene	0.63	1.57	2.86	2.73	6.82	12.41	
79-34-5	1,1,2,2-Tetrachloroethane	0.30	0.76	ND	2.07	5.18	ND	
622-96-8	4-Ethyltoluene	1.01	2.53	2.38	4.97	12.42	11.69	J
108-67-8	1,3,5-Trimethylbenzene	0.63	1.58	0.94	3.10	7.74	4.60	J
95-63-6	1,2,4-Trimethylbenzene	0.62	1.55	3.71	3.05	7.62	18.22	
541-73-1	1,3-Dichlorobenzene	0.61	1.13	ND	3.67	6.78	ND	
100-44-7	Benzyl chloride	0.61	3.70	ND	3.16	19.13	ND	
106-46-7	1,4-Dichlorobenzene	0.61	1.06	ND	3.67	6.34	ND	
95-50-1	1,2-Dichlorobenzene	0.61	0.99	ND	3.67	5.94	ND	
120-82-1	1,2,4-Trichlorobenzene	1.53	2.10	ND	11.31	15.56	ND	
91-20-3	Naphthalene	0.31	0.49	ND	1.63	2.56	ND	
87-68-3	Hexachlorobutadiene	1.53	1.62	ND	16.26	17.23	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	108	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 16

File Name: 1820516A
Description: T-202
Canister: 732
QC_Batch: 041818-GCK

Date Sampled: 04/11/18 Time: 8:13
Date Analyzed: 04/18/18 Time: 20:33
Can Factor: 1.22
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.22	3.66	4.30	1.41	4.22	4.95	
74-86-2	Acetylene	1.22	3.66	ND	1.30	3.90	ND	ND
74-84-0	Ethane	1.22	3.66	45.89	1.51	4.52	56.61	
115-07-1	Propene	0.81	2.44	ND	1.40	4.21	ND	ND
74-98-6	Propane	0.81	2.44	6.21	1.47	4.41	11.23	
75-28-5	i-Butane	0.61	1.83	ND	1.45	4.36	ND	ND
106-98-9	1-Butene	0.61	1.83	ND	1.40	4.21	ND	ND
106-97-8	n-Butane	0.61	1.83	1.87	1.45	4.36	4.45	
624-64-6	t-2-Butene	0.61	1.83	ND	1.40	4.21	ND	ND
590-18-1	c-2-Butene	0.61	1.83	ND	1.40	4.21	ND	ND
78-78-4	i-Pentane	0.49	1.46	ND	1.44	4.33	ND	ND
109-67-1	1-Pentene	0.49	1.46	ND	1.40	4.21	ND	ND
109-66-0	n-Pentane	0.49	1.46	ND	1.44	4.33	ND	ND
78-79-5	Isoprene	0.49	1.46	ND	1.36	4.09	ND	ND
646-04-8	t-2-Pentene	0.49	1.46	ND	1.40	4.21	ND	ND
627-20-3	c-2-Pentene	0.49	1.46	ND	1.40	4.21	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.22	ND	1.44	4.31	ND	ND
287-92-3	Cyclopentane	0.49	1.46	ND	1.40	4.21	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.22	ND	1.44	4.31	ND	ND
107-83-5	2-Methylpentane	0.41	1.22	ND	1.44	4.31	ND	ND
96-14-0	3-Methylpentane	0.41	1.22	ND	1.44	4.31	ND	ND
110-54-3	n-Hexane	0.41	1.22	7.65	1.44	4.31	27.01	
96-37-7	Methylcyclopentane	0.41	1.22	ND	1.40	4.21	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.05	1.32	1.43	4.29	5.40	
71-43-2	Benzene	0.41	1.22	2.99	1.30	3.91	9.58	
110-82-7	Cyclohexane	0.41	1.22	ND	1.40	4.21	ND	ND
591-76-4	2-Methylhexane	0.35	1.05	59.55	1.43	4.29	244.55	
565-59-3	2,3-Dimethylpentane	0.35	1.05	1.44	1.43	4.29	5.93	
589-34-4	3-Methylhexane	0.35	1.05	30.39	1.43	4.29	124.80	
540-84-1	2,2,4-Trimethylpentane	0.31	0.92	ND	1.43	4.28	ND	ND
142-82-5	n-Heptane	0.35	1.05	1.11	1.43	4.29	4.58	
108-87-2	Methylcyclohexane	0.35	1.05	ND	1.40	4.21	ND	ND
592-13-2	2,5-Dimethylhexane	0.31	0.92	2.33	1.43	4.28	10.92	
589-43-5	2,4-Dimethylhexane	0.31	0.92	1.41	1.43	4.28	6.60	
565-75-3	2,3,4-Trimethylpentane	0.31	0.92	ND	1.43	4.28	ND	ND
108-88-3	Toluene	0.35	1.05	7.16	1.32	3.95	27.03	
584-94-1	2,3-Dimethylhexane	0.31	0.92	ND	1.43	4.28	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.92	ND	1.43	4.28	ND	ND
589-81-1	3-Methylheptane	0.31	0.92	ND	1.43	4.28	ND	ND
111-65-9	n-Octane	0.31	0.92	ND	1.43	4.28	ND	ND
100-41-4	Ethylbenzene	0.31	0.92	1.48	1.33	3.98	6.42	
108-38-3	m,p-xylene	0.31	0.92	3.56	1.33	3.98	15.51	
100-42-5	Styrene	0.31	0.92	ND	1.30	3.91	ND	ND
95-47-6	o-xylene	0.31	0.92	3.32	1.33	3.98	14.46	
111-84-2	n-Nonane	0.27	0.81	ND	1.43	4.28	ND	ND
98-82-8	i-Propylbenzene	0.27	0.81	ND	1.34	4.01	ND	ND
103-65-1	n-propylbenzene	0.27	0.81	ND	1.34	4.01	ND	ND
80-56-8	a-Pinene	0.24	0.73	ND	1.36	4.09	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.81	ND	1.34	4.01	ND	ND
622-96-8	4-Ethyltoluene	0.27	0.81	3.06	1.34	4.01	15.05	
108-67-8	1,3,5-Trimethylbenzene	0.27	0.81	1.76	1.34	4.01	8.69	
611-14-3	2-Ethyltoluene	0.27	0.81	ND	1.34	4.01	ND	ND
127-91-3	b-Pinene	0.24	0.73	ND	1.36	4.09	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.81	5.85	1.34	4.01	28.83	
124-18-5	n-Decane	0.24	0.73	1.02	1.42	4.27	5.94	
526-73-8	1,2,3-Trimethylbenzene	0.27	0.81	3.41	1.34	4.01	16.78	
5989-27-5	d-Limonene	0.24	0.73	ND	1.36	4.09	ND	ND
141-93-5	1,3-Diethylbenzene	0.24	0.73	ND	1.34	4.03	ND	ND
105-05-5	1,4-Diethylbenzene	0.24	0.73	ND	1.34	4.03	ND	ND
104-51-8	n-Butylbenzene	0.24	0.73	ND	1.34	4.03	ND	ND
1120-21-4	Undecane	0.22	0.67	ND	1.42	4.26	ND	ND
112-40-3	Dodecane	0.20	0.61	ND	1.42	4.26	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.15	27.45	1,496.17	32.33	96.98	5,285.63	
TNMHC - C1	Total Non-Methane Hydrocarbons	54.90	164.70	8,976.99	36.00	108.00	5,886.55	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 16

File Name: 1820516A

Date Sampled: 04/11/18

Time: 8:13

Description: T-202

Date Analyzed: 04/16/18

Time: 18:49

Can/Tube#: 732

Can Dilution Factor: 1.22

QC_Batch: 041618-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	122	366	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 16

File Name: 1820516A
Description: T-202
Can/Tube#: 732
QC_Batch: 041718-GCL

Date Sampled: 04/11/18 Time: 8:13
Date Analyzed: 04/17/18 Time: 14:44
Dilution Factor: 1.22

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.37	8.46	0.08	0.25	5.72	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 17

File Name: 1820517A.D
Description: T-203
Canister: 882
QC_Batch: 042018-MA1

Date Sampled: 04/11/18 Time: 09:19
Date Analyzed: 04/20/18 Time: 20:52
Can Dilution Factor: 1.23
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.31	1.55	ND	1.52	7.64	ND	
74-87-3	Chloromethane	0.31	1.55	ND	0.63	3.19	ND	
76-14-2	Freon 114	0.31	1.55	ND	2.15	10.81	ND	
75-01-4	Vinyl chloride	0.31	1.55	ND	0.79	3.95	ND	
106-99-0	1,3-Butadiene	0.31	1.55	ND	0.68	3.42	ND	
74-83-9	Bromomethane	0.31	1.55	ND	1.19	6.00	ND	
75-00-3	Chloroethane	0.31	1.55	ND	0.81	4.08	ND	
64-17-5	Ethanol	1.54	4.61	ND	2.90	8.69	ND	
75-69-4	Trichlorofluoromethane	0.31	1.48	ND	1.73	8.29	ND	
67-64-1	Acetone	1.54	3.78	1,245.26	3.65	8.98	2,957.62	E
67-63-0	2-propanol	1.54	3.53	ND	3.78	8.67	ND	
75-35-4	1,1-Dichloroethene	0.31	1.53	ND	1.22	6.04	ND	
76-13-1	Freon 113	0.31	1.47	ND	2.36	11.27	ND	
75-09-2	Dichloromethane	0.62	1.48	ND	2.13	5.14	ND	
75-15-0	Carbon disulfide	1.54	2.85	5.24	4.78	8.88	16.29	
156-60-5	trans-1,2-Dichloroethene	0.31	1.11	ND	1.22	4.40	ND	
1634-04-4	Methyl tert butyl ether	0.31	1.13	ND	1.11	4.08	ND	
75-34-3	1,1-Dichloroethane	0.31	1.53	ND	1.24	6.21	ND	
108-05-4	Vinyl acetate	0.31	1.35	ND	1.08	4.76	ND	
78-93-3	2-Butanone	1.23	3.13	431.38	3.63	9.23	1,271.44	E
141-78-6	Ethyl acetate	0.62	1.35	ND	2.21	4.85	ND	
74-97-5	Bromochloromethane	0.31	0.82	ND	1.63	4.33	ND	
109-99-9	Tetrahydrofuran	0.62	1.55	ND	1.81	4.56	ND	
156-59-2	cis-1,2-Dichloroethene	0.62	1.65	ND	2.44	6.55	ND	
67-66-3	Chloroform	0.31	1.54	ND	1.50	7.53	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.37	ND	1.68	7.45	ND	
107-06-2	1,2-Dichloroethane	0.31	1.40	ND	1.24	5.68	ND	
110-82-7	Cyclohexane	0.31	1.18	ND	1.06	4.06	ND	
71-43-2	Benzene	0.31	1.56	7.79	0.98	4.99	24.87	
56-23-5	Carbon tetrachloride	0.31	1.46	ND	1.93	9.16	ND	
142-82-5	n-Heptane	1.54	3.73	ND	6.30	15.27	ND	
78-87-5	1,2-Dichloropropane	0.31	1.48	ND	1.42	6.84	ND	
123-91-1	1,4 Dioxane	1.23	2.52	ND	4.43	9.06	ND	
79-01-6	Trichloroethene	0.18	1.43	ND	0.99	7.69	ND	
75-27-4	Bromodichloromethane	0.31	0.62	ND	2.06	4.16	ND	
80-62-6	Methyl methacrylate	1.23	4.16	ND	5.03	17.01	ND	
108-10-1	4-Methyl-2-pentanone	1.23	4.66	7.84	5.04	19.07	32.12	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	0.31	1.59	ND	1.40	7.23	ND		
108-88-3	Toluene	0.62	1.61	6.29	2.32	6.04	23.67		
10061-02-6	trans-1,3-Dichloropropene	0.31	1.59	ND	1.40	7.24	ND		
79-00-5	1,1,2-Trichloroethane	0.31	1.58	ND	1.68	8.62	ND		
591-78-6	2-Hexanone	1.54	4.36	5.30	6.30	17.86	21.70		
124-48-1	Dibromochloromethane	0.31	0.61	ND	2.62	5.23	ND		
106-93-4	1,2-Dibromoethane	0.31	0.75	ND	2.36	5.73	ND		
127-18-4	Tetrachloroethene	0.18	0.75	ND	1.25	5.07	ND		
108-90-7	Chlorobenzene	0.31	1.40	ND	1.42	6.44	ND		
100-41-4	Ethylbenzene	0.65	1.63	1.20	2.82	7.06	5.23	J	
1330-20-7	m,p-Xylenes	0.65	1.63	3.77	2.83	7.07	16.37		
100-42-5	Styrene	0.64	1.59	ND	2.71	6.78	ND		
75-25-2	Bromoform	0.31	0.41	ND	3.18	4.26	ND		
95-47-6	o-Xylene	0.63	1.58	2.95	2.75	6.88	12.82		
79-34-5	1,1,2,2-Tetrachloroethane	0.30	0.76	ND	2.09	5.22	ND		
622-96-8	4-Ethyltoluene	1.02	2.55	3.08	5.01	12.52	15.11		
108-67-8	1,3,5-Trimethylbenzene	0.64	1.59	1.66	3.12	7.81	8.15		
95-63-6	1,2,4-Trimethylbenzene	0.63	1.56	5.31	3.07	7.68	26.11		
541-73-1	1,3-Dichlorobenzene	0.62	1.14	ND	3.70	6.84	ND		
100-44-7	Benzyl chloride	0.62	3.73	ND	3.18	19.29	ND		
106-46-7	1,4-Dichlorobenzene	0.62	1.06	ND	3.70	6.39	ND		
95-50-1	1,2-Dichlorobenzene	0.62	1.00	ND	3.70	5.99	ND		
120-82-1	1,2,4-Trichlorobenzene	1.54	2.12	ND	11.40	15.69	ND		
91-20-3	Naphthalene	0.31	0.49	ND	1.64	2.58	ND		
87-68-3	Hexachlorobutadiene	1.54	1.63	ND	16.39	17.38	ND		
					QC		Limits		
Surrogate Recovery				% Rec.	LCL	UCL	Flag		
2037-26-5	Toluene-d8			103	70	130			

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 17

File Name: 1820517A
Description: T-203
Canister: 882
QC_Batch: 041818-GCK

Date Sampled: 04/11/18 Time: 9:19
Date Analyzed: 04/18/18 Time: 16:15
Can Factor: 1.23
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.23	3.69	ND	1.42	4.25	ND	ND
74-86-2	Acetylene	1.23	3.69	ND	1.31	3.93	ND	ND
74-84-0	Ethane	1.23	3.69	8.71	1.52	4.55	10.75	
115-07-1	Propene	0.82	2.46	ND	1.41	4.24	ND	ND
74-98-6	Propane	0.82	2.46	1.93	1.48	4.45	3.48	J
75-28-5	i-Butane	0.62	1.85	ND	1.46	4.39	ND	ND
106-98-9	1-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
106-97-8	n-Butane	0.62	1.85	ND	1.46	4.39	ND	ND
624-64-6	t-2-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
590-18-1	c-2-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
78-78-4	i-Pentane	0.49	1.48	ND	1.46	4.37	ND	ND
109-67-1	1-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
109-66-0	n-Pentane	0.49	1.48	1.07	1.45	4.36	3.15	J
78-79-5	Isoprene	0.49	1.48	ND	1.37	4.12	ND	ND
646-04-8	t-2-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
627-20-3	c-2-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.23	ND	1.45	4.35	ND	ND
287-92-3	Cyclopentane	0.49	1.48	ND	1.41	4.24	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.23	ND	1.45	4.35	ND	ND
107-83-5	2-Methylpentane	0.41	1.23	ND	1.45	4.35	ND	ND
96-14-0	3-Methylpentane	0.41	1.23	ND	1.45	4.35	ND	ND
110-54-3	n-Hexane	0.41	1.23	1.13	1.45	4.35	3.99	J
96-37-7	Methylcyclopentane	0.41	1.23	ND	1.41	4.24	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.05	ND	1.44	4.33	ND	ND
71-43-2	Benzene	0.41	1.23	0.97	1.31	3.94	3.09	J
110-82-7	Cyclohexane	0.41	1.23	ND	1.41	4.24	ND	ND
591-76-4	2-Methylhexane	0.35	1.05	15.28	1.44	4.33	62.77	
565-59-3	2,3-Dimethylpentane	0.35	1.05	ND	1.44	4.33	ND	ND
589-34-4	3-Methylhexane	0.35	1.05	6.53	1.44	4.33	26.81	
540-84-1	2,2,4-Trimethylpentane	0.31	0.92	ND	1.44	4.32	ND	ND
142-82-5	n-Heptane	0.35	1.05	ND	1.44	4.33	ND	ND
108-87-2	Methylcyclohexane	0.35	1.05	2.33	1.41	4.24	9.37	
592-13-2	2,5-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND
589-43-5	2,4-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.31	0.92	ND	1.44	4.32	ND	ND
108-88-3	Toluene	0.35	1.05	1.89	1.33	3.98	7.12	
584-94-1	2,3-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.92	ND	1.44	4.32	ND	ND
589-81-1	3-Methylheptane	0.31	0.92	ND	1.44	4.32	ND	ND
111-65-9	n-Octane	0.31	0.92	ND	1.44	4.32	ND	ND
100-41-4	Ethylbenzene	0.31	0.92	ND	1.34	4.02	ND	ND
108-38-3	m,p-xylene	0.31	0.92	0.78	1.34	4.02	3.39	J
100-42-5	Styrene	0.31	0.92	ND	1.31	3.94	ND	ND
95-47-6	o-xylene	0.31	0.92	ND	1.34	4.02	ND	ND
111-84-2	n-Nonane	0.27	0.82	ND	1.44	4.31	ND	ND
98-82-8	i-Propylbenzene	0.27	0.82	0.59	1.35	4.04	2.91	J
103-65-1	n-propylbenzene	0.27	0.82	3.23	1.35	4.04	15.92	
80-56-8	a-Pinene	0.25	0.74	ND	1.37	4.12	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.82	ND	1.35	4.04	ND	ND
622-96-8	4-Ethyltoluene	0.27	0.82	ND	1.35	4.04	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.27	0.82	ND	1.35	4.04	ND	ND
611-14-3	2-Ethyltoluene	0.27	0.82	ND	1.35	4.04	ND	ND
127-91-3	b-Pinene	0.25	0.74	ND	1.37	4.12	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.82	0.61	1.35	4.04	3.02	J
124-18-5	n-Decane	0.25	0.74	ND	1.43	4.30	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.27	0.82	ND	1.35	4.04	ND	ND
5989-27-5	d-Limonene	0.25	0.74	ND	1.37	4.12	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.74	ND	1.35	4.06	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.74	ND	1.35	4.06	ND	ND
104-51-8	n-Butylbenzene	0.25	0.74	ND	1.35	4.06	ND	ND
1120-21-4	Undecane	0.22	0.67	ND	1.43	4.30	ND	ND
112-40-3	Dodecane	0.21	0.62	ND	1.43	4.29	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.23	27.68	466.37	32.59	97.77	1,647.59
TNMHC - C1	Total Non-Methane Hydrocarbons	55.35	166.05	2,798.23	36.30	108.89	1,834.90

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 17

File Name: 1820517A

Date Sampled: 04/11/18

Time: 9:19

Description: T-203

Date Analyzed: 04/16/18

Time: 18:55

Can/Tube#: 882

Can Dilution Factor: 1.23

QC_Batch: 041618-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	123	369	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 17

File Name: 1820517A
Description: T-203
Can/Tube#: 882
QC_Batch: 041718-GCL

Date Sampled: 04/11/18 Time: 9:19
Date Analyzed: 04/17/18 Time: 14:50
Dilution Factor: 1.23

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.37	1.17	0.08	0.25	0.79	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 18

File Name: 1820518A.D
Description: T-204
Canister: 696
QC_Batch: 042518-MA1

Date Sampled: 04/11/18 Time: 09:39
Date Analyzed: 04/25/18 Time: 20:22
Can Dilution Factor: 1.31
Air Volume: 20 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	3.28	16.47	ND	16.19	81.42	ND	
74-87-3	Chloromethane	3.28	16.47	ND	6.76	34.01	ND	
76-14-2	Freon 114	3.28	16.47	ND	22.88	115.09	ND	
75-01-4	Vinyl chloride	3.28	16.47	ND	8.37	42.09	ND	
106-99-0	1,3-Butadiene	3.28	16.47	ND	7.24	36.43	ND	
74-83-9	Bromomethane	3.28	16.47	ND	12.71	63.91	ND	
75-00-3	Chloroethane	3.28	16.47	ND	8.64	43.44	ND	
64-17-5	Ethanol	16.38	49.13	ND	30.86	92.58	ND	
75-69-4	Trichlorofluoromethane	3.28	15.73	ND	18.40	88.33	ND	
67-64-1	Acetone	16.38	40.28	13,053.01	38.89	95.67	31,002.12	E
67-63-0	2-propanol	16.38	37.60	ND	40.23	92.37	ND	
75-35-4	1,1-Dichloroethene	3.28	16.24	ND	12.97	64.35	ND	
76-13-1	Freon 113	3.28	15.67	ND	25.09	120.03	ND	
75-09-2	Dichloromethane	6.55	15.77	ND	22.73	54.74	ND	
75-15-0	Carbon disulfide	16.38	30.39	63.76	50.94	94.55	198.35	
156-60-5	trans-1,2-Dichloroethene	3.28	11.82	ND	12.97	46.84	ND	
1634-04-4	Methyl tert butyl ether	3.28	12.07	ND	11.79	43.49	ND	
75-34-3	1,1-Dichloroethane	3.28	16.33	ND	13.25	66.10	ND	
108-05-4	Vinyl acetate	3.28	14.39	ND	11.53	50.65	ND	
78-93-3	2-Butanone	13.10	33.34	4,498.63	38.61	98.27	13,259.28	E
141-78-6	Ethyl acetate	6.55	14.34	ND	23.59	51.66	ND	
74-97-5	Bromochloromethane	3.28	8.72	ND	17.32	46.14	ND	
109-99-9	Tetrahydrofuran	6.55	16.47	ND	19.31	48.55	ND	
156-59-2	cis-1,2-Dichloroethene	6.55	17.62	ND	25.95	69.79	ND	
67-66-3	Chloroform	3.28	16.43	ND	15.99	80.17	ND	
71-55-6	1,1,1-Trichloroethane	3.28	14.54	ND	17.86	79.30	ND	
107-06-2	1,2-Dichloroethane	3.28	14.94	ND	13.25	60.46	ND	
110-82-7	Cyclohexane	3.29	12.58	127.60	11.32	43.29	439.21	
71-43-2	Benzene	3.28	16.64	41.28	10.46	53.12	131.79	
56-23-5	Carbon tetrachloride	3.28	15.52	ND	20.59	97.60	ND	
142-82-5	n-Heptane	16.38	39.69	ND	67.07	162.59	ND	
78-87-5	1,2-Dichloropropane	3.28	15.76	ND	15.13	72.81	ND	
123-91-1	1,4 Dioxane	13.10	26.79	ND	47.18	96.48	ND	
79-01-6	Trichloroethene	1.97	15.25	ND	10.56	81.94	ND	
75-27-4	Bromodichloromethane	3.28	6.62	ND	21.93	44.30	ND	
80-62-6	Methyl methacrylate	13.10	44.28	ND	53.61	181.19	ND	
108-10-1	4-Methyl-2-pentanone	13.10	49.58	75.64	53.66	203.10	309.81	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	3.28	16.97	ND	14.86	77.01	ND	
108-88-3	Toluene	6.55	17.10	58.00	24.66	64.36	218.39	
10061-02-6	trans-1,3-Dichloropropene	3.28	16.98	ND	14.86	77.07	ND	
79-00-5	1,1,2-Trichloroethane	3.28	16.84	ND	17.86	91.83	ND	
591-78-6	2-Hexanone	16.38	46.44	48.15	67.07	190.22	197.23	
124-48-1	Dibromochloromethane	3.28	6.54	ND	27.89	55.68	ND	
106-93-4	1,2-Dibromoethane	3.28	7.95	ND	25.16	61.06	ND	
127-18-4	Tetrachloroethene	1.97	7.97	ND	13.32	54.03	ND	
108-90-7	Chlorobenzene	3.28	14.90	ND	15.07	68.60	ND	
100-41-4	Ethylbenzene	6.93	17.31	13.10	30.06	75.16	56.86	J
1330-20-7	m,p-Xylenes	6.94	17.36	40.02	30.14	75.35	173.73	
100-42-5	Styrene	6.78	16.96	ND	28.89	72.22	ND	
75-25-2	Bromoform	3.28	4.39	ND	33.83	45.39	ND	
95-47-6	o-Xylene	6.75	16.88	31.94	29.31	73.28	138.67	
79-34-5	1,1,2,2-Tetrachloroethane	3.24	8.11	ND	22.25	55.61	ND	
622-96-8	4-Ethyltoluene	10.86	27.14	37.95	53.35	133.36	186.47	
108-67-8	1,3,5-Trimethylbenzene	6.77	16.92	20.51	33.25	83.13	100.80	
95-63-6	1,2,4-Trimethylbenzene	6.66	16.64	66.01	32.71	81.78	324.34	
541-73-1	1,3-Dichlorobenzene	6.55	12.12	ND	39.36	72.82	ND	
100-44-7	Benzyl chloride	6.55	39.69	ND	33.90	205.42	ND	
106-46-7	1,4-Dichlorobenzene	6.55	11.33	ND	39.36	68.09	ND	
95-50-1	1,2-Dichlorobenzene	6.55	10.61	ND	39.36	63.76	ND	
120-82-1	1,2,4-Trichlorobenzene	16.38	22.53	ND	121.43	167.09	ND	
91-20-3	Naphthalene	3.34	5.24	ND	17.51	27.46	ND	
87-68-3	Hexachlorobutadiene	16.38	17.36	ND	174.58	185.05	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	111	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205

Laboratory Number: 18

File Name: 1820518A
Description: T-204
Canister: 696
QC_Batch: 041918-GCK

Date Sampled: 04/11/18 Time: 9:39
Date Analyzed: 04/20/18 Time: 9:40
Can Factor: 1.31
Air Volume: 5 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	52.4	157.2	ND	60.3	181.0	ND	ND
74-86-2	Acetylene	52.4	157.2	ND	55.8	167.5	ND	ND
74-84-0	Ethane	52.4	157.2	2,827.9	64.6	193.9	3,488.5	
115-07-1	Propene	34.9	104.8	ND	60.3	180.8	ND	ND
74-98-6	Propane	34.9	104.8	354.4	63.1	189.4	640.5	
75-28-5	i-Butane	26.2	78.6	ND	62.4	187.2	ND	ND
106-98-9	1-Butene	26.2	78.6	ND	60.2	180.7	ND	ND
106-97-8	n-Butane	26.2	78.6	ND	62.4	187.2	ND	ND
624-64-6	t-2-Butene	26.2	78.6	ND	60.2	180.7	ND	ND
590-18-1	c-2-Butene	26.2	78.6	ND	60.2	180.7	ND	ND
78-78-4	i-Pentane	21.0	62.9	ND	62.0	186.1	ND	ND
109-87-1	1-Pentene	21.0	62.9	ND	60.2	180.7	ND	ND
109-66-0	n-Pentane	21.0	62.9	38.1	61.9	185.8	112.5	J
78-79-5	Isoprene	21.0	62.9	ND	58.5	175.5	ND	ND
646-04-8	t-2-Pentene	21.0	62.9	ND	60.2	180.7	ND	ND
627-20-3	c-2-Pentene	21.0	62.9	ND	60.2	180.7	ND	ND
75-83-2	2,2-Dimethylbutane	17.5	52.4	ND	61.7	185.1	ND	ND
287-92-3	Cyclopentane	21.0	62.9	ND	60.2	180.7	ND	ND
79-29-8	2,3-Dimethylbutane	17.5	52.4	ND	61.7	185.1	ND	ND
107-83-5	2-Methylpentane	17.5	52.4	ND	61.7	185.1	ND	ND
96-14-0	3-Methylpentane	17.5	52.4	ND	61.7	185.1	ND	ND
110-54-3	n-Hexane	17.5	52.4	ND	61.7	185.1	ND	ND
96-37-7	Methylcyclopentane	17.5	52.4	ND	60.3	180.8	ND	ND
108-08-7	2,4-Dimethylpentane	15.0	44.9	137.1	61.5	184.4	563.1	
71-43-2	Benzene	17.5	52.4	56.2	55.9	167.7	179.8	
110-82-7	Cyclohexane	17.5	52.4	131.1	60.3	180.8	452.5	
591-76-4	2-Methylhexane	15.0	44.9	319.6	61.5	184.4	1,312.6	
565-59-3	2,3-Dimethylpentane	15.0	44.9	151.1	61.5	184.4	620.4	
589-34-4	3-Methylhexane	15.0	44.9	151.9	61.5	184.4	623.9	
540-84-1	2,2,4-Trimethylpentane	13.1	39.3	ND	61.3	183.9	ND	ND
142-82-5	n-Heptane	15.0	44.9	ND	61.5	184.4	ND	ND
108-87-2	Methylcyclohexane	15.0	44.9	207.3	60.3	180.8	834.2	
592-13-2	2,5-Dimethylhexane	13.1	39.3	31.6	61.3	183.9	147.7	J
589-43-5	2,4-Dimethylhexane	13.1	39.3	28.6	61.3	183.9	133.9	J
565-75-3	2,3,4-Trimethylpentane	13.1	39.3	ND	61.3	183.9	ND	ND
108-88-3	Toluene	15.0	44.9	91.2	56.5	169.5	344.2	
584-94-1	2,3-Dimethylhexane	13.1	39.3	ND	61.3	183.9	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	13.1	39.3	241.1	61.3	183.9	1,128.4	
589-81-1	3-Methylheptane	13.1	39.3	63.0	61.3	183.9	294.6	
111-65-9	n-Octane	13.1	39.3	90.7	61.3	183.9	424.6	
100-41-4	Ethylbenzene	13.1	39.3	36.1	57.0	171.1	157.1	J
108-38-3	m,p-xylene	13.1	39.3	66.8	57.0	171.1	290.6	
100-42-5	Styrene	13.1	39.3	ND	55.9	167.8	ND	ND
95-47-6	o-xylene	13.1	39.3	62.4	57.0	171.1	271.6	
111-84-2	n-Nonane	11.6	34.9	66.2	61.2	183.7	348.0	
98-82-8	i-Propylbenzene	11.6	34.9	28.0	57.4	172.1	138.2	J
103-65-1	n-propylbenzene	11.6	34.9	63.6	57.4	172.1	313.2	
80-56-8	a-Pinene	10.5	31.4	ND	58.5	175.5	ND	ND
620-14-4	3-Ethyltoluene	11.6	34.9	ND	57.4	172.1	ND	ND
622-96-8	4-Ethyltoluene	11.6	34.9	122.9	57.4	172.1	605.5	
108-67-8	1,3,5-Trimethylbenzene	11.6	34.9	61.0	57.4	172.1	300.6	
611-14-3	2-Ethyltoluene	11.6	34.9	ND	57.4	172.1	ND	ND
127-91-3	b-Pinene	10.5	31.4	ND	58.5	175.5	ND	ND
95-63-6	1,2,4-Trimethylbenzene	11.6	34.9	131.5	57.4	172.1	647.9	
124-18-5	n-Decane	10.5	31.4	44.7	61.1	183.4	260.7	
526-73-8	1,2,3-Trimethylbenzene	11.6	34.9	49.0	57.4	172.1	241.4	
5989-27-5	d-Limonene	10.5	31.4	ND	58.5	175.5	ND	ND
141-93-5	1,3-Diethylbenzene	10.5	31.4	160.4	57.6	172.9	882.4	
105-05-5	1,4-Diethylbenzene	10.5	31.4	87.9	57.6	172.9	483.4	
104-51-8	n-Butylbenzene	10.5	31.4	40.1	57.6	172.9	220.3	
1120-21-4	Undecane	9.5	28.6	ND	61.0	183.1	ND	ND
112-40-3	Dodecane	8.7	26.2	ND	61.0	182.9	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	393.0	1,179.0	83,801.6	1,388.4	4,165.2	296,053.1
TNMHC - C1	Total Non-Methane Hydrocarbons	2,358.0	7,074.0	502,809.5	1,546.2	4,638.7	329,711.1

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 18

File Name: 1820518A

Date Sampled: 04/11/18

Time: 9:39

Description: T-204

Date Analyzed: 04/16/18

Time: 19:01

Can/Tube#: 696

Can Dilution Factor: 1.31

QC_Batch: 041618-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.18	131	393	1,816	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 18

File Name: 1820518A
Description: T-204
Can/Tube#: 696
QC_Batch: 041718-GCL

Date Sampled: 04/11/18 Time: 9:39
Date Analyzed: 04/17/18 Time: 14:54
Dilution Factor: 1.31

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.39	324.35	0.09	0.27	219.16	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 19

File Name: 1820519A.D

Date Sampled: 04/11/18

Time: 11:13

Description: T-205

Date Analyzed: 04/25/18

Time: 19:43

Canister: 627

Can Dilution Factor: 1.26

QC_Batch: 042518-MA1

Air Volume: 100 ml

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
75-71-8	Dichlorodifluoromethane	0.63	3.17	ND	3.11	15.66	ND	
74-87-3	Chloromethane	0.63	3.17	ND	1.30	6.54	ND	
76-14-2	Freon 114	0.63	3.17	ND	4.40	22.14	ND	
75-01-4	Vinyl chloride	0.63	3.17	ND	1.61	8.10	ND	
106-99-0	1,3-Butadiene	0.63	3.17	ND	1.39	7.01	ND	
74-83-9	Bromomethane	0.63	3.17	ND	2.44	12.29	ND	
75-00-3	Chloroethane	0.63	3.17	ND	1.66	8.36	ND	
64-17-5	Ethanol	3.15	9.45	ND	5.94	17.81	ND	
75-69-4	Trichlorofluoromethane	0.63	3.03	ND	3.54	16.99	ND	
67-64-1	Acetone	3.15	7.75	34.46	7.48	18.40	81.85	
67-63-0	2-propanol	3.15	7.23	ND	7.74	17.77	ND	
75-35-4	1,1-Dichloroethene	0.63	3.12	ND	2.50	12.38	ND	
76-13-1	Freon 113	0.63	3.01	ND	4.83	23.09	ND	
75-09-2	Dichloromethane	1.26	3.03	ND	4.37	10.53	ND	
75-15-0	Carbon disulfide	3.15	5.85	ND	9.80	18.19	ND	
156-60-5	trans-1,2-Dichloroethene	0.63	2.27	ND	2.50	9.01	ND	
1634-04-4	Methyl tert butyl ether	0.63	2.32	ND	2.27	8.37	ND	
75-34-3	1,1-Dichloroethane	0.63	3.14	ND	2.55	12.72	ND	
108-05-4	Vinyl acetate	0.63	2.77	ND	2.22	9.74	ND	
78-93-3	2-Butanone	2.52	6.41	ND	7.43	18.90	ND	
141-78-6	Ethyl acetate	1.26	2.76	ND	4.54	9.94	ND	
74-97-5	Bromochloromethane	0.63	1.68	ND	3.33	8.88	ND	
109-99-9	Tetrahydrofuran	1.26	3.17	ND	3.71	9.34	ND	
156-59-2	cis-1,2-Dichloroethene	1.26	3.39	ND	4.99	13.43	ND	
67-66-3	Chloroform	0.63	3.16	ND	3.08	15.42	ND	
71-55-6	1,1,1-Trichloroethane	0.63	2.80	ND	3.44	15.25	ND	
107-06-2	1,2-Dichloroethane	0.63	2.87	ND	2.55	11.63	ND	
110-82-7	Cyclohexane	0.63	2.42	ND	2.18	8.33	ND	
71-43-2	Benzene	0.63	3.20	17.43	2.01	10.22	55.66	
56-23-5	Carbon tetrachloride	0.63	2.99	ND	3.96	18.77	ND	
142-82-5	n-Heptane	3.15	7.64	ND	12.90	31.28	ND	
78-87-5	1,2-Dichloropropane	0.63	3.03	ND	2.91	14.01	ND	
123-91-1	1,4 Dioxane	2.52	5.15	ND	9.08	18.56	ND	
79-01-6	Trichloroethene	0.38	2.93	ND	2.03	15.76	ND	
75-27-4	Bromodichloromethane	0.63	1.27	ND	4.22	8.52	ND	
80-62-6	Methyl methacrylate	2.52	8.52	ND	10.31	34.85	ND	
108-10-1	4-Methyl-2-pentanone	2.52	9.54	ND	10.32	39.07	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	0.63	3.26	ND	2.86	14.81	ND		
108-88-3	Toluene	1.26	3.29	14.29	4.74	12.38	53.79		
10061-02-6	trans-1,3-Dichloropropene	0.63	3.27	ND	2.86	14.83	ND		
79-00-5	1,1,2-Trichloroethane	0.63	3.24	ND	3.44	17.66	ND		
591-78-6	2-Hexanone	3.15	8.93	ND	12.90	36.59	ND		
124-48-1	Dibromochloromethane	0.63	1.26	ND	5.36	10.71	ND		
106-93-4	1,2-Dibromoethane	0.63	1.53	ND	4.84	11.75	ND		
127-18-4	Tetrachloroethene	0.38	1.53	ND	2.56	10.39	ND		
108-90-7	Chlorobenzene	0.63	2.87	ND	2.90	13.20	ND		
100-41-4	Ethylbenzene	1.33	3.33	ND	5.78	14.46	ND		
1330-20-7	m,p-Xylenes	1.34	3.34	2.34	5.80	14.49	10.14	J	
100-42-5	Styrene	1.30	3.26	ND	5.56	13.89	ND		
75-25-2	Bromoform	0.63	0.85	ND	6.51	8.73	ND		
95-47-6	o-Xylene	1.30	3.25	ND	5.64	14.10	ND		
79-34-5	1,1,2,2-Tetrachloroethane	0.62	1.56	ND	4.28	10.70	ND		
622-96-8	4-Ethyltoluene	2.09	5.22	ND	10.26	25.65	ND		
108-67-8	1,3,5-Trimethylbenzene	1.30	3.25	ND	6.40	15.99	ND		
95-63-6	1,2,4-Trimethylbenzene	1.28	3.20	ND	6.29	15.73	ND		
541-73-1	1,3-Dichlorobenzene	1.26	2.33	ND	7.57	14.01	ND		
100-44-7	Benzyl chloride	1.26	7.64	ND	6.52	39.52	ND		
106-46-7	1,4-Dichlorobenzene	1.26	2.18	ND	7.57	13.10	ND		
95-50-1	1,2-Dichlorobenzene	1.26	2.04	ND	7.57	12.27	ND		
120-82-1	1,2,4-Trichlorobenzene	3.15	4.33	ND	23.36	32.14	ND		
91-20-3	Naphthalene	0.64	1.01	ND	3.37	5.28	ND		
87-68-3	Hexachlorobutadiene	3.15	3.34	ND	33.58	35.60	ND		
					QC		Limits		
Surrogate Recovery				% Rec.	LCL	UCL	Flag		
2037-26-5	Toluene-d8			117	70	130			

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205

Laboratory Number: 19

File Name: 1820519B
Description: T-205
Canister: 627
QC_Batch: 042618-GCK

Date Sampled: 04/11/18 Time: 11:13
Date Analyzed: 04/26/18 Time: 15:09
Can Factor: 1.26
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.26	3.78	ND	1.45	4.35	ND	ND
74-86-2	Acetylene	1.26	3.78	ND	1.34	4.03	ND	ND
74-84-0	Ethane	1.26	3.78	39.23	1.55	4.66	48.40	
115-07-1	Propene	0.84	2.52	ND	1.45	4.35	ND	ND
74-98-6	Propane	0.84	2.52	5.53	1.52	4.55	9.99	
75-28-5	i-Butane	0.63	1.89	ND	1.50	4.50	ND	ND
106-98-9	1-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
106-97-8	n-Butane	0.63	1.89	2.67	1.50	4.50	6.36	
624-64-6	t-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
590-18-1	c-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
78-78-4	i-Pentane	0.50	1.51	0.68	1.49	4.47	2.02	J
109-67-1	1-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
109-66-0	n-Pentane	0.50	1.51	0.92	1.49	4.47	2.71	J
78-79-5	Isoprene	0.50	1.51	ND	1.41	4.22	ND	ND
646-04-8	t-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
627-20-3	c-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
287-92-3	Cyclopentane	0.50	1.51	ND	1.45	4.34	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
107-83-5	2-Methylpentane	0.42	1.26	2.10	1.48	4.45	7.43	
96-14-0	3-Methylpentane	0.42	1.26	4.74	1.48	4.45	16.75	
110-54-3	n-Hexane	0.42	1.26	0.96	1.48	4.45	3.41	J
96-37-7	Methylcyclopentane	0.42	1.26	ND	1.45	4.35	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.08	1.05	1.48	4.44	4.31	J
71-43-2	Benzene	0.42	1.26	15.36	1.34	4.03	49.18	
110-82-7	Cyclohexane	0.42	1.26	ND	1.45	4.35	ND	ND
591-76-4	2-Methylhexane	0.36	1.08	ND	1.48	4.44	ND	ND
565-59-3	2,3-Dimethylpentane	0.36	1.08	ND	1.48	4.44	ND	ND
589-34-4	3-Methylhexane	0.36	1.08	ND	1.48	4.44	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	0.78	1.47	4.42	3.66	J
142-82-5	n-Heptane	0.36	1.08	0.67	1.48	4.44	2.76	J
108-87-2	Methylcyclohexane	0.36	1.08	1.03	1.45	4.35	4.16	J
592-13-2	2,5-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	0.46	1.47	4.42	2.16	J
108-88-3	Toluene	0.36	1.08	13.98	1.36	4.08	52.78	
584-94-1	2,3-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND
589-81-1	3-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND
111-65-9	n-Octane	0.32	0.95	1.08	1.47	4.42	5.04	
100-41-4	Ethylbenzene	0.32	0.95	1.08	1.37	4.11	4.68	
108-38-3	m,p-xylene	0.32	0.95	3.81	1.37	4.11	16.56	
100-42-5	Styrene	0.32	0.95	ND	1.35	4.04	ND	ND
95-47-6	o-xylene	0.32	0.95	2.95	1.37	4.11	12.83	
111-84-2	n-Nonane	0.28	0.84	1.60	1.47	4.42	8.42	
98-82-8	i-Propylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
103-65-1	n-propylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
80-56-8	a-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
611-14-3	2-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
127-91-3	b-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.84	1.17	1.38	4.14	5.77	
124-18-5	n-Decane	0.25	0.76	1.25	1.47	4.41	7.32	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
5989-27-5	d-Limonene	0.25	0.76	ND	1.41	4.22	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
104-51-8	n-Butylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
1120-21-4	Undecane	0.23	0.69	1.38	1.47	4.40	8.84	
112-40-3	Dodecane	0.21	0.63	0.43	1.47	4.40	3.02	J

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.45	28.35	146.10	33.38	100.15	516.15	
TNMHC - C1	Total Non-Methane Hydrocarbons	56.70	170.10	876.62	37.18	111.54	574.83	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 19

File Name: 1820519A

Date Sampled: 04/11/18 Time: 11:13

Description: T-205

Date Analyzed: 04/16/18 Time: 19:07

Can/Tube#: 627

Can Dilution Factor: 1.26

QC_Batch: 041618-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	126	378	ND	ND

ANALYTICAL REPORT

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 19

File Name: 1820519A
Description: T-205
Can/Tube#: 627
QC_Batch: 041718-GCL

Date Sampled: 04/11/18 Time: 11:13
Date Analyzed: 04/17/18 Time: 15:07
Dilution Factor: 1.26

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	138.64	0.09	0.26	93.68	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 20

File Name: 1820520A.D

Description: T-206

Canister: 838

QC_Batch: 042018-MA1

Date Sampled: 04/11/18

Time: 11:19

Date Analyzed: 04/20/18

Time: 21:28

Can Dilution Factor: 1.27

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.60	ND	1.57	7.89	ND	
74-87-3	Chloromethane	0.32	1.60	ND	0.66	3.30	ND	
76-14-2	Freon 114	0.32	1.60	ND	2.22	11.16	ND	
75-01-4	Vinyl chloride	0.32	1.60	ND	0.81	4.08	ND	
106-99-0	1,3-Butadiene	0.32	1.60	ND	0.70	3.53	ND	
74-83-9	Bromomethane	0.32	1.60	ND	1.23	6.20	ND	
75-00-3	Chloroethane	0.32	1.60	ND	0.84	4.21	ND	
64-17-5	Ethanol	1.59	4.76	ND	2.99	8.98	ND	
75-69-4	Trichlorofluoromethane	0.32	1.52	ND	1.78	8.56	ND	
67-64-1	Acetone	1.59	3.91	72.47	3.77	9.28	172.11	
67-63-0	2-propanol	1.59	3.64	ND	3.90	8.95	ND	
75-35-4	1,1-Dichloroethene	0.32	1.57	ND	1.26	6.24	ND	
76-13-1	Freon 113	0.32	1.52	ND	2.43	11.64	ND	
75-09-2	Dichloromethane	0.64	1.53	ND	2.20	5.31	ND	
75-15-0	Carbon disulfide	1.59	2.95	18.82	4.94	9.17	58.54	
156-60-5	trans-1,2-Dichloroethene	0.32	1.15	ND	1.26	4.54	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.17	ND	1.14	4.22	ND	
75-34-3	1,1-Dichloroethane	0.32	1.58	ND	1.28	6.41	ND	
108-05-4	Vinyl acetate	0.32	1.39	ND	1.12	4.91	ND	
78-93-3	2-Butanone	1.27	3.23	13.72	3.74	9.53	40.45	
141-78-6	Ethyl acetate	0.64	1.39	ND	2.29	5.01	ND	
74-97-5	Bromochloromethane	0.32	0.85	ND	1.68	4.47	ND	
109-99-9	Tetrahydrofuran	0.64	1.60	ND	1.87	4.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.64	1.71	ND	2.52	6.77	ND	
67-66-3	Chloroform	0.32	1.59	ND	1.55	7.77	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.41	ND	1.73	7.69	ND	
107-06-2	1,2-Dichloroethane	0.32	1.45	ND	1.28	5.86	ND	
110-82-7	Cyclohexane	0.32	1.22	ND	1.10	4.20	ND	
56-23-5	Carbon tetrachloride	0.32	1.50	ND	2.00	9.46	ND	
142-82-5	n-Heptane	1.59	3.85	10.55	6.50	15.76	43.20	
78-87-5	1,2-Dichloropropane	0.32	1.53	ND	1.47	7.06	ND	
123-91-1	1,4 Dioxane	1.27	2.60	ND	4.57	9.35	ND	
79-01-6	Trichloroethene	0.19	1.48	ND	1.02	7.94	ND	
75-27-4	Bromodichloromethane	0.32	0.64	ND	2.13	4.29	ND	
80-62-6	Methyl methacrylate	1.27	4.29	ND	5.20	17.57	ND	
108-10-1	4-Methyl-2-pentanone	1.27	4.81	ND	5.20	19.69	ND	
10061-01-5	cis-1,3-Dichloropropene	0.32	1.65	ND	1.44	7.47	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-02-6	trans-1,3-Dichloropropene	0.32	1.65	ND	1.44	7.47	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.63	ND	1.73	8.90	ND	
591-78-6	2-Hexanone	1.59	4.50	ND	6.50	18.44	ND	
124-48-1	Dibromochloromethane	0.32	0.63	ND	2.70	5.40	ND	
106-93-4	1,2-Dibromoethane	0.32	0.77	ND	2.44	5.92	ND	
127-18-4	Tetrachloroethene	0.19	0.77	ND	1.29	5.24	ND	
108-90-7	Chlorobenzene	0.32	1.44	ND	1.46	6.65	ND	
100-41-4	Ethylbenzene	0.67	1.68	10.64	2.91	7.29	46.21	
1330-20-7	m,p-Xylenes	0.67	1.68	40.14	2.92	7.30	174.28	
100-42-5	Styrene	0.66	1.64	ND	2.80	7.00	ND	
75-25-2	Bromoform	0.32	0.43	ND	3.28	4.40	ND	
95-47-6	o-Xylene	0.65	1.64	20.90	2.84	7.10	90.72	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.79	0.37	2.16	5.39	2.56	J
622-96-8	4-Ethyltoluene	1.05	2.63	3.86	5.17	12.93	18.98	
108-67-8	1,3,5-Trimethylbenzene	0.66	1.64	1.65	3.22	8.06	8.11	
95-63-6	1,2,4-Trimethylbenzene	0.65	1.61	6.14	3.17	7.93	30.18	
541-73-1	1,3-Dichlorobenzene	0.64	1.17	ND	3.82	7.06	ND	
100-44-7	Benzyl chloride	0.64	3.85	ND	3.29	19.92	ND	
106-46-7	1,4-Dichlorobenzene	0.64	1.10	ND	3.82	6.60	ND	
95-50-1	1,2-Dichlorobenzene	0.64	1.03	ND	3.82	6.18	ND	
120-82-1	1,2,4-Trichlorobenzene	1.59	2.18	ND	11.77	16.20	ND	
91-20-3	Naphthalene	0.32	0.51	1.39	1.70	2.66	7.29	
87-68-3	Hexachlorobutadiene	1.59	1.68	ND	16.92	17.94	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				106	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 20

File Name: 1821520A.D
Description: T-206
Canister: 838
QC_Batch: 042618-MA1

Date Sampled: 04/11/18 Time: 11:19
Date Analyzed: 04/26/18 Time: 20:43
Can Dilution Factor: 1.27
Air Volume: 10.00 ml

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
71-43-2	Benzene	6.35	32.26	190.89	20.27	103.00	609.47	
108-88-3	Toluene	12.70	33.15	158.80	47.82	124.80	597.88	

Surrogate Recovery		% Rec.	QC	Limits	Flag
			LCL	UCL	
2037-26-5	Toluene-d8	111	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205

Laboratory Number: 20

File Name: 1820520B
Description: T-206
Canister: 838
QC_Batch: 041918-GCK

Date Sampled: 04/11/18 Time: 11:19
Date Analyzed: 04/19/18 Time: 14:41
Can Factor: 1.27
Air Volume: 100 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2.54	7.62	ND	2.93	8.78	ND	ND
74-86-2	Acetylene	2.54	7.62	ND	2.71	8.12	ND	ND
74-84-0	Ethane	2.54	7.62	68.36	3.13	9.40	84.33	
115-07-1	Propene	1.69	5.08	ND	2.92	8.77	ND	ND
74-98-6	Propane	1.69	5.08	31.18	3.06	9.18	56.36	
75-28-5	i-Butane	1.27	3.81	3.12	3.02	9.07	7.42	J
106-98-9	1-Butene	1.27	3.81	ND	2.92	8.76	ND	ND
106-97-8	n-Butane	1.27	3.81	8.25	3.02	9.07	19.64	
624-64-6	t-2-Butene	1.27	3.81	ND	2.92	8.76	ND	ND
590-18-1	c-2-Butene	1.27	3.81	ND	2.92	8.76	ND	ND
78-78-4	i-Pentane	1.02	3.05	4.09	3.01	9.02	12.09	
109-67-1	1-Pentene	1.02	3.05	ND	2.92	8.76	ND	ND
109-66-0	n-Pentane	1.02	3.05	7.06	3.00	9.01	20.86	
78-79-5	Isoprene	1.02	3.05	ND	2.84	8.51	ND	ND
646-04-8	t-2-Pentene	1.02	3.05	ND	2.92	8.76	ND	ND
627-20-3	c-2-Pentene	1.02	3.05	ND	2.92	8.76	ND	ND
75-83-2	2,2-Dimethylbutane	0.85	2.54	ND	2.99	8.97	ND	ND
287-92-3	Cyclopentane	1.02	3.05	ND	2.92	8.76	ND	ND
79-29-8	2,3-Dimethylbutane	0.85	2.54	ND	2.99	8.97	ND	ND
107-83-5	2-Methylpentane	0.85	2.54	4.55	2.99	8.97	16.07	
96-14-0	3-Methylpentane	0.85	2.54	10.62	2.99	8.97	37.53	
110-54-3	n-Hexane	0.85	2.54	12.04	2.99	8.97	42.53	
96-37-7	Methylcyclopentane	0.85	2.54	ND	2.92	8.77	ND	ND
108-08-7	2,4-Dimethylpentane	0.73	2.18	16.20	2.98	8.94	66.51	
71-43-2	Benzene	0.85	2.54	212.56	2.71	8.13	680.37	
110-82-7	Cyclohexane	0.85	2.54	ND	2.92	8.77	ND	ND
591-76-4	2-Methylhexane	0.73	2.18	2.87	2.98	8.94	11.80	
565-59-3	2,3-Dimethylpentane	0.73	2.18	1.74	2.98	8.94	7.14	J
589-34-4	3-Methylhexane	0.73	2.18	6.11	2.98	8.94	25.07	
540-84-1	2,2,4-Trimethylpentane	0.64	1.91	ND	2.97	8.92	ND	ND
142-82-5	n-Heptane	0.73	2.18	13.29	2.98	8.94	54.59	
108-87-2	Methylcyclohexane	0.73	2.18	20.56	2.92	8.76	82.76	
592-13-2	2,5-Dimethylhexane	0.64	1.91	ND	2.97	8.92	ND	ND
589-43-5	2,4-Dimethylhexane	0.64	1.91	ND	2.97	8.92	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.64	1.91	ND	2.97	8.92	ND	ND
108-88-3	Toluene	0.73	2.18	207.37	2.74	8.22	782.75	
584-94-1	2,3-Dimethylhexane	0.64	1.91	ND	2.97	8.92	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.64	1.91	13.54	2.97	8.92	63.37	
589-81-1	3-Methylheptane	0.64	1.91	5.22	2.97	8.92	24.43	
111-65-9	n-Octane	0.64	1.91	19.54	2.97	8.92	91.44	
100-41-4	Ethylbenzene	0.64	1.91	18.70	2.76	8.29	81.39	
108-38-3	m,p-xylene	0.64	1.91	63.46	2.76	8.29	276.22	
100-42-5	Styrene	0.64	1.91	ND	2.71	8.14	ND	ND
95-47-6	o-xylene	0.64	1.91	41.56	2.76	8.29	180.90	
111-84-2	n-Nonane	0.56	1.69	20.94	2.97	8.90	110.11	
98-82-8	i-Propylbenzene	0.56	1.69	ND	2.78	8.34	ND	ND
103-65-1	n-propylbenzene	0.56	1.69	ND	2.78	8.34	ND	ND
80-56-8	a-Pinene	0.51	1.52	ND	2.84	8.51	ND	ND
620-14-4	3-Ethyltoluene	0.56	1.69	ND	2.78	8.34	ND	ND
622-96-8	4-Ethyltoluene	0.56	1.69	9.67	2.78	8.34	47.63	
108-67-8	1,3,5-Trimethylbenzene	0.56	1.69	7.19	2.78	8.34	35.41	
611-14-3	2-Ethyltoluene	0.56	1.69	ND	2.78	8.34	ND	ND
127-91-3	b-Pinene	0.51	1.52	6.02	2.84	8.51	33.61	
95-63-6	1,2,4-Trimethylbenzene	0.56	1.69	19.62	2.78	8.34	96.64	
124-18-5	n-Decane	0.51	1.52	19.48	2.96	8.89	113.58	
526-73-8	1,2,3-Trimethylbenzene	0.56	1.69	3.44	2.78	8.34	16.94	
5989-27-5	d-Limonene	0.51	1.52	ND	2.84	8.51	ND	ND
141-93-5	1,3-Diethylbenzene	0.51	1.52	4.84	2.79	8.38	26.64	
105-05-5	1,4-Diethylbenzene	0.51	1.52	5.86	2.79	8.38	32.25	
104-51-8	n-Butylbenzene	0.51	1.52	6.80	2.79	8.38	37.41	
1120-21-4	Undecane	0.46	1.39	18.64	2.96	8.87	119.39	
112-40-3	Dodecane	0.42	1.27	5.24	2.95	8.86	36.56	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	19.05	57.15	1,663.01	67.30	201.90	5,875.07	
TNMHC - C1	Total Non-Methane Hydrocarbons	114.30	342.90	9,978.07	74.95	224.85	6,543.00	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 20

File Name: 1820520A

Date Sampled: 04/11/18

Time: 11:19

Description: T-206

Date Analyzed: 04/16/18

Time: 19:20

Can/Tube#: 838

Can Dilution Factor: 1.27

QC_Batch: 041618-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.02	127	381	219	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 20

File Name: 1820520A
Description: T-206
Can/Tube#: 838
QC_Batch: 041718-GCL

Date Sampled: 04/11/18 Time: 11:19
Date Analyzed: 04/17/18 Time: 15:27
Dilution Factor: 1.27

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	197.73	0.09	0.26	133.60	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 21

File Name: 1820521A.D
Description: T-207
Canister: 886
QC_Batch: 042418-MA1

Date Sampled: 04/11/18 Time: 11:23
Date Analyzed: 04/24/18 Time: 14:49
Can Dilution Factor: 1.27
Air Volume: 100 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.64	3.19	ND	3.14	15.79	ND	
74-87-3	Chloromethane	0.64	3.19	ND	1.31	6.59	ND	
76-14-2	Freon 114	0.64	3.19	ND	4.44	22.32	ND	
75-01-4	Vinyl chloride	0.64	3.19	ND	1.62	8.16	ND	
106-99-0	1,3-Butadiene	0.64	3.19	ND	1.40	7.06	ND	
74-83-9	Bromomethane	0.64	3.19	ND	2.46	12.39	ND	
75-00-3	Chloroethane	0.64	3.19	ND	1.67	8.42	ND	
64-17-5	Ethanol	3.18	9.53	ND	5.98	17.95	ND	
75-69-4	Trichlorofluoromethane	0.64	3.05	ND	3.57	17.13	ND	
67-64-1	Acetone	3.18	7.81	76.51	7.54	18.55	181.73	
67-63-0	2-propanol	3.18	7.29	ND	7.80	17.91	ND	
75-35-4	1,1-Dichloroethene	0.64	3.15	ND	2.52	12.48	ND	
76-13-1	Freon 113	0.64	3.04	ND	4.86	23.27	ND	
75-09-2	Dichloromethane	1.27	3.06	ND	4.41	10.61	ND	
75-15-0	Carbon disulfide	3.18	5.89	ND	9.88	18.33	ND	
156-60-5	trans-1,2-Dichloroethene	0.64	2.29	ND	2.52	9.08	ND	
1634-04-4	Methyl tert butyl ether	0.64	2.34	ND	2.29	8.43	ND	
75-34-3	1,1-Dichloroethane	0.64	3.17	ND	2.57	12.82	ND	
108-05-4	Vinyl acetate	0.64	2.79	ND	2.24	9.82	ND	
78-93-3	2-Butanone	2.54	6.46	19.91	7.49	19.05	58.67	
141-78-6	Ethyl acetate	1.27	2.78	ND	4.57	10.02	ND	
74-97-5	Bromochloromethane	0.64	1.69	ND	3.36	8.95	ND	
109-99-9	Tetrahydrofuran	1.27	3.19	ND	3.74	9.41	ND	
156-59-2	cis-1,2-Dichloroethene	1.27	3.42	ND	5.03	13.53	ND	
67-66-3	Chloroform	0.64	3.18	ND	3.10	15.54	ND	
71-55-6	1,1,1-Trichloroethane	0.64	2.82	ND	3.46	15.38	ND	
107-06-2	1,2-Dichloroethane	0.64	2.90	ND	2.57	11.72	ND	
110-82-7	Cyclohexane	0.64	2.44	ND	2.19	8.39	ND	
71-43-2	Benzene	0.64	3.23	189.71	2.03	10.30	605.68	
56-23-5	Carbon tetrachloride	0.64	3.01	ND	3.99	18.92	ND	
142-82-5	n-Heptane	3.18	7.70	8.48	13.01	31.52	34.75	
78-87-5	1,2-Dichloropropane	0.64	3.06	ND	2.93	14.12	ND	
123-91-1	1,4 Dioxane	2.54	5.19	10.67	9.15	18.71	38.43	
79-01-6	Trichloroethene	0.38	2.96	ND	2.05	15.89	ND	
75-27-4	Bromodichloromethane	0.64	1.28	ND	4.25	8.59	ND	
80-62-6	Methyl methacrylate	2.54	8.59	ND	10.39	35.13	ND	
108-10-1	4-Methyl-2-pentanone	2.54	9.61	2.78	10.40	39.38	11.38	J

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	0.64	3.29	ND	2.88	14.93	ND		
108-88-3	Toluene	1.27	3.31	177.71	4.78	12.48	669.08		
10061-02-6	trans-1,3-Dichloropropene	0.64	3.29	2.05	2.88	14.94	9.31	J	
79-00-5	1,1,2-Trichloroethane	0.64	3.27	ND	3.46	17.81	ND		
591-78-6	2-Hexanone	3.18	9.00	8.27	13.01	36.88	33.89	J	
124-48-1	Dibromochloromethane	0.64	1.27	ND	5.41	10.80	ND		
106-93-4	1,2-Dibromoethane	0.64	1.54	3.23	4.88	11.84	24.85		
127-18-4	Tetrachloroethene	0.38	1.55	ND	2.58	10.48	ND		
108-90-7	Chlorobenzene	0.64	2.89	ND	2.92	13.30	ND		
100-41-4	Ethylbenzene	1.34	3.36	10.90	5.83	14.57	47.30		
1330-20-7	m,p-Xylenes	1.35	3.37	36.93	5.84	14.61	160.33		
100-42-5	Styrene	1.32	3.29	1.35	5.60	14.00	5.74	J	
75-25-2	Bromoform	0.64	0.85	ND	6.56	8.80	ND		
95-47-6	o-Xylene	1.31	3.27	21.53	5.68	14.21	93.47		
79-34-5	1,1,2,2-Tetrachloroethane	0.63	1.57	ND	4.31	10.78	ND		
622-96-8	4-Ethyltoluene	2.10	5.26	2.21	10.34	25.86	10.87	J	
108-67-8	1,3,5-Trimethylbenzene	1.31	3.28	1.31	6.45	16.12	6.46	J	
95-63-6	1,2,4-Trimethylbenzene	1.29	3.23	3.94	6.34	15.86	19.38		
541-73-1	1,3-Dichlorobenzene	1.27	2.35	ND	7.63	14.12	ND		
100-44-7	Benzyl chloride	1.27	7.70	2.61	6.57	39.83	13.51	J	
106-46-7	1,4-Dichlorobenzene	1.27	2.20	ND	7.63	13.20	ND		
95-50-1	1,2-Dichlorobenzene	1.27	2.06	1.64	7.63	12.36	9.84	J	
120-82-1	1,2,4-Trichlorobenzene	3.18	4.37	ND	23.54	32.40	ND		
91-20-3	Naphthalene	0.65	1.02	1.66	3.39	5.32	8.70		
87-68-3	Hexachlorobutadiene	3.18	3.37	ND	33.85	35.88	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				107	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205

Laboratory Number: 21

File Name: 1820521A
Description: T-207
Canister: 886
QC_Batch: 041918-GCK

Date Sampled: 04/11/18 Time: 11:23
Date Analyzed: 04/19/18 Time: 15:25
Can Factor: 1.27
Air Volume: 100 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2.54	7.62	ND	2.93	8.78	ND	ND
74-86-2	Acetylene	2.54	7.62	ND	2.71	8.12	ND	ND
74-84-0	Ethane	2.54	7.62	74.54	3.13	9.40	91.96	
115-07-1	Propene	1.69	5.08	ND	2.92	8.77	ND	ND
74-98-6	Propane	1.69	5.08	32.14	3.06	9.18	58.08	
75-28-5	i-Butane	1.27	3.81	ND	3.02	9.07	ND	ND
106-98-9	1-Butene	1.27	3.81	ND	2.92	8.76	ND	ND
106-97-8	n-Butane	1.27	3.81	8.02	3.02	9.07	19.11	
624-64-6	t-2-Butene	1.27	3.81	ND	2.92	8.76	ND	ND
590-18-1	c-2-Butene	1.27	3.81	ND	2.92	8.76	ND	ND
78-78-4	i-Pentane	1.02	3.05	4.94	3.01	9.02	14.62	
109-67-1	1-Pentene	1.02	3.05	ND	2.92	8.76	ND	ND
109-66-0	n-Pentane	1.02	3.05	7.21	3.00	9.01	21.32	
78-79-5	Isoprene	1.02	3.05	ND	2.84	8.51	ND	ND
646-04-8	t-2-Pentene	1.02	3.05	ND	2.92	8.76	ND	ND
627-20-3	c-2-Pentene	1.02	3.05	ND	2.92	8.76	ND	ND
75-83-2	2,2-Dimethylbutane	0.85	2.54	ND	2.99	8.97	ND	ND
287-92-3	Cyclopentane	1.02	3.05	ND	2.92	8.76	ND	ND
79-29-8	2,3-Dimethylbutane	0.85	2.54	ND	2.99	8.97	ND	ND
107-83-5	2-Methylpentane	0.85	2.54	4.01	2.99	8.97	14.17	
96-14-0	3-Methylpentane	0.85	2.54	3.24	2.99	8.97	11.46	
110-54-3	n-Hexane	0.85	2.54	9.68	2.99	8.97	34.21	
96-37-7	Methylcyclopentane	0.85	2.54	ND	2.92	8.77	ND	ND
108-08-7	2,4-Dimethylpentane	0.73	2.18	16.10	2.98	8.94	66.10	
71-43-2	Benzene	0.85	2.54	238.35	2.71	8.13	762.92	
110-82-7	Cyclohexane	0.85	2.54	ND	2.92	8.77	ND	ND
591-76-4	2-Methylhexane	0.73	2.18	2.83	2.98	8.94	11.62	
565-59-3	2,3-Dimethylpentane	0.73	2.18	1.92	2.98	8.94	7.89	J
589-34-4	3-Methylhexane	0.73	2.18	6.03	2.98	8.94	24.76	
540-84-1	2,2,4-Trimethylpentane	0.64	1.91	ND	2.97	8.92	ND	ND
142-82-5	n-Heptane	0.73	2.18	13.04	2.98	8.94	53.55	
108-87-2	Methylcyclohexane	0.73	2.18	18.39	2.92	8.76	74.02	
592-13-2	2,5-Dimethylhexane	0.64	1.91	ND	2.97	8.92	ND	ND
589-43-5	2,4-Dimethylhexane	0.64	1.91	ND	2.97	8.92	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.64	1.91	ND	2.97	8.92	ND	ND
108-88-3	Toluene	0.73	2.18	231.22	2.74	8.22	872.77	
584-94-1	2,3-Dimethylhexane	0.64	1.91	ND	2.97	8.92	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.64	1.91	13.04	2.97	8.92	61.04	
589-81-1	3-Methylheptane	0.64	1.91	4.22	2.97	8.92	19.77	
111-65-9	n-Octane	0.64	1.91	15.31	2.97	8.92	71.67	
100-41-4	Ethylbenzene	0.64	1.91	19.14	2.76	8.29	83.32	
108-38-3	m,p-xylene	0.64	1.91	67.42	2.76	8.29	293.45	
100-42-5	Styrene	0.64	1.91	ND	2.71	8.14	ND	ND
95-47-6	o-xylene	0.64	1.91	38.97	2.76	8.29	169.62	
111-84-2	n-Nonane	0.56	1.69	16.73	2.97	8.90	87.99	
98-82-8	i-Propylbenzene	0.56	1.69	2.37	2.78	8.34	11.68	
103-65-1	n-propylbenzene	0.56	1.69	3.85	2.78	8.34	18.97	
80-56-8	a-Pinene	0.51	1.52	ND	2.84	8.51	ND	ND
620-14-4	3-Ethyltoluene	0.56	1.69	ND	2.78	8.34	ND	ND
622-96-8	4-Ethyltoluene	0.56	1.69	8.73	2.78	8.34	43.02	
108-67-8	1,3,5-Trimethylbenzene	0.56	1.69	6.51	2.78	8.34	32.07	
611-14-3	2-Ethyltoluene	0.56	1.69	ND	2.78	8.34	ND	ND
127-91-3	b-Pinene	0.51	1.52	ND	2.84	8.51	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.56	1.69	17.83	2.78	8.34	87.85	
124-18-5	n-Decane	0.51	1.52	16.79	2.96	8.89	97.89	
526-73-8	1,2,3-Trimethylbenzene	0.56	1.69	2.25	2.78	8.34	11.07	
5989-27-5	d-Limonene	0.51	1.52	ND	2.84	8.51	ND	ND
141-93-5	1,3-Diethylbenzene	0.51	1.52	2.56	2.79	8.38	14.08	
105-05-5	1,4-Diethylbenzene	0.51	1.52	4.36	2.79	8.38	23.96	
104-51-8	n-Butylbenzene	0.51	1.52	5.25	2.79	8.38	28.86	
1120-21-4	Undecane	0.46	1.39	16.80	2.96	8.87	107.61	
112-40-3	Dodecane	0.42	1.27	5.39	2.95	8.86	37.60	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	19.05	57.15	1,594.69	67.30	201.90	5,633.71	
TNMHC - C1	Total Non-Methane Hydrocarbons	114.30	342.90	9,568.15	74.95	224.85	6,274.20	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 21

File Name: 1820521A

Date Sampled: 04/11/18

Time: 11:23

Description: T-207

Date Analyzed: 04/16/18

Time: 19:26

Can/Tube#: 886

Can Dilution Factor: 1.27

QC_Batch: 041618-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.03	127	381	265	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 21

File Name: 1820521A
Description: T-207
Can/Tube#: 886
QC_Batch: 041718-GCL

Date Sampled: 04/11/18 Time: 11:23
Date Analyzed: 04/17/18 Time: 15:31
Dilution Factor: 1.27

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	147.31	0.09	0.26	99.54	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 22

File Name: 1820522A.D
Description: T-208
Canister: 508
QC_Batch: 042418-MA1

Date Sampled: 04/11/18 Time: 12:33
Date Analyzed: 04/24/18 Time: 16:04
Can Dilution Factor: 1.24
Air Volume: 100 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.62	3.12	ND	3.06	15.41	ND	
74-87-3	Chloromethane	0.62	3.12	ND	1.28	6.44	ND	
76-14-2	Freon 114	0.62	3.12	ND	4.33	21.79	ND	
75-01-4	Vinyl chloride	0.62	3.12	ND	1.58	7.97	ND	
106-99-0	1,3-Butadiene	0.62	3.12	ND	1.37	6.90	ND	
74-83-9	Bromomethane	0.62	3.12	ND	2.41	12.10	ND	
75-00-3	Chloroethane	0.62	3.12	ND	1.63	8.22	ND	
64-17-5	Ethanol	3.10	9.30	ND	5.84	17.53	ND	
75-69-4	Trichlorofluoromethane	0.62	2.98	ND	3.48	16.72	ND	
67-64-1	Acetone	3.10	7.63	82.72	7.36	18.11	196.48	
67-63-0	2-propanol	3.10	7.12	ND	7.62	17.49	ND	
75-35-4	1,1-Dichloroethene	0.62	3.08	ND	2.46	12.18	ND	
76-13-1	Freon 113	0.62	2.97	ND	4.75	22.72	ND	
75-09-2	Dichloromethane	1.24	2.99	ND	4.30	10.36	ND	
75-15-0	Carbon disulfide	3.10	5.75	10.57	9.64	17.90	32.88	
156-60-5	trans-1,2-Dichloroethene	0.62	2.24	ND	2.46	8.87	ND	
1634-04-4	Methyl tert butyl ether	0.62	2.29	ND	2.23	8.23	ND	
75-34-3	1,1-Dichloroethane	0.62	3.09	ND	2.51	12.51	ND	
108-05-4	Vinyl acetate	0.62	2.72	ND	2.18	9.59	ND	
78-93-3	2-Butanone	2.48	6.31	ND	7.31	18.60	ND	
141-78-6	Ethyl acetate	1.24	2.72	ND	4.47	9.78	ND	
74-97-5	Bromochloromethane	0.62	1.65	ND	3.28	8.74	ND	
109-99-9	Tetrahydrofuran	1.24	3.12	ND	3.65	9.19	ND	
156-59-2	cis-1,2-Dichloroethene	1.24	3.34	ND	4.91	13.21	ND	
67-66-3	Chloroform	0.62	3.11	ND	3.03	15.18	ND	
71-55-6	1,1,1-Trichloroethane	0.62	2.75	ND	3.38	15.01	ND	
107-06-2	1,2-Dichloroethane	0.62	2.83	ND	2.51	11.45	ND	
110-82-7	Cyclohexane	0.62	2.38	ND	2.14	8.19	ND	
71-43-2	Benzene	0.62	3.15	194.92	1.98	10.06	622.32	
56-23-5	Carbon tetrachloride	0.62	2.94	ND	3.90	18.48	ND	
142-82-5	n-Heptane	3.10	7.51	5.75	12.70	30.78	23.56	J
78-87-5	1,2-Dichloropropane	0.62	2.98	ND	2.86	13.78	ND	
123-91-1	1,4 Dioxane	2.48	5.07	ND	8.93	18.27	ND	
79-01-6	Trichloroethene	0.37	2.89	ND	2.00	15.51	ND	
75-27-4	Bromodichloromethane	0.62	1.25	ND	4.15	8.39	ND	
80-62-6	Methyl methacrylate	2.48	8.38	ND	10.15	34.30	ND	
108-10-1	4-Methyl-2-pentanone	2.48	9.39	ND	10.16	38.45	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag	
10061-01-5	cis-1,3-Dichloropropene	0.62	3.21	ND	2.81	14.58	ND		
108-88-3	Toluene	1.24	3.24	168.92	4.67	12.19	636.00		
10061-02-6	trans-1,3-Dichloropropene	0.62	3.22	ND	2.81	14.59	ND		
79-00-5	1,1,2-Trichloroethane	0.62	3.19	ND	3.38	17.38	ND		
591-78-6	2-Hexanone	3.10	8.79	ND	12.70	36.01	ND		
124-48-1	Dibromochloromethane	0.62	1.24	ND	5.28	10.54	ND		
106-93-4	1,2-Dibromoethane	0.62	1.50	ND	4.76	11.56	ND		
127-18-4	Tetrachloroethene	0.37	1.51	9.57	2.52	10.23	64.88		
108-90-7	Chlorobenzene	0.62	2.82	ND	2.85	12.99	ND		
100-41-4	Ethylbenzene	1.31	3.28	10.25	5.69	14.23	44.51		
1330-20-7	m,p-Xylenes	1.31	3.29	39.98	5.71	14.26	173.55		
100-42-5	Styrene	1.28	3.21	ND	5.47	13.67	ND		
75-25-2	Bromoform	0.62	0.83	ND	6.40	8.59	ND		
95-47-6	o-Xylene	1.28	3.20	19.91	5.55	13.87	86.42		
79-34-5	1,1,2,2-Tetrachloroethane	0.61	1.53	ND	4.21	10.53	ND		
622-96-8	4-Ethyltoluene	2.06	5.14	2.47	10.10	25.25	12.14	J	
108-67-8	1,3,5-Trimethylbenzene	1.28	3.20	ND	6.30	15.74	ND		
95-63-6	1,2,4-Trimethylbenzene	1.26	3.15	4.02	6.19	15.48	19.75		
541-73-1	1,3-Dichlorobenzene	1.24	2.29	ND	7.45	13.79	ND		
100-44-7	Benzyl chloride	1.24	7.51	ND	6.42	38.89	ND		
106-46-7	1,4-Dichlorobenzene	1.24	2.15	ND	7.45	12.89	ND		
95-50-1	1,2-Dichlorobenzene	1.24	2.01	ND	7.45	12.07	ND		
120-82-1	1,2,4-Trichlorobenzene	3.10	4.27	ND	22.99	31.63	ND		
91-20-3	Naphthalene	0.63	0.99	1.72	3.31	5.20	9.02		
87-68-3	Hexachlorobutadiene	3.10	3.29	ND	33.05	35.03	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				109	70	130		

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205

Laboratory Number: 22

File Name: 1820522A
Description: T-208
Canister: 508
QC_Batch: 041918-GCK

Date Sampled: 04/11/18 Time: 12:33
Date Analyzed: 04/19/18 Time: 16:06
Can Factor: 1.24
Air Volume: 100 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	2.48	7.44	ND	2.86	8.57	ND	ND
74-86-2	Acetylene	2.48	7.44	ND	2.64	7.93	ND	ND
74-84-0	Ethane	2.48	7.44	59.85	3.06	9.18	73.84	
115-07-1	Propene	1.65	4.96	ND	2.85	8.56	ND	ND
74-98-6	Propane	1.65	4.96	24.86	2.99	8.96	44.93	
75-28-5	i-Butane	1.24	3.72	ND	2.95	8.86	ND	ND
106-98-9	1-Butene	1.24	3.72	ND	2.85	8.55	ND	ND
106-97-8	n-Butane	1.24	3.72	4.85	2.95	8.86	11.55	
624-64-6	t-2-Butene	1.24	3.72	ND	2.85	8.55	ND	ND
590-18-1	c-2-Butene	1.24	3.72	ND	2.85	8.55	ND	ND
78-78-4	i-Pentane	0.99	2.98	3.80	2.94	8.81	11.25	
109-67-1	1-Pentene	0.99	2.98	ND	2.85	8.55	ND	ND
109-66-0	n-Pentane	0.99	2.98	5.01	2.93	8.79	14.80	
78-79-5	Isoprene	0.99	2.98	ND	2.77	8.31	ND	ND
646-04-8	t-2-Pentene	0.99	2.98	ND	2.85	8.55	ND	ND
627-20-3	c-2-Pentene	0.99	2.98	ND	2.85	8.55	ND	ND
75-83-2	2,2-Dimethylbutane	0.83	2.48	ND	2.92	8.76	ND	ND
287-92-3	Cyclopentane	0.99	2.98	ND	2.85	8.55	ND	ND
79-29-8	2,3-Dimethylbutane	0.83	2.48	ND	2.92	8.76	ND	ND
107-83-5	2-Methylpentane	0.83	2.48	2.37	2.92	8.76	8.37	J
96-14-0	3-Methylpentane	0.83	2.48	3.91	2.92	8.76	13.82	
110-54-3	n-Hexane	0.83	2.48	5.93	2.92	8.76	20.95	
96-37-7	Methylcyclopentane	0.83	2.48	ND	2.85	8.56	ND	ND
108-08-7	2,4-Dimethylpentane	0.71	2.13	11.90	2.91	8.73	48.88	
71-43-2	Benzene	0.83	2.48	206.40	2.65	7.94	660.65	
110-82-7	Cyclohexane	0.83	2.48	ND	2.85	8.56	ND	ND
591-76-4	2-Methylhexane	0.71	2.13	1.54	2.91	8.73	6.34	J
565-59-3	2,3-Dimethylpentane	0.71	2.13	1.07	2.91	8.73	4.38	J
589-34-4	3-Methylhexane	0.71	2.13	2.76	2.91	8.73	11.34	
540-84-1	2,2,4-Trimethylpentane	0.62	1.86	9.19	2.90	8.71	43.00	
142-82-5	n-Heptane	0.71	2.13	6.66	2.91	8.73	27.36	
108-87-2	Methylcyclohexane	0.71	2.13	13.30	2.85	8.56	53.54	
592-13-2	2,5-Dimethylhexane	0.62	1.86	ND	2.90	8.71	ND	ND
589-43-5	2,4-Dimethylhexane	0.62	1.86	ND	2.90	8.71	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.62	1.86	5.92	2.90	8.71	27.69	
108-88-3	Toluene	0.71	2.13	194.07	2.67	8.02	732.54	
584-94-1	2,3-Dimethylhexane	0.62	1.86	ND	2.90	8.71	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.62	1.86	6.76	2.90	8.71	31.65	
589-81-1	3-Methylheptane	0.62	1.86	2.66	2.90	8.71	12.46	
111-65-9	n-Octane	0.62	1.86	8.81	2.90	8.71	41.25	
100-41-4	Ethylbenzene	0.62	1.86	12.28	2.70	8.10	53.43	
108-38-3	m,p-xylene	0.62	1.86	47.89	2.70	8.10	208.45	
100-42-5	Styrene	0.62	1.86	ND	2.65	7.94	ND	ND
95-47-6	o-xylene	0.62	1.86	27.57	2.70	8.10	119.99	
111-84-2	n-Nonane	0.55	1.65	5.97	2.90	8.69	31.39	
98-82-8	i-Propylbenzene	0.55	1.65	1.87	2.71	8.14	9.19	
103-65-1	n-propylbenzene	0.55	1.65	1.26	2.71	8.14	6.20	J
80-56-8	a-Pinene	0.50	1.49	ND	2.77	8.31	ND	ND
620-14-4	3-Ethyltoluene	0.55	1.65	ND	2.71	8.14	ND	ND
622-96-8	4-Ethyltoluene	0.55	1.65	4.24	2.71	8.14	20.87	
108-67-8	1,3,5-Trimethylbenzene	0.55	1.65	3.05	2.71	8.14	15.02	
611-14-3	2-Ethyltoluene	0.55	1.65	ND	2.71	8.14	ND	ND
127-91-3	b-Pinene	0.50	1.49	ND	2.77	8.31	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.55	1.65	7.10	2.71	8.14	34.95	
124-18-5	n-Decane	0.50	1.49	3.18	2.89	8.68	18.54	
526-73-8	1,2,3-Trimethylbenzene	0.55	1.65	ND	2.71	8.14	ND	ND
5989-27-5	d-Limonene	0.50	1.49	ND	2.77	8.31	ND	ND
141-93-5	1,3-Diethylbenzene	0.50	1.49	ND	2.73	8.18	ND	ND
105-05-5	1,4-Diethylbenzene	0.50	1.49	ND	2.73	8.18	ND	ND
104-51-8	n-Butylbenzene	0.50	1.49	ND	2.73	8.18	ND	ND
1120-21-4	Undecane	0.45	1.35	1.07	2.89	8.67	6.86	J
112-40-3	Dodecane	0.41	1.24	0.76	2.88	8.65	5.33	J

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	18.60	55.80	902.25	65.71	197.13	3,187.46	
TNMHC - C1	Total Non-Methane Hydrocarbons	111.60	334.80	5,413.51	73.18	219.54	3,549.84	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 22

File Name: 1820522A

Date Sampled: 04/11/18

Time: 12:33

Description: T-208

Date Analyzed: 04/16/18

Time: 19:32

Can/Tube#: 508

Can Dilution Factor: 1.24

QC_Batch: 041618-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.02	124	372	195	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 22

File Name: 1820522A
Description: T-208
Can/Tube#: 508
QC_Batch: 041718-GCL

Date Sampled: 04/11/18 Time: 12:33
Date Analyzed: 04/17/18 Time: 15:35
Dilution Factor: 1.24

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.37	228.70	0.08	0.25	154.53	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 23

File Name: 1820523A.D
Description: T-209
Canister: 690
QC_Batch: 042518-MA1

Date Sampled: 04/11/18 Time: 13:36
Date Analyzed: 04/25/18 Time: 20:56
Can Dilution Factor: 1.27
Air Volume: 10.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	6.35	31.94	ND	31.38	157.86	ND	
74-87-3	Chloromethane	6.35	31.94	ND	13.11	65.94	ND	
76-14-2	Freon 114	6.35	31.94	ND	44.36	223.15	ND	
75-01-4	Vinyl chloride	6.35	31.94	ND	16.22	81.61	ND	
106-99-0	1,3-Butadiene	6.35	31.94	ND	14.04	70.64	ND	
74-83-9	Bromomethane	6.35	31.94	ND	24.63	123.91	ND	
75-00-3	Chloroethane	6.35	31.94	ND	16.74	84.22	ND	
64-17-5	Ethanol	31.75	95.25	ND	59.83	179.50	ND	
75-69-4	Trichlorofluoromethane	6.35	30.49	ND	35.67	171.26	ND	
67-64-1	Acetone	31.75	78.11	ND	75.41	185.51	ND	
67-63-0	2-propanol	31.75	72.90	ND	78.01	179.10	ND	
75-35-4	1,1-Dichloroethene	6.35	31.50	ND	25.15	124.76	ND	
76-13-1	Freon 113	6.35	30.38	ND	48.65	232.74	ND	
75-09-2	Dichloromethane	12.70	30.58	ND	44.08	106.14	ND	
75-15-0	Carbon disulfide	31.75	58.93	41.10	98.77	183.32	127.87	J
156-60-5	trans-1,2-Dichloroethene	6.35	22.93	ND	25.15	90.81	ND	
1634-04-4	Methyl tert butyl ether	6.35	23.41	ND	22.87	84.32	ND	
75-34-3	1,1-Dichloroethane	6.35	31.67	ND	25.70	128.17	ND	
108-05-4	Vinyl acetate	6.35	27.90	ND	22.35	98.20	ND	
78-93-3	2-Butanone	25.40	64.64	ND	74.86	190.53	ND	
141-78-6	Ethyl acetate	12.70	27.81	ND	45.74	100.17	ND	
74-97-5	Bromochloromethane	6.35	16.91	ND	33.59	89.47	ND	
109-99-9	Tetrahydrofuran	12.70	31.94	ND	37.43	94.14	ND	
156-59-2	cis-1,2-Dichloroethene	12.70	34.16	ND	50.31	135.33	ND	
67-66-3	Chloroform	6.35	31.85	ND	30.99	155.45	ND	
71-55-6	1,1,1-Trichloroethane	6.35	28.19	ND	34.63	153.75	ND	
107-06-2	1,2-Dichloroethane	6.35	28.97	ND	25.70	117.23	ND	
110-82-7	Cyclohexane	6.38	24.38	ND	21.94	83.93	ND	
56-23-5	Carbon tetrachloride	6.35	30.10	ND	39.92	189.24	ND	
142-82-5	n-Heptane	31.75	76.96	468.54	130.05	315.25	1,919.21	
78-87-5	1,2-Dichloropropane	6.35	30.56	ND	29.33	141.17	ND	
123-91-1	1,4 Dioxane	25.40	51.94	ND	91.48	187.07	ND	
79-01-6	Trichloroethene	3.81	29.58	ND	20.47	158.88	ND	
75-27-4	Bromodichloromethane	6.35	12.83	ND	42.52	85.89	ND	
80-62-6	Methyl methacrylate	25.40	85.85	ND	103.94	351.31	ND	
108-10-1	4-Methyl-2-pentanone	25.40	96.14	ND	104.04	393.80	ND	
10061-01-5	cis-1,3-Dichloropropene	6.35	32.91	ND	28.81	149.31	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-02-6	trans-1,3-Dichloropropene	6.35	32.93	ND	28.81	149.43	ND	
79-00-5	1,1,2-Trichloroethane	6.35	32.65	ND	34.63	178.05	ND	
591-78-6	2-Hexanone	31.75	90.04	ND	130.05	368.83	ND	
124-48-1	Dibromochloromethane	6.35	12.68	ND	54.07	107.96	ND	
106-93-4	1,2-Dibromoethane	6.35	15.41	ND	48.78	118.39	ND	
127-18-4	Tetrachloroethene	3.81	15.46	ND	25.82	104.75	ND	
108-90-7	Chlorobenzene	6.35	28.90	ND	29.23	133.01	ND	
100-41-4	Ethylbenzene	13.43	33.57	366.72	58.29	145.73	1,592.10	
1330-20-7	m,p-Xylenes	13.46	33.65	1,296.94	58.44	146.10	5,630.51	
100-42-5	Styrene	13.15	32.88	ND	56.01	140.04	ND	
75-25-2	Bromoform	6.35	8.52	ND	65.60	88.02	ND	
95-47-6	o-Xylene	13.09	32.73	625.83	56.83	142.09	2,716.97	
79-34-5	1,1,2,2-Tetrachloroethane	6.29	15.72	ND	43.13	107.83	ND	
622-96-8	4-Ethyltoluene	21.05	52.62	146.75	103.43	258.58	721.10	
108-67-8	1,3,5-Trimethylbenzene	13.12	32.80	60.44	64.48	161.19	296.97	
95-63-6	1,2,4-Trimethylbenzene	12.91	32.27	233.37	63.43	158.57	1,146.72	
541-73-1	1,3-Dichlorobenzene	12.70	23.50	ND	76.32	141.19	ND	
100-44-7	Benzyl chloride	12.70	76.96	ND	65.73	398.30	ND	
106-46-7	1,4-Dichlorobenzene	12.70	21.97	ND	76.32	132.03	ND	
95-50-1	1,2-Dichlorobenzene	12.70	20.57	ND	76.32	123.63	ND	
120-82-1	1,2,4-Trichlorobenzene	31.75	43.69	ND	235.44	323.97	ND	
91-20-3	Naphthalene	6.48	10.16	14.71	33.94	53.25	77.11	
87-68-3	Hexachlorobutadiene	31.75	33.66	ND	338.50	358.81	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	102	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218205

Laboratory ID: 23

File Name: 1820523A.D
Description: T-209
Canister: 690
QC_Batch: 042418-MA1

Date Sampled: 04/11/18 Time: 13:36
Date Analyzed: 04/24/18 Time: 18:45
Can Dilution Factor: 1.27
Air Volume: 1.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
71-43-2	Benzene	63.5	322.6	3,795.2	202.7	1,030.0	12,116.8	
108-88-3	Toluene	127.0	331.5	4,994.7	478.2	1,248.0	18,805.0	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	107	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205

Laboratory Number: 23

File Name: 1820523A
Description: T-209
Canister: 690
QC_Batch: 041918-GCK

Date Sampled: 04/11/18 Time: 13:36
Date Analyzed: 04/20/18 Time: 10:22
Can Factor: 1.27
Air Volume: 5 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	50.8	152.4	ND	58.5	175.5	ND	ND
74-86-2	Acetylene	50.8	152.4	ND	54.1	162.4	ND	ND
74-84-0	Ethane	50.8	152.4	2,134.9	62.7	188.0	2,633.6	
115-07-1	Propene	33.9	101.6	ND	58.4	175.3	ND	ND
74-98-6	Propane	33.9	101.6	1,078.1	61.2	183.6	1,948.6	
75-28-5	i-Butane	25.4	76.2	79.1	60.5	181.4	188.3	
106-98-9	1-Butene	25.4	76.2	ND	58.4	175.2	ND	ND
106-97-8	n-Butane	25.4	76.2	418.9	60.5	181.4	997.4	
624-64-6	t-2-Butene	25.4	76.2	ND	58.4	175.2	ND	ND
590-18-1	c-2-Butene	25.4	76.2	ND	58.4	175.2	ND	ND
78-78-4	i-Pentane	20.3	61.0	235.6	60.1	180.4	697.1	
109-67-1	1-Pentene	20.3	61.0	ND	58.4	175.1	ND	ND
109-66-0	n-Pentane	20.3	61.0	370.1	60.0	180.1	1,093.5	
78-79-5	Isoprene	20.3	61.0	ND	56.7	170.1	ND	ND
646-04-8	t-2-Pentene	20.3	61.0	ND	58.4	175.1	ND	ND
627-20-3	c-2-Pentene	20.3	61.0	ND	58.4	175.1	ND	ND
75-83-2	2,2-Dimethylbutane	16.9	50.8	ND	59.8	179.5	ND	ND
287-92-3	Cyclopentane	20.3	61.0	ND	58.4	175.1	ND	ND
79-29-8	2,3-Dimethylbutane	16.9	50.8	ND	59.8	179.5	ND	ND
107-83-5	2-Methylpentane	16.9	50.8	217.2	59.8	179.5	767.5	
96-14-0	3-Methylpentane	16.9	50.8	195.2	59.8	179.5	689.4	
110-54-3	n-Hexane	16.9	50.8	422.1	59.8	179.5	1,491.1	
96-37-7	Methylcyclopentane	16.9	50.8	ND	58.4	175.3	ND	ND
108-08-7	2,4-Dimethylpentane	14.5	43.5	765.5	59.6	178.8	3,143.7	
71-43-2	Benzene	16.9	50.8	3,475.2	54.2	162.6	11,123.6	
110-82-7	Cyclohexane	16.9	50.8	ND	58.4	175.3	ND	ND
591-76-4	2-Methylhexane	14.5	43.5	88.9	59.6	178.8	365.0	
565-59-3	2,3-Dimethylpentane	14.5	43.5	59.9	59.6	178.8	246.0	
589-34-4	3-Methylhexane	14.5	43.5	222.5	59.6	178.8	913.8	
540-84-1	2,2,4-Trimethylpentane	12.7	38.1	722.8	59.4	178.3	3,382.9	
142-82-5	n-Heptane	14.5	43.5	518.6	59.6	178.8	2,129.7	
108-87-2	Methylcyclohexane	14.5	43.5	916.7	58.4	175.2	3,689.5	
592-13-2	2,5-Dimethylhexane	12.7	38.1	ND	59.4	178.3	ND	ND
589-43-5	2,4-Dimethylhexane	12.7	38.1	ND	59.4	178.3	ND	ND
565-75-3	2,3,4-Trimethylpentane	12.7	38.1	417.5	59.4	178.3	1,954.1	
108-88-3	Toluene	14.5	43.5	4,931.8	54.8	164.4	18,615.3	
584-94-1	2,3-Dimethylhexane	12.7	38.1	ND	59.4	178.3	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	12.7	38.1	425.7	59.4	178.3	1,992.3	
589-81-1	3-Methylheptane	12.7	38.1	487.7	59.4	178.3	2,282.8	
111-65-9	n-Octane	12.7	38.1	168.5	59.4	178.3	788.5	
100-41-4	Ethylbenzene	12.7	38.1	593.8	55.3	165.8	2,584.4	
108-38-3	m,p-xylene	12.7	38.1	1,901.0	55.3	165.8	8,274.2	
100-42-5	Styrene	12.7	38.1	ND	54.2	162.7	ND	ND
95-47-6	o-xylene	12.7	38.1	1,053.2	55.3	165.8	4,584.1	
111-84-2	n-Nonane	11.3	33.9	459.8	59.4	178.1	2,417.9	
98-82-8	i-Propylbenzene	11.3	33.9	89.1	55.6	166.8	439.1	
103-65-1	n-propylbenzene	11.3	33.9	110.8	55.6	166.8	545.9	
80-56-8	a-Pinene	10.2	30.5	ND	56.7	170.1	ND	ND
620-14-4	3-Ethyltoluene	11.3	33.9	ND	55.6	166.8	ND	ND
622-96-8	4-Ethyltoluene	11.3	33.9	378.7	55.6	166.8	1,865.7	
108-67-8	1,3,5-Trimethylbenzene	11.3	33.9	217.3	55.6	166.8	1,070.2	
611-14-3	2-Ethyltoluene	11.3	33.9	ND	55.6	166.8	ND	ND
127-91-3	b-Pinene	10.2	30.5	ND	56.7	170.1	ND	ND
95-63-6	1,2,4-Trimethylbenzene	11.3	33.9	581.9	55.6	166.8	2,866.4	
124-18-5	n-Decane	10.2	30.5	521.4	59.3	177.8	3,041.0	
526-73-8	1,2,3-Trimethylbenzene	11.3	33.9	92.0	55.6	166.8	453.4	
5989-27-5	d-Limonene	10.2	30.5	ND	56.7	170.1	ND	ND
141-93-5	1,3-Diethylbenzene	10.2	30.5	73.3	55.9	167.6	403.0	
105-05-5	1,4-Diethylbenzene	10.2	30.5	149.4	55.9	167.6	821.6	
104-51-8	n-Butylbenzene	10.2	30.5	166.6	55.9	167.6	916.2	
1120-21-4	Undecane	9.2	27.7	209.5	59.2	177.5	1,342.2	
112-40-3	Dodecane	8.5	25.4	154.5	59.1	177.3	1,078.4	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	381.0	1,143.0	55,443.4	1,346.0	4,038.0	195,869.6
TNMHC - C1	Total Non-Methane Hydrocarbons	2,286.0	6,858.0	332,660.2	1,499.0	4,497.0	218,137.9

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number: 23

File Name: 1820523A

Date Sampled: 04/11/18

Time: 13:36

Description: T-209

Date Analyzed: 04/16/18

Time: 19:38

Can/Tube#: 690

Can Dilution Factor: 1.27

QC_Batch: 041618-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.06	127	381	580	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218205
Laboratory Number: 23

File Name: 1820523A
Description: T-209
Can/Tube#: 690
QC_Batch: 041718-GCL

Date Sampled: 04/11/18 Time: 13:36
Date Analyzed: 04/17/18 Time: 15:40
Dilution Factor: 1.27

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	493.96	0.09	0.26	333.76	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218205

Analytical Method: TO-15

Laboratory ID: 24

File Name: 1820524B.D
Description: T-210
Canister: 618
QC_Batch: 042018-MA1

Date Sampled: 04/11/18 Time: 13:50
Date Analyzed: 04/20/18 Time: 14:29
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	ND	0.80	4.05	ND	
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	121	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218205
Laboratory Number: 24

File Name: 1820524A
Description: T-210
Canister: 618
QC_Batch: 041818-GCK

Date Sampled: 04/11/18 Time: 13:50
Date Analyzed: 04/18/18 Time: 19:48
Can Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

ANALYTICAL REPORT

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218205

Laboratory Number:

24

File Name: 1820524A

Date Sampled: 04/11/18

Time: 13:50

Description: T-210

Date Analyzed: 04/16/18

Time: 19:46

Can/Tube#: 618

Can Dilution Factor: 1.00

QC_Batch: 041618-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	100	300	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 218205

Laboratory Number: 24

File Name: 1820524A
Description: T-210
Can/Tube#: 618
QC_Batch: 041718-GCL

Date Sampled: 04/11/18 Time: 13:50
Date Analyzed: 04/17/18 Time: 15:43
Dilution Factor: 1.00

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.10	0.30	ND	0.07	0.20	ND	



Date of Report: 04/18/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1811813
Invoice ID: B300794

Enclosed are the results of analyses for samples received by the laboratory on 4/10/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 2

Submission #: 18-11813

SHIPPING INFORMATION
 Fed Ex UPS Ontrac Hand Delivery
 BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER
 Ice Chest None Box
 Other (Specify) _____

FREE LIQUID
 YES NO
 W I S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Container None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received YES NO
 Emissivity: 0.97 Container: None Thermometer ID: 08 Date/Time: 4/18/18
 Temperature: (A) 0.8 °C / (C) 0.9 °C Analyst Init: GA

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁴										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A, B, C	A, B, C	A, B, C	A, B, C	A, B, C	A, B, C	A, B, C	A, B, C	A, B, C	A, B, C
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.I										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
3oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____
 Sample Numbering Completed By: GA Date/Time: 4/12/18 1130
 = Actual / C = Corrected



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 18-11813

SHIPPING INFORMATION
 Fed Ex UPS Ontrac Hand Delivery
 BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER
 Ice Chest None Box
 Other (Specify) _____

FREE LIQUID
 YES NO W S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Containers None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received YES NO

Emissivity: 0.97 Container: Amb Thermometer ID: 08 Date/Time: 4/18/18
 Temperature: (A) 0.6 °C / (C) 0.9 °C Analyst Init: [Signature]

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A1C	A1C	A1C	A1C						
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/605/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ZINCORE										
MART KIT										
UMMA CANISTER										

Comments: _____

Sample Numbering Completed By: CRA Date/Time: 4/18/18 1130

= Actual / C = Corrected

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	
1811813-01	COC Number:	---		04/10/2018 18:00	
	Project Number:	---		Sampling Date:	04/10/2018 07:52
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-101		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1811813-02	COC Number:	---		04/10/2018 18:00	
	Project Number:	---		Sampling Date:	04/10/2018 07:55
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-102		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1811813-03	COC Number:	---		04/10/2018 18:00	
	Project Number:	---		Sampling Date:	04/10/2018 09:00
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-103		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1811813-04	COC Number:	---		04/10/2018 18:00	
	Project Number:	---		Sampling Date:	04/10/2018 09:05
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-104		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1811813-05	COC Number:	---		04/10/2018 18:00	
	Project Number:	---		Sampling Date:	04/10/2018 10:10
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-105		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1811813-06	COC Number:	---		04/10/2018 18:00	
	Project Number:	---		Sampling Date:	04/10/2018 10:15
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-106		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1811813-07	COC Number:	---		04/10/2018 18:00	
	Project Number:	---		Sampling Date:	04/10/2018 11:15
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-107		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1811813-08	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 13:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-108	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811813-09	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 14:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-109	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811813-10	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 15:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-110	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811813-11	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 15:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-111	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811813-12	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 15:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-112	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811813-13	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 16:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-113	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811813-14	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 16:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-114	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-01		Client Sample Name:	V-101, 4/10/2018 7:52:00AM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	1.6	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-01		Client Sample Name:	V-101, 4/10/2018 7:52:00AM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	1.1	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.21	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	1.7	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.13	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.96	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.74	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.27	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	2.3	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	1.4	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.92	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-01	Client Sample Name: V-101, 4/10/2018 7:52:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/13/18 07:00	04/14/18 15:20	MGC	MS-V5	1	B010733

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-02		Client Sample Name:	V-102, 4/10/2018 7:55:00AM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	6.0	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.17	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	0.19	ug/L	0.50	0.093	EPA-8260B	ND	J	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-02	Client Sample Name:	V-102, 4/10/2018 7:55:00AM, Chuck Schmidt					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	4.5	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.79	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	5.4	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.59	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	3.3	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	2.6	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.77	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	6.5	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	4.2	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	2.3	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-02	Client Sample Name: V-102, 4/10/2018 7:55:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/13/18 07:00	04/14/18 15:43	MGC	MS-V5	1	B010733

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-03	Client Sample Name:	V-103, 4/10/2018 9:00:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Benzene	0.33	ug/L	0.50	0.083	EPA-8260B	ND	J	1	
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1	
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1	
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1	
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1	
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1	
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1	
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1	
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1	
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1	
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1	
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1	
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1	
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1	
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1	
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1	
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1	
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1	
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1	
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1	
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1	

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-03		Client Sample Name: V-103, 4/10/2018 9:00:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.25	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.11	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	0.50	ug/L	1.0	0.36	EPA-8260B	ND	J	1
p- & m-Xylenes	0.39	ug/L	0.50	0.28	EPA-8260B	ND	J	1
o-Xylene	0.11	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-03	Client Sample Name: V-103, 4/10/2018 9:00:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/13/18 07:00	04/14/18 16:07	MGC	MS-V5	1	B010733

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-04 **Client Sample Name:** V-104, 4/10/2018 9:05:00AM, Chuck Schmidt

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.55	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-04		Client Sample Name:	V-104, 4/10/2018 9:05:00AM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.14	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	0.97	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.22	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.13	ug/L	0.50	0.12	EPA-8260B	ND	J	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	0.65	ug/L	1.0	0.36	EPA-8260B	ND	J	1
p- & m-Xylenes	0.45	ug/L	0.50	0.28	EPA-8260B	ND	J	1
o-Xylene	0.20	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-04	Client Sample Name: V-104, 4/10/2018 9:05:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/13/18 07:00	04/14/18 16:30	MGC	MS-V5	1	B010733

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-05							
Client Sample Name:	V-105, 4/10/2018 10:10:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.21	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-05	Client Sample Name:	V-105, 4/10/2018 10:10:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1	
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1	
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1	
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1	
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1	
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1	
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1	
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1	
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1	
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1	
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1	
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1	
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1	
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1	
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1	
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1	
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1	
Total Xylenes	0.42	ug/L	1.0	0.36	EPA-8260B	ND	J	1	
p- & m-Xylenes	0.32	ug/L	0.50	0.28	EPA-8260B	ND	J	1	
o-Xylene	0.10	ug/L	0.50	0.082	EPA-8260B	ND	J	1	
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-8260B			1	
Toluene-d8 (Surrogate)	97.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1	
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1	

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-05	Client Sample Name: V-105, 4/10/2018 10:10:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/13/18 07:00	04/14/18 16:53	MGC	MS-V5	1	B010733

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-06 **Client Sample Name:** V-106, 4/10/2018 10:15:00AM, Chuck Schmidt

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.37	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-06		Client Sample Name:	V-106, 4/10/2018 10:15:00AM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.24	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.18	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	0.53	ug/L	1.0	0.36	EPA-8260B	ND	J	1
p- & m-Xylenes	0.39	ug/L	0.50	0.28	EPA-8260B	ND	J	1
o-Xylene	0.14	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-06	Client Sample Name: V-106, 4/10/2018 10:15:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/13/18 07:00	04/14/18 17:16	MGC	MS-V5	1	B010733

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-07							
Client Sample Name:	V-107, 4/10/2018 11:15:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	10	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.57	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	0.24	ug/L	0.50	0.093	EPA-8260B	ND	J	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-07		Client Sample Name: V-107, 4/10/2018 11:15:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	11	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	2.5	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.31	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	18	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	2.4	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	0.17	ug/L	0.50	0.13	EPA-8260B	ND	J	1
Toluene	6.7	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	6.8	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	2.4	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	14	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	8.9	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	4.6	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-07	Client Sample Name: V-107, 4/10/2018 11:15:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/13/18 07:00	04/14/18 17:39	MGC	MS-V5	1	B010733

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-08		Client Sample Name:	V-108, 4/10/2018 1:05:00PM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	4.4	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-08	Client Sample Name:	V-108, 4/10/2018 1:05:00PM, Chuck Schmidt					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.59	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	1.8	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	6.2	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.90	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.25	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	4.2	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	2.8	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	1.3	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-08	Client Sample Name: V-108, 4/10/2018 1:05:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/13/18 07:00	04/14/18 18:25	MGC	MS-V5	1	B010733

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-09 **Client Sample Name:** V-109, 4/10/2018 2:00:00PM, Chuck Schmidt

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-09		Client Sample Name: V-109, 4/10/2018 2:00:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.21	ug/L	0.50	0.12	EPA-8260B	ND	J	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	0.61	ug/L	1.0	0.36	EPA-8260B	ND	J	1
p- & m-Xylenes	0.52	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.090	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-09	Client Sample Name: V-109, 4/10/2018 2:00:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	04/13/18 07:00	04/14/18 18:48		MGC	MS-V5	1	B010733

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-10	Client Sample Name: V-110, 4/10/2018 3:00:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	70	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.23	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-10	Client Sample Name:	V-110, 4/10/2018 3:00:00PM, Chuck Schmidt					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	11	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	1.3	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.37	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	11	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	1.4	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	90	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	8.6	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	2.3	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	50	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	34	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	16	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-10	Client Sample Name: V-110, 4/10/2018 3:00:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/13/18 07:00	04/14/18 19:11	MGC	MS-V5	1	B010733

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-11							
Client Sample Name:	V-111, 4/10/2018 3:00:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	79	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.22	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-11	Client Sample Name:	V-111, 4/10/2018 3:00:00PM, Chuck Schmidt					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	12	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	1.2	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.31	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	11	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	1.4	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	100	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	8.8	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	2.4	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	56	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	37	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	18	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Red Bluff, CA 96080

Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-11	Client Sample Name: V-111, 4/10/2018 3:00:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/13/18 07:00	04/14/18 19:34	MGC	MS-V5	1	B010733

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-12		Client Sample Name:	V-112, 4/10/2018 3:05:00PM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	51	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.17	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-12		Client Sample Name:	V-112, 4/10/2018 3:05:00PM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	7.6	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.89	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.27	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	6.5	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	1.0	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	70	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	5.7	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	1.8	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	35	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	23	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	11	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-12	Client Sample Name: V-112, 4/10/2018 3:05:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/13/18 07:00	04/14/18 19:58	MGC	MS-V5	1	B010733

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-13	Client Sample Name: V-113, 4/10/2018 4:15:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	180	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		2
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
sec-Butylbenzene	0.67	ug/L	0.50	0.15	EPA-8260B	ND		2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-13		Client Sample Name:	V-113, 4/10/2018 4:15:00PM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		2
Ethylbenzene	32	ug/L	0.50	0.098	EPA-8260B	ND		2
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
Isopropylbenzene	3.5	ug/L	0.50	0.14	EPA-8260B	ND		2
p-Isopropyltoluene	1.0	ug/L	0.50	0.12	EPA-8260B	ND		2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
Naphthalene	25	ug/L	0.50	0.36	EPA-8260B	ND		2
n-Propylbenzene	4.4	ug/L	0.50	0.11	EPA-8260B	ND		2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Toluene	250	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,2,4-Trimethylbenzene	22	ug/L	0.50	0.12	EPA-8260B	ND		2
1,3,5-Trimethylbenzene	6.4	ug/L	0.50	0.12	EPA-8260B	ND		2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		2
Total Xylenes	140	ug/L	1.0	0.36	EPA-8260B	ND		2
p- & m-Xylenes	93	ug/L	0.50	0.28	EPA-8260B	ND		2
o-Xylene	44	ug/L	0.50	0.082	EPA-8260B	ND		2
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	99.6	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-13	Client Sample Name: V-113, 4/10/2018 4:15:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	109	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	04/13/18 07:00	04/17/18 22:03		MGC	MS-V5	5	B010733
2	EPA-8260B	04/13/18 07:00	04/14/18 20:44		MGC	MS-V5	1	B010733

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Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-14	Client Sample Name: V-114, 4/10/2018 4:25:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Red Bluff, CA 96080

Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811813-14	Client Sample Name:	V-114, 4/10/2018 4:25:00PM, Chuck Schmidt					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811813-14 **Client Sample Name:** V-114, 4/10/2018 4:25:00PM, Chuck Schmidt

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	04/13/18 07:00	04/13/18 20:08		MGC	MS-V5	1	B010733

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B010733						
Benzene	B010733-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B010733-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B010733-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B010733-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B010733-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B010733-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B010733-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B010733-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B010733-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B010733-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B010733-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B010733-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B010733-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B010733-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B010733-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B010733-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B010733-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B010733-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B010733-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B010733-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B010733-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B010733-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B010733-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B010733-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B010733-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B010733-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B010733-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B010733-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B010733-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B010733-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B010733-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B010733-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B010733-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B010733-BLK1	ND	ug/L	0.50	0.14	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B010733						
trans-1,3-Dichloropropene	B010733-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B010733-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B010733-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B010733-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B010733-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B010733-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B010733-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B010733-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B010733-BLK1	ND	ug/L	0.50	0.11	
Styrene	B010733-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B010733-BLK1	ND	ug/L	0.50	0.18	
1,1,1,2-Tetrachloroethane	B010733-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B010733-BLK1	ND	ug/L	0.50	0.13	
Toluene	B010733-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B010733-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B010733-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B010733-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B010733-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B010733-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B010733-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B010733-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B010733-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B010733-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B010733-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B010733-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B010733-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B010733-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B010733-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B010733-BLK1	107	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B010733-BLK1	96.8	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B010733-BLK1	101	%	80 - 120 (LCL - UCL)		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B010733										
Benzene	B010733-BS1	LCS	23.050	25.000	ug/L	92.2		70 - 130		
Bromodichloromethane	B010733-BS1	LCS	25.970	25.000	ug/L	104		70 - 130		
Chlorobenzene	B010733-BS1	LCS	25.210	25.000	ug/L	101		70 - 130		
Chloroethane	B010733-BS1	LCS	23.730	25.000	ug/L	94.9		70 - 130		
1,4-Dichlorobenzene	B010733-BS1	LCS	24.990	25.000	ug/L	100		70 - 130		
1,1-Dichloroethane	B010733-BS1	LCS	24.290	25.000	ug/L	97.2		70 - 130		
1,1-Dichloroethene	B010733-BS1	LCS	26.200	25.000	ug/L	105		70 - 130		
Toluene	B010733-BS1	LCS	24.370	25.000	ug/L	97.5		70 - 130		
Trichloroethene	B010733-BS1	LCS	25.810	25.000	ug/L	103		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B010733-BS1	LCS	11.160	10.000	ug/L	112		75 - 125		
Toluene-d8 (Surrogate)	B010733-BS1	LCS	9.9000	10.000	ug/L	99.0		80 - 120		
4-Bromofluorobenzene (Surrogate)	B010733-BS1	LCS	10.350	10.000	ug/L	104		80 - 120		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B010733		Used client sample: N								
Benzene	MS	1811422-01	ND	24.160	25.000	ug/L		96.6		70 - 130
	MSD	1811422-01	ND	24.840	25.000	ug/L	2.8	99.4	20	70 - 130
Bromodichloromethane	MS	1811422-01	ND	27.560	25.000	ug/L		110		70 - 130
	MSD	1811422-01	ND	26.820	25.000	ug/L	2.7	107	20	70 - 130
Chlorobenzene	MS	1811422-01	ND	25.170	25.000	ug/L		101		70 - 130
	MSD	1811422-01	ND	25.320	25.000	ug/L	0.6	101	20	70 - 130
Chloroethane	MS	1811422-01	ND	25.040	25.000	ug/L		100		70 - 130
	MSD	1811422-01	ND	24.350	25.000	ug/L	2.8	97.4	20	70 - 130
1,4-Dichlorobenzene	MS	1811422-01	ND	24.810	25.000	ug/L		99.2		70 - 130
	MSD	1811422-01	ND	25.570	25.000	ug/L	3.0	102	20	70 - 130
1,1-Dichloroethane	MS	1811422-01	ND	25.570	25.000	ug/L		102		70 - 130
	MSD	1811422-01	ND	25.620	25.000	ug/L	0.2	102	20	70 - 130
1,1-Dichloroethene	MS	1811422-01	ND	27.290	25.000	ug/L		109		70 - 130
	MSD	1811422-01	ND	27.320	25.000	ug/L	0.1	109	20	70 - 130
Toluene	MS	1811422-01	ND	25.720	25.000	ug/L		103		70 - 130
	MSD	1811422-01	ND	25.880	25.000	ug/L	0.6	104	20	70 - 130
Trichloroethene	MS	1811422-01	ND	26.190	25.000	ug/L		105		70 - 130
	MSD	1811422-01	ND	26.010	25.000	ug/L	0.7	104	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1811422-01	ND	10.730	10.000	ug/L		107		75 - 125
	MSD	1811422-01	ND	10.540	10.000	ug/L	1.8	105		75 - 125
Toluene-d8 (Surrogate)	MS	1811422-01	ND	9.8400	10.000	ug/L		98.4		80 - 120
	MSD	1811422-01	ND	9.8800	10.000	ug/L	0.4	98.8		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1811422-01	ND	9.5900	10.000	ug/L		95.9		80 - 120
	MSD	1811422-01	ND	10.120	10.000	ug/L	5.4	101		80 - 120

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/18/2018 15:07
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A01 Detection and quantitation limits are raised due to sample dilution.



Date of Report: 04/19/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1811964
Invoice ID: B300915

Enclosed are the results of analyses for samples received by the laboratory on 4/ 11/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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00b Day 2

18-11964

CE Schmidt, P.L., Environmental Consultant

Chain of Custody Record

Form Serial Number: CES F1-02108
Client Name: Air Resources Board
Project Manager: Loris Leyva

Table with columns for Station Number, Date, Time, Sample ID Number, Sample Container, Analysis Requested, Date/Time, and Remarks. Includes handwritten entries for samples 1-10 and a 'No Preservation' note.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



BC LABORATORIES INC. COOLER RECEIPT FORM Page Of

Submission #: 18-11964

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S _____

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Containers: None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO

Emissivity: 0.97 Container: VOA Thermometer ID: 274 Date/Time: 4-11-18

Temperature: (A) 19.0 °C (C) 19.1 °C Analyst: ASU

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁴⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	<u>ASU</u>	<u>ASU</u>	<u>ASU</u>	<u>ASU</u>	<u>ASU</u>	<u>ASU</u>	<u>ASU</u>	<u>ASU</u>	<u>ASU</u>	<u>ASU</u>
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/018/010										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCE VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: MA Date/Time: 4-13-18 0914 Rv 21 06/23/2016

λ = Actual / C = Corrected

IS:\WF\Doc\In\Perfect\LAB_DOCS\FORMS\SAMRECvr 20j



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1811964-01	COC Number:	---	Receive Date:	04/11/2018 14:00
	Project Number:	---	Sampling Date:	04/11/2018 07:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 201 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811964-02	COC Number:	---	Receive Date:	04/11/2018 14:00
	Project Number:	---	Sampling Date:	04/11/2018 08:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 202 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811964-03	COC Number:	---	Receive Date:	04/11/2018 14:00
	Project Number:	---	Sampling Date:	04/11/2018 08:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 203 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811964-04	COC Number:	---	Receive Date:	04/11/2018 14:00
	Project Number:	---	Sampling Date:	04/11/2018 09:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 204 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811964-05	COC Number:	---	Receive Date:	04/11/2018 14:00
	Project Number:	---	Sampling Date:	04/11/2018 10:50
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 205 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811964-06	COC Number:	---	Receive Date:	04/11/2018 14:00
	Project Number:	---	Sampling Date:	04/11/2018 11:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 206 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811964-07	COC Number:	---	Receive Date:	04/11/2018 14:00
	Project Number:	---	Sampling Date:	04/11/2018 11:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 207 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1811964-08	COC Number:	---	Receive Date:	04/11/2018 14:00
	Project Number:	---	Sampling Date:	04/11/2018 12:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 208 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811964-09	COC Number:	---	Receive Date:	04/11/2018 14:00
	Project Number:	---	Sampling Date:	04/11/2018 13:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 209 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811964-10	COC Number:	---	Receive Date:	04/11/2018 14:00
	Project Number:	---	Sampling Date:	04/11/2018 13:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 210 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-01							
Client Sample Name:	V - 201 a/b/c, 4/11/2018 7:55:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.32	ug/L	0.50	0.083	EPA-8260B	ND	J,Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1

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Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-01		Client Sample Name: V - 201 a/b/c, 4/11/2018 7:55:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	1
Ethylbenzene	0.35	ug/L	0.50	0.098	EPA-8260B	ND	J,Z1	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
n-Propylbenzene	0.34	ug/L	0.50	0.11	EPA-8260B	ND	J,Z1	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Toluene	1.4	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2,4-Trimethylbenzene	2.2	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Total Xylenes	2.4	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	1.4	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	0.92	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-01	Client Sample Name: V - 201 a/b/c, 4/11/2018 7:55:00AM, Chuck Schmidt
----------------------------------	--

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	04/16/18 12:28	04/16/18 23:58		AKM	MS-V14	1	B010893

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-02							
Client Sample Name:	V - 202 a/b/c, 4/11/2018 8:05:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.45	ug/L	0.50	0.083	EPA-8260B	ND	J,Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1

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Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-02		Client Sample Name:	V - 202 a/b/c, 4/11/2018 8:05:00AM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	1
Ethylbenzene	0.46	ug/L	0.50	0.098	EPA-8260B	ND	J,Z1	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
n-Propylbenzene	0.41	ug/L	0.50	0.11	EPA-8260B	ND	J,Z1	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Toluene	2.2	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2,4-Trimethylbenzene	2.7	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Total Xylenes	3.0	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	1.8	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	1.2	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-02	Client Sample Name: V - 202 a/b/c, 4/11/2018 8:05:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/16/18 12:28	04/17/18 00:21	AKM	MS-V14	1	B010893

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-03							
Client Sample Name:	V - 203 a/b/c, 4/11/2018 8:55:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.31	ug/L	0.50	0.083	EPA-8260B	ND	J,Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1

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Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-03		Client Sample Name:	V - 203 a/b/c, 4/11/2018 8:55:00AM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	1
Ethylbenzene	0.35	ug/L	0.50	0.098	EPA-8260B	ND	J,Z1	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Toluene	1.6	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2,4-Trimethylbenzene	2.0	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Total Xylenes	2.2	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	1.3	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	0.90	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-03 **Client Sample Name:** V - 203 a/b/c, 4/11/2018 8:55:00AM, Chuck Schmidt

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	04/16/18 12:28	04/17/18 00:45		AKM	MS-V14	1	B010893

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-04							
Client Sample Name:	V - 204 a/b/c, 4/11/2018 9:25:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	1.4	ug/L	0.50	0.083	EPA-8260B	ND	Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-04		Client Sample Name:	V - 204 a/b/c, 4/11/2018 9:25:00AM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	1
Ethylbenzene	1.1	ug/L	0.50	0.098	EPA-8260B	ND	Z1	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
p-Isopropyltoluene	0.22	ug/L	0.50	0.12	EPA-8260B	ND	J,Z1	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	2.0	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
n-Propylbenzene	0.77	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Toluene	4.9	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2,4-Trimethylbenzene	5.5	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Total Xylenes	6.5	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	3.8	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	2.8	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-04	Client Sample Name: V - 204 a/b/c, 4/11/2018 9:25:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/16/18 12:28	04/17/18 01:08	AKM	MS-V14	1	B010893

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-05							
Client Sample Name:	V - 205 a/b/c, 4/11/2018 10:50:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	13	ug/L	0.50	0.083	EPA-8260B	ND	Z1	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-05		Client Sample Name:	V - 205 a/b/c, 4/11/2018 10:50:00AM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	1
Ethylbenzene	1.2	ug/L	0.50	0.098	EPA-8260B	ND	Z1	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	2.1	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
Toluene	17	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	1
1,2,4-Trimethylbenzene	1.5	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	1
Total Xylenes	8.7	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	5.7	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	3.0	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-05	Client Sample Name: V - 205 a/b/c, 4/11/2018 10:50:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/16/18 12:28	04/17/18 01:31	AKM	MS-V14	1	B010893

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-06	Client Sample Name: V - 206 a/b/c, 4/11/2018 11:10:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	190	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	2
n-Butylbenzene	0.63	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
sec-Butylbenzene	0.50	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-06	Client Sample Name: V - 206 a/b/c, 4/11/2018 11:10:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	2
Ethylbenzene	19	ug/L	0.50	0.098	EPA-8260B	ND	Z1	2
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Isopropylbenzene	1.9	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
p-Isopropyltoluene	0.95	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Naphthalene	15	ug/L	0.50	0.36	EPA-8260B	ND	Z1	2
n-Propylbenzene	2.5	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Toluene	230	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2,4-Trimethylbenzene	16	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
1,3,5-Trimethylbenzene	1.9	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Total Xylenes	110	ug/L	1.0	0.36	EPA-8260B	ND	Z1	2
p- & m-Xylenes	72	ug/L	0.50	0.28	EPA-8260B	ND	Z1	2
o-Xylene	39	ug/L	0.50	0.082	EPA-8260B	ND	Z1	2
1,2-Dichloroethane-d4 (Surrogate)	94.7	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-06	Client Sample Name: V - 206 a/b/c, 4/11/2018 11:10:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	04/17/18 10:00	04/17/18 14:33		AKM	MS-V14	5	B010893
2	EPA-8260B	04/16/18 12:28	04/17/18 01:55		AKM	MS-V14	1	B010893

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-07							
Client Sample Name:	V - 207 a/b/c, 4/11/2018 11:10:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	180	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	2
n-Butylbenzene	0.59	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
sec-Butylbenzene	0.50	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-07		Client Sample Name:	V - 207 a/b/c, 4/11/2018 11:10:00AM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	2
Ethylbenzene	18	ug/L	0.50	0.098	EPA-8260B	ND	Z1	2
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Isopropylbenzene	1.9	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
p-Isopropyltoluene	0.93	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Naphthalene	15	ug/L	0.50	0.36	EPA-8260B	ND	Z1	2
n-Propylbenzene	2.3	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Toluene	210	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2,4-Trimethylbenzene	15	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
1,3,5-Trimethylbenzene	1.9	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Total Xylenes	100	ug/L	1.0	0.36	EPA-8260B	ND	Z1	2
p- & m-Xylenes	68	ug/L	0.50	0.28	EPA-8260B	ND	Z1	2
o-Xylene	37	ug/L	0.50	0.082	EPA-8260B	ND	Z1	2
1,2-Dichloroethane-d4 (Surrogate)	94.9	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	98.8	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-07	Client Sample Name: V - 207 a/b/c, 4/11/2018 11:10:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	04/17/18 10:00	04/17/18 14:57		AKM	MS-V14	5	B010893
2	EPA-8260B	04/16/18 12:28	04/17/18 02:18		AKM	MS-V14	1	B010893

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Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-08							
Client Sample Name:	V - 208 a/b/c, 4/11/2018 12:15:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	180	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	2
n-Butylbenzene	0.58	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
sec-Butylbenzene	0.53	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-08		Client Sample Name:	V - 208 a/b/c, 4/11/2018 12:15:00PM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	2
Ethylbenzene	19	ug/L	0.50	0.098	EPA-8260B	ND	Z1	2
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Isopropylbenzene	1.9	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
p-Isopropyltoluene	1.0	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Naphthalene	16	ug/L	0.50	0.36	EPA-8260B	ND	Z1	2
n-Propylbenzene	2.6	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Toluene	210	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2,4-Trimethylbenzene	16	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
1,3,5-Trimethylbenzene	1.9	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Total Xylenes	110	ug/L	1.0	0.36	EPA-8260B	ND	Z1	2
p- & m-Xylenes	72	ug/L	0.50	0.28	EPA-8260B	ND	Z1	2
o-Xylene	38	ug/L	0.50	0.082	EPA-8260B	ND	Z1	2
1,2-Dichloroethane-d4 (Surrogate)	99.9	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-08	Client Sample Name: V - 208 a/b/c, 4/11/2018 12:15:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	04/17/18 10:00	04/17/18 15:20		AKM	MS-V14	5	B010893
2	EPA-8260B	04/16/18 12:28	04/17/18 02:41		AKM	MS-V14	1	B010893

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Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-09							
Client Sample Name:	V - 209 a/b/c, 4/11/2018 1:00:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	1300	ug/L	25	4.2	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	Z1	2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	Z1	2
n-Butylbenzene	3.5	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
sec-Butylbenzene	2.6	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	Z1	2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	Z1	2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	Z1	2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	Z1	2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	Z1	2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	Z1	2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	Z1	2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-09	Client Sample Name: V - 209 a/b/c, 4/11/2018 1:00:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	Z1	2
Ethylbenzene	80	ug/L	25	4.9	EPA-8260B	ND	A01	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Isopropylbenzene	11	ug/L	0.50	0.14	EPA-8260B	ND	Z1	2
p-Isopropyltoluene	5.2	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	Z1	2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Naphthalene	71	ug/L	0.50	0.36	EPA-8260B	ND	Z1	2
n-Propylbenzene	16	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	Z1	2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	Z1	2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	Z1	2
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
Toluene	1300	ug/L	25	4.6	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	Z1	2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	Z1	2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	Z1	2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	Z1	2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	Z1	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	Z1	2
1,2,4-Trimethylbenzene	72	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
1,3,5-Trimethylbenzene	11	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	Z1	2
Total Xylenes	590	ug/L	50	18	EPA-8260B	ND	A01	1
p- & m-Xylenes	380	ug/L	25	14	EPA-8260B	ND	A01	1
o-Xylene	200	ug/L	25	4.1	EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	95.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	91.4	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-09	Client Sample Name: V - 209 a/b/c, 4/11/2018 1:00:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	113	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/17/18 10:00	04/19/18 06:43	AKM	MS-V14	50	B010893
2	EPA-8260B	04/16/18 12:28	04/17/18 03:04	AKM	MS-V14	1	B010893

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-10	Client Sample Name: V - 210 a/b/c, 4/11/2018 1:30:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
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Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1811964-10							
Client Sample Name:	V - 210 a/b/c, 4/11/2018 1:30:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.30	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1811964-10	Client Sample Name: V - 210 a/b/c, 4/11/2018 1:30:00PM, Chuck Schmidt
----------------------------------	--

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	04/17/18 10:00	04/18/18 02:34		AKM	MS-V14	1	B010893

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B010893						
Benzene	B010893-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B010893-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B010893-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B010893-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B010893-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B010893-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B010893-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B010893-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B010893-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B010893-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B010893-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B010893-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B010893-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B010893-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B010893-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B010893-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B010893-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B010893-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B010893-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B010893-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B010893-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B010893-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B010893-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B010893-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B010893-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B010893-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B010893-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B010893-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B010893-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B010893-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B010893-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B010893-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B010893-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B010893-BLK1	ND	ug/L	0.50	0.14	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B010893						
trans-1,3-Dichloropropene	B010893-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B010893-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B010893-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B010893-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B010893-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B010893-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B010893-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B010893-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B010893-BLK1	ND	ug/L	0.50	0.11	
Styrene	B010893-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B010893-BLK1	ND	ug/L	0.50	0.18	
1,1,1,2-Tetrachloroethane	B010893-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B010893-BLK1	ND	ug/L	0.50	0.13	
Toluene	B010893-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B010893-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B010893-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B010893-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B010893-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B010893-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B010893-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B010893-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B010893-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B010893-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B010893-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B010893-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B010893-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B010893-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B010893-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B010893-BLK1	96.2	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B010893-BLK1	100	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B010893-BLK1	93.8	%	80 - 120 (LCL - UCL)		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B010893										
Benzene	B010893-BS1	LCS	26.293	25.000	ug/L	105		70 - 130		
Bromodichloromethane	B010893-BS1	LCS	24.787	25.000	ug/L	99.1		70 - 130		
Chlorobenzene	B010893-BS1	LCS	25.822	25.000	ug/L	103		70 - 130		
Chloroethane	B010893-BS1	LCS	26.789	25.000	ug/L	107		70 - 130		
1,4-Dichlorobenzene	B010893-BS1	LCS	26.029	25.000	ug/L	104		70 - 130		
1,1-Dichloroethane	B010893-BS1	LCS	27.075	25.000	ug/L	108		70 - 130		
1,1-Dichloroethene	B010893-BS1	LCS	29.476	25.000	ug/L	118		70 - 130		
Toluene	B010893-BS1	LCS	26.024	25.000	ug/L	104		70 - 130		
Trichloroethene	B010893-BS1	LCS	26.781	25.000	ug/L	107		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B010893-BS1	LCS	10.270	10.000	ug/L	103		75 - 125		
Toluene-d8 (Surrogate)	B010893-BS1	LCS	9.8400	10.000	ug/L	98.4		80 - 120		
4-Bromofluorobenzene (Surrogate)	B010893-BS1	LCS	10.330	10.000	ug/L	103		80 - 120		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B010893		Used client sample: N								
Benzene	MS	1810833-47	ND	25.587	25.000	ug/L		102		70 - 130
	MSD	1810833-47	ND	26.328	25.000	ug/L	2.9	105	20	70 - 130
Bromodichloromethane	MS	1810833-47	ND	24.693	25.000	ug/L		98.8		70 - 130
	MSD	1810833-47	ND	25.236	25.000	ug/L	2.2	101	20	70 - 130
Chlorobenzene	MS	1810833-47	ND	24.606	25.000	ug/L		98.4		70 - 130
	MSD	1810833-47	ND	26.071	25.000	ug/L	5.8	104	20	70 - 130
Chloroethane	MS	1810833-47	ND	27.539	25.000	ug/L		110		70 - 130
	MSD	1810833-47	ND	28.359	25.000	ug/L	2.9	113	20	70 - 130
1,4-Dichlorobenzene	MS	1810833-47	ND	25.357	25.000	ug/L		101		70 - 130
	MSD	1810833-47	ND	26.732	25.000	ug/L	5.3	107	20	70 - 130
1,1-Dichloroethane	MS	1810833-47	ND	26.341	25.000	ug/L		105		70 - 130
	MSD	1810833-47	ND	26.992	25.000	ug/L	2.4	108	20	70 - 130
1,1-Dichloroethene	MS	1810833-47	ND	28.287	25.000	ug/L		113		70 - 130
	MSD	1810833-47	ND	29.196	25.000	ug/L	3.2	117	20	70 - 130
Toluene	MS	1810833-47	ND	25.673	25.000	ug/L		103		70 - 130
	MSD	1810833-47	ND	26.557	25.000	ug/L	3.4	106	20	70 - 130
Trichloroethene	MS	1810833-47	ND	26.655	25.000	ug/L		107		70 - 130
	MSD	1810833-47	ND	27.636	25.000	ug/L	3.6	111	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1810833-47	ND	10.220	10.000	ug/L		102		75 - 125
	MSD	1810833-47	ND	9.9000	10.000	ug/L	3.2	99.0		75 - 125
Toluene-d8 (Surrogate)	MS	1810833-47	ND	10.090	10.000	ug/L		101		80 - 120
	MSD	1810833-47	ND	10.020	10.000	ug/L	0.7	100		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1810833-47	ND	10.140	10.000	ug/L		101		80 - 120
	MSD	1810833-47	ND	10.120	10.000	ug/L	0.2	101		80 - 120

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/19/2018 12:26
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A01 Detection and quantitation limits are raised due to sample dilution.
- Z1 10UL OF ANTIFOAMER SOLUTION ADDED TO SAMPLE VOA



Date of Report: 04/24/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1811810
Invoice ID: B301303

Enclosed are the results of analyses for samples received by the laboratory on 4/10/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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18-11810

CE Schmidt, Ph.D., Environmental Consultant

Form Serial Number: CES F1-02108
 Client Name: Air Resources Board
 Client Address: 19200 Lyle Oak Road, Red Bluff, CA 96080
 Project Manager: Luis Loyva
 E-Mail: SCHMIDTCE@aol.com

For Information Regarding These Samples Please Contact:
 Dr. Charles E. Schmidt
 19200 Lyle Oak Road, Red Bluff, CA 96080
 530-528-4256
 E-Mail: SCHMIDTCE@aol.com

Client Address and Phone Number: 1001 I Street, Sacramento, CA 95814 800-242-4450

Analysis Requested: [Blank]

Laboratory Name: BC Laboratories
 Laboratory Address: 4100 Atlas Court, Bakersfield, CA 93308
 Laboratory Phone: 661-327-4911

Laboratory Contact: Ms. Kerrie Vaughan
 Kerrie.vaughan@bclabs.com

Remarks: [Blank]

Station Number	Date	Time	Sample ID Number			Sample Container			Retinquired by	Date/Time	Retinquired by	Date/Time	Retinquired by	Date/Time	Sample Condition
			C	G	O	R	M	A							
	4/10/2018	7:52	X						J-101	-1	X				
	4/10/2018	7:55	X						J-102	-2	X				
	4/10/2018	9:00	X						J-103	-3	X				
	4/10/2018	9:05	X						J-104	-4	X				
	4/10/2018	10:10	X						J-105	-5	X				
	4/10/2018	10:15	X						J-106	-4	X				
	4/10/2018	11:15	X						J-107	-3	X				
	4/10/2018	12:05	X						J-108	-8	X				
	4/10/2018	1:00	X						J-109	-9	X				
	4/10/2018	1:00	X						J-110	-10	X				
	4/10/2018	1:50	X						J-111	-11	X				
	4/10/2018	1:50	X						J-112	-12	X				
	4/10/2018	1:65	X						J-113	-13	X				
	4/10/2018	1:65	X						J-114	-14	X				
	4/10/2018		X						J-148		X				

Retinquired by: [Signature] Date/Time: 4/10/18 1800
 Retinquired by: [Signature] Date/Time: 4/10/18 1800
 Retinquired by: [Signature] Date/Time: 4/10/18 1800

Remarks: All Samples are in a Wastewater Matrix

CHK BY: [Signature] DATE: [Signature]

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 2

Submission #: 18-11810

SHIPPING INFORMATION
 Fed Ex UPS Ontrac Hand Delivery
 BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER
 Ice Chest None Box
 Other (Specify) _____

FREE LIQUID
 YES NO W/S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received YES NO
 Emissivity: 0.97 Container: Amber Thermometer No: 706 Date/Time: 4/10/18
 Temperature: (A) 0.4 °C / (C) 0.5 °C Analyst Init: [Signature]

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PHA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664	A	A	A	A	A	A	A	A	A	A
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/803										
QT EPA 515/615										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLURVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____
 Sample Numbering Completed By: [Signature] Date/Time: 4/12/18 1130
 A = Actual / C = Corrected



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 18-11810

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO

Emissivity: 0.97 Container: None Thermometer ID: 06 Date/Time: 9/16/18

Temperature: (A) 0.6 °C / (C) 0.9 °C Analyst Init: CS

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	10	12	13	14	15	16	17	18	19	20
QT PE IMPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁴⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664	A	A	A	A						
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/08/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 543										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: CS Date/Time: 9/16/18 11:30

Actual / C = Corrected



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1811810-01	COC Number:	---	Receive Date: 04/10/2018 18:00
	Project Number:	---	Sampling Date: 04/10/2018 07:52
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-101	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1811810-02	COC Number:	---	Receive Date: 04/10/2018 18:00
	Project Number:	---	Sampling Date: 04/10/2018 07:55
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-102	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1811810-03	COC Number:	---	Receive Date: 04/10/2018 18:00
	Project Number:	---	Sampling Date: 04/10/2018 09:00
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-103	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1811810-04	COC Number:	---	Receive Date: 04/10/2018 18:00
	Project Number:	---	Sampling Date: 04/10/2018 09:05
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-104	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1811810-05	COC Number:	---	Receive Date: 04/10/2018 18:00
	Project Number:	---	Sampling Date: 04/10/2018 10:10
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-105	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1811810-06	COC Number:	---	Receive Date: 04/10/2018 18:00
	Project Number:	---	Sampling Date: 04/10/2018 10:15
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-106	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water
1811810-07	COC Number:	---	Receive Date: 04/10/2018 18:00
	Project Number:	---	Sampling Date: 04/10/2018 11:15
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	J-107	Lab Matrix: Water
	Sampled By:	Chuck Schmidt	Sample Type: Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1811810-08	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 13:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-108	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811810-09	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 14:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-109	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811810-10	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 15:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-110	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811810-11	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 15:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-111	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811810-12	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 15:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-112	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811810-13	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 16:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-113	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811810-14	COC Number:	---	Receive Date:	04/10/2018 18:00
	Project Number:	---	Sampling Date:	04/10/2018 16:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-114	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-01	Client Sample Name: J-101, 4/10/2018 7:52:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	8.8	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-02	Client Sample Name: J-102, 4/10/2018 7:55:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	8.2	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-03	Client Sample Name: J-103, 4/10/2018 9:00:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	5.2	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-04	Client Sample Name: J-104, 4/10/2018 9:05:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	6.4	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-05	Client Sample Name: J-105, 4/10/2018 10:10:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	6.2	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-06	Client Sample Name: J-106, 4/10/2018 10:15:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	3.0	mg/L	5.0	0.86	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-07	Client Sample Name: J-107, 4/10/2018 11:15:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	29	mg/L	6.9	1.2	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1.389	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-08	Client Sample Name: J-108, 4/10/2018 1:05:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	5.4	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-09	Client Sample Name: J-109, 4/10/2018 2:00:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	6.8	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-10	Client Sample Name: J-110, 4/10/2018 3:00:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	6.6	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-11	Client Sample Name: J-111, 4/10/2018 3:00:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	5.8	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-12	Client Sample Name: J-112, 4/10/2018 3:05:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	5.0	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-13	Client Sample Name: J-113, 4/10/2018 4:15:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	10	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811810-14	Client Sample Name: J-114, 4/10/2018 4:25:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	ND	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/20/18 12:30	04/20/18 12:30	MAM	MAN-SV	1	B011641

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B011641						
Oil and Grease	B011641-BLK1	ND	mg/L	5.0	0.86	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B011641										
Oil and Grease	B011641-BS1	LCS	40.100	42.400	mg/L	94.6		78	114	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent		Lab Quals
								Recovery	RPD	
QC Batch ID: B011641		Used client sample: N								
Oil and Grease	DUP	1807882-71	ND	ND		mg/L				18
	MS	1807882-71	ND	37.950	42.400	mg/L		89.5		78 - 114
	MSD	1807882-71	ND	37.850	42.400	mg/L	0.3	89.3	18	78 - 114

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/24/2018 8:29
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 04/26/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: [none]
BCL Project: O&G/8260
BCL Work Order: 1811995
Invoice ID: B301628

Enclosed are the results of analyses for samples received by the laboratory on 4/ 11/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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----------------------------	----



18-11995

CE Schmidt, Ph.D., Environmental Consultant

Form Serial Number

Client Name

Project Manager

Requested Completion Date

Station Number

Date

Time

CG

IR

MA

Sample ID Number

Sample Container

Tube

1

X

J-201

1

X

J-202

1

X

J-203

1

X

J-204

1

X

J-205

1

X

J-206

1

X

J-207

1

X

J-208

1

X

J-209

1

X

J-210

1

X

J-211

1

X

J-212

1

X

J-213

1

X

J-214

1

X

J-215

1

X

Relinquished by

Relinquished by

Relinquished by

Sample Shipped Via

Remarks

18-11995

CE SCHMIDT

4/11/2018

7:55

CG

IR

MA

Sample ID Number

Sample Container

Tube

1

X

J-201

1

X

J-202

1

X

J-203

1

X

J-204

1

X

J-205

1

X

J-206

1

X

J-207

1

X

J-208

1

X

J-209

1

X

J-210

1

X

J-211

1

X

J-212

1

X

J-213

1

X

J-214

1

X

J-215

1

X

Relinquished by

Relinquished by

Relinquished by

Sample Shipped Via

Remarks

18-11995

CE SCHMIDT

4/11/2018

7:55

CG

IR

MA

Sample ID Number

Sample Container

Tube

1

X

J-201

1

X

J-202

1

X

J-203

1

X

J-204

1

X

J-205

1

X

J-206

1

X

J-207

1

X

J-208

1

X

J-209

1

X

J-210

1

X

J-211

1

X

J-212

1

X

J-213

1

X

J-214

1

X

J-215

1

X

Relinquished by

Relinquished by

Relinquished by

Sample Shipped Via

Remarks

18-11995

CE SCHMIDT

4/11/2018

7:55

CG

IR

MA

Sample ID Number

Sample Container

Tube

1

X

J-201

1

X

J-202

1

X

J-203

1

X

J-204

1

X

J-205

1

X

J-206

1

X

J-207

1

X

J-208

1

X

J-209

1

X

J-210

1

X

J-211

1

X

J-212

1

X

J-213

1

X

J-214

1

X

J-215

1

X

Relinquished by

Relinquished by

Relinquished by

Sample Shipped Via

Remarks

18-11995

CE SCHMIDT

4/11/2018

7:55

CG

IR

MA

Sample ID Number

Sample Container

Tube

1

X

J-201

1

X

J-202

1

X

J-203

1

X

J-204

1

X

J-205

1

X

J-206

1

X

J-207

1

X

J-208

1

X

J-209

1

X

J-210

1

X

J-211

1

X

J-212

1

X

J-213

1

X

J-214

1

X

J-215

1

X

Relinquished by

Relinquished by

Relinquished by

Sample Shipped Via

Remarks

18-11995

CE SCHMIDT

4/11/2018

7:55

CG

IR

MA

Sample ID



BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 18-11995

SHIPPING INFORMATION
 Fed Ex UPS Ontrac Hand Delivery
 BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER
 Ice Chest None Box
 Other (Specify) _____

FREE LIQUID
 YES NO W/S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Containers: None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received YES NO
 Emissivity: 0.95 Container: Amber Thermometer ID: 274
 Temperature: (A) 17.4 °C / (C) 63.3 °F
 Date/Time: 4/11/18 Analyst: JLS

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664	A	A	A	A	A	A	A	A	A	A
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/508/5080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.I										
8oz EPA 548										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLURRY										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____
 Sample Numbering Completed By: GA Date/Time: 4/13/18 0940 Rev 21 05/23/2016
 A = Actual / C = Corrected

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1811995-01	COC Number:	---	Receive Date:	04/11/2018 14:02
	Project Number:	---	Sampling Date:	04/11/2018 07:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-201	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811995-02	COC Number:	---	Receive Date:	04/11/2018 14:02
	Project Number:	---	Sampling Date:	04/11/2018 08:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-202	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811995-03	COC Number:	---	Receive Date:	04/11/2018 14:02
	Project Number:	---	Sampling Date:	04/11/2018 08:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-203	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811995-04	COC Number:	---	Receive Date:	04/11/2018 14:02
	Project Number:	---	Sampling Date:	04/11/2018 09:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-204	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811995-05	COC Number:	---	Receive Date:	04/11/2018 14:02
	Project Number:	---	Sampling Date:	04/11/2018 10:50
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-205	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811995-06	COC Number:	---	Receive Date:	04/11/2018 14:02
	Project Number:	---	Sampling Date:	04/11/2018 11:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-206	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1811995-07	COC Number:	---	Receive Date:	04/11/2018 14:02
	Project Number:	---	Sampling Date:	04/11/2018 11:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-207	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1811995-08	COC Number:	---	Receive Date:	04/11/2018 14:02
	Project Number:	---	Sampling Date:	04/11/2018 12:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-208	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
	1811995-09	COC Number:	---	Receive Date:
Project Number:		---	Sampling Date:	04/11/2018 13:00
Sampling Location:		---	Sample Depth:	---
Sampling Point:		J-209	Lab Matrix:	Water
Sampled By:		Chuck Schmidt	Sample Type:	Water
<hr/>				
1811995-10		COC Number:	---	Receive Date:
	Project Number:	---	Sampling Date:	04/11/2018 13:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-210	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811995-01	Client Sample Name: J-201, 4/11/2018 7:55:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	11	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/24/18 15:30	04/24/18 15:30	MAM	MAN-SV	1	B011875

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811995-02	Client Sample Name: J-202, 4/11/2018 8:05:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	16	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/24/18 15:30	04/24/18 15:30	MAM	MAN-SV	1	B011875

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811995-03	Client Sample Name: J-203, 4/11/2018 8:55:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	16	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/24/18 15:30	04/24/18 15:30	MAM	MAN-SV	1	B011875

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811995-04	Client Sample Name: J-204, 4/11/2018 9:25:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	38	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/24/18 15:30	04/24/18 15:30	MAM	MAN-SV	1	B011875

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811995-05	Client Sample Name: J-205, 4/11/2018 10:50:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	3.6	mg/L	5.0	0.86	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/24/18 15:30	04/24/18 15:30	MAM	MAN-SV	1	B011875

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811995-06	Client Sample Name: J-206, 4/11/2018 11:10:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	27	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/24/18 15:30	04/24/18 15:30	MAM	MAN-SV	1	B011875

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811995-07	Client Sample Name: J-207, 4/11/2018 11:10:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	10	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/24/18 15:30	04/24/18 15:30	MAM	MAN-SV	1	B011875

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811995-08	Client Sample Name: J-208, 4/11/2018 12:15:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	4.4	mg/L	5.0	0.86	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/24/18 15:30	04/24/18 15:30	MAM	MAN-SV	1	B011875

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811995-09	Client Sample Name: J-209, 4/11/2018 1:00:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	28	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/24/18 15:30	04/24/18 15:30	MAM	MAN-SV	1	B011875

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1811995-10	Client Sample Name: J-210, 4/11/2018 1:30:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	ND	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	04/24/18 15:30	04/24/18 15:30	MAM	MAN-SV	1	B011875

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B011875						
Oil and Grease	B011875-BLK1	ND	mg/L	5.0	0.86	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B011875										
Oil and Grease	B011875-BS1	LCS	39.000	40.700	mg/L	95.8		78	114	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent		Lab Quals
								Recovery	RPD	
QC Batch ID: B011875		Used client sample: N								
Oil and Grease	DUP	1807882-82	ND	ND		mg/L				18
	MS	1807882-82	ND	37.700	40.700	mg/L		92.6		78 - 114
	MSD	1807882-82	ND	38.900	40.700	mg/L	3.1	95.6	18	78 - 114

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 04/26/2018 8:09
Project: O&G/8260
Project Number: [none]
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit

California Resources Board
RFP No. 161SD005

Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations

Data Validation Technical Memorandum- Phase 2, Trip #2



August 2018

Submitted by

Primary Contact:

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Environmental Management Consulting
41125 278th Way SE, Enumclaw, WA 98022 USA
360-802-5540 trcard@earthlink.net

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II. Test Methodology- Page 5

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IV. Results and Discussion- Page 13

V. Summary- Page 14

References

EXECUTIVE SUMMARY

This Technical Memorandum describes the methodology, sampling procedures and test results for Phase 2, Test No. 2 (July/August 2018) of the Air Resources Board project titled *Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations (No. 161SD005)*.

The purpose of this testing effort was to conduct a more detailed assessment of selected ponds based on the data collected in the screening effort conducted in Phase 1. Four pond systems were selected for Test No. 1 in Phase 2 as shown below.

Project Region	Dates	Facilities
R5 S1	07/31/2018 (Field Trip #2)	CP1, P1A, P2A,
R5 S1B	07/31/2018 (Field Trip #2)	CP1, CP1 1-3, P2, P15
R5 S4	08/01/2018 (Field Trip #2)	CP4, P8, P9
R5 S3	08/01/2018 (Field Trip #2)	CP2, P1, P2, P3, P4, P4, P6, P7
R4 S1	08/02/2018 (Field Trip #2)	Oil/Water Separator Tank

In total, one or more samples were collected, along with Quality Control sampling, at these facilities for a total of 26 sample sets. Sample collection included air emission sampling and produced water sampling.

The assessment included using the US EPA flux chamber technology complete with all test equipment as specified in the US EPA Flux Chamber User's and measurement protocol, to measure the 'flux' of study compounds from selected sources on these facilities. Testing included using a fixed sweep air flow rate of 5.0 liters per minute and a 30 liter dynamic flux chamber as per the User's guidance document. Gas phase measurements were performed for volatile organic compounds (VOCs) and toxic air contaminants (TACs) using US EPA Methods TO-14/TO-15, and fixed gases carbon dioxide and methane by ASTM Methods 1945 and 3416, respectively. Liquid phase measurements were performed by liquid sample collection and analysis for dissolved phase VOCs by US EPA Method 8260b, and for oil and grease by US EPA Method 1664 as described in the attached project Test Plan.

A summary of the Test No. 1, Phase 2 testing program, complete with data summary and QC report is provided.

I. INTRODUCTION

This Technical Memorandum describes the field testing that was conducted in order to collect more detailed data from a limited selection of facilities screened in Phase 1 as the second of two field tests in Phase 2 of the program. Testing was conducted by Mr. Tom Card, Dr. C.E. Schmidt, a field technician, and CARB staff. The testing was conducted over a three-day time period, July 31, August 1, and August 2, 2018. Produced water operations included in the Phase 2 testing effort were selected by the Facility Manager using Phase 1 data; the selection process involved identifying operating facilities, contacting facility owners/operators and the regional water boards for permission and access for testing and arranging for access to facilities on the days of testing. Testing included making arrangements for testing, equipment preparation, travel to the facilities, obtaining access to the specific test locations, testing, preparing and shipping air and water samples to the laboratories. Testing activities were observed by one or more representatives from the facilities and the regional water boards.

The objective of this effort was to obtain a more detailed estimate for pond emissions for selected ponds that were tested in Phase 1 (regional screening) and Phase 2 (first field detailed field test in Phase 2). This memorandum includes a discussion of the testing methodology, quality control procedures, results, discussion of the results, and summary statements. The actual facility emissions estimates and control efficiency calculations are reported elsewhere.

II. TEST METHODOLOGY

Testing for surface flux was conducted using the US EPA recommended Surface Isolation Flux Chamber (Radian Corporation, February 1986) following the project Test Plan. Flux chamber sampling was performed on the wastewater surface of selected unit processes or on produced water extracted from processes and placed in a 30-gallon wash tub. At equilibrium in the flux chamber, gas samples were collected using evacuated Summa polished canisters sampled as grab samples to atmospheric pressure. Process produced water was collected using a long-handle 'dipper' following the Test Plan protocol. Produced water was transferred to a container where pH and total dissolved solids (TDS) were measured, then the waste water was poured into method-specific sample containers for per method.

The operation of the surface flux chamber and gas sample collection is given below:

- 1) Flux chamber, sweep air, sample collection equipment, and field documents were located on-site.
- 2) The facility information, location information, equipment information, date, and proposed time of testing were documented on the Emissions Measurement Field Data Sheet.
- 3) The exact test location was selected and placed about 0.5" to 1" into the liquid or oil surface sealing the chamber bottom edge for testing.
- 4) The sweep air flow rate (ultra-high purity- UHP air) was initiated and the calibrated rotameter, which controls the sweep air flow rate, was set at 5.0 liters per minute. A constant sweep air flow rate was maintained throughout the measurement for each sampling location.
- 5) Flux chamber data were recorded every residence interval (6 minutes) for five intervals, or 30 minutes. Source temperature and ambient temperature, along with source description and UTM coordinates were recorded during the equilibration time period.
- 6) At steady-state (greater than 5 residence intervals per method), the sample line was purged preparing for sample collection. Sample collection was performed by interfacing the sample canister to the purged, sample line and filling the sampling media with sample gas or collecting the desired sample following sample collection protocols as per the Test Plan. The canisters were filled to atmospheric pressure and then sealed.
- 7) After sample collection, the sample collection information was documented on the field data sheet and sample collection Chain of Custody sheet.
- 8) After sampling, the flux measurement was discontinued by shutting off the sweep air, removing the chamber, and securing the equipment. The sample line was back-flushed

with UHP clean air, and the flux chamber was cleaned by dry wipe with a clean paper towel and then washed as needed with soap and water.

- 9) The sampling location was recorded on the field data sheet. The equipment was then relocated to the next test location and steps 1) through 8) were repeated.

The operation of the liquid 'dipper' and liquid sample collection is given below:

- 1) The long-handle dipper and collection container, field analyzers, and field documents were located on-site at the selected test location. Note- screening surveys were conducted at multiple locations for each unit process tested supporting the flux chamber and liquid sample collection locations.
- 2) The facility information, location information, equipment information, date, and proposed time of testing were documented on the sample collection log sheets.
- 3) A location near the flux chamber test (1' to 2') was selected for liquid sampling and the dipper was rinsed with produced water, then a sample was taken below the produced water surface by filling the dipper and retrieving the sample catch as shown below.
- 4) Once collected, the sample catch was tested for pH and TDS using calibrated real-time instruments, then the sample vials were filled as per the method specifications, sealed, and stored following the sample preservation requirements.
- 5) After sample collection, the dipper and sampling containers were cleaned by washing and drying as was appropriate.
- 6) Samples were sealed, labels were applied, sample collection was recorded on Chain of Custody sheets, and samples were prepared for shipping to the laboratory.

Sample collection information is provided in Table 1.

Photo Showing Liquid Sample Collection.



III. QUALITY CONTROL

Control procedures that were used to ensure compliance to the data quality specifications as stated in Test Plan and are listed and described below. The application and frequency of these procedures were developed to meet the program data quality objectives and were executed without exception. QC data for air analyses are found on Table 2 (field blank data and precision data), and for liquid analyses on Table 3 (field blank and precision data).

Field Documentation -- A field notebook containing data forms, including sample chain-of-custody (COC) forms, was maintained for the testing program. Attachment A contains the Emission Measurement Data Sheets.

Chain-of-Custody -- COC forms were used for field data collection; all samples were logged daily. Field data were recorded on the COC forms provided in Attachment B.

VOC Analysis by US EPA Method TO-14

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds. These data are reported in the method specific lab reports (footnoted on each lab report showing compliance with the methods).

Laboratory Method Blank- A total of four laboratory method blank samples were performed by the laboratory. No compounds were detected in either blank sample. These data indicate acceptable method performance.

Laboratory Precision- A total of four laboratory Lab Control Duplicate (LCD) samples including nine compounds were performed by the laboratory. All four LCD samples were reported within the criteria of 25 relative percent difference (RPD). These data indicate acceptable method performance.

Laboratory Accuracy- A total of four laboratory Lab Control Samples (LCS) including nine compounds were performed by the laboratory. All four LCS samples were reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Two media (field) blank samples were prepared in the field (T-210 and T-314) were analyzed as field samples (blind QC samples). No compounds were detected above the method detection limits. These data demonstrate acceptable method performance.

Field Method Precision – Three field samples were collected in replicate and analyzed for the flux chamber testing (T-206/-207, T-311/-312, and T-401/-402). Sample and replicate T-206/-207 showed 17 compound pairs with three pairs exceeding criteria ($\pm 50\%$). Sample replicate pair T-311/-312 showed 5 compound pairs with three compound pairs exceeding criteria. And sample replicate pair showed 26 compounds with 17 compound pairs exceeding criteria. The

criteria for field precision is RPD 50 which is often times a challenge with petroleum related compounds at a wide range of concentrations. With half or more sample/compound pairs exceeding criteria, the field precision is identified as poor. However, given the sample matrix, the field data should be considered acceptable and the data for TNMEOC considered representative.

VOC Analysis by US EPA Method TO-15

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of four laboratory method blank samples were performed by the laboratory. No compounds were detected in the blank samples. These data indicate acceptable method performance.

Laboratory Precision- A total of four laboratory LCD samples including 16 compounds were performed by the laboratory. All four LCD samples were reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- A total of four laboratory LCS samples including nine compounds were performed by the laboratory. All four LCS samples were reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Two media (field) blank samples were prepared in the field (T-210 and T-314) were analyzed as field samples (blind QC samples). No compounds were detected above the method detection limits. These data demonstrate acceptable method performance.

Field Method Precision – Three field samples were collected in replicate and analyzed for the flux chamber testing (T-206/-207, T-311/-312, and T-401/-402). Sample and replicate T-206/-207 showed 8 compound pairs with 2 pairs exceeding criteria ($\pm 50\%$). Sample replicate pair T-311/-312 showed 3 compound pairs with no compound pairs exceeding criteria. And sample replicate pair showed 9 compounds with no compound pairs exceeding criteria. These data indicate acceptable laboratory method performance.

Methane Analysis by ASTM Method 3416

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- One laboratory method blank sample was performed by the laboratory. Methane was not detected in the blank sample. These data indicate acceptable method performance.

Laboratory Precision- One LCD sample was performed by the laboratory. The sample was reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- One LCS sample was performed by the laboratory. The sample was reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Two media (field) blank samples were prepared in the field (T-210 and T-314) were analyzed as field samples (blind QC samples). Methane was not detected above method detection limit. These data demonstrate acceptable method performance.

Field Method Precision – Three field samples were collected in replicate and analyzed for the flux chamber testing (T-206/-207, T-311/-312, and T-401/-402). The sample/replicate pairs were within the RPD criteria of 50. These data indicate acceptable method performance.

Carbon Dioxide Analysis by ASTM Method 1946

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- One method blank sample was performed by the laboratory. Carbon dioxide was not detected in the blank sample. These data indicate acceptable method performance.

Laboratory Precision- One LCD sample was performed by the laboratory. The sample was reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- One LCS sample was performed by the laboratory. The sample was reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Two media (field) blank samples were prepared in the field (T-210 and T-314) were analyzed as field samples (blind QC samples). Carbon dioxide was not detected above method detection limit. These data demonstrate acceptable method performance.

Field Method Precision – Two sample/replicate pairs were collected in replicate and analyzed for the flux chamber testing (T-206/-207, T-311/-312, and T-401/-402). Carbon dioxide was not detected in these samples and no comment can be made about field precision, but the laboratory precision was within specifications indicating acceptable method performance.

Liquid Sample VOC Analysis by US EPA Method 8260b

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds, matrix spike samples, and matrix spike duplicate samples. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of six laboratory method blank samples were performed by the laboratory. No compounds were detected in any of the samples above detection. These data indicate acceptable method performance.

Laboratory Precision- A total of five laboratory LCD samples including nine compounds and three surrogates were performed by the laboratory. All LCD samples were reported within the criteria of 20 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- A total of five LCS samples including nine compounds and three surrogates were performed by the laboratory. All LCS samples were reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – Two media (field) blank samples were prepared in the field (V-210 and V-314) were analyzed as field samples (blind QC samples). In total, one compound, toluene at 0.31 ug/L was detected in one of the two field blank samples (V-314) and was reported below the practical quantitation limit. These data demonstrate acceptable method performance.

Field Method Precision – Three field samples were collected in replicate and analyzed for the flux chamber testing (V-206/-207, V-311/-312, and V-401/-402). Sample/replicate pair V-206/-207 had six compound pairs and all were within precision criteria. Sample/replicate pair V-311/-312 had seven compound pairs and all were within precision criteria. And sample/replicate pair V-401/-402 had 16 compound pairs and all were within criteria. These data indicate acceptable method performance.

Liquid Sample Oil and Grease Analysis by US EPA Method 1664

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of three laboratory method blank samples were performed by the laboratory. No compounds were detected in any of the samples above detection. These data indicate acceptable method performance.

Laboratory Precision- A total of four LCD samples were performed by the laboratory. All four LCD samples were reported within the criteria of 18 RPD. Two field samples were analyzed as oil/tar samples (solid), and one LCD sample was prepared and reported as such with no detections in the sample. These data indicate acceptable method performance.

Laboratory Accuracy- A total of four laboratory LCS samples were performed by the laboratory. The LCS samples were reported within the criteria of 78-to-114 percent recovery. These data indicate acceptable method performance.

Field System Blank – Two media (field) blank samples were prepared in the field (J-210 and J-314) were analyzed as field samples (blind QC samples). Both samples were non-detect. These data demonstrate acceptable method performance.

Field Method Precision – Three field samples were collected in replicate and analyzed for the flux chamber testing (J-206/-207, J311/-312, and J-401/-402). The replicate samples showed precision within the criteria of ± 50 RPD (4.9 to 35). These data indicate acceptable method performance.

IV. RESULTS AND DISCUSSIONS

A summary of the field sample collection data and information for the testing conducted during this source test is provided in Table 1. All field data for the on-site surface flux chamber testing for temperature, along with sample identification and sample ID data and information on the liquid sample collection are presented in Table 1.

Quality control data for both air and liquid samples is reported in Tables 2 through 5; blank and replicate QC data for air samples is found in Table 2, and blank and replicate QC data for liquid samples is found in Table 3.

Laboratory data for air samples are summarized in Table 4 and reported in concentration units, and in flux units in Table 5. All liquid sample data are summarized in Table 6 and are reported in concentration units.

Surface flux data for surface area sources are calculated using measured target compound concentrations and flux chamber operating parameter data (i.e., sweep air flow rate of 5.0 liters per minute, and surface area of 0.13 square meters [m^2]). The facility emissions can be calculated by multiplying the flux by the surface area of the source. The flux is calculated from the sweep air flow rate Q (cubic meters per minute [m^3/min]), the species concentration Y_i (micrograms or milligrams per cubic meter [$\mu g/m^3$; mg/m^3]), and exposure to the chamber surface area A (square meters [m^2]), as follows:

$$F_i = (Q) (Y_i) / (A)$$

V. SUMMARY

A more detailed investigation was performed on four produced water systems in Test No. 1 of Phase 2 with an additional system studied Region 4. Testing was conducted with the intent of understanding at a higher level of certainly, the nature and extent of VOC emissions from these facilities which are operationally different. The following is a summary of activities and results associated with this objective:

- A total of 26 flux samples (including QC samples) were conducted using the US EPA Surface Emission Isolation flux chamber technology. The technology, coupled with regulatory approved analytical methods, quantitatively measures flux of VOCs and fixed gases at the test surface of study compounds. In addition, liquid samples were taken at each test location to determine the content of VOCs and oil/grease; the sample collection was co-located so that a relationship between VOC flux and dissolved phase VOCs in waste water could be established.
- Field and laboratory quality control data indicate acceptable data quality for the air methods, including US EPA Method TO-14 (GC/FID), US EPA Method TO-15 (GC/MS), and ASTM 1945 for carbon dioxide and ASTM Method 3416 for methane. Method and media blank samples were non-detection for study compounds and precision was acceptable (compounds generally within method limits) with the exception of Method TO-14 field replicate samples where two of the three showed poor precision. Data qualification with flags is not necessary. Other QC parameters indicated acceptable method performance.
- Field and laboratory quality control data indicate acceptable data quality for the liquid methods, including US EPA Method 8260b (GC/MS) for dissolved phase VOCs and US EPA Method 1664 for oil and grease. Low levels of one compound, toluene, was detected in one field blank, and oil and grease field blanks non-detect. Other QC parameters indicated acceptable method performance.
- The flux data can be used to estimate VOC and fixed gas (methane and carbon dioxide) emissions from those operations tested. Likewise the liquid sample data can be used to describe the VOC and oil/grease content of the produced water sources tested. Further, these data can be used to correlate produced water concentration data to VOC flux data.

REFERENCES

US EPA. 1986. ***"Measurement of Gaseous Emission Rates From Land Surfaces Using an Emission Isolation Flux Chamber, Users Guide."*** EPA Environmental Monitoring Systems Laboratory, Las Vegas, Nevada, EPA Contract No. 68-02-3889, Work Assignment No. 18, Radian Corporation, February 1986. NTIS # PB 86-223161.

Card, TR, and CE Schmidt, Test Plan. August 17, 2017. ***"Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations"***.

Attachment 1
Field Notes

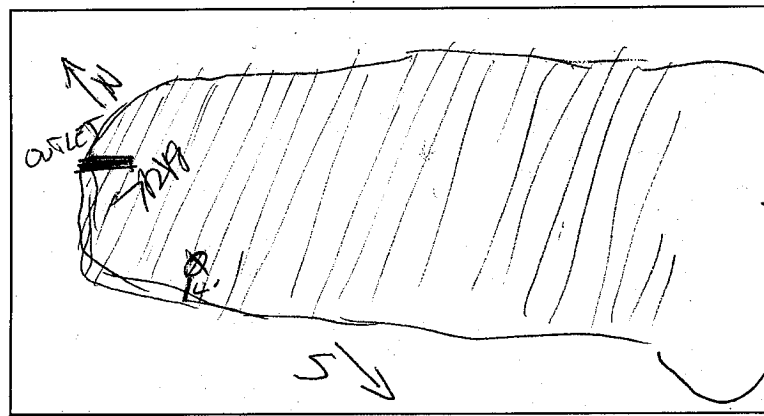
SURFACE FLUX MEASUREMENT DATA FORM

DATE 7/31/18 SAMPLERS LES TRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 1
 SURFACE DESCRIPTION P-2A 100% OIL/SCUM LAYER Outlet
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 122584 SUPPLIER PA PSIG START 1700 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0800	5.0 ↓	0								
↓		1								
↓		2						T201	# 699	
0818		3			80	87			AT 4'32"	
↓		4								
0830		5								

COMMENTS:

SITE DIAGRAM



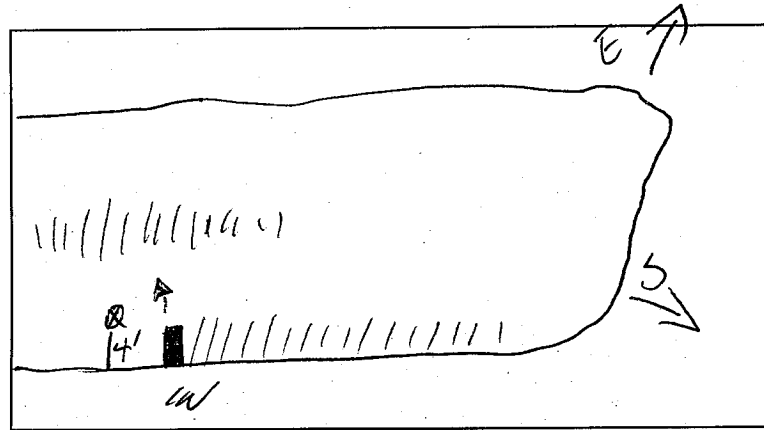
SURFACE FLUX MEASUREMENT DATA FORM

DATE 7/31/18 SAMPLERS LES JRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 7
 SURFACE DESCRIPTION P-2A Inlet
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', 0 mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 22584 SUPPLIER PA PSIG START 1700 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0852	5.0	0								
↓		1								
↓		2						T202	#773	
0910		3			82	89			ΔT 4'40"	
↓		4								
0922	V	5								

COMMENTS:

SITE DIAGRAM

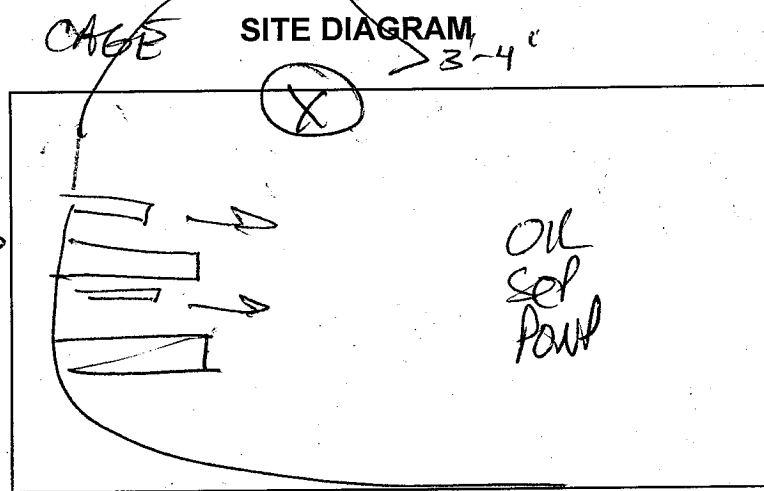


SURFACE FLUX MEASUREMENT DATA FORM

DATE 7/21/19 SAMPLERS LES TRC-TDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 1
 SURFACE DESCRIPTION CP-1 POND
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. 1 PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P. Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 22584 SUPPLIER TRC PSIG START _____ PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1048	5.0	0								
		1								
		2								
1106	↓	3			96	92				
1118		4								
		5						T204	#526	
	ST440								AT	

COMMENTS:

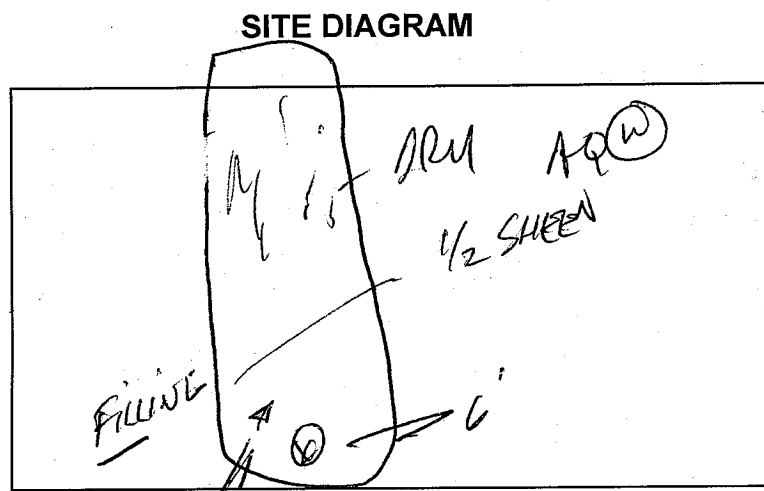


SURFACE FLUX MEASUREMENT DATA FORM

DATE 7/31/18 SAMPLERS LES TRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 7B
 SURFACE DESCRIPTION P15
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 122584 SUPPLIER PA PSIG START 1500 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>1201</u>	<u>5.0</u>	<u>0</u>								
		<u>1</u>								
		<u>2</u>						<u>1205</u>	<u># 605</u>	
<u>1219</u>		<u>3</u>			<u>103</u>	<u>104</u>			<u>OT 3'30"</u>	
		<u>4</u>								
<u>1231</u>		<u>5</u>								

COMMENTS:
FILLING



SURFACE FLUX MEASUREMENT DATA FORM

DATE 7/31/18 SAMPLERS LES JRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 113

SURFACE DESCRIPTION P2 5% oil/scom - some sheen, purple water

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. D PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

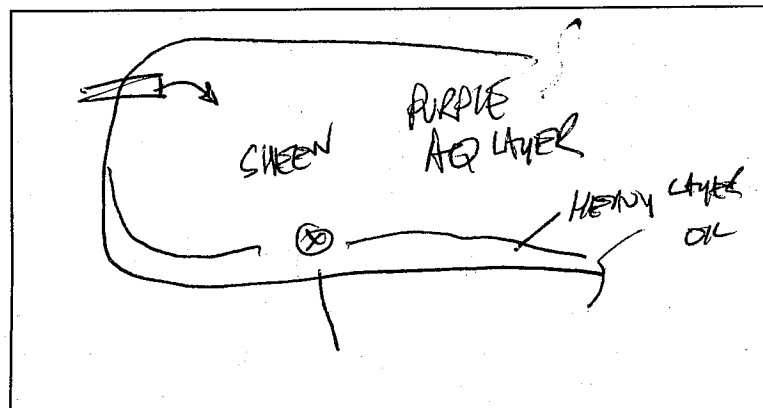
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR UAP CC 122584 SUPPLIER DA PSIG START 1400 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1252	5.0	0								
↓		1								
↓		2						T206	#158 4'30"	
1310		3			100	99			AT	
		4						T207	#877	
1322	↓	5							AT 4'20"	

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 7/31/18 SAMPLERS CBZ/TRYADA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 1B

SURFACE DESCRIPTION OIL MOSTLY CP-1

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. 0- PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe* None

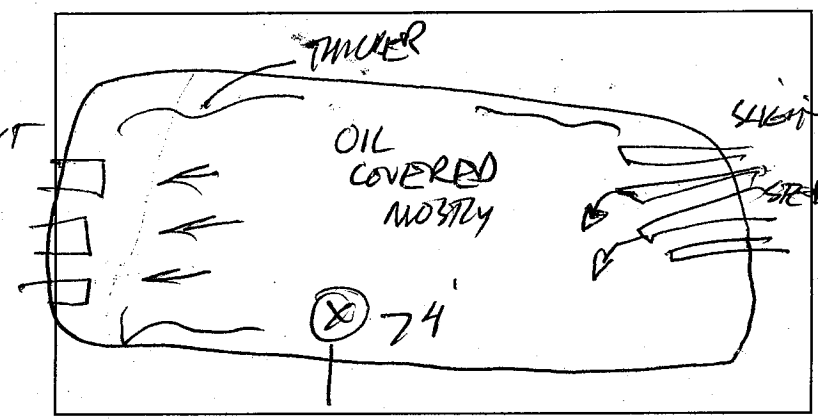
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR UND CC 122584 SUPPLIER SAM/TRY PSIG START 1300 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1353	50	0								
1359		1								
1405		2								
1411		3			161	108				
1417		4								
1423		5						T208	#539	
ΔT4	13								ΔT	

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

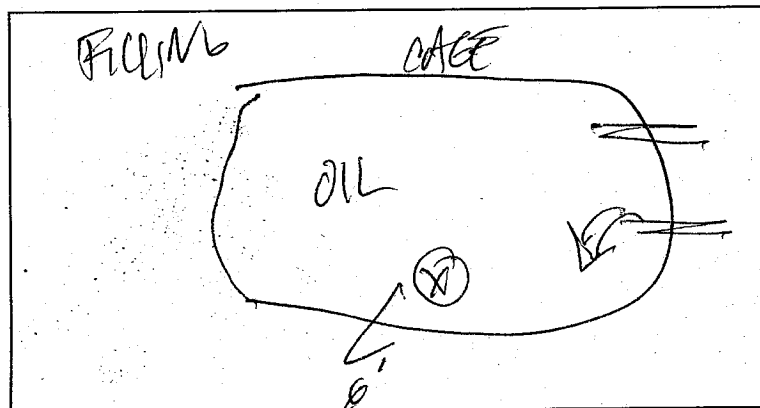
DATE 7/31/18 SAMPLERS CES TRL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 1B
 SURFACE DESCRIPTION BLACK OIL I-3 CPI
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 122584 SUPPLIER PA PSIG START 1300 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1506	5.0 ↓ ↓ ↓ ↓	0								
		1								
		2								
1524		3			162	107				
1536		4								
		5						F-209	#781 AT 4'40"	

COMMENTS:

~~BLANK~~
 F-210
 #765
 1553

SITE DIAGRAM



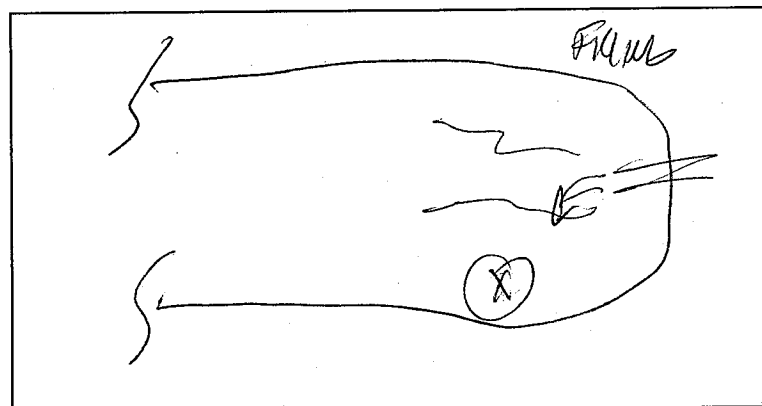
SURFACE FLUX MEASUREMENT DATA FORM

DATE 8/1/18 SAMPLERS LES JRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 4
 SURFACE DESCRIPTION P-8 IN Brown/Green WATER
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 114719 SUPPLIER PA PSIG START 1000 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>0740</u>	<u>5.0</u> ↓ ↓ ↓ ↓	0								
		1								
		2								
<u>0758</u>		3			<u>B6</u>	<u>B7</u>			<u>1301</u>	<u># 729</u> <u>AT 4' 20"</u>
		4								
<u>0810</u>		5								

COMMENTS:

SITE DIAGRAM



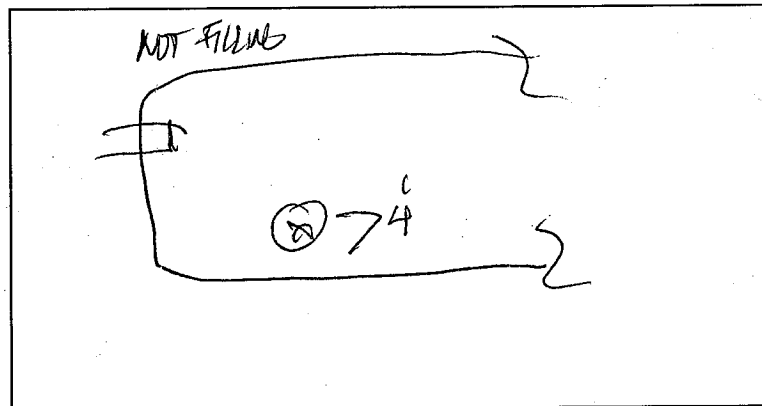
SURFACE FLUX MEASUREMENT DATA FORM

DATE 8/1/18 SAMPLERS LBS TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 4
 SURFACE DESCRIPTION P-9 IN BROWN WATER
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 122504 SUPPLIER PA PSIG START 100 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>0720</u>	<u>5.0</u>	<u>0</u>								
<u>↓</u>	<u>↓</u>	<u>1</u>								
<u>↓</u>	<u>↓</u>	<u>2</u>						<u>T302</u>	<u>#881</u>	
<u>0746</u>	<u>↓</u>	<u>3</u>			<u>79</u>	<u>90</u>			<u>ΔT 4'</u>	
	<u>↓</u>	<u>4</u>								
<u>0750</u>	<u>↓</u>	<u>5</u>								

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 8/1/18 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 4

SURFACE DESCRIPTION P-9 BACK BLOWN WATER w/ GREEN SCUM

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. 4 PHOTO TAKEN: Yes No

CHAMBER SEAL ✓ CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

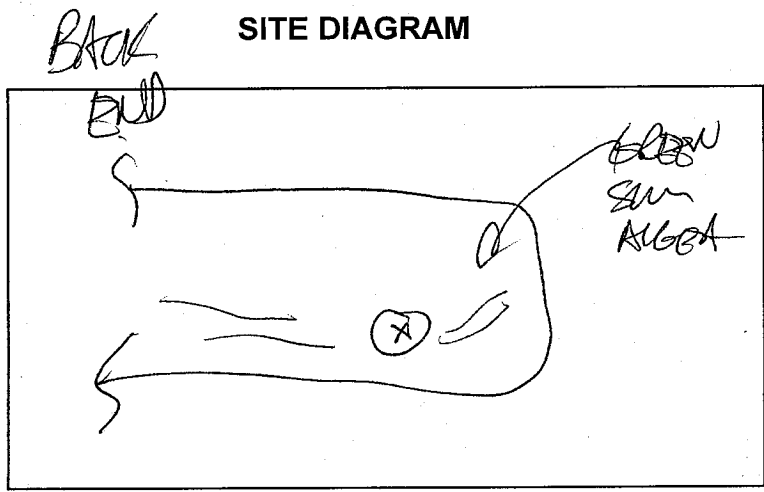
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR WHP CC 122584 SUPPLIER PA PSIG START 1000 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0839	5.0	0								
		1								
		2								
0857		3			84	91			T303	#702 ΔT 3'10"
		4								
0904		5								

COMMENTS:

SITE DIAGRAM



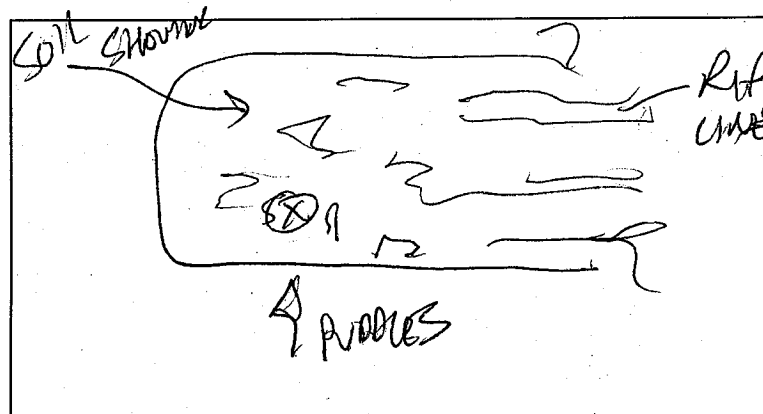
SURFACE FLUX MEASUREMENT DATA FORM

DATE 8/1/18 SAMPLERS CBS TPL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 4
 SURFACE DESCRIPTION P-8 BACK BROWN WATER
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UAP CC 14719 SUPPLIER PA PSIG START 1000 PSIG STOP _____

Time	Sweep Air (L/min) <u>5.0</u>	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>0842</u>	↓	0								
		1								
		2								
<u>0900</u>		3			<u>76</u>	<u>70</u>			<u>T304 #510 AT 3'05"</u>	
		4								
<u>0912</u>		5								

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

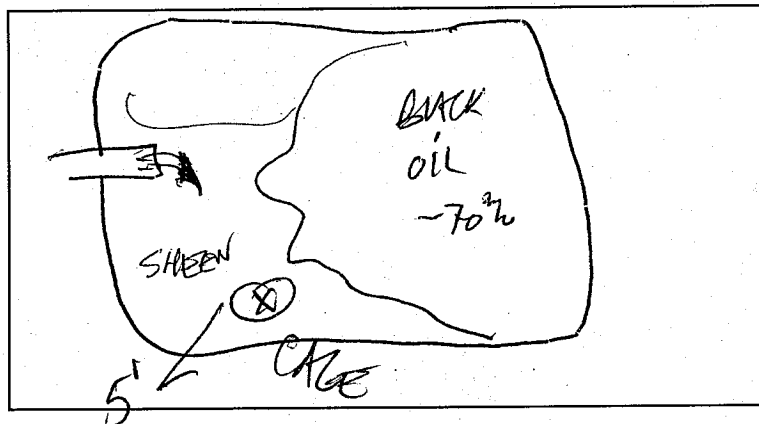
DATE 8/1/18 SAMPLERS LES TRL JPA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 4
 SURFACE DESCRIPTION CP4 BROWN WATER w/ 65% OIL COVER
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 122504 SUPPLIER PA PSIG START 1000 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
944	5.0	0								
↓	↓	1								
↓	↓	2						T305	# 628	
1002	↓	3			125	102			AT	
	↓	4								
1014	V	5								
3:15										

COMMENTS:

WINDWOLVES PRESERVE
AT 166

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

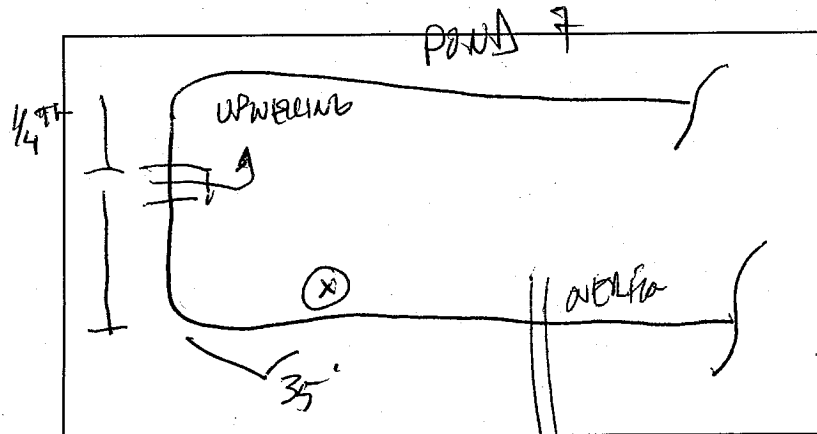
DATE 8/1/18 SAMPLERS LES TOZC JOA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 3
 SURFACE DESCRIPTION P-7 BLOWN WATER
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL V CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 22584 SUPPLIER PA PSIG START 800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
<u>1148</u>	<u>5.0</u>	<u>0</u>								
<u>✓</u>		<u>1</u>								
<u>1206</u>		<u>2</u>								
		<u>3</u>			<u>98</u>	<u>104</u>		<u>T306</u>	<u># 700</u>	
		<u>4</u>							<u>AT 4:30"</u>	
<u>1218</u>	<u>✓</u>	<u>5</u>								

COMMENTS:

FILLING

SITE DIAGRAM



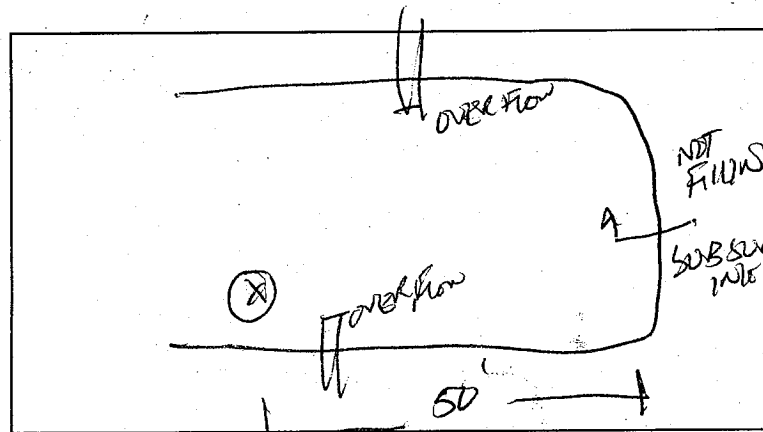
SURFACE FLUX MEASUREMENT DATA FORM

DATE 8/1/18 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 3
 SURFACE DESCRIPTION P-6 GREEN WATER
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UAP CC 114719 SUPPLIER PA PSIG START 1060 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1200	5.0 ↓ ↓ ↓ ↓	0								
↓		1								
↓		2								
1218		3			84°	98°			T307 #614 AT 4'35"	
1230		4								
		5								

COMMENTS:

SITE DIAGRAM



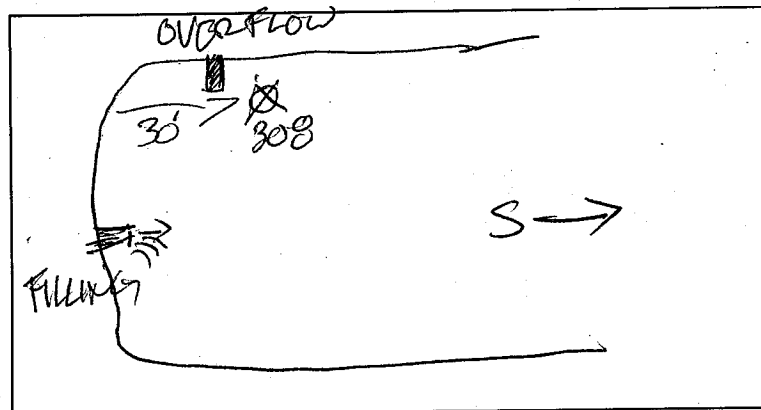
SURFACE FLUX MEASUREMENT DATA FORM

DATE 8/1/18 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 3
 SURFACE DESCRIPTION P-3 GREEN WATER
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 114719 SUPPLIER PA PSIG START 900 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1252	310	0								
↓	↓	1								
↓	↓	2								
1310	↓	3			87	106				
↓	↓	4						1308	#779	
1322	↓	5							AT 4'10"	

COMMENTS:

SITE DIAGRAM



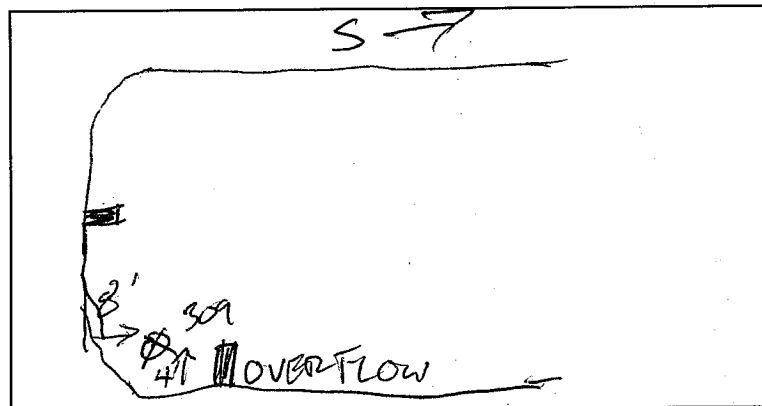
SURFACE FLUX MEASUREMENT DATA FORM

DATE 8/1/18 SAMPLERS LES JRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 3
 SURFACE DESCRIPTION P-4 GREEN WATER
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL _____ CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHR CC 122504 SUPPLIER PA PSIG START 800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1300	5.0	0								
	↓	1								
	↓	2								
1318	↓	3			87	104		1309	#690 AT 3'45"	
	↓	4								
1330	↓	5								

COMMENTS:

SITE DIAGRAM



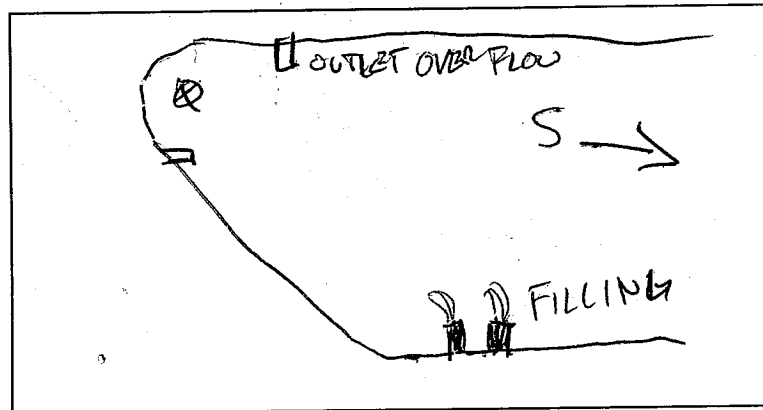
SURFACE FLUX MEASUREMENT DATA FORM

DATE 8/1/18 SAMPLERS LRS TFC SOA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 3
 SURFACE DESCRIPTION P-1 Brown water
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 14719 SUPPLIER PA PSIG START 850 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1352	5.0 ↓ ↓ ↓ ↓	0								
		1								
		2								
1410		3			86	106			T310 #642 AT 5'	
1422		5								

COMMENTS:

SITE DIAGRAM



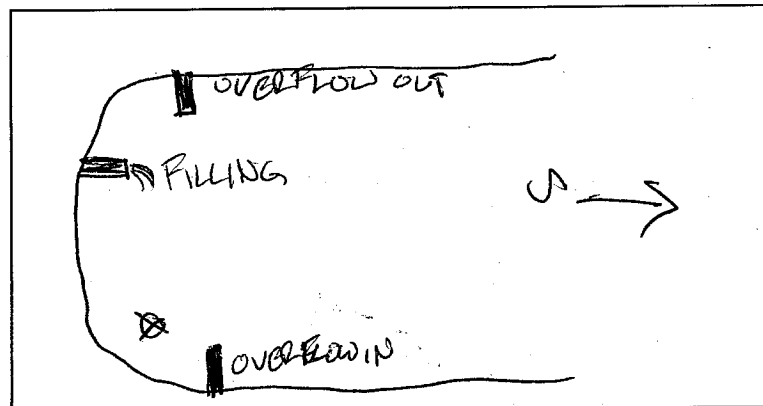
SURFACE FLUX MEASUREMENT DATA FORM

DATE 8/1/18 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 3
 SURFACE DESCRIPTION P-2 GREEN WATER
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 22504 SUPPLIER PA PSIG START 800 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1355	5.0 ↓ ↓ ↓ ↓	0								
↓		1								
↓		2							1425	
1413		3			105	88			T311 #740	
↓		4							AT 4'50"	
1415		5						T312 #823 1431		
									AT 4'50"	

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

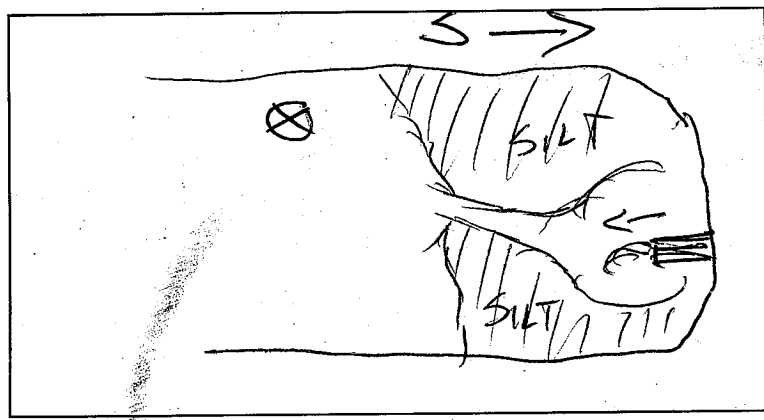
DATE 8/1/18 SAMPLERS LES TPC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 3
 SURFACE DESCRIPTION CP-2 BROWN/BLACK WATER w/ SHEEN
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P. Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UAP CC 122584 SUPPLIER PA PSIG START 600 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1500	5.0 ↓ ↓ ↓ ↓	0								
		1								
		2								
1518		3			129	105			T313 1219 #637 AT 2'	
		4								
1530		5								

COMMENTS:

MARK BLANK
T-314
1505
CC 11719

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 02/10 SAMPLERS CS/TRE/DA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 04-51

SURFACE DESCRIPTION BLACK WATER IN TUB (ANTERRA)

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____

CHAMBER I.D. D PHOTO TAKEN: Yes No

CHAMBER SEAL ✓ CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

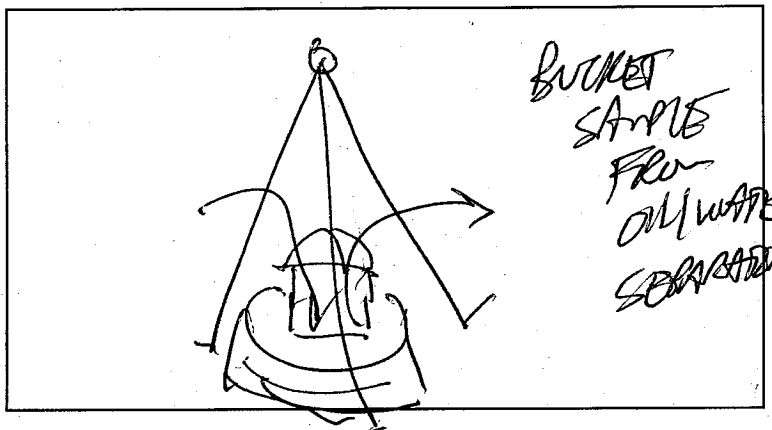
SWEEP AIR UAB CC 12584 SUPPLIER PA PSIG START 500 PSIG STOP _____

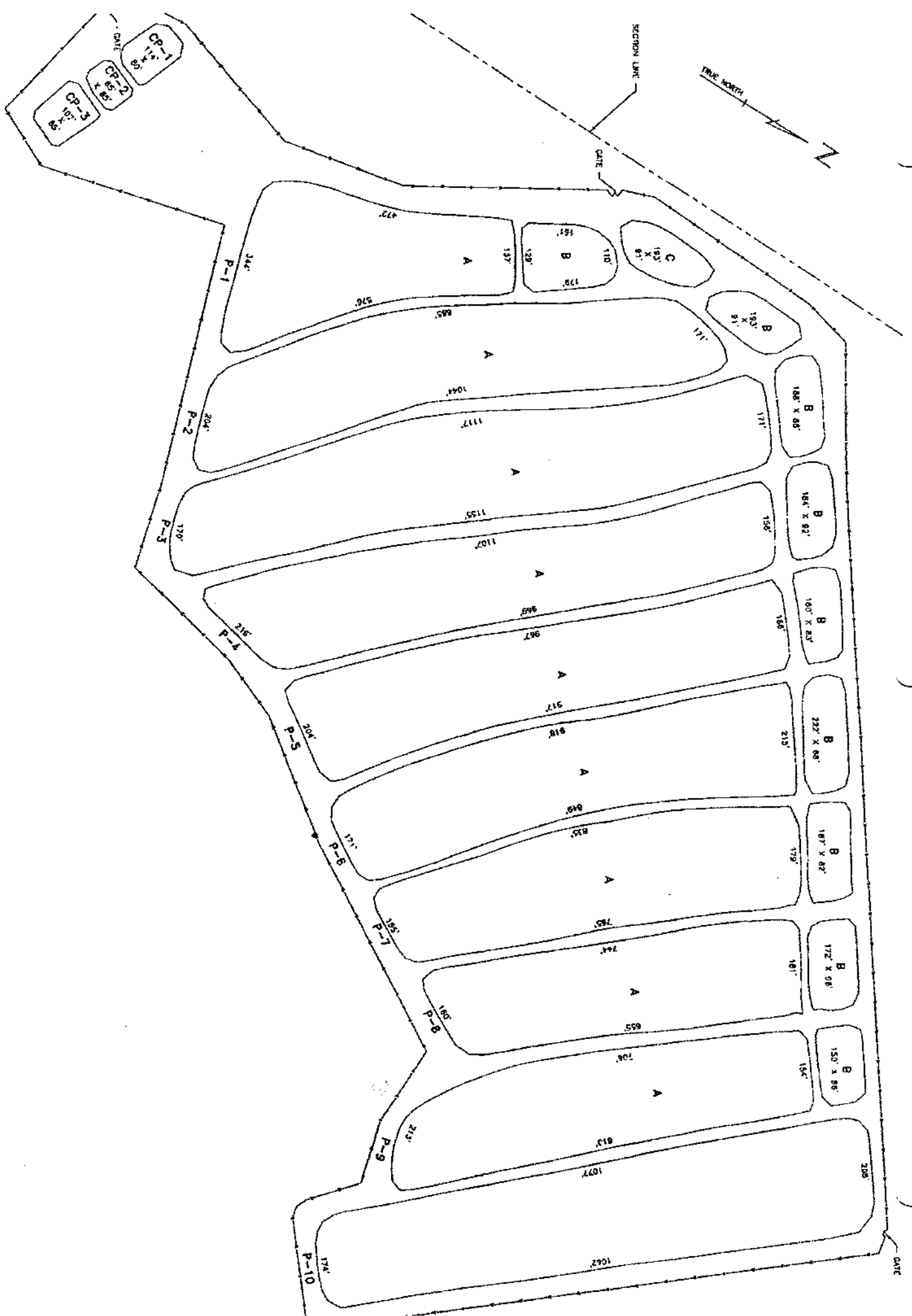
Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0914	5.0	0								
↓	↓	1								
↓	↓	2								
0932	↓	3			102	82				
	↓	4			98			T401	# 645	
0944	↓	5						T402	# 636	
								0950	AT 4' 2.5"	

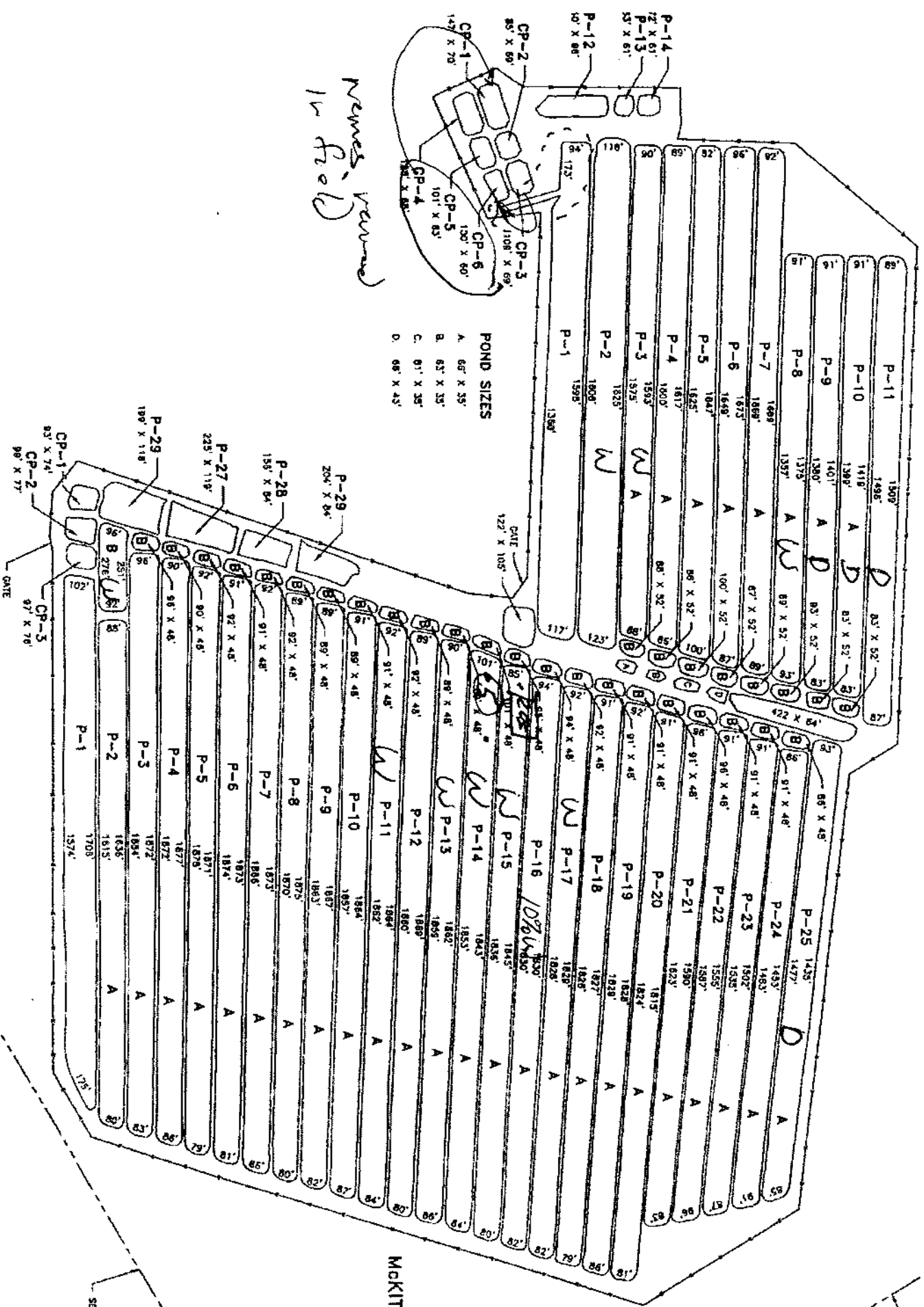
COMMENTS:

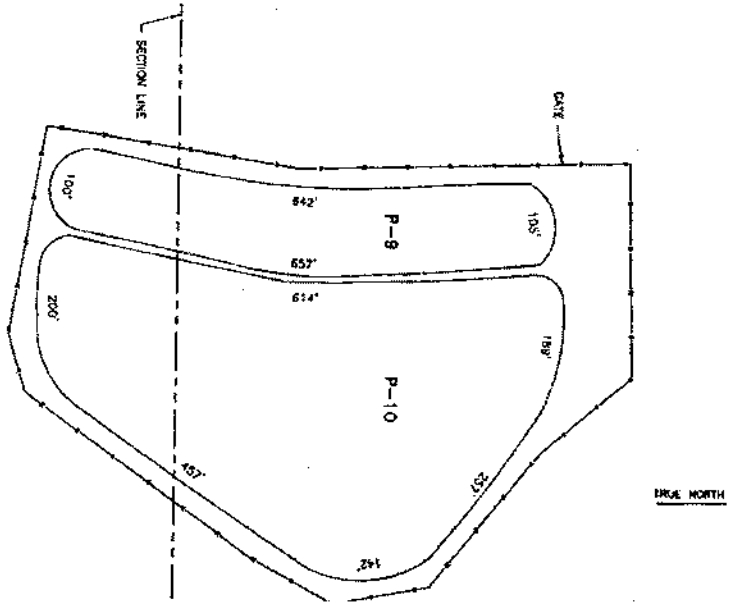
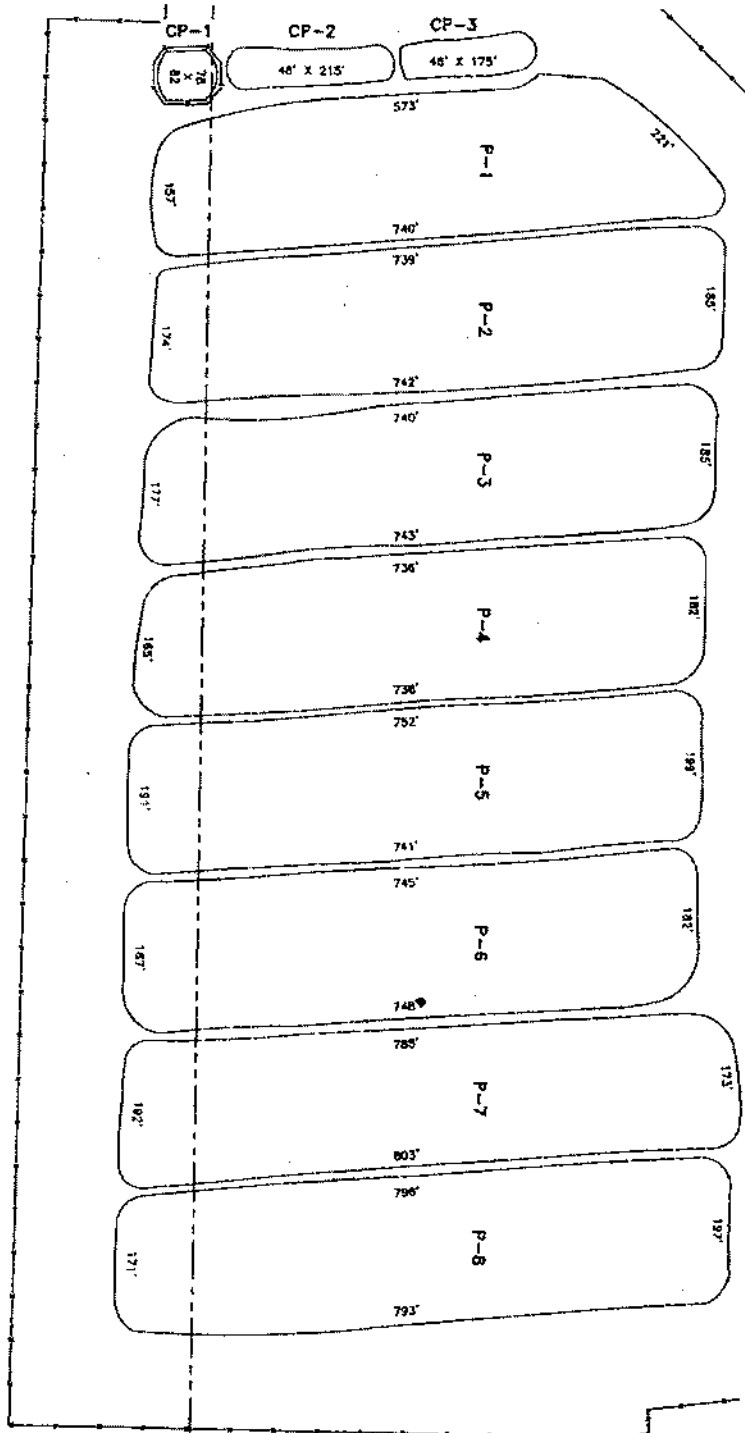
INITIAL TEMP 35.4 C

SITE DIAGRAM

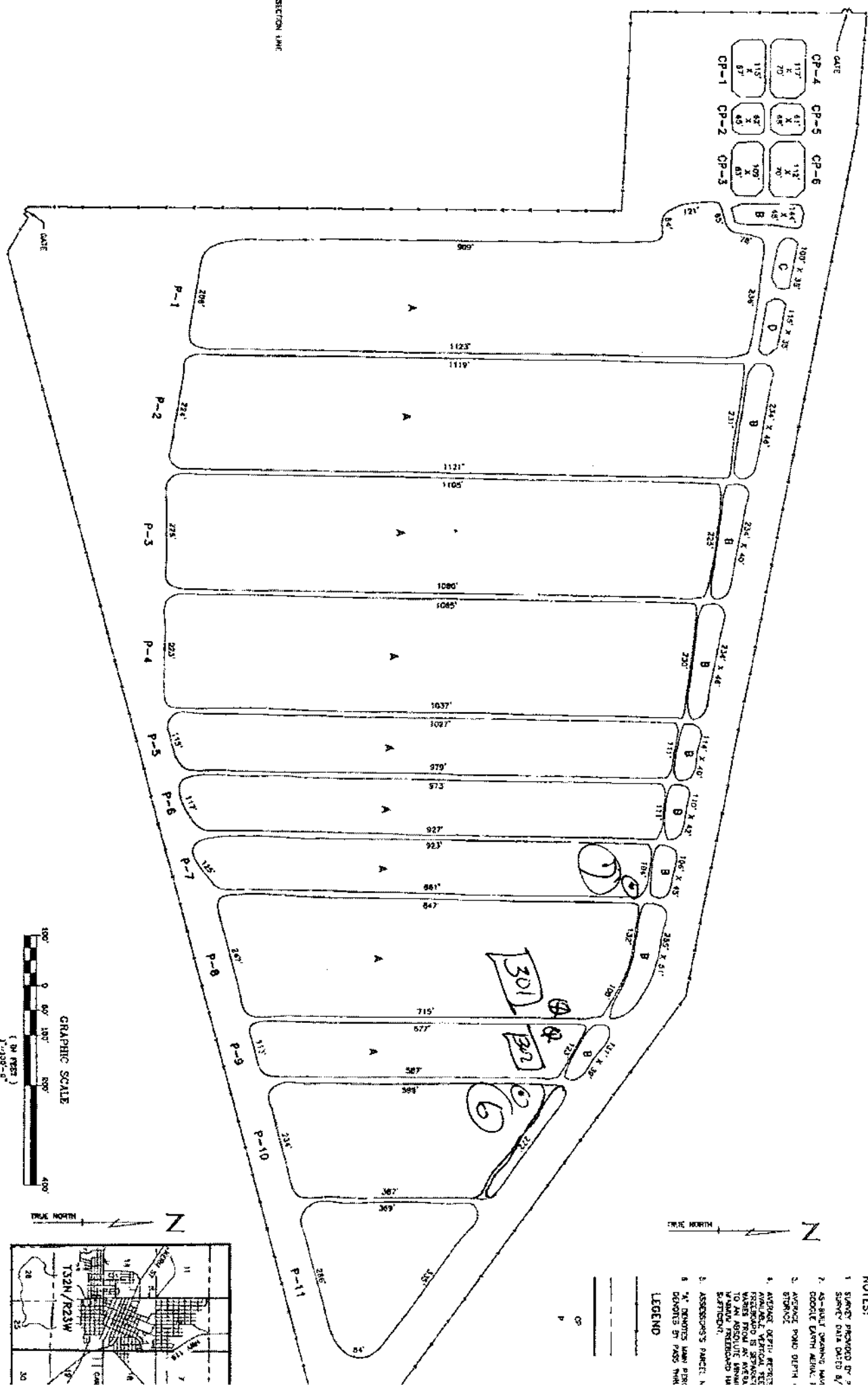








SECTION LINE

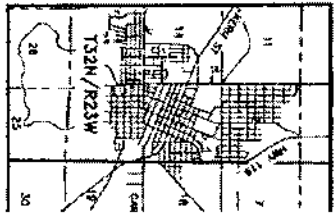


CP-4 117' x 70'
 CP-5 91' x 40'
 CP-6 112' x 70'
 CP-1 115' x 57'
 CP-2 72' x 40'
 CP-3 100' x 60'

TRUE NORTH

- NOTES:
1. SURVEY PREPARED BY P. J. ...
 2. AS-BUILT DRAWINGS HAVE BEEN OBTAINED FROM ...
 3. AVERAGE POND DEPTH IS ...
 4. AVERAGE DEPTH FROM ...
 5. ASSessor'S PARCELS ...
 6. 'X' DENOTES ...

LEGEND



Attachment 2
Chain of Custody Forms

CE Schmidt, Ph.L., Environmental Consultant
Chain of Custody Record

Form Serial Number CES F1-02108	For Information Regarding These Samples Please Contact:	Client Address and Phone Number 1001 I Street Sacramento, CA 95814 800-242-4450	Laboratory Name EAS
Client Name Air Resources Board Oilfield WW Emissions Assessment	Dr. Charles E. Schmidt 19200 Live Oak Road, Red Bluff, CA 96080 530-529-4256 E-Mail: SCHMIDTCE@aol.com	Analysis Requested TO-14 FID (TNMHC) TO-14 FID (Target List on Back) TO-15 (Target List on Back) ASTM D-1945 (CH4, CO2)	Laboratory Address 173 Cross Street San Luis Obispo, CA 93401 Laboratory Phone 805-781-8585
Project Manager Luis Leyva 916-323-1079		Can Pressure In (Inches Hg) -25 -24 -23 -22 -21 -20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10	Laboratory Contact Dr. Steve Hoyt
Requested Completion Date		Can Pressure Out (Inches) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Remarks

Station Number	Date	Time	C/G O/R M/A P	Sample ID Number	Can ID Number	Sample Container		Client Address and Phone Number				Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
						S Vial	Can / Tube	1001 I Street Sacramento, CA 95814 800-242-4450	Analysis Requested	TO-14 FID (TNMHC)	TO-14 FID (Target List on Back)			
18326-51	7/31/2018	830	X	T-201	699	X	X	X	X	X	X	-25	0	
-02	7/31/2018	922	X	T-202	773	X	X	X	X	X	X	-24	0	
-03	7/31/2018	1020	X	T-203	776	X	X	X	X	X	X	-23	0	
-04	7/31/2018	1118	X	T-204	926	X	X	X	X	X	X	-22	0	
-05	7/31/2018	1231	X	T-205	605	X	X	X	X	X	X	-21	0	
-06	7/31/2018	1322	X	T-206	558	X	X	X	X	X	X	-20	0	
-07	7/31/2018	1326	X	T-207	877	X	X	X	X	X	X	-19	0	
-08	7/31/2018	1423	X	T-208	539	X	X	X	X	X	X	-18	0	
-09	7/31/2018	1536	X	T-209	781	X	X	X	X	X	X	-17	0	
-10	7/31/2018	1553	X	T-210	765	X	X	X	X	X	X	-16	0	
JR-V	7/31/2018		X	T-211		X	X	X	X	X	X			
AR	7/31/2018		X	T-212		X	X	X	X	X	X			
	7/31/2018		X	T-213		X	X	X	X	X	X			
	7/31/2018		X	T-214		X	X	X	X	X	X			
	7/31/2018		X	T-215		X	X	X	X	X	X			

Sampler	Date/Time	Relinquished by	Date/Time	HAZWRAP/NEESA Y N
Received by	Date/Time	Relinquished by	Date/Time	QC Level 1 2 3
Received by	Date/Time	Relinquished by	Date/Time	COG
Received by	Date/Time	Relinquished by	Date/Time	Airt Red
Received by	Date/Time	Relinquished by	Date/Time	Cust Seal
Received by	Date/Time	Relinquished by	Date/Time	Sample Condition

Received by Laboratory	Date/Time	Sample Shipped Via	Other
Received by	08/02/18 13:00	UPS FEDEX BUS	
Remarks	Canister Dropped		

CE Schmidt, Ph.D., Environmental Consultant
Chain of Custody Record

Form Serial Number CES-F1-02106	For Information Regarding These Samples Please Contact: Dr. Charles E. Schmidt 19200 Live Oak Road, Red Bluff, CA 96080 530-529-4256 E-Mail: SCHMIDTCE@aol.com	Client Address and Phone Number 1001 I Street Sacramento, CA 95814 800-242-4450	Laboratory Name EAS
Client Name Air Resources Board	Project Manager Luis Leyva	Laboratory Address 173 Cross Street San Luis Obispo, CA 93401 Laboratory Phone 805-781-3585	Laboratory Contact Dr. Steve Hoyt
Requested Completion Date 9/6/2018			

Station Number	Date	Time	G O R M A P	Sample ID Number	Can ID Number	#	CONTAINER		TO-14 FID (TNMHC)	TO-14 FID (Target List on Back)	TO-15 (Target List on Back)	ASTM D-1945 (CH4, CO2)	Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
							Vial	Can							
36-11	8/1/2018	8:10	X	T-301	729	1	X	X	X	X	X	X	-29	0	
-12	8/1/2018	8:58	X	T-302	881	1	X	X	X	X	X	X	-29	0	
-13	8/1/2018	9:05	X	T-303	902	1	X	X	X	X	X	X	-29	0	
-14	8/1/2018	9:12	X	T-304	510	1	X	X	X	X	X	X	-29	0	
-15	8/1/2018	10:14	X	T-305	628	1	X	X	X	X	X	X	-29	0	
-16	8/1/2018	12:18	X	T-306	900	1	X	X	X	X	X	X	-29	0	
-17	8/1/2018	12:30	X	T-307	614	1	X	X	X	X	X	X	-29	0	
-18	8/1/2018	13:22	X	T-308	979	1	X	X	X	X	X	X	-29	0	
-19	8/1/2018	13:30	X	T-309	690	1	X	X	X	X	X	X	-29	0	
-20	8/1/2018	14:22	X	T-310	642	1	X	X	X	X	X	X	-29	0	
-21	8/1/2018	14:25	X	T-311	740	1	X	X	X	X	X	X	-29	0	
-22	8/1/2018	14:31	X	T-312	823	1	X	X	X	X	X	X	-29	0	
-23	8/1/2018	14:30	X	T-313	630	1	X	X	X	X	X	X	-29	0	
-24	8/1/2018	15:05	X	T-314	637	1	X	X	X	X	X	X	-29	0	
	8/1/2018		X	T-315		1	X	X	X	X	X	X			

Received by <i>CE Schmidt</i>	Date/Time 8/2/18 11:00	Relinquished by <i>CE Schmidt</i>	Date/Time 8/2/18 11:00
Received by <i>AKS</i>	Date/Time	Relinquished by	Date/Time
Received by <i>AKS</i>	Date/Time	Relinquished by	Date/Time
Received by Laboratory <i>CE Schmidt</i>	Date/Time 8/2/18 13:00	Sample Shipped Via UPS FEDEX BUS Other	
Remarks			

CE Schmidt, Pl., Environmental Consultant
Chain of Custody Report

Form Serial Number: CES-F-102108
 Client Name: Air Resources Board
 Client Address and Phone Number: 1401 J Street, Sacramento, CA 95814, 899-242-4450
 Laboratory Name: BC Laboratories
 Laboratory Address: 4300 Atlas Court, Bakersfield, CA 93308
 Laboratory Phone: 661-327-4911
 Laboratory Contact: Ms. Kerie Vaughn, kerie.v Vaughn@bcslabs.com

For Information Regarding These Samples Please Contact: Dr. Charles E. Schmidt, 19200 Live Oak Road, Red Bluff, CA 95080, 530-529-4256, E-Mail: SCHMIDTCE@aol.com
 Project Manager: Luis Leyva, 916.323.1079
 Requested Completion Date: _____

Station Number	Date	Time	C G	O R	M A	P B	Sample ID Number	#	Sample Container		Analysis Requested	Remarks
									Vial	Par Tube		
	8/1/2018	8:05	X				V-301 a/b/c	3	X		USEPA Method 8260b	
	8/1/2018	8:45	X				V-302 a/b/c	3	X		USEPA Method 1664	
	8/1/2018	8:50	X				V-303 a/b/c	3	X			
	8/1/2018	9:00	X				V-304 a/b/c	3	X			
	8/1/2018	9:50	X				V-305 a/b/c	3	X			
	8/1/2018	12:00	X				V-306 a/b/c	3	X			
	8/1/2018	12:20	X				V-307 a/b/c	3	X			
	8/1/2018	1:30	X				V-308 a/b/c	3	X			
	8/1/2018	4:20	X				V-309 a/b/c	3	X			
	8/1/2018	4:05	X				V-310 a/b/c	3	X			
	8/1/2018	4:15	X				V-311 a/b/c	3	X			
	8/1/2018	4:15	X				V-312 a/b/c	3	X			
	8/1/2018	4:05	X				V-313 a/b/c	3	X			
	8/1/2018	4:25	X				V-314 a/b/c	3	X			
	8/1/2018	4:25	X				V-315 a/b/c	3	X			

Sampler: _____
 Date/Time: 8/2/18 11:00
 Received by: _____
 Date/Time: 8/2/18 11:00
 Received by: _____
 Date/Time: _____
 Retrieved by Laboratory: _____
 Date/Time: _____
 Remarks: All Samples are in a Wastewater Matrix

CE Schmidt, Ph.D., Environmental Consultant
Chain of Custody Record

Form Serial Number: **CE8-FI-02106**
 Client Name: **Air Resources Board**
 Project Name: **Oilfield W/Emulsions Assessment**
 Lufs Leiva
 946.323.1979

For Information Regarding These Samples
 Please Contact:
 Dr. Charles E. Schmidt
 19290 Live Oak Road, Red Bluff, CA 96080
 530.529.4256
 E-Mail: SOHMI@ce.com

Client Address and Phone Number
1001 I Street
Sacramento, CA 95814 800.242.4460

Analysis Requested
USEPA Method 8268b
USEPA Method 1664

Laboratory Name
BC Laboratories

Laboratory Address
4100 Atlas Court
Bakersfield, CA 93308
 Laboratory Phone
667-527-4911

Laboratory Contact
Ms. Kerrie Vaughn
Kerrie.Vaughn@bc labs.com

Station Number	Date	Time	G O R M A	P A	Sample ID Number	#	Sample Container		Analysis Requested	Remarks
							Val	Jar / Tube		
	8/1/2018	8:05	X		J-301	1	X			
	8/1/2018	7:55	X		J-302	1	X			
	8/1/2018	8:00	X		J-303	1	X			
	8/1/2018	8:00	X		J-304	1	X			
	8/1/2018	9:50	X		J-305	1	X			
	8/1/2018	12:00	X		J-306	1	X			
	8/1/2018	12:20	X		J-307	1	X			
	8/1/2018	1:30	X		J-308	1	X			
	8/1/2018	1:30	X		J-309	1	X			
	8/1/2018	1:40	X		J-310	1	X			
	8/1/2018	4:15	X		J-311	1	X			
	8/1/2018	4:15	X		J-312	1	X			
	8/1/2018	15:05	X		J-313	1	X			
	8/1/2018	15:05	X		J-314	1	X			
	8/1/2018	15:05	X		J-315	1	X			

Sampler: **AC 100118**

Received by: **AC 100118 (K. Lufs)** Date/Time: **8/2/18 11:10**

Retained by: **AC 100118** Date/Time: **8/2/18 11:10**

Retained by Laboratory: **BC Labs** Date/Time: **8/2/18 11:10**

Remarks: **All Samples are in a Wastewater Matrix**

Sample Shipped Via: **UPS** **FEDEX** **BUS** **Other**

HAZWOPER/NEESA Y N
 GCL Level 1 2 3
 CCL
 Ana Resd
 Cust Seal
 Sample Condition

GE Schmidt, Ph.D., Environmental Consultant

Chain of Custody Record

Form Serial Number
GES F-02105

For Information Regarding These Samples
Please Contact:

Client Name
Air Resources Board
Client Address
19200 Lme Oak Road, Red Bluff, CA 96080
Project Manager
Chris L. Ayres
E-Mail
SCHMIDTCE@aol.com

Requested Completion Date

Client Address and Phone Number
**1001 I Street
Sacramento, CA 95814 800-342-4450**

Analysis Requested
**USEPA Method 8260b
USEPA Method 1564**

Laboratory Name
EC Laboratories
Laboratory Address
**4100 Atlas Court
Bakersfield, CA 93308**
Laboratory Phone
661-327-4913
Laboratory Contact
**Mrs. Kerrie Vaughn
kerrie.vaughn@ecolabs.com**

Station/ Number	Date	Time	C O G			Sample ID Number	#	Sample Container		USEPA Method 8260b	USEPA Method 1564	Remarks
			P	M	A			S	Vial Jar Tube			

	8/2/2018	9:15	X			J - 401	1	X		X		
	8/2/2018		X			J - 402	1	X		X		
	8/2/2018		X			J - 403	1	X		X		
	8/2/2018		X			J - 404	1	X		X		
	8/2/2018		X			J - 405	1	X		X		

Sampler	Date/Time	Relinquished by	Date/Time	Relinquished by	Date/Time	Relinquished by	Date/Time	Other	HAZARDOUSNESS	QC Level	1	2	3	Am Reg	Clust Seal	Sample Condition
Reviewed by <i>D. Schmidt</i>	8/2/18	8:15	8/2/18	11:00												
Received by Laboratory																

Remarks All Samples are in a Wastewater Matrix

Attachment 3
Laboratory Reports

Laboratory Work Order

SDG Number: 218376

Project Number: 17198

Client: Chuck Schmidt

Received: 8/2/2018

C.E. Schmidt

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 201	218376 1	ASTM D3416 Methane, MDL 0.5 ppmv	7/31/2018
T - 201	218376 1	EPA TO-14 DHA with TNMHC	7/31/2018
T - 201	218376 1	EPA TO-15 VOC + TIC	7/31/2018
T - 201	218376 1	ASTM D1945 Carbon Dioxide	7/31/2018
T - 202	218376 2	ASTM D1945 Carbon Dioxide	7/31/2018
T - 202	218376 2	ASTM D3416 Methane, MDL 0.5 ppmv	7/31/2018
T - 202	218376 2	EPA TO-14 DHA with TNMHC	7/31/2018
T - 202	218376 2	EPA TO-15 VOC + TIC	7/31/2018
T - 203	218376 3	ASTM D1945 Carbon Dioxide	7/31/2018
T - 203	218376 3	ASTM D3416 Methane, MDL 0.5 ppmv	7/31/2018
T - 203	218376 3	EPA TO-14 DHA with TNMHC	7/31/2018
T - 203	218376 3	EPA TO-15 VOC + TIC	7/31/2018
T - 204	218376 4	ASTM D1945 Carbon Dioxide	7/31/2018
T - 204	218376 4	EPA TO-15 VOC + TIC	7/31/2018
T - 204	218376 4	ASTM D3416 Methane, MDL 0.5 ppmv	7/31/2018
T - 204	218376 4	EPA TO-14 DHA with TNMHC	7/31/2018
T - 205	218376 5	ASTM D1945 Carbon Dioxide	7/31/2018
T - 205	218376 5	ASTM D3416 Methane, MDL 0.5 ppmv	7/31/2018
T - 205	218376 5	EPA TO-14 DHA with TNMHC	7/31/2018
T - 205	218376 5	EPA TO-15 VOC + TIC	7/31/2018
T - 206	218376 6	ASTM D1945 Carbon Dioxide	7/31/2018
T - 206	218376 6	ASTM D3416 Methane, MDL 0.5 ppmv	7/31/2018
T - 206	218376 6	EPA TO-14 DHA with TNMHC	7/31/2018

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 206	218376 6	EPA TO-15 VOC + TIC	7/31/2018
T - 207	218376 7	EPA TO-14 DHA with TNMHC	7/31/2018
T - 207	218376 7	ASTM D3416 Methane, MDL 0.5 ppmv	7/31/2018
T - 207	218376 7	ASTM D1945 Carbon Dioxide	7/31/2018
T - 207	218376 7	EPA TO-15 VOC + TIC	7/31/2018
T - 208	218376 8	ASTM D1945 Carbon Dioxide	7/31/2018
T - 208	218376 8	ASTM D3416 Methane, MDL 0.5 ppmv	7/31/2018
T - 208	218376 8	EPA TO-14 DHA with TNMHC	7/31/2018
T - 208	218376 8	EPA TO-15 VOC + TIC	7/31/2018
T - 209	218376 9	ASTM D1945 Carbon Dioxide	7/31/2018
T - 209	218376 9	ASTM D3416 Methane, MDL 0.5 ppmv	7/31/2018
T - 209	218376 9	EPA TO-14 DHA with TNMHC	7/31/2018
T - 209	218376 9	EPA TO-15 VOC + TIC	7/31/2018
T - 210	218376 10	EPA TO-14 DHA with TNMHC	7/31/2018
T - 210	218376 10	EPA TO-15 VOC + TIC	7/31/2018
T - 210	218376 10	ASTM D3416 Methane, MDL 0.5 ppmv	7/31/2018
T - 210	218376 10	ASTM D1945 Carbon Dioxide	7/31/2018
T - 301	218376 11	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 301	218376 11	EPA TO-14 DHA with TNMHC	8/1/2018
T - 301	218376 11	EPA TO-15 VOC + TIC	8/1/2018
T - 301	218376 11	ASTM D1945 Carbon Dioxide	8/1/2018
T - 302	218376 12	ASTM D1945 Carbon Dioxide	8/1/2018
T - 302	218376 12	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 302	218376 12	EPA TO-14 DHA with TNMHC	8/1/2018
T - 302	218376 12	EPA TO-15 VOC + TIC	8/1/2018
T - 303	218376 13	EPA TO-15 VOC + TIC	8/1/2018
T - 303	218376 13	ASTM D1945 Carbon Dioxide	8/1/2018
T - 303	218376 13	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 303	218376 13	EPA TO-14 DHA with TNMHC	8/1/2018
T - 304	218376 14	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 304	218376 14	EPA TO-14 DHA with TNMHC	8/1/2018
T - 304	218376 14	EPA TO-15 VOC + TIC	8/1/2018
T - 304	218376 14	ASTM D1945 Carbon Dioxide	8/1/2018
T - 305	218376 15	ASTM D1945 Carbon Dioxide	8/1/2018
T - 305	218376 15	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 305	218376 15	EPA TO-14 DHA with TNMHC	8/1/2018
T - 305	218376 15	EPA TO-15 VOC + TIC	8/1/2018
T - 306	218376 16	ASTM D1945 Carbon Dioxide	8/1/2018
T - 306	218376 16	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 306	218376 16	EPA TO-14 DHA with TNMHC	8/1/2018
T - 306	218376 16	EPA TO-15 VOC + TIC	8/1/2018
T - 307	218376 17	ASTM D1945 Carbon Dioxide	8/1/2018
T - 307	218376 17	EPA TO-15 VOC + TIC	8/1/2018
T - 307	218376 17	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 307	218376 17	EPA TO-14 DHA with TNMHC	8/1/2018
T - 308	218376 18	ASTM D1945 Carbon Dioxide	8/1/2018
T - 308	218376 18	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 308	218376 18	EPA TO-14 DHA with TNMHC	8/1/2018
T - 308	218376 18	EPA TO-15 VOC + TIC	8/1/2018
T - 309	218376 19	ASTM D1945 Carbon Dioxide	8/1/2018
T - 309	218376 19	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 309	218376 19	EPA TO-14 DHA with TNMHC	8/1/2018
T - 309	218376 19	EPA TO-15 VOC + TIC	8/1/2018
T - 310	218376 20	EPA TO-14 DHA with TNMHC	8/1/2018
T - 310	218376 20	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 310	218376 20	ASTM D1945 Carbon Dioxide	8/1/2018
T - 310	218376 20	EPA TO-15 VOC + TIC	8/1/2018
T - 311	218376 21	ASTM D1945 Carbon Dioxide	8/1/2018
T - 311	218376 21	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 311	218376 21	EPA TO-14 DHA with TNMHC	8/1/2018

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T - 311	218376 21	EPA TO-15 VOC + TIC	8/1/2018
T - 312	218376 22	ASTM D1945 Carbon Dioxide	8/1/2018
T - 312	218376 22	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 312	218376 22	EPA TO-14 DHA with TNMHC	8/1/2018
T - 312	218376 22	EPA TO-15 VOC + TIC	8/1/2018
T - 313	218376 23	EPA TO-14 DHA with TNMHC	8/1/2018
T - 313	218376 23	EPA TO-15 VOC + TIC	8/1/2018
T - 313	218376 23	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 313	218376 23	ASTM D1945 Carbon Dioxide	8/1/2018
T - 314	218376 24	ASTM D3416 Methane, MDL 0.5 ppmv	8/1/2018
T - 314	218376 24	EPA TO-14 DHA with TNMHC	8/1/2018
T - 314	218376 24	EPA TO-15 VOC + TIC	8/1/2018
T - 314	218376 24	ASTM D1945 Carbon Dioxide	8/1/2018
T - 401	218376 25	ASTM D1945 Carbon Dioxide	8/2/2018
T - 401	218376 25	ASTM D3416 Methane, MDL 0.5 ppmv	8/2/2018
T - 401	218376 25	EPA TO-14 DHA with TNMHC	8/2/2018
T - 401	218376 25	EPA TO-15 VOC + TIC	8/2/2018
T - 402	218376 26	EPA TO-15 VOC + TIC	8/2/2018
T - 402	218376 26	ASTM D1945 Carbon Dioxide	8/2/2018
T - 402	218376 26	ASTM D3416 Methane, MDL 0.5 ppmv	8/2/2018
T - 402	218376 26	EPA TO-14 DHA with TNMHC	8/2/2018

Project Sample Media

SDG Number: 218376

The following sample media was used for this Sample Delivery Group (SDG). The Sample Media column identifies the type of media. For canisters, the Sample Media Batch gives the canister number followed by the cleaning batch number, which is a unique identification. Canisters that are received with sub-ambient pressures are pressurized to about 5 psig. The initial pressure of the canister when it is received is recorded along with the final pressure after pressurization. The canister dilution factor is the ratio of the final to initial pressure. The results are adjusted for the can dilution factor.

SDG	Lab ID	Client Sample No.	Sample		Pressure, torr		Can Factor
			Media	Batch	Initial	Final	
218376	1	T - 201	699	061318A	697	898	1.29
218376	2	T - 202	773	061318A	686	919	1.34
218376	3	T - 203	726	062518B	692	870	1.26
218376	4	T - 204	526	031518B	682	918	1.35
218376	5	T - 205	605	070918C	660	918	1.39
218376	6	T - 206	158	070918C	671	893	1.33
218376	7	T - 207	877	061418A	674	913	1.35
218376	8	T - 208	539	052918A	628	893	1.42
218376	9	T - 209	781	060718B	673	903	1.34
218376	10	T - 210	765	032018B	720	905	1.26
218376	11	T - 301	729	071218B	693	913	1.32
218376	12	T - 302	881	072018A	696	902	1.30
218376	13	T - 303	702	123017A	686	905	1.32
218376	14	T - 304	510	062918A	679	928	1.37
218376	15	T - 305	628	123017A	647	930	1.44
218376	16	T - 306	700	032018B	647	925	1.43
218376	17	T - 307	614	123017A	675	914	1.35
218376	18	T - 308	779	062518B	663	924	1.39
218376	19	T - 309	690	050818B	659	916	1.39
218376	20	T - 310	642	052918A	667	923	1.38
218376	21	T - 311	740	052918A	664	896	1.35
218376	22	T - 312	823	071118B	658	915	1.39
218376	23	T - 313	630	072018A	638	919	1.44
218376	24	T - 314	637	050718A	712	909	1.28
218376	25	T - 401	645	070518A	711	904	1.27

SDG	Lab ID	Client Sample No.	Sample Media	Batch	Pressure, torr Initial	Final	Can Factor
218376	26	T - 402	636	060718B	720	914	1.27

Laboratory Case Narrative

EAS SDG Number: 218376

Project Number: 17198

Client: C.E. Schmidt

The Laboratory Case Narrative for the SDG is below. The Chain of Custody form(s) follow the Laboratory Case Narrative.

Sample Control Narrative

The samples were all received in good condition and with proper preservation.

Analytical Methods

The methods used for sample analysis are listed on the Analytical Report header, and have been modified as described in the EAS Quality Manual..

Case Narrative

QC Narrative

All analyses met EAS method criteria as defined in the Quality Manual, except as noted in the report or QC reports with data qualifiers.

Subcontract Narrative

No sample analysis was subcontracted for this project

Laboratory Certification

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness other than the condition(s) noted above. The Laboratory Report is property of EAS and its client. The entire report has been reviewed and approved.



Date Approved: 8/20/2018

Steven D. Hoyt, Ph.D.
Environmental Analytical Service
Laboratory Director

CE Schmidt, Ph.D., Environmental Consultant

Chain of Custody Record

Form Serial Number: CES F1-02106
 Client Name: Air Resources Board
 Project: Offfield WW Emissions Assessment
 Project Manager: Luis Leyva
 E-Mail: SCHMIDTCE@aol.com
 Requested Completion Date: 916.323.1079

For Information Regarding These Samples
 Please Contact:
 Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDTCE@aol.com

Laboratory Name: EAS
 Laboratory Address: 173 Cross Street
 San Luis Obispo, CA 93401
 Laboratory Phone: 805-781-3585
 Laboratory Contact: Dr. Steve Hoyt

Station Number	Date	Time	Sample ID Number			Can ID Number	Sample Container	# OF CONTAINERS	Client Address and Phone Number				Remarks	
			C	O	M				A	1001 I Street Sacramento, CA 95814 800-242-4450	Analysis Requested	TO-14 FID (Target List on Back)		TO-15 (Target List on Back)
01	7/31/2018	8:30	X			T-201	1571	1	X	X	X	X	0	
02	7/31/2018	9:22	X			T-202	773	1	X	X	X	X	0	
03	7/31/2018	10:20	X			T-203	746	1	X	X	X	X	0	
04	7/31/2018	11:18	X			T-204	926	1	X	X	X	X	0	
05	7/31/2018	12:31	X			T-205	605	1	X	X	X	X	0	
06	7/31/2018	13:22	X			T-206	158	1	X	X	X	X	0	
07	7/31/2018	13:26	X			T-207	871	1	X	X	X	X	0	
08	7/31/2018	14:23	X			T-208	539	1	X	X	X	X	0	
09	7/31/2018	15:30	X			T-209	781	1	X	X	X	X	0	
10	7/31/2018	15:52	X			T-210	765	1	X	X	X	X	0	
11	7/31/2018		X			T-211		1	X	X	X	X		
12	7/31/2018		X			T-212		1	X	X	X	X		
13	7/31/2018		X			T-213		1	X	X	X	X		
14	7/31/2018		X			T-214		1	X	X	X	X		
15	7/31/2018		X			T-215		1	X	X	X	X		
16														
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Relinquished by: [Signature] Date/Time: 8/2/18 15:54
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 Relinquished by: [Signature] Date/Time: 8/2/18 15:54

Sample Shipped Via: BUS
 UPS FEDEX Other

Date/Time: 08/02/18 13:00

Remarks: [Handwritten notes]

CE Schmidt, Ph.D., Environmental Consultant

Chain of Custody Record

Form Serial Number: CES F1-02106
 Client Name: Air Resources Board
 Client Address and Phone Number: 19200 Live Oak Road, Red Bluff, CA 96080
 Project Manager: Luis Leyva
 Laboratory Name: EAS
 Laboratory Address: 173 Cross Street, San Luis Obispo, CA 93401
 Laboratory Phone: 805-781-3585
 Laboratory Contact: Dr. Steve Hoyt

Station Number	Date	Time	For Information Regarding These Samples			Sample ID Number	Can ID Number	# OF CONTAINERS			TO-14 FID (NMHC)	TO-15 (Target List on Back)	ASTM D-1945 (CH4, CO2)	Can Pressure In (Inches Hg)	Can Pressure Out (Inches)	Remarks
			C	O	R			M	A	B						
1576-11	8/1/2018	9:10	X				929	X	X	X	X	X	-29	0		
-12	8/1/2018	9:58	X				881	X	X	X	X	X	-29	0		
-13	8/1/2018	9:09	X				902	X	X	X	X	X	-29	0		
-14	8/1/2018	9:12	X				510	X	X	X	X	X	-29	0		
-15	8/1/2018	10:14	X				628	X	X	X	X	X	-29	0		
-16	8/1/2018	12:18	X				900	X	X	X	X	X	-29	0		
-17	8/1/2018	12:30	X				614	X	X	X	X	X	-29	0		
-18	8/1/2018	13:22	X				979	X	X	X	X	X	-29	0		
-19	8/1/2018	13:30	X				690	X	X	X	X	X	-29	0		
-20	8/1/2018	14:22	X				642	X	X	X	X	X	-29	0		
-21	8/1/2018	14:25	X				940	X	X	X	X	X	-29	0		
-22	8/1/2018	14:31	X				823	X	X	X	X	X	-29	0		
-23	8/1/2018	14:30	X				630	X	X	X	X	X	-29	0		
-24	8/1/2018	15:03	X				632	X	X	X	X	X	-29	0		
	8/1/2018		X					X	X	X	X	X				

Relinquished by: *CE Schmidt* Date/Time: 8/2/18 11:00
 Relinquished by: *ASB OAS* Date/Time: *ASB OAS*
 Relinquished by: *ASB OAS* Date/Time: *ASB OAS*
 Sample Shipped Via: *CE Schmidt* Date/Time: 8/2/18 13:00
 Reports: *CE Schmidt*

Quality Control Report

EAS SDG Number 218376

Project Number: 17198

QC Narrative

Samples were analyzed in a daily analytical batch (DAB) designated by a QC batch number, and were analyzed using EAS standard laboratory QC specified in the EAS Quality Manual which may be different than the referenced agency method. Any deviations from the EAS QC criteria are flagged in the Laboratory Control Reports or in the sample Analytical Reports.

Standard Laboratory QC Report

Unless project specific QC was requested, this Section containing the standard laboratory QC (Level 2) supplied with the Analytical Reports. Each sample is analyzed in a Daily Analytical Batch (DAB) which includes the method blank, a laboratory control spike (LCS) and a laboratory control duplicate (LCD). A Daily Analytical Batch QC report is supplied for each method requested.

Method Blank

A method blank is a laboratory generated sample which assesses the degree to which laboratory operations and procedures cause a false positive. In the method blank, compounds should be present below the reporting limit (RL). Compounds present above the RL are flagged with a "B" in the Analytical Reports in that batch unless the result is greater than ten times the blank value..

Laboratory Control Spike

A laboratory control spike is a well characterized matrix similar to the sample which is spiked and run in duplicate with each Daily Analytical Batch. The laboratory control spike results are reported as a percent recovery. The QC Criteria for the control spike is listed in the Laboratory Control Report. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report. The control spike contains an abbreviated list of compounds in the method, and may contain compounds not on the target list for the specified report.

Laboratory Control Duplicate

The laboratory control duplicate is a duplicate analysis of the laboratory control spike, a standard, or a sample depending on the method. The results are reported as a relative percent difference (RPD). The criteria for the duplicate is in the Laboratory Control Report for the Daily Analytical Batch. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report.

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B08148

File Name: B08148C.D

Date Sampled:

Time:

Description: METHOD BLANK

Date Analyzed: 08/14/18

Time: 14:23

Canister:

Can Dilution Factor: 1.00

QC_Batch: 081418-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	ND	0.80	4.05	ND	
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	
					QC	Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag
2037-26-5	Toluene-d8				89	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B08158

File Name: B08158C.D
Description: METHOD BLANK
Canister:
QC_Batch: 081518-MA1

Date Sampled:
Date Analyzed: 08/15/18
Can Dilution Factor: 1.00
Air Volume: 200 ml
Time:
Time: 13:39

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	ND	0.80	4.05	ND	
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	95	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC

Analytical Method: TO-15

Laboratory ID: B08168

File Name: B08168D.D

Date Sampled:

Time:

Description: METHOD BLANK

Date Analyzed: 08/16/18

Time: 13:33

Canister:

Can Dilution Factor: 1.00

QC_Batch: 081618-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	ND	0.80	4.05	ND	
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	100	70	130	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	10.00	51.82	ND	45.38	235.14	ND	
108-88-3	Toluene	20.00	52.20	ND	75.30	196.53	ND	
10061-02-6	trans-1,3-Dichloropropene	10.00	51.86	ND	45.38	235.32	ND	
79-00-5	1,1,2-Trichloroethane	10.00	51.42	ND	54.53	280.39	ND	
591-78-6	2-Hexanone	50.00	141.80	ND	204.81	580.83	ND	
124-48-1	Dibromochloromethane	10.00	19.97	ND	85.15	170.02	ND	
106-93-4	1,2-Dibromoethane	10.00	24.27	ND	76.81	186.44	ND	
127-18-4	Tetrachloroethene	6.00	24.34	ND	40.67	164.97	ND	
108-90-7	Chlorobenzene	10.00	45.51	ND	46.03	209.47	ND	
100-41-4	Ethylbenzene	21.15	52.86	ND	91.80	229.50	ND	
1330-20-7	m,p-Xylenes	21.20	53.00	ND	92.03	230.07	ND	
100-42-5	Styrene	20.71	51.77	ND	88.21	220.53	ND	
75-25-2	Bromoform	10.00	13.42	ND	103.30	138.61	ND	
95-47-6	o-Xylene	20.62	51.54	ND	89.50	223.76	ND	
79-34-5	1,1,2,2-Tetrachloroethane	9.90	24.76	ND	67.93	169.81	ND	
622-96-8	4-Ethyltoluene	33.15	82.87	ND	162.89	407.22	ND	
108-67-8	1,3,5-Trimethylbenzene	20.66	51.66	ND	101.54	253.84	ND	
95-63-6	1,2,4-Trimethylbenzene	20.33	50.82	ND	99.89	249.72	ND	
541-73-1	1,3-Dichlorobenzene	20.00	37.00	ND	120.19	222.34	ND	
100-44-7	Benzyl chloride	20.00	121.20	ND	103.51	627.25	ND	
106-46-7	1,4-Dichlorobenzene	20.00	34.60	ND	120.19	207.92	ND	
95-50-1	1,2-Dichlorobenzene	20.00	32.40	ND	120.19	194.70	ND	
120-82-1	1,2,4-Trichlorobenzene	50.00	68.80	ND	370.78	510.19	ND	
91-20-3	Naphthalene	10.20	16.00	ND	53.46	83.85	ND	
87-68-3	Hexachlorobutadiene	50.00	53.00	ND	533.07	565.05	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	86	70	130	

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B08078

File Name: B08078B
Description: METHOD BLANK
Canister:
QC_Batch: 080718-GCK

Date Sampled:
Date Analyzed: 08/07/18
Can Factor: 1.00
Air Volume: 200 ml
Time: 13:19

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B08088

File Name: B08088C
Description: METHOD BLANK
Canister:
QC_Batch: 080818-GCK

Date Sampled:
Date Analyzed: 08/08/18
Can Factor: 1.00
Air Volume: 200 ml
Time: 12:21

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B08138

File Name: B08138B
Description: METHOD BLANK
Canister:
QC_Batch: 081318-GCK

Date Sampled:
Date Analyzed: 08/13/18
Can Factor: 1.00
Air Volume: 200 ml
Time: 11:46

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B08148

File Name: B08148B
Description: METHOD BLANK
Canister:
QC_Batch: 081418-GCK

Date Sampled:
Date Analyzed: 08/14/18
Can Factor: 1.00
Air Volume: 200 ml
Time: 11:57

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: LABQC
Laboratory Number: B08038

File Name: B08038B
Description: METHOD BLANK
Can/Tube#:
QC_Batch: 080318-GCO

Date Sampled:
Date Analyzed: 08/03/18
Can Dilution Factor: 1.00
Time: 12:22

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	100	300	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: LABQC
Laboratory Number: B08038

File Name: B08038A
Description: METHOD BLANK
Can/Tube#:
QC_Batch: 080318-GCL

Date Sampled:
Date Analyzed: 08/03/18
Dilution Factor: 1.00
Time: 9:59

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.10	0.30	ND	0.07	0.20	ND	

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 081418-MA1

Date: 08/14/18

CAS#	Compound	LCS Recovery		LCD Recovery		Spike Limit		Duplicate		Flag
		%	Flag	%	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	86		105		70	130	20	25	
75-35-4	1,1-Dichloroethene	92		91		70	130	1	25	
75-09-2	Dichloromethane	102		98		70	130	4	25	
75-34-3	1,1-Dichloroethane	92		90		70	130	1	25	
67-66-3	Chloroform	94		94		70	130	0	25	
71-55-6	1,1,1-Trichloroethane	83		80		70	130	4	25	
107-06-2	1,2-Dichloroethane	99		94		70	130	5	25	
71-43-2	Benzene	90		91		70	130	0	25	
56-23-5	Carbon tetrachloride	82		83		70	130	1	25	
79-01-6	Trichloroethene	92		90		70	130	1	25	
108-88-3	Toluene	89		87		70	130	2	25	
127-18-4	Tetrachloroethene	82		84		70	130	2	25	
100-41-4	Ethylbenzene	91		94		70	130	3	25	
1330-20-7	m,p-Xylenes	94		95		70	130	1	25	
95-47-6	o-Xylene	93		99		70	130	6	25	
108-67-8	1,3,5-Trimethylbenzene	101		105		70	130	4	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 081518-MA1

Date: 08/15/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	78		86		70	130	10	25	
75-35-4	1,1-Dichloroethene	88		94		70	130	7	25	
75-09-2	Dichloromethane	98		99		70	130	1	25	
75-34-3	1,1-Dichloroethane	89		91		70	130	2	25	
67-66-3	Chloroform	89		95		70	130	7	25	
71-55-6	1,1,1-Trichloroethane	83		82		70	130	1	25	
107-06-2	1,2-Dichloroethane	105		97		70	130	8	25	
71-43-2	Benzene	92		87		70	130	5	25	
56-23-5	Carbon tetrachloride	94		82		70	130	13	25	
79-01-6	Trichloroethene	95		92		70	130	3	25	
108-88-3	Toluene	92		91		70	130	1	25	
127-18-4	Tetrachloroethene	87		84		70	130	3	25	
100-41-4	Ethylbenzene	101		101		70	130	0	25	
1330-20-7	m,p-Xylenes	101		102		70	130	1	25	
95-47-6	o-Xylene	101		104		70	130	3	25	
108-67-8	1,3,5-Trimethylbenzene	106		108		70	130	2	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 081618-MA1

Date: 08/16/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	74		93		70	130	24	25	
75-35-4	1,1-Dichloroethene	97		89		70	130	8	25	
75-09-2	Dichloromethane	96		97		70	130	2	25	
75-34-3	1,1-Dichloroethane	90		87		70	130	3	25	
67-66-3	Chloroform	95		92		70	130	3	25	
71-55-6	1,1,1-Trichloroethane	80		82		70	130	3	25	
107-06-2	1,2-Dichloroethane	98		97		70	130	1	25	
71-43-2	Benzene	91		91		70	130	0	25	
56-23-5	Carbon tetrachloride	90		89		70	130	1	25	
79-01-6	Trichloroethene	90		93		70	130	3	25	
108-88-3	Toluene	92		91		70	130	1	25	
127-18-4	Tetrachloroethene	88		87		70	130	1	25	
100-41-4	Ethylbenzene	104		100		70	130	5	25	
1330-20-7	m,p-Xylenes	96		96		70	130	0	25	
95-47-6	o-Xylene	106		98		70	130	7	25	
108-67-8	1,3,5-Trimethylbenzene	107		107		70	130	1	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 081718-MA1

Date: 08/17/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	91		104		70	130	14	25	
75-35-4	1,1-Dichloroethene	84		93		70	130	10	25	
75-09-2	Dichloromethane	93		93		70	130	0	25	
75-34-3	1,1-Dichloroethane	87		91		70	130	5	25	
67-66-3	Chloroform	90		93		70	130	3	25	
71-55-6	1,1,1-Trichloroethane	78		80		70	130	2	25	
107-06-2	1,2-Dichloroethane	95		90		70	130	6	25	
71-43-2	Benzene	89		91		70	130	2	25	
56-23-5	Carbon tetrachloride	91		85		70	130	7	25	
79-01-6	Trichloroethene	86		91		70	130	5	25	
108-88-3	Toluene	91		89		70	130	3	25	
127-18-4	Tetrachloroethene	83		78		70	130	5	25	
100-41-4	Ethylbenzene	93		95		70	130	2	25	
1330-20-7	m,p-Xylenes	97		94		70	130	3	25	
95-47-6	o-Xylene	97		95		70	130	2	25	
108-67-8	1,3,5-Trimethylbenzene	99		103		70	130	4	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-14 Modified GC/FID

QC_Batch: 080718-GCK

Date: 08/07/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
109-66-0	n-Pentane	110		118		70	130	8	25	
110-54-3	n-Hexane	104		106		70	130	2	25	
71-43-2	Benzene	108		108		70	130	0	25	
142-82-5	n-Heptane	108		109		70	130	2	25	
108-88-3	Toluene	110		112		70	130	2	25	
111-65-9	n-Octane	109		114		70	130	5	25	
108-38-3	m,p-xylene	114		116		70	130	3	25	
95-47-6	o-xylene	113		117		70	130	4	25	
108-67-8	1,3,5-Trimethylbenzene	116		122		70	130	6	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-14 Modified GC/FID

QC_Batch: 080818-GCK

Date: 08/08/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
109-66-0	n-Pentane	99		100		70	130	1	25	
110-54-3	n-Hexane	105		106		70	130	1	25	
71-43-2	Benzene	114		108		70	130	6	25	
142-82-5	n-Heptane	111		108		70	130	3	25	
108-88-3	Toluene	110		104		70	130	6	25	
111-65-9	n-Octane	111		110		70	130	1	25	
108-38-3	m,p-xylene	113		108		70	130	4	25	
95-47-6	o-xylene	115		112		70	130	3	25	
108-67-8	1,3,5-Trimethylbenzene	119		116		70	130	3	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-14 Modified GC/FID

QC_Batch: 081318-GCK

Date: 08/13/18

CAS#	Compound	LCS Recovery		LCD Recovery		Spike Limit		Duplicate		Flag
		%	Flag	%	Flag	LCL %	UCL %	Duplicate %	Limit %	
109-66-0	n-Pentane	99		101		70	130	2	25	
110-54-3	n-Hexane	113		103		70	130	10	25	
71-43-2	Benzene	109		105		70	130	4	25	
142-82-5	n-Heptane	124		105		70	130	19	25	
108-88-3	Toluene	104		95		70	130	10	25	
111-65-9	n-Octane	107		99		70	130	8	25	
108-38-3	m,p-xylene	94		83		70	130	11	25	
95-47-6	o-xylene	92		84		70	130	8	25	
108-67-8	1,3,5-Trimethylbenzene	84		75		70	130	9	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-14 Modified GC/FID

QC_Batch: 081418-GCK

Date: 08/14/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	Flag
		%		%		%	%	%	%	
109-66-0	n-Pentane	115		104		70	130	10	25	
110-54-3	n-Hexane	106		104		70	130	2	25	
71-43-2	Benzene	106		103		70	130	3	25	
142-82-5	n-Heptane	109		106		70	130	3	25	
108-88-3	Toluene	93		92		70	130	1	25	
111-65-9	n-Octane	104		103		70	130	1	25	
108-38-3	m,p-xylene	86		85		70	130	1	25	
95-47-6	o-xylene	88		88		70	130	0	25	
108-67-8	1,3,5-Trimethylbenzene	75		79		70	130	4	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL REPORT

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D 1945 GC/TCD

Analytical Method: D1945

QC_Batch: 080118-GCO

Date Analyzed: 08/01/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	Flag
		%		%		%	%	%	%	
7782-44-7	Oxygen	92		92		70	130	0	25	
7727-37-9	Nitrogen	94		93		70	130	1	25	
74-82-8	Methane	112		113		70	130	0	25	
630-08-0	Carbon Monoxide	90		90		70	130	0	25	
124-38-9	Carbon Dioxide	98		98		70	130	0	25	

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D3416 Methane by GC/FID

Analytical Method: ASTM D3416

Date: 08/03/18

QC_Batch: 080318-GCL

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
74-82-8	Methane	101		101		70	130	0	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

Analytical Reports

EAS SDG Number 218376

Project Number: 17198

The following pages contain the certified Analytical Reports for the samples submitted in the Sample Delivery Group (SDG) and are in order of the EAS Lab ID number. All of the analytical methods used are modifications of the published methods. Procedural method modifications are listed in the method descriptions, and the QC modifications are in the QC Criteria table in the EAS Quality Manual.

The Analytical Report has columns for the method detection limit (MDL), the reporting limit (RL), and the Amount. The Amount is the concentration of the compound in the sample. The report usually has the results reported with two commonly used units. The MDL, RL, and Amount are adjusted for the canister dilution factor and any dilution caused by sample matrix effects.

DETECTION LIMITS

MDL: The MDL is initially determined from the standard deviation of seven replicate measurements, but the value in the report is set from a MDL verification sample run at a level near the calculated MDL.

RL: The reporting limit (RL) is usually the lowest concentration standard on the calibration curve, and represents the lowest concentration that can be measured that will meet all of the QC Criteria for the method.

DATA FLAGS

In the standard report, if a compound is not detected above the method detection limit, a "ND" is in the Amount column. The flag column is used for both the not detect flag and for any data flags. The not detect flag is either a "ND" or a "U". If the "U" flag is selected, the MDL for the compound is reported in the Amount column instead of "ND". Other flags are listed below:

B - This compound was detected in the batch method blank above the reporting limit.

E - This compound exceeds the calibration range for this sample volume.

J - The amount reported is estimated because it was below the RL and above the MDL

F - Higher detection limits because of matrix interference

UNITS

PPBV or PPMV: Parts-per-billion (or million) by volume is a mole (volume) ratio of the moles of analyte divided by the moles of air (gas). This is the primary unit used to report air or gas concentrations and is independent of temperature and pressure. It is different from the ppb unit used to report water or soil data, which is a mass ratio.

UG/M3 OR MG/M3: Micrograms (or milligrams) per cubic meter is a mass/volume ratio and does depend on temperature and pressure of the source at time of sample collection. The reported result was calculated based on 1 atm pressure and a temperature of 25C. The conversion from PPBV is: $UG/M3 = PPBV \times MW/24.46$ where 24.46 is the gas constant and MW is the Compounds Molecular Weight (sometimes called Formula Weight)

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 01

File Name: 1837601A.D
Description: T - 201
Canister: 699
QC_Batch: 081418-MA1

Date Sampled: 07/31/18 Time: 08:30
Date Analyzed: 08/14/18 Time: 16:31
Can Dilution Factor: 1.29
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.62	ND	1.59	8.02	ND	
74-87-3	Chloromethane	0.32	1.62	ND	0.67	3.35	ND	
76-14-2	Freon 114	0.32	1.62	ND	2.25	11.33	ND	
75-01-4	Vinyl chloride	0.32	1.62	ND	0.82	4.14	ND	
106-99-0	1,3-Butadiene	0.32	1.62	ND	0.71	3.59	ND	
74-83-9	Bromomethane	0.32	1.62	ND	1.25	6.29	ND	
75-00-3	Chloroethane	0.32	1.62	ND	0.85	4.28	ND	
64-17-5	Ethanol	1.61	4.84	ND	3.04	9.12	ND	
75-69-4	Trichlorofluoromethane	0.32	1.55	ND	1.81	8.70	ND	
67-64-1	Acetone	1.61	3.97	58.02	3.83	9.42	137.80	
67-63-0	2-propanol	1.61	3.70	21.48	3.96	9.10	52.77	
75-35-4	1,1-Dichloroethene	0.32	1.60	ND	1.28	6.34	ND	
76-13-1	Freon 113	0.32	1.54	ND	2.47	11.82	ND	
75-09-2	Dichloromethane	0.65	1.55	ND	2.24	5.39	ND	
75-15-0	Carbon disulfide	1.61	2.99	ND	5.02	9.31	ND	
156-60-5	trans-1,2-Dichloroethene	0.32	1.16	ND	1.28	4.61	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.19	ND	1.16	4.28	ND	
75-34-3	1,1-Dichloroethane	0.32	1.61	ND	1.31	6.51	ND	
108-05-4	Vinyl acetate	0.32	1.42	ND	1.14	4.99	ND	
78-93-3	2-Butanone	1.29	3.28	ND	3.80	9.68	ND	
141-78-6	Ethyl acetate	0.65	1.41	ND	2.32	5.09	ND	
74-97-5	Bromochloromethane	0.32	0.86	ND	1.71	4.54	ND	
109-99-9	Tetrahydrofuran	0.65	1.62	ND	1.90	4.78	ND	
156-59-2	cis-1,2-Dichloroethene	0.65	1.74	ND	2.55	6.87	ND	
67-66-3	Chloroform	0.32	1.62	ND	1.57	7.89	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.43	ND	1.76	7.81	ND	
107-06-2	1,2-Dichloroethane	0.32	1.47	ND	1.31	5.95	ND	
110-82-7	Cyclohexane	0.32	1.24	ND	1.11	4.26	ND	
71-43-2	Benzene	0.32	1.64	40.99	1.03	5.23	130.87	
56-23-5	Carbon tetrachloride	0.32	1.53	ND	2.03	9.61	ND	
142-82-5	n-Heptane	1.61	3.91	ND	6.60	16.01	ND	
78-87-5	1,2-Dichloropropane	0.32	1.55	ND	1.49	7.17	ND	
123-91-1	1,4 Dioxane	1.29	2.64	ND	4.65	9.50	ND	
79-01-6	Trichloroethene	0.19	1.50	ND	1.04	8.07	ND	
75-27-4	Bromodichloromethane	0.32	0.65	ND	2.16	4.36	ND	
80-62-6	Methyl methacrylate	1.29	4.36	ND	5.28	17.84	ND	
108-10-1	4-Methyl-2-pentanone	1.29	4.88	ND	5.28	20.00	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.32	1.67	ND	1.46	7.58	ND	
108-88-3	Toluene	0.65	1.68	44.68	2.43	6.34	168.23	
10061-02-6	trans-1,3-Dichloropropene	0.32	1.67	ND	1.46	7.59	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.66	ND	1.76	9.04	ND	
591-78-6	2-Hexanone	1.61	4.57	ND	6.60	18.73	ND	
124-48-1	Dibromochloromethane	0.32	0.64	ND	2.75	5.48	ND	
106-93-4	1,2-Dibromoethane	0.32	0.78	ND	2.48	6.01	ND	
127-18-4	Tetrachloroethene	0.19	0.78	ND	1.31	5.32	ND	
108-90-7	Chlorobenzene	0.32	1.47	ND	1.48	6.76	ND	
100-41-4	Ethylbenzene	0.68	1.70	8.36	2.96	7.40	36.30	
1330-20-7	m,p-Xylenes	0.68	1.71	33.83	2.97	7.42	146.85	
100-42-5	Styrene	0.67	1.67	ND	2.84	7.11	ND	
75-25-2	Bromoform	0.32	0.43	ND	3.33	4.47	ND	
95-47-6	o-Xylene	0.66	1.66	17.08	2.89	7.22	74.17	
79-34-5	1,1,2,2-Tetrachloroethane	0.32	0.80	ND	2.19	5.48	ND	
622-96-8	4-Ethyltoluene	1.07	2.67	1.83	5.25	13.13	8.98	J
108-67-8	1,3,5-Trimethylbenzene	0.67	1.67	1.38	3.27	8.19	6.77	J
95-63-6	1,2,4-Trimethylbenzene	0.66	1.64	3.24	3.22	8.05	15.91	
541-73-1	1,3-Dichlorobenzene	0.65	1.19	ND	3.88	7.17	ND	
100-44-7	Benzyl chloride	0.65	3.91	ND	3.34	20.23	ND	
106-46-7	1,4-Dichlorobenzene	0.65	1.12	ND	3.88	6.71	ND	
95-50-1	1,2-Dichlorobenzene	0.65	1.04	ND	3.88	6.28	ND	
120-82-1	1,2,4-Trichlorobenzene	1.61	2.22	ND	11.96	16.45	ND	
91-20-3	Naphthalene	0.33	0.52	2.17	1.72	2.70	11.39	
87-68-3	Hexachlorobutadiene	1.61	1.71	ND	17.19	18.22	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				87	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 01

File Name: 1837601B
Description: T - 201
Canister: 699
QC_Batch: 080718-GCK

Date Sampled: 07/31/18 Time: 8:30
Date Analyzed: 08/07/18 Time: 15:55
Can Factor: 1.29
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.29	3.87	ND	1.49	4.46	ND	ND
74-86-2	Acetylene	1.29	3.87	ND	1.37	4.12	ND	ND
74-84-0	Ethane	1.29	3.87	20.30	1.59	4.77	25.05	
115-07-1	Propene	0.86	2.58	ND	1.48	4.45	ND	ND
74-98-6	Propane	0.86	2.58	3.59	1.55	4.66	6.50	
75-28-5	i-Butane	0.65	1.94	ND	1.54	4.61	ND	ND
106-98-9	1-Butene	0.65	1.94	ND	1.48	4.45	ND	ND
106-97-8	n-Butane	0.65	1.94	0.88	1.54	4.61	2.09	J
624-64-6	t-2-Butene	0.65	1.94	ND	1.48	4.45	ND	ND
590-18-1	c-2-Butene	0.65	1.94	ND	1.48	4.45	ND	ND
78-78-4	i-Pentane	0.52	1.55	14.53	1.53	4.58	43.00	
109-67-1	1-Pentene	0.52	1.55	ND	1.48	4.45	ND	ND
109-66-0	n-Pentane	0.52	1.55	2.11	1.52	4.57	6.23	
78-79-5	Isoprene	0.52	1.55	ND	1.44	4.32	ND	ND
646-04-8	t-2-Pentene	0.52	1.55	ND	1.48	4.45	ND	ND
627-20-3	c-2-Pentene	0.52	1.55	ND	1.48	4.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.43	1.29	ND	1.52	4.56	ND	ND
287-92-3	Cyclopentane	0.52	1.55	ND	1.48	4.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.43	1.29	ND	1.52	4.56	ND	ND
107-83-5	2-Methylpentane	0.43	1.29	ND	1.52	4.56	ND	ND
96-14-0	3-Methylpentane	0.43	1.29	8.37	1.52	4.56	29.58	
110-54-3	n-Hexane	0.43	1.29	12.20	1.52	4.56	43.11	
96-37-7	Methylcyclopentane	0.43	1.29	ND	1.48	4.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.37	1.11	ND	1.51	4.54	ND	ND
71-43-2	Benzene	0.43	1.29	65.32	1.38	4.13	209.06	
110-82-7	Cyclohexane	0.43	1.29	ND	1.48	4.45	ND	ND
591-76-4	2-Methylhexane	0.37	1.11	ND	1.51	4.54	ND	ND
565-59-3	2,3-Dimethylpentane	0.37	1.11	ND	1.51	4.54	ND	ND
589-34-4	3-Methylhexane	0.37	1.11	1.46	1.51	4.54	6.00	
540-84-1	2,2,4-Trimethylpentane	0.32	0.97	ND	1.51	4.53	ND	ND
142-82-5	n-Heptane	0.37	1.11	2.21	1.51	4.54	9.06	
108-87-2	Methylcyclohexane	0.37	1.11	ND	1.48	4.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.97	ND	1.51	4.53	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.97	0.77	1.51	4.53	3.61	J
565-75-3	2,3,4-Trimethylpentane	0.32	0.97	ND	1.51	4.53	ND	ND
108-88-3	Toluene	0.37	1.11	69.13	1.39	4.17	260.94	
584-94-1	2,3-Dimethylhexane	0.32	0.97	ND	1.51	4.53	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.97	3.58	1.51	4.53	16.76	
589-81-1	3-Methylheptane	0.32	0.97	1.53	1.51	4.53	7.16	
111-65-9	n-Octane	0.32	0.97	6.03	1.51	4.53	28.22	
100-41-4	Ethylbenzene	0.32	0.97	15.13	1.40	4.21	65.86	
108-38-3	m,p-xylene	0.32	0.97	61.62	1.40	4.21	268.20	
100-42-5	Styrene	0.32	0.97	1.76	1.38	4.13	7.51	
95-47-6	o-xylene	0.32	0.97	36.18	1.40	4.21	157.48	
111-84-2	n-Nonane	0.29	0.86	5.74	1.51	4.52	30.17	
98-82-8	i-Propylbenzene	0.29	0.86	ND	1.41	4.24	ND	ND
103-65-1	n-propylbenzene	0.29	0.86	1.31	1.41	4.24	6.44	
80-56-8	a-Pinene	0.26	0.77	ND	1.44	4.32	ND	ND
620-14-4	3-Ethyltoluene	0.29	0.86	3.82	1.41	4.24	18.80	
622-96-8	4-Ethyltoluene	0.29	0.86	ND	1.41	4.24	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.29	0.86	1.88	1.41	4.24	9.28	
611-14-3	2-Ethyltoluene	0.29	0.86	ND	1.41	4.24	ND	ND
127-91-3	b-Pinene	0.26	0.77	ND	1.44	4.32	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.29	0.86	7.30	1.41	4.24	35.98	
124-18-5	n-Decane	0.26	0.77	5.41	1.50	4.51	31.52	
526-73-8	1,2,3-Trimethylbenzene	0.29	0.86	ND	1.41	4.24	ND	ND
5989-27-5	d-Limonene	0.26	0.77	ND	1.44	4.32	ND	ND
141-93-5	1,3-Diethylbenzene	0.26	0.77	1.11	1.42	4.26	6.09	
105-05-5	1,4-Diethylbenzene	0.26	0.77	ND	1.42	4.26	ND	ND
104-51-8	n-Butylbenzene	0.26	0.77	1.71	1.42	4.26	9.40	
1120-21-4	Undecane	0.23	0.70	5.21	1.50	4.51	33.35	
112-40-3	Dodecane	0.22	0.65	2.05	1.50	4.50	14.30	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.68	29.03	604.93	34.18	102.54	2,137.08	
TNMHC - C1	Total Non-Methane Hydrocarbons	58.05	174.15	3,629.56	38.07	114.20	2,380.04	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 01

File Name: 1837601A

Date Sampled: 07/31/18

Time: 8:30

Description: T - 201

Date Analyzed: 08/03/18

Time: 15:12

Can/Tube#: 699

Can Dilution Factor: 1.29

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.02	129	387	168	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 01

File Name: 1837601A
Description: T - 201
Can/Tube#: 699
QC_Batch: 080318-GCL

Date Sampled: 07/31/18 **Time:** 8:30
Date Analyzed: 08/03/18 **Time:** 10:20
Dilution Factor: 1.29

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.39	339.52	0.09	0.26	229.41	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 02

File Name: 1837602A.D

Date Sampled: 07/31/18

Time: 09:22

Description: T - 202

Date Analyzed: 08/14/18

Time: 17:09

Canister: 773

Can Dilution Factor: 1.34

QC_Batch: 081418-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.34	1.69	ND	1.66	8.33	ND	
74-87-3	Chloromethane	0.34	1.69	ND	0.69	3.48	ND	
76-14-2	Freon 114	0.34	1.69	ND	2.34	11.77	ND	
75-01-4	Vinyl chloride	0.34	1.69	ND	0.86	4.31	ND	
106-99-0	1,3-Butadiene	0.34	1.69	ND	0.74	3.73	ND	
74-83-9	Bromomethane	0.34	1.69	ND	1.30	6.54	ND	
75-00-3	Chloroethane	0.34	1.69	ND	0.88	4.44	ND	
64-17-5	Ethanol	1.68	5.03	ND	3.16	9.47	ND	
75-69-4	Trichlorofluoromethane	0.34	1.61	ND	1.88	9.04	ND	
67-64-1	Acetone	1.68	4.12	38.06	3.98	9.79	90.39	
67-63-0	2-propanol	1.68	3.85	13.33	4.12	9.45	32.76	
75-35-4	1,1-Dichloroethene	0.34	1.66	ND	1.33	6.58	ND	
76-13-1	Freon 113	0.34	1.60	ND	2.57	12.28	ND	
75-09-2	Dichloromethane	0.67	1.61	ND	2.33	5.60	ND	
75-15-0	Carbon disulfide	1.68	3.11	ND	5.21	9.67	ND	
156-60-5	trans-1,2-Dichloroethene	0.34	1.21	ND	1.33	4.79	ND	
1634-04-4	Methyl tert butyl ether	0.34	1.24	ND	1.21	4.45	ND	
75-34-3	1,1-Dichloroethane	0.34	1.67	ND	1.36	6.76	ND	
108-05-4	Vinyl acetate	0.34	1.47	ND	1.18	5.18	ND	
78-93-3	2-Butanone	1.34	3.41	8.21	3.95	10.05	24.20	
141-78-6	Ethyl acetate	0.67	1.47	ND	2.41	5.28	ND	
74-97-5	Bromochloromethane	0.34	0.89	ND	1.77	4.72	ND	
109-99-9	Tetrahydrofuran	0.67	1.69	ND	1.97	4.97	ND	
156-59-2	cis-1,2-Dichloroethene	0.67	1.80	ND	2.65	7.14	ND	
67-66-3	Chloroform	0.34	1.68	ND	1.64	8.20	ND	
71-55-6	1,1,1-Trichloroethane	0.34	1.49	ND	1.83	8.11	ND	
107-06-2	1,2-Dichloroethane	0.34	1.53	ND	1.36	6.18	ND	
110-82-7	Cyclohexane	0.34	1.29	ND	1.16	4.43	ND	
71-43-2	Benzene	0.34	1.70	35.82	1.07	5.43	114.37	
56-23-5	Carbon tetrachloride	0.34	1.59	ND	2.11	9.98	ND	
142-82-5	n-Heptane	1.68	4.06	ND	6.86	16.63	ND	
78-87-5	1,2-Dichloropropane	0.34	1.61	ND	1.55	7.45	ND	
123-91-1	1,4 Dioxane	1.34	2.74	ND	4.83	9.87	ND	
79-01-6	Trichloroethene	0.20	1.56	ND	1.08	8.38	ND	
75-27-4	Bromodichloromethane	0.34	0.68	ND	2.24	4.53	ND	
80-62-6	Methyl methacrylate	1.34	4.53	ND	5.48	18.53	ND	
108-10-1	4-Methyl-2-pentanone	1.34	5.07	ND	5.49	20.78	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	0.34	1.74	ND	1.52	7.88	ND		
108-88-3	Toluene	0.67	1.75	37.61	2.52	6.58	141.60		
10061-02-6	trans-1,3-Dichloropropene	0.34	1.74	ND	1.52	7.88	ND		
79-00-5	1,1,2-Trichloroethane	0.34	1.72	ND	1.83	9.39	ND		
591-78-6	2-Hexanone	1.68	4.75	ND	6.86	19.46	ND		
124-48-1	Dibromochloromethane	0.34	0.67	ND	2.85	5.70	ND		
106-93-4	1,2-Dibromoethane	0.34	0.81	ND	2.57	6.25	ND		
127-18-4	Tetrachloroethene	0.20	0.82	ND	1.36	5.53	ND		
108-90-7	Chlorobenzene	0.34	1.52	ND	1.54	7.02	ND		
100-41-4	Ethylbenzene	0.71	1.77	7.57	3.08	7.69	32.88		
1330-20-7	m,p-Xylenes	0.71	1.78	30.03	3.08	7.71	130.38		
100-42-5	Styrene	0.69	1.73	ND	2.96	7.39	ND		
75-25-2	Bromoform	0.34	0.45	ND	3.46	4.64	ND		
95-47-6	o-Xylene	0.69	1.73	15.94	3.00	7.50	69.21		
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.83	ND	2.28	5.69	ND		
622-96-8	4-Ethyltoluene	1.11	2.78	1.54	5.46	13.64	7.56	J	
108-67-8	1,3,5-Trimethylbenzene	0.69	1.73	2.48	3.40	8.50	12.19		
95-63-6	1,2,4-Trimethylbenzene	0.68	1.70	2.67	3.35	8.37	13.11		
541-73-1	1,3-Dichlorobenzene	0.67	1.24	ND	4.03	7.45	ND		
100-44-7	Benzyl chloride	0.67	4.06	ND	3.47	21.01	ND		
106-46-7	1,4-Dichlorobenzene	0.67	1.16	ND	4.03	6.97	ND		
95-50-1	1,2-Dichlorobenzene	0.67	1.09	ND	4.03	6.52	ND		
120-82-1	1,2,4-Trichlorobenzene	1.68	2.30	ND	12.42	17.09	ND		
91-20-3	Naphthalene	0.34	0.54	4.85	1.79	2.81	25.40		
87-68-3	Hexachlorobutadiene	1.68	1.78	ND	17.86	18.93	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				96	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 02

File Name: 1837602A
Description: T - 202
Canister: 773
QC_Batch: 080718-GCK

Date Sampled: 07/31/18 Time: 9:22
Date Analyzed: 08/07/18 Time: 15:11
Can Factor: 1.34
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.34	4.02	ND	1.54	4.63	ND	ND
74-86-2	Acetylene	1.34	4.02	ND	1.43	4.28	ND	ND
74-84-0	Ethane	1.34	4.02	21.02	1.65	4.96	25.93	
115-07-1	Propene	0.89	2.68	ND	1.54	4.62	ND	ND
74-98-6	Propane	0.89	2.68	8.71	1.61	4.84	15.74	
75-28-5	i-Butane	0.67	2.01	ND	1.60	4.79	ND	ND
106-98-9	1-Butene	0.67	2.01	ND	1.54	4.62	ND	ND
106-97-8	n-Butane	0.67	2.01	ND	1.60	4.79	ND	ND
624-64-6	t-2-Butene	0.67	2.01	ND	1.54	4.62	ND	ND
590-18-1	c-2-Butene	0.67	2.01	ND	1.54	4.62	ND	ND
78-78-4	i-Pentane	0.54	1.61	1.33	1.59	4.76	3.93	J
109-67-1	1-Pentene	0.54	1.61	ND	1.54	4.62	ND	ND
109-66-0	n-Pentane	0.54	1.61	1.25	1.58	4.75	3.70	J
78-79-5	Isoprene	0.54	1.61	ND	1.50	4.49	ND	ND
646-04-8	t-2-Pentene	0.54	1.61	ND	1.54	4.62	ND	ND
627-20-3	c-2-Pentene	0.54	1.61	ND	1.54	4.62	ND	ND
75-83-2	2,2-Dimethylbutane	0.45	1.34	ND	1.58	4.73	ND	ND
287-92-3	Cyclopentane	0.54	1.61	ND	1.54	4.62	ND	ND
79-29-8	2,3-Dimethylbutane	0.45	1.34	ND	1.58	4.73	ND	ND
107-83-5	2-Methylpentane	0.45	1.34	0.73	1.58	4.73	2.56	J
96-14-0	3-Methylpentane	0.45	1.34	2.94	1.58	4.73	10.39	
110-54-3	n-Hexane	0.45	1.34	3.00	1.58	4.73	10.59	
96-37-7	Methylcyclopentane	0.45	1.34	ND	1.54	4.62	ND	ND
108-08-7	2,4-Dimethylpentane	0.38	1.15	1.88	1.57	4.72	7.74	
71-43-2	Benzene	0.45	1.34	40.76	1.43	4.29	130.47	
110-82-7	Cyclohexane	0.45	1.34	ND	1.54	4.62	ND	ND
591-76-4	2-Methylhexane	0.38	1.15	ND	1.57	4.72	ND	ND
565-59-3	2,3-Dimethylpentane	0.38	1.15	ND	1.57	4.72	ND	ND
589-34-4	3-Methylhexane	0.38	1.15	0.92	1.57	4.72	3.77	J
540-84-1	2,2,4-Trimethylpentane	0.34	1.01	1.36	1.57	4.70	6.35	
142-82-5	n-Heptane	0.38	1.15	1.36	1.57	4.72	5.57	
108-87-2	Methylcyclohexane	0.38	1.15	2.10	1.54	4.62	8.46	
592-13-2	2,5-Dimethylhexane	0.34	1.01	ND	1.57	4.70	ND	ND
589-43-5	2,4-Dimethylhexane	0.34	1.01	0.73	1.57	4.70	3.44	J
565-75-3	2,3,4-Trimethylpentane	0.34	1.01	1.37	1.57	4.70	6.43	
108-88-3	Toluene	0.38	1.15	42.53	1.45	4.34	160.55	
584-94-1	2,3-Dimethylhexane	0.34	1.01	ND	1.57	4.70	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.34	1.01	ND	1.57	4.70	ND	ND
589-81-1	3-Methylheptane	0.34	1.01	ND	1.57	4.70	ND	ND
111-65-9	n-Octane	0.34	1.01	2.25	1.57	4.70	10.53	
100-41-4	Ethylbenzene	0.34	1.01	9.44	1.46	4.37	41.09	
108-38-3	m,p-xylene	0.34	1.01	39.80	1.46	4.37	173.24	
100-42-5	Styrene	0.34	1.01	ND	1.43	4.29	ND	ND
95-47-6	o-xylene	0.34	1.01	21.93	1.46	4.37	95.43	
111-84-2	n-Nonane	0.30	0.89	3.03	1.57	4.70	15.92	
98-82-8	i-Propylbenzene	0.30	0.89	ND	1.47	4.40	ND	ND
103-65-1	n-propylbenzene	0.30	0.89	0.80	1.47	4.40	3.92	J
80-56-8	a-Pinene	0.27	0.80	ND	1.50	4.49	ND	ND
620-14-4	3-Ethyltoluene	0.30	0.89	ND	1.47	4.40	ND	ND
622-96-8	4-Ethyltoluene	0.30	0.89	2.17	1.47	4.40	10.71	
108-67-8	1,3,5-Trimethylbenzene	0.30	0.89	1.32	1.47	4.40	6.51	
611-14-3	2-Ethyltoluene	0.30	0.89	ND	1.47	4.40	ND	ND
127-91-3	b-Pinene	0.27	0.80	ND	1.50	4.49	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.30	0.89	5.31	1.47	4.40	26.16	
124-18-5	n-Decane	0.27	0.80	2.72	1.56	4.69	15.87	
526-73-8	1,2,3-Trimethylbenzene	0.30	0.89	ND	1.47	4.40	ND	ND
5989-27-5	d-Limonene	0.27	0.80	ND	1.50	4.49	ND	ND
141-93-5	1,3-Diethylbenzene	0.27	0.80	ND	1.47	4.42	ND	ND
105-05-5	1,4-Diethylbenzene	0.27	0.80	ND	1.47	4.42	ND	ND
104-51-8	n-Butylbenzene	0.27	0.80	ND	1.47	4.42	ND	ND
1120-21-4	Undecane	0.24	0.73	2.85	1.56	4.68	18.23	
112-40-3	Dodecane	0.22	0.67	1.57	1.56	4.68	10.95	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.05	30.15	426.00	35.50	106.51	1,504.96	
TNMHC - C1	Total Non-Methane Hydrocarbons	60.30	180.90	2,555.98	39.54	118.62	1,676.05	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 02

File Name: 1837602A

Date Sampled: 07/31/18

Time: 9:22

Description: T - 202

Date Analyzed: 08/03/18

Time: 15:18

Can/Tube#: 773

Can Dilution Factor: 1.34

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.03	134	402	299	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 02

File Name: 1837602A
Description: T - 202
Can/Tube#: 773
QC_Batch: 080318-GCL

Date Sampled: 07/31/18 Time: 9:22
Date Analyzed: 08/03/18 Time: 10:44
Dilution Factor: 1.34

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.40	214.76	0.09	0.27	145.11	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 03

File Name: 1837603A.D

Date Sampled: 07/31/18

Time: 10:20

Description: T - 203

Date Analyzed: 08/16/18

Time: 15:32

Canister: 726

Can Dilution Factor: 1.26

QC_Batch: 081618-MA1

Air Volume: 20 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane.	3.15	15.84	ND	15.57	78.31	ND	
74-87-3	Chloromethane	3.15	15.84	ND	6.50	32.71	ND	
76-14-2	Freon 114	3.15	15.84	ND	22.01	110.70	ND	
75-01-4	Vinyl chloride	3.15	15.84	ND	8.05	40.48	ND	
106-99-0	1,3-Butadiene	3.15	15.84	ND	6.97	35.04	ND	
74-83-9	Bromomethane	3.15	15.84	ND	12.22	61.47	ND	
75-00-3	Chloroethane	3.15	15.84	ND	8.31	41.78	ND	
64-17-5	Ethanol	15.75	47.25	ND	29.68	89.04	ND	
75-69-4	Trichlorofluoromethane	3.15	15.13	ND	17.69	84.96	ND	
67-64-1	Acetone	15.75	38.75	361.59	37.41	92.02	858.81	
67-63-0	2-propanol	15.75	36.16	33.58	38.70	88.84	82.51	J
75-35-4	1,1-Dichloroethene	3.15	15.62	ND	12.48	61.89	ND	
76-13-1	Freon 113	3.15	15.07	ND	24.13	115.45	ND	
75-09-2	Dichloromethane	6.30	15.17	ND	21.87	52.65	ND	
75-15-0	Carbon disulfide	15.75	29.23	ND	49.00	90.94	ND	
156-60-5	trans-1,2-Dichloroethene	3.15	11.37	ND	12.48	45.05	ND	
1634-04-4	Methyl tert butyl ether	3.15	11.61	ND	11.34	41.83	ND	
75-34-3	1,1-Dichloroethane	3.15	15.71	ND	12.75	63.58	ND	
108-05-4	Vinyl acetate	3.15	13.84	ND	11.09	48.71	ND	
78-93-3	2-Butanone	12.60	32.07	116.28	37.14	94.51	342.71	
141-78-6	Ethyl acetate	6.30	13.80	ND	22.69	49.69	ND	
74-97-5	Bromochloromethane	3.15	8.39	ND	16.66	44.38	ND	
109-99-9	Tetrahydrofuran	6.30	15.84	ND	18.57	46.70	ND	
156-59-2	cis-1,2-Dichloroethene	6.30	16.95	ND	24.96	67.13	ND	
67-66-3	Chloroform	3.15	15.80	ND	15.38	77.11	ND	
71-55-6	1,1,1-Trichloroethane	3.15	13.99	ND	17.18	76.27	ND	
107-06-2	1,2-Dichloroethane	3.15	14.37	ND	12.75	58.15	ND	
110-82-7	Cyclohexane	3.16	12.10	ND	10.89	41.63	ND	
71-43-2	Benzene	3.15	16.00	1,735.15	10.06	51.09	5,539.79	
56-23-5	Carbon tetrachloride	3.15	14.93	ND	19.80	93.87	ND	
142-82-5	n-Heptane	15.75	38.18	102.66	64.51	156.38	420.49	
78-87-5	1,2-Dichloropropane	3.15	15.16	ND	14.55	70.03	ND	
123-91-1	1,4 Dioxane	12.60	25.77	ND	45.38	92.80	ND	
79-01-6	Trichloroethene	1.89	14.67	ND	10.15	78.81	ND	
75-27-4	Bromodichloromethane	3.15	6.36	ND	21.09	42.61	ND	
80-62-6	Methyl methacrylate	12.60	42.59	ND	51.56	174.27	ND	
108-10-1	4-Methyl-2-pentanone	12.60	47.69	ND	51.61	195.35	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	3.15	16.32	ND	14.29	74.07	ND		
108-88-3	Toluene	6.30	16.44	1,647.41	23.72	61.91	6,202.49		
10061-02-6	trans-1,3-Dichloropropene	3.15	16.34	32.72	14.29	74.13	148.46		
79-00-5	1,1,2-Trichloroethane	3.15	16.20	159.57	17.18	88.32	870.21		
591-78-6	2-Hexanone	15.75	44.67	ND	64.51	182.96	ND		
124-48-1	Dibromochloromethane	3.15	6.29	ND	26.82	53.56	ND		
106-93-4	1,2-Dibromoethane	3.15	7.65	ND	24.20	58.73	ND		
127-18-4	Tetrachloroethene	1.89	7.67	ND	12.81	51.96	ND		
108-90-7	Chlorobenzene	3.15	14.33	15.50	14.50	65.98	71.33		
100-41-4	Ethylbenzene	6.66	16.65	558.60	28.92	72.29	2,425.09		
1330-20-7	m,p-Xylenes	6.68	16.69	2,106.96	28.99	72.47	9,147.12		
100-42-5	Styrene	6.52	16.31	30.57	27.79	69.47	130.21		
75-25-2	Bromoform	3.15	4.23	ND	32.54	43.66	ND		
95-47-6	o-Xylene	6.49	16.24	1,079.34	28.19	70.48	4,685.82		
79-34-5	1,1,2,2-Tetrachloroethane	3.12	7.80	ND	21.40	53.49	ND		
622-96-8	4-Ethyltoluene	10.44	26.11	88.43	51.31	128.27	434.50		
108-67-8	1,3,5-Trimethylbenzene	6.51	16.27	40.40	31.98	79.96	198.50		
95-63-6	1,2,4-Trimethylbenzene	6.40	16.01	163.65	31.46	78.66	804.11		
541-73-1	1,3-Dichlorobenzene	6.30	11.66	ND	37.86	70.04	ND		
100-44-7	Benzyl chloride	6.30	38.18	ND	32.60	197.58	ND		
106-46-7	1,4-Dichlorobenzene	6.30	10.90	ND	37.86	65.50	ND		
95-50-1	1,2-Dichlorobenzene	6.30	10.21	ND	37.86	61.33	ND		
120-82-1	1,2,4-Trichlorobenzene	15.75	21.67	ND	116.79	160.71	ND		
91-20-3	Naphthalene	3.21	5.04	183.49	16.84	26.41	961.60		
87-68-3	Hexachlorobutadiene	15.75	16.70	ND	167.92	177.99	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				88	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376

Laboratory Number: 03

File Name: 1837603A
Description: T - 203
Canister: 726
QC_Batch: 080718-GCK

Date Sampled: 07/31/18 Time: 10:20
Date Analyzed: 08/07/18 Time: 16:43
Can Factor: 1.26
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.26	3.78	ND	1.45	4.35	ND	ND
74-86-2	Acetylene	1.26	3.78	ND	1.34	4.03	ND	ND
74-84-0	Ethane	1.26	3.78	681.44	1.55	4.66	840.63	
115-07-1	Propene	0.84	2.52	ND	1.45	4.35	ND	ND
74-98-6	Propane	0.84	2.52	284.35	1.52	4.55	513.93	
75-28-5	i-Butane	0.63	1.89	30.90	1.50	4.50	73.57	
106-98-9	1-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
106-97-8	n-Butane	0.63	1.89	132.09	1.50	4.50	314.53	
624-64-6	t-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
590-18-1	c-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
78-78-4	i-Pentane	0.50	1.51	212.60	1.49	4.47	629.08	
109-67-1	1-Pentene	0.50	1.51	3.11	1.45	4.34	8.94	
109-66-0	n-Pentane	0.50	1.51	87.39	1.49	4.47	258.22	
78-79-5	Isoprene	0.50	1.51	ND	1.41	4.22	ND	ND
646-04-8	t-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
627-20-3	c-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
287-92-3	Cyclopentane	0.50	1.51	ND	1.45	4.34	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
107-83-5	2-Methylpentane	0.42	1.26	49.94	1.48	4.45	176.42	
96-14-0	3-Methylpentane	0.42	1.26	66.75	1.48	4.45	235.81	
110-54-3	n-Hexane	0.42	1.26	112.51	1.48	4.45	397.46	
96-37-7	Methylcyclopentane	0.42	1.26	ND	1.45	4.35	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.08	193.88	1.48	4.44	796.20	
71-43-2	Benzene	0.42	1.26	3,023.91	1.34	4.03	9,678.98	
110-82-7	Cyclohexane	0.42	1.26	108.87	1.45	4.35	375.69	
591-76-4	2-Methylhexane	0.36	1.08	42.77	1.48	4.44	175.63	
565-59-3	2,3-Dimethylpentane	0.36	1.08	ND	1.48	4.44	ND	ND
589-34-4	3-Methylhexane	0.36	1.08	66.92	1.48	4.44	274.82	
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	193.34	1.47	4.42	904.88	
142-82-5	n-Heptane	0.36	1.08	171.52	1.48	4.44	704.34	
108-87-2	Methylcyclohexane	0.36	1.08	292.18	1.45	4.35	1,175.92	
592-13-2	2,5-Dimethylhexane	0.32	0.95	69.45	1.47	4.42	325.05	
589-43-5	2,4-Dimethylhexane	0.32	0.95	2.27	1.47	4.42	10.64	
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	151.09	1.47	4.42	707.14	
108-88-3	Toluene	0.36	1.08	2,838.61	1.36	4.08	10,714.57	
584-94-1	2,3-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND
589-81-1	3-Methylheptane	0.32	0.95	17.94	1.47	4.42	83.96	
111-65-9	n-Octane	0.32	0.95	297.59	1.47	4.42	1,392.81	
100-41-4	Ethylbenzene	0.32	0.95	123.90	1.37	4.11	539.28	
108-38-3	m,p-xylene	0.32	0.95	376.81	1.37	4.11	1,640.06	
100-42-5	Styrene	0.32	0.95	ND	1.35	4.04	ND	ND
95-47-6	o-xylene	0.32	0.95	317.34	1.37	4.11	1,381.22	
111-84-2	n-Nonane	0.28	0.84	55.83	1.47	4.42	293.59	
98-82-8	i-Propylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
103-65-1	n-propylbenzene	0.28	0.84	57.19	1.38	4.14	281.71	
80-56-8	a-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.84	218.78	1.38	4.14	1,077.75	
108-67-8	1,3,5-Trimethylbenzene	0.28	0.84	146.25	1.38	4.14	720.45	
611-14-3	2-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
127-91-3	b-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.84	287.59	1.38	4.14	1,416.71	
124-18-5	n-Decane	0.25	0.76	238.28	1.47	4.41	1,389.66	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
5989-27-5	d-Limonene	0.25	0.76	ND	1.41	4.22	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
104-51-8	n-Butylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
1120-21-4	Undecane	0.23	0.69	197.85	1.47	4.40	1,267.39	
112-40-3	Dodecane	0.21	0.63	84.68	1.47	4.40	591.01	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.45	28.35	29,415.19	33.38	100.15	103,917.59	
TNMHC - C1	Total Non-Methane Hydrocarbons	56.70	170.10	176,491.13	37.18	111.54	115,731.89	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 03

File Name: 1837603A

Date Sampled: 07/31/18

Time: 10:20

Description: T - 203

Date Analyzed: 08/03/18

Time: 15:24

Can/Tube#: 726

Can Dilution Factor: 1.26

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.08	126	378	836	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 03

File Name: 1837603A
Description: T - 203
Can/Tube#: 726
QC_Batch: 080318-GCL

Date Sampled: 07/31/18 Time: 10:20
Date Analyzed: 08/03/18 Time: 10:51
Dilution Factor: 1.26

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	632.73	0.09	0.26	427.52	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 04

File Name: 1837604A.D

Date Sampled: 07/31/18

Time: 11:18

Description: T - 204

Date Analyzed: 08/16/18

Time: 19:15

Canister: 526

Can Dilution Factor: 1.54

QC_Batch: 081618-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	15.40	77.46	ND	76.11	382.85	ND	
74-87-3	Chloromethane	15.40	77.46	ND	31.79	159.92	ND	
76-14-2	Freon 114	15.40	77.46	ND	107.59	541.18	ND	
75-01-4	Vinyl chloride	15.40	77.46	ND	39.35	197.92	ND	
106-99-0	1,3-Butadiene	15.40	77.46	ND	34.06	171.32	ND	
74-83-9	Bromomethane	15.40	77.46	ND	59.74	300.52	ND	
75-00-3	Chloroethane	15.40	77.46	ND	40.61	204.25	ND	
64-17-5	Ethanol	77.00	231.00	ND	145.11	435.33	ND	
75-69-4	Trichlorofluoromethane	15.40	73.95	ND	86.50	415.35	ND	
67-64-1	Acetone	77.00	189.42	370.01	182.88	449.89	878.82	
67-63-0	2-propanol	77.00	176.79	ND	189.18	434.35	ND	
75-35-4	1,1-Dichloroethene	15.40	76.38	ND	61.00	302.57	ND	
76-13-1	Freon 113	15.40	73.68	ND	117.98	564.44	ND	
75-09-2	Dichloromethane	30.80	74.17	ND	106.90	257.42	ND	
75-15-0	Carbon disulfide	77.00	142.91	ND	239.54	444.59	ND	
156-60-5	trans-1,2-Dichloroethene	15.40	55.60	ND	61.00	220.24	ND	
1634-04-4	Methyl tert butyl ether	15.40	56.78	ND	55.46	204.49	ND	
75-34-3	1,1-Dichloroethane	15.40	76.81	ND	62.32	310.84	ND	
108-05-4	Vinyl acetate	15.40	67.66	ND	54.20	238.15	ND	
78-93-3	2-Butanone	61.60	156.77	ND	181.56	462.07	ND	
141-78-6	Ethyl acetate	30.80	67.45	ND	110.93	242.93	ND	
74-97-5	Bromochloromethane	15.40	41.02	ND	81.46	216.98	ND	
109-99-9	Tetrahydrofuran	30.80	77.46	ND	90.78	228.32	ND	
156-59-2	cis-1,2-Dichloroethene	30.80	82.85	ND	122.01	328.19	ND	
67-66-3	Chloroform	15.40	77.24	ND	75.17	377.00	ND	
71-55-6	1,1,1-Trichloroethane	15.40	68.38	ND	83.98	372.88	ND	
107-06-2	1,2-Dichloroethane	15.40	70.25	ND	62.32	284.30	ND	
110-82-7	Cyclohexane	15.46	59.14	ND	53.22	203.55	ND	
71-43-2	Benzene	15.40	78.24	1,360.81	49.17	249.78	4,344.63	
56-23-5	Carbon tetrachloride	15.40	73.00	ND	96.82	458.94	ND	
142-82-5	n-Heptane	77.00	186.65	ND	315.40	764.53	ND	
78-87-5	1,2-Dichloropropane	15.40	74.12	ND	71.14	342.37	ND	
123-91-1	1,4 Dioxane	61.60	125.97	ND	221.85	453.69	ND	
79-01-6	Trichloroethene	9.24	71.73	ND	49.63	385.31	ND	
75-27-4	Bromodichloromethane	15.40	31.11	ND	103.12	208.30	ND	
80-62-6	Methyl methacrylate	61.60	208.21	ND	252.07	851.99	ND	
108-10-1	4-Methyl-2-pentanone	61.60	233.16	ND	252.32	955.03	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	15.40	79.80	ND	69.88	362.11	ND		
108-88-3	Toluene	30.80	80.39	1,442.32	115.96	302.66	5,430.32		
10061-02-6	trans-1,3-Dichloropropene	15.40	79.87	ND	69.88	362.40	ND		
79-00-5	1,1,2-Trichloroethane	15.40	79.18	ND	83.98	431.81	ND		
591-78-6	2-Hexanone	77.00	218.37	ND	315.40	894.48	ND		
124-48-1	Dibromochloromethane	15.40	30.75	ND	131.13	261.83	ND		
106-93-4	1,2-Dibromoethane	15.40	37.38	ND	118.29	287.11	ND		
127-18-4	Tetrachloroethene	9.24	37.48	ND	62.63	254.05	ND		
108-90-7	Chlorobenzene	15.40	70.08	ND	70.89	322.59	ND		
100-41-4	Ethylbenzene	32.56	81.41	466.58	141.37	353.43	2,025.59		
1330-20-7	m,p-Xylenes	32.65	81.61	1,991.62	141.73	354.31	8,646.39		
100-42-5	Styrene	31.89	79.73	ND	135.85	339.61	ND		
75-25-2	Bromoform	15.40	20.66	ND	159.09	213.46	ND		
95-47-6	o-Xylene	31.75	79.37	916.66	137.83	344.58	3,979.59		
79-34-5	1,1,2,2-Tetrachloroethane	15.25	38.12	ND	104.61	261.51	ND		
622-96-8	4-Ethyltoluene	51.05	127.63	68.65	250.85	627.11	337.35	J	
108-67-8	1,3,5-Trimethylbenzene	31.82	79.56	32.20	156.37	390.92	158.20	J	
95-63-6	1,2,4-Trimethylbenzene	31.31	78.26	119.88	153.83	384.56	589.03		
541-73-1	1,3-Dichlorobenzene	30.80	56.98	ND	185.09	342.41	ND		
100-44-7	Benzyl chloride	30.80	186.65	ND	159.40	965.97	ND		
106-46-7	1,4-Dichlorobenzene	30.80	53.28	ND	185.09	320.20	ND		
95-50-1	1,2-Dichlorobenzene	30.80	49.90	ND	185.09	299.84	ND		
120-82-1	1,2,4-Trichlorobenzene	77.00	105.95	ND	571.00	785.69	ND		
91-20-3	Naphthalene	15.71	24.64	ND	82.32	129.13	ND		
87-68-3	Hexachlorobutadiene	77.00	81.62	ND	820.92	870.18	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				88	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376

Laboratory Number: 04

File Name: 1837604A
Description: T - 204
Canister: 526
QC_Batch: 080718-GCK

Date Sampled: 07/31/18 Time: 11:18
Date Analyzed: 08/07/18 Time: 17:28
Can Factor: 1.35
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.35	4.05	ND	1.55	4.66	ND	ND
74-86-2	Acetylene	1.35	4.05	ND	1.44	4.32	ND	ND
74-84-0	Ethane	1.35	4.05	1,073.75	1.67	5.00	1,324.58	
115-07-1	Propene	0.90	2.70	ND	1.55	4.66	ND	ND
74-98-6	Propane	0.90	2.70	500.58	1.63	4.88	904.73	
75-28-5	i-Butane	0.68	2.03	52.00	1.61	4.82	123.81	
106-98-9	1-Butene	0.68	2.03	ND	1.55	4.66	ND	ND
106-97-8	n-Butane	0.68	2.03	226.17	1.61	4.82	538.54	
624-64-6	t-2-Butene	0.68	2.03	ND	1.55	4.66	ND	ND
590-18-1	c-2-Butene	0.68	2.03	ND	1.55	4.66	ND	ND
78-78-4	i-Pentane	0.54	1.62	83.92	1.60	4.79	248.31	
109-67-1	1-Pentene	0.54	1.62	4.18	1.55	4.65	12.00	
109-66-0	n-Pentane	0.54	1.62	124.67	1.60	4.79	368.38	
78-79-5	Isoprene	0.54	1.62	ND	1.51	4.52	ND	ND
646-04-8	t-2-Pentene	0.54	1.62	ND	1.55	4.65	ND	ND
627-20-3	c-2-Pentene	0.54	1.62	ND	1.55	4.65	ND	ND
75-83-2	2,2-Dimethylbutane	0.45	1.35	ND	1.59	4.77	ND	ND
287-92-3	Cyclopentane	0.54	1.62	ND	1.55	4.65	ND	ND
79-29-8	2,3-Dimethylbutane	0.45	1.35	ND	1.59	4.77	ND	ND
107-83-5	2-Methylpentane	0.45	1.35	43.87	1.59	4.77	154.99	
96-14-0	3-Methylpentane	0.45	1.35	53.87	1.59	4.77	190.31	
110-54-3	n-Hexane	0.45	1.35	92.56	1.59	4.77	327.00	
96-37-7	Methylcyclopentane	0.45	1.35	ND	1.55	4.66	ND	ND
108-08-7	2,4-Dimethylpentane	0.39	1.16	210.55	1.58	4.75	864.65	
71-43-2	Benzene	0.45	1.35	2,492.26	1.44	4.32	7,977.26	
110-82-7	Cyclohexane	0.45	1.35	ND	1.55	4.66	ND	ND
591-76-4	2-Methylhexane	0.39	1.16	28.44	1.58	4.75	116.77	
565-59-3	2,3-Dimethylpentane	0.39	1.16	ND	1.58	4.75	ND	ND
589-34-4	3-Methylhexane	0.39	1.16	10.75	1.58	4.75	44.16	
540-84-1	2,2,4-Trimethylpentane	0.34	1.01	149.21	1.58	4.74	698.37	
142-82-5	n-Heptane	0.39	1.16	108.37	1.58	4.75	445.02	
108-87-2	Methylcyclohexane	0.39	1.16	223.05	1.55	4.66	897.69	
592-13-2	2,5-Dimethylhexane	0.34	1.01	45.71	1.58	4.74	213.95	
589-43-5	2,4-Dimethylhexane	0.34	1.01	1.63	1.58	4.74	7.62	
565-75-3	2,3,4-Trimethylpentane	0.34	1.01	77.08	1.58	4.74	360.77	
108-88-3	Toluene	0.39	1.16	2,309.27	1.46	4.37	8,716.54	
584-94-1	2,3-Dimethylhexane	0.34	1.01	4.33	1.58	4.74	20.28	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.34	1.01	90.34	1.58	4.74	422.80	
589-81-1	3-Methylheptane	0.34	1.01	26.86	1.58	4.74	125.73	
111-65-9	n-Octane	0.34	1.01	64.93	1.58	4.74	303.92	
100-41-4	Ethylbenzene	0.34	1.01	174.38	1.47	4.41	758.98	
108-38-3	m,p-xylene	0.34	1.01	1,559.70	1.47	4.41	6,788.52	
100-42-5	Styrene	0.34	1.01	ND	1.44	4.32	ND	ND
95-47-6	o-xylene	0.34	1.01	816.74	1.47	4.41	3,554.82	
111-84-2	n-Nonane	0.30	0.90	167.24	1.58	4.73	879.38	
98-82-8	i-Propylbenzene	0.30	0.90	37.20	1.48	4.43	183.26	
103-65-1	n-propylbenzene	0.30	0.90	32.17	1.48	4.43	158.47	
80-56-8	a-Pinene	0.27	0.81	57.37	1.51	4.52	320.22	
620-14-4	3-Ethyltoluene	0.30	0.90	156.18	1.48	4.43	769.39	
622-96-8	4-Ethyltoluene	0.30	0.90	ND	1.48	4.43	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.30	0.90	97.32	1.48	4.43	479.43	
611-14-3	2-Ethyltoluene	0.30	0.90	ND	1.48	4.43	ND	ND
127-91-3	b-Pinene	0.27	0.81	69.84	1.51	4.52	389.85	
95-63-6	1,2,4-Trimethylbenzene	0.30	0.90	245.52	1.48	4.43	1,209.49	
124-18-5	n-Decane	0.27	0.81	150.66	1.57	4.72	878.67	
526-73-8	1,2,3-Trimethylbenzene	0.30	0.90	ND	1.48	4.43	ND	ND
5989-27-5	d-Limonene	0.27	0.81	30.15	1.51	4.52	168.31	
141-93-5	1,3-Diethylbenzene	0.27	0.81	29.46	1.49	4.46	162.06	
105-05-5	1,4-Diethylbenzene	0.27	0.81	50.80	1.49	4.46	279.41	
104-51-8	n-Butylbenzene	0.27	0.81	49.55	1.49	4.46	272.54	
1120-21-4	Undecane	0.25	0.74	144.63	1.57	4.72	926.47	
112-40-3	Dodecane	0.23	0.68	76.84	1.57	4.71	536.30	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.13	30.38	22,635.54	35.77	107.31	79,966.53	
TNMHC - C1	Total Non-Methane Hydrocarbons	60.75	182.25	135,813.23	39.84	119.51	89,057.85	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 04

File Name: 1837604A

Date Sampled: 07/31/18

Time: 11:18

Description: T - 204

Date Analyzed: 08/03/18

Time: 15:29

Can/Tube#: 526

Can Dilution Factor: 1.35

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.08	135	405	763	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 04

File Name: 1837604A
Description: T - 204
Can/Tube#: 526
QC_Batch: 080318-GCL

Date Sampled: 07/31/18 Time: 11:18
Date Analyzed: 08/03/18 Time: 11:00
Dilution Factor: 1.35

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.41	467.51	0.09	0.27	315.88	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 05

File Name: 1837605A.D

Date Sampled: 07/31/18

Time: 12:31

Description: T - 205

Date Analyzed: 08/16/18

Time: 18:37

Canister: 605

Can Dilution Factor: 1.39

QC_Batch: 081618-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	13.90	69.92	ND	68.70	345.56	ND	
74-87-3	Chloromethane	13.90	69.92	ND	28.70	144.34	ND	
76-14-2	Freon 114	13.90	69.92	ND	97.11	488.47	ND	
75-01-4	Vinyl chloride	13.90	69.92	ND	35.51	178.64	ND	
106-99-0	1,3-Butadiene	13.90	69.92	ND	30.74	154.63	ND	
74-83-9	Bromomethane	13.90	69.92	ND	53.92	271.25	ND	
75-00-3	Chloroethane	13.90	69.92	ND	36.65	184.36	ND	
64-17-5	Ethanol	69.50	208.50	ND	130.98	392.93	ND	
75-69-4	Trichlorofluoromethane	13.90	66.74	ND	78.07	374.89	ND	
67-64-1	Acetone	69.50	170.97	1,518.20	165.07	406.07	3,605.86	
67-63-0	2-propanol	69.50	159.57	ND	170.75	392.04	ND	
75-35-4	1,1-Dichloroethene	13.90	68.94	ND	55.06	273.10	ND	
76-13-1	Freon 113	13.90	66.50	ND	106.49	509.46	ND	
75-09-2	Dichloromethane	27.80	66.95	ND	96.48	232.35	ND	
75-15-0	Carbon disulfide	69.50	128.99	ND	216.21	401.28	ND	
156-60-5	trans-1,2-Dichloroethene	13.90	50.18	ND	55.06	198.79	ND	
1634-04-4	Methyl tert butyl ether	13.90	51.25	ND	50.06	184.57	ND	
75-34-3	1,1-Dichloroethane	13.90	69.32	ND	56.25	280.56	ND	
108-05-4	Vinyl acetate	13.90	61.07	ND	48.92	214.96	ND	
78-93-3	2-Butanone	55.60	141.50	521.51	163.88	417.06	1,537.10	
141-78-6	Ethyl acetate	27.80	60.88	ND	100.12	219.27	ND	
74-97-5	Bromochloromethane	13.90	37.02	ND	73.53	195.84	ND	
109-99-9	Tetrahydrofuran	27.80	69.92	ND	81.94	206.08	ND	
156-59-2	cis-1,2-Dichloroethene	27.80	74.78	ND	110.12	296.23	ND	
67-66-3	Chloroform	13.90	69.71	ND	67.85	340.28	ND	
71-55-6	1,1,1-Trichloroethane	13.90	61.72	ND	75.80	336.56	ND	
107-06-2	1,2-Dichloroethane	13.90	63.41	ND	56.25	256.61	ND	
110-82-7	Cyclohexane	13.96	53.38	ND	48.04	183.72	ND	
71-43-2	Benzene	13.90	70.62	ND	44.38	225.45	ND	
56-23-5	Carbon tetrachloride	13.90	65.89	ND	87.39	414.24	ND	
142-82-5	n-Heptane	69.50	168.47	ND	284.68	690.06	ND	
78-87-5	1,2-Dichloropropane	13.90	66.90	ND	64.21	309.03	ND	
123-91-1	1,4 Dioxane	55.60	113.70	ND	200.24	409.49	ND	
79-01-6	Trichloroethene	8.34	64.75	ND	44.80	347.78	ND	
75-27-4	Bromodichloromethane	13.90	28.08	ND	93.08	188.01	ND	
80-62-6	Methyl methacrylate	55.60	187.93	ND	227.52	769.01	ND	
108-10-1	4-Methyl-2-pentanone	55.60	210.45	ND	227.74	862.01	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	13.90	72.03	ND	63.07	326.84	ND	
108-88-3	Toluene	27.80	72.56	44.94	104.67	273.18	169.19	J
10061-02-6	trans-1,3-Dichloropropene	13.90	72.09	ND	63.07	327.10	ND	
79-00-5	1,1,2-Trichloroethane	13.90	71.47	ND	75.80	389.75	ND	
591-78-6	2-Hexanone	69.50	197.10	ND	284.68	807.35	ND	
124-48-1	Dibromochloromethane	13.90	27.75	ND	118.36	236.33	ND	
106-93-4	1,2-Dibromoethane	13.90	33.74	ND	106.77	259.15	ND	
127-18-4	Tetrachloroethene	8.34	33.83	ND	56.53	229.30	ND	
108-90-7	Chlorobenzene	13.90	63.26	ND	63.98	291.16	ND	
100-41-4	Ethylbenzene	29.39	73.48	ND	127.60	319.00	ND	
1330-20-7	m,p-Xylenes	29.47	73.66	ND	127.92	319.80	ND	
100-42-5	Styrene	28.79	71.96	ND	122.61	306.54	ND	
75-25-2	Bromoform	13.90	18.65	ND	143.59	192.67	ND	
95-47-6	o-Xylene	28.66	71.64	ND	124.41	311.02	ND	
79-34-5	1,1,2,2-Tetrachloroethane	13.76	34.41	ND	94.42	236.04	ND	
622-96-8	4-Ethyltoluene	46.08	115.19	ND	226.41	566.03	ND	
108-67-8	1,3,5-Trimethylbenzene	28.72	71.81	ND	141.14	352.84	ND	
95-63-6	1,2,4-Trimethylbenzene	28.26	70.64	ND	138.84	347.11	ND	
541-73-1	1,3-Dichlorobenzene	27.80	51.43	ND	167.06	309.06	ND	
100-44-7	Benzyl chloride	27.80	168.47	ND	143.87	871.88	ND	
106-46-7	1,4-Dichlorobenzene	27.80	48.09	ND	167.06	289.01	ND	
95-50-1	1,2-Dichlorobenzene	27.80	45.04	ND	167.06	270.63	ND	
120-82-1	1,2,4-Trichlorobenzene	69.50	95.63	ND	515.38	709.16	ND	
91-20-3	Naphthalene	14.18	22.24	ND	74.30	116.55	ND	
87-68-3	Hexachlorobutadiene	69.50	73.67	ND	740.96	785.42	ND	

Surrogate Recovery	% Rec.	QC	Limits	Flag
		LCL	UCL	
2037-26-5 Toluene-d8	87	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 05

File Name: 1837605A
Description: T - 205
Canister: 605
QC_Batch: 080818-GCK

Date Sampled: 07/31/18 Time: 12:31
Date Analyzed: 08/08/18 Time: 14:42
Can Factor: 1.39
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.39	4.17	6.62	1.60	4.80	7.62	
74-86-2	Acetylene	1.39	4.17	ND	1.48	4.44	ND	ND
74-84-0	Ethane	1.39	4.17	15.67	1.71	5.14	19.32	
115-07-1	Propene	0.93	2.78	ND	1.60	4.80	ND	ND
74-98-6	Propane	0.93	2.78	6.03	1.67	5.02	10.89	
75-28-5	i-Butane	0.70	2.09	ND	1.65	4.96	ND	ND
106-98-9	1-Butene	0.70	2.09	ND	1.60	4.79	ND	ND
106-97-8	n-Butane	0.70	2.09	4.40	1.65	4.96	10.49	
624-64-6	t-2-Butene	0.70	2.09	ND	1.60	4.79	ND	ND
590-18-1	c-2-Butene	0.70	2.09	ND	1.60	4.79	ND	ND
78-78-4	i-Pentane	0.56	1.67	1,052.83	1.65	4.94	3,115.33	
109-67-1	1-Pentene	0.56	1.67	ND	1.60	4.79	ND	ND
109-66-0	n-Pentane	0.56	1.67	30.87	1.64	4.93	91.22	
78-79-5	Isoprene	0.56	1.67	ND	1.55	4.66	ND	ND
646-04-8	t-2-Pentene	0.56	1.67	ND	1.60	4.79	ND	ND
627-20-3	c-2-Pentene	0.56	1.67	ND	1.60	4.79	ND	ND
75-83-2	2,2-Dimethylbutane	0.46	1.39	ND	1.64	4.91	ND	ND
287-92-3	Cyclopentane	0.56	1.67	ND	1.60	4.79	ND	ND
79-29-8	2,3-Dimethylbutane	0.46	1.39	ND	1.64	4.91	ND	ND
107-83-5	2-Methylpentane	0.46	1.39	412.84	1.64	4.91	1,458.48	
96-14-0	3-Methylpentane	0.46	1.39	ND	1.64	4.91	ND	ND
110-54-3	n-Hexane	0.46	1.39	22.01	1.64	4.91	77.76	
96-37-7	Methylcyclopentane	0.46	1.39	ND	1.60	4.80	ND	ND
108-08-7	2,4-Dimethylpentane	0.40	1.19	ND	1.63	4.89	ND	ND
71-43-2	Benzene	0.46	1.39	1.25	1.48	4.45	4.00	J
110-82-7	Cyclohexane	0.46	1.39	ND	1.60	4.80	ND	ND
591-76-4	2-Methylhexane	0.40	1.19	39.72	1.63	4.89	163.11	
565-59-3	2,3-Dimethylpentane	0.40	1.19	ND	1.63	4.89	ND	ND
589-34-4	3-Methylhexane	0.40	1.19	17.28	1.63	4.89	70.96	
540-84-1	2,2,4-Trimethylpentane	0.35	1.04	ND	1.63	4.88	ND	ND
142-82-5	n-Heptane	0.40	1.19	ND	1.63	4.89	ND	ND
108-87-2	Methylcyclohexane	0.40	1.19	ND	1.60	4.80	ND	ND
592-13-2	2,5-Dimethylhexane	0.35	1.04	ND	1.63	4.88	ND	ND
589-43-5	2,4-Dimethylhexane	0.35	1.04	ND	1.63	4.88	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.35	1.04	ND	1.63	4.88	ND	ND
108-88-3	Toluene	0.40	1.19	32.14	1.50	4.50	121.31	
584-94-1	2,3-Dimethylhexane	0.35	1.04	ND	1.63	4.88	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.35	1.04	ND	1.63	4.88	ND	ND
589-81-1	3-Methylheptane	0.35	1.04	ND	1.63	4.88	ND	ND
111-65-9	n-Octane	0.35	1.04	0.55	1.63	4.88	2.59	J
100-41-4	Ethylbenzene	0.35	1.04	6.67	1.51	4.54	29.01	
108-38-3	m,p-xylene	0.35	1.04	1.93	1.51	4.54	8.41	
100-42-5	Styrene	0.35	1.04	0.92	1.48	4.45	3.94	J
95-47-6	o-xylene	0.35	1.04	ND	1.51	4.54	ND	ND
111-84-2	n-Nonane	0.31	0.93	ND	1.62	4.87	ND	ND
98-82-8	i-Propylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
103-65-1	n-propylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
80-56-8	a-Pinene	0.28	0.83	ND	1.55	4.66	ND	ND
620-14-4	3-Ethyltoluene	0.31	0.93	ND	1.52	4.56	ND	ND
622-96-8	4-Ethyltoluene	0.31	0.93	ND	1.52	4.56	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
611-14-3	2-Ethyltoluene	0.31	0.93	ND	1.52	4.56	ND	ND
127-91-3	b-Pinene	0.28	0.83	ND	1.55	4.66	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
124-18-5	n-Decane	0.28	0.83	ND	1.62	4.86	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
5989-27-5	d-Limonene	0.28	0.83	ND	1.55	4.66	ND	ND
141-93-5	1,3-Diethylbenzene	0.28	0.83	ND	1.53	4.59	ND	ND
105-05-5	1,4-Diethylbenzene	0.28	0.83	ND	1.53	4.59	ND	ND
104-51-8	n-Butylbenzene	0.28	0.83	ND	1.53	4.59	ND	ND
1120-21-4	Undecane	0.25	0.76	ND	1.62	4.86	ND	ND
112-40-3	Dodecane	0.23	0.70	1.12	1.62	4.85	7.83	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.43	31.28	1,517.06	36.83	110.49	5,359.44
TNMHC - C1	Total Non-Methane Hydrocarbons	62.55	187.65	9,102.35	41.02	123.05	5,968.75

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 05

File Name: 1837605A

Date Sampled: 07/31/18

Time: 12:31

Description: T - 205

Date Analyzed: 08/03/18

Time: 15:35

Can/Tube#: 605

Can Dilution Factor: 1.39

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	139	417	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 05

File Name: 1837605A
Description: T - 205
Can/Tube#: 605
QC_Batch: 080318-GCL

Date Sampled: 07/31/18 Time: 12:31
Date Analyzed: 08/03/18 Time: 11:25
Dilution Factor: 1.39

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.42	3.31	0.09	0.28	2.23	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218376

Laboratory ID: 06

File Name: 1837606A.D

Date Sampled: 07/31/18

Time: 13:22

Description: T - 206

Date Analyzed: 08/14/18

Time: 18:57

Canister: 158

Can Dilution Factor: 1.33

QC_Batch: 081418-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.33	1.67	ND	1.64	8.27	ND	
74-87-3	Chloromethane	0.33	1.67	ND	0.69	3.45	ND	
76-14-2	Freon 114	0.33	1.67	ND	2.32	11.68	ND	
75-01-4	Vinyl chloride	0.33	1.67	ND	0.85	4.27	ND	
106-99-0	1,3-Butadiene	0.33	1.67	ND	0.74	3.70	ND	
74-83-9	Bromomethane	0.33	1.67	ND	1.29	6.49	ND	
75-00-3	Chloroethane	0.33	1.67	ND	0.88	4.41	ND	
64-17-5	Ethanol	1.66	4.99	ND	3.13	9.40	ND	
75-69-4	Trichlorofluoromethane	0.33	1.60	ND	1.87	8.97	ND	
67-64-1	Acetone	1.66	4.09	183.12	3.95	9.71	434.92	
67-63-0	2-propanol	1.66	3.82	ND	4.08	9.38	ND	
75-35-4	1,1-Dichloroethene	0.33	1.65	ND	1.32	6.53	ND	
76-13-1	Freon 113	0.33	1.59	ND	2.55	12.19	ND	
75-09-2	Dichloromethane	0.67	1.60	ND	2.31	5.56	ND	
75-15-0	Carbon disulfide	1.66	3.09	ND	5.17	9.60	ND	
156-60-5	trans-1,2-Dichloroethene	0.33	1.20	ND	1.32	4.76	ND	
1634-04-4	Methyl tert butyl ether	0.33	1.23	ND	1.20	4.42	ND	
75-34-3	1,1-Dichloroethane	0.33	1.66	ND	1.35	6.71	ND	
108-05-4	Vinyl acetate	0.33	1.46	ND	1.17	5.14	ND	
78-93-3	2-Butanone	1.33	3.38	104.14	3.92	9.98	306.94	
141-78-6	Ethyl acetate	0.67	1.46	ND	2.39	5.25	ND	
74-97-5	Bromochloromethane	0.33	0.89	ND	1.76	4.68	ND	
109-99-9	Tetrahydrofuran	0.67	1.67	ND	1.96	4.93	ND	
156-59-2	cis-1,2-Dichloroethene	0.67	1.79	ND	2.63	7.09	ND	
67-66-3	Chloroform	0.33	1.67	ND	1.62	8.14	ND	
71-55-6	1,1,1-Trichloroethane	0.33	1.48	ND	1.81	8.05	ND	
107-06-2	1,2-Dichloroethane	0.33	1.52	ND	1.35	6.14	ND	
110-82-7	Cyclohexane	0.33	1.28	ND	1.15	4.39	ND	
71-43-2	Benzene	0.33	1.69	2.19	1.06	5.39	6.99	
56-23-5	Carbon tetrachloride	0.33	1.58	ND	2.09	9.91	ND	
142-82-5	n-Heptane	1.66	4.03	ND	6.81	16.51	ND	
78-87-5	1,2-Dichloropropane	0.33	1.60	ND	1.54	7.39	ND	
123-91-1	1,4 Dioxane	1.33	2.72	ND	4.79	9.80	ND	
79-01-6	Trichloroethene	0.20	1.55	ND	1.07	8.32	ND	
75-27-4	Bromodichloromethane	0.33	0.67	ND	2.23	4.50	ND	
80-62-6	Methyl methacrylate	1.33	4.50	ND	5.44	18.40	ND	
108-10-1	4-Methyl-2-pentanone	1.33	5.03	ND	5.45	20.62	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.33	1.72	ND	1.51	7.82	ND	
108-88-3	Toluene	0.67	1.74	2.77	2.50	6.53	10.42	
10061-02-6	trans-1,3-Dichloropropene	0.33	1.72	ND	1.51	7.82	ND	
79-00-5	1,1,2-Trichloroethane	0.33	1.71	ND	1.81	9.32	ND	
591-78-6	2-Hexanone	1.66	4.71	ND	6.81	19.31	ND	
124-48-1	Dibromochloromethane	0.33	0.66	ND	2.83	5.65	ND	
106-93-4	1,2-Dibromoethane	0.33	0.81	ND	2.55	6.20	ND	
127-18-4	Tetrachloroethene	0.20	0.81	ND	1.35	5.49	ND	
108-90-7	Chlorobenzene	0.33	1.51	ND	1.53	6.96	ND	
100-41-4	Ethylbenzene	0.70	1.76	2.96	3.05	7.63	12.87	
1330-20-7	m,p-Xylenes	0.70	1.76	3.48	3.06	7.65	15.13	
100-42-5	Styrene	0.69	1.72	ND	2.93	7.33	ND	
75-25-2	Bromoform	0.33	0.45	ND	3.43	4.61	ND	
95-47-6	o-Xylene	0.69	1.71	1.65	2.98	7.44	7.17	J
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.82	ND	2.26	5.65	ND	
622-96-8	4-Ethyltoluene	1.10	2.76	ND	5.42	13.54	ND	
108-67-8	1,3,5-Trimethylbenzene	0.69	1.72	ND	3.38	8.44	ND	
95-63-6	1,2,4-Trimethylbenzene	0.68	1.69	1.74	3.32	8.30	8.57	
541-73-1	1,3-Dichlorobenzene	0.67	1.23	ND	4.00	7.39	ND	
100-44-7	Benzyl chloride	0.67	4.03	ND	3.44	20.86	ND	
106-46-7	1,4-Dichlorobenzene	0.67	1.15	ND	4.00	6.91	ND	
95-50-1	1,2-Dichlorobenzene	0.67	1.08	ND	4.00	6.47	ND	
120-82-1	1,2,4-Trichlorobenzene	1.66	2.29	ND	12.33	16.96	ND	
91-20-3	Naphthalene	0.34	0.53	4.75	1.78	2.79	24.88	
87-68-3	Hexachlorobutadiene	1.66	1.76	ND	17.72	18.79	ND	
					QC	Limits		
Surrogate Recovery				% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8			94	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376

Laboratory Number: 06

File Name: 1837606A
Description: T - 206
Canister: 158
QC_Batch: 080718-GCK

Date Sampled: 07/31/18 Time: 13:22
Date Analyzed: 08/07/18 Time: 19:32
Can Factor: 1.33
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.33	3.99	ND	1.53	4.60	ND	ND
74-86-2	Acetylene	1.33	3.99	ND	1.42	4.25	ND	ND
74-84-0	Ethane	1.33	3.99	8.00	1.64	4.92	9.87	
115-07-1	Propene	0.89	2.66	ND	1.53	4.59	ND	ND
74-98-6	Propane	0.89	2.66	1.90	1.60	4.81	3.44	J
75-28-5	i-Butane	0.67	2.00	ND	1.58	4.75	ND	ND
106-98-9	1-Butene	0.67	2.00	ND	1.53	4.59	ND	ND
106-97-8	n-Butane	0.67	2.00	1.91	1.58	4.75	4.55	J
624-64-6	t-2-Butene	0.67	2.00	ND	1.53	4.59	ND	ND
590-18-1	c-2-Butene	0.67	2.00	ND	1.53	4.59	ND	ND
78-78-4	i-Pentane	0.53	1.60	ND	1.57	4.72	ND	ND
109-67-1	1-Pentene	0.53	1.60	ND	1.53	4.59	ND	ND
109-66-0	n-Pentane	0.53	1.60	98.54	1.57	4.72	291.17	
78-79-5	Isoprene	0.53	1.60	ND	1.48	4.45	ND	ND
646-04-8	t-2-Pentene	0.53	1.60	ND	1.53	4.59	ND	ND
627-20-3	c-2-Pentene	0.53	1.60	ND	1.53	4.59	ND	ND
75-83-2	2,2-Dimethylbutane	0.44	1.33	ND	1.57	4.70	ND	ND
287-92-3	Cyclopentane	0.53	1.60	ND	1.53	4.59	ND	ND
79-29-8	2,3-Dimethylbutane	0.44	1.33	ND	1.57	4.70	ND	ND
107-83-5	2-Methylpentane	0.44	1.33	ND	1.57	4.70	ND	ND
96-14-0	3-Methylpentane	0.44	1.33	ND	1.57	4.70	ND	ND
110-54-3	n-Hexane	0.44	1.33	80.98	1.57	4.70	286.07	
96-37-7	Methylcyclopentane	0.44	1.33	ND	1.53	4.59	ND	ND
108-08-7	2,4-Dimethylpentane	0.38	1.14	ND	1.56	4.68	ND	ND
71-43-2	Benzene	0.44	1.33	1.78	1.42	4.26	5.70	
110-82-7	Cyclohexane	0.44	1.33	ND	1.53	4.59	ND	ND
591-76-4	2-Methylhexane	0.38	1.14	6.78	1.56	4.68	27.83	
565-59-3	2,3-Dimethylpentane	0.38	1.14	ND	1.56	4.68	ND	ND
589-34-4	3-Methylhexane	0.38	1.14	1.36	1.56	4.68	5.58	
540-84-1	2,2,4-Trimethylpentane	0.33	1.00	ND	1.56	4.67	ND	ND
142-82-5	n-Heptane	0.38	1.14	12.46	1.56	4.68	51.16	
108-87-2	Methylcyclohexane	0.38	1.14	ND	1.53	4.59	ND	ND
592-13-2	2,5-Dimethylhexane	0.33	1.00	ND	1.56	4.67	ND	ND
589-43-5	2,4-Dimethylhexane	0.33	1.00	ND	1.56	4.67	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.33	1.00	ND	1.56	4.67	ND	ND
108-88-3	Toluene	0.38	1.14	2.28	1.43	4.30	8.60	
584-94-1	2,3-Dimethylhexane	0.33	1.00	ND	1.56	4.67	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.33	1.00	ND	1.56	4.67	ND	ND
589-81-1	3-Methylheptane	0.33	1.00	ND	1.56	4.67	ND	ND
111-65-9	n-Octane	0.33	1.00	0.67	1.56	4.67	3.12	J
100-41-4	Ethylbenzene	0.33	1.00	1.10	1.45	4.34	4.78	
108-38-3	m,p-xylene	0.33	1.00	2.97	1.45	4.34	12.91	
100-42-5	Styrene	0.33	1.00	ND	1.42	4.26	ND	ND
95-47-6	o-xylene	0.33	1.00	4.10	1.45	4.34	17.83	
111-84-2	n-Nonane	0.30	0.89	1.40	1.55	4.66	7.38	
98-82-8	i-Propylbenzene	0.30	0.89	ND	1.46	4.37	ND	ND
103-65-1	n-propylbenzene	0.30	0.89	ND	1.46	4.37	ND	ND
80-56-8	a-Pinene	0.27	0.80	0.70	1.48	4.45	3.91	J
620-14-4	3-Ethyltoluene	0.30	0.89	ND	1.46	4.37	ND	ND
622-96-8	4-Ethyltoluene	0.30	0.89	ND	1.46	4.37	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.30	0.89	0.88	1.46	4.37	4.34	J
611-14-3	2-Ethyltoluene	0.30	0.89	ND	1.46	4.37	ND	ND
127-91-3	b-Pinene	0.27	0.80	ND	1.48	4.45	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.30	0.89	ND	1.46	4.37	ND	ND
124-18-5	n-Decane	0.27	0.80	1.58	1.55	4.65	9.19	
526-73-8	1,2,3-Trimethylbenzene	0.30	0.89	ND	1.46	4.37	ND	ND
5989-27-5	d-Limonene	0.27	0.80	0.44	1.48	4.45	2.43	J
141-93-5	1,3-Diethylbenzene	0.27	0.80	ND	1.46	4.39	ND	ND
105-05-5	1,4-Diethylbenzene	0.27	0.80	ND	1.46	4.39	ND	ND
104-51-8	n-Butylbenzene	0.27	0.80	ND	1.46	4.39	ND	ND
1120-21-4	Undecane	0.24	0.73	2.30	1.55	4.65	14.72	
112-40-3	Dodecane	0.22	0.67	2.02	1.55	4.64	14.10	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.98	29.93	385.17	35.24	105.72	1,360.73	
TNMHC - C1	Total Non-Methane Hydrocarbons	59.85	179.55	2,311.03	39.25	117.74	1,515.43	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 06

File Name: 1837606A

Date Sampled: 07/31/18

Time: 13:22

Description: T - 206

Date Analyzed: 08/03/18

Time: 15:46

Can/Tube#: 158

Can Dilution Factor: 1.33

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	133	399	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 06

File Name: 1837606A
Description: T - 206
Can/Tube#: 158
QC_Batch: 080318-GCL

Date Sampled: 07/31/18 **Time:** 13:22
Date Analyzed: 08/03/18 **Time:** 12:15
Dilution Factor: 1.33

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.40	1.53	0.09	0.27	1.04	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218376

Laboratory ID: 07

File Name: 1837607A.D

Date Sampled: 07/31/18

Time: 13:26

Description: T - 207

Date Analyzed: 08/14/18

Time: 19:35

Canister: 877

Can Dilution Factor: 1.35

QC_Batch: 081418-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.34	1.70	ND	1.67	8.39	ND	
74-87-3	Chloromethane	0.34	1.70	ND	0.70	3.50	ND	
76-14-2	Freon 114	0.34	1.70	ND	2.36	11.86	ND	
75-01-4	Vinyl chloride	0.34	1.70	ND	0.86	4.34	ND	
106-99-0	1,3-Butadiene	0.34	1.70	ND	0.75	3.75	ND	
74-83-9	Bromomethane	0.34	1.70	ND	1.31	6.59	ND	
75-00-3	Chloroethane	0.34	1.70	ND	0.89	4.48	ND	
64-17-5	Ethanol	1.69	5.06	ND	3.18	9.54	ND	
75-69-4	Trichlorofluoromethane	0.34	1.62	ND	1.90	9.10	ND	
67-64-1	Acetone	1.69	4.15	182.99	4.01	9.86	434.61	
67-63-0	2-propanol	1.69	3.87	ND	4.15	9.52	ND	
75-35-4	1,1-Dichloroethene	0.34	1.67	ND	1.34	6.63	ND	
76-13-1	Freon 113	0.34	1.61	ND	2.59	12.37	ND	
75-09-2	Dichloromethane	0.68	1.63	ND	2.34	5.64	ND	
75-15-0	Carbon disulfide	1.69	3.13	ND	5.25	9.74	ND	
156-60-5	trans-1,2-Dichloroethene	0.34	1.22	ND	1.34	4.83	ND	
1634-04-4	Methyl tert butyl ether	0.34	1.24	ND	1.22	4.48	ND	
75-34-3	1,1-Dichloroethane	0.34	1.68	ND	1.37	6.81	ND	
108-05-4	Vinyl acetate	0.34	1.48	ND	1.19	5.22	ND	
78-93-3	2-Butanone	1.35	3.44	104.62	3.98	10.13	308.36	
141-78-6	Ethyl acetate	0.68	1.48	ND	2.43	5.32	ND	
74-97-5	Bromochloromethane	0.34	0.90	ND	1.79	4.76	ND	
109-99-9	Tetrahydrofuran	0.68	1.70	ND	1.99	5.00	ND	
156-59-2	cis-1,2-Dichloroethene	0.68	1.82	ND	2.67	7.19	ND	
67-66-3	Chloroform	0.34	1.69	ND	1.65	8.26	ND	
71-55-6	1,1,1-Trichloroethane	0.34	1.50	ND	1.84	8.17	ND	
107-06-2	1,2-Dichloroethane	0.34	1.54	ND	1.37	6.23	ND	
110-82-7	Cyclohexane	0.34	1.30	ND	1.17	4.46	ND	
71-43-2	Benzene	0.34	1.71	2.19	1.08	5.47	6.99	
56-23-5	Carbon tetrachloride	0.34	1.60	ND	2.12	10.06	ND	
142-82-5	n-Heptane	1.69	4.09	ND	6.91	16.76	ND	
78-87-5	1,2-Dichloropropane	0.34	1.62	ND	1.56	7.50	ND	
123-91-1	1,4 Dioxane	1.35	2.76	ND	4.86	9.94	ND	
79-01-6	Trichloroethene	0.20	1.57	ND	1.09	8.44	ND	
75-27-4	Bromodichloromethane	0.34	0.68	ND	2.26	4.57	ND	
80-62-6	Methyl methacrylate	1.35	4.56	ND	5.52	18.67	ND	
108-10-1	4-Methyl-2-pentanone	1.35	5.11	ND	5.53	20.93	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.34	1.75	ND	1.53	7.94	ND	
108-88-3	Toluene	0.68	1.76	1.89	2.54	6.63	7.12	
10061-02-6	trans-1,3-Dichloropropene	0.34	1.75	ND	1.53	7.94	ND	
79-00-5	1,1,2-Trichloroethane	0.34	1.74	ND	1.84	9.46	ND	
591-78-6	2-Hexanone	1.69	4.79	ND	6.91	19.60	ND	
124-48-1	Dibromochloromethane	0.34	0.67	ND	2.87	5.74	ND	
106-93-4	1,2-Dibromoethane	0.34	0.82	ND	2.59	6.29	ND	
127-18-4	Tetrachloroethene	0.20	0.82	ND	1.37	5.57	ND	
108-90-7	Chlorobenzene	0.34	1.54	ND	1.55	7.07	ND	
100-41-4	Ethylbenzene	0.71	1.78	1.64	3.10	7.75	7.13	J
1330-20-7	m,p-Xylenes	0.72	1.79	1.93	3.11	7.76	8.38	
100-42-5	Styrene	0.70	1.75	ND	2.98	7.44	ND	
75-25-2	Bromoform	0.34	0.45	ND	3.49	4.68	ND	
95-47-6	o-Xylene	0.70	1.74	ND	3.02	7.55	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.84	ND	2.29	5.73	ND	
622-96-8	4-Ethyltoluene	1.12	2.80	ND	5.50	13.74	ND	
108-67-8	1,3,5-Trimethylbenzene	0.70	1.74	ND	3.43	8.57	ND	
95-63-6	1,2,4-Trimethylbenzene	0.69	1.72	1.47	3.37	8.43	7.25	J
541-73-1	1,3-Dichlorobenzene	0.68	1.25	ND	4.06	7.50	ND	
100-44-7	Benzyl chloride	0.68	4.09	ND	3.49	21.17	ND	
106-46-7	1,4-Dichlorobenzene	0.68	1.17	ND	4.06	7.02	ND	
95-50-1	1,2-Dichlorobenzene	0.68	1.09	ND	4.06	6.57	ND	
120-82-1	1,2,4-Trichlorobenzene	1.69	2.32	ND	12.51	17.22	ND	
91-20-3	Naphthalene	0.34	0.54	3.19	1.80	2.83	16.70	
87-68-3	Hexachlorobutadiene	1.69	1.79	ND	17.99	19.07	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				90	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376

Laboratory Number: 07

File Name: 1837607A
Description: T - 207
Canister: 877
QC_Batch: 080718-GCK

Date Sampled: 07/31/18 Time: 13:26
Date Analyzed: 08/07/18 Time: 20:15
Can Factor: 1.35
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.35	4.05	ND	1.55	4.66	ND	ND
74-86-2	Acetylene	1.35	4.05	ND	1.44	4.32	ND	ND
74-84-0	Ethane	1.35	4.05	6.06	1.67	5.00	7.48	
115-07-1	Propene	0.90	2.70	ND	1.55	4.66	ND	ND
74-98-6	Propane	0.90	2.70	ND	1.63	4.88	ND	ND
75-28-5	i-Butane	0.68	2.03	ND	1.61	4.82	ND	ND
106-98-9	1-Butene	0.68	2.03	ND	1.55	4.66	ND	ND
106-97-8	n-Butane	0.68	2.03	2.07	1.61	4.82	4.93	
624-64-6	t-2-Butene	0.68	2.03	ND	1.55	4.66	ND	ND
590-18-1	c-2-Butene	0.68	2.03	ND	1.55	4.66	ND	ND
78-78-4	i-Pentane	0.54	1.62	ND	1.60	4.79	ND	ND
109-67-1	1-Pentene	0.54	1.62	ND	1.55	4.65	ND	ND
109-66-0	n-Pentane	0.54	1.62	106.31	1.60	4.79	314.13	
78-79-5	Isoprene	0.54	1.62	ND	1.51	4.52	ND	ND
646-04-8	t-2-Pentene	0.54	1.62	ND	1.55	4.65	ND	ND
627-20-3	c-2-Pentene	0.54	1.62	ND	1.55	4.65	ND	ND
75-83-2	2,2-Dimethylbutane	0.45	1.35	ND	1.59	4.77	ND	ND
287-92-3	Cyclopentane	0.54	1.62	ND	1.55	4.65	ND	ND
79-29-8	2,3-Dimethylbutane	0.45	1.35	ND	1.59	4.77	ND	ND
107-83-5	2-Methylpentane	0.45	1.35	ND	1.59	4.77	ND	ND
96-14-0	3-Methylpentane	0.45	1.35	ND	1.59	4.77	ND	ND
110-54-3	n-Hexane	0.45	1.35	84.42	1.59	4.77	298.25	
96-37-7	Methylcyclopentane	0.45	1.35	ND	1.55	4.66	ND	ND
108-08-7	2,4-Dimethylpentane	0.39	1.16	ND	1.58	4.75	ND	ND
71-43-2	Benzene	0.45	1.35	2.30	1.44	4.32	7.37	
110-82-7	Cyclohexane	0.45	1.35	ND	1.55	4.66	ND	ND
591-76-4	2-Methylhexane	0.39	1.16	6.62	1.58	4.75	27.20	
565-59-3	2,3-Dimethylpentane	0.39	1.16	ND	1.58	4.75	ND	ND
589-34-4	3-Methylhexane	0.39	1.16	1.10	1.58	4.75	4.50	J
540-84-1	2,2,4-Trimethylpentane	0.34	1.01	ND	1.58	4.74	ND	ND
142-82-5	n-Heptane	0.39	1.16	13.12	1.58	4.75	53.86	
108-87-2	Methylcyclohexane	0.39	1.16	ND	1.55	4.66	ND	ND
592-13-2	2,5-Dimethylhexane	0.34	1.01	ND	1.58	4.74	ND	ND
589-43-5	2,4-Dimethylhexane	0.34	1.01	ND	1.58	4.74	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.34	1.01	ND	1.58	4.74	ND	ND
108-88-3	Toluene	0.39	1.16	1.87	1.46	4.37	7.07	
584-94-1	2,3-Dimethylhexane	0.34	1.01	ND	1.58	4.74	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.34	1.01	ND	1.58	4.74	ND	ND
589-81-1	3-Methylheptane	0.34	1.01	ND	1.58	4.74	ND	ND
111-65-9	n-Octane	0.34	1.01	7.21	1.58	4.74	33.75	
100-41-4	Ethylbenzene	0.34	1.01	0.94	1.47	4.41	4.08	J
108-38-3	m,p-xylene	0.34	1.01	1.71	1.47	4.41	7.45	
100-42-5	Styrene	0.34	1.01	ND	1.44	4.32	ND	ND
95-47-6	o-xylene	0.34	1.01	1.70	1.47	4.41	7.38	
111-84-2	n-Nonane	0.30	0.90	1.42	1.58	4.73	7.44	
98-82-8	i-Propylbenzene	0.30	0.90	ND	1.48	4.43	ND	ND
103-65-1	n-propylbenzene	0.30	0.90	ND	1.48	4.43	ND	ND
80-56-8	a-Pinene	0.27	0.81	0.46	1.51	4.52	2.57	J
620-14-4	3-Ethyltoluene	0.30	0.90	ND	1.48	4.43	ND	ND
622-96-8	4-Ethyltoluene	0.30	0.90	ND	1.48	4.43	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.30	0.90	0.78	1.48	4.43	3.86	J
611-14-3	2-Ethyltoluene	0.30	0.90	ND	1.48	4.43	ND	ND
127-91-3	b-Pinene	0.27	0.81	0.56	1.51	4.52	3.14	J
95-63-6	1,2,4-Trimethylbenzene	0.30	0.90	1.85	1.48	4.43	9.09	
124-18-5	n-Decane	0.27	0.81	1.30	1.57	4.72	7.61	
526-73-8	1,2,3-Trimethylbenzene	0.30	0.90	ND	1.48	4.43	ND	ND
5989-27-5	d-Limonene	0.27	0.81	ND	1.51	4.52	ND	ND
141-93-5	1,3-Diethylbenzene	0.27	0.81	ND	1.49	4.46	ND	ND
105-05-5	1,4-Diethylbenzene	0.27	0.81	ND	1.49	4.46	ND	ND
104-51-8	n-Butylbenzene	0.27	0.81	ND	1.49	4.46	ND	ND
1120-21-4	Undecane	0.25	0.74	3.15	1.57	4.72	20.17	
112-40-3	Dodecane	0.23	0.68	2.07	1.57	4.71	14.48	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.13	30.38	565.46	35.77	107.31	1,997.66	
TNMHC - C1	Total Non-Methane Hydrocarbons	60.75	182.25	3,392.77	39.84	119.51	2,224.77	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 07

File Name: 1837607A

Date Sampled: 07/31/18

Time: 13:26

Description: T - 207

Date Analyzed: 08/03/18

Time: 15:52

Can/Tube#: 877

Can Dilution Factor: 1.35

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	135	405	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 07

File Name: 1837607A
Description: T - 207
Can/Tube#: 877
QC_Batch: 080318-GCL

Date Sampled: 07/31/18 Time: 13:26
Date Analyzed: 08/03/18 Time: 15:13
Dilution Factor: 1.35

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.41	1.45	0.09	0.27	0.98	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 08

File Name: 1837608A.D

Date Sampled: 07/31/18

Time: 14:23

Description: T - 208

Date Analyzed: 08/17/18

Time: 14:39

Canister: 539

Can Dilution Factor: 1.42

QC_Batch: 081718-MA1

Air Volume: 1.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	71.00	357.14	ND	350.90	1,765.09	ND	
74-87-3	Chloromethane	71.00	357.14	ND	146.57	737.28	ND	
76-14-2	Freon 114	71.00	357.14	ND	496.03	2,495.06	ND	
75-01-4	Vinyl chloride	71.00	357.14	ND	181.40	912.47	ND	
106-99-0	1,3-Butadiene	71.00	357.14	ND	157.02	789.84	ND	
74-83-9	Bromomethane	71.00	357.14	ND	275.44	1,385.50	ND	
75-00-3	Chloroethane	71.00	357.14	ND	187.21	941.67	ND	
64-17-5	Ethanol	355.00	1,065.00	ND	669.01	2,007.04	ND	
75-69-4	Trichlorofluoromethane	71.00	340.93	ND	398.79	1,914.93	ND	
67-64-1	Acetone	355.00	873.30	7,162.87	843.16	2,074.17	17,012.49	
67-63-0	2-propanol	355.00	815.08	ND	872.18	2,002.53	ND	
75-35-4	1,1-Dichloroethene	71.00	352.16	ND	281.25	1,394.98	ND	
76-13-1	Freon 113	71.00	339.69	ND	543.92	2,602.27	ND	
75-09-2	Dichloromethane	142.00	341.96	ND	492.83	1,186.82	ND	
75-15-0	Carbon disulfide	355.00	658.88	ND	1,104.38	2,049.72	ND	
156-60-5	trans-1,2-Dichloroethene	71.00	256.33	ND	281.25	1,015.40	ND	
1634-04-4	Methyl tert butyl ether	71.00	261.77	ND	255.70	942.76	ND	
75-34-3	1,1-Dichloroethane	71.00	354.10	ND	287.34	1,433.08	ND	
108-05-4	Vinyl acetate	71.00	311.95	ND	249.90	1,097.98	ND	
78-93-3	2-Butanone	284.00	722.78	2,216.98	837.06	2,130.33	6,534.33	
141-78-6	Ethyl acetate	142.00	310.98	ND	511.41	1,119.99	ND	
74-97-5	Bromochloromethane	71.00	189.11	ND	375.58	1,000.34	ND	
109-99-9	Tetrahydrofuran	142.00	357.14	ND	418.53	1,052.64	ND	
156-59-2	cis-1,2-Dichloroethene	142.00	381.98	ND	562.49	1,513.10	ND	
67-66-3	Chloroform	71.00	356.09	ND	346.55	1,738.10	ND	
71-55-6	1,1,1-Trichloroethane	71.00	315.24	ND	387.19	1,719.10	ND	
107-06-2	1,2-Dichloroethane	71.00	323.87	ND	287.34	1,310.73	ND	
110-82-7	Cyclohexane	71.28	272.64	ND	245.36	938.44	ND	
71-43-2	Benzene	71.00	360.70	ND	226.68	1,151.60	ND	
56-23-5	Carbon tetrachloride	71.00	336.54	ND	446.39	2,115.91	ND	
142-82-5	n-Heptane	355.00	860.52	ND	1,454.12	3,524.79	ND	
78-87-5	1,2-Dichloropropane	71.00	341.71	ND	327.98	1,578.48	ND	
123-91-1	1,4 Dioxane	284.00	580.78	ND	1,022.82	2,091.66	ND	
79-01-6	Trichloroethene	42.60	330.71	ND	228.83	1,776.44	ND	
75-27-4	Bromodichloromethane	71.00	143.42	ND	475.42	960.35	ND	
80-62-6	Methyl methacrylate	284.00	959.92	ND	1,162.14	3,928.02	ND	
108-10-1	4-Methyl-2-pentanone	284.00	1,074.94	ND	1,163.30	4,403.08	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	71.00	367.92	ND	322.17	1,669.48	ND	
108-88-3	Toluene	142.00	370.62	ND	534.63	1,395.38	ND	
10061-02-6	trans-1,3-Dichloropropene	71.00	368.21	ND	322.17	1,670.80	ND	
79-00-5	1,1,2-Trichloroethane	71.00	365.06	ND	387.19	1,990.80	ND	
591-78-6	2-Hexanone	355.00	1,006.78	ND	1,454.12	4,123.89	ND	
124-48-1	Dibromochloromethane	71.00	141.77	ND	604.58	1,207.16	ND	
106-93-4	1,2-Dibromoethane	71.00	172.33	ND	545.37	1,323.71	ND	
127-18-4	Tetrachloroethene	42.60	172.81	ND	288.73	1,171.26	ND	
108-90-7	Chlorobenzene	71.00	323.10	ND	326.81	1,487.25	ND	
100-41-4	Ethylbenzene	150.13	375.32	ND	651.77	1,629.43	ND	
1330-20-7	m,p-Xylenes	150.51	376.27	ND	653.41	1,633.52	ND	
100-42-5	Styrene	147.03	367.58	ND	626.30	1,565.76	ND	
75-25-2	Bromoform	71.00	95.27	ND	733.45	984.12	ND	
95-47-6	o-Xylene	146.37	365.94	ND	635.47	1,588.67	ND	
79-34-5	1,1,2,2-Tetrachloroethane	70.31	175.77	ND	482.27	1,205.68	ND	
622-96-8	4-Ethyltoluene	235.36	588.40	ND	1,156.50	2,891.24	ND	
108-67-8	1,3,5-Trimethylbenzene	146.72	366.79	ND	720.92	1,802.30	ND	
95-63-6	1,2,4-Trimethylbenzene	144.33	360.82	ND	709.19	1,772.98	ND	
541-73-1	1,3-Dichlorobenzene	142.00	262.70	ND	853.32	1,578.64	ND	
100-44-7	Benzyl chloride	142.00	860.52	ND	734.90	4,453.48	ND	
106-46-7	1,4-Dichlorobenzene	142.00	245.66	ND	853.32	1,476.24	ND	
95-50-1	1,2-Dichlorobenzene	142.00	230.04	ND	853.32	1,382.37	ND	
120-82-1	1,2,4-Trichlorobenzene	355.00	488.48	ND	2,632.51	3,622.33	ND	
91-20-3	Naphthalene	72.42	113.60	ND	379.53	595.35	ND	
87-68-3	Hexachlorobutadiene	355.00	376.30	ND	3,784.78	4,011.87	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	83	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376

Laboratory Number: 08

File Name: 1837608A
Description: T - 208
Canister: 539
QC_Batch: 080718-GCK

Date Sampled: 07/31/18 Time: 14:23
Date Analyzed: 08/07/18 Time: 20:58
Can Factor: 1.42
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.42	4.27	ND	1.64	4.92	ND	ND
74-86-2	Acetylene	1.42	4.27	32.49	1.52	4.55	34.62	
74-84-0	Ethane	1.42	4.27	44.87	1.76	5.27	55.35	
115-07-1	Propene	0.95	2.85	ND	1.64	4.91	ND	ND
74-98-6	Propane	0.95	2.85	23.83	1.72	5.15	43.07	
75-28-5	i-Butane	0.71	2.14	ND	1.70	5.09	ND	ND
106-98-9	1-Butene	0.71	2.14	ND	1.64	4.91	ND	ND
106-97-8	n-Butane	0.71	2.14	2.36	1.70	5.09	5.62	
624-64-6	t-2-Butene	0.71	2.14	7.48	1.64	4.91	17.20	
590-18-1	c-2-Butene	0.71	2.14	ND	1.64	4.91	ND	ND
78-78-4	i-Pentane	0.57	1.71	ND	1.69	5.06	ND	ND
109-67-1	1-Pentene	0.57	1.71	ND	1.64	4.91	ND	ND
109-66-0	n-Pentane	0.57	1.71	4,572.68	1.68	5.05	13,511.91	
78-79-5	Isoprene	0.57	1.71	44.01	1.59	4.77	122.84	
646-04-8	t-2-Pentene	0.57	1.71	ND	1.64	4.91	ND	ND
627-20-3	c-2-Pentene	0.57	1.71	7.99	1.64	4.91	22.94	
75-83-2	2,2-Dimethylbutane	0.47	1.42	ND	1.68	5.03	ND	ND
287-92-3	Cyclopentane	0.57	1.71	ND	1.64	4.91	ND	ND
79-29-8	2,3-Dimethylbutane	0.47	1.42	ND	1.68	5.03	ND	ND
107-83-5	2-Methylpentane	0.47	1.42	ND	1.68	5.03	ND	ND
96-14-0	3-Methylpentane	0.47	1.42	ND	1.68	5.03	ND	ND
110-54-3	n-Hexane	0.47	1.42	2,149.12	1.68	5.03	7,592.38	
96-37-7	Methylcyclopentane	0.47	1.42	ND	1.64	4.91	ND	ND
108-08-7	2,4-Dimethylpentane	0.41	1.22	ND	1.67	5.01	ND	ND
71-43-2	Benzene	0.47	1.42	4.70	1.52	4.56	15.04	
110-82-7	Cyclohexane	0.47	1.42	ND	1.64	4.91	ND	ND
591-76-4	2-Methylhexane	0.41	1.22	135.53	1.67	5.01	556.58	
565-59-3	2,3-Dimethylpentane	0.41	1.22	ND	1.67	5.01	ND	ND
589-34-4	3-Methylhexane	0.41	1.22	ND	1.67	5.01	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.36	1.07	ND	1.67	5.00	ND	ND
142-82-5	n-Heptane	0.41	1.22	357.49	1.67	5.01	1,468.04	
108-87-2	Methylcyclohexane	0.41	1.22	ND	1.64	4.91	ND	ND
592-13-2	2,5-Dimethylhexane	0.36	1.07	ND	1.67	5.00	ND	ND
589-43-5	2,4-Dimethylhexane	0.36	1.07	ND	1.67	5.00	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.36	1.07	ND	1.67	5.00	ND	ND
108-88-3	Toluene	0.41	1.22	18.17	1.54	4.61	68.58	
584-94-1	2,3-Dimethylhexane	0.36	1.07	ND	1.67	5.00	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.36	1.07	ND	1.67	5.00	ND	ND
589-81-1	3-Methylheptane	0.36	1.07	ND	1.67	5.00	ND	ND
111-65-9	n-Octane	0.36	1.07	198.96	1.67	5.00	931.22	
100-41-4	Ethylbenzene	0.36	1.07	56.52	1.55	4.65	246.02	
108-38-3	m,p-xylene	0.36	1.07	304.36	1.55	4.65	1,324.70	
100-42-5	Styrene	0.36	1.07	ND	1.52	4.56	ND	ND
95-47-6	o-xylene	0.36	1.07	258.38	1.55	4.65	1,124.57	
111-84-2	n-Nonane	0.32	0.95	31.33	1.66	4.99	164.72	
98-82-8	i-Propylbenzene	0.32	0.95	ND	1.56	4.68	ND	ND
103-65-1	n-propylbenzene	0.32	0.95	ND	1.56	4.68	ND	ND
80-56-8	a-Pinene	0.28	0.85	14.48	1.59	4.77	80.81	
620-14-4	3-Ethyltoluene	0.32	0.95	ND	1.56	4.68	ND	ND
622-96-8	4-Ethyltoluene	0.32	0.95	ND	1.56	4.68	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.32	0.95	69.16	1.56	4.68	340.68	
611-14-3	2-Ethyltoluene	0.32	0.95	ND	1.56	4.68	ND	ND
127-91-3	b-Pinene	0.28	0.85	70.27	1.59	4.77	392.23	
95-63-6	1,2,4-Trimethylbenzene	0.32	0.95	24.27	1.56	4.68	119.58	
124-18-5	n-Decane	0.28	0.85	10.34	1.66	4.98	60.32	
526-73-8	1,2,3-Trimethylbenzene	0.32	0.95	ND	1.56	4.68	ND	ND
5989-27-5	d-Limonene	0.28	0.85	ND	1.59	4.77	ND	ND
141-93-5	1,3-Diethylbenzene	0.28	0.85	ND	1.57	4.70	ND	ND
105-05-5	1,4-Diethylbenzene	0.28	0.85	ND	1.57	4.70	ND	ND
104-51-8	n-Butylbenzene	0.28	0.85	ND	1.57	4.70	ND	ND
1120-21-4	Undecane	0.26	0.78	12.66	1.66	4.98	81.08	
112-40-3	Dodecane	0.24	0.71	15.22	1.66	4.97	106.25	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.68	32.04	10,808.36	37.73	113.19	38,183.64	
TNMHC - C1	Total Non-Methane Hydrocarbons	64.08	192.24	64,850.18	42.02	126.06	42,524.71	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 08

File Name: 1837608A

Date Sampled: 07/31/18

Time: 14:23

Description: T - 208

Date Analyzed: 08/03/18

Time: 15:58

Can/Tube#: 539

Can Dilution Factor: 1.42

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.08	142	426	808	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 08

File Name: 1837608A
Description: T - 208
Can/Tube#: 539
QC_Batch: 080318-GCL

Date Sampled: 07/31/18 Time: 14:23
Date Analyzed: 08/03/18 Time: 15:17
Dilution Factor: 1.42

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.43	18.68	0.10	0.29	12.62	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218376

Laboratory ID: 09

File Name: 1837609B.D
Description: T - 209
Canister: 781
QC_Batch: 081618-MA1

Date Sampled: 07/31/18
Date Analyzed: 08/16/18
Can Dilution Factor: 1.34
Air Volume: 1.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	67.00	337.02	ND	331.14	1,665.64	ND	
74-87-3	Chloromethane	67.00	337.02	ND	138.32	695.74	ND	
76-14-2	Freon 114	67.00	337.02	ND	468.08	2,354.50	ND	
75-01-4	Vinyl chloride	67.00	337.02	ND	171.18	861.07	ND	
106-99-0	1,3-Butadiene	67.00	337.02	ND	148.18	745.34	ND	
74-83-9	Bromomethane	67.00	337.02	ND	259.92	1,307.44	ND	
75-00-3	Chloroethane	67.00	337.02	ND	176.66	888.62	ND	
64-17-5	Ethanol	335.00	1,005.00	ND	631.32	1,893.96	ND	
75-69-4	Trichlorofluoromethane	67.00	321.72	ND	376.33	1,807.04	ND	
67-64-1	Acetone	335.00	824.10	1,438.56	795.66	1,957.31	3,416.72	
67-63-0	2-propanol	335.00	769.16	ND	823.05	1,889.71	ND	
75-35-4	1,1-Dichloroethene	67.00	332.32	ND	265.40	1,316.39	ND	
76-13-1	Freon 113	67.00	320.55	ND	513.27	2,455.66	ND	
75-09-2	Dichloromethane	134.00	322.69	ND	465.07	1,119.95	ND	
75-15-0	Carbon disulfide	335.00	621.76	ND	1,042.16	1,934.25	ND	
156-60-5	trans-1,2-Dichloroethene	67.00	241.89	ND	265.40	958.19	ND	
1634-04-4	Methyl tert butyl ether	67.00	247.02	ND	241.30	889.65	ND	
75-34-3	1,1-Dichloroethane	67.00	334.15	ND	271.15	1,352.34	ND	
108-05-4	Vinyl acetate	67.00	294.38	ND	235.82	1,036.12	ND	
78-93-3	2-Butanone	268.00	682.06	ND	789.90	2,010.31	ND	
141-78-6	Ethyl acetate	134.00	293.46	ND	482.60	1,056.89	ND	
74-97-5	Bromochloromethane	67.00	178.45	ND	354.42	943.99	ND	
109-99-9	Tetrahydrofuran	134.00	337.02	ND	394.95	993.33	ND	
156-59-2	cis-1,2-Dichloroethene	134.00	360.46	ND	530.80	1,427.86	ND	
67-66-3	Chloroform	67.00	336.03	ND	327.03	1,640.18	ND	
71-55-6	1,1,1-Trichloroethane	67.00	297.48	ND	365.37	1,622.25	ND	
107-06-2	1,2-Dichloroethane	67.00	305.63	ND	271.15	1,236.88	ND	
110-82-7	Cyclohexane	67.27	257.28	ND	231.54	885.57	ND	
71-43-2	Benzene	67.00	340.38	217.88	213.91	1,086.72	695.63	J
56-23-5	Carbon tetrachloride	67.00	317.58	ND	421.25	1,996.71	ND	
142-82-5	n-Heptane	335.00	812.04	ND	1,372.20	3,326.21	ND	
78-87-5	1,2-Dichloropropane	67.00	322.46	ND	309.50	1,489.55	ND	
123-91-1	1,4 Dioxane	268.00	548.06	ND	965.20	1,973.82	ND	
79-01-6	Trichloroethene	40.20	312.08	ND	215.94	1,676.36	ND	
75-27-4	Bromodichloromethane	67.00	135.34	ND	448.64	906.24	ND	
80-62-6	Methyl methacrylate	268.00	905.84	ND	1,096.66	3,706.72	ND	
108-10-1	4-Methyl-2-pentanone	268.00	1,014.38	ND	1,097.76	4,155.02	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	67.00	347.19	ND	304.02	1,575.42	ND	
108-88-3	Toluene	134.00	349.74	15,657.16	504.51	1,316.77	58,949.10	
10061-02-6	trans-1,3-Dichloropropene	67.00	347.47	ND	304.02	1,576.67	ND	
79-00-5	1,1,2-Trichloroethane	67.00	344.50	1,433.91	365.37	1,878.65	7,819.54	
591-78-6	2-Hexanone	335.00	950.06	ND	1,372.20	3,891.56	ND	
124-48-1	Dibromochloromethane	67.00	133.78	ND	570.52	1,139.15	ND	
106-93-4	1,2-Dibromoethane	67.00	162.62	ND	514.64	1,249.13	ND	
127-18-4	Tetrachloroethene	40.20	163.07	ND	272.47	1,105.27	ND	
108-90-7	Chlorobenzene	67.00	304.90	ND	308.40	1,403.46	ND	
100-41-4	Ethylbenzene	141.67	354.18	351.83	615.05	1,537.63	1,527.43	J
1330-20-7	m,p-Xylenes	142.03	355.07	679.23	616.60	1,541.49	2,948.79	
100-42-5	Styrene	138.75	346.87	ND	591.02	1,477.54	ND	
75-25-2	Bromoform	67.00	89.90	ND	692.13	928.68	ND	
95-47-6	o-Xylene	138.13	345.32	448.98	599.67	1,499.17	1,949.21	
79-34-5	1,1,2,2-Tetrachloroethane	66.35	165.86	ND	455.10	1,137.75	ND	
622-96-8	4-Ethyltoluene	222.10	555.25	1,702.86	1,091.34	2,728.36	8,367.34	
108-67-8	1,3,5-Trimethylbenzene	138.45	346.13	850.57	680.30	1,700.76	4,179.43	
95-63-6	1,2,4-Trimethylbenzene	136.20	340.50	3,333.91	669.24	1,673.10	16,381.84	
541-73-1	1,3-Dichlorobenzene	134.00	247.90	ND	805.24	1,489.70	ND	
100-44-7	Benzyl chloride	134.00	812.04	ND	693.49	4,202.58	ND	
106-46-7	1,4-Dichlorobenzene	134.00	231.82	ND	805.24	1,393.07	ND	
95-50-1	1,2-Dichlorobenzene	134.00	217.08	ND	805.24	1,304.49	ND	
120-82-1	1,2,4-Trichlorobenzene	335.00	460.96	ND	2,484.20	3,418.26	ND	
91-20-3	Naphthalene	68.34	107.20	459.73	358.15	561.81	2,409.31	
87-68-3	Hexachlorobutadiene	335.00	355.10	ND	3,571.55	3,785.84	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	88	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376

Laboratory Number: 09

File Name: 1837609A
Description: T - 209
Canister: 781
QC_Batch: 081418-GCK

Date Sampled: 07/31/18 Time: 15:36
Date Analyzed: 08/14/18 Time: 20:02
Can Factor: 1.34
Air Volume: 50 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	5.36	16.08	42.80	6.17	18.52	49.30	
74-86-2	Acetylene	5.36	16.08	ND	5.71	17.13	ND	ND
74-84-0	Ethane	5.36	16.08	83.39	6.61	19.84	102.87	
115-07-1	Propene	3.57	10.72	ND	6.17	18.50	ND	ND
74-98-6	Propane	3.57	10.72	55.07	6.46	19.38	99.52	
75-28-5	i-Butane	2.68	8.04	ND	6.38	19.14	ND	ND
106-98-9	1-Butene	2.68	8.04	ND	6.16	18.49	ND	ND
106-97-8	n-Butane	2.68	8.04	19.14	6.38	19.14	45.59	
624-64-6	t-2-Butene	2.68	8.04	ND	6.16	18.49	ND	ND
590-18-1	c-2-Butene	2.68	8.04	ND	6.16	18.49	ND	ND
78-78-4	i-Pentane	2.14	6.43	ND	6.34	19.03	ND	ND
109-67-1	1-Pentene	2.14	6.43	ND	6.16	18.48	ND	ND
109-66-0	n-Pentane	2.14	6.43	90.32	6.34	19.01	266.90	
78-79-5	Isoprene	2.14	6.43	ND	5.98	17.95	ND	ND
646-04-8	t-2-Pentene	2.14	6.43	3.90	6.16	18.48	11.22	J
627-20-3	c-2-Pentene	2.14	6.43	ND	6.16	18.48	ND	ND
75-83-2	2,2-Dimethylbutane	1.79	5.36	8.99	6.31	18.94	31.76	
287-92-3	Cyclopentane	2.14	6.43	39.65	6.16	18.48	113.90	
79-29-8	2,3-Dimethylbutane	1.79	5.36	ND	6.31	18.94	ND	ND
107-83-5	2-Methylpentane	1.79	5.36	338.02	6.31	18.94	1,194.14	
96-14-0	3-Methylpentane	1.79	5.36	ND	6.31	18.94	ND	ND
110-54-3	n-Hexane	1.79	5.36	ND	6.31	18.94	ND	ND
96-37-7	Methylcyclopentane	1.79	5.36	11.80	6.17	18.50	40.71	
108-08-7	2,4-Dimethylpentane	1.53	4.59	9.62	6.29	18.87	39.51	
71-43-2	Benzene	1.79	5.36	437.21	5.72	17.16	1,399.44	
110-82-7	Cyclohexane	1.79	5.36	5.08	6.17	18.50	17.54	J
591-76-4	2-Methylhexane	1.53	4.59	103.68	6.29	18.87	425.77	
565-59-3	2,3-Dimethylpentane	1.53	4.59	114.28	6.29	18.87	469.29	
589-34-4	3-Methylhexane	1.53	4.59	263.56	6.29	18.87	1,082.33	
540-84-1	2,2,4-Trimethylpentane	1.34	4.02	288.96	6.27	18.81	1,352.43	
142-82-5	n-Heptane	1.53	4.59	3.63	6.29	18.87	14.92	J
108-87-2	Methylcyclohexane	1.53	4.59	ND	6.16	18.49	ND	ND
592-13-2	2,5-Dimethylhexane	1.34	4.02	611.76	6.27	18.81	2,863.26	
589-43-5	2,4-Dimethylhexane	1.34	4.02	ND	6.27	18.81	ND	ND
565-75-3	2,3,4-Trimethylpentane	1.34	4.02	ND	6.27	18.81	ND	ND
108-88-3	Toluene	1.53	4.59	22,883.11	5.78	17.34	86,374.35	
584-94-1	2,3-Dimethylhexane	1.34	4.02	ND	6.27	18.81	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	1.34	4.02	151.82	6.27	18.81	710.56	
589-81-1	3-Methylheptane	1.34	4.02	ND	6.27	18.81	ND	ND
111-65-9	n-Octane	1.34	4.02	4,528.80	6.27	18.81	21,196.25	
100-41-4	Ethylbenzene	1.34	4.02	987.81	5.83	17.50	4,299.41	
108-38-3	m,p-xylene	1.34	4.02	1,969.55	5.83	17.50	8,572.38	
100-42-5	Styrene	1.34	4.02	ND	5.72	17.17	ND	ND
95-47-6	o-xylene	1.34	4.02	1,129.91	5.83	17.50	4,917.88	
111-84-2	n-Nonane	1.19	3.57	4,105.83	6.26	18.79	21,589.24	
98-82-8	i-Propylbenzene	1.19	3.57	ND	5.87	17.60	ND	ND
103-65-1	n-propylbenzene	1.19	3.57	ND	5.87	17.60	ND	ND
80-56-8	a-Pinene	1.07	3.22	1,946.54	5.98	17.95	10,865.50	
620-14-4	3-Ethyltoluene	1.19	3.57	ND	5.87	17.60	ND	ND
622-96-8	4-Ethyltoluene	1.19	3.57	4,853.32	5.87	17.60	23,908.55	
108-67-8	1,3,5-Trimethylbenzene	1.19	3.57	2,244.90	5.87	17.60	11,058.91	
611-14-3	2-Ethyltoluene	1.19	3.57	5,137.18	5.87	17.60	25,306.90	
127-91-3	b-Pinene	1.07	3.22	2,095.19	5.98	17.95	11,695.26	
95-63-6	1,2,4-Trimethylbenzene	1.19	3.57	5,065.34	5.87	17.60	24,953.04	
124-18-5	n-Decane	1.07	3.22	6,427.96	6.25	18.76	37,487.64	
526-73-8	1,2,3-Trimethylbenzene	1.19	3.57	ND	5.87	17.60	ND	ND
5989-27-5	d-Limonene	1.07	3.22	2,570.53	5.98	17.95	14,348.64	
141-93-5	1,3-Diethylbenzene	1.07	3.22	2,371.55	5.90	17.69	13,043.53	
105-05-5	1,4-Diethylbenzene	1.07	3.22	3,026.58	5.90	17.69	16,646.18	
104-51-8	n-Butylbenzene	1.07	3.22	2,759.80	5.90	17.69	15,178.91	
1120-21-4	Undecane	0.97	2.92	6,580.59	6.24	18.73	42,153.51	
112-40-3	Dodecane	0.89	2.68	2,668.24	6.24	18.71	18,623.00	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	40.20	120.60	310,779.70	142.02	426.05	1,097,918.44	
TNMHC - C1	Total Non-Methane Hydrocarbons	241.20	723.60	1,864,678.18	158.16	474.49	1,222,739.79	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 09

File Name: 1837609A

Date Sampled: 07/31/18

Time: 15:36

Description: T - 209

Date Analyzed: 08/03/18

Time: 16:03

Can/Tube#: 781

Can Dilution Factor: 1.34

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	134	402	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 09

File Name: 1837609A
Description: T - 209
Can/Tube#: 781
QC_Batch: 080318-GCL

Date Sampled: 07/31/18 Time: 15:36
Date Analyzed: 08/03/18 Time: 15:20
Dilution Factor: 1.34

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.40	14.70	0.09	0.27	9.93	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 10

File Name: 1837610A.D
Description: T - 210
Canister: 765
QC_Batch: 081418-MA1

Date Sampled: 07/31/18 Time: 15:53
Date Analyzed: 08/14/18 Time: 20:11
Can Dilution Factor: 1.26
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.58	ND	1.56	7.83	ND	
74-87-3	Chloromethane	0.32	1.58	ND	0.65	3.27	ND	
76-14-2	Freon 114	0.32	1.58	ND	2.20	11.07	ND	
75-01-4	Vinyl chloride	0.32	1.58	ND	0.80	4.05	ND	
106-99-0	1,3-Butadiene	0.32	1.58	ND	0.70	3.50	ND	
74-83-9	Bromomethane	0.32	1.58	ND	1.22	6.15	ND	
75-00-3	Chloroethane	0.32	1.58	ND	0.83	4.18	ND	
64-17-5	Ethanol	1.58	4.73	ND	2.97	8.90	ND	
75-69-4	Trichlorofluoromethane	0.32	1.51	ND	1.77	8.50	ND	
67-64-1	Acetone	1.58	3.87	ND	3.74	9.20	ND	
67-63-0	2-propanol	1.58	3.62	ND	3.87	8.88	ND	
75-35-4	1,1-Dichloroethene	0.32	1.56	ND	1.25	6.19	ND	
76-13-1	Freon 113	0.32	1.51	ND	2.41	11.55	ND	
75-09-2	Dichloromethane	0.63	1.52	ND	2.19	5.27	ND	
75-15-0	Carbon disulfide	1.58	2.92	ND	4.90	9.09	ND	
156-60-5	trans-1,2-Dichloroethene	0.32	1.14	ND	1.25	4.50	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.16	ND	1.13	4.18	ND	
75-34-3	1,1-Dichloroethane	0.32	1.57	ND	1.27	6.36	ND	
108-05-4	Vinyl acetate	0.32	1.38	ND	1.11	4.87	ND	
78-93-3	2-Butanone	1.26	3.21	ND	3.71	9.45	ND	
141-78-6	Ethyl acetate	0.63	1.38	ND	2.27	4.97	ND	
74-97-5	Bromochloromethane	0.32	0.84	ND	1.67	4.44	ND	
109-99-9	Tetrahydrofuran	0.63	1.58	ND	1.86	4.67	ND	
156-59-2	cis-1,2-Dichloroethene	0.63	1.69	ND	2.50	6.71	ND	
67-66-3	Chloroform	0.32	1.58	ND	1.54	7.71	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.40	ND	1.72	7.63	ND	
107-06-2	1,2-Dichloroethane	0.32	1.44	ND	1.27	5.82	ND	
110-82-7	Cyclohexane	0.32	1.21	ND	1.09	4.16	ND	
71-43-2	Benzene	0.32	1.60	ND	1.01	5.11	ND	
56-23-5	Carbon tetrachloride	0.32	1.49	ND	1.98	9.39	ND	
142-82-5	n-Heptane	1.58	3.82	ND	6.45	15.64	ND	
78-87-5	1,2-Dichloropropane	0.32	1.52	ND	1.46	7.00	ND	
123-91-1	1,4 Dioxane	1.26	2.58	ND	4.54	9.28	ND	
79-01-6	Trichloroethene	0.19	1.47	ND	1.02	7.88	ND	
75-27-4	Bromodichloromethane	0.32	0.64	ND	2.11	4.26	ND	
80-62-6	Methyl methacrylate	1.26	4.26	ND	5.16	17.43	ND	
108-10-1	4-Methyl-2-pentanone	1.26	4.77	ND	5.16	19.53	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.32	1.63	ND	1.43	7.41	ND	
108-88-3	Toluene	0.63	1.64	ND	2.37	6.19	ND	
10061-02-6	trans-1,3-Dichloropropene	0.32	1.63	ND	1.43	7.41	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.62	ND	1.72	8.83	ND	
591-78-6	2-Hexanone	1.58	4.47	ND	6.45	18.30	ND	
124-48-1	Dibromochloromethane	0.32	0.63	ND	2.68	5.36	ND	
106-93-4	1,2-Dibromoethane	0.32	0.76	ND	2.42	5.87	ND	
127-18-4	Tetrachloroethene	0.19	0.77	ND	1.28	5.20	ND	
108-90-7	Chlorobenzene	0.32	1.43	ND	1.45	6.60	ND	
100-41-4	Ethylbenzene	0.67	1.67	ND	2.89	7.23	ND	
1330-20-7	m,p-Xylenes	0.67	1.67	ND	2.90	7.25	ND	
100-42-5	Styrene	0.65	1.63	ND	2.78	6.95	ND	
75-25-2	Bromoform	0.32	0.42	ND	3.25	4.37	ND	
95-47-6	o-Xylene	0.65	1.62	ND	2.82	7.05	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.78	ND	2.14	5.35	ND	
622-96-8	4-Ethyltoluene	1.04	2.61	ND	5.13	12.83	ND	
108-67-8	1,3,5-Trimethylbenzene	0.65	1.63	ND	3.20	8.00	ND	
95-63-6	1,2,4-Trimethylbenzene	0.64	1.60	ND	3.15	7.87	ND	
541-73-1	1,3-Dichlorobenzene	0.63	1.17	ND	3.79	7.00	ND	
100-44-7	Benzyl chloride	0.63	3.82	ND	3.26	19.76	ND	
106-46-7	1,4-Dichlorobenzene	0.63	1.09	ND	3.79	6.55	ND	
95-50-1	1,2-Dichlorobenzene	0.63	1.02	ND	3.79	6.13	ND	
120-82-1	1,2,4-Trichlorobenzene	1.58	2.17	ND	11.68	16.07	ND	
91-20-3	Naphthalene	0.32	0.50	ND	1.68	2.64	ND	
87-68-3	Hexachlorobutadiene	1.58	1.67	ND	16.79	17.80	ND	
					QC	Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag
2037-26-5	Toluene-d8				86	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376

Laboratory Number: 10

File Name: 1837610B
Description: T - 210
Canister: 765
QC_Batch: 081418-GCK

Date Sampled: 07/31/18 Time: 15:53
Date Analyzed: 08/14/18 Time: 16:24
Can Factor: 1.26
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.26	3.78	ND	1.45	4.35	ND	ND
74-86-2	Acetylene	1.26	3.78	ND	1.34	4.03	ND	ND
74-84-0	Ethane	1.26	3.78	ND	1.55	4.66	ND	ND
115-07-1	Propene	0.84	2.52	ND	1.45	4.35	ND	ND
74-98-6	Propane	0.84	2.52	ND	1.52	4.55	ND	ND
75-28-5	i-Butane	0.63	1.89	ND	1.50	4.50	ND	ND
106-98-9	1-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
106-97-8	n-Butane	0.63	1.89	ND	1.50	4.50	ND	ND
624-64-6	t-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
590-18-1	c-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
78-78-4	i-Pentane	0.50	1.51	ND	1.49	4.47	ND	ND
109-67-1	1-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
109-66-0	n-Pentane	0.50	1.51	ND	1.49	4.47	ND	ND
78-79-5	Isoprene	0.50	1.51	ND	1.41	4.22	ND	ND
646-04-8	t-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
627-20-3	c-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
287-92-3	Cyclopentane	0.50	1.51	ND	1.45	4.34	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
107-83-5	2-Methylpentane	0.42	1.26	ND	1.48	4.45	ND	ND
96-14-0	3-Methylpentane	0.42	1.26	ND	1.48	4.45	ND	ND
110-54-3	n-Hexane	0.42	1.26	ND	1.48	4.45	ND	ND
96-37-7	Methylcyclopentane	0.42	1.26	ND	1.45	4.35	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.08	ND	1.48	4.44	ND	ND
71-43-2	Benzene	0.42	1.26	ND	1.34	4.03	ND	ND
110-82-7	Cyclohexane	0.42	1.26	ND	1.45	4.35	ND	ND
591-76-4	2-Methylhexane	0.36	1.08	ND	1.48	4.44	ND	ND
565-59-3	2,3-Dimethylpentane	0.36	1.08	ND	1.48	4.44	ND	ND
589-34-4	3-Methylhexane	0.36	1.08	ND	1.48	4.44	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	ND	1.47	4.42	ND	ND
142-82-5	n-Heptane	0.36	1.08	ND	1.48	4.44	ND	ND
108-87-2	Methylcyclohexane	0.36	1.08	ND	1.45	4.35	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	ND	1.47	4.42	ND	ND
108-88-3	Toluene	0.36	1.08	ND	1.36	4.08	ND	ND
584-94-1	2,3-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND
589-81-1	3-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND
111-65-9	n-Octane	0.32	0.95	ND	1.47	4.42	ND	ND
100-41-4	Ethylbenzene	0.32	0.95	ND	1.37	4.11	ND	ND
108-38-3	m,p-xylene	0.32	0.95	ND	1.37	4.11	ND	ND
100-42-5	Styrene	0.32	0.95	ND	1.35	4.04	ND	ND
95-47-6	o-xylene	0.32	0.95	ND	1.37	4.11	ND	ND
111-84-2	n-Nonane	0.28	0.84	ND	1.47	4.42	ND	ND
98-82-8	i-Propylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
103-65-1	n-propylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
80-56-8	a-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
611-14-3	2-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
127-91-3	b-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
124-18-5	n-Decane	0.25	0.76	ND	1.47	4.41	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
5989-27-5	d-Limonene	0.25	0.76	ND	1.41	4.22	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
104-51-8	n-Butylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
1120-21-4	Undecane	0.23	0.69	ND	1.47	4.40	ND	ND
112-40-3	Dodecane	0.21	0.63	ND	1.47	4.40	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.45	28.35	ND	33.38	100.15	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	56.70	170.10	ND	37.18	111.54	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 10

File Name: 1837610A

Date Sampled: 07/31/18

Time: 15:53

Description: T - 210

Date Analyzed: 08/03/18

Time: 16:09

Can/Tube#: 765

Can Dilution Factor: 1.26

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	126	378	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: **ASTM D3416**

SDG: 218376
Laboratory Number: 10

File Name: 1837610A
Description: T - 210
Can/Tube#: 765
QC_Batch: 080318-GCL

Date Sampled: 07/31/18 **Time:** 15:53
Date Analyzed: 08/03/18 **Time:** 15:24
Dilution Factor: 1.26

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	ND	0.09	0.26	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218376

Laboratory ID: 11

File Name: 1837611A.D

Date Sampled: 08/01/18

Time: 08:10

Description: T - 301

Date Analyzed: 08/16/18

Time: 17:25

Canister: 729

Can Dilution Factor: 1.32

QC_Batch: 081618-MA1

Air Volume: 20 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	3.30	16.60	ND	16.31	82.04	ND	
74-87-3	Chloromethane	3.30	16.60	ND	6.81	34.27	ND	
76-14-2	Freon 114	3.30	16.60	ND	23.05	115.97	ND	
75-01-4	Vinyl chloride	3.30	16.60	ND	8.43	42.41	ND	
106-99-0	1,3-Butadiene	3.30	16.60	ND	7.30	36.71	ND	
74-83-9	Bromomethane	3.30	16.60	ND	12.80	64.40	ND	
75-00-3	Chloroethane	3.30	16.60	ND	8.70	43.77	ND	
64-17-5	Ethanol	16.50	49.50	ND	31.09	93.28	ND	
75-69-4	Trichlorofluoromethane	3.30	15.85	ND	18.54	89.00	ND	
67-64-1	Acetone	16.50	40.59	424.46	39.19	96.41	1,008.12	
67-63-0	2-propanol	16.50	37.88	ND	40.54	93.08	ND	
75-35-4	1,1-Dichloroethene	3.30	16.37	ND	13.07	64.84	ND	
76-13-1	Freon 113	3.30	15.79	ND	25.28	120.95	ND	
75-09-2	Dichloromethane	6.60	15.89	ND	22.91	55.16	ND	
75-15-0	Carbon disulfide	16.50	30.62	ND	51.33	95.27	ND	
156-60-5	trans-1,2-Dichloroethene	3.30	11.91	ND	13.07	47.19	ND	
1634-04-4	Methyl tert butyl ether	3.30	12.17	ND	11.88	43.82	ND	
75-34-3	1,1-Dichloroethane	3.30	16.46	ND	13.36	66.61	ND	
108-05-4	Vinyl acetate	3.30	14.50	ND	11.62	51.03	ND	
78-93-3	2-Butanone	13.20	33.59	181.91	38.91	99.02	536.17	
141-78-6	Ethyl acetate	6.60	14.45	ND	23.77	52.06	ND	
74-97-5	Bromochloromethane	3.30	8.79	ND	17.46	46.49	ND	
109-99-9	Tetrahydrofuran	6.60	16.60	ND	19.45	48.93	ND	
156-59-2	cis-1,2-Dichloroethene	6.60	17.75	ND	26.14	70.33	ND	
67-66-3	Chloroform	3.30	16.55	ND	16.11	80.78	ND	
71-55-6	1,1,1-Trichloroethane	3.30	14.65	ND	18.00	79.90	ND	
107-06-2	1,2-Dichloroethane	3.30	15.05	ND	13.36	60.92	ND	
110-82-7	Cyclohexane	3.31	12.67	ND	11.40	43.62	ND	
71-43-2	Benzene	3.30	16.76	37.48	10.54	53.53	119.65	
56-23-5	Carbon tetrachloride	3.30	15.64	ND	20.75	98.35	ND	
142-82-5	n-Heptane	16.50	40.00	ND	67.59	163.83	ND	
78-87-5	1,2-Dichloropropane	3.30	15.88	ND	15.24	73.37	ND	
123-91-1	1,4 Dioxane	13.20	26.99	ND	47.54	97.22	ND	
79-01-6	Trichloroethene	1.98	15.37	ND	10.64	82.57	ND	
75-27-4	Bromodichloromethane	3.30	6.67	ND	22.10	44.64	ND	
80-62-6	Methyl methacrylate	13.20	44.62	ND	54.01	182.57	ND	
108-10-1	4-Methyl-2-pentanone	13.20	49.96	ND	54.07	204.65	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	3.30	17.10	ND	14.97	77.60	ND	
108-88-3	Toluene	6.60	17.23	31.34	24.85	64.86	118.00	
10061-02-6	trans-1,3-Dichloropropene	3.30	17.11	ND	14.97	77.66	ND	
79-00-5	1,1,2-Trichloroethane	3.30	16.97	ND	18.00	92.53	ND	
591-78-6	2-Hexanone	16.50	46.79	ND	67.59	191.67	ND	
124-48-1	Dibromochloromethane	3.30	6.59	ND	28.10	56.11	ND	
106-93-4	1,2-Dibromoethane	3.30	8.01	ND	25.35	61.52	ND	
127-18-4	Tetrachloroethene	1.98	8.03	ND	13.42	54.44	ND	
108-90-7	Chlorobenzene	3.30	15.02	ND	15.19	69.13	ND	
100-41-4	Ethylbenzene	6.98	17.44	ND	30.29	75.73	ND	
1330-20-7	m,p-Xylenes	7.00	17.49	11.43	30.37	75.92	49.63	J
100-42-5	Styrene	6.83	17.08	ND	29.11	72.77	ND	
75-25-2	Bromoform	3.30	4.43	ND	34.09	45.74	ND	
95-47-6	o-Xylene	6.80	17.01	8.45	29.54	73.84	36.69	J
79-34-5	1,1,2,2-Tetrachloroethane	3.27	8.17	ND	22.42	56.04	ND	
622-96-8	4-Ethyltoluene	10.94	27.35	ND	53.75	134.38	ND	
108-67-8	1,3,5-Trimethylbenzene	6.82	17.05	ND	33.51	83.77	ND	
95-63-6	1,2,4-Trimethylbenzene	6.71	16.77	ND	32.96	82.41	ND	
541-73-1	1,3-Dichlorobenzene	6.60	12.21	ND	39.66	73.37	ND	
100-44-7	Benzyl chloride	6.60	40.00	ND	34.16	206.99	ND	
106-46-7	1,4-Dichlorobenzene	6.60	11.42	ND	39.66	68.61	ND	
95-50-1	1,2-Dichlorobenzene	6.60	10.69	ND	39.66	64.25	ND	
120-82-1	1,2,4-Trichlorobenzene	16.50	22.70	ND	122.36	168.36	ND	
91-20-3	Naphthalene	3.37	5.28	53.40	17.64	27.67	279.87	
87-68-3	Hexachlorobutadiene	16.50	17.49	ND	175.91	186.47	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				87	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376

Laboratory Number: 11

File Name: 1837611A
Description: T - 301
Canister: 729
QC_Batch: 080818-GCK

Date Sampled: 08/01/18 Time: 8:10
Date Analyzed: 08/08/18 Time: 16:54
Can Factor: 1.32
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.32	3.96	3.91	1.52	4.56	4.50	J
74-86-2	Acetylene	1.32	3.96	ND	1.41	4.22	ND	ND
74-84-0	Ethane	1.32	3.96	23.88	1.63	4.89	29.46	
115-07-1	Propene	0.88	2.64	ND	1.52	4.56	ND	ND
74-98-6	Propane	0.88	2.64	5.92	1.59	4.77	10.69	
75-28-5	i-Butane	0.66	1.98	ND	1.57	4.71	ND	ND
106-98-9	1-Butene	0.66	1.98	ND	1.52	4.55	ND	ND
106-97-8	n-Butane	0.66	1.98	2.59	1.57	4.71	6.16	
624-64-6	t-2-Butene	0.66	1.98	ND	1.52	4.55	ND	ND
590-18-1	c-2-Butene	0.66	1.98	ND	1.52	4.55	ND	ND
78-78-4	i-Pentane	0.53	1.58	252.58	1.56	4.69	747.40	
109-67-1	1-Pentene	0.53	1.58	ND	1.52	4.55	ND	ND
109-66-0	n-Pentane	0.53	1.58	3.78	1.56	4.68	11.18	
78-79-5	Isoprene	0.53	1.58	ND	1.47	4.42	ND	ND
646-04-8	t-2-Pentene	0.53	1.58	1.34	1.52	4.55	3.84	J
627-20-3	c-2-Pentene	0.53	1.58	ND	1.52	4.55	ND	ND
75-83-2	2,2-Dimethylbutane	0.44	1.32	ND	1.55	4.66	ND	ND
287-92-3	Cyclopentane	0.53	1.58	ND	1.52	4.55	ND	ND
79-29-8	2,3-Dimethylbutane	0.44	1.32	0.61	1.55	4.66	2.15	J
107-83-5	2-Methylpentane	0.44	1.32	139.25	1.55	4.66	491.95	
96-14-0	3-Methylpentane	0.44	1.32	ND	1.55	4.66	ND	ND
110-54-3	n-Hexane	0.44	1.32	ND	1.55	4.66	ND	ND
96-37-7	Methylcyclopentane	0.44	1.32	ND	1.52	4.56	ND	ND
108-08-7	2,4-Dimethylpentane	0.38	1.13	ND	1.55	4.65	ND	ND
71-43-2	Benzene	0.44	1.32	40.83	1.41	4.23	130.68	
110-82-7	Cyclohexane	0.44	1.32	ND	1.52	4.56	ND	ND
591-76-4	2-Methylhexane	0.38	1.13	4.05	1.55	4.65	16.65	
565-59-3	2,3-Dimethylpentane	0.38	1.13	ND	1.55	4.65	ND	ND
589-34-4	3-Methylhexane	0.38	1.13	0.87	1.55	4.65	3.58	J
540-84-1	2,2,4-Trimethylpentane	0.33	0.99	ND	1.54	4.63	ND	ND
142-82-5	n-Heptane	0.38	1.13	30.33	1.55	4.65	124.56	
108-87-2	Methylcyclohexane	0.38	1.13	8.41	1.52	4.55	33.86	
592-13-2	2,5-Dimethylhexane	0.33	0.99	0.89	1.54	4.63	4.16	J
589-43-5	2,4-Dimethylhexane	0.33	0.99	27.47	1.54	4.63	128.57	
565-75-3	2,3,4-Trimethylpentane	0.33	0.99	24.64	1.54	4.63	115.33	
108-88-3	Toluene	0.38	1.13	48.55	1.42	4.27	183.26	
584-94-1	2,3-Dimethylhexane	0.33	0.99	ND	1.54	4.63	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.33	0.99	3.20	1.54	4.63	14.98	
589-81-1	3-Methylheptane	0.33	0.99	16.51	1.54	4.63	77.27	
111-65-9	n-Octane	0.33	0.99	7.90	1.54	4.63	36.98	
100-41-4	Ethylbenzene	0.33	0.99	4.61	1.44	4.31	20.05	
108-38-3	m,p-xylene	0.33	0.99	10.03	1.44	4.31	43.64	
100-42-5	Styrene	0.33	0.99	ND	1.41	4.23	ND	ND
95-47-6	o-xylene	0.33	0.99	14.72	1.44	4.31	64.08	
111-84-2	n-Nonane	0.29	0.88	41.04	1.54	4.63	215.79	
98-82-8	i-Propylbenzene	0.29	0.88	ND	1.45	4.34	ND	ND
103-65-1	n-propylbenzene	0.29	0.88	10.09	1.45	4.34	49.70	
80-56-8	a-Pinene	0.26	0.79	ND	1.47	4.42	ND	ND
620-14-4	3-Ethyltoluene	0.29	0.88	6.36	1.45	4.34	31.34	
622-96-8	4-Ethyltoluene	0.29	0.88	ND	1.45	4.34	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.29	0.88	10.32	1.45	4.34	50.83	
611-14-3	2-Ethyltoluene	0.29	0.88	10.57	1.45	4.34	52.06	
127-91-3	b-Pinene	0.26	0.79	6.37	1.47	4.42	35.58	
95-63-6	1,2,4-Trimethylbenzene	0.29	0.88	7.57	1.45	4.34	37.29	
124-18-5	n-Decane	0.26	0.79	9.44	1.54	4.62	55.06	
526-73-8	1,2,3-Trimethylbenzene	0.29	0.88	16.14	1.45	4.34	79.52	
5989-27-5	d-Limonene	0.26	0.79	4.28	1.47	4.42	23.88	
141-93-5	1,3-Diethylbenzene	0.26	0.79	4.42	1.45	4.36	24.33	
105-05-5	1,4-Diethylbenzene	0.26	0.79	ND	1.45	4.36	ND	ND
104-51-8	n-Butylbenzene	0.26	0.79	ND	1.45	4.36	ND	ND
1120-21-4	Undecane	0.24	0.72	5.15	1.54	4.61	32.99	
112-40-3	Dodecane	0.22	0.66	4.27	1.54	4.61	29.79	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.90	29.70	2,082.39	34.97	104.92	7,356.62	
TNMHC - C1	Total Non-Methane Hydrocarbons	59.40	178.20	12,494.31	38.95	116.85	8,192.99	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 11

File Name: 1837611A

Date Sampled: 08/01/18

Time: 8:10

Description: T - 301

Date Analyzed: 08/03/18

Time: 16:21

Can/Tube#: 729

Can Dilution Factor: 1.32

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	132	396	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 11

File Name: 1837611A
Description: T - 301
Can/Tube#: 729
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 Time: 8:10
Date Analyzed: 08/03/18 Time: 15:31
Dilution Factor: 1.32

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.40	1.52	0.09	0.27	1.03	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218376

Laboratory ID: 12

File Name: 1837612A.D

Date Sampled: 08/01/18

Time: 07:58

Description: T - 302

Date Analyzed: 08/14/18

Time: 21:23

Canister: 881

Can Dilution Factor: 1.30

QC_Batch: 081418-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.33	1.63	ND	1.61	8.08	ND	
74-87-3	Chloromethane	0.33	1.63	ND	0.67	3.37	ND	
76-14-2	Freon 114	0.33	1.63	ND	2.27	11.42	ND	
75-01-4	Vinyl chloride	0.33	1.63	ND	0.83	4.18	ND	
106-99-0	1,3-Butadiene	0.33	1.63	ND	0.72	3.62	ND	
74-83-9	Bromomethane	0.33	1.63	ND	1.26	6.34	ND	
75-00-3	Chloroethane	0.33	1.63	ND	0.86	4.31	ND	
64-17-5	Ethanol	1.63	4.88	ND	3.06	9.19	ND	
75-69-4	Trichlorofluoromethane	0.33	1.56	ND	1.83	8.77	ND	
67-64-1	Acetone	1.63	4.00	ND	3.86	9.49	ND	
67-63-0	2-propanol	1.63	3.73	ND	3.99	9.17	ND	
75-35-4	1,1-Dichloroethene	0.33	1.61	ND	1.29	6.39	ND	
76-13-1	Freon 113	0.33	1.55	ND	2.49	11.91	ND	
75-09-2	Dichloromethane	0.65	1.57	ND	2.26	5.43	ND	
75-15-0	Carbon disulfide	1.63	3.02	ND	5.06	9.38	ND	
156-60-5	trans-1,2-Dichloroethene	0.33	1.17	ND	1.29	4.65	ND	
1634-04-4	Methyl tert butyl ether	0.33	1.20	ND	1.17	4.32	ND	
75-34-3	1,1-Dichloroethane	0.33	1.62	ND	1.32	6.56	ND	
108-05-4	Vinyl acetate	0.33	1.43	ND	1.14	5.03	ND	
78-93-3	2-Butanone	1.30	3.31	ND	3.83	9.75	ND	
141-78-6	Ethyl acetate	0.65	1.42	ND	2.34	5.13	ND	
74-97-5	Bromochloromethane	0.33	0.87	ND	1.72	4.58	ND	
109-99-9	Tetrahydrofuran	0.65	1.63	ND	1.92	4.82	ND	
156-59-2	cis-1,2-Dichloroethene	0.65	1.75	ND	2.57	6.93	ND	
67-66-3	Chloroform	0.33	1.63	ND	1.59	7.96	ND	
71-55-6	1,1,1-Trichloroethane	0.33	1.44	ND	1.77	7.87	ND	
107-06-2	1,2-Dichloroethane	0.33	1.48	ND	1.32	6.00	ND	
110-82-7	Cyclohexane	0.33	1.25	ND	1.12	4.30	ND	
71-43-2	Benzene	0.33	1.65	2.49	1.04	5.27	7.96	
56-23-5	Carbon tetrachloride	0.33	1.54	ND	2.04	9.69	ND	
142-82-5	n-Heptane	1.63	3.94	ND	6.66	16.13	ND	
78-87-5	1,2-Dichloropropane	0.33	1.56	ND	1.50	7.23	ND	
123-91-1	1,4 Dioxane	1.30	2.66	ND	4.68	9.57	ND	
79-01-6	Trichloroethene	0.20	1.51	ND	1.05	8.13	ND	
75-27-4	Bromodichloromethane	0.33	0.66	ND	2.18	4.40	ND	
80-62-6	Methyl methacrylate	1.30	4.39	ND	5.32	17.98	ND	
108-10-1	4-Methyl-2-pentanone	1.30	4.92	ND	5.32	20.15	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.33	1.68	ND	1.47	7.64	ND	
108-88-3	Toluene	0.65	1.70	1.90	2.45	6.39	7.17	
10061-02-6	trans-1,3-Dichloropropene	0.33	1.69	ND	1.47	7.65	ND	
79-00-5	1,1,2-Trichloroethane	0.33	1.67	ND	1.77	9.11	ND	
591-78-6	2-Hexanone	1.63	4.61	ND	6.66	18.88	ND	
124-48-1	Dibromochloromethane	0.33	0.65	ND	2.77	5.53	ND	
106-93-4	1,2-Dibromoethane	0.33	0.79	ND	2.50	6.06	ND	
127-18-4	Tetrachloroethene	0.20	0.79	ND	1.32	5.36	ND	
108-90-7	Chlorobenzene	0.33	1.48	ND	1.50	6.81	ND	
100-41-4	Ethylbenzene	0.69	1.72	ND	2.98	7.46	ND	
1330-20-7	m,p-Xylenes	0.69	1.72	ND	2.99	7.48	ND	
100-42-5	Styrene	0.67	1.68	ND	2.87	7.17	ND	
75-25-2	Bromoform	0.33	0.44	ND	3.36	4.50	ND	
95-47-6	o-Xylene	0.67	1.68	ND	2.91	7.27	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.32	0.80	ND	2.21	5.52	ND	
622-96-8	4-Ethyltoluene	1.08	2.69	ND	5.29	13.23	ND	
108-67-8	1,3,5-Trimethylbenzene	0.67	1.68	ND	3.30	8.25	ND	
95-63-6	1,2,4-Trimethylbenzene	0.66	1.65	ND	3.25	8.12	ND	
541-73-1	1,3-Dichlorobenzene	0.65	1.20	ND	3.91	7.23	ND	
100-44-7	Benzyl chloride	0.65	3.94	ND	3.36	20.39	ND	
106-46-7	1,4-Dichlorobenzene	0.65	1.12	ND	3.91	6.76	ND	
95-50-1	1,2-Dichlorobenzene	0.65	1.05	ND	3.91	6.33	ND	
120-82-1	1,2,4-Trichlorobenzene	1.63	2.24	ND	12.05	16.58	ND	
91-20-3	Naphthalene	0.33	0.52	ND	1.74	2.73	ND	
87-68-3	Hexachlorobutadiene	1.63	1.72	ND	17.32	18.36	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	94	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 12

File Name: 1837612A
Description: T - 302
Canister: 881
QC_Batch: 080818-GCK

Date Sampled: 08/01/18 Time: 7:58
Date Analyzed: 08/08/18 Time: 17:38
Can Factor: 1.30
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.30	3.90	3.79	1.50	4.49	4.36	J
74-86-2	Acetylene	1.30	3.90	ND	1.39	4.16	ND	ND
74-84-0	Ethane	1.30	3.90	15.44	1.60	4.81	19.05	
115-07-1	Propene	0.87	2.60	ND	1.50	4.49	ND	ND
74-98-6	Propane	0.87	2.60	5.98	1.57	4.70	10.81	
75-28-5	i-Butane	0.65	1.95	ND	1.55	4.64	ND	ND
106-98-9	1-Butene	0.65	1.95	ND	1.49	4.48	ND	ND
106-97-8	n-Butane	0.65	1.95	3.56	1.55	4.64	8.47	
624-64-6	t-2-Butene	0.65	1.95	ND	1.49	4.48	ND	ND
590-18-1	c-2-Butene	0.65	1.95	ND	1.49	4.48	ND	ND
78-78-4	i-Pentane	0.52	1.56	0.82	1.54	4.62	2.41	J
109-67-1	1-Pentene	0.52	1.56	ND	1.49	4.48	ND	ND
109-66-0	n-Pentane	0.52	1.56	0.99	1.54	4.61	2.91	J
78-79-5	Isoprene	0.52	1.56	ND	1.45	4.35	ND	ND
646-04-8	t-2-Pentene	0.52	1.56	ND	1.49	4.48	ND	ND
627-20-3	c-2-Pentene	0.52	1.56	ND	1.49	4.48	ND	ND
75-83-2	2,2-Dimethylbutane	0.43	1.30	ND	1.53	4.59	ND	ND
287-92-3	Cyclopentane	0.52	1.56	ND	1.49	4.48	ND	ND
79-29-8	2,3-Dimethylbutane	0.43	1.30	ND	1.53	4.59	ND	ND
107-83-5	2-Methylpentane	0.43	1.30	0.67	1.53	4.59	2.36	J
96-14-0	3-Methylpentane	0.43	1.30	1.71	1.53	4.59	6.05	
110-54-3	n-Hexane	0.43	1.30	2.73	1.53	4.59	9.64	
96-37-7	Methylcyclopentane	0.43	1.30	ND	1.50	4.49	ND	ND
108-08-7	2,4-Dimethylpentane	0.37	1.11	1.14	1.53	4.58	4.67	
71-43-2	Benzene	0.43	1.30	10.27	1.39	4.16	32.86	
110-82-7	Cyclohexane	0.43	1.30	ND	1.50	4.49	ND	ND
591-76-4	2-Methylhexane	0.37	1.11	0.94	1.53	4.58	3.85	J
565-59-3	2,3-Dimethylpentane	0.37	1.11	ND	1.53	4.58	ND	ND
589-34-4	3-Methylhexane	0.37	1.11	1.77	1.53	4.58	7.26	
540-84-1	2,2,4-Trimethylpentane	0.33	0.98	ND	1.52	4.56	ND	ND
142-82-5	n-Heptane	0.37	1.11	0.73	1.53	4.58	3.01	J
108-87-2	Methylcyclohexane	0.37	1.11	16.88	1.49	4.48	67.95	
592-13-2	2,5-Dimethylhexane	0.33	0.98	3.24	1.52	4.56	15.17	
589-43-5	2,4-Dimethylhexane	0.33	0.98	6.16	1.52	4.56	28.84	
565-75-3	2,3,4-Trimethylpentane	0.33	0.98	0.72	1.52	4.56	3.37	J
108-88-3	Toluene	0.37	1.11	9.91	1.40	4.21	37.41	
584-94-1	2,3-Dimethylhexane	0.33	0.98	4.96	1.52	4.56	23.19	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.33	0.98	18.79	1.52	4.56	87.95	
589-81-1	3-Methylheptane	0.33	0.98	24.05	1.52	4.56	112.55	
111-65-9	n-Octane	0.33	0.98	14.73	1.52	4.56	68.95	
100-41-4	Ethylbenzene	0.33	0.98	1.64	1.41	4.24	7.14	
108-38-3	m,p-xylene	0.33	0.98	6.50	1.41	4.24	28.31	
100-42-5	Styrene	0.33	0.98	10.71	1.39	4.16	45.74	
95-47-6	o-xylene	0.33	0.98	3.89	1.41	4.24	16.91	
111-84-2	n-Nonane	0.29	0.87	15.32	1.52	4.56	80.56	
98-82-8	i-Propylbenzene	0.29	0.87	2.45	1.42	4.27	12.06	
103-65-1	n-propylbenzene	0.29	0.87	4.51	1.42	4.27	22.19	
80-56-8	a-Pinene	0.26	0.78	2.56	1.45	4.35	14.28	
620-14-4	3-Ethyltoluene	0.29	0.87	3.84	1.42	4.27	18.92	
622-96-8	4-Ethyltoluene	0.29	0.87	7.61	1.42	4.27	37.48	
108-67-8	1,3,5-Trimethylbenzene	0.29	0.87	2.48	1.42	4.27	12.21	
611-14-3	2-Ethyltoluene	0.29	0.87	8.53	1.42	4.27	42.03	
127-91-3	b-Pinene	0.26	0.78	7.71	1.45	4.35	43.01	
95-63-6	1,2,4-Trimethylbenzene	0.29	0.87	6.50	1.42	4.27	32.01	
124-18-5	n-Decane	0.26	0.78	5.59	1.52	4.55	32.61	
526-73-8	1,2,3-Trimethylbenzene	0.29	0.87	ND	1.42	4.27	ND	ND
5989-27-5	d-Limonene	0.26	0.78	4.09	1.45	4.35	22.81	
141-93-5	1,3-Diethylbenzene	0.26	0.78	5.23	1.43	4.29	28.77	
105-05-5	1,4-Diethylbenzene	0.26	0.78	12.92	1.43	4.29	71.07	
104-51-8	n-Butylbenzene	0.26	0.78	ND	1.43	4.29	ND	ND
1120-21-4	Undecane	0.24	0.71	3.28	1.51	4.54	21.00	
112-40-3	Dodecane	0.22	0.65	1.42	1.51	4.54	9.90	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.75	29.25	1,104.76	34.44	103.33	3,902.89	
TNMHC - C1	Total Non-Methane Hydrocarbons	58.50	175.50	6,628.57	38.36	115.08	4,346.60	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 12

File Name: 1837612A

Date Sampled: 08/01/18

Time: 7:58

Description: T - 302

Date Analyzed: 08/03/18

Time: 16:26

Can/Tube#: 881

Can Dilution Factor: 1.30

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	130	390	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 12

File Name: 1837612A
Description: T - 302
Can/Tube#: 881
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 **Time:** 7:58
Date Analyzed: 08/03/18 **Time:** 15:35
Dilution Factor: 1.30

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.39	ND	0.09	0.26	ND	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218376

Laboratory ID: 13

File Name: 1837613A.D
Description: T - 303
Canister: 702
QC_Batch: 081518-MA1

Date Sampled: 08/01/18 Time: 09:09
Date Analyzed: 08/15/18 Time: 14:19
Can Dilution Factor: 1.32
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.33	1.66	ND	1.63	8.20	ND	
74-87-3	Chloromethane	0.33	1.66	ND	0.68	3.43	ND	
76-14-2	Freon 114	0.33	1.66	ND	2.31	11.60	ND	
75-01-4	Vinyl chloride	0.33	1.66	ND	0.84	4.24	ND	
106-99-0	1,3-Butadiene	0.33	1.66	ND	0.73	3.67	ND	
74-83-9	Bromomethane	0.33	1.66	ND	1.28	6.44	ND	
75-00-3	Chloroethane	0.33	1.66	ND	0.87	4.38	ND	
64-17-5	Ethanol	1.65	4.95	ND	3.11	9.33	ND	
75-69-4	Trichlorofluoromethane	0.33	1.58	ND	1.85	8.90	ND	
67-64-1	Acetone	1.65	4.06	ND	3.92	9.64	ND	
67-63-0	2-propanol	1.65	3.79	ND	4.05	9.31	ND	
75-35-4	1,1-Dichloroethene	0.33	1.64	ND	1.31	6.48	ND	
76-13-1	Freon 113	0.33	1.58	ND	2.53	12.10	ND	
75-09-2	Dichloromethane	0.66	1.59	ND	2.29	5.52	ND	
75-15-0	Carbon disulfide	1.65	3.06	ND	5.13	9.53	ND	
156-60-5	trans-1,2-Dichloroethene	0.33	1.19	ND	1.31	4.72	ND	
1634-04-4	Methyl tert butyl ether	0.33	1.22	ND	1.19	4.38	ND	
75-34-3	1,1-Dichloroethane	0.33	1.65	ND	1.34	6.66	ND	
108-05-4	Vinyl acetate	0.33	1.45	ND	1.16	5.10	ND	
78-93-3	2-Butanone	1.32	3.36	ND	3.89	9.90	ND	
141-78-6	Ethyl acetate	0.66	1.45	ND	2.38	5.21	ND	
74-97-5	Bromochloromethane	0.33	0.88	ND	1.75	4.65	ND	
109-99-9	Tetrahydrofuran	0.66	1.66	ND	1.95	4.89	ND	
156-59-2	cis-1,2-Dichloroethene	0.66	1.78	ND	2.61	7.03	ND	
67-66-3	Chloroform	0.33	1.66	ND	1.61	8.08	ND	
71-55-6	1,1,1-Trichloroethane	0.33	1.47	ND	1.80	7.99	ND	
107-06-2	1,2-Dichloroethane	0.33	1.51	ND	1.34	6.09	ND	
110-82-7	Cyclohexane	0.33	1.27	ND	1.14	4.36	ND	
71-43-2	Benzene	0.33	1.68	ND	1.05	5.35	ND	
56-23-5	Carbon tetrachloride	0.33	1.56	ND	2.07	9.83	ND	
142-82-5	n-Heptane	1.65	4.00	ND	6.76	16.38	ND	
78-87-5	1,2-Dichloropropane	0.33	1.59	ND	1.52	7.34	ND	
123-91-1	1,4 Dioxane	1.32	2.70	ND	4.75	9.72	ND	
79-01-6	Trichloroethene	0.20	1.54	ND	1.06	8.26	ND	
75-27-4	Bromodichloromethane	0.33	0.67	ND	2.21	4.46	ND	
80-62-6	Methyl methacrylate	1.32	4.46	ND	5.40	18.26	ND	
108-10-1	4-Methyl-2-pentanone	1.32	5.00	ND	5.41	20.47	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.33	1.71	ND	1.50	7.76	ND	
108-88-3	Toluene	0.66	1.72	ND	2.48	6.49	ND	
10061-02-6	trans-1,3-Dichloropropene	0.33	1.71	ND	1.50	7.77	ND	
79-00-5	1,1,2-Trichloroethane	0.33	1.70	ND	1.80	9.25	ND	
591-78-6	2-Hexanone	1.65	4.68	ND	6.76	19.17	ND	
124-48-1	Dibromochloromethane	0.33	0.66	ND	2.81	5.61	ND	
106-93-4	1,2-Dibromoethane	0.33	0.80	ND	2.53	6.15	ND	
127-18-4	Tetrachloroethene	0.20	0.80	ND	1.34	5.44	ND	
108-90-7	Chlorobenzene	0.33	1.50	ND	1.52	6.91	ND	
100-41-4	Ethylbenzene	0.70	1.74	ND	3.03	7.57	ND	
1330-20-7	m,p-Xylenes	0.70	1.75	ND	3.04	7.59	ND	
100-42-5	Styrene	0.68	1.71	ND	2.91	7.28	ND	
75-25-2	Bromoform	0.33	0.44	ND	3.41	4.57	ND	
95-47-6	o-Xylene	0.68	1.70	ND	2.95	7.38	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.82	ND	2.24	5.60	ND	
622-96-8	4-Ethyltoluene	1.09	2.73	ND	5.38	13.44	ND	
108-67-8	1,3,5-Trimethylbenzene	0.68	1.70	ND	3.35	8.38	ND	
95-63-6	1,2,4-Trimethylbenzene	0.67	1.68	ND	3.30	8.24	ND	
541-73-1	1,3-Dichlorobenzene	0.66	1.22	ND	3.97	7.34	ND	
100-44-7	Benzyl chloride	0.66	4.00	ND	3.42	20.70	ND	
106-46-7	1,4-Dichlorobenzene	0.66	1.14	ND	3.97	6.86	ND	
95-50-1	1,2-Dichlorobenzene	0.66	1.07	ND	3.97	6.43	ND	
120-82-1	1,2,4-Trichlorobenzene	1.65	2.27	ND	12.24	16.84	ND	
91-20-3	Naphthalene	0.34	0.53	ND	1.76	2.77	ND	
87-68-3	Hexachlorobutadiene	1.65	1.75	ND	17.59	18.65	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	91	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 13

File Name: 1837613A
Description: T - 303
Canister: 702
QC_Batch: 080818-GCK

Date Sampled: 08/01/18 Time: 9:09
Date Analyzed: 08/08/18 Time: 18:20
Can Factor: 1.32
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.32	3.96	4.45	1.52	4.56	5.13	
74-86-2	Acetylene	1.32	3.96	ND	1.41	4.22	ND	ND
74-84-0	Ethane	1.32	3.96	2.35	1.63	4.89	2.90	J
115-07-1	Propene	0.88	2.64	ND	1.52	4.56	ND	ND
74-98-6	Propane	0.88	2.64	2.23	1.59	4.77	4.02	J
75-28-5	i-Butane	0.66	1.98	ND	1.57	4.71	ND	ND
106-98-9	1-Butene	0.66	1.98	ND	1.52	4.55	ND	ND
106-97-8	n-Butane	0.66	1.98	ND	1.57	4.71	ND	ND
624-64-6	t-2-Butene	0.66	1.98	ND	1.52	4.55	ND	ND
590-18-1	c-2-Butene	0.66	1.98	ND	1.52	4.55	ND	ND
78-78-4	i-Pentane	0.53	1.58	ND	1.56	4.69	ND	ND
109-67-1	1-Pentene	0.53	1.58	ND	1.52	4.55	ND	ND
109-66-0	n-Pentane	0.53	1.58	1.12	1.56	4.68	3.30	J
78-79-5	Isoprene	0.53	1.58	ND	1.47	4.42	ND	ND
646-04-8	t-2-Pentene	0.53	1.58	ND	1.52	4.55	ND	ND
627-20-3	c-2-Pentene	0.53	1.58	ND	1.52	4.55	ND	ND
75-83-2	2,2-Dimethylbutane	0.44	1.32	ND	1.55	4.66	ND	ND
287-92-3	Cyclopentane	0.53	1.58	ND	1.52	4.55	ND	ND
79-29-8	2,3-Dimethylbutane	0.44	1.32	ND	1.55	4.66	ND	ND
107-83-5	2-Methylpentane	0.44	1.32	ND	1.55	4.66	ND	ND
96-14-0	3-Methylpentane	0.44	1.32	ND	1.55	4.66	ND	ND
110-54-3	n-Hexane	0.44	1.32	2.00	1.55	4.66	7.05	
96-37-7	Methylcyclopentane	0.44	1.32	ND	1.52	4.56	ND	ND
108-08-7	2,4-Dimethylpentane	0.38	1.13	0.60	1.55	4.65	2.46	J
71-43-2	Benzene	0.44	1.32	9.12	1.41	4.23	29.20	
110-82-7	Cyclohexane	0.44	1.32	ND	1.52	4.56	ND	ND
591-76-4	2-Methylhexane	0.38	1.13	0.47	1.55	4.65	1.94	J
565-59-3	2,3-Dimethylpentane	0.38	1.13	ND	1.55	4.65	ND	ND
589-34-4	3-Methylhexane	0.38	1.13	0.88	1.55	4.65	3.61	J
540-84-1	2,2,4-Trimethylpentane	0.33	0.99	1.54	1.54	4.63	7.20	
142-82-5	n-Heptane	0.38	1.13	ND	1.55	4.65	ND	ND
108-87-2	Methylcyclohexane	0.38	1.13	8.93	1.52	4.55	35.93	
592-13-2	2,5-Dimethylhexane	0.33	0.99	1.60	1.54	4.63	7.49	
589-43-5	2,4-Dimethylhexane	0.33	0.99	3.28	1.54	4.63	15.34	
565-75-3	2,3,4-Trimethylpentane	0.33	0.99	0.43	1.54	4.63	2.01	J
108-88-3	Toluene	0.38	1.13	5.22	1.42	4.27	19.69	
584-94-1	2,3-Dimethylhexane	0.33	0.99	3.09	1.54	4.63	14.46	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.33	0.99	4.62	1.54	4.63	21.64	
589-81-1	3-Methylheptane	0.33	0.99	14.58	1.54	4.63	68.24	
111-65-9	n-Octane	0.33	0.99	9.09	1.54	4.63	42.56	
100-41-4	Ethylbenzene	0.33	0.99	6.94	1.44	4.31	30.20	
108-38-3	m,p-xylene	0.33	0.99	4.17	1.44	4.31	18.16	
100-42-5	Styrene	0.33	0.99	ND	1.41	4.23	ND	ND
95-47-6	o-xylene	0.33	0.99	2.47	1.44	4.31	10.73	
111-84-2	n-Nonane	0.29	0.88	8.32	1.54	4.63	43.74	
98-82-8	i-Propylbenzene	0.29	0.88	1.48	1.45	4.34	7.28	
103-65-1	n-propylbenzene	0.29	0.88	3.14	1.45	4.34	15.44	
80-56-8	a-Pinene	0.26	0.79	1.31	1.47	4.42	7.33	
620-14-4	3-Ethyltoluene	0.29	0.88	ND	1.45	4.34	ND	ND
622-96-8	4-Ethyltoluene	0.29	0.88	4.34	1.45	4.34	21.37	
108-67-8	1,3,5-Trimethylbenzene	0.29	0.88	1.45	1.45	4.34	7.13	
611-14-3	2-Ethyltoluene	0.29	0.88	5.57	1.45	4.34	27.43	
127-91-3	b-Pinene	0.26	0.79	4.50	1.47	4.42	25.13	
95-63-6	1,2,4-Trimethylbenzene	0.29	0.88	3.16	1.45	4.34	15.56	
124-18-5	n-Decane	0.26	0.79	5.56	1.54	4.62	32.40	
526-73-8	1,2,3-Trimethylbenzene	0.29	0.88	ND	1.45	4.34	ND	ND
5989-27-5	d-Limonene	0.26	0.79	2.22	1.47	4.42	12.42	
141-93-5	1,3-Diethylbenzene	0.26	0.79	2.78	1.45	4.36	15.31	
105-05-5	1,4-Diethylbenzene	0.26	0.79	7.59	1.45	4.36	41.74	
104-51-8	n-Butylbenzene	0.26	0.79	ND	1.45	4.36	ND	ND
1120-21-4	Undecane	0.24	0.72	0.98	1.54	4.61	6.29	
112-40-3	Dodecane	0.22	0.66	2.69	1.54	4.61	18.80	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.90	29.70	598.97	34.97	104.92	2,116.04
TNMHC - C1	Total Non-Methane Hydrocarbons	59.40	178.20	3,593.84	38.95	116.85	2,356.61

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 13

File Name: 1837613A

Date Sampled: 08/01/18

Time: 9:09

Description: T - 303

Date Analyzed: 08/03/18

Time: 16:32

Can/Tube#: 702

Can Dilution Factor: 1.32

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	132	396	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 13

File Name: 1837613A
Description: T - 303
Can/Tube#: 702
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 Time: 9:09
Date Analyzed: 08/03/18 Time: 15:39
Dilution Factor: 1.32

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.40	ND	0.09	0.27	ND	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 14

File Name: 1837614B.D
Description: T - 304
Canister: 510
QC_Batch: 081518-MA1

Date Sampled: 08/01/18 Time: 09:12
Date Analyzed: 08/15/18 Time: 15:37
Can Dilution Factor: 1.37
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.34	1.72	ND	1.69	8.51	ND	
74-87-3	Chloromethane	0.34	1.72	ND	0.71	3.56	ND	
76-14-2	Freon 114	0.34	1.72	ND	2.39	12.04	ND	
75-01-4	Vinyl chloride	0.34	1.72	ND	0.88	4.40	ND	
106-99-0	1,3-Butadiene	0.34	1.72	ND	0.76	3.81	ND	
74-83-9	Bromomethane	0.34	1.72	ND	1.33	6.68	ND	
75-00-3	Chloroethane	0.34	1.72	ND	0.90	4.54	ND	
64-17-5	Ethanol	1.71	5.14	ND	3.23	9.68	ND	
75-69-4	Trichlorofluoromethane	0.34	1.64	ND	1.92	9.24	ND	
67-64-1	Acetone	1.71	4.21	19.18	4.07	10.01	45.57	
67-63-0	2-propanol	1.71	3.93	21.50	4.21	9.66	52.83	
75-35-4	1,1-Dichloroethene	0.34	1.70	ND	1.36	6.73	ND	
76-13-1	Freon 113	0.34	1.64	ND	2.62	12.55	ND	
75-09-2	Dichloromethane	0.69	1.65	ND	2.38	5.73	ND	
75-15-0	Carbon disulfide	1.71	3.18	ND	5.33	9.89	ND	
156-60-5	trans-1,2-Dichloroethene	0.34	1.24	ND	1.36	4.90	ND	
1634-04-4	Methyl tert butyl ether	0.34	1.26	ND	1.23	4.55	ND	
75-34-3	1,1-Dichloroethane	0.34	1.71	ND	1.39	6.91	ND	
108-05-4	Vinyl acetate	0.34	1.50	ND	1.21	5.30	ND	
78-93-3	2-Butanone	1.37	3.49	ND	4.04	10.28	ND	
141-78-6	Ethyl acetate	0.69	1.50	ND	2.47	5.40	ND	
74-97-5	Bromochloromethane	0.34	0.91	ND	1.81	4.83	ND	
109-99-9	Tetrahydrofuran	0.69	1.72	ND	2.02	5.08	ND	
156-59-2	cis-1,2-Dichloroethene	0.69	1.84	ND	2.71	7.30	ND	
67-66-3	Chloroform	0.34	1.72	ND	1.67	8.38	ND	
71-55-6	1,1,1-Trichloroethane	0.34	1.52	ND	1.87	8.29	ND	
107-06-2	1,2-Dichloroethane	0.34	1.56	ND	1.39	6.32	ND	
110-82-7	Cyclohexane	0.34	1.32	ND	1.18	4.53	ND	
71-43-2	Benzene	0.34	1.74	ND	1.09	5.56	ND	
56-23-5	Carbon tetrachloride	0.34	1.62	ND	2.15	10.21	ND	
142-82-5	n-Heptane	1.71	4.15	ND	7.01	17.00	ND	
78-87-5	1,2-Dichloropropane	0.34	1.65	ND	1.58	7.61	ND	
123-91-1	1,4 Dioxane	1.37	2.80	ND	4.93	10.09	ND	
79-01-6	Trichloroethene	0.21	1.60	ND	1.10	8.57	ND	
75-27-4	Bromodichloromethane	0.34	0.69	ND	2.29	4.63	ND	
80-62-6	Methyl methacrylate	1.37	4.63	ND	5.61	18.95	ND	
108-10-1	4-Methyl-2-pentanone	1.37	5.19	ND	5.61	21.24	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.34	1.77	ND	1.55	8.05	ND	
108-88-3	Toluene	0.69	1.79	ND	2.58	6.73	ND	
10061-02-6	trans-1,3-Dichloropropene	0.34	1.78	ND	1.55	8.06	ND	
79-00-5	1,1,2-Trichloroethane	0.34	1.76	ND	1.87	9.60	ND	
591-78-6	2-Hexanone	1.71	4.86	ND	7.01	19.89	ND	
124-48-1	Dibromochloromethane	0.34	0.68	ND	2.92	5.82	ND	
106-93-4	1,2-Dibromoethane	0.34	0.83	ND	2.63	6.39	ND	
127-18-4	Tetrachloroethene	0.21	0.83	ND	1.39	5.65	ND	
108-90-7	Chlorobenzene	0.34	1.56	ND	1.58	7.17	ND	
100-41-4	Ethylbenzene	0.72	1.81	ND	3.14	7.86	ND	
1330-20-7	m,p-Xylenes	0.73	1.82	ND	3.15	7.88	ND	
100-42-5	Styrene	0.71	1.77	ND	3.02	7.55	ND	
75-25-2	Bromoform	0.34	0.46	ND	3.54	4.75	ND	
95-47-6	o-Xylene	0.71	1.77	ND	3.07	7.66	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.34	0.85	ND	2.33	5.82	ND	
622-96-8	4-Ethyltoluene	1.14	2.84	ND	5.58	13.95	ND	
108-67-8	1,3,5-Trimethylbenzene	0.71	1.77	ND	3.48	8.69	ND	
95-63-6	1,2,4-Trimethylbenzene	0.70	1.74	ND	3.42	8.55	ND	
541-73-1	1,3-Dichlorobenzene	0.69	1.27	ND	4.12	7.62	ND	
100-44-7	Benzyl chloride	0.69	4.15	ND	3.55	21.48	ND	
106-46-7	1,4-Dichlorobenzene	0.69	1.19	ND	4.12	7.12	ND	
95-50-1	1,2-Dichlorobenzene	0.69	1.11	ND	4.12	6.67	ND	
120-82-1	1,2,4-Trichlorobenzene	1.71	2.36	ND	12.70	17.47	ND	
91-20-3	Naphthalene	0.35	0.55	ND	1.83	2.87	ND	
87-68-3	Hexachlorobutadiene	1.71	1.82	ND	18.26	19.35	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	90	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376

Laboratory Number: 14

File Name: 1837614A
Description: T - 304
Canister: 510
QC_Batch: 080818-GCK

Date Sampled: 08/01/18 Time: 9:12
Date Analyzed: 08/08/18 Time: 19:03
Can Factor: 1.37
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.37	4.11	ND	1.58	4.73	ND	ND
74-86-2	Acetylene	1.37	4.11	ND	1.46	4.38	ND	ND
74-84-0	Ethane	1.37	4.11	3.38	1.69	5.07	4.17	J
115-07-1	Propene	0.91	2.74	ND	1.58	4.73	ND	ND
74-98-6	Propane	0.91	2.74	1.80	1.65	4.95	3.26	J
75-28-5	i-Butane	0.69	2.06	ND	1.63	4.89	ND	ND
106-98-9	1-Butene	0.69	2.06	ND	1.57	4.72	ND	ND
106-97-8	n-Butane	0.69	2.06	0.90	1.63	4.89	2.15	J
624-64-6	t-2-Butene	0.69	2.06	ND	1.57	4.72	ND	ND
590-18-1	c-2-Butene	0.69	2.06	ND	1.57	4.72	ND	ND
78-78-4	i-Pentane	0.55	1.64	ND	1.62	4.86	ND	ND
109-67-1	1-Pentene	0.55	1.64	ND	1.57	4.72	ND	ND
109-66-0	n-Pentane	0.55	1.64	1.20	1.62	4.86	3.55	J
78-79-5	Isoprene	0.55	1.64	ND	1.53	4.59	ND	ND
646-04-8	t-2-Pentene	0.55	1.64	ND	1.57	4.72	ND	ND
627-20-3	c-2-Pentene	0.55	1.64	ND	1.57	4.72	ND	ND
75-83-2	2,2-Dimethylbutane	0.46	1.37	ND	1.61	4.84	ND	ND
287-92-3	Cyclopentane	0.55	1.64	ND	1.57	4.72	ND	ND
79-29-8	2,3-Dimethylbutane	0.46	1.37	ND	1.61	4.84	ND	ND
107-83-5	2-Methylpentane	0.46	1.37	ND	1.61	4.84	ND	ND
96-14-0	3-Methylpentane	0.46	1.37	0.91	1.61	4.84	3.22	J
110-54-3	n-Hexane	0.46	1.37	1.36	1.61	4.84	4.80	J
96-37-7	Methylcyclopentane	0.46	1.37	ND	1.58	4.73	ND	ND
108-08-7	2,4-Dimethylpentane	0.39	1.17	ND	1.61	4.82	ND	ND
71-43-2	Benzene	0.46	1.37	9.33	1.46	4.39	29.86	
110-82-7	Cyclohexane	0.46	1.37	ND	1.58	4.73	ND	ND
591-76-4	2-Methylhexane	0.39	1.17	ND	1.61	4.82	ND	ND
565-59-3	2,3-Dimethylpentane	0.39	1.17	ND	1.61	4.82	ND	ND
589-34-4	3-Methylhexane	0.39	1.17	0.53	1.61	4.82	2.17	J
540-84-1	2,2,4-Trimethylpentane	0.34	1.03	ND	1.60	4.81	ND	ND
142-82-5	n-Heptane	0.39	1.17	1.07	1.61	4.82	4.39	J
108-87-2	Methylcyclohexane	0.39	1.17	1.07	1.58	4.73	4.30	J
592-13-2	2,5-Dimethylhexane	0.34	1.03	2.14	1.60	4.81	10.01	
589-43-5	2,4-Dimethylhexane	0.34	1.03	2.99	1.60	4.81	13.99	
565-75-3	2,3,4-Trimethylpentane	0.34	1.03	3.61	1.60	4.81	16.89	
108-88-3	Toluene	0.39	1.17	5.19	1.48	4.43	19.60	
584-94-1	2,3-Dimethylhexane	0.34	1.03	ND	1.60	4.81	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.34	1.03	8.19	1.60	4.81	38.35	
589-81-1	3-Methylheptane	0.34	1.03	10.44	1.60	4.81	48.88	
111-65-9	n-Octane	0.34	1.03	6.44	1.60	4.81	30.13	
100-41-4	Ethylbenzene	0.34	1.03	5.73	1.49	4.47	24.95	
108-38-3	m,p-xylene	0.34	1.03	3.15	1.49	4.47	13.70	
100-42-5	Styrene	0.34	1.03	5.48	1.46	4.39	23.41	
95-47-6	o-xylene	0.34	1.03	7.03	1.49	4.47	30.61	
111-84-2	n-Nonane	0.30	0.91	5.92	1.60	4.80	31.12	
98-82-8	i-Propylbenzene	0.30	0.91	1.22	1.50	4.50	6.03	
103-65-1	n-propylbenzene	0.30	0.91	2.71	1.50	4.50	13.34	
80-56-8	a-Pinene	0.27	0.82	1.17	1.53	4.59	6.55	
620-14-4	3-Ethyltoluene	0.30	0.91	ND	1.50	4.50	ND	ND
622-96-8	4-Ethyltoluene	0.30	0.91	3.62	1.50	4.50	17.85	
108-67-8	1,3,5-Trimethylbenzene	0.30	0.91	1.23	1.50	4.50	6.08	
611-14-3	2-Ethyltoluene	0.30	0.91	4.31	1.50	4.50	21.24	
127-91-3	b-Pinene	0.27	0.82	ND	1.53	4.59	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.30	0.91	1.96	1.50	4.50	9.65	
124-18-5	n-Decane	0.27	0.82	4.76	1.60	4.79	27.76	
526-73-8	1,2,3-Trimethylbenzene	0.30	0.91	ND	1.50	4.50	ND	ND
5989-27-5	d-Limonene	0.27	0.82	1.94	1.53	4.59	10.81	
141-93-5	1,3-Diethylbenzene	0.27	0.82	5.23	1.51	4.52	28.77	
105-05-5	1,4-Diethylbenzene	0.27	0.82	7.43	1.51	4.52	40.88	
104-51-8	n-Butylbenzene	0.27	0.82	ND	1.51	4.52	ND	ND
1120-21-4	Undecane	0.25	0.75	2.16	1.60	4.79	13.82	
112-40-3	Dodecane	0.23	0.69	0.75	1.59	4.78	5.25	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.28	30.83	594.06	36.30	108.90	2,098.69
TNMHC - C1	Total Non-Methane Hydrocarbons	61.65	184.95	3,564.37	40.43	121.28	2,337.29

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 14

File Name: 1837614A

Date Sampled: 08/01/18

Time: 9:12

Description: T - 304

Date Analyzed: 08/03/18

Time: 16:37

Can/Tube#: 510

Can Dilution Factor: 1.37

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	137	411	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 14

File Name: 1837614A
Description: T - 304
Can/Tube#: 510
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 Time: 9:12
Date Analyzed: 08/03/18 Time: 15:42
Dilution Factor: 1.37

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.41	0.47	0.09	0.28	0.32	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218376

Laboratory ID: 15

File Name: 1837615A.D

Date Sampled: 08/01/18

Time: 10:14

Description: T - 305

Date Analyzed: 08/16/18

Time: 16:10

Canister: 628

Can Dilution Factor: 1.44

QC_Batch: 081618-MA1

Air Volume: 20 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	3.60	18.11	ND	17.79	89.50	ND	
74-87-3	Chloromethane	3.60	18.11	ND	7.43	37.38	ND	
76-14-2	Freon 114	3.60	18.11	ND	25.15	126.51	ND	
75-01-4	Vinyl chloride	3.60	18.11	ND	9.20	46.27	ND	
106-99-0	1,3-Butadiene	3.60	18.11	ND	7.96	40.05	ND	
74-83-9	Bromomethane	3.60	18.11	ND	13.97	70.25	ND	
75-00-3	Chloroethane	3.60	18.11	ND	9.49	47.75	ND	
64-17-5	Ethanol	18.00	54.00	ND	33.92	101.77	ND	
75-69-4	Trichlorofluoromethane	3.60	17.29	ND	20.22	97.09	ND	
67-64-1	Acetone	18.00	44.28	3,105.90	42.75	105.17	7,376.80	
67-63-0	2-propanol	18.00	41.33	ND	44.22	101.54	ND	
75-35-4	1,1-Dichloroethene	3.60	17.86	ND	14.26	70.73	ND	
76-13-1	Freon 113	3.60	17.22	ND	27.58	131.95	ND	
75-09-2	Dichloromethane	7.20	17.34	ND	24.99	60.18	ND	
75-15-0	Carbon disulfide	18.00	33.41	ND	56.00	103.93	ND	
156-60-5	trans-1,2-Dichloroethene	3.60	13.00	ND	14.26	51.48	ND	
1634-04-4	Methyl tert butyl ether	3.60	13.27	ND	12.97	47.80	ND	
75-34-3	1,1-Dichloroethane	3.60	17.95	ND	14.57	72.66	ND	
108-05-4	Vinyl acetate	3.60	15.82	ND	12.67	55.67	ND	
78-93-3	2-Butanone	14.40	36.65	1,835.51	42.44	108.02	5,410.00	
141-78-6	Ethyl acetate	7.20	15.77	ND	25.93	56.79	ND	
74-97-5	Bromochloromethane	3.60	9.59	ND	19.04	50.72	ND	
109-99-9	Tetrahydrofuran	7.20	18.11	ND	21.22	53.37	ND	
156-59-2	cis-1,2-Dichloroethene	7.20	19.37	ND	28.52	76.72	ND	
67-66-3	Chloroform	3.60	18.06	ND	17.57	88.13	ND	
71-55-6	1,1,1-Trichloroethane	3.60	15.98	ND	19.63	87.17	ND	
107-06-2	1,2-Dichloroethane	3.60	16.42	ND	14.57	66.46	ND	
110-82-7	Cyclohexane	3.61	13.82	ND	12.44	47.58	ND	
71-43-2	Benzene	3.60	18.29	571.06	11.49	58.39	1,823.23	
56-23-5	Carbon tetrachloride	3.60	17.06	ND	22.63	107.29	ND	
142-82-5	n-Heptane	18.00	43.63	ND	73.73	178.72	ND	
78-87-5	1,2-Dichloropropane	3.60	17.33	ND	16.63	80.04	ND	
123-91-1	1,4 Dioxane	14.40	29.45	ND	51.86	106.06	ND	
79-01-6	Trichloroethene	2.16	16.77	ND	11.60	90.07	ND	
75-27-4	Bromodichloromethane	3.60	7.27	ND	24.11	48.69	ND	
80-62-6	Methyl methacrylate	14.40	48.67	ND	58.93	199.17	ND	
108-10-1	4-Methyl-2-pentanone	14.40	54.50	ND	58.98	223.25	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	3.60	18.66	ND	16.34	84.65	ND		
108-88-3	Toluene	7.20	18.79	641.00	27.11	70.75	2,413.37		
10061-02-6	trans-1,3-Dichloropropene	3.60	18.67	ND	16.34	84.72	ND		
79-00-5	1,1,2-Trichloroethane	3.60	18.51	ND	19.63	100.94	ND		
591-78-6	2-Hexanone	18.00	51.05	33.89	73.73	209.10	138.81	J	
124-48-1	Dibromochloromethane	3.60	7.19	ND	30.65	61.21	ND		
106-93-4	1,2-Dibromoethane	3.60	8.74	ND	27.65	67.12	ND		
127-18-4	Tetrachloroethene	2.16	8.76	ND	14.64	59.39	ND		
108-90-7	Chlorobenzene	3.60	16.38	ND	16.57	75.41	ND		
100-41-4	Ethylbenzene	7.61	19.03	77.01	33.05	82.62	334.32		
1330-20-7	m,p-Xylenes	7.63	19.08	236.98	33.13	82.83	1,028.81		
100-42-5	Styrene	7.46	18.64	ND	31.76	79.39	ND		
75-25-2	Bromoform	3.60	4.83	ND	37.19	49.90	ND		
95-47-6	o-Xylene	7.42	18.55	106.48	32.22	80.55	462.29		
79-34-5	1,1,2,2-Tetrachloroethane	3.56	8.91	ND	24.45	61.13	ND		
622-96-8	4-Ethyltoluene	11.93	29.83	30.55	58.64	146.60	150.11		
108-67-8	1,3,5-Trimethylbenzene	7.44	18.60	20.14	36.55	91.38	98.95		
95-63-6	1,2,4-Trimethylbenzene	7.32	18.30	64.65	35.96	89.90	317.68		
541-73-1	1,3-Dichlorobenzene	7.20	13.32	ND	43.27	80.04	ND		
100-44-7	Benzyl chloride	7.20	43.63	ND	37.26	225.81	ND		
106-46-7	1,4-Dichlorobenzene	7.20	12.46	ND	43.27	74.85	ND		
95-50-1	1,2-Dichlorobenzene	7.20	11.66	ND	43.27	70.09	ND		
120-82-1	1,2,4-Trichlorobenzene	18.00	24.77	ND	133.48	183.67	ND		
91-20-3	Naphthalene	3.67	5.76	151.57	19.24	30.19	794.34		
87-68-3	Hexachlorobutadiene	18.00	19.08	ND	191.90	203.42	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				86	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 15

File Name: 1837615A
Description: T - 305
Canister: 628
QC_Batch: 080818-GCK

Date Sampled: 08/01/18 Time: 10:14
Date Analyzed: 08/08/18 Time: 19:46
Can Factor: 1.44
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.44	4.32	14.60	1.66	4.98	16.82	
74-86-2	Acetylene	1.44	4.32	ND	1.53	4.60	ND	ND
74-84-0	Ethane	1.44	4.32	918.96	1.78	5.33	1,133.64	
115-07-1	Propene	0.96	2.88	ND	1.66	4.97	ND	ND
74-98-6	Propane	0.96	2.88	470.12	1.74	5.21	849.69	
75-28-5	i-Butane	0.72	2.16	66.54	1.71	5.14	158.44	
106-98-9	1-Butene	0.72	2.16	4.03	1.66	4.97	9.27	
106-97-8	n-Butane	0.72	2.16	10.49	1.71	5.14	24.98	
624-64-6	t-2-Butene	0.72	2.16	ND	1.66	4.97	ND	ND
590-18-1	c-2-Butene	0.72	2.16	ND	1.66	4.97	ND	ND
78-78-4	i-Pentane	0.58	1.73	ND	1.70	5.11	ND	ND
109-67-1	1-Pentene	0.58	1.73	ND	1.65	4.96	ND	ND
109-66-0	n-Pentane	0.58	1.73	14.11	1.70	5.11	41.69	
78-79-5	Isoprene	0.58	1.73	ND	1.61	4.82	ND	ND
646-04-8	t-2-Pentene	0.58	1.73	68.80	1.65	4.96	197.67	
627-20-3	c-2-Pentene	0.58	1.73	ND	1.65	4.96	ND	ND
75-83-2	2,2-Dimethylbutane	0.48	1.44	6.76	1.70	5.09	23.87	
287-92-3	Cyclopentane	0.58	1.73	ND	1.65	4.96	ND	ND
79-29-8	2,3-Dimethylbutane	0.48	1.44	ND	1.70	5.09	ND	ND
107-83-5	2-Methylpentane	0.48	1.44	107.54	1.70	5.09	379.90	
96-14-0	3-Methylpentane	0.48	1.44	6.77	1.70	5.09	23.92	
110-54-3	n-Hexane	0.48	1.44	40.19	1.70	5.09	141.97	
96-37-7	Methylcyclopentane	0.48	1.44	ND	1.66	4.97	ND	ND
108-08-7	2,4-Dimethylpentane	0.41	1.23	ND	1.69	5.07	ND	ND
71-43-2	Benzene	0.48	1.44	794.56	1.54	4.61	2,543.25	
110-82-7	Cyclohexane	0.48	1.44	ND	1.66	4.97	ND	ND
591-76-4	2-Methylhexane	0.41	1.23	421.36	1.69	5.07	1,730.35	
565-59-3	2,3-Dimethylpentane	0.41	1.23	ND	1.69	5.07	ND	ND
589-34-4	3-Methylhexane	0.41	1.23	231.87	1.69	5.07	952.21	
540-84-1	2,2,4-Trimethylpentane	0.36	1.08	11.68	1.68	5.05	54.69	
142-82-5	n-Heptane	0.41	1.23	24.28	1.69	5.07	99.69	
108-87-2	Methylcyclohexane	0.41	1.23	178.97	1.66	4.97	720.27	
592-13-2	2,5-Dimethylhexane	0.36	1.08	38.81	1.68	5.05	181.66	
589-43-5	2,4-Dimethylhexane	0.36	1.08	39.12	1.68	5.05	183.11	
565-75-3	2,3,4-Trimethylpentane	0.36	1.08	ND	1.68	5.05	ND	ND
108-88-3	Toluene	0.41	1.23	864.77	1.55	4.66	3,264.17	
584-94-1	2,3-Dimethylhexane	0.36	1.08	ND	1.68	5.05	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.36	1.08	55.33	1.68	5.05	258.95	
589-81-1	3-Methylheptane	0.36	1.08	27.38	1.68	5.05	128.14	
111-65-9	n-Octane	0.36	1.08	24.37	1.68	5.05	114.05	
100-41-4	Ethylbenzene	0.36	1.08	117.51	1.57	4.70	511.48	
108-38-3	m,p-xylene	0.36	1.08	332.23	1.57	4.70	1,446.03	
100-42-5	Styrene	0.36	1.08	ND	1.54	4.61	ND	ND
95-47-6	o-xylene	0.36	1.08	197.68	1.57	4.70	860.40	
111-84-2	n-Nonane	0.32	0.96	29.56	1.68	5.05	155.46	
98-82-8	i-Propylbenzene	0.32	0.96	118.02	1.58	4.73	581.40	
103-65-1	n-propylbenzene	0.32	0.96	ND	1.58	4.73	ND	ND
80-56-8	a-Pinene	0.29	0.86	ND	1.61	4.82	ND	ND
620-14-4	3-Ethyltoluene	0.32	0.96	ND	1.58	4.73	ND	ND
622-96-8	4-Ethyltoluene	0.32	0.96	73.40	1.58	4.73	361.60	
108-67-8	1,3,5-Trimethylbenzene	0.32	0.96	53.29	1.58	4.73	262.52	
611-14-3	2-Ethyltoluene	0.32	0.96	59.23	1.58	4.73	291.80	
127-91-3	b-Pinene	0.29	0.86	ND	1.61	4.82	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.32	0.96	106.11	1.58	4.73	522.73	
124-18-5	n-Decane	0.29	0.86	15.66	1.68	5.04	91.34	
526-73-8	1,2,3-Trimethylbenzene	0.32	0.96	26.37	1.58	4.73	129.89	
5989-27-5	d-Limonene	0.29	0.86	ND	1.61	4.82	ND	ND
141-93-5	1,3-Diethylbenzene	0.29	0.86	67.73	1.58	4.75	372.49	
105-05-5	1,4-Diethylbenzene	0.29	0.86	68.39	1.58	4.75	376.14	
104-51-8	n-Butylbenzene	0.29	0.86	ND	1.58	4.75	ND	ND
1120-21-4	Undecane	0.26	0.79	35.60	1.68	5.03	228.02	
112-40-3	Dodecane	0.24	0.72	47.32	1.68	5.03	330.24	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.80	32.40	15,792.06	38.15	114.46	55,789.98	
TNMHC - C1	Total Non-Methane Hydrocarbons	64.80	194.40	94,752.36	42.49	127.48	62,132.70	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 15

File Name: 1837615A

Date Sampled: 08/01/18

Time: 10:14

Description: T - 305

Date Analyzed: 08/03/18

Time: 16:47

Can/Tube#: 628

Can Dilution Factor: 1.44

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.20	144	432	2,021	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 15

File Name: 1837615A
Description: T - 305
Can/Tube#: 628
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 **Time:** 10:14
Date Analyzed: 08/03/18 **Time:** 15:46
Dilution Factor: 1.44

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.43	98.21	0.10	0.29	66.36	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 16

File Name: 1837616A.D
Description: T - 306
Canister: 700
QC_Batch: 081518-MA1

Date Sampled: 08/01/18 Time: 12:18
Date Analyzed: 08/15/18 Time: 16:17
Can Dilution Factor: 1.43
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.36	1.80	ND	1.77	8.89	ND	
74-87-3	Chloromethane	0.36	1.80	ND	0.74	3.71	ND	
76-14-2	Freon 114	0.36	1.80	ND	2.50	12.56	ND	
75-01-4	Vinyl chloride	0.36	1.80	ND	0.91	4.59	ND	
106-99-0	1,3-Butadiene	0.36	1.80	ND	0.79	3.98	ND	
74-83-9	Bromomethane	0.36	1.80	ND	1.39	6.98	ND	
75-00-3	Chloroethane	0.36	1.80	ND	0.94	4.74	ND	
64-17-5	Ethanol	1.79	5.36	ND	3.37	10.11	ND	
75-69-4	Trichlorofluoromethane	0.36	1.72	ND	2.01	9.64	ND	
67-64-1	Acetone	1.79	4.40	259.11	4.25	10.44	615.40	
67-63-0	2-propanol	1.79	4.10	ND	4.39	10.08	ND	
75-35-4	1,1-Dichloroethene	0.36	1.77	ND	1.42	7.02	ND	
76-13-1	Freon 113	0.36	1.71	ND	2.74	13.10	ND	
75-09-2	Dichloromethane	0.72	1.72	ND	2.48	5.98	ND	
75-15-0	Carbon disulfide	1.79	3.32	ND	5.56	10.32	ND	
156-60-5	trans-1,2-Dichloroethene	0.36	1.29	ND	1.42	5.11	ND	
1634-04-4	Methyl tert butyl ether	0.36	1.32	ND	1.29	4.75	ND	
75-34-3	1,1-Dichloroethane	0.36	1.78	ND	1.45	7.22	ND	
108-05-4	Vinyl acetate	0.36	1.57	ND	1.26	5.53	ND	
78-93-3	2-Butanone	1.43	3.64	93.68	4.21	10.73	276.12	
141-78-6	Ethyl acetate	0.72	1.57	ND	2.58	5.64	ND	
74-97-5	Bromochloromethane	0.36	0.95	ND	1.89	5.04	ND	
109-99-9	Tetrahydrofuran	0.72	1.80	ND	2.11	5.30	ND	
156-59-2	cis-1,2-Dichloroethene	0.72	1.92	ND	2.83	7.62	ND	
67-66-3	Chloroform	0.36	1.79	ND	1.74	8.75	ND	
71-55-6	1,1,1-Trichloroethane	0.36	1.59	ND	1.95	8.66	ND	
107-06-2	1,2-Dichloroethane	0.36	1.63	ND	1.45	6.60	ND	
110-82-7	Cyclohexane	0.36	1.37	ND	1.24	4.73	ND	
71-43-2	Benzene	0.36	1.82	8.83	1.14	5.80	28.20	
56-23-5	Carbon tetrachloride	0.36	1.69	ND	2.25	10.65	ND	
142-82-5	n-Heptane	1.79	4.33	ND	7.32	17.75	ND	
78-87-5	1,2-Dichloropropane	0.36	1.72	ND	1.65	7.95	ND	
123-91-1	1,4 Dioxane	1.43	2.92	ND	5.15	10.53	ND	
79-01-6	Trichloroethene	0.21	1.67	ND	1.15	8.94	ND	
75-27-4	Bromodichloromethane	0.36	0.72	ND	2.39	4.84	ND	
80-62-6	Methyl methacrylate	1.43	4.83	ND	5.85	19.78	ND	
108-10-1	4-Methyl-2-pentanone	1.43	5.41	ND	5.86	22.17	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.36	1.85	ND	1.62	8.41	ND	
108-88-3	Toluene	0.72	1.87	7.03	2.69	7.03	26.45	
10061-02-6	trans-1,3-Dichloropropene	0.36	1.85	ND	1.62	8.41	ND	
79-00-5	1,1,2-Trichloroethane	0.36	1.84	ND	1.95	10.02	ND	
591-78-6	2-Hexanone	1.79	5.07	ND	7.32	20.76	ND	
124-48-1	Dibromochloromethane	0.36	0.71	ND	3.04	6.08	ND	
106-93-4	1,2-Dibromoethane	0.36	0.87	ND	2.75	6.67	ND	
127-18-4	Tetrachloroethene	0.21	0.87	ND	1.45	5.90	ND	
108-90-7	Chlorobenzene	0.36	1.63	ND	1.65	7.49	ND	
100-41-4	Ethylbenzene	0.76	1.89	6.62	3.28	8.20	28.73	
1330-20-7	m,p-Xylenes	0.76	1.89	4.42	3.29	8.23	19.17	
100-42-5	Styrene	0.74	1.85	ND	3.15	7.88	ND	
75-25-2	Bromoform	0.36	0.48	ND	3.69	4.96	ND	
95-47-6	o-Xylene	0.74	1.84	3.53	3.20	8.00	15.35	
79-34-5	1,1,2,2-Tetrachloroethane	0.35	0.89	ND	2.43	6.07	ND	
622-96-8	4-Ethyltoluene	1.19	2.96	ND	5.82	14.56	ND	
108-67-8	1,3,5-Trimethylbenzene	0.74	1.85	ND	3.63	9.07	ND	
95-63-6	1,2,4-Trimethylbenzene	0.73	1.82	ND	3.57	8.93	ND	
541-73-1	1,3-Dichlorobenzene	0.72	1.32	ND	4.30	7.95	ND	
100-44-7	Benzyl chloride	0.72	4.33	ND	3.70	22.42	ND	
106-46-7	1,4-Dichlorobenzene	0.72	1.24	ND	4.30	7.43	ND	
95-50-1	1,2-Dichlorobenzene	0.72	1.16	ND	4.30	6.96	ND	
120-82-1	1,2,4-Trichlorobenzene	1.79	2.46	ND	13.26	18.24	ND	
91-20-3	Naphthalene	0.36	0.57	19.91	1.91	3.00	104.34	
87-68-3	Hexachlorobutadiene	1.79	1.89	ND	19.06	20.20	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				82	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 16

File Name: 1837616A
Description: T - 306
Canister: 700
QC_Batch: 081418-GCK

Date Sampled: 08/01/18 Time: 12:18
Date Analyzed: 08/14/18 Time: 18:34
Can Factor: 1.43
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.43	4.29	4.69	1.65	4.94	5.40	
74-86-2	Acetylene	1.43	4.29	ND	1.52	4.57	ND	ND
74-84-0	Ethane	1.43	4.29	24.91	1.76	5.29	30.73	
115-07-1	Propene	0.95	2.86	ND	1.64	4.93	ND	ND
74-98-6	Propane	0.95	2.86	10.74	1.72	5.17	19.40	
75-28-5	i-Butane	0.72	2.15	ND	1.70	5.11	ND	ND
106-98-9	1-Butene	0.72	2.15	ND	1.64	4.93	ND	ND
106-97-8	n-Butane	0.72	2.15	8.63	1.70	5.11	20.54	
624-64-6	t-2-Butene	0.72	2.15	ND	1.64	4.93	ND	ND
590-18-1	c-2-Butene	0.72	2.15	ND	1.64	4.93	ND	ND
78-78-4	i-Pentane	0.57	1.72	366.16	1.69	5.08	1,083.46	
109-67-1	1-Pentene	0.57	1.72	ND	1.64	4.93	ND	ND
109-66-0	n-Pentane	0.57	1.72	2.87	1.69	5.07	8.48	
78-79-5	Isoprene	0.57	1.72	ND	1.60	4.79	ND	ND
646-04-8	t-2-Pentene	0.57	1.72	ND	1.64	4.93	ND	ND
627-20-3	c-2-Pentene	0.57	1.72	ND	1.64	4.93	ND	ND
75-83-2	2,2-Dimethylbutane	0.48	1.43	ND	1.68	5.05	ND	ND
287-92-3	Cyclopentane	0.57	1.72	ND	1.64	4.93	ND	ND
79-29-8	2,3-Dimethylbutane	0.48	1.43	ND	1.68	5.05	ND	ND
107-83-5	2-Methylpentane	0.48	1.43	132.96	1.68	5.05	469.71	
96-14-0	3-Methylpentane	0.48	1.43	ND	1.68	5.05	ND	ND
110-54-3	n-Hexane	0.48	1.43	4.53	1.68	5.05	16.01	
96-37-7	Methylcyclopentane	0.48	1.43	ND	1.64	4.93	ND	ND
108-08-7	2,4-Dimethylpentane	0.41	1.23	ND	1.68	5.03	ND	ND
71-43-2	Benzene	0.48	1.43	2.33	1.53	4.58	7.46	
110-82-7	Cyclohexane	0.48	1.43	ND	1.64	4.93	ND	ND
591-76-4	2-Methylhexane	0.41	1.23	ND	1.68	5.03	ND	ND
565-59-3	2,3-Dimethylpentane	0.41	1.23	ND	1.68	5.03	ND	ND
589-34-4	3-Methylhexane	0.41	1.23	13.01	1.68	5.03	53.41	
540-84-1	2,2,4-Trimethylpentane	0.36	1.07	ND	1.67	5.02	ND	ND
142-82-5	n-Heptane	0.41	1.23	ND	1.68	5.03	ND	ND
108-87-2	Methylcyclohexane	0.41	1.23	ND	1.64	4.93	ND	ND
592-13-2	2,5-Dimethylhexane	0.36	1.07	ND	1.67	5.02	ND	ND
589-43-5	2,4-Dimethylhexane	0.36	1.07	2.53	1.67	5.02	11.82	
565-75-3	2,3,4-Trimethylpentane	0.36	1.07	ND	1.67	5.02	ND	ND
108-88-3	Toluene	0.41	1.23	9.88	1.54	4.63	37.31	
584-94-1	2,3-Dimethylhexane	0.36	1.07	ND	1.67	5.02	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.36	1.07	ND	1.67	5.02	ND	ND
589-81-1	3-Methylheptane	0.36	1.07	ND	1.67	5.02	ND	ND
111-65-9	n-Octane	0.36	1.07	0.56	1.67	5.02	2.62	J
100-41-4	Ethylbenzene	0.36	1.07	11.15	1.56	4.67	48.54	
108-38-3	m,p-xylene	0.36	1.07	8.30	1.56	4.67	36.14	
100-42-5	Styrene	0.36	1.07	ND	1.53	4.58	ND	ND
95-47-6	o-xylene	0.36	1.07	8.33	1.56	4.67	36.24	
111-84-2	n-Nonane	0.32	0.95	2.12	1.67	5.01	11.13	
98-82-8	i-Propylbenzene	0.32	0.95	ND	1.57	4.70	ND	ND
103-65-1	n-propylbenzene	0.32	0.95	ND	1.57	4.70	ND	ND
80-56-8	a-Pinene	0.29	0.86	ND	1.60	4.79	ND	ND
620-14-4	3-Ethyltoluene	0.32	0.95	ND	1.57	4.70	ND	ND
622-96-8	4-Ethyltoluene	0.32	0.95	2.48	1.57	4.70	12.23	
108-67-8	1,3,5-Trimethylbenzene	0.32	0.95	4.27	1.57	4.70	21.02	
611-14-3	2-Ethyltoluene	0.32	0.95	ND	1.57	4.70	ND	ND
127-91-3	b-Pinene	0.29	0.86	ND	1.60	4.79	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.32	0.95	9.77	1.57	4.70	48.14	
124-18-5	n-Decane	0.29	0.86	11.33	1.67	5.00	66.10	
526-73-8	1,2,3-Trimethylbenzene	0.32	0.95	ND	1.57	4.70	ND	ND
5989-27-5	d-Limonene	0.29	0.86	ND	1.60	4.79	ND	ND
141-93-5	1,3-Diethylbenzene	0.29	0.86	ND	1.57	4.72	ND	ND
105-05-5	1,4-Diethylbenzene	0.29	0.86	ND	1.57	4.72	ND	ND
104-51-8	n-Butylbenzene	0.29	0.86	ND	1.57	4.72	ND	ND
1120-21-4	Undecane	0.26	0.78	31.78	1.67	5.00	203.60	
112-40-3	Dodecane	0.24	0.72	9.57	1.66	4.99	66.78	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.73	32.18	1,844.21	37.89	113.67	6,515.21
TNMHC - C1	Total Non-Methane Hydrocarbons	64.35	193.05	11,065.27	42.20	126.59	7,255.92

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number:

16

File Name: 1837616A

Date Sampled: 08/01/18

Time: 12:18

Description: T - 306

Date Analyzed: 08/03/18

Time: 17:01

Can/Tube#: 700

Can Dilution Factor: 1.43

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	143	429	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 16

File Name: 1837616A
Description: T - 306
Can/Tube#: 700
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 Time: 12:18
Date Analyzed: 08/03/18 Time: 15:54
Dilution Factor: 1.43

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.43	1.19	0.10	0.29	0.80	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218376

Laboratory ID: 17

File Name: 1837617A.D

Date Sampled: 08/01/18

Time: 12:30

Description: T - 307

Date Analyzed: 08/15/18

Time: 16:54

Canister: 614

Can Dilution Factor: 1.35

QC_Batch: 081518-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.34	1.70	ND	1.67	8.39	ND	
74-87-3	Chloromethane	0.34	1.70	ND	0.70	3.50	ND	
76-14-2	Freon 114	0.34	1.70	ND	2.36	11.86	ND	
75-01-4	Vinyl chloride	0.34	1.70	ND	0.86	4.34	ND	
106-99-0	1,3-Butadiene	0.34	1.70	ND	0.75	3.75	ND	
74-83-9	Bromomethane	0.34	1.70	ND	1.31	6.59	ND	
75-00-3	Chloroethane	0.34	1.70	ND	0.89	4.48	ND	
64-17-5	Ethanol	1.69	5.06	ND	3.18	9.54	ND	
75-69-4	Trichlorofluoromethane	0.34	1.62	ND	1.90	9.10	ND	
67-64-1	Acetone	1.69	4.15	10.99	4.01	9.86	26.11	
67-63-0	2-propanol	1.69	3.87	5.24	4.15	9.52	12.87	
75-35-4	1,1-Dichloroethene	0.34	1.67	ND	1.34	6.63	ND	
76-13-1	Freon 113	0.34	1.61	ND	2.59	12.37	ND	
75-09-2	Dichloromethane	0.68	1.63	ND	2.34	5.64	ND	
75-15-0	Carbon disulfide	1.69	3.13	ND	5.25	9.74	ND	
156-60-5	trans-1,2-Dichloroethene	0.34	1.22	ND	1.34	4.83	ND	
1634-04-4	Methyl tert butyl ether	0.34	1.24	ND	1.22	4.48	ND	
75-34-3	1,1-Dichloroethane	0.34	1.68	ND	1.37	6.81	ND	
108-05-4	Vinyl acetate	0.34	1.48	ND	1.19	5.22	ND	
78-93-3	2-Butanone	1.35	3.44	ND	3.98	10.13	ND	
141-78-6	Ethyl acetate	0.68	1.48	ND	2.43	5.32	ND	
74-97-5	Bromochloromethane	0.34	0.90	ND	1.79	4.76	ND	
109-99-9	Tetrahydrofuran	0.68	1.70	ND	1.99	5.00	ND	
156-59-2	cis-1,2-Dichloroethene	0.68	1.82	ND	2.67	7.19	ND	
67-66-3	Chloroform	0.34	1.69	ND	1.65	8.26	ND	
71-55-6	1,1,1-Trichloroethane	0.34	1.50	ND	1.84	8.17	ND	
107-06-2	1,2-Dichloroethane	0.34	1.54	ND	1.37	6.23	ND	
110-82-7	Cyclohexane	0.34	1.30	ND	1.17	4.46	ND	
71-43-2	Benzene	0.34	1.71	ND	1.08	5.47	ND	
56-23-5	Carbon tetrachloride	0.34	1.60	ND	2.12	10.06	ND	
142-82-5	n-Heptane	1.69	4.09	ND	6.91	16.76	ND	
78-87-5	1,2-Dichloropropane	0.34	1.62	ND	1.56	7.50	ND	
123-91-1	1,4 Dioxane	1.35	2.76	ND	4.86	9.94	ND	
79-01-6	Trichloroethene	0.20	1.57	ND	1.09	8.44	ND	
75-27-4	Bromodichloromethane	0.34	0.68	ND	2.26	4.57	ND	
80-62-6	Methyl methacrylate	1.35	4.56	ND	5.52	18.67	ND	
108-10-1	4-Methyl-2-pentanone	1.35	5.11	ND	5.53	20.93	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.34	1.75	ND	1.53	7.94	ND	
108-88-3	Toluene	0.68	1.76	ND	2.54	6.63	ND	
10061-02-6	trans-1,3-Dichloropropene	0.34	1.75	ND	1.53	7.94	ND	
79-00-5	1,1,2-Trichloroethane	0.34	1.74	ND	1.84	9.46	ND	
591-78-6	2-Hexanone	1.69	4.79	ND	6.91	19.60	ND	
124-48-1	Dibromochloromethane	0.34	0.67	ND	2.87	5.74	ND	
106-93-4	1,2-Dibromoethane	0.34	0.82	ND	2.59	6.29	ND	
127-18-4	Tetrachloroethene	0.20	0.82	ND	1.37	5.57	ND	
108-90-7	Chlorobenzene	0.34	1.54	ND	1.55	7.07	ND	
100-41-4	Ethylbenzene	0.71	1.78	ND	3.10	7.75	ND	
1330-20-7	m,p-Xylenes	0.72	1.79	ND	3.11	7.76	ND	
100-42-5	Styrene	0.70	1.75	ND	2.98	7.44	ND	
75-25-2	Bromoform	0.34	0.45	ND	3.49	4.68	ND	
95-47-6	o-Xylene	0.70	1.74	ND	3.02	7.55	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.84	ND	2.29	5.73	ND	
622-96-8	4-Ethyltoluene	1.12	2.80	ND	5.50	13.74	ND	
108-67-8	1,3,5-Trimethylbenzene	0.70	1.74	ND	3.43	8.57	ND	
95-63-6	1,2,4-Trimethylbenzene	0.69	1.72	ND	3.37	8.43	ND	
541-73-1	1,3-Dichlorobenzene	0.68	1.25	ND	4.06	7.50	ND	
100-44-7	Benzyl chloride	0.68	4.09	ND	3.49	21.17	ND	
106-46-7	1,4-Dichlorobenzene	0.68	1.17	ND	4.06	7.02	ND	
95-50-1	1,2-Dichlorobenzene	0.68	1.09	ND	4.06	6.57	ND	
120-82-1	1,2,4-Trichlorobenzene	1.69	2.32	ND	12.51	17.22	ND	
91-20-3	Naphthalene	0.34	0.54	4.44	1.80	2.83	23.28	
87-68-3	Hexachlorobutadiene	1.69	1.79	ND	17.99	19.07	ND	
					QC		Limits	
Surrogate Recovery					% Rec.	LCL	UCL	Flag
2037-26-5	Toluene-d8				89	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376

Laboratory Number: 17

File Name: 1837617B
Description: T - 307
Canister: 614
QC_Batch: 081318-GCK

Date Sampled: 08/01/18 Time: 12:30
Date Analyzed: 08/13/18 Time: 13:08
Can Factor: 1.35
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.35	4.05	ND	1.55	4.66	ND	ND
74-86-2	Acetylene	1.35	4.05	ND	1.44	4.32	ND	ND
74-84-0	Ethane	1.35	4.05	7.70	1.67	5.00	9.50	
115-07-1	Propene	0.90	2.70	ND	1.55	4.66	ND	ND
74-98-6	Propane	0.90	2.70	ND	1.63	4.88	ND	ND
75-28-5	i-Butane	0.68	2.03	ND	1.61	4.82	ND	ND
106-98-9	1-Butene	0.68	2.03	ND	1.55	4.66	ND	ND
106-97-8	n-Butane	0.68	2.03	1.02	1.61	4.82	2.43	J
624-64-6	t-2-Butene	0.68	2.03	ND	1.55	4.66	ND	ND
590-18-1	c-2-Butene	0.68	2.03	ND	1.55	4.66	ND	ND
78-78-4	i-Pentane	0.54	1.62	ND	1.60	4.79	ND	ND
109-67-1	1-Pentene	0.54	1.62	ND	1.55	4.65	ND	ND
109-66-0	n-Pentane	0.54	1.62	1.60	1.60	4.79	4.72	J
78-79-5	Isoprene	0.54	1.62	ND	1.51	4.52	ND	ND
646-04-8	t-2-Pentene	0.54	1.62	ND	1.55	4.65	ND	ND
627-20-3	c-2-Pentene	0.54	1.62	ND	1.55	4.65	ND	ND
75-83-2	2,2-Dimethylbutane	0.45	1.35	ND	1.59	4.77	ND	ND
287-92-3	Cyclopentane	0.54	1.62	ND	1.55	4.65	ND	ND
79-29-8	2,3-Dimethylbutane	0.45	1.35	ND	1.59	4.77	ND	ND
107-83-5	2-Methylpentane	0.45	1.35	ND	1.59	4.77	ND	ND
96-14-0	3-Methylpentane	0.45	1.35	ND	1.59	4.77	ND	ND
110-54-3	n-Hexane	0.45	1.35	ND	1.59	4.77	ND	ND
96-37-7	Methylcyclopentane	0.45	1.35	ND	1.55	4.66	ND	ND
108-08-7	2,4-Dimethylpentane	0.39	1.16	ND	1.58	4.75	ND	ND
71-43-2	Benzene	0.45	1.35	ND	1.44	4.32	ND	ND
110-82-7	Cyclohexane	0.45	1.35	ND	1.55	4.66	ND	ND
591-76-4	2-Methylhexane	0.39	1.16	ND	1.58	4.75	ND	ND
565-59-3	2,3-Dimethylpentane	0.39	1.16	ND	1.58	4.75	ND	ND
589-34-4	3-Methylhexane	0.39	1.16	ND	1.58	4.75	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.34	1.01	ND	1.58	4.74	ND	ND
142-82-5	n-Heptane	0.39	1.16	ND	1.58	4.75	ND	ND
108-87-2	Methylcyclohexane	0.39	1.16	ND	1.55	4.66	ND	ND
592-13-2	2,5-Dimethylhexane	0.34	1.01	ND	1.58	4.74	ND	ND
589-43-5	2,4-Dimethylhexane	0.34	1.01	ND	1.58	4.74	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.34	1.01	ND	1.58	4.74	ND	ND
108-88-3	Toluene	0.39	1.16	ND	1.46	4.37	ND	ND
584-94-1	2,3-Dimethylhexane	0.34	1.01	ND	1.58	4.74	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.34	1.01	ND	1.58	4.74	ND	ND
589-81-1	3-Methylheptane	0.34	1.01	ND	1.58	4.74	ND	ND
111-65-9	n-Octane	0.34	1.01	2.58	1.58	4.74	12.09	
100-41-4	Ethylbenzene	0.34	1.01	ND	1.47	4.41	ND	ND
108-38-3	m,p-xylene	0.34	1.01	ND	1.47	4.41	ND	ND
100-42-5	Styrene	0.34	1.01	ND	1.44	4.32	ND	ND
95-47-6	o-xylene	0.34	1.01	ND	1.47	4.41	ND	ND
111-84-2	n-Nonane	0.30	0.90	ND	1.58	4.73	ND	ND
98-82-8	i-Propylbenzene	0.30	0.90	ND	1.48	4.43	ND	ND
103-65-1	n-propylbenzene	0.30	0.90	ND	1.48	4.43	ND	ND
80-56-8	a-Pinene	0.27	0.81	ND	1.51	4.52	ND	ND
620-14-4	3-Ethyltoluene	0.30	0.90	ND	1.48	4.43	ND	ND
622-96-8	4-Ethyltoluene	0.30	0.90	ND	1.48	4.43	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.30	0.90	ND	1.48	4.43	ND	ND
611-14-3	2-Ethyltoluene	0.30	0.90	ND	1.48	4.43	ND	ND
127-91-3	b-Pinene	0.27	0.81	ND	1.51	4.52	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.30	0.90	0.55	1.48	4.43	2.71	J
124-18-5	n-Decane	0.27	0.81	ND	1.57	4.72	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.30	0.90	ND	1.48	4.43	ND	ND
5989-27-5	d-Limonene	0.27	0.81	ND	1.51	4.52	ND	ND
141-93-5	1,3-Diethylbenzene	0.27	0.81	ND	1.49	4.46	ND	ND
105-05-5	1,4-Diethylbenzene	0.27	0.81	ND	1.49	4.46	ND	ND
104-51-8	n-Butylbenzene	0.27	0.81	ND	1.49	4.46	ND	ND
1120-21-4	Undecane	0.25	0.74	ND	1.57	4.72	ND	ND
112-40-3	Dodecane	0.23	0.68	ND	1.57	4.71	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.13	30.38	ND	35.77	107.31	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	60.75	182.25	ND	39.84	119.51	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number:

17

File Name: 1837617A

Date Sampled: 08/01/18

Time: 12:30

Description: T - 307

Date Analyzed: 08/03/18

Time: 17:07

Can/Tube#: 614

Can Dilution Factor: 1.35

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	135	405	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 17

File Name: 1837617A
Description: T - 307
Can/Tube#: 614
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 Time: 12:30
Date Analyzed: 08/03/18 Time: 15:57
Dilution Factor: 1.35

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.41	2.32	0.09	0.27	1.57	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218376

Laboratory ID: 18

File Name: 1837618A.D

Date Sampled: 08/01/18

Time: 13:22

Description: T - 308

Date Analyzed: 08/15/18

Time: 17:29

Canister: 779

Can Dilution Factor: 1.39

QC_Batch: 081518-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.35	1.75	ND	1.72	8.64	ND	
74-87-3	Chloromethane	0.35	1.75	ND	0.72	3.61	ND	
76-14-2	Freon 114	0.35	1.75	ND	2.43	12.21	ND	
75-01-4	Vinyl chloride	0.35	1.75	ND	0.89	4.47	ND	
106-99-0	1,3-Butadiene	0.35	1.75	ND	0.77	3.87	ND	
74-83-9	Bromomethane	0.35	1.75	ND	1.35	6.78	ND	
75-00-3	Chloroethane	0.35	1.75	ND	0.92	4.61	ND	
64-17-5	Ethanol	1.74	5.21	ND	3.27	9.82	ND	
75-69-4	Trichlorofluoromethane	0.35	1.67	ND	1.95	9.37	ND	
67-64-1	Acetone	1.74	4.27	59.68	4.13	10.15	141.75	
67-63-0	2-propanol	1.74	3.99	9.49	4.27	9.80	23.31	
75-35-4	1,1-Dichloroethene	0.35	1.72	ND	1.38	6.83	ND	
76-13-1	Freon 113	0.35	1.66	ND	2.66	12.74	ND	
75-09-2	Dichloromethane	0.70	1.67	ND	2.41	5.81	ND	
75-15-0	Carbon disulfide	1.74	3.22	ND	5.41	10.03	ND	
156-60-5	trans-1,2-Dichloroethene	0.35	1.25	ND	1.38	4.97	ND	
1634-04-4	Methyl tert butyl ether	0.35	1.28	ND	1.25	4.61	ND	
75-34-3	1,1-Dichloroethane	0.35	1.73	ND	1.41	7.01	ND	
108-05-4	Vinyl acetate	0.35	1.53	ND	1.22	5.37	ND	
78-93-3	2-Butanone	1.39	3.54	16.82	4.10	10.43	49.58	
141-78-6	Ethyl acetate	0.70	1.52	ND	2.50	5.48	ND	
74-97-5	Bromochloromethane	0.35	0.93	ND	1.84	4.90	ND	
109-99-9	Tetrahydrofuran	0.70	1.75	ND	2.05	5.15	ND	
156-59-2	cis-1,2-Dichloroethene	0.70	1.87	ND	2.75	7.41	ND	
67-66-3	Chloroform	0.35	1.74	ND	1.70	8.51	ND	
71-55-6	1,1,1-Trichloroethane	0.35	1.54	ND	1.90	8.41	ND	
107-06-2	1,2-Dichloroethane	0.35	1.59	ND	1.41	6.42	ND	
110-82-7	Cyclohexane	0.35	1.33	ND	1.20	4.59	ND	
71-43-2	Benzene	0.35	1.77	ND	1.11	5.64	ND	
56-23-5	Carbon tetrachloride	0.35	1.65	ND	2.18	10.36	ND	
142-82-5	n-Heptane	1.74	4.21	ND	7.12	17.25	ND	
78-87-5	1,2-Dichloropropane	0.35	1.67	ND	1.61	7.73	ND	
123-91-1	1,4 Dioxane	1.39	2.84	ND	5.01	10.24	ND	
79-01-6	Trichloroethene	0.21	1.62	ND	1.12	8.69	ND	
75-27-4	Bromodichloromethane	0.35	0.70	ND	2.33	4.70	ND	
80-62-6	Methyl methacrylate	1.39	4.70	ND	5.69	19.23	ND	
108-10-1	4-Methyl-2-pentanone	1.39	5.26	ND	5.69	21.55	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.35	1.80	ND	1.58	8.17	ND	
108-88-3	Toluene	0.70	1.81	1.25	2.62	6.83	4.72	J
10061-02-6	trans-1,3-Dichloropropene	0.35	1.80	ND	1.58	8.18	ND	
79-00-5	1,1,2-Trichloroethane	0.35	1.79	ND	1.90	9.74	ND	
591-78-6	2-Hexanone	1.74	4.93	ND	7.12	20.18	ND	
124-48-1	Dibromochloromethane	0.35	0.69	ND	2.96	5.91	ND	
106-93-4	1,2-Dibromoethane	0.35	0.84	ND	2.67	6.48	ND	
127-18-4	Tetrachloroethene	0.21	0.85	ND	1.41	5.73	ND	
108-90-7	Chlorobenzene	0.35	1.58	ND	1.60	7.28	ND	
100-41-4	Ethylbenzene	0.73	1.84	ND	3.19	7.98	ND	
1330-20-7	m,p-Xylenes	0.74	1.84	ND	3.20	8.00	ND	
100-42-5	Styrene	0.72	1.80	ND	3.07	7.66	ND	
75-25-2	Bromoform	0.35	0.47	ND	3.59	4.82	ND	
95-47-6	o-Xylene	0.72	1.79	ND	3.11	7.78	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.34	0.86	ND	2.36	5.90	ND	
622-96-8	4-Ethyltoluene	1.15	2.88	ND	5.66	14.15	ND	
108-67-8	1,3,5-Trimethylbenzene	0.72	1.80	ND	3.53	8.82	ND	
95-63-6	1,2,4-Trimethylbenzene	0.71	1.77	ND	3.47	8.68	ND	
541-73-1	1,3-Dichlorobenzene	0.70	1.29	ND	4.18	7.73	ND	
100-44-7	Benzyl chloride	0.70	4.21	ND	3.60	21.80	ND	
106-46-7	1,4-Dichlorobenzene	0.70	1.20	ND	4.18	7.23	ND	
95-50-1	1,2-Dichlorobenzene	0.70	1.13	ND	4.18	6.77	ND	
120-82-1	1,2,4-Trichlorobenzene	1.74	2.39	ND	12.88	17.73	ND	
91-20-3	Naphthalene	0.35	0.56	3.68	1.86	2.91	19.29	
87-68-3	Hexachlorobutadiene	1.74	1.84	ND	18.52	19.64	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	92	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 18

File Name: 1837618A
Description: T - 308
Canister: 779
QC_Batch: 081318-GCK

Date Sampled: 08/01/18 Time: 13:22
Date Analyzed: 08/13/18 Time: 13:54
Can Factor: 1.39
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.39	4.17	2.53	1.60	4.80	2.91	J
74-86-2	Acetylene	1.39	4.17	ND	1.48	4.44	ND	ND
74-84-0	Ethane	1.39	4.17	13.03	1.71	5.14	16.07	
115-07-1	Propene	0.93	2.78	ND	1.60	4.80	ND	ND
74-98-6	Propane	0.93	2.78	5.01	1.67	5.02	9.05	
75-28-5	i-Butane	0.70	2.09	ND	1.65	4.96	ND	ND
106-98-9	1-Butene	0.70	2.09	ND	1.60	4.79	ND	ND
106-97-8	n-Butane	0.70	2.09	2.13	1.65	4.96	5.07	
624-64-6	t-2-Butene	0.70	2.09	ND	1.60	4.79	ND	ND
590-18-1	c-2-Butene	0.70	2.09	ND	1.60	4.79	ND	ND
78-78-4	i-Pentane	0.56	1.67	ND	1.65	4.94	ND	ND
109-67-1	1-Pentene	0.56	1.67	ND	1.60	4.79	ND	ND
109-66-0	n-Pentane	0.56	1.67	1.52	1.64	4.93	4.50	J
78-79-5	Isoprene	0.56	1.67	ND	1.55	4.66	ND	ND
646-04-8	t-2-Pentene	0.56	1.67	ND	1.60	4.79	ND	ND
627-20-3	c-2-Pentene	0.56	1.67	ND	1.60	4.79	ND	ND
75-83-2	2,2-Dimethylbutane	0.46	1.39	ND	1.64	4.91	ND	ND
287-92-3	Cyclopentane	0.56	1.67	ND	1.60	4.79	ND	ND
79-29-8	2,3-Dimethylbutane	0.46	1.39	ND	1.64	4.91	ND	ND
107-83-5	2-Methylpentane	0.46	1.39	6.54	1.64	4.91	23.12	
96-14-0	3-Methylpentane	0.46	1.39	ND	1.64	4.91	ND	ND
110-54-3	n-Hexane	0.46	1.39	ND	1.64	4.91	ND	ND
96-37-7	Methylcyclopentane	0.46	1.39	ND	1.60	4.80	ND	ND
108-08-7	2,4-Dimethylpentane	0.40	1.19	2.39	1.63	4.89	9.81	
71-43-2	Benzene	0.46	1.39	0.83	1.48	4.45	2.64	J
110-82-7	Cyclohexane	0.46	1.39	ND	1.60	4.80	ND	ND
591-76-4	2-Methylhexane	0.40	1.19	ND	1.63	4.89	ND	ND
565-59-3	2,3-Dimethylpentane	0.40	1.19	ND	1.63	4.89	ND	ND
589-34-4	3-Methylhexane	0.40	1.19	ND	1.63	4.89	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.35	1.04	ND	1.63	4.88	ND	ND
142-82-5	n-Heptane	0.40	1.19	0.60	1.63	4.89	2.48	J
108-87-2	Methylcyclohexane	0.40	1.19	ND	1.60	4.80	ND	ND
592-13-2	2,5-Dimethylhexane	0.35	1.04	ND	1.63	4.88	ND	ND
589-43-5	2,4-Dimethylhexane	0.35	1.04	ND	1.63	4.88	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.35	1.04	ND	1.63	4.88	ND	ND
108-88-3	Toluene	0.40	1.19	1.96	1.50	4.50	7.38	
584-94-1	2,3-Dimethylhexane	0.35	1.04	ND	1.63	4.88	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.35	1.04	ND	1.63	4.88	ND	ND
589-81-1	3-Methylheptane	0.35	1.04	ND	1.63	4.88	ND	ND
111-65-9	n-Octane	0.35	1.04	1.78	1.63	4.88	8.33	
100-41-4	Ethylbenzene	0.35	1.04	ND	1.51	4.54	ND	ND
108-38-3	m,p-xylene	0.35	1.04	ND	1.51	4.54	ND	ND
100-42-5	Styrene	0.35	1.04	ND	1.48	4.45	ND	ND
95-47-6	o-xylene	0.35	1.04	0.90	1.51	4.54	3.93	J
111-84-2	n-Nonane	0.31	0.93	ND	1.62	4.87	ND	ND
98-82-8	i-Propylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
103-65-1	n-propylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
80-56-8	a-Pinene	0.28	0.83	ND	1.55	4.66	ND	ND
620-14-4	3-Ethyltoluene	0.31	0.93	ND	1.52	4.56	ND	ND
622-96-8	4-Ethyltoluene	0.31	0.93	ND	1.52	4.56	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
611-14-3	2-Ethyltoluene	0.31	0.93	ND	1.52	4.56	ND	ND
127-91-3	b-Pinene	0.28	0.83	ND	1.55	4.66	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.31	0.93	0.62	1.52	4.56	3.07	J
124-18-5	n-Decane	0.28	0.83	0.32	1.62	4.86	1.88	J
526-73-8	1,2,3-Trimethylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
5989-27-5	d-Limonene	0.28	0.83	ND	1.55	4.66	ND	ND
141-93-5	1,3-Diethylbenzene	0.28	0.83	ND	1.53	4.59	ND	ND
105-05-5	1,4-Diethylbenzene	0.28	0.83	ND	1.53	4.59	ND	ND
104-51-8	n-Butylbenzene	0.28	0.83	ND	1.53	4.59	ND	ND
1120-21-4	Undecane	0.25	0.76	0.36	1.62	4.86	2.33	J
112-40-3	Dodecane	0.23	0.70	0.36	1.62	4.85	2.51	J

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.43	31.28	49.51	36.83	110.49	174.91	
TNMHC - C1	Total Non-Methane Hydrocarbons	62.55	187.65	297.06	41.02	123.05	194.79	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 18

File Name: 1837618A

Date Sampled: 08/01/18

Time: 13:22

Description: T - 308

Date Analyzed: 08/03/18

Time: 17:12

Can/Tube#: 779

Can Dilution Factor: 1.39

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	139	417	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 18

File Name: 1837618A
Description: T - 308
Can/Tube#: 779
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 Time: 13:22
Date Analyzed: 08/03/18 Time: 16:01
Dilution Factor: 1.39

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.42	4.10	0.09	0.28	2.77	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 19

File Name: 1837619A.D
Description: T - 309
Canister: 690
QC_Batch: 081518-MA1

Date Sampled: 08/01/18 Time: 13:30
Date Analyzed: 08/15/18 Time: 18:04
Can Dilution Factor: 1.39
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.35	1.75	ND	1.72	8.64	ND	
74-87-3	Chloromethane	0.35	1.75	ND	0.72	3.61	ND	
76-14-2	Freon 114	0.35	1.75	ND	2.43	12.21	ND	
75-01-4	Vinyl chloride	0.35	1.75	ND	0.89	4.47	ND	
106-99-0	1,3-Butadiene	0.35	1.75	ND	0.77	3.87	ND	
74-83-9	Bromomethane	0.35	1.75	ND	1.35	6.78	ND	
75-00-3	Chloroethane	0.35	1.75	ND	0.92	4.61	ND	
64-17-5	Ethanol	1.74	5.21	ND	3.27	9.82	ND	
75-69-4	Trichlorofluoromethane	0.35	1.67	ND	1.95	9.37	ND	
67-64-1	Acetone	1.74	4.27	ND	4.13	10.15	ND	
67-63-0	2-propanol	1.74	3.99	ND	4.27	9.80	ND	
75-35-4	1,1-Dichloroethene	0.35	1.72	ND	1.38	6.83	ND	
76-13-1	Freon 113	0.35	1.66	ND	2.66	12.74	ND	
75-09-2	Dichloromethane	0.70	1.67	ND	2.41	5.81	ND	
75-15-0	Carbon disulfide	1.74	3.22	ND	5.41	10.03	ND	
156-60-5	trans-1,2-Dichloroethene	0.35	1.25	ND	1.38	4.97	ND	
1634-04-4	Methyl tert butyl ether	0.35	1.28	ND	1.25	4.61	ND	
75-34-3	1,1-Dichloroethane	0.35	1.73	ND	1.41	7.01	ND	
108-05-4	Vinyl acetate	0.35	1.53	ND	1.22	5.37	ND	
78-93-3	2-Butanone	1.39	3.54	ND	4.10	10.43	ND	
141-78-6	Ethyl acetate	0.70	1.52	ND	2.50	5.48	ND	
74-97-5	Bromochloromethane	0.35	0.93	ND	1.84	4.90	ND	
109-99-9	Tetrahydrofuran	0.70	1.75	ND	2.05	5.15	ND	
156-59-2	cis-1,2-Dichloroethene	0.70	1.87	ND	2.75	7.41	ND	
67-66-3	Chloroform	0.35	1.74	ND	1.70	8.51	ND	
71-55-6	1,1,1-Trichloroethane	0.35	1.54	ND	1.90	8.41	ND	
107-06-2	1,2-Dichloroethane	0.35	1.59	ND	1.41	6.42	ND	
110-82-7	Cyclohexane	0.35	1.33	ND	1.20	4.59	ND	
71-43-2	Benzene	0.35	1.77	1.65	1.11	5.64	5.28	J
56-23-5	Carbon tetrachloride	0.35	1.65	ND	2.18	10.36	ND	
142-82-5	n-Heptane	1.74	4.21	ND	7.12	17.25	ND	
78-87-5	1,2-Dichloropropane	0.35	1.67	ND	1.61	7.73	ND	
123-91-1	1,4 Dioxane	1.39	2.84	ND	5.01	10.24	ND	
79-01-6	Trichloroethene	0.21	1.62	ND	1.12	8.69	ND	
75-27-4	Bromodichloromethane	0.35	0.70	ND	2.33	4.70	ND	
80-62-6	Methyl methacrylate	1.39	4.70	ND	5.69	19.23	ND	
108-10-1	4-Methyl-2-pentanone	1.39	5.26	ND	5.69	21.55	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.35	1.80	ND	1.58	8.17	ND	
108-88-3	Toluene	0.70	1.81	0.82	2.62	6.83	3.09	J
10061-02-6	trans-1,3-Dichloropropene	0.35	1.80	ND	1.58	8.18	ND	
79-00-5	1,1,2-Trichloroethane	0.35	1.79	ND	1.90	9.74	ND	
591-78-6	2-Hexanone	1.74	4.93	ND	7.12	20.18	ND	
124-48-1	Dibromochloromethane	0.35	0.69	ND	2.96	5.91	ND	
106-93-4	1,2-Dibromoethane	0.35	0.84	ND	2.67	6.48	ND	
127-18-4	Tetrachloroethene	0.21	0.85	ND	1.41	5.73	ND	
108-90-7	Chlorobenzene	0.35	1.58	ND	1.60	7.28	ND	
100-41-4	Ethylbenzene	0.73	1.84	ND	3.19	7.98	ND	
1330-20-7	m,p-Xylenes	0.74	1.84	ND	3.20	8.00	ND	
100-42-5	Styrene	0.72	1.80	ND	3.07	7.66	ND	
75-25-2	Bromoform	0.35	0.47	ND	3.59	4.82	ND	
95-47-6	o-Xylene	0.72	1.79	ND	3.11	7.78	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.34	0.86	ND	2.36	5.90	ND	
622-96-8	4-Ethyltoluene	1.15	2.88	ND	5.66	14.15	ND	
108-67-8	1,3,5-Trimethylbenzene	0.72	1.80	ND	3.53	8.82	ND	
95-63-6	1,2,4-Trimethylbenzene	0.71	1.77	ND	3.47	8.68	ND	
541-73-1	1,3-Dichlorobenzene	0.70	1.29	ND	4.18	7.73	ND	
100-44-7	Benzyl chloride	0.70	4.21	ND	3.60	21.80	ND	
106-46-7	1,4-Dichlorobenzene	0.70	1.20	ND	4.18	7.23	ND	
95-50-1	1,2-Dichlorobenzene	0.70	1.13	ND	4.18	6.77	ND	
120-82-1	1,2,4-Trichlorobenzene	1.74	2.39	ND	12.88	17.73	ND	
91-20-3	Naphthalene	0.35	0.56	ND	1.86	2.91	ND	
87-68-3	Hexachlorobutadiene	1.74	1.84	ND	18.52	19.64	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	85	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 19

File Name: 1837619A
Description: T - 309
Canister: 690
QC_Batch: 081318-GCK

Date Sampled: 08/01/18 Time: 13:30
Date Analyzed: 08/13/18 Time: 14:40
Can Factor: 1.39
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.39	4.17	4.08	1.60	4.80	4.70	J
74-86-2	Acetylene	1.39	4.17	ND	1.48	4.44	ND	ND
74-84-0	Ethane	1.39	4.17	9.57	1.71	5.14	11.80	
115-07-1	Propene	0.93	2.78	ND	1.60	4.80	ND	ND
74-98-6	Propane	0.93	2.78	4.69	1.67	5.02	8.49	
75-28-5	i-Butane	0.70	2.09	ND	1.65	4.96	ND	ND
106-98-9	1-Butene	0.70	2.09	ND	1.60	4.79	ND	ND
106-97-8	n-Butane	0.70	2.09	5.01	1.65	4.96	11.93	
624-64-6	t-2-Butene	0.70	2.09	ND	1.60	4.79	ND	ND
590-18-1	c-2-Butene	0.70	2.09	ND	1.60	4.79	ND	ND
78-78-4	i-Pentane	0.56	1.67	1.21	1.65	4.94	3.57	J
109-67-1	1-Pentene	0.56	1.67	ND	1.60	4.79	ND	ND
109-66-0	n-Pentane	0.56	1.67	0.86	1.64	4.93	2.53	J
78-79-5	Isoprene	0.56	1.67	ND	1.55	4.66	ND	ND
646-04-8	t-2-Pentene	0.56	1.67	ND	1.60	4.79	ND	ND
627-20-3	c-2-Pentene	0.56	1.67	ND	1.60	4.79	ND	ND
75-83-2	2,2-Dimethylbutane	0.46	1.39	ND	1.64	4.91	ND	ND
287-92-3	Cyclopentane	0.56	1.67	ND	1.60	4.79	ND	ND
79-29-8	2,3-Dimethylbutane	0.46	1.39	ND	1.64	4.91	ND	ND
107-83-5	2-Methylpentane	0.46	1.39	ND	1.64	4.91	ND	ND
96-14-0	3-Methylpentane	0.46	1.39	0.67	1.64	4.91	2.37	J
110-54-3	n-Hexane	0.46	1.39	ND	1.64	4.91	ND	ND
96-37-7	Methylcyclopentane	0.46	1.39	ND	1.60	4.80	ND	ND
108-08-7	2,4-Dimethylpentane	0.40	1.19	1.28	1.63	4.89	5.24	
71-43-2	Benzene	0.46	1.39	1.04	1.48	4.45	3.34	J
110-82-7	Cyclohexane	0.46	1.39	ND	1.60	4.80	ND	ND
591-76-4	2-Methylhexane	0.40	1.19	ND	1.63	4.89	ND	ND
565-59-3	2,3-Dimethylpentane	0.40	1.19	ND	1.63	4.89	ND	ND
589-34-4	3-Methylhexane	0.40	1.19	ND	1.63	4.89	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.35	1.04	ND	1.63	4.88	ND	ND
142-82-5	n-Heptane	0.40	1.19	ND	1.63	4.89	ND	ND
108-87-2	Methylcyclohexane	0.40	1.19	ND	1.60	4.80	ND	ND
592-13-2	2,5-Dimethylhexane	0.35	1.04	ND	1.63	4.88	ND	ND
589-43-5	2,4-Dimethylhexane	0.35	1.04	ND	1.63	4.88	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.35	1.04	ND	1.63	4.88	ND	ND
108-88-3	Toluene	0.40	1.19	1.49	1.50	4.50	5.64	
584-94-1	2,3-Dimethylhexane	0.35	1.04	1.04	1.63	4.88	4.89	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.35	1.04	ND	1.63	4.88	ND	ND
589-81-1	3-Methylheptane	0.35	1.04	ND	1.63	4.88	ND	ND
111-65-9	n-Octane	0.35	1.04	2.44	1.63	4.88	11.41	
100-41-4	Ethylbenzene	0.35	1.04	ND	1.51	4.54	ND	ND
108-38-3	m,p-xylene	0.35	1.04	ND	1.51	4.54	ND	ND
100-42-5	Styrene	0.35	1.04	ND	1.48	4.45	ND	ND
95-47-6	o-xylene	0.35	1.04	ND	1.51	4.54	ND	ND
111-84-2	n-Nonane	0.31	0.93	2.61	1.62	4.87	13.72	
98-82-8	i-Propylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
103-65-1	n-propylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
80-56-8	a-Pinene	0.28	0.83	ND	1.55	4.66	ND	ND
620-14-4	3-Ethyltoluene	0.31	0.93	ND	1.52	4.56	ND	ND
622-96-8	4-Ethyltoluene	0.31	0.93	ND	1.52	4.56	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
611-14-3	2-Ethyltoluene	0.31	0.93	ND	1.52	4.56	ND	ND
127-91-3	b-Pinene	0.28	0.83	ND	1.55	4.66	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
124-18-5	n-Decane	0.28	0.83	0.85	1.62	4.86	4.94	
526-73-8	1,2,3-Trimethylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
5989-27-5	d-Limonene	0.28	0.83	ND	1.55	4.66	ND	ND
141-93-5	1,3-Diethylbenzene	0.28	0.83	ND	1.53	4.59	ND	ND
105-05-5	1,4-Diethylbenzene	0.28	0.83	ND	1.53	4.59	ND	ND
104-51-8	n-Butylbenzene	0.28	0.83	ND	1.53	4.59	ND	ND
1120-21-4	Undecane	0.25	0.76	0.39	1.62	4.86	2.47	J
112-40-3	Dodecane	0.23	0.70	0.95	1.62	4.85	6.66	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.43	31.28	41.28	36.83	110.49	145.82
TNMHC - C1	Total Non-Methane Hydrocarbons	62.55	187.65	247.65	41.02	123.05	162.40

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 19

File Name: 1837619A

Date Sampled: 08/01/18

Time: 13:30

Description: T - 309

Date Analyzed: 08/03/18

Time: 17:18

Can/Tube#: 690

Can Dilution Factor: 1.39

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	139	417	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: **ASTM D3416**

SDG: 218376
Laboratory Number: 19

File Name: 1837619A
Description: T - 309
Can/Tube#: 690
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 **Time:** 13:30
Date Analyzed: 08/03/18 **Time:** 16:04
Dilution Factor: 1.39

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.42	7.88	0.09	0.28	5.32	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218376

Laboratory ID: 20

File Name: 1837620A.D
Description: T - 310
Canister: 642
QC_Batch: 081518-MA1

Date Sampled: 08/01/18 Time: 14:22
Date Analyzed: 08/15/18 Time: 18:39
Can Dilution Factor: 1.38
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.35	1.74	ND	1.71	8.58	ND	
74-87-3	Chloromethane	0.35	1.74	ND	0.71	3.58	ND	
76-14-2	Freon 114	0.35	1.74	ND	2.41	12.12	ND	
75-01-4	Vinyl chloride	0.35	1.74	ND	0.88	4.43	ND	
106-99-0	1,3-Butadiene	0.35	1.74	ND	0.76	3.84	ND	
74-83-9	Bromomethane	0.35	1.74	ND	1.34	6.73	ND	
75-00-3	Chloroethane	0.35	1.74	ND	0.91	4.58	ND	
64-17-5	Ethanol	1.73	5.18	ND	3.25	9.75	ND	
75-69-4	Trichlorofluoromethane	0.35	1.66	ND	1.94	9.30	ND	
67-64-1	Acetone	1.73	4.24	71.58	4.10	10.08	170.01	
67-63-0	2-propanol	1.73	3.96	6.80	4.24	9.73	16.70	
75-35-4	1,1-Dichloroethene	0.35	1.71	ND	1.37	6.78	ND	
76-13-1	Freon 113	0.35	1.65	ND	2.64	12.64	ND	
75-09-2	Dichloromethane	0.69	1.66	ND	2.39	5.77	ND	
75-15-0	Carbon disulfide	1.73	3.20	ND	5.37	9.96	ND	
156-60-5	trans-1,2-Dichloroethene	0.35	1.25	ND	1.37	4.93	ND	
1634-04-4	Methyl tert butyl ether	0.35	1.27	ND	1.24	4.58	ND	
75-34-3	1,1-Dichloroethane	0.35	1.72	ND	1.40	6.96	ND	
108-05-4	Vinyl acetate	0.35	1.52	ND	1.21	5.34	ND	
78-93-3	2-Butanone	1.38	3.51	31.14	4.07	10.35	91.78	
141-78-6	Ethyl acetate	0.69	1.51	ND	2.49	5.44	ND	
74-97-5	Bromochloromethane	0.35	0.92	ND	1.82	4.86	ND	
109-99-9	Tetrahydrofuran	0.69	1.74	ND	2.03	5.11	ND	
156-59-2	cis-1,2-Dichloroethene	0.69	1.86	ND	2.73	7.35	ND	
67-66-3	Chloroform	0.35	1.73	ND	1.68	8.45	ND	
71-55-6	1,1,1-Trichloroethane	0.35	1.53	ND	1.88	8.35	ND	
107-06-2	1,2-Dichloroethane	0.35	1.57	ND	1.40	6.37	ND	
110-82-7	Cyclohexane	0.35	1.32	ND	1.19	4.56	ND	
71-43-2	Benzene	0.35	1.75	1.85	1.10	5.60	5.92	
56-23-5	Carbon tetrachloride	0.35	1.64	ND	2.17	10.28	ND	
142-82-5	n-Heptane	1.73	4.18	ND	7.07	17.13	ND	
78-87-5	1,2-Dichloropropane	0.35	1.66	ND	1.59	7.67	ND	
123-91-1	1,4 Dioxane	1.38	2.82	ND	4.97	10.16	ND	
79-01-6	Trichloroethene	0.21	1.61	ND	1.11	8.63	ND	
75-27-4	Bromodichloromethane	0.35	0.70	ND	2.31	4.67	ND	
80-62-6	Methyl methacrylate	1.38	4.66	ND	5.65	19.09	ND	
108-10-1	4-Methyl-2-pentanone	1.38	5.22	5.66	5.65	21.40	23.20	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.35	1.79	ND	1.57	8.11	ND	
108-88-3	Toluene	0.69	1.80	ND	2.60	6.78	ND	
10061-02-6	trans-1,3-Dichloropropene	0.35	1.79	ND	1.57	8.12	ND	
79-00-5	1,1,2-Trichloroethane	0.35	1.77	ND	1.88	9.67	ND	
591-78-6	2-Hexanone	1.73	4.89	ND	7.07	20.04	ND	
124-48-1	Dibromochloromethane	0.35	0.69	ND	2.94	5.87	ND	
106-93-4	1,2-Dibromoethane	0.35	0.84	ND	2.65	6.43	ND	
127-18-4	Tetrachloroethene	0.21	0.84	ND	1.40	5.69	ND	
108-90-7	Chlorobenzene	0.35	1.57	ND	1.59	7.23	ND	
100-41-4	Ethylbenzene	0.73	1.82	ND	3.17	7.92	ND	
1330-20-7	m,p-Xylenes	0.73	1.83	ND	3.18	7.94	ND	
100-42-5	Styrene	0.71	1.79	ND	3.04	7.61	ND	
75-25-2	Bromoform	0.35	0.46	ND	3.56	4.78	ND	
95-47-6	o-Xylene	0.71	1.78	ND	3.09	7.72	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.34	0.85	ND	2.34	5.86	ND	
622-96-8	4-Ethyltoluene	1.14	2.86	ND	5.62	14.05	ND	
108-67-8	1,3,5-Trimethylbenzene	0.71	1.78	ND	3.50	8.76	ND	
95-63-6	1,2,4-Trimethylbenzene	0.70	1.75	ND	3.45	8.62	ND	
541-73-1	1,3-Dichlorobenzene	0.69	1.28	ND	4.15	7.67	ND	
100-44-7	Benzyl chloride	0.69	4.18	ND	3.57	21.64	ND	
106-46-7	1,4-Dichlorobenzene	0.69	1.19	ND	4.15	7.17	ND	
95-50-1	1,2-Dichlorobenzene	0.69	1.12	ND	4.15	6.72	ND	
120-82-1	1,2,4-Trichlorobenzene	1.73	2.37	ND	12.79	17.60	ND	
91-20-3	Naphthalene	0.35	0.55	5.44	1.84	2.89	28.51	
87-68-3	Hexachlorobutadiene	1.73	1.83	ND	18.39	19.49	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	95	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376

Laboratory Number: 20

File Name: 1837620A
Description: T - 310
Canister: 642
QC_Batch: 081318-GCK

Date Sampled: 08/01/18 Time: 14:22
Date Analyzed: 08/13/18 Time: 15:51
Can Factor: 1.38
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.38	4.14	4.61	1.59	4.77	5.30	
74-86-2	Acetylene	1.38	4.14	ND	1.47	4.41	ND	ND
74-84-0	Ethane	1.38	4.14	7.94	1.70	5.11	9.80	
115-07-1	Propene	0.92	2.76	ND	1.59	4.76	ND	ND
74-98-6	Propane	0.92	2.76	3.64	1.66	4.99	6.57	
75-28-5	i-Butane	0.69	2.07	ND	1.64	4.93	ND	ND
106-98-9	1-Butene	0.69	2.07	ND	1.59	4.76	ND	ND
106-97-8	n-Butane	0.69	2.07	2.87	1.64	4.93	6.82	
624-64-6	t-2-Butene	0.69	2.07	ND	1.59	4.76	ND	ND
590-18-1	c-2-Butene	0.69	2.07	ND	1.59	4.76	ND	ND
78-78-4	i-Pentane	0.55	1.66	ND	1.63	4.90	ND	ND
109-67-1	1-Pentene	0.55	1.66	ND	1.59	4.76	ND	ND
109-66-0	n-Pentane	0.55	1.66	36.40	1.63	4.89	107.55	
78-79-5	Isoprene	0.55	1.66	ND	1.54	4.62	ND	ND
646-04-8	t-2-Pentene	0.55	1.66	ND	1.59	4.76	ND	ND
627-20-3	c-2-Pentene	0.55	1.66	ND	1.59	4.76	ND	ND
75-83-2	2,2-Dimethylbutane	0.46	1.38	ND	1.63	4.88	ND	ND
287-92-3	Cyclopentane	0.55	1.66	ND	1.59	4.76	ND	ND
79-29-8	2,3-Dimethylbutane	0.46	1.38	ND	1.63	4.88	ND	ND
107-83-5	2-Methylpentane	0.46	1.38	ND	1.63	4.88	ND	ND
96-14-0	3-Methylpentane	0.46	1.38	ND	1.63	4.88	ND	ND
110-54-3	n-Hexane	0.46	1.38	25.06	1.63	4.88	88.53	
96-37-7	Methylcyclopentane	0.46	1.38	ND	1.59	4.76	ND	ND
108-08-7	2,4-Dimethylpentane	0.39	1.18	ND	1.62	4.86	ND	ND
71-43-2	Benzene	0.46	1.38	0.76	1.47	4.42	2.45	J
110-82-7	Cyclohexane	0.46	1.38	ND	1.59	4.76	ND	ND
591-76-4	2-Methylhexane	0.39	1.18	1.52	1.62	4.86	6.23	
565-59-3	2,3-Dimethylpentane	0.39	1.18	ND	1.62	4.86	ND	ND
589-34-4	3-Methylhexane	0.39	1.18	1.13	1.62	4.86	4.65	J
540-84-1	2,2,4-Trimethylpentane	0.35	1.04	ND	1.61	4.84	ND	ND
142-82-5	n-Heptane	0.39	1.18	0.93	1.62	4.86	3.81	J
108-87-2	Methylcyclohexane	0.39	1.18	ND	1.59	4.76	ND	ND
592-13-2	2,5-Dimethylhexane	0.35	1.04	ND	1.61	4.84	ND	ND
589-43-5	2,4-Dimethylhexane	0.35	1.04	ND	1.61	4.84	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.35	1.04	ND	1.61	4.84	ND	ND
108-88-3	Toluene	0.39	1.18	1.25	1.49	4.46	4.73	
584-94-1	2,3-Dimethylhexane	0.35	1.04	ND	1.61	4.84	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.35	1.04	ND	1.61	4.84	ND	ND
589-81-1	3-Methylheptane	0.35	1.04	ND	1.61	4.84	ND	ND
111-65-9	n-Octane	0.35	1.04	0.84	1.61	4.84	3.92	J
100-41-4	Ethylbenzene	0.35	1.04	ND	1.50	4.50	ND	ND
108-38-3	m,p-xylene	0.35	1.04	0.69	1.50	4.50	3.01	J
100-42-5	Styrene	0.35	1.04	ND	1.47	4.42	ND	ND
95-47-6	o-xylene	0.35	1.04	1.00	1.50	4.50	4.37	J
111-84-2	n-Nonane	0.31	0.92	0.65	1.61	4.84	3.44	J
98-82-8	i-Propylbenzene	0.31	0.92	ND	1.51	4.53	ND	ND
103-65-1	n-propylbenzene	0.31	0.92	ND	1.51	4.53	ND	ND
80-56-8	a-Pinene	0.28	0.83	ND	1.54	4.62	ND	ND
620-14-4	3-Ethyltoluene	0.31	0.92	ND	1.51	4.53	ND	ND
622-96-8	4-Ethyltoluene	0.31	0.92	ND	1.51	4.53	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.31	0.92	6.62	1.51	4.53	32.60	
611-14-3	2-Ethyltoluene	0.31	0.92	ND	1.51	4.53	ND	ND
127-91-3	b-Pinene	0.28	0.83	ND	1.54	4.62	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.31	0.92	1.07	1.51	4.53	5.28	
124-18-5	n-Decane	0.28	0.83	6.39	1.61	4.83	37.27	
526-73-8	1,2,3-Trimethylbenzene	0.31	0.92	ND	1.51	4.53	ND	ND
5989-27-5	d-Limonene	0.28	0.83	ND	1.54	4.62	ND	ND
141-93-5	1,3-Diethylbenzene	0.28	0.83	ND	1.52	4.55	ND	ND
105-05-5	1,4-Diethylbenzene	0.28	0.83	ND	1.52	4.55	ND	ND
104-51-8	n-Butylbenzene	0.28	0.83	ND	1.52	4.55	ND	ND
1120-21-4	Undecane	0.25	0.75	1.08	1.61	4.82	6.91	
112-40-3	Dodecane	0.23	0.69	1.59	1.61	4.82	11.09	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.35	31.05	449.70	36.56	109.69	1,588.69	
TNMHC - C1	Total Non-Methane Hydrocarbons	62.10	186.30	2,698.19	40.72	122.16	1,769.31	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 20

File Name: 1837620A

Date Sampled: 08/01/18

Time: 14:22

Description: T - 310

Date Analyzed: 08/03/18

Time: 17:23

Can/Tube#: 642

Can Dilution Factor: 1.38

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	138	414	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 20

File Name: 1837620A
Description: T - 310
Can/Tube#: 642
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 Time: 14:22
Date Analyzed: 08/03/18 Time: 16:08
Dilution Factor: 1.38

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.41	6.49	0.09	0.28	4.38	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 21

File Name: 1837621A.D
Description: T - 311
Canister: 740
QC_Batch: 081518-MA1

Date Sampled: 08/01/18 Time: 14:25
Date Analyzed: 08/15/18 Time: 19:15
Can Dilution Factor: 1.35
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.34	1.70	ND	1.67	8.39	ND	
74-87-3	Chloromethane	0.34	1.70	ND	0.70	3.50	ND	
76-14-2	Freon 114	0.34	1.70	ND	2.36	11.86	ND	
75-01-4	Vinyl chloride	0.34	1.70	ND	0.86	4.34	ND	
106-99-0	1,3-Butadiene	0.34	1.70	ND	0.75	3.75	ND	
74-83-9	Bromomethane	0.34	1.70	ND	1.31	6.59	ND	
75-00-3	Chloroethane	0.34	1.70	ND	0.89	4.48	ND	
64-17-5	Ethanol	1.69	5.06	ND	3.18	9.54	ND	
75-69-4	Trichlorofluoromethane	0.34	1.62	ND	1.90	9.10	ND	
67-64-1	Acetone	1.69	4.15	105.67	4.01	9.86	250.97	
67-63-0	2-propanol	1.69	3.87	ND	4.15	9.52	ND	
75-35-4	1,1-Dichloroethene	0.34	1.67	ND	1.34	6.63	ND	
76-13-1	Freon 113	0.34	1.61	ND	2.59	12.37	ND	
75-09-2	Dichloromethane	0.68	1.63	ND	2.34	5.64	ND	
75-15-0	Carbon disulfide	1.69	3.13	ND	5.25	9.74	ND	
156-60-5	trans-1,2-Dichloroethene	0.34	1.22	ND	1.34	4.83	ND	
1634-04-4	Methyl tert butyl ether	0.34	1.24	ND	1.22	4.48	ND	
75-34-3	1,1-Dichloroethane	0.34	1.68	ND	1.37	6.81	ND	
108-05-4	Vinyl acetate	0.34	1.48	ND	1.19	5.22	ND	
78-93-3	2-Butanone	1.35	3.44	27.43	3.98	10.13	80.84	
141-78-6	Ethyl acetate	0.68	1.48	ND	2.43	5.32	ND	
74-97-5	Bromochloromethane	0.34	0.90	ND	1.79	4.76	ND	
109-99-9	Tetrahydrofuran	0.68	1.70	ND	1.99	5.00	ND	
156-59-2	cis-1,2-Dichloroethene	0.68	1.82	ND	2.67	7.19	ND	
67-66-3	Chloroform	0.34	1.69	ND	1.65	8.26	ND	
71-55-6	1,1,1-Trichloroethane	0.34	1.50	ND	1.84	8.17	ND	
107-06-2	1,2-Dichloroethane	0.34	1.54	ND	1.37	6.23	ND	
110-82-7	Cyclohexane	0.34	1.30	ND	1.17	4.46	ND	
71-43-2	Benzene	0.34	1.71	1.87	1.08	5.47	5.98	
56-23-5	Carbon tetrachloride	0.34	1.60	ND	2.12	10.06	ND	
142-82-5	n-Heptane	1.69	4.09	ND	6.91	16.76	ND	
78-87-5	1,2-Dichloropropane	0.34	1.62	ND	1.56	7.50	ND	
123-91-1	1,4 Dioxane	1.35	2.76	ND	4.86	9.94	ND	
79-01-6	Trichloroethene	0.20	1.57	ND	1.09	8.44	ND	
75-27-4	Bromodichloromethane	0.34	0.68	ND	2.26	4.57	ND	
80-62-6	Methyl methacrylate	1.35	4.56	ND	5.52	18.67	ND	
108-10-1	4-Methyl-2-pentanone	1.35	5.11	ND	5.53	20.93	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.34	1.75	ND	1.53	7.94	ND	
108-88-3	Toluene	0.68	1.76	ND	2.54	6.63	ND	
10061-02-6	trans-1,3-Dichloropropene	0.34	1.75	ND	1.53	7.94	ND	
79-00-5	1,1,2-Trichloroethane	0.34	1.74	ND	1.84	9.46	ND	
591-78-6	2-Hexanone	1.69	4.79	ND	6.91	19.60	ND	
124-48-1	Dibromochloromethane	0.34	0.67	ND	2.87	5.74	ND	
106-93-4	1,2-Dibromoethane	0.34	0.82	ND	2.59	6.29	ND	
127-18-4	Tetrachloroethene	0.20	0.82	ND	1.37	5.57	ND	
108-90-7	Chlorobenzene	0.34	1.54	ND	1.55	7.07	ND	
100-41-4	Ethylbenzene	0.71	1.78	ND	3.10	7.75	ND	
1330-20-7	m,p-Xylenes	0.72	1.79	ND	3.11	7.76	ND	
100-42-5	Styrene	0.70	1.75	ND	2.98	7.44	ND	
75-25-2	Bromoform	0.34	0.45	ND	3.49	4.68	ND	
95-47-6	o-Xylene	0.70	1.74	ND	3.02	7.55	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.84	ND	2.29	5.73	ND	
622-96-8	4-Ethyltoluene	1.12	2.80	ND	5.50	13.74	ND	
108-67-8	1,3,5-Trimethylbenzene	0.70	1.74	ND	3.43	8.57	ND	
95-63-6	1,2,4-Trimethylbenzene	0.69	1.72	ND	3.37	8.43	ND	
541-73-1	1,3-Dichlorobenzene	0.68	1.25	ND	4.06	7.50	ND	
100-44-7	Benzyl chloride	0.68	4.09	ND	3.49	21.17	ND	
106-46-7	1,4-Dichlorobenzene	0.68	1.17	ND	4.06	7.02	ND	
95-50-1	1,2-Dichlorobenzene	0.68	1.09	ND	4.06	6.57	ND	
120-82-1	1,2,4-Trichlorobenzene	1.69	2.32	ND	12.51	17.22	ND	
91-20-3	Naphthalene	0.34	0.54	ND	1.80	2.83	ND	
87-68-3	Hexachlorobutadiene	1.69	1.79	ND	17.99	19.07	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	94	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 21

File Name: 1837621B
Description: T - 311
Canister: 740
QC_Batch: 081318-GCK

Date Sampled: 08/01/18 Time: 14:25
Date Analyzed: 08/13/18 Time: 18:43
Can Factor: 1.35
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.35	4.05	ND	1.55	4.66	ND	ND
74-86-2	Acetylene	1.35	4.05	ND	1.44	4.32	ND	ND
74-84-0	Ethane	1.35	4.05	5.18	1.67	5.00	6.39	
115-07-1	Propene	0.90	2.70	ND	1.55	4.66	ND	ND
74-98-6	Propane	0.90	2.70	ND	1.63	4.88	ND	ND
75-28-5	i-Butane	0.68	2.03	ND	1.61	4.82	ND	ND
106-98-9	1-Butene	0.68	2.03	ND	1.55	4.66	ND	ND
106-97-8	n-Butane	0.68	2.03	2.69	1.61	4.82	6.41	
624-64-6	t-2-Butene	0.68	2.03	ND	1.55	4.66	ND	ND
590-18-1	c-2-Butene	0.68	2.03	ND	1.55	4.66	ND	ND
78-78-4	i-Pentane	0.54	1.62	ND	1.60	4.79	ND	ND
109-67-1	1-Pentene	0.54	1.62	ND	1.55	4.65	ND	ND
109-66-0	n-Pentane	0.54	1.62	31.82	1.60	4.79	94.02	
78-79-5	Isoprene	0.54	1.62	ND	1.51	4.52	ND	ND
646-04-8	t-2-Pentene	0.54	1.62	ND	1.55	4.65	ND	ND
627-20-3	c-2-Pentene	0.54	1.62	ND	1.55	4.65	ND	ND
75-83-2	2,2-Dimethylbutane	0.45	1.35	ND	1.59	4.77	ND	ND
287-92-3	Cyclopentane	0.54	1.62	ND	1.55	4.65	ND	ND
79-29-8	2,3-Dimethylbutane	0.45	1.35	ND	1.59	4.77	ND	ND
107-83-5	2-Methylpentane	0.45	1.35	ND	1.59	4.77	ND	ND
96-14-0	3-Methylpentane	0.45	1.35	ND	1.59	4.77	ND	ND
110-54-3	n-Hexane	0.45	1.35	11.43	1.59	4.77	40.39	
96-37-7	Methylcyclopentane	0.45	1.35	ND	1.55	4.66	ND	ND
108-08-7	2,4-Dimethylpentane	0.39	1.16	ND	1.58	4.75	ND	ND
71-43-2	Benzene	0.45	1.35	1.02	1.44	4.32	3.28	J
110-82-7	Cyclohexane	0.45	1.35	ND	1.55	4.66	ND	ND
591-76-4	2-Methylhexane	0.39	1.16	ND	1.58	4.75	ND	ND
565-59-3	2,3-Dimethylpentane	0.39	1.16	ND	1.58	4.75	ND	ND
589-34-4	3-Methylhexane	0.39	1.16	ND	1.58	4.75	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.34	1.01	ND	1.58	4.74	ND	ND
142-82-5	n-Heptane	0.39	1.16	ND	1.58	4.75	ND	ND
108-87-2	Methylcyclohexane	0.39	1.16	ND	1.55	4.66	ND	ND
592-13-2	2,5-Dimethylhexane	0.34	1.01	ND	1.58	4.74	ND	ND
589-43-5	2,4-Dimethylhexane	0.34	1.01	ND	1.58	4.74	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.34	1.01	ND	1.58	4.74	ND	ND
108-88-3	Toluene	0.39	1.16	ND	1.46	4.37	ND	ND
584-94-1	2,3-Dimethylhexane	0.34	1.01	ND	1.58	4.74	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.34	1.01	ND	1.58	4.74	ND	ND
589-81-1	3-Methylheptane	0.34	1.01	ND	1.58	4.74	ND	ND
111-65-9	n-Octane	0.34	1.01	1.98	1.58	4.74	9.25	
100-41-4	Ethylbenzene	0.34	1.01	ND	1.47	4.41	ND	ND
108-38-3	m,p-xylene	0.34	1.01	ND	1.47	4.41	ND	ND
100-42-5	Styrene	0.34	1.01	ND	1.44	4.32	ND	ND
95-47-6	o-xylene	0.34	1.01	ND	1.47	4.41	ND	ND
111-84-2	n-Nonane	0.30	0.90	ND	1.58	4.73	ND	ND
98-82-8	i-Propylbenzene	0.30	0.90	ND	1.48	4.43	ND	ND
103-65-1	n-propylbenzene	0.30	0.90	ND	1.48	4.43	ND	ND
80-56-8	a-Pinene	0.27	0.81	ND	1.51	4.52	ND	ND
620-14-4	3-Ethyltoluene	0.30	0.90	ND	1.48	4.43	ND	ND
622-96-8	4-Ethyltoluene	0.30	0.90	ND	1.48	4.43	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.30	0.90	ND	1.48	4.43	ND	ND
611-14-3	2-Ethyltoluene	0.30	0.90	ND	1.48	4.43	ND	ND
127-91-3	b-Pinene	0.27	0.81	ND	1.51	4.52	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.30	0.90	0.58	1.48	4.43	2.87	J
124-18-5	n-Decane	0.27	0.81	0.52	1.57	4.72	3.00	J
526-73-8	1,2,3-Trimethylbenzene	0.30	0.90	ND	1.48	4.43	ND	ND
5989-27-5	d-Limonene	0.27	0.81	ND	1.51	4.52	ND	ND
141-93-5	1,3-Diethylbenzene	0.27	0.81	ND	1.49	4.46	ND	ND
105-05-5	1,4-Diethylbenzene	0.27	0.81	ND	1.49	4.46	ND	ND
104-51-8	n-Butylbenzene	0.27	0.81	ND	1.49	4.46	ND	ND
1120-21-4	Undecane	0.25	0.74	ND	1.57	4.72	ND	ND
112-40-3	Dodecane	0.23	0.68	ND	1.57	4.71	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.13	30.38	47.94	35.77	107.31	169.36
TNMHC - C1	Total Non-Methane Hydrocarbons	60.75	182.25	287.64	39.84	119.51	188.62

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number:

21

File Name: 1837621A

Date Sampled: 08/01/18

Time: 14:25

Description: T - 311

Date Analyzed: 08/03/18

Time: 17:35

Can/Tube#: 740

Can Dilution Factor: 1.35

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	135	405	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: **ASTM D3416**

SDG: 218376
Laboratory Number: 21

File Name: 1837621A
Description: T - 311
Can/Tube#: 740
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 **Time:** 14:25
Date Analyzed: 08/03/18 **Time:** 16:15
Dilution Factor: 1.35

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.41	15.25	0.09	0.27	10.30	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 22

File Name: 1837622A.D
Description: T - 312
Canister: 823
QC_Batch: 081518-MA1

Date Sampled: 08/01/18 Time: 14:31
Date Analyzed: 08/15/18 Time: 19:51
Can Dilution Factor: 1.39
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.35	1.75	ND	1.72	8.64	ND	
74-87-3	Chloromethane	0.35	1.75	ND	0.72	3.61	ND	
76-14-2	Freon 114	0.35	1.75	ND	2.43	12.21	ND	
75-01-4	Vinyl chloride	0.35	1.75	ND	0.89	4.47	ND	
106-99-0	1,3-Butadiene	0.35	1.75	ND	0.77	3.87	ND	
74-83-9	Bromomethane	0.35	1.75	ND	1.35	6.78	ND	
75-00-3	Chloroethane	0.35	1.75	ND	0.92	4.61	ND	
64-17-5	Ethanol	1.74	5.21	ND	3.27	9.82	ND	
75-69-4	Trichlorofluoromethane	0.35	1.67	ND	1.95	9.37	ND	
67-64-1	Acetone	1.74	4.27	83.04	4.13	10.15	197.24	
67-63-0	2-propanol	1.74	3.99	ND	4.27	9.80	ND	
75-35-4	1,1-Dichloroethene	0.35	1.72	ND	1.38	6.83	ND	
76-13-1	Freon 113	0.35	1.66	ND	2.66	12.74	ND	
75-09-2	Dichloromethane	0.70	1.67	ND	2.41	5.81	ND	
75-15-0	Carbon disulfide	1.74	3.22	ND	5.41	10.03	ND	
156-60-5	trans-1,2-Dichloroethene	0.35	1.25	ND	1.38	4.97	ND	
1634-04-4	Methyl tert butyl ether	0.35	1.28	ND	1.25	4.61	ND	
75-34-3	1,1-Dichloroethane	0.35	1.73	ND	1.41	7.01	ND	
108-05-4	Vinyl acetate	0.35	1.53	ND	1.22	5.37	ND	
78-93-3	2-Butanone	1.39	3.54	20.99	4.10	10.43	61.87	
141-78-6	Ethyl acetate	0.70	1.52	ND	2.50	5.48	ND	
74-97-5	Bromochloromethane	0.35	0.93	ND	1.84	4.90	ND	
109-99-9	Tetrahydrofuran	0.70	1.75	ND	2.05	5.15	ND	
156-59-2	cis-1,2-Dichloroethene	0.70	1.87	ND	2.75	7.41	ND	
67-66-3	Chloroform	0.35	1.74	ND	1.70	8.51	ND	
71-55-6	1,1,1-Trichloroethane	0.35	1.54	ND	1.90	8.41	ND	
107-06-2	1,2-Dichloroethane	0.35	1.59	ND	1.41	6.42	ND	
110-82-7	Cyclohexane	0.35	1.33	ND	1.20	4.59	ND	
71-43-2	Benzene	0.35	1.77	2.71	1.11	5.64	8.65	
56-23-5	Carbon tetrachloride	0.35	1.65	ND	2.18	10.36	ND	
142-82-5	n-Heptane	1.74	4.21	ND	7.12	17.25	ND	
78-87-5	1,2-Dichloropropane	0.35	1.67	ND	1.61	7.73	ND	
123-91-1	1,4 Dioxane	1.39	2.84	ND	5.01	10.24	ND	
79-01-6	Trichloroethene	0.21	1.62	ND	1.12	8.69	ND	
75-27-4	Bromodichloromethane	0.35	0.70	ND	2.33	4.70	ND	
80-62-6	Methyl methacrylate	1.39	4.70	ND	5.69	19.23	ND	
108-10-1	4-Methyl-2-pentanone	1.39	5.26	ND	5.69	21.55	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.35	1.80	ND	1.58	8.17	ND	
108-88-3	Toluene	0.70	1.81	ND	2.62	6.83	ND	
10061-02-6	trans-1,3-Dichloropropene	0.35	1.80	ND	1.58	8.18	ND	
79-00-5	1,1,2-Trichloroethane	0.35	1.79	ND	1.90	9.74	ND	
591-78-6	2-Hexanone	1.74	4.93	ND	7.12	20.18	ND	
124-48-1	Dibromochloromethane	0.35	0.69	ND	2.96	5.91	ND	
106-93-4	1,2-Dibromoethane	0.35	0.84	ND	2.67	6.48	ND	
127-18-4	Tetrachloroethene	0.21	0.85	ND	1.41	5.73	ND	
108-90-7	Chlorobenzene	0.35	1.58	ND	1.60	7.28	ND	
100-41-4	Ethylbenzene	0.73	1.84	ND	3.19	7.98	ND	
1330-20-7	m,p-Xylenes	0.74	1.84	ND	3.20	8.00	ND	
100-42-5	Styrene	0.72	1.80	ND	3.07	7.66	ND	
75-25-2	Bromoform	0.35	0.47	ND	3.59	4.82	ND	
95-47-6	o-Xylene	0.72	1.79	ND	3.11	7.78	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.34	0.86	ND	2.36	5.90	ND	
622-96-8	4-Ethyltoluene	1.15	2.88	ND	5.66	14.15	ND	
108-67-8	1,3,5-Trimethylbenzene	0.72	1.80	ND	3.53	8.82	ND	
95-63-6	1,2,4-Trimethylbenzene	0.71	1.77	ND	3.47	8.68	ND	
541-73-1	1,3-Dichlorobenzene	0.70	1.29	ND	4.18	7.73	ND	
100-44-7	Benzyl chloride	0.70	4.21	ND	3.60	21.80	ND	
106-46-7	1,4-Dichlorobenzene	0.70	1.20	ND	4.18	7.23	ND	
95-50-1	1,2-Dichlorobenzene	0.70	1.13	ND	4.18	6.77	ND	
120-82-1	1,2,4-Trichlorobenzene	1.74	2.39	ND	12.88	17.73	ND	
91-20-3	Naphthalene	0.35	0.56	ND	1.86	2.91	ND	
87-68-3	Hexachlorobutadiene	1.74	1.84	ND	18.52	19.64	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	89	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 22

File Name: 1837622A
Description: T - 312
Canister: 823
QC_Batch: 081318-GCK

Date Sampled: 08/01/18 Time: 14:31
Date Analyzed: 08/13/18 Time: 19:27
Can Factor: 1.39
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.39	4.17	ND	1.60	4.80	ND	ND
74-86-2	Acetylene	1.39	4.17	ND	1.48	4.44	ND	ND
74-84-0	Ethane	1.39	4.17	6.68	1.71	5.14	8.24	
115-07-1	Propene	0.93	2.78	ND	1.60	4.80	ND	ND
74-98-6	Propane	0.93	2.78	2.57	1.67	5.02	4.64	J
75-28-5	i-Butane	0.70	2.09	3.81	1.65	4.96	9.06	
106-98-9	1-Butene	0.70	2.09	ND	1.60	4.79	ND	ND
106-97-8	n-Butane	0.70	2.09	ND	1.65	4.96	ND	ND
624-64-6	t-2-Butene	0.70	2.09	ND	1.60	4.79	ND	ND
590-18-1	c-2-Butene	0.70	2.09	ND	1.60	4.79	ND	ND
78-78-4	i-Pentane	0.56	1.67	30.22	1.65	4.94	89.42	
109-67-1	1-Pentene	0.56	1.67	ND	1.60	4.79	ND	ND
109-66-0	n-Pentane	0.56	1.67	0.96	1.64	4.93	2.85	J
78-79-5	Isoprene	0.56	1.67	ND	1.55	4.66	ND	ND
646-04-8	t-2-Pentene	0.56	1.67	ND	1.60	4.79	ND	ND
627-20-3	c-2-Pentene	0.56	1.67	ND	1.60	4.79	ND	ND
75-83-2	2,2-Dimethylbutane	0.46	1.39	ND	1.64	4.91	ND	ND
287-92-3	Cyclopentane	0.56	1.67	ND	1.60	4.79	ND	ND
79-29-8	2,3-Dimethylbutane	0.46	1.39	ND	1.64	4.91	ND	ND
107-83-5	2-Methylpentane	0.46	1.39	ND	1.64	4.91	ND	ND
96-14-0	3-Methylpentane	0.46	1.39	ND	1.64	4.91	ND	ND
110-54-3	n-Hexane	0.46	1.39	10.92	1.64	4.91	38.59	
96-37-7	Methylcyclopentane	0.46	1.39	ND	1.60	4.80	ND	ND
108-08-7	2,4-Dimethylpentane	0.40	1.19	ND	1.63	4.89	ND	ND
71-43-2	Benzene	0.46	1.39	ND	1.48	4.45	ND	ND
110-82-7	Cyclohexane	0.46	1.39	ND	1.60	4.80	ND	ND
591-76-4	2-Methylhexane	0.40	1.19	0.62	1.63	4.89	2.54	J
565-59-3	2,3-Dimethylpentane	0.40	1.19	ND	1.63	4.89	ND	ND
589-34-4	3-Methylhexane	0.40	1.19	1.01	1.63	4.89	4.15	J
540-84-1	2,2,4-Trimethylpentane	0.35	1.04	ND	1.63	4.88	ND	ND
142-82-5	n-Heptane	0.40	1.19	0.87	1.63	4.89	3.57	J
108-87-2	Methylcyclohexane	0.40	1.19	ND	1.60	4.80	ND	ND
592-13-2	2,5-Dimethylhexane	0.35	1.04	ND	1.63	4.88	ND	ND
589-43-5	2,4-Dimethylhexane	0.35	1.04	ND	1.63	4.88	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.35	1.04	ND	1.63	4.88	ND	ND
108-88-3	Toluene	0.40	1.19	0.85	1.50	4.50	3.22	J
584-94-1	2,3-Dimethylhexane	0.35	1.04	ND	1.63	4.88	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.35	1.04	ND	1.63	4.88	ND	ND
589-81-1	3-Methylheptane	0.35	1.04	ND	1.63	4.88	ND	ND
111-65-9	n-Octane	0.35	1.04	8.94	1.63	4.88	41.83	
100-41-4	Ethylbenzene	0.35	1.04	ND	1.51	4.54	ND	ND
108-38-3	m,p-xylene	0.35	1.04	ND	1.51	4.54	ND	ND
100-42-5	Styrene	0.35	1.04	ND	1.48	4.45	ND	ND
95-47-6	o-xylene	0.35	1.04	ND	1.51	4.54	ND	ND
111-84-2	n-Nonane	0.31	0.93	ND	1.62	4.87	ND	ND
98-82-8	i-Propylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
103-65-1	n-propylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
80-56-8	a-Pinene	0.28	0.83	ND	1.55	4.66	ND	ND
620-14-4	3-Ethyltoluene	0.31	0.93	ND	1.52	4.56	ND	ND
622-96-8	4-Ethyltoluene	0.31	0.93	ND	1.52	4.56	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.31	0.93	0.45	1.52	4.56	2.23	J
611-14-3	2-Ethyltoluene	0.31	0.93	ND	1.52	4.56	ND	ND
127-91-3	b-Pinene	0.28	0.83	ND	1.55	4.66	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
124-18-5	n-Decane	0.28	0.83	9.98	1.62	4.86	58.23	
526-73-8	1,2,3-Trimethylbenzene	0.31	0.93	ND	1.52	4.56	ND	ND
5989-27-5	d-Limonene	0.28	0.83	ND	1.55	4.66	ND	ND
141-93-5	1,3-Diethylbenzene	0.28	0.83	ND	1.53	4.59	ND	ND
105-05-5	1,4-Diethylbenzene	0.28	0.83	ND	1.53	4.59	ND	ND
104-51-8	n-Butylbenzene	0.28	0.83	ND	1.53	4.59	ND	ND
1120-21-4	Undecane	0.25	0.76	2.54	1.62	4.86	16.30	
112-40-3	Dodecane	0.23	0.70	1.28	1.62	4.85	8.94	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.43	31.28	122.06	36.83	110.49	431.22	
TNMHC - C1	Total Non-Methane Hydrocarbons	62.55	187.65	732.38	41.02	123.05	480.25	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 22

File Name: 1837622A

Date Sampled: 08/01/18

Time: 14:31

Description: T - 312

Date Analyzed: 08/03/18

Time: 17:41

Can/Tube#: 823

Can Dilution Factor: 1.39

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	139	417	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: **ASTM D3416**

SDG: 218376
Laboratory Number: 22

File Name: 1837622A
Description: T - 312
Can/Tube#: 823
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 **Time:** 14:31
Date Analyzed: 08/03/18 **Time:** 16:19
Dilution Factor: 1.39

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.42	14.44	0.09	0.28	9.76	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218376

Laboratory ID: 23

File Name: 1837623A.D

Date Sampled: 08/01/18

Time: 15:30

Description: T - 313

Date Analyzed: 08/16/18

Time: 18:02

Canister: 630

Can Dilution Factor: 1.44

QC_Batch: 081618-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	14.40	72.43	ND	71.17	357.99	ND	
74-87-3	Chloromethane	14.40	72.43	ND	29.73	149.53	ND	
76-14-2	Freon 114	14.40	72.43	ND	100.60	506.04	ND	
75-01-4	Vinyl chloride	14.40	72.43	ND	36.79	185.06	ND	
106-99-0	1,3-Butadiene	14.40	72.43	ND	31.85	160.19	ND	
74-83-9	Bromomethane	14.40	72.43	ND	55.86	281.00	ND	
75-00-3	Chloroethane	14.40	72.43	ND	37.97	190.99	ND	
64-17-5	Ethanol	72.00	216.00	ND	135.69	407.06	ND	
75-69-4	Trichlorofluoromethane	14.40	69.15	ND	80.88	388.38	ND	
67-64-1	Acetone	72.00	177.12	3,623.42	171.01	420.68	8,605.97	
67-63-0	2-propanol	72.00	165.31	ND	176.89	406.15	ND	
75-35-4	1,1-Dichloroethene	14.40	71.42	ND	57.04	282.93	ND	
76-13-1	Freon 113	14.40	68.89	ND	110.32	527.78	ND	
75-09-2	Dichloromethane	28.80	69.35	ND	99.96	240.71	ND	
75-15-0	Carbon disulfide	72.00	133.63	ND	223.99	415.72	ND	
156-60-5	trans-1,2-Dichloroethene	14.40	51.99	ND	57.04	205.94	ND	
1634-04-4	Methyl tert butyl ether	14.40	53.09	ND	51.86	191.21	ND	
75-34-3	1,1-Dichloroethane	14.40	71.82	ND	58.28	290.65	ND	
108-05-4	Vinyl acetate	14.40	63.27	ND	50.68	222.69	ND	
78-93-3	2-Butanone	57.60	146.59	1,095.59	169.77	432.07	3,229.14	
141-78-6	Ethyl acetate	28.80	63.07	ND	103.72	227.15	ND	
74-97-5	Bromochloromethane	14.40	38.35	ND	76.17	202.89	ND	
109-99-9	Tetrahydrofuran	28.80	72.43	ND	84.89	213.49	ND	
156-59-2	cis-1,2-Dichloroethene	28.80	77.47	ND	114.08	306.88	ND	
67-66-3	Chloroform	14.40	72.22	ND	70.29	352.52	ND	
71-55-6	1,1,1-Trichloroethane	14.40	63.94	ND	78.53	348.66	ND	
107-06-2	1,2-Dichloroethane	14.40	65.69	ND	58.28	265.84	ND	
110-82-7	Cyclohexane	14.46	55.30	ND	49.76	190.33	ND	
71-43-2	Benzene	14.40	73.16	ND	45.97	233.56	ND	
56-23-5	Carbon tetrachloride	14.40	68.26	ND	90.54	429.14	ND	
142-82-5	n-Heptane	72.00	174.53	ND	294.92	714.89	ND	
78-87-5	1,2-Dichloropropane	14.40	69.30	ND	66.52	320.14	ND	
123-91-1	1,4 Dioxane	57.60	117.79	ND	207.44	424.22	ND	
79-01-6	Trichloroethene	8.64	67.07	ND	46.41	360.29	ND	
75-27-4	Bromodichloromethane	14.40	29.09	ND	96.42	194.77	ND	
80-62-6	Methyl methacrylate	57.60	194.69	ND	235.70	796.67	ND	
108-10-1	4-Methyl-2-pentanone	57.60	218.02	ND	235.94	893.02	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	14.40	74.62	ND	65.34	338.60	ND	
108-88-3	Toluene	28.80	75.17	ND	108.43	283.01	ND	
10061-02-6	trans-1,3-Dichloropropene	14.40	74.68	ND	65.34	338.87	ND	
79-00-5	1,1,2-Trichloroethane	14.40	74.04	ND	78.53	403.77	ND	
591-78-6	2-Hexanone	72.00	204.19	ND	294.92	836.39	ND	
124-48-1	Dibromochloromethane	14.40	28.75	ND	122.62	244.83	ND	
106-93-4	1,2-Dibromoethane	14.40	34.95	ND	110.61	268.47	ND	
127-18-4	Tetrachloroethene	8.64	35.05	ND	58.56	237.55	ND	
108-90-7	Chlorobenzene	14.40	65.53	ND	66.28	301.64	ND	
100-41-4	Ethylbenzene	30.45	76.12	ND	132.19	330.48	ND	
1330-20-7	m,p-Xylenes	30.53	76.31	ND	132.52	331.31	ND	
100-42-5	Styrene	29.82	74.55	ND	127.02	317.56	ND	
75-25-2	Bromoform	14.40	19.32	ND	148.76	199.60	ND	
95-47-6	o-Xylene	29.69	74.22	ND	128.88	322.21	ND	
79-34-5	1,1,2,2-Tetrachloroethane	14.26	35.65	ND	97.81	244.53	ND	
622-96-8	4-Ethyltoluene	47.74	119.34	ND	234.56	586.39	ND	
108-67-8	1,3,5-Trimethylbenzene	29.76	74.39	ND	146.21	365.54	ND	
95-63-6	1,2,4-Trimethylbenzene	29.27	73.18	ND	143.84	359.59	ND	
541-73-1	1,3-Dichlorobenzene	28.80	53.28	ND	173.07	320.17	ND	
100-44-7	Benzyl chloride	28.80	174.53	ND	149.05	903.24	ND	
106-46-7	1,4-Dichlorobenzene	28.80	49.82	ND	173.07	299.41	ND	
95-50-1	1,2-Dichlorobenzene	28.80	46.66	ND	173.07	280.37	ND	
120-82-1	1,2,4-Trichlorobenzene	72.00	99.07	ND	533.92	734.67	ND	
91-20-3	Naphthalene	14.69	23.04	ND	76.98	120.75	ND	
87-68-3	Hexachlorobutadiene	72.00	76.32	ND	767.62	813.67	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	82	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 23

File Name: 1837623A
Description: T - 313
Canister: 630
QC_Batch: 081418-GCK

Date Sampled: 08/01/18 Time: 15:30
Date Analyzed: 08/14/18 Time: 12:35
Can Factor: 1.44
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.44	4.32	3.17	1.66	4.98	3.65	J
74-86-2	Acetylene	1.44	4.32	ND	1.53	4.60	ND	ND
74-84-0	Ethane	1.44	4.32	35.69	1.78	5.33	44.02	
115-07-1	Propene	0.96	2.88	2.26	1.66	4.97	3.90	J
74-98-6	Propane	0.96	2.88	17.51	1.74	5.21	31.66	
75-28-5	i-Butane	0.72	2.16	1.82	1.71	5.14	4.33	J
106-98-9	1-Butene	0.72	2.16	ND	1.66	4.97	ND	ND
106-97-8	n-Butane	0.72	2.16	6.45	1.71	5.14	15.35	
624-64-6	t-2-Butene	0.72	2.16	ND	1.66	4.97	ND	ND
590-18-1	c-2-Butene	0.72	2.16	ND	1.66	4.97	ND	ND
78-78-4	i-Pentane	0.58	1.73	1,815.90	1.70	5.11	5,373.29	
109-67-1	1-Pentene	0.58	1.73	ND	1.65	4.96	ND	ND
109-66-0	n-Pentane	0.58	1.73	36.47	1.70	5.11	107.76	
78-79-5	Isoprene	0.58	1.73	ND	1.61	4.82	ND	ND
646-04-8	t-2-Pentene	0.58	1.73	ND	1.65	4.96	ND	ND
627-20-3	c-2-Pentene	0.58	1.73	ND	1.65	4.96	ND	ND
75-83-2	2,2-Dimethylbutane	0.48	1.44	ND	1.70	5.09	ND	ND
287-92-3	Cyclopentane	0.58	1.73	ND	1.65	4.96	ND	ND
79-29-8	2,3-Dimethylbutane	0.48	1.44	1.07	1.70	5.09	3.79	J
107-83-5	2-Methylpentane	0.48	1.44	855.02	1.70	5.09	3,020.61	
96-14-0	3-Methylpentane	0.48	1.44	6.05	1.70	5.09	21.38	
110-54-3	n-Hexane	0.48	1.44	9.45	1.70	5.09	33.39	
96-37-7	Methylcyclopentane	0.48	1.44	ND	1.66	4.97	ND	ND
108-08-7	2,4-Dimethylpentane	0.41	1.23	21.48	1.69	5.07	88.21	
71-43-2	Benzene	0.48	1.44	1.42	1.54	4.61	4.55	J
110-82-7	Cyclohexane	0.48	1.44	ND	1.66	4.97	ND	ND
591-76-4	2-Methylhexane	0.41	1.23	5.56	1.69	5.07	22.83	
565-59-3	2,3-Dimethylpentane	0.41	1.23	ND	1.69	5.07	ND	ND
589-34-4	3-Methylhexane	0.41	1.23	3.86	1.69	5.07	15.84	
540-84-1	2,2,4-Trimethylpentane	0.36	1.08	ND	1.68	5.05	ND	ND
142-82-5	n-Heptane	0.41	1.23	3.27	1.69	5.07	13.41	
108-87-2	Methylcyclohexane	0.41	1.23	5.27	1.66	4.97	21.21	
592-13-2	2,5-Dimethylhexane	0.36	1.08	ND	1.68	5.05	ND	ND
589-43-5	2,4-Dimethylhexane	0.36	1.08	3.41	1.68	5.05	15.97	
565-75-3	2,3,4-Trimethylpentane	0.36	1.08	18.93	1.68	5.05	88.60	
108-88-3	Toluene	0.41	1.23	4.38	1.55	4.66	16.52	
584-94-1	2,3-Dimethylhexane	0.36	1.08	18.93	1.68	5.05	88.60	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.36	1.08	17.50	1.68	5.05	81.91	
589-81-1	3-Methylheptane	0.36	1.08	ND	1.68	5.05	ND	ND
111-65-9	n-Octane	0.36	1.08	3.07	1.68	5.05	14.37	
100-41-4	Ethylbenzene	0.36	1.08	12.21	1.57	4.70	53.14	
108-38-3	m,p-xylene	0.36	1.08	27.59	1.57	4.70	120.09	
100-42-5	Styrene	0.36	1.08	ND	1.54	4.61	ND	ND
95-47-6	o-xylene	0.36	1.08	32.14	1.57	4.70	139.90	
111-84-2	n-Nonane	0.32	0.96	3.08	1.68	5.05	16.22	
98-82-8	i-Propylbenzene	0.32	0.96	ND	1.58	4.73	ND	ND
103-65-1	n-propylbenzene	0.32	0.96	ND	1.58	4.73	ND	ND
80-56-8	a-Pinene	0.29	0.86	ND	1.61	4.82	ND	ND
620-14-4	3-Ethyltoluene	0.32	0.96	ND	1.58	4.73	ND	ND
622-96-8	4-Ethyltoluene	0.32	0.96	6.80	1.58	4.73	33.51	
108-67-8	1,3,5-Trimethylbenzene	0.32	0.96	8.08	1.58	4.73	39.82	
611-14-3	2-Ethyltoluene	0.32	0.96	ND	1.58	4.73	ND	ND
127-91-3	b-Pinene	0.29	0.86	ND	1.61	4.82	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.32	0.96	6.00	1.58	4.73	29.53	
124-18-5	n-Decane	0.29	0.86	ND	1.68	5.04	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.32	0.96	3.60	1.58	4.73	17.74	
5989-27-5	d-Limonene	0.29	0.86	3.55	1.61	4.82	19.80	
141-93-5	1,3-Diethylbenzene	0.29	0.86	20.89	1.58	4.75	114.91	
105-05-5	1,4-Diethylbenzene	0.29	0.86	6.59	1.58	4.75	36.27	
104-51-8	n-Butylbenzene	0.29	0.86	ND	1.58	4.75	ND	ND
1120-21-4	Undecane	0.26	0.79	4.61	1.68	5.03	29.56	
112-40-3	Dodecane	0.24	0.72	9.52	1.68	5.03	66.43	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	10.80	32.40	4,353.37	38.15	114.46	15,379.54
TNMHC - C1	Total Non-Methane Hydrocarbons	64.80	194.40	26,120.24	42.49	127.48	17,128.03

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 23

File Name: 1837623A

Date Sampled: 08/01/18

Time: 15:30

Description: T - 313

Date Analyzed: 08/03/18

Time: 17:47

Can/Tube#: 630

Can Dilution Factor: 1.44

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.05	144	432	504	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 23

File Name: 1837623A
Description: T - 313
Can/Tube#: 630
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 Time: 15:30
Date Analyzed: 08/03/18 Time: 16:22
Dilution Factor: 1.44

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.14	0.43	60.46	0.10	0.29	40.85	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 24

File Name: 1837624A.D

Date Sampled: 08/01/18

Time: 15:35

Description: T - 314

Date Analyzed: 08/15/18

Time: 21:04

Canister: 637

Can Dilution Factor: 1.28

QC_Batch: 081518-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.61	ND	1.58	7.96	ND	
74-87-3	Chloromethane	0.32	1.61	ND	0.66	3.32	ND	
76-14-2	Freon 114	0.32	1.61	ND	2.24	11.25	ND	
75-01-4	Vinyl chloride	0.32	1.61	ND	0.82	4.11	ND	
106-99-0	1,3-Butadiene	0.32	1.61	ND	0.71	3.56	ND	
74-83-9	Bromomethane	0.32	1.61	ND	1.24	6.24	ND	
75-00-3	Chloroethane	0.32	1.61	ND	0.84	4.24	ND	
64-17-5	Ethanol	1.60	4.80	ND	3.02	9.05	ND	
75-69-4	Trichlorofluoromethane	0.32	1.54	ND	1.80	8.63	ND	
67-64-1	Acetone	1.60	3.94	ND	3.80	9.35	ND	
67-63-0	2-propanol	1.60	3.67	ND	3.93	9.03	ND	
75-35-4	1,1-Dichloroethene	0.32	1.59	ND	1.27	6.29	ND	
76-13-1	Freon 113	0.32	1.53	ND	2.45	11.73	ND	
75-09-2	Dichloromethane	0.64	1.54	ND	2.22	5.35	ND	
75-15-0	Carbon disulfide	1.60	2.97	ND	4.98	9.24	ND	
156-60-5	trans-1,2-Dichloroethene	0.32	1.16	ND	1.27	4.58	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.18	ND	1.15	4.25	ND	
75-34-3	1,1-Dichloroethane	0.32	1.60	ND	1.30	6.46	ND	
108-05-4	Vinyl acetate	0.32	1.41	ND	1.13	4.95	ND	
78-93-3	2-Butanone	1.28	3.26	ND	3.77	9.60	ND	
141-78-6	Ethyl acetate	0.64	1.40	ND	2.30	5.05	ND	
74-97-5	Bromochloromethane	0.32	0.85	ND	1.69	4.51	ND	
109-99-9	Tetrahydrofuran	0.64	1.61	ND	1.89	4.74	ND	
156-59-2	cis-1,2-Dichloroethene	0.64	1.72	ND	2.54	6.82	ND	
67-66-3	Chloroform	0.32	1.60	ND	1.56	7.83	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.42	ND	1.75	7.75	ND	
107-06-2	1,2-Dichloroethane	0.32	1.46	ND	1.30	5.91	ND	
110-82-7	Cyclohexane	0.32	1.23	ND	1.11	4.23	ND	
71-43-2	Benzene	0.32	1.63	ND	1.02	5.19	ND	
56-23-5	Carbon tetrachloride	0.32	1.52	ND	2.01	9.54	ND	
142-82-5	n-Heptane	1.60	3.88	ND	6.55	15.89	ND	
78-87-5	1,2-Dichloropropane	0.32	1.54	ND	1.48	7.11	ND	
123-91-1	1,4 Dioxane	1.28	2.62	ND	4.61	9.43	ND	
79-01-6	Trichloroethene	0.19	1.49	ND	1.03	8.01	ND	
75-27-4	Bromodichloromethane	0.32	0.65	ND	2.14	4.33	ND	
80-62-6	Methyl methacrylate	1.28	4.33	ND	5.24	17.70	ND	
108-10-1	4-Methyl-2-pentanone	1.28	4.84	ND	5.24	19.84	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.32	1.66	ND	1.45	7.52	ND	
108-88-3	Toluene	0.64	1.67	ND	2.41	6.29	ND	
10061-02-6	trans-1,3-Dichloropropene	0.32	1.66	ND	1.45	7.53	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.65	ND	1.75	8.97	ND	
591-78-6	2-Hexanone	1.60	4.54	ND	6.55	18.59	ND	
124-48-1	Dibromochloromethane	0.32	0.64	ND	2.72	5.44	ND	
106-93-4	1,2-Dibromoethane	0.32	0.78	ND	2.46	5.97	ND	
127-18-4	Tetrachloroethene	0.19	0.78	ND	1.30	5.28	ND	
108-90-7	Chlorobenzene	0.32	1.46	ND	1.47	6.70	ND	
100-41-4	Ethylbenzene	0.68	1.69	ND	2.94	7.34	ND	
1330-20-7	m,p-Xylenes	0.68	1.70	ND	2.94	7.36	ND	
100-42-5	Styrene	0.66	1.66	ND	2.82	7.06	ND	
75-25-2	Bromoform	0.32	0.43	ND	3.31	4.44	ND	
95-47-6	o-Xylene	0.66	1.65	ND	2.86	7.16	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.32	0.79	ND	2.17	5.43	ND	
622-96-8	4-Ethyltoluene	1.06	2.65	ND	5.21	13.03	ND	
108-67-8	1,3,5-Trimethylbenzene	0.66	1.65	ND	3.25	8.12	ND	
95-63-6	1,2,4-Trimethylbenzene	0.65	1.63	ND	3.20	7.99	ND	
541-73-1	1,3-Dichlorobenzene	0.64	1.18	ND	3.85	7.11	ND	
100-44-7	Benzyl chloride	0.64	3.88	ND	3.31	20.07	ND	
106-46-7	1,4-Dichlorobenzene	0.64	1.11	ND	3.85	6.65	ND	
95-50-1	1,2-Dichlorobenzene	0.64	1.04	ND	3.85	6.23	ND	
120-82-1	1,2,4-Trichlorobenzene	1.60	2.20	ND	11.86	16.33	ND	
91-20-3	Naphthalene	0.33	0.51	ND	1.71	2.68	ND	
87-68-3	Hexachlorobutadiene	1.60	1.70	ND	17.06	18.08	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	88	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376

Laboratory Number: 24

File Name: 1837624B
Description: T - 314
Canister: 637
QC_Batch: 081318-GCK

Date Sampled: 08/01/18 Time: 15:35
Date Analyzed: 08/13/18 Time: 21:08
Can Factor: 1.28
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.28	3.84	ND	1.47	4.42	ND	ND
74-86-2	Acetylene	1.28	3.84	ND	1.36	4.09	ND	ND
74-84-0	Ethane	1.28	3.84	ND	1.58	4.74	ND	ND
115-07-1	Propene	0.85	2.56	ND	1.47	4.42	ND	ND
74-98-6	Propane	0.85	2.56	ND	1.54	4.63	ND	ND
75-28-5	i-Butane	0.64	1.92	ND	1.52	4.57	ND	ND
106-98-9	1-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
106-97-8	n-Butane	0.64	1.92	ND	1.52	4.57	ND	ND
624-64-6	t-2-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
590-18-1	c-2-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
78-78-4	i-Pentane	0.51	1.54	ND	1.52	4.55	ND	ND
109-67-1	1-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
109-66-0	n-Pentane	0.51	1.54	ND	1.51	4.54	ND	ND
78-79-5	Isoprene	0.51	1.54	ND	1.43	4.29	ND	ND
646-04-8	t-2-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
627-20-3	c-2-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
75-83-2	2,2-Dimethylbutane	0.43	1.28	ND	1.51	4.52	ND	ND
287-92-3	Cyclopentane	0.51	1.54	ND	1.47	4.41	ND	ND
79-29-8	2,3-Dimethylbutane	0.43	1.28	ND	1.51	4.52	ND	ND
107-83-5	2-Methylpentane	0.43	1.28	ND	1.51	4.52	ND	ND
96-14-0	3-Methylpentane	0.43	1.28	ND	1.51	4.52	ND	ND
110-54-3	n-Hexane	0.43	1.28	ND	1.51	4.52	ND	ND
96-37-7	Methylcyclopentane	0.43	1.28	ND	1.47	4.42	ND	ND
108-08-7	2,4-Dimethylpentane	0.37	1.10	ND	1.50	4.51	ND	ND
71-43-2	Benzene	0.43	1.28	0.71	1.37	4.10	2.27	J
110-82-7	Cyclohexane	0.43	1.28	ND	1.47	4.42	ND	ND
591-76-4	2-Methylhexane	0.37	1.10	ND	1.50	4.51	ND	ND
565-59-3	2,3-Dimethylpentane	0.37	1.10	ND	1.50	4.51	ND	ND
589-34-4	3-Methylhexane	0.37	1.10	ND	1.50	4.51	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.96	ND	1.50	4.49	ND	ND
142-82-5	n-Heptane	0.37	1.10	ND	1.50	4.51	ND	ND
108-87-2	Methylcyclohexane	0.37	1.10	ND	1.47	4.42	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.96	ND	1.50	4.49	ND	ND
108-88-3	Toluene	0.37	1.10	ND	1.38	4.14	ND	ND
584-94-1	2,3-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.96	ND	1.50	4.49	ND	ND
589-81-1	3-Methylheptane	0.32	0.96	ND	1.50	4.49	ND	ND
111-65-9	n-Octane	0.32	0.96	ND	1.50	4.49	ND	ND
100-41-4	Ethylbenzene	0.32	0.96	ND	1.39	4.18	ND	ND
108-38-3	m,p-xylene	0.32	0.96	ND	1.39	4.18	ND	ND
100-42-5	Styrene	0.32	0.96	ND	1.37	4.10	ND	ND
95-47-6	o-xylene	0.32	0.96	ND	1.39	4.18	ND	ND
111-84-2	n-Nonane	0.28	0.85	ND	1.50	4.49	ND	ND
98-82-8	i-Propylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
103-65-1	n-propylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
80-56-8	a-Pinene	0.26	0.77	ND	1.43	4.29	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
611-14-3	2-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
127-91-3	b-Pinene	0.26	0.77	ND	1.43	4.29	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
124-18-5	n-Decane	0.26	0.77	ND	1.49	4.48	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
5989-27-5	d-Limonene	0.26	0.77	ND	1.43	4.29	ND	ND
141-93-5	1,3-Diethylbenzene	0.26	0.77	ND	1.41	4.22	ND	ND
105-05-5	1,4-Diethylbenzene	0.26	0.77	ND	1.41	4.22	ND	ND
104-51-8	n-Butylbenzene	0.26	0.77	ND	1.41	4.22	ND	ND
1120-21-4	Undecane	0.23	0.70	ND	1.49	4.47	ND	ND
112-40-3	Dodecane	0.21	0.64	ND	1.49	4.47	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.60	28.80	ND	33.91	101.74	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	57.60	172.80	ND	37.77	113.31	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 24

File Name: 1837624A

Date Sampled: 08/01/18

Time: 15:35

Description: T - 314

Date Analyzed: 08/03/18

Time: 17:53

Can/Tube#: 637

Can Dilution Factor: 1.28

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	128	384	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: **ASTM D3416**

SDG: 218376
Laboratory Number: 24

File Name: 1837624A
Description: T - 314
Can/Tube#: 637
QC_Batch: 080318-GCL

Date Sampled: 08/01/18 **Time:** 15:35
Date Analyzed: 08/03/18 **Time:** 16:26
Dilution Factor: 1.28

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	ND	0.09	0.26	ND	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218376

Analytical Method: TO-15

Laboratory ID: 25

File Name: 1837625A.D

Date Sampled: 08/02/18

Time: 09:44

Description: T - 401

Date Analyzed: 08/17/18

Time: 14:02

Canister: 645

Can Dilution Factor: 1.27

QC_Batch: 081718-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	12.70	63.88	ND	62.77	315.73	ND	
74-87-3	Chloromethane	12.70	63.88	ND	26.22	131.88	ND	
76-14-2	Freon 114	12.70	63.88	ND	88.73	446.30	ND	
75-01-4	Vinyl chloride	12.70	63.88	ND	32.45	163.22	ND	
106-99-0	1,3-Butadiene	12.70	63.88	ND	28.09	141.28	ND	
74-83-9	Bromomethane	12.70	63.88	ND	49.27	247.83	ND	
75-00-3	Chloroethane	12.70	63.88	ND	33.49	168.44	ND	
64-17-5	Ethanol	63.50	190.50	ND	119.67	359.00	ND	
75-69-4	Trichlorofluoromethane	12.70	60.98	ND	71.33	342.53	ND	
67-64-1	Acetone	63.50	156.21	1,118.03	150.82	371.01	2,655.42	
67-63-0	2-propanol	63.50	145.80	245.26	156.01	358.20	602.57	
75-35-4	1,1-Dichloroethene	12.70	62.99	ND	50.31	249.52	ND	
76-13-1	Freon 113	12.70	60.76	ND	97.29	465.48	ND	
75-09-2	Dichloromethane	25.40	61.17	ND	88.15	212.29	ND	
75-15-0	Carbon disulfide	63.50	117.86	ND	197.54	366.64	ND	
156-60-5	trans-1,2-Dichloroethene	12.70	45.85	ND	50.31	181.63	ND	
1634-04-4	Methyl tert butyl ether	12.70	46.82	ND	45.74	168.63	ND	
75-34-3	1,1-Dichloroethane	12.70	63.34	ND	51.40	256.34	ND	
108-05-4	Vinyl acetate	12.70	55.80	ND	44.70	196.40	ND	
78-93-3	2-Butanone	50.80	129.29	ND	149.73	381.06	ND	
141-78-6	Ethyl acetate	25.40	55.63	ND	91.48	200.34	ND	
74-97-5	Bromochloromethane	12.70	33.83	ND	67.18	178.93	ND	
109-99-9	Tetrahydrofuran	25.40	63.88	ND	74.86	188.29	ND	
156-59-2	cis-1,2-Dichloroethene	25.40	68.33	ND	100.61	270.65	ND	
67-66-3	Chloroform	12.70	63.70	ND	61.99	310.90	ND	
71-55-6	1,1,1-Trichloroethane	12.70	56.39	ND	69.26	307.50	ND	
107-06-2	1,2-Dichloroethane	12.70	57.93	ND	51.40	234.45	ND	
110-82-7	Cyclohexane	12.75	48.77	ND	43.89	167.86	ND	
71-43-2	Benzene	12.70	64.52	1,122.85	40.55	205.99	3,584.90	
56-23-5	Carbon tetrachloride	12.70	60.20	ND	79.85	378.48	ND	
142-82-5	n-Heptane	63.50	153.92	ND	260.10	630.49	ND	
78-87-5	1,2-Dichloropropane	12.70	61.12	ND	58.67	282.35	ND	
123-91-1	1,4 Dioxane	50.80	103.89	ND	182.95	374.14	ND	
79-01-6	Trichloroethene	7.62	59.16	ND	40.93	317.76	ND	
75-27-4	Bromodichloromethane	12.70	25.65	ND	85.04	171.78	ND	
80-62-6	Methyl methacrylate	50.80	171.70	ND	207.88	702.62	ND	
108-10-1	4-Methyl-2-pentanone	50.80	192.28	ND	208.08	787.59	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	12.70	65.81	ND	57.63	298.63	ND	
108-88-3	Toluene	25.40	66.29	1,164.83	95.63	249.60	4,385.56	
10061-02-6	trans-1,3-Dichloropropene	12.70	65.86	ND	57.63	298.86	ND	
79-00-5	1,1,2-Trichloroethane	12.70	65.30	ND	69.26	356.10	ND	
591-78-6	2-Hexanone	63.50	180.09	ND	260.10	737.65	ND	
124-48-1	Dibromochloromethane	12.70	25.36	ND	108.14	215.93	ND	
106-93-4	1,2-Dibromoethane	12.70	30.83	ND	97.55	236.78	ND	
127-18-4	Tetrachloroethene	7.62	30.91	ND	51.65	209.51	ND	
108-90-7	Chlorobenzene	12.70	57.79	ND	58.46	266.03	ND	
100-41-4	Ethylbenzene	26.85	67.14	137.53	116.58	291.46	597.09	
1330-20-7	m,p-Xylenes	26.92	67.30	279.16	116.88	292.19	1,211.96	
100-42-5	Styrene	26.30	65.75	ND	112.03	280.07	ND	
75-25-2	Bromoform	12.70	17.04	ND	131.19	176.03	ND	
95-47-6	o-Xylene	26.18	65.46	166.24	113.67	284.17	721.71	
79-34-5	1,1,2,2-Tetrachloroethane	12.58	31.44	ND	86.27	215.66	ND	
622-96-8	4-Ethyltoluene	42.10	105.25	57.10	206.87	517.17	280.59	J
108-67-8	1,3,5-Trimethylbenzene	26.24	65.61	ND	128.95	322.38	ND	
95-63-6	1,2,4-Trimethylbenzene	25.82	64.54	87.53	126.86	317.14	430.09	
541-73-1	1,3-Dichlorobenzene	25.40	46.99	ND	152.64	282.38	ND	
100-44-7	Benzyl chloride	25.40	153.92	ND	131.45	796.61	ND	
106-46-7	1,4-Dichlorobenzene	25.40	43.94	ND	152.64	264.06	ND	
95-50-1	1,2-Dichlorobenzene	25.40	41.15	ND	152.64	247.27	ND	
120-82-1	1,2,4-Trichlorobenzene	63.50	87.38	ND	470.89	647.94	ND	
91-20-3	Naphthalene	12.95	20.32	ND	67.89	106.49	ND	
87-68-3	Hexachlorobutadiene	63.50	67.31	ND	677.00	717.62	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	84	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 25

File Name: 1837625A
Description: T - 401
Canister: 645
QC_Batch: 081418-GCK

Date Sampled: 08/02/18 Time: 9:44
Date Analyzed: 08/14/18 Time: 13:17
Can Factor: 1.27
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.27	3.81	ND	1.46	4.39	ND	ND
74-86-2	Acetylene	1.27	3.81	ND	1.35	4.06	ND	ND
74-84-0	Ethane	1.27	3.81	1,490.97	1.57	4.70	1,839.27	
115-07-1	Propene	0.85	2.54	ND	1.46	4.38	ND	ND
74-98-6	Propane	0.85	2.54	2,630.77	1.53	4.59	4,754.79	
75-28-5	i-Butane	0.64	1.91	271.92	1.51	4.54	647.48	
106-98-9	1-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
106-97-8	n-Butane	0.64	1.91	827.10	1.51	4.54	1,969.44	
624-64-6	t-2-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
590-18-1	c-2-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
78-78-4	i-Pentane	0.51	1.52	828.58	1.50	4.51	2,451.79	
109-67-1	1-Pentene	0.51	1.52	459.73	1.46	4.38	1,320.79	
109-66-0	n-Pentane	0.51	1.52	31.17	1.50	4.50	92.09	
78-79-5	Isoprene	0.51	1.52	ND	1.42	4.25	ND	ND
646-04-8	t-2-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
627-20-3	c-2-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.27	ND	1.50	4.49	ND	ND
287-92-3	Cyclopentane	0.51	1.52	ND	1.46	4.38	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.27	ND	1.50	4.49	ND	ND
107-83-5	2-Methylpentane	0.42	1.27	36.39	1.50	4.49	128.55	
96-14-0	3-Methylpentane	0.42	1.27	ND	1.50	4.49	ND	ND
110-54-3	n-Hexane	0.42	1.27	2.34	1.50	4.49	8.26	
96-37-7	Methylcyclopentane	0.42	1.27	2.15	1.46	4.38	7.42	
108-08-7	2,4-Dimethylpentane	0.36	1.09	ND	1.49	4.47	ND	ND
71-43-2	Benzene	0.42	1.27	1,500.03	1.36	4.07	4,801.33	
110-82-7	Cyclohexane	0.42	1.27	ND	1.46	4.38	ND	ND
591-76-4	2-Methylhexane	0.36	1.09	1.18	1.49	4.47	4.85	
565-59-3	2,3-Dimethylpentane	0.36	1.09	ND	1.49	4.47	ND	ND
589-34-4	3-Methylhexane	0.36	1.09	ND	1.49	4.47	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	ND	1.49	4.46	ND	ND
142-82-5	n-Heptane	0.36	1.09	0.51	1.49	4.47	2.08	J
108-87-2	Methylcyclohexane	0.36	1.09	16.85	1.46	4.38	67.81	
592-13-2	2,5-Dimethylhexane	0.32	0.95	ND	1.49	4.46	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.95	ND	1.49	4.46	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	ND	1.49	4.46	ND	ND
108-88-3	Toluene	0.36	1.09	1,467.73	1.37	4.11	5,540.08	
584-94-1	2,3-Dimethylhexane	0.32	0.95	ND	1.49	4.46	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	ND	1.49	4.46	ND	ND
589-81-1	3-Methylheptane	0.32	0.95	ND	1.49	4.46	ND	ND
111-65-9	n-Octane	0.32	0.95	4.16	1.49	4.46	19.46	
100-41-4	Ethylbenzene	0.32	0.95	ND	1.38	4.15	ND	ND
108-38-3	m,p-xylene	0.32	0.95	7.87	1.38	4.15	34.24	
100-42-5	Styrene	0.32	0.95	ND	1.36	4.07	ND	ND
95-47-6	o-xylene	0.32	0.95	2.21	1.38	4.15	9.62	
111-84-2	n-Nonane	0.28	0.85	9.75	1.48	4.45	51.28	
98-82-8	i-Propylbenzene	0.28	0.85	84.07	1.39	4.17	414.13	
103-65-1	n-propylbenzene	0.28	0.85	3.40	1.39	4.17	16.77	
80-56-8	a-Pinene	0.25	0.76	2.27	1.42	4.25	12.67	
620-14-4	3-Ethyltoluene	0.28	0.85	ND	1.39	4.17	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.85	82.62	1.39	4.17	407.02	
108-67-8	1,3,5-Trimethylbenzene	0.28	0.85	6.44	1.39	4.17	31.71	
611-14-3	2-Ethyltoluene	0.28	0.85	ND	1.39	4.17	ND	ND
127-91-3	b-Pinene	0.25	0.76	11.47	1.42	4.25	64.05	
95-63-6	1,2,4-Trimethylbenzene	0.28	0.85	22.85	1.39	4.17	112.56	
124-18-5	n-Decane	0.25	0.76	20.30	1.48	4.44	118.38	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.85	12.55	1.39	4.17	61.83	
5989-27-5	d-Limonene	0.25	0.76	ND	1.42	4.25	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.76	ND	1.40	4.19	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.76	7.38	1.40	4.19	40.59	
104-51-8	n-Butylbenzene	0.25	0.76	ND	1.40	4.19	ND	ND
1120-21-4	Undecane	0.23	0.69	5.73	1.48	4.44	36.72	
112-40-3	Dodecane	0.21	0.64	16.97	1.48	4.43	118.44	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.53	28.58	11,163.15	33.65	100.95	39,437.02	
TNMHC - C1	Total Non-Methane Hydrocarbons	57.15	171.45	66,978.88	37.48	112.43	43,920.58	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 25

File Name: 1837625A

Date Sampled: 08/02/18

Time: 9:44

Description: T - 401

Date Analyzed: 08/03/18

Time: 17:58

Can/Tube#: 645

Can Dilution Factor: 1.27

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	127	381	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 25

File Name: 1837625A
Description: T - 401
Can/Tube#: 645
QC_Batch: 080318-GCL

Date Sampled: 08/02/18 Time: 9:44
Date Analyzed: 08/03/18 Time: 16:30
Dilution Factor: 1.27

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	4.65	0.09	0.26	3.14	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218376

Laboratory ID: 26

File Name: 1837626A.D

Date Sampled: 08/02/18

Time: 09:50

Description: T - 402

Date Analyzed: 08/16/18

Time: 16:48

Canister: 636

Can Dilution Factor: 1.27

QC_Batch: 081618-MA1

Air Volume: 20 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	3.18	15.97	ND	15.69	78.93	ND	
74-87-3	Chloromethane	3.18	15.97	ND	6.55	32.97	ND	
76-14-2	Freon 114	3.18	15.97	ND	22.18	111.58	ND	
75-01-4	Vinyl chloride	3.18	15.97	ND	8.11	40.80	ND	
106-99-0	1,3-Butadiene	3.18	15.97	ND	7.02	35.32	ND	
74-83-9	Bromomethane	3.18	15.97	ND	12.32	61.96	ND	
75-00-3	Chloroethane	3.18	15.97	ND	8.37	42.11	ND	
64-17-5	Ethanol	15.88	47.63	ND	29.92	89.75	ND	
75-69-4	Trichlorofluoromethane	3.18	15.25	ND	17.83	85.63	ND	
67-64-1	Acetone	15.88	39.05	1,283.08	37.70	92.75	3,047.44	
67-63-0	2-propanol	15.88	36.45	258.75	39.00	89.55	635.70	
75-35-4	1,1-Dichloroethene	3.18	15.75	ND	12.58	62.38	ND	
76-13-1	Freon 113	3.18	15.19	ND	24.32	116.37	ND	
75-09-2	Dichloromethane	6.35	15.29	ND	22.04	53.07	ND	
75-15-0	Carbon disulfide	15.88	29.46	ND	49.39	91.66	ND	
156-60-5	trans-1,2-Dichloroethene	3.18	11.46	ND	12.58	45.41	ND	
1634-04-4	Methyl tert butyl ether	3.18	11.71	ND	11.43	42.16	ND	
75-34-3	1,1-Dichloroethane	3.18	15.83	ND	12.85	64.08	ND	
108-05-4	Vinyl acetate	3.18	13.95	ND	11.18	49.10	ND	
78-93-3	2-Butanone	12.70	32.32	ND	37.43	95.26	ND	
141-78-6	Ethyl acetate	6.35	13.91	ND	22.87	50.08	ND	
74-97-5	Bromochloromethane	3.18	8.46	ND	16.80	44.73	ND	
109-99-9	Tetrahydrofuran	6.35	15.97	ND	18.72	47.07	ND	
156-59-2	cis-1,2-Dichloroethene	6.35	17.08	ND	25.15	67.66	ND	
67-66-3	Chloroform	3.18	15.92	ND	15.50	77.72	ND	
71-55-6	1,1,1-Trichloroethane	3.18	14.10	ND	17.31	76.88	ND	
107-06-2	1,2-Dichloroethane	3.18	14.48	ND	12.85	58.61	ND	
110-82-7	Cyclohexane	3.19	12.19	ND	10.97	41.97	ND	
71-43-2	Benzene	3.18	16.13	1,116.76	10.14	51.50	3,565.47	
56-23-5	Carbon tetrachloride	3.18	15.05	ND	19.96	94.62	ND	
142-82-5	n-Heptane	15.88	38.48	ND	65.03	157.62	ND	
78-87-5	1,2-Dichloropropane	3.18	15.28	ND	14.67	70.59	ND	
123-91-1	1,4 Dioxane	12.70	25.97	ND	45.74	93.54	ND	
79-01-6	Trichloroethene	1.91	14.79	ND	10.23	79.44	ND	
75-27-4	Bromodichloromethane	3.18	6.41	ND	21.26	42.95	ND	
80-62-6	Methyl methacrylate	12.70	42.93	ND	51.97	175.65	ND	
108-10-1	4-Methyl-2-pentanone	12.70	48.07	ND	52.02	196.90	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag	
10061-01-5	cis-1,3-Dichloropropene	3.18	16.45	ND	14.41	74.66	ND		
108-88-3	Toluene	6.35	16.57	1,168.32	23.91	62.40	4,398.70		
10061-02-6	trans-1,3-Dichloropropene	3.18	16.47	ND	14.41	74.72	ND		
79-00-5	1,1,2-Trichloroethane	3.18	16.33	ND	17.31	89.03	ND		
591-78-6	2-Hexanone	15.88	45.02	ND	65.03	184.41	ND		
124-48-1	Dibromochloromethane	3.18	6.34	ND	27.04	53.98	ND		
106-93-4	1,2-Dibromoethane	3.18	7.71	ND	24.39	59.19	ND		
127-18-4	Tetrachloroethene	1.91	7.73	ND	12.91	52.38	ND		
108-90-7	Chlorobenzene	3.18	14.45	ND	14.61	66.51	ND		
100-41-4	Ethylbenzene	6.71	16.78	137.35	29.15	72.87	596.27		
1330-20-7	m,p-Xylenes	6.73	16.83	280.31	29.22	73.05	1,216.94		
100-42-5	Styrene	6.58	16.44	ND	28.01	70.02	ND		
75-25-2	Bromoform	3.18	4.26	ND	32.80	44.01	ND		
95-47-6	o-Xylene	6.55	16.36	167.70	28.42	71.04	728.05		
79-34-5	1,1,2,2-Tetrachloroethane	3.14	7.86	ND	21.57	53.92	ND		
622-96-8	4-Ethyltoluene	10.52	26.31	59.65	51.72	129.29	293.11		
108-67-8	1,3,5-Trimethylbenzene	6.56	16.40	16.35	32.24	80.60	80.34	J	
95-63-6	1,2,4-Trimethylbenzene	6.45	16.14	77.12	31.71	79.28	378.95		
541-73-1	1,3-Dichlorobenzene	6.35	11.75	ND	38.16	70.59	ND		
100-44-7	Benzyl chloride	6.35	38.48	ND	32.86	199.15	ND		
106-46-7	1,4-Dichlorobenzene	6.35	10.99	ND	38.16	66.01	ND		
95-50-1	1,2-Dichlorobenzene	6.35	10.29	ND	38.16	61.82	ND		
120-82-1	1,2,4-Trichlorobenzene	15.88	21.84	ND	117.72	161.98	ND		
91-20-3	Naphthalene	3.24	5.08	126.81	16.97	26.62	664.58		
87-68-3	Hexachlorobutadiene	15.88	16.83	ND	169.25	179.40	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				87	70	130		

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218376
Laboratory Number: 26

File Name: 1837626A
Description: T - 402
Canister: 636
QC_Batch: 081418-GCK

Date Sampled: 08/02/18 Time: 9:50
Date Analyzed: 08/14/18 Time: 13:58
Can Factor: 1.27
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.27	3.81	ND	1.46	4.39	ND	ND
74-86-2	Acetylene	1.27	3.81	ND	1.35	4.06	ND	ND
74-84-0	Ethane	1.27	3.81	1,512.14	1.57	4.70	1,865.39	
115-07-1	Propene	0.85	2.54	ND	1.46	4.38	ND	ND
74-98-6	Propane	0.85	2.54	2,667.58	1.53	4.59	4,821.33	
75-28-5	i-Butane	0.64	1.91	ND	1.51	4.54	ND	ND
106-98-9	1-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
106-97-8	n-Butane	0.64	1.91	1,339.34	1.51	4.54	3,189.17	
624-64-6	t-2-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
590-18-1	c-2-Butene	0.64	1.91	ND	1.46	4.38	ND	ND
78-78-4	i-Pentane	0.51	1.52	306.49	1.50	4.51	906.91	
109-67-1	1-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
109-66-0	n-Pentane	0.51	1.52	120.84	1.50	4.50	357.07	
78-79-5	Isoprene	0.51	1.52	ND	1.42	4.25	ND	ND
646-04-8	t-2-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
627-20-3	c-2-Pentene	0.51	1.52	ND	1.46	4.38	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.27	ND	1.50	4.49	ND	ND
287-92-3	Cyclopentane	0.51	1.52	ND	1.46	4.38	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.27	ND	1.50	4.49	ND	ND
107-83-5	2-Methylpentane	0.42	1.27	69.41	1.50	4.49	245.22	
96-14-0	3-Methylpentane	0.42	1.27	72.34	1.50	4.49	255.55	
110-54-3	n-Hexane	0.42	1.27	97.60	1.50	4.49	344.80	
96-37-7	Methylcyclopentane	0.42	1.27	ND	1.46	4.38	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.09	ND	1.49	4.47	ND	ND
71-43-2	Benzene	0.42	1.27	1,536.49	1.36	4.07	4,918.03	
110-82-7	Cyclohexane	0.42	1.27	ND	1.46	4.38	ND	ND
591-76-4	2-Methylhexane	0.36	1.09	17.35	1.49	4.47	71.25	
565-59-3	2,3-Dimethylpentane	0.36	1.09	ND	1.49	4.47	ND	ND
589-34-4	3-Methylhexane	0.36	1.09	4.20	1.49	4.47	17.24	
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	ND	1.49	4.46	ND	ND
142-82-5	n-Heptane	0.36	1.09	35.39	1.49	4.47	145.35	
108-87-2	Methylcyclohexane	0.36	1.09	109.76	1.46	4.38	441.74	
592-13-2	2,5-Dimethylhexane	0.32	0.95	24.15	1.49	4.46	113.05	
589-43-5	2,4-Dimethylhexane	0.32	0.95	1.01	1.49	4.46	4.73	
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	0.96	1.49	4.46	4.48	
108-88-3	Toluene	0.36	1.09	1,511.98	1.37	4.11	5,707.11	
584-94-1	2,3-Dimethylhexane	0.32	0.95	17.95	1.49	4.46	84.03	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	2.83	1.49	4.46	13.25	
589-81-1	3-Methylheptane	0.32	0.95	6.63	1.49	4.46	31.04	
111-65-9	n-Octane	0.32	0.95	9.03	1.49	4.46	42.27	
100-41-4	Ethylbenzene	0.32	0.95	178.24	1.38	4.15	775.76	
108-38-3	m,p-xylene	0.32	0.95	352.35	1.38	4.15	1,533.60	
100-42-5	Styrene	0.32	0.95	ND	1.36	4.07	ND	ND
95-47-6	o-xylene	0.32	0.95	219.61	1.38	4.15	955.85	
111-84-2	n-Nonane	0.28	0.85	6.32	1.48	4.45	33.21	
98-82-8	i-Propylbenzene	0.28	0.85	12.16	1.39	4.17	59.91	
103-65-1	n-propylbenzene	0.28	0.85	ND	1.39	4.17	ND	ND
80-56-8	a-Pinene	0.25	0.76	19.53	1.42	4.25	109.00	
620-14-4	3-Ethyltoluene	0.28	0.85	85.93	1.39	4.17	423.32	
622-96-8	4-Ethyltoluene	0.28	0.85	85.93	1.39	4.17	423.32	
108-67-8	1,3,5-Trimethylbenzene	0.28	0.85	20.12	1.39	4.17	99.10	
611-14-3	2-Ethyltoluene	0.28	0.85	40.51	1.39	4.17	199.55	
127-91-3	b-Pinene	0.25	0.76	ND	1.42	4.25	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.85	83.55	1.39	4.17	411.59	
124-18-5	n-Decane	0.25	0.76	5.45	1.48	4.44	31.78	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.85	13.23	1.39	4.17	65.16	
5989-27-5	d-Limonene	0.25	0.76	ND	1.42	4.25	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.76	21.26	1.40	4.19	116.92	
105-05-5	1,4-Diethylbenzene	0.25	0.76	20.94	1.40	4.19	115.18	
104-51-8	n-Butylbenzene	0.25	0.76	3.77	1.40	4.19	20.76	
1120-21-4	Undecane	0.23	0.69	2.08	1.48	4.44	13.31	
112-40-3	Dodecane	0.21	0.64	16.42	1.48	4.43	114.63	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.53	28.58	11,469.77	33.65	100.95	40,520.27	
TNMHC - C1	Total Non-Methane Hydrocarbons	57.15	171.45	68,818.64	37.48	112.43	45,126.98	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218376

Laboratory Number: 26

File Name: 1837626A

Date Sampled: 08/02/18

Time: 9:50

Description: T - 402

Date Analyzed: 08/03/18

Time: 18:04

Can/Tube#: 636

Can Dilution Factor: 1.27

QC_Batch: 080318-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	127	381	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218376
Laboratory Number: 26

File Name: 1837626A
Description: T - 402
Can/Tube#: 636
QC_Batch: 080318-GCL

Date Sampled: 08/02/18 Time: 9:50
Date Analyzed: 08/03/18 Time: 16:49
Dilution Factor: 1.27

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	4.44	0.09	0.26	3.00	



Date of Report: 08/14/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: 15669
BCL Project: O&G/8260
BCL Work Order: 1823664
Invoice ID: B312628

Enclosed are the results of analyses for samples received by the laboratory on 7/31/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Case Narratives

Case Narrative for Work Order 1823664

1823664-01: Preservative rinsed out of VOAs, due to high carbonates.

1823664-02: Preservative rinsed out of VOAs, due to high carbonates.

1823664-03: Preservative rinsed out of VOAs, due to high carbonates.

1823664-04: Preservative rinsed out of VOAs, due to high carbonates.

1823664-09: Matrix is an oil, not a water.



00b Day 1

18-23664

CE Schmidt, Ph.D., Environmental Consultant

Chain of Custody Record

Form Serial Number CES F1-02108

Client Name Air Resources Board

Offfield WY Emissions Assessment

Project Manager Luis Leyva

918.323.1078

Requested Completion Date

For Information Regarding These Samples Please Contact:

Dr. Charles E. Schmidt

19200 Live Oak Road, Red Bluff, CA 96080

530-529-4256

E-Mail: SCHMIDTCE@aol.com

Client Address and Phone Number

1007 J Street

Sacramento, CA 95814 800-242-4450

Analysis Requested

US EPA Method 1524

US EPA Method 8260b

Laboratory Name

BC Laboratories

Laboratory Address

4100 Atlas Court

Bakersfield, CA 93308

Laboratory Phone

861-327-4911

Laboratory Contact

Ms. Karrie Vaughn

Karrie.v@bclabs.com

Remarks

No Preservative

Station Number	Date	Time	CG	OR	M	A	P	Sample ID Number	Sample Container			US EPA Method 1524	US EPA Method 8260b	Analysis Requested	Client Address and Phone Number	Laboratory Name	Laboratory Address	Laboratory Phone	Laboratory Contact	Remarks	
									S	Vial	Tube										
-1	7/31/2018	8:25	X					V-201	a/b/c	X	X	X									
-2	7/31/2018	9:05	X					V-202	a/b/c	X	X	X									
-3	7/31/2018	10:10	X					V-203	a/b/c	X	X	X									
-4	7/31/2018	11:05	X					V-204	a/b/c	X	X	X									
-5	7/31/2018	12:20	X					V-205	a/b/c	X	X	X									
-6	7/31/2018	13:10	X					V-206	a/b/c	X	X	X									
-7	7/31/2018	13:10	X					V-207	a/b/c	X	X	X									
-8	7/31/2018	14:10	X					V-208	a/b/c	X	X	X									
-9	7/31/2018	15:20	X					V-209	a/b/c	X	X	X									
-10	7/31/2018	15:50	X					V-210	a/b/c	X	X	X									
	7/31/2018		X					V-211	arbitr	X	X	X									
	7/31/2018		X					V-212	a/b/c	X	X	X									
	7/31/2018		X					V-213	a/b/c	X	X	X									
	7/31/2018		X					V-214	a/b/c	X	X	X									
	7/31/2018		X					V-215	a/b/c	X	X	X									

Received by [Signature] Date/Time 7/31/18 15:34

Received by [Signature] Date/Time 7/31/18 16:48

Received by Laboratory Date/Time 7/31/18 16:48

Remarks: All Samples are in a Wastewater Matrix

File: ARB Forms II A.xlsx Form: COC 8260b D1

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 18-23664

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S _____

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Intact? Yes No Intact? Yes No Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 95 Container: Amber Thermometer ID: 224 Date/Time: 7-31-18

Temperature: (A) 9.9 °C / (C) 58 °C Analyst Init: [Signature]

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PR UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁴⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL 096	ABC	ABC	ABC	ABC						
QT EPA-1664 096					ABC	ABC	ABC	ABC	ABC	ABC
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8370										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: [Signature] Date/Time: 7/31/18

A = Actual / C = Corrected

Rev 21 05/23/2016 [Signature]



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	
1823664-01	COC Number:	---		07/31/2018 16:48	
	Project Number:	---		Sampling Date:	07/31/2018 08:25
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-201 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1823664-02	COC Number:	---		07/31/2018 16:48	
	Project Number:	---		Sampling Date:	07/31/2018 09:05
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-202 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1823664-03	COC Number:	---		07/31/2018 16:48	
	Project Number:	---		Sampling Date:	07/31/2018 10:10
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-203 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1823664-04	COC Number:	---		07/31/2018 16:48	
	Project Number:	---		Sampling Date:	07/31/2018 11:05
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-204 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1823664-05	COC Number:	---		07/31/2018 16:48	
	Project Number:	---		Sampling Date:	07/31/2018 12:20
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-205 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1823664-06	COC Number:	---		07/31/2018 16:48	
	Project Number:	---		Sampling Date:	07/31/2018 13:10
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-206 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1823664-07	COC Number:	---		07/31/2018 16:48	
	Project Number:	---		Sampling Date:	07/31/2018 13:10
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-207 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1823664-08	COC Number:	---	Receive Date:	07/31/2018 16:48
	Project Number:	---	Sampling Date:	07/31/2018 14:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-208 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1823664-09	COC Number:	---	Receive Date:	07/31/2018 16:48
	Project Number:	---	Sampling Date:	07/31/2018 15:20
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-209 a/b/c	Lab Matrix:	Solids
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1823664-10	COC Number:	---	Receive Date:	07/31/2018 16:48
	Project Number:	---	Sampling Date:	07/31/2018 15:50
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-210 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1823664-01							
Client Sample Name:	V-201 a/b/c, 7/31/2018 8:25:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	27	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	0.31	ug/L	0.50	0.11	EPA-8260B	ND	J	1
sec-Butylbenzene	0.17	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1823664-01							
Client Sample Name:	V-201 a/b/c, 7/31/2018 8:25:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	9.7	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.54	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.33	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	4.0	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.23	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	34	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	4.7	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	1.1	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	58	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	36	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	21	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-01	Client Sample Name: V-201 a/b/c, 7/31/2018 8:25:00AM, Chuck Schmidt
----------------------------------	--

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/02/18 07:36	08/07/18 14:21	JPT	HPCHEM	1	B020505

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-02 **Client Sample Name:** V-202 a/b/c, 7/31/2018 9:05:00AM, Chuck Schmidt

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	28	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	0.23	ug/L	0.50	0.11	EPA-8260B	ND	J	1
sec-Butylbenzene	0.17	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
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Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-02		Client Sample Name: V-202 a/b/c, 7/31/2018 9:05:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	8.9	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.52	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.31	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	3.6	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.14	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	35	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	4.4	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.98	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	54	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	34	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	20	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-02	Client Sample Name: V-202 a/b/c, 7/31/2018 9:05:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	08/02/18 07:36	08/07/18 14:45		JPT	HPCHEM	1	B020505

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Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-03	Client Sample Name: V-203 a/b/c, 7/31/2018 10:10:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	480	ug/L	12	2.1	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		2
n-Butylbenzene	2.8	ug/L	0.50	0.11	EPA-8260B	ND		2
sec-Butylbenzene	2.0	ug/L	0.50	0.15	EPA-8260B	ND		2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2

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Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-03		Client Sample Name: V-203 a/b/c, 7/31/2018 10:10:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		2
Ethylbenzene	190	ug/L	12	2.4	EPA-8260B	ND	A01	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
Isopropylbenzene	7.6	ug/L	0.50	0.14	EPA-8260B	ND		2
p-Isopropyltoluene	4.4	ug/L	0.50	0.12	EPA-8260B	ND		2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
Naphthalene	49	ug/L	0.50	0.36	EPA-8260B	ND		2
n-Propylbenzene	9.0	ug/L	0.50	0.11	EPA-8260B	ND		2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Toluene	510	ug/L	12	2.3	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,2,4-Trimethylbenzene	50	ug/L	0.50	0.12	EPA-8260B	ND		2
1,3,5-Trimethylbenzene	13	ug/L	0.50	0.12	EPA-8260B	ND		2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		2
Total Xylenes	1200	ug/L	25	9.0	EPA-8260B	ND	A01	1
p- & m-Xylenes	800	ug/L	12	7.0	EPA-8260B	ND	A01	1
o-Xylene	420	ug/L	12	2.0	EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	83.1	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	97.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-03	Client Sample Name: V-203 a/b/c, 7/31/2018 10:10:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	94.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/02/18 07:36	08/07/18 16:47	JPT	HPCHEM	25	B020505
2	EPA-8260B	08/02/18 07:36	08/03/18 13:25	JPT	HPCHEM	1	B020505

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Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-04	Client Sample Name: V-204 a/b/c, 7/31/2018 11:05:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	840	ug/L	12	2.1	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		2
n-Butylbenzene	3.9	ug/L	0.50	0.11	EPA-8260B	ND		2
sec-Butylbenzene	3.1	ug/L	0.50	0.15	EPA-8260B	ND		2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2

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Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-04		Client Sample Name: V-204 a/b/c, 7/31/2018 11:05:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		2
Ethylbenzene	370	ug/L	12	2.4	EPA-8260B	ND	A01	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
Isopropylbenzene	14	ug/L	0.50	0.14	EPA-8260B	ND		2
p-Isopropyltoluene	6.8	ug/L	0.50	0.12	EPA-8260B	ND		2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
Naphthalene	74	ug/L	0.50	0.36	EPA-8260B	ND		2
n-Propylbenzene	16	ug/L	0.50	0.11	EPA-8260B	ND		2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Toluene	960	ug/L	12	2.3	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,2,4-Trimethylbenzene	92	ug/L	12	3.0	EPA-8260B	ND	A01	1
1,3,5-Trimethylbenzene	21	ug/L	0.50	0.12	EPA-8260B	ND		2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		2
Total Xylenes	2200	ug/L	25	9.0	EPA-8260B	ND	A01	1
p- & m-Xylenes	1400	ug/L	12	7.0	EPA-8260B	ND	A01	1
o-Xylene	770	ug/L	12	2.0	EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	85.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	90.5	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-04	Client Sample Name: V-204 a/b/c, 7/31/2018 11:05:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	95.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.9	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/02/18 07:36	08/07/18 17:12	JPT	HPCHEM	25	B020505
2	EPA-8260B	08/02/18 07:36	08/03/18 13:49	JPT	HPCHEM	1	B020505

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Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1823664-05	Client Sample Name:	V-205 a/b/c, 7/31/2018 12:20:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Benzene	0.41	ug/L	0.50	0.083	EPA-8260B	ND	J	1	
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1	
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1	
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1	
n-Butylbenzene	0.11	ug/L	0.50	0.11	EPA-8260B	ND	J	1	
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1	
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1	
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1	
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1	
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1	
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1	
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1	
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1	
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1	
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1	
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1	
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1	
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1	
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1	
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1	
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1823664-05	Client Sample Name:	V-205 a/b/c, 7/31/2018 12:20:00PM, Chuck Schmidt					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.23	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.20	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	3.2	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	75	ug/L	1.0	0.19	EPA-8260B	ND	A01	2
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	1.9	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.43	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	1.3	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	1.3	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.80	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.4	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	85.5	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	97.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-05	Client Sample Name: V-205 a/b/c, 7/31/2018 12:20:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	08/02/18 07:36	08/07/18 15:10		JPT	HPCHEM	1	B020505
2	EPA-8260B	08/02/18 07:36	08/03/18 15:02		JPT	HPCHEM	2	B020505

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Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1823664-06							
Client Sample Name:	V-206 a/b/c, 7/31/2018 1:10:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.29	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1823664-06							
Client Sample Name:	V-206 a/b/c, 7/31/2018 1:10:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	0.46	ug/L	0.50	0.36	EPA-8260B	ND	J	1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	1.1	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.86	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.22	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	0.86	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.12	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	94.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-06	Client Sample Name: V-206 a/b/c, 7/31/2018 1:10:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/02/18 07:36	08/07/18 15:34	JPT	HPCHEM	1	B020505

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Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-07	Client Sample Name: V-207 a/b/c, 7/31/2018 1:10:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.31	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1823664-07	Client Sample Name:	V-207 a/b/c, 7/31/2018 1:10:00PM, Chuck Schmidt					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	1.0	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.80	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.23	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	0.97	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.17	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	97.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-07	Client Sample Name: V-207 a/b/c, 7/31/2018 1:10:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	08/02/18 07:36	08/07/18 15:59		JPT	HPCHEM	1	B020505

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CE Schmidt
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Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-08	Client Sample Name: V-208 a/b/c, 7/31/2018 2:10:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.84	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1823664-08		Client Sample Name:	V-208 a/b/c, 7/31/2018 2:10:00PM, Chuck Schmidt				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.74	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.15	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	4.3	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	2.8	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.61	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	4.5	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	3.0	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	1.4	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.5	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-08	Client Sample Name: V-208 a/b/c, 7/31/2018 2:10:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	08/02/18 07:36	08/07/18 16:23		JPT	HPCHEM	1	B020505

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-09	Client Sample Name: V-209 a/b/c, 7/31/2018 3:20:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	2.5	0.65	EPA-8260B	ND	A01	1
Bromobenzene	ND	mg/kg	2.5	0.65	EPA-8260B	ND	A01	1
Bromochloromethane	ND	mg/kg	2.5	0.46	EPA-8260B	ND	A01	1
Bromodichloromethane	ND	mg/kg	2.5	0.42	EPA-8260B	ND	A01	1
Bromoform	ND	mg/kg	2.5	0.75	EPA-8260B	ND	A01	1
Bromomethane	ND	mg/kg	2.5	0.80	EPA-8260B	ND	A01	1
n-Butylbenzene	1.2	mg/kg	2.5	0.75	EPA-8260B	ND	J,A01	1
sec-Butylbenzene	0.86	mg/kg	2.5	0.60	EPA-8260B	ND	J,A01	1
tert-Butylbenzene	ND	mg/kg	2.5	0.60	EPA-8260B	ND	A01	1
Carbon tetrachloride	ND	mg/kg	2.5	0.55	EPA-8260B	ND	A01	1
Chlorobenzene	ND	mg/kg	2.5	0.65	EPA-8260B	ND	A01	1
Chloroethane	ND	mg/kg	2.5	0.70	EPA-8260B	ND	A01	1
Chloroform	ND	mg/kg	2.5	0.32	EPA-8260B	ND	A01	1
Chloromethane	ND	mg/kg	2.5	0.70	EPA-8260B	ND	A01	1
2-Chlorotoluene	ND	mg/kg	2.5	0.90	EPA-8260B	ND	A01	1
4-Chlorotoluene	ND	mg/kg	2.5	0.70	EPA-8260B	ND	A01	1
Dibromochloromethane	ND	mg/kg	2.5	0.50	EPA-8260B	ND	A01	1
1,2-Dibromo-3-chloropropane	ND	mg/kg	2.5	0.85	EPA-8260B	ND	A01	1
1,2-Dibromoethane	ND	mg/kg	2.5	0.50	EPA-8260B	ND	A01	1
Dibromomethane	ND	mg/kg	2.5	0.90	EPA-8260B	ND	A01	1
1,2-Dichlorobenzene	ND	mg/kg	2.5	0.40	EPA-8260B	ND	A01	1
1,3-Dichlorobenzene	ND	mg/kg	2.5	0.70	EPA-8260B	ND	A01	1
1,4-Dichlorobenzene	ND	mg/kg	2.5	0.75	EPA-8260B	ND	A01	1
Dichlorodifluoromethane	ND	mg/kg	2.5	0.65	EPA-8260B	ND	A01	1
1,1-Dichloroethane	ND	mg/kg	2.5	0.70	EPA-8260B	ND	A01	1
1,2-Dichloroethane	ND	mg/kg	2.5	0.42	EPA-8260B	ND	A01	1
1,1-Dichloroethene	ND	mg/kg	2.5	0.60	EPA-8260B	ND	A01	1
cis-1,2-Dichloroethene	ND	mg/kg	2.5	0.65	EPA-8260B	ND	A01	1
trans-1,2-Dichloroethene	ND	mg/kg	2.5	0.70	EPA-8260B	ND	A01	1
1,2-Dichloropropane	ND	mg/kg	2.5	0.40	EPA-8260B	ND	A01	1
1,3-Dichloropropane	ND	mg/kg	2.5	0.55	EPA-8260B	ND	A01	1
2,2-Dichloropropane	ND	mg/kg	2.5	0.65	EPA-8260B	ND	A01	1
1,1-Dichloropropene	ND	mg/kg	2.5	0.60	EPA-8260B	ND	A01	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1823664-09							
Client Sample Name:	V-209 a/b/c, 7/31/2018 3:20:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	mg/kg	2.5	0.55	EPA-8260B	ND	A01	1
trans-1,3-Dichloropropene	ND	mg/kg	2.5	0.60	EPA-8260B	ND	A01	1
Ethylbenzene	0.86	mg/kg	2.5	0.75	EPA-8260B	ND	J,A01	1
Hexachlorobutadiene	ND	mg/kg	2.5	0.85	EPA-8260B	ND	A01	1
Isopropylbenzene	0.67	mg/kg	2.5	0.65	EPA-8260B	ND	J,A01	1
p-Isopropyltoluene	ND	mg/kg	2.5	0.65	EPA-8260B	ND	A01	1
Methylene chloride	ND	mg/kg	5.0	1.2	EPA-8260B	ND	A01	1
Methyl t-butyl ether	ND	mg/kg	2.5	0.25	EPA-8260B	ND	A01	1
Naphthalene	4.2	mg/kg	2.5	0.70	EPA-8260B	ND	A01	1
n-Propylbenzene	1.7	mg/kg	2.5	0.65	EPA-8260B	ND	J,A01	1
Styrene	ND	mg/kg	2.5	0.70	EPA-8260B	ND	A01	1
1,1,1,2-Tetrachloroethane	ND	mg/kg	2.5	0.55	EPA-8260B	ND	A01	1
1,1,2,2-Tetrachloroethane	ND	mg/kg	2.5	0.55	EPA-8260B	ND	A01	1
Tetrachloroethene	ND	mg/kg	2.5	0.65	EPA-8260B	ND	A01	1
Toluene	39	mg/kg	2.5	0.60	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	mg/kg	2.5	1.0	EPA-8260B	ND	A01	1
1,2,4-Trichlorobenzene	ND	mg/kg	2.5	1.0	EPA-8260B	ND	A01	1
1,1,1-Trichloroethane	ND	mg/kg	2.5	0.55	EPA-8260B	ND	A01	1
1,1,2-Trichloroethane	ND	mg/kg	2.5	0.38	EPA-8260B	ND	A01	1
Trichloroethene	ND	mg/kg	2.5	0.55	EPA-8260B	ND	A01	1
Trichlorofluoromethane	ND	mg/kg	2.5	0.55	EPA-8260B	ND	A01	1
1,2,3-Trichloropropane	ND	mg/kg	2.5	0.80	EPA-8260B	ND	A01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	2.5	0.65	EPA-8260B	ND	A01	1
1,2,4-Trimethylbenzene	6.6	mg/kg	2.5	0.65	EPA-8260B	ND	A01	1
1,3,5-Trimethylbenzene	2.0	mg/kg	2.5	0.75	EPA-8260B	ND	J,A01	1
Vinyl chloride	ND	mg/kg	2.5	0.80	EPA-8260B	ND	A01	1
Total Xylenes	2.4	mg/kg	5.0	1.7	EPA-8260B	ND	J,A01	1
p- & m-Xylenes	1.4	mg/kg	2.5	1.1	EPA-8260B	ND	J,A01	1
o-Xylene	0.96	mg/kg	2.5	0.60	EPA-8260B	ND	J,A01	1
1,2-Dichloroethane-d4 (Surrogate)	119	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.7	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-09	Client Sample Name: V-209 a/b/c, 7/31/2018 3:20:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	08/13/18 12:00	08/13/18 13:52		ADC	MS-V3	500	B021324

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-10	Client Sample Name: V-210 a/b/c, 7/31/2018 3:50:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-10		Client Sample Name: V-210 a/b/c, 7/31/2018 3:50:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1823664-10	Client Sample Name: V-210 a/b/c, 7/31/2018 3:50:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	08/02/18 07:36	08/03/18 13:00		JPT	HPCHEM	1	B020505

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CE Schmidt
19200 Live Oak Road
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Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B020505						
Benzene	B020505-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B020505-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B020505-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B020505-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B020505-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B020505-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B020505-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B020505-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B020505-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B020505-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B020505-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B020505-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B020505-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B020505-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B020505-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B020505-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B020505-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B020505-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B020505-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B020505-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B020505-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B020505-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B020505-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B020505-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B020505-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B020505-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B020505-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B020505-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B020505-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B020505-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B020505-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B020505-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B020505-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B020505-BLK1	ND	ug/L	0.50	0.14	

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CE Schmidt
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Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B020505						
trans-1,3-Dichloropropene	B020505-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B020505-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B020505-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B020505-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B020505-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B020505-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B020505-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B020505-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B020505-BLK1	ND	ug/L	0.50	0.11	
Styrene	B020505-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B020505-BLK1	ND	ug/L	0.50	0.18	
1,1,1,2-Tetrachloroethane	B020505-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B020505-BLK1	ND	ug/L	0.50	0.13	
Toluene	B020505-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B020505-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B020505-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B020505-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B020505-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B020505-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B020505-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B020505-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B020505-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B020505-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B020505-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B020505-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B020505-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B020505-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B020505-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B020505-BLK1	102	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B020505-BLK1	98.6	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B020505-BLK1	99.6	%	80 - 120 (LCL - UCL)		

QC Batch ID: B021324						
Benzene	B021324-BLK1	ND	mg/kg	0.0050	0.0013	

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CE Schmidt
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Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B021324						
Bromobenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0013	
Bromochloromethane	B021324-BLK1	ND	mg/kg	0.0050	0.00092	
Bromodichloromethane	B021324-BLK1	ND	mg/kg	0.0050	0.00084	
Bromoform	B021324-BLK1	ND	mg/kg	0.0050	0.0015	
Bromomethane	B021324-BLK1	ND	mg/kg	0.0050	0.0016	
n-Butylbenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0015	
sec-Butylbenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0012	
tert-Butylbenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0012	
Carbon tetrachloride	B021324-BLK1	ND	mg/kg	0.0050	0.0011	
Chlorobenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0013	
Chloroethane	B021324-BLK1	ND	mg/kg	0.0050	0.0014	
Chloroform	B021324-BLK1	ND	mg/kg	0.0050	0.00063	
Chloromethane	B021324-BLK1	ND	mg/kg	0.0050	0.0014	
2-Chlorotoluene	B021324-BLK1	ND	mg/kg	0.0050	0.0018	
4-Chlorotoluene	B021324-BLK1	ND	mg/kg	0.0050	0.0014	
Dibromochloromethane	B021324-BLK1	ND	mg/kg	0.0050	0.00099	
1,2-Dibromo-3-chloropropane	B021324-BLK1	ND	mg/kg	0.0050	0.0017	
1,2-Dibromoethane	B021324-BLK1	ND	mg/kg	0.0050	0.0010	
Dibromomethane	B021324-BLK1	ND	mg/kg	0.0050	0.0018	
1,2-Dichlorobenzene	B021324-BLK1	ND	mg/kg	0.0050	0.00081	
1,3-Dichlorobenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0014	
1,4-Dichlorobenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0015	
Dichlorodifluoromethane	B021324-BLK1	ND	mg/kg	0.0050	0.0013	
1,1-Dichloroethane	B021324-BLK1	ND	mg/kg	0.0050	0.0014	
1,2-Dichloroethane	B021324-BLK1	ND	mg/kg	0.0050	0.00085	
1,1-Dichloroethene	B021324-BLK1	ND	mg/kg	0.0050	0.0012	
cis-1,2-Dichloroethene	B021324-BLK1	ND	mg/kg	0.0050	0.0013	
trans-1,2-Dichloroethene	B021324-BLK1	ND	mg/kg	0.0050	0.0014	
1,2-Dichloropropane	B021324-BLK1	ND	mg/kg	0.0050	0.00081	
1,3-Dichloropropane	B021324-BLK1	ND	mg/kg	0.0050	0.0011	
2,2-Dichloropropane	B021324-BLK1	ND	mg/kg	0.0050	0.0013	
1,1-Dichloropropene	B021324-BLK1	ND	mg/kg	0.0050	0.0012	
cis-1,3-Dichloropropene	B021324-BLK1	ND	mg/kg	0.0050	0.0011	
trans-1,3-Dichloropropene	B021324-BLK1	ND	mg/kg	0.0050	0.0012	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B021324						
Ethylbenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0015	
Hexachlorobutadiene	B021324-BLK1	ND	mg/kg	0.0050	0.0017	
Isopropylbenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0013	
p-Isopropyltoluene	B021324-BLK1	ND	mg/kg	0.0050	0.0013	
Methylene chloride	B021324-BLK1	ND	mg/kg	0.010	0.0024	
Methyl t-butyl ether	B021324-BLK1	ND	mg/kg	0.0050	0.00050	
Naphthalene	B021324-BLK1	ND	mg/kg	0.0050	0.0014	
n-Propylbenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0013	
Styrene	B021324-BLK1	ND	mg/kg	0.0050	0.0014	
1,1,1,2-Tetrachloroethane	B021324-BLK1	ND	mg/kg	0.0050	0.0011	
1,1,2,2-Tetrachloroethane	B021324-BLK1	ND	mg/kg	0.0050	0.0011	
Tetrachloroethene	B021324-BLK1	ND	mg/kg	0.0050	0.0013	
Toluene	B021324-BLK1	ND	mg/kg	0.0050	0.0012	
1,2,3-Trichlorobenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0021	
1,2,4-Trichlorobenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0020	
1,1,1-Trichloroethane	B021324-BLK1	ND	mg/kg	0.0050	0.0011	
1,1,2-Trichloroethane	B021324-BLK1	ND	mg/kg	0.0050	0.00077	
Trichloroethene	B021324-BLK1	ND	mg/kg	0.0050	0.0011	
Trichlorofluoromethane	B021324-BLK1	ND	mg/kg	0.0050	0.0011	
1,2,3-Trichloropropane	B021324-BLK1	ND	mg/kg	0.0050	0.0016	
1,1,2-Trichloro-1,2,2-trifluoroethane	B021324-BLK1	ND	mg/kg	0.0050	0.0013	
1,2,4-Trimethylbenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0013	
1,3,5-Trimethylbenzene	B021324-BLK1	ND	mg/kg	0.0050	0.0015	
Vinyl chloride	B021324-BLK1	ND	mg/kg	0.0050	0.0016	
Total Xylenes	B021324-BLK1	ND	mg/kg	0.010	0.0034	
p- & m-Xylenes	B021324-BLK1	ND	mg/kg	0.0050	0.0022	
o-Xylene	B021324-BLK1	ND	mg/kg	0.0050	0.0012	
1,2-Dichloroethane-d4 (Surrogate)	B021324-BLK1	124	%	70 - 121 (LCL - UCL)	S09	
Toluene-d8 (Surrogate)	B021324-BLK1	94.5	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B021324-BLK1	102	%	74 - 121 (LCL - UCL)		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: B020505										
Benzene	B020505-BS1	LCS	23.650	25.000	ug/L	94.6		70 - 130		
Bromodichloromethane	B020505-BS1	LCS	26.730	25.000	ug/L	107		70 - 130		
Chlorobenzene	B020505-BS1	LCS	23.940	25.000	ug/L	95.8		70 - 130		
Chloroethane	B020505-BS1	LCS	24.870	25.000	ug/L	99.5		70 - 130		
1,4-Dichlorobenzene	B020505-BS1	LCS	24.590	25.000	ug/L	98.4		70 - 130		
1,1-Dichloroethane	B020505-BS1	LCS	26.150	25.000	ug/L	105		70 - 130		
1,1-Dichloroethene	B020505-BS1	LCS	26.490	25.000	ug/L	106		70 - 130		
Toluene	B020505-BS1	LCS	24.230	25.000	ug/L	96.9		70 - 130		
Trichloroethene	B020505-BS1	LCS	25.470	25.000	ug/L	102		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B020505-BS1	LCS	10.260	10.000	ug/L	103		75 - 125		
Toluene-d8 (Surrogate)	B020505-BS1	LCS	10.090	10.000	ug/L	101		80 - 120		
4-Bromofluorobenzene (Surrogate)	B020505-BS1	LCS	10.610	10.000	ug/L	106		80 - 120		
QC Batch ID: B021324										
Benzene	B021324-BS1	LCS	0.12038	0.12500	mg/kg	96.3		70 - 130		
Bromodichloromethane	B021324-BS1	LCS	0.12948	0.12500	mg/kg	104		70 - 130		
Chlorobenzene	B021324-BS1	LCS	0.12077	0.12500	mg/kg	96.6		70 - 130		
Chloroethane	B021324-BS1	LCS	0.15077	0.12500	mg/kg	121		70 - 130		
1,4-Dichlorobenzene	B021324-BS1	LCS	0.12713	0.12500	mg/kg	102		70 - 130		
1,1-Dichloroethane	B021324-BS1	LCS	0.12762	0.12500	mg/kg	102		70 - 130		
1,1-Dichloroethene	B021324-BS1	LCS	0.12992	0.12500	mg/kg	104		70 - 130		
Toluene	B021324-BS1	LCS	0.12148	0.12500	mg/kg	97.2		70 - 130		
Trichloroethene	B021324-BS1	LCS	0.12865	0.12500	mg/kg	103		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B021324-BS1	LCS	0.056270	0.050000	mg/kg	113		70 - 121		
Toluene-d8 (Surrogate)	B021324-BS1	LCS	0.049660	0.050000	mg/kg	99.3		81 - 117		
4-Bromofluorobenzene (Surrogate)	B021324-BS1	LCS	0.053380	0.050000	mg/kg	107		74 - 121		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B020505		Used client sample: N								
Benzene	MS	1821541-78	ND	21.870	25.000	ug/L		87.5		70 - 130
	MSD	1821541-78	ND	24.190	25.000	ug/L	10.1	96.8	20	70 - 130
Bromodichloromethane	MS	1821541-78	ND	24.600	25.000	ug/L		98.4		70 - 130
	MSD	1821541-78	ND	26.840	25.000	ug/L	8.7	107	20	70 - 130
Chlorobenzene	MS	1821541-78	ND	22.880	25.000	ug/L		91.5		70 - 130
	MSD	1821541-78	ND	24.990	25.000	ug/L	8.8	100	20	70 - 130
Chloroethane	MS	1821541-78	ND	22.590	25.000	ug/L		90.4		70 - 130
	MSD	1821541-78	ND	23.870	25.000	ug/L	5.5	95.5	20	70 - 130
1,4-Dichlorobenzene	MS	1821541-78	ND	22.960	25.000	ug/L		91.8		70 - 130
	MSD	1821541-78	ND	25.470	25.000	ug/L	10.4	102	20	70 - 130
1,1-Dichloroethane	MS	1821541-78	ND	23.610	25.000	ug/L		94.4		70 - 130
	MSD	1821541-78	ND	26.080	25.000	ug/L	9.9	104	20	70 - 130
1,1-Dichloroethene	MS	1821541-78	ND	23.850	25.000	ug/L		95.4		70 - 130
	MSD	1821541-78	ND	26.110	25.000	ug/L	9.0	104	20	70 - 130
Toluene	MS	1821541-78	ND	23.080	25.000	ug/L		92.3		70 - 130
	MSD	1821541-78	ND	24.970	25.000	ug/L	7.9	99.9	20	70 - 130
Trichloroethene	MS	1821541-78	ND	23.550	25.000	ug/L		94.2		70 - 130
	MSD	1821541-78	ND	26.050	25.000	ug/L	10.1	104	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1821541-78	ND	10.430	10.000	ug/L		104		75 - 125
	MSD	1821541-78	ND	10.070	10.000	ug/L	3.5	101		75 - 125
Toluene-d8 (Surrogate)	MS	1821541-78	ND	10.260	10.000	ug/L		103		80 - 120
	MSD	1821541-78	ND	10.050	10.000	ug/L	2.1	100		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1821541-78	ND	10.240	10.000	ug/L		102		80 - 120
	MSD	1821541-78	ND	10.140	10.000	ug/L	1.0	101		80 - 120
QC Batch ID: B021324		Used client sample: N								
Benzene	MS	1824975-01	ND	0.12922	0.12500	mg/kg		103		70 - 130
	MSD	1824975-01	ND	0.11683	0.12500	mg/kg	10.1	93.5	20	70 - 130
Bromodichloromethane	MS	1824975-01	ND	0.12587	0.12500	mg/kg		101		70 - 130
	MSD	1824975-01	ND	0.12346	0.12500	mg/kg	1.9	98.8	20	70 - 130
Chlorobenzene	MS	1824975-01	ND	0.12128	0.12500	mg/kg		97.0		70 - 130
	MSD	1824975-01	ND	0.11650	0.12500	mg/kg	4.0	93.2	20	70 - 130
Chloroethane	MS	1824975-01	ND	0.18028	0.12500	mg/kg		144		70 - 130 Q03
	MSD	1824975-01	ND	0.14257	0.12500	mg/kg	23.4	114	20	70 - 130 Q02
1,4-Dichlorobenzene	MS	1824975-01	ND	0.12182	0.12500	mg/kg		97.5		70 - 130
	MSD	1824975-01	ND	0.11896	0.12500	mg/kg	2.4	95.2	20	70 - 130
1,1-Dichloroethane	MS	1824975-01	ND	0.13795	0.12500	mg/kg		110		70 - 130
	MSD	1824975-01	ND	0.12344	0.12500	mg/kg	11.1	98.8	20	70 - 130

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B021324		Used client sample: N								
1,1-Dichloroethene	MS	1824975-01	ND	0.14295	0.12500	mg/kg		114		70 - 130
	MSD	1824975-01	ND	0.12752	0.12500	mg/kg	11.4	102	20	70 - 130
Toluene	MS	1824975-01	ND	0.12021	0.12500	mg/kg		96.2		70 - 130
	MSD	1824975-01	ND	0.11646	0.12500	mg/kg	3.2	93.2	20	70 - 130
Trichloroethene	MS	1824975-01	ND	0.13176	0.12500	mg/kg		105		70 - 130
	MSD	1824975-01	ND	0.12593	0.12500	mg/kg	4.5	101	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1824975-01	ND	0.060340	0.050000	mg/kg		121		70 - 121
	MSD	1824975-01	ND	0.055960	0.050000	mg/kg	7.5	112		70 - 121
Toluene-d8 (Surrogate)	MS	1824975-01	ND	0.048960	0.050000	mg/kg		97.9		81 - 117
	MSD	1824975-01	ND	0.050140	0.050000	mg/kg	2.4	100		81 - 117
4-Bromofluorobenzene (Surrogate)	MS	1824975-01	ND	0.053480	0.050000	mg/kg		107		74 - 121
	MSD	1824975-01	ND	0.051410	0.050000	mg/kg	3.9	103		74 - 121

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/14/2018 12:17
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A01 Detection and quantitation limits are raised due to sample dilution.
- Q02 Matrix spike precision is not within the control limits.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.
- S09 The surrogate recovery for this compound was not within the control limits.



Date of Report: 08/13/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: CES F1-02106
BCL Project: O&G/8260
BCL Work Order: 1824073
Invoice ID: B312449

Enclosed are the results of analyses for samples received by the laboratory on 8/3/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Case Narratives

Case Narrative for Work Order 1824073

- 1824073-01: No preservative, due to carbonates.
- 1824073-02: No preservative, due to carbonates.
- 1824073-03: No preservative, due to carbonates.
- 1824073-04: No preservative, due to carbonates.
- 1824073-05: No preservative, due to carbonates.
- 1824073-06: No preservative, due to carbonates.
- 1824073-07: No preservative, due to carbonates.



BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 2

Submission #: 18-24073

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S _____

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____

Intact? Yes No Intact? Yes No

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 0.97 Container: Amber Thermometer ID: 208 Date/Time: 8/2/18 2:00

Temperature: (A) 1.1 °C / (C) 1.1 °C Analyst Init: ELP

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁴⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PTa PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL <u>0.00</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: MA Date/Time: 8-2-18 1529 Rev 21 05/23/2016

A = Actual / C = Corrected

15:00:00 (Rev) PerfectLAB_DOC\CONTROL\SANREC\rev 20

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 18-24073

SHIPPING INFORMATION
Fed Ex [] UPS [] Ontrac [] Hand Delivery []
BC Lab Field Service [x] Other [] (Specify) _____

SHIPPING CONTAINER
Ice Chest [x] None [] Box []
Other [] (Specify) _____

FREE LIQUID
YES [] NO []
W / S

Refrigerant: Ice [x] Blue Ice [] None [] Other [] Comments:

Custody Seals Ice Chest [x] Containers [] None [x]
Intact? Yes [] No [] Intact? Yes [] No []

All samples received? Yes [x] No [] All samples containers intact? Yes [x] No [] Description(s) match COC? Yes [x] No []

COC Received
YES [x] NO []

Emissivity: 0.97 Container: UNOPENED Thermometer ID: 208

Date/Time: 8/2/18 2100

Temperature: (A) 1.10 °C / (C) 1.10 °C

Analyst Init: [Signature]

Table with columns for Sample Containers and Sample Numbers (10-14). Rows include various sample types like QT PE UNPRES, QT INORGANIC CHEMICAL METALS, etc. Handwritten entries are present in row 10.

Comments: - 14 the 3 vials dont have no description time or date
Sample Numbering Completed By: jlk Date/Time: 8-6-18 1329

A = Actual / C = Corrected



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	
1824073-01	COC Number:	---		08/03/2018 21:00	
	Project Number:	---		Sampling Date:	08/01/2018 08:05
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-301 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1824073-02	COC Number:	---		08/03/2018 21:00	
	Project Number:	---		Sampling Date:	08/01/2018 07:45
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-302 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1824073-03	COC Number:	---		08/03/2018 21:00	
	Project Number:	---		Sampling Date:	08/01/2018 08:50
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-303 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1824073-04	COC Number:	---		08/03/2018 21:00	
	Project Number:	---		Sampling Date:	08/01/2018 09:00
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-304 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1824073-05	COC Number:	---		08/03/2018 21:00	
	Project Number:	---		Sampling Date:	08/01/2018 09:50
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-305 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1824073-06	COC Number:	---		08/03/2018 21:00	
	Project Number:	---		Sampling Date:	08/01/2018 12:00
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-306 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water
1824073-07	COC Number:	---		08/03/2018 21:00	
	Project Number:	---		Sampling Date:	08/01/2018 12:20
	Sampling Location:	---		Sample Depth:	---
	Sampling Point:	V-307 a/b/c		Lab Matrix:	Water
	Sampled By:	Chuck Schmidt		Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1824073-08	COC Number:	---	Receive Date:	08/03/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 13:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-308 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824073-09	COC Number:	---	Receive Date:	08/03/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 13:20
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-309 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824073-10	COC Number:	---	Receive Date:	08/03/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 14:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-310 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824073-11	COC Number:	---	Receive Date:	08/03/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 14:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-311 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824073-12	COC Number:	---	Receive Date:	08/03/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 14:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-312 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824073-13	COC Number:	---	Receive Date:	08/03/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 15:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-313 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824073-14	COC Number:	---	Receive Date:	08/03/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 15:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-314 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-01							
Client Sample Name:	V-301 a/b/c, 8/1/2018 8:05:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	18	ug/L	0.50	0.083	EPA-8260B	ND	A39	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	A39	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	A39	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	A39	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	A39	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	A39	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	A39	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	A39	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	A39	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	A39	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-01			Client Sample Name:	V-301 a/b/c, 8/1/2018 8:05:00AM, Chuck Schmidt			
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	A39	1
Ethylbenzene	2.7	ug/L	0.50	0.098	EPA-8260B	ND	A39	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
Isopropylbenzene	0.31	ug/L	0.50	0.14	EPA-8260B	ND	J,A39	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	A39	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
Naphthalene	5.8	ug/L	0.50	0.36	EPA-8260B	ND	A39	1
n-Propylbenzene	0.34	ug/L	0.50	0.11	EPA-8260B	ND	J,A39	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	A39	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Toluene	14	ug/L	0.50	0.093	EPA-8260B	ND	A39	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	A39	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	A39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,2,4-Trimethylbenzene	2.4	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
1,3,5-Trimethylbenzene	0.57	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Total Xylenes	13	ug/L	1.0	0.36	EPA-8260B	ND	A39	1
p- & m-Xylenes	8.4	ug/L	0.50	0.28	EPA-8260B	ND	A39	1
o-Xylene	4.6	ug/L	0.50	0.082	EPA-8260B	ND	A39	1
1,2-Dichloroethane-d4 (Surrogate)	91.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-01	Client Sample Name: V-301 a/b/c, 8/1/2018 8:05:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/08/18 10:16	08/09/18 01:52	MGC	MS-V5	1	B020982

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-02	Client Sample Name:	V-302 a/b/c, 8/1/2018 7:45:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Benzene	0.87	ug/L	0.50	0.083	EPA-8260B	ND	A39	1	
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1	
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1	
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	A39	1	
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	A39	1	
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1	
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1	
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	A39	1	
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1	
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1	
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1	
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	A39	1	
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1	
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	A39	1	
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1	
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1	
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	A39	1	
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1	
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	A39	1	
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	A39	1	
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1	
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1	
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1	
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1	
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	A39	1	
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-02	Client Sample Name:	V-302 a/b/c, 8/1/2018 7:45:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1	
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	A39	1	
Ethylbenzene	0.16	ug/L	0.50	0.098	EPA-8260B	ND	J,A39	1	
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1	
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1	
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1	
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	A39	1	
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
Naphthalene	1.6	ug/L	0.50	0.36	EPA-8260B	ND	A39	1	
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	A39	1	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1	
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
Toluene	0.41	ug/L	0.50	0.093	EPA-8260B	ND	J,A39	1	
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1	
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	A39	1	
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1	
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1	
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	A39	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1	
1,2,4-Trimethylbenzene	0.75	ug/L	0.50	0.12	EPA-8260B	ND	A39	1	
1,3,5-Trimethylbenzene	0.19	ug/L	0.50	0.12	EPA-8260B	ND	J,A39	1	
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1	
Total Xylenes	3.5	ug/L	1.0	0.36	EPA-8260B	ND	A39	1	
p- & m-Xylenes	2.2	ug/L	0.50	0.28	EPA-8260B	ND	A39	1	
o-Xylene	1.3	ug/L	0.50	0.082	EPA-8260B	ND	A39	1	
1,2-Dichloroethane-d4 (Surrogate)	88.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1	
Toluene-d8 (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1	
4-Bromofluorobenzene (Surrogate)	91.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-02	Client Sample Name: V-302 a/b/c, 8/1/2018 7:45:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/08/18 10:16	08/09/18 02:15	MGC	MS-V5	1	B020982

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-03							
Client Sample Name:	V-303 a/b/c, 8/1/2018 8:50:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.66	ug/L	0.50	0.083	EPA-8260B	ND	A39	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	A39	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	A39	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	A39	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	A39	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	A39	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	A39	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	A39	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	A39	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	A39	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-03							
Client Sample Name:	V-303 a/b/c, 8/1/2018 8:50:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	A39	1
Ethylbenzene	0.14	ug/L	0.50	0.098	EPA-8260B	ND	J,A39	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	A39	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
Naphthalene	0.99	ug/L	0.50	0.36	EPA-8260B	ND	A39	1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	A39	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Toluene	0.32	ug/L	0.50	0.093	EPA-8260B	ND	J,A39	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	A39	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	A39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,2,4-Trimethylbenzene	0.47	ug/L	0.50	0.12	EPA-8260B	ND	J,A39	1
1,3,5-Trimethylbenzene	0.12	ug/L	0.50	0.12	EPA-8260B	ND	J,A39	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Total Xylenes	2.1	ug/L	1.0	0.36	EPA-8260B	ND	A39	1
p- & m-Xylenes	1.4	ug/L	0.50	0.28	EPA-8260B	ND	A39	1
o-Xylene	0.67	ug/L	0.50	0.082	EPA-8260B	ND	A39	1
1,2-Dichloroethane-d4 (Surrogate)	91.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	90.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-03 **Client Sample Name:** V-303 a/b/c, 8/1/2018 8:50:00AM, Chuck Schmidt

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	08/08/18 10:16	08/09/18 02:38		MGC	MS-V5	1	B020982

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Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-04							
Client Sample Name:	V-304 a/b/c, 8/1/2018 9:00:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.49	ug/L	0.50	0.083	EPA-8260B	ND	J,A39	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	A39	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	A39	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	A39	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	A39	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	A39	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	A39	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	A39	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	A39	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	A39	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-04	Client Sample Name:	V-304 a/b/c, 8/1/2018 9:00:00AM, Chuck Schmidt					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	A39	1
Ethylbenzene	0.14	ug/L	0.50	0.098	EPA-8260B	ND	J,A39	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	A39	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND	A39	1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	A39	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Toluene	0.35	ug/L	0.50	0.093	EPA-8260B	ND	J,A39	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	A39	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	A39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,2,4-Trimethylbenzene	0.20	ug/L	0.50	0.12	EPA-8260B	ND	J,A39	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Total Xylenes	0.76	ug/L	1.0	0.36	EPA-8260B	ND	J,A39	1
p- & m-Xylenes	0.54	ug/L	0.50	0.28	EPA-8260B	ND	A39	1
o-Xylene	0.22	ug/L	0.50	0.082	EPA-8260B	ND	J,A39	1
1,2-Dichloroethane-d4 (Surrogate)	89.5	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-04	Client Sample Name: V-304 a/b/c, 8/1/2018 9:00:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/08/18 10:16	08/09/18 03:01	MGC	MS-V5	1	B020982

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-05							
Client Sample Name:	V-305 a/b/c, 8/1/2018 9:50:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	160	ug/L	2.5	0.42	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	A39	2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	A39	2
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	2
sec-Butylbenzene	0.42	ug/L	0.50	0.15	EPA-8260B	ND	J,A39	2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	A39	2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	A39	2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	A39	2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	A39	2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	A39	2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	A39	2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	A39	2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-05							
Client Sample Name:	V-305 a/b/c, 8/1/2018 9:50:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	A39	2
Ethylbenzene	21	ug/L	0.50	0.098	EPA-8260B	ND	A39	2
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	2
Isopropylbenzene	2.2	ug/L	0.50	0.14	EPA-8260B	ND	A39	2
p-Isopropyltoluene	0.62	ug/L	0.50	0.12	EPA-8260B	ND	A39	2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	A39	2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	2
Naphthalene	14	ug/L	0.50	0.36	EPA-8260B	ND	A39	2
n-Propylbenzene	2.4	ug/L	0.50	0.11	EPA-8260B	ND	A39	2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	A39	2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	2
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	2
Toluene	170	ug/L	2.5	0.46	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	A39	2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	A39	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	2
1,2,4-Trimethylbenzene	13	ug/L	0.50	0.12	EPA-8260B	ND	A39	2
1,3,5-Trimethylbenzene	3.7	ug/L	0.50	0.12	EPA-8260B	ND	A39	2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	2
Total Xylenes	88	ug/L	1.0	0.36	EPA-8260B	ND	A39	2
p- & m-Xylenes	60	ug/L	0.50	0.28	EPA-8260B	ND	A39	2
o-Xylene	29	ug/L	0.50	0.082	EPA-8260B	ND	A39	2
1,2-Dichloroethane-d4 (Surrogate)	95.0	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	82.0	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-05	Client Sample Name: V-305 a/b/c, 8/1/2018 9:50:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.4	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/08/18 10:16	08/09/18 10:20	MGC	MS-V5	5	B020982
2	EPA-8260B	08/08/18 10:16	08/09/18 03:24	MGC	MS-V5	1	B020982

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-06	Client Sample Name: V-306 a/b/c, 8/1/2018 12:00:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.28	ug/L	0.50	0.083	EPA-8260B	ND	J,A39	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	A39	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	A39	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	A39	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	A39	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	A39	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	A39	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	A39	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	A39	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	A39	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-06	Client Sample Name:	V-306 a/b/c, 8/1/2018 12:00:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1	
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	A39	1	
Ethylbenzene	2.6	ug/L	0.50	0.098	EPA-8260B	ND	A39	1	
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1	
Isopropylbenzene	0.31	ug/L	0.50	0.14	EPA-8260B	ND	J,A39	1	
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1	
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	A39	1	
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
Naphthalene	0.73	ug/L	0.50	0.36	EPA-8260B	ND	A39	1	
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	A39	1	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1	
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
Toluene	0.42	ug/L	0.50	0.093	EPA-8260B	ND	J,A39	1	
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1	
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	A39	1	
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1	
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1	
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	A39	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1	
1,2,4-Trimethylbenzene	0.13	ug/L	0.50	0.12	EPA-8260B	ND	J,A39	1	
1,3,5-Trimethylbenzene	0.42	ug/L	0.50	0.12	EPA-8260B	ND	J,A39	1	
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1	
Total Xylenes	1.8	ug/L	1.0	0.36	EPA-8260B	ND	A39	1	
p- & m-Xylenes	0.64	ug/L	0.50	0.28	EPA-8260B	ND	A39	1	
o-Xylene	1.2	ug/L	0.50	0.082	EPA-8260B	ND	A39	1	
1,2-Dichloroethane-d4 (Surrogate)	91.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1	
Toluene-d8 (Surrogate)	97.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1	
4-Bromofluorobenzene (Surrogate)	91.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-06	Client Sample Name: V-306 a/b/c, 8/1/2018 12:00:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/08/18 10:16	08/09/18 03:47	MGC	MS-V5	1	B020982

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Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-07	Client Sample Name:	V-307 a/b/c, 8/1/2018 12:20:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND	A39	1	
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1	
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1	
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	A39	1	
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	A39	1	
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1	
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1	
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	A39	1	
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1	
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1	
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1	
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	A39	1	
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1	
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	A39	1	
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1	
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1	
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	A39	1	
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1	
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	A39	1	
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	A39	1	
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1	
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1	
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1	
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1	
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	A39	1	
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-07	Client Sample Name:	V-307 a/b/c, 8/1/2018 12:20:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1	
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	A39	1	
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND	A39	1	
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1	
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1	
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1	
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	A39	1	
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND	A39	1	
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	A39	1	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1	
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND	A39	1	
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1	
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	A39	1	
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1	
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1	
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1	
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	A39	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1	
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1	
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND	A39	1	
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND	A39	1	
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND	A39	1	
1,2-Dichloroethane-d4 (Surrogate)	95.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1	
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1	
4-Bromofluorobenzene (Surrogate)	92.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-07	Client Sample Name: V-307 a/b/c, 8/1/2018 12:20:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/08/18 10:16	08/09/18 04:10	MGC	MS-V5	1	B020982

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-08	Client Sample Name:	V-308 a/b/c, 8/1/2018 1:00:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Benzene	0.59	ug/L	0.50	0.083	EPA-8260B	ND		1	
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1	
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1	
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1	
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1	
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1	
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1	
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1	
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1	
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1	
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1	
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1	
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1	
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1	
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1	
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1	
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1	
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1	
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1	
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1	
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1	

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-08	Client Sample Name:	V-308 a/b/c, 8/1/2018 1:00:00PM, Chuck Schmidt					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.14	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.39	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.26	ug/L	0.50	0.12	EPA-8260B	ND	J	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	1.4	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	0.74	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.68	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.4	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-08	Client Sample Name: V-308 a/b/c, 8/1/2018 1:00:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/08/18 10:16	08/09/18 04:33	MGC	MS-V5	1	B020982

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-09	Client Sample Name: V-309 a/b/c, 8/1/2018 1:20:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-09	Client Sample Name:	V-309 a/b/c, 8/1/2018 1:20:00PM, Chuck Schmidt					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.18	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	0.39	ug/L	1.0	0.36	EPA-8260B	ND	J	1
p- & m-Xylenes	0.32	ug/L	0.50	0.28	EPA-8260B	ND	J	1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	90.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-09	Client Sample Name: V-309 a/b/c, 8/1/2018 1:20:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/08/18 10:16	08/09/18 08:01	MGC	MS-V5	1	B020982

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-10	Client Sample Name: V-310 a/b/c, 8/1/2018 2:00:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.55	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-10							
Client Sample Name:	V-310 a/b/c, 8/1/2018 2:00:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.20	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	0.92	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.44	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.75	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	1.3	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	0.75	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.56	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	92.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-10	Client Sample Name: V-310 a/b/c, 8/1/2018 2:00:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	08/08/18 10:16	08/09/18 08:24		MGC	MS-V5	1	B020982

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-11							
Client Sample Name:	V-311 a/b/c, 8/1/2018 2:15:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.40	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-11							
Client Sample Name:	V-311 a/b/c, 8/1/2018 2:15:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.27	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.41	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.19	ug/L	0.50	0.12	EPA-8260B	ND	J	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	0.81	ug/L	1.0	0.36	EPA-8260B	ND	J	1
p- & m-Xylenes	0.64	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.17	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	98.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	80.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-11	Client Sample Name: V-311 a/b/c, 8/1/2018 2:15:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	08/09/18 07:00	08/09/18 08:47		MGC	MS-V5	1	B021156

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Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-12	Client Sample Name: V-312 a/b/c, 8/1/2018 2:15:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.44	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-12		Client Sample Name: V-312 a/b/c, 8/1/2018 2:15:00PM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.33	ug/L	0.50	0.098	EPA-8260B	ND	J	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.37	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.26	ug/L	0.50	0.12	EPA-8260B	ND	J	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	1.1	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	0.79	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.27	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	99.5	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-12	Client Sample Name: V-312 a/b/c, 8/1/2018 2:15:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	08/09/18 07:00	08/09/18 09:10		MGC	MS-V5	1	B021156

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-13	Client Sample Name: V-313 a/b/c, 8/1/2018 3:05:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	7.2	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.23	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-13							
Client Sample Name:	V-313 a/b/c, 8/1/2018 3:05:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	9.0	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	1.4	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	0.15	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	18	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	1.0	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	5.8	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	5.2	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	1.2	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	8.8	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	4.2	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	4.6	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.2	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-13	Client Sample Name: V-313 a/b/c, 8/1/2018 3:05:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	08/09/18 07:00	08/09/18 12:15		MGC	MS-V5	1	B021156

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-14	Client Sample Name: V-314 a/b/c, 8/1/2018 3:25:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824073-14	Client Sample Name:	V-314 a/b/c, 8/1/2018 3:25:00PM, Chuck Schmidt					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.31	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	85.9	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824073-14	Client Sample Name: V-314 a/b/c, 8/1/2018 3:25:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/09/18 07:00	08/09/18 07:38	MGC	MS-V5	1	B021156

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Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B020982						
Benzene	B020982-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B020982-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B020982-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B020982-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B020982-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B020982-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B020982-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B020982-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B020982-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B020982-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B020982-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B020982-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B020982-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B020982-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B020982-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B020982-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B020982-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B020982-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B020982-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B020982-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B020982-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B020982-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B020982-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B020982-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B020982-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B020982-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B020982-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B020982-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B020982-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B020982-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B020982-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B020982-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B020982-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B020982-BLK1	ND	ug/L	0.50	0.14	

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Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B020982						
trans-1,3-Dichloropropene	B020982-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B020982-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B020982-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B020982-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B020982-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B020982-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B020982-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B020982-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B020982-BLK1	ND	ug/L	0.50	0.11	
Styrene	B020982-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B020982-BLK1	ND	ug/L	0.50	0.18	
1,1,1,2-Tetrachloroethane	B020982-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B020982-BLK1	ND	ug/L	0.50	0.13	
Toluene	B020982-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B020982-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B020982-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B020982-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B020982-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B020982-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B020982-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B020982-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B020982-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B020982-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B020982-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B020982-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B020982-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B020982-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B020982-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B020982-BLK1	99.5	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B020982-BLK1	94.7	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B020982-BLK1	96.1	%	80 - 120 (LCL - UCL)		
QC Batch ID: B021156						
Benzene	B021156-BLK1	ND	ug/L	0.50	0.083	

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Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B021156						
Bromobenzene	B021156-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B021156-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B021156-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B021156-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B021156-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B021156-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B021156-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B021156-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B021156-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B021156-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B021156-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B021156-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B021156-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B021156-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B021156-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B021156-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B021156-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B021156-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B021156-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B021156-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B021156-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B021156-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B021156-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B021156-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B021156-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B021156-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B021156-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B021156-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B021156-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B021156-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B021156-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B021156-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B021156-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	B021156-BLK1	ND	ug/L	0.50	0.079	

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Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B021156						
Ethylbenzene	B021156-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B021156-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B021156-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B021156-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B021156-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B021156-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B021156-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B021156-BLK1	ND	ug/L	0.50	0.11	
Styrene	B021156-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B021156-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	B021156-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B021156-BLK1	ND	ug/L	0.50	0.13	
Toluene	B021156-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B021156-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B021156-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B021156-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B021156-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B021156-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B021156-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B021156-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B021156-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B021156-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B021156-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B021156-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B021156-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B021156-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B021156-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B021156-BLK1	90.0	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B021156-BLK1	95.7	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B021156-BLK1	96.3	%	80 - 120 (LCL - UCL)		

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Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: B020982										
Benzene	B020982-BS1	LCS	26.750	25.000	ug/L	107		70 - 130		
Bromodichloromethane	B020982-BS1	LCS	26.890	25.000	ug/L	108		70 - 130		
Chlorobenzene	B020982-BS1	LCS	25.390	25.000	ug/L	102		70 - 130		
Chloroethane	B020982-BS1	LCS	25.320	25.000	ug/L	101		70 - 130		
1,4-Dichlorobenzene	B020982-BS1	LCS	26.400	25.000	ug/L	106		70 - 130		
1,1-Dichloroethane	B020982-BS1	LCS	27.650	25.000	ug/L	111		70 - 130		
1,1-Dichloroethene	B020982-BS1	LCS	27.470	25.000	ug/L	110		70 - 130		
Toluene	B020982-BS1	LCS	25.040	25.000	ug/L	100		70 - 130		
Trichloroethene	B020982-BS1	LCS	25.720	25.000	ug/L	103		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B020982-BS1	LCS	10.140	10.000	ug/L	101		75 - 125		
Toluene-d8 (Surrogate)	B020982-BS1	LCS	9.8200	10.000	ug/L	98.2		80 - 120		
4-Bromofluorobenzene (Surrogate)	B020982-BS1	LCS	9.7100	10.000	ug/L	97.1		80 - 120		
QC Batch ID: B021156										
Benzene	B021156-BS1	LCS	27.800	25.000	ug/L	111		70 - 130		
Bromodichloromethane	B021156-BS1	LCS	23.580	25.000	ug/L	94.3		70 - 130		
Chlorobenzene	B021156-BS1	LCS	24.260	25.000	ug/L	97.0		70 - 130		
Chloroethane	B021156-BS1	LCS	29.280	25.000	ug/L	117		70 - 130		
1,4-Dichlorobenzene	B021156-BS1	LCS	22.160	25.000	ug/L	88.6		70 - 130		
1,1-Dichloroethane	B021156-BS1	LCS	26.220	25.000	ug/L	105		70 - 130		
1,1-Dichloroethene	B021156-BS1	LCS	25.800	25.000	ug/L	103		70 - 130		
Toluene	B021156-BS1	LCS	25.850	25.000	ug/L	103		70 - 130		
Trichloroethene	B021156-BS1	LCS	24.020	25.000	ug/L	96.1		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B021156-BS1	LCS	8.8600	10.000	ug/L	88.6		75 - 125		
Toluene-d8 (Surrogate)	B021156-BS1	LCS	9.7100	10.000	ug/L	97.1		80 - 120		
4-Bromofluorobenzene (Surrogate)	B021156-BS1	LCS	9.4600	10.000	ug/L	94.6		80 - 120		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B020982		Used client sample: N								
Benzene	MS	1824123-01	ND	27.160	25.000	ug/L		109		70 - 130
	MSD	1824123-01	ND	26.180	25.000	ug/L	3.7	105	20	70 - 130
Bromodichloromethane	MS	1824123-01	ND	26.580	25.000	ug/L		106		70 - 130
	MSD	1824123-01	ND	25.920	25.000	ug/L	2.5	104	20	70 - 130
Chlorobenzene	MS	1824123-01	ND	26.200	25.000	ug/L		105		70 - 130
	MSD	1824123-01	ND	26.670	25.000	ug/L	1.8	107	20	70 - 130
Chloroethane	MS	1824123-01	ND	27.250	25.000	ug/L		109		70 - 130
	MSD	1824123-01	ND	26.210	25.000	ug/L	3.9	105	20	70 - 130
1,4-Dichlorobenzene	MS	1824123-01	ND	26.880	25.000	ug/L		108		70 - 130
	MSD	1824123-01	ND	27.660	25.000	ug/L	2.9	111	20	70 - 130
1,1-Dichloroethane	MS	1824123-01	ND	28.070	25.000	ug/L		112		70 - 130
	MSD	1824123-01	ND	26.760	25.000	ug/L	4.8	107	20	70 - 130
1,1-Dichloroethene	MS	1824123-01	ND	27.670	25.000	ug/L		111		70 - 130
	MSD	1824123-01	ND	26.590	25.000	ug/L	4.0	106	20	70 - 130
Toluene	MS	1824123-01	ND	26.040	25.000	ug/L		104		70 - 130
	MSD	1824123-01	ND	25.260	25.000	ug/L	3.0	101	20	70 - 130
Trichloroethene	MS	1824123-01	ND	26.430	25.000	ug/L		106		70 - 130
	MSD	1824123-01	ND	25.010	25.000	ug/L	5.5	100	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1824123-01	ND	10.040	10.000	ug/L		100		75 - 125
	MSD	1824123-01	ND	10.280	10.000	ug/L	2.4	103		75 - 125
Toluene-d8 (Surrogate)	MS	1824123-01	ND	9.9200	10.000	ug/L		99.2		80 - 120
	MSD	1824123-01	ND	9.6400	10.000	ug/L	2.9	96.4		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1824123-01	ND	9.9500	10.000	ug/L		99.5		80 - 120
	MSD	1824123-01	ND	10.280	10.000	ug/L	3.3	103		80 - 120
QC Batch ID: B021156		Used client sample: N								
Benzene	MS	1824682-03	ND	30.810	25.000	ug/L		123		70 - 130
	MSD	1824682-03	ND	29.810	25.000	ug/L	3.3	119	20	70 - 130
Bromodichloromethane	MS	1824682-03	ND	25.960	25.000	ug/L		104		70 - 130
	MSD	1824682-03	ND	25.730	25.000	ug/L	0.9	103	20	70 - 130
Chlorobenzene	MS	1824682-03	ND	24.910	25.000	ug/L		99.6		70 - 130
	MSD	1824682-03	ND	25.970	25.000	ug/L	4.2	104	20	70 - 130
Chloroethane	MS	1824682-03	ND	30.960	25.000	ug/L		124		70 - 130
	MSD	1824682-03	ND	32.310	25.000	ug/L	4.3	129	20	70 - 130
1,4-Dichlorobenzene	MS	1824682-03	ND	24.010	25.000	ug/L		96.0		70 - 130
	MSD	1824682-03	ND	24.610	25.000	ug/L	2.5	98.4	20	70 - 130
1,1-Dichloroethane	MS	1824682-03	1.0800	29.920	25.000	ug/L		115		70 - 130
	MSD	1824682-03	1.0800	29.660	25.000	ug/L	0.9	114	20	70 - 130

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery		Lab	
								RPD	Percent Recovery		
QC Batch ID: B021156		Used client sample: N									
1,1-Dichloroethene	MS	1824682-03	ND	28.010	25.000	ug/L		112		70 - 130	
	MSD	1824682-03	ND	27.690	25.000	ug/L	1.1	111	20	70 - 130	
Toluene	MS	1824682-03	ND	28.280	25.000	ug/L		113		70 - 130	
	MSD	1824682-03	ND	28.140	25.000	ug/L	0.5	113	20	70 - 130	
Trichloroethene	MS	1824682-03	0.83000	26.940	25.000	ug/L		104		70 - 130	
	MSD	1824682-03	0.83000	26.860	25.000	ug/L	0.3	104	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1824682-03	ND	9.1200	10.000	ug/L		91.2		75 - 125	
	MSD	1824682-03	ND	8.9700	10.000	ug/L	1.7	89.7		75 - 125	
Toluene-d8 (Surrogate)	MS	1824682-03	ND	9.7000	10.000	ug/L		97.0		80 - 120	
	MSD	1824682-03	ND	9.9000	10.000	ug/L	2.0	99.0		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1824682-03	ND	9.1800	10.000	ug/L		91.8		80 - 120	
	MSD	1824682-03	ND	9.9300	10.000	ug/L	7.8	99.3		80 - 120	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:33
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A01 Detection and quantitation limits are raised due to sample dilution.
- A39 Sample received at pH greater than 2.



Date of Report: 08/13/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: CES F1-02106
BCL Project: O&G/8260
BCL Work Order: 1824072
Invoice ID: B312454

Enclosed are the results of analyses for samples received by the laboratory on 8/3/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Job Day 2

18-24072

CE Schmidt, Ph.D., Environmental Consultant

Chain of Custody Record

Form Serial Number CES FT-02106
Client Name Air Resources Board
Project Manager Luis Leyva
Requested Completion Date

For Information Regarding These Samples Please Contact:
Dr. Charles E. Schmidt
19200 Live Oak Road, Red Bluff, CA 95069
530-529-4266
E-Mail: SCHMIDTCE@aol.com

Client Address and Phone Number
1601 I Street
Sacramento, CA 95814 800-242-4450

Laboratory Name BC Laboratories
Laboratory Address 4700 Atlas Court Bakersfield, CA 93308
Laboratory Phone 661-327-4911

Laboratory Contact Mrs. Kerrie Vaughan
Kerrie.v@bcclabs.com

Table with columns for Station Number, Date, Time, Sample ID Number, and various analysis methods (USEPA Method 6250b, USEPA Method 1664). Includes handwritten entries for samples V-401 through V-405.

File: ARB Forms II A.xsh Form: COC-0200b-D3

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 18-24072

SHIPPING INFORMATION: Fed Ex, UPS, Ontrac, Hand Delivery, BC Lab Field Service. SHIPPING CONTAINER: Ice Chest, None, Box, Other. FREE LIQUID: YES, NO, W/S.

Refrigerant: Ice, Blue Ice, None, Other. Comments:

Custody Seals: Ice Chest, Containers, None. Comments:

All samples received? Yes, No. All samples containers intact? Yes, No. Description(s) match COC? Yes, No.

COC Received: YES, NO. Emissivity: 0.97. Container: UNIDEX. Thermometer ID: 208. Date/Time: 8/2/18 2100. Temperature: (A) 1.10 °C / (C) 1.6 °C. Analyst Init: [Signature]

Table with columns: SAMPLE CONTAINERS, SAMPLE NUMBERS (1-10). Rows include: QT PE UNPRES, 4oz / 8oz / 16oz PE UNPRES, 2oz C, QT INORGANIC CHEMICAL METALS, INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz, FT CYANIDE, FT NITROGEN FORMS, FT TOTAL SULFIDE, 2oz. NITRATE / NITRITE, FT TOTAL ORGANIC CARBON, FT CHEMICAL OXYGEN DEMAND, PLA PHENOLICS, 40ml VOA VIAL TRAVEL BLANK, 40ml VOA VIAL (with handwritten 'GAW' and 'ABC ABC'), QT EPA 1664, FT ODOR, RADIOLOGICAL, BACTERIOLOGICAL, 40 ml VOA VIAL- 504, QT EPA 518/608/808, QT EPA 515/18150, QT EPA 525, QT EPA 525 TRAVEL BLANK, 40ml EPA 547, 40ml EPA 531.I, 8oz EPA 548, QT EPA 549, QT EPA 8015M, QT EPA 8270, 8oz / 16oz / 32oz AMBER, 8oz / 16oz / 32oz JAR, SOIL SLEEVE, PCB VIAL, PLASTIC BAG, TEDLAR BAG, FERROUS IRON, ENCORE, SMART KIT, SUMMA CANISTER.

Comments: Sample Numbering Completed By: JM Date/Time: 8-3-18 1325 Rev 21 05/23/2016

Actual / C = Corrected [S:\WFOac\Word\PerfectLAB_DOC\FORMS\SAMREC1ev 20]

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:48
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1824072-01	COC Number:	---	Receive Date:	08/03/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 09:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-401 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824072-02	COC Number:	---	Receive Date:	08/03/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 09:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V-402 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:48
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824072-01	Client Sample Name: V-401 a/b/c, 8/1/2018 9:15:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	1700	ug/L	25	4.2	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		2
n-Butylbenzene	5.2	ug/L	0.50	0.11	EPA-8260B	ND		2
sec-Butylbenzene	4.2	ug/L	0.50	0.15	EPA-8260B	ND		2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:48
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824072-01							
Client Sample Name:	V-401 a/b/c, 8/1/2018 9:15:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		2
Ethylbenzene	290	ug/L	25	4.9	EPA-8260B	ND	A01	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
Isopropylbenzene	20	ug/L	0.50	0.14	EPA-8260B	ND		2
p-Isopropyltoluene	34	ug/L	0.50	0.12	EPA-8260B	ND		2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		2
Methyl t-butyl ether	97	ug/L	0.50	0.11	EPA-8260B	ND		2
Naphthalene	100	ug/L	0.50	0.36	EPA-8260B	ND		2
n-Propylbenzene	30	ug/L	0.50	0.11	EPA-8260B	ND		2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
Tetrachloroethene	0.21	ug/L	0.50	0.13	EPA-8260B	ND	J	2
Toluene	2000	ug/L	25	4.6	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,2,4-Trimethylbenzene	100	ug/L	0.50	0.12	EPA-8260B	ND		2
1,3,5-Trimethylbenzene	28	ug/L	0.50	0.12	EPA-8260B	ND		2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		2
Total Xylenes	950	ug/L	50	18	EPA-8260B	ND	A01	1
p- & m-Xylenes	610	ug/L	25	14	EPA-8260B	ND	A01	1
o-Xylene	340	ug/L	25	4.1	EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	90.1	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	73.2	%	75 - 125 (LCL - UCL)		EPA-8260B		S09	2
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	110	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:48
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824072-01	Client Sample Name: V-401 a/b/c, 8/1/2018 9:15:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/08/18 06:00	08/09/18 10:43	MGC	MS-V5	50	B020981
2	EPA-8260B	08/08/18 06:00	08/09/18 04:56	MGC	MS-V5	1	B020981

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:48
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824072-02	Client Sample Name: V-402 a/b/c, 8/1/2018 9:15:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	1600	ug/L	25	4.2	EPA-8260B	ND	A01	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		2
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		2
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		2
n-Butylbenzene	4.0	ug/L	0.50	0.11	EPA-8260B	ND		2
sec-Butylbenzene	3.3	ug/L	0.50	0.15	EPA-8260B	ND		2
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		2
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		2
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		2
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		2
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		2
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		2
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		2
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		2
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		2
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:48
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1824072-02							
Client Sample Name:	V-402 a/b/c, 8/1/2018 9:15:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		2
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		2
Ethylbenzene	270	ug/L	25	4.9	EPA-8260B	ND	A01	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
Isopropylbenzene	17	ug/L	0.50	0.14	EPA-8260B	ND		2
p-Isopropyltoluene	27	ug/L	0.50	0.12	EPA-8260B	ND		2
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		2
Methyl t-butyl ether	94	ug/L	0.50	0.11	EPA-8260B	ND		2
Naphthalene	79	ug/L	0.50	0.36	EPA-8260B	ND		2
n-Propylbenzene	24	ug/L	0.50	0.11	EPA-8260B	ND		2
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		2
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		2
Tetrachloroethene	0.19	ug/L	0.50	0.13	EPA-8260B	ND	J	2
Toluene	1800	ug/L	25	4.6	EPA-8260B	ND	A01	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		2
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		2
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		2
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		2
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		2
1,2,4-Trimethylbenzene	85	ug/L	0.50	0.12	EPA-8260B	ND		2
1,3,5-Trimethylbenzene	23	ug/L	0.50	0.12	EPA-8260B	ND		2
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		2
Total Xylenes	880	ug/L	50	18	EPA-8260B	ND	A01	1
p- & m-Xylenes	560	ug/L	25	14	EPA-8260B	ND	A01	1
o-Xylene	330	ug/L	25	4.1	EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	87.1	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	68.6	%	75 - 125 (LCL - UCL)		EPA-8260B		S09	2
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	109	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:48
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1824072-02	Client Sample Name: V-402 a/b/c, 8/1/2018 9:15:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	95.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	90.8	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	08/08/18 06:00	08/09/18 11:06		MGC	MS-V5	50	B020981
2	EPA-8260B	08/08/18 06:00	08/09/18 05:19		MGC	MS-V5	1	B020981

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:48
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B020981						
Benzene	B020981-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B020981-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B020981-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B020981-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B020981-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B020981-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B020981-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B020981-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B020981-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B020981-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B020981-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B020981-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B020981-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B020981-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B020981-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B020981-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B020981-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B020981-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B020981-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B020981-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B020981-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B020981-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B020981-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B020981-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B020981-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B020981-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B020981-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B020981-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B020981-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B020981-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B020981-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B020981-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B020981-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B020981-BLK1	ND	ug/L	0.50	0.14	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:48
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B020981						
trans-1,3-Dichloropropene	B020981-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B020981-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B020981-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B020981-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B020981-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B020981-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B020981-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B020981-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B020981-BLK1	ND	ug/L	0.50	0.11	
Styrene	B020981-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B020981-BLK1	ND	ug/L	0.50	0.18	
1,1,1,2-Tetrachloroethane	B020981-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethane	B020981-BLK1	ND	ug/L	0.50	0.13	
Toluene	B020981-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B020981-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B020981-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B020981-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B020981-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B020981-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B020981-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B020981-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B020981-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B020981-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B020981-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B020981-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B020981-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B020981-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B020981-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B020981-BLK1	98.1	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B020981-BLK1	99.2	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B020981-BLK1	97.4	%	80 - 120 (LCL - UCL)		

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Red Bluff, CA 96080

Reported: 08/13/2018 11:48
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B020981										
Benzene	B020981-BS1	LCS	27.060	25.000	ug/L	108		70 - 130		
Bromodichloromethane	B020981-BS1	LCS	28.030	25.000	ug/L	112		70 - 130		
Chlorobenzene	B020981-BS1	LCS	25.900	25.000	ug/L	104		70 - 130		
Chloroethane	B020981-BS1	LCS	26.850	25.000	ug/L	107		70 - 130		
1,4-Dichlorobenzene	B020981-BS1	LCS	27.300	25.000	ug/L	109		70 - 130		
1,1-Dichloroethane	B020981-BS1	LCS	27.330	25.000	ug/L	109		70 - 130		
1,1-Dichloroethene	B020981-BS1	LCS	27.490	25.000	ug/L	110		70 - 130		
Toluene	B020981-BS1	LCS	27.850	25.000	ug/L	111		70 - 130		
Trichloroethene	B020981-BS1	LCS	27.240	25.000	ug/L	109		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B020981-BS1	LCS	9.9900	10.000	ug/L	99.9		75 - 125		
Toluene-d8 (Surrogate)	B020981-BS1	LCS	10.150	10.000	ug/L	102		80 - 120		
4-Bromofluorobenzene (Surrogate)	B020981-BS1	LCS	9.9800	10.000	ug/L	99.8		80 - 120		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:48
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B020981		Used client sample: N								
Benzene	MS	1823832-01	ND	26.150	25.000	ug/L		105		70 - 130
	MSD	1823832-01	ND	26.830	25.000	ug/L	2.6	107	20	70 - 130
Bromodichloromethane	MS	1823832-01	ND	25.580	25.000	ug/L		102		70 - 130
	MSD	1823832-01	ND	25.350	25.000	ug/L	0.9	101	20	70 - 130
Chlorobenzene	MS	1823832-01	ND	24.010	25.000	ug/L		96.0		70 - 130
	MSD	1823832-01	ND	24.800	25.000	ug/L	3.2	99.2	20	70 - 130
Chloroethane	MS	1823832-01	ND	25.950	25.000	ug/L		104		70 - 130
	MSD	1823832-01	ND	26.390	25.000	ug/L	1.7	106	20	70 - 130
1,4-Dichlorobenzene	MS	1823832-01	ND	25.040	25.000	ug/L		100		70 - 130
	MSD	1823832-01	ND	25.190	25.000	ug/L	0.6	101	20	70 - 130
1,1-Dichloroethane	MS	1823832-01	ND	26.800	25.000	ug/L		107		70 - 130
	MSD	1823832-01	ND	26.510	25.000	ug/L	1.1	106	20	70 - 130
1,1-Dichloroethene	MS	1823832-01	ND	26.200	25.000	ug/L		105		70 - 130
	MSD	1823832-01	ND	26.640	25.000	ug/L	1.7	107	20	70 - 130
Toluene	MS	1823832-01	ND	25.840	25.000	ug/L		103		70 - 130
	MSD	1823832-01	ND	26.060	25.000	ug/L	0.8	104	20	70 - 130
Trichloroethene	MS	1823832-01	ND	25.410	25.000	ug/L		102		70 - 130
	MSD	1823832-01	ND	25.250	25.000	ug/L	0.6	101	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1823832-01	ND	9.6500	10.000	ug/L		96.5		75 - 125
	MSD	1823832-01	ND	9.4400	10.000	ug/L	2.2	94.4		75 - 125
Toluene-d8 (Surrogate)	MS	1823832-01	ND	9.8400	10.000	ug/L		98.4		80 - 120
	MSD	1823832-01	ND	9.9300	10.000	ug/L	0.9	99.3		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1823832-01	ND	9.3400	10.000	ug/L		93.4		80 - 120
	MSD	1823832-01	ND	9.5600	10.000	ug/L	2.3	95.6		80 - 120

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 11:48
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A01 Detection and quantitation limits are raised due to sample dilution.
- S09 The surrogate recovery for this compound was not within the control limits.



Date of Report: 08/13/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: 15669
BCL Project: O&G/8260
BCL Work Order: 1823665
Invoice ID: B312529

Enclosed are the results of analyses for samples received by the laboratory on 7/31/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Case Narratives

Case Narrative for Work Order 1823665

1823665-09: Sample matrix is oil.



0.64 Day 1

CE Schmidt, Ph.D., Environmental Consultant 18-23665
Chain of Custody Record

Form Serial Number CES F1-02108
Client Name Air Resources Board
Offfield WW Emissions Assessment
Project Manager Luis Leyva
Requested Completion Date 9/16/2018

For Information Regarding These Samples
Please Contact:
Dr. Charles E. Schmidt
19200 Live Oak Road, Red Bluff, CA 96080
930.929.4256
E-Mail: SCHMIDTCE@aol.com

Station Number	Date	Time	CIG			Sample ID Number	Sample Container			Analysis Requested	Remarks
			O	R	M		S	Vial	Jar		
-1	7/31/2018	8:25	X			J-201	X			USEPA Method 1664	
-2	7/31/2018	9:05	X			J-202	X			USEPA Method 1664	
-3	7/31/2018	10:10	X			J-203	X			USEPA Method 1664	
-4	7/31/2018	11:05	X			J-204	X			USEPA Method 1664	
-5	7/31/2018	12:00	X			J-205	X			USEPA Method 1664	
-6	7/31/2018	13:10	X			J-206	X			USEPA Method 1664	
-7	7/31/2018	13:30	X			J-207	X			USEPA Method 1664	
-8	7/31/2018	14:10	X			J-208	X			USEPA Method 1664	
-9	7/31/2018	15:20	X			J-209	X			USEPA Method 1664	
-10	7/31/2018	15:50	X			J-210	X			USEPA Method 1664	
	7/31/2018		X			J-211	X			USEPA Method 1664	
	7/31/2018		X			J-212	X			USEPA Method 1664	
	7/31/2018		X			J-213	X			USEPA Method 1664	
	7/31/2018		X			J-214	X			USEPA Method 1664	
	7/31/2018		X			J-215	X			USEPA Method 1664	

Sampler	Date/Time	7/31/18 15:54	Requisitioned by	CSAMBA	Date/Time	7/31/18 15:54	HAZWOP/NEESA	Y	N	
Received by	Date/Time	7/31/18 15:54	Requisitioned by	CSAMBA	Date/Time	7/31/18 15:54	COC Level	1	2	3
Received by	Date/Time	7/31/18 16:48	Requisitioned by		Date/Time		Area Req			
Received by Laboratory	Date/Time		Sample Shipped Via	BUS	Date/Time		Cust Seal			
Remaining	All Samples are in a Wastewater Matrix									

File: ARB Forms II A.xtb Form: OCC 1664.D1



BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 1823665

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 95 Container: AMBER Thermometer ID: 224 Date/Time: 7/31/18
 Temperature: (A) 5.9 °C / (C) 5.8 °C Analyst Init: [Signature]

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁴										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664	A	A	A	A	A	A	A	A	A	A
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 525.1M150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8915M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: [Signature] Date/Time: 7/31/18 Rev 21 05/23/2016

A = Actual / C = Corrected



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1823665-01	COC Number:	---	Receive Date:	07/31/2018 16:48
	Project Number:	---	Sampling Date:	07/31/2018 08:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-201	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1823665-02	COC Number:	---	Receive Date:	07/31/2018 16:48
	Project Number:	---	Sampling Date:	07/31/2018 09:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-202	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1823665-03	COC Number:	---	Receive Date:	07/31/2018 16:48
	Project Number:	---	Sampling Date:	07/31/2018 10:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-203	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1823665-04	COC Number:	---	Receive Date:	07/31/2018 16:48
	Project Number:	---	Sampling Date:	07/31/2018 11:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-204	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1823665-05	COC Number:	---	Receive Date:	07/31/2018 16:48
	Project Number:	---	Sampling Date:	07/31/2018 12:20
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-205	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1823665-06	COC Number:	---	Receive Date:	07/31/2018 16:48
	Project Number:	---	Sampling Date:	07/31/2018 13:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-206	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1823665-07	COC Number:	---	Receive Date:	07/31/2018 16:48
	Project Number:	---	Sampling Date:	07/31/2018 13:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-207	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1823665-08	COC Number:	---	Receive Date:	07/31/2018 16:48
	Project Number:	---	Sampling Date:	07/31/2018 14:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-208	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
	1823665-09	COC Number:	---	Receive Date:
Project Number:		---	Sampling Date:	07/31/2018 15:20
Sampling Location:		---	Sample Depth:	---
Sampling Point:		J-209	Lab Matrix:	Solids
Sampled By:		Chuck Schmidt	Sample Type:	Oil
<hr/>				
1823665-10		COC Number:	---	Receive Date:
	Project Number:	---	Sampling Date:	07/31/2018 15:50
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-210	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1823665-01	Client Sample Name: J-201, 7/31/2018 8:25:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	4.6	mg/L	5.0	0.86	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/07/18 12:00	08/07/18 12:00	MAM	MAN-SV	1	B020964

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1823665-02	Client Sample Name: J-202, 7/31/2018 9:05:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	3.2	mg/L	5.0	0.86	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/07/18 12:00	08/07/18 12:00	MAM	MAN-SV	1	B020964

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1823665-03	Client Sample Name: J-203, 7/31/2018 10:10:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	14	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/07/18 12:00	08/07/18 12:00	MAM	MAN-SV	1.053	B020964

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1823665-04	Client Sample Name: J-204, 7/31/2018 11:05:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	16	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/07/18 12:00	08/07/18 12:00	MAM	MAN-SV	1	B020964

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Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1823665-05	Client Sample Name: J-205, 7/31/2018 12:20:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	48	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/07/18 12:00	08/07/18 12:00	MAM	MAN-SV	1	B020964

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1823665-06	Client Sample Name: J-206, 7/31/2018 1:10:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	24	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/07/18 12:00	08/07/18 12:00	MAM	MAN-SV	1	B020964

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1823665-07	Client Sample Name: J-207, 7/31/2018 1:10:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	26	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/07/18 12:00	08/07/18 12:00	MAM	MAN-SV	1	B020964

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1823665-08	Client Sample Name: J-208, 7/31/2018 2:10:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	60	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/07/18 12:00	08/07/18 12:00	MAM	MAN-SV	1.053	B020964

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1823665-09	Client Sample Name: J-209, 7/31/2018 3:20:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	660000	mg/kg	1800	750	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/06/18 09:00	08/06/18 09:00	MAM	MAN-SV	35.714	B020840

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Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1823665-10	Client Sample Name: J-210, 7/31/2018 3:50:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	ND	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/07/18 12:00	08/07/18 12:00	MAM	MAN-SV	1	B020964

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B020840						
Oil and Grease	B020840-BLK1	ND	mg/kg	50	21	
QC Batch ID: B020964						
Oil and Grease	B020964-BLK1	ND	mg/L	5.0	0.86	

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab	Quals
								Percent Recovery	RPD		
QC Batch ID: B020840											
Oil and Grease	B020840-BS1	LCS	759.07	778.23	mg/kg	97.5		59	117		
QC Batch ID: B020964											
Oil and Grease	B020964-BS1	LCS	42.600	39.400	mg/L	108		78	114		

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: B020840		Used client sample: N								
Oil and Grease	DUP	1823990-02	ND	ND		mg/kg			30	
	MS	1823990-02	ND	794.00	772.00	mg/kg		103		56 - 111
	MSD	1823990-02	ND	755.95	765.87	mg/kg	4.9	98.7	30	56 - 111
QC Batch ID: B020964		Used client sample: N								
Oil and Grease	DUP	1821541-31	ND	ND		mg/L			18	
	MS	1821541-31	ND	42.100	39.400	mg/L		107		78 - 114
	MSD	1821541-31	ND	37.450	39.400	mg/L	11.7	95.1	18	78 - 114

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:49
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 08/16/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: CES F1-02106
BCL Project: O&G/8260
BCL Work Order: 1824023
Invoice ID: B312871

Enclosed are the results of analyses for samples received by the laboratory on 8/2/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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064 Day 2

CE Schmidt, Ph.D., Environmental Consultant 18-24023

Station Number	Date	Time	Sample ID Number			Sample Container	Remarks
			CG	OR	MA		
-1	8/1/2018	8:05	X	X	X	J-301	
-2	8/1/2018	7:15	X	X	X	J-302	
-3	8/1/2018	8:50	X	X	X	J-303	
-4	8/1/2018	9:00	X	X	X	J-304	
-5	8/1/2018	9:50	X	X	X	J-305	
-6	8/1/2018	12:00	X	X	X	J-306	
-7	8/1/2018	12:20	X	X	X	J-307	
-8	8/1/2018	1:30	X	X	X	J-308	
-9	8/1/2018	1:30	X	X	X	J-309	
-10	8/1/2018	1:00	X	X	X	J-310	
-11	8/1/2018	H/S	X	X	X	J-311	
-12	8/1/2018	H/S	X	X	X	J-312	
-13	8/1/2018	15:05	X	X	X	J-313	
-14	8/1/2018	15:25	X	X	X	J-314	
	8/1/2018		X	X	X	J-315	

Form Serial Number	Client Name	Client Address and Phone Number	Analysis Requested
CE F1-02106	Dr. Charles E. Schmidt	1001 / Street Sacramento, CA 95814 800-242-4450	
Client Name	Project Manager	Lab's Name	Requested Completion Date
Air Resources Board	Luis Lopez	916.323.1079	
Clifford WW Emissions Assessment			
19200 Live Oak Road, Red Bluff, CA 96080			
930-529-4295			
E-Mail: SCHMIDTCE@aol.com			

Station	Time	Date	Signature	Role
Sampler	8/2/18 11:00	8/2/18 11:00	CE Schmidt	Sampler
Received by	8/2/18 11:20	8/2/18 11:20	BC Labs (Luis Lopez)	Receiver
Received by	8/2/18 6:20	8/2/18 6:20	Hector Baccus	Receiver
Received by	8/16 2:00	8/16 2:00	CE Schmidt	Receiver

RECEIVED	DATE	BY

HAZWOPER/NEESA	Y	N	
CC Level	1	2	3
COC			
Ars. Req.			
Cont. Seal			
Sample Condition			

File: ARB Forms II Axiso Form: COC-1664.D2

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 2

Submission #: 18-24023

SHIPPING INFORMATION: Fed Ex, UPS, Ontrac, Hand Delivery, BC Lab Field Service. SHIPPING CONTAINER: Ice Chest, None, Box, Other. FREE LIQUID: YES, NO, W/S.

Refrigerant: Ice, Blue Ice, None, Other. Comments:

Custody Seals: Ice Chest, Containers, None. Comments:

All samples received? Yes, No. All samples containers intact? Yes, No. Description(s) match COC? Yes, No.

COC Received: YES, NO. Emissivity: 0.97. Container: Amber. Thermometer ID: 208. Date/Time: 8/2/19 2100. Analyst Init: [Signature]

SAMPLE CONTAINERS vs SAMPLE NUMBERS table header

Table with 10 columns for sample numbers and rows for various sample types like PE UNPRES, INORGANIC CHEMICAL METALS, etc. Handwritten 'A' marks are present in the table.

Comments: Sample Numbering Completed By: [Signature] Date/Time: 8-3-19 0910 Rev 21 05/23/2016

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COOLER RECEIPT FORM Page 2 of 2

Submission #: 18-24023

SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S	
---	--	---	--	---	--

Refrigerant: Ice Blue Ice None Other Comments:

Custody Seals Ice Chest Containers None Comments:

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received YES NO Emissivity: 0.97 Container: AMBER Thermometer ID: 208 Date/Time: 8/2/18 2:00 Temperature: (A) 1.1 °C / 10.1 °C Analyst Init: [Signature]

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁴										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1661	012	A	A	A	A	A				
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/6150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: Sample Numbering Completed By: [Signature] Date/Time: 8-3-18 0910 [Signature] Rev 21 05/23/2016



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1824023-01	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 08:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-301	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824023-02	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 07:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-302	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824023-03	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 08:50
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-303	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824023-04	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 09:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-304	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824023-05	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 09:50
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-305	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824023-06	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 12:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-306	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824023-07	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 12:20
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-307	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1824023-08	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 13:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-308	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824023-09	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 13:20
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-309	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824023-10	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 14:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-310	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824023-11	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 14:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-311	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824023-12	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 15:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-312	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824023-13	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 15:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-313	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824023-14	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/01/2018 15:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-314	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-01	Client Sample Name: J-301, 8/1/2018 8:05:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	16	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-02	Client Sample Name: J-302, 8/1/2018 7:15:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	14	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-03	Client Sample Name: J-303, 8/1/2018 8:50:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	9.2	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-04	Client Sample Name: J-304, 8/1/2018 9:00:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	8.8	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-05	Client Sample Name: J-305, 8/1/2018 9:50:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	24	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-06	Client Sample Name: J-306, 8/1/2018 12:00:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	26	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-07	Client Sample Name: J-307, 8/1/2018 12:20:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	22	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-08	Client Sample Name: J-308, 8/1/2018 1:00:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	30	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-09	Client Sample Name: J-309, 8/1/2018 1:20:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	25	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-10	Client Sample Name: J-310, 8/1/2018 2:00:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	22	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-11 **Client Sample Name:** J-311, 8/1/2018 2:15:00PM, Chuck Schmidt

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	26	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-12	Client Sample Name: J-312, 8/1/2018 3:15:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	25	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-13	Client Sample Name: J-313, 8/1/2018 3:05:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	24	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824023-14	Client Sample Name: J-314, 8/1/2018 3:25:00PM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	ND	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/14/18 11:00	08/14/18 11:00	MAM	MAN-SV	1	B021549

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CE Schmidt
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Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B021549						
Oil and Grease	B021549-BLK1	ND	mg/L	5.0	0.86	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B021549										
Oil and Grease	B021549-BS1	LCS	39.100	38.800	mg/L	101		78	114	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent		Lab Quals
								Recovery	RPD	
QC Batch ID: B021549		Used client sample: N								
Oil and Grease	DUP	1821541-34	ND	ND		mg/L				18
	MS	1821541-34	ND	39.200	38.800	mg/L		101		78 - 114
	MSD	1821541-34	ND	39.050	38.800	mg/L	0.4	101	18	78 - 114

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/16/2018 8:12
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Notes And Definitions

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 08/13/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: CES F1-02106
BCL Project: O&G/8260
BCL Work Order: 1824024
Invoice ID: B312518

Enclosed are the results of analyses for samples received by the laboratory on 8/2/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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CE Schmidt, Plc., Environmental Consultant 18-24024
 Chain of Custody Record
 Form Serial Number CES F4-02108

For Information Regarding These Samples
 Please Contact:
 Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-528-4256
 E-Mail: SCHMIDTCE@aol.com

Client Name: Air Resources Board
 Client Address: 15000 Live Oak Road, Red Bluff, CA 96080
 Project Manager: Luis Leyva
 Phone: 916.325.1079
 Requested Completion Date:

Laboratory Name: BC Laboratories
 Laboratory Address: 4100 Atlas Court Bakersfield, CA 93308
 Laboratory Phone: 661-327-4911
 Laboratory Contact: Ms. Kerrie Vaughn
 Email: kerrie.vaughn@bclabs.com

Station Number	Date	Time	Sample ID Number			Sample Container	Tube	Remarks
			C	O	R			
-1	8/2/2018	9:15	X	J	- 401	X		
-2	8/2/2018	9:15	X	J	- 402	X		
	8/2/2018		X	J	- 403	X		
	8/2/2018		X	J	- 404	X		
	8/2/2018		X	J	- 405	X		

USEPA Method 8260b
 USEPA Method 8264

Client Address and Phone Number
 1601 I Street
 Sacramento, CA 95814 800-242-4450

Analysis Requested

HAZ/WRAP/NESEA Y N
 OC Level 1 2 3
 COC
 Area Req
 Cust Seal
 Sample Condition

CHK BY: [Signature] DISTRIBUTION
 SUB-OUT

Received by: [Signature] Date/Time: 8/2/18 11:00
 Received by: [Signature] Date/Time: 8/2/18 11:00
 Received by: [Signature] Date/Time: 8/2/18 16:20
 Received by: [Signature] Date/Time: 8/2/18 21:00

Requisitioned by: [Signature] Date/Time: 8/2/18 11:00
 Requisitioned by: [Signature] Date/Time: 8/2/18 16:20
 Requisitioned by: [Signature] Date/Time: 8/2/18 21:00

Sample Shipped Via: UPS FEDEX BUS Other

Remarks: All Samples are in a Wastewater Matrix

File: ARB Forms II A.xlb Form: COC 1664 D3

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BC LABORATORIES, INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 18-24024

SHIPPING INFORMATION
 Fed Ex UPS Ontrac Hand Delivery
 BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER
 Ice Chest None Box
 Other (Specify) _____

FREE LIQUID
 YES NO
 W / S _____

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers
 Smart Intact None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received YES NO Emissivity: 0.95 Container: AMBER Thermometer ID: 208 Date/Time: 8/2/18 2100
 Temperature: (A) 1.1 °C / (C) 1.1 °C Analyst Init: [Signature]

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664		012	A	A						
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz IAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____
 Sample Numbering Completed By: [Signature] Date/Time: 8-3-18 0910 8-3-18
 = Actual / C = Corrected

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:06
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1824024-01	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/02/2018 09:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-401	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1824024-02	COC Number:	---	Receive Date:	08/02/2018 21:00
	Project Number:	---	Sampling Date:	08/02/2018 09:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J-402	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:06
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824024-01	Client Sample Name: J-401, 8/2/2018 9:15:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	19	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/07/18 12:00	08/07/18 12:00	MAM	MAN-SV	1	B020964

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:06
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1824024-02	Client Sample Name: J-402, 8/2/2018 9:15:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	27	mg/L	5.0	0.86	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	08/07/18 12:00	08/07/18 12:00	MAM	MAN-SV	1	B020964

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:06
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B020964						
Oil and Grease	B020964-BLK1	ND	mg/L	5.0	0.86	

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Red Bluff, CA 96080

Reported: 08/13/2018 15:06
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B020964										
Oil and Grease	B020964-BS1	LCS	42.600	39.400	mg/L	108		78	114	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:06
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent		Lab Quals
								Recovery	RPD	
QC Batch ID: B020964		Used client sample: N								
Oil and Grease	DUP	1821541-31	ND	ND		mg/L				18
	MS	1821541-31	ND	42.100	39.400	mg/L		107		78 - 114
	MSD	1821541-31	ND	37.450	39.400	mg/L	11.7	95.1	18	78 - 114

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 08/13/2018 15:06
Project: O&G/8260
Project Number: CES F1-02106
Project Manager: Chuck Schmidt

Notes And Definitions

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit

California Air Resources Board
RFP No. 161SD005

Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations

Data Validation Technical Memorandum- Phase 2, Trip #3



November 2018

Submitted by

Primary Contact:

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EXECUTIVE SUMMARY

This Technical Memorandum describes the methodology, sampling procedures and test results for Phase 2, Test No. 3 (one day test, October 3, 2018) of the Air Resources Board project titled *Measurement of Produced Water Emissions from Crude Oil and Natural Gas Operations (No. 161SD005)*.

The purpose of this testing effort was to conduct a more detailed assessment of selected ponds based on the data collected in the screening effort conducted in Phase 1. Four pond systems were selected for Test No. 1 in Phase 2 as shown below.

Project Region	Dates	Facilities
R5 1	10/03/2018 (Field Trip #3)	P-4, P-3, CP-2
R5 4	10/03/2018 (Field Trip #3)	P-4, P-5, CP-2
R5 3	10/03/2018 (Field Trip #3)	CP-3, P1, P2, P8, P9

In total, one or more samples were collected, along with Quality Control sampling, at these facilities for a total of 13 sample sets. Sample collection included air emission sampling and sampling.

The assessment included using the US EPA flux chamber technology complete with all test equipment as specified in the US EPA Flux Chamber User's and measurement protocol, to measure the 'flux' of study compounds from selected sources on these facilities. Testing included using a fixed sweep air flow rate of 5.0 liters per minute and a 30 liter dynamic flux chamber as per the User's guidance document. Gas phase measurements were performed for volatile organic compounds (VOCs) and toxic air contaminants (TACs) using US EPA Methods TO-14/TO-15, and fixed gases carbon dioxide and methane by ASTM Methods 1945 and 3416, respectively. Liquid phase measurements were performed by liquid sample collection and analysis for dissolved phase VOCs by US EPA Method 8260b, and for oil and grease by US EPA Method 1664 as described in the attached project Test Plan.

A summary of the Test No. 1, Phase 2 testing program, complete with data summary and QC report is provided.

I. INTRODUCTION

This Technical Memorandum describes the field testing that was conducted in order to collect more detailed data from a limited selection of facilities screened in Phase 1 as the second of two field tests in Phase 2 of the program. Testing was conducted by Mr. Tom Card, Dr. C.E. Schmidt, a field technician, and CARB staff. The testing was conducted over a one-day time period, October 3, 2018. operations included in the Phase 2 testing effort were selected by the Facility Manager using Phase 1 and Phase 2 data; the selection process involved identifying operating facilities, contacting facility owners/operators and the regional water boards for permission and access for testing and arranging for access to facilities on the days of testing. Testing included making arrangements for testing, equipment preparation, travel to the facilities, obtaining access to the specific test locations, testing, preparing and shipping air and water samples to the laboratories. Testing activities were observed by one or more representatives from the facilities and the regional water boards.

The objective of this effort was to obtain a more detailed estimate for pond emissions for selected ponds that were tested in Phase 1 (regional screening) and Phase 2 (two in-depth field tests in Phase 2). This memorandum includes a discussion of the testing methodology, quality control procedures, results, discussion of the results, and summary statements. The actual facility emissions estimates and control efficiency calculations are reported elsewhere.

II. TEST METHODOLOGY

Testing for surface flux was conducted using the US EPA recommended Surface Isolation Flux Chamber (Radian Corporation, February 1986) following the project Test Plan. Flux chamber sampling was performed on the wastewater surface of selected unit processes (Photo 1). Process was collected using a long-handle 'dipper' following the Test Plan protocol (Photo 2). was transferred to a container where pH and total dissolved solids (TDS) were measured, then the waste water was poured into method-specific sample containers for per method.

The operation of the surface flux chamber and gas sample collection is given below:

- 1) Flux chamber, sweep air, sample collection equipment, and field documents were located on-site.
- 2) The facility information, location information, equipment information, date, and proposed time of testing were documented on the Emissions Measurement Field Data Sheet.
- 3) The exact test location was selected and placed about 0.5" to 1" into the liquid or oil surface sealing the chamber bottom edge for testing.
- 4) The sweep air flow rate (ultra-high purity- UHP air) was initiated and the calibrated rotameter, which controls the sweep air flow rate, was set at 5.0 liters per minute. A constant sweep air flow rate was maintained throughout the measurement for each sampling location.
- 5) Flux chamber data were recorded every residence interval (6 minutes) for five intervals, or 30 minutes. Source temperature and ambient temperature, along with source description and UTM coordinates were recorded during the equilibration time period.
- 6) At steady-state (greater than 5 residence intervals per method), the sample line was purged preparing for sample collection. Sample collection was performed by interfacing the sample canister to the purged, sample line and filling the sampling media with sample gas or collecting the desired sample following sample collection protocols as per the Test Plan. The canisters were filled to atmospheric pressure and then sealed.
- 7) After sample collection, the sample collection information was documented on the field data sheet and sample collection Chain of Custody sheet.
- 8) After sampling, the flux measurement was discontinued by shutting off the sweep air, removing the chamber, and securing the equipment. The sample line was back-flushed with UHP clean air, and the flux chamber was cleaned by dry wipe with a clean paper towel and then washed as needed with soap and water.

- 9) The sampling location was recorded on the field data sheet. The equipment was then relocated to the next test location and steps 1) through 8) were repeated.

The operation of the liquid 'dipper' and liquid sample collection is given below:

- 1) The long-handle dipper and collection container, field analyzers, and field documents were located on-site at the selected test location. Note- screening surveys were conducted at multiple locations for each unit process tested supporting the flux chamber and liquid sample collection locations.
- 2) The facility information, location information, equipment information, date, and proposed time of testing were documented on the sample collection log sheets.
- 3) A location near the flux chamber test (1' to 2') was selected for liquid sampling and the dipper was rinsed with , then a sample was taken below the surface by filling the dipper and retrieving the sample catch as shown below.
- 4) Once collected, the sample catch was tested for pH and TDS using calibrated real-time instruments, then the sample vials were filled as per the method specifications, sealed, and stored following the sample preservation requirements.
- 5) After sample collection, the dipper and sampling containers were cleaned by washing and drying as was appropriate.
- 6) Samples were sealed, labels were applied, sample collection was recorded on Chain of Custody sheets, and samples were prepared for shipping to the laboratory.

Sample collection information is provided in Table 1.

Photo 1. Flux Chamber Testing on Liquid Surface.



Photo 2. Liquid Sample Collection.



III. QUALITY CONTROL

Control procedures that were used to ensure compliance to the data quality specifications as stated in Test Plan and are listed and described below. The application and frequency of these procedures were developed to meet the program data quality objectives and were executed without exception. QC data for air analyses are found on Table 2 (field blank data and precision data). Liquid analyses QC data (field blank and precision data) are provided with the lab sheets.

Field Documentation -- A field notebook containing data forms, including sample chain-of-custody (COC) forms, was maintained for the testing program. Attachment A contains the Emission Measurement Data Sheets.

Chain-of-Custody -- COC forms were used for field data collection; all samples were logged daily. Field data were recorded on the COC forms provided in Attachment B.

VOC Analysis by US EPA Method TO-14

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds. These data are reported in the method specific lab reports (footnoted on each lab report showing compliance with the methods).

Laboratory Method Blank- A total of two laboratory method blank samples were performed by the laboratory. No compounds were detected in either blank sample. These data indicate acceptable method performance.

Laboratory Precision- A total of two laboratory Lab Control Duplicate (LCD) samples including nine compounds were performed by the laboratory. The LCD samples were reported within the criteria of 25 relative percent difference (RPD). These data indicate acceptable method performance.

Laboratory Accuracy- A total of two laboratory Lab Control Samples (LCS) including nine compounds were performed by the laboratory. The LCS sample was reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – One media (field) blank sample was prepared in the field (T-113) was analyzed as field sample (blind QC sample). No compounds were detected above the method detection limits. These data demonstrate acceptable method performance.

Field Method Precision – One field sample was collected in replicate and analyzed for the flux chamber testing (T-111/-112). The sample and replicate showed 33 compound pairs with 14 pairs exceeding criteria ($\pm 50\%$). The criteria for field precision is RPD 50 which is often times a challenge with petroleum related compounds at a wide range of concentrations. With half or

more sample/compound pairs meeting criteria, including the principle compounds of interest (BTEX, TNMHC) the field precision is identified as acceptable.

VOC Analysis by US EPA Method TO-15

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of two laboratory method blank samples were performed by the laboratory. No compounds were detected in the blank samples. These data indicate acceptable method performance.

Laboratory Precision- A total of two laboratory LCD sampled including 16 compounds were performed by the laboratory. The LCD sample compounds were reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- A total of two laboratory LCS samples including nine compounds were performed by the laboratory. The LCS samples were reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – One media (field) blank sample was prepared in the field (T-113) was analyzed as field samples (blind QC sample). No compounds were detected above the method detection limits. These data demonstrate acceptable method performance.

Field Method Precision – One field sample was collected in replicate and analyzed for the flux chamber testing (T-111/-112). The sample and replicate pair showed 9 compound pairs with all pairs meeting criteria ($\pm 50\%$). These data indicate acceptable laboratory method performance.

Methane Analysis by ASTM Method 3416

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- One laboratory method blank sample was performed by the laboratory. Methane was not detected in the blank sample. These data indicate acceptable method performance.

Laboratory Precision- One LCD sample was performed by the laboratory. The sample was reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- One LCS sample was performed by the laboratory. The sample was reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – One media (field) blank sample was prepared in the field (T-113) was analyzed as a field sample (blind QC sample). Methane was not detected above method detection limit. These data demonstrate acceptable method performance.

Field Method Precision – One field sample was collected in replicate and analyzed for the flux chamber testing (T-111/-112). The sample/replicate pair compounds were within the RPD criteria of 50. These data indicate acceptable method performance.

Carbon Dioxide Analysis by ASTM Method 1946

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- One method blank sample was performed by the laboratory. Carbon dioxide was not detected in the blank sample. These data indicate acceptable method performance.

Laboratory Precision- One LCD sample was performed by the laboratory. The sample was reported within the criteria of 25 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- One LCS sample was performed by the laboratory. The sample was reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – One media (field) blank sample was prepared in the field (T-113) was analyzed as a field sample (blind QC sample). Carbon dioxide was not detected above method detection limit. These data demonstrate acceptable method performance.

Field Method Precision – One sample/replicate pair was collected in replicate and analyzed for the flux chamber testing (T-111/-112). Carbon dioxide was not detected in these samples and no comment can be made about field precision, but the laboratory precision was within specifications indicating acceptable method performance.

Liquid Sample VOC Analysis by US EPA Method 8260b

Method QC Requirements- Method QC procedures were completed as per method requirements including recovery of surrogate compounds, matrix spike samples, and matrix spike duplicate samples. These data are reported in the method specific lab reports.

Laboratory Method Blank- A total of one laboratory method blank sample was performed by the laboratory. No compounds were detected in the samples above detection. These data indicate acceptable method performance.

Laboratory Precision- A one laboratory LCD sample including nine compounds and three surrogates were performed by the laboratory. The LCD sample was reported within the criteria of 20 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- A total of one LCS sample including nine compounds and three surrogates was performed by the laboratory. The LCS sample was reported within the criteria of 70-to-130 percent recovery. These data indicate acceptable method performance.

Field System Blank – One media (field) blank sample was prepared in the field (V-113) was analyzed as a field sample (blind QC sample). In total, one compound, toluene at 0.14 ug/L was detected in the field blank sample below the practical quantitation limit. These data demonstrate acceptable method performance.

Field Method Precision – One field sample was collected in replicate and analyzed for the flux chamber testing (V-111/-112). The sample/replicate pair had 11 compound pairs, and all were within precision criteria (± 50 RPD). These data indicate acceptable method performance.

Liquid Sample Oil and Grease Analysis by US EPA Method 1664

Method QC Requirements- Method QC procedures were completed as per method requirements. These data are reported in the method specific lab reports.

Laboratory Method Blank- One laboratory method blank sample was performed by the laboratory. No compounds were detected in the blank sample above detection. These data indicate acceptable method performance.

Laboratory Precision- A total of one LCD sample was performed by the laboratory. The LCD sample was reported within the criteria of 18 RPD. These data indicate acceptable method performance.

Laboratory Accuracy- A total of one laboratory LCS sample was performed by the laboratory. The LCS sample was reported within the criteria of 78-to-114 percent recovery. These data indicate acceptable method performance.

Field System Blank – One media (field) blank sample was prepared in the field (J-113) and was analyzed as a field sample (blind QC sample). The sample showed non-detect. These data demonstrate acceptable method performance.

Field Method Precision – One field sample was collected in replicate and analyzed for the flux chamber testing (J-111/-112). The replicate sample showed precision within the criteria of ± 50 RPD (28). These data indicate acceptable method performance.

IV. RESULTS AND DISCUSSIONS

A summary of the field sample collection data and information for the testing conducted during this source test is provided in Table 1. All field data for the on-site surface flux chamber testing for temperature, along with sample identification and sample ID data and information on the liquid sample collection are presented in Table 1.

Quality control data for both air and liquid samples is reported in Tables 2 through 5; blank and replicate QC data for air samples is found in Table 2; blank and replicate QC data for liquid samples is found in Table 5 along with the sample data.

Laboratory data for air samples are summarized in Table 3 and reported in concentration units, and in flux units in Table 4. All liquid sample data are summarized in Table 5 and are reported in concentration units.

Surface flux data for surface area sources are calculated using measured target compound concentrations and flux chamber operating parameter data (i.e., sweep air flow rate of 5.0 liters per minute, and surface area of 0.13 square meters [m^2]). The facility emissions can be calculated by multiplying the flux by the surface area of the source. The flux is calculated from the sweep air flow rate Q (cubic meters per minute [m^3/min]), the species concentration Y_i (micrograms or milligrams per cubic meter [$\mu g/m^3$; mg/m^3]), and exposure to the chamber surface area A (square meters [m^2]), as follows:

$$F_i = (Q) (Y_i) / (A)$$

V. SUMMARY

A follow-up, detailed investigation was performed on three systems of interest in Phase 2, Test No. 3. Testing was conducted with the intent of understanding at a higher level of certainty, the nature and extent of VOC emissions from these facilities which are operationally different. The following is a summary of activities and results associated with this objective:

- A total of 13 flux samples (including QC samples) were conducted using the US EPA Surface Emission Isolation flux chamber technology. The technology, coupled with regulatory approved analytical methods, quantitatively measures flux of VOCs and fixed gases at the test surface of study compounds. In addition, liquid samples were taken at each test location to determine the content of VOCs and oil/grease; the sample collection was co-located so that a relationship between VOC flux and dissolved phase VOCs in waste water could be established.
- Field and laboratory quality control data indicate acceptable data quality for the air methods, including US EPA Method TO-14 (GC/FID), US EPA Method TO-15 (GC/MS), and ASTM 1945 for carbon dioxide and ASTM Method 3416 for methane. Method and media blank samples were non-detection for study compounds and precision was acceptable (compounds generally within method limits) with the exception of Method TO-14 field replicate samples where about half of the compounds, but not BTEX or THMHC showed poor precision. Data qualification with flags is not necessary. Other QC parameters indicated acceptable method performance.
- Field and laboratory quality control data indicate acceptable data quality for the liquid methods, including US EPA Method 8260b (GC/MS) for dissolved phase VOCs and US EPA Method 1664 for oil and grease. Low levels of one compound, toluene, was detected in one field blank, and oil and grease field blanks non-detect. Other QC parameters indicated acceptable method performance.
- The flux data can be used to estimate VOC and fixed gas (methane and carbon dioxide) emissions from those operations tested. Likewise the liquid sample data can be used to describe the VOC and oil/grease content of the sources tested. Further, these data can be used to correlate concentration data to VOC flux data.

REFERENCES

US EPA. 1986. ***"Measurement of Gaseous Emission Rates From Land Surfaces Using an Emission Isolation Flux Chamber, Users Guide."*** EPA Environmental Monitoring Systems Laboratory, Las Vegas, Nevada, EPA Contract No. 68-02-3889, Work Assignment No. 18, Radian Corporation, February 1986. NTIS # PB 86-223161.

Card, TR, and CE Schmidt, Test Plan. August 17, 2017. ***"Measurement of Emissions from Crude Oil and Natural Gas Operations"***.

Attachment 1
Field Notes

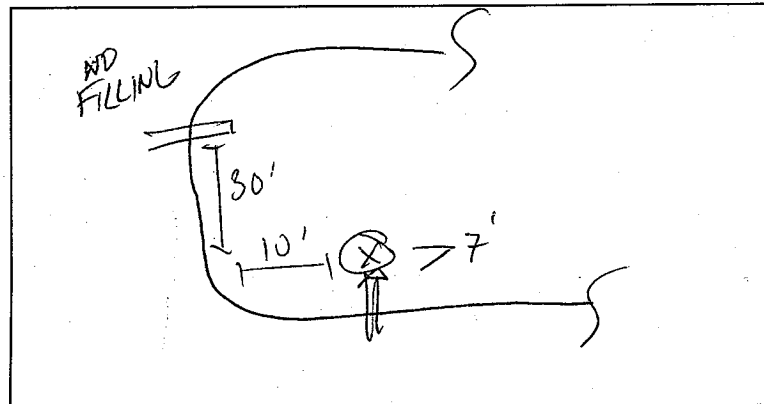
SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/3/18 SAMPLERS LES THE SPA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 3
 SURFACE DESCRIPTION P-4 / Brown water w/ GREEN SLUMLINE
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 06554 SUPPLIER PA PSIG START 1000 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0735	S.O ↓ ↓ ↓ V	0							46 69	
↓		1								
↓		2							TW1 #860	
0753		3			69	69			ΔT 3'40"	
↓		4								
0806		5								

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

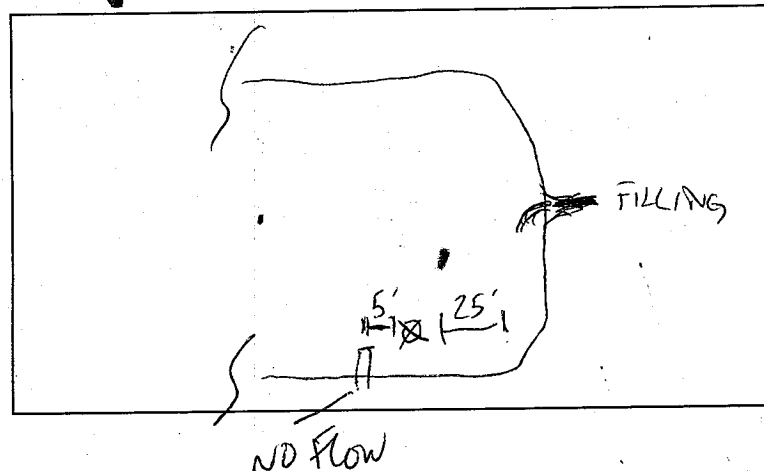
DATE 10/3/18 SAMPLERS LES TPC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 3
 SURFACE DESCRIPTION P3 / Blown WATER w/ clumpy ALGAE SCUM
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL ✓ CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 114719 SUPPLIER PA PSIG START 600 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
0739	5.0	0							40272	
↓		1								
↓		2						T102	777	
0757		3			73	72				
		4								
0809	V	5								
ΔT	4.03									

COMMENTS:

POND FILLING
FLOATING SCUM ~ 5%
GREEN ALGAE

SITE DIAGRAM

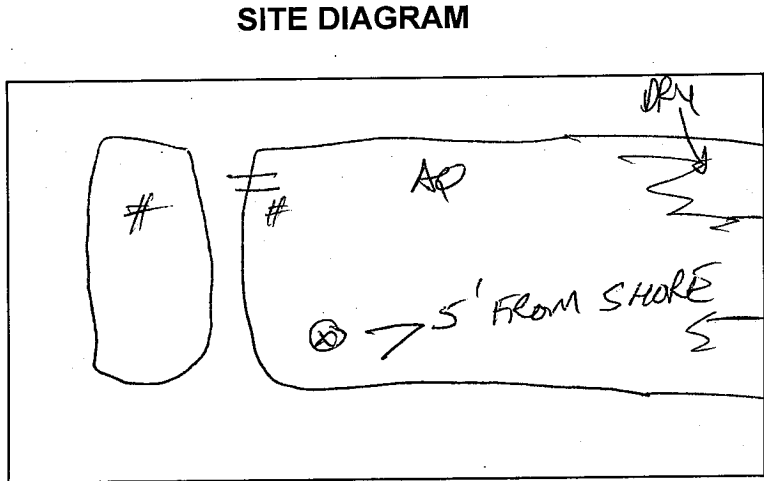


SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/3/18 SAMPLERS URS / TRC / JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. _____
 SURFACE DESCRIPTION SWE #4 P5
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment SLIGHT SPRINKLES
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR UHP CC 9250 SUPPLIER PRAXAIR PSIG START 1100 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1007	510	0								
↓	↓	1								
↓	↓	2								
1019		3			70	73				
		4								
1037		5						T-104	#651 AT 4'50"	

COMMENTS: NO SHEEN



SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/3/18 SAMPLERS LBS TRC JDA

LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 4

SURFACE DESCRIPTION P-4 / Blown WATER w/ vly LIGHT SCREEN

CURRENT ACTIVITY _____

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS _____

CHAMBER I.D. G PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5' SLIGHT mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment SPRINKLE RAIN

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

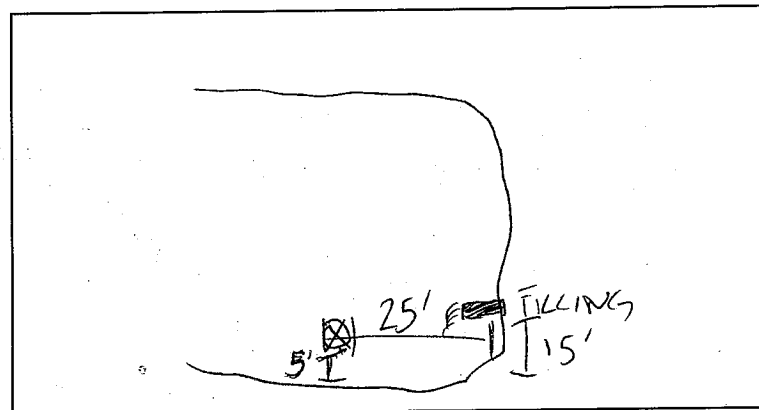
SWEEP AIR UHP CC 114719 SUPPLIER PA PSIG START 600 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1013	5.0	0								
↓		1								
↓		2								
1031		3			77	72			7105 #643 ΔT	
↓		4								
1043	✓	5								
ΔT	2:30"									

COMMENTS:

FILLING

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

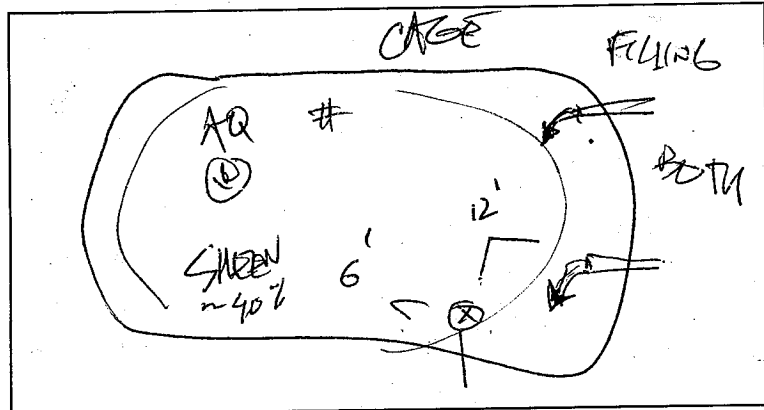
DATE 10/3/18 SAMPLERS LES TREC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 4
 SURFACE DESCRIPTION CP-5 (SIGN) Blown water w/ SAEEN & 100% & 30MB 40MB
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. D PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VAP CC 06554 SUPPLIER PA PSIG START 1100 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1110	5.0	0								
↓	↓	1								
↓	↓	2						T106	#548	
1128	↓	3			117	69			AT 3'15"	
		4								
1140	✓	5								

COMMENTS:

SOME SWEEP
IN CHAMBER

SITE DIAGRAM



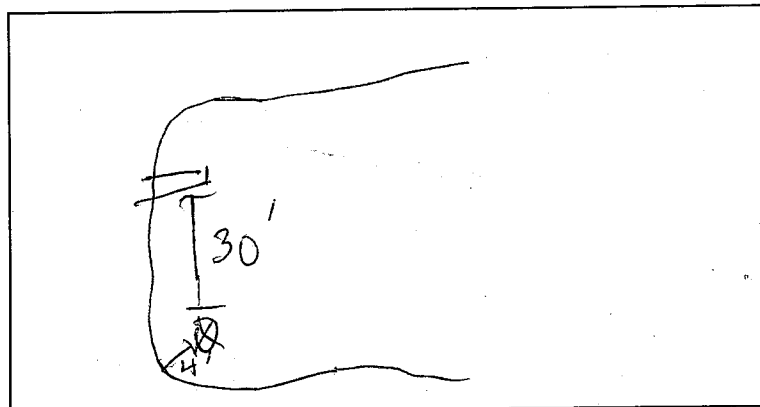
SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/3/18 SAMPLERS LES TRC JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 1
 SURFACE DESCRIPTION P9 / Brown WATER w/ 5% Brown SCUM Layer
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 06554 SUPPLIER PA PSIG START 1600 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1348	5.0	0								
↓	↓	1								
↓	↓	2								
1406	↓	3			77	72		T107	#1680 Δ 4'05"	
	↓	4								
1418	✓	5								

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

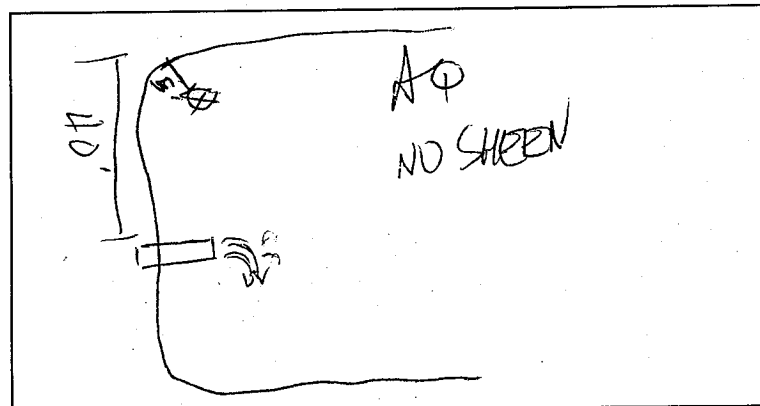
DATE 10/3/18 SAMPLERS LES TPL JDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 1
 SURFACE DESCRIPTION P-8 / Brown WATER
 CURRENT ACTIVITY Filling
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. 0 PHOTO TAKEN: Yes No
 CHAMBER SEAL ✓ CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 114719 SUPPLIER PA PSIG START 500 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1345	5.0	0								
↓		1								
↓		2								
1403		3			74°	78°			T108 #152	
↓		4							AT	
1413	✓	5								
AT	4'10"									

COMMENTS:

FILLING POND

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

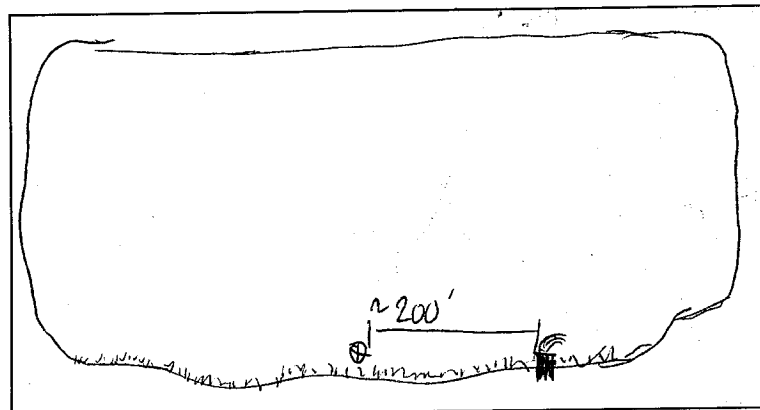
DATE 10/3/18 SAMPLERS LBS THE JON
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 1
 SURFACE DESCRIPTION P2 Flow THROUGH / Brown water w/ broken sheet & small
 CURRENT ACTIVITY BLACK Globules - Black Oil & SCUM ON P2
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. G PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHP CC 06554 SUPPLIER PA PSIG START 1500 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1449	5.0 ↓	0								
		1								
		2								
1507		3			72	74				
1519		4							T109 #701 AT 4'30"	
		5								

COMMENTS:

FILLING

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

DATE 10/3/18 SAMPLERS LES TRL JDA

LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 1

SURFACE DESCRIPTION P.I. FLOW THROUGH POND/BLOWN WATER w/ BLOCKED SCREEN

CURRENT ACTIVITY BLACK OIL GLOBES OTHER SIDE

INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____

INSTRUMENT BASELINE _____

PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS _____

CHAMBER I.D. D PHOTO TAKEN: Yes No

CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____

AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5', _____ mph Wind at Seal, _____ mph

TEMP _____ RAIN: Yes No Comment _____

PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None

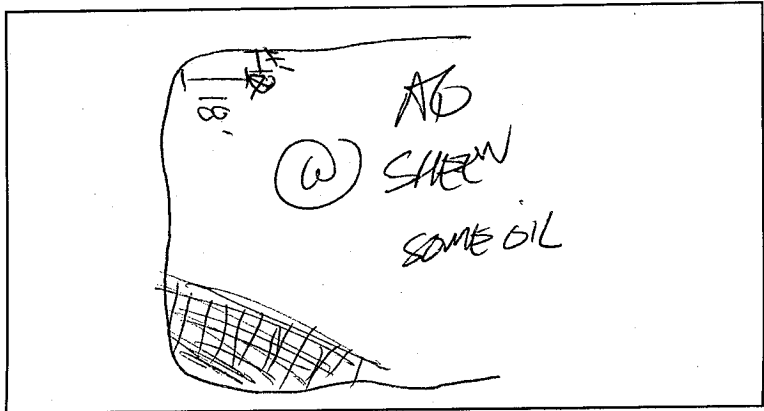
SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used

SWEEP AIR VAP CC 114719 SUPPLIER PTA PSIG START 500 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1450	5.0 ↓ ↓ ↓ ↓	0								
		1								
		2								
1508		3						T110	#725, " AT 330"	
		4			77	74			# AT 330	
1520		5						T111	#668, " AT 350"	
1524										

COMMENTS:

SITE DIAGRAM



SURFACE FLUX MEASUREMENT DATA FORM

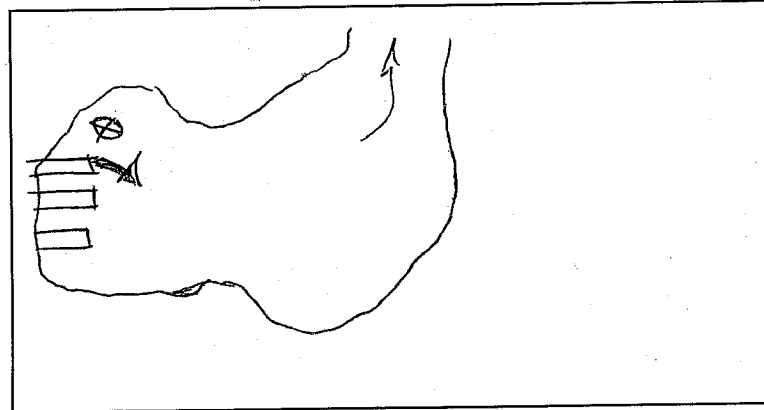
DATE 10/3/18 SAMPLERS CRS JRC SDA
 LOCATION Air Resources Board Oil Field Wastewater Air Emissions Assessment Phase II Site No. 1
 SURFACE DESCRIPTION CP3-OUT / DARK WATER w/STRAW & GLOBULES
 CURRENT ACTIVITY _____
 INSTRUMENT TYPE _____ I.D. NO. _____ TYPE _____ ID NO. _____
 INSTRUMENT BASELINE _____
 PROJECT QC: BACKGROUND MEASUREMENTS BLANK MEASUREMENTS REPLICATE MEASUREMENTS
 AMBIENT CONCENTRATIONS _____
 CHAMBER I.D. 9 PHOTO TAKEN: Yes No
 CHAMBER SEAL Y CONDENSATION: Yes No BARM PRESS _____
 AMBIENT CONDITIONS: Sun P.Sun Cloudy Wind at 5' 11.1111 mph Wind at Seal, _____ mph
 TEMP _____ RAIN: Yes No Comment _____
 PRIOR CHAMBER CLEANING: Full Wash Wet Wipe Dry Wipe None
 SAMPLE LINE: BACK FLUSHED PRIOR TO START PURGED PRIOR TO SAMPLING New Used
 SWEEP AIR VHR CC 06554 SUPPLIER PA PSIG START 400 PSIG STOP _____

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments
			Chamber		Ambient		pH	TDS (mg/l)		
			Surf	Air	Surf	Air				
1551	5.0 ↓ ↓ ↓ ↓	0								
↓		1								
↓		2						T112	#689	
1609		3			82	83			AT 4'00"	
↓		4								
1621		5								

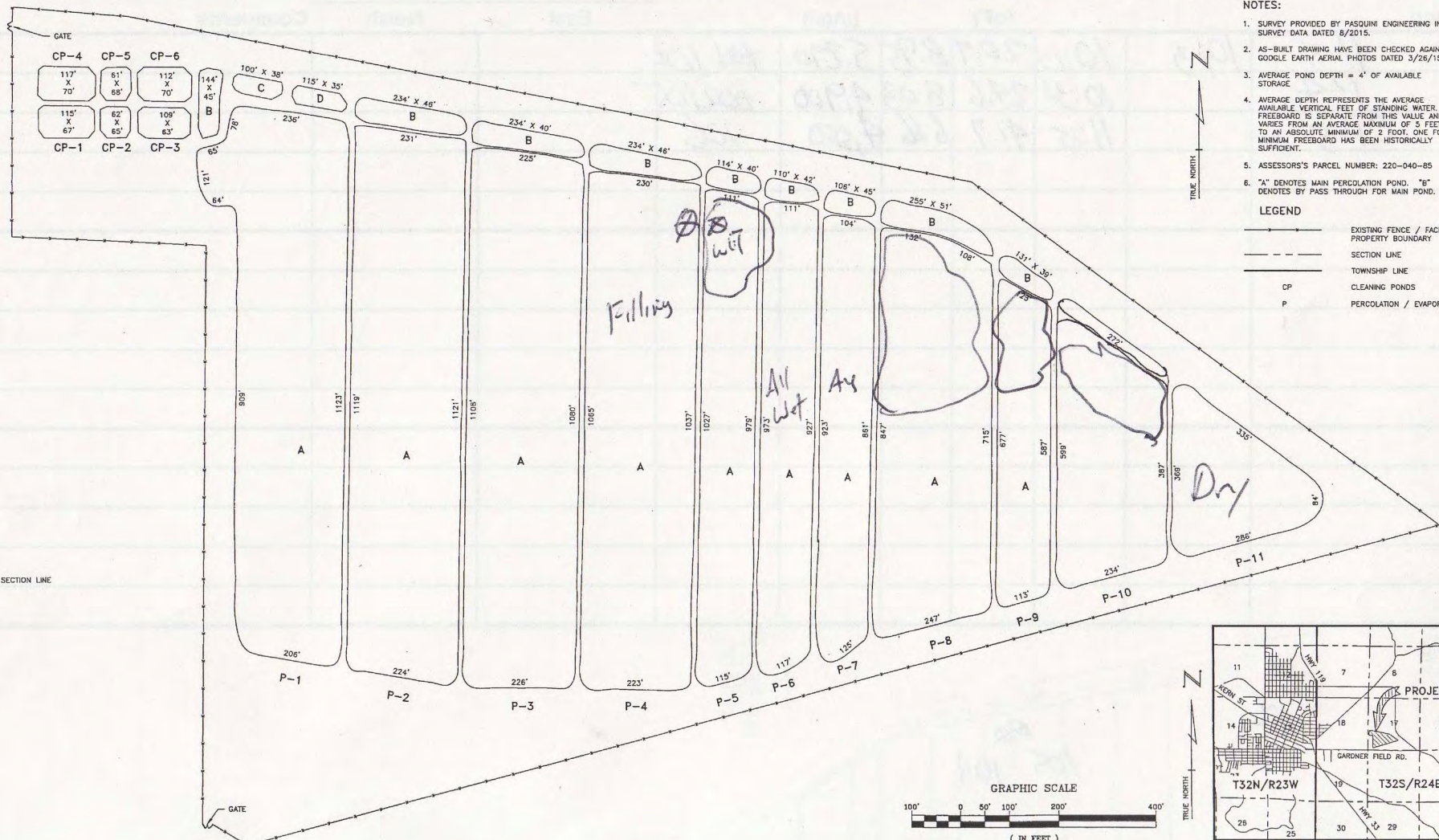
COMMENTS:

FILLING/FLOWING
CAGED PONDS TGO ONLY TO TEST
MEDIA BANK
T=113
690
1602

SITE DIAGRAM



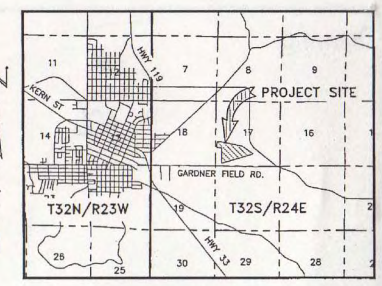
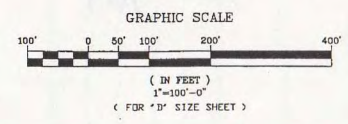
I:\2015\Valley Water Management\15384 - Perc Ponds Record Drawings\Civil\Working\SE Taft (new)\015384-09.dwg 01/12/2016 07:24 p001456C (01/12/2016 07:23)



- NOTES:**
1. SURVEY PROVIDED BY PASQUINI ENGINEERING INC. SURVEY DATA DATED 8/2015.
 2. AS-BUILT DRAWING HAVE BEEN CHECKED AGAINST GOOGLE EARTH AERIAL PHOTOS DATED 3/26/15.
 3. AVERAGE POND DEPTH = 4' OF AVAILABLE STORAGE
 4. AVERAGE DEPTH REPRESENTS THE AVERAGE AVAILABLE VERTICAL FEET OF STANDING WATER. FREEBOARD IS SEPARATE FROM THIS VALUE AND VARIES FROM AN AVERAGE MAXIMUM OF 5 FEET TO AN ABSOLUTE MINIMUM OF 2 FOOT. ONE FOOT MINIMUM FREEBOARD HAS BEEN HISTORICALLY SUFFICIENT.
 5. ASSESSOR'S PARCEL NUMBER: 220-040-85
 6. "A" DENOTES MAIN PERCOLATION POND. "B" DENOTES BY PASS THROUGH FOR MAIN POND.

LEGEND

	EXISTING FENCE / FACILITY PROPERTY BOUNDARY
	SECTION LINE
	TOWNSHIP LINE
	CLEANING PONDS
	PERCOLATION / EVAPORATION PONDS



NUMBER	SHT	REFERENCE DRAWINGS

VALLEY WATER
MANAGEMENT COMPANY

REV. NO.	DATE	REVISED	DESTROY ALL PREVIOUS REVISIONS EARLIER DATE	REV. BY	APP'D BY	APPROVED BY
A	12/18/15	ISSUED FOR REVIEW		MW/MSC	JAC	
B	01/06/16	RE-ISSUED FOR REVIEW		MW/MSC	JAC	

TJCROSS
ENGINEERS
a PARSONS Company

PERCOLATION POND AS-BUILT
VALLEY WATER MANAGEMENT COMPANY
SOUTHEAST TAFT (NEW)
TAFT AREA T32S/R24E, SEC 17

C-15384-09 B 1/1

Attachment 2
Chain of Custody Forms

CE Schmidt, P.H., Environmental Consultant
Chain of Custody Record

Form Serial Number: **CGS F-102/106**
 Client Name: **Air Resources Board**
 Project Manager: **Chiffeld WW Emissions Assessment**
 Luis Leyva
 916.323.1079
 Requested Completion Date: _____

For Information Regarding These Samples
 Please Contact:
 D. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530-529-4256
 E-Mail: SCHMIDT@CE@aol.com

Client Address and Phone Number
 1001 / Street
 Sacramento, CA 95814 800-242-4450
 Analysis Requested: _____

Station Number	Date	Time	C G O R M A P B	Sample ID Number	# OF CONTAINERS			Sample Container	Remarks
					S	Vial	Jar / Tube		

10/3/2018	7:45	J-101	X	1	X				
10/3/2018	8:00	J-102	X	1	X				
10/3/2018	8:45	J-103	X	1	X				
10/3/2018	10:5	J-104	X	1	X				
10/3/2018	10:30	J-105	X	1	X				
10/3/2018	11:15	J-106	X	1	X				
10/3/2018	12:55	J-107	X	1	X				
10/3/2018	14:05	J-108	X	1	X				
10/3/2018	14:55	J-109	X	1	X				
10/3/2018	15:10	J-110	X	1	X				
10/3/2018	15:10	J-111	X	1	X				
10/3/2018	15:55	J-112	X	1	X				
10/3/2018	16:10	J-113	X	1	X				

Sampler: **OS QUINN**
 Received by: **OS QUINN**
 Date/Time: **10/3/18 10:35**
 Relinquished by: **OS QUINN**
 Date/Time: **10/3/18 16:33**
 Received by Laboratory: **OS QUINN**
 Date/Time: **10/3 17:45**
 Relinquished by: _____
 Date/Time: _____
 Remarks: All Samples are in a Wastewater Matrix

Sample Shipped Via: **BUS**
 UPS FEDEX Other

Attachment 3
Laboratory Reports

Laboratory Report

Project Name:

Air Resource Board

EAS SDG Number: **218511**

Client Project Manager: Chuck Schmidt

Prepared For:

C.E. Schmidt
19200 Live Oak Road
Red Bluff CA 96080

Project Number: 17198

Sample Event Date: 10/3/18

Received Date: 10/3/2018

Report Date: 10/22/2018

Project Number: None Given

PO Number: None Given

This is the Laboratory Report for the samples in the indicated Sample Delivery Group (SDG). Each sample received in the group is assigned a Laboratory ID number. The combination of the SDG number and the Lab ID number is a unique identifier for the sample.

This Report Contains:

- Laboratory Work Order
- Project Sample Media
- Laboratory Case Narrative and Chain of Custody
- Method Description (when applicable)
- Quality Control Reports
- Analytical Reports

NELAC Certification: Florida E871125

173 Cross Street, San Luis Obispo, CA 93401 (805) 781-3585

Laboratory Work Order

SDG Number: 218511

Project Number: 17198

Client: Chuck Schmidt

Received: 10/3/2018

C.E. Schmidt

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T-101	218511 1	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-101	218511 1	EPA TO-14 DHA with TNMHC	10/3/2018
T-101	218511 1	EPA TO-15 VOC	10/3/2018
T-101	218511 1	ASTM D1945 Carbon Dioxide	10/3/2018
T-102	218511 2	ASTM D1945 Carbon Dioxide	10/3/2018
T-102	218511 2	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-102	218511 2	EPA TO-14 DHA with TNMHC	10/3/2018
T-102	218511 2	EPA TO-15 VOC	10/3/2018
T-103	218511 3	ASTM D1945 Carbon Dioxide	10/3/2018
T-103	218511 3	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-103	218511 3	EPA TO-14 DHA with TNMHC	10/3/2018
T-103	218511 3	EPA TO-15 VOC	10/3/2018
T-104	218511 4	ASTM D1945 Carbon Dioxide	10/3/2018
T-104	218511 4	EPA TO-15 VOC	10/3/2018
T-104	218511 4	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-104	218511 4	EPA TO-14 DHA with TNMHC	10/3/2018
T-105	218511 5	ASTM D1945 Carbon Dioxide	10/3/2018
T-105	218511 5	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-105	218511 5	EPA TO-14 DHA with TNMHC	10/3/2018
T-105	218511 5	EPA TO-15 VOC	10/3/2018
T-106	218511 6	ASTM D1945 Carbon Dioxide	10/3/2018
T-106	218511 6	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-106	218511 6	EPA TO-14 DHA with TNMHC	10/3/2018

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
T-106	218511 6	EPA TO-15 VOC	10/3/2018
T-107	218511 7	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-107	218511 7	EPA TO-14 DHA with TNMHC	10/3/2018
T-107	218511 7	EPA TO-15 VOC	10/3/2018
T-107	218511 7	ASTM D1945 Carbon Dioxide	10/3/2018
T-108	218511 8	ASTM D1945 Carbon Dioxide	10/3/2018
T-108	218511 8	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-108	218511 8	EPA TO-14 DHA with TNMHC	10/3/2018
T-108	218511 8	EPA TO-15 VOC	10/3/2018
T-109	218511 9	ASTM D1945 Carbon Dioxide	10/3/2018
T-109	218511 9	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-109	218511 9	EPA TO-14 DHA with TNMHC	10/3/2018
T-109	218511 9	EPA TO-15 VOC	10/3/2018
T-110	218511 10	EPA TO-14 DHA with TNMHC	10/3/2018
T-110	218511 10	EPA TO-15 VOC	10/3/2018
T-110	218511 10	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-110	218511 10	ASTM D1945 Carbon Dioxide	10/3/2018
T-111	218511 11	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-111	218511 11	EPA TO-14 DHA with TNMHC	10/3/2018
T-111	218511 11	EPA TO-15 VOC	10/3/2018
T-111	218511 11	ASTM D1945 Carbon Dioxide	10/3/2018
T-112	218511 12	ASTM D1945 Carbon Dioxide	10/3/2018
T-112	218511 12	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-112	218511 12	EPA TO-14 DHA with TNMHC	10/3/2018
T-112	218511 12	EPA TO-15 VOC	10/3/2018
T-113	218511 13	EPA TO-15 VOC	10/3/2018
T-113	218511 13	ASTM D1945 Carbon Dioxide	10/3/2018
T-113	218511 13	ASTM D3416 Methane, MDL 0.5 ppmv	10/3/2018
T-113	218511 13	EPA TO-14 DHA with TNMHC	10/3/2018

Project Sample Media

SDG Number: 218511

The following sample media was used for this Sample Delivery Group (SDG). The Sample Media column identifies the type of media. For canisters, the Sample Media Batch gives the canister number followed by the cleaning batch number, which is a unique identification. Canisters that are received with sub-ambient pressures are pressurized to about 5 psig. The initial pressure of the canister when it is received is recorded along with the final pressure after pressurization. The canister dilution factor is the ratio of the final to initial pressure. The results are adjusted for the can dilution factor.

SDG	Lab ID	Client Sample No.	Sample Media	Batch	Pressure, torr		Can Factor
					Initial	Final	
218511	1	T-101	860	092818B	728	906	1.24
218511	2	T-102	777	092818B	737	904	1.23
218511	3	T-103	882	092818B	709	904	1.28
218511	4	T-104	651	092818B	721	910	1.26
218511	5	T-105	643	092818B	725	900	1.24
218511	6	T-106	548	092818B	724	909	1.26
218511	7	T-107	680	092818B	714	902	1.26
218511	8	T-108	158	092818B	707	906	1.28
218511	9	T-109	704	092818A	725	908	1.25
218511	10	T-110	725	092818A	720	890	1.24
218511	11	T-111	668	092818A	715	900	1.26
218511	12	T-112	689	092818A	703	908	1.29
218511	13	T-113	698	092818A	797	906	1.14

Laboratory Case Narrative

EAS SDG Number: 218511

Project Number: 17198

Client: C.E. Schmidt

The Laboratory Case Narrative for the SDG is below. The Chain of Custody form(s) follow the Laboratory Case Narrative.

Sample Control Narrative

The samples were all received in good condition and with proper preservation.

Analytical Methods

The methods used for sample analysis are listed on the Analytical Report header, and have been modified as described in the EAS Quality Manual.

Case Narrative

QC Narrative

All analyses met EAS method criteria as defined in the Quality Manual, except as noted in the report or QC reports with data qualifiers.

Subcontract Narrative

No sample analysis was subcontracted for this project

Laboratory Certification

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness other than the condition(s) noted above. The Laboratory Report is property of EAS and its client. The entire report has been reviewed and approved.



Date Approved: 10/22/2018

Steven D. Hoyt, Ph.D.
Environmental Analytical Service
Laboratory Director

Quality Control Report

EAS SDG Number 218511

Project Number: 17198

QC Narrative

Samples were analyzed in a daily analytical batch (DAB) designated by a QC batch number, and were analyzed using EAS standard laboratory QC specified in the EAS Quality Manual which may be different than the referenced agency method. Any deviations from the EAS QC criteria are flagged in the Laboratory Control Reports or in the sample Analytical Reports.

Standard Laboratory QC Report

Unless project specific QC was requested, this Section containing the standard laboratory QC (Level 2) supplied with the Analytical Reports. Each sample is analyzed in a Daily Analytical Batch (DAB) which includes the method blank, a laboratory control spike (LCS) and a laboratory control duplicate (LCD). A Daily Analytical Batch QC report is supplied for each method requested.

Method Blank

A method blank is a laboratory generated sample which assesses the degree to which laboratory operations and procedures cause a false positive. In the method blank, compounds should be present below the reporting limit (RL). Compounds present above the RL are flagged with a "B" in the Analytical Reports in that batch unless the result is greater than ten times the blank value..

Laboratory Control Spike

A laboratory control spike is a well characterized matrix similar to the sample which is spiked and run in duplicate with each Daily Analytical Batch. The laboratory control spike results are reported as a percent recovery. The QC Criteria for the control spike is listed in the Laboratory Control Report. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report. The control spike contains an abbreviated list of compounds in the method, and may contain compounds not on the target list for the specified report.

Laboratory Control Duplicate

The laboratory control duplicate is a duplicate analysis of the laboratory control spike, a standard, or a sample depending on the method. The results are reported as a relative percent difference (RPD). The criteria for the duplicate is in the Laboratory Control Report for the Daily Analytical Batch. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report.

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B10158

File Name: B10158D.D
Description: METHOD BLANK
Canister:
QC_Batch: 101518-MA1

Date Sampled:
Date Analyzed: 10/15/18
Can Dilution Factor: 1.00
Air Volume: 200 ml
Time:
Time: 14:12

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	ND	0.80	4.05	ND	
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				99	70	130	

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B10178

File Name: B10178C.D
Description: METHOD BLANK
Canister:
QC_Batch: 101718-MA1

Date Sampled:
Date Analyzed: 10/17/18
Can Dilution Factor: 1.00
Air Volume: 200 ml
Time: 13:01

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.25	1.26	ND	1.24	6.22	ND	
74-87-3	Chloromethane	0.25	1.26	ND	0.52	2.60	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.79	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.78	ND	
74-83-9	Bromomethane	0.25	1.26	ND	0.97	4.88	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.07	ND	
75-69-4	Trichlorofluoromethane	0.25	1.20	ND	1.40	6.74	ND	
67-64-1	Acetone	1.25	3.08	ND	2.97	7.30	ND	
67-63-0	2-propanol	1.25	2.87	ND	3.07	7.05	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.16	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.18	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.89	7.22	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.32	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.50	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.94	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.52	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.47	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
67-66-3	Chloroform	0.25	1.25	ND	1.22	6.12	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.86	3.30	ND	
71-43-2	Benzene	0.25	1.27	ND	0.80	4.05	ND	
56-23-5	Carbon tetrachloride	0.25	1.19	ND	1.57	7.45	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.12	12.41	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.15	5.56	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.60	7.37	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.67	3.38	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.09	13.83	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.50	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
108-88-3	Toluene	0.50	1.31	ND	1.88	4.91	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.13	5.88	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.36	7.01	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.12	14.52	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.25	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.66	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.24	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.29	5.74	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.75	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.51	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.58	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.59	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.07	10.18	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.35	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.24	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.00	5.56	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.68	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.00	5.20	ND	
95-50-1	1,2-Dichlorobenzene	0.50	0.81	ND	3.00	4.87	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.27	12.75	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	1.25	1.33	ND	13.33	14.13	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				102	70	130	

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B10118

File Name: B10118B
Description: METHOD BLANK
Canister:
QC_Batch: 101118-GCK

Date Sampled:
Date Analyzed: 10/11/18
Can Factor: 1.00
Air Volume: 200 ml
Time: 11:06

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: LABQC
Laboratory Number: B10128

File Name: B10128B
Description: METHOD BLANK
Canister:
QC_Batch: 101218-GCK

Date Sampled:
Date Analyzed: 10/12/18
Can Factor: 1.00
Air Volume: 200 ml
Time: 11:17

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.00	3.00	ND	1.15	3.45	ND	ND
74-86-2	Acetylene	1.00	3.00	ND	1.07	3.20	ND	ND
74-84-0	Ethane	1.00	3.00	ND	1.23	3.70	ND	ND
115-07-1	Propene	0.67	2.00	ND	1.15	3.45	ND	ND
74-98-6	Propane	0.67	2.00	ND	1.20	3.61	ND	ND
75-28-5	i-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
106-98-9	1-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
106-97-8	n-Butane	0.50	1.50	ND	1.19	3.57	ND	ND
624-64-6	t-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
590-18-1	c-2-Butene	0.50	1.50	ND	1.15	3.45	ND	ND
78-78-4	i-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
109-67-1	1-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
109-66-0	n-Pentane	0.40	1.20	ND	1.18	3.55	ND	ND
78-79-5	Isoprene	0.40	1.20	ND	1.12	3.35	ND	ND
646-04-8	t-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
627-20-3	c-2-Pentene	0.40	1.20	ND	1.15	3.45	ND	ND
75-83-2	2,2-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
287-92-3	Cyclopentane	0.40	1.20	ND	1.15	3.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.33	1.00	ND	1.18	3.53	ND	ND
107-83-5	2-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
96-14-0	3-Methylpentane	0.33	1.00	ND	1.18	3.53	ND	ND
110-54-3	n-Hexane	0.33	1.00	ND	1.18	3.53	ND	ND
96-37-7	Methylcyclopentane	0.33	1.00	ND	1.15	3.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
71-43-2	Benzene	0.33	1.00	ND	1.07	3.20	ND	ND
110-82-7	Cyclohexane	0.33	1.00	ND	1.15	3.45	ND	ND
591-76-4	2-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
565-59-3	2,3-Dimethylpentane	0.29	0.86	ND	1.17	3.52	ND	ND
589-34-4	3-Methylhexane	0.29	0.86	ND	1.17	3.52	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
142-82-5	n-Heptane	0.29	0.86	ND	1.17	3.52	ND	ND
108-87-2	Methylcyclohexane	0.29	0.86	ND	1.15	3.45	ND	ND
592-13-2	2,5-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
589-43-5	2,4-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.25	0.75	ND	1.17	3.51	ND	ND
108-88-3	Toluene	0.29	0.86	ND	1.08	3.24	ND	ND
584-94-1	2,3-Dimethylhexane	0.25	0.75	ND	1.17	3.51	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
589-81-1	3-Methylheptane	0.25	0.75	ND	1.17	3.51	ND	ND
111-65-9	n-Octane	0.25	0.75	ND	1.17	3.51	ND	ND
100-41-4	Ethylbenzene	0.25	0.75	ND	1.09	3.26	ND	ND
108-38-3	m,p-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
100-42-5	Styrene	0.25	0.75	ND	1.07	3.20	ND	ND
95-47-6	o-xylene	0.25	0.75	ND	1.09	3.26	ND	ND
111-84-2	n-Nonane	0.22	0.67	ND	1.17	3.51	ND	ND
98-82-8	i-Propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
103-65-1	n-propylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
80-56-8	a-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
620-14-4	3-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
622-96-8	4-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
611-14-3	2-Ethyltoluene	0.22	0.67	ND	1.09	3.28	ND	ND
127-91-3	b-Pinene	0.20	0.60	ND	1.12	3.35	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
124-18-5	n-Decane	0.20	0.60	ND	1.17	3.50	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.22	0.67	ND	1.09	3.28	ND	ND
5989-27-5	d-Limonene	0.20	0.60	ND	1.12	3.35	ND	ND
141-93-5	1,3-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
105-05-5	1,4-Diethylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
104-51-8	n-Butylbenzene	0.20	0.60	ND	1.10	3.30	ND	ND
1120-21-4	Undecane	0.18	0.55	ND	1.16	3.49	ND	ND
112-40-3	Dodecane	0.17	0.50	ND	1.16	3.49	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	7.50	22.50	ND	26.50	79.49	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	45.00	135.00	ND	29.51	88.52	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: LABQC

Laboratory Number: B10108

File Name: B10108B

Date Sampled:

Time:

Description: METHOD BLANK

Date Analyzed: 10/10/18

Time: 10:52

Can/Tube#:

Can Dilution Factor: 1.00

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	100	300	ND	ND

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: **ASTM D3416**

SDG: LABQC
Laboratory Number: B10108

File Name: B10108A
Description: METHOD BLANK
Can/Tube#:
QC_Batch: 101018-GCL

Date Sampled:
Date Analyzed: 10/10/18
Dilution Factor: 1.00
Time: 10:19

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.10	0.30	ND	0.07	0.20	ND	

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 101518-MA1

Date: 10/15/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
75-01-4	Vinyl chloride	81		87		70	130	7	25	
75-35-4	1,1-Dichloroethene	84		89		70	130	5	25	
75-09-2	Dichloromethane	85		91		70	130	6	25	
75-34-3	1,1-Dichloroethane	84		86		70	130	2	25	
67-66-3	Chloroform	84		86		70	130	3	25	
71-55-6	1,1,1-Trichloroethane	85		85		70	130	0	25	
107-06-2	1,2-Dichloroethane	84		90		70	130	8	25	
71-43-2	Benzene	88		95		70	130	8	25	
56-23-5	Carbon tetrachloride	84		82		70	130	3	25	
79-01-6	Trichloroethene	97		102		70	130	5	25	
108-88-3	Toluene	95		99		70	130	4	25	
127-18-4	Tetrachloroethene	100		108		70	130	7	25	
100-41-4	Ethylbenzene	77		82		70	130	6	25	
1330-20-7	m,p-Xylenes	80		85		70	130	5	25	
95-47-6	o-Xylene	77		83		70	130	7	25	
108-67-8	1,3,5-Trimethylbenzene	76		80		70	130	6	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 101718-MA1

Date: 10/17/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	86		83		70	130	3	25	
75-35-4	1,1-Dichloroethene	88		97		70	130	10	25	
75-09-2	Dichloromethane	90		95		70	130	5	25	
75-34-3	1,1-Dichloroethane	88		94		70	130	7	25	
67-66-3	Chloroform	85		87		70	130	2	25	
71-55-6	1,1,1-Trichloroethane	86		84		70	130	2	25	
107-06-2	1,2-Dichloroethane	87		89		70	130	3	25	
71-43-2	Benzene	97		97		70	130	1	25	
56-23-5	Carbon tetrachloride	83		83		70	130	0	25	
79-01-6	Trichloroethene	98		103		70	130	5	25	
108-88-3	Toluene	98		104		70	130	5	25	
127-18-4	Tetrachloroethene	105		109		70	130	3	25	
100-41-4	Ethylbenzene	91		88		70	130	3	25	
1330-20-7	m,p-Xylenes	89		90		70	130	1	25	
95-47-6	o-Xylene	91		90		70	130	1	25	
108-67-8	1,3,5-Trimethylbenzene	85		85		70	130	0	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-14 Modified GC/FID

QC_Batch: 101118-GCK

Date: 10/11/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	
		%		%		%	%	%	%	
109-66-0	n-Pentane	93		97		70	130	5	25	
110-54-3	n-Hexane	96		91		70	130	4	25	
71-43-2	Benzene	94		93		70	130	1	25	
142-82-5	n-Heptane	95		92		70	130	3	25	
108-88-3	Toluene	95		92		70	130	3	25	
111-65-9	n-Octane	96		97		70	130	2	25	
108-38-3	m,p-xylene	102		102		70	130	0	25	
95-47-6	o-xylene	97		103		70	130	6	25	
108-67-8	1,3,5-Trimethylbenzene	103		113		70	130	10	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

EPA Method TO-14 Modified GC/FID

QC_Batch: 101218-GCK

Date: 10/12/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery	Flag	Recovery	Flag	LCL	UCL	Duplicate	Limit	Flag
		%		%		%	%	%	%	
109-66-0	n-Pentane	92		85		70	130	7	25	
110-54-3	n-Hexane	91		85		70	130	6	25	
71-43-2	Benzene	90		85		70	130	4	25	
142-82-5	n-Heptane	89		83		70	130	7	25	
108-88-3	Toluene	82		77		70	130	6	25	
111-65-9	n-Octane	89		86		70	130	3	25	
108-38-3	m,p-xylene	88		87		70	130	1	25	
95-47-6	o-xylene	89		90		70	130	0	25	
108-67-8	1,3,5-Trimethylbenzene	96		95		70	130	1	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D 1945 GC/TCD

Analytical Method: D1945

QC_Batch: 101018-GCO

Date Analyzed: 10/10/18

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	Flag
7782-44-7	Oxygen	96		96		70	130	0	25	
7727-37-9	Nitrogen	100		95		70	130	5	25	
74-82-8	Methane	107		109		70	130	2	25	
630-08-0	Carbon Monoxide	94		96		70	130	2	25	
124-38-9	Carbon Dioxide	101		101		70	130	0	25	

QUALITY CONTROL SPIKE

Laboratory Control Spike and Laboratory Control Duplicate

ASTM D3416 Methane by GC/FID

Analytical Method: ASTM D3416

Date: 10/10/18

QC_Batch: 101018-GCL

CAS#	Compound	LCS Recovery		LCD Recovery		Spike Limit		Duplicate		
		%	Flag	%	Flag	LCL	UCL	Duplicate	Limit	Flag
74-82-8	Methane	101		101		70	130	0	25	

LCS- Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicates out of Limit

Analytical Reports

EAS SDG Number 218511

Project Number: 17198

The following pages contain the certified Analytical Reports for the samples submitted in the Sample Delivery Group (SDG) and are in order of the EAS Lab ID number. All of the analytical methods used are modifications of the published methods. Procedural method modifications are listed in the method descriptions, and the QC modifications are in the QC Criteria table in the EAS Quality Manual.

The Analytical Report has columns for the method detection limit (MDL), the reporting limit (RL), and the Amount. The Amount is the concentration of the compound in the sample. The report usually has the results reported with two commonly used units. The MDL, RL, and Amount are adjusted for the canister dilution factor and any dilution caused by sample matrix effects.

DETECTION LIMITS

MDL: The MDL is initially determined from the standard deviation of seven replicate measurements, but the value in the report is set from a MDL verification sample run at a level near the calculated MDL.

RL: The reporting limit (RL) is usually the lowest concentration standard on the calibration curve, and represents the lowest concentration that can be measured that will meet all of the QC Criteria for the method.

DATA FLAGS

In the standard report, if a compound is not detected above the method detection limit, a "ND" is in the Amount column. The flag column is used for both the not detect flag and for any data flags. The not detect flag is either a "ND" or a "U". If the "U" flag is selected, the MDL for the compound is reported in the Amount column instead of "ND". Other flags are listed below:

B - This compound was detected in the batch method blank above the reporting limit.

E - This compound exceeds the calibration range for this sample volume.

J - The amount reported is estimated because it was below the RL and above the MDL

F - Higher detection limits because of matrix interference

UNITS

PPBV or PPMV: Parts-per-billion (or million) by volume is a mole (volume) ratio of the moles of analyte divided by the moles of air (gas). This is the primary unit used to report air or gas concentrations and is independent of temperature and pressure. It is different from the ppb unit used to report water or soil data, which is a mass ratio.

UG/M3 OR MG/M3: Micrograms (or milligrams) per cubic meter is a mass/volume ratio and does depend on temperature and pressure of the source at time of sample collection. The reported result was calculated based on 1 atm pressure and a temperature of 25C. The conversion from PPBV is: $UG/M3 = PPBV \times MW/24.46$ where 24.26 is the gas constant and MW is the Compounds Molecular Weight (sometimes called Formula Weight)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218511

Analytical Method: TO-15

Laboratory ID: 01

File Name: 1851101A.D

Date Sampled: 10/03/18

Time: 08:04

Description: T-101

Date Analyzed: 10/15/18

Time: 18:07

Canister: 860

Can Dilution Factor: 1.24

QC_Batch: 101518-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.31	1.56	ND	1.53	7.71	ND	
74-87-3	Chloromethane	0.31	1.56	ND	0.64	3.22	ND	
76-14-2	Freon 114	0.31	1.56	ND	2.17	10.89	ND	
75-01-4	Vinyl chloride	0.31	1.56	ND	0.79	3.98	ND	
106-99-0	1,3-Butadiene	0.31	1.56	ND	0.69	3.45	ND	
74-83-9	Bromomethane	0.31	1.56	ND	1.20	6.05	ND	
75-00-3	Chloroethane	0.31	1.56	ND	0.82	4.11	ND	
64-17-5	Ethanol	1.55	4.65	ND	2.92	8.76	ND	
75-69-4	Trichlorofluoromethane	0.31	1.49	ND	1.74	8.36	ND	
67-64-1	Acetone	1.55	3.81	ND	3.68	9.06	ND	
67-63-0	2-propanol	1.55	3.56	ND	3.81	8.74	ND	
75-35-4	1,1-Dichloroethene	0.31	1.54	ND	1.23	6.09	ND	
76-13-1	Freon 113	0.31	1.48	ND	2.37	11.36	ND	
75-09-2	Dichloromethane	0.62	1.49	ND	2.15	5.18	ND	
75-15-0	Carbon disulfide	1.55	2.88	ND	4.82	8.95	ND	
156-60-5	trans-1,2-Dichloroethene	0.31	1.12	ND	1.23	4.43	ND	
1634-04-4	Methyl tert butyl ether	0.31	1.14	ND	1.12	4.12	ND	
75-34-3	1,1-Dichloroethane	0.31	1.55	ND	1.25	6.26	ND	
108-05-4	Vinyl acetate	0.31	1.36	ND	1.09	4.79	ND	
78-93-3	2-Butanone	1.24	3.16	ND	3.65	9.30	ND	
141-78-6	Ethyl acetate	0.62	1.36	ND	2.23	4.89	ND	
74-97-5	Bromochloromethane	0.31	0.83	ND	1.64	4.37	ND	
109-99-9	Tetrahydrofuran	0.62	1.56	ND	1.83	4.60	ND	
156-59-2	cis-1,2-Dichloroethene	0.62	1.67	ND	2.46	6.61	ND	
67-66-3	Chloroform	0.31	1.55	ND	1.51	7.59	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.38	ND	1.69	7.51	ND	
107-06-2	1,2-Dichloroethane	0.31	1.41	ND	1.25	5.72	ND	
110-82-7	Cyclohexane	0.31	1.19	ND	1.07	4.10	ND	
71-43-2	Benzene	0.31	1.57	1.27	0.99	5.03	4.04	J
56-23-5	Carbon tetrachloride	0.31	1.47	ND	1.95	9.24	ND	
142-82-5	n-Heptane	1.55	3.76	ND	6.35	15.39	ND	
78-87-5	1,2-Dichloropropane	0.31	1.49	ND	1.43	6.89	ND	
123-91-1	1,4 Dioxane	1.24	2.54	ND	4.47	9.13	ND	
79-01-6	Trichloroethene	0.19	1.44	ND	1.00	7.76	ND	
75-27-4	Bromodichloromethane	0.31	0.63	ND	2.08	4.19	ND	
80-62-6	Methyl methacrylate	1.24	4.19	ND	5.07	17.15	ND	
108-10-1	4-Methyl-2-pentanone	1.24	4.69	ND	5.08	19.22	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.31	1.61	ND	1.41	7.29	ND	
108-88-3	Toluene	0.62	1.62	1.31	2.33	6.09	4.92	J
10061-02-6	trans-1,3-Dichloropropene	0.31	1.61	ND	1.41	7.30	ND	
79-00-5	1,1,2-Trichloroethane	0.31	1.59	ND	1.69	8.69	ND	
591-78-6	2-Hexanone	1.55	4.40	ND	6.35	18.01	ND	
124-48-1	Dibromochloromethane	0.31	0.62	ND	2.64	5.27	ND	
106-93-4	1,2-Dibromoethane	0.31	0.75	ND	2.38	5.78	ND	
127-18-4	Tetrachloroethene	0.19	0.75	ND	1.26	5.11	ND	
108-90-7	Chlorobenzene	0.31	1.41	ND	1.43	6.49	ND	
100-41-4	Ethylbenzene	0.66	1.64	ND	2.85	7.11	ND	
1330-20-7	m,p-Xylenes	0.66	1.64	ND	2.85	7.13	ND	
100-42-5	Styrene	0.64	1.60	ND	2.73	6.84	ND	
75-25-2	Bromoform	0.31	0.42	ND	3.20	4.30	ND	
95-47-6	o-Xylene	0.64	1.60	ND	2.77	6.94	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.77	ND	2.11	5.26	ND	
622-96-8	4-Ethyltoluene	1.03	2.57	ND	5.05	12.62	ND	
108-67-8	1,3,5-Trimethylbenzene	0.64	1.60	ND	3.15	7.87	ND	
95-63-6	1,2,4-Trimethylbenzene	0.63	1.58	ND	3.10	7.74	ND	
541-73-1	1,3-Dichlorobenzene	0.62	1.15	ND	3.73	6.89	ND	
100-44-7	Benzyl chloride	0.62	3.76	ND	3.21	19.44	ND	
106-46-7	1,4-Dichlorobenzene	0.62	1.07	ND	3.73	6.45	ND	
95-50-1	1,2-Dichlorobenzene	0.62	1.00	ND	3.73	6.04	ND	
120-82-1	1,2,4-Trichlorobenzene	1.55	2.13	ND	11.49	15.82	ND	
91-20-3	Naphthalene	0.32	0.50	ND	1.66	2.60	ND	
87-68-3	Hexachlorobutadiene	1.55	1.64	ND	16.53	17.52	ND	
Surrogate Recovery					% Rec.	QC	Limits	Flag
2037-26-5	Toluene-d8				91	LCL 70	UCL 130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511
Laboratory Number: 01

File Name: 1851101A
Description: T-101
Canister: 860
QC_Batch: 101218-GCK

Date Sampled: 10/03/18 Time: 8:04
Date Analyzed: 10/12/18 Time: 11:50
Can Factor: 1.24
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.24	3.72	ND	1.43	4.28	ND	ND
74-86-2	Acetylene	1.24	3.72	ND	1.32	3.96	ND	ND
74-84-0	Ethane	1.24	3.72	5.37	1.53	4.59	6.62	
115-07-1	Propene	0.83	2.48	ND	1.43	4.28	ND	ND
74-98-6	Propane	0.83	2.48	ND	1.49	4.48	ND	ND
75-28-5	i-Butane	0.62	1.86	5.55	1.48	4.43	13.22	
106-98-9	1-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
106-97-8	n-Butane	0.62	1.86	ND	1.48	4.43	ND	ND
624-64-6	t-2-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
590-18-1	c-2-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
78-78-4	i-Pentane	0.50	1.49	287.75	1.47	4.40	851.45	
109-67-1	1-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
109-66-0	n-Pentane	0.50	1.49	23.74	1.47	4.40	70.14	
78-79-5	Isoprene	0.50	1.49	ND	1.38	4.15	ND	ND
646-04-8	t-2-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
627-20-3	c-2-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.24	ND	1.46	4.38	ND	ND
287-92-3	Cyclopentane	0.50	1.49	ND	1.42	4.27	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.24	ND	1.46	4.38	ND	ND
107-83-5	2-Methylpentane	0.41	1.24	ND	1.46	4.38	ND	ND
96-14-0	3-Methylpentane	0.41	1.24	ND	1.46	4.38	ND	ND
110-54-3	n-Hexane	0.41	1.24	21.03	1.46	4.38	74.30	
96-37-7	Methylcyclopentane	0.41	1.24	ND	1.43	4.28	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.06	ND	1.45	4.36	ND	ND
71-43-2	Benzene	0.41	1.24	ND	1.32	3.97	ND	ND
110-82-7	Cyclohexane	0.41	1.24	ND	1.43	4.28	ND	ND
591-76-4	2-Methylhexane	0.35	1.06	ND	1.45	4.36	ND	ND
565-59-3	2,3-Dimethylpentane	0.35	1.06	ND	1.45	4.36	ND	ND
589-34-4	3-Methylhexane	0.35	1.06	ND	1.45	4.36	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.31	0.93	ND	1.45	4.35	ND	ND
142-82-5	n-Heptane	0.35	1.06	ND	1.45	4.36	ND	ND
108-87-2	Methylcyclohexane	0.35	1.06	ND	1.43	4.28	ND	ND
592-13-2	2,5-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND
589-43-5	2,4-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.31	0.93	ND	1.45	4.35	ND	ND
108-88-3	Toluene	0.35	1.06	ND	1.34	4.01	ND	ND
584-94-1	2,3-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.93	ND	1.45	4.35	ND	ND
589-81-1	3-Methylheptane	0.31	0.93	ND	1.45	4.35	ND	ND
111-65-9	n-Octane	0.31	0.93	1.52	1.45	4.35	7.12	
100-41-4	Ethylbenzene	0.31	0.93	ND	1.35	4.05	ND	ND
108-38-3	m,p-xylene	0.31	0.93	ND	1.35	4.05	ND	ND
100-42-5	Styrene	0.31	0.93	ND	1.32	3.97	ND	ND
95-47-6	o-xylene	0.31	0.93	ND	1.35	4.05	ND	ND
111-84-2	n-Nonane	0.28	0.83	ND	1.45	4.35	ND	ND
98-82-8	i-Propylbenzene	0.28	0.83	ND	1.36	4.07	ND	ND
103-65-1	n-propylbenzene	0.28	0.83	ND	1.36	4.07	ND	ND
80-56-8	a-Pinene	0.25	0.74	ND	1.38	4.15	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.83	ND	1.36	4.07	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.83	ND	1.36	4.07	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.83	ND	1.36	4.07	ND	ND
611-14-3	2-Ethyltoluene	0.28	0.83	ND	1.36	4.07	ND	ND
127-91-3	b-Pinene	0.25	0.74	ND	1.38	4.15	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.83	ND	1.36	4.07	ND	ND
124-18-5	n-Decane	0.25	0.74	ND	1.45	4.34	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.28	0.83	ND	1.36	4.07	ND	ND
5989-27-5	d-Limonene	0.25	0.74	ND	1.38	4.15	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.74	ND	1.36	4.09	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.74	ND	1.36	4.09	ND	ND
104-51-8	n-Butylbenzene	0.25	0.74	ND	1.36	4.09	ND	ND
1120-21-4	Undecane	0.23	0.68	ND	1.44	4.33	ND	ND
112-40-3	Dodecane	0.21	0.62	ND	1.44	4.33	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.30	27.90	369.45	32.85	98.56	1,305.20
TNMHC - C1	Total Non-Methane Hydrocarbons	55.80	167.40	2,216.71	36.59	109.77	1,453.58

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 01

File Name: 1851101A

Date Sampled: 10/03/18

Time: 8:04

Description: T-101

Date Analyzed: 10/10/18

Time: 11:33

Can/Tube#: 860

Can Dilution Factor: 1.24

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	124	372	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 218511

Laboratory Number: 01

File Name: 1851101A
Description: T-101
Can/Tube#: 860
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 Time: 8:04
Date Analyzed: 10/10/18 Time: 10:28
Dilution Factor: 1.24

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.37	2.43	0.08	0.25	1.64	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218511

Laboratory ID: 02

File Name: 1851102A.D

Date Sampled: 10/03/18

Time: 08:09

Description: T-102

Date Analyzed: 10/15/18

Time: 16:45

Canister: 777

Can Dilution Factor: 1.23

QC_Batch: 101518-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.31	1.55	ND	1.52	7.64	ND	
74-87-3	Chloromethane	0.31	1.55	ND	0.63	3.19	ND	
76-14-2	Freon 114	0.31	1.55	ND	2.15	10.81	ND	
75-01-4	Vinyl chloride	0.31	1.55	ND	0.79	3.95	ND	
106-99-0	1,3-Butadiene	0.31	1.55	ND	0.68	3.42	ND	
74-83-9	Bromomethane	0.31	1.55	ND	1.19	6.00	ND	
75-00-3	Chloroethane	0.31	1.55	ND	0.81	4.08	ND	
64-17-5	Ethanol	1.54	4.61	ND	2.90	8.69	ND	
75-69-4	Trichlorofluoromethane	0.31	1.48	ND	1.73	8.29	ND	
67-64-1	Acetone	1.54	3.78	ND	3.65	8.98	ND	
67-63-0	2-propanol	1.54	3.53	ND	3.78	8.67	ND	
75-35-4	1,1-Dichloroethene	0.31	1.53	ND	1.22	6.04	ND	
76-13-1	Freon 113	0.31	1.47	ND	2.36	11.27	ND	
75-09-2	Dichloromethane	0.62	1.48	ND	2.13	5.14	ND	
75-15-0	Carbon disulfide	1.54	2.85	ND	4.78	8.88	ND	
156-60-5	trans-1,2-Dichloroethene	0.31	1.11	ND	1.22	4.40	ND	
1634-04-4	Methyl tert butyl ether	0.31	1.13	ND	1.11	4.08	ND	
75-34-3	1,1-Dichloroethane	0.31	1.53	ND	1.24	6.21	ND	
108-05-4	Vinyl acetate	0.31	1.35	ND	1.08	4.76	ND	
78-93-3	2-Butanone	1.23	3.13	ND	3.63	9.23	ND	
141-78-6	Ethyl acetate	0.62	1.35	ND	2.21	4.85	ND	
74-97-5	Bromochloromethane	0.31	0.82	ND	1.63	4.33	ND	
109-99-9	Tetrahydrofuran	0.62	1.55	ND	1.81	4.56	ND	
156-59-2	cis-1,2-Dichloroethene	0.62	1.65	ND	2.44	6.55	ND	
67-66-3	Chloroform	0.31	1.54	ND	1.50	7.53	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.37	ND	1.68	7.45	ND	
107-06-2	1,2-Dichloroethane	0.31	1.40	ND	1.24	5.68	ND	
110-82-7	Cyclohexane	0.31	1.18	ND	1.06	4.06	ND	
71-43-2	Benzene	0.31	1.56	3.27	0.98	4.99	10.43	
56-23-5	Carbon tetrachloride	0.31	1.46	ND	1.93	9.16	ND	
142-82-5	n-Heptane	1.54	3.73	ND	6.30	15.27	ND	
78-87-5	1,2-Dichloropropane	0.31	1.48	ND	1.42	6.84	ND	
123-91-1	1,4 Dioxane	1.23	2.52	ND	4.43	9.06	ND	
79-01-6	Trichloroethene	0.18	1.43	ND	0.99	7.69	ND	
75-27-4	Bromodichloromethane	0.31	0.62	ND	2.06	4.16	ND	
80-62-6	Methyl methacrylate	1.23	4.16	ND	5.03	17.01	ND	
108-10-1	4-Methyl-2-pentanone	1.23	4.66	ND	5.04	19.07	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	0.31	1.59	ND	1.40	7.23	ND	
108-88-3	Toluene	0.62	1.61	1.23	2.32	6.04	4.64	J
10061-02-6	trans-1,3-Dichloropropene	0.31	1.59	ND	1.40	7.24	ND	
79-00-5	1,1,2-Trichloroethane	0.31	1.58	ND	1.68	8.62	ND	
591-78-6	2-Hexanone	1.54	4.36	ND	6.30	17.86	ND	
124-48-1	Dibromochloromethane	0.31	0.61	ND	2.62	5.23	ND	
106-93-4	1,2-Dibromoethane	0.31	0.75	ND	2.36	5.73	ND	
127-18-4	Tetrachloroethene	0.18	0.75	ND	1.25	5.07	ND	
108-90-7	Chlorobenzene	0.31	1.40	ND	1.42	6.44	ND	
100-41-4	Ethylbenzene	0.65	1.63	0.74	2.82	7.06	3.21	J
1330-20-7	m,p-Xylenes	0.65	1.63	0.82	2.83	7.07	3.54	J
100-42-5	Styrene	0.64	1.59	ND	2.71	6.78	ND	
75-25-2	Bromoform	0.31	0.41	ND	3.18	4.26	ND	
95-47-6	o-Xylene	0.63	1.58	ND	2.75	6.88	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.30	0.76	ND	2.09	5.22	ND	
622-96-8	4-Ethyltoluene	1.02	2.55	ND	5.01	12.52	ND	
108-67-8	1,3,5-Trimethylbenzene	0.64	1.59	ND	3.12	7.81	ND	
95-63-6	1,2,4-Trimethylbenzene	0.63	1.56	ND	3.07	7.68	ND	
541-73-1	1,3-Dichlorobenzene	0.62	1.14	ND	3.70	6.84	ND	
100-44-7	Benzyl chloride	0.62	3.73	ND	3.18	19.29	ND	
106-46-7	1,4-Dichlorobenzene	0.62	1.06	ND	3.70	6.39	ND	
95-50-1	1,2-Dichlorobenzene	0.62	1.00	ND	3.70	5.99	ND	
120-82-1	1,2,4-Trichlorobenzene	1.54	2.12	ND	11.40	15.69	ND	
91-20-3	Naphthalene	0.31	0.49	ND	1.64	2.58	ND	
87-68-3	Hexachlorobutadiene	1.54	1.63	ND	16.39	17.38	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	103	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511
Laboratory Number: 02

File Name: 1851102A
Description: T-102
Canister: 777
QC_Batch: 101118-GCK

Date Sampled: 10/03/18 Time: 8:09
Date Analyzed: 10/11/18 Time: 14:54
Can Factor: 1.23
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.23	3.69	ND	1.42	4.25	ND	ND
74-86-2	Acetylene	1.23	3.69	ND	1.31	3.93	ND	ND
74-84-0	Ethane	1.23	3.69	8.83	1.52	4.55	10.89	
115-07-1	Propene	0.82	2.46	ND	1.41	4.24	ND	ND
74-98-6	Propane	0.82	2.46	2.55	1.48	4.45	4.62	
75-28-5	i-Butane	0.62	1.85	ND	1.46	4.39	ND	ND
106-98-9	1-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
106-97-8	n-Butane	0.62	1.85	ND	1.46	4.39	ND	ND
624-64-6	t-2-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
590-18-1	c-2-Butene	0.62	1.85	ND	1.41	4.24	ND	ND
78-78-4	i-Pentane	0.49	1.48	ND	1.46	4.37	ND	ND
109-67-1	1-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
109-66-0	n-Pentane	0.49	1.48	61.55	1.45	4.36	181.87	
78-79-5	Isoprene	0.49	1.48	ND	1.37	4.12	ND	ND
646-04-8	t-2-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
627-20-3	c-2-Pentene	0.49	1.48	ND	1.41	4.24	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.23	ND	1.45	4.35	ND	ND
287-92-3	Cyclopentane	0.49	1.48	ND	1.41	4.24	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.23	ND	1.45	4.35	ND	ND
107-83-5	2-Methylpentane	0.41	1.23	ND	1.45	4.35	ND	ND
96-14-0	3-Methylpentane	0.41	1.23	0.59	1.45	4.35	2.08	J
110-54-3	n-Hexane	0.41	1.23	0.48	1.45	4.35	1.71	J
96-37-7	Methylcyclopentane	0.41	1.23	ND	1.41	4.24	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.05	ND	1.44	4.33	ND	ND
71-43-2	Benzene	0.41	1.23	ND	1.31	3.94	ND	ND
110-82-7	Cyclohexane	0.41	1.23	ND	1.41	4.24	ND	ND
591-76-4	2-Methylhexane	0.35	1.05	1.68	1.44	4.33	6.91	
565-59-3	2,3-Dimethylpentane	0.35	1.05	ND	1.44	4.33	ND	ND
589-34-4	3-Methylhexane	0.35	1.05	2.66	1.44	4.33	10.91	
540-84-1	2,2,4-Trimethylpentane	0.31	0.92	ND	1.44	4.32	ND	ND
142-82-5	n-Heptane	0.35	1.05	ND	1.44	4.33	ND	ND
108-87-2	Methylcyclohexane	0.35	1.05	ND	1.41	4.24	ND	ND
592-13-2	2,5-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND
589-43-5	2,4-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.31	0.92	ND	1.44	4.32	ND	ND
108-88-3	Toluene	0.35	1.05	ND	1.33	3.98	ND	ND
584-94-1	2,3-Dimethylhexane	0.31	0.92	ND	1.44	4.32	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.92	ND	1.44	4.32	ND	ND
589-81-1	3-Methylheptane	0.31	0.92	ND	1.44	4.32	ND	ND
111-65-9	n-Octane	0.31	0.92	0.68	1.44	4.32	3.17	J
100-41-4	Ethylbenzene	0.31	0.92	1.38	1.34	4.02	6.03	
108-38-3	m,p-xylene	0.31	0.92	0.65	1.34	4.02	2.81	J
100-42-5	Styrene	0.31	0.92	ND	1.31	3.94	ND	ND
95-47-6	o-xylene	0.31	0.92	ND	1.34	4.02	ND	ND
111-84-2	n-Nonane	0.27	0.82	0.49	1.44	4.31	2.55	J
98-82-8	i-Propylbenzene	0.27	0.82	8.44	1.35	4.04	41.56	
103-65-1	n-propylbenzene	0.27	0.82	ND	1.35	4.04	ND	ND
80-56-8	a-Pinene	0.25	0.74	ND	1.37	4.12	ND	ND
620-14-4	3-Ethyltoluene	0.27	0.82	ND	1.35	4.04	ND	ND
622-96-8	4-Ethyltoluene	0.27	0.82	2.25	1.35	4.04	11.06	
108-67-8	1,3,5-Trimethylbenzene	0.27	0.82	0.47	1.35	4.04	2.33	J
611-14-3	2-Ethyltoluene	0.27	0.82	ND	1.35	4.04	ND	ND
127-91-3	b-Pinene	0.25	0.74	ND	1.37	4.12	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.27	0.82	0.47	1.35	4.04	2.33	J
124-18-5	n-Decane	0.25	0.74	ND	1.43	4.30	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.27	0.82	7.82	1.35	4.04	38.52	
5989-27-5	d-Limonene	0.25	0.74	ND	1.37	4.12	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.74	ND	1.35	4.06	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.74	ND	1.35	4.06	ND	ND
104-51-8	n-Butylbenzene	0.25	0.74	ND	1.35	4.06	ND	ND
1120-21-4	Undecane	0.22	0.67	0.36	1.43	4.30	2.28	J
112-40-3	Dodecane	0.21	0.62	1.30	1.43	4.29	9.11	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.23	27.68	175.96	32.59	97.77	621.63	
TNMHC - C1	Total Non-Methane Hydrocarbons	55.35	166.05	1,055.77	36.30	108.89	692.31	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 02

File Name: 1851102A

Date Sampled: 10/03/18

Time: 8:09

Description: T-102

Date Analyzed: 10/10/18

Time: 11:48

Can/Tube#: 777

Can Dilution Factor: 1.23

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	123	369	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 218511
Laboratory Number: 02

File Name: 1851102A
Description: T-102
Can/Tube#: 777
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 Time: 8:09
Date Analyzed: 10/10/18 Time: 10:36
Dilution Factor: 1.23

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.37	3.70	0.08	0.25	2.50	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218511

Laboratory ID: 03

File Name: 1851103A.D

Date Sampled: 10/03/18

Time: 09:15

Description: T-103

Date Analyzed: 10/15/18

Time: 20:52

Canister: 882

Can Dilution Factor: 1.28

QC_Batch: 101518-MA1

Air Volume: 20 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	3.20	16.10	ND	15.82	79.55	ND	
74-87-3	Chloromethane	3.20	16.10	ND	6.61	33.23	ND	
76-14-2	Freon 114	3.20	16.10	ND	22.36	112.45	ND	
75-01-4	Vinyl chloride	3.20	16.10	ND	8.18	41.13	ND	
106-99-0	1,3-Butadiene	3.20	16.10	ND	7.08	35.60	ND	
74-83-9	Bromomethane	3.20	16.10	ND	12.41	62.44	ND	
75-00-3	Chloroethane	3.20	16.10	ND	8.44	42.44	ND	
64-17-5	Ethanol	16.00	48.00	ND	30.15	90.46	ND	
75-69-4	Trichlorofluoromethane	3.20	15.37	ND	17.97	86.31	ND	
67-64-1	Acetone	16.00	39.36	1,811.80	38.00	93.48	4,303.21	
67-63-0	2-propanol	16.00	36.74	63.73	39.31	90.25	156.57	
75-35-4	1,1-Dichloroethene	3.20	15.87	ND	12.68	62.87	ND	
76-13-1	Freon 113	3.20	15.31	ND	24.51	117.29	ND	
75-09-2	Dichloromethane	6.40	15.41	ND	22.21	53.49	ND	
75-15-0	Carbon disulfide	16.00	29.70	ND	49.77	92.38	ND	
156-60-5	trans-1,2-Dichloroethene	3.20	11.55	ND	12.68	45.76	ND	
1634-04-4	Methyl tert butyl ether	3.20	11.80	ND	11.52	42.49	ND	
75-34-3	1,1-Dichloroethane	3.20	15.96	ND	12.95	64.59	ND	
108-05-4	Vinyl acetate	3.20	14.06	ND	11.26	49.49	ND	
78-93-3	2-Butanone	12.80	32.58	737.09	37.73	96.01	2,172.51	
141-78-6	Ethyl acetate	6.40	14.02	ND	23.05	50.48	ND	
74-97-5	Bromochloromethane	3.20	8.52	ND	16.93	45.09	ND	
109-99-9	Tetrahydrofuran	6.40	16.10	ND	18.86	47.44	ND	
156-59-2	cis-1,2-Dichloroethene	6.40	17.22	ND	25.35	68.20	ND	
67-66-3	Chloroform	3.20	16.05	ND	15.62	78.34	ND	
71-55-6	1,1,1-Trichloroethane	3.20	14.21	ND	17.45	77.48	ND	
107-06-2	1,2-Dichloroethane	3.20	14.60	ND	12.95	59.08	ND	
110-82-7	Cyclohexane	3.21	12.29	ND	11.06	42.30	ND	
71-43-2	Benzene	3.20	16.26	19.76	10.22	51.90	63.08	
56-23-5	Carbon tetrachloride	3.20	15.17	ND	20.12	95.37	ND	
142-82-5	n-Heptane	16.00	38.78	ND	65.54	158.86	ND	
78-87-5	1,2-Dichloropropane	3.20	15.40	ND	14.78	71.14	ND	
123-91-1	1,4 Dioxane	12.80	26.18	ND	46.10	94.27	ND	
79-01-6	Trichloroethene	1.92	14.91	ND	10.31	80.06	ND	
75-27-4	Bromodichloromethane	3.20	6.46	ND	21.43	43.28	ND	
80-62-6	Methyl methacrylate	12.80	43.26	ND	52.38	177.04	ND	
108-10-1	4-Methyl-2-pentanone	12.80	48.45	ND	52.43	198.45	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
10061-01-5	cis-1,3-Dichloropropene	3.20	16.58	ND	14.52	75.24	ND		
108-88-3	Toluene	6.40	16.70	10.72	24.10	62.89	40.37	J	
10061-02-6	trans-1,3-Dichloropropene	3.20	16.60	ND	14.52	75.30	ND		
79-00-5	1,1,2-Trichloroethane	3.20	16.45	ND	17.45	89.73	ND		
591-78-6	2-Hexanone	16.00	45.38	ND	65.54	185.87	ND		
124-48-1	Dibromochloromethane	3.20	6.39	ND	27.25	54.41	ND		
106-93-4	1,2-Dibromoethane	3.20	7.77	ND	24.58	59.66	ND		
127-18-4	Tetrachloroethene	1.92	7.79	ND	13.01	52.79	ND		
108-90-7	Chlorobenzene	3.20	14.56	ND	14.73	67.03	ND		
100-41-4	Ethylbenzene	6.77	16.92	7.67	29.38	73.44	33.32	J	
1330-20-7	m,p-Xylenes	6.78	16.96	ND	29.45	73.62	ND		
100-42-5	Styrene	6.63	16.57	ND	28.23	70.57	ND		
75-25-2	Bromoform	3.20	4.29	ND	33.06	44.35	ND		
95-47-6	o-Xylene	6.60	16.49	ND	28.64	71.60	ND		
79-34-5	1,1,2,2-Tetrachloroethane	3.17	7.92	ND	21.74	54.34	ND		
622-96-8	4-Ethyltoluene	10.61	26.52	ND	52.12	130.31	ND		
108-67-8	1,3,5-Trimethylbenzene	6.61	16.53	ND	32.49	81.23	ND		
95-63-6	1,2,4-Trimethylbenzene	6.51	16.26	ND	31.96	79.91	ND		
541-73-1	1,3-Dichlorobenzene	6.40	11.84	ND	38.46	71.15	ND		
100-44-7	Benzyl chloride	6.40	38.78	ND	33.12	200.72	ND		
106-46-7	1,4-Dichlorobenzene	6.40	11.07	ND	38.46	66.53	ND		
95-50-1	1,2-Dichlorobenzene	6.40	10.37	ND	38.46	62.30	ND		
120-82-1	1,2,4-Trichlorobenzene	16.00	22.02	ND	118.65	163.26	ND		
91-20-3	Naphthalene	3.26	5.12	ND	17.11	26.83	ND		
87-68-3	Hexachlorobutadiene	16.00	16.96	ND	170.58	180.82	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				94	70	130		

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511
Laboratory Number: 03

File Name: 1851103A
Description: T-103
Canister: 882
QC_Batch: 101118-GCK

Date Sampled: 10/03/18 Time: 9:15
Date Analyzed: 10/11/18 Time: 15:40
Can Factor: 1.28
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.28	3.84	ND	1.47	4.42	ND	ND
74-86-2	Acetylene	1.28	3.84	ND	1.36	4.09	ND	ND
74-84-0	Ethane	1.28	3.84	30.56	1.58	4.74	37.70	
115-07-1	Propene	0.85	2.56	ND	1.47	4.42	ND	ND
74-98-6	Propane	0.85	2.56	23.97	1.54	4.63	43.33	
75-28-5	i-Butane	0.64	1.92	1.58	1.52	4.57	3.76	J
106-98-9	1-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
106-97-8	n-Butane	0.64	1.92	0.75	1.52	4.57	1.80	J
624-64-6	t-2-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
590-18-1	c-2-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
78-78-4	i-Pentane	0.51	1.54	ND	1.52	4.55	ND	ND
109-67-1	1-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
109-66-0	n-Pentane	0.51	1.54	0.61	1.51	4.54	1.81	J
78-79-5	Isoprene	0.51	1.54	ND	1.43	4.29	ND	ND
646-04-8	t-2-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
627-20-3	c-2-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
75-83-2	2,2-Dimethylbutane	0.43	1.28	ND	1.51	4.52	ND	ND
287-92-3	Cyclopentane	0.51	1.54	ND	1.47	4.41	ND	ND
79-29-8	2,3-Dimethylbutane	0.43	1.28	ND	1.51	4.52	ND	ND
107-83-5	2-Methylpentane	0.43	1.28	ND	1.51	4.52	ND	ND
96-14-0	3-Methylpentane	0.43	1.28	ND	1.51	4.52	ND	ND
110-54-3	n-Hexane	0.43	1.28	1.23	1.51	4.52	4.35	J
96-37-7	Methylcyclopentane	0.43	1.28	ND	1.47	4.42	ND	ND
108-08-7	2,4-Dimethylpentane	0.37	1.10	ND	1.50	4.51	ND	ND
71-43-2	Benzene	0.43	1.28	17.91	1.37	4.10	57.33	
110-82-7	Cyclohexane	0.43	1.28	ND	1.47	4.42	ND	ND
591-76-4	2-Methylhexane	0.37	1.10	ND	1.50	4.51	ND	ND
565-59-3	2,3-Dimethylpentane	0.37	1.10	ND	1.50	4.51	ND	ND
589-34-4	3-Methylhexane	0.37	1.10	ND	1.50	4.51	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.96	ND	1.50	4.49	ND	ND
142-82-5	n-Heptane	0.37	1.10	ND	1.50	4.51	ND	ND
108-87-2	Methylcyclohexane	0.37	1.10	ND	1.47	4.42	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.96	ND	1.50	4.49	ND	ND
108-88-3	Toluene	0.37	1.10	11.97	1.38	4.14	45.17	
584-94-1	2,3-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.96	ND	1.50	4.49	ND	ND
589-81-1	3-Methylheptane	0.32	0.96	ND	1.50	4.49	ND	ND
111-65-9	n-Octane	0.32	0.96	36.45	1.50	4.49	170.59	
100-41-4	Ethylbenzene	0.32	0.96	4.83	1.39	4.18	21.04	
108-38-3	m,p-xylene	0.32	0.96	ND	1.39	4.18	ND	ND
100-42-5	Styrene	0.32	0.96	ND	1.37	4.10	ND	ND
95-47-6	o-xylene	0.32	0.96	ND	1.39	4.18	ND	ND
111-84-2	n-Nonane	0.28	0.85	4.76	1.50	4.49	25.02	
98-82-8	i-Propylbenzene	0.28	0.85	18.50	1.40	4.20	91.15	
103-65-1	n-propylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
80-56-8	a-Pinene	0.26	0.77	ND	1.43	4.29	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.85	3.89	1.40	4.20	19.18	
108-67-8	1,3,5-Trimethylbenzene	0.28	0.85	16.99	1.40	4.20	83.70	
611-14-3	2-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
127-91-3	b-Pinene	0.26	0.77	ND	1.43	4.29	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.85	16.43	1.40	4.20	80.92	
124-18-5	n-Decane	0.26	0.77	2.15	1.49	4.48	12.57	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.85	1.50	1.40	4.20	7.40	
5989-27-5	d-Limonene	0.26	0.77	3.61	1.43	4.29	20.17	
141-93-5	1,3-Diethylbenzene	0.26	0.77	ND	1.41	4.22	ND	ND
105-05-5	1,4-Diethylbenzene	0.26	0.77	9.43	1.41	4.22	51.85	
104-51-8	n-Butylbenzene	0.26	0.77	ND	1.41	4.22	ND	ND
1120-21-4	Undecane	0.23	0.70	3.75	1.49	4.47	24.01	
112-40-3	Dodecane	0.21	0.64	1.77	1.49	4.47	12.32	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.60	28.80	2,847.40	33.91	101.74	10,059.26	
TNMHC - C1	Total Non-Methane Hydrocarbons	57.60	172.80	17,084.40	37.77	113.31	11,202.89	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 03

File Name: 1851103A

Date Sampled: 10/03/18

Time: 9:15

Description: T-103

Date Analyzed: 10/10/18

Time: 11:57

Can/Tube#: 882

Can Dilution Factor: 1.28

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.02	128	384	168	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218511
Laboratory Number: 03

File Name: 1851103A
Description: T-103
Can/Tube#: 882
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 Time: 9:15
Date Analyzed: 10/10/18 Time: 10:46
Dilution Factor: 1.28

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	2.76	0.09	0.26	1.87	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218511

Analytical Method: TO-15

Laboratory ID: 04

File Name: 1851104A.D
Description: T-104
Canister: 651
QC_Batch: 101518-MA1

Date Sampled: 10/03/18 Time: 10:39
Date Analyzed: 10/15/18 Time: 16:07
Can Dilution Factor: 1.26
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.58	ND	1.56	7.83	ND	
74-87-3	Chloromethane	0.32	1.58	ND	0.65	3.27	ND	
76-14-2	Freon 114	0.32	1.58	ND	2.20	11.07	ND	
75-01-4	Vinyl chloride	0.32	1.58	ND	0.80	4.05	ND	
106-99-0	1,3-Butadiene	0.32	1.58	ND	0.70	3.50	ND	
74-83-9	Bromomethane	0.32	1.58	ND	1.22	6.15	ND	
75-00-3	Chloroethane	0.32	1.58	ND	0.83	4.18	ND	
64-17-5	Ethanol	1.58	4.73	ND	2.97	8.90	ND	
75-69-4	Trichlorofluoromethane	0.32	1.51	ND	1.77	8.50	ND	
67-64-1	Acetone	1.58	3.87	ND	3.74	9.20	ND	
67-63-0	2-propanol	1.58	3.62	ND	3.87	8.88	ND	
75-35-4	1,1-Dichloroethene	0.32	1.56	ND	1.25	6.19	ND	
76-13-1	Freon 113	0.32	1.51	ND	2.41	11.55	ND	
75-09-2	Dichloromethane	0.63	1.52	ND	2.19	5.27	ND	
75-15-0	Carbon disulfide	1.58	2.92	ND	4.90	9.09	ND	
156-60-5	trans-1,2-Dichloroethene	0.32	1.14	ND	1.25	4.50	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.16	ND	1.13	4.18	ND	
75-34-3	1,1-Dichloroethane	0.32	1.57	ND	1.27	6.36	ND	
108-05-4	Vinyl acetate	0.32	1.38	ND	1.11	4.87	ND	
78-93-3	2-Butanone	1.26	3.21	ND	3.71	9.45	ND	
141-78-6	Ethyl acetate	0.63	1.38	ND	2.27	4.97	ND	
74-97-5	Bromochloromethane	0.32	0.84	ND	1.67	4.44	ND	
109-99-9	Tetrahydrofuran	0.63	1.58	ND	1.86	4.67	ND	
156-59-2	cis-1,2-Dichloroethene	0.63	1.69	ND	2.50	6.71	ND	
67-66-3	Chloroform	0.32	1.58	ND	1.54	7.71	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.40	ND	1.72	7.63	ND	
107-06-2	1,2-Dichloroethane	0.32	1.44	ND	1.27	5.82	ND	
110-82-7	Cyclohexane	0.32	1.21	ND	1.09	4.16	ND	
71-43-2	Benzene	0.32	1.60	1.22	1.01	5.11	3.89	J
56-23-5	Carbon tetrachloride	0.32	1.49	ND	1.98	9.39	ND	
142-82-5	n-Heptane	1.58	3.82	ND	6.45	15.64	ND	
78-87-5	1,2-Dichloropropane	0.32	1.52	ND	1.46	7.00	ND	
123-91-1	1,4 Dioxane	1.26	2.58	ND	4.54	9.28	ND	
79-01-6	Trichloroethene	0.19	1.47	ND	1.02	7.88	ND	
75-27-4	Bromodichloromethane	0.32	0.64	ND	2.11	4.26	ND	
80-62-6	Methyl methacrylate	1.26	4.26	ND	5.16	17.43	ND	
108-10-1	4-Methyl-2-pentanone	1.26	4.77	ND	5.16	19.53	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.32	1.63	ND	1.43	7.41	ND	
108-88-3	Toluene	0.63	1.64	ND	2.37	6.19	ND	
10061-02-6	trans-1,3-Dichloropropene	0.32	1.63	ND	1.43	7.41	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.62	ND	1.72	8.83	ND	
591-78-6	2-Hexanone	1.58	4.47	ND	6.45	18.30	ND	
124-48-1	Dibromochloromethane	0.32	0.63	ND	2.68	5.36	ND	
106-93-4	1,2-Dibromoethane	0.32	0.76	ND	2.42	5.87	ND	
127-18-4	Tetrachloroethene	0.19	0.77	ND	1.28	5.20	ND	
108-90-7	Chlorobenzene	0.32	1.43	ND	1.45	6.60	ND	
100-41-4	Ethylbenzene	0.67	1.67	ND	2.89	7.23	ND	
1330-20-7	m,p-Xylenes	0.67	1.67	ND	2.90	7.25	ND	
100-42-5	Styrene	0.65	1.63	ND	2.78	6.95	ND	
75-25-2	Bromoform	0.32	0.42	ND	3.25	4.37	ND	
95-47-6	o-Xylene	0.65	1.62	ND	2.82	7.05	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.78	ND	2.14	5.35	ND	
622-96-8	4-Ethyltoluene	1.04	2.61	ND	5.13	12.83	ND	
108-67-8	1,3,5-Trimethylbenzene	0.65	1.63	ND	3.20	8.00	ND	
95-63-6	1,2,4-Trimethylbenzene	0.64	1.60	ND	3.15	7.87	ND	
541-73-1	1,3-Dichlorobenzene	0.63	1.17	ND	3.79	7.00	ND	
100-44-7	Benzyl chloride	0.63	3.82	ND	3.26	19.76	ND	
106-46-7	1,4-Dichlorobenzene	0.63	1.09	ND	3.79	6.55	ND	
95-50-1	1,2-Dichlorobenzene	0.63	1.02	ND	3.79	6.13	ND	
120-82-1	1,2,4-Trichlorobenzene	1.58	2.17	ND	11.68	16.07	ND	
91-20-3	Naphthalene	0.32	0.50	ND	1.68	2.64	ND	
87-68-3	Hexachlorobutadiene	1.58	1.67	ND	16.79	17.80	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				99	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511

Laboratory Number: 04

File Name: 1851104A
Description: T-104
Canister: 651
QC_Batch: 101118-GCK

Date Sampled: 10/03/18 Time: 10:39
Date Analyzed: 10/11/18 Time: 16:26
Can Factor: 1.26
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.26	3.78	ND	1.45	4.35	ND	ND
74-86-2	Acetylene	1.26	3.78	ND	1.34	4.03	ND	ND
74-84-0	Ethane	1.26	3.78	5.14	1.55	4.66	6.34	
115-07-1	Propene	0.84	2.52	ND	1.45	4.35	ND	ND
74-98-6	Propane	0.84	2.52	ND	1.52	4.55	ND	ND
75-28-5	i-Butane	0.63	1.89	ND	1.50	4.50	ND	ND
106-98-9	1-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
106-97-8	n-Butane	0.63	1.89	2.30	1.50	4.50	5.48	
624-64-6	t-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
590-18-1	c-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
78-78-4	i-Pentane	0.50	1.51	ND	1.49	4.47	ND	ND
109-67-1	1-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
109-66-0	n-Pentane	0.50	1.51	66.11	1.49	4.47	195.34	
78-79-5	Isoprene	0.50	1.51	ND	1.41	4.22	ND	ND
646-04-8	t-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
627-20-3	c-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
287-92-3	Cyclopentane	0.50	1.51	ND	1.45	4.34	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
107-83-5	2-Methylpentane	0.42	1.26	ND	1.48	4.45	ND	ND
96-14-0	3-Methylpentane	0.42	1.26	ND	1.48	4.45	ND	ND
110-54-3	n-Hexane	0.42	1.26	35.56	1.48	4.45	125.63	
96-37-7	Methylcyclopentane	0.42	1.26	ND	1.45	4.35	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.08	ND	1.48	4.44	ND	ND
71-43-2	Benzene	0.42	1.26	1.34	1.34	4.03	4.29	
110-82-7	Cyclohexane	0.42	1.26	ND	1.45	4.35	ND	ND
591-76-4	2-Methylhexane	0.36	1.08	2.04	1.48	4.44	8.39	
565-59-3	2,3-Dimethylpentane	0.36	1.08	ND	1.48	4.44	ND	ND
589-34-4	3-Methylhexane	0.36	1.08	ND	1.48	4.44	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	ND	1.47	4.42	ND	ND
142-82-5	n-Heptane	0.36	1.08	6.09	1.48	4.44	24.99	
108-87-2	Methylcyclohexane	0.36	1.08	ND	1.45	4.35	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	ND	1.47	4.42	ND	ND
108-88-3	Toluene	0.36	1.08	0.67	1.36	4.08	2.53	J
584-94-1	2,3-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
592-27-8	2-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND
589-81-1	3-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
111-65-9	n-Octane	0.32	0.95	0.61	1.47	4.42	2.87	J
100-41-4	Ethylbenzene	0.32	0.95	ND	1.37	4.11	ND	ND
108-38-3	m,p-xylene	0.32	0.95	ND	1.37	4.11	ND	ND
100-42-5	Styrene	0.32	0.95	ND	1.35	4.04	ND	ND
95-47-6	o-xylene	0.32	0.95	ND	1.37	4.11	ND	ND
111-84-2	n-Nonane	0.28	0.84	0.65	1.47	4.42	3.43	J
98-82-8	i-Propylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
103-65-1	n-propylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
80-56-8	a-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.84	0.90	1.38	4.14	4.45	
611-14-3	2-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
127-91-3	b-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.84	1.13	1.38	4.14	5.55	
124-18-5	n-Decane	0.25	0.76	ND	1.47	4.41	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
5989-27-5	d-Limonene	0.25	0.76	ND	1.41	4.22	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
104-51-8	n-Butylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
1120-21-4	Undecane	0.23	0.69	0.50	1.47	4.40	3.20	J
112-40-3	Dodecane	0.21	0.63	0.47	1.47	4.40	3.29	J

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.45	28.35	163.47	33.38	100.15	577.52	
TNMHC - C1	Total Non-Methane Hydrocarbons	56.70	170.10	980.85	37.18	111.54	643.18	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 04

File Name: 1851104A

Date Sampled: 10/03/18

Time: 10:39

Description: T-104

Date Analyzed: 10/10/18

Time: 12:05

Can/Tube#: 651

Can Dilution Factor: 1.26

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	126	378	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218511
Laboratory Number: 04

File Name: 1851104A
Description: T-104
Can/Tube#: 651
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 Time: 10:39
Date Analyzed: 10/10/18 Time: 10:54
Dilution Factor: 1.26

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	ND	0.09	0.26	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218511

Analytical Method: TO-15

Laboratory ID: 05

File Name: 1851105A.D

Date Sampled: 10/03/18

Time: 10:53

Description: T-105

Date Analyzed: 10/15/18

Time: 21:30

Canister: 643

Can Dilution Factor: 1.24

QC_Batch: 101518-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	12.40	62.37	ND	61.28	308.27	ND	
74-87-3	Chloromethane	12.40	62.37	ND	25.60	128.76	ND	
76-14-2	Freon 114	12.40	62.37	ND	86.63	435.76	ND	
75-01-4	Vinyl chloride	12.40	62.37	ND	31.68	159.36	ND	
106-99-0	1,3-Butadiene	12.40	62.37	ND	27.42	137.94	ND	
74-83-9	Bromomethane	12.40	62.37	ND	48.11	241.97	ND	
75-00-3	Chloroethane	12.40	62.37	ND	32.70	164.46	ND	
64-17-5	Ethanol	62.00	186.00	ND	116.84	350.52	ND	
75-69-4	Trichlorofluoromethane	12.40	59.54	ND	69.65	334.44	ND	
67-64-1	Acetone	62.00	152.52	1,148.01	147.26	362.25	2,726.64	
67-63-0	2-propanol	62.00	142.35	ND	152.32	349.74	ND	
75-35-4	1,1-Dichloroethene	12.40	61.50	ND	49.12	243.63	ND	
76-13-1	Freon 113	12.40	59.33	ND	94.99	454.48	ND	
75-09-2	Dichloromethane	24.80	59.72	ND	86.07	207.27	ND	
75-15-0	Carbon disulfide	62.00	115.07	ND	192.88	357.98	ND	
156-60-5	trans-1,2-Dichloroethene	12.40	44.77	ND	49.12	177.34	ND	
1634-04-4	Methyl tert butyl ether	12.40	45.72	ND	44.66	164.65	ND	
75-34-3	1,1-Dichloroethane	12.40	61.84	ND	50.18	250.28	ND	
108-05-4	Vinyl acetate	12.40	54.48	ND	43.64	191.76	ND	
78-93-3	2-Butanone	49.60	126.23	604.38	146.19	372.06	1,781.35	
141-78-6	Ethyl acetate	24.80	54.31	ND	89.32	195.60	ND	
74-97-5	Bromochloromethane	12.40	33.03	ND	65.59	174.71	ND	
109-99-9	Tetrahydrofuran	24.80	62.37	ND	73.10	183.84	ND	
156-59-2	cis-1,2-Dichloroethene	24.80	66.71	ND	98.24	264.26	ND	
67-66-3	Chloroform	12.40	62.19	ND	60.52	303.56	ND	
71-55-6	1,1,1-Trichloroethane	12.40	55.06	ND	67.62	300.24	ND	
107-06-2	1,2-Dichloroethane	12.40	56.56	ND	50.18	228.92	ND	
110-82-7	Cyclohexane	12.45	47.62	ND	42.85	163.90	ND	
71-43-2	Benzene	12.40	63.00	49.93	39.59	201.12	159.40	J
56-23-5	Carbon tetrachloride	12.40	58.78	ND	77.96	369.54	ND	
142-82-5	n-Heptane	62.00	150.29	ND	253.96	615.60	ND	
78-87-5	1,2-Dichloropropane	12.40	59.68	ND	57.28	275.68	ND	
123-91-1	1,4 Dioxane	49.60	101.43	ND	178.63	365.30	ND	
79-01-6	Trichloroethene	7.44	57.76	ND	39.96	310.25	ND	
75-27-4	Bromodichloromethane	12.40	25.05	ND	83.03	167.72	ND	
80-62-6	Methyl methacrylate	49.60	167.65	ND	202.96	686.02	ND	
108-10-1	4-Methyl-2-pentanone	49.60	187.74	ND	203.17	768.99	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	12.40	64.26	ND	56.27	291.57	ND	
108-88-3	Toluene	24.80	64.73	34.66	93.37	243.70	130.50	J
10061-02-6	trans-1,3-Dichloropropene	12.40	64.31	ND	56.27	291.80	ND	
79-00-5	1,1,2-Trichloroethane	12.40	63.76	ND	67.62	347.69	ND	
591-78-6	2-Hexanone	62.00	175.83	ND	253.96	720.23	ND	
124-48-1	Dibromochloromethane	12.40	24.76	ND	105.59	210.83	ND	
106-93-4	1,2-Dibromoethane	12.40	30.10	ND	95.25	231.18	ND	
127-18-4	Tetrachloroethene	7.44	30.18	ND	50.43	204.56	ND	
108-90-7	Chlorobenzene	12.40	56.43	ND	57.08	259.74	ND	
100-41-4	Ethylbenzene	26.22	65.55	ND	113.83	284.58	ND	
1330-20-7	m,p-Xylenes	26.29	65.71	39.13	114.12	285.29	169.89	J
100-42-5	Styrene	25.68	64.20	ND	109.38	273.46	ND	
75-25-2	Bromoform	12.40	16.64	ND	128.09	171.87	ND	
95-47-6	o-Xylene	25.56	63.91	ND	110.98	277.46	ND	
79-34-5	1,1,2,2-Tetrachloroethane	12.28	30.70	ND	84.23	210.57	ND	
622-96-8	4-Ethyltoluene	41.11	102.76	ND	201.98	504.95	ND	
108-67-8	1,3,5-Trimethylbenzene	25.62	64.06	ND	125.91	314.77	ND	
95-63-6	1,2,4-Trimethylbenzene	25.21	63.02	ND	123.86	309.65	ND	
541-73-1	1,3-Dichlorobenzene	24.80	45.88	ND	149.03	275.71	ND	
100-44-7	Benzyl chloride	24.80	150.29	ND	128.35	777.79	ND	
106-46-7	1,4-Dichlorobenzene	24.80	42.90	ND	149.03	257.82	ND	
95-50-1	1,2-Dichlorobenzene	24.80	40.18	ND	149.03	241.43	ND	
120-82-1	1,2,4-Trichlorobenzene	62.00	85.31	ND	459.76	632.63	ND	
91-20-3	Naphthalene	12.65	19.84	ND	66.28	103.98	ND	
87-68-3	Hexachlorobutadiene	62.00	65.72	ND	661.00	700.66	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	98	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511
Laboratory Number: 05

File Name: 1851105A
Description: T-105
Canister: 643
QC_Batch: 101118-GCK

Date Sampled: 10/03/18 Time: 10:43
Date Analyzed: 10/11/18 Time: 18:01
Can Factor: 1.24
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.24	3.72	10.75	1.43	4.28	12.37	
74-86-2	Acetylene	1.24	3.72	ND	1.32	3.96	ND	ND
74-84-0	Ethane	1.24	3.72	288.71	1.53	4.59	356.15	
115-07-1	Propene	0.83	2.48	ND	1.43	4.28	ND	ND
74-98-6	Propane	0.83	2.48	82.48	1.49	4.48	149.07	
75-28-5	i-Butane	0.62	1.86	14.13	1.48	4.43	33.65	
106-98-9	1-Butene	0.62	1.86	0.95	1.43	4.28	2.18	J
106-97-8	n-Butane	0.62	1.86	4.19	1.48	4.43	9.98	
624-64-6	t-2-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
590-18-1	c-2-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
78-78-4	i-Pentane	0.50	1.49	ND	1.47	4.40	ND	ND
109-67-1	1-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
109-66-0	n-Pentane	0.50	1.49	5,156.06	1.47	4.40	15,235.73	
78-79-5	Isoprene	0.50	1.49	ND	1.38	4.15	ND	ND
646-04-8	t-2-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
627-20-3	c-2-Pentene	0.50	1.49	28.45	1.42	4.27	81.72	
75-83-2	2,2-Dimethylbutane	0.41	1.24	ND	1.46	4.38	ND	ND
287-92-3	Cyclopentane	0.50	1.49	ND	1.42	4.27	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.24	ND	1.46	4.38	ND	ND
107-83-5	2-Methylpentane	0.41	1.24	ND	1.46	4.38	ND	ND
96-14-0	3-Methylpentane	0.41	1.24	ND	1.46	4.38	ND	ND
110-54-3	n-Hexane	0.41	1.24	3,280.23	1.46	4.38	11,588.35	
96-37-7	Methylcyclopentane	0.41	1.24	ND	1.43	4.28	ND	ND
108-08-7	2,4-Dimethylpentane	0.35	1.06	ND	1.45	4.36	ND	ND
71-43-2	Benzene	0.41	1.24	36.35	1.32	3.97	116.35	
110-82-7	Cyclohexane	0.41	1.24	ND	1.43	4.28	ND	ND
591-76-4	2-Methylhexane	0.35	1.06	113.05	1.45	4.36	464.25	
565-59-3	2,3-Dimethylpentane	0.35	1.06	31.16	1.45	4.36	127.95	
589-34-4	3-Methylhexane	0.35	1.06	9.74	1.45	4.36	39.99	
540-84-1	2,2,4-Trimethylpentane	0.31	0.93	28.91	1.45	4.35	135.33	
142-82-5	n-Heptane	0.35	1.06	83.27	1.45	4.36	341.94	
108-87-2	Methylcyclohexane	0.35	1.06	ND	1.43	4.28	ND	ND
592-13-2	2,5-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND
589-43-5	2,4-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.31	0.93	ND	1.45	4.35	ND	ND
108-88-3	Toluene	0.35	1.06	40.48	1.34	4.01	152.79	
584-94-1	2,3-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.93	ND	1.45	4.35	ND	ND
589-81-1	3-Methylheptane	0.31	0.93	ND	1.45	4.35	ND	ND
111-65-9	n-Octane	0.31	0.93	84.59	1.45	4.35	395.92	
100-41-4	Ethylbenzene	0.31	0.93	25.26	1.35	4.05	109.96	
108-38-3	m,p-xylene	0.31	0.93	92.52	1.35	4.05	402.70	
100-42-5	Styrene	0.31	0.93	ND	1.32	3.97	ND	ND
95-47-6	o-xylene	0.31	0.93	43.75	1.35	4.05	190.40	
111-84-2	n-Nonane	0.28	0.83	96.04	1.45	4.35	504.99	
98-82-8	i-Propylbenzene	0.28	0.83	22.36	1.36	4.07	110.13	
103-65-1	n-propylbenzene	0.28	0.83	ND	1.36	4.07	ND	ND
80-56-8	a-Pinene	0.25	0.74	ND	1.38	4.15	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.83	ND	1.36	4.07	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.83	55.85	1.36	4.07	275.14	
108-67-8	1,3,5-Trimethylbenzene	0.28	0.83	230.76	1.36	4.07	1,136.77	
611-14-3	2-Ethyltoluene	0.28	0.83	ND	1.36	4.07	ND	ND
127-91-3	b-Pinene	0.25	0.74	ND	1.38	4.15	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.83	108.07	1.36	4.07	532.38	
124-18-5	n-Decane	0.25	0.74	58.89	1.45	4.34	343.45	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.83	ND	1.36	4.07	ND	ND
5989-27-5	d-Limonene	0.25	0.74	ND	1.38	4.15	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.74	ND	1.36	4.09	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.74	ND	1.36	4.09	ND	ND
104-51-8	n-Butylbenzene	0.25	0.74	ND	1.36	4.09	ND	ND
1120-21-4	Undecane	0.23	0.68	37.87	1.44	4.33	242.60	
112-40-3	Dodecane	0.21	0.62	5.75	1.44	4.33	40.13	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.30	27.90	21,160.90	32.85	98.56	74,756.95
TNMHC - C1	Total Non-Methane Hydrocarbons	55.80	167.40	126,965.40	36.59	109.77	83,256.00

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 05

File Name: 1851105A

Date Sampled: 10/03/18

Time: 10:43

Description: T-105

Date Analyzed: 10/10/18

Time: 12:14

Can/Tube#: 643

Can Dilution Factor: 1.24

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	124	372	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 218511
Laboratory Number: 05

File Name: 1851105A
Description: T-105
Can/Tube#: 643
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 Time: 10:43
Date Analyzed: 10/10/18 Time: 11:00
Dilution Factor: 1.24

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.37	14.40	0.08	0.25	9.73	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218511

Laboratory ID: 06

File Name: 1851106A.D
Description: T-106
Canister: 548
QC_Batch: 101718-MA1

Date Sampled: 10/03/18 Time: 11:40
Date Analyzed: 10/17/18 Time: 14:24
Can Dilution Factor: 1.26
Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	12.60	63.38	ND	62.27	313.24	ND	
74-87-3	Chloromethane	12.60	63.38	ND	26.01	130.84	ND	
76-14-2	Freon 114	12.60	63.38	ND	88.03	442.79	ND	
75-01-4	Vinyl chloride	12.60	63.38	ND	32.19	161.93	ND	
106-99-0	1,3-Butadiene	12.60	63.38	ND	27.87	140.17	ND	
74-83-9	Bromomethane	12.60	63.38	ND	48.88	245.88	ND	
75-00-3	Chloroethane	12.60	63.38	ND	33.22	167.11	ND	
64-17-5	Ethanol	63.00	189.00	ND	118.73	356.18	ND	
75-69-4	Trichlorofluoromethane	12.60	60.50	ND	70.77	339.83	ND	
67-64-1	Acetone	63.00	154.98	6,377.32	149.63	368.09	15,146.74	
67-63-0	2-propanol	63.00	144.65	225.98	154.78	355.38	555.20	
75-35-4	1,1-Dichloroethene	12.60	62.50	ND	49.91	247.56	ND	
76-13-1	Freon 113	12.60	60.28	ND	96.53	461.81	ND	
75-09-2	Dichloromethane	25.20	60.69	ND	87.46	210.62	ND	
75-15-0	Carbon disulfide	63.00	116.93	ND	195.99	363.75	ND	
156-60-5	trans-1,2-Dichloroethene	12.60	45.49	ND	49.91	180.20	ND	
1634-04-4	Methyl tert butyl ether	12.60	46.46	ND	45.38	167.31	ND	
75-34-3	1,1-Dichloroethane	12.60	62.84	ND	50.99	254.32	ND	
108-05-4	Vinyl acetate	12.60	55.36	ND	44.35	194.85	ND	
78-93-3	2-Butanone	50.40	128.27	3,691.41	148.55	378.06	10,880.09	
141-78-6	Ethyl acetate	25.20	55.19	ND	90.76	198.76	ND	
74-97-5	Bromochloromethane	12.60	33.56	ND	66.65	177.53	ND	
109-99-9	Tetrahydrofuran	25.20	63.38	ND	74.27	186.81	ND	
156-59-2	cis-1,2-Dichloroethene	25.20	67.79	ND	99.82	268.52	ND	
67-66-3	Chloroform	12.60	63.19	ND	61.50	308.45	ND	
71-55-6	1,1,1-Trichloroethane	12.60	55.94	ND	68.71	305.08	ND	
107-06-2	1,2-Dichloroethane	12.60	57.48	ND	50.99	232.61	ND	
110-82-7	Cyclohexane	12.65	48.38	ND	43.54	166.54	ND	
71-43-2	Benzene	12.60	64.01	82.26	40.23	204.37	262.62	
56-23-5	Carbon tetrachloride	12.60	59.72	ND	79.22	375.50	ND	
142-82-5	n-Heptane	63.00	152.71	ND	258.06	625.53	ND	
78-87-5	1,2-Dichloropropane	12.60	60.64	ND	58.20	280.12	ND	
123-91-1	1,4 Dioxane	50.40	103.07	ND	181.51	371.20	ND	
79-01-6	Trichloroethene	7.56	58.69	ND	40.61	315.26	ND	
75-27-4	Bromodichloromethane	12.60	25.45	ND	84.37	170.43	ND	
80-62-6	Methyl methacrylate	50.40	170.35	ND	206.24	697.09	ND	
108-10-1	4-Methyl-2-pentanone	50.40	190.76	ND	206.44	781.39	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	12.60	65.29	ND	57.17	296.27	ND	
108-88-3	Toluene	25.20	65.77	119.12	94.88	247.63	448.47	
10061-02-6	trans-1,3-Dichloropropene	12.60	65.34	ND	57.17	296.51	ND	
79-00-5	1,1,2-Trichloroethane	12.60	64.79	ND	68.71	353.30	ND	
591-78-6	2-Hexanone	63.00	178.67	71.21	258.06	731.84	291.70	J
124-48-1	Dibromochloromethane	12.60	25.16	ND	107.29	214.23	ND	
106-93-4	1,2-Dibromoethane	12.60	30.58	ND	96.78	234.91	ND	
127-18-4	Tetrachloroethene	7.56	30.67	ND	51.24	207.86	ND	
108-90-7	Chlorobenzene	12.60	57.34	ND	58.00	263.93	ND	
100-41-4	Ethylbenzene	26.64	66.61	48.51	115.67	289.17	210.59	J
1330-20-7	m,p-Xylenes	26.71	66.77	135.40	115.96	289.89	587.83	
100-42-5	Styrene	26.09	65.23	ND	111.15	277.87	ND	
75-25-2	Bromoform	12.60	16.91	ND	130.16	174.65	ND	
95-47-6	o-Xylene	25.98	64.94	57.38	112.77	281.93	249.10	J
79-34-5	1,1,2,2-Tetrachloroethane	12.48	31.19	ND	85.59	213.97	ND	
622-96-8	4-Ethyltoluene	41.77	104.42	ND	205.24	513.09	ND	
108-67-8	1,3,5-Trimethylbenzene	26.04	65.09	ND	127.94	319.84	ND	
95-63-6	1,2,4-Trimethylbenzene	25.61	64.03	53.87	125.86	314.64	264.68	J
541-73-1	1,3-Dichlorobenzene	25.20	46.62	ND	151.43	280.15	ND	
100-44-7	Benzyl chloride	25.20	152.71	ND	130.42	790.34	ND	
106-46-7	1,4-Dichlorobenzene	25.20	43.60	ND	151.43	261.98	ND	
95-50-1	1,2-Dichlorobenzene	25.20	40.82	ND	151.43	245.32	ND	
120-82-1	1,2,4-Trichlorobenzene	63.00	86.69	ND	467.18	642.84	ND	
91-20-3	Naphthalene	12.85	20.16	ND	67.35	105.65	ND	
87-68-3	Hexachlorobutadiene	63.00	66.78	ND	671.66	711.96	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	100	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511
Laboratory Number: 06

File Name: 1851106A
Description: T-106
Canister: 548
QC_Batch: 101118-GCK

Date Sampled: 10/03/18 Time: 11:40
Date Analyzed: 10/11/18 Time: 19:28
Can Factor: 1.26
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.26	3.78	6.96	1.45	4.35	8.02	
74-86-2	Acetylene	1.26	3.78	ND	1.34	4.03	ND	ND
74-84-0	Ethane	1.26	3.78	275.29	1.55	4.66	339.60	
115-07-1	Propene	0.84	2.52	ND	1.45	4.35	ND	ND
74-98-6	Propane	0.84	2.52	94.26	1.52	4.55	170.37	
75-28-5	i-Butane	0.63	1.89	15.79	1.50	4.50	37.60	
106-98-9	1-Butene	0.63	1.89	14.22	1.45	4.35	32.70	
106-97-8	n-Butane	0.63	1.89	4.67	1.50	4.50	11.11	
624-64-6	t-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
590-18-1	c-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
78-78-4	i-Pentane	0.50	1.51	ND	1.49	4.47	ND	ND
109-67-1	1-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
109-66-0	n-Pentane	0.50	1.51	5,331.20	1.49	4.47	15,753.26	
78-79-5	Isoprene	0.50	1.51	ND	1.41	4.22	ND	ND
646-04-8	t-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
627-20-3	c-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
287-92-3	Cyclopentane	0.50	1.51	ND	1.45	4.34	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
107-83-5	2-Methylpentane	0.42	1.26	5.56	1.48	4.45	19.65	
96-14-0	3-Methylpentane	0.42	1.26	10.29	1.48	4.45	36.37	
110-54-3	n-Hexane	0.42	1.26	3,422.92	1.48	4.45	12,092.43	
96-37-7	Methylcyclopentane	0.42	1.26	ND	1.45	4.35	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.08	ND	1.48	4.44	ND	ND
71-43-2	Benzene	0.42	1.26	125.28	1.34	4.03	401.00	
110-82-7	Cyclohexane	0.42	1.26	ND	1.45	4.35	ND	ND
591-76-4	2-Methylhexane	0.36	1.08	ND	1.48	4.44	ND	ND
565-59-3	2,3-Dimethylpentane	0.36	1.08	ND	1.48	4.44	ND	ND
589-34-4	3-Methylhexane	0.36	1.08	ND	1.48	4.44	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	ND	1.47	4.42	ND	ND
142-82-5	n-Heptane	0.36	1.08	30.79	1.48	4.44	126.45	
108-87-2	Methylcyclohexane	0.36	1.08	ND	1.45	4.35	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	ND	1.47	4.42	ND	ND
108-88-3	Toluene	0.36	1.08	81.94	1.36	4.08	309.30	
584-94-1	2,3-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND
589-81-1	3-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND
111-65-9	n-Octane	0.32	0.95	9.70	1.47	4.42	45.41	
100-41-4	Ethylbenzene	0.32	0.95	87.08	1.37	4.11	379.03	
108-38-3	m,p-xylene	0.32	0.95	94.63	1.37	4.11	411.87	
100-42-5	Styrene	0.32	0.95	ND	1.35	4.04	ND	ND
95-47-6	o-xylene	0.32	0.95	45.52	1.37	4.11	198.12	
111-84-2	n-Nonane	0.28	0.84	364.08	1.47	4.42	1,914.41	
98-82-8	i-Propylbenzene	0.28	0.84	15.31	1.38	4.14	75.41	
103-65-1	n-propylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
80-56-8	a-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.84	21.63	1.38	4.14	106.57	
108-67-8	1,3,5-Trimethylbenzene	0.28	0.84	60.20	1.38	4.14	296.56	
611-14-3	2-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
127-91-3	b-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.84	69.99	1.38	4.14	344.76	
124-18-5	n-Decane	0.25	0.76	104.89	1.47	4.41	611.70	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
5989-27-5	d-Limonene	0.25	0.76	77.24	1.41	4.22	431.17	
141-93-5	1,3-Diethylbenzene	0.25	0.76	23.51	1.39	4.16	129.32	
105-05-5	1,4-Diethylbenzene	0.25	0.76	25.38	1.39	4.16	139.58	
104-51-8	n-Butylbenzene	0.25	0.76	28.26	1.39	4.16	155.42	
1120-21-4	Undecane	0.23	0.69	21.91	1.47	4.40	140.35	
112-40-3	Dodecane	0.21	0.63	35.48	1.47	4.40	247.64	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.45	28.35	22,519.68	33.38	100.15	79,557.23
TNMHC - C1	Total Non-Methane Hydrocarbons	56.70	170.10	135,118.08	37.18	111.54	88,602.02

ANALYTICAL REPORT

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 06

File Name: 1851106A

Date Sampled: 10/03/18 Time: 11:40

Description: T-106

Date Analyzed: 10/10/18 Time: 12:22

Can/Tube#: 548

Can Dilution Factor: 1.26

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.17	126	378	1,746	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218511
Laboratory Number: 06

File Name: 1851106A
Description: T-106
Can/Tube#: 548
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 Time: 11:40
Date Analyzed: 10/10/18 Time: 11:05
Dilution Factor: 1.26

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	123.34	0.09	0.26	83.34	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218511

Analytical Method: TO-15

Laboratory ID: 07

File Name: 1851107A.D

Date Sampled: 10/03/18

Time: 14:18

Description: T-107

Date Analyzed: 10/15/18

Time: 15:30

Canister: 680

Can Dilution Factor: 1.26

QC_Batch: 101518-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.58	ND	1.56	7.83	ND	
74-87-3	Chloromethane	0.32	1.58	ND	0.65	3.27	ND	
76-14-2	Freon 114	0.32	1.58	ND	2.20	11.07	ND	
75-01-4	Vinyl chloride	0.32	1.58	ND	0.80	4.05	ND	
106-99-0	1,3-Butadiene	0.32	1.58	ND	0.70	3.50	ND	
74-83-9	Bromomethane	0.32	1.58	ND	1.22	6.15	ND	
75-00-3	Chloroethane	0.32	1.58	ND	0.83	4.18	ND	
64-17-5	Ethanol	1.58	4.73	ND	2.97	8.90	ND	
75-69-4	Trichlorofluoromethane	0.32	1.51	ND	1.77	8.50	ND	
67-64-1	Acetone	1.58	3.87	14.94	3.74	9.20	35.49	
67-63-0	2-propanol	1.58	3.62	3.00	3.87	8.88	7.38	J
75-35-4	1,1-Dichloroethene	0.32	1.56	ND	1.25	6.19	ND	
76-13-1	Freon 113	0.32	1.51	ND	2.41	11.55	ND	
75-09-2	Dichloromethane	0.63	1.52	ND	2.19	5.27	ND	
75-15-0	Carbon disulfide	1.58	2.92	ND	4.90	9.09	ND	
156-60-5	trans-1,2-Dichloroethene	0.32	1.14	ND	1.25	4.50	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.16	ND	1.13	4.18	ND	
75-34-3	1,1-Dichloroethane	0.32	1.57	ND	1.27	6.36	ND	
108-05-4	Vinyl acetate	0.32	1.38	ND	1.11	4.87	ND	
78-93-3	2-Butanone	1.26	3.21	ND	3.71	9.45	ND	
141-78-6	Ethyl acetate	0.63	1.38	ND	2.27	4.97	ND	
74-97-5	Bromochloromethane	0.32	0.84	ND	1.67	4.44	ND	
109-99-9	Tetrahydrofuran	0.63	1.58	ND	1.86	4.67	ND	
156-59-2	cis-1,2-Dichloroethene	0.63	1.69	ND	2.50	6.71	ND	
67-66-3	Chloroform	0.32	1.58	ND	1.54	7.71	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.40	ND	1.72	7.63	ND	
107-06-2	1,2-Dichloroethane	0.32	1.44	ND	1.27	5.82	ND	
110-82-7	Cyclohexane	0.32	1.21	ND	1.09	4.16	ND	
71-43-2	Benzene	0.32	1.60	1.75	1.01	5.11	5.57	
56-23-5	Carbon tetrachloride	0.32	1.49	ND	1.98	9.39	ND	
142-82-5	n-Heptane	1.58	3.82	ND	6.45	15.64	ND	
78-87-5	1,2-Dichloropropane	0.32	1.52	ND	1.46	7.00	ND	
123-91-1	1,4 Dioxane	1.26	2.58	ND	4.54	9.28	ND	
79-01-6	Trichloroethene	0.19	1.47	ND	1.02	7.88	ND	
75-27-4	Bromodichloromethane	0.32	0.64	ND	2.11	4.26	ND	
80-62-6	Methyl methacrylate	1.26	4.26	ND	5.16	17.43	ND	
108-10-1	4-Methyl-2-pentanone	1.26	4.77	ND	5.16	19.53	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.32	1.63	ND	1.43	7.41	ND	
108-88-3	Toluene	0.63	1.64	0.67	2.37	6.19	2.54	J
10061-02-6	trans-1,3-Dichloropropene	0.32	1.63	ND	1.43	7.41	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.62	ND	1.72	8.83	ND	
591-78-6	2-Hexanone	1.58	4.47	ND	6.45	18.30	ND	
124-48-1	Dibromochloromethane	0.32	0.63	ND	2.68	5.36	ND	
106-93-4	1,2-Dibromoethane	0.32	0.76	ND	2.42	5.87	ND	
127-18-4	Tetrachloroethene	0.19	0.77	ND	1.28	5.20	ND	
108-90-7	Chlorobenzene	0.32	1.43	ND	1.45	6.60	ND	
100-41-4	Ethylbenzene	0.67	1.67	ND	2.89	7.23	ND	
1330-20-7	m,p-Xylenes	0.67	1.67	ND	2.90	7.25	ND	
100-42-5	Styrene	0.65	1.63	ND	2.78	6.95	ND	
75-25-2	Bromoform	0.32	0.42	ND	3.25	4.37	ND	
95-47-6	o-Xylene	0.65	1.62	ND	2.82	7.05	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.31	0.78	ND	2.14	5.35	ND	
622-96-8	4-Ethyltoluene	1.04	2.61	ND	5.13	12.83	ND	
108-67-8	1,3,5-Trimethylbenzene	0.65	1.63	ND	3.20	8.00	ND	
95-63-6	1,2,4-Trimethylbenzene	0.64	1.60	ND	3.15	7.87	ND	
541-73-1	1,3-Dichlorobenzene	0.63	1.17	ND	3.79	7.00	ND	
100-44-7	Benzyl chloride	0.63	3.82	ND	3.26	19.76	ND	
106-46-7	1,4-Dichlorobenzene	0.63	1.09	ND	3.79	6.55	ND	
95-50-1	1,2-Dichlorobenzene	0.63	1.02	ND	3.79	6.13	ND	
120-82-1	1,2,4-Trichlorobenzene	1.58	2.17	ND	11.68	16.07	ND	
91-20-3	Naphthalene	0.32	0.50	ND	1.68	2.64	ND	
87-68-3	Hexachlorobutadiene	1.58	1.67	ND	16.79	17.80	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				106	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511
Laboratory Number: 07

File Name: 1851107A
Description: T-107
Canister: 680
QC_Batch: 101218-GCK

Date Sampled: 10/03/18 Time: 14:18
Date Analyzed: 10/12/18 Time: 13:22
Can Factor: 1.26
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.26	3.78	ND	1.45	4.35	ND	ND
74-86-2	Acetylene	1.26	3.78	ND	1.34	4.03	ND	ND
74-84-0	Ethane	1.26	3.78	3.84	1.55	4.66	4.74	
115-07-1	Propene	0.84	2.52	ND	1.45	4.35	ND	ND
74-98-6	Propane	0.84	2.52	ND	1.52	4.55	ND	ND
75-28-5	i-Butane	0.63	1.89	ND	1.50	4.50	ND	ND
106-98-9	1-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
106-97-8	n-Butane	0.63	1.89	ND	1.50	4.50	ND	ND
624-64-6	t-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
590-18-1	c-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
78-78-4	i-Pentane	0.50	1.51	ND	1.49	4.47	ND	ND
109-67-1	1-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
109-66-0	n-Pentane	0.50	1.51	0.90	1.49	4.47	2.67	J
78-79-5	Isoprene	0.50	1.51	ND	1.41	4.22	ND	ND
646-04-8	t-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
627-20-3	c-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
287-92-3	Cyclopentane	0.50	1.51	ND	1.45	4.34	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
107-83-5	2-Methylpentane	0.42	1.26	ND	1.48	4.45	ND	ND
96-14-0	3-Methylpentane	0.42	1.26	ND	1.48	4.45	ND	ND
110-54-3	n-Hexane	0.42	1.26	0.73	1.48	4.45	2.57	J
96-37-7	Methylcyclopentane	0.42	1.26	ND	1.45	4.35	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.08	ND	1.48	4.44	ND	ND
71-43-2	Benzene	0.42	1.26	0.72	1.34	4.03	2.30	J
110-82-7	Cyclohexane	0.42	1.26	ND	1.45	4.35	ND	ND
591-76-4	2-Methylhexane	0.36	1.08	ND	1.48	4.44	ND	ND
565-59-3	2,3-Dimethylpentane	0.36	1.08	ND	1.48	4.44	ND	ND
589-34-4	3-Methylhexane	0.36	1.08	ND	1.48	4.44	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	ND	1.47	4.42	ND	ND
142-82-5	n-Heptane	0.36	1.08	ND	1.48	4.44	ND	ND
108-87-2	Methylcyclohexane	0.36	1.08	ND	1.45	4.35	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	ND	1.47	4.42	ND	ND
108-88-3	Toluene	0.36	1.08	0.55	1.36	4.08	2.08	J
584-94-1	2,3-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND
589-81-1	3-Methylheptane	0.32	0.95	ND	1.47	4.42	ND	ND
111-65-9	n-Octane	0.32	0.95	1.25	1.47	4.42	5.85	
100-41-4	Ethylbenzene	0.32	0.95	ND	1.37	4.11	ND	ND
108-38-3	m,p-xylene	0.32	0.95	ND	1.37	4.11	ND	ND
100-42-5	Styrene	0.32	0.95	ND	1.35	4.04	ND	ND
95-47-6	o-xylene	0.32	0.95	ND	1.37	4.11	ND	ND
111-84-2	n-Nonane	0.28	0.84	ND	1.47	4.42	ND	ND
98-82-8	i-Propylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
103-65-1	n-propylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
80-56-8	a-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
611-14-3	2-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
127-91-3	b-Pinene	0.25	0.76	ND	1.41	4.22	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
124-18-5	n-Decane	0.25	0.76	ND	1.47	4.41	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
5989-27-5	d-Limonene	0.25	0.76	ND	1.41	4.22	ND	ND
141-93-5	1,3-Diethylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
104-51-8	n-Butylbenzene	0.25	0.76	ND	1.39	4.16	ND	ND
1120-21-4	Undecane	0.23	0.69	ND	1.47	4.40	ND	ND
112-40-3	Dodecane	0.21	0.63	ND	1.47	4.40	ND	ND
Total Petroleum Hydrocarbons:								
TNMHC - C6	Total Non-Methane Hydrocarbons	9.45	28.35	ND	33.38	100.15	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	56.70	170.10	ND	37.18	111.54	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 07

File Name: 1851107A

Date Sampled: 10/03/18 Time: 14:18

Description: T-107

Date Analyzed: 10/10/18 Time: 13:19

Can/Tube#: 680

Can Dilution Factor: 1.26

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.01	126	378	138	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 218511
Laboratory Number: 07

File Name: 1851107A
Description: T-107
Can/Tube#: 680
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 Time: 14:18
Date Analyzed: 10/10/18 Time: 11:16
Dilution Factor: 1.26

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	60.29	0.09	0.26	40.74	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218511

Laboratory ID: 08

File Name: 1851108A.D

Description: T-108

Canister: 158

QC_Batch: 101518-MA1

Date Sampled: 10/03/18

Time: 14:15

Date Analyzed: 10/15/18

Time: 17:24

Can Dilution Factor: 1.28

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.32	1.61	ND	1.58	7.96	ND	
74-87-3	Chloromethane	0.32	1.61	ND	0.66	3.32	ND	
76-14-2	Freon 114	0.32	1.61	ND	2.24	11.25	ND	
75-01-4	Vinyl chloride	0.32	1.61	ND	0.82	4.11	ND	
106-99-0	1,3-Butadiene	0.32	1.61	ND	0.71	3.56	ND	
74-83-9	Bromomethane	0.32	1.61	ND	1.24	6.24	ND	
75-00-3	Chloroethane	0.32	1.61	ND	0.84	4.24	ND	
64-17-5	Ethanol	1.60	4.80	ND	3.02	9.05	ND	
75-69-4	Trichlorofluoromethane	0.32	1.54	ND	1.80	8.63	ND	
67-64-1	Acetone	1.60	3.94	125.37	3.80	9.35	297.76	
67-63-0	2-propanol	1.60	3.67	71.31	3.93	9.03	175.19	
75-35-4	1,1-Dichloroethene	0.32	1.59	ND	1.27	6.29	ND	
76-13-1	Freon 113	0.32	1.53	ND	2.45	11.73	ND	
75-09-2	Dichloromethane	0.64	1.54	ND	2.22	5.35	ND	
75-15-0	Carbon disulfide	1.60	2.97	7.89	4.98	9.24	24.55	
156-60-5	trans-1,2-Dichloroethene	0.32	1.16	ND	1.27	4.58	ND	
1634-04-4	Methyl tert butyl ether	0.32	1.18	ND	1.15	4.25	ND	
75-34-3	1,1-Dichloroethane	0.32	1.60	ND	1.30	6.46	ND	
108-05-4	Vinyl acetate	0.32	1.41	ND	1.13	4.95	ND	
78-93-3	2-Butanone	1.28	3.26	44.91	3.77	9.60	132.37	
141-78-6	Ethyl acetate	0.64	1.40	ND	2.30	5.05	ND	
74-97-5	Bromochloromethane	0.32	0.85	ND	1.69	4.51	ND	
109-99-9	Tetrahydrofuran	0.64	1.61	ND	1.89	4.74	ND	
156-59-2	cis-1,2-Dichloroethene	0.64	1.72	ND	2.54	6.82	ND	
67-66-3	Chloroform	0.32	1.60	ND	1.56	7.83	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.42	ND	1.75	7.75	ND	
107-06-2	1,2-Dichloroethane	0.32	1.46	ND	1.30	5.91	ND	
110-82-7	Cyclohexane	0.32	1.23	ND	1.11	4.23	ND	
71-43-2	Benzene	0.32	1.63	4.67	1.02	5.19	14.92	
56-23-5	Carbon tetrachloride	0.32	1.52	ND	2.01	9.54	ND	
142-82-5	n-Heptane	1.60	3.88	ND	6.55	15.89	ND	
78-87-5	1,2-Dichloropropane	0.32	1.54	ND	1.48	7.11	ND	
123-91-1	1,4 Dioxane	1.28	2.62	ND	4.61	9.43	ND	
79-01-6	Trichloroethene	0.19	1.49	ND	1.03	8.01	ND	
75-27-4	Bromodichloromethane	0.32	0.65	ND	2.14	4.33	ND	
80-62-6	Methyl methacrylate	1.28	4.33	ND	5.24	17.70	ND	
108-10-1	4-Methyl-2-pentanone	1.28	4.84	ND	5.24	19.84	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.32	1.66	ND	1.45	7.52	ND	
108-88-3	Toluene	0.64	1.67	8.19	2.41	6.29	30.83	
10061-02-6	trans-1,3-Dichloropropene	0.32	1.66	ND	1.45	7.53	ND	
79-00-5	1,1,2-Trichloroethane	0.32	1.65	ND	1.75	8.97	ND	
591-78-6	2-Hexanone	1.60	4.54	ND	6.55	18.59	ND	
124-48-1	Dibromochloromethane	0.32	0.64	ND	2.72	5.44	ND	
106-93-4	1,2-Dibromoethane	0.32	0.78	ND	2.46	5.97	ND	
127-18-4	Tetrachloroethene	0.19	0.78	ND	1.30	5.28	ND	
108-90-7	Chlorobenzene	0.32	1.46	ND	1.47	6.70	ND	
100-41-4	Ethylbenzene	0.68	1.69	ND	2.94	7.34	ND	
1330-20-7	m,p-Xylenes	0.68	1.70	1.72	2.94	7.36	7.47	
100-42-5	Styrene	0.66	1.66	ND	2.82	7.06	ND	
75-25-2	Bromoform	0.32	0.43	ND	3.31	4.44	ND	
95-47-6	o-Xylene	0.66	1.65	0.95	2.86	7.16	4.10	J
79-34-5	1,1,2,2-Tetrachloroethane	0.32	0.79	ND	2.17	5.43	ND	
622-96-8	4-Ethyltoluene	1.06	2.65	ND	5.21	13.03	ND	
108-67-8	1,3,5-Trimethylbenzene	0.66	1.65	ND	3.25	8.12	ND	
95-63-6	1,2,4-Trimethylbenzene	0.65	1.63	ND	3.20	7.99	ND	
541-73-1	1,3-Dichlorobenzene	0.64	1.18	ND	3.85	7.11	ND	
100-44-7	Benzyl chloride	0.64	3.88	ND	3.31	20.07	ND	
106-46-7	1,4-Dichlorobenzene	0.64	1.11	ND	3.85	6.65	ND	
95-50-1	1,2-Dichlorobenzene	0.64	1.04	ND	3.85	6.23	ND	
120-82-1	1,2,4-Trichlorobenzene	1.60	2.20	ND	11.86	16.33	ND	
91-20-3	Naphthalene	0.33	0.51	0.37	1.71	2.68	1.96	J
87-68-3	Hexachlorobutadiene	1.60	1.70	ND	17.06	18.08	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				102	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511
Laboratory Number: 08

File Name: 1851108A
Description: T-108
Canister: 158
QC_Batch: 101218-GCK

Date Sampled: 10/03/18 Time: 14:15
Date Analyzed: 10/12/18 Time: 12:36
Can Factor: 1.28
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.28	3.84	ND	1.47	4.42	ND	ND
74-86-2	Acetylene	1.28	3.84	ND	1.36	4.09	ND	ND
74-84-0	Ethane	1.28	3.84	5.23	1.58	4.74	6.45	
115-07-1	Propene	0.85	2.56	ND	1.47	4.42	ND	ND
74-98-6	Propane	0.85	2.56	7.02	1.54	4.63	12.69	
75-28-5	i-Butane	0.64	1.92	ND	1.52	4.57	ND	ND
106-98-9	1-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
106-97-8	n-Butane	0.64	1.92	1.49	1.52	4.57	3.55	J
624-64-6	t-2-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
590-18-1	c-2-Butene	0.64	1.92	ND	1.47	4.41	ND	ND
78-78-4	i-Pentane	0.51	1.54	75.68	1.52	4.55	223.92	
109-67-1	1-Pentene	0.51	1.54	ND	1.47	4.41	ND	ND
109-66-0	n-Pentane	0.51	1.54	1.08	1.51	4.54	3.18	J
78-79-5	Isoprene	0.51	1.54	ND	1.43	4.29	ND	ND
646-04-8	t-2-Pentene	0.51	1.54	17.84	1.47	4.41	51.24	
627-20-3	c-2-Pentene	0.51	1.54	0.74	1.47	4.41	2.13	J
75-83-2	2,2-Dimethylbutane	0.43	1.28	ND	1.51	4.52	ND	ND
287-92-3	Cyclopentane	0.51	1.54	ND	1.47	4.41	ND	ND
79-29-8	2,3-Dimethylbutane	0.43	1.28	ND	1.51	4.52	ND	ND
107-83-5	2-Methylpentane	0.43	1.28	ND	1.51	4.52	ND	ND
96-14-0	3-Methylpentane	0.43	1.28	ND	1.51	4.52	ND	ND
110-54-3	n-Hexane	0.43	1.28	7.22	1.51	4.52	25.50	
96-37-7	Methylcyclopentane	0.43	1.28	ND	1.47	4.42	ND	ND
108-08-7	2,4-Dimethylpentane	0.37	1.10	ND	1.50	4.51	ND	ND
71-43-2	Benzene	0.43	1.28	5.56	1.37	4.10	17.81	
110-82-7	Cyclohexane	0.43	1.28	ND	1.47	4.42	ND	ND
591-76-4	2-Methylhexane	0.37	1.10	ND	1.50	4.51	ND	ND
565-59-3	2,3-Dimethylpentane	0.37	1.10	ND	1.50	4.51	ND	ND
589-34-4	3-Methylhexane	0.37	1.10	ND	1.50	4.51	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.32	0.96	ND	1.50	4.49	ND	ND
142-82-5	n-Heptane	0.37	1.10	0.94	1.50	4.51	3.87	J
108-87-2	Methylcyclohexane	0.37	1.10	ND	1.47	4.42	ND	ND
592-13-2	2,5-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND
589-43-5	2,4-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.96	ND	1.50	4.49	ND	ND
108-88-3	Toluene	0.37	1.10	12.39	1.38	4.14	46.75	
584-94-1	2,3-Dimethylhexane	0.32	0.96	ND	1.50	4.49	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.96	ND	1.50	4.49	ND	ND
589-81-1	3-Methylheptane	0.32	0.96	ND	1.50	4.49	ND	ND
111-65-9	n-Octane	0.32	0.96	0.42	1.50	4.49	1.98	J
100-41-4	Ethylbenzene	0.32	0.96	0.94	1.39	4.18	4.10	J
108-38-3	m,p-xylene	0.32	0.96	3.37	1.39	4.18	14.68	
100-42-5	Styrene	0.32	0.96	ND	1.37	4.10	ND	ND
95-47-6	o-xylene	0.32	0.96	3.08	1.39	4.18	13.41	
111-84-2	n-Nonane	0.28	0.85	0.60	1.50	4.49	3.15	J
98-82-8	i-Propylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
103-65-1	n-propylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
80-56-8	a-Pinene	0.26	0.77	ND	1.43	4.29	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.85	0.81	1.40	4.20	4.00	J
611-14-3	2-Ethyltoluene	0.28	0.85	ND	1.40	4.20	ND	ND
127-91-3	b-Pinene	0.26	0.77	ND	1.43	4.29	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
124-18-5	n-Decane	0.26	0.77	0.68	1.49	4.48	3.95	J
526-73-8	1,2,3-Trimethylbenzene	0.28	0.85	ND	1.40	4.20	ND	ND
5989-27-5	d-Limonene	0.26	0.77	ND	1.43	4.29	ND	ND
141-93-5	1,3-Diethylbenzene	0.26	0.77	ND	1.41	4.22	ND	ND
105-05-5	1,4-Diethylbenzene	0.26	0.77	ND	1.41	4.22	ND	ND
104-51-8	n-Butylbenzene	0.26	0.77	ND	1.41	4.22	ND	ND
1120-21-4	Undecane	0.23	0.70	ND	1.49	4.47	ND	ND
112-40-3	Dodecane	0.21	0.64	ND	1.49	4.47	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.60	28.80	202.68	33.91	101.74	716.03	
TNMHC - C1	Total Non-Methane Hydrocarbons	57.60	172.80	1,216.08	37.77	113.31	797.43	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 08

File Name: 1851108A

Date Sampled: 10/03/18

Time: 14:15

Description: T-108

Date Analyzed: 10/10/18

Time: 13:29

Can/Tube#: 158

Can Dilution Factor: 1.28

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	128	384	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 218511
Laboratory Number: 08

File Name: 1851108A
Description: T-108
Can/Tube#: 158
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 Time: 14:15
Date Analyzed: 10/10/18 Time: 11:26
Dilution Factor: 1.28

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	6.01	0.09	0.26	4.06	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218511

Laboratory ID: 09

File Name: 1851109A.D

Date Sampled: 10/03/18

Time: 15:19

Description: T-109

Date Analyzed: 10/15/18

Time: 18:47

Canister: 704

Can Dilution Factor: 1.25

QC_Batch: 101518-MA1

Air Volume: 20 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	3.13	15.72	ND	15.44	77.69	ND	
74-87-3	Chloromethane	3.13	15.72	ND	6.45	32.45	ND	
76-14-2	Freon 114	3.13	15.72	ND	21.83	109.82	ND	
75-01-4	Vinyl chloride	3.13	15.72	ND	7.98	40.16	ND	
106-99-0	1,3-Butadiene	3.13	15.72	ND	6.91	34.76	ND	
74-83-9	Bromomethane	3.13	15.72	ND	12.12	60.98	ND	
75-00-3	Chloroethane	3.13	15.72	ND	8.24	41.45	ND	
64-17-5	Ethanol	15.63	46.88	522.95	29.45	88.34	985.52	
75-69-4	Trichlorofluoromethane	3.13	15.01	ND	17.55	84.28	ND	
67-64-1	Acetone	15.63	38.44	154.20	37.11	91.29	366.24	
67-63-0	2-propanol	15.63	35.88	31.88	38.39	88.14	78.32	J
75-35-4	1,1-Dichloroethene	3.13	15.50	ND	12.38	61.40	ND	
76-13-1	Freon 113	3.13	14.95	ND	23.94	114.54	ND	
75-09-2	Dichloromethane	6.25	15.05	ND	21.69	52.24	ND	
75-15-0	Carbon disulfide	15.63	29.00	ND	48.61	90.22	ND	
156-60-5	trans-1,2-Dichloroethene	3.13	11.28	ND	12.38	44.69	ND	
1634-04-4	Methyl tert butyl ether	3.13	11.52	ND	11.25	41.49	ND	
75-34-3	1,1-Dichloroethane	3.13	15.59	ND	12.65	63.08	ND	
108-05-4	Vinyl acetate	3.13	13.73	ND	11.00	48.33	ND	
78-93-3	2-Butanone	12.50	31.81	52.32	36.84	93.76	154.21	
141-78-6	Ethyl acetate	6.25	13.69	ND	22.51	49.30	ND	
74-97-5	Bromochloromethane	3.13	8.32	ND	16.53	44.03	ND	
109-99-9	Tetrahydrofuran	6.25	15.72	ND	18.42	46.33	ND	
156-59-2	cis-1,2-Dichloroethene	6.25	16.81	ND	24.76	66.60	ND	
67-66-3	Chloroform	3.13	15.67	ND	15.25	76.50	ND	
71-55-6	1,1,1-Trichloroethane	3.13	13.88	ND	17.04	75.66	ND	
107-06-2	1,2-Dichloroethane	3.13	14.25	ND	12.65	57.69	ND	
110-82-7	Cyclohexane	3.14	12.00	ND	10.80	41.30	ND	
71-43-2	Benzene	3.13	15.88	98.73	9.98	50.69	315.20	
56-23-5	Carbon tetrachloride	3.13	14.81	ND	19.65	93.13	ND	
142-82-5	n-Heptane	15.63	37.88	ND	64.00	155.14	ND	
78-87-5	1,2-Dichloropropane	3.13	15.04	ND	14.44	69.48	ND	
123-91-1	1,4 Dioxane	12.50	25.56	ND	45.02	92.06	ND	
79-01-6	Trichloroethene	1.88	14.56	ND	10.07	78.19	ND	
75-27-4	Bromodichloromethane	3.13	6.31	ND	20.93	42.27	ND	
80-62-6	Methyl methacrylate	12.50	42.25	ND	51.15	172.89	ND	
108-10-1	4-Methyl-2-pentanone	12.50	47.31	ND	51.20	193.80	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	3.13	16.19	ND	14.18	73.48	ND	
108-88-3	Toluene	6.25	16.31	134.95	23.53	61.42	508.09	
10061-02-6	trans-1,3-Dichloropropene	3.13	16.21	ND	14.18	73.54	ND	
79-00-5	1,1,2-Trichloroethane	3.13	16.07	ND	17.04	87.62	ND	
591-78-6	2-Hexanone	15.63	44.31	ND	64.00	181.51	ND	
124-48-1	Dibromochloromethane	3.13	6.24	ND	26.61	53.13	ND	
106-93-4	1,2-Dibromoethane	3.13	7.58	ND	24.00	58.26	ND	
127-18-4	Tetrachloroethene	1.88	7.61	ND	12.71	51.55	ND	
108-90-7	Chlorobenzene	3.13	14.22	ND	14.38	65.46	ND	
100-41-4	Ethylbenzene	6.61	16.52	9.68	28.69	71.72	42.02	J
1330-20-7	m,p-Xylenes	6.62	16.56	42.65	28.76	71.90	185.16	
100-42-5	Styrene	6.47	16.18	ND	27.57	68.92	ND	
75-25-2	Bromoform	3.13	4.19	ND	32.28	43.32	ND	
95-47-6	o-Xylene	6.44	16.11	21.51	27.97	69.92	93.37	
79-34-5	1,1,2,2-Tetrachloroethane	3.09	7.74	ND	21.23	53.07	ND	
622-96-8	4-Ethyltoluene	10.36	25.90	ND	50.90	127.26	ND	
108-67-8	1,3,5-Trimethylbenzene	6.46	16.14	ND	31.73	79.33	ND	
95-63-6	1,2,4-Trimethylbenzene	6.35	15.88	ND	31.21	78.04	ND	
541-73-1	1,3-Dichlorobenzene	6.25	11.56	ND	37.56	69.48	ND	
100-44-7	Benzyl chloride	6.25	37.88	ND	32.35	196.02	ND	
106-46-7	1,4-Dichlorobenzene	6.25	10.81	ND	37.56	64.98	ND	
95-50-1	1,2-Dichlorobenzene	6.25	10.13	ND	37.56	60.84	ND	
120-82-1	1,2,4-Trichlorobenzene	15.63	21.50	ND	115.87	159.43	ND	
91-20-3	Naphthalene	3.19	5.00	ND	16.70	26.20	ND	
87-68-3	Hexachlorobutadiene	15.63	16.56	ND	166.58	176.58	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				112	70	130	

ANALYTICAL REPORT

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511
Laboratory Number: 09

File Name: 1851109A
Description: T-109
Canister: 704
QC_Batch: 101218-GCK

Date Sampled: 10/03/18 Time: 15:19
Date Analyzed: 10/12/18 Time: 14:10
Can Factor: 1.25
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.25	3.75	ND	1.44	4.32	ND	ND
74-86-2	Acetylene	1.25	3.75	ND	1.33	4.00	ND	ND
74-84-0	Ethane	1.25	3.75	61.35	1.54	4.63	75.68	
115-07-1	Propene	0.83	2.50	ND	1.44	4.31	ND	ND
74-98-6	Propane	0.83	2.50	18.11	1.51	4.52	32.74	
75-28-5	i-Butane	0.63	1.88	ND	1.49	4.46	ND	ND
106-98-9	1-Butene	0.63	1.88	ND	1.44	4.31	ND	ND
106-97-8	n-Butane	0.63	1.88	0.98	1.49	4.46	2.34	J
624-64-6	t-2-Butene	0.63	1.88	ND	1.44	4.31	ND	ND
590-18-1	c-2-Butene	0.63	1.88	ND	1.44	4.31	ND	ND
78-78-4	i-Pentane	0.50	1.50	1.34	1.48	4.44	3.96	J
109-67-1	1-Pentene	0.50	1.50	ND	1.44	4.31	ND	ND
109-66-0	n-Pentane	0.50	1.50	2.55	1.48	4.43	7.52	
78-79-5	Isoprene	0.50	1.50	ND	1.40	4.19	ND	ND
646-04-8	t-2-Pentene	0.50	1.50	9.41	1.44	4.31	27.03	
627-20-3	c-2-Pentene	0.50	1.50	ND	1.44	4.31	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.25	ND	1.47	4.42	ND	ND
287-92-3	Cyclopentane	0.50	1.50	ND	1.44	4.31	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.25	ND	1.47	4.42	ND	ND
107-83-5	2-Methylpentane	0.42	1.25	6.51	1.47	4.42	23.00	
96-14-0	3-Methylpentane	0.42	1.25	ND	1.47	4.42	ND	ND
110-54-3	n-Hexane	0.42	1.25	16.20	1.47	4.42	57.25	
96-37-7	Methylcyclopentane	0.42	1.25	ND	1.44	4.31	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.07	5.10	1.47	4.40	20.95	
71-43-2	Benzene	0.42	1.25	163.90	1.33	4.00	524.62	
110-82-7	Cyclohexane	0.42	1.25	3.90	1.44	4.31	13.44	
591-76-4	2-Methylhexane	0.36	1.07	0.87	1.47	4.40	3.56	J
565-59-3	2,3-Dimethylpentane	0.36	1.07	9.27	1.47	4.40	38.06	
589-34-4	3-Methylhexane	0.36	1.07	3.37	1.47	4.40	13.85	
540-84-1	2,2,4-Trimethylpentane	0.31	0.94	ND	1.46	4.39	ND	ND
142-82-5	n-Heptane	0.36	1.07	3.56	1.47	4.40	14.61	
108-87-2	Methylcyclohexane	0.36	1.07	6.42	1.44	4.31	25.83	
592-13-2	2,5-Dimethylhexane	0.31	0.94	ND	1.46	4.39	ND	ND
589-43-5	2,4-Dimethylhexane	0.31	0.94	1.26	1.46	4.39	5.92	
565-75-3	2,3,4-Trimethylpentane	0.31	0.94	ND	1.46	4.39	ND	ND
108-88-3	Toluene	0.36	1.07	205.28	1.35	4.04	774.83	
584-94-1	2,3-Dimethylhexane	0.31	0.94	ND	1.46	4.39	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.94	9.67	1.46	4.39	45.28	
589-81-1	3-Methylheptane	0.31	0.94	3.88	1.46	4.39	18.16	
111-65-9	n-Octane	0.31	0.94	7.66	1.46	4.39	35.87	
100-41-4	Ethylbenzene	0.31	0.94	21.09	1.36	4.08	91.79	
108-38-3	m,p-xylene	0.31	0.94	84.44	1.36	4.08	367.51	
100-42-5	Styrene	0.31	0.94	ND	1.33	4.00	ND	ND
95-47-6	o-xylene	0.31	0.94	46.52	1.36	4.08	202.46	
111-84-2	n-Nonane	0.28	0.83	5.44	1.46	4.38	28.63	
98-82-8	i-Propylbenzene	0.28	0.83	1.25	1.37	4.11	6.16	
103-65-1	n-propylbenzene	0.28	0.83	2.51	1.37	4.11	12.35	
80-56-8	a-Pinene	0.25	0.75	ND	1.40	4.19	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.83	ND	1.37	4.11	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.83	4.96	1.37	4.11	24.43	
108-67-8	1,3,5-Trimethylbenzene	0.28	0.83	2.16	1.37	4.11	10.63	
611-14-3	2-Ethyltoluene	0.28	0.83	ND	1.37	4.11	ND	ND
127-91-3	b-Pinene	0.25	0.75	3.47	1.40	4.19	19.38	
95-63-6	1,2,4-Trimethylbenzene	0.28	0.83	10.09	1.37	4.11	49.69	
124-18-5	n-Decane	0.25	0.75	3.63	1.46	4.37	21.17	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.83	ND	1.37	4.11	ND	ND
5989-27-5	d-Limonene	0.25	0.75	0.82	1.40	4.19	4.59	
141-93-5	1,3-Diethylbenzene	0.25	0.75	2.02	1.38	4.13	11.13	
105-05-5	1,4-Diethylbenzene	0.25	0.75	2.77	1.38	4.13	15.24	
104-51-8	n-Butylbenzene	0.25	0.75	1.17	1.38	4.13	6.43	
1120-21-4	Undecane	0.23	0.68	2.15	1.46	4.37	13.76	
112-40-3	Dodecane	0.21	0.63	1.75	1.45	4.36	12.21	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.38	28.13	1,177.16	33.12	99.36	4,158.67	
TNMHC - C1	Total Non-Methane Hydrocarbons	56.25	168.75	7,062.98	36.89	110.66	4,631.46	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 09

File Name: 1851109A

Date Sampled: 10/03/18 Time: 15:19

Description: T-109

Date Analyzed: 10/10/18 Time: 13:38

Can/Tube#: 704

Can Dilution Factor: 1.25

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	125	375	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218511
Laboratory Number: 09

File Name: 1851109A
Description: T-109
Can/Tube#: 704
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 Time: 15:19
Date Analyzed: 10/10/18 Time: 11:34
Dilution Factor: 1.25

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	158.39	0.08	0.25	107.02	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218511

Laboratory ID: 10

File Name: 1851110A.D
Description: T-110
Canister: 725
QC_Batch: 101518-MA1

Date Sampled: 10/03/18 Time: 15:20
Date Analyzed: 10/15/18 Time: 19:29
Can Dilution Factor: 1.24
Air Volume: 20 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	3.10	15.59	ND	15.32	77.07	ND	
74-87-3	Chloromethane	3.10	15.59	ND	6.40	32.19	ND	
76-14-2	Freon 114	3.10	15.59	ND	21.66	108.94	ND	
75-01-4	Vinyl chloride	3.10	15.59	ND	7.92	39.84	ND	
106-99-0	1,3-Butadiene	3.10	15.59	ND	6.86	34.49	ND	
74-83-9	Bromomethane	3.10	15.59	ND	12.03	60.49	ND	
75-00-3	Chloroethane	3.10	15.59	ND	8.17	41.12	ND	
64-17-5	Ethanol	15.50	46.50	115.80	29.21	87.63	218.24	
75-69-4	Trichlorofluoromethane	3.10	14.89	ND	17.41	83.61	ND	
67-64-1	Acetone	15.50	38.13	231.72	36.81	90.56	550.35	
67-63-0	2-propanol	15.50	35.59	38.81	38.08	87.43	95.35	
75-35-4	1,1-Dichloroethene	3.10	15.38	ND	12.28	60.91	ND	
76-13-1	Freon 113	3.10	14.83	ND	23.75	113.62	ND	
75-09-2	Dichloromethane	6.20	14.93	ND	21.52	51.82	ND	
75-15-0	Carbon disulfide	15.50	28.77	ND	48.22	89.50	ND	
156-60-5	trans-1,2-Dichloroethene	3.10	11.19	ND	12.28	44.33	ND	
1634-04-4	Methyl tert butyl ether	3.10	11.43	ND	11.16	41.16	ND	
75-34-3	1,1-Dichloroethane	3.10	15.46	ND	12.55	62.57	ND	
108-05-4	Vinyl acetate	3.10	13.62	ND	10.91	47.94	ND	
78-93-3	2-Butanone	12.40	31.56	72.30	36.55	93.01	213.11	
141-78-6	Ethyl acetate	6.20	13.58	ND	22.33	48.90	ND	
74-97-5	Bromochloromethane	3.10	8.26	ND	16.40	43.68	ND	
109-99-9	Tetrahydrofuran	6.20	15.59	ND	18.27	45.96	ND	
156-59-2	cis-1,2-Dichloroethene	6.20	16.68	ND	24.56	66.07	ND	
67-66-3	Chloroform	3.10	15.55	ND	15.13	75.89	ND	
71-55-6	1,1,1-Trichloroethane	3.10	13.76	ND	16.91	75.06	ND	
107-06-2	1,2-Dichloroethane	3.10	14.14	ND	12.55	57.23	ND	
110-82-7	Cyclohexane	3.11	11.90	ND	10.71	40.97	ND	
71-43-2	Benzene	3.10	15.75	340.40	9.90	50.28	1,086.80	
56-23-5	Carbon tetrachloride	3.10	14.69	ND	19.49	92.38	ND	
142-82-5	n-Heptane	15.50	37.57	ND	63.49	153.90	ND	
78-87-5	1,2-Dichloropropane	3.10	14.92	ND	14.32	68.92	ND	
123-91-1	1,4 Dioxane	12.40	25.36	ND	44.66	91.33	ND	
79-01-6	Trichloroethene	1.86	14.44	ND	9.99	77.56	ND	
75-27-4	Bromodichloromethane	3.10	6.26	ND	20.76	41.93	ND	
80-62-6	Methyl methacrylate	12.40	41.91	ND	50.74	171.51	ND	
108-10-1	4-Methyl-2-pentanone	12.40	46.93	ND	50.79	192.25	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	3.10	16.06	ND	14.07	72.89	ND	
108-88-3	Toluene	6.20	16.18	413.61	23.34	60.93	1,557.24	
10061-02-6	trans-1,3-Dichloropropene	3.10	16.08	ND	14.07	72.95	ND	
79-00-5	1,1,2-Trichloroethane	3.10	15.94	ND	16.91	86.92	ND	
591-78-6	2-Hexanone	15.50	43.96	ND	63.49	180.06	ND	
124-48-1	Dibromochloromethane	3.10	6.19	ND	26.40	52.71	ND	
106-93-4	1,2-Dibromoethane	3.10	7.52	ND	23.81	57.80	ND	
127-18-4	Tetrachloroethene	1.86	7.55	ND	12.61	51.14	ND	
108-90-7	Chlorobenzene	3.10	14.11	ND	14.27	64.94	ND	
100-41-4	Ethylbenzene	6.55	16.39	36.38	28.46	71.14	157.96	
1330-20-7	m,p-Xylenes	6.57	16.43	174.13	28.53	71.32	755.98	
100-42-5	Styrene	6.42	16.05	ND	27.35	68.36	ND	
75-25-2	Bromoform	3.10	4.16	ND	32.02	42.97	ND	
95-47-6	o-Xylene	6.39	15.98	83.37	27.75	69.36	361.95	
79-34-5	1,1,2,2-Tetrachloroethane	3.07	7.67	ND	21.06	52.64	ND	
622-96-8	4-Ethyltoluene	10.28	25.69	ND	50.49	126.24	ND	
108-67-8	1,3,5-Trimethylbenzene	6.41	16.01	ND	31.48	78.69	ND	
95-63-6	1,2,4-Trimethylbenzene	6.30	15.75	14.72	30.96	77.41	72.32	J
541-73-1	1,3-Dichlorobenzene	6.20	11.47	ND	37.26	68.93	ND	
100-44-7	Benzyl chloride	6.20	37.57	ND	32.09	194.45	ND	
106-46-7	1,4-Dichlorobenzene	6.20	10.73	ND	37.26	64.46	ND	
95-50-1	1,2-Dichlorobenzene	6.20	10.04	ND	37.26	60.36	ND	
120-82-1	1,2,4-Trichlorobenzene	15.50	21.33	ND	114.94	158.16	ND	
91-20-3	Naphthalene	3.16	4.96	4.53	16.57	25.99	23.76	J
87-68-3	Hexachlorobutadiene	15.50	16.43	ND	165.25	175.17	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				107	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511
Laboratory Number: 10

File Name: 1851110A
Description: T-110
Canister: 725
QC_Batch: 101118-GCK

Date Sampled: 10/03/18 Time: 15:20
Date Analyzed: 10/11/18 Time: 20:54
Can Factor: 1.24
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.24	3.72	83.08	1.43	4.28	95.67	
74-86-2	Acetylene	1.24	3.72	ND	1.32	3.96	ND	ND
74-84-0	Ethane	1.24	3.72	65.46	1.53	4.59	80.75	
115-07-1	Propene	0.83	2.48	ND	1.43	4.28	ND	ND
74-98-6	Propane	0.83	2.48	131.18	1.49	4.48	237.09	
75-28-5	i-Butane	0.62	1.86	ND	1.48	4.43	ND	ND
106-98-9	1-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
106-97-8	n-Butane	0.62	1.86	4.55	1.48	4.43	10.83	
624-64-6	t-2-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
590-18-1	c-2-Butene	0.62	1.86	ND	1.43	4.28	ND	ND
78-78-4	i-Pentane	0.50	1.49	34.42	1.47	4.40	101.84	
109-67-1	1-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
109-66-0	n-Pentane	0.50	1.49	6.92	1.47	4.40	20.46	
78-79-5	Isoprene	0.50	1.49	ND	1.38	4.15	ND	ND
646-04-8	t-2-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
627-20-3	c-2-Pentene	0.50	1.49	ND	1.42	4.27	ND	ND
75-83-2	2,2-Dimethylbutane	0.41	1.24	ND	1.46	4.38	ND	ND
287-92-3	Cyclopentane	0.50	1.49	ND	1.42	4.27	ND	ND
79-29-8	2,3-Dimethylbutane	0.41	1.24	ND	1.46	4.38	ND	ND
107-83-5	2-Methylpentane	0.41	1.24	ND	1.46	4.38	ND	ND
96-14-0	3-Methylpentane	0.41	1.24	11.34	1.46	4.38	40.06	
110-54-3	n-Hexane	0.41	1.24	1.54	1.46	4.38	5.44	
96-37-7	Methylcyclopentane	0.41	1.24	14.55	1.43	4.28	50.22	
108-08-7	2,4-Dimethylpentane	0.35	1.06	ND	1.45	4.36	ND	ND
71-43-2	Benzene	0.41	1.24	304.36	1.32	3.97	974.21	
110-82-7	Cyclohexane	0.41	1.24	ND	1.43	4.28	ND	ND
591-76-4	2-Methylhexane	0.35	1.06	ND	1.45	4.36	ND	ND
565-59-3	2,3-Dimethylpentane	0.35	1.06	ND	1.45	4.36	ND	ND
589-34-4	3-Methylhexane	0.35	1.06	ND	1.45	4.36	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.31	0.93	ND	1.45	4.35	ND	ND
142-82-5	n-Heptane	0.35	1.06	4.54	1.45	4.36	18.66	
108-87-2	Methylcyclohexane	0.35	1.06	8.91	1.43	4.28	35.87	
592-13-2	2,5-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND
589-43-5	2,4-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.31	0.93	4.67	1.45	4.35	21.85	
108-88-3	Toluene	0.35	1.06	297.93	1.34	4.01	1,124.56	
584-94-1	2,3-Dimethylhexane	0.31	0.93	ND	1.45	4.35	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.31	0.93	ND	1.45	4.35	ND	ND
589-81-1	3-Methylheptane	0.31	0.93	9.81	1.45	4.35	45.90	
111-65-9	n-Octane	0.31	0.93	1.13	1.45	4.35	5.29	
100-41-4	Ethylbenzene	0.31	0.93	43.16	1.35	4.05	187.84	
108-38-3	m,p-xylene	0.31	0.93	164.54	1.35	4.05	716.15	
100-42-5	Styrene	0.31	0.93	ND	1.32	3.97	ND	ND
95-47-6	o-xylene	0.31	0.93	91.03	1.35	4.05	396.22	
111-84-2	n-Nonane	0.28	0.83	13.01	1.45	4.35	68.41	
98-82-8	i-Propylbenzene	0.28	0.83	4.19	1.36	4.07	20.65	
103-65-1	n-propylbenzene	0.28	0.83	10.76	1.36	4.07	53.02	
80-56-8	a-Pinene	0.25	0.74	ND	1.38	4.15	ND	ND
620-14-4	3-Ethyltoluene	0.28	0.83	3.96	1.36	4.07	19.49	
622-96-8	4-Ethyltoluene	0.28	0.83	ND	1.36	4.07	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.28	0.83	3.63	1.36	4.07	17.88	
611-14-3	2-Ethyltoluene	0.28	0.83	ND	1.36	4.07	ND	ND
127-91-3	b-Pinene	0.25	0.74	6.18	1.38	4.15	34.51	
95-63-6	1,2,4-Trimethylbenzene	0.28	0.83	5.80	1.36	4.07	28.57	
124-18-5	n-Decane	0.25	0.74	6.43	1.45	4.34	37.47	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.83	ND	1.36	4.07	ND	ND
5989-27-5	d-Limonene	0.25	0.74	8.47	1.38	4.15	47.26	
141-93-5	1,3-Diethylbenzene	0.25	0.74	ND	1.36	4.09	ND	ND
105-05-5	1,4-Diethylbenzene	0.25	0.74	ND	1.36	4.09	ND	ND
104-51-8	n-Butylbenzene	0.25	0.74	ND	1.36	4.09	ND	ND
1120-21-4	Undecane	0.23	0.68	2.53	1.44	4.33	16.20	
112-40-3	Dodecane	0.21	0.62	4.29	1.44	4.33	29.97	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.30	27.90	1,907.74	32.85	98.56	6,739.63	
TNMHC - C1	Total Non-Methane Hydrocarbons	55.80	167.40	11,446.43	36.59	109.77	7,505.86	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 10

File Name: 1851110A

Date Sampled: 10/03/18

Time: 15:20

Description: T-110

Date Analyzed: 10/10/18

Time: 13:52

Can/Tube#: 725

Can Dilution Factor: 1.24

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	124	372	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 218511

Laboratory Number: 10

File Name: 1851110A
Description: T-110
Can/Tube#: 725
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 Time: 15:20
Date Analyzed: 10/10/18 Time: 11:44
Dilution Factor: 1.24

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.12	0.37	188.18	0.08	0.25	127.15	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218511

Laboratory ID: 11

File Name: 1851111A.D

Date Sampled: 10/03/18

Time: 15:24

Description: T-111

Date Analyzed: 10/15/18

Time: 20:10

Canister: 668

Can Dilution Factor: 1.26

QC_Batch: 101518-MA1

Air Volume: 20 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	3.15	15.84	ND	15.57	78.31	ND	
74-87-3	Chloromethane	3.15	15.84	25.47	6.50	32.71	52.58	
76-14-2	Freon 114	3.15	15.84	ND	22.01	110.70	ND	
75-01-4	Vinyl chloride	3.15	15.84	ND	8.05	40.48	ND	
106-99-0	1,3-Butadiene	3.15	15.84	ND	6.97	35.04	ND	
74-83-9	Bromomethane	3.15	15.84	ND	12.22	61.47	ND	
75-00-3	Chloroethane	3.15	15.84	ND	8.31	41.78	ND	
64-17-5	Ethanol	15.75	47.25	ND	29.68	89.04	ND	
75-69-4	Trichlorofluoromethane	3.15	15.13	ND	17.69	84.96	ND	
67-64-1	Acetone	15.75	38.75	195.14	37.41	92.02	463.47	
67-63-0	2-propanol	15.75	36.16	25.18	38.70	88.84	61.86	J
75-35-4	1,1-Dichloroethene	3.15	15.62	ND	12.48	61.89	ND	
76-13-1	Freon 113	3.15	15.07	ND	24.13	115.45	ND	
75-09-2	Dichloromethane	6.30	15.17	ND	21.87	52.65	ND	
75-15-0	Carbon disulfide	15.75	29.23	ND	49.00	90.94	ND	
156-60-5	trans-1,2-Dichloroethene	3.15	11.37	ND	12.48	45.05	ND	
1634-04-4	Methyl tert butyl ether	3.15	11.61	ND	11.34	41.83	ND	
75-34-3	1,1-Dichloroethane	3.15	15.71	ND	12.75	63.58	ND	
108-05-4	Vinyl acetate	3.15	13.84	748.67	11.09	48.71	2,635.11	
78-93-3	2-Butanone	12.60	32.07	43.71	37.14	94.51	128.82	
141-78-6	Ethyl acetate	6.30	13.80	ND	22.69	49.69	ND	
74-97-5	Bromochloromethane	3.15	8.39	ND	16.66	44.38	ND	
109-99-9	Tetrahydrofuran	6.30	15.84	ND	18.57	46.70	ND	
156-59-2	cis-1,2-Dichloroethene	6.30	16.95	ND	24.96	67.13	ND	
67-66-3	Chloroform	3.15	15.80	ND	15.38	77.11	ND	
71-55-6	1,1,1-Trichloroethane	3.15	13.99	ND	17.18	76.27	ND	
107-06-2	1,2-Dichloroethane	3.15	14.37	ND	12.75	58.15	ND	
110-82-7	Cyclohexane	3.16	12.10	ND	10.89	41.63	ND	
71-43-2	Benzene	3.15	16.00	220.96	10.06	51.09	705.47	
56-23-5	Carbon tetrachloride	3.15	14.93	ND	19.80	93.87	ND	
142-82-5	n-Heptane	15.75	38.18	ND	64.51	156.38	ND	
78-87-5	1,2-Dichloropropane	3.15	15.16	ND	14.55	70.03	ND	
123-91-1	1,4 Dioxane	12.60	25.77	ND	45.38	92.80	ND	
79-01-6	Trichloroethene	1.89	14.67	ND	10.15	78.81	ND	
75-27-4	Bromodichloromethane	3.15	6.36	ND	21.09	42.61	ND	
80-62-6	Methyl methacrylate	12.60	42.59	ND	51.56	174.27	ND	
108-10-1	4-Methyl-2-pentanone	12.60	47.69	ND	51.61	195.35	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
10061-01-5	cis-1,3-Dichloropropene	3.15	16.32	ND	14.29	74.07	ND	
108-88-3	Toluene	6.30	16.44	270.26	23.72	61.91	1,017.51	
10061-02-6	trans-1,3-Dichloropropene	3.15	16.34	ND	14.29	74.13	ND	
79-00-5	1,1,2-Trichloroethane	3.15	16.20	ND	17.18	88.32	ND	
591-78-6	2-Hexanone	15.75	44.67	ND	64.51	182.96	ND	
124-48-1	Dibromochloromethane	3.15	6.29	ND	26.82	53.56	ND	
106-93-4	1,2-Dibromoethane	3.15	7.65	ND	24.20	58.73	ND	
127-18-4	Tetrachloroethene	1.89	7.67	ND	12.81	51.96	ND	
108-90-7	Chlorobenzene	3.15	14.33	ND	14.50	65.98	ND	
100-41-4	Ethylbenzene	6.66	16.65	22.39	28.92	72.29	97.22	
1330-20-7	m,p-Xylenes	6.68	16.69	105.47	28.99	72.47	457.90	
100-42-5	Styrene	6.52	16.31	ND	27.79	69.47	ND	
75-25-2	Bromoform	3.15	4.23	ND	32.54	43.66	ND	
95-47-6	o-Xylene	6.49	16.24	52.89	28.19	70.48	229.60	
79-34-5	1,1,2,2-Tetrachloroethane	3.12	7.80	ND	21.40	53.49	ND	
622-96-8	4-Ethyltoluene	10.44	26.11	ND	51.31	128.27	ND	
108-67-8	1,3,5-Trimethylbenzene	6.51	16.27	ND	31.98	79.96	ND	
95-63-6	1,2,4-Trimethylbenzene	6.40	16.01	9.72	31.46	78.66	47.75	J
541-73-1	1,3-Dichlorobenzene	6.30	11.66	ND	37.86	70.04	ND	
100-44-7	Benzyl chloride	6.30	38.18	ND	32.60	197.58	ND	
106-46-7	1,4-Dichlorobenzene	6.30	10.90	ND	37.86	65.50	ND	
95-50-1	1,2-Dichlorobenzene	6.30	10.21	ND	37.86	61.33	ND	
120-82-1	1,2,4-Trichlorobenzene	15.75	21.67	ND	116.79	160.71	ND	
91-20-3	Naphthalene	3.21	5.04	ND	16.84	26.41	ND	
87-68-3	Hexachlorobutadiene	15.75	16.70	ND	167.92	177.99	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				117	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511
Laboratory Number: 11

File Name: 1851111A
Description: T-111
Canister: 668
QC_Batch: 101218-GCK

Date Sampled: 10/03/18 Time: 15:24
Date Analyzed: 10/12/18 Time: 15:10
Can Factor: 1.26
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.26	3.78	ND	1.45	4.35	ND	ND
74-86-2	Acetylene	1.26	3.78	ND	1.34	4.03	ND	ND
74-84-0	Ethane	1.26	3.78	121.61	1.55	4.66	150.02	
115-07-1	Propene	0.84	2.52	ND	1.45	4.35	ND	ND
74-98-6	Propane	0.84	2.52	46.58	1.52	4.55	84.19	
75-28-5	i-Butane	0.63	1.89	ND	1.50	4.50	ND	ND
106-98-9	1-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
106-97-8	n-Butane	0.63	1.89	7.71	1.50	4.50	18.35	
624-64-6	t-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
590-18-1	c-2-Butene	0.63	1.89	ND	1.45	4.35	ND	ND
78-78-4	i-Pentane	0.50	1.51	86.88	1.49	4.47	257.07	
109-67-1	1-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
109-66-0	n-Pentane	0.50	1.51	5.63	1.49	4.47	16.63	
78-79-5	Isoprene	0.50	1.51	ND	1.41	4.22	ND	ND
646-04-8	t-2-Pentene	0.50	1.51	3.74	1.45	4.34	10.75	
627-20-3	c-2-Pentene	0.50	1.51	ND	1.45	4.34	ND	ND
75-83-2	2,2-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
287-92-3	Cyclopentane	0.50	1.51	ND	1.45	4.34	ND	ND
79-29-8	2,3-Dimethylbutane	0.42	1.26	ND	1.48	4.45	ND	ND
107-83-5	2-Methylpentane	0.42	1.26	421.07	1.48	4.45	1,487.55	
96-14-0	3-Methylpentane	0.42	1.26	ND	1.48	4.45	ND	ND
110-54-3	n-Hexane	0.42	1.26	10.40	1.48	4.45	36.73	
96-37-7	Methylcyclopentane	0.42	1.26	ND	1.45	4.35	ND	ND
108-08-7	2,4-Dimethylpentane	0.36	1.08	13.99	1.48	4.44	57.46	
71-43-2	Benzene	0.42	1.26	366.25	1.34	4.03	1,172.29	
110-82-7	Cyclohexane	0.42	1.26	ND	1.45	4.35	ND	ND
591-76-4	2-Methylhexane	0.36	1.08	2.65	1.48	4.44	10.89	
565-59-3	2,3-Dimethylpentane	0.36	1.08	4.54	1.48	4.44	18.64	
589-34-4	3-Methylhexane	0.36	1.08	5.41	1.48	4.44	22.22	
540-84-1	2,2,4-Trimethylpentane	0.32	0.95	11.63	1.47	4.42	54.41	
142-82-5	n-Heptane	0.36	1.08	11.53	1.48	4.44	47.34	
108-87-2	Methylcyclohexane	0.36	1.08	17.40	1.45	4.35	70.02	
592-13-2	2,5-Dimethylhexane	0.32	0.95	4.65	1.47	4.42	21.76	
589-43-5	2,4-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.32	0.95	9.15	1.47	4.42	42.82	
108-88-3	Toluene	0.36	1.08	357.82	1.36	4.08	1,350.61	
584-94-1	2,3-Dimethylhexane	0.32	0.95	ND	1.47	4.42	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.95	14.94	1.47	4.42	69.94	
589-81-1	3-Methylheptane	0.32	0.95	7.48	1.47	4.42	34.99	
111-65-9	n-Octane	0.32	0.95	21.49	1.47	4.42	100.57	
100-41-4	Ethylbenzene	0.32	0.95	49.44	1.37	4.11	215.19	
108-38-3	m,p-xylene	0.32	0.95	191.52	1.37	4.11	833.58	
100-42-5	Styrene	0.32	0.95	ND	1.35	4.04	ND	ND
95-47-6	o-xylene	0.32	0.95	104.76	1.37	4.11	455.98	
111-84-2	n-Nonane	0.28	0.84	17.35	1.47	4.42	91.24	
98-82-8	i-Propylbenzene	0.28	0.84	4.56	1.38	4.14	22.46	
103-65-1	n-propylbenzene	0.28	0.84	4.63	1.38	4.14	22.81	
80-56-8	a-Pinene	0.25	0.76	5.74	1.41	4.22	32.03	
620-14-4	3-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
622-96-8	4-Ethyltoluene	0.28	0.84	150.11	1.38	4.14	739.48	
108-67-8	1,3,5-Trimethylbenzene	0.28	0.84	2.59	1.38	4.14	12.78	
611-14-3	2-Ethyltoluene	0.28	0.84	ND	1.38	4.14	ND	ND
127-91-3	b-Pinene	0.25	0.76	7.49	1.41	4.22	41.82	
95-63-6	1,2,4-Trimethylbenzene	0.28	0.84	23.35	1.38	4.14	115.02	
124-18-5	n-Decane	0.25	0.76	13.06	1.47	4.41	76.19	
526-73-8	1,2,3-Trimethylbenzene	0.28	0.84	ND	1.38	4.14	ND	ND
5989-27-5	d-Limonene	0.25	0.76	2.41	1.41	4.22	13.48	
141-93-5	1,3-Diethylbenzene	0.25	0.76	4.15	1.39	4.16	22.84	
105-05-5	1,4-Diethylbenzene	0.25	0.76	6.10	1.39	4.16	33.52	
104-51-8	n-Butylbenzene	0.25	0.76	4.32	1.39	4.16	23.76	
1120-21-4	Undecane	0.23	0.69	11.18	1.47	4.40	71.65	
112-40-3	Dodecane	0.21	0.63	6.58	1.47	4.40	45.93	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.45	28.35	2,912.61	33.38	100.15	10,289.63	
TNMHC - C1	Total Non-Methane Hydrocarbons	56.70	170.10	17,475.66	37.18	111.54	11,459.45	

ANALYTICAL REPORT

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 11

File Name: 1851111A

Date Sampled: 10/03/18

Time: 15:24

Description: T-111

Date Analyzed: 10/10/18

Time: 14:01

Can/Tube#: 668

Can Dilution Factor: 1.26

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.02	126	378	238	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218511
Laboratory Number: 11

File Name: 1851111A
Description: T-111
Can/Tube#: 668
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 **Time:** 15:24
Date Analyzed: 10/10/18 **Time:** 11:51
Dilution Factor: 1.26

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.38	185.01	0.09	0.26	125.01	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218511

Laboratory ID: 12

File Name: 1851112A.D

Date Sampled: 10/03/18

Time: 16:21

Description: T-112

Date Analyzed: 10/17/18

Time: 15:02

Canister: 689

Can Dilution Factor: 1.29

QC_Batch: 101718-MA1

Air Volume: 5.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	12.90	64.89	ND	63.76	320.70	ND	
74-87-3	Chloromethane	12.90	64.89	ND	26.63	133.96	ND	
76-14-2	Freon 114	12.90	64.89	ND	90.12	453.33	ND	
75-01-4	Vinyl chloride	12.90	64.89	ND	32.96	165.79	ND	
106-99-0	1,3-Butadiene	12.90	64.89	ND	28.53	143.51	ND	
74-83-9	Bromomethane	12.90	64.89	ND	50.04	251.73	ND	
75-00-3	Chloroethane	12.90	64.89	ND	34.01	171.09	ND	
64-17-5	Ethanol	64.50	193.50	ND	121.55	364.66	ND	
75-69-4	Trichlorofluoromethane	12.90	61.94	ND	72.46	347.92	ND	
67-64-1	Acetone	64.50	158.67	334.01	153.19	376.86	793.30	
67-63-0	2-propanol	64.50	148.09	ND	158.47	363.84	ND	
75-35-4	1,1-Dichloroethene	12.90	63.98	ND	51.10	253.45	ND	
76-13-1	Freon 113	12.90	61.72	ND	98.82	472.81	ND	
75-09-2	Dichloromethane	25.80	62.13	ND	89.54	215.63	ND	
75-15-0	Carbon disulfide	64.50	119.71	ND	200.65	372.41	ND	
156-60-5	trans-1,2-Dichloroethene	12.90	46.57	ND	51.10	184.49	ND	
1634-04-4	Methyl tert butyl ether	12.90	47.56	ND	46.46	171.29	ND	
75-34-3	1,1-Dichloroethane	12.90	64.34	ND	52.21	260.38	ND	
108-05-4	Vinyl acetate	12.90	56.68	ND	45.40	199.49	ND	
78-93-3	2-Butanone	51.60	131.32	ND	152.09	387.06	ND	
141-78-6	Ethyl acetate	25.80	56.50	ND	92.92	203.49	ND	
74-97-5	Bromochloromethane	12.90	34.36	ND	68.24	181.75	ND	
109-99-9	Tetrahydrofuran	25.80	64.89	ND	76.04	191.25	ND	
156-59-2	cis-1,2-Dichloroethene	25.80	69.40	ND	102.20	274.92	ND	
67-66-3	Chloroform	12.90	64.70	ND	62.96	315.80	ND	
71-55-6	1,1,1-Trichloroethane	12.90	57.28	ND	70.35	312.34	ND	
107-06-2	1,2-Dichloroethane	12.90	58.84	ND	52.21	238.15	ND	
110-82-7	Cyclohexane	12.95	49.54	ND	44.58	170.51	ND	
71-43-2	Benzene	12.90	65.54	5,019.59	41.19	209.23	16,025.96	
56-23-5	Carbon tetrachloride	12.90	61.15	ND	81.11	384.44	ND	
142-82-5	n-Heptane	64.50	156.35	ND	264.20	640.42	ND	
78-87-5	1,2-Dichloropropane	12.90	62.09	ND	59.59	286.79	ND	
123-91-1	1,4 Dioxane	51.60	105.52	ND	185.84	380.03	ND	
79-01-6	Trichloroethene	7.74	60.09	ND	41.58	322.76	ND	
75-27-4	Bromodichloromethane	12.90	26.06	ND	86.38	174.49	ND	
80-62-6	Methyl methacrylate	51.60	174.41	ND	211.15	713.68	ND	
108-10-1	4-Methyl-2-pentanone	51.60	195.31	ND	211.36	800.00	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	12.90	66.85	ND	58.54	303.33	ND	
108-88-3	Toluene	25.80	67.34	5,879.26	97.14	253.53	22,135.38	
10061-02-6	trans-1,3-Dichloropropene	12.90	66.90	ND	58.54	303.57	ND	
79-00-5	1,1,2-Trichloroethane	12.90	66.33	ND	70.35	361.71	ND	
591-78-6	2-Hexanone	64.50	182.92	ND	264.20	749.27	ND	
124-48-1	Dibromochloromethane	12.90	25.76	ND	109.85	219.33	ND	
106-93-4	1,2-Dibromoethane	12.90	31.31	ND	99.09	240.50	ND	
127-18-4	Tetrachloroethene	7.74	31.40	ND	52.46	212.81	ND	
108-90-7	Chlorobenzene	12.90	58.70	ND	59.38	270.22	ND	
100-41-4	Ethylbenzene	27.28	68.19	656.22	118.42	296.05	2,848.89	
1330-20-7	m,p-Xylenes	27.35	68.36	2,650.96	118.72	296.79	11,508.87	
100-42-5	Styrene	26.71	66.79	ND	113.79	284.48	ND	
75-25-2	Bromoform	12.90	17.31	ND	133.26	178.80	ND	
95-47-6	o-Xylene	26.59	66.49	1,291.02	115.46	288.65	5,604.82	
79-34-5	1,1,2,2-Tetrachloroethane	12.77	31.94	ND	87.62	219.06	ND	
622-96-8	4-Ethyltoluene	42.76	106.91	122.23	210.12	525.31	600.58	
108-67-8	1,3,5-Trimethylbenzene	26.66	66.64	57.92	130.98	327.46	284.60	J
95-63-6	1,2,4-Trimethylbenzene	26.22	65.56	225.19	128.85	322.13	1,106.50	
541-73-1	1,3-Dichlorobenzene	25.80	47.73	ND	155.04	286.82	ND	
100-44-7	Benzyl chloride	25.80	156.35	ND	133.52	809.15	ND	
106-46-7	1,4-Dichlorobenzene	25.80	44.63	ND	155.04	268.22	ND	
95-50-1	1,2-Dichlorobenzene	25.80	41.80	ND	155.04	251.16	ND	
120-82-1	1,2,4-Trichlorobenzene	64.50	88.75	ND	478.30	658.14	ND	
91-20-3	Naphthalene	13.16	20.64	ND	68.96	108.17	ND	
87-68-3	Hexachlorobutadiene	64.50	68.37	ND	687.66	728.92	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	101	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511
Laboratory Number: 12

File Name: 1851112A
Description: T-112
Canister: 689
QC_Batch: 101218-GCK

Date Sampled: 10/03/18 Time: 16:21
Date Analyzed: 10/12/18 Time: 15:58
Can Factor: 1.29
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.29	3.87	ND	1.49	4.46	ND	ND
74-86-2	Acetylene	1.29	3.87	ND	1.37	4.12	ND	ND
74-84-0	Ethane	1.29	3.87	4,071.12	1.59	4.77	5,022.16	
115-07-1	Propene	0.86	2.58	ND	1.48	4.45	ND	ND
74-98-6	Propane	0.86	2.58	1,797.15	1.55	4.66	3,248.12	
75-28-5	i-Butane	0.65	1.94	151.87	1.54	4.61	361.61	
106-98-9	1-Butene	0.65	1.94	ND	1.48	4.45	ND	ND
106-97-8	n-Butane	0.65	1.94	2.29	1.54	4.61	5.45	
624-64-6	t-2-Butene	0.65	1.94	ND	1.48	4.45	ND	ND
590-18-1	c-2-Butene	0.65	1.94	ND	1.48	4.45	ND	ND
78-78-4	i-Pentane	0.52	1.55	167.08	1.53	4.58	494.39	
109-67-1	1-Pentene	0.52	1.55	3.62	1.48	4.45	10.41	
109-66-0	n-Pentane	0.52	1.55	241.33	1.52	4.57	713.11	
78-79-5	Isoprene	0.52	1.55	ND	1.44	4.32	ND	ND
646-04-8	t-2-Pentene	0.52	1.55	7.47	1.48	4.45	21.47	
627-20-3	c-2-Pentene	0.52	1.55	4.05	1.48	4.45	11.63	
75-83-2	2,2-Dimethylbutane	0.43	1.29	ND	1.52	4.56	ND	ND
287-92-3	Cyclopentane	0.52	1.55	ND	1.48	4.45	ND	ND
79-29-8	2,3-Dimethylbutane	0.43	1.29	ND	1.52	4.56	ND	ND
107-83-5	2-Methylpentane	0.43	1.29	104.25	1.52	4.56	368.28	
96-14-0	3-Methylpentane	0.43	1.29	97.70	1.52	4.56	345.14	
110-54-3	n-Hexane	0.43	1.29	171.57	1.52	4.56	606.10	
96-37-7	Methylcyclopentane	0.43	1.29	ND	1.48	4.45	ND	ND
108-08-7	2,4-Dimethylpentane	0.37	1.11	456.54	1.51	4.54	1,874.81	
71-43-2	Benzene	0.43	1.29	7,929.76	1.38	4.13	25,381.73	
110-82-7	Cyclohexane	0.43	1.29	ND	1.48	4.45	ND	ND
591-76-4	2-Methylhexane	0.37	1.11	34.08	1.51	4.54	139.94	
565-59-3	2,3-Dimethylpentane	0.37	1.11	ND	1.51	4.54	ND	ND
589-34-4	3-Methylhexane	0.37	1.11	141.64	1.51	4.54	581.67	
540-84-1	2,2,4-Trimethylpentane	0.32	0.97	ND	1.51	4.53	ND	ND
142-82-5	n-Heptane	0.37	1.11	194.63	1.51	4.54	799.26	
108-87-2	Methylcyclohexane	0.37	1.11	437.96	1.48	4.45	1,762.60	
592-13-2	2,5-Dimethylhexane	0.32	0.97	88.51	1.51	4.53	414.27	
589-43-5	2,4-Dimethylhexane	0.32	0.97	3.99	1.51	4.53	18.69	
565-75-3	2,3,4-Trimethylpentane	0.32	0.97	ND	1.51	4.53	ND	ND
108-88-3	Toluene	0.37	1.11	7,350.99	1.39	4.17	27,746.97	
584-94-1	2,3-Dimethylhexane	0.32	0.97	144.08	1.51	4.53	674.36	

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.32	0.97	6.80	1.51	4.53	31.82	
589-81-1	3-Methylheptane	0.32	0.97	16.11	1.51	4.53	75.40	
111-65-9	n-Octane	0.32	0.97	45.04	1.51	4.53	210.78	
100-41-4	Ethylbenzene	0.32	0.97	1,019.50	1.40	4.21	4,437.35	
108-38-3	m,p-xylene	0.32	0.97	3,847.01	1.40	4.21	16,743.94	
100-42-5	Styrene	0.32	0.97	ND	1.38	4.13	ND	ND
95-47-6	o-xylene	0.32	0.97	1,884.90	1.40	4.21	8,203.95	
111-84-2	n-Nonane	0.29	0.86	8.63	1.51	4.52	45.38	
98-82-8	i-Propylbenzene	0.29	0.86	61.06	1.41	4.24	300.81	
103-65-1	n-propylbenzene	0.29	0.86	93.61	1.41	4.24	461.14	
80-56-8	a-Pinene	0.26	0.77	ND	1.44	4.32	ND	ND
620-14-4	3-Ethyltoluene	0.29	0.86	ND	1.41	4.24	ND	ND
622-96-8	4-Ethyltoluene	0.29	0.86	131.60	1.41	4.24	648.27	
108-67-8	1,3,5-Trimethylbenzene	0.29	0.86	100.79	1.41	4.24	496.49	
611-14-3	2-Ethyltoluene	0.29	0.86	ND	1.41	4.24	ND	ND
127-91-3	b-Pinene	0.26	0.77	23.35	1.44	4.32	130.34	
95-63-6	1,2,4-Trimethylbenzene	0.29	0.86	167.93	1.41	4.24	827.25	
124-18-5	n-Decane	0.26	0.77	34.61	1.50	4.51	201.82	
526-73-8	1,2,3-Trimethylbenzene	0.29	0.86	42.15	1.41	4.24	207.64	
5989-27-5	d-Limonene	0.26	0.77	353.12	1.44	4.32	1,971.09	
141-93-5	1,3-Diethylbenzene	0.26	0.77	72.78	1.42	4.26	400.28	
105-05-5	1,4-Diethylbenzene	0.26	0.77	46.74	1.42	4.26	257.06	
104-51-8	n-Butylbenzene	0.26	0.77	66.69	1.42	4.26	366.78	
1120-21-4	Undecane	0.23	0.70	62.93	1.50	4.51	403.14	
112-40-3	Dodecane	0.22	0.65	56.12	1.50	4.50	391.67	

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	9.68	29.03	42,669.61	34.18	102.54	150,742.65	
TNMHC - C1	Total Non-Methane Hydrocarbons	58.05	174.15	256,017.68	38.07	114.20	167,880.45	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 12

File Name: 1851112A

Date Sampled: 10/03/18 Time: 16:21

Description: T-112

Date Analyzed: 10/10/18 Time: 14:10

Can/Tube#: 689

Can Dilution Factor: 1.29

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	0.12	129	387	1,222	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID
Modified Analytical Method: ASTM D3416

SDG: 218511
Laboratory Number: 12

File Name: 1851112A
Description: T-112
Can/Tube#: 689
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 **Time:** 16:21
Date Analyzed: 10/10/18 **Time:** 11:59
Dilution Factor: 1.29

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.13	0.39	314.60	0.09	0.26	212.57	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218511

Analytical Method: TO-15

Laboratory ID: 13

File Name: 1851113A.D
Description: T-113
Canister: 698
QC_Batch: 101518-MA1

Date Sampled: 10/03/18 Time: 16:00
Date Analyzed: 10/15/18 Time: 14:52
Can Dilution Factor: 1.14
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.29	1.43	ND	1.41	7.09	ND	
74-87-3	Chloromethane	0.29	1.43	ND	0.59	2.96	ND	
76-14-2	Freon 114	0.29	1.43	ND	1.99	10.02	ND	
75-01-4	Vinyl chloride	0.29	1.43	ND	0.73	3.66	ND	
106-99-0	1,3-Butadiene	0.29	1.43	ND	0.63	3.17	ND	
74-83-9	Bromomethane	0.29	1.43	ND	1.11	5.56	ND	
75-00-3	Chloroethane	0.29	1.43	ND	0.75	3.78	ND	
64-17-5	Ethanol	1.43	4.28	ND	2.69	8.06	ND	
75-69-4	Trichlorofluoromethane	0.29	1.37	ND	1.60	7.69	ND	
67-64-1	Acetone	1.43	3.51	ND	3.38	8.33	ND	
67-63-0	2-propanol	1.43	3.27	ND	3.50	8.04	ND	
75-35-4	1,1-Dichloroethene	0.29	1.41	ND	1.13	5.60	ND	
76-13-1	Freon 113	0.29	1.36	ND	2.18	10.45	ND	
75-09-2	Dichloromethane	0.57	1.37	ND	1.98	4.76	ND	
75-15-0	Carbon disulfide	1.43	2.64	ND	4.43	8.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.29	1.03	ND	1.13	4.08	ND	
1634-04-4	Methyl tert butyl ether	0.29	1.05	ND	1.03	3.78	ND	
75-34-3	1,1-Dichloroethane	0.29	1.42	ND	1.15	5.75	ND	
108-05-4	Vinyl acetate	0.29	1.25	ND	1.00	4.41	ND	
78-93-3	2-Butanone	1.14	2.90	ND	3.36	8.55	ND	
141-78-6	Ethyl acetate	0.57	1.25	ND	2.05	4.50	ND	
74-97-5	Bromochloromethane	0.29	0.76	ND	1.51	4.02	ND	
109-99-9	Tetrahydrofuran	0.57	1.43	ND	1.68	4.23	ND	
156-59-2	cis-1,2-Dichloroethene	0.57	1.53	ND	2.26	6.07	ND	
67-66-3	Chloroform	0.29	1.43	ND	1.39	6.98	ND	
71-55-6	1,1,1-Trichloroethane	0.29	1.27	ND	1.55	6.90	ND	
107-06-2	1,2-Dichloroethane	0.29	1.30	ND	1.15	5.26	ND	
110-82-7	Cyclohexane	0.29	1.09	ND	0.98	3.77	ND	
71-43-2	Benzene	0.29	1.45	ND	0.91	4.62	ND	
56-23-5	Carbon tetrachloride	0.29	1.35	ND	1.79	8.49	ND	
142-82-5	n-Heptane	1.43	3.45	ND	5.84	14.15	ND	
78-87-5	1,2-Dichloropropane	0.29	1.37	ND	1.32	6.34	ND	
123-91-1	1,4 Dioxane	1.14	2.33	ND	4.11	8.40	ND	
79-01-6	Trichloroethene	0.17	1.33	ND	0.92	7.13	ND	
75-27-4	Bromodichloromethane	0.29	0.58	ND	1.91	3.85	ND	
80-62-6	Methyl methacrylate	1.14	3.85	ND	4.66	15.77	ND	
108-10-1	4-Methyl-2-pentanone	1.14	4.31	ND	4.67	17.67	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
10061-01-5	cis-1,3-Dichloropropene	0.29	1.48	ND	1.29	6.70	ND	
108-88-3	Toluene	0.57	1.49	ND	2.15	5.60	ND	
10061-02-6	trans-1,3-Dichloropropene	0.29	1.48	ND	1.29	6.71	ND	
79-00-5	1,1,2-Trichloroethane	0.29	1.47	ND	1.55	7.99	ND	
591-78-6	2-Hexanone	1.43	4.04	ND	5.84	16.55	ND	
124-48-1	Dibromochloromethane	0.29	0.57	ND	2.43	4.85	ND	
106-93-4	1,2-Dibromoethane	0.29	0.69	ND	2.19	5.31	ND	
127-18-4	Tetrachloroethene	0.17	0.69	ND	1.16	4.70	ND	
108-90-7	Chlorobenzene	0.29	1.30	ND	1.31	5.97	ND	
100-41-4	Ethylbenzene	0.60	1.51	ND	2.62	6.54	ND	
1330-20-7	m,p-Xylenes	0.60	1.51	ND	2.62	6.56	ND	
100-42-5	Styrene	0.59	1.48	ND	2.51	6.29	ND	
75-25-2	Bromoform	0.29	0.38	ND	2.94	3.95	ND	
95-47-6	o-Xylene	0.59	1.47	ND	2.55	6.38	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.28	0.71	ND	1.94	4.84	ND	
622-96-8	4-Ethyltoluene	0.94	2.36	ND	4.64	11.61	ND	
108-67-8	1,3,5-Trimethylbenzene	0.59	1.47	ND	2.89	7.23	ND	
95-63-6	1,2,4-Trimethylbenzene	0.58	1.45	ND	2.85	7.12	ND	
541-73-1	1,3-Dichlorobenzene	0.57	1.05	ND	3.43	6.34	ND	
100-44-7	Benzyl chloride	0.57	3.45	ND	2.95	17.88	ND	
106-46-7	1,4-Dichlorobenzene	0.57	0.99	ND	3.43	5.93	ND	
95-50-1	1,2-Dichlorobenzene	0.57	0.92	ND	3.43	5.55	ND	
120-82-1	1,2,4-Trichlorobenzene	1.43	1.96	ND	10.57	14.54	ND	
91-20-3	Naphthalene	0.29	0.46	ND	1.52	2.39	ND	
87-68-3	Hexachlorobutadiene	1.43	1.51	ND	15.19	16.10	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				96	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-14 Modified GC/FID

Analytical Method: TO-14FID

SDG: 218511
Laboratory Number: 13

File Name: 1851113A
Description: T-113
Canister: 698
QC_Batch: 101118-GCK

Date Sampled: 10/03/18 Time: 16:00
Date Analyzed: 10/11/18 Time: 12:16
Can Factor: 1.14
Air Volume: 200 ml

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
74-85-1	Ethene	1.14	3.42	ND	1.31	3.94	ND	ND
74-86-2	Acetylene	1.14	3.42	ND	1.21	3.64	ND	ND
74-84-0	Ethane	1.14	3.42	ND	1.41	4.22	ND	ND
115-07-1	Propene	0.76	2.28	ND	1.31	3.93	ND	ND
74-98-6	Propane	0.76	2.28	ND	1.37	4.12	ND	ND
75-28-5	i-Butane	0.57	1.71	ND	1.36	4.07	ND	ND
106-98-9	1-Butene	0.57	1.71	ND	1.31	3.93	ND	ND
106-97-8	n-Butane	0.57	1.71	ND	1.36	4.07	ND	ND
624-64-6	t-2-Butene	0.57	1.71	ND	1.31	3.93	ND	ND
590-18-1	c-2-Butene	0.57	1.71	ND	1.31	3.93	ND	ND
78-78-4	i-Pentane	0.46	1.37	ND	1.35	4.05	ND	ND
109-67-1	1-Pentene	0.46	1.37	ND	1.31	3.93	ND	ND
109-66-0	n-Pentane	0.46	1.37	ND	1.35	4.04	ND	ND
78-79-5	Isoprene	0.46	1.37	ND	1.27	3.82	ND	ND
646-04-8	t-2-Pentene	0.46	1.37	ND	1.31	3.93	ND	ND
627-20-3	c-2-Pentene	0.46	1.37	ND	1.31	3.93	ND	ND
75-83-2	2,2-Dimethylbutane	0.38	1.14	ND	1.34	4.03	ND	ND
287-92-3	Cyclopentane	0.46	1.37	ND	1.31	3.93	ND	ND
79-29-8	2,3-Dimethylbutane	0.38	1.14	ND	1.34	4.03	ND	ND
107-83-5	2-Methylpentane	0.38	1.14	ND	1.34	4.03	ND	ND
96-14-0	3-Methylpentane	0.38	1.14	ND	1.34	4.03	ND	ND
110-54-3	n-Hexane	0.38	1.14	ND	1.34	4.03	ND	ND
96-37-7	Methylcyclopentane	0.38	1.14	ND	1.31	3.93	ND	ND
108-08-7	2,4-Dimethylpentane	0.33	0.98	ND	1.34	4.01	ND	ND
71-43-2	Benzene	0.38	1.14	ND	1.22	3.65	ND	ND
110-82-7	Cyclohexane	0.38	1.14	ND	1.31	3.93	ND	ND
591-76-4	2-Methylhexane	0.33	0.98	ND	1.34	4.01	ND	ND
565-59-3	2,3-Dimethylpentane	0.33	0.98	ND	1.34	4.01	ND	ND
589-34-4	3-Methylhexane	0.33	0.98	ND	1.34	4.01	ND	ND
540-84-1	2,2,4-Trimethylpentane	0.29	0.86	ND	1.33	4.00	ND	ND
142-82-5	n-Heptane	0.33	0.98	ND	1.34	4.01	ND	ND
108-87-2	Methylcyclohexane	0.33	0.98	ND	1.31	3.93	ND	ND
592-13-2	2,5-Dimethylhexane	0.29	0.86	ND	1.33	4.00	ND	ND
589-43-5	2,4-Dimethylhexane	0.29	0.86	ND	1.33	4.00	ND	ND
565-75-3	2,3,4-Trimethylpentane	0.29	0.86	ND	1.33	4.00	ND	ND
108-88-3	Toluene	0.33	0.98	ND	1.23	3.69	ND	ND
584-94-1	2,3-Dimethylhexane	0.29	0.86	ND	1.33	4.00	ND	ND

CAS#	Compound	MDL ppbV	RL ppbV	Amount ppbV	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
592-27-8	2-Methylheptane	0.29	0.86	ND	1.33	4.00	ND	ND
589-81-1	3-Methylheptane	0.29	0.86	ND	1.33	4.00	ND	ND
111-65-9	n-Octane	0.29	0.86	ND	1.33	4.00	ND	ND
100-41-4	Ethylbenzene	0.29	0.86	ND	1.24	3.72	ND	ND
108-38-3	m,p-xylene	0.29	0.86	ND	1.24	3.72	ND	ND
100-42-5	Styrene	0.29	0.86	ND	1.22	3.65	ND	ND
95-47-6	o-xylene	0.29	0.86	ND	1.24	3.72	ND	ND
111-84-2	n-Nonane	0.25	0.76	ND	1.33	4.00	ND	ND
98-82-8	i-Propylbenzene	0.25	0.76	ND	1.25	3.74	ND	ND
103-65-1	n-propylbenzene	0.25	0.76	ND	1.25	3.74	ND	ND
80-56-8	a-Pinene	0.23	0.68	ND	1.27	3.82	ND	ND
620-14-4	3-Ethyltoluene	0.25	0.76	ND	1.25	3.74	ND	ND
622-96-8	4-Ethyltoluene	0.25	0.76	ND	1.25	3.74	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.25	0.76	ND	1.25	3.74	ND	ND
611-14-3	2-Ethyltoluene	0.25	0.76	ND	1.25	3.74	ND	ND
127-91-3	b-Pinene	0.23	0.68	ND	1.27	3.82	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.25	0.76	ND	1.25	3.74	ND	ND
124-18-5	n-Decane	0.23	0.68	ND	1.33	3.99	ND	ND
526-73-8	1,2,3-Trimethylbenzene	0.25	0.76	ND	1.25	3.74	ND	ND
5989-27-5	d-Limonene	0.23	0.68	ND	1.27	3.82	ND	ND
141-93-5	1,3-Diethylbenzene	0.23	0.68	ND	1.25	3.76	ND	ND
105-05-5	1,4-Diethylbenzene	0.23	0.68	ND	1.25	3.76	ND	ND
104-51-8	n-Butylbenzene	0.23	0.68	ND	1.25	3.76	ND	ND
1120-21-4	Undecane	0.21	0.62	ND	1.33	3.98	ND	ND
112-40-3	Dodecane	0.19	0.57	ND	1.33	3.98	ND	ND

Total Petroleum Hydrocarbons:

TNMHC - C6	Total Non-Methane Hydrocarbons	8.55	25.65	ND	30.21	90.62	ND	ND
TNMHC - C1	Total Non-Methane Hydrocarbons	51.30	153.90	ND	33.64	100.92	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 GC/TCD

Analytical Method:

D1945

SDG: 218511

Laboratory Number: 13

File Name: 1851113A

Date Sampled: 10/03/18

Time: 16:00

Description: T-113

Date Analyzed: 10/10/18

Time: 14:10

Can/Tube#: 698

Can Dilution Factor: 1.14

QC_Batch: 101018-GCO

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
124-38-9	Carbon Dioxide	0.01	0.03	ND	114	342	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D3416 Methane by GC/FID

Modified Analytical Method: ASTM D3416

SDG: 218511
Laboratory Number: 13

File Name: 1851113A
Description: T-113
Can/Tube#: 698
QC_Batch: 101018-GCL

Date Sampled: 10/03/18 Time: 16:00
Date Analyzed: 10/10/18 Time: 12:15
Dilution Factor: 1.14

CAS#	Compound	MDL ppmv	RL ppmv	Result ppmv	MDL mg/m3	RL mg/m3	Result mg/m3	Flag
74-82-8	Methane	0.11	0.34	ND	0.08	0.23	ND	



Date of Report: 10/10/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: 15669
BCL Project: O&G/8260
BCL Work Order: 1831010
Invoice ID: B318607

Enclosed are the results of analyses for samples received by the laboratory on 10/3/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 18-31010

SHIPPING INFORMATION: Fed Ex UPS Contract Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S _____

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Containers None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 0.97 Container: Amber Thermometer ID: 206 Date/Time: 10/31/15

Temperature: (A) 2.2 °C / (C) 2.2 °C Analyst Init: ESD

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABC	ABC	ABC							
OT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL-504										
QT EPA 508/509/5080										
QT EPA 515.18159										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
CEDLAR BAG										
FERROUS IRON										
TCORE										
MART KIT										
UMMA CANISTER										

Comments: _____

Sample Numbering Completed By: EAK Date/Time: 10-3-18 1809 Rev 21 05/23/2016

= Actual / C = Corrected

IS:\WP0\del\Work\Project\LAB DOCS\FORMS\KAMREC\rev 21



CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1831010-01	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 07:45
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 101 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831010-02	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 08:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 102 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831010-03	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 08:45
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 103 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831010-04	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 10:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 104 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831010-05	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 10:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 105 /b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831010-06	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 11:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 106 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831010-07	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 13:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 107 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1831010-08	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 14:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 108 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831010-09	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 14:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 109 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831010-10	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 15:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 110 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831010-11	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 15:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 111 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831010-12	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 15:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 112 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831010-13	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 16:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	V - 113 a/b/c	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-01	Client Sample Name: V - 101 a/b/c, 10/3/2018 7:45:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.28	ug/L	0.50	0.083	EPA-8260B	ND	J	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-01		Client Sample Name: V - 101 a/b/c, 10/3/2018 7:45:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.30	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.17	ug/L	0.50	0.12	EPA-8260B	ND	J	1
1,3,5-Trimethylbenzene	0.15	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	1.1	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	0.66	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.45	ug/L	0.50	0.082	EPA-8260B	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	93.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	95.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	87.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-01	Client Sample Name: V - 101 a/b/c, 10/3/2018 7:45:00AM, Chuck Schmidt
----------------------------------	--

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/09/18 07:00	10/09/18 16:06		MGC	MS-V5	1	B026717

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-02	Client Sample Name: V - 102 a/b/c, 10/3/2018 8:00:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	1.6	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-02							
Client Sample Name:	V - 102 a/b/c, 10/3/2018 8:00:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	1.4	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.16	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	1.6	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.13	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	1.2	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	0.62	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.19	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	2.2	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	1.3	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	0.91	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.4	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-02	Client Sample Name: V - 102 a/b/c, 10/3/2018 8:00:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/09/18 07:00	10/09/18 16:29		MGC	MS-V5	1	B026717

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-03							
Client Sample Name:	V - 103 a/b/c, 10/3/2018 8:45:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	7.0	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	0.16	ug/L	0.50	0.15	EPA-8260B	ND	J	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-03							
Client Sample Name:	V - 103 a/b/c, 10/3/2018 8:45:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	6.8	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.89	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	11	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.72	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	5.3	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	3.1	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.73	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	7.3	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	3.4	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	3.9	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-03	Client Sample Name: V - 103 a/b/c, 10/3/2018 8:45:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/09/18 07:00	10/09/18 16:52		MGC	MS-V5	1	B026717

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-04	Client Sample Name: V - 104 a/b/c, 10/3/2018 10:15:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.53	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-04							
Client Sample Name:	V - 104 a/b/c, 10/3/2018 10:15:00AM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	0.90	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	0.15	ug/L	0.50	0.14	EPA-8260B	ND	J	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	1.5	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	0.16	ug/L	0.50	0.11	EPA-8260B	ND	J	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	1.3	ug/L	0.50	0.093	EPA-8260B	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	1.1	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	0.34	ug/L	0.50	0.12	EPA-8260B	ND	J	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	3.8	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	2.7	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	1.0	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.0	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	90.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-04	Client Sample Name: V - 104 a/b/c, 10/3/2018 10:15:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/09/18 07:00	10/09/18 17:15		MGC	MS-V5	1	B026717

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-05	Client Sample Name: V - 105 /b/c, 10/3/2018 10:30:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	4.5	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-05	Client Sample Name:	V - 105 /b/c, 10/3/2018 10:30:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1	
Ethylbenzene	3.1	ug/L	0.50	0.098	EPA-8260B	ND		1	
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1	
Isopropylbenzene	0.47	ug/L	0.50	0.14	EPA-8260B	ND	J	1	
p-Isopropyltoluene	0.17	ug/L	0.50	0.12	EPA-8260B	ND	J	1	
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1	
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1	
Naphthalene	3.7	ug/L	0.50	0.36	EPA-8260B	ND		1	
n-Propylbenzene	0.51	ug/L	0.50	0.11	EPA-8260B	ND		1	
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1	
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
Toluene	7.7	ug/L	0.50	0.093	EPA-8260B	ND		1	
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1	
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1	
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1	
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1	
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1	
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
1,2,4-Trimethylbenzene	3.4	ug/L	0.50	0.12	EPA-8260B	ND		1	
1,3,5-Trimethylbenzene	0.97	ug/L	0.50	0.12	EPA-8260B	ND		1	
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1	
Total Xylenes	16	ug/L	1.0	0.36	EPA-8260B	ND		1	
p- & m-Xylenes	11	ug/L	0.50	0.28	EPA-8260B	ND		1	
o-Xylene	5.0	ug/L	0.50	0.082	EPA-8260B	ND		1	
1,2-Dichloroethane-d4 (Surrogate)	87.9	%	75 - 125 (LCL - UCL)		EPA-8260B			1	
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1	
4-Bromofluorobenzene (Surrogate)	92.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-05	Client Sample Name: V - 105 /b/c, 10/3/2018 10:30:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/09/18 07:00	10/09/18 17:39		MGC	MS-V5	1	B026717

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Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-06	Client Sample Name: V - 106 a/b/c, 10/3/2018 11:15:00AM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	18	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	0.44	ug/L	0.50	0.11	EPA-8260B	ND	J	1
sec-Butylbenzene	0.52	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-06	Client Sample Name:	V - 106 a/b/c, 10/3/2018 11:15:00AM, Chuck Schmidt						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1	
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1	
Ethylbenzene	14	ug/L	0.50	0.098	EPA-8260B	ND		1	
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1	
Isopropylbenzene	2.1	ug/L	0.50	0.14	EPA-8260B	ND		1	
p-Isopropyltoluene	0.81	ug/L	0.50	0.12	EPA-8260B	ND		1	
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1	
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1	
Naphthalene	13	ug/L	0.50	0.36	EPA-8260B	ND		1	
n-Propylbenzene	2.7	ug/L	0.50	0.11	EPA-8260B	ND		1	
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1	
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
Toluene	30	ug/L	0.50	0.093	EPA-8260B	ND		1	
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1	
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1	
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1	
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1	
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1	
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1	
1,2,4-Trimethylbenzene	13	ug/L	0.50	0.12	EPA-8260B	ND		1	
1,3,5-Trimethylbenzene	4.3	ug/L	0.50	0.12	EPA-8260B	ND		1	
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1	
Total Xylenes	56	ug/L	1.0	0.36	EPA-8260B	ND		1	
p- & m-Xylenes	39	ug/L	0.50	0.28	EPA-8260B	ND		1	
o-Xylene	16	ug/L	0.50	0.082	EPA-8260B	ND		1	
1,2-Dichloroethane-d4 (Surrogate)	83.2	%	75 - 125 (LCL - UCL)		EPA-8260B			1	
Toluene-d8 (Surrogate)	98.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1	
4-Bromofluorobenzene (Surrogate)	94.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1	

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-06	Client Sample Name: V - 106 a/b/c, 10/3/2018 11:15:00AM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/09/18 07:00	10/09/18 18:02		MGC	MS-V5	1	B026717

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Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-07							
Client Sample Name:	V - 107 a/b/c, 10/3/2018 1:55:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	0.31	ug/L	0.50	0.083	EPA-8260B	ND	J,A39	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	A39	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	A39	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	A39	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	A39	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	A39	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	A39	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	A39	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	A39	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	A39	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-07							
Client Sample Name:	V - 107 a/b/c, 10/3/2018 1:55:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	A39	1
Ethylbenzene	0.10	ug/L	0.50	0.098	EPA-8260B	ND	J,A39	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	A39	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND	A39	1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	A39	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Toluene	0.77	ug/L	0.50	0.093	EPA-8260B	ND	A39	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	A39	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	A39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,2,4-Trimethylbenzene	0.18	ug/L	0.50	0.12	EPA-8260B	ND	J,A39	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Total Xylenes	0.90	ug/L	1.0	0.36	EPA-8260B	ND	J,A39	1
p- & m-Xylenes	0.57	ug/L	0.50	0.28	EPA-8260B	ND	A39	1
o-Xylene	0.33	ug/L	0.50	0.082	EPA-8260B	ND	J,A39	1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	92.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-07	Client Sample Name: V - 107 a/b/c, 10/3/2018 1:55:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/08/18 12:00	10/09/18 13:01		MGC	MS-V5	1	B026576

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19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-08	Client Sample Name: V - 108 a/b/c, 10/3/2018 2:05:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	4.8	ug/L	0.50	0.083	EPA-8260B	ND	A39	1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND	A39	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND	A39	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND	A39	1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND	A39	1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND	A39	1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND	A39	1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND	A39	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND	A39	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND	A39	1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND	A39	1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-08							
Client Sample Name:	V - 108 a/b/c, 10/3/2018 2:05:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND	A39	1
Ethylbenzene	1.2	ug/L	0.50	0.098	EPA-8260B	ND	A39	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND	A39	1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND	A39	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
Naphthalene	0.67	ug/L	0.50	0.36	EPA-8260B	ND	A39	1
n-Propylbenzene	0.11	ug/L	0.50	0.11	EPA-8260B	ND	J,A39	1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND	A39	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND	A39	1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND	A39	1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
Toluene	16	ug/L	0.50	0.093	EPA-8260B	ND	A39	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND	A39	1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND	A39	1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND	A39	1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND	A39	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND	A39	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND	A39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND	A39	1
1,2,4-Trimethylbenzene	0.77	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
1,3,5-Trimethylbenzene	0.16	ug/L	0.50	0.12	EPA-8260B	ND	J,A39	1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND	A39	1
Total Xylenes	7.6	ug/L	1.0	0.36	EPA-8260B	ND	A39	1
p- & m-Xylenes	4.6	ug/L	0.50	0.28	EPA-8260B	ND	A39	1
o-Xylene	3.0	ug/L	0.50	0.082	EPA-8260B	ND	A39	1
1,2-Dichloroethane-d4 (Surrogate)	97.0	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	89.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-08	Client Sample Name: V - 108 a/b/c, 10/3/2018 2:05:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/08/18 12:00	10/09/18 13:24		MGC	MS-V5	1	B026576

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-09	Client Sample Name: V - 109 a/b/c, 10/3/2018 2:55:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	59	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	1
Bromobenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
Bromochloromethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01,A39	1
Bromodichloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
Bromoform	ND	ug/L	2.5	1.4	EPA-8260B	ND	A01,A39	1
Bromomethane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01,A39	1
n-Butylbenzene	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	1
sec-Butylbenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
tert-Butylbenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
Carbon tetrachloride	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01,A39	1
Chlorobenzene	ND	ug/L	2.5	0.46	EPA-8260B	ND	A01,A39	1
Chloroethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
Chloroform	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	1
Chloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
2-Chlorotoluene	ND	ug/L	2.5	1.0	EPA-8260B	ND	A01,A39	1
4-Chlorotoluene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
Dibromochloromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.2	EPA-8260B	ND	A01,A39	1
1,2-Dibromoethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01,A39	1
Dibromomethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01,A39	1
1,2-Dichlorobenzene	ND	ug/L	2.5	0.36	EPA-8260B	ND	A01,A39	1
1,3-Dichlorobenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
1,4-Dichlorobenzene	ND	ug/L	2.5	0.31	EPA-8260B	ND	A01,A39	1
Dichlorodifluoromethane	ND	ug/L	2.5	0.50	EPA-8260B	ND	A01,A39	1
1,1-Dichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	1
1,2-Dichloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01,A39	1
1,1-Dichloroethene	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01,A39	1
cis-1,2-Dichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	1
trans-1,2-Dichloroethene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
1,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
1,3-Dichloropropane	ND	ug/L	2.5	0.43	EPA-8260B	ND	A01,A39	1
2,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
1,1-Dichloropropene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-09							
Client Sample Name:	V - 109 a/b/c, 10/3/2018 2:55:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
trans-1,3-Dichloropropene	ND	ug/L	2.5	0.40	EPA-8260B	ND	A01,A39	1
Ethylbenzene	9.9	ug/L	2.5	0.49	EPA-8260B	ND	A01,A39	1
Hexachlorobutadiene	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01,A39	1
Isopropylbenzene	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
p-Isopropyltoluene	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	1
Methylene chloride	ND	ug/L	5.0	2.4	EPA-8260B	ND	A01,A39	1
Methyl t-butyl ether	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	1
Naphthalene	3.4	ug/L	2.5	1.8	EPA-8260B	ND	A01,A39	1
n-Propylbenzene	0.80	ug/L	2.5	0.55	EPA-8260B	ND	J,A01,A39	1
Styrene	ND	ug/L	2.5	0.34	EPA-8260B	ND	A01,A39	1
1,1,1,2-Tetrachloroethane	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01,A39	1
1,1,2,2-Tetrachloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01,A39	1
Tetrachloroethene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
Toluene	92	ug/L	2.5	0.46	EPA-8260B	ND	A01,A39	1
1,2,3-Trichlorobenzene	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01,A39	1
1,2,4-Trichlorobenzene	ND	ug/L	2.5	0.95	EPA-8260B	ND	A01,A39	1
1,1,1-Trichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	1
1,1,2-Trichloroethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01,A39	1
Trichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	1
Trichlorofluoromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
1,2,3-Trichloropropane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01,A39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
1,2,4-Trimethylbenzene	4.0	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	1
1,3,5-Trimethylbenzene	1.0	ug/L	2.5	0.60	EPA-8260B	ND	J,A01,A39	1
Vinyl chloride	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	1
Total Xylenes	63	ug/L	5.0	1.8	EPA-8260B	ND	A01,A39	1
p- & m-Xylenes	40	ug/L	2.5	1.4	EPA-8260B	ND	A01,A39	1
o-Xylene	22	ug/L	2.5	0.41	EPA-8260B	ND	A01,A39	1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-09	Client Sample Name: V - 109 a/b/c, 10/3/2018 2:55:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/08/18 12:00	10/09/18 13:47		MGC	MS-V5	5	B026576

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-10	Client Sample Name: V - 110 a/b/c, 10/3/2018 3:10:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	190	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	1
Bromobenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
Bromochloromethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01,A39	1
Bromodichloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
Bromoform	ND	ug/L	2.5	1.4	EPA-8260B	ND	A01,A39	1
Bromomethane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01,A39	1
n-Butylbenzene	0.75	ug/L	2.5	0.55	EPA-8260B	ND	J,A01,A39	1
sec-Butylbenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
tert-Butylbenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
Carbon tetrachloride	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01,A39	1
Chlorobenzene	ND	ug/L	2.5	0.46	EPA-8260B	ND	A01,A39	1
Chloroethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
Chloroform	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	1
Chloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
2-Chlorotoluene	ND	ug/L	2.5	1.0	EPA-8260B	ND	A01,A39	1
4-Chlorotoluene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
Dibromochloromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.2	EPA-8260B	ND	A01,A39	1
1,2-Dibromoethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01,A39	1
Dibromomethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01,A39	1
1,2-Dichlorobenzene	ND	ug/L	2.5	0.36	EPA-8260B	ND	A01,A39	1
1,3-Dichlorobenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
1,4-Dichlorobenzene	ND	ug/L	2.5	0.31	EPA-8260B	ND	A01,A39	1
Dichlorodifluoromethane	ND	ug/L	2.5	0.50	EPA-8260B	ND	A01,A39	1
1,1-Dichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	1
1,2-Dichloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01,A39	1
1,1-Dichloroethene	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01,A39	1
cis-1,2-Dichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	1
trans-1,2-Dichloroethene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
1,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
1,3-Dichloropropane	ND	ug/L	2.5	0.43	EPA-8260B	ND	A01,A39	1
2,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
1,1-Dichloropropene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-10							
Client Sample Name:	V - 110 a/b/c, 10/3/2018 3:10:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
trans-1,3-Dichloropropene	ND	ug/L	2.5	0.40	EPA-8260B	ND	A01,A39	1
Ethylbenzene	36	ug/L	2.5	0.49	EPA-8260B	ND	A01,A39	1
Hexachlorobutadiene	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01,A39	1
Isopropylbenzene	1.9	ug/L	2.5	0.70	EPA-8260B	ND	J,A01,A39	1
p-Isopropyltoluene	0.90	ug/L	2.5	0.60	EPA-8260B	ND	J,A01,A39	1
Methylene chloride	ND	ug/L	5.0	2.4	EPA-8260B	ND	A01,A39	1
Methyl t-butyl ether	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	1
Naphthalene	11	ug/L	2.5	1.8	EPA-8260B	ND	A01,A39	1
n-Propylbenzene	2.8	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	1
Styrene	ND	ug/L	2.5	0.34	EPA-8260B	ND	A01,A39	1
1,1,1,2-Tetrachloroethane	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01,A39	1
1,1,2,2-Tetrachloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01,A39	1
Tetrachloroethene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
Toluene	240	ug/L	2.5	0.46	EPA-8260B	ND	A01,A39	1
1,2,3-Trichlorobenzene	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01,A39	1
1,2,4-Trichlorobenzene	ND	ug/L	2.5	0.95	EPA-8260B	ND	A01,A39	1
1,1,1-Trichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	1
1,1,2-Trichloroethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01,A39	1
Trichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	1
Trichlorofluoromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
1,2,3-Trichloropropane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01,A39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
1,2,4-Trimethylbenzene	16	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	1
1,3,5-Trimethylbenzene	3.6	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	1
Vinyl chloride	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	1
Total Xylenes	230	ug/L	5.0	1.8	EPA-8260B	ND	A01,A39	1
p- & m-Xylenes	140	ug/L	2.5	1.4	EPA-8260B	ND	A01,A39	1
o-Xylene	81	ug/L	2.5	0.41	EPA-8260B	ND	A01,A39	1
1,2-Dichloroethane-d4 (Surrogate)	94.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-10	Client Sample Name: V - 110 a/b/c, 10/3/2018 3:10:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/08/18 12:00	10/09/18 14:10		MGC	MS-V5	5	B026576

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-11							
Client Sample Name:	V - 111 a/b/c, 10/3/2018 3:10:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	190	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	1
Bromobenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
Bromochloromethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01,A39	1
Bromodichloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
Bromoform	ND	ug/L	2.5	1.4	EPA-8260B	ND	A01,A39	1
Bromomethane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01,A39	1
n-Butylbenzene	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	1
sec-Butylbenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
tert-Butylbenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
Carbon tetrachloride	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01,A39	1
Chlorobenzene	ND	ug/L	2.5	0.46	EPA-8260B	ND	A01,A39	1
Chloroethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
Chloroform	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	1
Chloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
2-Chlorotoluene	ND	ug/L	2.5	1.0	EPA-8260B	ND	A01,A39	1
4-Chlorotoluene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
Dibromochloromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.2	EPA-8260B	ND	A01,A39	1
1,2-Dibromoethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01,A39	1
Dibromomethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01,A39	1
1,2-Dichlorobenzene	ND	ug/L	2.5	0.36	EPA-8260B	ND	A01,A39	1
1,3-Dichlorobenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
1,4-Dichlorobenzene	ND	ug/L	2.5	0.31	EPA-8260B	ND	A01,A39	1
Dichlorodifluoromethane	ND	ug/L	2.5	0.50	EPA-8260B	ND	A01,A39	1
1,1-Dichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	1
1,2-Dichloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01,A39	1
1,1-Dichloroethene	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01,A39	1
cis-1,2-Dichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	1
trans-1,2-Dichloroethene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
1,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
1,3-Dichloropropane	ND	ug/L	2.5	0.43	EPA-8260B	ND	A01,A39	1
2,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
1,1-Dichloropropene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-11							
Client Sample Name:	V - 111 a/b/c, 10/3/2018 3:10:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	1
trans-1,3-Dichloropropene	ND	ug/L	2.5	0.40	EPA-8260B	ND	A01,A39	1
Ethylbenzene	32	ug/L	2.5	0.49	EPA-8260B	ND	A01,A39	1
Hexachlorobutadiene	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01,A39	1
Isopropylbenzene	1.6	ug/L	2.5	0.70	EPA-8260B	ND	J,A01,A39	1
p-Isopropyltoluene	0.85	ug/L	2.5	0.60	EPA-8260B	ND	J,A01,A39	1
Methylene chloride	ND	ug/L	5.0	2.4	EPA-8260B	ND	A01,A39	1
Methyl t-butyl ether	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	1
Naphthalene	11	ug/L	2.5	1.8	EPA-8260B	ND	A01,A39	1
n-Propylbenzene	2.3	ug/L	2.5	0.55	EPA-8260B	ND	J,A01,A39	1
Styrene	ND	ug/L	2.5	0.34	EPA-8260B	ND	A01,A39	1
1,1,1,2-Tetrachloroethane	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01,A39	1
1,1,2,2-Tetrachloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01,A39	1
Tetrachloroethene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
Toluene	230	ug/L	2.5	0.46	EPA-8260B	ND	A01,A39	1
1,2,3-Trichlorobenzene	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01,A39	1
1,2,4-Trichlorobenzene	ND	ug/L	2.5	0.95	EPA-8260B	ND	A01,A39	1
1,1,1-Trichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	1
1,1,2-Trichloroethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01,A39	1
Trichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	1
Trichlorofluoromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	1
1,2,3-Trichloropropane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01,A39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	1
1,2,4-Trimethylbenzene	14	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	1
1,3,5-Trimethylbenzene	3.1	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	1
Vinyl chloride	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	1
Total Xylenes	200	ug/L	5.0	1.8	EPA-8260B	ND	A01,A39	1
p- & m-Xylenes	130	ug/L	2.5	1.4	EPA-8260B	ND	A01,A39	1
o-Xylene	71	ug/L	2.5	0.41	EPA-8260B	ND	A01,A39	1
1,2-Dichloroethane-d4 (Surrogate)	98.1	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-11	Client Sample Name: V - 111 a/b/c, 10/3/2018 3:10:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/09/18 07:00	10/09/18 14:34		MGC	MS-V5	5	B026717

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Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-12							
Client Sample Name:	V - 112 a/b/c, 10/3/2018 3:55:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	1500	ug/L	25	4.2	EPA-8260B	ND	A01,A39	1
Bromobenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	2
Bromochloromethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01,A39	2
Bromodichloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	2
Bromoform	ND	ug/L	2.5	1.4	EPA-8260B	ND	A01,A39	2
Bromomethane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01,A39	2
n-Butylbenzene	2.8	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	2
sec-Butylbenzene	2.4	ug/L	2.5	0.75	EPA-8260B	ND	J,A01,A39	2
tert-Butylbenzene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	2
Carbon tetrachloride	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01,A39	2
Chlorobenzene	ND	ug/L	2.5	0.46	EPA-8260B	ND	A01,A39	2
Chloroethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	2
Chloroform	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	2
Chloromethane	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	2
2-Chlorotoluene	ND	ug/L	2.5	1.0	EPA-8260B	ND	A01,A39	2
4-Chlorotoluene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	2
Dibromochloromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	2
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.2	EPA-8260B	ND	A01,A39	2
1,2-Dibromoethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01,A39	2
Dibromomethane	ND	ug/L	2.5	1.2	EPA-8260B	ND	A01,A39	2
1,2-Dichlorobenzene	ND	ug/L	2.5	0.36	EPA-8260B	ND	A01,A39	2
1,3-Dichlorobenzene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	2
1,4-Dichlorobenzene	ND	ug/L	2.5	0.31	EPA-8260B	ND	A01,A39	2
Dichlorodifluoromethane	ND	ug/L	2.5	0.50	EPA-8260B	ND	A01,A39	2
1,1-Dichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	2
1,2-Dichloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01,A39	2
1,1-Dichloroethene	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01,A39	2
cis-1,2-Dichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	2
trans-1,2-Dichloroethene	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	2
1,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	2
1,3-Dichloropropane	ND	ug/L	2.5	0.43	EPA-8260B	ND	A01,A39	2
2,2-Dichloropropane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	2
1,1-Dichloropropene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-12							
Client Sample Name:	V - 112 a/b/c, 10/3/2018 3:55:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	2
trans-1,3-Dichloropropene	ND	ug/L	2.5	0.40	EPA-8260B	ND	A01,A39	2
Ethylbenzene	170	ug/L	2.5	0.49	EPA-8260B	ND	A01,A39	2
Hexachlorobutadiene	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01,A39	2
Isopropylbenzene	9.2	ug/L	2.5	0.70	EPA-8260B	ND	A01,A39	2
p-Isopropyltoluene	4.6	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	2
Methylene chloride	ND	ug/L	5.0	2.4	EPA-8260B	ND	A01,A39	2
Methyl t-butyl ether	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	2
Naphthalene	54	ug/L	2.5	1.8	EPA-8260B	ND	A01,A39	2
n-Propylbenzene	12	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	2
Styrene	ND	ug/L	2.5	0.34	EPA-8260B	ND	A01,A39	2
1,1,1,2-Tetrachloroethane	ND	ug/L	2.5	0.90	EPA-8260B	ND	A01,A39	2
1,1,2,2-Tetrachloroethane	ND	ug/L	2.5	0.85	EPA-8260B	ND	A01,A39	2
Tetrachloroethene	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	2
Toluene	1600	ug/L	25	4.6	EPA-8260B	ND	A01,A39	1
1,2,3-Trichlorobenzene	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01,A39	2
1,2,4-Trichlorobenzene	ND	ug/L	2.5	0.95	EPA-8260B	ND	A01,A39	2
1,1,1-Trichloroethane	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01,A39	2
1,1,2-Trichloroethane	ND	ug/L	2.5	0.80	EPA-8260B	ND	A01,A39	2
Trichloroethene	ND	ug/L	2.5	0.42	EPA-8260B	ND	A01,A39	2
Trichlorofluoromethane	ND	ug/L	2.5	0.65	EPA-8260B	ND	A01,A39	2
1,2,3-Trichloropropane	ND	ug/L	5.0	1.2	EPA-8260B	ND	A01,A39	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	2.5	0.75	EPA-8260B	ND	A01,A39	2
1,2,4-Trimethylbenzene	72	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	2
1,3,5-Trimethylbenzene	16	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	2
Vinyl chloride	ND	ug/L	2.5	0.60	EPA-8260B	ND	A01,A39	2
Total Xylenes	1000	ug/L	5.0	1.8	EPA-8260B	ND	A01,A39	2
p- & m-Xylenes	640	ug/L	2.5	1.4	EPA-8260B	ND	A01,A39	2
o-Xylene	360	ug/L	2.5	0.41	EPA-8260B	ND	A01,A39	2
1,2-Dichloroethane-d4 (Surrogate)	97.5	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	97.1	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			2

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-12	Client Sample Name: V - 112 a/b/c, 10/3/2018 3:55:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
4-Bromofluorobenzene (Surrogate)	93.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/09/18 07:00	10/10/18 06:46		MGC	MS-V5	50	B026717
2	EPA-8260B	10/09/18 07:00	10/09/18 14:57		MGC	MS-V5	5	B026717

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-13	Client Sample Name: V - 113 a/b/c, 10/3/2018 4:10:00PM, Chuck Schmidt
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260B	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-8260B	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-8260B	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1831010-13							
Client Sample Name:	V - 113 a/b/c, 10/3/2018 4:10:00PM, Chuck Schmidt							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-8260B	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-8260B	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
Toluene	0.14	ug/L	0.50	0.093	EPA-8260B	ND	J	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-8260B	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-8260B	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	91.0	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	90.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1831010-13	Client Sample Name: V - 113 a/b/c, 10/3/2018 4:10:00PM, Chuck Schmidt
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Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-8260B	10/09/18 07:00	10/09/18 21:54		MGC	MS-V5	1	B026717

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Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B026576						
Benzene	B026576-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	B026576-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B026576-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B026576-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B026576-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B026576-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B026576-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B026576-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B026576-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B026576-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B026576-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B026576-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B026576-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B026576-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B026576-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B026576-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B026576-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B026576-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B026576-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B026576-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B026576-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B026576-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B026576-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B026576-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B026576-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B026576-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B026576-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B026576-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B026576-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B026576-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B026576-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B026576-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B026576-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B026576-BLK1	ND	ug/L	0.50	0.14	

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Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B026576						
trans-1,3-Dichloropropene	B026576-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	B026576-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B026576-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B026576-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B026576-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B026576-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B026576-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B026576-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B026576-BLK1	ND	ug/L	0.50	0.11	
Styrene	B026576-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B026576-BLK1	ND	ug/L	0.50	0.18	
1,1,1,2-Tetrachloroethane	B026576-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B026576-BLK1	ND	ug/L	0.50	0.13	
Toluene	B026576-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B026576-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B026576-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B026576-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B026576-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B026576-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B026576-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B026576-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B026576-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B026576-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B026576-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B026576-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B026576-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B026576-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B026576-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B026576-BLK1	84.2	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B026576-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B026576-BLK1	89.8	%	80 - 120 (LCL - UCL)		
QC Batch ID: B026717						
Benzene	B026717-BLK1	ND	ug/L	0.50	0.083	

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Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B026717						
Bromobenzene	B026717-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	B026717-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	B026717-BLK1	ND	ug/L	0.50	0.14	
Bromoform	B026717-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	B026717-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	B026717-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	B026717-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	B026717-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	B026717-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	B026717-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	B026717-BLK1	ND	ug/L	0.50	0.14	
Chloroform	B026717-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	B026717-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	B026717-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	B026717-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	B026717-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	B026717-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	B026717-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	B026717-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	B026717-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	B026717-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	B026717-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	B026717-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	B026717-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	B026717-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B026717-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	B026717-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	B026717-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	B026717-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	B026717-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	B026717-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	B026717-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	B026717-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	B026717-BLK1	ND	ug/L	0.50	0.079	

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Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B026717						
Ethylbenzene	B026717-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	B026717-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	B026717-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B026717-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	B026717-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	B026717-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	B026717-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	B026717-BLK1	ND	ug/L	0.50	0.11	
Styrene	B026717-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	B026717-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	B026717-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B026717-BLK1	ND	ug/L	0.50	0.13	
Toluene	B026717-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	B026717-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	B026717-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	B026717-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	B026717-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	B026717-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	B026717-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	B026717-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	B026717-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	B026717-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	B026717-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	B026717-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	B026717-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B026717-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B026717-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	B026717-BLK1	95.8	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B026717-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B026717-BLK1	92.0	%	80 - 120 (LCL - UCL)		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: B026576										
Benzene	B026576-BS1	LCS	25.590	25.000	ug/L	102		70 - 130		
Bromodichloromethane	B026576-BS1	LCS	19.320	25.000	ug/L	77.3		70 - 130		
Chlorobenzene	B026576-BS1	LCS	23.480	25.000	ug/L	93.9		70 - 130		
Chloroethane	B026576-BS1	LCS	26.900	25.000	ug/L	108		70 - 130		
1,4-Dichlorobenzene	B026576-BS1	LCS	21.050	25.000	ug/L	84.2		70 - 130		
1,1-Dichloroethane	B026576-BS1	LCS	23.900	25.000	ug/L	95.6		70 - 130		
1,1-Dichloroethene	B026576-BS1	LCS	23.870	25.000	ug/L	95.5		70 - 130		
Toluene	B026576-BS1	LCS	25.060	25.000	ug/L	100		70 - 130		
Trichloroethene	B026576-BS1	LCS	23.860	25.000	ug/L	95.4		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B026576-BS1	LCS	8.3500	10.000	ug/L	83.5		75 - 125		
Toluene-d8 (Surrogate)	B026576-BS1	LCS	9.7900	10.000	ug/L	97.9		80 - 120		
4-Bromofluorobenzene (Surrogate)	B026576-BS1	LCS	8.8600	10.000	ug/L	88.6		80 - 120		
QC Batch ID: B026717										
Benzene	B026717-BS1	LCS	25.320	25.000	ug/L	101		70 - 130		
Bromodichloromethane	B026717-BS1	LCS	20.600	25.000	ug/L	82.4		70 - 130		
Chlorobenzene	B026717-BS1	LCS	22.500	25.000	ug/L	90.0		70 - 130		
Chloroethane	B026717-BS1	LCS	27.770	25.000	ug/L	111		70 - 130		
1,4-Dichlorobenzene	B026717-BS1	LCS	19.720	25.000	ug/L	78.9		70 - 130		
1,1-Dichloroethane	B026717-BS1	LCS	24.390	25.000	ug/L	97.6		70 - 130		
1,1-Dichloroethene	B026717-BS1	LCS	22.740	25.000	ug/L	91.0		70 - 130		
Toluene	B026717-BS1	LCS	23.970	25.000	ug/L	95.9		70 - 130		
Trichloroethene	B026717-BS1	LCS	24.020	25.000	ug/L	96.1		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B026717-BS1	LCS	8.4000	10.000	ug/L	84.0		75 - 125		
Toluene-d8 (Surrogate)	B026717-BS1	LCS	10.080	10.000	ug/L	101		80 - 120		
4-Bromofluorobenzene (Surrogate)	B026717-BS1	LCS	8.9100	10.000	ug/L	89.1		80 - 120		

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
QC Batch ID: B026576		Used client sample: N								
Benzene	MS	1830038-12	ND	27.560	25.000	ug/L		110	70 - 130	
	MSD	1830038-12	ND	27.220	25.000	ug/L	1.2	109	20	70 - 130
Bromodichloromethane	MS	1830038-12	ND	17.060	25.000	ug/L		68.2	70 - 130	Q03
	MSD	1830038-12	ND	18.900	25.000	ug/L	10.2	75.6	20	70 - 130
Chlorobenzene	MS	1830038-12	ND	24.240	25.000	ug/L		97.0	70 - 130	
	MSD	1830038-12	ND	24.900	25.000	ug/L	2.7	99.6	20	70 - 130
Chloroethane	MS	1830038-12	ND	29.250	25.000	ug/L		117	70 - 130	
	MSD	1830038-12	ND	29.640	25.000	ug/L	1.3	119	20	70 - 130
1,4-Dichlorobenzene	MS	1830038-12	ND	21.850	25.000	ug/L		87.4	70 - 130	
	MSD	1830038-12	ND	22.440	25.000	ug/L	2.7	89.8	20	70 - 130
1,1-Dichloroethane	MS	1830038-12	ND	26.390	25.000	ug/L		106	70 - 130	
	MSD	1830038-12	ND	26.200	25.000	ug/L	0.7	105	20	70 - 130
1,1-Dichloroethene	MS	1830038-12	ND	25.760	25.000	ug/L		103	70 - 130	
	MSD	1830038-12	ND	25.510	25.000	ug/L	1.0	102	20	70 - 130
Toluene	MS	1830038-12	ND	25.720	25.000	ug/L		103	70 - 130	
	MSD	1830038-12	ND	25.480	25.000	ug/L	0.9	102	20	70 - 130
Trichloroethene	MS	1830038-12	ND	24.940	25.000	ug/L		99.8	70 - 130	
	MSD	1830038-12	ND	24.690	25.000	ug/L	1.0	98.8	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1830038-12	ND	8.8200	10.000	ug/L		88.2	75 - 125	
	MSD	1830038-12	ND	8.9200	10.000	ug/L	1.1	89.2		75 - 125
Toluene-d8 (Surrogate)	MS	1830038-12	ND	9.8800	10.000	ug/L		98.8	80 - 120	
	MSD	1830038-12	ND	9.8900	10.000	ug/L	0.1	98.9		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1830038-12	ND	9.0500	10.000	ug/L		90.5	80 - 120	
	MSD	1830038-12	ND	9.1800	10.000	ug/L	1.4	91.8		80 - 120
QC Batch ID: B026717		Used client sample: N								
Benzene	MS	1830372-01	ND	27.140	25.000	ug/L		109	70 - 130	
	MSD	1830372-01	ND	28.470	25.000	ug/L	4.8	114	20	70 - 130
Bromodichloromethane	MS	1830372-01	ND	21.400	25.000	ug/L		85.6	70 - 130	
	MSD	1830372-01	ND	21.160	25.000	ug/L	1.1	84.6	20	70 - 130
Chlorobenzene	MS	1830372-01	ND	23.380	25.000	ug/L		93.5	70 - 130	
	MSD	1830372-01	ND	24.540	25.000	ug/L	4.8	98.2	20	70 - 130
Chloroethane	MS	1830372-01	ND	30.490	25.000	ug/L		122	70 - 130	
	MSD	1830372-01	ND	31.930	25.000	ug/L	4.6	128	20	70 - 130
1,4-Dichlorobenzene	MS	1830372-01	ND	21.100	25.000	ug/L		84.4	70 - 130	
	MSD	1830372-01	ND	22.210	25.000	ug/L	5.1	88.8	20	70 - 130
1,1-Dichloroethane	MS	1830372-01	ND	26.250	25.000	ug/L		105	70 - 130	
	MSD	1830372-01	ND	26.990	25.000	ug/L	2.8	108	20	70 - 130

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
QC Batch ID: B026717		Used client sample: N								
1,1-Dichloroethene	MS	1830372-01	ND	24.300	25.000	ug/L		97.2		70 - 130
	MSD	1830372-01	ND	25.150	25.000	ug/L	3.4	101	20	70 - 130
Toluene	MS	1830372-01	ND	25.610	25.000	ug/L		102		70 - 130
	MSD	1830372-01	ND	25.470	25.000	ug/L	0.5	102	20	70 - 130
Trichloroethene	MS	1830372-01	ND	24.070	25.000	ug/L		96.3		70 - 130
	MSD	1830372-01	ND	24.690	25.000	ug/L	2.5	98.8	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1830372-01	ND	8.6400	10.000	ug/L		86.4		75 - 125
	MSD	1830372-01	ND	8.1900	10.000	ug/L	5.3	81.9		75 - 125
Toluene-d8 (Surrogate)	MS	1830372-01	ND	10.300	10.000	ug/L		103		80 - 120
	MSD	1830372-01	ND	9.9200	10.000	ug/L	3.8	99.2		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1830372-01	ND	9.1600	10.000	ug/L		91.6		80 - 120
	MSD	1830372-01	ND	9.3100	10.000	ug/L	1.6	93.1		80 - 120

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/10/2018 10:13
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A01 Detection and quantitation limits are raised due to sample dilution.
- A39 Sample received at pH greater than 2.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.



Date of Report: 10/16/2018

Chuck Schmidt

CE Schmidt

19200 Live Oak Road
Red Bluff, CA 96080

Client Project: 15669
BCL Project: O&G/8260
BCL Work Order: 1831011
Invoice ID: B319188

Enclosed are the results of analyses for samples received by the laboratory on 10/3/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Case Narratives

Case Narrative for Work Order 1831011

1831011-12: Sample broken in laboratory. No analyses.



064 Day 1

18-31011

CE Schmidt, P.L., Environmental Consultant
 Chain of Custody Record
 Form Serial Number CES F1-02108
 Client Name
 Air Resources Board
 Offfield WW Emissions Assessment
 Project Manager
 Luis Leyva
 916.323.1079
 Requested Completion Date

For information regarding these samples
 Please Contact:
 Dr. Charles E. Schmidt
 19200 Live Oak Road, Red Bluff, CA 96080
 530.829.4266
 E-Mail: SCHMIDTCE@aol.com

Station Number	Date	Time	Sample ID Number			Sample Container	US EPA Method 8260	US EPA Method 1664	Analysis Requested	Client Address and Phone Number	Laboratory Name
			CIG	OIR	MIA						
-1	10/3/2018	7:45	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-2	10/3/2018	8:00	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-3	10/3/2018	8:45	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-4	10/3/2018	10:5	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-5	10/3/2018	10:30	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-6	10/3/2018	11:15	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-7	10/3/2018	13:55	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-8	10/3/2018	14:05	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-9	10/3/2018	14:55	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-10	10/3/2018	15:10	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-11	10/3/2018	15:10	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-12	10/3/2018	15:55	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-13	10/3/2018	16:0	X	X	X	X	X	X	1001 J Street Sacramento, CA 95814 800-542-4450	BC Laboratories	
-											

REINQUIRED BY
 Date/Time 10/3/2018 16:35
 Date/Time 10/3/2018 16:35
 Date/Time 10/3/2018 17:45
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REINQUIRED BY
 Date/Time 10/3/2018 16:35
 Date/Time 10/3/2018 16:35
 Date/Time 10/3/2018 17:45
 Date/Time 10/3/2018 17:45

Remarks: All samples are in a Wastewater Matrix

File: AFB Forms II A.xab Form: CCC 1654 D1



BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 2

Submission #: 18-31011

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S _____

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 0.97 Container: Amber Thermometer ID: 1062 Date/Time: 10/3/15

Temperature: (A) 3.3 °C / (C) 3.3 °C Analyst Init: CSJ

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664	A	A	A	A	A	A	A	A	A	A
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/038/080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FEDLAR BAG										
FERROUS IRON										
INCORE										
MART KIT										
UMMA CANISTER										

Comments: _____

Sample Numbering Completed By: EM Date/Time: 10-3-15 1816 Rev 21 05/23/2016

= Actual / C = Corrected



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 18-31011

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W / S _____

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO Emissivity: 0.97 Container: Antel Thermometer ID: 1082 Date/Time: 10/3/15

Temperature: (A) 9.3 °C / (C) 3.3 °C Analyst Init: GS

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664	A	A	A							
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL-504										
QT EPA 508/808/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____
 Sample Numbering Completed By: EM Date/Time: 10-3-15 1816 Rev 21 05/23/2015
 = Actual / C = Corrected

15:W:\Doc\Wood\PerfectLAB_DOC\9\EM\5\AM\REC\F 201

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1831011-01	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 07:45
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 101	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831011-02	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 08:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 102	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831011-03	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 08:45
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 103	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831011-04	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 10:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 104	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831011-05	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 10:30
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 105	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831011-06	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 11:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 106	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831011-07	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 13:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 107	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1831011-08	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 14:05
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 108	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831011-09	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 14:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 109	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831011-10	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 15:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 110	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831011-11	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 15:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 111	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831011-12	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 15:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 112	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			
1831011-13	COC Number:	---	Receive Date:	10/03/2018 17:45
	Project Number:	---	Sampling Date:	10/03/2018 16:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	J - 113	Lab Matrix:	Water
	Sampled By:	Chuck Schmidt	Sample Type:	Water
	<hr/>			

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CE Schmidt
19200 Live Oak Road
Red Bluff, CA 96080

Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1831011-01	Client Sample Name: J - 101, 10/3/2018 7:45:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	1.6	mg/L	5.0	0.82	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/05/18 14:30	10/05/18 14:30	MAM	MAN-SV	1	B026946

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Red Bluff, CA 96080

Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1831011-02	Client Sample Name: J - 102, 10/3/2018 8:00:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	7.1	mg/L	5.0	0.82	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/05/18 14:30	10/05/18 14:30	MAM	MAN-SV	1	B026946

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19200 Live Oak Road
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Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1831011-03	Client Sample Name: J - 103, 10/3/2018 8:45:00AM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	11	mg/L	5.0	0.82	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/05/18 14:30	10/05/18 14:30	MAM	MAN-SV	1	B026946

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Red Bluff, CA 96080

Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1831011-04	Client Sample Name: J - 104, 10/3/2018 10:15:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	6.4	mg/L	5.0	0.82	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/05/18 14:30	10/05/18 14:30	MAM	MAN-SV	1	B026946

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Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1831011-05	Client Sample Name: J - 105, 10/3/2018 10:30:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	9.7	mg/L	5.0	0.82	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/05/18 14:30	10/05/18 14:30	MAM	MAN-SV	1	B026946

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Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1831011-06	Client Sample Name: J - 106, 10/3/2018 11:15:00AM, Chuck Schmidt
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	13	mg/L	5.0	0.82	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/05/18 14:30	10/05/18 14:30	MAM	MAN-SV	1	B026946

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Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1831011-07	Client Sample Name: J - 107, 10/3/2018 1:55:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	1.4	mg/L	5.0	0.82	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/05/18 14:30	10/05/18 14:30	MAM	MAN-SV	1	B026946

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Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1831011-08	Client Sample Name: J - 108, 10/3/2018 2:05:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	2.7	mg/L	5.0	0.82	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/05/18 14:30	10/05/18 14:30	MAM	MAN-SV	1	B026946

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Red Bluff, CA 96080

Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1831011-09	Client Sample Name: J - 109, 10/3/2018 2:55:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	7.8	mg/L	5.0	0.82	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/05/18 14:30	10/05/18 14:30	MAM	MAN-SV	1	B026946

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Red Bluff, CA 96080

Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1831011-10	Client Sample Name: J - 110, 10/3/2018 3:10:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	3.4	mg/L	5.0	0.82	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/05/18 14:30	10/05/18 14:30	MAM	MAN-SV	1	B026946

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Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1831011-11	Client Sample Name: J - 111, 10/3/2018 3:10:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	4.5	mg/L	5.0	0.82	EPA-1664A HEM	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/05/18 14:30	10/05/18 14:30	MAM	MAN-SV	1	B026946

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Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

BCL Sample ID: 1831011-13	Client Sample Name: J - 113, 10/3/2018 4:10:00PM, Chuck Schmidt
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Oil and Grease	ND	mg/L	5.0	0.82	EPA-1664A HEM	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-1664A HEM	10/05/18 14:30	10/05/18 14:30	MAM	MAN-SV	1	B026946

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Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B026946						
Oil and Grease	B026946-BLK1	ND	mg/L	5.0	0.82	

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Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B026946										
Oil and Grease	B026946-BS1	LCS	38.100	40.200	mg/L	94.8		78	114	

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Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
QC Batch ID: B026946		Used client sample: N									
Oil and Grease	DUP	1828905-03	ND	ND		mg/L			18		
	MS	1828905-03	ND	38.700	40.200	mg/L		96.3		78 - 114	
	MSD	1828905-03	ND	36.600	40.200	mg/L	5.6	91.0	18	78 - 114	

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Reported: 10/16/2018 9:01
Project: O&G/8260
Project Number: 15669
Project Manager: Chuck Schmidt

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit