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## Report of Work Completed – Pit Investigation

|                                   |                           |
|-----------------------------------|---------------------------|
| <b>COGCC Location Name (ID)</b>   | NP EF C27 (287619)        |
| <b>Client Location Name</b>       | C27 595 Pits              |
| <b>Remediation Project Number</b> | 8255                      |
| <b>Legal Description</b>          | NENW Section 27, T5S-R95W |
| <b>Coordinates (Lat/Long)</b>     | 39.58901 / -108.04395     |
| <b>County</b>                     | Garfield County, Colorado |

Mr. Rollins,

Confluence Compliance Companies, LLC (Confluence) prepared this Report of Work Completed (ROWC) for Caerus Oil & Gas LLC (Caerus) to present findings from a data review undertaken to present the current status of the open remediation project #8255 associated with the C27 595 Pits (Location). The Location is 9.10 miles north of Parachute, Colorado in Garfield County. The primary purpose of this report is to evaluate historical records created by past operators and consultants for the Remediation Project Number, identify data gaps, and to provide recommendations for how to pursue closure of the remediation project in accordance with COGCC 900 series regulations. The resulting dataset may be used to report previous remedial efforts to the COGCC and inform future characterization and remediation efforts. Included in this report is a review of the following data products created during the data review effort:

- A consolidated spatial dataset that visually links collection points and methods to analytical results from past delineation efforts as well as in-situ bioremediation implemented to mitigate or prevent environmental impacts.
- An analytical results summary table that presents all substantiated soil sample results in a single, easily referenced format. This tool may be employed for continued data tracking to ensure continuity of report preparation for future project updates.

This report includes a summary of project background, methodology used to review project data and prepare datasets/deliverables, the results of the review, and recommendations for how to proceed.



## Background

According to records acquired from the COGCC and provided by Caerus, the produced water storage pits at the Location were closed in 2014. Per COGCC rules, the closure was documented in COGCC Form 27 Document 2147922, and Remediation Project 8255 was assigned. After removal of the pit liner in 2014, analytical results of soil samples indicated levels of organic and inorganic constituents exceeding COGCC Table 910-1 allowable limits, indicating a possible liner failure. Impacted soil was excavated and stockpiled onsite, and interim reclamation was completed.

Multiple subsequent site investigations with environmental drilling rigs were performed to determine the vertical and horizontal extent of soil impacts and install vertical soil vapor extraction (SVE) wells to accelerate natural attenuation of hydrocarbons, monitor subsurface conditions, and support future remediation efforts.

The Remediation Project was not closed by January 15, 2022; therefore, per Rule 915.f., Caerus will now comply with COGCC Table 915-1 soil screening levels. All references to compliance will now be compared to COGCC Table 915-1 Protection of Groundwater Screening Levels.

## Methodology

To generate the consolidated datasets and deliverables requested by Caerus, Confluence utilized the following methodology.

### Document Review

An in-depth review of publicly available records obtained through the Colorado Oil and Gas Information System (COGIS) database provided a broad project overview and scaffold of remediation project statuses reported to the COGCC.

### Analytical Results Summary Table

Analytical results for soil samples containing substantiated laboratory reports and data tables were consolidated. A copy of the Laboratory Results Summary Table is included as an attachment to this report.

### Spatial Data (Google Earth KML)

Utilizing available project shapefiles and spreadsheets provided by Caerus and digitized from historical project diagrams, Confluence prepared a single consolidated Google Earth KML for the project. The data is organized by date with associated metadata and symbology to distinguish between data type, consultant, associated activity, and other criteria. The KML only includes records with substantiated laboratory reports, data tables, or boring logs. The KML ensures that data from disparate sources can be comprehensively and cohesively presented. The file's open source, public format ensures that future sampling efforts can be incorporated into the document until regulatory compliance objectives are achieved. Site diagrams illustrating findings from this report are provided as an attachment to this report.





**Note:** *Much of the spatial data included in the project KML was digitized from "paper" maps and spatial data from various consultants; Confluence cannot guarantee the accuracy of this data.*

## Results

These results summarize findings from the file reviews and associated laboratory data. For organizational and presentation purposes the results summary is divided between general observations of lithology and hydrogeology for the entire Location and site investigation activities.

Collected spatial data are depicted in the attached Site Diagram. Laboratory analytical reports are attached and summarized in the Laboratory Results Summary Table.

### Lithology and Hydrogeology

Lithology at the Location is characterized by sandy clay and silts. Groundwater is expected to flow south toward the East Fork of Parachute Creek and ultimately into the Colorado River, located 8.15 miles south of the Location. The East Fork of Parachute Creek sits approximately 25 lower than the surface of the Location. However, drilling on the Location has been conducted to depths of 82 feet below ground surface (bgs) without observing groundwater. Therefore, it is safe to assume that groundwater is expected to be greater than 80 feet bgs.

### Initial investigation Results

On April 7 and June 11, 2014, 13 soil samples were collected from the base and sidewalls of the former pit footprints after removal of the pit liner. Analytical results of pit samples are compliant with COGCC Table 915-1 Protection of Groundwater Soil Screening Levels except for total petroleum hydrocarbons - gasoline range organics (TPH-GRO), TPH - diesel range organics (DRO), benzene, toluene, xylenes, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, electrical conductivity (EC), sodium adsorption ratio (SAR), pH, arsenic, barium, and cadmium. See the attached Analytical Results Summary Table for additional details.

### September 2014 Investigation Results

Between September 19 and September 30, 2014, 16 soil borings were advanced to depths ranging from 37 to 82 feet bgs. Analytical results of the soil samples are compliant with COGCC Table 915-1 Protection of Groundwater Soil Screening Levels except for TPH (GRO and DRO), benzene, toluene, and xylenes. TPH exceedances range from 1,300 to 8,800 milligrams per kilogram (mg/kg). Benzene exceeds at 0.088 mg/kg, and toluene exceeds at 0.76 mg/kg.

### November 2016 Investigation Results

On November 15, 2016, two boreholes were advanced to depths ranging from 17 to 32 feet bgs. Samples were submitted for analysis of TPH (GRO and DRO) and benzene, toluene, ethylbenzene, and xylenes (BTEX). Analytical results are compliant with COGCC Table 915-1 Protection of Groundwater Soil Screening Levels except for TPH (GRO and DRO), benzene, and toluene. Exceedances of TPH range from 3,054 to 4,484 mg/kg. Benzene exceedances range from 0.00555 to 0.0511 mg/kg, and toluene exceeds at 1.71 mg/kg.





### April 2017 Investigation Results

Between April 20, and April 26, 2017, 12 soil borings were advanced to depths ranging from 25 to 35 feet bgs. A total of 33 samples were collected and analyzed for TPH (GRO and DRO) and BTEX. Analytical results are compliant with COGCC Table 915-1 Protection of Groundwater Soil Screening Levels except for TPH, benzene, and toluene. Exceedances of TPH range from 585 to 2,542 mg/kg. Benzene exceedances range from 0.00264 to 0.245 mg/kg, and toluene exceedances range from 1.93 to 2.95 mg/kg.

### October 2020 Investigation Results

On October 13 and October 14, 2020, five soil borings were advanced to depths ranging from 15 to 25 feet bgs. A total of 11 soil samples were collected and analyzed for COGCC Table 910-1 soil constituents. Analytical results are compliant with COGCC Table 915-1 Protection of Groundwater Soil Screening Levels except for TPH (GRO and DRO), benzene, toluene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, EC, SAR, pH, arsenic, barium, cadmium, lead, and selenium. Exceedances of TPH range from 736 to 1,321 mg/kg. Benzene exceedances range from 0.00333 to 0.02730 mg/kg. Toluene exceeded at 1.72 mg/kg. 1-methylnaphthalene exceedances range from 0.0205 to 0.163 mg/kg. 2-methylnaphthalene exceedances range from 0.0431 to 0.441 mg/kg. Naphthalene exceedances range from 0.0209 to 0.168 mg/kg. An EC exceedance of 6.040 millimhos per centimeter (mmhos/cm) was observed. SAR exceedances range from 6.46 to 37.8. Values of pH exceedances range from 8.0 to 10.0. Arsenic exceedances range from 7.99 to 30.4 mg/kg. Barium exceedances range from 276 to 17,800 mg/kg. Cadmium exceedances range from 0.615 to 0.677 mg/kg. Lead exceedances range from 14.7 to 25.3 mg/kg and a selenium exceedance of 2.59 mg/kg.

### Analysis and Recommendations

Based on a comprehensive review of analytical results of site investigation to date, the pit has not been characterized or delineated in accordance with COGCC Table 915-1 Protection of Groundwater Soil Screening Levels. Soil impacts have not been delineated vertically or horizontally at the Location.

Confluence recommends advancing approximately 14 soil borings to characterize both pits and delineate soil impacts. Potential pathways to groundwater will be evaluated once soil impacts are fully delineated vertically. Proposed soil boring locations are presented on the attached Site Diagram. Additional soil borings may be advanced if field screening and observations indicate impacts to soil.





Confluence is grateful for the opportunity to support you with this project. If you have any questions about the methods, results, or recommendations presented here, please do not hesitate to contact us.

Regards,



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### Attachments

- Topographic Location Map
- Site Diagram – Site Overview
- Site Diagram – North Pit
- Site Diagram – South Pit
- Analytical Results Summary Table
- Laboratory Reports





## Topographic Location Map

**Caerus Oil and Gas LLC**

C27 595 Pits

(NP EF C27)

COGCC Location ID: 287619

Garfield County

NENW Sec. 27 T5S-R95W



Topographic map sourced from 2020 Earth Point using data provided by United States Geological Survey

Created by: Andrew Smith on 01/18/2022.

C27





## Site Diagram Site Overview

### Caerus Oil and Gas LLC

C27 595 Pits

(NP EF C27)


COGCC Location ID: 287619

Garfield County

NENW Sec. 27 T5S-R95W



### Legend

 Proposed Soil Boring

 Historic Pit Extent

Spatial data was collected using a handheld GPS unit with submeter accuracy. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

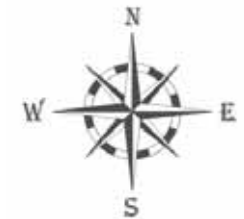
Map created by: Andrew Smith on 01/16/2023.

200 ft



## Site Diagram North Pit

Caerus Oil and Gas LLC  
C27 595 Pits  
(NP EF C27)  
COGCC Location ID: 287619  
Garfield County  
NENW Sec. 27 T5S-R95W



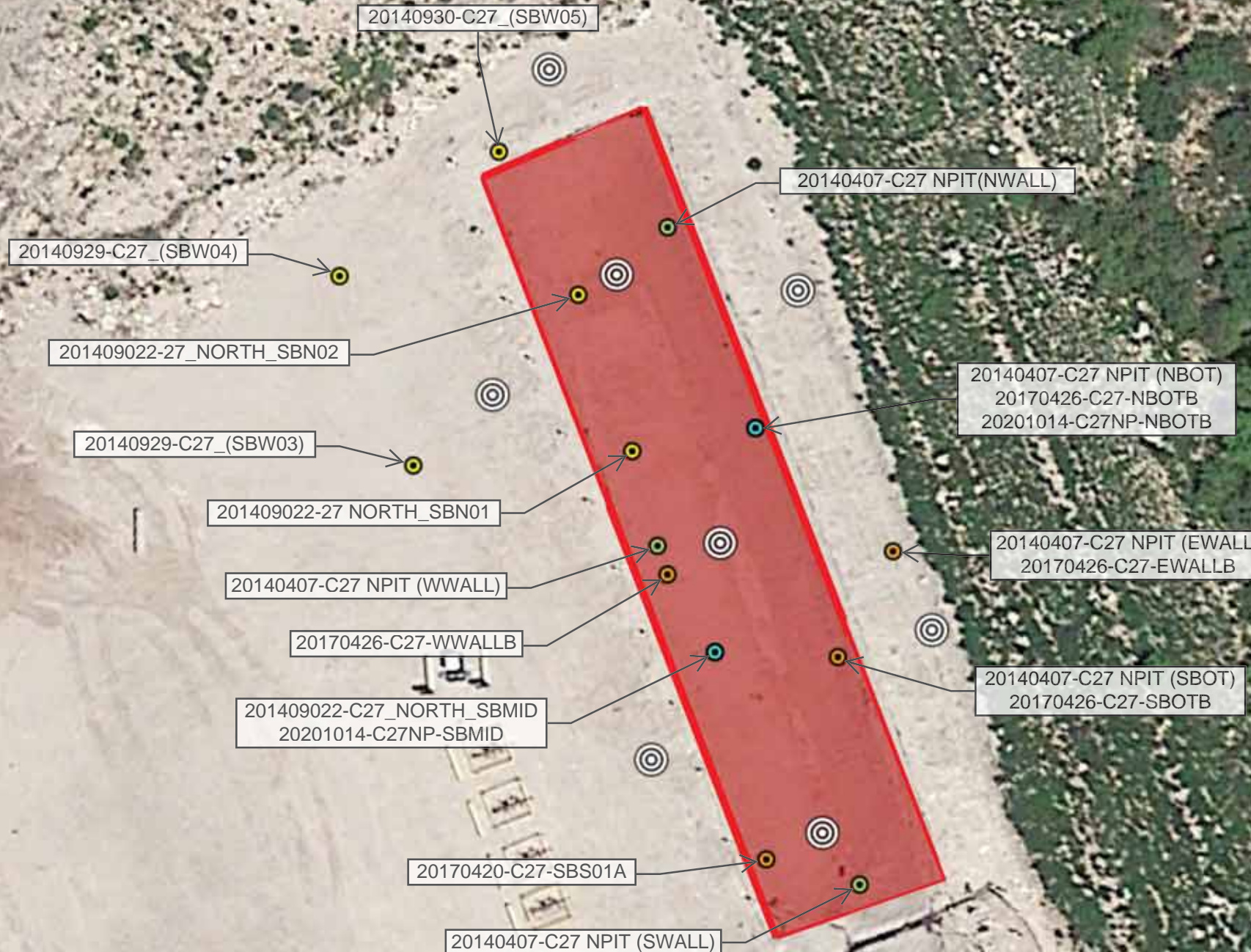
### Legend

-  March 2014 Pit Soil Sample
-  September 2014 Soil Boring
-  March 2017 Soil Boring
-  October 2020 Soil Boring
-  Proposed Soil Boring
-  Historic Pit Extent

Spatial data was collected using a handheld GPS unit with submeter accuracy. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

Map created by: Andrew Smith on 01/16/2023.

100 ft





## Site Diagram South Pit

**Caerus Oil and Gas LLC**

C27 595 Pits

(NP EF C27)

COGCC Location ID: 287619

Garfield County

NENW Sec. 27 T5S-R95W



### Legend

-  June 2014 Pit Soil Sample
-  September 2014 Soil Boring
-  November 2016 Soil Boring
-  March 2017 Soil Boring
-  October 2020 Soil Boring
-  Proposed Soil Boring
-  Historic Pit Extent

Spatial data was collected using a handheld GPS unit with submeter accuracy. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

Map created by: Andrew Smith on 01/16/2023.

100 ft

20140611-C24 SPIT (NWALL)

20140925-C27\_(SOUTH\_SBN02)  
20170421-C27-SBN02A  
20201013-C275P-SBN02A

20140924-C27\_(SOUTH\_SBN01)

20170426-C27-SBNEWALLA

20161115-C27(SBNO1)

20140929-C27\_(SBW02)

20140611-C24 SPIT (WWALL)

20170424-C27-EWALLA

20140611-C24 SPIT (NBOT)

20140929-C27\_(SBW01)

20140924-C27\_SOUTH\_SBMID01

20140925-C27\_SOUTHSBMID02  
20170421-C27-SBMID02A

20140611-C24 SPIT (CENTER)

20170426-C27SP-SEWALLA  
20201014-C27SP-SEWALLA

20140611-C24 SPIT (SBOT)

20140924-C27\_SOUTH\_SBS01

20140926-C27\_(SOUTHSBS02)  
20170421-C27-SBS02A

20140611-C24 SPIT (SWELL)



Blue Fill = Exceedance  
Dark Gray Italics = Below Reporting Detection Limit (RDL)  
"NA" = Not Analyzed  
mg/kg = milligrams per kilogram / parts per million



Blue Fill = Exceedance  
Dark Gray Italics = Below Reporting Detection Limit (RDL)  
"NA" = Not Analyzed  
mg/kg = milligrams per kilogram / parts per million



| Soil Screening and Remediation Limits       |   |  |                            | Soil Suitability for Reclamation   |   |  |                                     | Metals (mg/kg (ppm)) |        |                    |               |        |      |        |          |        |      |  |
|---|---|--|----------------------------|--|---|--|-------------------------------------|----------------------|--------|--------------------|---------------|--------|------|--------|----------|--------|------|--|
| COGCC Table 915-1 Groundwater Protection--> |   |  |                            | 4  | 6   | 6-8.3  | 2                                   | 0.29                 | 82     | 0.38               | 0.00067       | 46     | 14   | 26     | 0.26     | 0.8    | 370  |  |
| Sample Date                                 | Solid/Soil Source<br>(Equipment, Sequence, Tank,<br>Battery, Dump Line, Pit, Cuttings,<br>Background, etc.) | Depth - Z (feet)<br>(NEGATIVE VALUE)<br>below ground surface (bgs) | Sample ID                  | EC (Specific Conductance)<br>(millimhos/centimeter)<br>(by saturated paste method) | SAR (Sodium Adsorption<br>Ratio) (calculation)<br>(by saturated paste method) | pH (pH Units)<br>(by saturated paste method) | Boron - Hot Water Soluble<br>(mg/L) | Arsenic              | Barium | Cadmium<br>(mg/kg) | Chromium (VI) | Copper | Lead | Nickel | Selenium | Silver | Zinc |  |
| 10/14/2020                                  | PH  | -30  | 20201014-C27SP-SWALLA(30)  | 0.805  | 2.40  | 8.60   | NA                                  | 17.3                 | 489    | <0.500             | <2.00         | 23.9   | 14.7 | 18.3   | <2.00    | <1.00  | 52.7 |  |
| 10/14/2020                                  | PH  | -5   | 20201014-C27NP-SBMD(5)     | 6.040  | 6.46  | 10.0   | NA                                  | 12.9                 | 10700  | <0.500             | <2.00         | 20.8   | 17.4 | 15.7   | <2.00    | <1.00  | 50.8 |  |
| 10/14/2020                                  | PH  | -10  | 20201014-C27NP-SBMD(10)    | 0.920  | 11.8  | 8.93   | NA                                  | 9.16                 | 11500  | <0.500             | <2.00         | 23.5   | 17.9 | 13.3   | <2.00    | <1.00  | 42.6 |  |
| 10/14/2020                                  | PH  | -15  | 20201014-C27NP-SBMD(15)    | 1.440  | 10.7  | 10.0   | NA                                  | 11.2                 | 17800  | <0.500             | <2.00         | 34.6   | 21.9 | 13.8   | <2.00    | <1.00  | 52.7 |  |
| 10/14/2020                                  | PH  | -20  | 20201014-C27NP-SBMD(20)    | 1.330  | 23.4  | 9.07   | NA                                  | 25.0                 | 276    | 0.615              | <2.00         | 39.8   | 22.7 | 18.9   | <2.00    | <1.00  | 54.2 |  |
| 10/14/2020                                  | PH  | -10  | 20201014-C27NP-NBOTB(10)   | 2.410  | 12.1  | 9.23   | NA                                  | 7.99                 | 11500  | <0.500             | <2.00         | 21.1   | 19.3 | 11.8   | <2.00    | <1.00  | 44.5 |  |
| 10/14/2020                                  | PH  | -15  | 20201014-C27NP-NBOTB(15)   | 1.730  | 16.7  | 8.91   | NA                                  | 12.2                 | 451    | <0.500             | <2.00         | 24.7   | 17.0 | 18.4   | <2.00    | <1.00  | 55.3 |  |
| 10/13/2020                                  | PH  | -15  | 20201013-C27SP-SBMD2A(15)  | 2.870  | 37.2  | 8.89   | NA                                  | 8.33                 | 1660   | <0.500             | <2.00         | 26.1   | 16.1 | 17.7   | <2.00    | <1.00  | 61.4 |  |
| 10/13/2020                                  | PH  | -20  | 20201013-C27SP-SBMD2A(20)  | 1.950  | 37.8  | 8.70   | NA                                  | 15.5                 | 461    | <0.500             | <2.00         | 28.2   | 17.0 | 21.7   | <2.00    | <1.00  | 55.4 |  |
| 10/13/2020                                  | PH  | -25  | 20201013-C27SP-SBMD2A(25)  | 1.490  | 17.9  | 8.82   | NA                                  | 30.4                 | 549    | 0.677              | <2.00         | 42.4   | 25.3 | 23.5   | 2.59     | <1.00  | 59.4 |  |
| 10/13/2020                                  | PH  | -25  | 20201013-C27SP-SWALLA(25)  | 0.471  | 4.15  | 8.78   | NA                                  | 18.9                 | 937    | <0.500             | <2.00         | 27.2   | 16.4 | 17.3   | <2.00    | <1.00  | 47.5 |  |
| 4/27/2017                                   | PH  | -5   | 20170426-C27-NBOTB (5)     | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/27/2017                                   | PH  | -10  | 20170426-C27-NBOTB (10)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/27/2017                                   | PH  | -15  | 20170426-C27-NBOTB (15)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/27/2017                                   | PH  | -20  | 20170426-C27-NBOTB (20)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/27/2017                                   | PH  | -25  | 20170426-C27-NBOTB (25)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/27/2017                                   | PH  | -30  | 20170426-C27-NBOTB (30)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/27/2017                                   | PH  | -35  | 20170426-C27-NBOTB (35)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -30  | 20170426-C27-SBOTB (30)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -35  | 20170426-C27-SBOTB (35)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -5   | 20170426-C27-EWALLB (5)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -10  | 20170426-C27-EWALLB (10)   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -15  | 20170426-C27-EWALLB (15)   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -20  | 20170426-C27-EWALLB (20)   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -25  | 20170426-C27-EWALLB (25)   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -30  | 20170426-C27-EWALLB (30)   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -35  | 20170426-C27-EWALLB (35)   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -10  | 20170426-C27-WWALLB (10)   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -25  | 20170426-C27-WWALLB (25)   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -10  | 20170426-C27-SBN02B (10)   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/26/2017                                   | PH  | -25  | 20170426-C27-SBN02B (25)   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -30  | 20170424-C27-SWALL A (30)  | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -35  | 20170424-C27-SWALL A (35)  | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -5   | 20170424-C27-NEWALL A (5)  | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -10  | 20170424-C27-NEWALL A (10) | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -15  | 20170424-C27-NEWALL A (15) | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -20  | 20170424-C27-NEWALL A (20) | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -25  | 20170424-C27-NEWALL A (25) | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -30  | 20170424-C27-NEWALL A (30) | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -35  | 20170424-C27-NEWALL A (35) | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -5   | 20170424-C27-SBOTB (5)     | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -10  | 20170424-C27-SBOTB (10)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -15  | 20170424-C27-SBOTB (15)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -20  | 20170424-C27-SBOTB (20)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/25/2017                                   | PH  | -25  | 20170424-C27-SBOTB (25)    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/24/2017                                   | PH  | -5   | 20170424-C27-SWALL A (5)   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/24/2017                                   | PH  | -10  | 20170424-C27-SWALL A (10)  | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |



| Soil Screening and Remediation Limits       |   |  |                                    | Soil Suitability for Reclamation   |   |  |                                     | Metals (mg/kg (ppm)) |        |                    |               |        |      |        |          |        |      |  |
|---|---|--|------------------------------------|--|---|--|-------------------------------------|----------------------|--------|--------------------|---------------|--------|------|--------|----------|--------|------|--|
| COGCC Table 915-1 Groundwater Protection--> |   |  |                                    | 4  | 6   | 6-8.3  | 2                                   | 0.29                 | 82     | 0.38               | 0.0067        | 46     | 14   | 26     | 0.26     | 0.8    | 370  |  |
| Sample Date                                 | Soil/Soil Source<br>(Equipment Separator, Tank<br>Battery, Dump Line, Pit, Cuttings,<br>Background, etc.) | Depth - Z (feet)<br>(NEGATIVE VALUE)<br>below ground surface (bgs) | Sample ID                          | EC (Specific Conductance)<br>(microsiemen/cm)<br>(by saturated paste method) | SAR (Sodium Adsorption<br>Ratio) (calculation)<br>(by saturated paste method) | pH (pH Units)<br>(by saturated paste method) | Boron - Hot Water Soluble<br>(mg/L) | Arsenic              | Barium | Cadmium<br>(mg/kg) | Chromium (VI) | Copper | Lead | Nickel | Selenium | Silver | Zinc |  |
| 4/24/2017                                   | PH  | -15  | 20170424-C27-SEWALL A (15)         |  |   |  |                                     |                      |        |                    |               |        |      |        |          |        |      |  |
| 4/24/2017                                   | PH  | -20  | 20170424-C27-SEWALL A (20)         | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/24/2017                                   | PH  | -25  | 20170424-C27-SEWALL A (25)         | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/24/2017                                   | PH  | -5   | 20170424-C27-EWALLA(5)             | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/24/2017                                   | PH  | -10  | 20170424-C27-EWALLA(10)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/24/2017                                   | PH  | -15  | 20170424-C27-EWALLA(15)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/24/2017                                   | PH  | -20  | 20170424-C27-EWALLA(20)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/24/2017                                   | PH  | -25  | 20170424-C27-EWALLA(25)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/24/2017                                   | PH  | -30  | 20170424-C27-EWALLA(30)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/24/2017                                   | PH  | -35  | 20170424-C27-EWALLA(35)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -5   | 20170421-C27-SBN02A(5)             | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -10  | 20170421-C27-SBN02A(10)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -15  | 20170421-C27-SBN02A(15)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -20  | 20170421-C27-SBN02A(20)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -25  | 20170421-C27-SBN02A(25)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -30  | 20170421-C27-SBN02A(30)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -35  | 20170421-C27-SBN02A(35)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -5   | 20170421-C27-SBMID02A(5)           | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -20  | 20170421-C27-SBMID02A(20)          | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -30  | 20170421-C27-SBMID02A(30)          | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -35  | 20170421-C27-SBMID02A(35)          | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -5   | 20170421-C27-SBS02A(5)             | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -10  | 20170421-C27-SBS02A(10)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -15  | 20170421-C27-SBS02A(15)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -20  | 20170421-C27-SBS02A(20)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/21/2017                                   | PH  | -35  | 20170421-C27-SBS02A(35)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/20/2017                                   | PH  | -7   | 20170420-C27-SBS01A(5-7)           | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/20/2017                                   | PH  | -25  | 20170420-C27-SBS01A(25)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/20/2017                                   | PH  | -10  | 20170421-C27-SBMID02A(10)          | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/20/2017                                   | PH  | -15  | 20170421-C27-SBMID02A(15)          | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/20/2017                                   | PH  | -25  | 20170421-C27-SBS02A(25)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/20/2017                                   | PH  | -30  | 20170421-C27-SBS02A(30)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 11/15/2016                                  | PH  | -27  | 20161115-C27(SBN01) 25-27          | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 11/15/2016                                  | PH  | -32  | 20161115-C27(SBN01) 30-32          | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 11/15/2016                                  | PH  | -17  | 20161115-C27(SBSMID01) 15-17       | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/30/2014                                   | PH  | -47  | 20140930-C27 (SBW05) 45-47FT       | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/29/2014                                   | PH  | -47  | 20140929-C27 (SBW01) 45-47FT       | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/29/2014                                   | PH  | -47  | 20140929-C27 (SBW02) 45-47FT       | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/29/2014                                   | PH  | -47  | 20140929-C27 (SBW03) 45-47FT       | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/29/2014                                   | PH  | -47  | 20140929-C27 (SBW04) 45-47FT       | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/26/2014                                   | PH  | -22  | 20140926-C27(SOUTHSBS02) 20-22FT   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/26/2014                                   | PH  | -42  | 20140926-C27(SOUTHSBS02) 40-42FT   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/26/2014                                   | PH  | -42  | 20140926-C27(SOUTHSBMID02) 40-42FT | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/25/2014                                   | PH  | -17  | 20140925-C27(SOUTHSBMID02) 15-17FT | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/25/2014                                   | PH  | -67  | 20140925-C27 (SOUTH SBN01) 65-67FT | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/25/2014                                   | PH  | -17  | 20140925-C27 (SOUTH SBN02) 15-17FT | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/25/2014                                   | PH  | -42  | 20140925-C27 (SOUTH SBN02) 40-42FT | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/24/2014                                   | PH  | -27  | 20140924-C27 (SOUTH SBN01) 25-27FT | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/24/2014                                   | PH  | -32  | 20140924-C27 (SOUTH SBN01) 30-32FT | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/24/2014                                   | PH  | -17  | 20140924-C27 SOUTHSBS01 15-17      | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/24/2014                                   | PH  | -37  | 20140924-C27 SOUTH SBS01 35-37     | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/24/2014                                   | PH  | -27  | 20140924-C27 SOUTH SBMID01 25-27   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/24/2014                                   | PH  | -37  | 20140924-C27 SOUTH SBMID01 35-37   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/22/2014                                   | PH  | -17  | 201409022-C27 NORTH SB N01 15-17   | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/22/2014                                   | PH  | -72  | 201409022-C27 NORTH SBN01 70-72    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/22/2014                                   | PH  | -12  | 201409022-C27 NORTH SBN02 10-12    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/22/2014                                   | PH  | -47  | 201409022-C27 NORTH SBN02 45-47    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/22/2014                                   | PH  | -82  | 201409022-C27 NORTH SBMID 80-82    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/19/2014                                   | PH  | -52  | 20140919-C27(NORTH SBMID) 50-52    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/19/2014                                   | PH  | -47  | 20140919-C27(NORTHSBS02) 45-47 FT  | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 9/19/2014                                   | PH  | -12  | 20140919-C27(NORTHSBMID) 10-12 FT  | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 6/11/2014                                   | PH  | 0  | 20140611-C24 SPT (NWALL)           | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 6/11/2014                                   | PH  | 0  | 20140611-C24 SPT (NBOT)            | 4.400  | 24  | 7.1  | 6.6                                 | 7100                 | <0.50  | <2.0               | 16            | 13     | 13   | <2.0   | <1.0     | 54     |      |  |
| 6/11/2014                                   | PH  | 0  | 20140611-C24 SPT (WVALL)           | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 6/11/2014                                   | PH  | 0  | 20140611-C24 SPT (EWALL)           | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 6/11/2014                                   | PH  | 0  | 20140611-C24 SPT (SWELL)           | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 6/11/2014                                   | PH  | 0  | 20140611-C24 SPT (SBOT)            | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 6/11/2014                                   | PH  | 0  | 20140611-C24 SPT (CENTER)          | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/7/2014                                    | PH  | -10  | 20140407-C27 NPIT (NWALL) 10 FT    | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/7/2014                                    | PH  | 0  | 20140407-C27 NPIT (EWALL)          | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/7/2014                                    | PH  | 0  | 20140407-C27 NPIT (WVALL)          | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |
| 4/7/2014                                    | PH  | 0  | 20140407-C27 NPIT (SBOT)           | 2.100  | 80  | 9.7  | NA                                  | 5.6                  | 5200   | 0.57               | <2.0          | 15     | 14   | 14     | <1.0     | <0.50  | 56   |  |
| 4/7/2014                                    | PH  | 0  | 20140407-C27 NPIT (SWALL)          | NA   | NA  | NA   | NA                                  | NA                   | NA     | NA                 | NA            | NA     | NA   | NA     | NA       | NA     | NA   |  |



## EnCana Oil & Gas - Parachute, CO

Sample Delivery Group: L873886  
Samples Received: 11/19/2016  
Project Number: EF C27 595 PIT CLOSU  
Description: EF 27C 595 Site Characterization  
Site: EF C27 595  
Report To: Brett Middleton  
143 Diamond Avenue  
Parachute, CO 81635

Entire Report Reviewed By:



Shane Gambill  
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.





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| <sup>4</sup> Cn |
| <sup>5</sup> Sr |
| <sup>6</sup> Gl |
| <sup>7</sup> Al |
| <sup>8</sup> Sc |



## SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## 20161115-C27(SBNO1) 25-27 L873886-01 Solid

Collected by  
Jana NilsenCollected date/time  
11/15/16 07:30Received date/time  
11/19/16 09:00

| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time | Analyst |
|---|----------|----------|--------------------------|-----------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG929315 | 20       | 11/25/16 11:38           | 11/25/16 21:44        | TH      |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG928851 | 24.75    | 11/17/16 08:24           | 11/29/16 17:45        | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG928848 | 24.75    | 11/21/16 14:57           | 11/29/16 15:35        | BMB     |

<sup>1</sup> Cp<sup>2</sup> Tc<sup>3</sup> Ss<sup>4</sup> Cn<sup>5</sup> Sr<sup>6</sup> Gl<sup>7</sup> Al<sup>8</sup> Sc

## 20161115-C27(SBNO1) 30-32 L873886-02 Solid

Collected by  
Jana NilsenCollected date/time  
11/15/16 08:15Received date/time  
11/19/16 09:00

| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time | Analyst |
|---|----------|----------|--------------------------|-----------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG929315 | 20       | 11/25/16 11:38           | 11/25/16 21:56        | TH      |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG928851 | 1        | 11/22/16 08:21           | 11/28/16 20:28        | DAH     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG928848 | 25       | 11/21/16 14:57           | 11/29/16 15:56        | BMB     |

## 20161115-C27(SBSMID01) 15-17 L873886-03 Solid

Collected by  
Jana NilsenCollected date/time  
11/15/16 09:00Received date/time  
11/19/16 09:00

| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time | Analyst |
|---|----------|----------|--------------------------|-----------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG929315 | 1        | 11/25/16 11:38           | 11/25/16 20:20        | TH      |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG928851 | 1        | 11/22/16 08:21           | 11/28/16 22:36        | DAH     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG928848 | 1        | 11/22/16 08:21           | 11/26/16 20:35        | BRA     |

ACCOUNT:

EnCana Oil &amp; Gas - Parachute, CO

PROJECT:

EF C27 595 PIT CLOSURE

SDG:

L873886

DATE/TIME:

11/30/16 11:35

PAGE:

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All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Shane Gambill  
Technical Service Representative







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 74.2            |           | 2.48         | 24.75    | 11/29/2016 17:45        | WG928851 |
| (S) a,a,a-Trifluorotoluene(FID) | 100             |           | 59.0-128     |          | 11/29/2016 17:45        | WG928851 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.0392          |           | 0.0248       | 24.75    | 11/29/2016 15:35        | WG928848 |
| Toluene                    | ND              |           | 0.124        | 24.75    | 11/29/2016 15:35        | WG928848 |
| Ethylbenzene               | 0.152           |           | 0.0248       | 24.75    | 11/29/2016 15:35        | WG928848 |
| Total Xylenes              | 1.96            |           | 0.0742       | 24.75    | 11/29/2016 15:35        | WG928848 |
| (S) Toluene-d8             | 105             |           | 88.7-115     |          | 11/29/2016 15:35        | WG928848 |
| (S) Dibromofluoromethane   | 97.7            |           | 76.3-123     |          | 11/29/2016 15:35        | WG928848 |
| (S) a,a,a-Trifluorotoluene | 105             |           | 87.2-117     |          | 11/29/2016 15:35        | WG928848 |
| (S) 4-Bromofluorobenzene   | 120             |           | 69.7-129     |          | 11/29/2016 15:35        | WG928848 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 4410            |           | 80.0         | 20       | 11/25/2016 21:44        | WG929315 |
| (S) o-Terphenyl            | 423             | J7        | 50.0-150     |          | 11/25/2016 21:44        | WG929315 |







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 3.54            |           | 0.100        | 1        | 11/28/2016 20:28        | WG928851 |
| (S) a,a,a-Trifluorotoluene(FID) | 100             |           | 59.0-128     |          | 11/28/2016 20:28        | WG928851 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.0511          |           | 0.0250       | 25       | 11/29/2016 15:56        | WG928848 |
| Toluene                    | 1.71            |           | 0.125        | 25       | 11/29/2016 15:56        | WG928848 |
| Ethylbenzene               | 0.109           |           | 0.0250       | 25       | 11/29/2016 15:56        | WG928848 |
| Total Xylenes              | 3.43            |           | 0.0750       | 25       | 11/29/2016 15:56        | WG928848 |
| (S) Toluene-d8             | 106             |           | 88.7-115     |          | 11/29/2016 15:56        | WG928848 |
| (S) Dibromofluoromethane   | 96.3            |           | 76.3-123     |          | 11/29/2016 15:56        | WG928848 |
| (S) a,a,a-Trifluorotoluene | 102             |           | 87.2-117     |          | 11/29/2016 15:56        | WG928848 |
| (S) 4-Bromofluorobenzene   | 107             |           | 69.7-129     |          | 11/29/2016 15:56        | WG928848 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 3050            |           | 80.0         | 20       | 11/25/2016 21:56        | WG929315 |
| (S) o-Terphenyl            | 111             | J7        | 50.0-150     |          | 11/25/2016 21:56        | WG929315 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.359           |           | 0.100        | 1        | 11/28/2016 22:36        | WG928851 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 98.5            |           | 59.0-128     |          | 11/28/2016 22:36        | WG928851 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00555         |           | 0.00100      | 1        | 11/26/2016 20:35        | WG928848 |
| Toluene                            | 0.0112          |           | 0.00500      | 1        | 11/26/2016 20:35        | WG928848 |
| Ethylbenzene                       | 0.00121         |           | 0.00100      | 1        | 11/26/2016 20:35        | WG928848 |
| Total Xylenes                      | 0.0129          |           | 0.00300      | 1        | 11/26/2016 20:35        | WG928848 |
| (S) <i>Toluene-d8</i>              | 102             |           | 88.7-115     |          | 11/26/2016 20:35        | WG928848 |
| (S) <i>Dibromofluoromethane</i>    | 129             | J1        | 76.3-123     |          | 11/26/2016 20:35        | WG928848 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 95.9            |           | 87.2-117     |          | 11/26/2016 20:35        | WG928848 |
| (S) <i>4</i> -Bromofluorobenzene   | 93.6            |           | 69.7-129     |          | 11/26/2016 20:35        | WG928848 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 196             |           | 4.00         | 1        | 11/25/2016 20:20        | WG929315 |
| (S) <i>o</i> -Terphenyl    | 97.9            |           | 50.0-150     |          | 11/25/2016 20:20        | WG929315 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Abbreviations and Definitions

|     |  |
|-----|--|
| SDG | Sample Delivery Group.   |
| RDL | Reported Detection Limit.  |
| ND  | Not detected at the Reporting Limit (or MDL where applicable).   |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |

| Qualifier | Description  |
|-----------|--|
| J1        | Surrogate recovery limits have been exceeded; values are outside upper control limits. |
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution.        |

<sup>1</sup> Cp<sup>2</sup> Tc<sup>3</sup> Ss<sup>4</sup> Cn<sup>5</sup> Sr<sup>6</sup> Gl<sup>7</sup> Al<sup>8</sup> Sc





ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

## State Accreditations

|                       |             |                             |                   |
|-----------------------|-------------|-----------------------------|-------------------|
| Alabama               | 40660       | Nevada                      | TN-03-2002-34     |
| Alaska                | UST-080     | New Hampshire               | 2975              |
| Arizona               | AZ0612      | New Jersey–NELAP            | TN002             |
| Arkansas              | 88-0469     | New Mexico                  | TN00003           |
| California            | 01157CA     | New York                    | 11742             |
| Colorado              | TN00003     | North Carolina              | Env375            |
| Connecticut           | PH-0197     | North Carolina <sup>1</sup> | DW21704           |
| Florida               | E87487      | North Carolina <sup>2</sup> | 41                |
| Georgia               | NELAP       | North Dakota                | R-140             |
| Georgia <sup>1</sup>  | 923         | Ohio–VAP                    | CL0069            |
| Idaho                 | TN00003     | Oklahoma                    | 9915              |
| Illinois              | 200008      | Oregon                      | TN200002          |
| Indiana               | C-TN-01     | Pennsylvania                | 68-02979          |
| Iowa                  | 364         | Rhode Island                | 221               |
| Kansas                | E-10277     | South Carolina              | 84004             |
| Kentucky <sup>1</sup> | 90010       | South Dakota                | n/a               |
| Kentucky <sup>2</sup> | 16          | Tennessee <sup>14</sup>     | 2006              |
| Louisiana             | AI30792     | Texas                       | T 104704245-07-TX |
| Maine                 | TN0002      | Texas <sup>5</sup>          | LAB0152           |
| Maryland              | 324         | Utah                        | 6157585858        |
| Massachusetts         | M-TN003     | Vermont                     | VT2006            |
| Michigan              | 9958        | Virginia                    | 109               |
| Minnesota             | 047-999-395 | Washington                  | C1915             |
| Mississippi           | TN00003     | West Virginia               | 233               |
| Missouri              | 340         | Wisconsin                   | 9980939910        |
| Montana               | CERT0086    | Wyoming                     | A2LA              |
| Nebraska              | NE-OS-15-05 |                             |                   |

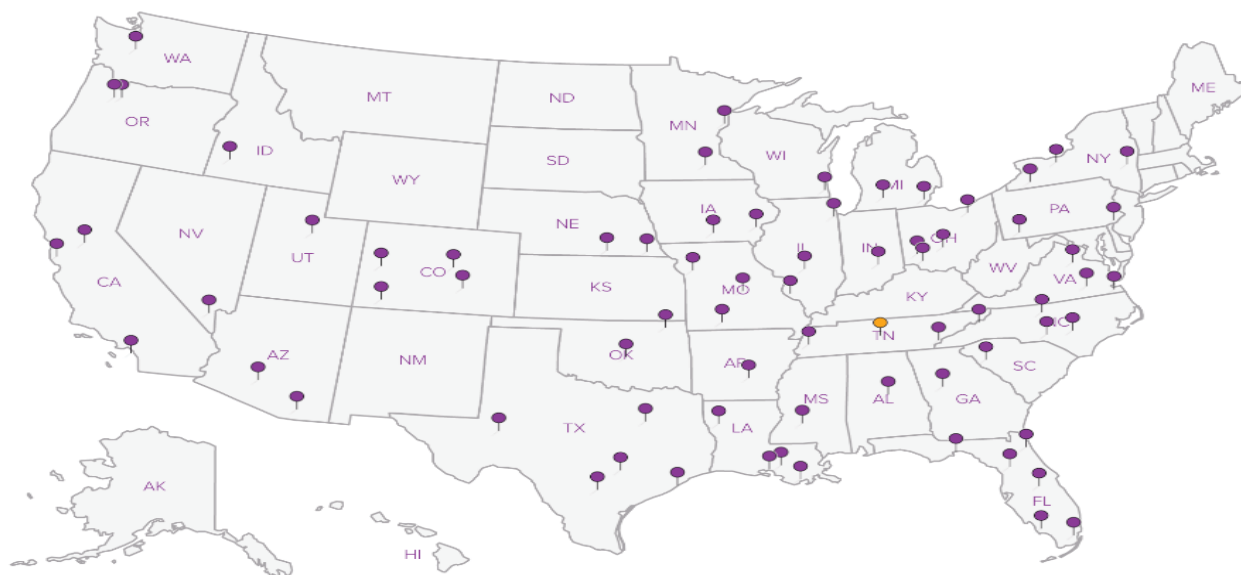
## Third Party & Federal Accreditations

|                               |         |      |         |
|-------------------------------|---------|------|---------|
| A2LA – ISO 17025              | 1461.01 | AIHA | 100789  |
| A2LA – ISO 17025 <sup>5</sup> | 1461.02 | DOD  | 1461.01 |
| Canada                        | 1461.01 | USDA | S-67674 |
| EPA–Crypto                    | TN00003 |      |         |

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>n/a</sup> Accreditation not applicable

## Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**











L · A · B   S · C · I · E · N · C · E · S

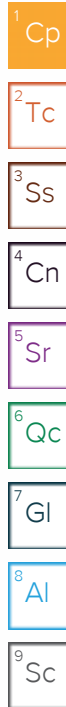
YOUR LAB OF CHOICE

## Cooler Receipt Form

| Client: <b>ENCANACO</b>  | SDG#                      | <b>6873886</b> |     |
|--|---------------------------|----------------|-----|
| Cooler Received/Opened On: <b>11-19-16</b>   | Temperature Upon Receipt: | <b>2.7 °C</b>  |     |
| Received by: <b>Greg Dearmon</b>   |                           |                |     |
| Signature: <b>[Signature]</b>  |                           |                |     |
| Receipt Check List   | Yes                       | No             | N/A |
| Were custody seals on outside of cooler and intact?  |                           |                | /   |
| Were custody papers properly filled out?   | /                         |                |     |
| Did all bottles arrive in good condition?  | /                         |                |     |
| Were correct bottles used for the analyses requested?  | /                         |                |     |
| Was sufficient amount of sample sent in each bottle?   | /                         |                |     |
| Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC) |                           |                | /   |
| If applicable, was an observable VOA headspace present?  |                           |                | /   |
| Non Conformance Generated. (If yes see attached NCF)   |                           |                |     |



October 23, 2020



## Caerus Oil and Gas

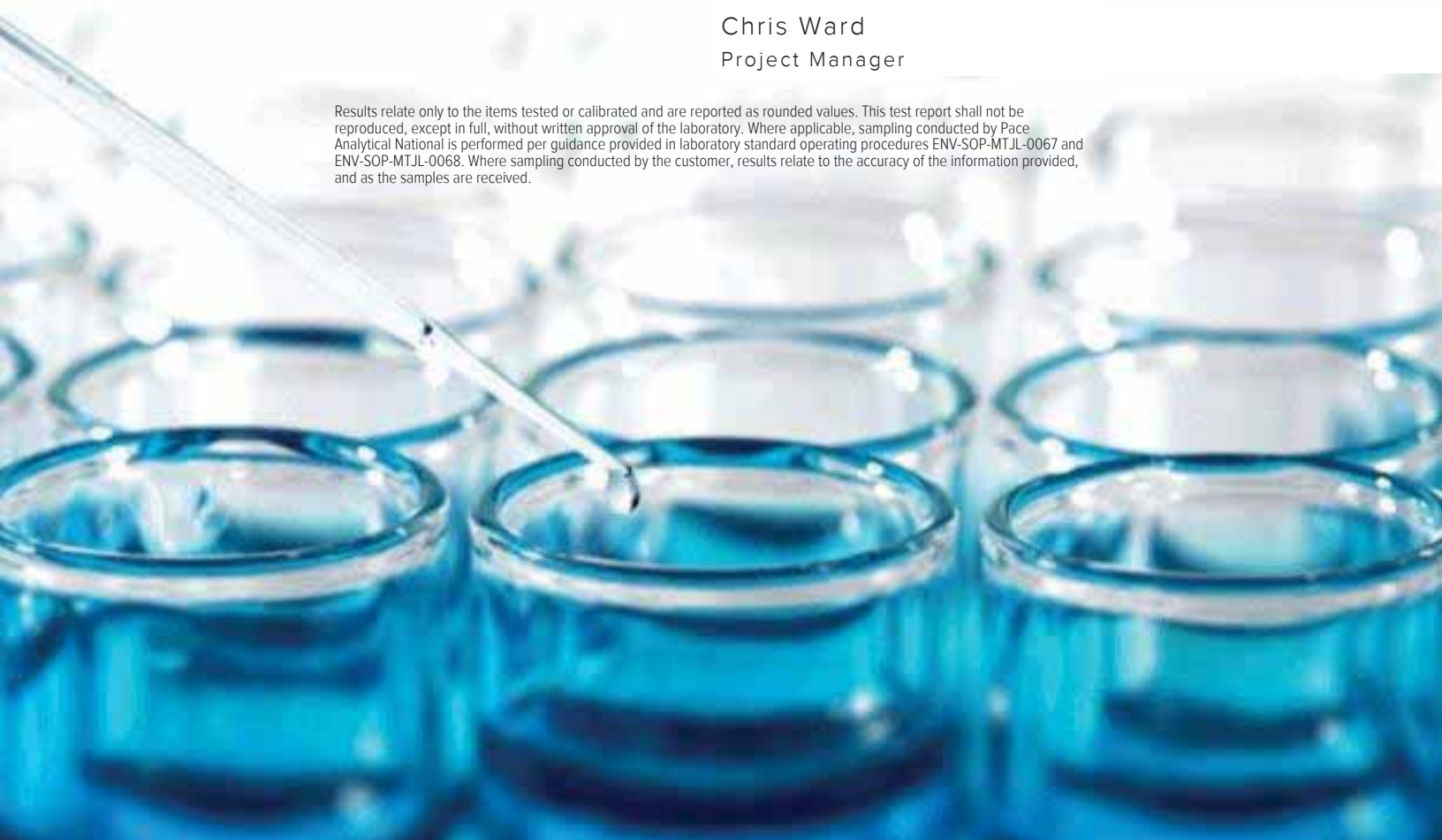
Sample Delivery Group: L1273414  
Samples Received: 10/14/2020  
Project Number:  
Description: C27 South Pit  
  
Report To: Blair Rollins  
143 Diamond Avenue  
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.







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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20201013-C275P-SBN02A(15') L1273414-01 Solid

Collected by R. Johnson  
Collected date/time 10/13/20 12:40  
Received date/time 10/14/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 11:54        | 10/20/20 11:54     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561162 | 1        | 10/18/20 06:46        | 10/20/20 21:16     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561333 | 1        | 10/19/20 18:00        | 10/20/20 21:16     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1561828 | 1        | 10/20/20 16:31        | 10/20/20 22:34     | WOS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561129 | 1        | 10/18/20 13:49        | 10/19/20 12:03     | ABL     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561162 | 1        | 10/18/20 06:46        | 10/19/20 20:50     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:12     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1562779 | 1        | 10/20/20 14:57        | 10/21/20 14:03     | AV      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1562727 | 1        | 10/20/20 14:57        | 10/22/20 06:10     | JHH     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562194 | 10       | 10/21/20 02:37        | 10/22/20 01:53     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562211 | 1        | 10/21/20 07:33        | 10/21/20 20:16     | JNJ     | Mt. Juliet, TN |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

20201013-C275P-SBN02A(20') L1273414-02 Solid

Collected by R. Johnson  
Collected date/time 10/13/20 12:50  
Received date/time 10/14/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 11:56        | 10/20/20 11:56     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561162 | 1        | 10/18/20 06:46        | 10/20/20 21:16     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561333 | 1        | 10/19/20 18:00        | 10/20/20 21:16     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1561828 | 1        | 10/20/20 16:31        | 10/20/20 22:34     | WOS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561129 | 1        | 10/18/20 13:49        | 10/19/20 12:05     | ABL     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561162 | 1        | 10/18/20 06:46        | 10/19/20 20:53     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:16     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1562779 | 1        | 10/20/20 14:57        | 10/21/20 14:26     | AV      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1563520 | 1        | 10/20/20 14:57        | 10/23/20 02:17     | BMB     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562194 | 40       | 10/21/20 02:37        | 10/22/20 01:28     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562211 | 1        | 10/21/20 07:33        | 10/21/20 21:28     | JNJ     | Mt. Juliet, TN |

20201013-C275P-SBN02A(25') L1273414-03 Solid

Collected by R. Johnson  
Collected date/time 10/13/20 13:15  
Received date/time 10/14/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 11:59        | 10/20/20 11:59     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561162 | 1        | 10/18/20 06:46        | 10/20/20 21:17     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561333 | 1        | 10/19/20 18:00        | 10/20/20 21:17     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1561828 | 1        | 10/20/20 16:31        | 10/20/20 22:34     | WOS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561129 | 1        | 10/18/20 13:49        | 10/19/20 12:08     | ABL     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561162 | 1        | 10/18/20 06:46        | 10/19/20 21:02     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:19     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1562779 | 1        | 10/20/20 14:57        | 10/21/20 14:49     | AV      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1563520 | 1        | 10/20/20 14:57        | 10/23/20 02:36     | BMB     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562194 | 40       | 10/21/20 02:37        | 10/22/20 01:40     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562211 | 1        | 10/21/20 07:33        | 10/21/20 19:53     | JNJ     | Mt. Juliet, TN |



# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20201013-C275P-SELIALLA(25') L1273414-04 Solid

Collected by  
R. Johnson

Collected date/time  
10/13/20 15:10

Received date/time  
10/14/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 12:02        | 10/20/20 12:02     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561162 | 1        | 10/18/20 06:46        | 10/20/20 21:19     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561333 | 1        | 10/19/20 18:00        | 10/20/20 21:19     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1561828 | 1        | 10/20/20 16:31        | 10/20/20 22:34     | WOS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561129 | 1        | 10/18/20 13:49        | 10/19/20 12:11     | ABL     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561162 | 1        | 10/18/20 06:46        | 10/19/20 21:04     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:30     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1562779 | 1        | 10/20/20 14:57        | 10/21/20 15:12     | AV      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1563520 | 1        | 10/20/20 14:57        | 10/23/20 02:55     | BMB     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562194 | 40       | 10/21/20 02:37        | 10/22/20 01:15     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562211 | 1        | 10/21/20 07:33        | 10/21/20 22:11     | JNJ     | Mt. Juliet, TN |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 37.2   |           | 1        | 10/20/2020 11:54     | WG1561069 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 26.9         |           | 1.00      | 1        | 10/20/2020 21:16     | <a href="#">WG1561162</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/20/2020 21:16     | <a href="#">WG1561333</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.89      | <a href="#">T8</a> | 1        | 10/20/2020 22:34     | <a href="#">WG1561828</a> |

## Sample Narrative:

L1273414-01 WG1561828: 8.89 at 21.1C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 2870            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | 0.0519       |           | 0.0400    | 1        | 10/19/2020 12:03     | <a href="#">WG1561129</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 1660         |           | 0.500     | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Chromium | 26.9         |           | 1.00      | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Copper   | 26.1         |           | 2.00      | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Lead     | 16.1         |           | 0.500     | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Nickel   | 17.7         |           | 2.00      | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Zinc     | 61.4         |           | 5.00      | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 8.33         |           | 1.00      | 5        | 10/19/2020 18:12     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 3.49         |           | 0.100     | 1        | 10/21/2020 14:03     | <a href="#">WG1562779</a> |





Collected date/time: 10/13/20 12:40

L1273414

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) a,a,a-Trifluorotoluene(FID) | 87.2            |           | 77.0-120     |          | 10/21/2020 14:03        | <a href="#">WG1562779</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.00208         |           | 0.00100      | 1        | 10/22/2020 06:10        | <a href="#">WG1562727</a> |
| Toluene                   | 0.00653         |           | 0.00500      | 1        | 10/22/2020 06:10        | <a href="#">WG1562727</a> |
| Ethylbenzene              | 0.00383         |           | 0.00250      | 1        | 10/22/2020 06:10        | <a href="#">WG1562727</a> |
| Total Xylenes             | 0.0464          |           | 0.00650      | 1        | 10/22/2020 06:10        | <a href="#">WG1562727</a> |
| (S) Toluene-d8            | 107             |           | 75.0-131     |          | 10/22/2020 06:10        | <a href="#">WG1562727</a> |
| (S) 4-Bromofluorobenzene  | 100             |           | 67.0-138     |          | 10/22/2020 06:10        | <a href="#">WG1562727</a> |
| (S) 1,2-Dichloroethane-d4 | 86.5            |           | 70.0-130     |          | 10/22/2020 06:10        | <a href="#">WG1562727</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 1120            |           | 40.0         | 10       | 10/22/2020 01:53        | <a href="#">WG1562194</a> |
| (S) o-Terphenyl            | 0.000           | J2        | 18.0-148     |          | 10/22/2020 01:53        | <a href="#">WG1562194</a> |

## Sample Narrative:

L1273414-01 WG1562194: Surrogate failure due to matrix interference

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene             | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Acenaphthene           | 0.0304          |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Acenaphthylene         | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Benzo(a)anthracene     | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Benzo(a)pyrene         | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Benzo(b)fluoranthene   | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Benzo(g,h,i)perylene   | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Benzo(k)fluoranthene   | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Chrysene               | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Dibenz(a,h)anthracene  | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Fluoranthene           | 0.00703         |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Fluorene               | 0.0702          |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Indeno(1,2,3-cd)pyrene | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Naphthalene            | 0.0783          |           | 0.0200       | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Phenanthrene           | 0.0846          |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Pyrene                 | 0.0184          |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| 1-Methylnaphthalene    | 0.125           |           | 0.0200       | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| 2-Methylnaphthalene    | 0.427           |           | 0.0200       | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| 2-Chloronaphthalene    | ND              |           | 0.0200       | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| (S) p-Terphenyl-d14    | 93.5            |           | 23.0-120     |          | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| (S) Nitrobenzene-d5    | 197             | J1        | 14.0-149     |          | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| (S) 2-Fluorobiphenyl   | 84.5            |           | 34.0-125     |          | 10/21/2020 20:16        | <a href="#">WG1562211</a> |





Collected date/time: 10/13/20 12:50

L1273414

## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 37.8   |           | 1        | 10/20/2020 11:56     | WG1561069 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 28.2         |           | 1.00      | 1        | 10/20/2020 21:16     | <a href="#">WG1561162</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/20/2020 21:16     | <a href="#">WG1561333</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.70      | <a href="#">T8</a> | 1        | 10/20/2020 22:34     | <a href="#">WG1561828</a> |

## Sample Narrative:

L1273414-02 WG1561828: 8.7 at 21.4C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 1950            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | ND           |           | 0.0400    | 1        | 10/19/2020 12:05     | <a href="#">WG1561129</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 461          |           | 0.500     | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Chromium | 28.2         |           | 1.00      | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Copper   | 28.2         |           | 2.00      | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Lead     | 17.0         |           | 0.500     | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Nickel   | 21.7         |           | 2.00      | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Zinc     | 55.4         |           | 5.00      | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 15.5         |           | 1.00      | 5        | 10/19/2020 18:16     | <a href="#">WG1561534</a> |





Collected date/time: 10/13/20 12:50

L1273414

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction       | 0.713           |           | 0.100        | 1        | 10/21/2020 14:26        | <a href="#">WG1562779</a> |
| (S) a,a,a-Trifluorotoluene(FID) | 73.2            | <u>J2</u> | 77.0-120     |          | 10/21/2020 14:26        | <a href="#">WG1562779</a> |

## Sample Narrative:

L1273414-02 WG1562779: Surrogate failure due to matrix interference

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | ND              |           | 0.00100      | 1        | 10/23/2020 02:17        | <a href="#">WG1563520</a> |
| Toluene                   | 0.0626          |           | 0.00500      | 1        | 10/23/2020 02:17        | <a href="#">WG1563520</a> |
| Ethylbenzene              | 0.00535         |           | 0.00250      | 1        | 10/23/2020 02:17        | <a href="#">WG1563520</a> |
| Total Xylenes             | 0.155           |           | 0.00650      | 1        | 10/23/2020 02:17        | <a href="#">WG1563520</a> |
| (S) Toluene-d8            | 95.4            |           | 75.0-131     |          | 10/23/2020 02:17        | <a href="#">WG1563520</a> |
| (S) 4-Bromofluorobenzene  | 100             |           | 67.0-138     |          | 10/23/2020 02:17        | <a href="#">WG1563520</a> |
| (S) 1,2-Dichloroethane-d4 | 93.4            |           | 70.0-130     |          | 10/23/2020 02:17        | <a href="#">WG1563520</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 1320            |           | 160          | 40       | 10/22/2020 01:28        | <a href="#">WG1562194</a> |
| (S) o-Terphenyl            | 0.000           | <u>J7</u> | 18.0-148     |          | 10/22/2020 01:28        | <a href="#">WG1562194</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene             | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Acenaphthene           | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Acenaphthylene         | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Benzo(a)anthracene     | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Benzo(a)pyrene         | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Benzo(b)fluoranthene   | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Benzo(g,h,i)perylene   | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Benzo(k)fluoranthene   | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Chrysene               | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Dibenz(a,h)anthracene  | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Fluoranthene           | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Fluorene               | 0.0380          |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Indeno(1,2,3-cd)pyrene | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Naphthalene            | 0.0609          |           | 0.0200       | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Phenanthrene           | 0.0406          |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Pyrene                 | 0.00948         |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| 1-Methylnaphthalene    | 0.0973          |           | 0.0200       | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| 2-Methylnaphthalene    | 0.253           |           | 0.0200       | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| 2-Chloronaphthalene    | ND              |           | 0.0200       | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| (S) p-Terphenyl-d14    | 103             |           | 23.0-120     |          | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| (S) Nitrobenzene-d5    | 80.9            |           | 14.0-149     |          | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| (S) 2-Fluorobiphenyl   | 55.1            |           | 34.0-125     |          | 10/21/2020 21:28        | <a href="#">WG1562211</a> |





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 17.9   |           | 1        | 10/20/2020 11:59     | WG1561069 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 24.1         |           | 1.00      | 1        | 10/20/2020 21:17     | <a href="#">WG1561162</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/20/2020 21:17     | <a href="#">WG1561333</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.82      | <a href="#">T8</a> | 1        | 10/20/2020 22:34     | <a href="#">WG1561828</a> |

## Sample Narrative:

L1273414-03 WG1561828: 8.82 at 21.3C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 1690            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

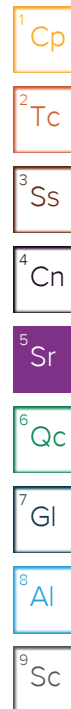
| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | ND           |           | 0.0400    | 1        | 10/19/2020 12:08     | <a href="#">WG1561129</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 549          |           | 0.500     | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Cadmium  | 0.677        |           | 0.500     | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Chromium | 24.1         |           | 1.00      | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Copper   | 42.4         |           | 2.00      | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Lead     | 25.3         |           | 0.500     | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Nickel   | 23.5         |           | 2.00      | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Selenium | 2.59         |           | 2.00      | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Zinc     | 59.4         |           | 5.00      | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 30.4         |           | 1.00      | 5        | 10/19/2020 18:19     | <a href="#">WG1561534</a> |







Collected date/time: 10/13/20 13:15

L1273414

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction               | 9.46            |           | 0.100        | 1        | 10/21/2020 14:49        | <a href="#">WG1562779</a> |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 64.4            | <u>J2</u> | 77.0-120     |          | 10/21/2020 14:49        | <a href="#">WG1562779</a> |

## Sample Narrative:

L1273414-03 WG1562779: Surrogate failure due to matrix interference

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                          | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                          | 0.0273          |           | 0.00100      | 1        | 10/23/2020 02:36        | <a href="#">WG1563520</a> |
| Toluene                          | 1.72            |           | 0.00500      | 1        | 10/23/2020 02:36        | <a href="#">WG1563520</a> |
| Ethylbenzene                     | 0.172           |           | 0.00250      | 1        | 10/23/2020 02:36        | <a href="#">WG1563520</a> |
| Total Xylenes                    | 4.80            |           | 0.00650      | 1        | 10/23/2020 02:36        | <a href="#">WG1563520</a> |
| (S) <i>Toluene-d8</i>            | 133             | <u>J1</u> | 75.0-131     |          | 10/23/2020 02:36        | <a href="#">WG1563520</a> |
| (S) <i>4-Bromofluorobenzene</i>  | 113             |           | 67.0-138     |          | 10/23/2020 02:36        | <a href="#">WG1563520</a> |
| (S) <i>1,2-Dichloroethane-d4</i> | 92.3            |           | 70.0-130     |          | 10/23/2020 02:36        | <a href="#">WG1563520</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 800             |           | 160          | 40       | 10/22/2020 01:40        | <a href="#">WG1562194</a> |
| (S) <i>o</i> -Terphenyl    | 0.000           | <u>J7</u> | 18.0-148     |          | 10/22/2020 01:40        | <a href="#">WG1562194</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                     | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|-----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene                  | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Acenaphthene                | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Acenaphthylene              | 0.0145          |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Benzo(a)anthracene          | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Benzo(a)pyrene              | 0.00900         |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Benzo(b)fluoranthene        | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Benzo(g,h,i)perylene        | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Benzo(k)fluoranthene        | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Chrysene                    | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Dibenz(a,h)anthracene       | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Fluoranthene                | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Fluorene                    | 0.00680         |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Indeno(1,2,3-cd)pyrene      | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Naphthalene                 | 0.0724          |           | 0.0200       | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Phenanthrene                | 0.0176          |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Pyrene                      | 0.0318          |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| 1-Methylnaphthalene         | 0.0535          |           | 0.0200       | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| 2-Methylnaphthalene         | 0.318           |           | 0.0200       | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| 2-Chloronaphthalene         | ND              |           | 0.0200       | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| (S) <i>p</i> -Terphenyl-d14 | 86.4            |           | 23.0-120     |          | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| (S) Nitrobenzene-d5         | 98.8            |           | 14.0-149     |          | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| (S) 2-Fluorobiphenyl        | 81.5            |           | 34.0-125     |          | 10/21/2020 19:53        | <a href="#">WG1562211</a> |

|         |
|---------|
| 1<br>Cp |
| 2<br>Tc |
| 3<br>Ss |
| 4<br>Cn |
| 5<br>Sr |
| 6<br>Qc |
| 7<br>Gl |
| 8<br>Al |
| 9<br>Sc |





Collected date/time: 10/13/20 15:10

L1273414

## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 4.15   |           | 1        | 10/20/2020 12:02     | WG1561069 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 26.8         |           | 1.00      | 1        | 10/20/2020 21:19     | <a href="#">WG1561162</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/20/2020 21:19     | <a href="#">WG1561333</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.78      | <a href="#">T8</a> | 1        | 10/20/2020 22:34     | <a href="#">WG1561828</a> |

## Sample Narrative:

L1273414-04 WG1561828: 8.78 at 21C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 471             |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | ND           |           | 0.0400    | 1        | 10/19/2020 12:11     | <a href="#">WG1561129</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 937          |           | 0.500     | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Chromium | 26.8         |           | 1.00      | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Copper   | 27.2         |           | 2.00      | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Lead     | 16.4         |           | 0.500     | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Nickel   | 17.3         |           | 2.00      | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Zinc     | 47.5         |           | 5.00      | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 18.9         |           | 1.00      | 5        | 10/19/2020 18:30     | <a href="#">WG1561534</a> |





Collected date/time: 10/13/20 15:10

L1273414

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction       | 2.54            |           | 0.100        | 1        | 10/21/2020 15:12        | <a href="#">WG1562779</a> |
| (S) a,a,a-Trifluorotoluene(FID) | 71.7            | <u>J2</u> | 77.0-120     |          | 10/21/2020 15:12        | <a href="#">WG1562779</a> |

## Sample Narrative:

L1273414-04 WG1562779: Surrogate failure due to matrix interference

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier    | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.00333         | <u>J3 J5</u> | 0.00100      | 1        | 10/23/2020 02:55        | <a href="#">WG1563520</a> |
| Toluene                   | 0.292           | <u>J5</u>    | 0.00500      | 1        | 10/23/2020 02:55        | <a href="#">WG1563520</a> |
| Ethylbenzene              | 0.0166          | <u>J3 J5</u> | 0.00250      | 1        | 10/23/2020 02:55        | <a href="#">WG1563520</a> |
| Total Xylenes             | 0.735           | <u>J5</u>    | 0.00650      | 1        | 10/23/2020 02:55        | <a href="#">WG1563520</a> |
| (S) Toluene-d8            | 133             | <u>J1</u>    | 75.0-131     |          | 10/23/2020 02:55        | <a href="#">WG1563520</a> |
| (S) 4-Bromofluorobenzene  | 79.3            |              | 67.0-138     |          | 10/23/2020 02:55        | <a href="#">WG1563520</a> |
| (S) 1,2-Dichloroethane-d4 | 90.8            |              | 70.0-130     |          | 10/23/2020 02:55        | <a href="#">WG1563520</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 413             |           | 160          | 40       | 10/22/2020 01:15        | <a href="#">WG1562194</a> |
| (S) o-Terphenyl            | 0.000           | <u>J7</u> | 18.0-148     |          | 10/22/2020 01:15        | <a href="#">WG1562194</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene             | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Acenaphthene           | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Acenaphthylene         | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Benzo(a)anthracene     | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Benzo(a)pyrene         | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Benzo(b)fluoranthene   | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Benzo(g,h,i)perylene   | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Benzo(k)fluoranthene   | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Chrysene               | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Dibenz(a,h)anthracene  | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Fluoranthene           | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Fluorene               | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Indeno(1,2,3-cd)pyrene | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Naphthalene            | ND              |           | 0.0200       | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Phenanthrene           | 0.00959         |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Pyrene                 | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| 1-Methylnaphthalene    | 0.0205          |           | 0.0200       | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| 2-Methylnaphthalene    | 0.150           |           | 0.0200       | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| 2-Chloronaphthalene    | ND              |           | 0.0200       | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| (S) p-Terphenyl-d14    | 92.9            |           | 23.0-120     |          | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| (S) Nitrobenzene-d5    | 74.8            |           | 14.0-149     |          | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| (S) 2-Fluorobiphenyl   | 64.9            |           | 34.0-125     |          | 10/21/2020 22:11        | <a href="#">WG1562211</a> |







Method Blank (MB)

(MB) R3583658-1 10/20/20 21:07

|                     | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------------------|-----------|--------------|--------|--------|
| Analyte             | mg/kg     |              | mg/kg  | mg/kg  |
| Chromium,Hexavalent | U         |              | 0.640  | 2.00   |

L1273336-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1273336-03 10/20/20 21:09 • (DUP) R3583658-3 10/20/20 21:09

|                     | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte             | mg/kg           | mg/kg      |          | %       |               | %              |
| Chromium,Hexavalent | ND              | ND         | 1        | 0.000   |               | 20             |

L1273414-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1273414-03 10/20/20 21:17 • (DUP) R3583658-8 10/20/20 21:18

|                     | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte             | mg/kg           | mg/kg      |          | %       |               | %              |
| Chromium,Hexavalent | ND              | ND         | 1        | 0.000   |               | 20             |

Laboratory Control Sample (LCS)

(LCS) R3583658-2 10/20/20 21:08

|                     | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------------------|--------------|------------|----------|-------------|---------------|
| Analyte             | mg/kg        | mg/kg      | %        | %           |               |
| Chromium,Hexavalent | 24.0         | 22.3       | 92.8     | 80.0-120    |               |

L1273411-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273411-01 10/20/20 21:14 • (MS) R3583658-4 10/20/20 21:14 • (MSD) R3583658-5 10/20/20 21:14

|                     | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD  | RPD Limits |
|---------------------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Analyte             | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %    | %          |
| Chromium,Hexavalent | 20.0         | ND              | 18.6      | 18.9       | 93.0    | 94.6     | 1        | 75.0-125    |              |               | 1.65 | 20         |

L1273411-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1273411-01 10/20/20 21:14 • (MS) R3583658-6 10/20/20 21:15

|                     | Spike Amount | Original Result | MS Result | MS Rec. | Dilution | Rec. Limits | MS Qualifier |
|---------------------|--------------|-----------------|-----------|---------|----------|-------------|--------------|
| Analyte             | mg/kg        | mg/kg           | mg/kg     | %       |          | %           |              |
| Chromium,Hexavalent | 653          | ND              | 597       | 91.5    | 50       | 75.0-125    |              |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc





L1273352-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1273352-01 10/20/20 22:34 • (DUP) R3583659-2 10/20/20 22:34

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 8.50            | 8.50       | 1        | 0.000   |               | 1              |

Sample Narrative:

OS: 8.5 at 21.9C

DUP: 8.5 at 21.6C

L1273411-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1273411-02 10/20/20 22:34 • (DUP) R3583659-3 10/20/20 22:34

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 8.76            | 8.79       | 1        | 0.342   |               | 1              |

Sample Narrative:

OS: 8.76 at 22.1C

DUP: 8.79 at 21.3C

Laboratory Control Sample (LCS)

(LCS) R3583659-1 10/20/20 22:34

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | su           | su         | %        | %           |               |
| pH      | 10.0         | 10.0       | 100      | 99.0-101    |               |

Sample Narrative:

LCS: 10.02 at 21C







Method Blank (MB)

(MB) R3584033-1 10/21/20 16:37

| Analyte              | MB Result<br>umhos/cm | MB Qualifier | MB MDL<br>umhos/cm | MB RDL<br>umhos/cm |
|----------------------|-----------------------|--------------|--------------------|--------------------|
| Specific Conductance | U                     |              | 10.0               | 10.0               |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

L1273411-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1273411-01 10/21/20 16:37 • (DUP) R3584033-3 10/21/20 16:37

| Analyte              | Original Result<br>umhos/cm | DUP Result<br>umhos/cm | Dilution | DUP RPD<br>% | DUP Qualifier | DUP RPD<br>Limits<br>% |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 214                         | 211                    | 1        | 1.27         |               | 20                     |

<sup>7</sup>Gl

<sup>8</sup>Al

L1273792-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1273792-05 10/21/20 16:37 • (DUP) R3584033-4 10/21/20 16:37

| Analyte              | Original Result<br>umhos/cm | DUP Result<br>umhos/cm | Dilution | DUP RPD<br>% | DUP Qualifier | DUP RPD<br>Limits<br>% |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 2410                        | 2420                   | 1        | 0.331        |               | 20                     |

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3584033-2 10/21/20 16:37

| Analyte              | Spike Amount<br>umhos/cm | LCS Result<br>umhos/cm | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------------------|--------------------------|------------------------|---------------|------------------|---------------|
| Specific Conductance | 326                      | 324                    | 99.4          | 85.0-115         |               |





Method Blank (MB)

(MB) R3583106-1 10/19/20 11:22

|         | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Analyte | mg/kg     |              | mg/kg  | mg/kg  |
| Mercury | U         |              | 0.0180 | 0.0400 |

Laboratory Control Sample (LCS)

(LCS) R3583106-2 10/19/20 11:25

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/kg        | mg/kg      | %        | %           |               |
| Mercury | 0.500        | 0.516      | 103      | 80.0-120    |               |

L1273411-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273411-01 10/19/20 11:32 • (MS) R3583106-3 10/19/20 11:35 • (MSD) R3583106-4 10/19/20 11:37

|         | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD  | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Analyte | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %    | %          |
| Mercury | 0.500        | ND              | 0.482     | 0.461      | 96.5    | 92.3     | 1        | 75.0-125    |              |               | 4.48 | 20         |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc





Method Blank (MB)

(MB) R3583281-1 10/19/20 20:30

| Analyte  | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|----------|--------------------|--------------|-----------------|-----------------|
| Barium   | U                  |              | 0.240           | 0.500           |
| Cadmium  | U                  |              | 0.0810          | 0.500           |
| Chromium | U                  |              | 0.250           | 1.00            |
| Copper   | U                  |              | 0.506           | 2.00            |
| Lead     | U                  |              | 0.208           | 0.500           |
| Nickel   | U                  |              | 0.490           | 2.00            |
| Selenium | U                  |              | 0.617           | 2.00            |
| Silver   | U                  |              | 0.228           | 1.00            |
| Zinc     | U                  |              | 0.939           | 5.00            |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3583281-2 10/19/20 20:32

| Analyte  | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------|-----------------------|---------------------|---------------|------------------|---------------|
| Barium   | 100                   | 101                 | 101           | 80.0-120         |               |
| Cadmium  | 100                   | 96.8                | 96.8          | 80.0-120         |               |
| Chromium | 100                   | 97.2                | 97.2          | 80.0-120         |               |
| Copper   | 100                   | 96.2                | 96.2          | 80.0-120         |               |
| Lead     | 100                   | 96.2                | 96.2          | 80.0-120         |               |
| Nickel   | 100                   | 98.5                | 98.5          | 80.0-120         |               |
| Selenium | 100                   | 96.7                | 96.7          | 80.0-120         |               |
| Silver   | 20.0                  | 17.6                | 88.1          | 80.0-120         |               |
| Zinc     | 100                   | 96.9                | 96.9          | 80.0-120         |               |

L1274820-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1274820-01 10/19/20 20:35 • (MS) R3583281-5 10/19/20 20:42 • (MSD) R3583281-6 10/19/20 20:45

| Analyte  | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Barium   | 100                   | 53.1                     | 154                | 153                 | 101          | 99.9          | 1        | 75.0-125         |              |               | 0.723    | 20              |
| Cadmium  | 100                   | ND                       | 100                | 96.0                | 100          | 95.7          | 1        | 75.0-125         |              |               | 4.42     | 20              |
| Chromium | 100                   | 8.91                     | 109                | 104                 | 100          | 95.5          | 1        | 75.0-125         |              |               | 4.31     | 20              |
| Copper   | 100                   | 6.79                     | 109                | 106                 | 102          | 99.3          | 1        | 75.0-125         |              |               | 2.85     | 20              |
| Lead     | 100                   | 13.8                     | 116                | 113                 | 102          | 99.2          | 1        | 75.0-125         |              |               | 2.30     | 20              |
| Nickel   | 100                   | 4.30                     | 109                | 105                 | 105          | 101           | 1        | 75.0-125         |              |               | 3.76     | 20              |
| Selenium | 100                   | ND                       | 99.3               | 95.4                | 99.3         | 95.4          | 1        | 75.0-125         |              |               | 3.98     | 20              |
| Silver   | 20.0                  | ND                       | 18.7               | 18.0                | 93.6         | 89.8          | 1        | 75.0-125         |              |               | 4.09     | 20              |
| Zinc     | 100                   | 87.5                     | 181                | 187                 | 93.8         | 99.4          | 1        | 75.0-125         |              |               | 3.04     | 20              |



Method Blank (MB)

(MB) R3583210-1 10/19/20 17:47

|         | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Analyte | mg/kg     |              | mg/kg  | mg/kg  |
| Arsenic | U         |              | 0.100  | 1.00   |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3583210-2 10/19/20 17:51

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/kg        | mg/kg      | %        | %           |               |
| Arsenic | 100          | 103        | 103      | 80.0-120    |               |

L1273954-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273954-01 10/19/20 17:54 • (MS) R3583210-5 10/19/20 18:05 • (MSD) R3583210-6 10/19/20 18:08

|         | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD   | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %     | %          |
| Arsenic | 20.0         | 2.05            | 96.0      | 96.8       | 94.0    | 94.8     | 5        | 75.0-125    |              |               | 0.809 | 20         |



Method Blank (MB)

(MB) R3584432-1 10/21/20 11:19

| Analyte                            | MB Result | MB Qualifier | MB MDL | MB RDL   |
|------------------------------------|-----------|--------------|--------|----------|
|                                    | mg/kg     |              | mg/kg  | mg/kg    |
| TPH (GC/FID) Low Fraction          | 0.0566    | ⬇            | 0.0217 | 0.100    |
| (S)<br>a,a,a-Trifluorotoluene(FID) | 100       |              |        | 77.0-120 |

Laboratory Control Sample (LCS)

(LCS) R3584432-2 10/21/20 12:05

| Analyte                            | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------------------------|--------------|------------|----------|-------------|---------------|
|                                    | mg/kg        | mg/kg      | %        | %           |               |
| TPH (GC/FID) Low Fraction          | 5.50         | 6.36       | 116      | 72.0-127    |               |
| (S)<br>a,a,a-Trifluorotoluene(FID) |              |            | 106      | 77.0-120    |               |

L1274696-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1274696-06 10/21/20 20:38 • (MS) R3584432-3 10/21/20 21:01 • (MSD) R3584432-4 10/21/20 21:24

| Analyte                            | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD  | RPD Limits |
|------------------------------------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
|                                    | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %    | %          |
| TPH (GC/FID) Low Fraction          | 158          | ND              | 98.7      | 100        | 67.6    | 68.5     | 26.5     | 10.0-151    |              |               | 1.31 | 28         |
| (S)<br>a,a,a-Trifluorotoluene(FID) |              |                 |           |            | 104     | 103      |          | 77.0-120    |              |               |      |            |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc





Method Blank (MB)

(MB) R3584445-2 10/21/20 23:23

| Analyte                   | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene                   | U                  |              | 0.000467        | 0.00100         |
| Ethylbenzene              | U                  |              | 0.000737        | 0.00250         |
| Toluene                   | U                  |              | 0.00130         | 0.00500         |
| Xylenes, Total            | U                  |              | 0.000880        | 0.00650         |
| (S) Toluene-d8            | 109                |              |                 | 75.0-131        |
| (S) 4-Bromofluorobenzene  | 93.1               |              |                 | 67.0-138        |
| (S) 1,2-Dichloroethane-d4 | 84.4               |              |                 | 70.0-130        |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3584445-1 10/21/20 22:22

| Analyte                   | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|---------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Benzene                   | 0.125                 | 0.133               | 106           | 70.0-123         |               |
| Ethylbenzene              | 0.125                 | 0.113               | 90.4          | 74.0-126         |               |
| Toluene                   | 0.125                 | 0.122               | 97.6          | 75.0-121         |               |
| Xylenes, Total            | 0.375                 | 0.351               | 93.6          | 72.0-127         |               |
| (S) Toluene-d8            |                       |                     | 104           | 75.0-131         |               |
| (S) 4-Bromofluorobenzene  |                       |                     | 98.1          | 67.0-138         |               |
| (S) 1,2-Dichloroethane-d4 |                       |                     | 90.9          | 70.0-130         |               |

L1273409-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273409-02 10/22/20 05:50 • (MS) R3584445-3 10/22/20 06:30 • (MSD) R3584445-4 10/22/20 06:51

| Analyte                   | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene                   | 1.00                  | 0.0272                   | 0.902              | 1.02                | 87.5         | 99.3          | 8        | 10.0-149         |              |               | 12.3     | 37              |
| Ethylbenzene              | 1.00                  | 0.520                    | 1.34               | 1.40                | 82.0         | 88.0          | 8        | 10.0-160         |              |               | 4.38     | 38              |
| Toluene                   | 1.00                  | ND                       | 0.842              | 0.954               | 81.4         | 92.6          | 8        | 10.0-156         |              |               | 12.5     | 38              |
| Xylenes, Total            | 3.00                  | 8.46                     | 11.0               | 11.2                | 84.7         | 91.3          | 8        | 10.0-160         |              |               | 1.80     | 38              |
| (S) Toluene-d8            |                       |                          |                    |                     | 102          | 105           |          | 75.0-131         |              |               |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                          |                    |                     | 109          | 103           |          | 67.0-138         |              |               |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                          |                    |                     | 90.0         | 86.9          |          | 70.0-130         |              |               |          |                 |





Method Blank (MB)

(MB) R3584903-2 10/22/20 23:44

| Analyte                   | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene                   | U                  |              | 0.000467        | 0.00100         |
| Ethylbenzene              | U                  |              | 0.000737        | 0.00250         |
| Toluene                   | U                  |              | 0.00130         | 0.00500         |
| Xylenes, Total            | U                  |              | 0.000880        | 0.00650         |
| (S) Toluene-d8            | 127                |              |                 | 75.0-131        |
| (S) 4-Bromofluorobenzene  | 78.7               |              |                 | 67.0-138        |
| (S) 1,2-Dichloroethane-d4 | 92.2               |              |                 | 70.0-130        |

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3584903-1 10/22/20 22:28 • (LCSD) R3584903-3 10/23/20 00:22

| Analyte                   | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCSD Result<br>mg/kg | LCS Rec.<br>% | LCSD Rec.<br>% | Rec. Limits<br>% | LCS Qualifier | LCSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene                   | 0.125                 | 0.112               | 0.116                | 89.6          | 92.8           | 70.0-123         |               |                | 3.51     | 20              |
| Ethylbenzene              | 0.125                 | 0.120               | 0.132                | 96.0          | 106            | 74.0-126         |               |                | 9.52     | 20              |
| Toluene                   | 0.125                 | 0.113               | 0.116                | 90.4          | 92.8           | 75.0-121         |               |                | 2.62     | 20              |
| Xylenes, Total            | 0.375                 | 0.336               | 0.390                | 89.6          | 104            | 72.0-127         |               |                | 14.9     | 20              |
| (S) Toluene-d8            |                       |                     |                      | 105           | 106            | 75.0-131         |               |                |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                     |                      | 101           | 87.3           | 67.0-138         |               |                |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                     |                      | 97.4          | 96.5           | 70.0-130         |               |                |          |                 |

L1273414-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273414-04 10/23/20 02:55 • (MS) R3584903-4 10/23/20 07:03 • (MSD) R3584903-5 10/23/20 07:22

| Analyte                   | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene                   | 0.125                 | 0.00333                  | 0.230              | 0.136               | 181          | 106           | 1        | 10.0-149         | J5           | J3            | 51.4     | 37              |
| Ethylbenzene              | 0.125                 | 0.0166                   | 0.308              | 0.161               | 233          | 116           | 1        | 10.0-160         | J5           | J3            | 62.7     | 38              |
| Toluene                   | 0.125                 | 0.292                    | 1.09               | 1.33                | 638          | 830           | 1        | 10.0-156         | J5           | J5            | 19.8     | 38              |
| Xylenes, Total            | 0.375                 | 0.735                    | 2.88               | 2.19                | 572          | 388           | 1        | 10.0-160         | J5           | J5            | 27.2     | 38              |
| (S) Toluene-d8            |                       |                          |                    |                     | 126          | 168           |          | 75.0-131         |              | J1            |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                          |                    |                     | 95.6         | 101           |          | 67.0-138         |              |               |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                          |                    |                     | 95.4         | 86.4          |          | 70.0-130         |              |               |          |                 |





Method Blank (MB)

(MB) R3583919-1 10/21/20 10:37

| Analyte                    | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|----------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) High Fraction | U                  |              | 0.769           | 4.00            |
| (S) o-Terphenyl            | 71.3               |              |                 | 18.0-148        |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3583919-2 10/21/20 10:50

| Analyte                    | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) High Fraction | 50.0                  | 36.2                | 72.4          | 50.0-150         |               |
| (S) o-Terphenyl            |                       |                     | 75.8          | 18.0-148         |               |

L1273336-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273336-02 10/22/20 00:24 • (MS) R3583919-3 10/22/20 00:37 • (MSD) R3583919-4 10/22/20 00:49

| Analyte                    | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|----------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| TPH (GC/FID) High Fraction | 49.7                  | 26.0                     | 36.4               | 45.3                | 20.9         | 38.8          | 1        | 50.0-150         | J6           | J3 J6         | 21.8     | 20              |
| (S) o-Terphenyl            |                       |                          |                    |                     | 48.8         | 56.0          |          | 18.0-148         |              |               |          |                 |





Method Blank (MB)

(MB) R3584214-2 10/21/20 13:36

| Analyte                | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene             | U                  |              | 0.00230         | 0.00600         |
| Acenaphthene           | U                  |              | 0.00209         | 0.00600         |
| Acenaphthylene         | U                  |              | 0.00216         | 0.00600         |
| Benzo(a)anthracene     | U                  |              | 0.00173         | 0.00600         |
| Benzo(a)pyrene         | U                  |              | 0.00179         | 0.00600         |
| Benzo(b)fluoranthene   | U                  |              | 0.00153         | 0.00600         |
| Benzo(g,h,i)perylene   | U                  |              | 0.00177         | 0.00600         |
| Benzo(k)fluoranthene   | U                  |              | 0.00215         | 0.00600         |
| Chrysene               | U                  |              | 0.00232         | 0.00600         |
| Dibenz(a,h)anthracene  | U                  |              | 0.00172         | 0.00600         |
| Fluoranthene           | U                  |              | 0.00227         | 0.00600         |
| Fluorene               | U                  |              | 0.00205         | 0.00600         |
| Indeno(1,2,3-cd)pyrene | U                  |              | 0.00181         | 0.00600         |
| Naphthalene            | U                  |              | 0.00408         | 0.0200          |
| Phenanthrene           | U                  |              | 0.00231         | 0.00600         |
| Pyrene                 | U                  |              | 0.00200         | 0.00600         |
| 1-Methylnaphthalene    | U                  |              | 0.00449         | 0.0200          |
| 2-Methylnaphthalene    | U                  |              | 0.00427         | 0.0200          |
| 2-Chloronaphthalene    | U                  |              | 0.00466         | 0.0200          |
| (S) Nitrobenzene-d5    | 94.4               |              |                 | 14.0-149        |
| (S) 2-Fluorobiphenyl   | 79.1               |              |                 | 34.0-125        |
| (S) p-Terphenyl-d14    | 97.6               |              |                 | 23.0-120        |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3584214-1 10/21/20 13:15

| Analyte               | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|-----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Anthracene            | 0.0800                | 0.0542              | 67.8          | 50.0-126         |               |
| Acenaphthene          | 0.0800                | 0.0576              | 72.0          | 50.0-120         |               |
| Acenaphthylene        | 0.0800                | 0.0595              | 74.4          | 50.0-120         |               |
| Benzo(a)anthracene    | 0.0800                | 0.0608              | 76.0          | 45.0-120         |               |
| Benzo(a)pyrene        | 0.0800                | 0.0459              | 57.4          | 42.0-120         |               |
| Benzo(b)fluoranthene  | 0.0800                | 0.0575              | 71.9          | 42.0-121         |               |
| Benzo(g,h,i)perylene  | 0.0800                | 0.0561              | 70.1          | 45.0-125         |               |
| Benzo(k)fluoranthene  | 0.0800                | 0.0641              | 80.1          | 49.0-125         |               |
| Chrysene              | 0.0800                | 0.0609              | 76.1          | 49.0-122         |               |
| Dibenz(a,h)anthracene | 0.0800                | 0.0589              | 73.6          | 47.0-125         |               |
| Fluoranthene          | 0.0800                | 0.0591              | 73.9          | 49.0-129         |               |



Laboratory Control Sample (LCS)

(LCS) R3584214-1 10/21/20 13:15

| Analyte                | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | <u>LCS Qualifier</u> |
|------------------------|-----------------------|---------------------|---------------|------------------|----------------------|
| Fluorene               | 0.0800                | 0.0592              | 74.0          | 49.0-120         |                      |
| Indeno(1,2,3-cd)pyrene | 0.0800                | 0.0538              | 67.3          | 46.0-125         |                      |
| Naphthalene            | 0.0800                | 0.0592              | 74.0          | 50.0-120         |                      |
| Phenanthrene           | 0.0800                | 0.0565              | 70.6          | 47.0-120         |                      |
| Pyrene                 | 0.0800                | 0.0607              | 75.9          | 43.0-123         |                      |
| 1-Methylnaphthalene    | 0.0800                | 0.0588              | 73.5          | 51.0-121         |                      |
| 2-Methylnaphthalene    | 0.0800                | 0.0559              | 69.9          | 50.0-120         |                      |
| 2-Chloronaphthalene    | 0.0800                | 0.0565              | 70.6          | 50.0-120         |                      |
| (S) Nitrobenzene-d5    |                       |                     | 110           | 14.0-149         |                      |
| (S) 2-Fluorobiphenyl   |                       |                     | 86.2          | 34.0-125         |                      |
| (S) p-Terphenyl-d14    |                       |                     | 100           | 23.0-120         |                      |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1273414-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273414-04 10/21/20 22:11 • (MS) R3584214-3 10/21/20 22:32 • (MSD) R3584214-4 10/21/20 22:54

| Analyte                | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD<br>% | RPD Limits<br>% |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Anthracene             | 0.0784                | ND                       | 0.0574             | 0.0569              | 73.2         | 72.9          | 1        | 10.0-145         |                     |                      | 0.875    | 30              |
| Acenaphthene           | 0.0784                | ND                       | 0.0567             | 0.0562              | 72.3         | 72.1          | 1        | 14.0-127         |                     |                      | 0.886    | 27              |
| Acenaphthylene         | 0.0784                | ND                       | 0.0669             | 0.0652              | 85.3         | 83.6          | 1        | 21.0-124         |                     |                      | 2.57     | 25              |
| Benzo(a)anthracene     | 0.0784                | ND                       | 0.0734             | 0.0706              | 93.6         | 90.5          | 1        | 10.0-139         |                     |                      | 3.89     | 30              |
| Benzo(a)pyrene         | 0.0784                | ND                       | 0.0614             | 0.0631              | 78.3         | 80.9          | 1        | 10.0-141         |                     |                      | 2.73     | 31              |
| Benzo(b)fluoranthene   | 0.0784                | ND                       | 0.0558             | 0.0583              | 71.2         | 74.7          | 1        | 10.0-140         |                     |                      | 4.38     | 36              |
| Benzo(g,h,i)perylene   | 0.0784                | ND                       | 0.0218             | 0.0183              | 27.8         | 23.5          | 1        | 10.0-140         |                     |                      | 17.5     | 33              |
| Benzo(k)fluoranthene   | 0.0784                | ND                       | 0.0547             | 0.0567              | 69.8         | 72.7          | 1        | 10.0-137         |                     |                      | 3.59     | 31              |
| Chrysene               | 0.0784                | ND                       | 0.0643             | 0.0580              | 82.0         | 74.4          | 1        | 10.0-145         |                     |                      | 10.3     | 30              |
| Dibenz(a,h)anthracene  | 0.0784                | ND                       | 0.0301             | 0.0259              | 38.4         | 33.2          | 1        | 10.0-132         |                     |                      | 15.0     | 31              |
| Fluoranthene           | 0.0784                | ND                       | 0.0584             | 0.0574              | 74.5         | 73.6          | 1        | 10.0-153         |                     |                      | 1.73     | 33              |
| Fluorene               | 0.0784                | ND                       | 0.0630             | 0.0624              | 80.4         | 80.0          | 1        | 11.0-130         |                     |                      | 0.957    | 29              |
| Indeno(1,2,3-cd)pyrene | 0.0784                | ND                       | 0.0334             | 0.0303              | 42.6         | 38.8          | 1        | 10.0-137         |                     |                      | 9.73     | 32              |
| Naphthalene            | 0.0784                | ND                       | 0.0831             | 0.0920              | 94.1         | 106           | 1        | 10.0-135         |                     |                      | 10.2     | 27              |
| Phenanthrene           | 0.0784                | 0.00959                  | 0.0595             | 0.0605              | 63.7         | 65.3          | 1        | 10.0-144         |                     |                      | 1.67     | 31              |
| Pyrene                 | 0.0784                | ND                       | 0.0707             | 0.0695              | 90.2         | 89.1          | 1        | 10.0-148         |                     |                      | 1.71     | 35              |
| 1-Methylnaphthalene    | 0.0784                | 0.0205                   | 0.0827             | 0.0888              | 79.3         | 87.6          | 1        | 10.0-142         |                     |                      | 7.11     | 28              |
| 2-Methylnaphthalene    | 0.0784                | 0.150                    | 0.200              | 0.227               | 63.8         | 98.7          | 1        | 10.0-137         |                     |                      | 12.6     | 28              |
| 2-Chloronaphthalene    | 0.0784                | ND                       | 0.0532             | 0.0520              | 67.9         | 66.7          | 1        | 29.0-120         |                     |                      | 2.28     | 24              |
| (S) Nitrobenzene-d5    |                       |                          |                    |                     | 80.5         | 77.6          |          | 14.0-149         |                     |                      |          |                 |
| (S) 2-Fluorobiphenyl   |                       |                          |                    |                     | 67.1         | 68.3          |          | 34.0-125         |                     |                      |          |                 |
| (S) p-Terphenyl-d14    |                       |                          |                    |                     | 92.9         | 95.6          |          | 23.0-120         |                     |                      |          |                 |





## Guide to Reading and Understanding Your Laboratory Report

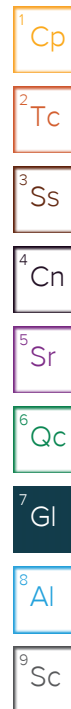
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### Abbreviations and Definitions

|                              |  |
|------------------------------|--|
| MDL                          | Method Detection Limit.  |
| ND                           | Not detected at the Reporting Limit (or MDL where applicable).   |
| RDL                          | Reported Detection Limit.  |
| Rec.                         | Recovery.  |
| RPD                          | Relative Percent Difference.   |
| SDG                          | Sample Delivery Group.   |
| (S)                          | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.   |
| U                            | Not detected at the Reporting Limit (or MDL where applicable).   |
| Analyte                      | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.   |
| Dilution                     | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.  |
| Limits                       | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.  |
| Original Sample              | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.  |
| Qualifier                    | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.  |
| Result                       | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma.   |
| Case Narrative (Cn)          | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.  |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.  |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.  |
| Sample Results (Sr)          | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.   |
| Sample Summary (Ss)          | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.  |

| Qualifier | Description  |
|-----------|--|
| J         | The identification of the analyte is acceptable; the reported value is an estimate.                    |
| J1        | Surrogate recovery limits have been exceeded; values are outside upper control limits.                 |
| J2        | Surrogate recovery limits have been exceeded; values are outside lower control limits.                 |
| J3        | The associated batch QC was outside the established quality control range for precision.               |
| J5        | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |
| J6        | The sample matrix interfered with the ability to make any accurate determination; spike value is low.  |
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution.                        |
| T8        | Sample(s) received past/too close to holding time expiration.  |







Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

|                         |             |                             |                  |
|-------------------------|-------------|-----------------------------|------------------|
| Alabama                 | 40660       | Nebraska                    | NE-OS-15-05      |
| Alaska                  | 17-026      | Nevada                      | TN-03-2002-34    |
| Arizona                 | AZ0612      | New Hampshire               | 2975             |
| Arkansas                | 88-0469     | New Jersey–NELAP            | TN002            |
| California              | 2932        | New Mexico <sup>1</sup>     | n/a              |
| Colorado                | TN00003     | New York                    | 11742            |
| Connecticut             | PH-0197     | North Carolina              | Env375           |
| Florida                 | E87487      | North Carolina <sup>1</sup> | DW21704          |
| Georgia                 | NELAP       | North Carolina <sup>3</sup> | 41               |
| Georgia <sup>1</sup>    | 923         | North Dakota                | R-140            |
| Idaho                   | TN00003     | Ohio–VAP                    | CL0069           |
| Illinois                | 200008      | Oklahoma                    | 9915             |
| Indiana                 | C-TN-01     | Oregon                      | TN200002         |
| Iowa                    | 364         | Pennsylvania                | 68-02979         |
| Kansas                  | E-10277     | Rhode Island                | LA000356         |
| Kentucky <sup>1 6</sup> | 90010       | South Carolina              | 84004            |
| Kentucky <sup>2</sup>   | 16          | South Dakota                | n/a              |
| Louisiana               | AI30792     | Tennessee <sup>1 4</sup>    | 2006             |
| Louisiana <sup>1</sup>  | LA180010    | Texas                       | T104704245-18-15 |
| Maine                   | TN0002      | Texas <sup>5</sup>          | LAB0152          |
| Maryland                | 324         | Utah                        | TN00003          |
| Massachusetts           | M-TN003     | Vermont                     | VT2006           |
| Michigan                | 9958        | Virginia                    | 460132           |
| Minnesota               | 047-999-395 | Washington                  | C847             |
| Mississippi             | TN00003     | West Virginia               | 233              |
| Missouri                | 340         | Wisconsin                   | 9980939910       |
| Montana                 | CERT0086    | Wyoming                     | A2LA             |

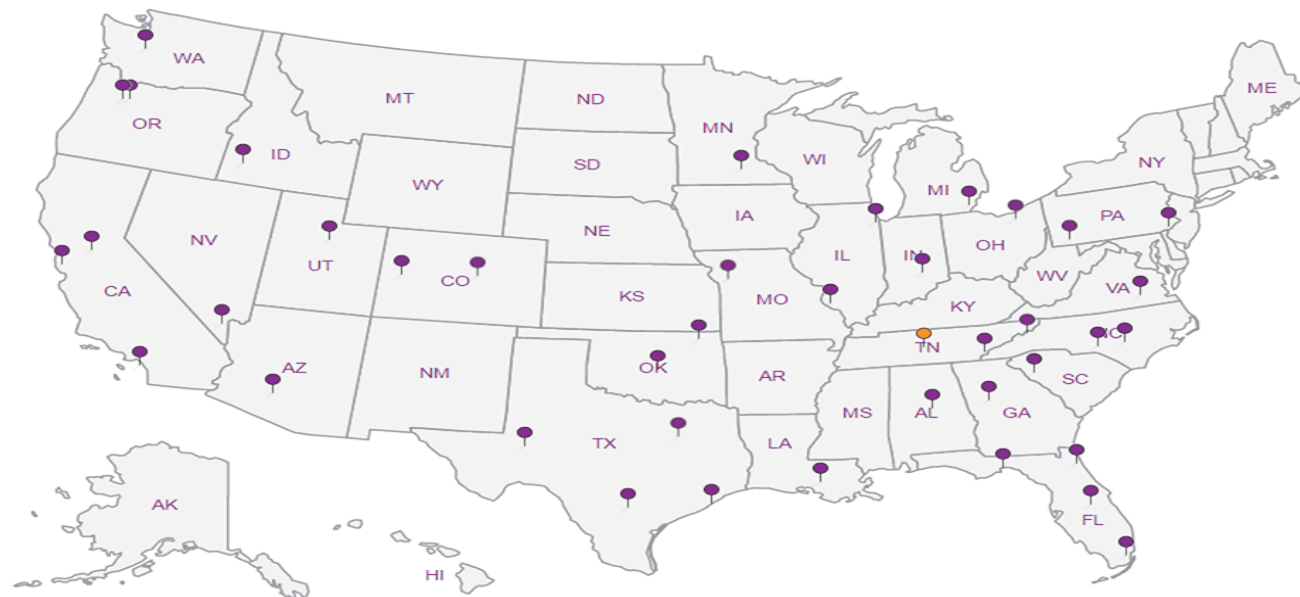
## Third Party Federal Accreditations

|                               |         |                     |               |
|-------------------------------|---------|---------------------|---------------|
| A2LA – ISO 17025              | 1461.01 | AIHA-LAP, LLC EMLAP | 100789        |
| A2LA – ISO 17025 <sup>5</sup> | 1461.02 | DOD                 | 1461.01       |
| Canada                        | 1461.01 | USDA                | P330-15-00234 |
| EPA–Crypto                    | TN00003 |                     |               |

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.





[illegible]



# ANALYTICAL REPORT

December 10, 2020

Revised Report

## Caerus Oil and Gas

Sample Delivery Group: L1273792  
Samples Received: 10/15/2020  
Project Number:  
Description: C27 North Pit

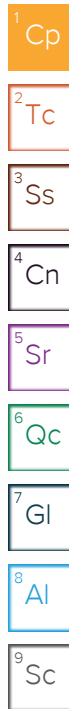
Report To: Blair Rollins  
143 Diamond Avenue  
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.







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# SAMPLE SUMMARY

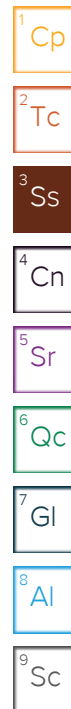
ONE LAB. NATIONWIDE.



20201014-C27NP-SBMID(5') L1273792-01 Solid

Collected by R. Johnson  
Collected date/time 10/14/20 10:35  
Received date/time 10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 12:30        | 10/20/20 12:30     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:09     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:09     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1562685 | 1        | 10/21/20 09:10        | 10/21/20 12:29     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561139 | 1        | 10/19/20 10:57        | 10/19/20 19:40     | TCT     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/20/20 00:16     | CCE     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 5        | 10/18/20 16:18        | 10/20/20 02:44     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:34     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563017 | 1        | 10/20/20 21:52        | 10/21/20 21:17     | ADM     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1564334 | 1        | 10/20/20 21:52        | 10/23/20 19:48     | ADM     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 10       | 10/22/20 06:44        | 10/23/20 12:22     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 10:13     | JNJ     | Mt. Juliet, TN |



20201014-C27NP-SBMID(10') L1273792-02 Solid

Collected by R. Johnson  
Collected date/time 10/14/20 10:50  
Received date/time 10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 12:32        | 10/20/20 12:32     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:13     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:13     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1562685 | 1        | 10/21/20 09:10        | 10/21/20 12:29     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561139 | 1        | 10/19/20 10:57        | 10/19/20 19:43     | TCT     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/20/20 00:19     | CCE     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 5        | 10/18/20 16:18        | 10/20/20 02:46     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:37     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563017 | 1        | 10/20/20 21:52        | 10/21/20 21:38     | ADM     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1564334 | 1        | 10/20/20 21:52        | 10/23/20 20:07     | ADM     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 10       | 10/22/20 06:44        | 10/25/20 01:00     | JN      | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 10:36     | JNJ     | Mt. Juliet, TN |

20201014-C27NP-SBMID(15') L1273792-03 Solid

Collected by R. Johnson  
Collected date/time 10/14/20 11:15  
Received date/time 10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 12:35        | 10/20/20 12:35     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:14     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:14     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1562685 | 1        | 10/21/20 09:10        | 10/21/20 12:29     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561139 | 1        | 10/19/20 10:57        | 10/19/20 19:45     | TCT     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/20/20 00:27     | CCE     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 5        | 10/18/20 16:18        | 10/20/20 02:49     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:41     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563017 | 1        | 10/20/20 21:52        | 10/21/20 21:58     | ADM     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1564334 | 1        | 10/20/20 21:52        | 10/23/20 20:26     | ADM     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 10       | 10/22/20 06:44        | 10/23/20 12:36     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 10:59     | JNJ     | Mt. Juliet, TN |



# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



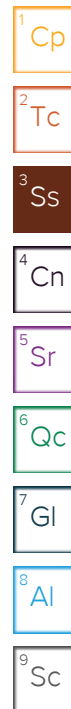
## 20201014-C27NP-SBMID(20') L1273792-04 Solid

Collected by  
R. Johnson

Collected date/time  
10/14/20 11:35

Received date/time  
10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 12:38        | 10/20/20 12:38     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:15     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:15     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1562685 | 1        | 10/21/20 09:10        | 10/21/20 12:29     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561139 | 1        | 10/19/20 10:57        | 10/19/20 19:48     | TCT     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/20/20 00:30     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:44     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563017 | 1        | 10/20/20 21:52        | 10/21/20 22:19     | ADM     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1564334 | 1        | 10/20/20 21:52        | 10/23/20 20:44     | ADM     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 20       | 10/22/20 06:44        | 10/23/20 12:49     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 11:22     | JNJ     | Mt. Juliet, TN |



## 20201014-C27NP-NBOTB(10') L1273792-05 Solid

Collected by  
R. Johnson

Collected date/time  
10/14/20 12:20

Received date/time  
10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 12:46        | 10/20/20 12:46     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:17     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:17     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1562685 | 1        | 10/21/20 09:10        | 10/21/20 12:29     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561139 | 1        | 10/19/20 10:57        | 10/19/20 19:50     | TCT     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/19/20 23:58     | CCE     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 5        | 10/18/20 16:18        | 10/20/20 02:41     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:48     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563094 | 1        | 10/20/20 21:52        | 10/22/20 06:37     | ACG     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1563772 | 1        | 10/20/20 21:52        | 10/22/20 22:19     | JHH     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 10       | 10/22/20 06:44        | 10/23/20 13:03     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 11:45     | JNJ     | Mt. Juliet, TN |

## 20201014-C27NP-NBOTB(15') L1273792-06 Solid

Collected by  
R. Johnson

Collected date/time  
10/14/20 12:35

Received date/time  
10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561070 | 1        | 10/21/20 12:30        | 10/21/20 12:30     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:18     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:18     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1563390 | 1        | 10/22/20 09:26        | 10/22/20 12:58     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1563225 | 1        | 10/22/20 10:58        | 10/22/20 13:02     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561139 | 1        | 10/19/20 10:57        | 10/19/20 19:53     | TCT     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/20/20 00:33     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:51     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563094 | 1        | 10/20/20 21:52        | 10/22/20 07:00     | ACG     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1563772 | 1        | 10/20/20 21:52        | 10/22/20 22:39     | JHH     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 40       | 10/22/20 06:44        | 10/23/20 13:16     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 12:08     | JNJ     | Mt. Juliet, TN |





All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward  
Project Manager

### Report Revision History

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Level II Report - Version 1: 10/27/20 10:08

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 6.46   |           | 1        | 10/20/2020 12:30     | WG1561069 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 22.7         |           | 1.00      | 1        | 10/22/2020 18:09     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier             | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------------------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           | <a href="#">J6 O1</a> | 2.00      | 1        | 10/22/2020 18:09     | <a href="#">WG1561334</a> |

## Sample Narrative:

L1273792-01 WG1561334: sample is a reducer

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 10.0      | <a href="#">T8</a> | 1        | 10/21/2020 12:29     | <a href="#">WG1562685</a> |

## Sample Narrative:

L1273792-01 WG1562685: 10.01 at 21.7C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 6040            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | 0.0502       |           | 0.0400    | 1        | 10/19/2020 19:40     | <a href="#">WG1561139</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 10700        |           | 2.50      | 5        | 10/20/2020 02:44     | <a href="#">WG1561163</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Chromium | 22.7         |           | 1.00      | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Copper   | 20.8         |           | 2.00      | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Lead     | 17.4         |           | 0.500     | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Nickel   | 15.7         |           | 2.00      | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Zinc     | 50.8         |           | 5.00      | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 12.9         |           | 1.00      | 5        | 10/19/2020 18:34     | <a href="#">WG1561534</a> |

|                 |
|-----------------|
| <sup>1</sup> Cp |
| <sup>2</sup> Tc |
| <sup>3</sup> Ss |
| <sup>4</sup> Cn |
| <sup>5</sup> Sr |
| <sup>6</sup> Qc |
| <sup>7</sup> Gl |
| <sup>8</sup> Al |
| <sup>9</sup> Sc |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction               | 1.07            |           | 0.100        | 1        | 10/21/2020 21:17        | <a href="#">WG1563017</a> |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 87.9            |           | 77.0-120     |          | 10/21/2020 21:17        | <a href="#">WG1563017</a> |

## Volatile Organic Compounds (GC/MS) by Method 8260B

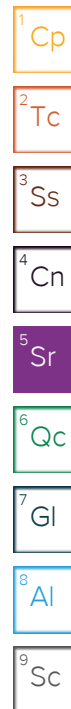
| Analyte                          | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                          | 0.00470         |           | 0.00100      | 1        | 10/23/2020 19:48        | <a href="#">WG1564334</a> |
| Toluene                          | 0.135           |           | 0.00500      | 1        | 10/23/2020 19:48        | <a href="#">WG1564334</a> |
| Ethylbenzene                     | 0.00943         |           | 0.00250      | 1        | 10/23/2020 19:48        | <a href="#">WG1564334</a> |
| Total Xylenes                    | 0.460           |           | 0.00650      | 1        | 10/23/2020 19:48        | <a href="#">WG1564334</a> |
| (S) <i>Toluene-d8</i>            | 110             |           | 75.0-131     |          | 10/23/2020 19:48        | <a href="#">WG1564334</a> |
| (S) <i>4-Bromofluorobenzene</i>  | 105             |           | 67.0-138     |          | 10/23/2020 19:48        | <a href="#">WG1564334</a> |
| (S) <i>1,2-Dichloroethane-d4</i> | 113             |           | 70.0-130     |          | 10/23/2020 19:48        | <a href="#">WG1564334</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 442             |           | 40.0         | 10       | 10/23/2020 12:22        | <a href="#">WG1562963</a> |
| (S) <i>o</i> -Terphenyl    | 80.3            |           | 18.0-148     |          | 10/23/2020 12:22        | <a href="#">WG1562963</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                     | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|-----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene                  | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Acenaphthene                | 0.0235          |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Acenaphthylene              | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene          | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene              | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Chrysene                    | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene       | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Fluoranthene                | 0.00906         |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Fluorene                    | 0.0257          |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene      | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Naphthalene                 | 0.0915          |           | 0.0200       | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Phenanthrene                | 0.149           |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Pyrene                      | 0.0370          |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene         | 0.119           |           | 0.0200       | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene         | 0.264           |           | 0.0200       | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene         | ND              |           | 0.0200       | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| (S) <i>p</i> -Terphenyl-d14 | 93.9            |           | 23.0-120     |          | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5         | 85.0            |           | 14.0-149     |          | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl        | 86.7            |           | 34.0-125     |          | 10/22/2020 10:13        | <a href="#">WG1562551</a> |







## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 11.8   |           | 1        | 10/20/2020 12:32     | WG1561069 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 19.3         |           | 1.00      | 1        | 10/22/2020 18:13     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/22/2020 18:13     | <a href="#">WG1561334</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.93      | <a href="#">T8</a> | 1        | 10/21/2020 12:29     | <a href="#">WG1562685</a> |

## Sample Narrative:

L1273792-02 WG1562685: 8.93 at 21.6C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 920             |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | 0.0405       |           | 0.0400    | 1        | 10/19/2020 19:43     | <a href="#">WG1561139</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 11500        |           | 2.50      | 5        | 10/20/2020 02:46     | <a href="#">WG1561163</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Chromium | 19.3         |           | 1.00      | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Copper   | 23.5         |           | 2.00      | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Lead     | 17.9         |           | 0.500     | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Nickel   | 13.3         |           | 2.00      | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Zinc     | 42.6         |           | 5.00      | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 9.16         |           | 1.00      | 5        | 10/19/2020 18:37     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.879        |           | 0.100     | 1        | 10/21/2020 21:38     | <a href="#">WG1563017</a> |







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 90.1            |           | 77.0-120     |          | 10/21/2020 21:38        | <a href="#">WG1563017</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.0238          |           | 0.00100      | 1        | 10/23/2020 20:07        | <a href="#">WG1564334</a> |
| Toluene                   | 0.00703         |           | 0.00500      | 1        | 10/23/2020 20:07        | <a href="#">WG1564334</a> |
| Ethylbenzene              | 0.00607         |           | 0.00250      | 1        | 10/23/2020 20:07        | <a href="#">WG1564334</a> |
| Total Xylenes             | 0.0260          |           | 0.00650      | 1        | 10/23/2020 20:07        | <a href="#">WG1564334</a> |
| (S) Toluene-d8            | 111             |           | 75.0-131     |          | 10/23/2020 20:07        | <a href="#">WG1564334</a> |
| (S) 4-Bromofluorobenzene  | 108             |           | 67.0-138     |          | 10/23/2020 20:07        | <a href="#">WG1564334</a> |
| (S) 1,2-Dichloroethane-d4 | 96.9            |           | 70.0-130     |          | 10/23/2020 20:07        | <a href="#">WG1564334</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 359             |           | 40.0         | 10       | 10/25/2020 01:00        | <a href="#">WG1562963</a> |
| (S) <i>o</i> -Terphenyl    | 92.9            |           | 18.0-148     |          | 10/25/2020 01:00        | <a href="#">WG1562963</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                     | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|-----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene                  | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Acenaphthene                | 0.0159          |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Acenaphthylene              | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene          | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene              | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Chrysene                    | 0.00644         |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene       | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Fluoranthene                | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Fluorene                    | 0.0262          |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene      | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Naphthalene                 | 0.0831          |           | 0.0200       | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Phenanthrene                | 0.129           |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Pyrene                      | 0.0290          |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene         | 0.100           |           | 0.0200       | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene         | 0.232           |           | 0.0200       | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene         | ND              |           | 0.0200       | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| (S) <i>p</i> -Terphenyl-d14 | 77.6            |           | 23.0-120     |          | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5         | 70.2            |           | 14.0-149     |          | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl        | 82.8            |           | 34.0-125     |          | 10/22/2020 10:36        | <a href="#">WG1562551</a> |





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 10.7   |           | 1        | 10/20/2020 12:35     | WG1561069 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 20.4         |           | 1.00      | 1        | 10/22/2020 18:14     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/22/2020 18:14     | <a href="#">WG1561334</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 10.0      | <a href="#">T8</a> | 1        | 10/21/2020 12:29     | <a href="#">WG1562685</a> |

## Sample Narrative:

L1273792-03 WG1562685: 10.02 at 21.5C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 1440            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | 0.0465       |           | 0.0400    | 1        | 10/19/2020 19:45     | <a href="#">WG1561139</a> |

## Metals (ICP) by Method 6010B

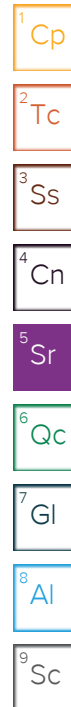
| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 17800        |           | 2.50      | 5        | 10/20/2020 02:49     | <a href="#">WG1561163</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Chromium | 20.4         |           | 1.00      | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Copper   | 34.6         |           | 2.00      | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Lead     | 21.9         |           | 0.500     | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Nickel   | 13.8         |           | 2.00      | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Zinc     | 52.7         |           | 5.00      | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 11.2         |           | 1.00      | 5        | 10/19/2020 18:41     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 2.13         |           | 0.100     | 1        | 10/21/2020 21:58     | <a href="#">WG1563017</a> |







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 96.4            |           | 77.0-120     |          | 10/21/2020 21:58        | <a href="#">WG1563017</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.0216          |           | 0.00100      | 1        | 10/23/2020 20:26        | <a href="#">WG1564334</a> |
| Toluene                   | 0.106           |           | 0.00500      | 1        | 10/23/2020 20:26        | <a href="#">WG1564334</a> |
| Ethylbenzene              | 0.0108          |           | 0.00250      | 1        | 10/23/2020 20:26        | <a href="#">WG1564334</a> |
| Total Xylenes             | 0.338           |           | 0.00650      | 1        | 10/23/2020 20:26        | <a href="#">WG1564334</a> |
| (S) Toluene-d8            | 107             |           | 75.0-131     |          | 10/23/2020 20:26        | <a href="#">WG1564334</a> |
| (S) 4-Bromofluorobenzene  | 107             |           | 67.0-138     |          | 10/23/2020 20:26        | <a href="#">WG1564334</a> |
| (S) 1,2-Dichloroethane-d4 | 120             |           | 70.0-130     |          | 10/23/2020 20:26        | <a href="#">WG1564334</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 419             |           | 40.0         | 10       | 10/23/2020 12:36        | <a href="#">WG1562963</a> |
| (S) <i>o</i> -Terphenyl    | 103             |           | 18.0-148     |          | 10/23/2020 12:36        | <a href="#">WG1562963</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                     | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|-----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene                  | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Acenaphthene                | 0.0317          |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Acenaphthylene              | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene          | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene              | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Chrysene                    | 0.00937         |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene       | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Fluoranthene                | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Fluorene                    | 0.0471          |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene      | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Naphthalene                 | 0.141           |           | 0.0200       | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Phenanthrene                | 0.170           |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Pyrene                      | 0.0362          |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene         | 0.163           |           | 0.0200       | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene         | 0.364           |           | 0.0200       | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene         | ND              |           | 0.0200       | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| (S) <i>p</i> -Terphenyl-d14 | 79.2            |           | 23.0-120     |          | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5         | 75.8            |           | 14.0-149     |          | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl        | 88.7            |           | 34.0-125     |          | 10/22/2020 10:59        | <a href="#">WG1562551</a> |





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 23.4   |           | 1        | 10/20/2020 12:38     | WG1561069 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 20.3         |           | 1.00      | 1        | 10/22/2020 18:15     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/22/2020 18:15     | <a href="#">WG1561334</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 9.07      | <a href="#">T8</a> | 1        | 10/21/2020 12:29     | <a href="#">WG1562685</a> |

## Sample Narrative:

L1273792-04 WG1562685: 9.07 at 22.2C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 1330            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | ND           |           | 0.0400    | 1        | 10/19/2020 19:48     | <a href="#">WG1561139</a> |

## Metals (ICP) by Method 6010B

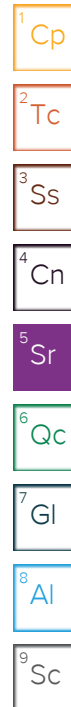
| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 276          |           | 0.500     | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Cadmium  | 0.615        |           | 0.500     | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Chromium | 20.3         |           | 1.00      | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Copper   | 39.8         |           | 2.00      | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Lead     | 22.7         |           | 0.500     | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Nickel   | 18.9         |           | 2.00      | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Zinc     | 54.2         |           | 5.00      | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 25.0         |           | 1.00      | 5        | 10/19/2020 18:44     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.646        |           | 0.100     | 1        | 10/21/2020 22:19     | <a href="#">WG1563017</a> |







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 88.4            |           | 77.0-120     |          | 10/21/2020 22:19        | <a href="#">WG1563017</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.00144         |           | 0.00100      | 1        | 10/23/2020 20:44        | <a href="#">WG1564334</a> |
| Toluene                   | 0.0508          |           | 0.00500      | 1        | 10/23/2020 20:44        | <a href="#">WG1564334</a> |
| Ethylbenzene              | 0.00567         |           | 0.00250      | 1        | 10/23/2020 20:44        | <a href="#">WG1564334</a> |
| Total Xylenes             | 0.305           |           | 0.00650      | 1        | 10/23/2020 20:44        | <a href="#">WG1564334</a> |
| (S) Toluene-d8            | 112             |           | 75.0-131     |          | 10/23/2020 20:44        | <a href="#">WG1564334</a> |
| (S) 4-Bromofluorobenzene  | 107             |           | 67.0-138     |          | 10/23/2020 20:44        | <a href="#">WG1564334</a> |
| (S) 1,2-Dichloroethane-d4 | 102             |           | 70.0-130     |          | 10/23/2020 20:44        | <a href="#">WG1564334</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 300             |           | 80.0         | 20       | 10/23/2020 12:49        | <a href="#">WG1562963</a> |
| (S) <i>o</i> -Terphenyl    | 0.000           | J7        | 18.0-148     |          | 10/23/2020 12:49        | <a href="#">WG1562963</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                     | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|-----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene                  | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Acenaphthene                | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Acenaphthylene              | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene          | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene              | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene        | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Chrysene                    | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene       | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Fluoranthene                | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Fluorene                    | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene      | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Naphthalene                 | 0.0209          |           | 0.0200       | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Phenanthrene                | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Pyrene                      | 0.0104          |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene         | ND              |           | 0.0200       | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene         | 0.0823          |           | 0.0200       | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene         | ND              |           | 0.0200       | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| (S) <i>p</i> -Terphenyl-d14 | 84.7            |           | 23.0-120     |          | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5         | 58.3            |           | 14.0-149     |          | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl        | 86.9            |           | 34.0-125     |          | 10/22/2020 11:22        | <a href="#">WG1562551</a> |





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 12.1   |           | 1        | 10/20/2020 12:46     | WG1561069 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 18.4         |           | 1.00      | 1        | 10/22/2020 18:17     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/22/2020 18:17     | <a href="#">WG1561334</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 9.23      | <a href="#">T8</a> | 1        | 10/21/2020 12:29     | <a href="#">WG1562685</a> |

## Sample Narrative:

L1273792-05 WG1562685: 9.23 at 21.9C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 2410            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | ND           |           | 0.0400    | 1        | 10/19/2020 19:50     | <a href="#">WG1561139</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result mg/kg | Qualifier          | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|--------------------|-----------|----------|----------------------|---------------------------|
| Barium   | 11500        |                    | 2.50      | 5        | 10/20/2020 02:41     | <a href="#">WG1561163</a> |
| Cadmium  | ND           |                    | 0.500     | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Chromium | 18.4         |                    | 1.00      | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Copper   | 21.1         |                    | 2.00      | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Lead     | 19.3         | <a href="#">O1</a> | 0.500     | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Nickel   | 11.8         |                    | 2.00      | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Selenium | ND           |                    | 2.00      | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Silver   | ND           |                    | 1.00      | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Zinc     | 44.5         |                    | 5.00      | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 7.99         |           | 1.00      | 5        | 10/19/2020 18:48     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier         | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-------------------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.325        | <a href="#">B</a> | 0.100     | 1        | 10/22/2020 06:37     | <a href="#">WG1563094</a> |

|                 |
|-----------------|
| <sup>1</sup> Cp |
| <sup>2</sup> Tc |
| <sup>3</sup> Ss |
| <sup>4</sup> Cn |
| <sup>5</sup> Sr |
| <sup>6</sup> Qc |
| <sup>7</sup> Gl |
| <sup>8</sup> Al |
| <sup>9</sup> Sc |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) a,a,a-Trifluorotoluene(FID) | 95.0            |           | 77.0-120     |          | 10/22/2020 06:37        | <a href="#">WG1563094</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.00163         |           | 0.00100      | 1        | 10/22/2020 22:19        | <a href="#">WG1563772</a> |
| Toluene                   | ND              |           | 0.00500      | 1        | 10/22/2020 22:19        | <a href="#">WG1563772</a> |
| Ethylbenzene              | ND              |           | 0.00250      | 1        | 10/22/2020 22:19        | <a href="#">WG1563772</a> |
| Total Xylenes             | 0.00847         |           | 0.00650      | 1        | 10/22/2020 22:19        | <a href="#">WG1563772</a> |
| (S) Toluene-d8            | 107             |           | 75.0-131     |          | 10/22/2020 22:19        | <a href="#">WG1563772</a> |
| (S) 4-Bromofluorobenzene  | 97.4            |           | 67.0-138     |          | 10/22/2020 22:19        | <a href="#">WG1563772</a> |
| (S) 1,2-Dichloroethane-d4 | 84.4            |           | 70.0-130     |          | 10/22/2020 22:19        | <a href="#">WG1563772</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 736             |           | 40.0         | 10       | 10/23/2020 13:03        | <a href="#">WG1562963</a> |
| (S) o-Terphenyl            | 161             | J1        | 18.0-148     |          | 10/23/2020 13:03        | <a href="#">WG1562963</a> |

## Sample Narrative:

L1273792-05 WG1562963: Surrogate failure due to matrix interference

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene             | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Acenaphthene           | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Acenaphthylene         | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene     | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene         | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene   | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene   | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene   | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Chrysene               | 0.00913         |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene  | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Fluoranthene           | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Fluorene               | 0.0530          |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Naphthalene            | 0.168           |           | 0.0200       | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Phenanthrene           | 0.134           |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Pyrene                 | 0.0269          |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene    | 0.156           |           | 0.0200       | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene    | 0.441           |           | 0.0200       | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene    | ND              |           | 0.0200       | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| (S) p-Terphenyl-d14    | 77.5            |           | 23.0-120     |          | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5    | 85.1            |           | 14.0-149     |          | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl   | 82.5            |           | 34.0-125     |          | 10/22/2020 11:45        | <a href="#">WG1562551</a> |





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 16.7   |           | 1        | 10/21/2020 12:30     | WG1561070 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 28.9         |           | 1.00      | 1        | 10/22/2020 18:18     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/22/2020 18:18     | <a href="#">WG1561334</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.91      | <a href="#">T8</a> | 1        | 10/22/2020 12:58     | <a href="#">WG1563390</a> |

## Sample Narrative:

L1273792-06 WG1563390: 8.91 at 23.3C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 1730            |           | 10.0         | 1        | 10/22/2020 13:02     | <a href="#">WG1563225</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | ND           |           | 0.0400    | 1        | 10/19/2020 19:53     | <a href="#">WG1561139</a> |

## Metals (ICP) by Method 6010B

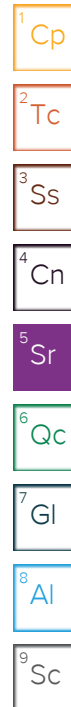
| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 451          |           | 0.500     | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Chromium | 28.9         |           | 1.00      | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Copper   | 24.7         |           | 2.00      | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Lead     | 17.0         |           | 0.500     | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Nickel   | 18.4         |           | 2.00      | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Zinc     | 55.3         |           | 5.00      | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 12.2         |           | 1.00      | 5        | 10/19/2020 18:51     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 1.67         |           | 0.100     | 1        | 10/22/2020 07:00     | <a href="#">WG1563094</a> |







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) a,a,a-Trifluorotoluene(FID) | 85.8            |           | 77.0-120     |          | 10/22/2020 07:00        | <a href="#">WG1563094</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | ND              |           | 0.00100      | 1        | 10/22/2020 22:39        | <a href="#">WG1563772</a> |
| Toluene                   | 0.0206          | J5        | 0.00500      | 1        | 10/22/2020 22:39        | <a href="#">WG1563772</a> |
| Ethylbenzene              | ND              |           | 0.00250      | 1        | 10/22/2020 22:39        | <a href="#">WG1563772</a> |
| Total Xylenes             | 0.0811          | J5        | 0.00650      | 1        | 10/22/2020 22:39        | <a href="#">WG1563772</a> |
| (S) Toluene-d8            | 104             |           | 75.0-131     |          | 10/22/2020 22:39        | <a href="#">WG1563772</a> |
| (S) 4-Bromofluorobenzene  | 97.7            |           | 67.0-138     |          | 10/22/2020 22:39        | <a href="#">WG1563772</a> |
| (S) 1,2-Dichloroethane-d4 | 85.1            |           | 70.0-130     |          | 10/22/2020 22:39        | <a href="#">WG1563772</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 285             |           | 160          | 40       | 10/23/2020 13:16        | <a href="#">WG1562963</a> |
| (S) o-Terphenyl            | 0.000           | J7        | 18.0-148     |          | 10/23/2020 13:16        | <a href="#">WG1562963</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene             | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Acenaphthene           | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Acenaphthylene         | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene     | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene         | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene   | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene   | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene   | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Chrysene               | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene  | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Fluoranthene           | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Fluorene               | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Naphthalene            | ND              |           | 0.0200       | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Phenanthrene           | 0.00970         |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Pyrene                 | 0.00878         |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene    | ND              |           | 0.0200       | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene    | 0.0642          |           | 0.0200       | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene    | ND              |           | 0.0200       | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| (S) p-Terphenyl-d14    | 86.2            |           | 23.0-120     |          | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5    | 83.5            |           | 14.0-149     |          | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl   | 88.4            |           | 34.0-125     |          | 10/22/2020 12:08        | <a href="#">WG1562551</a> |





Method Blank (MB)

(MB) R3584574-1 10/22/20 18:04

|                     | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------------------|-----------|--------------|--------|--------|
| Analyte             | mg/kg     |              | mg/kg  | mg/kg  |
| Chromium,Hexavalent | U         |              | 0.640  | 2.00   |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

L1273792-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1273792-06 10/22/20 18:18 • (DUP) R3584574-7 10/22/20 18:18

|                     | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte             | mg/kg           | mg/kg      |          | %       |               | %              |
| Chromium,Hexavalent | ND              | ND         | 1        | 0.000   |               | 20             |

<sup>7</sup>Gl

<sup>8</sup>Al

L1273863-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1273863-04 10/22/20 18:21 • (DUP) R3584574-8 10/22/20 18:22

|                     | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte             | mg/kg           | mg/kg      |          | %       |               | %              |
| Chromium,Hexavalent | ND              | ND         | 1        | 0.000   |               | 20             |

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3584574-2 10/22/20 18:08

|                     | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------------------|--------------|------------|----------|-------------|---------------|
| Analyte             | mg/kg        | mg/kg      | %        | %           |               |
| Chromium,Hexavalent | 24.0         | 23.1       | 96.1     | 80.0-120    |               |

L1273792-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273792-01 10/22/20 18:09 • (MS) R3584574-3 10/22/20 18:11 • (MSD) R3584574-4 10/22/20 18:11

|                     | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD  | RPD Limits |
|---------------------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Analyte             | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %    | %          |
| Chromium,Hexavalent | 20.0         | ND              | ND        | ND         | 9.40    | 9.92     | 1        | 75.0-125    | J6           | J6            | 5.39 | 20         |

Sample Narrative:

OS: sample is a reducer





L1273792-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1273792-01 10/22/20 18:09 • (MS) R3584574-5 10/22/20 18:11

| Analyte             | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MS Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier |
|---------------------|-----------------------|--------------------------|--------------------|--------------|----------|------------------|--------------|
| Chromium,Hexavalent | 646                   | ND                       | 583                | 90.2         | 50       | 75.0-125         |              |

Sample Narrative:

OS: sample is a reducer

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L1273684-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1273684-05 10/21/20 12:29 • (DUP) R3583899-2 10/21/20 12:29

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 7.97            | 7.97       | 1        | 0.000   |               | 1              |

Sample Narrative:  
OS: 7.97 at 21.9C  
DUP: 7.97 at 21.8C

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L1273863-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1273863-03 10/21/20 12:29 • (DUP) R3583899-3 10/21/20 12:29

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 8.43            | 8.45       | 1        | 0.237   |               | 1              |

Sample Narrative:  
OS: 8.43 at 21.7C  
DUP: 8.45 at 21.5C

Laboratory Control Sample (LCS)

(LCS) R3583899-1 10/21/20 12:29

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | su           | su         | %        | %           |               |
| pH      | 10.0         | 10.1       | 101      | 99.0-101    |               |

Sample Narrative:  
LCS: 10.05 at 20.7C





L1273904-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1273904-16 10/22/20 12:58 • (DUP) R3584423-2 10/22/20 12:58

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 8.05            | 8.09       | 1        | 0.496   |               | 1              |

Sample Narrative:

OS: 8.05 at 22.5C

DUP: 8.09 at 22.2C

L1274567-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1274567-02 10/22/20 12:58 • (DUP) R3584423-3 10/22/20 12:58

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 8.98            | 8.92       | 1        | 0.670   |               | 1              |

Sample Narrative:

OS: 8.98 at 22.4C

DUP: 8.92 at 22.1C

Laboratory Control Sample (LCS)

(LCS) R3584423-1 10/22/20 12:58

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | su           | su         | %        | %           |               |
| pH      | 10.0         | 10.0       | 100      | 99.0-101    |               |

Sample Narrative:

LCS: 10.02 at 21.1C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3584033-1 10/21/20 16:37

| Analyte              | MB Result<br>umhos/cm | MB Qualifier | MB MDL<br>umhos/cm | MB RDL<br>umhos/cm |
|----------------------|-----------------------|--------------|--------------------|--------------------|
| Specific Conductance | U                     |              | 10.0               | 10.0               |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1273411-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1273411-01 10/21/20 16:37 • (DUP) R3584033-3 10/21/20 16:37

| Analyte              | Original Result<br>umhos/cm | DUP Result<br>umhos/cm | Dilution | DUP RPD<br>% | DUP Qualifier | DUP RPD<br>Limits<br>% |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 214                         | 211                    | 1        | 1.27         |               | 20                     |

L1273792-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1273792-05 10/21/20 16:37 • (DUP) R3584033-4 10/21/20 16:37

| Analyte              | Original Result<br>umhos/cm | DUP Result<br>umhos/cm | Dilution | DUP RPD<br>% | DUP Qualifier | DUP RPD<br>Limits<br>% |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 2410                        | 2420                   | 1        | 0.331        |               | 20                     |

Laboratory Control Sample (LCS)

(LCS) R3584033-2 10/21/20 16:37

| Analyte              | Spike Amount<br>umhos/cm | LCS Result<br>umhos/cm | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------------------|--------------------------|------------------------|---------------|------------------|---------------|
| Specific Conductance | 326                      | 324                    | 99.4          | 85.0-115         |               |



Method Blank (MB)

(MB) R3584378-1 10/22/20 13:02

| Analyte              | MB Result | MB Qualifier | MB MDL   | MB RDL   |
|----------------------|-----------|--------------|----------|----------|
|                      | umhos/cm  |              | umhos/cm | umhos/cm |
| Specific Conductance | U         |              | 10.0     | 10.0     |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L1273863-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1273863-05 10/22/20 13:02 • (DUP) R3584378-3 10/22/20 13:02

| Analyte              | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------------------|-----------------|------------|----------|---------|---------------|----------------|
|                      | umhos/cm        | umhos/cm   |          | %       |               | %              |
| Specific Conductance | 189             | 186        | 1        | 1.50    |               | 20             |

Laboratory Control Sample (LCS)

(LCS) R3584378-2 10/22/20 13:02

| Analyte              | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------------------|--------------|------------|----------|-------------|---------------|
|                      | umhos/cm     | umhos/cm   | %        | %           |               |
| Specific Conductance | 326          | 324        | 99.4     | 85.0-115    |               |





Method Blank (MB)

(MB) R3583252-1 10/19/20 18:45

|         | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Analyte | mg/kg     |              | mg/kg  | mg/kg  |
| Mercury | U         |              | 0.0180 | 0.0400 |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

Laboratory Control Sample (LCS)

(LCS) R3583252-2 10/19/20 18:47

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/kg        | mg/kg      | %        | %           |               |
| Mercury | 0.500        | 0.493      | 98.6     | 80.0-120    |               |

<sup>7</sup>Gl

<sup>8</sup>Al

L1273331-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273331-02 10/19/20 18:50 • (MS) R3583252-3 10/19/20 18:52 • (MSD) R3583252-4 10/19/20 18:55

|         | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD  | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Analyte | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %    | %          |
| Mercury | 0.500        | ND              | 0.465     | 0.451      | 86.2    | 83.4     | 1        | 75.0-125    |              |               | 3.08 | 20         |

<sup>9</sup>Sc





Method Blank (MB)

(MB) R3583283-1 10/19/20 23:53

| Analyte  | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|----------|--------------------|--------------|-----------------|-----------------|
| Barium   | U                  |              | 0.240           | 0.500           |
| Cadmium  | U                  |              | 0.0810          | 0.500           |
| Chromium | U                  |              | 0.250           | 1.00            |
| Copper   | U                  |              | 0.506           | 2.00            |
| Lead     | U                  |              | 0.208           | 0.500           |
| Nickel   | U                  |              | 0.490           | 2.00            |
| Selenium | U                  |              | 0.617           | 2.00            |
| Silver   | U                  |              | 0.228           | 1.00            |
| Zinc     | 1.02               | J            | 0.939           | 5.00            |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3583283-2 10/19/20 23:55

| Analyte  | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------|-----------------------|---------------------|---------------|------------------|---------------|
| Barium   | 100                   | 107                 | 107           | 80.0-120         |               |
| Cadmium  | 100                   | 104                 | 104           | 80.0-120         |               |
| Chromium | 100                   | 107                 | 107           | 80.0-120         |               |
| Copper   | 100                   | 107                 | 107           | 80.0-120         |               |
| Lead     | 100                   | 102                 | 102           | 80.0-120         |               |
| Nickel   | 100                   | 105                 | 105           | 80.0-120         |               |
| Selenium | 100                   | 104                 | 104           | 80.0-120         |               |
| Silver   | 20.0                  | 19.1                | 95.7          | 80.0-120         |               |
| Zinc     | 100                   | 104                 | 104           | 80.0-120         |               |

L1273792-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273792-05 10/19/20 23:58 • (MS) R3583283-5 10/20/20 00:07 • (MSD) R3583283-6 10/20/20 00:10

| Analyte  | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Barium   | 100                   | 8850                     | 9600               | 8940                | 749          | 87.8          | 1        | 75.0-125         | E V          | E             | 7.13     | 20              |
| Cadmium  | 100                   | ND                       | 109                | 97.0                | 109          | 97.0          | 1        | 75.0-125         |              |               | 11.9     | 20              |
| Chromium | 100                   | 18.4                     | 119                | 110                 | 101          | 91.4          | 1        | 75.0-125         |              |               | 8.35     | 20              |
| Copper   | 100                   | 21.1                     | 132                | 120                 | 111          | 99.3          | 1        | 75.0-125         |              |               | 9.20     | 20              |
| Lead     | 100                   | 19.3                     | 128                | 118                 | 109          | 98.9          | 1        | 75.0-125         |              |               | 8.28     | 20              |
| Nickel   | 100                   | 11.8                     | 121                | 111                 | 110          | 98.7          | 1        | 75.0-125         |              |               | 9.47     | 20              |
| Selenium | 100                   | ND                       | 111                | 98.3                | 109          | 96.8          | 1        | 75.0-125         |              |               | 11.9     | 20              |
| Silver   | 20.0                  | ND                       | 20.7               | 18.6                | 103          | 93.1          | 1        | 75.0-125         |              |               | 10.5     | 20              |
| Zinc     | 100                   | 44.5                     | 142                | 136                 | 97.9         | 91.1          | 1        | 75.0-125         |              |               | 4.88     | 20              |



Method Blank (MB)

|                                |           |                     |        |        |
|--------------------------------|-----------|---------------------|--------|--------|
| (MB) R3583210-1 10/19/20 17:47 |           |                     |        |        |
|                                | MB Result | <u>MB Qualifier</u> | MB MDL | MB RDL |
| Analyte                        | mg/kg     |                     | mg/kg  | mg/kg  |
| Arsenic                        | U         |                     | 0.100  | 1.00   |

Laboratory Control Sample (LCS)

|                                 |              |            |          |             |                      |
|---------------------------------|--------------|------------|----------|-------------|----------------------|
| (LCS) R3583210-2 10/19/20 17:51 |              |            |          |             |                      |
|                                 | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | <u>LCS Qualifier</u> |
| Analyte                         | mg/kg        | mg/kg      | %        | %           |                      |
| Arsenic                         | 100          | 103        | 103      | 80.0-120    |                      |

L1273954-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

|  |              |                 |           |            |         |          |          |             |                     |                      |       |            |
|--|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|---------------------|----------------------|-------|------------|
| (OS) L1273954-01 10/19/20 17:54 • (MS) R3583210-5 10/19/20 18:05 • (MSD) R3583210-6 10/19/20 18:08 |              |                 |           |            |         |          |          |             |                     |                      |       |            |
|  | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD   | RPD Limits |
| Analyte  | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |                     |                      | %     | %          |
| Arsenic  | 20.0         | 2.05            | 96.0      | 96.8       | 94.0    | 94.8     | 5        | 75.0-125    |                     |                      | 0.809 | 20         |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc





Method Blank (MB)

(MB) R3584372-2 10/21/20 14:53

| Analyte                            | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction          | 0.0296             | ⬇            | 0.0217          | 0.100           |
| (S)<br>a,a,a-Trifluorotoluene(FID) | 99.7               |              |                 | 77.0-120        |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3584372-1 10/21/20 14:12

| Analyte                            | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|------------------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) Low Fraction          | 5.50                  | 4.97                | 90.4          | 72.0-127         |               |
| (S)<br>a,a,a-Trifluorotoluene(FID) |                       |                     | 109           | 77.0-120         |               |



Method Blank (MB)

(MB) R3585729-2 10/22/20 05:45

| Analyte                            | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction          | 0.0966             | ⬇            | 0.0217          | 0.100           |
| (S)<br>a,a,a-Trifluorotoluene(FID) | 100                |              |                 | 77.0-120        |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3585729-1 10/22/20 04:27

| Analyte                            | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|------------------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) Low Fraction          | 5.50                  | 5.82                | 106           | 72.0-127         |               |
| (S)<br>a,a,a-Trifluorotoluene(FID) |                       |                     | 106           | 77.0-120         |               |





Method Blank (MB)

(MB) R3584849-3 10/22/20 21:20

| Analyte                   | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene                   | U                  |              | 0.000467        | 0.00100         |
| Ethylbenzene              | U                  |              | 0.000737        | 0.00250         |
| Toluene                   | U                  |              | 0.00130         | 0.00500         |
| Xylenes, Total            | U                  |              | 0.000880        | 0.00650         |
| (S) Toluene-d8            | 108                |              |                 | 75.0-131        |
| (S) 4-Bromofluorobenzene  | 95.6               |              |                 | 67.0-138        |
| (S) 1,2-Dichloroethane-d4 | 85.2               |              |                 | 70.0-130        |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3584849-1 10/22/20 20:00 • (LCSD) R3584849-2 10/22/20 20:20

| Analyte                   | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCSD Result<br>mg/kg | LCS Rec.<br>% | LCSD Rec.<br>% | Rec. Limits<br>% | LCS Qualifier | LCSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene                   | 0.125                 | 0.136               | 0.138                | 109           | 110            | 70.0-123         |               |                | 1.46     | 20              |
| Ethylbenzene              | 0.125                 | 0.115               | 0.116                | 92.0          | 92.8           | 74.0-126         |               |                | 0.866    | 20              |
| Toluene                   | 0.125                 | 0.131               | 0.134                | 105           | 107            | 75.0-121         |               |                | 2.26     | 20              |
| Xylenes, Total            | 0.375                 | 0.340               | 0.351                | 90.7          | 93.6           | 72.0-127         |               |                | 3.18     | 20              |
| (S) Toluene-d8            |                       |                     |                      | 106           | 110            | 75.0-131         |               |                |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                     |                      | 92.8          | 93.2           | 67.0-138         |               |                |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                     |                      | 88.4          | 92.2           | 70.0-130         |               |                |          |                 |

L1273792-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273792-06 10/22/20 22:39 • (MS) R3584849-4 10/23/20 04:37 • (MSD) R3584849-5 10/23/20 04:57

| Analyte                   | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene                   | 0.124                 | ND                       | 0.119              | 0.0968              | 95.3         | 77.4          | 1        | 10.0-149         |              |               | 20.6     | 37              |
| Ethylbenzene              | 0.124                 | ND                       | 0.111              | 0.0957              | 87.9         | 75.6          | 1        | 10.0-160         |              |               | 14.8     | 38              |
| Toluene                   | 0.124                 | 0.0206                   | 0.355              | 0.327               | 270          | 247           | 1        | 10.0-156         | J5           | J5            | 8.21     | 38              |
| Xylenes, Total            | 0.372                 | 0.0811                   | 1.01               | 0.950               | 250          | 234           | 1        | 10.0-160         | J5           | J5            | 6.12     | 38              |
| (S) Toluene-d8            |                       |                          |                    |                     | 105          | 105           |          | 75.0-131         |              |               |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                          |                    |                     | 95.7         | 103           |          | 67.0-138         |              |               |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                          |                    |                     | 77.6         | 78.7          |          | 70.0-130         |              |               |          |                 |





Method Blank (MB)

(MB) R3585116-3 10/23/20 16:24

| Analyte                   | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene                   | U                  |              | 0.000467        | 0.00100         |
| Ethylbenzene              | U                  |              | 0.000737        | 0.00250         |
| Toluene                   | U                  |              | 0.00130         | 0.00500         |
| Xylenes, Total            | U                  |              | 0.000880        | 0.00650         |
| (S) Toluene-d8            | 111                |              |                 | 75.0-131        |
| (S) 4-Bromofluorobenzene  | 105                |              |                 | 67.0-138        |
| (S) 1,2-Dichloroethane-d4 | 106                |              |                 | 70.0-130        |

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3585116-1 10/23/20 15:27 • (LCSD) R3585116-2 10/23/20 15:46

| Analyte                   | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCSD Result<br>mg/kg | LCS Rec.<br>% | LCSD Rec.<br>% | Rec. Limits<br>% | LCS Qualifier | LCSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene                   | 0.125                 | 0.107               | 0.109                | 85.6          | 87.2           | 70.0-123         |               |                | 1.85     | 20              |
| Ethylbenzene              | 0.125                 | 0.132               | 0.133                | 106           | 106            | 74.0-126         |               |                | 0.755    | 20              |
| Toluene                   | 0.125                 | 0.135               | 0.134                | 108           | 107            | 75.0-121         |               |                | 0.743    | 20              |
| Xylenes, Total            | 0.375                 | 0.423               | 0.414                | 113           | 110            | 72.0-127         |               |                | 2.15     | 20              |
| (S) Toluene-d8            |                       |                     |                      | 108           | 109            | 75.0-131         |               |                |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                     |                      | 106           | 104            | 67.0-138         |               |                |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                     |                      | 105           | 102            | 70.0-130         |               |                |          |                 |

L1274488-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1274488-04 10/23/20 22:57 • (MS) R3585116-4 10/24/20 00:12 • (MSD) R3585116-5 10/24/20 00:31

| Analyte                   | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene                   | 0.127                 | 0.00103                  | 0.113              | 0.100               | 89.6         | 79.2          | 1        | 10.0-149         |              |               | 12.2     | 37              |
| Ethylbenzene              | 0.127                 | ND                       | 0.151              | 0.136               | 121          | 109           | 1        | 10.0-160         |              |               | 10.5     | 38              |
| Toluene                   | 0.127                 | ND                       | 0.156              | 0.137               | 125          | 110           | 1        | 10.0-156         |              |               | 13.0     | 38              |
| Xylenes, Total            | 0.382                 | ND                       | 0.473              | 0.417               | 126          | 111           | 1        | 10.0-160         |              |               | 12.6     | 38              |
| (S) Toluene-d8            |                       |                          |                    |                     | 110          | 107           |          | 75.0-131         |              |               |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                          |                    |                     | 107          | 107           |          | 67.0-138         |              |               |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                          |                    |                     | 95.4         | 96.9          |          | 70.0-130         |              |               |          |                 |





Method Blank (MB)

(MB) R3585007-1 10/23/20 09:42

| Analyte                    | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|----------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) High Fraction | U                  |              | 0.769           | 4.00            |
| (S) o-Terphenyl            | 71.3               |              |                 | 18.0-148        |

Laboratory Control Sample (LCS)

(LCS) R3585007-2 10/23/20 10:08

| Analyte                    | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) High Fraction | 50.0                  | 38.7                | 77.4          | 50.0-150         |               |
| (S) o-Terphenyl            |                       |                     | 98.9          | 18.0-148         |               |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3584288-2 10/22/20 02:35

| Analyte                | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene             | U                  |              | 0.00230         | 0.00600         |
| Acenaphthene           | U                  |              | 0.00209         | 0.00600         |
| Acenaphthylene         | U                  |              | 0.00216         | 0.00600         |
| Benzo(a)anthracene     | U                  |              | 0.00173         | 0.00600         |
| Benzo(a)pyrene         | U                  |              | 0.00179         | 0.00600         |
| Benzo(b)fluoranthene   | U                  |              | 0.00153         | 0.00600         |
| Benzo(g,h,i)perylene   | U                  |              | 0.00177         | 0.00600         |
| Benzo(k)fluoranthene   | U                  |              | 0.00215         | 0.00600         |
| Chrysene               | U                  |              | 0.00232         | 0.00600         |
| Dibenz(a,h)anthracene  | U                  |              | 0.00172         | 0.00600         |
| Fluoranthene           | U                  |              | 0.00227         | 0.00600         |
| Fluorene               | U                  |              | 0.00205         | 0.00600         |
| Indeno(1,2,3-cd)pyrene | U                  |              | 0.00181         | 0.00600         |
| Naphthalene            | U                  |              | 0.00408         | 0.0200          |
| Phenanthrene           | U                  |              | 0.00231         | 0.00600         |
| Pyrene                 | U                  |              | 0.00200         | 0.00600         |
| 1-Methylnaphthalene    | U                  |              | 0.00449         | 0.0200          |
| 2-Methylnaphthalene    | U                  |              | 0.00427         | 0.0200          |
| 2-Chloronaphthalene    | U                  |              | 0.00466         | 0.0200          |
| (S) Nitrobenzene-d5    | 82.5               |              |                 | 14.0-149        |
| (S) 2-Fluorobiphenyl   | 88.7               |              |                 | 34.0-125        |
| (S) p-Terphenyl-d14    | 93.3               |              |                 | 23.0-120        |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Laboratory Control Sample (LCS)

(LCS) R3584288-1 10/22/20 02:12

| Analyte               | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|-----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Anthracene            | 0.0800                | 0.0660              | 82.5          | 50.0-126         |               |
| Acenaphthene          | 0.0800                | 0.0716              | 89.5          | 50.0-120         |               |
| Acenaphthylene        | 0.0800                | 0.0682              | 85.3          | 50.0-120         |               |
| Benzo(a)anthracene    | 0.0800                | 0.0694              | 86.8          | 45.0-120         |               |
| Benzo(a)pyrene        | 0.0800                | 0.0511              | 63.9          | 42.0-120         |               |
| Benzo(b)fluoranthene  | 0.0800                | 0.0609              | 76.1          | 42.0-121         |               |
| Benzo(g,h,i)perylene  | 0.0800                | 0.0646              | 80.7          | 45.0-125         |               |
| Benzo(k)fluoranthene  | 0.0800                | 0.0662              | 82.8          | 49.0-125         |               |
| Chrysene              | 0.0800                | 0.0703              | 87.9          | 49.0-122         |               |
| Dibenz(a,h)anthracene | 0.0800                | 0.0663              | 82.9          | 47.0-125         |               |
| Fluoranthene          | 0.0800                | 0.0659              | 82.4          | 49.0-129         |               |



Laboratory Control Sample (LCS)

(LCS) R3584288-1 10/22/20 02:12

| Analyte                | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | <u>LCS Qualifier</u> |
|------------------------|-----------------------|---------------------|---------------|------------------|----------------------|
| Fluorene               | 0.0800                | 0.0694              | 86.8          | 49.0-120         |                      |
| Indeno(1,2,3-cd)pyrene | 0.0800                | 0.0642              | 80.3          | 46.0-125         |                      |
| Naphthalene            | 0.0800                | 0.0675              | 84.4          | 50.0-120         |                      |
| Phenanthrene           | 0.0800                | 0.0675              | 84.4          | 47.0-120         |                      |
| Pyrene                 | 0.0800                | 0.0671              | 83.9          | 43.0-123         |                      |
| 1-Methylnaphthalene    | 0.0800                | 0.0656              | 82.0          | 51.0-121         |                      |
| 2-Methylnaphthalene    | 0.0800                | 0.0621              | 77.6          | 50.0-120         |                      |
| 2-Chloronaphthalene    | 0.0800                | 0.0695              | 86.9          | 50.0-120         |                      |
| (S) Nitrobenzene-d5    |                       |                     | 83.7          | 14.0-149         |                      |
| (S) 2-Fluorobiphenyl   |                       |                     | 87.9          | 34.0-125         |                      |
| (S) p-Terphenyl-d14    |                       |                     | 90.6          | 23.0-120         |                      |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1273863-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273863-04 10/22/20 07:10 • (MS) R3584288-3 10/22/20 07:33 • (MSD) R3584288-4 10/22/20 07:56

| Analyte                | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD<br>% | RPD Limits<br>% |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Anthracene             | 0.0772                | ND                       | 0.0601             | 0.0566              | 77.8         | 73.7          | 1        | 10.0-145         |                     |                      | 6.00     | 30              |
| Acenaphthene           | 0.0772                | ND                       | 0.0628             | 0.0592              | 81.3         | 77.1          | 1        | 14.0-127         |                     |                      | 5.90     | 27              |
| Acenaphthylene         | 0.0772                | ND                       | 0.0598             | 0.0560              | 77.5         | 72.9          | 1        | 21.0-124         |                     |                      | 6.56     | 25              |
| Benzo(a)anthracene     | 0.0772                | ND                       | 0.0614             | 0.0574              | 79.5         | 74.7          | 1        | 10.0-139         |                     |                      | 6.73     | 30              |
| Benzo(a)pyrene         | 0.0772                | ND                       | 0.0537             | 0.0499              | 69.6         | 65.0          | 1        | 10.0-141         |                     |                      | 7.34     | 31              |
| Benzo(b)fluoranthene   | 0.0772                | ND                       | 0.0537             | 0.0505              | 66.5         | 62.6          | 1        | 10.0-140         |                     |                      | 6.14     | 36              |
| Benzo(g,h,i)perylene   | 0.0772                | ND                       | 0.0641             | 0.0596              | 83.0         | 77.6          | 1        | 10.0-140         |                     |                      | 7.28     | 33              |
| Benzo(k)fluoranthene   | 0.0772                | ND                       | 0.0530             | 0.0505              | 68.7         | 65.8          | 1        | 10.0-137         |                     |                      | 4.83     | 31              |
| Chrysene               | 0.0772                | ND                       | 0.0616             | 0.0570              | 79.8         | 74.2          | 1        | 10.0-145         |                     |                      | 7.76     | 30              |
| Dibenz(a,h)anthracene  | 0.0772                | ND                       | 0.0610             | 0.0563              | 79.0         | 73.3          | 1        | 10.0-132         |                     |                      | 8.01     | 31              |
| Fluoranthene           | 0.0772                | ND                       | 0.0578             | 0.0540              | 70.3         | 65.7          | 1        | 10.0-153         |                     |                      | 6.80     | 33              |
| Fluorene               | 0.0772                | ND                       | 0.0614             | 0.0581              | 79.5         | 75.7          | 1        | 11.0-130         |                     |                      | 5.52     | 29              |
| Indeno(1,2,3-cd)pyrene | 0.0772                | ND                       | 0.0604             | 0.0564              | 78.2         | 73.4          | 1        | 10.0-137         |                     |                      | 6.85     | 32              |
| Naphthalene            | 0.0772                | ND                       | 0.0588             | 0.0555              | 76.2         | 72.3          | 1        | 10.0-135         |                     |                      | 5.77     | 27              |
| Phenanthrene           | 0.0772                | ND                       | 0.0590             | 0.0557              | 76.4         | 72.5          | 1        | 10.0-144         |                     |                      | 5.75     | 31              |
| Pyrene                 | 0.0772                | ND                       | 0.0674             | 0.0613              | 81.7         | 74.2          | 1        | 10.0-148         |                     |                      | 9.48     | 35              |
| 1-Methylnaphthalene    | 0.0772                | ND                       | 0.0576             | 0.0548              | 74.6         | 71.4          | 1        | 10.0-142         |                     |                      | 4.98     | 28              |
| 2-Methylnaphthalene    | 0.0772                | ND                       | 0.0544             | 0.0511              | 70.5         | 66.5          | 1        | 10.0-137         |                     |                      | 6.26     | 28              |
| 2-Chloronaphthalene    | 0.0772                | ND                       | 0.0604             | 0.0572              | 78.2         | 74.5          | 1        | 29.0-120         |                     |                      | 5.44     | 24              |
| (S) Nitrobenzene-d5    |                       |                          |                    |                     | 72.0         | 70.3          |          | 14.0-149         |                     |                      |          |                 |
| (S) 2-Fluorobiphenyl   |                       |                          |                    |                     | 80.1         | 77.2          |          | 34.0-125         |                     |                      |          |                 |
| (S) p-Terphenyl-d14    |                       |                          |                    |                     | 90.1         | 85.0          |          | 23.0-120         |                     |                      |          |                 |





## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### Abbreviations and Definitions

|                              |  |
|------------------------------|--|
| MDL                          | Method Detection Limit.  |
| ND                           | Not detected at the Reporting Limit (or MDL where applicable).   |
| RDL                          | Reported Detection Limit.  |
| Rec.                         | Recovery.  |
| RPD                          | Relative Percent Difference.   |
| SDG                          | Sample Delivery Group.   |
| (S)                          | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.   |
| U                            | Not detected at the Reporting Limit (or MDL where applicable).   |
| Analyte                      | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.   |
| Dilution                     | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.  |
| Limits                       | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.  |
| Original Sample              | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.  |
| Qualifier                    | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.  |
| Result                       | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma.   |
| Case Narrative (Cn)          | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.  |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.  |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.  |
| Sample Results (Sr)          | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.   |
| Sample Summary (Ss)          | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.  |

| Qualifier | Description   |
|-----------|---|
| B         | The same analyte is found in the associated blank.  |
| E         | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).     |
| J         | The identification of the analyte is acceptable; the reported value is an estimate.   |
| J1        | Surrogate recovery limits have been exceeded; values are outside upper control limits.  |
| J5        | The sample matrix interfered with the ability to make any accurate determination; spike value is high.  |
| J6        | The sample matrix interfered with the ability to make any accurate determination; spike value is low.   |
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution.   |
| O1        | The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference. |
| T8        | Sample(s) received past/too close to holding time expiration.   |
| V         | The sample concentration is too high to evaluate accurate spike recoveries.   |

|   |    |
|---|----|
| 1 | Cp |
| 2 | Tc |
| 3 | Ss |
| 4 | Cn |
| 5 | Sr |
| 6 | Qc |
| 7 | Gl |
| 8 | Al |
| 9 | Sc |





Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

|                         |             |                             |                  |
|-------------------------|-------------|-----------------------------|------------------|
| Alabama                 | 40660       | Nebraska                    | NE-OS-15-05      |
| Alaska                  | 17-026      | Nevada                      | TN-03-2002-34    |
| Arizona                 | AZ0612      | New Hampshire               | 2975             |
| Arkansas                | 88-0469     | New Jersey–NELAP            | TN002            |
| California              | 2932        | New Mexico <sup>1</sup>     | n/a              |
| Colorado                | TN00003     | New York                    | 11742            |
| Connecticut             | PH-0197     | North Carolina              | Env375           |
| Florida                 | E87487      | North Carolina <sup>1</sup> | DW21704          |
| Georgia                 | NELAP       | North Carolina <sup>3</sup> | 41               |
| Georgia <sup>1</sup>    | 923         | North Dakota                | R-140            |
| Idaho                   | TN00003     | Ohio–VAP                    | CL0069           |
| Illinois                | 200008      | Oklahoma                    | 9915             |
| Indiana                 | C-TN-01     | Oregon                      | TN200002         |
| Iowa                    | 364         | Pennsylvania                | 68-02979         |
| Kansas                  | E-10277     | Rhode Island                | LA000356         |
| Kentucky <sup>1 6</sup> | 90010       | South Carolina              | 84004            |
| Kentucky <sup>2</sup>   | 16          | South Dakota                | n/a              |
| Louisiana               | AI30792     | Tennessee <sup>1 4</sup>    | 2006             |
| Louisiana <sup>1</sup>  | LA180010    | Texas                       | T104704245-18-15 |
| Maine                   | TN0002      | Texas <sup>5</sup>          | LAB0152          |
| Maryland                | 324         | Utah                        | TN00003          |
| Massachusetts           | M-TN003     | Vermont                     | VT2006           |
| Michigan                | 9958        | Virginia                    | 460132           |
| Minnesota               | 047-999-395 | Washington                  | C847             |
| Mississippi             | TN00003     | West Virginia               | 233              |
| Missouri                | 340         | Wisconsin                   | 9980939910       |
| Montana                 | CERT0086    | Wyoming                     | A2LA             |

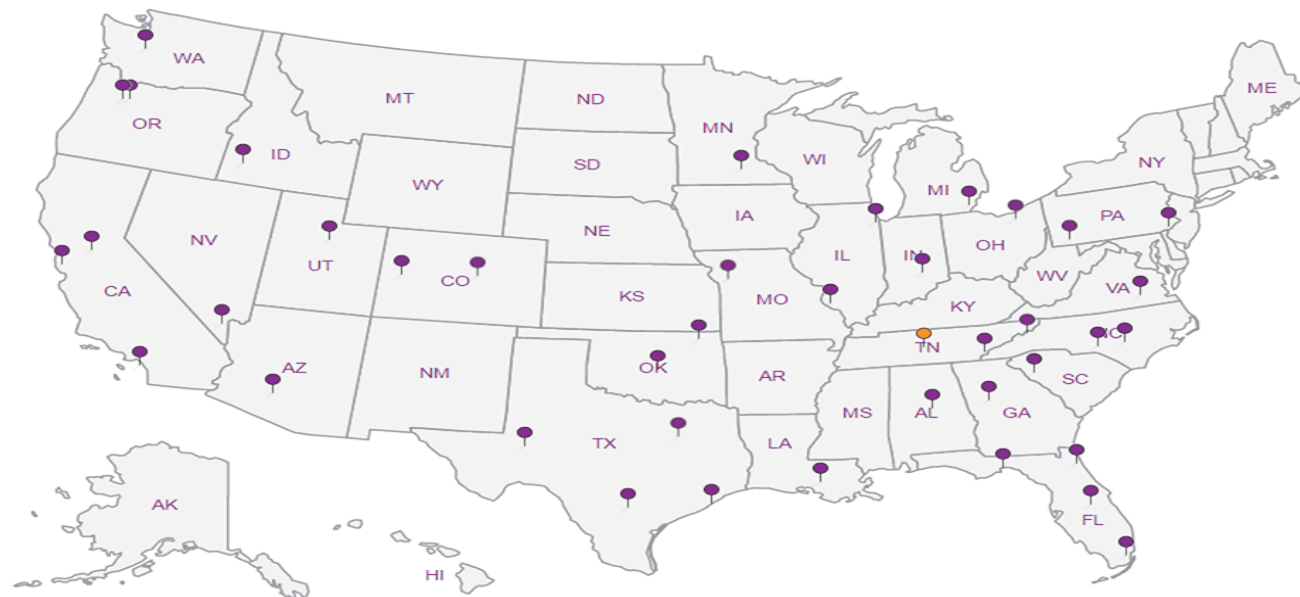
## Third Party Federal Accreditations

|                               |         |                     |               |
|-------------------------------|---------|---------------------|---------------|
| A2LA – ISO 17025              | 1461.01 | AIHA-LAP, LLC EMLAP | 100789        |
| A2LA – ISO 17025 <sup>5</sup> | 1461.02 | DOD                 | 1461.01       |
| Canada                        | 1461.01 | USDA                | P330-15-00234 |
| EPA–Crypto                    | TN00003 |                     |               |

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.





| Company Name/Address:   |           |   |                   | Billing Information:   |      |   |                 | Analysis / Container / Preservative |                            |                  |             |                        |        |     |  |
|---|-----------|---|-------------------|--|------|---|-----------------|-------------------------------------|----------------------------|------------------|-------------|------------------------|--------|-----|--|
| <b>Caerus</b><br>143 Diamond Avenue<br>Parachute, CO 81635                          |           |   |                   | <b>Blair Rollings</b><br>143 Diamond Avenue<br>Parachute, CO 81635   |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
| Report to:<br><b>Blair Rollins</b>  |           |   |                   | Email To:<br><b>brollins@caerusoilandgas.com</b>   |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
| Project Description: <b>C27 North Pit</b>   |           |   |                   | City/State Collected: <b>CO</b>  |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
| Phone: <b>970-640-6919</b>  |           | Client Project #  |                   | Lab Project #  |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
| Fax:  |           |   |                   |  |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
| Collected by (print):<br><b>R. Johns</b>  |           | Site/Facility ID #  |                   | P.O. #   |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
| Collected by (signature):<br>   |           | <b>Rush?</b> (Lab MUST Be Notified)<br>Same Day .....200%<br>Next Day .....100%<br>Two Day .....50%<br>Three Day .....25% |                   | Date Results Needed  |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
| Immediately Packed on Ice N ___ Y <input checked="" type="checkbox"/>               |           |   |                   | Email? ___ No <input checked="" type="checkbox"/> Yes<br>FAX? <input checked="" type="checkbox"/> No ___ Yes |      | No. of Cntrs  | TPH - GRO & DRO | BTEX                                | Table 910-1 Metals in soil | Table 910-1 PAHs | EC, SAR, pH |                        |        |     |  |
| Sample ID   | Comp/Grab | Matrix *  | Depth             | Date   | Time |   |                 |                                     |                            |                  |             |                        |        |     |  |
| 20201014-C27NP-SGMXD (5')   | Grab      | SS  | 5'                | 10/14/20   | 1035 | 2   | X               | X                                   | X                          | X                | X           |                        |        | -01 |  |
| 20201014-C27NP-SGMXD (10')  |           |   | 10'               |  | 1050 | 2   | X               | X                                   | X                          | X                | X           |                        |        | 02  |  |
| 20201014-C27NP-SGMXD (15')  |           |   | 15'               |  | 1115 | 2   | X               | X                                   | X                          | X                | X           |                        |        | 03  |  |
| 20201014-C27NP-SGMXD (20')  |           |   | 20'               |  | 1135 | 2   | X               | X                                   | X                          | X                | X           |                        |        | 04  |  |
| 20201014-C27NP-NBGTB (10')  |           |   | 10'               |  | 1230 | 2   | X               | X                                   | X                          | X                | X           |                        |        | 05  |  |
| 20201014-C27NP-NBGTB (15')  |           |   | 15'               |  | 1235 | 2   | X               | X                                   | X                          | X                | X           |                        |        | 06  |  |
|   |           |   |                   |  |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
|   |           |   |                   |  |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
|   |           |   |                   |  |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
|   |           |   |                   |  |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
|   |           |   |                   |  |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
|   |           |   |                   |  |      |   |                 |                                     |                            |                  |             |                        |        |     |  |
| * Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other |           |   |                   |  |      |   |                 |                                     |                            |                  |             | pH _____ Temp _____    |        |     |  |
| Remarks: <b>1876 2750 8177</b>  |           |   |                   |  |      |   |                 |                                     |                            |                  |             | Flow _____ Other _____ | Hold # |     |  |
| Relinquished by: (Signature)  |           | Date: <b>10/14/20</b>   | Time: <b>1600</b> | Received by: (Signature)   |      | Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____ |                 | Condition: (lab use only)           |                            |                  |             |                        |        |     |  |
| Relinquished by: (Signature)  |           | Date: <b>10/14/20</b>   | Time: <b>1700</b> | Received by: (Signature)   |      | Temp: <b>13</b> °C Bottles Received: <b>12</b>  |                 | COC Seal Intact: ___Y___N___NA      |                            |                  |             |                        |        |     |  |
| Relinquished by: (Signature)  |           | Date:   | Time:             | Received by lab by: (Signature)  |      | Date: <b>10-15-20</b> Time: <b>900</b>  |                 | pH Checked:                         |                            | NCF:             |             |                        |        |     |  |



October 26, 2020

## Caerus Oil and Gas

Sample Delivery Group: L1273795  
Samples Received: 10/15/2020  
Project Number:  
Description: C27South Pit

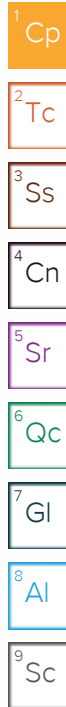
Report To: Blair Rollins  
143 Diamond Avenue  
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.







|   |    |
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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



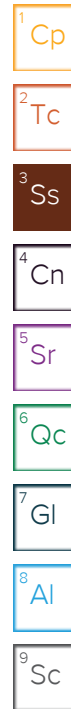
20201014-C27SP-SEWALLA(30') L1273795-01 Solid

Collected by  
R. Johnson

Collected date/time  
10/14/20 09:45

Received date/time  
10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561070 | 1        | 10/21/20 12:33        | 10/21/20 12:33     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:19     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:19     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1563390 | 1        | 10/22/20 09:49        | 10/22/20 12:58     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1563225 | 1        | 10/22/20 10:58        | 10/22/20 13:02     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561140 | 1        | 10/18/20 13:34        | 10/19/20 09:46     | ABL     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/20/20 00:36     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:55     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563094 | 1        | 10/21/20 10:17        | 10/22/20 07:23     | ACG     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1563772 | 1        | 10/21/20 10:17        | 10/22/20 22:59     | JHH     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 40       | 10/22/20 06:44        | 10/23/20 13:30     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 12:31     | JNJ     | Mt. Juliet, TN |

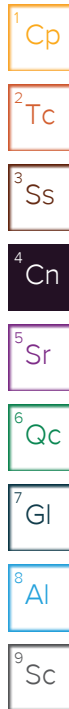






All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward  
Project Manager







Collected date/time: 10/14/20 09:45

L1273795

## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 2.40   |           | 1        | 10/21/2020 12:33     | WG1561070 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 26.1         |           | 1.00      | 1        | 10/22/2020 18:19     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/22/2020 18:19     | <a href="#">WG1561334</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.60      | <a href="#">T8</a> | 1        | 10/22/2020 12:58     | <a href="#">WG1563390</a> |

## Sample Narrative:

L1273795-01 WG1563390: 8.6 at 23.1C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 805             |           | 10.0         | 1        | 10/22/2020 13:02     | <a href="#">WG1563225</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | ND           |           | 0.0400    | 1        | 10/19/2020 09:46     | <a href="#">WG1561140</a> |

## Metals (ICP) by Method 6010B

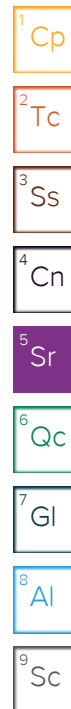
| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 489          |           | 0.500     | 1        | 10/20/2020 00:36     | <a href="#">WG1561163</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/20/2020 00:36     | <a href="#">WG1561163</a> |
| Chromium | 26.1         |           | 1.00      | 1        | 10/20/2020 00:36     | <a href="#">WG1561163</a> |
| Copper   | 23.9         |           | 2.00      | 1        | 10/20/2020 00:36     | <a href="#">WG1561163</a> |
| Lead     | 14.7         |           | 0.500     | 1        | 10/20/2020 00:36     | <a href="#">WG1561163</a> |
| Nickel   | 18.3         |           | 2.00      | 1        | 10/20/2020 00:36     | <a href="#">WG1561163</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/20/2020 00:36     | <a href="#">WG1561163</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/20/2020 00:36     | <a href="#">WG1561163</a> |
| Zinc     | 52.7         |           | 5.00      | 1        | 10/20/2020 00:36     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 17.3         |           | 1.00      | 5        | 10/19/2020 18:55     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 1.67         |           | 0.100     | 1        | 10/22/2020 07:23     | <a href="#">WG1563094</a> |







Collected date/time: 10/14/20 09:45

L1273795

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) a,a,a-Trifluorotoluene(FID) | 77.7            |           | 77.0-120     |          | 10/22/2020 07:23        | <a href="#">WG1563094</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.00100         |           | 0.00100      | 1        | 10/22/2020 22:59        | <a href="#">WG1563772</a> |
| Toluene                   | 0.0441          |           | 0.00500      | 1        | 10/22/2020 22:59        | <a href="#">WG1563772</a> |
| Ethylbenzene              | 0.00300         |           | 0.00250      | 1        | 10/22/2020 22:59        | <a href="#">WG1563772</a> |
| Total Xylenes             | 0.109           |           | 0.00650      | 1        | 10/22/2020 22:59        | <a href="#">WG1563772</a> |
| (S) Toluene-d8            | 105             |           | 75.0-131     |          | 10/22/2020 22:59        | <a href="#">WG1563772</a> |
| (S) 4-Bromofluorobenzene  | 93.8            |           | 67.0-138     |          | 10/22/2020 22:59        | <a href="#">WG1563772</a> |
| (S) 1,2-Dichloroethane-d4 | 83.8            |           | 70.0-130     |          | 10/22/2020 22:59        | <a href="#">WG1563772</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 297             |           | 160          | 40       | 10/23/2020 13:30        | <a href="#">WG1562963</a> |
| (S) o-Terphenyl            | 0.000           | J7        | 18.0-148     |          | 10/23/2020 13:30        | <a href="#">WG1562963</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene             | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Acenaphthene           | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Acenaphthylene         | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene     | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene         | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene   | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene   | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene   | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Chrysene               | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene  | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Fluoranthene           | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Fluorene               | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene | ND              |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Naphthalene            | ND              |           | 0.0200       | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Phenanthrene           | 0.00615         |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| Pyrene                 | 0.00714         |           | 0.00600      | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene    | ND              |           | 0.0200       | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene    | 0.0431          |           | 0.0200       | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene    | ND              |           | 0.0200       | 1        | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| (S) p-Terphenyl-d14    | 87.5            |           | 23.0-120     |          | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5    | 85.4            |           | 14.0-149     |          | 10/22/2020 12:31        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl   | 91.5            |           | 34.0-125     |          | 10/22/2020 12:31        | <a href="#">WG1562551</a> |



Method Blank (MB)

(MB) R3584574-1 10/22/20 18:04

| Analyte             | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|---------------------|--------------------|--------------|-----------------|-----------------|
| Chromium,Hexavalent | U                  |              | 0.640           | 2.00            |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3584574-2 10/22/20 18:08

| Analyte             | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|---------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Chromium,Hexavalent | 24.0                  | 23.1                | 96.1          | 80.0-120         |               |



L1273904-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1273904-16 10/22/20 12:58 • (DUP) R3584423-2 10/22/20 12:58

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 8.05            | 8.09       | 1        | 0.496   |               | 1              |

Sample Narrative:  
OS: 8.05 at 22.5C  
DUP: 8.09 at 22.2C

L1274567-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1274567-02 10/22/20 12:58 • (DUP) R3584423-3 10/22/20 12:58

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 8.98            | 8.92       | 1        | 0.670   |               | 1              |

Sample Narrative:  
OS: 8.98 at 22.4C  
DUP: 8.92 at 22.1C

Laboratory Control Sample (LCS)

(LCS) R3584423-1 10/22/20 12:58

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | su           | su         | %        | %           |               |
| pH      | 10.0         | 10.0       | 100      | 99.0-101    |               |

Sample Narrative:  
LCS: 10.02 at 21.1C

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Method Blank (MB)

(MB) R3584378-1 10/22/20 13:02

| Analyte              | MB Result | MB Qualifier | MB MDL   | MB RDL   |
|----------------------|-----------|--------------|----------|----------|
|                      | umhos/cm  |              | umhos/cm | umhos/cm |
| Specific Conductance | U         |              | 10.0     | 10.0     |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L1273863-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1273863-05 10/22/20 13:02 • (DUP) R3584378-3 10/22/20 13:02

| Analyte              | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------------------|-----------------|------------|----------|---------|---------------|----------------|
|                      | umhos/cm        | umhos/cm   |          | %       |               | %              |
| Specific Conductance | 189             | 186        | 1        | 1.50    |               | 20             |

Laboratory Control Sample (LCS)

(LCS) R3584378-2 10/22/20 13:02

| Analyte              | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------------------|--------------|------------|----------|-------------|---------------|
|                      | umhos/cm     | umhos/cm   | %        | %           |               |
| Specific Conductance | 326          | 324        | 99.4     | 85.0-115    |               |





Method Blank (MB)

(MB) R3583009-1 10/19/20 09:00

|         | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Analyte | mg/kg     |              | mg/kg  | mg/kg  |
| Mercury | U         |              | 0.0180 | 0.0400 |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

Laboratory Control Sample (LCS)

(LCS) R3583009-2 10/19/20 09:02

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/kg        | mg/kg      | %        | %           |               |
| Mercury | 0.500        | 0.516      | 103      | 80.0-120    |               |

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1274146-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1274146-02 10/19/20 09:05 • (MS) R3583009-3 10/19/20 09:07 • (MSD) R3583009-4 10/19/20 09:10

|         | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD  | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Analyte | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %    | %          |
| Mercury | 0.500        | ND              | 0.440     | 0.468      | 84.3    | 89.9     | 1        | 75.0-125    |              |               | 6.16 | 20         |





Method Blank (MB)

(MB) R3583283-1 10/19/20 23:53

| Analyte  | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|----------|--------------------|--------------|-----------------|-----------------|
| Barium   | U                  |              | 0.240           | 0.500           |
| Cadmium  | U                  |              | 0.0810          | 0.500           |
| Chromium | U                  |              | 0.250           | 1.00            |
| Copper   | U                  |              | 0.506           | 2.00            |
| Lead     | U                  |              | 0.208           | 0.500           |
| Nickel   | U                  |              | 0.490           | 2.00            |
| Selenium | U                  |              | 0.617           | 2.00            |
| Silver   | U                  |              | 0.228           | 1.00            |
| Zinc     | 1.02               | ⬇            | 0.939           | 5.00            |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3583283-2 10/19/20 23:55

| Analyte  | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------|-----------------------|---------------------|---------------|------------------|---------------|
| Barium   | 100                   | 107                 | 107           | 80.0-120         |               |
| Cadmium  | 100                   | 104                 | 104           | 80.0-120         |               |
| Chromium | 100                   | 107                 | 107           | 80.0-120         |               |
| Copper   | 100                   | 107                 | 107           | 80.0-120         |               |
| Lead     | 100                   | 102                 | 102           | 80.0-120         |               |
| Nickel   | 100                   | 105                 | 105           | 80.0-120         |               |
| Selenium | 100                   | 104                 | 104           | 80.0-120         |               |
| Silver   | 20.0                  | 19.1                | 95.7          | 80.0-120         |               |
| Zinc     | 100                   | 104                 | 104           | 80.0-120         |               |

L1273792-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273792-05 10/19/20 23:58 • (MS) R3583283-5 10/20/20 00:07 • (MSD) R3583283-6 10/20/20 00:10

| Analyte  | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Barium   | 100                   | 8850                     | 9600               | 8940                | 749          | 87.8          | 1        | 75.0-125         | EV           | E             | 7.13     | 20              |
| Cadmium  | 100                   | ND                       | 109                | 97.0                | 109          | 97.0          | 1        | 75.0-125         |              |               | 11.9     | 20              |
| Chromium | 100                   | 18.4                     | 119                | 110                 | 101          | 91.4          | 1        | 75.0-125         |              |               | 8.35     | 20              |
| Copper   | 100                   | 21.1                     | 132                | 120                 | 111          | 99.3          | 1        | 75.0-125         |              |               | 9.20     | 20              |
| Lead     | 100                   | 19.3                     | 128                | 118                 | 109          | 98.9          | 1        | 75.0-125         |              |               | 8.28     | 20              |
| Nickel   | 100                   | 11.8                     | 121                | 111                 | 110          | 98.7          | 1        | 75.0-125         |              |               | 9.47     | 20              |
| Selenium | 100                   | ND                       | 111                | 98.3                | 109          | 96.8          | 1        | 75.0-125         |              |               | 11.9     | 20              |
| Silver   | 20.0                  | ND                       | 20.7               | 18.6                | 103          | 93.1          | 1        | 75.0-125         |              |               | 10.5     | 20              |
| Zinc     | 100                   | 44.5                     | 142                | 136                 | 97.9         | 91.1          | 1        | 75.0-125         |              |               | 4.88     | 20              |





Method Blank (MB)

(MB) R3583210-1 10/19/20 17:47

|         | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Analyte | mg/kg     |              | mg/kg  | mg/kg  |
| Arsenic | U         |              | 0.100  | 1.00   |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3583210-2 10/19/20 17:51

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/kg        | mg/kg      | %        | %           |               |
| Arsenic | 100          | 103        | 103      | 80.0-120    |               |

L1273954-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273954-01 10/19/20 17:54 • (MS) R3583210-5 10/19/20 18:05 • (MSD) R3583210-6 10/19/20 18:08

|         | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD   | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %     | %          |
| Arsenic | 20.0         | 2.05            | 96.0      | 96.8       | 94.0    | 94.8     | 5        | 75.0-125    |              |               | 0.809 | 20         |





Method Blank (MB)

(MB) R3585729-2 10/22/20 05:45

| Analyte                            | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction          | 0.0966             | ⬇            | 0.0217          | 0.100           |
| (S)<br>a,a,a-Trifluorotoluene(FID) | 100                |              |                 | 77.0-120        |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3585729-1 10/22/20 04:27

| Analyte                            | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|------------------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) Low Fraction          | 5.50                  | 5.82                | 106           | 72.0-127         |               |
| (S)<br>a,a,a-Trifluorotoluene(FID) |                       |                     | 106           | 77.0-120         |               |





Method Blank (MB)

(MB) R3584849-3 10/22/20 21:20

| Analyte                   | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene                   | U                  |              | 0.000467        | 0.00100         |
| Ethylbenzene              | U                  |              | 0.000737        | 0.00250         |
| Toluene                   | U                  |              | 0.00130         | 0.00500         |
| Xylenes, Total            | U                  |              | 0.000880        | 0.00650         |
| (S) Toluene-d8            | 108                |              |                 | 75.0-131        |
| (S) 4-Bromofluorobenzene  | 95.6               |              |                 | 67.0-138        |
| (S) 1,2-Dichloroethane-d4 | 85.2               |              |                 | 70.0-130        |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3584849-1 10/22/20 20:00 • (LCSD) R3584849-2 10/22/20 20:20

| Analyte                   | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCSD Result<br>mg/kg | LCS Rec.<br>% | LCSD Rec.<br>% | Rec. Limits<br>% | LCS Qualifier | LCSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene                   | 0.125                 | 0.136               | 0.138                | 109           | 110            | 70.0-123         |               |                | 1.46     | 20              |
| Ethylbenzene              | 0.125                 | 0.115               | 0.116                | 92.0          | 92.8           | 74.0-126         |               |                | 0.866    | 20              |
| Toluene                   | 0.125                 | 0.131               | 0.134                | 105           | 107            | 75.0-121         |               |                | 2.26     | 20              |
| Xylenes, Total            | 0.375                 | 0.340               | 0.351                | 90.7          | 93.6           | 72.0-127         |               |                | 3.18     | 20              |
| (S) Toluene-d8            |                       |                     |                      | 106           | 110            | 75.0-131         |               |                |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                     |                      | 92.8          | 93.2           | 67.0-138         |               |                |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                     |                      | 88.4          | 92.2           | 70.0-130         |               |                |          |                 |

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) • (MS) R3584849-4 10/23/20 04:37 • (MSD) R3584849-5 10/23/20 04:57

| Analyte                   | Spike Amount<br>mg/kg | Original Result | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|-----------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene                   | 0.124                 |                 | 0.119              | 0.0968              | 95.3         | 77.4          | 1        | 10.0-149         |              |               | 20.6     | 37              |
| Ethylbenzene              | 0.124                 |                 | 0.111              | 0.0957              | 87.9         | 75.6          | 1        | 10.0-160         |              |               | 14.8     | 38              |
| Toluene                   | 0.124                 |                 | 0.355              | 0.327               | 270          | 247           | 1        | 10.0-156         | J5           | J5            | 8.21     | 38              |
| Xylenes, Total            | 0.372                 |                 | 1.01               | 0.950               | 250          | 234           | 1        | 10.0-160         | J5           | J5            | 6.12     | 38              |
| (S) Toluene-d8            |                       |                 |                    |                     | 105          | 105           |          | 75.0-131         |              |               |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                 |                    |                     | 95.7         | 103           |          | 67.0-138         |              |               |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                 |                    |                     | 77.6         | 78.7          |          | 70.0-130         |              |               |          |                 |



Method Blank (MB)

(MB) R3585007-1 10/23/20 09:42

| Analyte                    | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|----------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) High Fraction | U                  |              | 0.769           | 4.00            |
| (S) o-Terphenyl            | 71.3               |              |                 | 18.0-148        |

Laboratory Control Sample (LCS)

(LCS) R3585007-2 10/23/20 10:08

| Analyte                    | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) High Fraction | 50.0                  | 38.7                | 77.4          | 50.0-150         |               |
| (S) o-Terphenyl            |                       |                     | 98.9          | 18.0-148         |               |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3584288-2 10/22/20 02:35

| Analyte                | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene             | U                  |              | 0.00230         | 0.00600         |
| Acenaphthene           | U                  |              | 0.00209         | 0.00600         |
| Acenaphthylene         | U                  |              | 0.00216         | 0.00600         |
| Benzo(a)anthracene     | U                  |              | 0.00173         | 0.00600         |
| Benzo(a)pyrene         | U                  |              | 0.00179         | 0.00600         |
| Benzo(b)fluoranthene   | U                  |              | 0.00153         | 0.00600         |
| Benzo(g,h,i)perylene   | U                  |              | 0.00177         | 0.00600         |
| Benzo(k)fluoranthene   | U                  |              | 0.00215         | 0.00600         |
| Chrysene               | U                  |              | 0.00232         | 0.00600         |
| Dibenz(a,h)anthracene  | U                  |              | 0.00172         | 0.00600         |
| Fluoranthene           | U                  |              | 0.00227         | 0.00600         |
| Fluorene               | U                  |              | 0.00205         | 0.00600         |
| Indeno(1,2,3-cd)pyrene | U                  |              | 0.00181         | 0.00600         |
| Naphthalene            | U                  |              | 0.00408         | 0.0200          |
| Phenanthrene           | U                  |              | 0.00231         | 0.00600         |
| Pyrene                 | U                  |              | 0.00200         | 0.00600         |
| 1-Methylnaphthalene    | U                  |              | 0.00449         | 0.0200          |
| 2-Methylnaphthalene    | U                  |              | 0.00427         | 0.0200          |
| 2-Chloronaphthalene    | U                  |              | 0.00466         | 0.0200          |
| (S) Nitrobenzene-d5    | 82.5               |              |                 | 14.0-149        |
| (S) 2-Fluorobiphenyl   | 88.7               |              |                 | 34.0-125        |
| (S) p-Terphenyl-d14    | 93.3               |              |                 | 23.0-120        |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3584288-1 10/22/20 02:12

| Analyte               | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|-----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Anthracene            | 0.0800                | 0.0660              | 82.5          | 50.0-126         |               |
| Acenaphthene          | 0.0800                | 0.0716              | 89.5          | 50.0-120         |               |
| Acenaphthylene        | 0.0800                | 0.0682              | 85.3          | 50.0-120         |               |
| Benzo(a)anthracene    | 0.0800                | 0.0694              | 86.8          | 45.0-120         |               |
| Benzo(a)pyrene        | 0.0800                | 0.0511              | 63.9          | 42.0-120         |               |
| Benzo(b)fluoranthene  | 0.0800                | 0.0609              | 76.1          | 42.0-121         |               |
| Benzo(g,h,i)perylene  | 0.0800                | 0.0646              | 80.7          | 45.0-125         |               |
| Benzo(k)fluoranthene  | 0.0800                | 0.0662              | 82.8          | 49.0-125         |               |
| Chrysene              | 0.0800                | 0.0703              | 87.9          | 49.0-122         |               |
| Dibenz(a,h)anthracene | 0.0800                | 0.0663              | 82.9          | 47.0-125         |               |
| Fluoranthene          | 0.0800                | 0.0659              | 82.4          | 49.0-129         |               |



Laboratory Control Sample (LCS)

(LCS) R3584288-1 10/22/20 02:12

| Analyte                | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | <u>LCS Qualifier</u> |
|------------------------|-----------------------|---------------------|---------------|------------------|----------------------|
| Fluorene               | 0.0800                | 0.0694              | 86.8          | 49.0-120         |                      |
| Indeno(1,2,3-cd)pyrene | 0.0800                | 0.0642              | 80.3          | 46.0-125         |                      |
| Naphthalene            | 0.0800                | 0.0675              | 84.4          | 50.0-120         |                      |
| Phenanthrene           | 0.0800                | 0.0675              | 84.4          | 47.0-120         |                      |
| Pyrene                 | 0.0800                | 0.0671              | 83.9          | 43.0-123         |                      |
| 1-Methylnaphthalene    | 0.0800                | 0.0656              | 82.0          | 51.0-121         |                      |
| 2-Methylnaphthalene    | 0.0800                | 0.0621              | 77.6          | 50.0-120         |                      |
| 2-Chloronaphthalene    | 0.0800                | 0.0695              | 86.9          | 50.0-120         |                      |
| (S) Nitrobenzene-d5    |                       |                     | 83.7          | 14.0-149         |                      |
| (S) 2-Fluorobiphenyl   |                       |                     | 87.9          | 34.0-125         |                      |
| (S) p-Terphenyl-d14    |                       |                     | 90.6          | 23.0-120         |                      |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc





## Guide to Reading and Understanding Your Laboratory Report

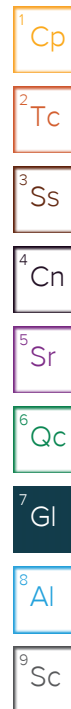
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### Abbreviations and Definitions

|                              |  |
|------------------------------|--|
| MDL                          | Method Detection Limit.  |
| ND                           | Not detected at the Reporting Limit (or MDL where applicable).   |
| RDL                          | Reported Detection Limit.  |
| Rec.                         | Recovery.  |
| RPD                          | Relative Percent Difference.   |
| SDG                          | Sample Delivery Group.   |
| (S)                          | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.   |
| U                            | Not detected at the Reporting Limit (or MDL where applicable).   |
| Analyte                      | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.   |
| Dilution                     | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.  |
| Limits                       | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.  |
| Original Sample              | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.  |
| Qualifier                    | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.  |
| Result                       | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma.   |
| Case Narrative (Cn)          | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.  |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.  |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.  |
| Sample Results (Sr)          | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.   |
| Sample Summary (Ss)          | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.  |

| Qualifier | Description   |
|-----------|---|
| E         | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J         | The identification of the analyte is acceptable; the reported value is an estimate.   |
| J5        | The sample matrix interfered with the ability to make any accurate determination; spike value is high.                                      |
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution.   |
| T8        | Sample(s) received past/too close to holding time expiration.   |
| V         | The sample concentration is too high to evaluate accurate spike recoveries.   |







Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

|                         |             |                             |                  |
|-------------------------|-------------|-----------------------------|------------------|
| Alabama                 | 40660       | Nebraska                    | NE-OS-15-05      |
| Alaska                  | 17-026      | Nevada                      | TN-03-2002-34    |
| Arizona                 | AZ0612      | New Hampshire               | 2975             |
| Arkansas                | 88-0469     | New Jersey–NELAP            | TN002            |
| California              | 2932        | New Mexico <sup>1</sup>     | n/a              |
| Colorado                | TN00003     | New York                    | 11742            |
| Connecticut             | PH-0197     | North Carolina              | Env375           |
| Florida                 | E87487      | North Carolina <sup>1</sup> | DW21704          |
| Georgia                 | NELAP       | North Carolina <sup>3</sup> | 41               |
| Georgia <sup>1</sup>    | 923         | North Dakota                | R-140            |
| Idaho                   | TN00003     | Ohio–VAP                    | CL0069           |
| Illinois                | 200008      | Oklahoma                    | 9915             |
| Indiana                 | C-TN-01     | Oregon                      | TN200002         |
| Iowa                    | 364         | Pennsylvania                | 68-02979         |
| Kansas                  | E-10277     | Rhode Island                | LA000356         |
| Kentucky <sup>1 6</sup> | 90010       | South Carolina              | 84004            |
| Kentucky <sup>2</sup>   | 16          | South Dakota                | n/a              |
| Louisiana               | AI30792     | Tennessee <sup>1 4</sup>    | 2006             |
| Louisiana <sup>1</sup>  | LA180010    | Texas                       | T104704245-18-15 |
| Maine                   | TN0002      | Texas <sup>5</sup>          | LAB0152          |
| Maryland                | 324         | Utah                        | TN00003          |
| Massachusetts           | M-TN003     | Vermont                     | VT2006           |
| Michigan                | 9958        | Virginia                    | 460132           |
| Minnesota               | 047-999-395 | Washington                  | C847             |
| Mississippi             | TN00003     | West Virginia               | 233              |
| Missouri                | 340         | Wisconsin                   | 9980939910       |
| Montana                 | CERT0086    | Wyoming                     | A2LA             |

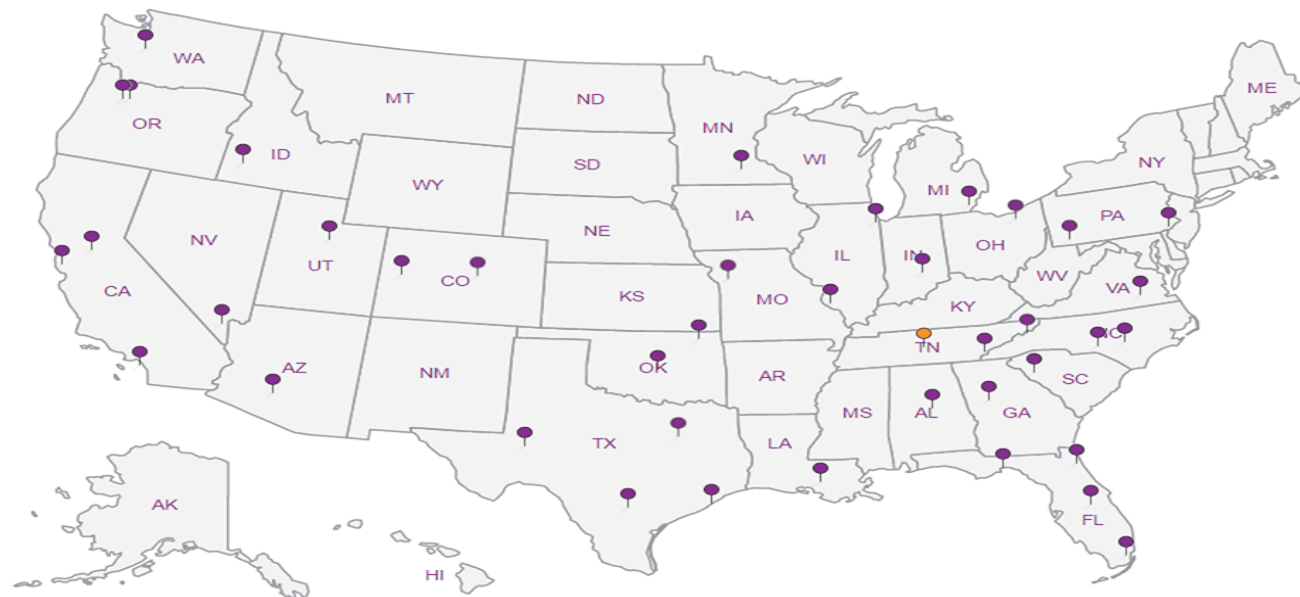
## Third Party Federal Accreditations

|                               |         |                     |               |
|-------------------------------|---------|---------------------|---------------|
| A2LA – ISO 17025              | 1461.01 | AIHA-LAP, LLC EMLAP | 100789        |
| A2LA – ISO 17025 <sup>5</sup> | 1461.02 | DOD                 | 1461.01       |
| Canada                        | 1461.01 | USDA                | P330-15-00234 |
| EPA–Crypto                    | TN00003 |                     |               |

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.





[illegible]



# ANALYTICAL REPORT

December 10, 2020

Revised Report

## Caerus Oil and Gas

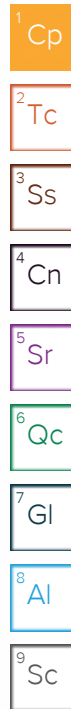
Sample Delivery Group: L1273792  
Samples Received: 10/15/2020  
Project Number:  
Description: C27 North Pit  
  
Report To: Blair Rollins  
143 Diamond Avenue  
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.







|   |           |
|---|-----------|
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<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20201014-C27NP-SBMID(5') L1273792-01 Solid

Collected by R. Johnson  
Collected date/time 10/14/20 10:35  
Received date/time 10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 12:30        | 10/20/20 12:30     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:09     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:09     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1562685 | 1        | 10/21/20 09:10        | 10/21/20 12:29     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561139 | 1        | 10/19/20 10:57        | 10/19/20 19:40     | TCT     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/20/20 00:16     | CCE     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 5        | 10/18/20 16:18        | 10/20/20 02:44     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:34     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563017 | 1        | 10/20/20 21:52        | 10/21/20 21:17     | ADM     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1564334 | 1        | 10/20/20 21:52        | 10/23/20 19:48     | ADM     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 10       | 10/22/20 06:44        | 10/23/20 12:22     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 10:13     | JNJ     | Mt. Juliet, TN |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

20201014-C27NP-SBMID(10') L1273792-02 Solid

Collected by R. Johnson  
Collected date/time 10/14/20 10:50  
Received date/time 10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 12:32        | 10/20/20 12:32     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:13     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:13     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1562685 | 1        | 10/21/20 09:10        | 10/21/20 12:29     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561139 | 1        | 10/19/20 10:57        | 10/19/20 19:43     | TCT     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/20/20 00:19     | CCE     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 5        | 10/18/20 16:18        | 10/20/20 02:46     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:37     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563017 | 1        | 10/20/20 21:52        | 10/21/20 21:38     | ADM     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1564334 | 1        | 10/20/20 21:52        | 10/23/20 20:07     | ADM     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 10       | 10/22/20 06:44        | 10/25/20 01:00     | JN      | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 10:36     | JNJ     | Mt. Juliet, TN |

20201014-C27NP-SBMID(15') L1273792-03 Solid

Collected by R. Johnson  
Collected date/time 10/14/20 11:15  
Received date/time 10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 12:35        | 10/20/20 12:35     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:14     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:14     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1562685 | 1        | 10/21/20 09:10        | 10/21/20 12:29     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561139 | 1        | 10/19/20 10:57        | 10/19/20 19:45     | TCT     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/20/20 00:27     | CCE     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 5        | 10/18/20 16:18        | 10/20/20 02:49     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:41     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563017 | 1        | 10/20/20 21:52        | 10/21/20 21:58     | ADM     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1564334 | 1        | 10/20/20 21:52        | 10/23/20 20:26     | ADM     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 10       | 10/22/20 06:44        | 10/23/20 12:36     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 10:59     | JNJ     | Mt. Juliet, TN |



# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



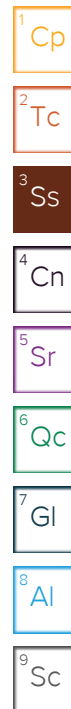
## 20201014-C27NP-SBMID(20') L1273792-04 Solid

Collected by  
R. Johnson

Collected date/time  
10/14/20 11:35

Received date/time  
10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 12:38        | 10/20/20 12:38     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:15     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:15     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1562685 | 1        | 10/21/20 09:10        | 10/21/20 12:29     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561139 | 1        | 10/19/20 10:57        | 10/19/20 19:48     | TCT     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/20/20 00:30     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:44     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563017 | 1        | 10/20/20 21:52        | 10/21/20 22:19     | ADM     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1564334 | 1        | 10/20/20 21:52        | 10/23/20 20:44     | ADM     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 20       | 10/22/20 06:44        | 10/23/20 12:49     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 11:22     | JNJ     | Mt. Juliet, TN |



## 20201014-C27NP-NBOTB(10') L1273792-05 Solid

Collected by  
R. Johnson

Collected date/time  
10/14/20 12:20

Received date/time  
10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 12:46        | 10/20/20 12:46     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:17     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:17     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1562685 | 1        | 10/21/20 09:10        | 10/21/20 12:29     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561139 | 1        | 10/19/20 10:57        | 10/19/20 19:50     | TCT     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/19/20 23:58     | CCE     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 5        | 10/18/20 16:18        | 10/20/20 02:41     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:48     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563094 | 1        | 10/20/20 21:52        | 10/22/20 06:37     | ACG     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1563772 | 1        | 10/20/20 21:52        | 10/22/20 22:19     | JHH     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 10       | 10/22/20 06:44        | 10/23/20 13:03     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 11:45     | JNJ     | Mt. Juliet, TN |

## 20201014-C27NP-NBOTB(15') L1273792-06 Solid

Collected by  
R. Johnson

Collected date/time  
10/14/20 12:35

Received date/time  
10/15/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561070 | 1        | 10/21/20 12:30        | 10/21/20 12:30     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561163 | 1        | 10/18/20 16:18        | 10/22/20 18:18     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561334 | 1        | 10/21/20 20:20        | 10/22/20 18:18     | KEG     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1563390 | 1        | 10/22/20 09:26        | 10/22/20 12:58     | KLS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1563225 | 1        | 10/22/20 10:58        | 10/22/20 13:02     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561139 | 1        | 10/19/20 10:57        | 10/19/20 19:53     | TCT     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561163 | 1        | 10/18/20 16:18        | 10/20/20 00:33     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:51     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1563094 | 1        | 10/20/20 21:52        | 10/22/20 07:00     | ACG     | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1563772 | 1        | 10/20/20 21:52        | 10/22/20 22:39     | JHH     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562963 | 40       | 10/22/20 06:44        | 10/23/20 13:16     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562551 | 1        | 10/21/20 18:16        | 10/22/20 12:08     | JNJ     | Mt. Juliet, TN |





All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward  
Project Manager

### Report Revision History

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Level II Report - Version 1: 10/27/20 10:08

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 6.46   |           | 1        | 10/20/2020 12:30     | WG1561069 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 22.7         |           | 1.00      | 1        | 10/22/2020 18:09     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier             | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------------------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           | <a href="#">J6 O1</a> | 2.00      | 1        | 10/22/2020 18:09     | <a href="#">WG1561334</a> |

## Sample Narrative:

L1273792-01 WG1561334: sample is a reducer

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 10.0      | <a href="#">T8</a> | 1        | 10/21/2020 12:29     | <a href="#">WG1562685</a> |

## Sample Narrative:

L1273792-01 WG1562685: 10.01 at 21.7C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 6040            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | 0.0502       |           | 0.0400    | 1        | 10/19/2020 19:40     | <a href="#">WG1561139</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 10700        |           | 2.50      | 5        | 10/20/2020 02:44     | <a href="#">WG1561163</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Chromium | 22.7         |           | 1.00      | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Copper   | 20.8         |           | 2.00      | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Lead     | 17.4         |           | 0.500     | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Nickel   | 15.7         |           | 2.00      | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |
| Zinc     | 50.8         |           | 5.00      | 1        | 10/20/2020 00:16     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 12.9         |           | 1.00      | 5        | 10/19/2020 18:34     | <a href="#">WG1561534</a> |

|                 |
|-----------------|
| <sup>1</sup> Cp |
| <sup>2</sup> Tc |
| <sup>3</sup> Ss |
| <sup>4</sup> Cn |
| <sup>5</sup> Sr |
| <sup>6</sup> Qc |
| <sup>7</sup> Gl |
| <sup>8</sup> Al |
| <sup>9</sup> Sc |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction               | 1.07            |           | 0.100        | 1        | 10/21/2020 21:17        | <a href="#">WG1563017</a> |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 87.9            |           | 77.0-120     |          | 10/21/2020 21:17        | <a href="#">WG1563017</a> |

## Volatile Organic Compounds (GC/MS) by Method 8260B

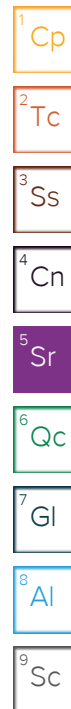
| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.00470         |           | 0.00100      | 1        | 10/23/2020 19:48        | <a href="#">WG1564334</a> |
| Toluene                   | 0.135           |           | 0.00500      | 1        | 10/23/2020 19:48        | <a href="#">WG1564334</a> |
| Ethylbenzene              | 0.00943         |           | 0.00250      | 1        | 10/23/2020 19:48        | <a href="#">WG1564334</a> |
| Total Xylenes             | 0.460           |           | 0.00650      | 1        | 10/23/2020 19:48        | <a href="#">WG1564334</a> |
| (S) Toluene-d8            | 110             |           | 75.0-131     |          | 10/23/2020 19:48        | <a href="#">WG1564334</a> |
| (S) 4-Bromofluorobenzene  | 105             |           | 67.0-138     |          | 10/23/2020 19:48        | <a href="#">WG1564334</a> |
| (S) 1,2-Dichloroethane-d4 | 113             |           | 70.0-130     |          | 10/23/2020 19:48        | <a href="#">WG1564334</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 442             |           | 40.0         | 10       | 10/23/2020 12:22        | <a href="#">WG1562963</a> |
| (S) <i>o</i> -Terphenyl    | 80.3            |           | 18.0-148     |          | 10/23/2020 12:22        | <a href="#">WG1562963</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                     | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|-----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene                  | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Acenaphthene                | 0.0235          |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Acenaphthylene              | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene          | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene              | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Chrysene                    | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene       | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Fluoranthene                | 0.00906         |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Fluorene                    | 0.0257          |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene      | ND              |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Naphthalene                 | 0.0915          |           | 0.0200       | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Phenanthrene                | 0.149           |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| Pyrene                      | 0.0370          |           | 0.00600      | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene         | 0.119           |           | 0.0200       | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene         | 0.264           |           | 0.0200       | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene         | ND              |           | 0.0200       | 1        | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| (S) <i>p</i> -Terphenyl-d14 | 93.9            |           | 23.0-120     |          | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5         | 85.0            |           | 14.0-149     |          | 10/22/2020 10:13        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl        | 86.7            |           | 34.0-125     |          | 10/22/2020 10:13        | <a href="#">WG1562551</a> |







## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 11.8   |           | 1        | 10/20/2020 12:32     | WG1561069 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 19.3         |           | 1.00      | 1        | 10/22/2020 18:13     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/22/2020 18:13     | <a href="#">WG1561334</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.93      | <a href="#">T8</a> | 1        | 10/21/2020 12:29     | <a href="#">WG1562685</a> |

## Sample Narrative:

L1273792-02 WG1562685: 8.93 at 21.6C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 920             |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | 0.0405       |           | 0.0400    | 1        | 10/19/2020 19:43     | <a href="#">WG1561139</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 11500        |           | 2.50      | 5        | 10/20/2020 02:46     | <a href="#">WG1561163</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Chromium | 19.3         |           | 1.00      | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Copper   | 23.5         |           | 2.00      | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Lead     | 17.9         |           | 0.500     | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Nickel   | 13.3         |           | 2.00      | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |
| Zinc     | 42.6         |           | 5.00      | 1        | 10/20/2020 00:19     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 9.16         |           | 1.00      | 5        | 10/19/2020 18:37     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.879        |           | 0.100     | 1        | 10/21/2020 21:38     | <a href="#">WG1563017</a> |







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 90.1            |           | 77.0-120     |          | 10/21/2020 21:38        | <a href="#">WG1563017</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.0238          |           | 0.00100      | 1        | 10/23/2020 20:07        | <a href="#">WG1564334</a> |
| Toluene                   | 0.00703         |           | 0.00500      | 1        | 10/23/2020 20:07        | <a href="#">WG1564334</a> |
| Ethylbenzene              | 0.00607         |           | 0.00250      | 1        | 10/23/2020 20:07        | <a href="#">WG1564334</a> |
| Total Xylenes             | 0.0260          |           | 0.00650      | 1        | 10/23/2020 20:07        | <a href="#">WG1564334</a> |
| (S) Toluene-d8            | 111             |           | 75.0-131     |          | 10/23/2020 20:07        | <a href="#">WG1564334</a> |
| (S) 4-Bromofluorobenzene  | 108             |           | 67.0-138     |          | 10/23/2020 20:07        | <a href="#">WG1564334</a> |
| (S) 1,2-Dichloroethane-d4 | 96.9            |           | 70.0-130     |          | 10/23/2020 20:07        | <a href="#">WG1564334</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 359             |           | 40.0         | 10       | 10/25/2020 01:00        | <a href="#">WG1562963</a> |
| (S) <i>o</i> -Terphenyl    | 92.9            |           | 18.0-148     |          | 10/25/2020 01:00        | <a href="#">WG1562963</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                     | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|-----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene                  | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Acenaphthene                | 0.0159          |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Acenaphthylene              | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene          | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene              | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Chrysene                    | 0.00644         |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene       | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Fluoranthene                | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Fluorene                    | 0.0262          |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene      | ND              |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Naphthalene                 | 0.0831          |           | 0.0200       | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Phenanthrene                | 0.129           |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| Pyrene                      | 0.0290          |           | 0.00600      | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene         | 0.100           |           | 0.0200       | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene         | 0.232           |           | 0.0200       | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene         | ND              |           | 0.0200       | 1        | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| (S) <i>p</i> -Terphenyl-d14 | 77.6            |           | 23.0-120     |          | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5         | 70.2            |           | 14.0-149     |          | 10/22/2020 10:36        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl        | 82.8            |           | 34.0-125     |          | 10/22/2020 10:36        | <a href="#">WG1562551</a> |





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 10.7   |           | 1        | 10/20/2020 12:35     | WG1561069 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 20.4         |           | 1.00      | 1        | 10/22/2020 18:14     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/22/2020 18:14     | <a href="#">WG1561334</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 10.0      | <a href="#">T8</a> | 1        | 10/21/2020 12:29     | <a href="#">WG1562685</a> |

## Sample Narrative:

L1273792-03 WG1562685: 10.02 at 21.5C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 1440            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | 0.0465       |           | 0.0400    | 1        | 10/19/2020 19:45     | <a href="#">WG1561139</a> |

## Metals (ICP) by Method 6010B

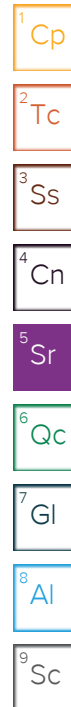
| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 17800        |           | 2.50      | 5        | 10/20/2020 02:49     | <a href="#">WG1561163</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Chromium | 20.4         |           | 1.00      | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Copper   | 34.6         |           | 2.00      | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Lead     | 21.9         |           | 0.500     | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Nickel   | 13.8         |           | 2.00      | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |
| Zinc     | 52.7         |           | 5.00      | 1        | 10/20/2020 00:27     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 11.2         |           | 1.00      | 5        | 10/19/2020 18:41     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 2.13         |           | 0.100     | 1        | 10/21/2020 21:58     | <a href="#">WG1563017</a> |







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 96.4            |           | 77.0-120     |          | 10/21/2020 21:58        | <a href="#">WG1563017</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.0216          |           | 0.00100      | 1        | 10/23/2020 20:26        | <a href="#">WG1564334</a> |
| Toluene                   | 0.106           |           | 0.00500      | 1        | 10/23/2020 20:26        | <a href="#">WG1564334</a> |
| Ethylbenzene              | 0.0108          |           | 0.00250      | 1        | 10/23/2020 20:26        | <a href="#">WG1564334</a> |
| Total Xylenes             | 0.338           |           | 0.00650      | 1        | 10/23/2020 20:26        | <a href="#">WG1564334</a> |
| (S) Toluene-d8            | 107             |           | 75.0-131     |          | 10/23/2020 20:26        | <a href="#">WG1564334</a> |
| (S) 4-Bromofluorobenzene  | 107             |           | 67.0-138     |          | 10/23/2020 20:26        | <a href="#">WG1564334</a> |
| (S) 1,2-Dichloroethane-d4 | 120             |           | 70.0-130     |          | 10/23/2020 20:26        | <a href="#">WG1564334</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 419             |           | 40.0         | 10       | 10/23/2020 12:36        | <a href="#">WG1562963</a> |
| (S) <i>o</i> -Terphenyl    | 103             |           | 18.0-148     |          | 10/23/2020 12:36        | <a href="#">WG1562963</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                     | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|-----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene                  | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Acenaphthene                | 0.0317          |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Acenaphthylene              | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene          | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene              | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene        | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Chrysene                    | 0.00937         |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene       | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Fluoranthene                | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Fluorene                    | 0.0471          |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene      | ND              |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Naphthalene                 | 0.141           |           | 0.0200       | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Phenanthrene                | 0.170           |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| Pyrene                      | 0.0362          |           | 0.00600      | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene         | 0.163           |           | 0.0200       | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene         | 0.364           |           | 0.0200       | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene         | ND              |           | 0.0200       | 1        | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| (S) <i>p</i> -Terphenyl-d14 | 79.2            |           | 23.0-120     |          | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5         | 75.8            |           | 14.0-149     |          | 10/22/2020 10:59        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl        | 88.7            |           | 34.0-125     |          | 10/22/2020 10:59        | <a href="#">WG1562551</a> |





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 23.4   |           | 1        | 10/20/2020 12:38     | WG1561069 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 20.3         |           | 1.00      | 1        | 10/22/2020 18:15     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/22/2020 18:15     | <a href="#">WG1561334</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 9.07      | <a href="#">T8</a> | 1        | 10/21/2020 12:29     | <a href="#">WG1562685</a> |

## Sample Narrative:

L1273792-04 WG1562685: 9.07 at 22.2C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 1330            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | ND           |           | 0.0400    | 1        | 10/19/2020 19:48     | <a href="#">WG1561139</a> |

## Metals (ICP) by Method 6010B

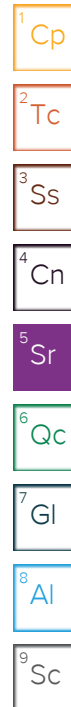
| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 276          |           | 0.500     | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Cadmium  | 0.615        |           | 0.500     | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Chromium | 20.3         |           | 1.00      | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Copper   | 39.8         |           | 2.00      | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Lead     | 22.7         |           | 0.500     | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Nickel   | 18.9         |           | 2.00      | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |
| Zinc     | 54.2         |           | 5.00      | 1        | 10/20/2020 00:30     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 25.0         |           | 1.00      | 5        | 10/19/2020 18:44     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.646        |           | 0.100     | 1        | 10/21/2020 22:19     | <a href="#">WG1563017</a> |







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) a,a,a-Trifluorotoluene(FID) | 88.4            |           | 77.0-120     |          | 10/21/2020 22:19        | <a href="#">WG1563017</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.00144         |           | 0.00100      | 1        | 10/23/2020 20:44        | <a href="#">WG1564334</a> |
| Toluene                   | 0.0508          |           | 0.00500      | 1        | 10/23/2020 20:44        | <a href="#">WG1564334</a> |
| Ethylbenzene              | 0.00567         |           | 0.00250      | 1        | 10/23/2020 20:44        | <a href="#">WG1564334</a> |
| Total Xylenes             | 0.305           |           | 0.00650      | 1        | 10/23/2020 20:44        | <a href="#">WG1564334</a> |
| (S) Toluene-d8            | 112             |           | 75.0-131     |          | 10/23/2020 20:44        | <a href="#">WG1564334</a> |
| (S) 4-Bromofluorobenzene  | 107             |           | 67.0-138     |          | 10/23/2020 20:44        | <a href="#">WG1564334</a> |
| (S) 1,2-Dichloroethane-d4 | 102             |           | 70.0-130     |          | 10/23/2020 20:44        | <a href="#">WG1564334</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 300             |           | 80.0         | 20       | 10/23/2020 12:49        | <a href="#">WG1562963</a> |
| (S) o-Terphenyl            | 0.000           | J7        | 18.0-148     |          | 10/23/2020 12:49        | <a href="#">WG1562963</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene             | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Acenaphthene           | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Acenaphthylene         | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene     | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene         | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene   | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene   | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene   | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Chrysene               | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene  | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Fluoranthene           | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Fluorene               | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Naphthalene            | 0.0209          |           | 0.0200       | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Phenanthrene           | ND              |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| Pyrene                 | 0.0104          |           | 0.00600      | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene    | ND              |           | 0.0200       | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene    | 0.0823          |           | 0.0200       | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene    | ND              |           | 0.0200       | 1        | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| (S) p-Terphenyl-d14    | 84.7            |           | 23.0-120     |          | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5    | 58.3            |           | 14.0-149     |          | 10/22/2020 11:22        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl   | 86.9            |           | 34.0-125     |          | 10/22/2020 11:22        | <a href="#">WG1562551</a> |





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 12.1   |           | 1        | 10/20/2020 12:46     | WG1561069 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 18.4         |           | 1.00      | 1        | 10/22/2020 18:17     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/22/2020 18:17     | <a href="#">WG1561334</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 9.23      | <a href="#">T8</a> | 1        | 10/21/2020 12:29     | <a href="#">WG1562685</a> |

## Sample Narrative:

L1273792-05 WG1562685: 9.23 at 21.9C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 2410            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | ND           |           | 0.0400    | 1        | 10/19/2020 19:50     | <a href="#">WG1561139</a> |

## Metals (ICP) by Method 6010B

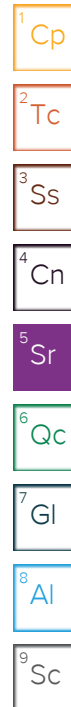
| Analyte  | Result mg/kg | Qualifier          | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|--------------------|-----------|----------|----------------------|---------------------------|
| Barium   | 11500        |                    | 2.50      | 5        | 10/20/2020 02:41     | <a href="#">WG1561163</a> |
| Cadmium  | ND           |                    | 0.500     | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Chromium | 18.4         |                    | 1.00      | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Copper   | 21.1         |                    | 2.00      | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Lead     | 19.3         | <a href="#">O1</a> | 0.500     | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Nickel   | 11.8         |                    | 2.00      | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Selenium | ND           |                    | 2.00      | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Silver   | ND           |                    | 1.00      | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |
| Zinc     | 44.5         |                    | 5.00      | 1        | 10/19/2020 23:58     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 7.99         |           | 1.00      | 5        | 10/19/2020 18:48     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier         | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-------------------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.325        | <a href="#">B</a> | 0.100     | 1        | 10/22/2020 06:37     | <a href="#">WG1563094</a> |







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) a,a,a-Trifluorotoluene(FID) | 95.0            |           | 77.0-120     |          | 10/22/2020 06:37        | <a href="#">WG1563094</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.00163         |           | 0.00100      | 1        | 10/22/2020 22:19        | <a href="#">WG1563772</a> |
| Toluene                   | ND              |           | 0.00500      | 1        | 10/22/2020 22:19        | <a href="#">WG1563772</a> |
| Ethylbenzene              | ND              |           | 0.00250      | 1        | 10/22/2020 22:19        | <a href="#">WG1563772</a> |
| Total Xylenes             | 0.00847         |           | 0.00650      | 1        | 10/22/2020 22:19        | <a href="#">WG1563772</a> |
| (S) Toluene-d8            | 107             |           | 75.0-131     |          | 10/22/2020 22:19        | <a href="#">WG1563772</a> |
| (S) 4-Bromofluorobenzene  | 97.4            |           | 67.0-138     |          | 10/22/2020 22:19        | <a href="#">WG1563772</a> |
| (S) 1,2-Dichloroethane-d4 | 84.4            |           | 70.0-130     |          | 10/22/2020 22:19        | <a href="#">WG1563772</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 736             |           | 40.0         | 10       | 10/23/2020 13:03        | <a href="#">WG1562963</a> |
| (S) o-Terphenyl            | 161             | J1        | 18.0-148     |          | 10/23/2020 13:03        | <a href="#">WG1562963</a> |

## Sample Narrative:

L1273792-05 WG1562963: Surrogate failure due to matrix interference

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene             | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Acenaphthene           | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Acenaphthylene         | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene     | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene         | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene   | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene   | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene   | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Chrysene               | 0.00913         |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene  | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Fluoranthene           | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Fluorene               | 0.0530          |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene | ND              |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Naphthalene            | 0.168           |           | 0.0200       | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Phenanthrene           | 0.134           |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| Pyrene                 | 0.0269          |           | 0.00600      | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene    | 0.156           |           | 0.0200       | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene    | 0.441           |           | 0.0200       | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene    | ND              |           | 0.0200       | 1        | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| (S) p-Terphenyl-d14    | 77.5            |           | 23.0-120     |          | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5    | 85.1            |           | 14.0-149     |          | 10/22/2020 11:45        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl   | 82.5            |           | 34.0-125     |          | 10/22/2020 11:45        | <a href="#">WG1562551</a> |





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 16.7   |           | 1        | 10/21/2020 12:30     | WG1561070 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 28.9         |           | 1.00      | 1        | 10/22/2020 18:18     | <a href="#">WG1561163</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/22/2020 18:18     | <a href="#">WG1561334</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.91      | <a href="#">T8</a> | 1        | 10/22/2020 12:58     | <a href="#">WG1563390</a> |

## Sample Narrative:

L1273792-06 WG1563390: 8.91 at 23.3C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 1730            |           | 10.0         | 1        | 10/22/2020 13:02     | <a href="#">WG1563225</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | ND           |           | 0.0400    | 1        | 10/19/2020 19:53     | <a href="#">WG1561139</a> |

## Metals (ICP) by Method 6010B

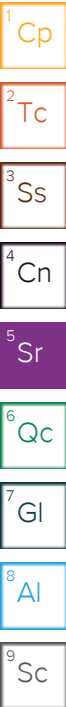
| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 451          |           | 0.500     | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Chromium | 28.9         |           | 1.00      | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Copper   | 24.7         |           | 2.00      | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Lead     | 17.0         |           | 0.500     | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Nickel   | 18.4         |           | 2.00      | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |
| Zinc     | 55.3         |           | 5.00      | 1        | 10/20/2020 00:33     | <a href="#">WG1561163</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 12.2         |           | 1.00      | 5        | 10/19/2020 18:51     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 1.67         |           | 0.100     | 1        | 10/22/2020 07:00     | <a href="#">WG1563094</a> |







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) a,a,a-Trifluorotoluene(FID) | 85.8            |           | 77.0-120     |          | 10/22/2020 07:00        | <a href="#">WG1563094</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | ND              |           | 0.00100      | 1        | 10/22/2020 22:39        | <a href="#">WG1563772</a> |
| Toluene                   | 0.0206          | J5        | 0.00500      | 1        | 10/22/2020 22:39        | <a href="#">WG1563772</a> |
| Ethylbenzene              | ND              |           | 0.00250      | 1        | 10/22/2020 22:39        | <a href="#">WG1563772</a> |
| Total Xylenes             | 0.0811          | J5        | 0.00650      | 1        | 10/22/2020 22:39        | <a href="#">WG1563772</a> |
| (S) Toluene-d8            | 104             |           | 75.0-131     |          | 10/22/2020 22:39        | <a href="#">WG1563772</a> |
| (S) 4-Bromofluorobenzene  | 97.7            |           | 67.0-138     |          | 10/22/2020 22:39        | <a href="#">WG1563772</a> |
| (S) 1,2-Dichloroethane-d4 | 85.1            |           | 70.0-130     |          | 10/22/2020 22:39        | <a href="#">WG1563772</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 285             |           | 160          | 40       | 10/23/2020 13:16        | <a href="#">WG1562963</a> |
| (S) o-Terphenyl            | 0.000           | J7        | 18.0-148     |          | 10/23/2020 13:16        | <a href="#">WG1562963</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene             | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Acenaphthene           | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Acenaphthylene         | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Benzo(a)anthracene     | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Benzo(a)pyrene         | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Benzo(b)fluoranthene   | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Benzo(g,h,i)perylene   | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Benzo(k)fluoranthene   | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Chrysene               | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Dibenz(a,h)anthracene  | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Fluoranthene           | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Fluorene               | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Indeno(1,2,3-cd)pyrene | ND              |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Naphthalene            | ND              |           | 0.0200       | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Phenanthrene           | 0.00970         |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| Pyrene                 | 0.00878         |           | 0.00600      | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| 1-Methylnaphthalene    | ND              |           | 0.0200       | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| 2-Methylnaphthalene    | 0.0642          |           | 0.0200       | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| 2-Chloronaphthalene    | ND              |           | 0.0200       | 1        | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| (S) p-Terphenyl-d14    | 86.2            |           | 23.0-120     |          | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| (S) Nitrobenzene-d5    | 83.5            |           | 14.0-149     |          | 10/22/2020 12:08        | <a href="#">WG1562551</a> |
| (S) 2-Fluorobiphenyl   | 88.4            |           | 34.0-125     |          | 10/22/2020 12:08        | <a href="#">WG1562551</a> |





Method Blank (MB)

(MB) R3584574-1 10/22/20 18:04

|                     | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------------------|-----------|--------------|--------|--------|
| Analyte             | mg/kg     |              | mg/kg  | mg/kg  |
| Chromium,Hexavalent | U         |              | 0.640  | 2.00   |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1273792-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1273792-06 10/22/20 18:18 • (DUP) R3584574-7 10/22/20 18:18

|                     | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte             | mg/kg           | mg/kg      |          | %       |               | %              |
| Chromium,Hexavalent | ND              | ND         | 1        | 0.000   |               | 20             |

L1273863-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1273863-04 10/22/20 18:21 • (DUP) R3584574-8 10/22/20 18:22

|                     | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte             | mg/kg           | mg/kg      |          | %       |               | %              |
| Chromium,Hexavalent | ND              | ND         | 1        | 0.000   |               | 20             |

Laboratory Control Sample (LCS)

(LCS) R3584574-2 10/22/20 18:08

|                     | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------------------|--------------|------------|----------|-------------|---------------|
| Analyte             | mg/kg        | mg/kg      | %        | %           |               |
| Chromium,Hexavalent | 24.0         | 23.1       | 96.1     | 80.0-120    |               |

L1273792-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273792-01 10/22/20 18:09 • (MS) R3584574-3 10/22/20 18:11 • (MSD) R3584574-4 10/22/20 18:11

|                     | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD  | RPD Limits |
|---------------------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Analyte             | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %    | %          |
| Chromium,Hexavalent | 20.0         | ND              | ND        | ND         | 9.40    | 9.92     | 1        | 75.0-125    | J6           | J6            | 5.39 | 20         |

Sample Narrative:

OS: sample is a reducer





L1273792-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1273792-01 10/22/20 18:09 • (MS) R3584574-5 10/22/20 18:11

| Analyte             | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MS Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier |
|---------------------|-----------------------|--------------------------|--------------------|--------------|----------|------------------|--------------|
| Chromium,Hexavalent | 646                   | ND                       | 583                | 90.2         | 50       | 75.0-125         |              |

Sample Narrative:

OS: sample is a reducer

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L1273684-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1273684-05 10/21/20 12:29 • (DUP) R3583899-2 10/21/20 12:29

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 7.97            | 7.97       | 1        | 0.000   |               | 1              |

Sample Narrative:  
OS: 7.97 at 21.9C  
DUP: 7.97 at 21.8C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1273863-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1273863-03 10/21/20 12:29 • (DUP) R3583899-3 10/21/20 12:29

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 8.43            | 8.45       | 1        | 0.237   |               | 1              |

Sample Narrative:  
OS: 8.43 at 21.7C  
DUP: 8.45 at 21.5C

Laboratory Control Sample (LCS)

(LCS) R3583899-1 10/21/20 12:29

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | su           | su         | %        | %           |               |
| pH      | 10.0         | 10.1       | 101      | 99.0-101    |               |

Sample Narrative:  
LCS: 10.05 at 20.7C





L1273904-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1273904-16 10/22/20 12:58 • (DUP) R3584423-2 10/22/20 12:58

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 8.05            | 8.09       | 1        | 0.496   |               | 1              |

Sample Narrative:

OS: 8.05 at 22.5C

DUP: 8.09 at 22.2C

L1274567-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1274567-02 10/22/20 12:58 • (DUP) R3584423-3 10/22/20 12:58

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 8.98            | 8.92       | 1        | 0.670   |               | 1              |

Sample Narrative:

OS: 8.98 at 22.4C

DUP: 8.92 at 22.1C

Laboratory Control Sample (LCS)

(LCS) R3584423-1 10/22/20 12:58

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | su           | su         | %        | %           |               |
| pH      | 10.0         | 10.0       | 100      | 99.0-101    |               |

Sample Narrative:

LCS: 10.02 at 21.1C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3584033-1 10/21/20 16:37

| Analyte              | MB Result<br>umhos/cm | MB Qualifier | MB MDL<br>umhos/cm | MB RDL<br>umhos/cm |
|----------------------|-----------------------|--------------|--------------------|--------------------|
| Specific Conductance | U                     |              | 10.0               | 10.0               |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1273411-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1273411-01 10/21/20 16:37 • (DUP) R3584033-3 10/21/20 16:37

| Analyte              | Original Result<br>umhos/cm | DUP Result<br>umhos/cm | Dilution | DUP RPD<br>% | DUP Qualifier | DUP RPD<br>Limits<br>% |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 214                         | 211                    | 1        | 1.27         |               | 20                     |

L1273792-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1273792-05 10/21/20 16:37 • (DUP) R3584033-4 10/21/20 16:37

| Analyte              | Original Result<br>umhos/cm | DUP Result<br>umhos/cm | Dilution | DUP RPD<br>% | DUP Qualifier | DUP RPD<br>Limits<br>% |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 2410                        | 2420                   | 1        | 0.331        |               | 20                     |

Laboratory Control Sample (LCS)

(LCS) R3584033-2 10/21/20 16:37

| Analyte              | Spike Amount<br>umhos/cm | LCS Result<br>umhos/cm | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------------------|--------------------------|------------------------|---------------|------------------|---------------|
| Specific Conductance | 326                      | 324                    | 99.4          | 85.0-115         |               |



Method Blank (MB)

(MB) R3584378-1 10/22/20 13:02

|                      | MB Result | <u>MB Qualifier</u> | MB MDL   | MB RDL   |
|----------------------|-----------|---------------------|----------|----------|
| Analyte              | umhos/cm  |                     | umhos/cm | umhos/cm |
| Specific Conductance | U         |                     | 10.0     | 10.0     |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1273863-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1273863-05 10/22/20 13:02 • (DUP) R3584378-3 10/22/20 13:02

|                      | Original Result | DUP Result | Dilution | DUP RPD | <u>DUP Qualifier</u> | DUP RPD Limits |
|----------------------|-----------------|------------|----------|---------|----------------------|----------------|
| Analyte              | umhos/cm        | umhos/cm   |          | %       |                      | %              |
| Specific Conductance | 189             | 186        | 1        | 1.50    |                      | 20             |

Laboratory Control Sample (LCS)

(LCS) R3584378-2 10/22/20 13:02

|                      | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | <u>LCS Qualifier</u> |
|----------------------|--------------|------------|----------|-------------|----------------------|
| Analyte              | umhos/cm     | umhos/cm   | %        | %           |                      |
| Specific Conductance | 326          | 324        | 99.4     | 85.0-115    |                      |





Method Blank (MB)

(MB) R3583252-1 10/19/20 18:45

|         | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Analyte | mg/kg     |              | mg/kg  | mg/kg  |
| Mercury | U         |              | 0.0180 | 0.0400 |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

Laboratory Control Sample (LCS)

(LCS) R3583252-2 10/19/20 18:47

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/kg        | mg/kg      | %        | %           |               |
| Mercury | 0.500        | 0.493      | 98.6     | 80.0-120    |               |

<sup>7</sup>Gl

<sup>8</sup>Al

L1273331-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273331-02 10/19/20 18:50 • (MS) R3583252-3 10/19/20 18:52 • (MSD) R3583252-4 10/19/20 18:55

|         | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD  | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Analyte | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %    | %          |
| Mercury | 0.500        | ND              | 0.465     | 0.451      | 86.2    | 83.4     | 1        | 75.0-125    |              |               | 3.08 | 20         |

<sup>9</sup>Sc





Method Blank (MB)

(MB) R3583283-1 10/19/20 23:53

| Analyte  | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|----------|--------------------|--------------|-----------------|-----------------|
| Barium   | U                  |              | 0.240           | 0.500           |
| Cadmium  | U                  |              | 0.0810          | 0.500           |
| Chromium | U                  |              | 0.250           | 1.00            |
| Copper   | U                  |              | 0.506           | 2.00            |
| Lead     | U                  |              | 0.208           | 0.500           |
| Nickel   | U                  |              | 0.490           | 2.00            |
| Selenium | U                  |              | 0.617           | 2.00            |
| Silver   | U                  |              | 0.228           | 1.00            |
| Zinc     | 1.02               | ⬇            | 0.939           | 5.00            |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3583283-2 10/19/20 23:55

| Analyte  | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------|-----------------------|---------------------|---------------|------------------|---------------|
| Barium   | 100                   | 107                 | 107           | 80.0-120         |               |
| Cadmium  | 100                   | 104                 | 104           | 80.0-120         |               |
| Chromium | 100                   | 107                 | 107           | 80.0-120         |               |
| Copper   | 100                   | 107                 | 107           | 80.0-120         |               |
| Lead     | 100                   | 102                 | 102           | 80.0-120         |               |
| Nickel   | 100                   | 105                 | 105           | 80.0-120         |               |
| Selenium | 100                   | 104                 | 104           | 80.0-120         |               |
| Silver   | 20.0                  | 19.1                | 95.7          | 80.0-120         |               |
| Zinc     | 100                   | 104                 | 104           | 80.0-120         |               |

L1273792-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273792-05 10/19/20 23:58 • (MS) R3583283-5 10/20/20 00:07 • (MSD) R3583283-6 10/20/20 00:10

| Analyte  | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Barium   | 100                   | 8850                     | 9600               | 8940                | 749          | 87.8          | 1        | 75.0-125         | EV           | E             | 7.13     | 20              |
| Cadmium  | 100                   | ND                       | 109                | 97.0                | 109          | 97.0          | 1        | 75.0-125         |              |               | 11.9     | 20              |
| Chromium | 100                   | 18.4                     | 119                | 110                 | 101          | 91.4          | 1        | 75.0-125         |              |               | 8.35     | 20              |
| Copper   | 100                   | 21.1                     | 132                | 120                 | 111          | 99.3          | 1        | 75.0-125         |              |               | 9.20     | 20              |
| Lead     | 100                   | 19.3                     | 128                | 118                 | 109          | 98.9          | 1        | 75.0-125         |              |               | 8.28     | 20              |
| Nickel   | 100                   | 11.8                     | 121                | 111                 | 110          | 98.7          | 1        | 75.0-125         |              |               | 9.47     | 20              |
| Selenium | 100                   | ND                       | 111                | 98.3                | 109          | 96.8          | 1        | 75.0-125         |              |               | 11.9     | 20              |
| Silver   | 20.0                  | ND                       | 20.7               | 18.6                | 103          | 93.1          | 1        | 75.0-125         |              |               | 10.5     | 20              |
| Zinc     | 100                   | 44.5                     | 142                | 136                 | 97.9         | 91.1          | 1        | 75.0-125         |              |               | 4.88     | 20              |





Method Blank (MB)

(MB) R3583210-1 10/19/20 17:47

| Analyte | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|---------|--------------------|--------------|-----------------|-----------------|
| Arsenic | U                  |              | 0.100           | 1.00            |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3583210-2 10/19/20 17:51

| Analyte | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|---------|-----------------------|---------------------|---------------|------------------|---------------|
| Arsenic | 100                   | 103                 | 103           | 80.0-120         |               |

L1273954-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273954-01 10/19/20 17:54 • (MS) R3583210-5 10/19/20 18:05 • (MSD) R3583210-6 10/19/20 18:08

| Analyte | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Arsenic | 20.0                  | 2.05                     | 96.0               | 96.8                | 94.0         | 94.8          | 5        | 75.0-125         |              |               | 0.809    | 20              |



Method Blank (MB)

(MB) R3584372-2 10/21/20 14:53

| Analyte                            | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction          | 0.0296             | ⬇            | 0.0217          | 0.100           |
| (S)<br>a,a,a-Trifluorotoluene(FID) | 99.7               |              |                 | 77.0-120        |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Laboratory Control Sample (LCS)

(LCS) R3584372-1 10/21/20 14:12

| Analyte                            | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|------------------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) Low Fraction          | 5.50                  | 4.97                | 90.4          | 72.0-127         |               |
| (S)<br>a,a,a-Trifluorotoluene(FID) |                       |                     | 109           | 77.0-120         |               |





Method Blank (MB)

(MB) R3585729-2 10/22/20 05:45

| Analyte                            | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction          | 0.0966             | ⬇            | 0.0217          | 0.100           |
| (S)<br>a,a,a-Trifluorotoluene(FID) | 100                |              |                 | 77.0-120        |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3585729-1 10/22/20 04:27

| Analyte                            | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|------------------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) Low Fraction          | 5.50                  | 5.82                | 106           | 72.0-127         |               |
| (S)<br>a,a,a-Trifluorotoluene(FID) |                       |                     | 106           | 77.0-120         |               |





Method Blank (MB)

(MB) R3584849-3 10/22/20 21:20

| Analyte                   | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene                   | U                  |              | 0.000467        | 0.00100         |
| Ethylbenzene              | U                  |              | 0.000737        | 0.00250         |
| Toluene                   | U                  |              | 0.00130         | 0.00500         |
| Xylenes, Total            | U                  |              | 0.000880        | 0.00650         |
| (S) Toluene-d8            | 108                |              |                 | 75.0-131        |
| (S) 4-Bromofluorobenzene  | 95.6               |              |                 | 67.0-138        |
| (S) 1,2-Dichloroethane-d4 | 85.2               |              |                 | 70.0-130        |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3584849-1 10/22/20 20:00 • (LCSD) R3584849-2 10/22/20 20:20

| Analyte                   | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCSD Result<br>mg/kg | LCS Rec.<br>% | LCSD Rec.<br>% | Rec. Limits<br>% | LCS Qualifier | LCSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene                   | 0.125                 | 0.136               | 0.138                | 109           | 110            | 70.0-123         |               |                | 1.46     | 20              |
| Ethylbenzene              | 0.125                 | 0.115               | 0.116                | 92.0          | 92.8           | 74.0-126         |               |                | 0.866    | 20              |
| Toluene                   | 0.125                 | 0.131               | 0.134                | 105           | 107            | 75.0-121         |               |                | 2.26     | 20              |
| Xylenes, Total            | 0.375                 | 0.340               | 0.351                | 90.7          | 93.6           | 72.0-127         |               |                | 3.18     | 20              |
| (S) Toluene-d8            |                       |                     |                      | 106           | 110            | 75.0-131         |               |                |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                     |                      | 92.8          | 93.2           | 67.0-138         |               |                |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                     |                      | 88.4          | 92.2           | 70.0-130         |               |                |          |                 |

L1273792-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273792-06 10/22/20 22:39 • (MS) R3584849-4 10/23/20 04:37 • (MSD) R3584849-5 10/23/20 04:57

| Analyte                   | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene                   | 0.124                 | ND                       | 0.119              | 0.0968              | 95.3         | 77.4          | 1        | 10.0-149         |              |               | 20.6     | 37              |
| Ethylbenzene              | 0.124                 | ND                       | 0.111              | 0.0957              | 87.9         | 75.6          | 1        | 10.0-160         |              |               | 14.8     | 38              |
| Toluene                   | 0.124                 | 0.0206                   | 0.355              | 0.327               | 270          | 247           | 1        | 10.0-156         | J5           | J5            | 8.21     | 38              |
| Xylenes, Total            | 0.372                 | 0.0811                   | 1.01               | 0.950               | 250          | 234           | 1        | 10.0-160         | J5           | J5            | 6.12     | 38              |
| (S) Toluene-d8            |                       |                          |                    |                     | 105          | 105           |          | 75.0-131         |              |               |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                          |                    |                     | 95.7         | 103           |          | 67.0-138         |              |               |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                          |                    |                     | 77.6         | 78.7          |          | 70.0-130         |              |               |          |                 |





Method Blank (MB)

(MB) R3585116-3 10/23/20 16:24

| Analyte                   | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene                   | U                  |              | 0.000467        | 0.00100         |
| Ethylbenzene              | U                  |              | 0.000737        | 0.00250         |
| Toluene                   | U                  |              | 0.00130         | 0.00500         |
| Xylenes, Total            | U                  |              | 0.000880        | 0.00650         |
| (S) Toluene-d8            | 111                |              |                 | 75.0-131        |
| (S) 4-Bromofluorobenzene  | 105                |              |                 | 67.0-138        |
| (S) 1,2-Dichloroethane-d4 | 106                |              |                 | 70.0-130        |

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3585116-1 10/23/20 15:27 • (LCSD) R3585116-2 10/23/20 15:46

| Analyte                   | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCSD Result<br>mg/kg | LCS Rec.<br>% | LCSD Rec.<br>% | Rec. Limits<br>% | LCS Qualifier | LCSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene                   | 0.125                 | 0.107               | 0.109                | 85.6          | 87.2           | 70.0-123         |               |                | 1.85     | 20              |
| Ethylbenzene              | 0.125                 | 0.132               | 0.133                | 106           | 106            | 74.0-126         |               |                | 0.755    | 20              |
| Toluene                   | 0.125                 | 0.135               | 0.134                | 108           | 107            | 75.0-121         |               |                | 0.743    | 20              |
| Xylenes, Total            | 0.375                 | 0.423               | 0.414                | 113           | 110            | 72.0-127         |               |                | 2.15     | 20              |
| (S) Toluene-d8            |                       |                     |                      | 108           | 109            | 75.0-131         |               |                |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                     |                      | 106           | 104            | 67.0-138         |               |                |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                     |                      | 105           | 102            | 70.0-130         |               |                |          |                 |

L1274488-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1274488-04 10/23/20 22:57 • (MS) R3585116-4 10/24/20 00:12 • (MSD) R3585116-5 10/24/20 00:31

| Analyte                   | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene                   | 0.127                 | 0.00103                  | 0.113              | 0.100               | 89.6         | 79.2          | 1        | 10.0-149         |              |               | 12.2     | 37              |
| Ethylbenzene              | 0.127                 | ND                       | 0.151              | 0.136               | 121          | 109           | 1        | 10.0-160         |              |               | 10.5     | 38              |
| Toluene                   | 0.127                 | ND                       | 0.156              | 0.137               | 125          | 110           | 1        | 10.0-156         |              |               | 13.0     | 38              |
| Xylenes, Total            | 0.382                 | ND                       | 0.473              | 0.417               | 126          | 111           | 1        | 10.0-160         |              |               | 12.6     | 38              |
| (S) Toluene-d8            |                       |                          |                    |                     | 110          | 107           |          | 75.0-131         |              |               |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                          |                    |                     | 107          | 107           |          | 67.0-138         |              |               |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                          |                    |                     | 95.4         | 96.9          |          | 70.0-130         |              |               |          |                 |





Method Blank (MB)

(MB) R3585007-1 10/23/20 09:42

| Analyte                    | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|----------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) High Fraction | U                  |              | 0.769           | 4.00            |
| (S) o-Terphenyl            | 71.3               |              |                 | 18.0-148        |

Laboratory Control Sample (LCS)

(LCS) R3585007-2 10/23/20 10:08

| Analyte                    | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) High Fraction | 50.0                  | 38.7                | 77.4          | 50.0-150         |               |
| (S) o-Terphenyl            |                       |                     | 98.9          | 18.0-148         |               |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3584288-2 10/22/20 02:35

| Analyte                | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene             | U                  |              | 0.00230         | 0.00600         |
| Acenaphthene           | U                  |              | 0.00209         | 0.00600         |
| Acenaphthylene         | U                  |              | 0.00216         | 0.00600         |
| Benzo(a)anthracene     | U                  |              | 0.00173         | 0.00600         |
| Benzo(a)pyrene         | U                  |              | 0.00179         | 0.00600         |
| Benzo(b)fluoranthene   | U                  |              | 0.00153         | 0.00600         |
| Benzo(g,h,i)perylene   | U                  |              | 0.00177         | 0.00600         |
| Benzo(k)fluoranthene   | U                  |              | 0.00215         | 0.00600         |
| Chrysene               | U                  |              | 0.00232         | 0.00600         |
| Dibenz(a,h)anthracene  | U                  |              | 0.00172         | 0.00600         |
| Fluoranthene           | U                  |              | 0.00227         | 0.00600         |
| Fluorene               | U                  |              | 0.00205         | 0.00600         |
| Indeno(1,2,3-cd)pyrene | U                  |              | 0.00181         | 0.00600         |
| Naphthalene            | U                  |              | 0.00408         | 0.0200          |
| Phenanthrene           | U                  |              | 0.00231         | 0.00600         |
| Pyrene                 | U                  |              | 0.00200         | 0.00600         |
| 1-Methylnaphthalene    | U                  |              | 0.00449         | 0.0200          |
| 2-Methylnaphthalene    | U                  |              | 0.00427         | 0.0200          |
| 2-Chloronaphthalene    | U                  |              | 0.00466         | 0.0200          |
| (S) Nitrobenzene-d5    | 82.5               |              |                 | 14.0-149        |
| (S) 2-Fluorobiphenyl   | 88.7               |              |                 | 34.0-125        |
| (S) p-Terphenyl-d14    | 93.3               |              |                 | 23.0-120        |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3584288-1 10/22/20 02:12

| Analyte               | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|-----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Anthracene            | 0.0800                | 0.0660              | 82.5          | 50.0-126         |               |
| Acenaphthene          | 0.0800                | 0.0716              | 89.5          | 50.0-120         |               |
| Acenaphthylene        | 0.0800                | 0.0682              | 85.3          | 50.0-120         |               |
| Benzo(a)anthracene    | 0.0800                | 0.0694              | 86.8          | 45.0-120         |               |
| Benzo(a)pyrene        | 0.0800                | 0.0511              | 63.9          | 42.0-120         |               |
| Benzo(b)fluoranthene  | 0.0800                | 0.0609              | 76.1          | 42.0-121         |               |
| Benzo(g,h,i)perylene  | 0.0800                | 0.0646              | 80.7          | 45.0-125         |               |
| Benzo(k)fluoranthene  | 0.0800                | 0.0662              | 82.8          | 49.0-125         |               |
| Chrysene              | 0.0800                | 0.0703              | 87.9          | 49.0-122         |               |
| Dibenz(a,h)anthracene | 0.0800                | 0.0663              | 82.9          | 47.0-125         |               |
| Fluoranthene          | 0.0800                | 0.0659              | 82.4          | 49.0-129         |               |



Laboratory Control Sample (LCS)

(LCS) R3584288-1 10/22/20 02:12

| Analyte                | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | <u>LCS Qualifier</u> |
|------------------------|-----------------------|---------------------|---------------|------------------|----------------------|
| Fluorene               | 0.0800                | 0.0694              | 86.8          | 49.0-120         |                      |
| Indeno(1,2,3-cd)pyrene | 0.0800                | 0.0642              | 80.3          | 46.0-125         |                      |
| Naphthalene            | 0.0800                | 0.0675              | 84.4          | 50.0-120         |                      |
| Phenanthrene           | 0.0800                | 0.0675              | 84.4          | 47.0-120         |                      |
| Pyrene                 | 0.0800                | 0.0671              | 83.9          | 43.0-123         |                      |
| 1-Methylnaphthalene    | 0.0800                | 0.0656              | 82.0          | 51.0-121         |                      |
| 2-Methylnaphthalene    | 0.0800                | 0.0621              | 77.6          | 50.0-120         |                      |
| 2-Chloronaphthalene    | 0.0800                | 0.0695              | 86.9          | 50.0-120         |                      |
| (S) Nitrobenzene-d5    |                       |                     | 83.7          | 14.0-149         |                      |
| (S) 2-Fluorobiphenyl   |                       |                     | 87.9          | 34.0-125         |                      |
| (S) p-Terphenyl-d14    |                       |                     | 90.6          | 23.0-120         |                      |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1273863-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273863-04 10/22/20 07:10 • (MS) R3584288-3 10/22/20 07:33 • (MSD) R3584288-4 10/22/20 07:56

| Analyte                | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD<br>% | RPD Limits<br>% |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Anthracene             | 0.0772                | ND                       | 0.0601             | 0.0566              | 77.8         | 73.7          | 1        | 10.0-145         |                     |                      | 6.00     | 30              |
| Acenaphthene           | 0.0772                | ND                       | 0.0628             | 0.0592              | 81.3         | 77.1          | 1        | 14.0-127         |                     |                      | 5.90     | 27              |
| Acenaphthylene         | 0.0772                | ND                       | 0.0598             | 0.0560              | 77.5         | 72.9          | 1        | 21.0-124         |                     |                      | 6.56     | 25              |
| Benzo(a)anthracene     | 0.0772                | ND                       | 0.0614             | 0.0574              | 79.5         | 74.7          | 1        | 10.0-139         |                     |                      | 6.73     | 30              |
| Benzo(a)pyrene         | 0.0772                | ND                       | 0.0537             | 0.0499              | 69.6         | 65.0          | 1        | 10.0-141         |                     |                      | 7.34     | 31              |
| Benzo(b)fluoranthene   | 0.0772                | ND                       | 0.0537             | 0.0505              | 66.5         | 62.6          | 1        | 10.0-140         |                     |                      | 6.14     | 36              |
| Benzo(g,h,i)perylene   | 0.0772                | ND                       | 0.0641             | 0.0596              | 83.0         | 77.6          | 1        | 10.0-140         |                     |                      | 7.28     | 33              |
| Benzo(k)fluoranthene   | 0.0772                | ND                       | 0.0530             | 0.0505              | 68.7         | 65.8          | 1        | 10.0-137         |                     |                      | 4.83     | 31              |
| Chrysene               | 0.0772                | ND                       | 0.0616             | 0.0570              | 79.8         | 74.2          | 1        | 10.0-145         |                     |                      | 7.76     | 30              |
| Dibenz(a,h)anthracene  | 0.0772                | ND                       | 0.0610             | 0.0563              | 79.0         | 73.3          | 1        | 10.0-132         |                     |                      | 8.01     | 31              |
| Fluoranthene           | 0.0772                | ND                       | 0.0578             | 0.0540              | 70.3         | 65.7          | 1        | 10.0-153         |                     |                      | 6.80     | 33              |
| Fluorene               | 0.0772                | ND                       | 0.0614             | 0.0581              | 79.5         | 75.7          | 1        | 11.0-130         |                     |                      | 5.52     | 29              |
| Indeno(1,2,3-cd)pyrene | 0.0772                | ND                       | 0.0604             | 0.0564              | 78.2         | 73.4          | 1        | 10.0-137         |                     |                      | 6.85     | 32              |
| Naphthalene            | 0.0772                | ND                       | 0.0588             | 0.0555              | 76.2         | 72.3          | 1        | 10.0-135         |                     |                      | 5.77     | 27              |
| Phenanthrene           | 0.0772                | ND                       | 0.0590             | 0.0557              | 76.4         | 72.5          | 1        | 10.0-144         |                     |                      | 5.75     | 31              |
| Pyrene                 | 0.0772                | ND                       | 0.0674             | 0.0613              | 81.7         | 74.2          | 1        | 10.0-148         |                     |                      | 9.48     | 35              |
| 1-Methylnaphthalene    | 0.0772                | ND                       | 0.0576             | 0.0548              | 74.6         | 71.4          | 1        | 10.0-142         |                     |                      | 4.98     | 28              |
| 2-Methylnaphthalene    | 0.0772                | ND                       | 0.0544             | 0.0511              | 70.5         | 66.5          | 1        | 10.0-137         |                     |                      | 6.26     | 28              |
| 2-Chloronaphthalene    | 0.0772                | ND                       | 0.0604             | 0.0572              | 78.2         | 74.5          | 1        | 29.0-120         |                     |                      | 5.44     | 24              |
| (S) Nitrobenzene-d5    |                       |                          |                    |                     | 72.0         | 70.3          |          | 14.0-149         |                     |                      |          |                 |
| (S) 2-Fluorobiphenyl   |                       |                          |                    |                     | 80.1         | 77.2          |          | 34.0-125         |                     |                      |          |                 |
| (S) p-Terphenyl-d14    |                       |                          |                    |                     | 90.1         | 85.0          |          | 23.0-120         |                     |                      |          |                 |





## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### Abbreviations and Definitions

|                              |  |
|------------------------------|--|
| MDL                          | Method Detection Limit.  |
| ND                           | Not detected at the Reporting Limit (or MDL where applicable).   |
| RDL                          | Reported Detection Limit.  |
| Rec.                         | Recovery.  |
| RPD                          | Relative Percent Difference.   |
| SDG                          | Sample Delivery Group.   |
| (S)                          | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.   |
| U                            | Not detected at the Reporting Limit (or MDL where applicable).   |
| Analyte                      | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.   |
| Dilution                     | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.  |
| Limits                       | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.  |
| Original Sample              | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.  |
| Qualifier                    | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.  |
| Result                       | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma.   |
| Case Narrative (Cn)          | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.  |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.  |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.  |
| Sample Results (Sr)          | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.   |
| Sample Summary (Ss)          | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.  |

| Qualifier | Description   |
|-----------|---|
| B         | The same analyte is found in the associated blank.  |
| E         | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).     |
| J         | The identification of the analyte is acceptable; the reported value is an estimate.   |
| J1        | Surrogate recovery limits have been exceeded; values are outside upper control limits.  |
| J5        | The sample matrix interfered with the ability to make any accurate determination; spike value is high.  |
| J6        | The sample matrix interfered with the ability to make any accurate determination; spike value is low.   |
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution.   |
| O1        | The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference. |
| T8        | Sample(s) received past/too close to holding time expiration.   |
| V         | The sample concentration is too high to evaluate accurate spike recoveries.   |

|   |    |
|---|----|
| 1 | Cp |
| 2 | Tc |
| 3 | Ss |
| 4 | Cn |
| 5 | Sr |
| 6 | Qc |
| 7 | Gl |
| 8 | Al |
| 9 | Sc |





Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

|                         |             |                             |                  |
|-------------------------|-------------|-----------------------------|------------------|
| Alabama                 | 40660       | Nebraska                    | NE-OS-15-05      |
| Alaska                  | 17-026      | Nevada                      | TN-03-2002-34    |
| Arizona                 | AZ0612      | New Hampshire               | 2975             |
| Arkansas                | 88-0469     | New Jersey–NELAP            | TN002            |
| California              | 2932        | New Mexico <sup>1</sup>     | n/a              |
| Colorado                | TN00003     | New York                    | 11742            |
| Connecticut             | PH-0197     | North Carolina              | Env375           |
| Florida                 | E87487      | North Carolina <sup>1</sup> | DW21704          |
| Georgia                 | NELAP       | North Carolina <sup>3</sup> | 41               |
| Georgia <sup>1</sup>    | 923         | North Dakota                | R-140            |
| Idaho                   | TN00003     | Ohio–VAP                    | CL0069           |
| Illinois                | 200008      | Oklahoma                    | 9915             |
| Indiana                 | C-TN-01     | Oregon                      | TN200002         |
| Iowa                    | 364         | Pennsylvania                | 68-02979         |
| Kansas                  | E-10277     | Rhode Island                | LA000356         |
| Kentucky <sup>1 6</sup> | 90010       | South Carolina              | 84004            |
| Kentucky <sup>2</sup>   | 16          | South Dakota                | n/a              |
| Louisiana               | AI30792     | Tennessee <sup>1 4</sup>    | 2006             |
| Louisiana <sup>1</sup>  | LA180010    | Texas                       | T104704245-18-15 |
| Maine                   | TN0002      | Texas <sup>5</sup>          | LAB0152          |
| Maryland                | 324         | Utah                        | TN00003          |
| Massachusetts           | M-TN003     | Vermont                     | VT2006           |
| Michigan                | 9958        | Virginia                    | 460132           |
| Minnesota               | 047-999-395 | Washington                  | C847             |
| Mississippi             | TN00003     | West Virginia               | 233              |
| Missouri                | 340         | Wisconsin                   | 9980939910       |
| Montana                 | CERT0086    | Wyoming                     | A2LA             |

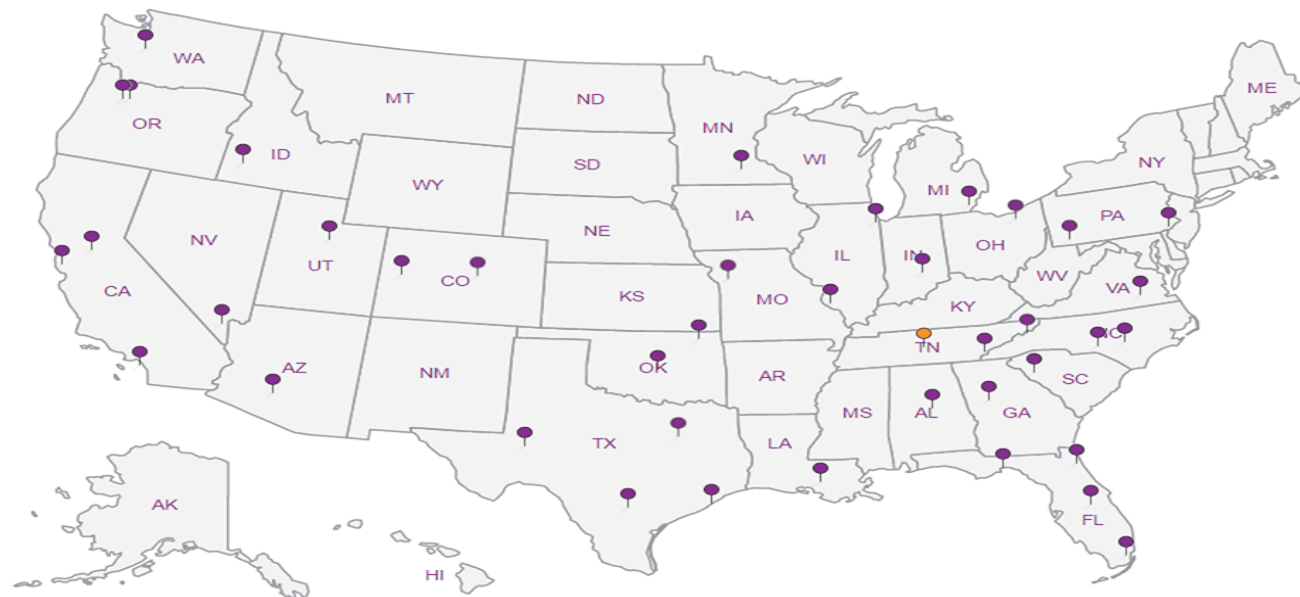
## Third Party Federal Accreditations

|                               |         |                     |               |
|-------------------------------|---------|---------------------|---------------|
| A2LA – ISO 17025              | 1461.01 | AIHA-LAP, LLC EMLAP | 100789        |
| A2LA – ISO 17025 <sup>5</sup> | 1461.02 | DOD                 | 1461.01       |
| Canada                        | 1461.01 | USDA                | P330-15-00234 |
| EPA–Crypto                    | TN00003 |                     |               |

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.





[illegible]



October 23, 2020

## Caerus Oil and Gas

Sample Delivery Group: L1273414  
Samples Received: 10/14/2020  
Project Number:  
Description: C27 South Pit

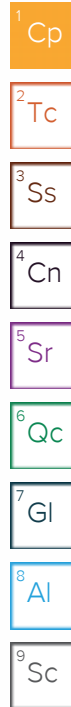
Report To: Blair Rollins  
143 Diamond Avenue  
Parachute, CO 81635

Entire Report Reviewed By:

*Chris Ward*

Chris Ward  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.







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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20201013-C275P-SBN02A(15') L1273414-01 Solid

Collected by R. Johnson  
Collected date/time 10/13/20 12:40  
Received date/time 10/14/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 11:54        | 10/20/20 11:54     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561162 | 1        | 10/18/20 06:46        | 10/20/20 21:16     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561333 | 1        | 10/19/20 18:00        | 10/20/20 21:16     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1561828 | 1        | 10/20/20 16:31        | 10/20/20 22:34     | WOS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561129 | 1        | 10/18/20 13:49        | 10/19/20 12:03     | ABL     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561162 | 1        | 10/18/20 06:46        | 10/19/20 20:50     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:12     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1562779 | 1        | 10/20/20 14:57        | 10/21/20 14:03     | AV      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1562727 | 1        | 10/20/20 14:57        | 10/22/20 06:10     | JHH     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562194 | 10       | 10/21/20 02:37        | 10/22/20 01:53     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562211 | 1        | 10/21/20 07:33        | 10/21/20 20:16     | JNJ     | Mt. Juliet, TN |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

20201013-C275P-SBN02A(20') L1273414-02 Solid

Collected by R. Johnson  
Collected date/time 10/13/20 12:50  
Received date/time 10/14/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 11:56        | 10/20/20 11:56     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561162 | 1        | 10/18/20 06:46        | 10/20/20 21:16     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561333 | 1        | 10/19/20 18:00        | 10/20/20 21:16     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1561828 | 1        | 10/20/20 16:31        | 10/20/20 22:34     | WOS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561129 | 1        | 10/18/20 13:49        | 10/19/20 12:05     | ABL     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561162 | 1        | 10/18/20 06:46        | 10/19/20 20:53     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:16     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1562779 | 1        | 10/20/20 14:57        | 10/21/20 14:26     | AV      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1563520 | 1        | 10/20/20 14:57        | 10/23/20 02:17     | BMB     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562194 | 40       | 10/21/20 02:37        | 10/22/20 01:28     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562211 | 1        | 10/21/20 07:33        | 10/21/20 21:28     | JNJ     | Mt. Juliet, TN |

20201013-C275P-SBN02A(25') L1273414-03 Solid

Collected by R. Johnson  
Collected date/time 10/13/20 13:15  
Received date/time 10/14/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 11:59        | 10/20/20 11:59     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561162 | 1        | 10/18/20 06:46        | 10/20/20 21:17     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561333 | 1        | 10/19/20 18:00        | 10/20/20 21:17     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1561828 | 1        | 10/20/20 16:31        | 10/20/20 22:34     | WOS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561129 | 1        | 10/18/20 13:49        | 10/19/20 12:08     | ABL     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561162 | 1        | 10/18/20 06:46        | 10/19/20 21:02     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:19     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1562779 | 1        | 10/20/20 14:57        | 10/21/20 14:49     | AV      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1563520 | 1        | 10/20/20 14:57        | 10/23/20 02:36     | BMB     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562194 | 40       | 10/21/20 02:37        | 10/22/20 01:40     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562211 | 1        | 10/21/20 07:33        | 10/21/20 19:53     | JNJ     | Mt. Juliet, TN |



# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20201013-C275P-SELIALLA(25') L1273414-04 Solid

Collected by  
R. Johnson

Collected date/time  
10/13/20 15:10

Received date/time  
10/14/20 09:00

| Method  | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results  | WG1561069 | 1        | 10/20/20 12:02        | 10/20/20 12:02     | EL      | Mt. Juliet, TN |
| Calculated Results  | WG1561162 | 1        | 10/18/20 06:46        | 10/20/20 21:19     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 3060A/7196A                         | WG1561333 | 1        | 10/19/20 18:00        | 10/20/20 21:19     | KPS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D                               | WG1561828 | 1        | 10/20/20 16:31        | 10/20/20 22:34     | WOS     | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod                            | WG1562692 | 1        | 10/21/20 11:19        | 10/21/20 16:37     | MMF     | Mt. Juliet, TN |
| Mercury by Method 7471A                                     | WG1561129 | 1        | 10/18/20 13:49        | 10/19/20 12:11     | ABL     | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B                                | WG1561162 | 1        | 10/18/20 06:46        | 10/19/20 21:04     | CCE     | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020                               | WG1561534 | 5        | 10/19/20 10:20        | 10/19/20 18:30     | LD      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO         | WG1562779 | 1        | 10/20/20 14:57        | 10/21/20 15:12     | AV      | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B          | WG1563520 | 1        | 10/20/20 14:57        | 10/23/20 02:55     | BMB     | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015         | WG1562194 | 40       | 10/21/20 02:37        | 10/22/20 01:15     | JDG     | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1562211 | 1        | 10/21/20 07:33        | 10/21/20 22:11     | JNJ     | Mt. Juliet, TN |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc





All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 37.2   |           | 1        | 10/20/2020 11:54     | WG1561069 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 26.9         |           | 1.00      | 1        | 10/20/2020 21:16     | <a href="#">WG1561162</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/20/2020 21:16     | <a href="#">WG1561333</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.89      | <a href="#">T8</a> | 1        | 10/20/2020 22:34     | <a href="#">WG1561828</a> |

## Sample Narrative:

L1273414-01 WG1561828: 8.89 at 21.1C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 2870            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | 0.0519       |           | 0.0400    | 1        | 10/19/2020 12:03     | <a href="#">WG1561129</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 1660         |           | 0.500     | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Chromium | 26.9         |           | 1.00      | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Copper   | 26.1         |           | 2.00      | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Lead     | 16.1         |           | 0.500     | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Nickel   | 17.7         |           | 2.00      | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |
| Zinc     | 61.4         |           | 5.00      | 1        | 10/19/2020 20:50     | <a href="#">WG1561162</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 8.33         |           | 1.00      | 5        | 10/19/2020 18:12     | <a href="#">WG1561534</a> |

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                   | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 3.49         |           | 0.100     | 1        | 10/21/2020 14:03     | <a href="#">WG1562779</a> |





Collected date/time: 10/13/20 12:40

L1273414

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| (S) a,a,a-Trifluorotoluene(FID) | 87.2            |           | 77.0-120     |          | 10/21/2020 14:03        | <a href="#">WG1562779</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.00208         |           | 0.00100      | 1        | 10/22/2020 06:10        | <a href="#">WG1562727</a> |
| Toluene                   | 0.00653         |           | 0.00500      | 1        | 10/22/2020 06:10        | <a href="#">WG1562727</a> |
| Ethylbenzene              | 0.00383         |           | 0.00250      | 1        | 10/22/2020 06:10        | <a href="#">WG1562727</a> |
| Total Xylenes             | 0.0464          |           | 0.00650      | 1        | 10/22/2020 06:10        | <a href="#">WG1562727</a> |
| (S) Toluene-d8            | 107             |           | 75.0-131     |          | 10/22/2020 06:10        | <a href="#">WG1562727</a> |
| (S) 4-Bromofluorobenzene  | 100             |           | 67.0-138     |          | 10/22/2020 06:10        | <a href="#">WG1562727</a> |
| (S) 1,2-Dichloroethane-d4 | 86.5            |           | 70.0-130     |          | 10/22/2020 06:10        | <a href="#">WG1562727</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 1120            |           | 40.0         | 10       | 10/22/2020 01:53        | <a href="#">WG1562194</a> |
| (S) o-Terphenyl            | 0.000           | J2        | 18.0-148     |          | 10/22/2020 01:53        | <a href="#">WG1562194</a> |

## Sample Narrative:

L1273414-01 WG1562194: Surrogate failure due to matrix interference

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene             | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Acenaphthene           | 0.0304          |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Acenaphthylene         | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Benzo(a)anthracene     | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Benzo(a)pyrene         | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Benzo(b)fluoranthene   | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Benzo(g,h,i)perylene   | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Benzo(k)fluoranthene   | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Chrysene               | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Dibenz(a,h)anthracene  | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Fluoranthene           | 0.00703         |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Fluorene               | 0.0702          |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Indeno(1,2,3-cd)pyrene | ND              |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Naphthalene            | 0.0783          |           | 0.0200       | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Phenanthrene           | 0.0846          |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| Pyrene                 | 0.0184          |           | 0.00600      | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| 1-Methylnaphthalene    | 0.125           |           | 0.0200       | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| 2-Methylnaphthalene    | 0.427           |           | 0.0200       | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| 2-Chloronaphthalene    | ND              |           | 0.0200       | 1        | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| (S) p-Terphenyl-d14    | 93.5            |           | 23.0-120     |          | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| (S) Nitrobenzene-d5    | 197             | J1        | 14.0-149     |          | 10/21/2020 20:16        | <a href="#">WG1562211</a> |
| (S) 2-Fluorobiphenyl   | 84.5            |           | 34.0-125     |          | 10/21/2020 20:16        | <a href="#">WG1562211</a> |





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 37.8   |           | 1        | 10/20/2020 11:56     | WG1561069 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 28.2         |           | 1.00      | 1        | 10/20/2020 21:16     | <a href="#">WG1561162</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/20/2020 21:16     | <a href="#">WG1561333</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.70      | <a href="#">T8</a> | 1        | 10/20/2020 22:34     | <a href="#">WG1561828</a> |

## Sample Narrative:

L1273414-02 WG1561828: 8.7 at 21.4C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 1950            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | ND           |           | 0.0400    | 1        | 10/19/2020 12:05     | <a href="#">WG1561129</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 461          |           | 0.500     | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Cadmium  | ND           |           | 0.500     | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Chromium | 28.2         |           | 1.00      | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Copper   | 28.2         |           | 2.00      | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Lead     | 17.0         |           | 0.500     | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Nickel   | 21.7         |           | 2.00      | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Selenium | ND           |           | 2.00      | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |
| Zinc     | 55.4         |           | 5.00      | 1        | 10/19/2020 20:53     | <a href="#">WG1561162</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 15.5         |           | 1.00      | 5        | 10/19/2020 18:16     | <a href="#">WG1561534</a> |





Collected date/time: 10/13/20 12:50

L1273414

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction       | 0.713           |           | 0.100        | 1        | 10/21/2020 14:26        | <a href="#">WG1562779</a> |
| (S) a,a,a-Trifluorotoluene(FID) | 73.2            | <u>J2</u> | 77.0-120     |          | 10/21/2020 14:26        | <a href="#">WG1562779</a> |

## Sample Narrative:

L1273414-02 WG1562779: Surrogate failure due to matrix interference

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                   | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | ND              |           | 0.00100      | 1        | 10/23/2020 02:17        | <a href="#">WG1563520</a> |
| Toluene                   | 0.0626          |           | 0.00500      | 1        | 10/23/2020 02:17        | <a href="#">WG1563520</a> |
| Ethylbenzene              | 0.00535         |           | 0.00250      | 1        | 10/23/2020 02:17        | <a href="#">WG1563520</a> |
| Total Xylenes             | 0.155           |           | 0.00650      | 1        | 10/23/2020 02:17        | <a href="#">WG1563520</a> |
| (S) Toluene-d8            | 95.4            |           | 75.0-131     |          | 10/23/2020 02:17        | <a href="#">WG1563520</a> |
| (S) 4-Bromofluorobenzene  | 100             |           | 67.0-138     |          | 10/23/2020 02:17        | <a href="#">WG1563520</a> |
| (S) 1,2-Dichloroethane-d4 | 93.4            |           | 70.0-130     |          | 10/23/2020 02:17        | <a href="#">WG1563520</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 1320            |           | 160          | 40       | 10/22/2020 01:28        | <a href="#">WG1562194</a> |
| (S) o-Terphenyl            | 0.000           | <u>J7</u> | 18.0-148     |          | 10/22/2020 01:28        | <a href="#">WG1562194</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene             | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Acenaphthene           | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Acenaphthylene         | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Benzo(a)anthracene     | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Benzo(a)pyrene         | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Benzo(b)fluoranthene   | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Benzo(g,h,i)perylene   | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Benzo(k)fluoranthene   | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Chrysene               | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Dibenz(a,h)anthracene  | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Fluoranthene           | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Fluorene               | 0.0380          |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Indeno(1,2,3-cd)pyrene | ND              |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Naphthalene            | 0.0609          |           | 0.0200       | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Phenanthrene           | 0.0406          |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| Pyrene                 | 0.00948         |           | 0.00600      | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| 1-Methylnaphthalene    | 0.0973          |           | 0.0200       | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| 2-Methylnaphthalene    | 0.253           |           | 0.0200       | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| 2-Chloronaphthalene    | ND              |           | 0.0200       | 1        | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| (S) p-Terphenyl-d14    | 103             |           | 23.0-120     |          | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| (S) Nitrobenzene-d5    | 80.9            |           | 14.0-149     |          | 10/21/2020 21:28        | <a href="#">WG1562211</a> |
| (S) 2-Fluorobiphenyl   | 55.1            |           | 34.0-125     |          | 10/21/2020 21:28        | <a href="#">WG1562211</a> |





## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 17.9   |           | 1        | 10/20/2020 11:59     | WG1561069 |

## Calculated Results

| Analyte             | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 24.1         |           | 1.00      | 1        | 10/20/2020 21:17     | <a href="#">WG1561162</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------------------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND           |           | 2.00      | 1        | 10/20/2020 21:17     | <a href="#">WG1561333</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|-----------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.82      | <a href="#">T8</a> | 1        | 10/20/2020 22:34     | <a href="#">WG1561828</a> |

## Sample Narrative:

L1273414-03 WG1561828: 8.82 at 21.3C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch                     |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 1690            |           | 10.0         | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

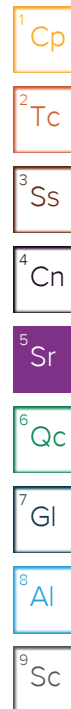
| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Mercury | ND           |           | 0.0400    | 1        | 10/19/2020 12:08     | <a href="#">WG1561129</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|----------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Barium   | 549          |           | 0.500     | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Cadmium  | 0.677        |           | 0.500     | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Chromium | 24.1         |           | 1.00      | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Copper   | 42.4         |           | 2.00      | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Lead     | 25.3         |           | 0.500     | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Nickel   | 23.5         |           | 2.00      | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Selenium | 2.59         |           | 2.00      | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Silver   | ND           |           | 1.00      | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |
| Zinc     | 59.4         |           | 5.00      | 1        | 10/19/2020 21:02     | <a href="#">WG1561162</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch                     |
|---------|--------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 30.4         |           | 1.00      | 5        | 10/19/2020 18:19     | <a href="#">WG1561534</a> |







Collected date/time: 10/13/20 13:15

L1273414

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction               | 9.46            |           | 0.100        | 1        | 10/21/2020 14:49        | <a href="#">WG1562779</a> |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 64.4            | <u>J2</u> | 77.0-120     |          | 10/21/2020 14:49        | <a href="#">WG1562779</a> |

## Sample Narrative:

L1273414-03 WG1562779: Surrogate failure due to matrix interference

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                          | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Benzene                          | 0.0273          |           | 0.00100      | 1        | 10/23/2020 02:36        | <a href="#">WG1563520</a> |
| Toluene                          | 1.72            |           | 0.00500      | 1        | 10/23/2020 02:36        | <a href="#">WG1563520</a> |
| Ethylbenzene                     | 0.172           |           | 0.00250      | 1        | 10/23/2020 02:36        | <a href="#">WG1563520</a> |
| Total Xylenes                    | 4.80            |           | 0.00650      | 1        | 10/23/2020 02:36        | <a href="#">WG1563520</a> |
| (S) <i>Toluene-d8</i>            | 133             | <u>J1</u> | 75.0-131     |          | 10/23/2020 02:36        | <a href="#">WG1563520</a> |
| (S) <i>4-Bromofluorobenzene</i>  | 113             |           | 67.0-138     |          | 10/23/2020 02:36        | <a href="#">WG1563520</a> |
| (S) <i>1,2-Dichloroethane-d4</i> | 92.3            |           | 70.0-130     |          | 10/23/2020 02:36        | <a href="#">WG1563520</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 800             |           | 160          | 40       | 10/22/2020 01:40        | <a href="#">WG1562194</a> |
| (S) <i>o</i> -Terphenyl    | 0.000           | <u>J7</u> | 18.0-148     |          | 10/22/2020 01:40        | <a href="#">WG1562194</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                     | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|-----------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene                  | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Acenaphthene                | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Acenaphthylene              | 0.0145          |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Benzo(a)anthracene          | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Benzo(a)pyrene              | 0.00900         |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Benzo(b)fluoranthene        | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Benzo(g,h,i)perylene        | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Benzo(k)fluoranthene        | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Chrysene                    | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Dibenz(a,h)anthracene       | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Fluoranthene                | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Fluorene                    | 0.00680         |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Indeno(1,2,3-cd)pyrene      | ND              |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Naphthalene                 | 0.0724          |           | 0.0200       | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Phenanthrene                | 0.0176          |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| Pyrene                      | 0.0318          |           | 0.00600      | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| 1-Methylnaphthalene         | 0.0535          |           | 0.0200       | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| 2-Methylnaphthalene         | 0.318           |           | 0.0200       | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| 2-Chloronaphthalene         | ND              |           | 0.0200       | 1        | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| (S) <i>p</i> -Terphenyl-d14 | 86.4            |           | 23.0-120     |          | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| (S) Nitrobenzene-d5         | 98.8            |           | 14.0-149     |          | 10/21/2020 19:53        | <a href="#">WG1562211</a> |
| (S) 2-Fluorobiphenyl        | 81.5            |           | 34.0-125     |          | 10/21/2020 19:53        | <a href="#">WG1562211</a> |

|         |
|---------|
| 1<br>Cp |
| 2<br>Tc |
| 3<br>Ss |
| 4<br>Cn |
| 5<br>Sr |
| 6<br>Qc |
| 7<br>Gl |
| 8<br>Al |
| 9<br>Sc |





Collected date/time: 10/13/20 15:10

L1273414

## Calculated Results

| Analyte                 | Result | Qualifier | Dilution | Analysis date / time | Batch     |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 4.15   |           | 1        | 10/20/2020 12:02     | WG1561069 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

| Analyte             | Result | Qualifier | RDL  | Dilution | Analysis date / time | Batch                     |
|---------------------|--------|-----------|------|----------|----------------------|---------------------------|
| Chromium, Trivalent | 26.8   |           | 1.00 | 1        | 10/20/2020 21:19     | <a href="#">WG1561162</a> |

## Wet Chemistry by Method 3060A/7196A

| Analyte              | Result | Qualifier | RDL  | Dilution | Analysis date / time | Batch                     |
|----------------------|--------|-----------|------|----------|----------------------|---------------------------|
| Chromium, Hexavalent | ND     |           | 2.00 | 1        | 10/20/2020 21:19     | <a href="#">WG1561333</a> |

## Wet Chemistry by Method 9045D

| Analyte | Result | Qualifier          | Dilution | Analysis date / time | Batch                     |
|---------|--------|--------------------|----------|----------------------|---------------------------|
| pH      | 8.78   | <a href="#">T8</a> | 1        | 10/20/2020 22:34     | <a href="#">WG1561828</a> |

## Sample Narrative:

L1273414-04 WG1561828: 8.78 at 21C

## Wet Chemistry by Method 9050AMod

| Analyte              | Result | Qualifier | RDL  | Dilution | Analysis date / time | Batch                     |
|----------------------|--------|-----------|------|----------|----------------------|---------------------------|
| Specific Conductance | 471    |           | 10.0 | 1        | 10/21/2020 16:37     | <a href="#">WG1562692</a> |

## Mercury by Method 7471A

| Analyte | Result | Qualifier | RDL    | Dilution | Analysis date / time | Batch                     |
|---------|--------|-----------|--------|----------|----------------------|---------------------------|
| Mercury | ND     |           | 0.0400 | 1        | 10/19/2020 12:11     | <a href="#">WG1561129</a> |

## Metals (ICP) by Method 6010B

| Analyte  | Result | Qualifier | RDL   | Dilution | Analysis date / time | Batch                     |
|----------|--------|-----------|-------|----------|----------------------|---------------------------|
| Barium   | 937    |           | 0.500 | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Cadmium  | ND     |           | 0.500 | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Chromium | 26.8   |           | 1.00  | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Copper   | 27.2   |           | 2.00  | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Lead     | 16.4   |           | 0.500 | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Nickel   | 17.3   |           | 2.00  | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Selenium | ND     |           | 2.00  | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Silver   | ND     |           | 1.00  | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |
| Zinc     | 47.5   |           | 5.00  | 1        | 10/19/2020 21:04     | <a href="#">WG1561162</a> |

## Metals (ICPMS) by Method 6020

| Analyte | Result | Qualifier | RDL  | Dilution | Analysis date / time | Batch                     |
|---------|--------|-----------|------|----------|----------------------|---------------------------|
| Arsenic | 18.9   |           | 1.00 | 5        | 10/19/2020 18:30     | <a href="#">WG1561534</a> |





Collected date/time: 10/13/20 15:10

L1273414

## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier          | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------------|-----------------|--------------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction       | 2.54            |                    | 0.100        | 1        | 10/21/2020 15:12        | <a href="#">WG1562779</a> |
| (S) a,a,a-Trifluorotoluene(FID) | 71.7            | <a href="#">J2</a> | 77.0-120     |          | 10/21/2020 15:12        | <a href="#">WG1562779</a> |

## Sample Narrative:

L1273414-04 WG1562779: Surrogate failure due to matrix interference

## Volatile Organic Compounds (GC/MS) by Method 8260B

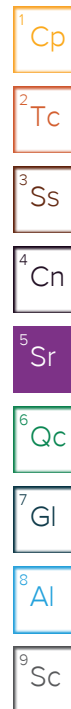
| Analyte                   | Result<br>mg/kg | Qualifier             | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|---------------------------|-----------------|-----------------------|--------------|----------|-------------------------|---------------------------|
| Benzene                   | 0.00333         | <a href="#">J3 J5</a> | 0.00100      | 1        | 10/23/2020 02:55        | <a href="#">WG1563520</a> |
| Toluene                   | 0.292           | <a href="#">J5</a>    | 0.00500      | 1        | 10/23/2020 02:55        | <a href="#">WG1563520</a> |
| Ethylbenzene              | 0.0166          | <a href="#">J3 J5</a> | 0.00250      | 1        | 10/23/2020 02:55        | <a href="#">WG1563520</a> |
| Total Xylenes             | 0.735           | <a href="#">J5</a>    | 0.00650      | 1        | 10/23/2020 02:55        | <a href="#">WG1563520</a> |
| (S) Toluene-d8            | 133             | <a href="#">J1</a>    | 75.0-131     |          | 10/23/2020 02:55        | <a href="#">WG1563520</a> |
| (S) 4-Bromofluorobenzene  | 79.3            |                       | 67.0-138     |          | 10/23/2020 02:55        | <a href="#">WG1563520</a> |
| (S) 1,2-Dichloroethane-d4 | 90.8            |                       | 70.0-130     |          | 10/23/2020 02:55        | <a href="#">WG1563520</a> |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier          | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|----------------------------|-----------------|--------------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 413             |                    | 160          | 40       | 10/22/2020 01:15        | <a href="#">WG1562194</a> |
| (S) o-Terphenyl            | 0.000           | <a href="#">J7</a> | 18.0-148     |          | 10/22/2020 01:15        | <a href="#">WG1562194</a> |

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte                | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch                     |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|---------------------------|
| Anthracene             | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Acenaphthene           | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Acenaphthylene         | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Benzo(a)anthracene     | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Benzo(a)pyrene         | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Benzo(b)fluoranthene   | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Benzo(g,h,i)perylene   | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Benzo(k)fluoranthene   | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Chrysene               | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Dibenz(a,h)anthracene  | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Fluoranthene           | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Fluorene               | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Indeno(1,2,3-cd)pyrene | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Naphthalene            | ND              |           | 0.0200       | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Phenanthrene           | 0.00959         |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| Pyrene                 | ND              |           | 0.00600      | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| 1-Methylnaphthalene    | 0.0205          |           | 0.0200       | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| 2-Methylnaphthalene    | 0.150           |           | 0.0200       | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| 2-Chloronaphthalene    | ND              |           | 0.0200       | 1        | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| (S) p-Terphenyl-d14    | 92.9            |           | 23.0-120     |          | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| (S) Nitrobenzene-d5    | 74.8            |           | 14.0-149     |          | 10/21/2020 22:11        | <a href="#">WG1562211</a> |
| (S) 2-Fluorobiphenyl   | 64.9            |           | 34.0-125     |          | 10/21/2020 22:11        | <a href="#">WG1562211</a> |







Method Blank (MB)

(MB) R3583658-1 10/20/20 21:07

|                     | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------------------|-----------|--------------|--------|--------|
| Analyte             | mg/kg     |              | mg/kg  | mg/kg  |
| Chromium,Hexavalent | U         |              | 0.640  | 2.00   |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1273336-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1273336-03 10/20/20 21:09 • (DUP) R3583658-3 10/20/20 21:09

|                     | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte             | mg/kg           | mg/kg      |          | %       |               | %              |
| Chromium,Hexavalent | ND              | ND         | 1        | 0.000   |               | 20             |

L1273414-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1273414-03 10/20/20 21:17 • (DUP) R3583658-8 10/20/20 21:18

|                     | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte             | mg/kg           | mg/kg      |          | %       |               | %              |
| Chromium,Hexavalent | ND              | ND         | 1        | 0.000   |               | 20             |

Laboratory Control Sample (LCS)

(LCS) R3583658-2 10/20/20 21:08

|                     | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------------------|--------------|------------|----------|-------------|---------------|
| Analyte             | mg/kg        | mg/kg      | %        | %           |               |
| Chromium,Hexavalent | 24.0         | 22.3       | 92.8     | 80.0-120    |               |

L1273411-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273411-01 10/20/20 21:14 • (MS) R3583658-4 10/20/20 21:14 • (MSD) R3583658-5 10/20/20 21:14

|                     | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD  | RPD Limits |
|---------------------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Analyte             | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %    | %          |
| Chromium,Hexavalent | 20.0         | ND              | 18.6      | 18.9       | 93.0    | 94.6     | 1        | 75.0-125    |              |               | 1.65 | 20         |

L1273411-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1273411-01 10/20/20 21:14 • (MS) R3583658-6 10/20/20 21:15

|                     | Spike Amount | Original Result | MS Result | MS Rec. | Dilution | Rec. Limits | MS Qualifier |
|---------------------|--------------|-----------------|-----------|---------|----------|-------------|--------------|
| Analyte             | mg/kg        | mg/kg           | mg/kg     | %       |          | %           |              |
| Chromium,Hexavalent | 653          | ND              | 597       | 91.5    | 50       | 75.0-125    |              |





L1273352-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1273352-01 10/20/20 22:34 • (DUP) R3583659-2 10/20/20 22:34

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 8.50            | 8.50       | 1        | 0.000   |               | 1              |

Sample Narrative:

OS: 8.5 at 21.9C

DUP: 8.5 at 21.6C

L1273411-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1273411-02 10/20/20 22:34 • (DUP) R3583659-3 10/20/20 22:34

|         | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su              | su         |          | %       |               | %              |
| pH      | 8.76            | 8.79       | 1        | 0.342   |               | 1              |

Sample Narrative:

OS: 8.76 at 22.1C

DUP: 8.79 at 21.3C

Laboratory Control Sample (LCS)

(LCS) R3583659-1 10/20/20 22:34

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | su           | su         | %        | %           |               |
| pH      | 10.0         | 10.0       | 100      | 99.0-101    |               |

Sample Narrative:

LCS: 10.02 at 21C







Method Blank (MB)

(MB) R3584033-1 10/21/20 16:37

| Analyte              | MB Result<br>umhos/cm | MB Qualifier | MB MDL<br>umhos/cm | MB RDL<br>umhos/cm |
|----------------------|-----------------------|--------------|--------------------|--------------------|
| Specific Conductance | U                     |              | 10.0               | 10.0               |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

L1273411-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1273411-01 10/21/20 16:37 • (DUP) R3584033-3 10/21/20 16:37

| Analyte              | Original Result<br>umhos/cm | DUP Result<br>umhos/cm | Dilution | DUP RPD<br>% | DUP Qualifier | DUP RPD<br>Limits<br>% |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 214                         | 211                    | 1        | 1.27         |               | 20                     |

<sup>7</sup>Gl

<sup>8</sup>Al

L1273792-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1273792-05 10/21/20 16:37 • (DUP) R3584033-4 10/21/20 16:37

| Analyte              | Original Result<br>umhos/cm | DUP Result<br>umhos/cm | Dilution | DUP RPD<br>% | DUP Qualifier | DUP RPD<br>Limits<br>% |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 2410                        | 2420                   | 1        | 0.331        |               | 20                     |

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3584033-2 10/21/20 16:37

| Analyte              | Spike Amount<br>umhos/cm | LCS Result<br>umhos/cm | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------------------|--------------------------|------------------------|---------------|------------------|---------------|
| Specific Conductance | 326                      | 324                    | 99.4          | 85.0-115         |               |





Method Blank (MB)

(MB) R3583106-1 10/19/20 11:22

|         | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Analyte | mg/kg     |              | mg/kg  | mg/kg  |
| Mercury | U         |              | 0.0180 | 0.0400 |

Laboratory Control Sample (LCS)

(LCS) R3583106-2 10/19/20 11:25

|         | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/kg        | mg/kg      | %        | %           |               |
| Mercury | 0.500        | 0.516      | 103      | 80.0-120    |               |

L1273411-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273411-01 10/19/20 11:32 • (MS) R3583106-3 10/19/20 11:35 • (MSD) R3583106-4 10/19/20 11:37

|         | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD  | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Analyte | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %    | %          |
| Mercury | 0.500        | ND              | 0.482     | 0.461      | 96.5    | 92.3     | 1        | 75.0-125    |              |               | 4.48 | 20         |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc





Method Blank (MB)

(MB) R3583281-1 10/19/20 20:30

| Analyte  | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|----------|--------------------|--------------|-----------------|-----------------|
| Barium   | U                  |              | 0.240           | 0.500           |
| Cadmium  | U                  |              | 0.0810          | 0.500           |
| Chromium | U                  |              | 0.250           | 1.00            |
| Copper   | U                  |              | 0.506           | 2.00            |
| Lead     | U                  |              | 0.208           | 0.500           |
| Nickel   | U                  |              | 0.490           | 2.00            |
| Selenium | U                  |              | 0.617           | 2.00            |
| Silver   | U                  |              | 0.228           | 1.00            |
| Zinc     | U                  |              | 0.939           | 5.00            |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3583281-2 10/19/20 20:32

| Analyte  | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------|-----------------------|---------------------|---------------|------------------|---------------|
| Barium   | 100                   | 101                 | 101           | 80.0-120         |               |
| Cadmium  | 100                   | 96.8                | 96.8          | 80.0-120         |               |
| Chromium | 100                   | 97.2                | 97.2          | 80.0-120         |               |
| Copper   | 100                   | 96.2                | 96.2          | 80.0-120         |               |
| Lead     | 100                   | 96.2                | 96.2          | 80.0-120         |               |
| Nickel   | 100                   | 98.5                | 98.5          | 80.0-120         |               |
| Selenium | 100                   | 96.7                | 96.7          | 80.0-120         |               |
| Silver   | 20.0                  | 17.6                | 88.1          | 80.0-120         |               |
| Zinc     | 100                   | 96.9                | 96.9          | 80.0-120         |               |

L1274820-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1274820-01 10/19/20 20:35 • (MS) R3583281-5 10/19/20 20:42 • (MSD) R3583281-6 10/19/20 20:45

| Analyte  | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Barium   | 100                   | 53.1                     | 154                | 153                 | 101          | 99.9          | 1        | 75.0-125         |              |               | 0.723    | 20              |
| Cadmium  | 100                   | ND                       | 100                | 96.0                | 100          | 95.7          | 1        | 75.0-125         |              |               | 4.42     | 20              |
| Chromium | 100                   | 8.91                     | 109                | 104                 | 100          | 95.5          | 1        | 75.0-125         |              |               | 4.31     | 20              |
| Copper   | 100                   | 6.79                     | 109                | 106                 | 102          | 99.3          | 1        | 75.0-125         |              |               | 2.85     | 20              |
| Lead     | 100                   | 13.8                     | 116                | 113                 | 102          | 99.2          | 1        | 75.0-125         |              |               | 2.30     | 20              |
| Nickel   | 100                   | 4.30                     | 109                | 105                 | 105          | 101           | 1        | 75.0-125         |              |               | 3.76     | 20              |
| Selenium | 100                   | ND                       | 99.3               | 95.4                | 99.3         | 95.4          | 1        | 75.0-125         |              |               | 3.98     | 20              |
| Silver   | 20.0                  | ND                       | 18.7               | 18.0                | 93.6         | 89.8          | 1        | 75.0-125         |              |               | 4.09     | 20              |
| Zinc     | 100                   | 87.5                     | 181                | 187                 | 93.8         | 99.4          | 1        | 75.0-125         |              |               | 3.04     | 20              |





Method Blank (MB)

(MB) R3583210-1 10/19/20 17:47

| Analyte | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|---------|--------------------|--------------|-----------------|-----------------|
| Arsenic | U                  |              | 0.100           | 1.00            |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3583210-2 10/19/20 17:51

| Analyte | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|---------|-----------------------|---------------------|---------------|------------------|---------------|
| Arsenic | 100                   | 103                 | 103           | 80.0-120         |               |

L1273954-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273954-01 10/19/20 17:54 • (MS) R3583210-5 10/19/20 18:05 • (MSD) R3583210-6 10/19/20 18:08

| Analyte | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Arsenic | 20.0                  | 2.05                     | 96.0               | 96.8                | 94.0         | 94.8          | 5        | 75.0-125         |              |               | 0.809    | 20              |



Method Blank (MB)

(MB) R3584432-1 10/21/20 11:19

| Analyte                            | MB Result | MB Qualifier | MB MDL | MB RDL   |
|------------------------------------|-----------|--------------|--------|----------|
|                                    | mg/kg     |              | mg/kg  | mg/kg    |
| TPH (GC/FID) Low Fraction          | 0.0566    | ⬇            | 0.0217 | 0.100    |
| (S)<br>a,a,a-Trifluorotoluene(FID) | 100       |              |        | 77.0-120 |

Laboratory Control Sample (LCS)

(LCS) R3584432-2 10/21/20 12:05

| Analyte                            | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------------------------|--------------|------------|----------|-------------|---------------|
|                                    | mg/kg        | mg/kg      | %        | %           |               |
| TPH (GC/FID) Low Fraction          | 5.50         | 6.36       | 116      | 72.0-127    |               |
| (S)<br>a,a,a-Trifluorotoluene(FID) |              |            | 106      | 77.0-120    |               |

L1274696-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1274696-06 10/21/20 20:38 • (MS) R3584432-3 10/21/20 21:01 • (MSD) R3584432-4 10/21/20 21:24

| Analyte                            | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD  | RPD Limits |
|------------------------------------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
|                                    | mg/kg        | mg/kg           | mg/kg     | mg/kg      | %       | %        |          | %           |              |               | %    | %          |
| TPH (GC/FID) Low Fraction          | 158          | ND              | 98.7      | 100        | 67.6    | 68.5     | 26.5     | 10.0-151    |              |               | 1.31 | 28         |
| (S)<br>a,a,a-Trifluorotoluene(FID) |              |                 |           |            | 104     | 103      |          | 77.0-120    |              |               |      |            |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc





Method Blank (MB)

(MB) R3584445-2 10/21/20 23:23

| Analyte                   | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene                   | U                  |              | 0.000467        | 0.00100         |
| Ethylbenzene              | U                  |              | 0.000737        | 0.00250         |
| Toluene                   | U                  |              | 0.00130         | 0.00500         |
| Xylenes, Total            | U                  |              | 0.000880        | 0.00650         |
| (S) Toluene-d8            | 109                |              |                 | 75.0-131        |
| (S) 4-Bromofluorobenzene  | 93.1               |              |                 | 67.0-138        |
| (S) 1,2-Dichloroethane-d4 | 84.4               |              |                 | 70.0-130        |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3584445-1 10/21/20 22:22

| Analyte                   | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|---------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Benzene                   | 0.125                 | 0.133               | 106           | 70.0-123         |               |
| Ethylbenzene              | 0.125                 | 0.113               | 90.4          | 74.0-126         |               |
| Toluene                   | 0.125                 | 0.122               | 97.6          | 75.0-121         |               |
| Xylenes, Total            | 0.375                 | 0.351               | 93.6          | 72.0-127         |               |
| (S) Toluene-d8            |                       |                     | 104           | 75.0-131         |               |
| (S) 4-Bromofluorobenzene  |                       |                     | 98.1          | 67.0-138         |               |
| (S) 1,2-Dichloroethane-d4 |                       |                     | 90.9          | 70.0-130         |               |

L1273409-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273409-02 10/22/20 05:50 • (MS) R3584445-3 10/22/20 06:30 • (MSD) R3584445-4 10/22/20 06:51

| Analyte                   | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene                   | 1.00                  | 0.0272                   | 0.902              | 1.02                | 87.5         | 99.3          | 8        | 10.0-149         |              |               | 12.3     | 37              |
| Ethylbenzene              | 1.00                  | 0.520                    | 1.34               | 1.40                | 82.0         | 88.0          | 8        | 10.0-160         |              |               | 4.38     | 38              |
| Toluene                   | 1.00                  | ND                       | 0.842              | 0.954               | 81.4         | 92.6          | 8        | 10.0-156         |              |               | 12.5     | 38              |
| Xylenes, Total            | 3.00                  | 8.46                     | 11.0               | 11.2                | 84.7         | 91.3          | 8        | 10.0-160         |              |               | 1.80     | 38              |
| (S) Toluene-d8            |                       |                          |                    |                     | 102          | 105           |          | 75.0-131         |              |               |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                          |                    |                     | 109          | 103           |          | 67.0-138         |              |               |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                          |                    |                     | 90.0         | 86.9          |          | 70.0-130         |              |               |          |                 |





Method Blank (MB)

(MB) R3584903-2 10/22/20 23:44

| Analyte                   | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene                   | U                  |              | 0.000467        | 0.00100         |
| Ethylbenzene              | U                  |              | 0.000737        | 0.00250         |
| Toluene                   | U                  |              | 0.00130         | 0.00500         |
| Xylenes, Total            | U                  |              | 0.000880        | 0.00650         |
| (S) Toluene-d8            | 127                |              |                 | 75.0-131        |
| (S) 4-Bromofluorobenzene  | 78.7               |              |                 | 67.0-138        |
| (S) 1,2-Dichloroethane-d4 | 92.2               |              |                 | 70.0-130        |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3584903-1 10/22/20 22:28 • (LCSD) R3584903-3 10/23/20 00:22

| Analyte                   | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCSD Result<br>mg/kg | LCS Rec.<br>% | LCSD Rec.<br>% | Rec. Limits<br>% | LCS Qualifier | LCSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene                   | 0.125                 | 0.112               | 0.116                | 89.6          | 92.8           | 70.0-123         |               |                | 3.51     | 20              |
| Ethylbenzene              | 0.125                 | 0.120               | 0.132                | 96.0          | 106            | 74.0-126         |               |                | 9.52     | 20              |
| Toluene                   | 0.125                 | 0.113               | 0.116                | 90.4          | 92.8           | 75.0-121         |               |                | 2.62     | 20              |
| Xylenes, Total            | 0.375                 | 0.336               | 0.390                | 89.6          | 104            | 72.0-127         |               |                | 14.9     | 20              |
| (S) Toluene-d8            |                       |                     |                      | 105           | 106            | 75.0-131         |               |                |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                     |                      | 101           | 87.3           | 67.0-138         |               |                |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                     |                      | 97.4          | 96.5           | 70.0-130         |               |                |          |                 |

L1273414-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273414-04 10/23/20 02:55 • (MS) R3584903-4 10/23/20 07:03 • (MSD) R3584903-5 10/23/20 07:22

| Analyte                   | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene                   | 0.125                 | 0.00333                  | 0.230              | 0.136               | 181          | 106           | 1        | 10.0-149         | J5           | J3            | 51.4     | 37              |
| Ethylbenzene              | 0.125                 | 0.0166                   | 0.308              | 0.161               | 233          | 116           | 1        | 10.0-160         | J5           | J3            | 62.7     | 38              |
| Toluene                   | 0.125                 | 0.292                    | 1.09               | 1.33                | 638          | 830           | 1        | 10.0-156         | J5           | J5            | 19.8     | 38              |
| Xylenes, Total            | 0.375                 | 0.735                    | 2.88               | 2.19                | 572          | 388           | 1        | 10.0-160         | J5           | J5            | 27.2     | 38              |
| (S) Toluene-d8            |                       |                          |                    |                     | 126          | 168           |          | 75.0-131         |              | J1            |          |                 |
| (S) 4-Bromofluorobenzene  |                       |                          |                    |                     | 95.6         | 101           |          | 67.0-138         |              |               |          |                 |
| (S) 1,2-Dichloroethane-d4 |                       |                          |                    |                     | 95.4         | 86.4          |          | 70.0-130         |              |               |          |                 |





Method Blank (MB)

(MB) R3583919-1 10/21/20 10:37

| Analyte                    | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|----------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) High Fraction | U                  |              | 0.769           | 4.00            |
| (S) o-Terphenyl            | 71.3               |              |                 | 18.0-148        |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3583919-2 10/21/20 10:50

| Analyte                    | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|----------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) High Fraction | 50.0                  | 36.2                | 72.4          | 50.0-150         |               |
| (S) o-Terphenyl            |                       |                     | 75.8          | 18.0-148         |               |

L1273336-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273336-02 10/22/20 00:24 • (MS) R3583919-3 10/22/20 00:37 • (MSD) R3583919-4 10/22/20 00:49

| Analyte                    | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|----------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| TPH (GC/FID) High Fraction | 49.7                  | 26.0                     | 36.4               | 45.3                | 20.9         | 38.8          | 1        | 50.0-150         | J6           | J3 J6         | 21.8     | 20              |
| (S) o-Terphenyl            |                       |                          |                    |                     | 48.8         | 56.0          |          | 18.0-148         |              |               |          |                 |





Method Blank (MB)

(MB) R3584214-2 10/21/20 13:36

| Analyte                | MB Result<br>mg/kg | MB Qualifier | MB MDL<br>mg/kg | MB RDL<br>mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene             | U                  |              | 0.00230         | 0.00600         |
| Acenaphthene           | U                  |              | 0.00209         | 0.00600         |
| Acenaphthylene         | U                  |              | 0.00216         | 0.00600         |
| Benzo(a)anthracene     | U                  |              | 0.00173         | 0.00600         |
| Benzo(a)pyrene         | U                  |              | 0.00179         | 0.00600         |
| Benzo(b)fluoranthene   | U                  |              | 0.00153         | 0.00600         |
| Benzo(g,h,i)perylene   | U                  |              | 0.00177         | 0.00600         |
| Benzo(k)fluoranthene   | U                  |              | 0.00215         | 0.00600         |
| Chrysene               | U                  |              | 0.00232         | 0.00600         |
| Dibenz(a,h)anthracene  | U                  |              | 0.00172         | 0.00600         |
| Fluoranthene           | U                  |              | 0.00227         | 0.00600         |
| Fluorene               | U                  |              | 0.00205         | 0.00600         |
| Indeno(1,2,3-cd)pyrene | U                  |              | 0.00181         | 0.00600         |
| Naphthalene            | U                  |              | 0.00408         | 0.0200          |
| Phenanthrene           | U                  |              | 0.00231         | 0.00600         |
| Pyrene                 | U                  |              | 0.00200         | 0.00600         |
| 1-Methylnaphthalene    | U                  |              | 0.00449         | 0.0200          |
| 2-Methylnaphthalene    | U                  |              | 0.00427         | 0.0200          |
| 2-Chloronaphthalene    | U                  |              | 0.00466         | 0.0200          |
| (S) Nitrobenzene-d5    | 94.4               |              |                 | 14.0-149        |
| (S) 2-Fluorobiphenyl   | 79.1               |              |                 | 34.0-125        |
| (S) p-Terphenyl-d14    | 97.6               |              |                 | 23.0-120        |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Laboratory Control Sample (LCS)

(LCS) R3584214-1 10/21/20 13:15

| Analyte               | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|-----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Anthracene            | 0.0800                | 0.0542              | 67.8          | 50.0-126         |               |
| Acenaphthene          | 0.0800                | 0.0576              | 72.0          | 50.0-120         |               |
| Acenaphthylene        | 0.0800                | 0.0595              | 74.4          | 50.0-120         |               |
| Benzo(a)anthracene    | 0.0800                | 0.0608              | 76.0          | 45.0-120         |               |
| Benzo(a)pyrene        | 0.0800                | 0.0459              | 57.4          | 42.0-120         |               |
| Benzo(b)fluoranthene  | 0.0800                | 0.0575              | 71.9          | 42.0-121         |               |
| Benzo(g,h,i)perylene  | 0.0800                | 0.0561              | 70.1          | 45.0-125         |               |
| Benzo(k)fluoranthene  | 0.0800                | 0.0641              | 80.1          | 49.0-125         |               |
| Chrysene              | 0.0800                | 0.0609              | 76.1          | 49.0-122         |               |
| Dibenz(a,h)anthracene | 0.0800                | 0.0589              | 73.6          | 47.0-125         |               |
| Fluoranthene          | 0.0800                | 0.0591              | 73.9          | 49.0-129         |               |



Laboratory Control Sample (LCS)

(LCS) R3584214-1 10/21/20 13:15

| Analyte                | Spike Amount<br>mg/kg | LCS Result<br>mg/kg | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Fluorene               | 0.0800                | 0.0592              | 74.0          | 49.0-120         |               |
| Indeno(1,2,3-cd)pyrene | 0.0800                | 0.0538              | 67.3          | 46.0-125         |               |
| Naphthalene            | 0.0800                | 0.0592              | 74.0          | 50.0-120         |               |
| Phenanthrene           | 0.0800                | 0.0565              | 70.6          | 47.0-120         |               |
| Pyrene                 | 0.0800                | 0.0607              | 75.9          | 43.0-123         |               |
| 1-Methylnaphthalene    | 0.0800                | 0.0588              | 73.5          | 51.0-121         |               |
| 2-Methylnaphthalene    | 0.0800                | 0.0559              | 69.9          | 50.0-120         |               |
| 2-Chloronaphthalene    | 0.0800                | 0.0565              | 70.6          | 50.0-120         |               |
| (S) Nitrobenzene-d5    |                       |                     | 110           | 14.0-149         |               |
| (S) 2-Fluorobiphenyl   |                       |                     | 86.2          | 34.0-125         |               |
| (S) p-Terphenyl-d14    |                       |                     | 100           | 23.0-120         |               |

L1273414-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1273414-04 10/21/20 22:11 • (MS) R3584214-3 10/21/20 22:32 • (MSD) R3584214-4 10/21/20 22:54

| Analyte                | Spike Amount<br>mg/kg | Original Result<br>mg/kg | MS Result<br>mg/kg | MSD Result<br>mg/kg | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Anthracene             | 0.0784                | ND                       | 0.0574             | 0.0569              | 73.2         | 72.9          | 1        | 10.0-145         |              |               | 0.875    | 30              |
| Acenaphthene           | 0.0784                | ND                       | 0.0567             | 0.0562              | 72.3         | 72.1          | 1        | 14.0-127         |              |               | 0.886    | 27              |
| Acenaphthylene         | 0.0784                | ND                       | 0.0669             | 0.0652              | 85.3         | 83.6          | 1        | 21.0-124         |              |               | 2.57     | 25              |
| Benzo(a)anthracene     | 0.0784                | ND                       | 0.0734             | 0.0706              | 93.6         | 90.5          | 1        | 10.0-139         |              |               | 3.89     | 30              |
| Benzo(a)pyrene         | 0.0784                | ND                       | 0.0614             | 0.0631              | 78.3         | 80.9          | 1        | 10.0-141         |              |               | 2.73     | 31              |
| Benzo(b)fluoranthene   | 0.0784                | ND                       | 0.0558             | 0.0583              | 71.2         | 74.7          | 1        | 10.0-140         |              |               | 4.38     | 36              |
| Benzo(g,h,i)perylene   | 0.0784                | ND                       | 0.0218             | 0.0183              | 27.8         | 23.5          | 1        | 10.0-140         |              |               | 17.5     | 33              |
| Benzo(k)fluoranthene   | 0.0784                | ND                       | 0.0547             | 0.0567              | 69.8         | 72.7          | 1        | 10.0-137         |              |               | 3.59     | 31              |
| Chrysene               | 0.0784                | ND                       | 0.0643             | 0.0580              | 82.0         | 74.4          | 1        | 10.0-145         |              |               | 10.3     | 30              |
| Dibenz(a,h)anthracene  | 0.0784                | ND                       | 0.0301             | 0.0259              | 38.4         | 33.2          | 1        | 10.0-132         |              |               | 15.0     | 31              |
| Fluoranthene           | 0.0784                | ND                       | 0.0584             | 0.0574              | 74.5         | 73.6          | 1        | 10.0-153         |              |               | 1.73     | 33              |
| Fluorene               | 0.0784                | ND                       | 0.0630             | 0.0624              | 80.4         | 80.0          | 1        | 11.0-130         |              |               | 0.957    | 29              |
| Indeno(1,2,3-cd)pyrene | 0.0784                | ND                       | 0.0334             | 0.0303              | 42.6         | 38.8          | 1        | 10.0-137         |              |               | 9.73     | 32              |
| Naphthalene            | 0.0784                | ND                       | 0.0831             | 0.0920              | 94.1         | 106           | 1        | 10.0-135         |              |               | 10.2     | 27              |
| Phenanthrene           | 0.0784                | 0.00959                  | 0.0595             | 0.0605              | 63.7         | 65.3          | 1        | 10.0-144         |              |               | 1.67     | 31              |
| Pyrene                 | 0.0784                | ND                       | 0.0707             | 0.0695              | 90.2         | 89.1          | 1        | 10.0-148         |              |               | 1.71     | 35              |
| 1-Methylnaphthalene    | 0.0784                | 0.0205                   | 0.0827             | 0.0888              | 79.3         | 87.6          | 1        | 10.0-142         |              |               | 7.11     | 28              |
| 2-Methylnaphthalene    | 0.0784                | 0.150                    | 0.200              | 0.227               | 63.8         | 98.7          | 1        | 10.0-137         |              |               | 12.6     | 28              |
| 2-Chloronaphthalene    | 0.0784                | ND                       | 0.0532             | 0.0520              | 67.9         | 66.7          | 1        | 29.0-120         |              |               | 2.28     | 24              |
| (S) Nitrobenzene-d5    |                       |                          |                    |                     | 80.5         | 77.6          |          | 14.0-149         |              |               |          |                 |
| (S) 2-Fluorobiphenyl   |                       |                          |                    |                     | 67.1         | 68.3          |          | 34.0-125         |              |               |          |                 |
| (S) p-Terphenyl-d14    |                       |                          |                    |                     | 92.9         | 95.6          |          | 23.0-120         |              |               |          |                 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc





## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

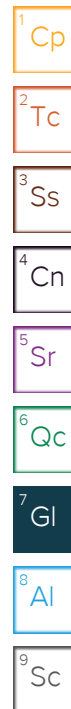
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### Abbreviations and Definitions

|                              |  |
|------------------------------|--|
| MDL                          | Method Detection Limit.  |
| ND                           | Not detected at the Reporting Limit (or MDL where applicable).   |
| RDL                          | Reported Detection Limit.  |
| Rec.                         | Recovery.  |
| RPD                          | Relative Percent Difference.   |
| SDG                          | Sample Delivery Group.   |
| (S)                          | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.   |
| U                            | Not detected at the Reporting Limit (or MDL where applicable).   |
| Analyte                      | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.   |
| Dilution                     | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.  |
| Limits                       | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.  |
| Original Sample              | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.  |
| Qualifier                    | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.  |
| Result                       | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma.   |
| Case Narrative (Cn)          | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.  |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.  |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.  |
| Sample Results (Sr)          | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.   |
| Sample Summary (Ss)          | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.  |

### Qualifier Description

|    |  |
|----|--|
| J  | The identification of the analyte is acceptable; the reported value is an estimate.                    |
| J1 | Surrogate recovery limits have been exceeded; values are outside upper control limits.                 |
| J2 | Surrogate recovery limits have been exceeded; values are outside lower control limits.                 |
| J3 | The associated batch QC was outside the established quality control range for precision.               |
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low.  |
| J7 | Surrogate recovery cannot be used for control limit evaluation due to dilution.                        |
| T8 | Sample(s) received past/too close to holding time expiration.  |







Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

|                         |             |
|-------------------------|-------------|
| Alabama                 | 40660       |
| Alaska                  | 17-026      |
| Arizona                 | AZ0612      |
| Arkansas                | 88-0469     |
| California              | 2932        |
| Colorado                | TN00003     |
| Connecticut             | PH-0197     |
| Florida                 | E87487      |
| Georgia                 | NELAP       |
| Georgia <sup>1</sup>    | 923         |
| Idaho                   | TN00003     |
| Illinois                | 200008      |
| Indiana                 | C-TN-01     |
| Iowa                    | 364         |
| Kansas                  | E-10277     |
| Kentucky <sup>1 6</sup> | 90010       |
| Kentucky <sup>2</sup>   | 16          |
| Louisiana               | AI30792     |
| Louisiana <sup>1</sup>  | LA180010    |
| Maine                   | TN0002      |
| Maryland                | 324         |
| Massachusetts           | M-TN003     |
| Michigan                | 9958        |
| Minnesota               | 047-999-395 |
| Mississippi             | TN00003     |
| Missouri                | 340         |
| Montana                 | CERT0086    |

|                             |                  |
|-----------------------------|------------------|
| Nebraska                    | NE-OS-15-05      |
| Nevada                      | TN-03-2002-34    |
| New Hampshire               | 2975             |
| New Jersey–NELAP            | TN002            |
| New Mexico <sup>1</sup>     | n/a              |
| New York                    | 11742            |
| North Carolina              | Env375           |
| North Carolina <sup>1</sup> | DW21704          |
| North Carolina <sup>3</sup> | 41               |
| North Dakota                | R-140            |
| Ohio–VAP                    | CL0069           |
| Oklahoma                    | 9915             |
| Oregon                      | TN200002         |
| Pennsylvania                | 68-02979         |
| Rhode Island                | LA000356         |
| South Carolina              | 84004            |
| South Dakota                | n/a              |
| Tennessee <sup>1 4</sup>    | 2006             |
| Texas                       | T104704245-18-15 |
| Texas <sup>5</sup>          | LAB0152          |
| Utah                        | TN00003          |
| Vermont                     | VT2006           |
| Virginia                    | 460132           |
| Washington                  | C847             |
| West Virginia               | 233              |
| Wisconsin                   | 9980939910       |
| Wyoming                     | A2LA             |

## Third Party Federal Accreditations

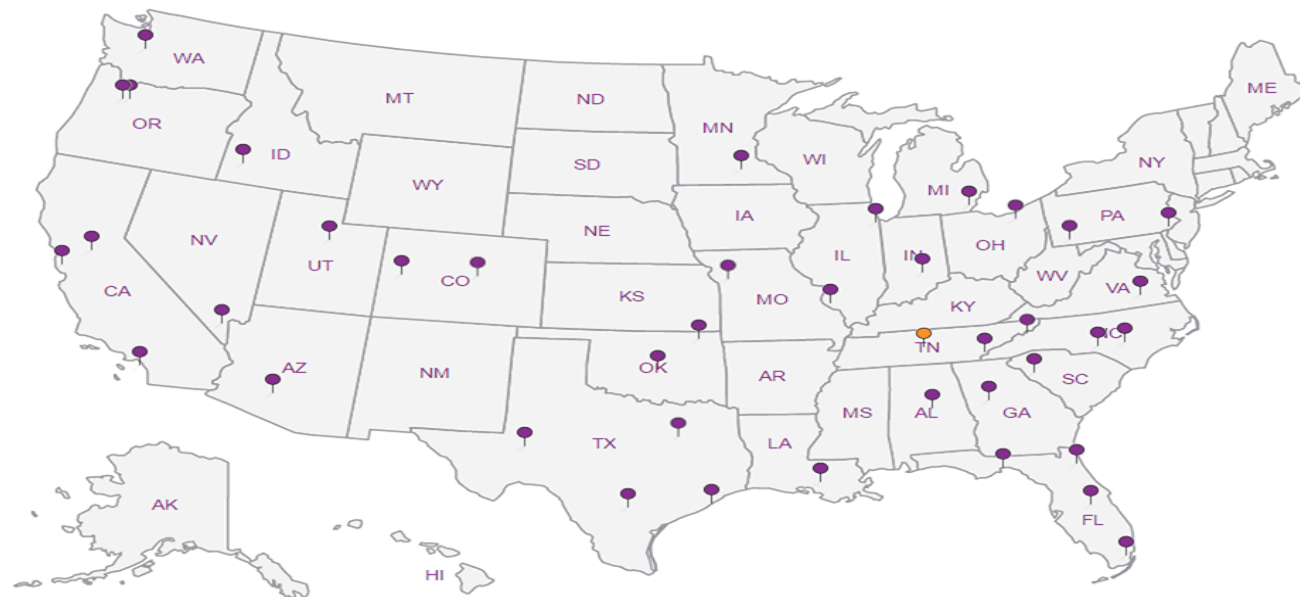
|                               |         |
|-------------------------------|---------|
| A2LA – ISO 17025              | 1461.01 |
| A2LA – ISO 17025 <sup>5</sup> | 1461.02 |
| Canada                        | 1461.01 |
| EPA–Crypto                    | TN00003 |

|                     |               |
|---------------------|---------------|
| AIHA-LAP, LLC EMLAP | 100789        |
| DOD                 | 1461.01       |
| USDA                | P330-15-00234 |

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.





[illegible]



## EnCana Oil & Gas - Parachute, CO

Sample Delivery Group: L906335  
Samples Received: 04/28/2017  
Project Number: C27  
Description: C27 Pit Assessment  
Site: C27  
Report To: Brett Middleton  
143 Diamond Avenue  
Parachute, CO 81635

Entire Report Reviewed By:



Shane Gambill  
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.





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| <sup>5</sup> Sr: Sample Results             | 8  |
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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## 20170426-C27-SBOTB (30) L906335-01 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/26/17 08:30 | Received date/time<br>04/28/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977236 | 1        | 05/06/17 14:47           | 05/07/17 07:24                        | JAH                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977456 | 1        | 05/06/17 14:47           | 05/09/17 02:30                        | ACG                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 2        | 05/09/17 00:21           | 05/09/17 20:09                        | LM                                   |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Gl

<sup>7</sup> Al

<sup>8</sup> Sc

## 20170426-C27-SBOTB (35) L906335-02 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/26/17 09:15 | Received date/time<br>04/28/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977236 | 1        | 05/06/17 14:47           | 05/07/17 07:45                        | JAH                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977456 | 1        | 05/06/17 14:47           | 05/09/17 02:52                        | ACG                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 2        | 05/09/17 00:21           | 05/09/17 20:42                        | LM                                   |

## 20170426-C27-EWALLB (5) L906335-03 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/26/17 09:40 | Received date/time<br>04/28/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977236 | 1        | 05/06/17 14:47           | 05/07/17 08:06                        | JAH                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977456 | 1        | 05/06/17 14:47           | 05/09/17 03:14                        | ACG                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 1        | 05/09/17 00:21           | 05/09/17 20:53                        | LM                                   |

## 20170426-C27-EWALLB (10) L906335-04 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/26/17 09:55 | Received date/time<br>04/28/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977236 | 1        | 05/06/17 14:47           | 05/07/17 08:27                        | JAH                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977456 | 1        | 05/06/17 14:47           | 05/09/17 03:36                        | ACG                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 1        | 05/09/17 00:21           | 05/09/17 21:05                        | LM                                   |

## 20170426-C27-EWALLB (15) L906335-05 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/26/17 10:10 | Received date/time<br>04/28/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47           | 05/08/17 00:38                        | BMB                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977456 | 1        | 05/06/17 14:47           | 05/09/17 03:58                        | ACG                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 2        | 05/09/17 00:21           | 05/09/17 21:16                        | LM                                   |

## 20170426-C27-EWALLB (20) L906335-06 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/26/17 10:25 | Received date/time<br>04/28/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47           | 05/08/17 00:59                        | BMB                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977456 | 1        | 05/06/17 14:47           | 05/09/17 04:20                        | ACG                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 2        | 05/09/17 00:21           | 05/09/17 21:27                        | LM                                   |

ACCOUNT:

EnCana Oil & Gas - Parachute, CO

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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## 20170426-C27-EWALLB (25) L906335-07 Solid

Collected by  
BKR

Collected date/time  
04/26/17 10:50

Received date/time  
04/28/17 08:45

<sup>1</sup> Cp

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47        | 05/08/17 01:20     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977456 | 1        | 05/06/17 14:47        | 05/09/17 04:41     | ACG     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 2        | 05/09/17 00:21        | 05/09/17 21:48     | LM      |

<sup>2</sup> Tc

<sup>3</sup> Ss

## 20170426-C27-EWALLB (30) L906335-08 Solid

Collected by  
BKR

Collected date/time  
04/26/17 11:25

Received date/time  
04/28/17 08:45

<sup>4</sup> Cn

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47        | 05/08/17 01:41     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977456 | 1        | 05/06/17 14:47        | 05/09/17 05:03     | ACG     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 40       | 05/09/17 00:21        | 05/10/17 01:58     | LM      |

<sup>5</sup> Sr

<sup>6</sup> Gl

## 20170426-C27-EWALLB (35) L906335-09 Solid

Collected by  
BKR

Collected date/time  
04/26/17 11:45

Received date/time  
04/28/17 08:45

<sup>7</sup> Al

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47        | 05/08/17 02:02     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977456 | 1        | 05/06/17 14:47        | 05/09/17 05:26     | ACG     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 10       | 05/09/17 00:21        | 05/10/17 01:24     | LM      |

<sup>8</sup> Sc

## 20170426-C27-WWALLB (10) L906335-10 Solid

Collected by  
BKR

Collected date/time  
04/26/17 12:10

Received date/time  
04/28/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47        | 05/08/17 02:23     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977456 | 1        | 05/06/17 14:47        | 05/09/17 05:57     | ACG     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 2        | 05/09/17 00:21        | 05/09/17 23:43     | LM      |

## 20170426-C27-WWALLB (25) L906335-11 Solid

Collected by  
BKR

Collected date/time  
04/26/17 12:40

Received date/time  
04/28/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47        | 05/08/17 02:44     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977477 | 1        | 05/06/17 14:47        | 05/08/17 18:15     | BRA     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 10       | 05/09/17 00:21        | 05/10/17 01:35     | LM      |

## 20170426-C27-SBN02B (10) L906335-12 Solid

Collected by  
BKR

Collected date/time  
04/26/17 13:45

Received date/time  
04/28/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 25       | 05/06/17 14:47        | 05/07/17 23:14     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977477 | 25       | 05/06/17 14:47        | 05/08/17 18:34     | BRA     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 5        | 05/09/17 00:21        | 05/10/17 10:24     | LM      |

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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## 20170426-C27-SBN02B (25) L906335-13 Solid

Collected by  
BKR

Collected date/time  
04/26/17 14:10

Received date/time  
04/28/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47        | 05/08/17 03:05     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977477 | 1        | 05/06/17 14:47        | 05/08/17 18:54     | BRA     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 2        | 05/09/17 00:21        | 05/10/17 00:05     | LM      |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Gl

<sup>7</sup> Al

<sup>8</sup> Sc

## 20170426-C27-NBOTB (5) L906335-14 Solid

Collected by  
BKR

Collected date/time  
04/27/17 09:00

Received date/time  
04/28/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47        | 05/08/17 03:26     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977477 | 1        | 05/06/17 14:47        | 05/08/17 19:14     | BRA     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 2        | 05/09/17 00:21        | 05/10/17 00:17     | LM      |

## 20170426-C27-NBOTB (10) L906335-15 Solid

Collected by  
BKR

Collected date/time  
04/27/17 09:10

Received date/time  
04/28/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47        | 05/08/17 03:47     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977477 | 1        | 05/06/17 14:47        | 05/08/17 19:34     | BRA     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 40       | 05/09/17 00:21        | 05/10/17 01:47     | LM      |

## 20170426-C27-NBOTB (15) L906335-16 Solid

Collected by  
BKR

Collected date/time  
04/27/17 09:20

Received date/time  
04/28/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47        | 05/08/17 04:08     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977477 | 1        | 05/06/17 14:47        | 05/08/17 19:53     | BRA     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 2        | 05/09/17 00:21        | 05/10/17 00:28     | LM      |

## 20170426-C27-NBOTB (20) L906335-17 Solid

Collected by  
BKR

Collected date/time  
04/27/17 09:35

Received date/time  
04/28/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47        | 05/08/17 04:29     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977477 | 1        | 05/06/17 14:47        | 05/08/17 20:12     | BRA     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 1        | 05/09/17 00:21        | 05/10/17 00:39     | LM      |

## 20170426-C27-NBOTB (25) L906335-18 Solid

Collected by  
BKR

Collected date/time  
04/27/17 09:45

Received date/time  
04/28/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47        | 05/08/17 04:50     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977477 | 1        | 05/06/17 14:47        | 05/08/17 20:32     | BRA     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 2        | 05/09/17 00:21        | 05/10/17 00:50     | LM      |

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## 20170426-C27-NBOTB (30) L906335-19 Solid

Collected by  
BKRCollected date/time  
04/27/17 10:05Received date/time  
04/28/17 08:45

| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time | Analyst |
|---|----------|----------|--------------------------|-----------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47           | 05/08/17 05:11        | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977477 | 1        | 05/06/17 14:47           | 05/08/17 20:52        | BRA     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 2        | 05/09/17 00:21           | 05/10/17 01:02        | LM      |

<sup>1</sup>Cp<sup>2</sup>Tc<sup>3</sup>Ss<sup>4</sup>Cn<sup>5</sup>Sr<sup>6</sup>Gl<sup>7</sup>Al<sup>8</sup>Sc

## 20170426-C27-NBOTB (35) L906335-20 Solid

Collected by  
BKRCollected date/time  
04/27/17 11:00Received date/time  
04/28/17 08:45

| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time | Analyst |
|---|----------|----------|--------------------------|-----------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG977359 | 1        | 05/06/17 14:47           | 05/08/17 05:32        | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG977477 | 1        | 05/06/17 14:47           | 05/08/17 21:11        | BRA     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG976266 | 2        | 05/09/17 00:21           | 05/10/17 01:13        | LM      |

<sup>7</sup>Al<sup>8</sup>Sc





All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Shane Gambill  
Technical Service Representative







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.718           |           | 0.100        | 1        | 05/07/2017 07:24        | WG977236 |
| (S) a,a,a-Trifluorotoluene(FID) | 97.2            |           | 77.0-120     |          | 05/07/2017 07:24        | WG977236 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00184         |           | 0.00100      | 1        | 05/09/2017 02:30        | WG977456 |
| Toluene                    | 0.0107          | J6        | 0.00500      | 1        | 05/09/2017 02:30        | WG977456 |
| Ethylbenzene               | 0.00427         |           | 0.00100      | 1        | 05/09/2017 02:30        | WG977456 |
| Total Xylenes              | 0.0278          | J3 J6     | 0.00300      | 1        | 05/09/2017 02:30        | WG977456 |
| (S) Toluene-d8             | 101             |           | 80.0-120     |          | 05/09/2017 02:30        | WG977456 |
| (S) Dibromofluoromethane   | 103             |           | 74.0-131     |          | 05/09/2017 02:30        | WG977456 |
| (S) a,a,a-Trifluorotoluene | 104             |           | 80.0-120     |          | 05/09/2017 02:30        | WG977456 |
| (S) 4-Bromofluorobenzene   | 96.5            |           | 64.0-132     |          | 05/09/2017 02:30        | WG977456 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 71.1            |           | 8.00         | 2        | 05/09/2017 20:09        | WG976266 |
| (S) o-Terphenyl            | 88.0            |           | 18.0-148     |          | 05/09/2017 20:09        | WG976266 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.173           |           | 0.100        | 1        | 05/07/2017 07:45        | WG977236 |
| (S) a,a,a-Trifluorotoluene(FID) | 97.7            |           | 77.0-120     |          | 05/07/2017 07:45        | WG977236 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00791         |           | 0.00100      | 1        | 05/09/2017 02:52        | WG977456 |
| Toluene                    | 0.0116          |           | 0.00500      | 1        | 05/09/2017 02:52        | WG977456 |
| Ethylbenzene               | 0.00268         |           | 0.00100      | 1        | 05/09/2017 02:52        | WG977456 |
| Total Xylenes              | 0.0157          |           | 0.00300      | 1        | 05/09/2017 02:52        | WG977456 |
| (S) Toluene-d8             | 101             |           | 80.0-120     |          | 05/09/2017 02:52        | WG977456 |
| (S) Dibromofluoromethane   | 100             |           | 74.0-131     |          | 05/09/2017 02:52        | WG977456 |
| (S) a,a,a-Trifluorotoluene | 105             |           | 80.0-120     |          | 05/09/2017 02:52        | WG977456 |
| (S) 4-Bromofluorobenzene   | 96.1            |           | 64.0-132     |          | 05/09/2017 02:52        | WG977456 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 88.0            |           | 8.00         | 2        | 05/09/2017 20:42        | WG976266 |
| (S) o-Terphenyl            | 62.4            |           | 18.0-148     |          | 05/09/2017 20:42        | WG976266 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 2.38            |           | 0.100        | 1        | 05/07/2017 08:06        | WG977236 |
| (S) a,a,a-Trifluorotoluene(FID) | 95.4            |           | 77.0-120     |          | 05/07/2017 08:06        | WG977236 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00399         |           | 0.00100      | 1        | 05/09/2017 03:14        | WG977456 |
| Toluene                    | 0.00846         |           | 0.00500      | 1        | 05/09/2017 03:14        | WG977456 |
| Ethylbenzene               | 0.00212         |           | 0.00100      | 1        | 05/09/2017 03:14        | WG977456 |
| Total Xylenes              | 0.0165          |           | 0.00300      | 1        | 05/09/2017 03:14        | WG977456 |
| (S) Toluene-d8             | 103             |           | 80.0-120     |          | 05/09/2017 03:14        | WG977456 |
| (S) Dibromofluoromethane   | 104             |           | 74.0-131     |          | 05/09/2017 03:14        | WG977456 |
| (S) a,a,a-Trifluorotoluene | 105             |           | 80.0-120     |          | 05/09/2017 03:14        | WG977456 |
| (S) 4-Bromofluorobenzene   | 128             |           | 64.0-132     |          | 05/09/2017 03:14        | WG977456 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 93.6            |           | 4.00         | 1        | 05/09/2017 20:53        | WG976266 |
| (S) o-Terphenyl            | 59.1            |           | 18.0-148     |          | 05/09/2017 20:53        | WG976266 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | ND              |           | 0.100        | 1        | 05/07/2017 08:27        | WG977236 |
| (S) a,a,a-Trifluorotoluene(FID) | 97.2            |           | 77.0-120     |          | 05/07/2017 08:27        | WG977236 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00432         |           | 0.00100      | 1        | 05/09/2017 03:36        | WG977456 |
| Toluene                    | 0.00672         |           | 0.00500      | 1        | 05/09/2017 03:36        | WG977456 |
| Ethylbenzene               | 0.00186         |           | 0.00100      | 1        | 05/09/2017 03:36        | WG977456 |
| Total Xylenes              | 0.00440         |           | 0.00300      | 1        | 05/09/2017 03:36        | WG977456 |
| (S) Toluene-d8             | 101             |           | 80.0-120     |          | 05/09/2017 03:36        | WG977456 |
| (S) Dibromofluoromethane   | 98.0            |           | 74.0-131     |          | 05/09/2017 03:36        | WG977456 |
| (S) a,a,a-Trifluorotoluene | 107             |           | 80.0-120     |          | 05/09/2017 03:36        | WG977456 |
| (S) 4-Bromofluorobenzene   | 104             |           | 64.0-132     |          | 05/09/2017 03:36        | WG977456 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 36.6            |           | 4.00         | 1        | 05/09/2017 21:05        | WG976266 |
| (S) o-Terphenyl            | 54.2            |           | 18.0-148     |          | 05/09/2017 21:05        | WG976266 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.389           |           | 0.100        | 1        | 05/08/2017 00:38        | WG977359 |
| (S) a,a,a-Trifluorotoluene(FID) | 96.5            |           | 77.0-120     |          | 05/08/2017 00:38        | WG977359 |

1 Cp

2 Tc

3 Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00358         |           | 0.00100      | 1        | 05/09/2017 03:58        | WG977456 |
| Toluene                    | 0.0175          |           | 0.00500      | 1        | 05/09/2017 03:58        | WG977456 |
| Ethylbenzene               | 0.00220         |           | 0.00100      | 1        | 05/09/2017 03:58        | WG977456 |
| Total Xylenes              | 0.0287          |           | 0.00300      | 1        | 05/09/2017 03:58        | WG977456 |
| (S) Toluene-d8             | 100             |           | 80.0-120     |          | 05/09/2017 03:58        | WG977456 |
| (S) Dibromofluoromethane   | 100             |           | 74.0-131     |          | 05/09/2017 03:58        | WG977456 |
| (S) a,a,a-Trifluorotoluene | 106             |           | 80.0-120     |          | 05/09/2017 03:58        | WG977456 |
| (S) 4-Bromofluorobenzene   | 102             |           | 64.0-132     |          | 05/09/2017 03:58        | WG977456 |

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 96.3            |           | 8.00         | 2        | 05/09/2017 21:16        | WG976266 |
| (S) o-Terphenyl            | 59.6            |           | 18.0-148     |          | 05/09/2017 21:16        | WG976266 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | ND              |           | 0.100        | 1        | 05/08/2017 00:59        | WG977359 |
| (S) a,a,a-Trifluorotoluene(FID) | 99.7            |           | 77.0-120     |          | 05/08/2017 00:59        | WG977359 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00450         |           | 0.00100      | 1        | 05/09/2017 04:20        | WG977456 |
| Toluene                    | 0.00706         |           | 0.00500      | 1        | 05/09/2017 04:20        | WG977456 |
| Ethylbenzene               | 0.00188         |           | 0.00100      | 1        | 05/09/2017 04:20        | WG977456 |
| Total Xylenes              | 0.00380         |           | 0.00300      | 1        | 05/09/2017 04:20        | WG977456 |
| (S) Toluene-d8             | 101             |           | 80.0-120     |          | 05/09/2017 04:20        | WG977456 |
| (S) Dibromofluoromethane   | 101             |           | 74.0-131     |          | 05/09/2017 04:20        | WG977456 |
| (S) a,a,a-Trifluorotoluene | 108             |           | 80.0-120     |          | 05/09/2017 04:20        | WG977456 |
| (S) 4-Bromofluorobenzene   | 104             |           | 64.0-132     |          | 05/09/2017 04:20        | WG977456 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 34.7            |           | 8.00         | 2        | 05/09/2017 21:27        | WG976266 |
| (S) o-Terphenyl            | 76.2            |           | 18.0-148     |          | 05/09/2017 21:27        | WG976266 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 1.32            |           | 0.100        | 1        | 05/08/2017 01:20        | WG977359 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 93.7            |           | 77.0-120     |          | 05/08/2017 01:20        | WG977359 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00595         |           | 0.00100      | 1        | 05/09/2017 04:41        | WG977456 |
| Toluene                            | 0.0344          |           | 0.00500      | 1        | 05/09/2017 04:41        | WG977456 |
| Ethylbenzene                       | 0.00883         |           | 0.00100      | 1        | 05/09/2017 04:41        | WG977456 |
| Total Xylenes                      | 0.391           |           | 0.00300      | 1        | 05/09/2017 04:41        | WG977456 |
| (S) <i>Toluene-d8</i>              | 99.0            |           | 80.0-120     |          | 05/09/2017 04:41        | WG977456 |
| (S) <i>Dibromofluoromethane</i>    | 106             |           | 74.0-131     |          | 05/09/2017 04:41        | WG977456 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 99.6            |           | 80.0-120     |          | 05/09/2017 04:41        | WG977456 |
| (S) <i>4</i> -Bromofluorobenzene   | 89.4            |           | 64.0-132     |          | 05/09/2017 04:41        | WG977456 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 180             |           | 8.00         | 2        | 05/09/2017 21:48        | WG976266 |
| (S) <i>o</i> -Terphenyl    | 54.2            |           | 18.0-148     |          | 05/09/2017 21:48        | WG976266 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 1.92            |           | 0.100        | 1        | 05/08/2017 01:41        | WG977359 |
| (S) a,a,a-Trifluorotoluene(FID) | 81.7            |           | 77.0-120     |          | 05/08/2017 01:41        | WG977359 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00292         |           | 0.00100      | 1        | 05/09/2017 05:03        | WG977456 |
| Toluene                    | 0.0467          |           | 0.00500      | 1        | 05/09/2017 05:03        | WG977456 |
| Ethylbenzene               | 0.0192          |           | 0.00100      | 1        | 05/09/2017 05:03        | WG977456 |
| Total Xylenes              | 0.266           |           | 0.00300      | 1        | 05/09/2017 05:03        | WG977456 |
| (S) Toluene-d8             | 104             |           | 80.0-120     |          | 05/09/2017 05:03        | WG977456 |
| (S) Dibromofluoromethane   | 102             |           | 74.0-131     |          | 05/09/2017 05:03        | WG977456 |
| (S) a,a,a-Trifluorotoluene | 96.0            |           | 80.0-120     |          | 05/09/2017 05:03        | WG977456 |
| (S) 4-Bromofluorobenzene   | 82.8            |           | 64.0-132     |          | 05/09/2017 05:03        | WG977456 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 392             |           | 160          | 40       | 05/10/2017 01:58        | WG976266 |
| (S) o-Terphenyl            | 0.000           | J7        | 18.0-148     |          | 05/10/2017 01:58        | WG976266 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.455           |           | 0.100        | 1        | 05/08/2017 02:02        | WG977359 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 97.4            |           | 77.0-120     |          | 05/08/2017 02:02        | WG977359 |

1 Cp

2 Tc

3 Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00425         |           | 0.00100      | 1        | 05/09/2017 05:26        | WG977456 |
| Toluene                            | 0.0138          |           | 0.00500      | 1        | 05/09/2017 05:26        | WG977456 |
| Ethylbenzene                       | 0.00361         |           | 0.00100      | 1        | 05/09/2017 05:26        | WG977456 |
| Total Xylenes                      | 0.0662          |           | 0.00300      | 1        | 05/09/2017 05:26        | WG977456 |
| (S) <i>Toluene-d8</i>              | 102             |           | 80.0-120     |          | 05/09/2017 05:26        | WG977456 |
| (S) <i>Dibromofluoromethane</i>    | 97.3            |           | 74.0-131     |          | 05/09/2017 05:26        | WG977456 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 105             |           | 80.0-120     |          | 05/09/2017 05:26        | WG977456 |
| (S) <i>4</i> -Bromofluorobenzene   | 103             |           | 64.0-132     |          | 05/09/2017 05:26        | WG977456 |

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 250             |           | 40.0         | 10       | 05/10/2017 01:24        | WG976266 |
| (S) <i>o</i> -Terphenyl    | 57.6            |           | 18.0-148     |          | 05/10/2017 01:24        | WG976266 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.476           |           | 0.100        | 1        | 05/08/2017 02:23        | WG977359 |
| (S) a,a,a-Trifluorotoluene(FID) | 98.3            |           | 77.0-120     |          | 05/08/2017 02:23        | WG977359 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.0230          |           | 0.00100      | 1        | 05/09/2017 05:57        | WG977456 |
| Toluene                    | 0.00689         |           | 0.00500      | 1        | 05/09/2017 05:57        | WG977456 |
| Ethylbenzene               | 0.00359         |           | 0.00100      | 1        | 05/09/2017 05:57        | WG977456 |
| Total Xylenes              | 0.0120          |           | 0.00300      | 1        | 05/09/2017 05:57        | WG977456 |
| (S) Toluene-d8             | 98.8            |           | 80.0-120     |          | 05/09/2017 05:57        | WG977456 |
| (S) Dibromofluoromethane   | 101             |           | 74.0-131     |          | 05/09/2017 05:57        | WG977456 |
| (S) a,a,a-Trifluorotoluene | 101             |           | 80.0-120     |          | 05/09/2017 05:57        | WG977456 |
| (S) 4-Bromofluorobenzene   | 104             |           | 64.0-132     |          | 05/09/2017 05:57        | WG977456 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 585             |           | 8.00         | 2        | 05/09/2017 23:43        | WG976266 |
| (S) o-Terphenyl            | 90.6            |           | 18.0-148     |          | 05/09/2017 23:43        | WG976266 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 1.09            |           | 0.100        | 1        | 05/08/2017 02:44        | WG977359 |
| (S) a,a,a-Trifluorotoluene(FID) | 95.5            |           | 77.0-120     |          | 05/08/2017 02:44        | WG977359 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00322         |           | 0.00100      | 1        | 05/08/2017 18:15        | WG977477 |
| Toluene                    | 0.00849         |           | 0.00500      | 1        | 05/08/2017 18:15        | WG977477 |
| Ethylbenzene               | 0.00270         |           | 0.00100      | 1        | 05/08/2017 18:15        | WG977477 |
| Total Xylenes              | 0.0503          |           | 0.00300      | 1        | 05/08/2017 18:15        | WG977477 |
| (S) Toluene-d8             | 110             |           | 80.0-120     |          | 05/08/2017 18:15        | WG977477 |
| (S) Dibromofluoromethane   | 98.3            |           | 74.0-131     |          | 05/08/2017 18:15        | WG977477 |
| (S) a,a,a-Trifluorotoluene | 105             |           | 80.0-120     |          | 05/08/2017 18:15        | WG977477 |
| (S) 4-Bromofluorobenzene   | 87.1            |           | 64.0-132     |          | 05/08/2017 18:15        | WG977477 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 295             |           | 40.0         | 10       | 05/10/2017 01:35        | WG976266 |
| (S) o-Terphenyl            | 56.8            |           | 18.0-148     |          | 05/10/2017 01:35        | WG976266 |







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 4.72            |           | 2.50         | 25       | 05/07/2017 23:14        | WG977359 |
| (S) a,a,a-Trifluorotoluene(FID) | 104             |           | 77.0-120     |          | 05/07/2017 23:14        | WG977359 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.245           |           | 0.0250       | 25       | 05/08/2017 18:34        | WG977477 |
| Toluene                    | 0.191           |           | 0.125        | 25       | 05/08/2017 18:34        | WG977477 |
| Ethylbenzene               | 0.0443          |           | 0.0250       | 25       | 05/08/2017 18:34        | WG977477 |
| Total Xylenes              | 0.463           |           | 0.0750       | 25       | 05/08/2017 18:34        | WG977477 |
| (S) Toluene-d8             | 104             |           | 80.0-120     |          | 05/08/2017 18:34        | WG977477 |
| (S) Dibromofluoromethane   | 84.6            |           | 74.0-131     |          | 05/08/2017 18:34        | WG977477 |
| (S) a,a,a-Trifluorotoluene | 109             |           | 80.0-120     |          | 05/08/2017 18:34        | WG977477 |
| (S) 4-Bromofluorobenzene   | 105             |           | 64.0-132     |          | 05/08/2017 18:34        | WG977477 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 624             |           | 20.0         | 5        | 05/10/2017 10:24        | WG976266 |
| (S) o-Terphenyl            | 173             | J1        | 18.0-148     |          | 05/10/2017 10:24        | WG976266 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 1.01            |           | 0.100        | 1        | 05/08/2017 03:05        | WG977359 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 93.6            |           | 77.0-120     |          | 05/08/2017 03:05        | WG977359 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00438         |           | 0.00100      | 1        | 05/08/2017 18:54        | WG977477 |
| Toluene                            | 0.0714          |           | 0.00500      | 1        | 05/08/2017 18:54        | WG977477 |
| Ethylbenzene                       | 0.00259         |           | 0.00100      | 1        | 05/08/2017 18:54        | WG977477 |
| Total Xylenes                      | 0.0835          |           | 0.00300      | 1        | 05/08/2017 18:54        | WG977477 |
| (S) <i>Toluene-d8</i>              | 107             |           | 80.0-120     |          | 05/08/2017 18:54        | WG977477 |
| (S) <i>Dibromofluoromethane</i>    | 99.8            |           | 74.0-131     |          | 05/08/2017 18:54        | WG977477 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 102             |           | 80.0-120     |          | 05/08/2017 18:54        | WG977477 |
| (S) <i>4</i> -Bromofluorobenzene   | 92.7            |           | 64.0-132     |          | 05/08/2017 18:54        | WG977477 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 243             |           | 8.00         | 2        | 05/10/2017 00:05        | WG976266 |
| (S) <i>o</i> -Terphenyl    | 112             |           | 18.0-148     |          | 05/10/2017 00:05        | WG976266 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 3.58            |           | 0.100        | 1        | 05/08/2017 03:26        | WG977359 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 94.4            |           | 77.0-120     |          | 05/08/2017 03:26        | WG977359 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00481         |           | 0.00100      | 1        | 05/08/2017 19:14        | WG977477 |
| Toluene                            | 0.0154          |           | 0.00500      | 1        | 05/08/2017 19:14        | WG977477 |
| Ethylbenzene                       | 0.00298         |           | 0.00100      | 1        | 05/08/2017 19:14        | WG977477 |
| Total Xylenes                      | 0.0389          |           | 0.00300      | 1        | 05/08/2017 19:14        | WG977477 |
| (S) <i>Toluene-d8</i>              | 106             |           | 80.0-120     |          | 05/08/2017 19:14        | WG977477 |
| (S) <i>Dibromofluoromethane</i>    | 101             |           | 74.0-131     |          | 05/08/2017 19:14        | WG977477 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 101             |           | 80.0-120     |          | 05/08/2017 19:14        | WG977477 |
| (S) <i>4</i> -Bromofluorobenzene   | 100             |           | 64.0-132     |          | 05/08/2017 19:14        | WG977477 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 187             |           | 8.00         | 2        | 05/10/2017 00:17        | WG976266 |
| (S) <i>o</i> -Terphenyl    | 66.6            |           | 18.0-148     |          | 05/10/2017 00:17        | WG976266 |

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Gl7  
Al8  
Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 2.49            |           | 0.100        | 1        | 05/08/2017 03:47        | WG977359 |
| (S) a,a,a-Trifluorotoluene(FID) | 91.5            |           | 77.0-120     |          | 05/08/2017 03:47        | WG977359 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00198         |           | 0.00100      | 1        | 05/08/2017 19:34        | WG977477 |
| Toluene                    | 0.00592         |           | 0.00500      | 1        | 05/08/2017 19:34        | WG977477 |
| Ethylbenzene               | 0.00101         |           | 0.00100      | 1        | 05/08/2017 19:34        | WG977477 |
| Total Xylenes              | 0.0117          |           | 0.00300      | 1        | 05/08/2017 19:34        | WG977477 |
| (S) Toluene-d8             | 103             |           | 80.0-120     |          | 05/08/2017 19:34        | WG977477 |
| (S) Dibromofluoromethane   | 102             |           | 74.0-131     |          | 05/08/2017 19:34        | WG977477 |
| (S) a,a,a-Trifluorotoluene | 107             |           | 80.0-120     |          | 05/08/2017 19:34        | WG977477 |
| (S) 4-Bromofluorobenzene   | 106             |           | 64.0-132     |          | 05/08/2017 19:34        | WG977477 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 887             |           | 160          | 40       | 05/10/2017 01:47        | WG976266 |
| (S) o-Terphenyl            | 2.77            | J7        | 18.0-148     |          | 05/10/2017 01:47        | WG976266 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.707           |           | 0.100        | 1        | 05/08/2017 04:08        | WG977359 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 97.6            |           | 77.0-120     |          | 05/08/2017 04:08        | WG977359 |

1 Cp

2 Tc

3 Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00390         |           | 0.00100      | 1        | 05/08/2017 19:53        | WG977477 |
| Toluene                            | 0.0539          |           | 0.00500      | 1        | 05/08/2017 19:53        | WG977477 |
| Ethylbenzene                       | 0.00170         |           | 0.00100      | 1        | 05/08/2017 19:53        | WG977477 |
| Total Xylenes                      | 0.0661          |           | 0.00300      | 1        | 05/08/2017 19:53        | WG977477 |
| (S) <i>Toluene-d8</i>              | 106             |           | 80.0-120     |          | 05/08/2017 19:53        | WG977477 |
| (S) <i>Dibromofluoromethane</i>    | 97.9            |           | 74.0-131     |          | 05/08/2017 19:53        | WG977477 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 109             |           | 80.0-120     |          | 05/08/2017 19:53        | WG977477 |
| (S) <i>4</i> -Bromofluorobenzene   | 101             |           | 64.0-132     |          | 05/08/2017 19:53        | WG977477 |

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 96.7            |           | 8.00         | 2        | 05/10/2017 00:28        | WG976266 |
| (S) <i>o</i> -Terphenyl    | 70.2            |           | 18.0-148     |          | 05/10/2017 00:28        | WG976266 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.151           |           | 0.100        | 1        | 05/08/2017 04:29        | WG977359 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 99.8            |           | 77.0-120     |          | 05/08/2017 04:29        | WG977359 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00427         |           | 0.00100      | 1        | 05/08/2017 20:12        | WG977477 |
| Toluene                            | 0.00945         |           | 0.00500      | 1        | 05/08/2017 20:12        | WG977477 |
| Ethylbenzene                       | 0.00144         |           | 0.00100      | 1        | 05/08/2017 20:12        | WG977477 |
| Total Xylenes                      | 0.0128          |           | 0.00300      | 1        | 05/08/2017 20:12        | WG977477 |
| (S) <i>Toluene-d8</i>              | 104             |           | 80.0-120     |          | 05/08/2017 20:12        | WG977477 |
| (S) <i>Dibromofluoromethane</i>    | 90.7            |           | 74.0-131     |          | 05/08/2017 20:12        | WG977477 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 112             |           | 80.0-120     |          | 05/08/2017 20:12        | WG977477 |
| (S) <i>4</i> -Bromofluorobenzene   | 99.6            |           | 64.0-132     |          | 05/08/2017 20:12        | WG977477 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 13.0            |           | 4.00         | 1        | 05/10/2017 00:39        | WG976266 |
| (S) <i>o</i> -Terphenyl    | 61.0            |           | 18.0-148     |          | 05/10/2017 00:39        | WG976266 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.298           |           | 0.100        | 1        | 05/08/2017 04:50        | WG977359 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 96.8            |           | 77.0-120     |          | 05/08/2017 04:50        | WG977359 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00398         |           | 0.00100      | 1        | 05/08/2017 20:32        | WG977477 |
| Toluene                            | 0.00783         |           | 0.00500      | 1        | 05/08/2017 20:32        | WG977477 |
| Ethylbenzene                       | 0.00139         |           | 0.00100      | 1        | 05/08/2017 20:32        | WG977477 |
| Total Xylenes                      | 0.00442         |           | 0.00300      | 1        | 05/08/2017 20:32        | WG977477 |
| (S) <i>Toluene-d8</i>              | 103             |           | 80.0-120     |          | 05/08/2017 20:32        | WG977477 |
| (S) <i>Dibromofluoromethane</i>    | 90.2            |           | 74.0-131     |          | 05/08/2017 20:32        | WG977477 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 114             |           | 80.0-120     |          | 05/08/2017 20:32        | WG977477 |
| (S) <i>4</i> -Bromofluorobenzene   | 96.7            |           | 64.0-132     |          | 05/08/2017 20:32        | WG977477 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 89.4            |           | 8.00         | 2        | 05/10/2017 00:50        | WG976266 |
| (S) <i>o</i> -Terphenyl    | 77.6            |           | 18.0-148     |          | 05/10/2017 00:50        | WG976266 |

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Gl7  
Al8  
Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 1.23            |           | 0.100        | 1        | 05/08/2017 05:11        | WG977359 |
| (S) a,a,a-Trifluorotoluene(FID) | 94.5            |           | 77.0-120     |          | 05/08/2017 05:11        | WG977359 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00264         |           | 0.00100      | 1        | 05/08/2017 20:52        | WG977477 |
| Toluene                    | 0.0503          |           | 0.00500      | 1        | 05/08/2017 20:52        | WG977477 |
| Ethylbenzene               | 0.00286         |           | 0.00100      | 1        | 05/08/2017 20:52        | WG977477 |
| Total Xylenes              | 0.0890          |           | 0.00300      | 1        | 05/08/2017 20:52        | WG977477 |
| (S) Toluene-d8             | 102             |           | 80.0-120     |          | 05/08/2017 20:52        | WG977477 |
| (S) Dibromofluoromethane   | 91.8            |           | 74.0-131     |          | 05/08/2017 20:52        | WG977477 |
| (S) a,a,a-Trifluorotoluene | 111             |           | 80.0-120     |          | 05/08/2017 20:52        | WG977477 |
| (S) 4-Bromofluorobenzene   | 96.0            |           | 64.0-132     |          | 05/08/2017 20:52        | WG977477 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 209             |           | 8.00         | 2        | 05/10/2017 01:02        | WG976266 |
| (S) o-Terphenyl            | 116             |           | 18.0-148     |          | 05/10/2017 01:02        | WG976266 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 1.04            |           | 0.100        | 1        | 05/08/2017 05:32        | WG977359 |
| (S) a,a,a-Trifluorotoluene(FID) | 94.9            |           | 77.0-120     |          | 05/08/2017 05:32        | WG977359 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00254         |           | 0.00100      | 1        | 05/08/2017 21:11        | WG977477 |
| Toluene                    | 0.0333          |           | 0.00500      | 1        | 05/08/2017 21:11        | WG977477 |
| Ethylbenzene               | 0.00250         |           | 0.00100      | 1        | 05/08/2017 21:11        | WG977477 |
| Total Xylenes              | 0.0601          |           | 0.00300      | 1        | 05/08/2017 21:11        | WG977477 |
| (S) Toluene-d8             | 103             |           | 80.0-120     |          | 05/08/2017 21:11        | WG977477 |
| (S) Dibromofluoromethane   | 90.4            |           | 74.0-131     |          | 05/08/2017 21:11        | WG977477 |
| (S) a,a,a-Trifluorotoluene | 114             |           | 80.0-120     |          | 05/08/2017 21:11        | WG977477 |
| (S) 4-Bromofluorobenzene   | 98.6            |           | 64.0-132     |          | 05/08/2017 21:11        | WG977477 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 188             |           | 8.00         | 2        | 05/10/2017 01:13        | WG976266 |
| (S) o-Terphenyl            | 75.4            |           | 18.0-148     |          | 05/10/2017 01:13        | WG976266 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Abbreviations and Definitions

|     |  |
|-----|--|
| SDG | Sample Delivery Group.   |
| RDL | Reported Detection Limit.  |
| ND  | Not detected at the Reporting Limit (or MDL where applicable).   |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |

| Qualifier | Description   |
|-----------|---|
| J1        | Surrogate recovery limits have been exceeded; values are outside upper control limits.                |
| J3        | The associated batch QC was outside the established quality control range for precision.              |
| J6        | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution.                       |

<sup>1</sup> Cp<sup>2</sup> Tc<sup>3</sup> Ss<sup>4</sup> Cn<sup>5</sup> Sr<sup>6</sup> Gl<sup>7</sup> Al<sup>8</sup> Sc





ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

## State Accreditations

|                       |             |                             |                   |
|-----------------------|-------------|-----------------------------|-------------------|
| Alabama               | 40660       | Nevada                      | TN-03-2002-34     |
| Alaska                | UST-080     | New Hampshire               | 2975              |
| Arizona               | AZ0612      | New Jersey–NELAP            | TN002             |
| Arkansas              | 88-0469     | New Mexico                  | TN00003           |
| California            | 01157CA     | New York                    | 11742             |
| Colorado              | TN00003     | North Carolina              | Env375            |
| Connecticut           | PH-0197     | North Carolina <sup>1</sup> | DW21704           |
| Florida               | E87487      | North Carolina <sup>2</sup> | 41                |
| Georgia               | NELAP       | North Dakota                | R-140             |
| Georgia <sup>1</sup>  | 923         | Ohio–VAP                    | CL0069            |
| Idaho                 | TN00003     | Oklahoma                    | 9915              |
| Illinois              | 200008      | Oregon                      | TN200002          |
| Indiana               | C-TN-01     | Pennsylvania                | 68-02979          |
| Iowa                  | 364         | Rhode Island                | 221               |
| Kansas                | E-10277     | South Carolina              | 84004             |
| Kentucky <sup>1</sup> | 90010       | South Dakota                | n/a               |
| Kentucky <sup>2</sup> | 16          | Tennessee <sup>14</sup>     | 2006              |
| Louisiana             | AI30792     | Texas                       | T 104704245-07-TX |
| Maine                 | TN0002      | Texas <sup>5</sup>          | LAB0152           |
| Maryland              | 324         | Utah                        | 6157585858        |
| Massachusetts         | M-TN003     | Vermont                     | VT2006            |
| Michigan              | 9958        | Virginia                    | 109               |
| Minnesota             | 047-999-395 | Washington                  | C1915             |
| Mississippi           | TN00003     | West Virginia               | 233               |
| Missouri              | 340         | Wisconsin                   | 9980939910        |
| Montana               | CERT0086    | Wyoming                     | A2LA              |
| Nebraska              | NE-OS-15-05 |                             |                   |

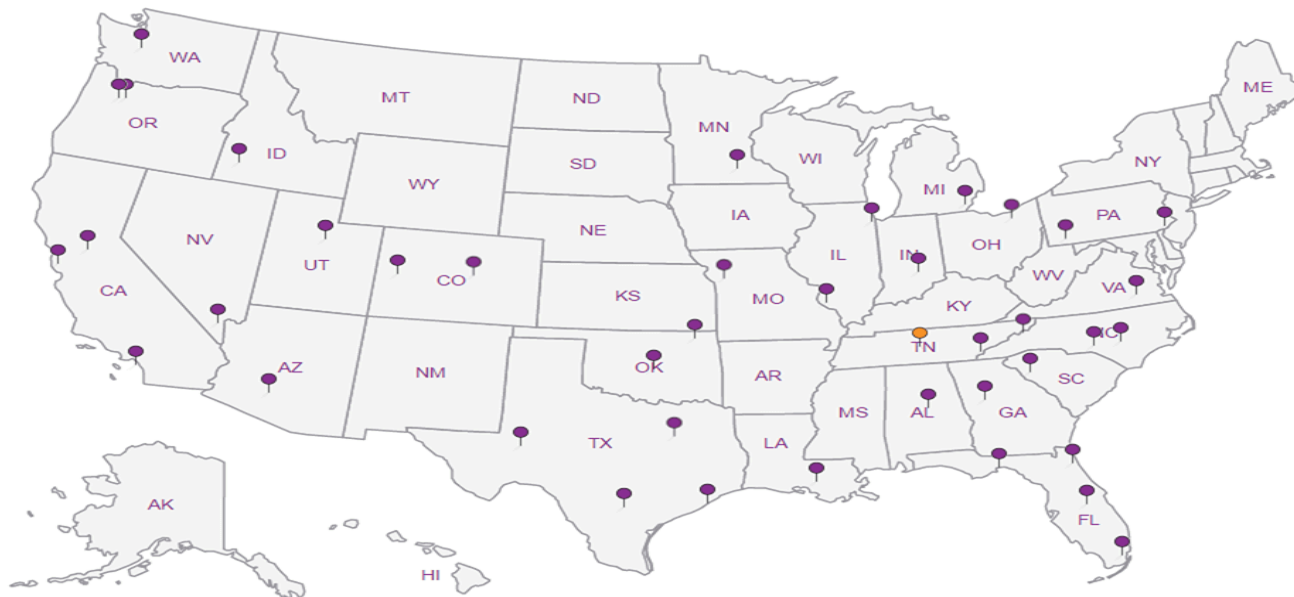
## Third Party & Federal Accreditations

|                               |         |              |         |
|-------------------------------|---------|--------------|---------|
| A2LA – ISO 17025              | 1461.01 | AIHA-LAP,LLC | 100789  |
| A2LA – ISO 17025 <sup>5</sup> | 1461.02 | DOD          | 1461.01 |
| Canada                        | 1461.01 | USDA         | S-67674 |
| EPA–Crypto                    | TN00003 |              |         |



<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>n/a</sup> Accreditation not applicable

## Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**





|   |  |   |          |   |          |      |   |   |   |  |  |  |  |  |  |  |  |   |  |  |  |  |
|---|--|---|----------|---|----------|------|---|---|---|--|--|--|--|--|--|--|--|---|--|--|--|--|
| Company Name/Address:<br><b>Encana</b><br><b>143 Diamond Avenue</b><br><b>Parachute, CO 81635</b> |  |   |          | Billing Information:<br><b>ENCANACO</b>   |          |      |   | Analysis / Container / Preservative<br><div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH (DRO and GRO)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX</div> </div> |   |  |  |  |  |  |  |  |  | Chain of Custody Page <u>    </u> of <u>    </u><br><br>L.A.B S.C.I.E.N.C.E.S<br><b>YOUR LAB OF CHOICE</b><br>12065 Lebanon Rd<br>Mount Juliet, TN 37122<br>Phone: 615-758-5858<br>Phone: 800-767-5859<br>Fax: 615-758-5859<br> |  |  |  |  |
| Report to:<br><b>Brett Middleton</b>  |  |   |          | Email To:<br><b>brett.middleton@encana.com</b>  |          |      |   |   |   |  |  |  |  |  |  |  |  |   |  |  |  |  |
| Project Description:<br><b>C27 Pit assessment</b>   |  |   |          | City/State Collected:<br>   |          |      |   |   |   |  |  |  |  |  |  |  |  |   |  |  |  |  |
| Phone: <b>(970) 285-2739</b><br>Fax:  |  | Client Project #<br><b>C27</b>  |          | Lab Project #<br><b>ENCANACO</b>  |          |      |   |   |   |  |  |  |  |  |  |  |  |   |  |  |  |  |
| Collected by (print):<br><b>BKR</b>   |  | Site/Facility ID #<br><b>C27</b>  |          | P.O. #  |          |      |   |   |   |  |  |  |  |  |  |  |  |   |  |  |  |  |
| Collected by (signature):<br><br>   |  | <b>Rush?</b> (Lab MUST Be Notified)<br><input type="checkbox"/> Same Day .....200%<br><input type="checkbox"/> Next Day .....100%<br><input type="checkbox"/> Two Day .....50%<br><input type="checkbox"/> Three Day .....25% |          | Date Results Needed<br><br>   |          |      |   |   |   |  |  |  |  |  |  |  |  |   |  |  |  |  |
| Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>        |  |   |          | Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes<br>FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes |          |      |   | No. of Cntrs  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |
| Sample ID   |  | Comp/Grab   | Matrix * | Depth   | Date     | Time |   |   |   |  |  |  |  |  |  |  |  |   |  |  |  |  |
| 20170426-C27-SBOTB(30)  |  | Grab  | SS       | 30  | 04/26/17 | 0830 | 1 | X   | X |  |  |  |  |  |  |  |  |   |  |  |  |  |
| 20170426-C27-SBOTB(35)  |  | Grab  | SS       | 35  | 04/26/17 | 0915 | 1 | X   | X |  |  |  |  |  |  |  |  |   |  |  |  |  |
| 20170426-C27-EWALLB(5)  |  | Grab  | SS       | 5   | 04/26/17 | 0940 | 1 | X   | X |  |  |  |  |  |  |  |  |   |  |  |  |  |
| 20170426-C27-EWALLB(15)   |  | Grab  | SS       | 10  | 04/26/17 | 0955 | 1 | X   | X |  |  |  |  |  |  |  |  |   |  |  |  |  |
| 20170426-C27-EWALLB(15)   |  | Grab  | SS       | 15  | 04/26/17 | 1010 | 1 | X   | X |  |  |  |  |  |  |  |  |   |  |  |  |  |
| 20170426-C27-EWALLB(25)   |  | Grab  | SS       | 20  | 04/26/17 | 1025 | 1 | X   | X |  |  |  |  |  |  |  |  |   |  |  |  |  |
| 20170426-C27-EWALLB(25)   |  | Grab  | SS       | 25  | 04/26/17 | 1050 | 1 | X   | X |  |  |  |  |  |  |  |  |   |  |  |  |  |
| 20170426-C27-EWALLB(25)   |  | Grab  | SS       | 30  | 04/26/17 | 1125 | 1 | X   | X |  |  |  |  |  |  |  |  |   |  |  |  |  |
| 20170426-C27-EWALLB(35)   |  | Grab  | SS       | 35  | 04/26/17 | 1145 | 1 | X   | X |  |  |  |  |  |  |  |  |   |  |  |  |  |
| 20170426-C27-WWALLB(5)  |  | Grab  | SS       | 10  | 04/26/17 | 1210 | 1 | X   | X |  |  |  |  |  |  |  |  |   |  |  |  |  |



\* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other **Soil**

Remarks: 7136 2663 8944

|                              |       |       |                                  |  |   |
|------------------------------|-------|-------|----------------------------------|--|---|
| Relinquished by: (Signature) | Date: | Time: | Received by: (Signature)         | Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> | Condition: (lab use only)<br><br>OK<br><br>COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA<br>pH Checked: <input type="checkbox"/> NCF: |
| Relinquished by: (Signature) | Date: | Time: | Received by: (Signature)         | Temp: °C <span style="margin-left: 20px;">21.2</span> Bottles Received: <span style="margin-left: 20px;">20-802</span>                                 |   |
| Relinquished by: (Signature) | Date: | Time: | Received for lab by: (Signature) | Date: <span style="margin-left: 20px;">4-28-17</span> Time: <span style="margin-left: 20px;">0845</span>   |   |

Hold #



|   |  |   |          |  |          |   |                   |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
|---|--|---|----------|--|----------|---|-------------------|-------------------------------------|--|--|--|--|--|--|--|--|--|---|--|--|--|
| Company Name/Address:<br><b>Encana</b><br><b>143 Diamond Avenue</b><br><b>Parachute, CO 81635</b> |  |   |          | Billing Information:<br><b>ENCANACO</b>        |          |   |                   | Analysis / Container / Preservative |  |  |  |  |  |  |  |  |  | Chain of Custody Page ____ of ____<br><br>L.A.B S.C.I.E.N.C.E.S<br><b>YOUR LAB OF CHOICE</b><br>12065 Lebanon Rd<br>Mount Juliet, TN 37122<br>Phone: 615-758-5858<br>Phone: 800-767-5859<br>Fax: 615-758-5859<br> |  |  |  |
| Report to:<br><b>Brett Middleton</b>  |  |   |          | Email To:<br><b>brett.middleton@encana.com</b> |          |   |                   |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| Project<br>Description: <b>C27 Pit assessment</b>   |  |   |          | City/State<br>Collected:                       |          |   |                   | TPH (DRO and GRO)    BTEX           |  |  |  |  |  |  |  |  |  |   |  |  |  |
| Phone: <b>(970) 285-2739</b><br>Fax:  |  | Client Project #<br><b>C27</b>  |          | Lab Project #<br><b>ENCANACO</b>               |          |   |                   |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| Collected by (print):<br><b>BKR</b>   |  | Site/Facility ID #<br><b>C27</b>  |          | P.O. #   |          |   |                   |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| Collected by (signature):   |  | <b>Rush?</b> (Lab MUST Be Notified)<br>_____ Same Day ..... 200%<br>_____ Next Day ..... 100%<br>_____ Two Day ..... 50%<br>_____ Three Day ..... 25% |          | Date Results Needed                            |          | Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes<br>FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes |                   |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| Immediately<br>Packed on ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>     |  |   |          |  |          |   |                   |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| Sample ID   |  | Comp/Grab   | Matrix * | Depth  | Date     | Time  | No.<br>of<br>Cnts |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| 20170426-C27-WWALLB(5)  |  | Grab  | SS       | 25   | 04/26/17 | 1240  | 1                 |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| 20170426-C27-SBN02B(10)   |  | Grab  | SS       | 10   | 04/26/17 | 1345  | 1                 |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| 20170426-C27-SBN02B(25)   |  | Grab  | SS       | 25   | 04/26/17 | 1410  | 1                 |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| 20170427-C27-NBOTB(5)   |  | Grab  | SS       | 5  | 04/27/17 | 0900  | 1                 |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| 20170427-C27-NBOTB(10)  |  | Grab  | SS       | 10   | 04/27/17 | 0910  | 1                 |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| 20170427-C27-NBOTB(15)  |  | Grab  | SS       | 15   | 04/27/17 | 0920  | 1                 |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| 20170427-C27-NBOTB(20)  |  | Grab  | SS       | 20   | 04/27/17 | 0935  | 1                 |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| 20170427-C27-NBOTB(25)  |  | Grab  | SS       | 25   | 04/27/17 | 0945  | 1                 |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| 20170427-C27-NBOTB(30)  |  | Grab  | SS       | 30   | 04/27/17 | 1005  | 1                 |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |
| 20170427-C27-NBOTB(35)  |  | Grab  | SS       | 35   | 04/27/17 | 1100  | 1                 |                                     |  |  |  |  |  |  |  |  |  |   |  |  |  |

\* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other **Soil**

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

|                              |       |       |                                  |  |  |  |  |
|------------------------------|-------|-------|----------------------------------|--|--|--|--|
| Remarks:                     |       |       |                                  | Hold #   |  |  |  |
| Relinquished by: (Signature) | Date: | Time: | Received by: (Signature)         | Samples returned via: <input type="checkbox"/> UPS     | Condition: (lab use only) <span style="float: right;">OK</span><br><br>COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA<br>pH Checked: _____ NCF: _____ |  |  |
| Relinquished by: (Signature) | Date: | Time: | Received by: (Signature)         | Temp: <u>21.0</u> °C    Bottles Received: <u>20.82</u> |  |  |  |
| Relinquished by: (Signature) | Date: | Time: | Received for lab by: (Signature) | Date: <u>4-28-17</u> Time: <u>0845</u>                 |  |  |  |



# ESC LAB SCIENCES

## Cooler Receipt Form

| Client: <u>ENCANACO</u>                   |                                     | SDG#                                | <u>1906335</u>           |
|---|-------------------------------------|-------------------------------------|--------------------------|
| Cooler Received/Opened On: <u>4/28/17</u> |                                     | Temperature: <u>21°C</u>            |                          |
| Received By: Troy Dunlap                  |                                     |                                     |                          |
| Signature: <u>[Signature]</u>             |                                     |                                     |                          |
| Receipt Check List                        |                                     |                                     |                          |
|   | NP                                  | Yes                                 | No                       |
| COC Seal Present / Intact?                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| COC Signed / Accurate?                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Bottles arrive intact?                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Correct bottles used?                     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Sufficient volume sent?                   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| If Applicable                             | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| VOA Zero headspace?                       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> |
| Preservation Correct / Checked?           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> |



**Troy Dunlap**

**ESC Lab Sciences**  
**Non-Conformance Form**

|                  |                  |               |                           |
|------------------|------------------|---------------|---------------------------|
| Login #: L906335 | Client: ENCANACO | Date: 4/28/17 | Evaluated by: Troy Dunlap |
|------------------|------------------|---------------|---------------------------|

**Non-Conformance (check applicable items)**

| Sample Integrity               | Chain of Custody Clarification                   | If Broken Container:                                 |
|--------------------------------|--|--|
| Parameter(s) past holding time | Login Clarification Needed                       |  |
| Improper temperature           | Chain of custody is incomplete                   | Insufficient packing material around container       |
| Improper container type        | Please specify Metals requested.                 | Insufficient packing material inside cooler          |
| Improper preservation          | Please specify TCLP requested.                   | Improper handling by carrier (FedEx / UPS / Courier) |
| Insufficient sample volume.    | Received additional samples not listed on coc.   | Sample was frozen                                    |
| Sample is biphasic.            | Sample ids on containers do not match ids on coc | Container lid not intact                             |
| Vials received with headspace. | Trip Blank not received.                         | <b>If no Chain of Custody:</b>                       |
| Broken container               | Client did not "X" analysis.                     | Received by:   |
| Broken container:              | X Chain of Custody is missing                    | Date/Time:   |
| Sufficient sample remains      |  | Temp./Cont. Rec./pH:                                 |
|                                |  | Carrier:   |
|                                |  | Tracking#  |

**Login Comments: COC is missing. Attached copy of all ID's, dates and times.**

|  |      |       |            |                |       |
|--|------|-------|------------|----------------|-------|
| Client informed by:                                  | Call | Email | Voice Mail | Date: 05/02/17 | Time: |
| TSR Initials: CSG      Client Contact: Blair Rollins |      |       |            |                |       |

**Login Instructions:**

**Client provided COC's by email**

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.



## EnCana Oil & Gas - Parachute, CO

Sample Delivery Group: L905166  
Samples Received: 04/26/2017  
Project Number: C27  
Description: C27 Pit Assessment  
Site: C27  
Report To: Brett Middleton  
143 Diamond Avenue  
Parachute, CO 81635

Entire Report Reviewed By:



Shane Gambill  
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.





|   |    |
|---|----|
| <sup>1</sup> Cp: Cover Page                 | 1  |
| <sup>2</sup> Tc: Table of Contents          | 2  |
| <sup>3</sup> Ss: Sample Summary             | 3  |
| <sup>4</sup> Cn: Case Narrative             | 8  |
| <sup>5</sup> Sr: Sample Results             | 9  |
| 20170420-C27-SBS01A(5-7) L905166-01         | 9  |
| 20170420-C27-SBS01A(25) L905166-02          | 10 |
| 20170421-C27-SBN02A(5) L905166-03           | 11 |
| 20170421-C27-SBN02A(10) L905166-04          | 12 |
| 20170421-C27-SBN02A(15) L905166-05          | 13 |
| 20170421-C27-SBN02A(20) L905166-06          | 14 |
| 20170421-C27-SBN02A(25) L905166-07          | 15 |
| 20170421-C27-SBN02A(30) L905166-08          | 16 |
| 20170421-C27-SBN02A(35) L905166-09          | 17 |
| 20170421-C27-SBMID02A(5) L905166-10         | 18 |
| 20170421-C27-SBMID02A(10) L905166-11        | 19 |
| 20170421-C27-SBMID02A(15) L905166-12        | 20 |
| 20170421-C27-SBMID02A(20) L905166-13        | 21 |
| 20170421-C27-SBMID02A(30) L905166-14        | 22 |
| 20170421-C27-SBMID02A(35) L905166-15        | 23 |
| 20170421-C27-SBS02A(5) L905166-16           | 24 |
| 20170421-C27-SBS02A(10) L905166-17          | 25 |
| 20170421-C27-SBS02A(15) L905166-18          | 26 |
| 20170421-C27-SBS02A(20) L905166-19          | 27 |
| 20170421-C27-SBS02A(25) L905166-20          | 28 |
| 20170421-C27-SBS02A(30) L905166-21          | 29 |
| 20170421-C27-SBS02A(35) L905166-22          | 30 |
| 20170424-C27-EWALLA(5) L905166-23           | 31 |
| 20170424-C27-EWALLA(10) L905166-24          | 32 |
| 20170424-C27-EWALLA(15) L905166-25          | 33 |
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| 20170424-C27-EWALLA(30) L905166-28          | 36 |
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| <sup>6</sup> Gl: Glossary of Terms          | 38 |
| <sup>7</sup> Al: Accreditations & Locations | 39 |
| <sup>8</sup> Sc: Chain of Custody           | 40 |

|                 |
|-----------------|
| <sup>1</sup> Cp |
| <sup>2</sup> Tc |
| <sup>3</sup> Ss |
| <sup>4</sup> Cn |
| <sup>5</sup> Sr |
| <sup>6</sup> Gl |
| <sup>7</sup> Al |
| <sup>8</sup> Sc |



# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## 20170420-C27-SBS01A(5-7) L905166-01 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/20/17 13:45 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 25       | 05/02/17 09:26           | 05/03/17 00:07                        | ACG                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975886 | 1        | 05/02/17 09:26           | 05/02/17 23:19                        | LRL                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 20       | 05/02/17 22:56           | 05/04/17 09:33                        | LM                                   |



## 20170420-C27-SBS01A(25) L905166-02 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/20/17 14:00 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26           | 05/03/17 00:31                        | ACG                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975886 | 1        | 05/02/17 09:26           | 05/02/17 23:39                        | LRL                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 2        | 05/02/17 22:56           | 05/03/17 23:52                        | LM                                   |

## 20170421-C27-SBN02A(5) L905166-03 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/21/17 08:15 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26           | 05/03/17 00:56                        | ACG                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975886 | 1        | 05/02/17 09:26           | 05/03/17 00:00                        | LRL                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 1        | 05/02/17 22:56           | 05/04/17 12:44                        | LM                                   |

## 20170421-C27-SBN02A(10) L905166-04 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/21/17 08:25 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 25       | 05/02/17 09:26           | 05/03/17 01:20                        | ACG                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975886 | 1        | 05/02/17 09:26           | 05/03/17 00:21                        | LRL                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 1        | 05/02/17 22:56           | 05/04/17 00:26                        | LM                                   |

## 20170421-C27-SBN02A(15) L905166-05 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/21/17 08:45 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 25       | 05/02/17 09:26           | 05/03/17 01:44                        | ACG                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975886 | 1        | 05/02/17 09:26           | 05/03/17 00:41                        | LRL                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 20       | 05/02/17 22:56           | 05/04/17 09:44                        | LM                                   |

## 20170421-C27-SBN02A(20) L905166-06 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/21/17 09:00 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 25       | 05/02/17 09:26           | 05/03/17 02:08                        | ACG                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975886 | 1        | 05/02/17 09:26           | 05/03/17 01:02                        | LRL                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 20       | 05/02/17 22:56           | 05/04/17 09:55                        | LM                                   |

ACCOUNT:

EnCana Oil & Gas - Parachute, CO

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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## 20170421-C27-SBN02A(25) L905166-07 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/21/17 09:10 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26           | 05/03/17 02:32                        | ACG                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975886 | 1        | 05/02/17 09:26           | 05/03/17 01:22                        | LRL                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 10       | 05/02/17 22:56           | 05/04/17 01:00                        | LM                                   |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Gl

<sup>7</sup> Al

<sup>8</sup> Sc

## 20170421-C27-SBN02A(30) L905166-08 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/21/17 09:25 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26           | 05/03/17 02:57                        | ACG                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975886 | 1        | 05/02/17 09:26           | 05/03/17 01:43                        | LRL                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 10       | 05/02/17 22:56           | 05/04/17 01:23                        | LM                                   |

## 20170421-C27-SBN02A(35) L905166-09 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/21/17 09:45 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 25       | 05/02/17 09:26           | 05/05/17 18:41                        | BMB                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975886 | 1        | 05/02/17 09:26           | 05/03/17 02:03                        | LRL                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975886 | 25       | 05/02/17 09:26           | 05/04/17 01:56                        | JHH                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 40       | 05/02/17 22:56           | 05/04/17 01:34                        | LM                                   |

## 20170421-C27-SBMID02A(5) L905166-10 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/21/17 11:15 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26           | 05/03/17 03:45                        | ACG                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975886 | 1        | 05/02/17 09:26           | 05/03/17 02:24                        | LRL                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975886 | 1        | 05/02/17 09:26           | 05/04/17 01:34                        | JHH                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 20       | 05/02/17 22:56           | 05/04/17 09:22                        | LM                                   |

## 20170421-C27-SBMID02A(10) L905166-11 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/20/17 11:30 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26           | 05/03/17 04:09                        | ACG                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG976099 | 1        | 05/02/17 09:26           | 05/04/17 04:29                        | JHH                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 2        | 05/02/17 22:56           | 05/03/17 23:41                        | LM                                   |

## 20170421-C27-SBMID02A(15) L905166-12 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/20/17 11:45 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26           | 05/03/17 04:34                        | ACG                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG976099 | 1        | 05/02/17 09:26           | 05/04/17 04:51                        | JHH                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 10       | 05/02/17 22:56           | 05/04/17 00:49                        | LM                                   |

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EnCana Oil & Gas - Parachute, CO

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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## 20170421-C27-SBMID02A(20) L905166-13 Solid

Collected by  
BKR

Collected date/time  
04/21/17 12:00

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 25       | 05/02/17 09:26        | 05/03/17 04:58     | ACG     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG976099 | 1        | 05/02/17 09:26        | 05/04/17 05:13     | JHH     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 1        | 05/02/17 22:56        | 05/04/17 00:03     | LM      |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Gl

<sup>7</sup> Al

<sup>8</sup> Sc

## 20170421-C27-SBMID02A(30) L905166-14 Solid

Collected by  
BKR

Collected date/time  
04/21/17 12:45

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26        | 05/03/17 05:22     | ACG     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG976099 | 1        | 05/02/17 09:26        | 05/04/17 05:35     | JHH     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 1        | 05/02/17 22:56        | 05/04/17 12:56     | LM      |

## 20170421-C27-SBMID02A(35) L905166-15 Solid

Collected by  
BKR

Collected date/time  
04/21/17 13:10

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26        | 05/03/17 05:46     | ACG     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 1        | 05/02/17 09:26        | 05/03/17 15:35     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 5        | 05/02/17 22:56        | 05/04/17 01:11     | LM      |

## 20170421-C27-SBS02A(5) L905166-16 Solid

Collected by  
BKR

Collected date/time  
04/21/17 14:00

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26        | 05/03/17 06:10     | ACG     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 1        | 05/02/17 09:26        | 05/03/17 15:52     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 40       | 05/02/17 22:56        | 05/04/17 10:07     | LM      |

## 20170421-C27-SBS02A(10) L905166-17 Solid

Collected by  
BKR

Collected date/time  
04/21/17 14:20

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26        | 05/03/17 06:34     | ACG     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 1        | 05/02/17 09:26        | 05/03/17 16:09     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 1        | 05/02/17 22:56        | 05/04/17 00:37     | LM      |

## 20170421-C27-SBS02A(15) L905166-18 Solid

Collected by  
BKR

Collected date/time  
04/21/17 14:30

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26        | 05/03/17 06:59     | ACG     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 1        | 05/02/17 09:26        | 05/03/17 16:29     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 10       | 05/02/17 22:56        | 05/04/17 01:45     | LM      |

ACCOUNT:

EnCana Oil & Gas - Parachute, CO

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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20170421-C27-SBS02A(20) L905166-19 Solid

Collected by  
BKR

Collected date/time  
04/21/17 14:50

Received date/time  
04/26/17 08:45

<sup>1</sup> Cp

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26        | 05/03/17 07:23     | ACG     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 1        | 05/02/17 09:26        | 05/03/17 17:01     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 5        | 05/02/17 22:56        | 05/04/17 01:56     | LM      |

<sup>2</sup> Tc

<sup>3</sup> Ss

20170421-C27-SBS02A(25) L905166-20 Solid

Collected by  
BKR

Collected date/time  
04/20/17 15:20

Received date/time  
04/26/17 08:45

<sup>4</sup> Cn

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975979 | 1        | 05/02/17 09:26        | 05/03/17 07:47     | ACG     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 1        | 05/02/17 09:26        | 05/03/17 17:18     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974619 | 10       | 05/02/17 22:56        | 05/04/17 02:07     | LM      |

<sup>5</sup> Sr

<sup>6</sup> Gl

20170421-C27-SBS02A(30) L905166-21 Solid

Collected by  
BKR

Collected date/time  
04/20/17 15:45

Received date/time  
04/26/17 08:45

<sup>7</sup> Al

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975976 | 1        | 05/02/17 09:26        | 05/03/17 05:47     | DWR     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 1        | 05/02/17 09:26        | 05/03/17 17:36     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG975036 | 1        | 05/02/17 15:55        | 05/03/17 06:14     | LM      |

<sup>8</sup> Sc

20170421-C27-SBS02A(35) L905166-22 Solid

Collected by  
BKR

Collected date/time  
04/21/17 16:00

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975976 | 1        | 05/02/17 09:26        | 05/03/17 06:09     | DWR     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 1        | 05/02/17 09:26        | 05/03/17 17:53     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG975036 | 1        | 05/02/17 15:55        | 05/03/17 07:10     | LM      |

20170424-C27-EWALLA(5) L905166-23 Solid

Collected by  
BKR

Collected date/time  
04/24/17 10:20

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975976 | 1        | 05/02/17 09:26        | 05/03/17 06:31     | DWR     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 1        | 05/02/17 09:26        | 05/03/17 18:10     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG975036 | 5        | 05/02/17 15:55        | 05/03/17 11:16     | DMG     |

20170424-C27-EWALLA(10) L905166-24 Solid

Collected by  
BKR

Collected date/time  
04/24/17 10:30

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975976 | 1        | 05/02/17 09:26        | 05/03/17 06:53     | DWR     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 1        | 05/02/17 09:26        | 05/03/17 19:14     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG975036 | 1        | 05/02/17 15:55        | 05/03/17 07:21     | LM      |

ACCOUNT:

EnCana Oil & Gas - Parachute, CO

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## 20170424-C27-EWALLA(15) L905166-25 Solid

Collected by  
BKR

Collected date/time  
04/24/17 10:45

Received date/time  
04/26/17 08:45

<sup>1</sup>Cp

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975976 | 25       | 05/02/17 09:26        | 05/05/17 18:18     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 1        | 05/02/17 09:26        | 05/03/17 19:32     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 25       | 05/02/17 09:26        | 05/04/17 22:25     | JHH     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG975036 | 5        | 05/02/17 15:55        | 05/03/17 11:27     | DMG     |

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

## 20170424-C27-EWALLA(20) L905166-26 Solid

Collected by  
BKR

Collected date/time  
04/24/17 11:10

Received date/time  
04/26/17 08:45

<sup>5</sup>Sr

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975980 | 1        | 05/02/17 09:26        | 05/03/17 02:10     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG976099 | 1        | 05/02/17 09:26        | 05/04/17 05:58     | JHH     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG975036 | 1        | 05/02/17 15:55        | 05/03/17 06:25     | LM      |

<sup>6</sup>Gl

<sup>7</sup>Al

## 20170424-C27-EWALLA(25) L905166-27 Solid

Collected by  
BKR

Collected date/time  
04/24/17 11:45

Received date/time  
04/26/17 08:45

<sup>8</sup>Sc

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975980 | 1        | 05/02/17 09:26        | 05/03/17 02:32     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG976099 | 1        | 05/02/17 09:26        | 05/04/17 06:20     | JHH     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG975036 | 10       | 05/02/17 15:55        | 05/03/17 14:28     | DMG     |

## 20170424-C27-EWALLA(30) L905166-28 Solid

Collected by  
BKR

Collected date/time  
04/24/17 12:00

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975980 | 1        | 05/02/17 09:26        | 05/03/17 02:54     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG976099 | 1        | 05/02/17 09:26        | 05/04/17 06:41     | JHH     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG975036 | 1        | 05/02/17 15:55        | 05/03/17 07:32     | LM      |

## 20170424-C27-EWALLA(35) L905166-29 Solid

Collected by  
BKR

Collected date/time  
04/24/17 12:40

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975980 | 1        | 05/02/17 09:26        | 05/03/17 03:16     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG976099 | 1        | 05/02/17 09:26        | 05/04/17 07:03     | JHH     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG975036 | 10       | 05/02/17 15:55        | 05/03/17 14:17     | DMG     |





All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Shane Gambill  
Technical Service Representative







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 26.4            |           | 2.50         | 25       | 05/03/2017 00:07        | WG975979 |
| (S) a,a,a-Trifluorotoluene(FID) | 97.0            |           | 77.0-120     |          | 05/03/2017 00:07        | WG975979 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.0144          |           | 0.00100      | 1        | 05/02/2017 23:19        | WG975886 |
| Toluene                    | 0.0129          |           | 0.00500      | 1        | 05/02/2017 23:19        | WG975886 |
| Ethylbenzene               | 0.00433         |           | 0.00100      | 1        | 05/02/2017 23:19        | WG975886 |
| Total Xylenes              | 0.0334          |           | 0.00300      | 1        | 05/02/2017 23:19        | WG975886 |
| (S) Toluene-d8             | 92.8            |           | 80.0-120     |          | 05/02/2017 23:19        | WG975886 |
| (S) Dibromofluoromethane   | 112             |           | 74.0-131     |          | 05/02/2017 23:19        | WG975886 |
| (S) a,a,a-Trifluorotoluene | 86.3            |           | 80.0-120     |          | 05/02/2017 23:19        | WG975886 |
| (S) 4-Bromofluorobenzene   | 106             |           | 64.0-132     |          | 05/02/2017 23:19        | WG975886 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 1660            |           | 80.0         | 20       | 05/04/2017 09:33        | WG974619 |
| (S) o-Terphenyl            | 266             | J7        | 18.0-148     |          | 05/04/2017 09:33        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.123           |           | 0.100        | 1        | 05/03/2017 00:31        | WG975979 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 99.3            |           | 77.0-120     |          | 05/03/2017 00:31        | WG975979 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00483         |           | 0.00100      | 1        | 05/02/2017 23:39        | WG975886 |
| Toluene                            | 0.00614         |           | 0.00500      | 1        | 05/02/2017 23:39        | WG975886 |
| Ethylbenzene                       | 0.00123         |           | 0.00100      | 1        | 05/02/2017 23:39        | WG975886 |
| Total Xylenes                      | 0.00347         |           | 0.00300      | 1        | 05/02/2017 23:39        | WG975886 |
| (S) <i>Toluene-d8</i>              | 104             |           | 80.0-120     |          | 05/02/2017 23:39        | WG975886 |
| (S) <i>Dibromofluoromethane</i>    | 101             |           | 74.0-131     |          | 05/02/2017 23:39        | WG975886 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 105             |           | 80.0-120     |          | 05/02/2017 23:39        | WG975886 |
| (S) <i>4</i> -Bromofluorobenzene   | 94.7            |           | 64.0-132     |          | 05/02/2017 23:39        | WG975886 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 172             |           | 8.00         | 2        | 05/03/2017 23:52        | WG974619 |
| (S) <i>o</i> -Terphenyl    | 169             | J1        | 18.0-148     |          | 05/03/2017 23:52        | WG974619 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 1.05            |           | 0.100        | 1        | 05/03/2017 00:56        | WG975979 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 89.5            |           | 77.0-120     |          | 05/03/2017 00:56        | WG975979 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00108         |           | 0.00100      | 1        | 05/03/2017 00:00        | WG975886 |
| Toluene                            | 0.00515         |           | 0.00500      | 1        | 05/03/2017 00:00        | WG975886 |
| Ethylbenzene                       | 0.00275         |           | 0.00100      | 1        | 05/03/2017 00:00        | WG975886 |
| Total Xylenes                      | 0.0115          |           | 0.00300      | 1        | 05/03/2017 00:00        | WG975886 |
| (S) <i>Toluene-d8</i>              | 93.8            |           | 80.0-120     |          | 05/03/2017 00:00        | WG975886 |
| (S) <i>Dibromofluoromethane</i>    | 108             |           | 74.0-131     |          | 05/03/2017 00:00        | WG975886 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 96.6            |           | 80.0-120     |          | 05/03/2017 00:00        | WG975886 |
| (S) <i>4</i> -Bromofluorobenzene   | 55.7            | J2        | 64.0-132     |          | 05/03/2017 00:00        | WG975886 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 31.2            |           | 4.00         | 1        | 05/04/2017 12:44        | WG974619 |
| (S) <i>o</i> -Terphenyl    | 60.2            |           | 18.0-148     |          | 05/04/2017 12:44        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 24.1            |           | 2.50         | 25       | 05/03/2017 01:20        | WG975979 |
| (S) a,a,a-Trifluorotoluene(FID) | 101             |           | 77.0-120     |          | 05/03/2017 01:20        | WG975979 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00588         |           | 0.00100      | 1        | 05/03/2017 00:21        | WG975886 |
| Toluene                    | 0.0108          |           | 0.00500      | 1        | 05/03/2017 00:21        | WG975886 |
| Ethylbenzene               | 0.00203         |           | 0.00100      | 1        | 05/03/2017 00:21        | WG975886 |
| Total Xylenes              | 0.0197          |           | 0.00300      | 1        | 05/03/2017 00:21        | WG975886 |
| (S) Toluene-d8             | 102             |           | 80.0-120     |          | 05/03/2017 00:21        | WG975886 |
| (S) Dibromofluoromethane   | 102             |           | 74.0-131     |          | 05/03/2017 00:21        | WG975886 |
| (S) a,a,a-Trifluorotoluene | 101             |           | 80.0-120     |          | 05/03/2017 00:21        | WG975886 |
| (S) 4-Bromofluorobenzene   | 107             |           | 64.0-132     |          | 05/03/2017 00:21        | WG975886 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 62.4            |           | 4.00         | 1        | 05/04/2017 00:26        | WG974619 |
| (S) o-Terphenyl            | 79.5            |           | 18.0-148     |          | 05/04/2017 00:26        | WG974619 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 25.0            |           | 2.50         | 25       | 05/03/2017 01:44        | WG975979 |
| (S) a,a,a-Trifluorotoluene(FID) | 101             |           | 77.0-120     |          | 05/03/2017 01:44        | WG975979 |

1 Cp

2 Tc

3 Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.0229          |           | 0.00100      | 1        | 05/03/2017 00:41        | WG975886 |
| Toluene                    | 0.00739         |           | 0.00500      | 1        | 05/03/2017 00:41        | WG975886 |
| Ethylbenzene               | 0.00564         |           | 0.00100      | 1        | 05/03/2017 00:41        | WG975886 |
| Total Xylenes              | 0.0843          |           | 0.00300      | 1        | 05/03/2017 00:41        | WG975886 |
| (S) Toluene-d8             | 101             |           | 80.0-120     |          | 05/03/2017 00:41        | WG975886 |
| (S) Dibromofluoromethane   | 104             |           | 74.0-131     |          | 05/03/2017 00:41        | WG975886 |
| (S) a,a,a-Trifluorotoluene | 96.0            |           | 80.0-120     |          | 05/03/2017 00:41        | WG975886 |
| (S) 4-Bromofluorobenzene   | 104             |           | 64.0-132     |          | 05/03/2017 00:41        | WG975886 |

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 667             |           | 80.0         | 20       | 05/04/2017 09:44        | WG974619 |
| (S) o-Terphenyl            | 112             | J7        | 18.0-148     |          | 05/04/2017 09:44        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 12.2            |           | 2.50         | 25       | 05/03/2017 02:08        | WG975979 |
| (S) a,a,a-Trifluorotoluene(FID) | 102             |           | 77.0-120     |          | 05/03/2017 02:08        | WG975979 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00709         |           | 0.00100      | 1        | 05/03/2017 01:02        | WG975886 |
| Toluene                    | 0.0152          |           | 0.00500      | 1        | 05/03/2017 01:02        | WG975886 |
| Ethylbenzene               | 0.00456         |           | 0.00100      | 1        | 05/03/2017 01:02        | WG975886 |
| Total Xylenes              | 0.0301          |           | 0.00300      | 1        | 05/03/2017 01:02        | WG975886 |
| (S) Toluene-d8             | 98.3            |           | 80.0-120     |          | 05/03/2017 01:02        | WG975886 |
| (S) Dibromofluoromethane   | 108             |           | 74.0-131     |          | 05/03/2017 01:02        | WG975886 |
| (S) a,a,a-Trifluorotoluene | 93.3            |           | 80.0-120     |          | 05/03/2017 01:02        | WG975886 |
| (S) 4-Bromofluorobenzene   | 154             | J1        | 64.0-132     |          | 05/03/2017 01:02        | WG975886 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 2530            |           | 80.0         | 20       | 05/04/2017 09:55        | WG974619 |
| (S) o-Terphenyl            | 300             | J7        | 18.0-148     |          | 05/04/2017 09:55        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | ND              |           | 0.100        | 1        | 05/03/2017 02:32        | WG975979 |
| (S) a,a,a-Trifluorotoluene(FID) | 100             |           | 77.0-120     |          | 05/03/2017 02:32        | WG975979 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00696         |           | 0.00100      | 1        | 05/03/2017 01:22        | WG975886 |
| Toluene                    | ND              |           | 0.00500      | 1        | 05/03/2017 01:22        | WG975886 |
| Ethylbenzene               | ND              |           | 0.00100      | 1        | 05/03/2017 01:22        | WG975886 |
| Total Xylenes              | ND              |           | 0.00300      | 1        | 05/03/2017 01:22        | WG975886 |
| (S) Toluene-d8             | 106             |           | 80.0-120     |          | 05/03/2017 01:22        | WG975886 |
| (S) Dibromofluoromethane   | 102             |           | 74.0-131     |          | 05/03/2017 01:22        | WG975886 |
| (S) a,a,a-Trifluorotoluene | 107             |           | 80.0-120     |          | 05/03/2017 01:22        | WG975886 |
| (S) 4-Bromofluorobenzene   | 96.1            |           | 64.0-132     |          | 05/03/2017 01:22        | WG975886 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | ND              |           | 40.0         | 10       | 05/04/2017 01:00        | WG974619 |
| (S) o-Terphenyl            | 94.7            |           | 18.0-148     |          | 05/04/2017 01:00        | WG974619 |

## Sample Narrative:

8015 L905166-07 WG974619: Dilution due to matrix







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.158           |           | 0.100        | 1        | 05/03/2017 02:57        | WG975979 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 99.5            |           | 77.0-120     |          | 05/03/2017 02:57        | WG975979 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00346         |           | 0.00100      | 1        | 05/03/2017 01:43        | WG975886 |
| Toluene                            | 0.00559         |           | 0.00500      | 1        | 05/03/2017 01:43        | WG975886 |
| Ethylbenzene                       | 0.00135         |           | 0.00100      | 1        | 05/03/2017 01:43        | WG975886 |
| Total Xylenes                      | 0.00339         |           | 0.00300      | 1        | 05/03/2017 01:43        | WG975886 |
| (S) <i>Toluene-d8</i>              | 102             |           | 80.0-120     |          | 05/03/2017 01:43        | WG975886 |
| (S) <i>Dibromofluoromethane</i>    | 98.7            |           | 74.0-131     |          | 05/03/2017 01:43        | WG975886 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 99.1            |           | 80.0-120     |          | 05/03/2017 01:43        | WG975886 |
| (S) <i>4</i> -Bromofluorobenzene   | 90.4            |           | 64.0-132     |          | 05/03/2017 01:43        | WG975886 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 75.4            |           | 40.0         | 10       | 05/04/2017 01:23        | WG974619 |
| (S) <i>o</i> -Terphenyl    | 121             |           | 18.0-148     |          | 05/04/2017 01:23        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 84.2            |           | 2.50         | 25       | 05/05/2017 18:41        | WG975979 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 95.8            |           | 77.0-120     |          | 05/05/2017 18:41        | WG975979 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00744         |           | 0.00100      | 1        | 05/03/2017 02:03        | WG975886 |
| Toluene                            | 0.157           |           | 0.00500      | 1        | 05/03/2017 02:03        | WG975886 |
| Ethylbenzene                       | 0.0186          |           | 0.00100      | 1        | 05/03/2017 02:03        | WG975886 |
| Total Xylenes                      | 7.82            |           | 0.0750       | 25       | 05/04/2017 01:56        | WG975886 |
| (S) <i>Toluene-d8</i>              | 103             |           | 80.0-120     |          | 05/03/2017 02:03        | WG975886 |
| (S) <i>Toluene-d8</i>              | 110             |           | 80.0-120     |          | 05/04/2017 01:56        | WG975886 |
| (S) <i>Dibromofluoromethane</i>    | 91.1            |           | 74.0-131     |          | 05/04/2017 01:56        | WG975886 |
| (S) <i>Dibromofluoromethane</i>    | 106             |           | 74.0-131     |          | 05/03/2017 02:03        | WG975886 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 90.7            |           | 80.0-120     |          | 05/03/2017 02:03        | WG975886 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 111             |           | 80.0-120     |          | 05/04/2017 01:56        | WG975886 |
| (S) <i>4</i> -Bromofluorobenzene   | 67.1            |           | 64.0-132     |          | 05/03/2017 02:03        | WG975886 |
| (S) <i>4</i> -Bromofluorobenzene   | 125             |           | 64.0-132     |          | 05/04/2017 01:56        | WG975886 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 311             |           | 160          | 40       | 05/04/2017 01:34        | WG974619 |
| (S) <i>o</i> -Terphenyl    | 1.07            | J7        | 18.0-148     |          | 05/04/2017 01:34        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.221           |           | 0.100        | 1        | 05/03/2017 03:45        | WG975979 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 96.8            |           | 77.0-120     |          | 05/03/2017 03:45        | WG975979 |

1 Cp

2 Tc

3 Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00514         |           | 0.00100      | 1        | 05/03/2017 02:24        | WG975886 |
| Toluene                            | 0.00697         |           | 0.00500      | 1        | 05/03/2017 02:24        | WG975886 |
| Ethylbenzene                       | 0.00132         |           | 0.00100      | 1        | 05/03/2017 02:24        | WG975886 |
| Total Xylenes                      | 0.00598         |           | 0.00300      | 1        | 05/04/2017 01:34        | WG975886 |
| (S) Toluene-d8                     | 103             |           | 80.0-120     |          | 05/03/2017 02:24        | WG975886 |
| (S) Toluene-d8                     | 104             |           | 80.0-120     |          | 05/04/2017 01:34        | WG975886 |
| (S) Dibromofluoromethane           | 101             |           | 74.0-131     |          | 05/04/2017 01:34        | WG975886 |
| (S) Dibromofluoromethane           | 104             |           | 74.0-131     |          | 05/03/2017 02:24        | WG975886 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 102             |           | 80.0-120     |          | 05/03/2017 02:24        | WG975886 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 104             |           | 80.0-120     |          | 05/04/2017 01:34        | WG975886 |
| (S) 4-Bromofluorobenzene           | 89.8            |           | 64.0-132     |          | 05/03/2017 02:24        | WG975886 |
| (S) 4-Bromofluorobenzene           | 96.5            |           | 64.0-132     |          | 05/04/2017 01:34        | WG975886 |

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | ND              |           | 80.0         | 20       | 05/04/2017 09:22        | WG974619 |
| (S) <i>o</i> -Terphenyl    | 49.0            | J7        | 18.0-148     |          | 05/04/2017 09:22        | WG974619 |

## Sample Narrative:

8015 L905166-10 WG974619: Dilution due to matrix





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.291           |           | 0.100        | 1        | 05/03/2017 04:09        | WG975979 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 98.6            |           | 77.0-120     |          | 05/03/2017 04:09        | WG975979 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00392         |           | 0.00100      | 1        | 05/04/2017 04:29        | WG976099 |
| Toluene                            | 0.00942         |           | 0.00500      | 1        | 05/04/2017 04:29        | WG976099 |
| Ethylbenzene                       | 0.00187         |           | 0.00100      | 1        | 05/04/2017 04:29        | WG976099 |
| Total Xylenes                      | 0.0184          |           | 0.00300      | 1        | 05/04/2017 04:29        | WG976099 |
| (S) <i>Toluene-d8</i>              | 100             |           | 80.0-120     |          | 05/04/2017 04:29        | WG976099 |
| (S) <i>Dibromofluoromethane</i>    | 105             |           | 74.0-131     |          | 05/04/2017 04:29        | WG976099 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 101             |           | 80.0-120     |          | 05/04/2017 04:29        | WG976099 |
| (S) <i>4-Bromofluorobenzene</i>    | 86.9            |           | 64.0-132     |          | 05/04/2017 04:29        | WG976099 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 86.3            |           | 8.00         | 2        | 05/03/2017 23:41        | WG974619 |
| (S) <i>o</i> -Terphenyl    | 96.0            |           | 18.0-148     |          | 05/03/2017 23:41        | WG974619 |

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Gl7  
Al8  
Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.831           |           | 0.100        | 1        | 05/03/2017 04:34        | WG975979 |
| (S) a,a,a-Trifluorotoluene(FID) | 92.9            |           | 77.0-120     |          | 05/03/2017 04:34        | WG975979 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00518         |           | 0.00100      | 1        | 05/04/2017 04:51        | WG976099 |
| Toluene                    | 0.0302          |           | 0.00500      | 1        | 05/04/2017 04:51        | WG976099 |
| Ethylbenzene               | 0.00385         |           | 0.00100      | 1        | 05/04/2017 04:51        | WG976099 |
| Total Xylenes              | 0.0591          |           | 0.00300      | 1        | 05/04/2017 04:51        | WG976099 |
| (S) Toluene-d8             | 104             |           | 80.0-120     |          | 05/04/2017 04:51        | WG976099 |
| (S) Dibromofluoromethane   | 99.7            |           | 74.0-131     |          | 05/04/2017 04:51        | WG976099 |
| (S) a,a,a-Trifluorotoluene | 102             |           | 80.0-120     |          | 05/04/2017 04:51        | WG976099 |
| (S) 4-Bromofluorobenzene   | 108             |           | 64.0-132     |          | 05/04/2017 04:51        | WG976099 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 50.0            |           | 40.0         | 10       | 05/04/2017 00:49        | WG974619 |
| (S) o-Terphenyl            | 81.1            |           | 18.0-148     |          | 05/04/2017 00:49        | WG974619 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 24.1            |           | 2.50         | 25       | 05/03/2017 04:58        | WG975979 |
| (S) a,a,a-Trifluorotoluene(FID) | 101             |           | 77.0-120     |          | 05/03/2017 04:58        | WG975979 |

1 Cp

2 Tc

3 Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.0131          |           | 0.00100      | 1        | 05/04/2017 05:13        | WG976099 |
| Toluene                    | 0.00916         |           | 0.00500      | 1        | 05/04/2017 05:13        | WG976099 |
| Ethylbenzene               | 0.00403         |           | 0.00100      | 1        | 05/04/2017 05:13        | WG976099 |
| Total Xylenes              | 0.0352          |           | 0.00300      | 1        | 05/04/2017 05:13        | WG976099 |
| (S) Toluene-d8             | 99.2            |           | 80.0-120     |          | 05/04/2017 05:13        | WG976099 |
| (S) Dibromofluoromethane   | 109             |           | 74.0-131     |          | 05/04/2017 05:13        | WG976099 |
| (S) a,a,a-Trifluorotoluene | 97.4            |           | 80.0-120     |          | 05/04/2017 05:13        | WG976099 |
| (S) 4-Bromofluorobenzene   | 17.4            | J2        | 64.0-132     |          | 05/04/2017 05:13        | WG976099 |

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 101             |           | 4.00         | 1        | 05/04/2017 00:03        | WG974619 |
| (S) o-Terphenyl            | 96.6            |           | 18.0-148     |          | 05/04/2017 00:03        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.126           |           | 0.100        | 1        | 05/03/2017 05:22        | WG975979 |
| (S) a,a,a-Trifluorotoluene(FID) | 101             |           | 77.0-120     |          | 05/03/2017 05:22        | WG975979 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00441         |           | 0.00100      | 1        | 05/04/2017 05:35        | WG976099 |
| Toluene                    | 0.00589         |           | 0.00500      | 1        | 05/04/2017 05:35        | WG976099 |
| Ethylbenzene               | 0.00123         |           | 0.00100      | 1        | 05/04/2017 05:35        | WG976099 |
| Total Xylenes              | 0.00363         |           | 0.00300      | 1        | 05/04/2017 05:35        | WG976099 |
| (S) Toluene-d8             | 105             |           | 80.0-120     |          | 05/04/2017 05:35        | WG976099 |
| (S) Dibromofluoromethane   | 103             |           | 74.0-131     |          | 05/04/2017 05:35        | WG976099 |
| (S) a,a,a-Trifluorotoluene | 109             |           | 80.0-120     |          | 05/04/2017 05:35        | WG976099 |
| (S) 4-Bromofluorobenzene   | 103             |           | 64.0-132     |          | 05/04/2017 05:35        | WG976099 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 34.8            |           | 4.00         | 1        | 05/04/2017 12:56        | WG974619 |
| (S) o-Terphenyl            | 81.3            |           | 18.0-148     |          | 05/04/2017 12:56        | WG974619 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.130           |           | 0.100        | 1        | 05/03/2017 05:46        | WG975979 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 99.7            |           | 77.0-120     |          | 05/03/2017 05:46        | WG975979 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00201         |           | 0.00100      | 1        | 05/03/2017 15:35        | WG975901 |
| Toluene                            | ND              |           | 0.00500      | 1        | 05/03/2017 15:35        | WG975901 |
| Ethylbenzene                       | 0.00129         |           | 0.00100      | 1        | 05/03/2017 15:35        | WG975901 |
| Total Xylenes                      | ND              |           | 0.00300      | 1        | 05/03/2017 15:35        | WG975901 |
| (S) <i>Toluene-d8</i>              | 101             |           | 80.0-120     |          | 05/03/2017 15:35        | WG975901 |
| (S) <i>Dibromofluoromethane</i>    | 105             |           | 74.0-131     |          | 05/03/2017 15:35        | WG975901 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 102             |           | 80.0-120     |          | 05/03/2017 15:35        | WG975901 |
| (S) <i>4</i> -Bromofluorobenzene   | 98.2            |           | 64.0-132     |          | 05/03/2017 15:35        | WG975901 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 58.8            |           | 20.0         | 5        | 05/04/2017 01:11        | WG974619 |
| (S) <i>o</i> -Terphenyl    | 117             |           | 18.0-148     |          | 05/04/2017 01:11        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 1.14            |           | 0.100        | 1        | 05/03/2017 06:10        | WG975979 |
| (S) a,a,a-Trifluorotoluene(FID) | 84.7            |           | 77.0-120     |          | 05/03/2017 06:10        | WG975979 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00331         |           | 0.00100      | 1        | 05/03/2017 15:52        | WG975901 |
| Toluene                    | 0.0140          |           | 0.00500      | 1        | 05/03/2017 15:52        | WG975901 |
| Ethylbenzene               | 0.00586         |           | 0.00100      | 1        | 05/03/2017 15:52        | WG975901 |
| Total Xylenes              | 0.0565          |           | 0.00300      | 1        | 05/03/2017 15:52        | WG975901 |
| (S) Toluene-d8             | 103             |           | 80.0-120     |          | 05/03/2017 15:52        | WG975901 |
| (S) Dibromofluoromethane   | 104             |           | 74.0-131     |          | 05/03/2017 15:52        | WG975901 |
| (S) a,a,a-Trifluorotoluene | 101             |           | 80.0-120     |          | 05/03/2017 15:52        | WG975901 |
| (S) 4-Bromofluorobenzene   | 87.6            |           | 64.0-132     |          | 05/03/2017 15:52        | WG975901 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 234             |           | 160          | 40       | 05/04/2017 10:07        | WG974619 |
| (S) o-Terphenyl            | 18.4            | J7        | 18.0-148     |          | 05/04/2017 10:07        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.309           |           | 0.100        | 1        | 05/03/2017 06:34        | WG975979 |
| (S) a,a,a-Trifluorotoluene(FID) | 99.1            |           | 77.0-120     |          | 05/03/2017 06:34        | WG975979 |

1 Cp

2 Tc

3 Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00336         |           | 0.00100      | 1        | 05/03/2017 16:09        | WG975901 |
| Toluene                    | 0.00553         |           | 0.00500      | 1        | 05/03/2017 16:09        | WG975901 |
| Ethylbenzene               | 0.00122         |           | 0.00100      | 1        | 05/03/2017 16:09        | WG975901 |
| Total Xylenes              | 0.00584         |           | 0.00300      | 1        | 05/03/2017 16:09        | WG975901 |
| (S) Toluene-d8             | 99.6            |           | 80.0-120     |          | 05/03/2017 16:09        | WG975901 |
| (S) Dibromofluoromethane   | 101             |           | 74.0-131     |          | 05/03/2017 16:09        | WG975901 |
| (S) a,a,a-Trifluorotoluene | 104             |           | 80.0-120     |          | 05/03/2017 16:09        | WG975901 |
| (S) 4-Bromofluorobenzene   | 98.2            |           | 64.0-132     |          | 05/03/2017 16:09        | WG975901 |

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 23.9            |           | 4.00         | 1        | 05/04/2017 00:37        | WG974619 |
| (S) o-Terphenyl            | 85.1            |           | 18.0-148     |          | 05/04/2017 00:37        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.141           |           | 0.100        | 1        | 05/03/2017 06:59        | WG975979 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 97.5            |           | 77.0-120     |          | 05/03/2017 06:59        | WG975979 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00369         |           | 0.00100      | 1        | 05/03/2017 16:29        | WG975901 |
| Toluene                            | 0.00636         |           | 0.00500      | 1        | 05/03/2017 16:29        | WG975901 |
| Ethylbenzene                       | 0.00168         |           | 0.00100      | 1        | 05/03/2017 16:29        | WG975901 |
| Total Xylenes                      | 0.00520         |           | 0.00300      | 1        | 05/03/2017 16:29        | WG975901 |
| (S) <i>Toluene-d8</i>              | 96.0            |           | 80.0-120     |          | 05/03/2017 16:29        | WG975901 |
| (S) <i>Dibromofluoromethane</i>    | 104             |           | 74.0-131     |          | 05/03/2017 16:29        | WG975901 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 95.7            |           | 80.0-120     |          | 05/03/2017 16:29        | WG975901 |
| (S) <i>4</i> -Bromofluorobenzene   | 81.9            |           | 64.0-132     |          | 05/03/2017 16:29        | WG975901 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 227             |           | 40.0         | 10       | 05/04/2017 01:45        | WG974619 |
| (S) <i>o</i> -Terphenyl    | 120             |           | 18.0-148     |          | 05/04/2017 01:45        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.169           |           | 0.100        | 1        | 05/03/2017 07:23        | WG975979 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 96.3            |           | 77.0-120     |          | 05/03/2017 07:23        | WG975979 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00409         |           | 0.00100      | 1        | 05/03/2017 17:01        | WG975901 |
| Toluene                            | 0.00590         |           | 0.00500      | 1        | 05/03/2017 17:01        | WG975901 |
| Ethylbenzene                       | 0.00154         |           | 0.00100      | 1        | 05/03/2017 17:01        | WG975901 |
| Total Xylenes                      | 0.00385         |           | 0.00300      | 1        | 05/03/2017 17:01        | WG975901 |
| (S) <i>Toluene-d8</i>              | 98.9            |           | 80.0-120     |          | 05/03/2017 17:01        | WG975901 |
| (S) <i>Dibromofluoromethane</i>    | 104             |           | 74.0-131     |          | 05/03/2017 17:01        | WG975901 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 98.5            |           | 80.0-120     |          | 05/03/2017 17:01        | WG975901 |
| (S) <i>4</i> -Bromofluorobenzene   | 87.4            |           | 64.0-132     |          | 05/03/2017 17:01        | WG975901 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 166             |           | 20.0         | 5        | 05/04/2017 01:56        | WG974619 |
| (S) <i>o</i> -Terphenyl    | 122             |           | 18.0-148     |          | 05/04/2017 01:56        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.469           |           | 0.100        | 1        | 05/03/2017 07:47        | WG975979 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 99.0            |           | 77.0-120     |          | 05/03/2017 07:47        | WG975979 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00419         |           | 0.00100      | 1        | 05/03/2017 17:18        | WG975901 |
| Toluene                            | 0.00914         |           | 0.00500      | 1        | 05/03/2017 17:18        | WG975901 |
| Ethylbenzene                       | 0.00395         |           | 0.00100      | 1        | 05/03/2017 17:18        | WG975901 |
| Total Xylenes                      | 0.0452          |           | 0.00300      | 1        | 05/03/2017 17:18        | WG975901 |
| (S) <i>Toluene-d8</i>              | 100             |           | 80.0-120     |          | 05/03/2017 17:18        | WG975901 |
| (S) <i>Dibromofluoromethane</i>    | 102             |           | 74.0-131     |          | 05/03/2017 17:18        | WG975901 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 97.3            |           | 80.0-120     |          | 05/03/2017 17:18        | WG975901 |
| (S) <i>4</i> -Bromofluorobenzene   | 90.8            |           | 64.0-132     |          | 05/03/2017 17:18        | WG975901 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 221             |           | 40.0         | 10       | 05/04/2017 02:07        | WG974619 |
| (S) <i>o</i> -Terphenyl    | 168             | J1        | 18.0-148     |          | 05/04/2017 02:07        | WG974619 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.494           |           | 0.100        | 1        | 05/03/2017 05:47        | WG975976 |
| (S) a,a,a-Trifluorotoluene(FID) | 89.3            |           | 77.0-120     |          | 05/03/2017 05:47        | WG975976 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00392         |           | 0.00100      | 1        | 05/03/2017 17:36        | WG975901 |
| Toluene                    | 0.0111          |           | 0.00500      | 1        | 05/03/2017 17:36        | WG975901 |
| Ethylbenzene               | 0.00436         |           | 0.00100      | 1        | 05/03/2017 17:36        | WG975901 |
| Total Xylenes              | 0.0486          | <u>J6</u> | 0.00300      | 1        | 05/03/2017 17:36        | WG975901 |
| (S) Toluene-d8             | 99.6            |           | 80.0-120     |          | 05/03/2017 17:36        | WG975901 |
| (S) Dibromofluoromethane   | 105             |           | 74.0-131     |          | 05/03/2017 17:36        | WG975901 |
| (S) a,a,a-Trifluorotoluene | 97.4            |           | 80.0-120     |          | 05/03/2017 17:36        | WG975901 |
| (S) 4-Bromofluorobenzene   | 84.7            |           | 64.0-132     |          | 05/03/2017 17:36        | WG975901 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 131             | <u>J3</u> | 4.00         | 1        | 05/03/2017 06:14        | WG975036 |
| (S) o-Terphenyl            | 161             | <u>J1</u> | 18.0-148     |          | 05/03/2017 06:14        | WG975036 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.127           | <u>B</u>  | 0.100        | 1        | 05/03/2017 06:09        | WG975976 |
| (S) a,a,a-Trifluorotoluene(FID) | 95.4            |           | 77.0-120     |          | 05/03/2017 06:09        | WG975976 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00446         |           | 0.00100      | 1        | 05/03/2017 17:53        | WG975901 |
| Toluene                    | 0.00604         |           | 0.00500      | 1        | 05/03/2017 17:53        | WG975901 |
| Ethylbenzene               | 0.00144         |           | 0.00100      | 1        | 05/03/2017 17:53        | WG975901 |
| Total Xylenes              | 0.00409         |           | 0.00300      | 1        | 05/03/2017 17:53        | WG975901 |
| (S) Toluene-d8             | 98.9            |           | 80.0-120     |          | 05/03/2017 17:53        | WG975901 |
| (S) Dibromofluoromethane   | 101             |           | 74.0-131     |          | 05/03/2017 17:53        | WG975901 |
| (S) a,a,a-Trifluorotoluene | 100             |           | 80.0-120     |          | 05/03/2017 17:53        | WG975901 |
| (S) 4-Bromofluorobenzene   | 92.0            |           | 64.0-132     |          | 05/03/2017 17:53        | WG975901 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 7.30            | <u>J3</u> | 4.00         | 1        | 05/03/2017 07:10        | WG975036 |
| (S) o-Terphenyl            | 39.3            |           | 18.0-148     |          | 05/03/2017 07:10        | WG975036 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.448           |           | 0.100        | 1        | 05/03/2017 06:31        | WG975976 |
| (S) a,a,a-Trifluorotoluene(FID) | 92.9            |           | 77.0-120     |          | 05/03/2017 06:31        | WG975976 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00470         |           | 0.00100      | 1        | 05/03/2017 18:10        | WG975901 |
| Toluene                    | 0.0249          |           | 0.00500      | 1        | 05/03/2017 18:10        | WG975901 |
| Ethylbenzene               | 0.00429         |           | 0.00100      | 1        | 05/03/2017 18:10        | WG975901 |
| Total Xylenes              | 0.108           |           | 0.00300      | 1        | 05/03/2017 18:10        | WG975901 |
| (S) Toluene-d8             | 98.4            |           | 80.0-120     |          | 05/03/2017 18:10        | WG975901 |
| (S) Dibromofluoromethane   | 101             |           | 74.0-131     |          | 05/03/2017 18:10        | WG975901 |
| (S) a,a,a-Trifluorotoluene | 97.3            |           | 80.0-120     |          | 05/03/2017 18:10        | WG975901 |
| (S) 4-Bromofluorobenzene   | 86.6            |           | 64.0-132     |          | 05/03/2017 18:10        | WG975901 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 84.6            | J3        | 20.0         | 5        | 05/03/2017 11:16        | WG975036 |
| (S) o-Terphenyl            | 61.0            |           | 18.0-148     |          | 05/03/2017 11:16        | WG975036 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | ND              |           | 0.100        | 1        | 05/03/2017 06:53        | WG975976 |
| (S) a,a,a-Trifluorotoluene(FID) | 95.4            |           | 77.0-120     |          | 05/03/2017 06:53        | WG975976 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00225         |           | 0.00100      | 1        | 05/03/2017 19:14        | WG975901 |
| Toluene                    | ND              |           | 0.00500      | 1        | 05/03/2017 19:14        | WG975901 |
| Ethylbenzene               | ND              |           | 0.00100      | 1        | 05/03/2017 19:14        | WG975901 |
| Total Xylenes              | 0.00700         |           | 0.00300      | 1        | 05/03/2017 19:14        | WG975901 |
| (S) Toluene-d8             | 98.8            |           | 80.0-120     |          | 05/03/2017 19:14        | WG975901 |
| (S) Dibromofluoromethane   | 104             |           | 74.0-131     |          | 05/03/2017 19:14        | WG975901 |
| (S) a,a,a-Trifluorotoluene | 104             |           | 80.0-120     |          | 05/03/2017 19:14        | WG975901 |
| (S) 4-Bromofluorobenzene   | 90.1            |           | 64.0-132     |          | 05/03/2017 19:14        | WG975901 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 56.6            | J3        | 4.00         | 1        | 05/03/2017 07:21        | WG975036 |
| (S) o-Terphenyl            | 50.9            |           | 18.0-148     |          | 05/03/2017 07:21        | WG975036 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 102             |           | 2.50         | 25       | 05/05/2017 18:18        | WG975976 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 95.7            |           | 77.0-120     |          | 05/05/2017 18:18        | WG975976 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00406         |           | 0.00100      | 1        | 05/03/2017 19:32        | WG975901 |
| Toluene                            | 1.93            |           | 0.125        | 25       | 05/04/2017 22:25        | WG975901 |
| Ethylbenzene                       | 0.0675          |           | 0.00100      | 1        | 05/03/2017 19:32        | WG975901 |
| Total Xylenes                      | 7.30            |           | 0.0750       | 25       | 05/04/2017 22:25        | WG975901 |
| (S) <i>Toluene-d8</i>              | 91.7            |           | 80.0-120     |          | 05/03/2017 19:32        | WG975901 |
| (S) <i>Toluene-d8</i>              | 113             |           | 80.0-120     |          | 05/04/2017 22:25        | WG975901 |
| (S) <i>Dibromofluoromethane</i>    | 98.4            |           | 74.0-131     |          | 05/04/2017 22:25        | WG975901 |
| (S) <i>Dibromofluoromethane</i>    | 106             |           | 74.0-131     |          | 05/03/2017 19:32        | WG975901 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 87.3            |           | 80.0-120     |          | 05/03/2017 19:32        | WG975901 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 105             |           | 80.0-120     |          | 05/04/2017 22:25        | WG975901 |
| (S) 4-Bromofluorobenzene           | 57.4            | J2        | 64.0-132     |          | 05/03/2017 19:32        | WG975901 |
| (S) 4-Bromofluorobenzene           | 93.6            |           | 64.0-132     |          | 05/04/2017 22:25        | WG975901 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 562             | J3        | 20.0         | 5        | 05/03/2017 11:27        | WG975036 |
| (S) <i>o</i> -Terphenyl    | 47.9            |           | 18.0-148     |          | 05/03/2017 11:27        | WG975036 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 2.29            |           | 0.100        | 1        | 05/03/2017 02:10        | WG975980 |
| (S) a,a,a-Trifluorotoluene(FID) | 92.0            |           | 77.0-120     |          | 05/03/2017 02:10        | WG975980 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00521         |           | 0.00100      | 1        | 05/04/2017 05:58        | WG976099 |
| Toluene                    | 0.118           |           | 0.00500      | 1        | 05/04/2017 05:58        | WG976099 |
| Ethylbenzene               | 0.00395         |           | 0.00100      | 1        | 05/04/2017 05:58        | WG976099 |
| Total Xylenes              | 0.149           |           | 0.00300      | 1        | 05/04/2017 05:58        | WG976099 |
| (S) Toluene-d8             | 103             |           | 80.0-120     |          | 05/04/2017 05:58        | WG976099 |
| (S) Dibromofluoromethane   | 103             |           | 74.0-131     |          | 05/04/2017 05:58        | WG976099 |
| (S) a,a,a-Trifluorotoluene | 100             |           | 80.0-120     |          | 05/04/2017 05:58        | WG976099 |
| (S) 4-Bromofluorobenzene   | 90.3            |           | 64.0-132     |          | 05/04/2017 05:58        | WG976099 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 209             | J3        | 4.00         | 1        | 05/03/2017 06:25        | WG975036 |
| (S) o-Terphenyl            | 105             |           | 18.0-148     |          | 05/03/2017 06:25        | WG975036 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 1.05            |           | 0.100        | 1        | 05/03/2017 02:32        | WG975980 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 91.0            |           | 77.0-120     |          | 05/03/2017 02:32        | WG975980 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00928         |           | 0.00100      | 1        | 05/04/2017 06:20        | WG976099 |
| Toluene                            | 0.170           |           | 0.00500      | 1        | 05/04/2017 06:20        | WG976099 |
| Ethylbenzene                       | 0.00753         |           | 0.00100      | 1        | 05/04/2017 06:20        | WG976099 |
| Total Xylenes                      | 0.246           |           | 0.00300      | 1        | 05/04/2017 06:20        | WG976099 |
| (S) <i>Toluene-d8</i>              | 101             |           | 80.0-120     |          | 05/04/2017 06:20        | WG976099 |
| (S) <i>Dibromofluoromethane</i>    | 107             |           | 74.0-131     |          | 05/04/2017 06:20        | WG976099 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 97.0            |           | 80.0-120     |          | 05/04/2017 06:20        | WG976099 |
| (S) <i>4-Bromofluorobenzene</i>    | 86.5            |           | 64.0-132     |          | 05/04/2017 06:20        | WG976099 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 204             | J3        | 40.0         | 10       | 05/03/2017 14:28        | WG975036 |
| (S) <i>o</i> -Terphenyl    | 49.5            |           | 18.0-148     |          | 05/03/2017 14:28        | WG975036 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | ND              |           | 0.100        | 1        | 05/03/2017 02:54        | WG975980 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 98.8            |           | 77.0-120     |          | 05/03/2017 02:54        | WG975980 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00454         |           | 0.00100      | 1        | 05/04/2017 06:41        | WG976099 |
| Toluene                            | 0.00508         |           | 0.00500      | 1        | 05/04/2017 06:41        | WG976099 |
| Ethylbenzene                       | 0.00106         |           | 0.00100      | 1        | 05/04/2017 06:41        | WG976099 |
| Total Xylenes                      | ND              |           | 0.00300      | 1        | 05/04/2017 06:41        | WG976099 |
| (S) <i>Toluene-d8</i>              | 104             |           | 80.0-120     |          | 05/04/2017 06:41        | WG976099 |
| (S) <i>Dibromofluoromethane</i>    | 105             |           | 74.0-131     |          | 05/04/2017 06:41        | WG976099 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 108             |           | 80.0-120     |          | 05/04/2017 06:41        | WG976099 |
| (S) <i>4</i> -Bromofluorobenzene   | 104             |           | 64.0-132     |          | 05/04/2017 06:41        | WG976099 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 32.8            | J3        | 4.00         | 1        | 05/03/2017 07:32        | WG975036 |
| (S) <i>o</i> -Terphenyl    | 83.1            |           | 18.0-148     |          | 05/03/2017 07:32        | WG975036 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.225           |           | 0.100        | 1        | 05/03/2017 03:16        | WG975980 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 96.0            |           | 77.0-120     |          | 05/03/2017 03:16        | WG975980 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00232         |           | 0.00100      | 1        | 05/04/2017 07:03        | WG976099 |
| Toluene                            | 0.0107          |           | 0.00500      | 1        | 05/04/2017 07:03        | WG976099 |
| Ethylbenzene                       | 0.00154         |           | 0.00100      | 1        | 05/04/2017 07:03        | WG976099 |
| Total Xylenes                      | 0.0121          |           | 0.00300      | 1        | 05/04/2017 07:03        | WG976099 |
| (S) <i>Toluene-d8</i>              | 102             |           | 80.0-120     |          | 05/04/2017 07:03        | WG976099 |
| (S) <i>Dibromofluoromethane</i>    | 104             |           | 74.0-131     |          | 05/04/2017 07:03        | WG976099 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 103             |           | 80.0-120     |          | 05/04/2017 07:03        | WG976099 |
| (S) <i>4-Bromofluorobenzene</i>    | 98.6            |           | 64.0-132     |          | 05/04/2017 07:03        | WG976099 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 193             | J3        | 40.0         | 10       | 05/03/2017 14:17        | WG975036 |
| (S) <i>o</i> -Terphenyl    | 72.8            |           | 18.0-148     |          | 05/03/2017 14:17        | WG975036 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Abbreviations and Definitions

|     |  |
|-----|--|
| SDG | Sample Delivery Group.   |
| RDL | Reported Detection Limit.  |
| ND  | Not detected at the Reporting Limit (or MDL where applicable).   |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |




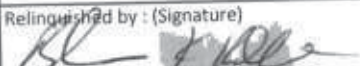
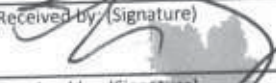

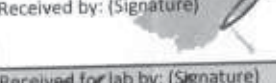

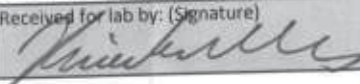
| Qualifier | Description   |
|-----------|---|
| B         | The same analyte is found in the associated blank.  |
| J1        | Surrogate recovery limits have been exceeded; values are outside upper control limits.                |
| J2        | Surrogate recovery limits have been exceeded; values are outside lower control limits.                |
| J3        | The associated batch QC was outside the established quality control range for precision.              |
| J6        | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution.                       |

<sup>1</sup> Cp<sup>2</sup> Tc<sup>3</sup> Ss<sup>4</sup> Cn<sup>5</sup> Sr<sup>6</sup> Gl<sup>7</sup> Al<sup>8</sup> Sc



 ${}^8\text{Sc}$



|   |  |  |  |   |  |                      |  |   |  |      |  |  |  |     |  |   |  |   |  |  |  |   |  |                     |  |
|---|--|--|--|---|--|----------------------|--|---|--|------|--|--|--|-----|--|---|--|---|--|--|--|---|--|---------------------|--|
| Company Name/Address:<br><b>Encana</b><br><b>143 Diamond Avenue</b><br><b>Parachute, CO 81635</b>   |  |  |  | Billing Information:<br><b>ENCANACO</b>   |  |                      |  | Analysis / Container / Preservative   |  |      |  |  |  |     |  |   |  | Chain of Custody Page <u>1</u> of <u>3</u><br><br><b>ESC</b><br>L.A.B S.C.I.E.N.C.E.S<br>YOUR LAB OF CHOICE<br>12065 Lebanon Rd<br>Mount Juliet, TN 37122<br>Phone: 615-758-5858<br>Phone: 800-767-5859<br>Fax: 615-758-5859<br> |  |  |  |   |  |                     |  |
| Report to:<br><b>Brett Middleton</b>  |  |  |  | Email To:<br><b>brett.middleton@encana.com</b>  |  |                      |  | <div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH (DRO &amp; GRO)</div> </div> |  |      |  |  |  |     |  |   |  |   |  |  |  | L# <u>L909166</u><br><b>F015</b>                                      |  |                     |  |
| Project Description:<br><b>C27 Pit assessment</b>   |  |  |  | City/State Collected:<br>Lab Project #<br><b>ENCANACO</b>   |  |                      |  |   |  |      |  |  |  |     |  |   |  |   |  |  |  | Acctnum:<br>Template:<br>Prelogin:<br>TSR:<br>Cooler:<br>Shipped Via: |  |                     |  |
| Phone: <b>(970) 285-2739</b><br>Fax:  |  | Client Project #<br><b>C27</b>   |  | Site/Facility ID #<br><b>C27</b>  |  | P.O. #               |  |   |  |      |  |  |  |     |  |   |  |   |  |  |  | Date Results Needed   |  |                     |  |
| Collected by (print):<br><b>BKR</b>   |  | Rush? (Lab MUST Be Notified)<br>Same Day .....200%<br>Next Day .....100%<br>Two Day .....50%<br>Three Day .....25% |  | Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes<br>FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes |  | No. of<br>Cntrs      |  |   |  |      |  |  |  |     |  |   |  |   |  |  |  | Rem./Contaminant  |  | Sample # (lab only) |  |
| Collected by (signature):<br><br>Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/> |  | Sample ID  |  | Comp/Grab   |  | Matrix *             |  |   |  |      |  |  |  |     |  |   |  |   |  |  |  | Depth   |  | Date                |  |
| 20170420-C27-SBS01A(5)  |  | Grab   |  | SS  |  | 5-7                  |  | 4/20/17   |  | 1345 |  | 2  |  | X X |  | -01   |  |   |  |  |  |   |  |                     |  |
| 20170420-C27-SBS01A(25)   |  | Grab   |  | SS  |  | 25                   |  | 4/20/17   |  | 1400 |  | 2  |  | X X |  | 02  |  |   |  |  |  |   |  |                     |  |
| 20170421-C27-SBN02A(5)  |  | Grab   |  | SS  |  | 5                    |  | 4/21/17   |  | 0815 |  | 2  |  | X X |  | 03  |  |   |  |  |  |   |  |                     |  |
| 20170421-C27-SBN02A(10)   |  | Grab   |  | SS  |  | 10                   |  | 4/21/17   |  | 0825 |  | 2  |  | X X |  | 04  |  |   |  |  |  |   |  |                     |  |
| 20170421-C27-SBN02A(15)   |  | Grab   |  | SS  |  | 15                   |  | 4/21/17   |  | 0845 |  | 2  |  | X X |  | 05  |  |   |  |  |  |   |  |                     |  |
| 20170421-C27-SBN02A(20)   |  | Grab   |  | SS  |  | 20                   |  | 4/21/17   |  | 0900 |  | 2  |  | X X |  | 06  |  |   |  |  |  |   |  |                     |  |
| 20170421-C27-SBN02A(25)   |  | Grab   |  | SS  |  | 25                   |  | 4/21/17   |  | 0910 |  | 2  |  | X X |  | 07  |  |   |  |  |  |   |  |                     |  |
| 20170421-C27-SBN02A(30)   |  | Grab   |  | SS  |  | 30                   |  | 4/21/17   |  | 0925 |  | 2  |  | X X |  | 08  |  |   |  |  |  |   |  |                     |  |
| 20170421-C27-SBN02A(35)   |  | Grab   |  | SS  |  | 35                   |  | 4/21/17   |  | 0945 |  | 2  |  | X X |  | 09  |  |   |  |  |  |   |  |                     |  |
| 20170421-C27-SBMID02A(5)  |  | Grab   |  | SS  |  | 5                    |  | 4/21/17   |  | 1115 |  | 2  |  | X X |  | 10  |  |   |  |  |  |   |  |                     |  |
| * Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____   |  |  |  |   |  |                      |  |   |  |      |  |  |  |     |  |   |  |   |  |  |  |   |  |                     |  |
| Remarks:  |  |  |  |   |  |                      |  |   |  |      |  |  |  |     |  |   |  |   |  |  |  |   |  |                     |  |
| Relinquished by: (Signature)<br>  |  |  |  | Date:<br><b>4/25/17</b>   |  | Time:<br><b>1600</b> |  | Received by: (Signature)<br>  |  |      |  | Samples returned via: <input type="checkbox"/> UPS<br><input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____ |  |     |  | Condition: (lab use only)<br><b>TDH</b>   |  |   |  |  |  |   |  |                     |  |
| Relinquished by: (Signature)<br>  |  |  |  | Date:<br><b>4/25/17</b>   |  | Time:<br><b>1700</b> |  | Received by: (Signature)<br>  |  |      |  | Temp: <b>2.7°</b> °C Bottles Received: <b>54 = 102</b>   |  |     |  | COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA |  |   |  |  |  |   |  |                     |  |
| Relinquished by: (Signature)<br>  |  |  |  | Date:   |  | Time:                |  | Received for lab by: (Signature)<br>  |  |      |  | Date: <b>4-20-17</b> Time: <b>845</b>  |  |     |  | pH Checked: NCF: <input checked="" type="checkbox"/>  |  |   |  |  |  |   |  |                     |  |



Company Name/Address:

**Encana**143 Diamond Avenue  
Parachute, CO 81635

Billing Information:

**ENCANACO**

Report to:

**Brett Middleton**

Email To:

**brett.middleton@encana.com**

Project

Description: **C27 Pit assessment**City/State  
Collected:

Lab Project #

**ENCANACO**Phone: **(970) 285-2739**

Fax:

Collected by (print):

**BKR**

Site/Facility ID #

**C27**

P.O. #

Date Results Needed

Collected by (signature):

**Rush? (Lab MUST Be Notified)**

☐ Same Day .....200%  
☐ Next Day .....100%  
☐ Two Day .....50%  
☐ Three Day .....25%

Email? ☐ No ☒ YesFAX? ☐ No ☐ YesNo.  
of  
CntrsImmediately  
Packed on Ice N ☐ Y ☒

| Sample ID               | Comp/Grab | Matrix * | Depth | Date    | Time | No.<br>of<br>Cntrs | BTEX | TPH (DRO & GRO) |  |  |  |  |  |  |  |  |  |  |    |
|-------------------------|-----------|----------|-------|---------|------|--------------------|------|-----------------|--|--|--|--|--|--|--|--|--|--|----|
| 20170421-C27-SBMID02A   | Grab      | SS       | 10    | 4/20/17 | 1130 | 2                  | X    | X               |  |  |  |  |  |  |  |  |  |  | 11 |
| 20170421-C27-SBMID02A   | Grab      | SS       | 15    | 4/20/17 | 1145 | 2                  | X    | X               |  |  |  |  |  |  |  |  |  |  | 12 |
| 20170421-C27-SBMID02A   | Grab      | SS       | 20    | 4/21/17 | 1200 | 2                  | X    | X               |  |  |  |  |  |  |  |  |  |  | 13 |
| 20170421-C27-SBMID02A   | Grab      | SS       | 25    | 4/21/17 | 1230 | 2                  | X    | X               |  |  |  |  |  |  |  |  |  |  | 14 |
| 20170421-C27-SBMID02A   | Grab      | SS       | 30    | 4/21/17 | 1245 | 2                  | X    | X               |  |  |  |  |  |  |  |  |  |  | 15 |
| 20170421-C27-SBMID02A   | Grab      | SS       | 35    | 4/21/17 | 1310 | 2                  | X    | X               |  |  |  |  |  |  |  |  |  |  | 16 |
| 20170421-C27-SBS02A(5)  | Grab      | SS       | 5     | 4/21/17 | 1400 | 2                  | X    | X               |  |  |  |  |  |  |  |  |  |  | 17 |
| 20170421-C27-SBS02A(10) | Grab      | SS       | 10    | 4/21/17 | 1420 | 2                  | X    | X               |  |  |  |  |  |  |  |  |  |  | 18 |
| 20170421-C27-SBS02A(15) | Grab      | SS       | 15    | 4/21/17 | 1430 | 2                  | X    | X               |  |  |  |  |  |  |  |  |  |  | 19 |
| 20170421-C27-SBS02A(20) | Grab      | SS       | 20    | 4/21/17 | 1450 | 2                  | X    | X               |  |  |  |  |  |  |  |  |  |  |    |

\* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other \_\_\_\_\_

Remarks:

Relinquished by: (Signature)

Date:

4/25/17

Time:

1600

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via: ☐ UPS☐ FedEx ☐ Courier ☐ \_\_\_\_\_

Temp: \_\_\_\_\_ °C Bottles Received:

2.7°C 54-62

Date: 4-26-17 Time: 845

Hold #

Condition: (lab use only)

COC Seal Intact: Y N NA

pH Checked: NCF: ☒

Chain of Custody Page 2 of 3



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

 12065 Lebanon Rd  
 Mount Juliet, TN 37122  
 Phone: 615-758-5858  
 Phone: 800-767-5859  
 Fax: 615-758-5859
L# **L965166**

Table #

Acctnum:

Template:

Prelogin:

TSR:

Cooler:

Shipped Via:

Rem./Contaminant Sample # (lab only)



Company Name/Address:

**Encana****143 Diamond Avenue  
Parachute, CO 81635**

Billing Information:

**ENCANACO**

Report to:

**Brett Middleton**

Email To:

**brett.middleton@encana.com**

Project

Description: **C27 Pit assessment**City/State  
Collected:

Lab Project #

**ENCANACO**Phone: **(970) 285-2739**

Fax:

Collected by (print):

**BKR**

Site/Facility ID #

**C27**

P.O. #

Date Results Needed

Collected by (signature):

*BKR*  
Immediately  
Packed on Ice N ☐ Y ☒**Rush?** (Lab MUST Be Notified)

☐ Same Day .....200%  
☐ Next Day .....100%  
☐ Two Day .....50%  
☐ Three Day .....25%

Email? ☐ No ☒ YesFAX? ☐ No ☐ YesNo.  
of  
Cntrs

Analysis / Container / Preservative

Chain of Custody Page **2** of **3**


**ESC**  
L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5859  
Fax: 615-758-5859

L# **L905166**

Table #

Acctnum:

Template:

Prelogin:

TSR:

Cooler:

Shipped Via:

Rem./Contaminant Sample # (lab only)

| Sample ID               | Comp/Grab | Matrix * | Depth | Date    | Time |   |   |   |  |  |  |  |  |  |  |  |  |  |    |
|-------------------------|-----------|----------|-------|---------|------|---|---|---|--|--|--|--|--|--|--|--|--|--|----|
| 20170421-C27-SBS02A(25) | Grab      | SS       | 25    | 4/20/17 | 1520 | 1 | X | X |  |  |  |  |  |  |  |  |  |  | 20 |
| 20170421-C27-SBS02A(30) | Grab      | SS       | 30    | 4/20/17 | 1545 | 2 | X | X |  |  |  |  |  |  |  |  |  |  | 21 |
| 20170421-C27-SBS02A(35) | Grab      | SS       | 35    | 4/21/17 | 1600 | 2 | X | X |  |  |  |  |  |  |  |  |  |  | 22 |
| 20170424-C27-EWallA(5)  | Grab      | SS       | 5     | 4/24/17 | 1020 | 2 | X | X |  |  |  |  |  |  |  |  |  |  | 23 |
| 20170424-C27-EWallA(10) | Grab      | SS       | 10    | 4/24/17 | 1030 | 2 | X | X |  |  |  |  |  |  |  |  |  |  | 24 |
| 20170424-C27-EWallA(15) | Grab      | SS       | 15    | 4/24/17 | 1045 | 2 | X | X |  |  |  |  |  |  |  |  |  |  | 25 |
| 20170424-C27-EWallA(20) | Grab      | SS       | 20    | 4/24/17 | 1110 | 2 | X | X |  |  |  |  |  |  |  |  |  |  | 26 |
| 20170424-C27-EWallA(25) | Grab      | SS       | 25    | 4/24/17 | 1145 | 2 | X | X |  |  |  |  |  |  |  |  |  |  | 27 |
| 20170424-C27-EWallA(30) | Grab      | SS       | 30    | 4/24/17 | 1200 | 2 | X | X |  |  |  |  |  |  |  |  |  |  | 28 |
| 20170424-C27-EWallA(35) | Grab      | SS       | 35    | 4/24/17 | 1240 | 2 | X | X |  |  |  |  |  |  |  |  |  |  | 29 |

\* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other \_\_\_\_\_

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Remarks:

Relinquished by: (Signature)

*BKR*

Date:

4/25/17

Time:

1600

Received by: (Signature)

*[Signature]*Samples returned via: ☐ UPS☐ FedEx ☐ Courier ☐ \_\_\_\_\_

Temp: \_\_\_\_\_ °C Bottles Received:

27°C 59=402

Hold #

Condition: (lab use only)

TOK

COC Seal Intact: ☐ Y ☐ N ☒ NA

pH Checked:

NCF:

☒

Relinquished by: (Signature)

*[Signature]*

Date:

4/25/17

Time:

1700

Received for lab by: (Signature)

*[Signature]*

Date:

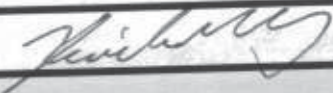
4-26-17

Time:

845



# ESC LAB SCIENCES Cooler Receipt Form

| Client:                         | ENCANACO  | SDG#         | L905166 |    |
|---------------------------------|---|--------------|---------|----|
| Cooler Received/Opened On:      | 4/26/17   | Temperature: | 2.7     |    |
| Received By:                    | Rickey Mosley   |              |         |    |
| Signature:                      |  |              |         |    |
| Receipt Check List              |   | NP           | Yes     | No |
| COC Seal Present / Intact?      |   | ✓            |         |    |
| COC Signed / Accurate?          |   |              | ✓       |    |
| Bottles arrive intact?          |   |              | ✓       |    |
| Correct bottles used?           |   |              | ✓       |    |
| Sufficient volume sent?         |   |              |         |    |
| If Applicable                   |   |              |         |    |
| VOA Zero headspace?             |   |              |         |    |
| Preservation Correct / Checked? |   |              |         |    |



## ESC Lab Sciences

### Non-Conformance Form

|                         |                         |                      |                             |
|-------------------------|-------------------------|----------------------|-----------------------------|
| <b>Login #:</b> L905166 | <b>Client:</b> ENCANACO | <b>Date:</b> 4/26/17 | <b>Evaluated by:</b> Jeremy |
|-------------------------|-------------------------|----------------------|-----------------------------|

#### Non-Conformance (check applicable items)

| <b>Sample Integrity</b>        | <b>Chain of Custody Clarification</b>            | <b>If Broken Container:</b>                          |
|--------------------------------|--|--|
| Parameter(s) past holding time | Login Clarification Needed                       |  |
| Improper temperature           | Chain of custody is incomplete                   | Insufficient packing material around container       |
| Improper container type        | Please specify Metals requested.                 | Insufficient packing material inside cooler          |
| Improper preservation          | Please specify TCLP requested.                   | Improper handling by carrier (FedEx / UPS / Courier) |
| Insufficient sample volume.    | Received additional samples not listed on coc.   | Sample was frozen                                    |
| Sample is biphasic.            | Sample ids on containers do not match ids on coc | Container lid not intact                             |
| Vials received with headspace. | Trip Blank not received.                         | <b>If no Chain of Custody:</b>                       |
| x Broken container             | Client did not "X" analysis.                     | Received by:   |
| Broken container:              | Chain of Custody is missing                      | Date/Time:   |
| Sufficient sample remains      |  | Temp./Cont. Rec./pH:                                 |
|                                |  | Carrier:   |
|                                |  | Tracking#  |

#### Login Comments: Received both containers for C27-SBMIDA(25)

|                            |  |              |                   |                       |              |
|----------------------------|--|--------------|-------------------|-----------------------|--------------|
| <b>Client informed by:</b> | <b>Call</b>                            | <b>Email</b> | <b>Voice Mail</b> | <b>Date:</b> 04/27/17 | <b>Time:</b> |
| <b>TSR Initials:</b> CSG   | <b>Client Contact:</b> Brett Middleton |              |                   |                       |              |

#### Login Instructions:

Client notified

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.



## EnCana Oil & Gas - Parachute, CO

Sample Delivery Group: L904916  
Samples Received: 04/26/2017  
Project Number:  
Description: C27 Pit Assessment  
Site: C27  
Report To: Brett Middleton  
143 Diamond Avenue  
Parachute, CO 81635

Entire Report Reviewed By:



Shane Gambill  
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.





|   |    |
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| <sup>2</sup> Tc: Table of Contents          | 2  |
| <sup>3</sup> Ss: Sample Summary             | 3  |
| <sup>4</sup> Cn: Case Narrative             | 7  |
| <sup>5</sup> Sr: Sample Results             | 8  |
| 20170424-C27-SEWALL A (5) L904916-01        | 8  |
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| 20170424-C27-SEWALL A (15) L904916-03       | 10 |
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| <sup>8</sup> Sc: Chain of Custody           | 29 |





# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## 20170424-C27-SEWALL A (5) L904916-01 Solid

Collected by  
BKR

Collected date/time  
04/24/17 13:40

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975384 | .98      | 04/21/17 11:00        | 05/01/17 17:32     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975623 | .97      | 05/01/17 11:32        | 05/02/17 02:25     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 5        | 05/01/17 21:13        | 05/02/17 11:05     | LM      |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Gl

<sup>7</sup> Al

<sup>8</sup> Sc

## 20170424-C27-SEWALL A (10) L904916-02 Solid

Collected by  
BKR

Collected date/time  
04/24/17 13:55

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975384 | .99      | 04/21/17 11:00        | 05/01/17 17:54     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975623 | 1        | 05/01/17 11:32        | 05/02/17 02:43     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 1        | 05/01/17 21:13        | 05/03/17 09:45     | DMG     |

## 20170424-C27-SEWALL A (15) L904916-03 Solid

Collected by  
BKR

Collected date/time  
04/24/17 14:10

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975384 | .99      | 04/21/17 11:00        | 05/01/17 18:16     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975623 | 1        | 05/01/17 11:32        | 05/02/17 03:00     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 5        | 05/01/17 21:13        | 05/02/17 11:50     | LM      |

## 20170424-C27-SEWALL A (20) L904916-04 Solid

Collected by  
BKR

Collected date/time  
04/24/17 14:30

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975384 | .99      | 04/21/17 11:00        | 05/01/17 23:15     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975623 | 1        | 05/01/17 11:32        | 05/02/17 03:18     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 1        | 05/01/17 21:13        | 05/03/17 09:56     | DMG     |

## 20170424-C27-SEWALL A (25) L904916-05 Solid

Collected by  
BKR

Collected date/time  
04/24/17 15:00

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975384 | 455      | 04/21/17 11:00        | 05/01/17 23:37     | ACG     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975623 | 1        | 05/01/17 11:32        | 05/02/17 03:35     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975623 | 24.5     | 05/01/17 07:12        | 05/03/17 01:24     | ACG     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 20       | 05/01/17 21:13        | 05/02/17 13:32     | LM      |

## 20170424-C27-SEWALL A (30) L904916-06 Solid

Collected by  
BKR

Collected date/time  
04/25/17 08:45

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975384 | 1        | 04/21/17 11:00        | 05/01/17 23:59     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975623 | 1        | 05/01/17 11:32        | 05/02/17 03:53     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 1        | 05/01/17 21:13        | 05/02/17 10:10     | LM      |

ACCOUNT:

EnCana Oil & Gas - Parachute, CO

PROJECT:

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05/04/17 17:18

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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## 20170424-C27-SEWALL A (35) L904916-07 Solid

Collected by  
BKR

Collected date/time  
04/25/17 09:30

Received date/time  
04/26/17 08:45

<sup>1</sup> Cp

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975384 | .98      | 04/21/17 11:00        | 05/02/17 00:21     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975623 | 1        | 05/01/17 11:32        | 05/02/17 04:10     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 20       | 05/01/17 21:13        | 05/02/17 13:21     | LM      |

<sup>2</sup> Tc

<sup>3</sup> Ss

## 20170424-C27-NEWALL A (5) L904916-08 Solid

Collected by  
BKR

Collected date/time  
04/25/17 10:10

Received date/time  
04/26/17 08:45

<sup>4</sup> Cn

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975658 | .99      | 05/01/17 07:12        | 05/02/17 12:20     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975623 | 1        | 05/01/17 11:32        | 05/02/17 04:28     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 1        | 05/01/17 21:13        | 05/02/17 10:21     | LM      |

<sup>5</sup> Sr

<sup>6</sup> Gl

## 20170424-C27-NEWALL A (10) L904916-09 Solid

Collected by  
BKR

Collected date/time  
04/25/17 10:25

Received date/time  
04/26/17 08:45

<sup>7</sup> Al

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975658 | 1        | 05/01/17 07:12        | 05/02/17 12:42     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975623 | 1        | 05/01/17 11:32        | 05/02/17 04:45     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 1        | 05/01/17 21:13        | 05/02/17 10:32     | LM      |

<sup>8</sup> Sc

## 20170424-C27-NEWALL A (15) L904916-10 Solid

Collected by  
BKR

Collected date/time  
04/25/17 11:00

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975658 | .98      | 05/01/17 07:12        | 05/02/17 13:04     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975623 | 1        | 05/01/17 11:32        | 05/02/17 05:03     | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 5        | 05/01/17 21:13        | 05/02/17 12:02     | LM      |

## 20170424-C27-NEWALL A (20) L904916-11 Solid

Collected by  
BKR

Collected date/time  
04/24/17 11:25

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975658 | .98      | 05/01/17 07:12        | 05/02/17 13:25     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | 1        | 05/01/17 07:12        | 05/03/17 01:42     | ACG     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 1        | 05/01/17 21:13        | 05/02/17 09:58     | LM      |

## 20170424-C27-NEWALL A (25) L904916-12 Solid

Collected by  
BKR

Collected date/time  
04/24/17 11:45

Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975658 | .99      | 05/01/17 07:12        | 05/02/17 13:47     | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG976099 | .96      | 05/01/17 07:12        | 05/04/17 03:45     | JHH     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 5        | 05/01/17 21:13        | 05/02/17 12:13     | LM      |

ACCOUNT:

EnCana Oil & Gas - Parachute, CO

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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## 20170424-C27-NEWALL A (30) L904916-13 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/24/17 12:10 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975658 | 1        | 05/01/17 07:12           | 05/02/17 10:53                        | LRL                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG976099 | .97      | 05/01/17 07:12           | 05/04/17 04:07                        | JHH                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 5        | 05/01/17 21:13           | 05/02/17 12:24                        | LM                                   |

|   |    |
|---|----|
| 1 | Cp |
| 2 | Tc |
| 3 | Ss |
| 4 | Cn |
| 5 | Sr |
| 6 | Gl |
| 7 | Al |
| 8 | Sc |

## 20170424-C27-NEWALL A (35) L904916-14 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/24/17 12:45 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975658 | .95      | 05/01/17 07:12           | 05/02/17 14:09                        | LRL                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | .98      | 05/01/17 07:12           | 05/03/17 13:50                        | BMB                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 5        | 05/01/17 21:13           | 05/02/17 12:35                        | LM                                   |

## 20170424-C27-SB0TB (5) L904916-15 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/24/17 13:35 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975658 | .97      | 05/01/17 07:12           | 05/02/17 14:30                        | LRL                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | .99      | 05/01/17 07:12           | 05/03/17 14:07                        | BMB                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 5        | 05/01/17 21:13           | 05/02/17 12:47                        | LM                                   |

## 20170424-C27-SB0TB (10) L904916-16 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/24/17 13:45 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975658 | .98      | 05/01/17 07:12           | 05/02/17 14:52                        | LRL                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | .97      | 05/01/17 07:12           | 05/03/17 14:25                        | BMB                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 1        | 05/01/17 21:13           | 05/02/17 10:43                        | LM                                   |

## 20170424-C27-SB0TB (15) L904916-17 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/24/17 14:10 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975658 | 1        | 05/01/17 07:12           | 05/02/17 15:13                        | LRL                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | .99      | 05/01/17 07:12           | 05/03/17 14:42                        | BMB                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 5        | 05/01/17 21:13           | 05/02/17 12:58                        | LM                                   |

## 20170424-C27-SB0TB (20) L904916-18 Solid

|   |          |          | Collected by<br>BKR      | Collected date/time<br>04/24/17 14:30 | Received date/time<br>04/26/17 08:45 |
|---|----------|----------|--------------------------|---------------------------------------|--------------------------------------|
| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time                 | Analyst                              |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975658 | .97      | 05/01/17 07:12           | 05/02/17 15:35                        | LRL                                  |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | .92      | 05/01/17 07:12           | 05/03/17 15:00                        | BMB                                  |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 5        | 05/01/17 21:13           | 05/02/17 13:09                        | LM                                   |

ACCOUNT:

EnCana Oil & Gas - Parachute, CO

PROJECT:

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## SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20170424-C27-SBOTB (25) L904916-19 Solid

Collected by  
BKRCollected date/time  
04/24/17 14:50Received date/time  
04/26/17 08:45

| Method  | Batch    | Dilution | Preparation<br>date/time | Analysis<br>date/time | Analyst |
|---|----------|----------|--------------------------|-----------------------|---------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG975658 | .97      | 05/01/17 07:12           | 05/02/17 15:56        | LRL     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG975901 | .98      | 05/01/17 07:12           | 05/03/17 15:17        | BMB     |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG974217 | 1        | 05/01/17 21:13           | 05/02/17 10:54        | LM      |

<sup>1</sup>Cp<sup>2</sup>Tc<sup>3</sup>Ss<sup>4</sup>Cn<sup>5</sup>Sr<sup>6</sup>Gl<sup>7</sup>Al<sup>8</sup>Sc

ACCOUNT:

EnCana Oil &amp; Gas - Parachute, CO

PROJECT:

SDG:

L904916

DATE/TIME:

05/04/17 17:18

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All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Shane Gambill  
Technical Service Representative







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.150           |           | 0.0980       | .98      | 05/01/2017 17:32        | WG975384 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 89.6            |           | 77.0-120     |          | 05/01/2017 17:32        | WG975384 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00405         |           | 0.000970     | .97      | 05/02/2017 02:25        | WG975623 |
| Toluene                            | 0.00759         |           | 0.00485      | .97      | 05/02/2017 02:25        | WG975623 |
| Ethylbenzene                       | 0.00191         |           | 0.000970     | .97      | 05/02/2017 02:25        | WG975623 |
| Total Xylenes                      | 0.0130          |           | 0.00291      | .97      | 05/02/2017 02:25        | WG975623 |
| (S) <i>Toluene-d8</i>              | 100             |           | 80.0-120     |          | 05/02/2017 02:25        | WG975623 |
| (S) <i>Dibromofluoromethane</i>    | 101             |           | 74.0-131     |          | 05/02/2017 02:25        | WG975623 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 102             |           | 80.0-120     |          | 05/02/2017 02:25        | WG975623 |
| (S) <i>4</i> -Bromofluorobenzene   | 95.2            |           | 64.0-132     |          | 05/02/2017 02:25        | WG975623 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 63.4            |           | 20.0         | 5        | 05/02/2017 11:05        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 65.0            |           | 18.0-148     |          | 05/02/2017 11:05        | WG974217 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | ND              |           | 0.0990       | .99      | 05/01/2017 17:54        | WG975384 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 90.6            |           | 77.0-120     |          | 05/01/2017 17:54        | WG975384 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00371         |           | 0.00100      | 1        | 05/02/2017 02:43        | WG975623 |
| Toluene                            | ND              |           | 0.00500      | 1        | 05/02/2017 02:43        | WG975623 |
| Ethylbenzene                       | ND              |           | 0.00100      | 1        | 05/02/2017 02:43        | WG975623 |
| Total Xylenes                      | 0.00334         |           | 0.00300      | 1        | 05/02/2017 02:43        | WG975623 |
| (S) <i>Toluene-d8</i>              | 99.9            |           | 80.0-120     |          | 05/02/2017 02:43        | WG975623 |
| (S) <i>Dibromofluoromethane</i>    | 97.8            |           | 74.0-131     |          | 05/02/2017 02:43        | WG975623 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 104             |           | 80.0-120     |          | 05/02/2017 02:43        | WG975623 |
| (S) <i>4</i> -Bromofluorobenzene   | 92.7            |           | 64.0-132     |          | 05/02/2017 02:43        | WG975623 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 19.9            |           | 4.00         | 1        | 05/03/2017 09:45        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 44.5            |           | 18.0-148     |          | 05/03/2017 09:45        | WG974217 |

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Gl7  
Al8  
Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.107           |           | 0.0990       | .99      | 05/01/2017 18:16        | WG975384 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 91.2            |           | 77.0-120     |          | 05/01/2017 18:16        | WG975384 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00471         |           | 0.00100      | 1        | 05/02/2017 03:00        | WG975623 |
| Toluene                            | 0.00648         |           | 0.00500      | 1        | 05/02/2017 03:00        | WG975623 |
| Ethylbenzene                       | 0.00143         |           | 0.00100      | 1        | 05/02/2017 03:00        | WG975623 |
| Total Xylenes                      | 0.00374         |           | 0.00300      | 1        | 05/02/2017 03:00        | WG975623 |
| (S) <i>Toluene-d8</i>              | 102             |           | 80.0-120     |          | 05/02/2017 03:00        | WG975623 |
| (S) <i>Dibromofluoromethane</i>    | 96.9            |           | 74.0-131     |          | 05/02/2017 03:00        | WG975623 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 104             |           | 80.0-120     |          | 05/02/2017 03:00        | WG975623 |
| (S) <i>4</i> -Bromofluorobenzene   | 99.3            |           | 64.0-132     |          | 05/02/2017 03:00        | WG975623 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 59.6            |           | 20.0         | 5        | 05/02/2017 11:50        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 76.0            |           | 18.0-148     |          | 05/02/2017 11:50        | WG974217 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.115           |           | 0.0990       | .99      | 05/01/2017 23:15        | WG975384 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 90.4            |           | 77.0-120     |          | 05/01/2017 23:15        | WG975384 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00362         |           | 0.00100      | 1        | 05/02/2017 03:18        | WG975623 |
| Toluene                            | 0.00515         |           | 0.00500      | 1        | 05/02/2017 03:18        | WG975623 |
| Ethylbenzene                       | 0.00102         |           | 0.00100      | 1        | 05/02/2017 03:18        | WG975623 |
| Total Xylenes                      | 0.00317         |           | 0.00300      | 1        | 05/02/2017 03:18        | WG975623 |
| (S) <i>Toluene-d8</i>              | 99.5            |           | 80.0-120     |          | 05/02/2017 03:18        | WG975623 |
| (S) <i>Dibromofluoromethane</i>    | 102             |           | 74.0-131     |          | 05/02/2017 03:18        | WG975623 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 106             |           | 80.0-120     |          | 05/02/2017 03:18        | WG975623 |
| (S) <i>4</i> -Bromofluorobenzene   | 97.6            |           | 64.0-132     |          | 05/02/2017 03:18        | WG975623 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 78.8            |           | 4.00         | 1        | 05/03/2017 09:56        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 106             |           | 18.0-148     |          | 05/03/2017 09:56        | WG974217 |

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Gl7  
Al8  
Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 1390            |           | 45.5         | 455      | 05/01/2017 23:37        | WG975384 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 87.8            |           | 77.0-120     |          | 05/01/2017 23:37        | WG975384 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.0157          |           | 0.00100      | 1        | 05/02/2017 03:35        | WG975623 |
| Toluene                            | 2.95            |           | 0.123        | 24.5     | 05/03/2017 01:24        | WG975623 |
| Ethylbenzene                       | 0.0465          |           | 0.00100      | 1        | 05/02/2017 03:35        | WG975623 |
| Total Xylenes                      | 7.01            |           | 0.0735       | 24.5     | 05/03/2017 01:24        | WG975623 |
| (S) <i>Toluene-d8</i>              | 101             |           | 80.0-120     |          | 05/02/2017 03:35        | WG975623 |
| (S) <i>Toluene-d8</i>              | 103             |           | 80.0-120     |          | 05/03/2017 01:24        | WG975623 |
| (S) <i>Dibromofluoromethane</i>    | 85.9            |           | 74.0-131     |          | 05/03/2017 01:24        | WG975623 |
| (S) <i>Dibromofluoromethane</i>    | 102             |           | 74.0-131     |          | 05/02/2017 03:35        | WG975623 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 95.2            |           | 80.0-120     |          | 05/02/2017 03:35        | WG975623 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 101             |           | 80.0-120     |          | 05/03/2017 01:24        | WG975623 |
| (S) <i>4</i> -Bromofluorobenzene   | 71.2            |           | 64.0-132     |          | 05/02/2017 03:35        | WG975623 |
| (S) <i>4</i> -Bromofluorobenzene   | 103             |           | 64.0-132     |          | 05/03/2017 01:24        | WG975623 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 351             |           | 80.0         | 20       | 05/02/2017 13:32        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 0.000           | J7        | 18.0-148     |          | 05/02/2017 13:32        | WG974217 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.107           |           | 0.100        | 1        | 05/01/2017 23:59        | WG975384 |
| (S) a,a,a-Trifluorotoluene(FID) | 91.2            |           | 77.0-120     |          | 05/01/2017 23:59        | WG975384 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00483         |           | 0.00100      | 1        | 05/02/2017 03:53        | WG975623 |
| Toluene                    | 0.0133          |           | 0.00500      | 1        | 05/02/2017 03:53        | WG975623 |
| Ethylbenzene               | 0.00220         |           | 0.00100      | 1        | 05/02/2017 03:53        | WG975623 |
| Total Xylenes              | 0.0149          |           | 0.00300      | 1        | 05/02/2017 03:53        | WG975623 |
| (S) Toluene-d8             | 100             |           | 80.0-120     |          | 05/02/2017 03:53        | WG975623 |
| (S) Dibromofluoromethane   | 103             |           | 74.0-131     |          | 05/02/2017 03:53        | WG975623 |
| (S) a,a,a-Trifluorotoluene | 103             |           | 80.0-120     |          | 05/02/2017 03:53        | WG975623 |
| (S) 4-Bromofluorobenzene   | 96.1            |           | 64.0-132     |          | 05/02/2017 03:53        | WG975623 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 29.4            |           | 4.00         | 1        | 05/02/2017 10:10        | WG974217 |
| (S) o-Terphenyl            | 57.5            |           | 18.0-148     |          | 05/02/2017 10:10        | WG974217 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.785           |           | 0.0980       | .98      | 05/02/2017 00:21        | WG975384 |
| (S) a,a,a-Trifluorotoluene(FID) | 85.4            |           | 77.0-120     |          | 05/02/2017 00:21        | WG975384 |

1 Cp

2 Tc

3 Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00295         |           | 0.00100      | 1        | 05/02/2017 04:10        | WG975623 |
| Toluene                    | 0.0614          |           | 0.00500      | 1        | 05/02/2017 04:10        | WG975623 |
| Ethylbenzene               | 0.0136          |           | 0.00100      | 1        | 05/02/2017 04:10        | WG975623 |
| Total Xylenes              | 0.154           |           | 0.00300      | 1        | 05/02/2017 04:10        | WG975623 |
| (S) Toluene-d8             | 99.0            |           | 80.0-120     |          | 05/02/2017 04:10        | WG975623 |
| (S) Dibromofluoromethane   | 107             |           | 74.0-131     |          | 05/02/2017 04:10        | WG975623 |
| (S) a,a,a-Trifluorotoluene | 92.5            |           | 80.0-120     |          | 05/02/2017 04:10        | WG975623 |
| (S) 4-Bromofluorobenzene   | 69.0            |           | 64.0-132     |          | 05/02/2017 04:10        | WG975623 |

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 312             |           | 80.0         | 20       | 05/02/2017 13:21        | WG974217 |
| (S) o-Terphenyl            | 0.000           | J7        | 18.0-148     |          | 05/02/2017 13:21        | WG974217 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | ND              |           | 0.0990       | .99      | 05/02/2017 12:20        | WG975658 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 95.7            |           | 77.0-120     |          | 05/02/2017 12:20        | WG975658 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00467         |           | 0.00100      | 1        | 05/02/2017 04:28        | WG975623 |
| Toluene                            | 0.00727         |           | 0.00500      | 1        | 05/02/2017 04:28        | WG975623 |
| Ethylbenzene                       | 0.00168         |           | 0.00100      | 1        | 05/02/2017 04:28        | WG975623 |
| Total Xylenes                      | 0.00700         |           | 0.00300      | 1        | 05/02/2017 04:28        | WG975623 |
| (S) <i>Toluene-d8</i>              | 98.9            |           | 80.0-120     |          | 05/02/2017 04:28        | WG975623 |
| (S) <i>Dibromofluoromethane</i>    | 100             |           | 74.0-131     |          | 05/02/2017 04:28        | WG975623 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 105             |           | 80.0-120     |          | 05/02/2017 04:28        | WG975623 |
| (S) <i>4</i> -Bromofluorobenzene   | 96.5            |           | 64.0-132     |          | 05/02/2017 04:28        | WG975623 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 36.4            |           | 4.00         | 1        | 05/02/2017 10:21        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 42.8            |           | 18.0-148     |          | 05/02/2017 10:21        | WG974217 |

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Gl7  
Al8  
Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | ND              |           | 0.100        | 1        | 05/02/2017 12:42        | WG975658 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 96.5            |           | 77.0-120     |          | 05/02/2017 12:42        | WG975658 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00351         |           | 0.00100      | 1        | 05/02/2017 04:45        | WG975623 |
| Toluene                            | 0.00533         |           | 0.00500      | 1        | 05/02/2017 04:45        | WG975623 |
| Ethylbenzene                       | 0.00124         |           | 0.00100      | 1        | 05/02/2017 04:45        | WG975623 |
| Total Xylenes                      | 0.00430         |           | 0.00300      | 1        | 05/02/2017 04:45        | WG975623 |
| (S) <i>Toluene-d8</i>              | 101             |           | 80.0-120     |          | 05/02/2017 04:45        | WG975623 |
| (S) <i>Dibromofluoromethane</i>    | 99.1            |           | 74.0-131     |          | 05/02/2017 04:45        | WG975623 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 104             |           | 80.0-120     |          | 05/02/2017 04:45        | WG975623 |
| (S) <i>4</i> -Bromofluorobenzene   | 95.7            |           | 64.0-132     |          | 05/02/2017 04:45        | WG975623 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 38.3            |           | 4.00         | 1        | 05/02/2017 10:32        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 46.1            |           | 18.0-148     |          | 05/02/2017 10:32        | WG974217 |

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Gl7  
Al8  
Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.127           |           | 0.0980       | .98      | 05/02/2017 13:04        | WG975658 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 95.2            |           | 77.0-120     |          | 05/02/2017 13:04        | WG975658 |

1 Cp

2 Tc

3 Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00554         |           | 0.00100      | 1        | 05/02/2017 05:03        | WG975623 |
| Toluene                            | 0.0128          |           | 0.00500      | 1        | 05/02/2017 05:03        | WG975623 |
| Ethylbenzene                       | 0.00219         |           | 0.00100      | 1        | 05/02/2017 05:03        | WG975623 |
| Total Xylenes                      | 0.0169          |           | 0.00300      | 1        | 05/02/2017 05:03        | WG975623 |
| (S) <i>Toluene-d8</i>              | 99.4            |           | 80.0-120     |          | 05/02/2017 05:03        | WG975623 |
| (S) <i>Dibromofluoromethane</i>    | 102             |           | 74.0-131     |          | 05/02/2017 05:03        | WG975623 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 101             |           | 80.0-120     |          | 05/02/2017 05:03        | WG975623 |
| (S) <i>4-Bromofluorobenzene</i>    | 92.9            |           | 64.0-132     |          | 05/02/2017 05:03        | WG975623 |

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 73.7            |           | 20.0         | 5        | 05/02/2017 12:02        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 79.5            |           | 18.0-148     |          | 05/02/2017 12:02        | WG974217 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | ND              |           | 0.0980       | .98      | 05/02/2017 13:25        | WG975658 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 96.9            |           | 77.0-120     |          | 05/02/2017 13:25        | WG975658 |

1 Cp

2 Tc

3 Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00524         |           | 0.00100      | 1        | 05/03/2017 01:42        | WG975901 |
| Toluene                            | 0.00714         |           | 0.00500      | 1        | 05/03/2017 01:42        | WG975901 |
| Ethylbenzene                       | 0.00150         |           | 0.00100      | 1        | 05/03/2017 01:42        | WG975901 |
| Total Xylenes                      | 0.00625         |           | 0.00300      | 1        | 05/03/2017 01:42        | WG975901 |
| (S) <i>Toluene-d8</i>              | 101             |           | 80.0-120     |          | 05/03/2017 01:42        | WG975901 |
| (S) <i>Dibromofluoromethane</i>    | 98.1            |           | 74.0-131     |          | 05/03/2017 01:42        | WG975901 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 103             |           | 80.0-120     |          | 05/03/2017 01:42        | WG975901 |
| (S) <i>4-Bromofluorobenzene</i>    | 98.0            |           | 64.0-132     |          | 05/03/2017 01:42        | WG975901 |

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 14.6            |           | 4.00         | 1        | 05/02/2017 09:58        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 40.5            |           | 18.0-148     |          | 05/02/2017 09:58        | WG974217 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.452           |           | 0.0990       | .99      | 05/02/2017 13:47        | WG975658 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 93.5            |           | 77.0-120     |          | 05/02/2017 13:47        | WG975658 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00331         |           | 0.000960     | .96      | 05/04/2017 03:45        | WG976099 |
| Toluene                            | 0.0240          |           | 0.00480      | .96      | 05/04/2017 03:45        | WG976099 |
| Ethylbenzene                       | 0.00263         |           | 0.000960     | .96      | 05/04/2017 03:45        | WG976099 |
| Total Xylenes                      | 0.0313          |           | 0.00288      | .96      | 05/04/2017 03:45        | WG976099 |
| (S) <i>Toluene-d8</i>              | 101             |           | 80.0-120     |          | 05/04/2017 03:45        | WG976099 |
| (S) <i>Dibromofluoromethane</i>    | 104             |           | 74.0-131     |          | 05/04/2017 03:45        | WG976099 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 100             |           | 80.0-120     |          | 05/04/2017 03:45        | WG976099 |
| (S) <i>4</i> -Bromofluorobenzene   | 86.5            |           | 64.0-132     |          | 05/04/2017 03:45        | WG976099 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 151             |           | 20.0         | 5        | 05/02/2017 12:13        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 133             |           | 18.0-148     |          | 05/02/2017 12:13        | WG974217 |

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Gl7  
Al8  
Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | ND              | <u>J3</u> | 0.100        | 1        | 05/02/2017 10:53        | WG975658 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 98.7            |           | 77.0-120     |          | 05/02/2017 10:53        | WG975658 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00212         |           | 0.000970     | .97      | 05/04/2017 04:07        | WG976099 |
| Toluene                            | ND              |           | 0.00485      | .97      | 05/04/2017 04:07        | WG976099 |
| Ethylbenzene                       | ND              |           | 0.000970     | .97      | 05/04/2017 04:07        | WG976099 |
| Total Xylenes                      | ND              |           | 0.00291      | .97      | 05/04/2017 04:07        | WG976099 |
| (S) <i>Toluene-d8</i>              | 104             |           | 80.0-120     |          | 05/04/2017 04:07        | WG976099 |
| (S) <i>Dibromofluoromethane</i>    | 102             |           | 74.0-131     |          | 05/04/2017 04:07        | WG976099 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 106             |           | 80.0-120     |          | 05/04/2017 04:07        | WG976099 |
| (S) <i>4</i> -Bromofluorobenzene   | 100             |           | 64.0-132     |          | 05/04/2017 04:07        | WG976099 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 47.4            |           | 20.0         | 5        | 05/02/2017 12:24        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 66.5            |           | 18.0-148     |          | 05/02/2017 12:24        | WG974217 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | ND              |           | 0.0950       | .95      | 05/02/2017 14:09        | WG975658 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 98.2            |           | 77.0-120     |          | 05/02/2017 14:09        | WG975658 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00179         |           | 0.000980     | .98      | 05/03/2017 13:50        | WG975901 |
| Toluene                            | 0.00637         |           | 0.00490      | .98      | 05/03/2017 13:50        | WG975901 |
| Ethylbenzene                       | 0.00162         |           | 0.000980     | .98      | 05/03/2017 13:50        | WG975901 |
| Total Xylenes                      | 0.00547         |           | 0.00294      | .98      | 05/03/2017 13:50        | WG975901 |
| (S) <i>Toluene-d8</i>              | 102             |           | 80.0-120     |          | 05/03/2017 13:50        | WG975901 |
| (S) <i>Dibromofluoromethane</i>    | 99.6            |           | 74.0-131     |          | 05/03/2017 13:50        | WG975901 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 104             |           | 80.0-120     |          | 05/03/2017 13:50        | WG975901 |
| (S) <i>4</i> -Bromofluorobenzene   | 99.4            |           | 64.0-132     |          | 05/03/2017 13:50        | WG975901 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 60.1            |           | 20.0         | 5        | 05/02/2017 12:35        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 74.5            |           | 18.0-148     |          | 05/02/2017 12:35        | WG974217 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 1.58            |           | 0.0970       | .97      | 05/02/2017 14:30        | WG975658 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 96.2            |           | 77.0-120     |          | 05/02/2017 14:30        | WG975658 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00415         |           | 0.000990     | .99      | 05/03/2017 14:07        | WG975901 |
| Toluene                            | 0.00601         |           | 0.00495      | .99      | 05/03/2017 14:07        | WG975901 |
| Ethylbenzene                       | 0.00169         |           | 0.000990     | .99      | 05/03/2017 14:07        | WG975901 |
| Total Xylenes                      | 0.00602         |           | 0.00297      | .99      | 05/03/2017 14:07        | WG975901 |
| (S) <i>Toluene-d8</i>              | 101             |           | 80.0-120     |          | 05/03/2017 14:07        | WG975901 |
| (S) <i>Dibromofluoromethane</i>    | 101             |           | 74.0-131     |          | 05/03/2017 14:07        | WG975901 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 103             |           | 80.0-120     |          | 05/03/2017 14:07        | WG975901 |
| (S) <i>4</i> -Bromofluorobenzene   | 109             |           | 64.0-132     |          | 05/03/2017 14:07        | WG975901 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 34.1            |           | 20.0         | 5        | 05/02/2017 12:47        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 60.5            |           | 18.0-148     |          | 05/02/2017 12:47        | WG974217 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.785           |           | 0.0980       | .98      | 05/02/2017 14:52        | WG975658 |
| (S) a,a,a-Trifluorotoluene(FID) | 99.0            |           | 77.0-120     |          | 05/02/2017 14:52        | WG975658 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00278         |           | 0.000970     | .97      | 05/03/2017 14:25        | WG975901 |
| Toluene                    | 0.00507         |           | 0.00485      | .97      | 05/03/2017 14:25        | WG975901 |
| Ethylbenzene               | 0.00147         |           | 0.000970     | .97      | 05/03/2017 14:25        | WG975901 |
| Total Xylenes              | 0.00532         |           | 0.00291      | .97      | 05/03/2017 14:25        | WG975901 |
| (S) Toluene-d8             | 101             |           | 80.0-120     |          | 05/03/2017 14:25        | WG975901 |
| (S) Dibromofluoromethane   | 103             |           | 74.0-131     |          | 05/03/2017 14:25        | WG975901 |
| (S) a,a,a-Trifluorotoluene | 102             |           | 80.0-120     |          | 05/03/2017 14:25        | WG975901 |
| (S) 4-Bromofluorobenzene   | 99.9            |           | 64.0-132     |          | 05/03/2017 14:25        | WG975901 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 75.8            |           | 4.00         | 1        | 05/02/2017 10:43        | WG974217 |
| (S) o-Terphenyl            | 64.2            |           | 18.0-148     |          | 05/02/2017 10:43        | WG974217 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.142           |           | 0.100        | 1        | 05/02/2017 15:13        | WG975658 |
| (S) a,a,a-Trifluorotoluene(FID) | 98.3            |           | 77.0-120     |          | 05/02/2017 15:13        | WG975658 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00256         |           | 0.000990     | .99      | 05/03/2017 14:42        | WG975901 |
| Toluene                    | 0.0112          |           | 0.00495      | .99      | 05/03/2017 14:42        | WG975901 |
| Ethylbenzene               | 0.00202         |           | 0.000990     | .99      | 05/03/2017 14:42        | WG975901 |
| Total Xylenes              | 0.0189          |           | 0.00297      | .99      | 05/03/2017 14:42        | WG975901 |
| (S) Toluene-d8             | 101             |           | 80.0-120     |          | 05/03/2017 14:42        | WG975901 |
| (S) Dibromofluoromethane   | 97.5            |           | 74.0-131     |          | 05/03/2017 14:42        | WG975901 |
| (S) a,a,a-Trifluorotoluene | 102             |           | 80.0-120     |          | 05/03/2017 14:42        | WG975901 |
| (S) 4-Bromofluorobenzene   | 100             |           | 64.0-132     |          | 05/03/2017 14:42        | WG975901 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 90.7            |           | 20.0         | 5        | 05/02/2017 12:58        | WG974217 |
| (S) o-Terphenyl            | 84.0            |           | 18.0-148     |          | 05/02/2017 12:58        | WG974217 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.364           |           | 0.0970       | .97      | 05/02/2017 15:35        | WG975658 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 95.4            |           | 77.0-120     |          | 05/02/2017 15:35        | WG975658 |

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00295         |           | 0.000920     | .92      | 05/03/2017 15:00        | WG975901 |
| Toluene                            | 0.0130          |           | 0.00460      | .92      | 05/03/2017 15:00        | WG975901 |
| Ethylbenzene                       | 0.00187         |           | 0.000920     | .92      | 05/03/2017 15:00        | WG975901 |
| Total Xylenes                      | 0.0268          |           | 0.00276      | .92      | 05/03/2017 15:00        | WG975901 |
| (S) <i>Toluene-d8</i>              | 99.3            |           | 80.0-120     |          | 05/03/2017 15:00        | WG975901 |
| (S) <i>Dibromofluoromethane</i>    | 103             |           | 74.0-131     |          | 05/03/2017 15:00        | WG975901 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 100             |           | 80.0-120     |          | 05/03/2017 15:00        | WG975901 |
| (S) <i>4</i> -Bromofluorobenzene   | 92.6            |           | 64.0-132     |          | 05/03/2017 15:00        | WG975901 |

4  
Cn5  
Sr6  
Gl7  
Al8  
Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 104             |           | 20.0         | 5        | 05/02/2017 13:09        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 91.0            |           | 18.0-148     |          | 05/02/2017 13:09        | WG974217 |





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 0.188           |           | 0.0970       | .97      | 05/02/2017 15:56        | WG975658 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 96.8            |           | 77.0-120     |          | 05/02/2017 15:56        | WG975658 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.00565         |           | 0.000980     | .98      | 05/03/2017 15:17        | WG975901 |
| Toluene                            | 0.00816         |           | 0.00490      | .98      | 05/03/2017 15:17        | WG975901 |
| Ethylbenzene                       | 0.00183         |           | 0.000980     | .98      | 05/03/2017 15:17        | WG975901 |
| Total Xylenes                      | 0.00798         |           | 0.00294      | .98      | 05/03/2017 15:17        | WG975901 |
| (S) <i>Toluene-d8</i>              | 102             |           | 80.0-120     |          | 05/03/2017 15:17        | WG975901 |
| (S) <i>Dibromofluoromethane</i>    | 101             |           | 74.0-131     |          | 05/03/2017 15:17        | WG975901 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 105             |           | 80.0-120     |          | 05/03/2017 15:17        | WG975901 |
| (S) <i>4</i> -Bromofluorobenzene   | 99.1            |           | 64.0-132     |          | 05/03/2017 15:17        | WG975901 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 77.8            |           | 4.00         | 1        | 05/02/2017 10:54        | WG974217 |
| (S) <i>o</i> -Terphenyl    | 96.1            |           | 18.0-148     |          | 05/02/2017 10:54        | WG974217 |

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Gl7  
Al8  
Sc





## Abbreviations and Definitions

|     |  |
|-----|--|
| SDG | Sample Delivery Group.   |
| RDL | Reported Detection Limit.  |
| ND  | Not detected at the Reporting Limit (or MDL where applicable).   |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |

| Qualifier | Description  |
|-----------|--|
| J3        | The associated batch QC was outside the established quality control range for precision. |
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution.          |

<sup>1</sup> Cp<sup>2</sup> Tc<sup>3</sup> Ss<sup>4</sup> Cn<sup>5</sup> Sr<sup>6</sup> Gl<sup>7</sup> Al<sup>8</sup> Sc





ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

## State Accreditations

|                       |             |                             |                   |
|-----------------------|-------------|-----------------------------|-------------------|
| Alabama               | 40660       | Nevada                      | TN-03-2002-34     |
| Alaska                | UST-080     | New Hampshire               | 2975              |
| Arizona               | AZ0612      | New Jersey–NELAP            | TN002             |
| Arkansas              | 88-0469     | New Mexico                  | TN00003           |
| California            | 01157CA     | New York                    | 11742             |
| Colorado              | TN00003     | North Carolina              | Env375            |
| Connecticut           | PH-0197     | North Carolina <sup>1</sup> | DW21704           |
| Florida               | E87487      | North Carolina <sup>2</sup> | 41                |
| Georgia               | NELAP       | North Dakota                | R-140             |
| Georgia <sup>1</sup>  | 923         | Ohio–VAP                    | CL0069            |
| Idaho                 | TN00003     | Oklahoma                    | 9915              |
| Illinois              | 200008      | Oregon                      | TN200002          |
| Indiana               | C-TN-01     | Pennsylvania                | 68-02979          |
| Iowa                  | 364         | Rhode Island                | 221               |
| Kansas                | E-10277     | South Carolina              | 84004             |
| Kentucky <sup>1</sup> | 90010       | South Dakota                | n/a               |
| Kentucky <sup>2</sup> | 16          | Tennessee <sup>14</sup>     | 2006              |
| Louisiana             | AI30792     | Texas                       | T 104704245-07-TX |
| Maine                 | TN0002      | Texas <sup>5</sup>          | LAB0152           |
| Maryland              | 324         | Utah                        | 6157585858        |
| Massachusetts         | M-TN003     | Vermont                     | VT2006            |
| Michigan              | 9958        | Virginia                    | 109               |
| Minnesota             | 047-999-395 | Washington                  | C1915             |
| Mississippi           | TN00003     | West Virginia               | 233               |
| Missouri              | 340         | Wisconsin                   | 9980939910        |
| Montana               | CERT0086    | Wyoming                     | A2LA              |
| Nebraska              | NE-OS-15-05 |                             |                   |

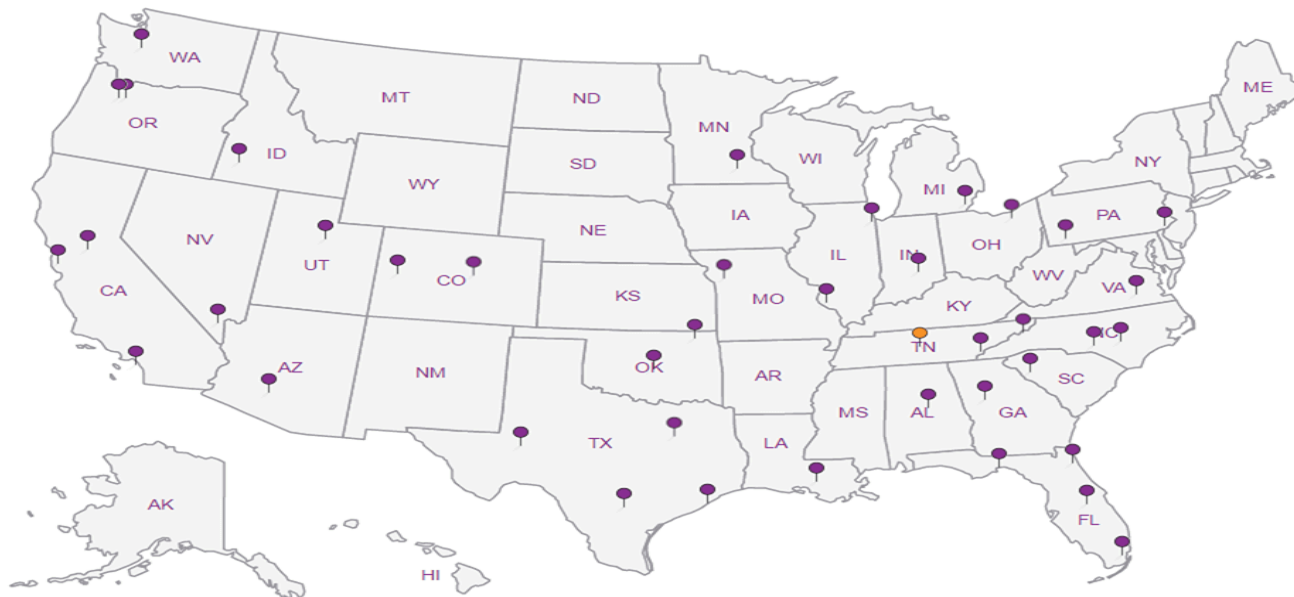
## Third Party & Federal Accreditations

|                               |         |              |         |
|-------------------------------|---------|--------------|---------|
| A2LA – ISO 17025              | 1461.01 | AIHA-LAP,LLC | 100789  |
| A2LA – ISO 17025 <sup>5</sup> | 1461.02 | DOD          | 1461.01 |
| Canada                        | 1461.01 | USDA         | S-67674 |
| EPA–Crypto                    | TN00003 |              |         |


<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>n/a</sup> Accreditation not applicable

## Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**





|   |  |  |  |   |  |               |  |                                     |  |              |  |   |  |                           |  |                           |  |  |  |   |  |
|---|--|--|--|---|--|---------------|--|-------------------------------------|--|--------------|--|---|--|---------------------------|--|---------------------------|--|--|--|---|--|
| Company Name/Address:<br>Encana<br>Parachute, CO                                    |  |  |  | Billing Information:                    |  |               |  | Analysis / Container / Preservative |  |              |  |   |  |                           |  |                           |  |  |  | Chain of Custody<br>Page 1 of 1   |  |
| Report to:<br>Brett Middleton   |  |  |  | Email To:<br>brett.middleton@encana.com |  |               |  | TPH (GRO + DRO)<br>BTX              |  |              |  |   |  |                           |  |                           |  |  |  | <br>L.A.B S.C.I.E.N.C.E.S<br>YOUR LAB OF CHOICE<br>12065 Lebanon Rd<br>Mount Juliet, TN 37122<br>Phone: 615-758-5858<br>Phone: 800-767-5859<br>Fax: 615-758-5859<br>QR Code |  |
| Project<br>Description: C27 Pit Assessment  |  |  |  | City/State<br>Collected:                |  |               |  |                                     |  |              |  |   |  |                           |  |                           |  |  |  | L#<br>904916<br>C180  |  |
| Phone: (970) 285-2739   |  | Client Project #   |  | Lab Project #                           |  | Acctnum:      |  |                                     |  |              |  |   |  |                           |  |                           |  |  |  |   |  |
| Fax:  |  | Site/Facility ID #<br>C27                                      |  | P.O. #                                  |  | Template:     |  |                                     |  |              |  |   |  |                           |  |                           |  |  |  |   |  |
| Collected by (print):<br>BKR  |  | Date Results Needed  |  | Rush? (Lab MUST Be Notified)            |  | Email? No Yes |  | FAX? No Yes                         |  | No. of Cntrs |  | Prelogin:   |  |                           |  |                           |  |  |  |   |  |
| Collected by (signature):<br>[Signature]  |  | Same Day 200%<br>Next Day 100%<br>Two Day 50%<br>Three Day 25% |  | Date                                    |  | Time          |  | pH                                  |  | Temp         |  | TSR:  |  |                           |  |                           |  |  |  |   |  |
| Immediately Packed on Ice N Y   |  | Sample ID  |  | Comp/Grab                               |  | Matrix *      |  | Depth                               |  | Flow         |  | Other   |  | PB:                       |  |                           |  |  |  |   |  |
| 20170424-C27-SEWallA(5)   |  | Grab   |  | Soil                                    |  | 5             |  | 4/24/17                             |  | 1340         |  | 1   |  | X X                       |  |                           |  |  |  |   |  |
| 20170424-C27-SEWallA(10)  |  |  |  |   |  | 10            |  |                                     |  | 1355         |  | 1   |  | X X                       |  |                           |  |  |  |   |  |
| 20170424-C27-SEWallA(15)  |  |  |  |   |  | 15            |  |                                     |  | 1410         |  | 1   |  | X X                       |  |                           |  |  |  |   |  |
| 20170424-C27-SEWallA(20)  |  |  |  |   |  | 20            |  |                                     |  | 1430         |  | 1   |  | X X                       |  |                           |  |  |  |   |  |
| 20170424-C27-SEWallA(25)  |  |  |  |   |  | 25            |  |                                     |  | 1500         |  | 1   |  | X X                       |  |                           |  |  |  |   |  |
| 20170425-C27-SEWallA(30)  |  |  |  |   |  | 30            |  | 4/25/17                             |  | 0845         |  | 1   |  | X X                       |  |                           |  |  |  |   |  |
| 20170425-C27-SEWallA(35)  |  |  |  |   |  | 35            |  |                                     |  | 0930         |  | 1   |  | X X                       |  |                           |  |  |  |   |  |
| 20170425-C27-NEWallA(5)   |  |  |  |   |  | 5             |  |                                     |  | 1010         |  | 1   |  | X X                       |  |                           |  |  |  |   |  |
| 20170425-C27-NEWallA(10)  |  |  |  |   |  | 10            |  |                                     |  | 1025         |  | 1   |  | X X                       |  |                           |  |  |  |   |  |
| 20170425-C27-NEWallA(15)  |  |  |  |   |  | 15            |  |                                     |  | 1100         |  | 1   |  | X X                       |  |                           |  |  |  |   |  |
| * Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other |  |  |  |   |  |               |  |                                     |  |              |  |   |  | Condition: (lab use only) |  |                           |  |  |  |   |  |
| Remarks:  |  |  |  |   |  |               |  |                                     |  |              |  |   |  | Hold #                    |  |                           |  |  |  |   |  |
| Relinquished by: (Signature)  |  |  |  | Date: 4/25/17                           |  | Time: 1600    |  | Received by: (Signature)            |  |              |  | Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> Other |  |                           |  | Condition: (lab use only) |  |  |  |   |  |
| Relinquished by: (Signature)  |  |  |  | Date: 4/25/17                           |  | Time: 1700    |  | Received by: (Signature)            |  |              |  | Temp: 1.8°C Bottles Received: 19 = 802  |  |                           |  | COC Seal Intact: Y N NA   |  |  |  |   |  |
| Relinquished by: (Signature)  |  |  |  | Date:                                   |  | Time:         |  | Received for lab by: (Signature)    |  |              |  | Date: 4-26-17 Time: 845   |  |                           |  | pH Checked: NCF:          |  |  |  |   |  |



| Company Name/Address:<br><b>Encana</b><br><b>Parachute, CO</b>                 |           |                                  |       | Billing Information:<br><b>Encana</b>          |      |   |   | Analysis / Container / Preservative   |  |  |  |  |  |  |  |  |    |  |  | Chain of Custody Page <u>  </u> of <u>  </u>   |  |
|--|-----------|----------------------------------|-------|--|------|---|---|---|--|--|--|--|--|--|--|--|----|--|--|--|--|
| Report to:<br><b>Brett Middleton</b>   |           |                                  |       | Email To:<br><b>brett.middleton@encana.com</b> |      |   |   | <div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 10px;">TPH (Gr+DRO)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 10px;">BTX</div> <div style="flex-grow: 1; border: 1px solid black; background-color: #cccccc;"></div> </div> |  |  |  |  |  |  |  |  |    |  |  | <br><b>ESC</b><br>L.A.B S.C.I.E.N.C.E.S<br>YOUR LAB OF CHOICE<br>12065 Lebanon Rd<br>Mount Juliet, TN 37122<br>Phone: 615-758-5858<br>Phone: 800-767-5859<br>Fax: 615-758-5859 |  |
| Project Description:<br><b>C27 P.t</b>   |           |                                  |       | City/State Collected:                          |      |   |   |   |  |  |  |  |  |  |  |  |    |  |  |  |  |
| Phone: <b>(970) 285-2739</b>   |           | Client Project #<br><b>C27</b>   |       | Lab Project #                                  |      |   |   |   |  |  |  |  |  |  |  |  |    |  |  |  |  |
| Fax:   |           | Site/Facility ID #<br><b>C27</b> |       | P.O. #   |      |   |   |   |  |  |  |  |  |  |  |  |    |  |  |  |  |
| Collected by (print):<br><b>SKP</b>  |           |                                  |       | Collected by (signature):<br>                  |      |   |   |   |  |  |  |  |  |  |  |  |    |  |  | <b>Rush? (Lab MUST Be Notified)</b><br>Same Day .....200%<br>Next Day .....100%<br>Two Day .....50%<br>Three Day .....25%  |  |
| Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/> |           |                                  |       |  |      |   |   |   |  |  |  |  |  |  |  |  |    |  |  |  |  |
| Sample ID  | Comp/Grab | Matrix *                         | Depth | Date   | Time |   |   |   |  |  |  |  |  |  |  |  |    |  |  |  |  |
| 20170425-C27-NEWALL(20)  | Grab      | Soil                             | 20    | 4/25/17  | 1125 | 1 | X | X   |  |  |  |  |  |  |  |  | 11 |  |  |  |  |
| 20170425-C27-NEWALL(25)  |           |                                  | 25    |  | 1145 | 1 | X | X   |  |  |  |  |  |  |  |  | 12 |  |  |  |  |
| 20170425-C27-NEWALL(30)  |           |                                  | 30    |  | 1210 | 1 | X | X   |  |  |  |  |  |  |  |  | 13 |  |  |  |  |
| 20170425-C27-NEWALL(35)  |           |                                  | 35    |  | 1245 | 1 | X | X   |  |  |  |  |  |  |  |  | 14 |  |  |  |  |
| 20170425-C27-SBOTB(5)  |           |                                  | 5     |  | 1335 | 1 | X | X   |  |  |  |  |  |  |  |  | 15 |  |  |  |  |
| 20170425-C27-SBOTB(10)   |           |                                  | 10    |  | 1345 | 1 | X | X   |  |  |  |  |  |  |  |  | 16 |  |  |  |  |
| 20170425-C27-SBOTB(15)   |           |                                  | 15    |  | 1410 | 1 | X | X   |  |  |  |  |  |  |  |  | 17 |  |  |  |  |
| 20170425-C27-SBOTB(20)   |           |                                  | 20    |  | 1430 | 1 | X | X   |  |  |  |  |  |  |  |  | 18 |  |  |  |  |
| 20170425-C27-SBOTB(25)   |           |                                  | 25    |  | 1450 | 1 | X | X   |  |  |  |  |  |  |  |  | 19 |  |  |  |  |

\* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other \_\_\_\_\_

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Remarks:

|                                  |  |                         |                      |                                      |  |  |  |   |  |
|----------------------------------|--|-------------------------|----------------------|--------------------------------------|--|--|--|---|--|
| Relinquished by: (Signature)<br> |  | Date:<br><b>4/25/17</b> | Time:<br><b>1600</b> | Received by: (Signature)<br>         |  | Samples returned via: <input type="checkbox"/> UPS<br><input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____ |  | Condition: (lab use only)<br><b>roll</b>  |  |
| Relinquished by: (Signature)<br> |  | Date:<br><b>4/25/17</b> | Time:<br><b>1700</b> | Received by: (Signature)<br>         |  | Temp: <b>1.8°C</b> Bottles Received: <b>19</b>   |  | COC Seal intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA |  |
| Relinquished by: (Signature)<br> |  | Date:                   | Time:                | Received for lab by: (Signature)<br> |  | Date: <b>4-26-17</b> Time: <b>845</b>  |  | pH Checked: NCF:  |  |



# ESC LAB SCIENCES

## Cooler Receipt Form

| Client:                         | ENCARGO  | SDG#         | 904916 |    |
|---------------------------------|----------|--------------|--------|----|
| Cooler Received/Opened On:      | 4/ 26/17 | Temperature: | 1.8    |    |
| Received By: Nadiar Yakob       |          |              |        |    |
| Signature: <i>Nadiar Yakob</i>  |          |              |        |    |
| Receipt Check List              |          | NP           | Yes    | No |
| COC Seal Present / Intact?      |          | /            |        |    |
| COC Signed / Accurate?          |          |              | /      |    |
| Bottles arrive intact?          |          |              | /      |    |
| Correct bottles used?           |          |              | /      |    |
| Sufficient volume sent?         |          |              | /      |    |
| If Applicable                   |          |              |        |    |
| VOA Zero headspace?             |          |              |        |    |
| Preservation Correct / Checked? |          |              |        |    |



## EnCana Oil & Gas - Parachute, CO

Sample Delivery Group: L873886  
Samples Received: 11/19/2016  
Project Number: EF C27 595 PIT CLOSU  
Description: EF 27C 595 Site Characterization  
Site: EF C27 595  
Report To: Brett Middleton  
143 Diamond Avenue  
Parachute, CO 81635

Entire Report Reviewed By:



Shane Gambill  
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.





|   |           |
|---|-----------|
| <b><sup>1</sup>Cp: Cover Page</b>                     | <b>1</b>  |
| <b><sup>2</sup>Tc: Table of Contents</b>              | <b>2</b>  |
| <b><sup>3</sup>Ss: Sample Summary</b>                 | <b>3</b>  |
| <b><sup>4</sup>Cn: Case Narrative</b>                 | <b>4</b>  |
| <b><sup>5</sup>Sr: Sample Results</b>                 | <b>5</b>  |
| 20161115-C27(SBNO1) 25-27    L873886-01               | 5         |
| 20161115-C27(SBNO1) 30-32    L873886-02               | 6         |
| 20161115-C27(SBSMID01) 15-17    L873886-03            | 7         |
| <b><sup>6</sup>Gl: Glossary of Terms</b>              | <b>8</b>  |
| <b><sup>7</sup>Al: Accreditations &amp; Locations</b> | <b>9</b>  |
| <b><sup>8</sup>Sc: Chain of Custody</b>               | <b>10</b> |

|                 |
|-----------------|
| <sup>1</sup> Cp |
| <sup>2</sup> Tc |
| <sup>3</sup> Ss |
| <sup>4</sup> Cn |
| <sup>5</sup> Sr |
| <sup>6</sup> Gl |
| <sup>7</sup> Al |
| <sup>8</sup> Sc |



# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## 20161115-C27(SBNO1) 25-27 L873886-01 Solid

Collected by  
Jana Nilsen

Collected date/time  
11/15/16 07:30

Received date/time  
11/19/16 09:00

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG929315 | 20       | 11/25/16 11:38        | 11/25/16 21:44     | TH      |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG928851 | 24.75    | 11/17/16 08:24        | 11/29/16 17:45     | BMB     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG928848 | 24.75    | 11/21/16 14:57        | 11/29/16 15:35     | BMB     |

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Gl

<sup>7</sup> Al

<sup>8</sup> Sc

## 20161115-C27(SBNO1) 30-32 L873886-02 Solid

Collected by  
Jana Nilsen

Collected date/time  
11/15/16 08:15

Received date/time  
11/19/16 09:00

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG929315 | 20       | 11/25/16 11:38        | 11/25/16 21:56     | TH      |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG928851 | 1        | 11/22/16 08:21        | 11/28/16 20:28     | DAH     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG928848 | 25       | 11/21/16 14:57        | 11/29/16 15:56     | BMB     |

## 20161115-C27(SBSMID01) 15-17 L873886-03 Solid

Collected by  
Jana Nilsen

Collected date/time  
11/15/16 09:00

Received date/time  
11/19/16 09:00

| Method  | Batch    | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG929315 | 1        | 11/25/16 11:38        | 11/25/16 20:20     | TH      |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG928851 | 1        | 11/22/16 08:21        | 11/28/16 22:36     | DAH     |
| Volatile Organic Compounds (GC/MS) by Method 8260B  | WG928848 | 1        | 11/22/16 08:21        | 11/26/16 20:35     | BRA     |

ACCOUNT:

EnCana Oil & Gas - Parachute, CO

PROJECT:

EF C27 595 PIT CLOSURE

SDG:

L873886

DATE/TIME:

11/30/16 11:35

PAGE:

3 of 11





All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Shane Gambill  
Technical Service Representative







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 74.2            |           | 2.48         | 24.75    | 11/29/2016 17:45        | WG928851 |
| (S) a,a,a-Trifluorotoluene(FID) | 100             |           | 59.0-128     |          | 11/29/2016 17:45        | WG928851 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.0392          |           | 0.0248       | 24.75    | 11/29/2016 15:35        | WG928848 |
| Toluene                    | ND              |           | 0.124        | 24.75    | 11/29/2016 15:35        | WG928848 |
| Ethylbenzene               | 0.152           |           | 0.0248       | 24.75    | 11/29/2016 15:35        | WG928848 |
| Total Xylenes              | 1.96            |           | 0.0742       | 24.75    | 11/29/2016 15:35        | WG928848 |
| (S) Toluene-d8             | 105             |           | 88.7-115     |          | 11/29/2016 15:35        | WG928848 |
| (S) Dibromofluoromethane   | 97.7            |           | 76.3-123     |          | 11/29/2016 15:35        | WG928848 |
| (S) a,a,a-Trifluorotoluene | 105             |           | 87.2-117     |          | 11/29/2016 15:35        | WG928848 |
| (S) 4-Bromofluorobenzene   | 120             |           | 69.7-129     |          | 11/29/2016 15:35        | WG928848 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 4410            |           | 80.0         | 20       | 11/25/2016 21:44        | WG929315 |
| (S) o-Terphenyl            | 423             | J7        | 50.0-150     |          | 11/25/2016 21:44        | WG929315 |







## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                                 | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction               | 3.54            |           | 0.100        | 1        | 11/28/2016 20:28        | WG928851 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 100             |           | 59.0-128     |          | 11/28/2016 20:28        | WG928851 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                            | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|------------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                            | 0.0511          |           | 0.0250       | 25       | 11/29/2016 15:56        | WG928848 |
| Toluene                            | 1.71            |           | 0.125        | 25       | 11/29/2016 15:56        | WG928848 |
| Ethylbenzene                       | 0.109           |           | 0.0250       | 25       | 11/29/2016 15:56        | WG928848 |
| Total Xylenes                      | 3.43            |           | 0.0750       | 25       | 11/29/2016 15:56        | WG928848 |
| (S) <i>Toluene-d8</i>              | 106             |           | 88.7-115     |          | 11/29/2016 15:56        | WG928848 |
| (S) <i>Dibromofluoromethane</i>    | 96.3            |           | 76.3-123     |          | 11/29/2016 15:56        | WG928848 |
| (S) <i>a,a,a</i> -Trifluorotoluene | 102             |           | 87.2-117     |          | 11/29/2016 15:56        | WG928848 |
| (S) <i>4</i> -Bromofluorobenzene   | 107             |           | 69.7-129     |          | 11/29/2016 15:56        | WG928848 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 3050            |           | 80.0         | 20       | 11/25/2016 21:56        | WG929315 |
| (S) <i>o</i> -Terphenyl    | 111             | J7        | 50.0-150     |          | 11/25/2016 21:56        | WG929315 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte                         | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) Low Fraction       | 0.359           |           | 0.100        | 1        | 11/28/2016 22:36        | WG928851 |
| (S) a,a,a-Trifluorotoluene(FID) | 98.5            |           | 59.0-128     |          | 11/28/2016 22:36        | WG928851 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| Benzene                    | 0.00555         |           | 0.00100      | 1        | 11/26/2016 20:35        | WG928848 |
| Toluene                    | 0.0112          |           | 0.00500      | 1        | 11/26/2016 20:35        | WG928848 |
| Ethylbenzene               | 0.00121         |           | 0.00100      | 1        | 11/26/2016 20:35        | WG928848 |
| Total Xylenes              | 0.0129          |           | 0.00300      | 1        | 11/26/2016 20:35        | WG928848 |
| (S) Toluene-d8             | 102             |           | 88.7-115     |          | 11/26/2016 20:35        | WG928848 |
| (S) Dibromofluoromethane   | 129             | J1        | 76.3-123     |          | 11/26/2016 20:35        | WG928848 |
| (S) a,a,a-Trifluorotoluene | 95.9            |           | 87.2-117     |          | 11/26/2016 20:35        | WG928848 |
| (S) 4-Bromofluorobenzene   | 93.6            |           | 69.7-129     |          | 11/26/2016 20:35        | WG928848 |

## Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte                    | Result<br>mg/kg | Qualifier | RDL<br>mg/kg | Dilution | Analysis<br>date / time | Batch    |
|----------------------------|-----------------|-----------|--------------|----------|-------------------------|----------|
| TPH (GC/FID) High Fraction | 196             |           | 4.00         | 1        | 11/25/2016 20:20        | WG929315 |
| (S) o-Terphenyl            | 97.9            |           | 50.0-150     |          | 11/25/2016 20:20        | WG929315 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc





## Abbreviations and Definitions

|     |  |
|-----|--|
| SDG | Sample Delivery Group.   |
| RDL | Reported Detection Limit.  |
| ND  | Not detected at the Reporting Limit (or MDL where applicable).   |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |

| Qualifier | Description |
|-----------|-------------|
|-----------|-------------|

|    |  |
|----|--|
| J1 | Surrogate recovery limits have been exceeded; values are outside upper control limits. |
| J7 | Surrogate recovery cannot be used for control limit evaluation due to dilution.        |

<sup>1</sup> Cp<sup>2</sup> Tc<sup>3</sup> Ss<sup>4</sup> Cn<sup>5</sup> Sr<sup>6</sup> Gl<sup>7</sup> Al<sup>8</sup> Sc





ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

## State Accreditations

|                       |             |                             |                   |
|-----------------------|-------------|-----------------------------|-------------------|
| Alabama               | 40660       | Nevada                      | TN-03-2002-34     |
| Alaska                | UST-080     | New Hampshire               | 2975              |
| Arizona               | AZ0612      | New Jersey–NELAP            | TN002             |
| Arkansas              | 88-0469     | New Mexico                  | TN00003           |
| California            | 01157CA     | New York                    | 11742             |
| Colorado              | TN00003     | North Carolina              | Env375            |
| Connecticut           | PH-0197     | North Carolina <sup>1</sup> | DW21704           |
| Florida               | E87487      | North Carolina <sup>2</sup> | 41                |
| Georgia               | NELAP       | North Dakota                | R-140             |
| Georgia <sup>1</sup>  | 923         | Ohio–VAP                    | CL0069            |
| Idaho                 | TN00003     | Oklahoma                    | 9915              |
| Illinois              | 200008      | Oregon                      | TN200002          |
| Indiana               | C-TN-01     | Pennsylvania                | 68-02979          |
| Iowa                  | 364         | Rhode Island                | 221               |
| Kansas                | E-10277     | South Carolina              | 84004             |
| Kentucky <sup>1</sup> | 90010       | South Dakota                | n/a               |
| Kentucky <sup>2</sup> | 16          | Tennessee <sup>14</sup>     | 2006              |
| Louisiana             | AI30792     | Texas                       | T 104704245-07-TX |
| Maine                 | TN0002      | Texas <sup>5</sup>          | LAB0152           |
| Maryland              | 324         | Utah                        | 6157585858        |
| Massachusetts         | M-TN003     | Vermont                     | VT2006            |
| Michigan              | 9958        | Virginia                    | 109               |
| Minnesota             | 047-999-395 | Washington                  | C1915             |
| Mississippi           | TN00003     | West Virginia               | 233               |
| Missouri              | 340         | Wisconsin                   | 9980939910        |
| Montana               | CERT0086    | Wyoming                     | A2LA              |
| Nebraska              | NE-OS-15-05 |                             |                   |

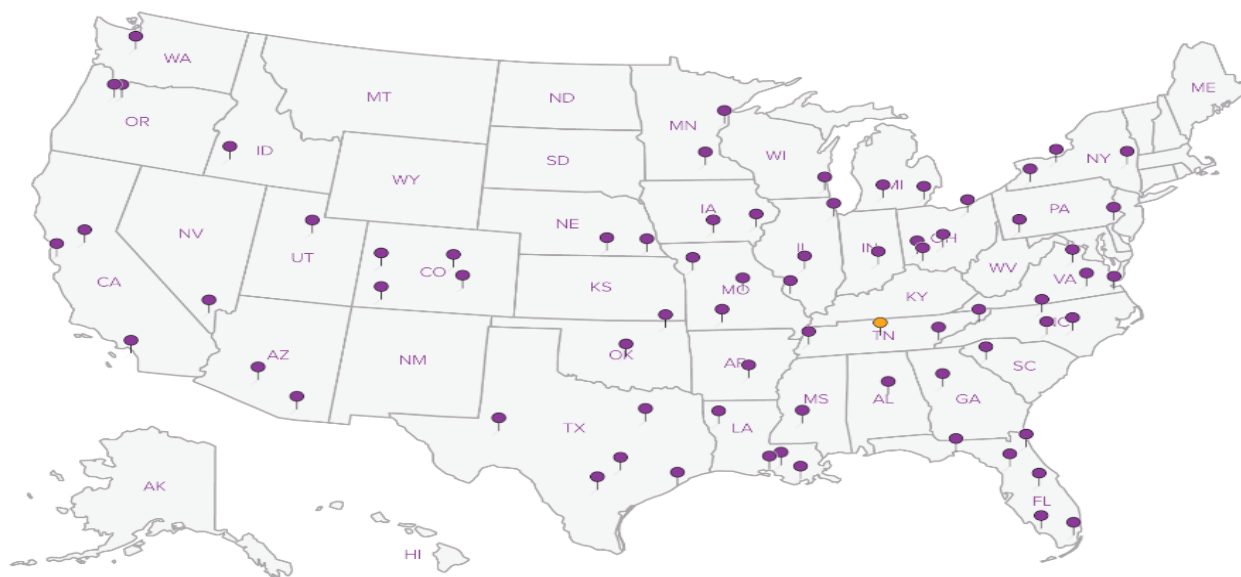
## Third Party & Federal Accreditations

|                               |         |      |         |
|-------------------------------|---------|------|---------|
| A2LA – ISO 17025              | 1461.01 | AIHA | 100789  |
| A2LA – ISO 17025 <sup>5</sup> | 1461.02 | DOD  | 1461.01 |
| Canada                        | 1461.01 | USDA | S-67674 |
| EPA–Crypto                    | TN00003 |      |         |

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>n/a</sup> Accreditation not applicable

## Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**











L·A·B S·C·I·E·N·C·E·S

YOUR LAB OF CHOICE

## Cooler Receipt Form

|  |   |
|--|---|
| Client: <u>ENCANACO</u>  | SDG# <u>6873886</u>   |
| Cooler Received/Opened On: <u>11-19-16</u>   | Temperature Upon Receipt: <u>2.7</u> °C   |
| Received by: <u>Greg Dearmon</u>   |   |
| Signature: <u>[Signature]</u>  |   |
| <b>Receipt Check List</b>  | <b>Yes No N/A</b>   |
| Were custody seals on outside of cooler and intact?  | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |
| Were custody papers properly filled out?   | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Did all bottles arrive in good condition?  | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Were correct bottles used for the analyses requested?  | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Was sufficient amount of sample sent in each bottle?   | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC) | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |
| If applicable, was an observable VOA headspace present?  | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |
| Non Conformance Generated. (If yes see attached NCF)   | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> |





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Est. 1970

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Thursday October 09, 2014

Report Number: L725217

Samples Received: 10/02/14

Client Project: C27

Description: C27 Pit

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

October 09, 2014

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

Date Received : October 02, 2014  
Description : C27 Pit  
Sample ID : 20140930-C27 (SBW05) 45-47FT  
Collected By : Ryan Zernis  
Collection Date : 09/30/14 09:55

ESC Sample # : L725217-01

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 10.    | 4.0        | mg/kg  | 8015D/DRO | 10/07/14 | 1    |
| Surrogate recovery(%)<br>o-Terphenyl | 68.7   |            | % Rec. | 8015D/DRO | 10/07/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 10/09/14 17:20 Printed: 10/09/14 17:20



Summary of Remarks For Samples Printed  
10/09/14 at 17:20:25

TSR Signing Reports: 358  
R5 - Desired TAT

Log all PAHs as PAHSIM. Log all BTEX waters by 8260. Log ALL samples for EDD (COGCC EDD).  
Accounting - pending coded invoices!

Sample: L725217-01 Account: ENCANACO Received: 10/02/14 09:00 Due Date: 10/09/14 00:00 RPT Date: 10/09/14 17:20





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Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Monday October 06, 2014

Report Number: L724912

Samples Received: 10/01/14

Client Project: C27

Description: C27 Pit

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

### Laboratory Certification Numbers

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FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 06, 2014

Date Received : October 01, 2014  
Description : C27 Pit  
Sample ID : 20140929-C27 (SBW01) 45-47FT  
Collected By : Ryan Zernis  
Collection Date : 09/29/14 10:10

ESC Sample # : L724912-01

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 120    | 20.        | mg/kg  | 8015D/DRO | 10/05/14 | 5    |
| Surrogate recovery(%)<br>o-Terphenyl | 112.   |            | % Rec. | 8015D/DRO | 10/05/14 | 5    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/06/14 14:40 Printed: 10/06/14 15:06





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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 06, 2014

Date Received : October 01, 2014  
Description : C27 Pit  
Sample ID : 20140929-C27 (SBW02) 45-47FT  
Collected By : Ryan Zernis  
Collection Date : 09/29/14 12:10

ESC Sample # : L724912-02

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 160    | 20.        | mg/kg  | 8015D/DRO | 10/05/14 | 5    |
| Surrogate recovery(%)<br>o-Terphenyl | 134.   |            | % Rec. | 8015D/DRO | 10/05/14 | 5    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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# REPORT OF ANALYSIS

October 06, 2014

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

Date Received : October 01, 2014  
Description : C27 Pit  
Sample ID : 20140929-C27 (SBW03) 45-47FT  
Collected By : Ryan Zernis  
Collection Date : 09/29/14 14:40

ESC Sample # : L724912-03

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 240    | 20.        | mg/kg  | 8015D/DRO | 10/05/14 | 5    |
| Surrogate recovery(%)<br>o-Terphenyl | 82.1   |            | % Rec. | 8015D/DRO | 10/05/14 | 5    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/06/14 14:40 Printed: 10/06/14 15:06





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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 06, 2014

Date Received : October 01, 2014  
Description : C27 Pit  
Sample ID : 20140929-C27 (SBW04) 45-47FT  
Collected By : Ryan Zernis  
Collection Date : 09/29/14 16:40

ESC Sample # : L724912-04

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 130    | 20.        | mg/kg  | 8015D/DRO | 10/05/14 | 5    |
| Surrogate recovery(%)<br>o-Terphenyl | 102.   |            | % Rec. | 8015D/DRO | 10/05/14 | 5    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/06/14 14:40 Printed: 10/06/14 15:06





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Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Wednesday October 08, 2014

Report Number: L724704

Samples Received: 09/30/14

Client Project: C27

Description: C27 Pit

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

### Laboratory Certification Numbers

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FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 08, 2014

Date Received : September 30, 2014  
Description : C27 Pit  
Sample ID : 20140926-C27(SOUTHSBS02) 20-22FT  
Collected By : Ryan Zernis  
Collection Date : 09/26/14 11:00

ESC Sample # : L724704-01

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 44.    | 40.        | mg/kg  | 8015D/DRO | 10/07/14 | 10   |
| Surrogate recovery(%)<br>o-Terphenyl | 88.0   |            | % Rec. | 8015D/DRO | 10/07/14 | 10   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/07/14 15:16 Revised: 10/08/14 10:44





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# REPORT OF ANALYSIS

October 08, 2014

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

Date Received : September 30, 2014  
Description : C27 Pit  
Sample ID : 20140926-C27(SOUTHSBS02) 40-42FT  
Collected By : Ryan Zernis  
Collection Date : 09/26/14 12:10

ESC Sample # : L724704-02

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 220    | 40.        | mg/kg  | 8015D/DRO | 10/07/14 | 10   |
| Surrogate recovery(%)<br>o-Terphenyl | 98.5   |            | % Rec. | 8015D/DRO | 10/07/14 | 10   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/07/14 15:16 Revised: 10/08/14 10:44





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REPORT OF ANALYSIS

October 08, 2014

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

Date Received : September 30, 2014  
Description : C27 Pit  
Sample ID : 20140926-C27(SOUTHSBMID02) 40-42FT)  
Collected By : Ryan Zernis  
Collection Date : 09/26/14 08:40

ESC Sample # : L724704-03

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 71.    | 40.        | mg/kg  | 8015D/DRO | 10/07/14 | 10   |
| Surrogate recovery(%)<br>o-Terphenyl | 89.2   |            | % Rec. | 8015D/DRO | 10/07/14 | 10   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/07/14 15:16 Revised: 10/08/14 10:44





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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 08, 2014

Date Received : September 30, 2014  
Description : C27 Pit  
Sample ID : 20140925-C27(SOUTHSBMID02) 15-17FT  
Collected By : Ryan Zernis  
Collection Date : 09/25/14 16:00

ESC Sample # : L724704-04

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 6100   | 80.        | mg/kg  | 8015D/DRO | 10/07/14 | 20   |
| Surrogate recovery(%)<br>o-Terphenyl | 0.00   |            | % Rec. | 8015D/DRO | 10/07/14 | 20   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/07/14 15:16 Revised: 10/08/14 10:44



Attachment A  
List of Analytes with QC Qualifiers

| Sample<br>Number | Work<br>Group | Sample<br>Type | Analyte     | Run<br>ID | Qualifier |
|------------------|---------------|----------------|-------------|-----------|-----------|
| L724704-04       | WG746656      | SAMP           | o-Terphenyl | R2995600  | J7        |



Attachment B  
Explanation of QC Qualifier Codes

| Qualifier | Meaning   |
|-----------|---|
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution. |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.





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Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Monday October 06, 2014

Report Number: L724465

Samples Received: 09/27/14

Client Project: C27

Description: C27 Pit

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 06, 2014

Date Received : September 27, 2014  
Description : C27 Pit  
Sample ID : 20140924-C27 (SOUTH SBN01) 25-27FT  
Collected By : Ryan Zernis  
Collection Date : 09/24/14 15:20

ESC Sample # : L724465-01

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 3200   | 200        | mg/kg  | 8015D/DRO | 10/03/14 | 50   |
| Surrogate recovery(%)<br>o-Terphenyl | 371.   |            | % Rec. | 8015D/DRO | 10/03/14 | 50   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/06/14 10:47 Printed: 10/06/14 10:48





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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 06, 2014

Date Received : September 27, 2014  
Description : C27 Pit  
Sample ID : 20140924-C27 (SOUTH SBN01) 30-32FT  
Collected By : Ryan Zernis  
Collection Date : 09/24/14 15:30

ESC Sample # : L724465-02

Site ID : C27

Project # : C27

| Parameter                  | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|----------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction | 8800   | 200        | mg/kg  | 8015D/DRO | 10/03/14 | 50   |
| Surrogate recovery(%)      |        |            |        |           |          |      |
| o-Terphenyl                | 0.00   |            | % Rec. | 8015D/DRO | 10/03/14 | 50   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 06, 2014

Date Received : September 27, 2014  
Description : C27 Pit  
Sample ID : 20140925-C27 (SOUTH SBN01) 65-67FT  
Collected By : Ryan Zernis  
Collection Date : 09/25/14 08:45

ESC Sample # : L724465-03

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 110    | 40.        | mg/kg  | 8015D/DRO | 10/03/14 | 10   |
| Surrogate recovery(%)<br>o-Terphenyl | 134.   |            | % Rec. | 8015D/DRO | 10/03/14 | 10   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

October 06, 2014

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

Date Received : September 27, 2014  
Description : C27 Pit  
Sample ID : 20140925-C27 (SOUTH SBN02) 15-17FT  
Collected By : Ryan Zernis  
Collection Date : 09/25/14 12:05

ESC Sample # : L724465-04

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 1500   | 80.        | mg/kg  | 8015D/DRO | 10/03/14 | 20   |
| Surrogate recovery(%)<br>o-Terphenyl | 0.00   |            | % Rec. | 8015D/DRO | 10/03/14 | 20   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 06, 2014

Date Received : September 27, 2014  
Description : C27 Pit  
Sample ID : 20140925-C27 (SOUTH SBN02) 40-42FT  
Collected By : Ryan Zernis  
Collection Date : 09/25/14 14:00

ESC Sample # : L724465-05

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 110    | 20.        | mg/kg  | 8015D/DRO | 10/03/14 | 5    |
| Surrogate recovery(%)<br>o-Terphenyl | 77.8   |            | % Rec. | 8015D/DRO | 10/03/14 | 5    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/06/14 10:47 Printed: 10/06/14 10:48



Attachment A  
List of Analytes with QC Qualifiers

| Sample<br>Number | Work<br>Group | Sample<br>Type | Analyte     | Run<br>ID | Qualifier |
|------------------|---------------|----------------|-------------|-----------|-----------|
| L724465-01       | WG746277      | SAMP           | o-Terphenyl | R2995238  | J7        |
| L724465-02       | WG746277      | SAMP           | o-Terphenyl | R2995238  | J7        |
| L724465-04       | WG746277      | SAMP           | o-Terphenyl | R2995238  | J7        |



Attachment B  
Explanation of QC Qualifier Codes

| Qualifier | Meaning   |
|-----------|---|
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution. |

Qualifier Report Information

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Definitions

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- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
10/06/14 at 10:48:09

TSR Signing Reports: 358  
R5 - Desired TAT

Log all PAHs as PAHSIM. Log all BTEX waters by 8260. Log ALL samples for EDD (COGCC EDD).  
Accounting - pending coded invoices!

Sample: L724465-01 Account: ENCANACO Received: 09/27/14 09:00 Due Date: 10/03/14 00:00 RPT Date: 10/06/14 10:47  
Sample: L724465-02 Account: ENCANACO Received: 09/27/14 09:00 Due Date: 10/03/14 00:00 RPT Date: 10/06/14 10:47  
Sample: L724465-03 Account: ENCANACO Received: 09/27/14 09:00 Due Date: 10/03/14 00:00 RPT Date: 10/06/14 10:47  
Sample: L724465-04 Account: ENCANACO Received: 09/27/14 09:00 Due Date: 10/03/14 00:00 RPT Date: 10/06/14 10:47  
Sample: L724465-05 Account: ENCANACO Received: 09/27/14 09:00 Due Date: 10/03/14 00:00 RPT Date: 10/06/14 10:47





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Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Monday October 06, 2014

Report Number: L724407

Samples Received: 09/27/14

Client Project: C27

Description: C27 Pit

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 06, 2014

Date Received : September 27, 2014  
Description : C27 Pit  
Sample ID : 20140924-C27 SOUTHSBS01 15-17  
Collected By : Ryan Zernis  
Collection Date : 09/24/14 08:35

ESC Sample # : L724407-01

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 1500   | 80.        | mg/kg  | 8015D/DRO | 10/03/14 | 20   |
| Surrogate recovery(%)<br>o-Terphenyl | 214.   |            | % Rec. | 8015D/DRO | 10/03/14 | 20   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/06/14 10:47 Printed: 10/06/14 10:47





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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 06, 2014

Date Received : September 27, 2014  
Description : C27 Pit  
Sample ID : 20140924-C27 SOUTH SBS01 35-37  
Collected By : Ryan Zernis  
Collection Date : 09/24/14 09:15

ESC Sample # : L724407-02

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 70.    | 4.0        | mg/kg  | 8015D/DRO | 10/03/14 | 1    |
| Surrogate recovery(%)<br>o-Terphenyl | 103.   |            | % Rec. | 8015D/DRO | 10/03/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/06/14 10:47 Printed: 10/06/14 10:47





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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 06, 2014

Date Received : September 27, 2014  
Description : C27 Pit  
Sample ID : 20140924-C27 SOUTH SBMID01 25-27  
Collected By : Ryan Zernis  
Collection Date : 09/24/14 11:45

ESC Sample # : L724407-03

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 120    | 40.        | mg/kg  | 8015D/DRO | 10/03/14 | 10   |
| Surrogate recovery(%)<br>o-Terphenyl | 133.   |            | % Rec. | 8015D/DRO | 10/03/14 | 10   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/06/14 10:47 Printed: 10/06/14 10:47





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Est. 1970

REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 06, 2014

Date Received : September 27, 2014  
Description : C27 Pit  
Sample ID : 20140924-C27 SOUTH SBMID01 35-37  
Collected By : Ryan Zernis  
Collection Date : 09/24/14 12:10

ESC Sample # : L724407-04

Site ID : C27

Project # : C27

| Parameter                            | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--------------------------------------|--------|------------|--------|-----------|----------|------|
| TPH (GC/FID) High Fraction           | 110    | 40.        | mg/kg  | 8015D/DRO | 10/03/14 | 10   |
| Surrogate recovery(%)<br>o-Terphenyl | 131.   |            | % Rec. | 8015D/DRO | 10/03/14 | 10   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 10/06/14 10:47 Printed: 10/06/14 10:47



Attachment A  
List of Analytes with QC Qualifiers

| Sample<br>Number | Work<br>Group | Sample<br>Type | Analyte     | Run<br>ID | Qualifier |
|------------------|---------------|----------------|-------------|-----------|-----------|
| L724407-01       | WG746277      | SAMP           | o-Terphenyl | R2995238  | J7        |



Attachment B  
Explanation of QC Qualifier Codes

| Qualifier | Meaning   |
|-----------|---|
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution. |

Qualifier Report Information

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- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
10/06/14 at 10:47:39

TSR Signing Reports: 358  
R5 - Desired TAT

Log all PAHs as PAHSIM. Log all BTEX waters by 8260. Log ALL samples for EDD (COGCC EDD).  
Accounting - pending coded invoices!

Sample: L724407-01 Account: ENCANACO Received: 09/27/14 09:00 Due Date: 10/03/14 00:00 RPT Date: 10/06/14 10:47  
Hold = 09-0092

Sample: L724407-02 Account: ENCANACO Received: 09/27/14 09:00 Due Date: 10/03/14 00:00 RPT Date: 10/06/14 10:47

Sample: L724407-03 Account: ENCANACO Received: 09/27/14 09:00 Due Date: 10/03/14 00:00 RPT Date: 10/06/14 10:47

Sample: L724407-04 Account: ENCANACO Received: 09/27/14 09:00 Due Date: 10/03/14 00:00 RPT Date: 10/06/14 10:47





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Tax I.D. 62-0814289

Est. 1970

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Wednesday October 01, 2014

Report Number: L723755

Samples Received: 09/25/14

Client Project: C27

Description: C27 Pit

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Jared Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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Est. 1970

# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 01, 2014

Date Received : September 25, 2014  
Description : C27 Pit  
Sample ID : 201409022-C27 NORTH SB N01 15-17  
Collected By : Ryan Zernis  
Collection Date : 09/22/14 14:15

ESC Sample # : L723755-01

Site ID : C27

Project # : C27

| Parameter  | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--|--------|------------|--------|-----------|----------|------|
| Benzene  | BDL    | 0.30       | mg/kg  | 8021B     | 09/28/14 | 25   |
| Toluene  | BDL    | 3.0        | mg/kg  | 8021B     | 09/28/14 | 25   |
| Ethylbenzene   | BDL    | 0.30       | mg/kg  | 8021B     | 09/28/14 | 25   |
| Total Xylene   | BDL    | 0.95       | mg/kg  | 8021B     | 09/28/14 | 25   |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 99.4   |            | % Rec. | 8021B     | 09/28/14 | 25   |
| TPH (GC/FID) High Fraction                           | 230    | 40.        | mg/kg  | 8015D/DRO | 10/01/14 | 10   |
| Surrogate recovery(%)<br>o-Terphenyl                 | 73.4   |            | % Rec. | 8015D/DRO | 10/01/14 | 10   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 10/01/14 15:56 Printed: 10/01/14 17:54





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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 01, 2014

Date Received : September 25, 2014  
Description : C27 Pit  
Sample ID : 201409022-27 NORTH SBN01 70-72  
Collected By : Ryan Zernis  
Collection Date : 09/22/14 10:00

ESC Sample # : L723755-02

Site ID : C27

Project # : C27

| Parameter  | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--|--------|------------|--------|-----------|----------|------|
| Benzene  | BDL    | 0.0025     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Toluene  | BDL    | 0.025      | mg/kg  | 8021B     | 09/28/14 | 5    |
| Ethylbenzene   | BDL    | 0.0025     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Total Xylene   | BDL    | 0.0075     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 98.1   |            | % Rec. | 8021B     | 09/28/14 | 5    |
| TPH (GC/FID) High Fraction                           | 110    | 20.        | mg/kg  | 8015D/DRO | 10/01/14 | 5    |
| Surrogate recovery(%)<br>o-Terphenyl                 | 92.4   |            | % Rec. | 8015D/DRO | 10/01/14 | 5    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 01, 2014

Date Received : September 25, 2014  
Description : C27 Pit  
Sample ID : 201409022-27 NORTH SBN02 10-12  
Collected By : Ryan Zernis  
Collection Date : 09/22/14 12:25

ESC Sample # : L723755-03

Site ID : C27

Project # : C27

| Parameter  | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--|--------|------------|--------|-----------|----------|------|
| Benzene  | 0.088  | 0.012      | mg/kg  | 8021B     | 09/28/14 | 25   |
| Toluene  | 0.76   | 0.12       | mg/kg  | 8021B     | 09/28/14 | 25   |
| Ethylbenzene   | 0.39   | 0.012      | mg/kg  | 8021B     | 09/28/14 | 25   |
| Total Xylene   | 3.2    | 0.038      | mg/kg  | 8021B     | 09/28/14 | 25   |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 98.7   |            | % Rec. | 8021B     | 09/28/14 | 25   |
| TPH (GC/FID) High Fraction                           | 3600   | 80.        | mg/kg  | 8015D/DRO | 10/01/14 | 20   |
| Surrogate recovery(%)<br>o-Terphenyl                 | 0.00   |            | % Rec. | 8015D/DRO | 10/01/14 | 20   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 01, 2014

Date Received : September 25, 2014  
Description : C27 Pit  
Sample ID : 201409022-27 NORTH SBN02 45-47  
Collected By : Ryan Zernis  
Collection Date : 09/22/14 14:20

ESC Sample # : L723755-04

Site ID : C27

Project # : C27

| Parameter  | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--|--------|------------|--------|-----------|----------|------|
| Benzene  | BDL    | 0.0025     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Toluene  | BDL    | 0.025      | mg/kg  | 8021B     | 09/28/14 | 5    |
| Ethylbenzene   | BDL    | 0.0025     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Total Xylene   | BDL    | 0.0075     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 99.0   |            | % Rec. | 8021B     | 09/28/14 | 5    |
| TPH (GC/FID) High Fraction                           | 38.    | 20.        | mg/kg  | 8015D/DRO | 10/01/14 | 5    |
| Surrogate recovery(%)<br>o-Terphenyl                 | 68.7   |            | % Rec. | 8015D/DRO | 10/01/14 | 5    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

October 01, 2014

Date Received : September 25, 2014  
Description : C27 Pit  
Sample ID : 201409022-C27 NORTH SBMID 80-82  
Collected By : Ryan Zernis  
Collection Date : 09/22/14 10:40

ESC Sample # : L723755-05

Site ID : C27

Project # : C27

| Parameter  | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--|--------|------------|--------|-----------|----------|------|
| Benzene  | BDL    | 0.0025     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Toluene  | BDL    | 0.025      | mg/kg  | 8021B     | 09/28/14 | 5    |
| Ethylbenzene   | BDL    | 0.0025     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Total Xylene   | 0.014  | 0.0075     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 98.2   |            | % Rec. | 8021B     | 09/28/14 | 5    |
| TPH (GC/FID) High Fraction                           | 82.    | 20.        | mg/kg  | 8015D/DRO | 10/01/14 | 5    |
| Surrogate recovery(%)<br>o-Terphenyl                 | 88.0   |            | % Rec. | 8015D/DRO | 10/01/14 | 5    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Attachment A  
List of Analytes with QC Qualifiers

| Sample<br>Number | Work<br>Group | Sample<br>Type | Analyte     | Run<br>ID | Qualifier |
|------------------|---------------|----------------|-------------|-----------|-----------|
| L723755-03       | WG745743      | SAMP           | o-Terphenyl | R2994294  | J7        |



Attachment B  
Explanation of QC Qualifier Codes

| Qualifier | Meaning   |
|-----------|---|
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution. |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.





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Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Tuesday September 30, 2014

Report Number: L723341

Samples Received: 09/23/14

Client Project: C27

Description: C27 Pit

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Jared Willis, ESC Representative

### Laboratory Certification Numbers

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NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

September 30, 2014

Date Received : September 23, 2014  
Description : C27 Pit  
Sample ID : 20140919-C27(NORTHSBS02) 45-47 FT  
Collected By : Ryan Zernis  
Collection Date : 09/19/14 09:00

ESC Sample # : L723341-01

Site ID : C27

Project # : C27

| Parameter  | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--|--------|------------|--------|-----------|----------|------|
| Benzene  | BDL    | 0.0025     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Toluene  | BDL    | 0.025      | mg/kg  | 8021B     | 09/28/14 | 5    |
| Ethylbenzene   | BDL    | 0.0025     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Total Xylene   | 0.035  | 0.0075     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 98.0   |            | % Rec. | 8021B     | 09/28/14 | 5    |
| TPH (GC/FID) High Fraction                           | 200    | 4.0        | mg/kg  | 8015D/DRO | 09/29/14 | 1    |
| Surrogate recovery(%)<br>o-Terphenyl                 | 101.   |            | % Rec. | 8015D/DRO | 09/29/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 09/30/14 08:12 Printed: 09/30/14 08:12





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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

September 30, 2014

Date Received : September 23, 2014  
Description : C27 Pit  
Sample ID : 20140919-C27(NORTHSBMID) 10-12 FT  
Collected By : Ryan Zernis  
Collection Date : 09/19/14 11:00

ESC Sample # : L723341-02

Site ID : C27

Project # : C27

| Parameter                   | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|-----------------------------|--------|------------|--------|-----------|----------|------|
| Benzene                     | BDL    | 0.0025     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Toluene                     | BDL    | 0.025      | mg/kg  | 8021B     | 09/28/14 | 5    |
| Ethylbenzene                | 0.0093 | 0.0025     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Total Xylene                | 0.056  | 0.0075     | mg/kg  | 8021B     | 09/28/14 | 5    |
| Surrogate Recovery(%)       |        |            |        |           |          |      |
| a,a,a-Trifluorotoluene(PID) | 98.0   |            | % Rec. | 8021B     | 09/28/14 | 5    |
| TPH (GC/FID) High Fraction  | 1300   | 80.        | mg/kg  | 8015D/DRO | 09/29/14 | 20   |
| Surrogate recovery(%)       |        |            |        |           |          |      |
| o-Terphenyl                 | 0.00   |            | % Rec. | 8015D/DRO | 09/29/14 | 20   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 09/30/14 08:12 Printed: 09/30/14 08:12  
L723341-02 (DRO) - Dilution due to matrix



Attachment A  
List of Analytes with QC Qualifiers

| Sample<br>Number | Work<br>Group | Sample<br>Type | Analyte     | Run<br>ID | Qualifier |
|------------------|---------------|----------------|-------------|-----------|-----------|
| L723341-02       | WG745128      | SAMP           | o-Terphenyl | R2993510  | J7        |



Attachment B  
Explanation of QC Qualifier Codes

| Qualifier | Meaning   |
|-----------|---|
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution. |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

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- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
09/30/14 at 08:12:34

TSR Signing Reports: 358  
R5 - Desired TAT

Log all PAHs as PAHSIM. Log all BTEX waters by 8260. Log ALL samples for EDD (COGCC EDD).  
Accounting - pending coded invoices!

Sample: L723341-01 Account: ENCANACO Received: 09/23/14 09:00 Due Date: 09/30/14 00:00 RPT Date: 09/30/14 08:12

Sample: L723341-02 Account: ENCANACO Received: 09/23/14 09:00 Due Date: 09/30/14 00:00 RPT Date: 09/30/14 08:12





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Est. 1970

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Wednesday September 24, 2014

Report Number: L723161

Samples Received: 09/23/14

Client Project: C27

Description: C27 Pit

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Jared Willis , ESC Representative

### Laboratory Certification Numbers

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SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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Est. 1970

# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

September 24, 2014

Date Received : September 23, 2014  
Description : C27 Pit  
Sample ID : 20140919-C27(NORTH SBMID) 50-52  
Collected By : Ryan Zernis  
Collection Date : 09/19/14 14:05

ESC Sample # : L723161-01

Site ID : C27

Project # : C27

| Parameter  | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|--|--------|------------|--------|-----------|----------|------|
| Benzene  | BDL    | 0.0025     | mg/kg  | 8021B     | 09/23/14 | 5    |
| Toluene  | BDL    | 0.025      | mg/kg  | 8021B     | 09/23/14 | 5    |
| Ethylbenzene   | BDL    | 0.0025     | mg/kg  | 8021B     | 09/23/14 | 5    |
| Total Xylene   | 0.015  | 0.0075     | mg/kg  | 8021B     | 09/23/14 | 5    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 99.1   |            | % Rec. | 8021B     | 09/23/14 | 5    |
| TPH (GC/FID) High Fraction                           | 110    | 40.        | mg/kg  | 8015D/DRO | 09/24/14 | 10   |
| Surrogate recovery(%)<br>o-Terphenyl                 | 100.   |            | % Rec. | 8015D/DRO | 09/24/14 | 10   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 09/24/14 12:10 Printed: 09/24/14 12:10

L723161-01 (DRO) - Cannot run at a lower dilution, dilution due to extractions process



Summary of Remarks For Samples Printed  
09/24/14 at 12:10:25

TSR Signing Reports: 358  
R2 - Rush: Next Day

Log all PAHs as PAHSIM. Log all BTEX waters by 8260. Log ALL samples for EDD (COGCC EDD).  
Accounting - pending coded invoices!

Sample: L723161-01 Account: ENCANACO Received: 09/23/14 09:00 Due Date: 09/24/14 00:00 RPT Date: 09/24/14 12:10





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Mt. Juliet, TN 37122  
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Tax I.D. 62-0814289

Est. 1970

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Friday June 20, 2014

Report Number: L704284

Samples Received: 06/12/14

Client Project: C27

Description: C27 South Pit

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Jared Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
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NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

June 20, 2014

Date Received : June 12, 2014  
Description : C27 South Pit  
Sample ID : 20140611-C24 SPIT (NWALL)  
Collected By : Matt Kasten  
Collection Date : 06/11/14 08:00

ESC Sample # : L704284-01

Site ID : C27 (NPR)

Project # : C27

| Parameter                   | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|-----------------------------|--------|------------|--------|-----------|----------|------|
| Benzene                     | BDL    | 0.012      | mg/kg  | 8021      | 06/16/14 | 25   |
| Toluene                     | BDL    | 0.12       | mg/kg  | 8021      | 06/16/14 | 25   |
| Ethylbenzene                | BDL    | 0.012      | mg/kg  | 8021      | 06/16/14 | 25   |
| Total Xylene                | BDL    | 0.038      | mg/kg  | 8021      | 06/16/14 | 25   |
| TPH (GC/FID) Low Fraction   | 22.    | 2.5        | mg/kg  | 8015      | 06/16/14 | 25   |
| Surrogate Recovery-%        |        |            |        |           |          |      |
| a,a,a-Trifluorotoluene(FID) | 101.   |            | % Rec. | 8021/8015 | 06/16/14 | 25   |
| a,a,a-Trifluorotoluene(PID) | 99.7   |            | % Rec. | 8021/8015 | 06/16/14 | 25   |
| TPH (GC/FID) High Fraction  | 240    | 4.0        | mg/kg  | 8015D/DRO | 06/17/14 | 1    |
| Surrogate recovery(%)       |        |            |        |           |          |      |
| o-Terphenyl                 | 63.5   |            | % Rec. | 8015D/DRO | 06/17/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

June 20, 2014

Date Received : June 12, 2014  
Description : C27 South Pit  
Sample ID : 20140611-C24 SPIT (NBO)  
Collected By : Matt Kasten  
Collection Date : 06/11/14 08:00

ESC Sample # : L704284-02

Site ID : C27 (NPR)

Project # : C27

| Parameter                         | Result | Det. Limit | Units    | Method      | Date     | Dil. |
|-----------------------------------|--------|------------|----------|-------------|----------|------|
| Chromium, Hexavalent              | BDL    | 2.0        | mg/kg    | 3060A/7196A | 06/18/14 | 1    |
| Chromium, Trivalent               | 20.    | 2.0        | mg/kg    | Calc.       | 06/19/14 | 1    |
| ORP                               | -50.   |            | mV       | 2580 B-2011 | 06/19/14 | 1    |
| pH                                | 7.1    |            | su       | 9045D       | 06/16/14 | 1    |
| Sodium Adsorption Ratio           | 24.    |            |          | Calc.       | 06/18/14 | 1    |
| Specific Conductance              | 4400   |            | umhos/cm | 9050AMod    | 06/18/14 | 1    |
| Mercury                           | 0.056  | 0.020      | mg/kg    | 7471        | 06/13/14 | 1    |
| Arsenic                           | 6.6    | 2.0        | mg/kg    | 6010B       | 06/16/14 | 1    |
| Barium                            | 7100   | 2.5        | mg/kg    | 6010B       | 06/16/14 | 5    |
| Cadmium                           | BDL    | 0.50       | mg/kg    | 6010B       | 06/16/14 | 1    |
| Chromium                          | 20.    | 1.0        | mg/kg    | 6010B       | 06/16/14 | 1    |
| Copper                            | 16.    | 2.0        | mg/kg    | 6010B       | 06/16/14 | 1    |
| Lead                              | 13.    | 0.50       | mg/kg    | 6010B       | 06/16/14 | 1    |
| Nickel                            | 13.    | 2.0        | mg/kg    | 6010B       | 06/16/14 | 1    |
| Selenium                          | BDL    | 2.0        | mg/kg    | 6010B       | 06/16/14 | 1    |
| Silver                            | BDL    | 1.0        | mg/kg    | 6010B       | 06/16/14 | 1    |
| Zinc                              | 54.    | 3.0        | mg/kg    | 6010B       | 06/16/14 | 1    |
| Benzene                           | 0.044  | 0.012      | mg/kg    | 8021        | 06/16/14 | 25   |
| Toluene                           | BDL    | 0.12       | mg/kg    | 8021        | 06/16/14 | 25   |
| Ethylbenzene                      | 0.019  | 0.012      | mg/kg    | 8021        | 06/16/14 | 25   |
| Total Xylene                      | 0.35   | 0.038      | mg/kg    | 8021        | 06/16/14 | 25   |
| TPH (GC/FID) Low Fraction         | 67.    | 2.5        | mg/kg    | 8015        | 06/16/14 | 25   |
| Surrogate Recovery-%              |        |            |          |             |          |      |
| a,a,a-Trifluorotoluene(FID)       | 97.5   |            | % Rec.   | 8021/8015   | 06/16/14 | 25   |
| a,a,a-Trifluorotoluene(PID)       | 100.   |            | % Rec.   | 8021/8015   | 06/16/14 | 25   |
| TPH (GC/FID) High Fraction        | 580    | 20.        | mg/kg    | 8015D/DRO   | 06/17/14 | 5    |
| Surrogate recovery(%)             |        |            |          |             |          |      |
| o-Terphenyl                       | 79.4   |            | % Rec.   | 8015D/DRO   | 06/17/14 | 5    |
| Polynuclear Aromatic Hydrocarbons |        |            |          |             |          |      |
| Anthracene                        | 0.036  | 0.0060     | mg/kg    | 8270C-SIM   | 06/18/14 | 1    |
| Acenaphthene                      | 0.048  | 0.0060     | mg/kg    | 8270C-SIM   | 06/18/14 | 1    |
| Acenaphthylene                    | BDL    | 0.0060     | mg/kg    | 8270C-SIM   | 06/18/14 | 1    |
| Benzo(a)anthracene                | BDL    | 0.0060     | mg/kg    | 8270C-SIM   | 06/18/14 | 1    |
| Benzo(a)pyrene                    | BDL    | 0.0060     | mg/kg    | 8270C-SIM   | 06/18/14 | 1    |

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L704284-02 (PH) - 7.1 @ 22.0c





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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

June 20, 2014

Date Received : June 12, 2014  
Description : C27 South Pit  
Sample ID : 20140611-C24 SPIT (NBO)  
Collected By : Matt Kasten  
Collection Date : 06/11/14 08:00

ESC Sample # : L704284-02

Site ID : C27 (NPR)

Project # : C27

| Parameter              | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|------------------------|--------|------------|--------|-----------|----------|------|
| Benzo(b)fluoranthene   | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| Benzo(g,h,i)perylene   | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| Benzo(k)fluoranthene   | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| Chrysene               | 0.011  | 0.0060     | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| Dibenz(a,h)anthracene  | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| Fluoranthene           | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| Fluorene               | 0.074  | 0.0060     | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| Indeno(1,2,3-cd)pyrene | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| Naphthalene            | 0.14   | 0.020      | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| Phenanthrene           | 0.13   | 0.0060     | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| Pyrene                 | 0.020  | 0.0060     | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| 1-Methylnaphthalene    | 0.29   | 0.020      | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| 2-Methylnaphthalene    | 0.60   | 0.020      | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| 2-Chloronaphthalene    | BDL    | 0.020      | mg/kg  | 8270C-SIM | 06/18/14 | 1    |
| Surrogate Recovery     |        |            |        |           |          |      |
| p-Terphenyl-d14        | 106.   |            | % Rec. | 8270C-SIM | 06/18/14 | 1    |
| Nitrobenzene-d5        | 97.6   |            | % Rec. | 8270C-SIM | 06/18/14 | 1    |
| 2-Fluorobiphenyl       | 73.9   |            | % Rec. | 8270C-SIM | 06/18/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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L704284-02 (PH) - 7.1 @ 22.0c





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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

June 20, 2014

Date Received : June 12, 2014  
Description : C27 South Pit  
Sample ID : 20140611-C24 SPIT (WWALL)  
Collected By : Matt Kasten  
Collection Date : 06/11/14 08:00

ESC Sample # : L704284-03

Site ID : C27 (NPR)

Project # : C27

| Parameter                   | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|-----------------------------|--------|------------|--------|-----------|----------|------|
| Benzene                     | BDL    | 0.050      | mg/kg  | 8021      | 06/16/14 | 100  |
| Toluene                     | BDL    | 0.50       | mg/kg  | 8021      | 06/16/14 | 100  |
| Ethylbenzene                | BDL    | 0.050      | mg/kg  | 8021      | 06/16/14 | 100  |
| Total Xylene                | 1.3    | 0.15       | mg/kg  | 8021      | 06/16/14 | 100  |
| TPH (GC/FID) Low Fraction   | 360    | 10.        | mg/kg  | 8015      | 06/16/14 | 100  |
| Surrogate Recovery-%        |        |            |        |           |          |      |
| a,a,a-Trifluorotoluene(FID) | 100.   |            | % Rec. | 8021/8015 | 06/16/14 | 100  |
| a,a,a-Trifluorotoluene(PID) | 99.5   |            | % Rec. | 8021/8015 | 06/16/14 | 100  |
| TPH (GC/FID) High Fraction  | 1300   | 80.        | mg/kg  | 8015D/DRO | 06/17/14 | 20   |
| Surrogate recovery(%)       |        |            |        |           |          |      |
| o-Terphenyl                 | 116.   |            | % Rec. | 8015D/DRO | 06/17/14 | 20   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

June 20, 2014

Date Received : June 12, 2014  
Description : C27 South Pit  
Sample ID : 20140611-C24 SPIT (EWALL)  
Collected By : Matt Kasten  
Collection Date : 06/11/14 08:00

ESC Sample # : L704284-04

Site ID : C27 (NPR)

Project # : C27

| Parameter                   | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|-----------------------------|--------|------------|--------|-----------|----------|------|
| Benzene                     | BDL    | 0.0025     | mg/kg  | 8021      | 06/16/14 | 5    |
| Toluene                     | BDL    | 0.025      | mg/kg  | 8021      | 06/16/14 | 5    |
| Ethylbenzene                | BDL    | 0.0025     | mg/kg  | 8021      | 06/16/14 | 5    |
| Total Xylene                | BDL    | 0.0075     | mg/kg  | 8021      | 06/16/14 | 5    |
| TPH (GC/FID) Low Fraction   | BDL    | 0.50       | mg/kg  | 8015      | 06/16/14 | 5    |
| Surrogate Recovery-%        |        |            |        |           |          |      |
| a,a,a-Trifluorotoluene(FID) | 99.6   |            | % Rec. | 8021/8015 | 06/16/14 | 5    |
| a,a,a-Trifluorotoluene(PID) | 97.7   |            | % Rec. | 8021/8015 | 06/16/14 | 5    |
| TPH (GC/FID) High Fraction  | 180    | 4.0        | mg/kg  | 8015D/DRO | 06/17/14 | 1    |
| Surrogate recovery(%)       |        |            |        |           |          |      |
| o-Terphenyl                 | 61.0   |            | % Rec. | 8015D/DRO | 06/17/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Est. 1970

# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

June 20, 2014

Date Received : June 12, 2014  
Description : C27 South Pit  
Sample ID : 20140611-C24 SPIT (SWELL)  
Collected By : Matt Kasten  
Collection Date : 06/11/14 08:00

ESC Sample # : L704284-05

Site ID : C27 (NPR)

Project # : C27

| Parameter                   | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|-----------------------------|--------|------------|--------|-----------|----------|------|
| Benzene                     | 0.030  | 0.012      | mg/kg  | 8021      | 06/16/14 | 25   |
| Toluene                     | BDL    | 0.12       | mg/kg  | 8021      | 06/16/14 | 25   |
| Ethylbenzene                | BDL    | 0.012      | mg/kg  | 8021      | 06/16/14 | 25   |
| Total Xylene                | 0.073  | 0.038      | mg/kg  | 8021      | 06/16/14 | 25   |
| TPH (GC/FID) Low Fraction   | BDL    | 2.5        | mg/kg  | 8015      | 06/16/14 | 25   |
| Surrogate Recovery-%        |        |            |        |           |          |      |
| a,a,a-Trifluorotoluene(FID) | 99.8   |            | % Rec. | 8021/8015 | 06/16/14 | 25   |
| a,a,a-Trifluorotoluene(PID) | 101.   |            | % Rec. | 8021/8015 | 06/16/14 | 25   |
| TPH (GC/FID) High Fraction  | 1200   | 80.        | mg/kg  | 8015D/DRO | 06/19/14 | 20   |
| Surrogate recovery(%)       |        |            |        |           |          |      |
| o-Terphenyl                 | 143.   |            | % Rec. | 8015D/DRO | 06/19/14 | 20   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L704284-05 (DRO) - Dilution due to matrix

L704284-05 (BTEXGRO) - Non-target compounds too high to run at a lower dilution.





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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

June 20, 2014

Date Received : June 12, 2014  
Description : C27 South Pit  
Sample ID : 20140611-C24 SPIT (SBOT)  
Collected By : Matt Kasten  
Collection Date : 06/11/14 08:00

ESC Sample # : L704284-06

Site ID : C27 (NPR)

Project # : C27

| Parameter                   | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|-----------------------------|--------|------------|--------|-----------|----------|------|
| Benzene                     | 0.013  | 0.012      | mg/kg  | 8021      | 06/16/14 | 25   |
| Toluene                     | BDL    | 0.12       | mg/kg  | 8021      | 06/16/14 | 25   |
| Ethylbenzene                | BDL    | 0.012      | mg/kg  | 8021      | 06/16/14 | 25   |
| Total Xylene                | 0.068  | 0.038      | mg/kg  | 8021      | 06/16/14 | 25   |
| TPH (GC/FID) Low Fraction   | 57.    | 2.5        | mg/kg  | 8015      | 06/16/14 | 25   |
| Surrogate Recovery-%        |        |            |        |           |          |      |
| a,a,a-Trifluorotoluene(FID) | 100.   |            | % Rec. | 8021/8015 | 06/16/14 | 25   |
| a,a,a-Trifluorotoluene(PID) | 101.   |            | % Rec. | 8021/8015 | 06/16/14 | 25   |
| TPH (GC/FID) High Fraction  | 400    | 20.        | mg/kg  | 8015D/DRO | 06/17/14 | 5    |
| Surrogate recovery(%)       |        |            |        |           |          |      |
| o-Terphenyl                 | 87.1   |            | % Rec. | 8015D/DRO | 06/17/14 | 5    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

June 20, 2014

Date Received : June 12, 2014  
Description : C27 South Pit  
Sample ID : 20140611-C24 SPIT (CENTER)  
Collected By : Matt Kasten  
Collection Date : 06/11/14 08:00

ESC Sample # : L704284-07

Site ID : C27 (NPR)

Project # : C27

| Parameter                   | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|-----------------------------|--------|------------|--------|-----------|----------|------|
| Benzene                     | 0.012  | 0.012      | mg/kg  | 8021      | 06/16/14 | 25   |
| Toluene                     | BDL    | 0.12       | mg/kg  | 8021      | 06/16/14 | 25   |
| Ethylbenzene                | BDL    | 0.012      | mg/kg  | 8021      | 06/16/14 | 25   |
| Total Xylene                | BDL    | 0.038      | mg/kg  | 8021      | 06/16/14 | 25   |
| TPH (GC/FID) Low Fraction   | 6.0    | 2.5        | mg/kg  | 8015      | 06/16/14 | 25   |
| Surrogate Recovery-%        |        |            |        |           |          |      |
| a,a,a-Trifluorotoluene(FID) | 101.   |            | % Rec. | 8021/8015 | 06/16/14 | 25   |
| a,a,a-Trifluorotoluene(PID) | 100.   |            | % Rec. | 8021/8015 | 06/16/14 | 25   |
| TPH (GC/FID) High Fraction  | 2100   | 40.        | mg/kg  | 8015D/DRO | 06/17/14 | 10   |
| Surrogate recovery(%)       |        |            |        |           |          |      |
| o-Terphenyl                 | 123.   |            | % Rec. | 8015D/DRO | 06/17/14 | 10   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L704284-07 (BTEXGRO) - Non-target compounds too high to run at a lower dilution.



Attachment A  
List of Analytes with QC Qualifiers

| Sample<br>Number | Work<br>Group | Sample<br>Type | Analyte              | Run<br>ID | Qualifier |
|------------------|---------------|----------------|----------------------|-----------|-----------|
| L704284-02       | WG726482      | SAMP           | Chromium, Hexavalent | R2943626  | T9        |
| L704284-03       | WG726740      | SAMP           | o-Terphenyl          | R2942682  | J7        |
| L704284-05       | WG726988      | SAMP           | o-Terphenyl          | R2944260  | J7        |



Attachment B  
Explanation of QC Qualifier Codes

| Qualifier | Meaning   |
|-----------|---|
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution.             |
| T9        | (ESC) - Additional method/sample information: The sample result represents blank correction |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
06/20/14 at 15:15:18

TSR Signing Reports: 358  
R5 - Desired TAT

Log all PAHs as PAHSIM. Log all BTEX waters by 8260. Log ALL samples for EDD (COGCC EDD).

Sample: L704284-01 Account: ENCANACO Received: 06/12/14 09:00 Due Date: 06/19/14 00:00 RPT Date: 06/20/14 15:14

Sample: L704284-02 Account: ENCANACO Received: 06/12/14 09:00 Due Date: 06/19/14 00:00 RPT Date: 06/20/14 15:14

Sample: L704284-03 Account: ENCANACO Received: 06/12/14 09:00 Due Date: 06/19/14 00:00 RPT Date: 06/20/14 15:14

Sample: L704284-04 Account: ENCANACO Received: 06/12/14 09:00 Due Date: 06/19/14 00:00 RPT Date: 06/20/14 15:14

Sample: L704284-05 Account: ENCANACO Received: 06/12/14 09:00 Due Date: 06/19/14 00:00 RPT Date: 06/20/14 15:14

Sample: L704284-06 Account: ENCANACO Received: 06/12/14 09:00 Due Date: 06/19/14 00:00 RPT Date: 06/20/14 15:14

Sample: L704284-07 Account: ENCANACO Received: 06/12/14 09:00 Due Date: 06/19/14 00:00 RPT Date: 06/20/14 15:14





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Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Wednesday April 16, 2014

Report Number: L692420

Samples Received: 04/08/14

Client Project: C27

Description: C27 North Pit

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Jared Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

April 16, 2014

Date Received : April 08, 2014  
Description : C27 North Pit  
Sample ID : 20140407-C27 NPIT(NWALL) 10 FT  
Collected By : Matt Kasten  
Collection Date : 04/07/14 10:45

ESC Sample # : L692420-01

Site ID : C27

Project # : C27

| Parameter                   | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|-----------------------------|--------|------------|--------|-----------|----------|------|
| Benzene                     | BDL    | 0.0025     | mg/kg  | 8021      | 04/14/14 | 5    |
| Toluene                     | BDL    | 0.025      | mg/kg  | 8021      | 04/14/14 | 5    |
| Ethylbenzene                | BDL    | 0.0025     | mg/kg  | 8021      | 04/14/14 | 5    |
| Total Xylene                | BDL    | 0.0075     | mg/kg  | 8021      | 04/14/14 | 5    |
| TPH (GC/FID) Low Fraction   | BDL    | 0.50       | mg/kg  | 8015      | 04/14/14 | 5    |
| Surrogate Recovery-%        |        |            |        |           |          |      |
| a,a,a-Trifluorotoluene(FID) | 98.1   |            | % Rec. | 8021/8015 | 04/14/14 | 5    |
| a,a,a-Trifluorotoluene(PID) | 103.   |            | % Rec. | 8021/8015 | 04/14/14 | 5    |
| TPH (GC/FID) High Fraction  | 76.    | 40.        | mg/kg  | 8015D/DRO | 04/14/14 | 10   |
| Surrogate recovery(%)       |        |            |        |           |          |      |
| o-Terphenyl                 | 74.2   |            | % Rec. | 8015D/DRO | 04/14/14 | 10   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

April 16, 2014

Date Received : April 08, 2014  
Description : C27 North Pit  
Sample ID : 20140407-C27 NPIT (EWALL)  
Collected By : Matt Kasten  
Collection Date : 04/07/14 10:50

ESC Sample # : L692420-02

Site ID : C27

Project # : C27

| Parameter                   | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|-----------------------------|--------|------------|--------|-----------|----------|------|
| Benzene                     | BDL    | 0.0025     | mg/kg  | 8021      | 04/14/14 | 5    |
| Toluene                     | BDL    | 0.025      | mg/kg  | 8021      | 04/14/14 | 5    |
| Ethylbenzene                | BDL    | 0.0025     | mg/kg  | 8021      | 04/14/14 | 5    |
| Total Xylene                | BDL    | 0.0075     | mg/kg  | 8021      | 04/14/14 | 5    |
| TPH (GC/FID) Low Fraction   | 1.7    | 0.50       | mg/kg  | 8015      | 04/14/14 | 5    |
| Surrogate Recovery-%        |        |            |        |           |          |      |
| a,a,a-Trifluorotoluene(FID) | 99.4   |            | % Rec. | 8021/8015 | 04/14/14 | 5    |
| a,a,a-Trifluorotoluene(PID) | 104.   |            | % Rec. | 8021/8015 | 04/14/14 | 5    |
| TPH (GC/FID) High Fraction  | 1800   | 40.        | mg/kg  | 8015D/DRO | 04/14/14 | 10   |
| Surrogate recovery(%)       |        |            |        |           |          |      |
| o-Terphenyl                 | 130.   |            | % Rec. | 8015D/DRO | 04/14/14 | 10   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

April 16, 2014

Date Received : April 08, 2014  
Description : C27 North Pit  
Sample ID : 20140407-C27 NPIT (WWALL)  
Collected By : Matt Kasten  
Collection Date : 04/07/14 10:55

ESC Sample # : L692420-03

Site ID : C27

Project # : C27

| Parameter                   | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|-----------------------------|--------|------------|--------|-----------|----------|------|
| Benzene                     | 0.044  | 0.012      | mg/kg  | 8021      | 04/14/14 | 25   |
| Toluene                     | BDL    | 0.12       | mg/kg  | 8021      | 04/14/14 | 25   |
| Ethylbenzene                | 0.21   | 0.012      | mg/kg  | 8021      | 04/14/14 | 25   |
| Total Xylene                | 6.0    | 0.038      | mg/kg  | 8021      | 04/14/14 | 25   |
| TPH (GC/FID) Low Fraction   | 180    | 2.5        | mg/kg  | 8015      | 04/14/14 | 25   |
| Surrogate Recovery-%        |        |            |        |           |          |      |
| a,a,a-Trifluorotoluene(FID) | 97.0   |            | % Rec. | 8021/8015 | 04/14/14 | 25   |
| a,a,a-Trifluorotoluene(PID) | 99.3   |            | % Rec. | 8021/8015 | 04/14/14 | 25   |
| TPH (GC/FID) High Fraction  | 420    | 20.        | mg/kg  | 8015D/DRO | 04/14/14 | 5    |
| Surrogate recovery(%)       |        |            |        |           |          |      |
| o-Terphenyl                 | 111.   |            | % Rec. | 8015D/DRO | 04/14/14 | 5    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L692420-03 (DRO) - Dilution due to matrix





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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

April 16, 2014

Date Received : April 08, 2014  
Description : C27 North Pit  
Sample ID : 20140407-C27 NPIT (NBOT)  
Collected By : Matt Kasten  
Collection Date : 04/07/14 11:00

ESC Sample # : L692420-04

Site ID : C27

Project # : C27

| Parameter                   | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|-----------------------------|--------|------------|--------|-----------|----------|------|
| Benzene                     | BDL    | 0.0025     | mg/kg  | 8021      | 04/14/14 | 5    |
| Toluene                     | BDL    | 0.025      | mg/kg  | 8021      | 04/14/14 | 5    |
| Ethylbenzene                | BDL    | 0.0025     | mg/kg  | 8021      | 04/14/14 | 5    |
| Total Xylene                | BDL    | 0.0075     | mg/kg  | 8021      | 04/14/14 | 5    |
| TPH (GC/FID) Low Fraction   | 1.5    | 0.50       | mg/kg  | 8015      | 04/14/14 | 5    |
| Surrogate Recovery-%        |        |            |        |           |          |      |
| a,a,a-Trifluorotoluene(FID) | 96.9   |            | % Rec. | 8021/8015 | 04/14/14 | 5    |
| a,a,a-Trifluorotoluene(PID) | 102.   |            | % Rec. | 8021/8015 | 04/14/14 | 5    |
| TPH (GC/FID) High Fraction  | 1200   | 80.        | mg/kg  | 8015D/DRO | 04/14/14 | 20   |
| Surrogate recovery(%)       |        |            |        |           |          |      |
| o-Terphenyl                 | 164.   |            | % Rec. | 8015D/DRO | 04/14/14 | 20   |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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L692420-04 (DRO) - Dilution due to matrix





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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

April 16, 2014

Date Received : April 08, 2014  
Description : C27 North Pit  
Sample ID : 20140407-C27 NPIT (SBOT)  
Collected By : Matt Kasten  
Collection Date : 04/07/14 11:10

ESC Sample # : L692420-05

Site ID : C27

Project # : C27

| Parameter                         | Result | Det. Limit | Units    | Method      | Date     | Dil. |
|-----------------------------------|--------|------------|----------|-------------|----------|------|
| Chromium, Hexavalent              | BDL    | 2.0        | mg/kg    | 3060A/7196A | 04/11/14 | 1    |
| Chromium, Trivalent               | 15.    | 2.0        | mg/kg    | Calc.       | 04/14/14 | 1    |
| ORP                               | 30.    |            | mV       | 2580 B-2011 | 04/10/14 | 1    |
| pH                                | 9.7    |            | su       | 9045D       | 04/10/14 | 1    |
| Sodium Adsorption Ratio           | 80.    |            |          | Calc.       | 04/15/14 | 1    |
| Specific Conductance              | 2100   |            | umhos/cm | 9050AMod    | 04/11/14 | 1    |
| Mercury                           | 0.036  | 0.020      | mg/kg    | 7471        | 04/10/14 | 1    |
| Arsenic                           | 5.6    | 1.0        | mg/kg    | 6010B       | 04/14/14 | 1    |
| Barium                            | 5200   | 0.25       | mg/kg    | 6010B       | 04/14/14 | 1    |
| Cadmium                           | 0.57   | 0.25       | mg/kg    | 6010B       | 04/15/14 | 1    |
| Chromium                          | 15.    | 0.50       | mg/kg    | 6010B       | 04/14/14 | 1    |
| Copper                            | 15.    | 1.0        | mg/kg    | 6010B       | 04/14/14 | 1    |
| Lead                              | 14.    | 0.25       | mg/kg    | 6010B       | 04/14/14 | 1    |
| Nickel                            | 14.    | 1.0        | mg/kg    | 6010B       | 04/14/14 | 1    |
| Selenium                          | BDL    | 1.0        | mg/kg    | 6010B       | 04/14/14 | 1    |
| Silver                            | BDL    | 0.50       | mg/kg    | 6010B       | 04/14/14 | 1    |
| Zinc                              | 56.    | 1.5        | mg/kg    | 6010B       | 04/14/14 | 1    |
| Benzene                           | 0.56   | 0.025      | mg/kg    | 8021        | 04/15/14 | 50   |
| Toluene                           | 1.6    | 0.25       | mg/kg    | 8021        | 04/15/14 | 50   |
| Ethylbenzene                      | 0.45   | 0.025      | mg/kg    | 8021        | 04/15/14 | 50   |
| Total Xylene                      | 12.    | 0.075      | mg/kg    | 8021        | 04/15/14 | 50   |
| TPH (GC/FID) Low Fraction         | 290    | 5.0        | mg/kg    | 8015        | 04/15/14 | 50   |
| Surrogate Recovery-%              |        |            |          |             |          |      |
| a,a,a-Trifluorotoluene(FID)       | 89.3   |            | % Rec.   | 8021/8015   | 04/15/14 | 50   |
| a,a,a-Trifluorotoluene(PID)       | 102.   |            | % Rec.   | 8021/8015   | 04/15/14 | 50   |
| TPH (GC/FID) High Fraction        | 3700   | 80.        | mg/kg    | 8015D/DRO   | 04/14/14 | 20   |
| Surrogate recovery(%)             |        |            |          |             |          |      |
| o-Terphenyl                       | 0.00   |            | % Rec.   | 8015D/DRO   | 04/14/14 | 20   |
| Polynuclear Aromatic Hydrocarbons |        |            |          |             |          |      |
| Anthracene                        | 0.027  | 0.0060     | mg/kg    | 8270C-SIM   | 04/10/14 | 1    |
| Acenaphthene                      | 0.028  | 0.0060     | mg/kg    | 8270C-SIM   | 04/10/14 | 1    |
| Acenaphthylene                    | BDL    | 0.0060     | mg/kg    | 8270C-SIM   | 04/10/14 | 1    |
| Benzo(a)anthracene                | BDL    | 0.0060     | mg/kg    | 8270C-SIM   | 04/10/14 | 1    |
| Benzo(a)pyrene                    | BDL    | 0.0060     | mg/kg    | 8270C-SIM   | 04/10/14 | 1    |

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L692420-05 (PH) - 9.7@22.2c  
L692420-05 (DRO) - Dilution due to matrix





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# REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

April 16, 2014

Date Received : April 08, 2014  
Description : C27 North Pit  
Sample ID : 20140407-C27 NPIT (SBOT)  
Collected By : Matt Kasten  
Collection Date : 04/07/14 11:10

ESC Sample # : L692420-05

Site ID : C27

Project # : C27

| Parameter              | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|------------------------|--------|------------|--------|-----------|----------|------|
| Benzo(b)fluoranthene   | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 04/10/14 | 1    |
| Benzo(g,h,i)perylene   | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 04/10/14 | 1    |
| Benzo(k)fluoranthene   | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 04/10/14 | 1    |
| Chrysene               | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 04/10/14 | 1    |
| Dibenz(a,h)anthracene  | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 04/10/14 | 1    |
| Fluoranthene           | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 04/10/14 | 1    |
| Fluorene               | 0.11   | 0.0060     | mg/kg  | 8270C-SIM | 04/10/14 | 1    |
| Indeno(1,2,3-cd)pyrene | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 04/10/14 | 1    |
| Naphthalene            | 0.17   | 0.10       | mg/kg  | 8270C-SIM | 04/11/14 | 5    |
| Phenanthrene           | 0.11   | 0.0060     | mg/kg  | 8270C-SIM | 04/10/14 | 1    |
| Pyrene                 | BDL    | 0.0060     | mg/kg  | 8270C-SIM | 04/10/14 | 1    |
| 1-Methylnaphthalene    | 0.19   | 0.10       | mg/kg  | 8270C-SIM | 04/11/14 | 5    |
| 2-Methylnaphthalene    | 0.61   | 0.10       | mg/kg  | 8270C-SIM | 04/11/14 | 5    |
| 2-Chloronaphthalene    | BDL    | 0.020      | mg/kg  | 8270C-SIM | 04/10/14 | 1    |
| Surrogate Recovery     |        |            |        |           |          |      |
| p-Terphenyl-d14        | 94.8   |            | % Rec. | 8270C-SIM | 04/10/14 | 1    |
| Nitrobenzene-d5        | 111.   |            | % Rec. | 8270C-SIM | 04/11/14 | 5    |
| 2-Fluorobiphenyl       | 86.3   |            | % Rec. | 8270C-SIM | 04/10/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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L692420-05 (PH) - 9.7@22.2c

L692420-05 (DRO) - Dilution due to matrix





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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

April 16, 2014

Date Received : April 08, 2014  
Description : C27 North Pit  
Sample ID : 20140407-C27 NPIT (SWALL)  
Collected By : Matt Kasten  
Collection Date : 04/07/14 11:05

ESC Sample # : L692420-06

Site ID : C27

Project # : C27

| Parameter                   | Result | Det. Limit | Units  | Method    | Date     | Dil. |
|-----------------------------|--------|------------|--------|-----------|----------|------|
| Benzene                     | 0.0029 | 0.0025     | mg/kg  | 8021      | 04/15/14 | 5    |
| Toluene                     | BDL    | 0.025      | mg/kg  | 8021      | 04/15/14 | 5    |
| Ethylbenzene                | BDL    | 0.0025     | mg/kg  | 8021      | 04/15/14 | 5    |
| Total Xylene                | BDL    | 0.0075     | mg/kg  | 8021      | 04/15/14 | 5    |
| TPH (GC/FID) Low Fraction   | BDL    | 0.50       | mg/kg  | 8015      | 04/15/14 | 5    |
| Surrogate Recovery-%        |        |            |        |           |          |      |
| a,a,a-Trifluorotoluene(FID) | 97.5   |            | % Rec. | 8021/8015 | 04/15/14 | 5    |
| a,a,a-Trifluorotoluene(PID) | 95.8   |            | % Rec. | 8021/8015 | 04/15/14 | 5    |
| TPH (GC/FID) High Fraction  | BDL    | 4.0        | mg/kg  | 8015D/DRO | 04/14/14 | 1    |
| Surrogate recovery(%)       |        |            |        |           |          |      |
| o-Terphenyl                 | 59.5   |            | % Rec. | 8015D/DRO | 04/14/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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Attachment A  
List of Analytes with QC Qualifiers

| Sample<br>Number | Work<br>Group | Sample<br>Type | Analyte     | Run<br>ID | Qualifier |
|------------------|---------------|----------------|-------------|-----------|-----------|
| L692420-04       | WG715432      | SAMP           | o-Terphenyl | R2904573  | J7        |
| L692420-05       | WG715432      | SAMP           | o-Terphenyl | R2904573  | J7        |



Attachment B  
Explanation of QC Qualifier Codes

| Qualifier | Meaning   |
|-----------|---|
| J7        | Surrogate recovery cannot be used for control limit evaluation due to dilution. |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
04/16/14 at 10:25:15

TSR Signing Reports: 358  
R5 - Desired TAT

Log all PAHs as PAHSIM. Log all BTEX waters by 8260. Log ALL samples for EDD (COGCC EDD).

Sample: L692420-01 Account: ENCANACO Received: 04/08/14 09:30 Due Date: 04/15/14 00:00 RPT Date: 04/16/14 10:24

Sample: L692420-02 Account: ENCANACO Received: 04/08/14 09:30 Due Date: 04/15/14 00:00 RPT Date: 04/16/14 10:24

Sample: L692420-03 Account: ENCANACO Received: 04/08/14 09:30 Due Date: 04/15/14 00:00 RPT Date: 04/16/14 10:24

Sample: L692420-04 Account: ENCANACO Received: 04/08/14 09:30 Due Date: 04/15/14 00:00 RPT Date: 04/16/14 10:24

Sample: L692420-05 Account: ENCANACO Received: 04/08/14 09:30 Due Date: 04/15/14 00:00 RPT Date: 04/16/14 10:24

Sample: L692420-06 Account: ENCANACO Received: 04/08/14 09:30 Due Date: 04/15/14 00:00 RPT Date: 04/16/14 10:24