



Nicholson GeoSolutions, LLC

3433 East Lake Drive
Centennial, CO 80121

September 20, 2016

Mr. Derek Johnson
Linn Energy, LLC
235 Callahan Avenue
Parachute, Colorado 81635

Subject: Long Ridge J-15 Fresh Water Pit Soil Investigation

Dear Derek:

Nicholson GeoSolutions LLC was retained by Linn Energy, LLC to conduct soil sampling of the fresh water pit located on the Long Ridge J-15 well pad in the Garden Gulch area, Garfield County, Colorado.

Five soil samples were collected from the locations shown on Figure 1 on September 23rd, 2016 to evaluate compliance with the COGCC Table 910-1 standards. All samples were analyzed for Total Volatile Petroleum Hydrocarbons (TVPH – gasoline range), Total Extractable Petroleum Hydrocarbons (TEPH – diesel and motor oil range), BTEX (benzene, toluene, ethylbenzene, and xylenes), sodium adsorption ratio (SAR), pH, conductivity, PAHs, and metals.

Table 1 provides a summary of the analytical results for the soil samples collected. The laboratory analytical report is contained in Appendix A. All TPH and PAHs were below the standards for all samples. SAR exceeded the standards for all five samples and ranged from 16.7 to 39.6. Conductivity exceeded the standards for four of the five samples and ranged from 1.89 to 12.8 mmhos/cm. Arsenic ranged from 2.55 to 7.37 mg/kg for the five samples, within the range of natural background concentrations for the Garden Gulch area.

Nicholson GeoSolutions LLC

A handwritten signature in blue ink that reads "DK Nicholson".

David K. Nicholson, P.G.
Principal Geologist

Table 1 Long Ridge J-15 Fresh Water Pit Sample Results – August 23, 2016

| Parameter | | J15-P-1 | J15-P-2 | J15-P-3 | J15-P-4 | J15-P-5 |
|-------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|
| sp. conductance (mmhos/cm) | <4 | 12.8 | 6.93 | 4.03 | 1.89 | 6.85 |
| pH (standard units) | 6-9 | 7.69 | 7.88 | 7.98 | 8.47 | 8.67 |
| SAR (ratio) | <12 | 39.6 | 18.2 | 22.5 | 16.7 | 20.7 |
| TVPH – gasoline range | 500 ¹ | <0.1 | 0.123 | 0.106 | <0.1 | <0.1 |
| TEPH – diesel range | 500 ¹ | 18.65 | 109.4 | 40.5 | 29.29 | 32.6 |
| benzene | 0.17 | 0.0011 | 0.0025 | 0.00216 | 0.00164 | 0.00153 |
| toluene | 85 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| ethylbenzene | 100 | <0.0005 | 0.00105 | 0.000789 | 0.00065 | <0.0005 |
| xylenes | 175 | <0.0015 | 0.00234 | 0.00193 | 0.00185 | <0.0015 |
| PAHs including benzo(a)pyrene | various | All ok | All ok | All ok | All ok | All ok |
| arsenic | 0.39 | 4.49 | 3.62 | 5.05 | 3.96 | 7.74 |

¹The standard is 500 for the combined total of TVPH and TEPH

Values in bold type exceed standards

All units in mg/kg except where indicated

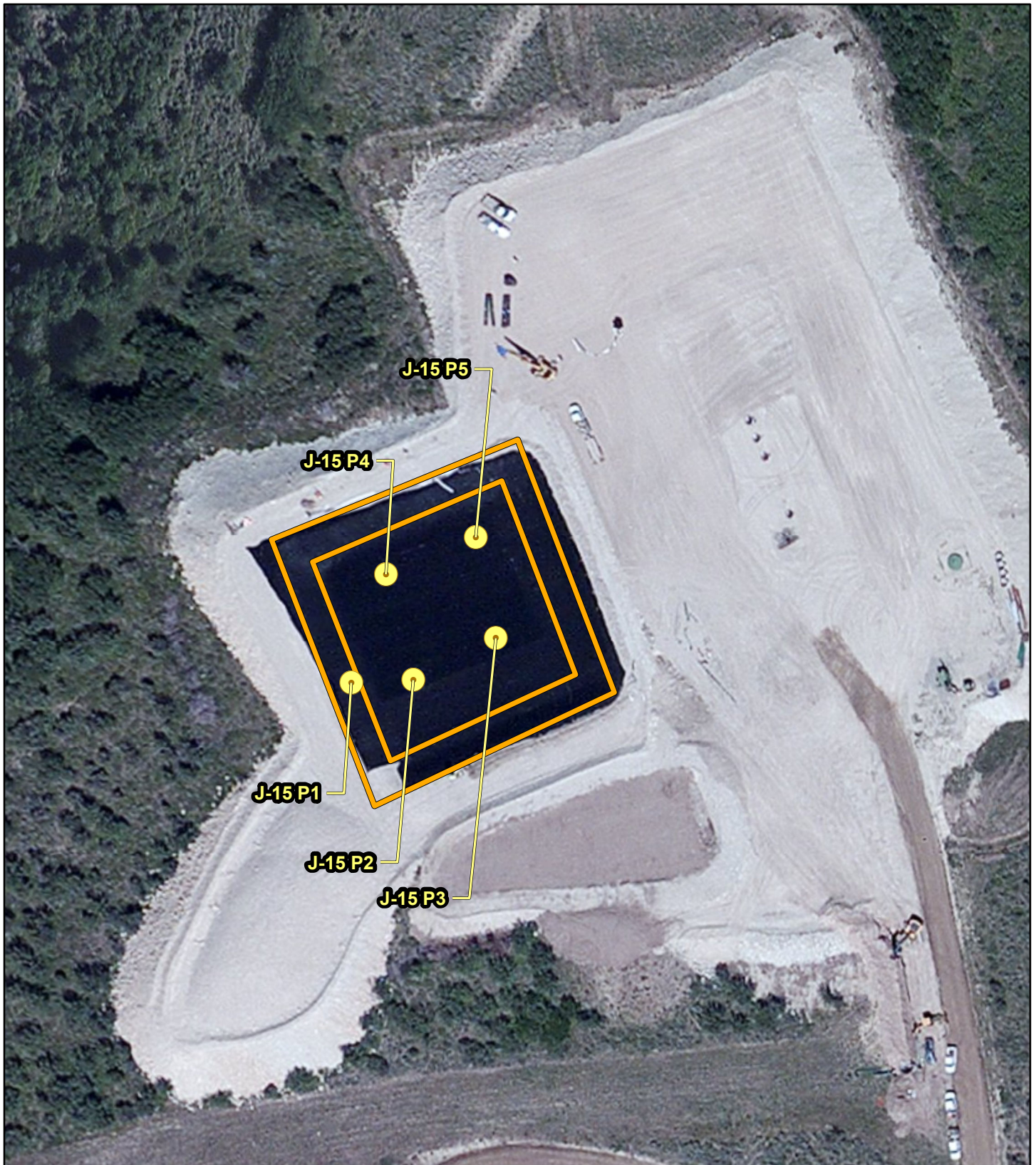


Figure 1

August
2016

GeoSolutions
NICHOLSON

Legend

● Sample Location

□ Pit Boundary

0 50 100 200 Feet 1" = 100'

Linn Energy, LLC

Long Ridge J-15
Fresh Water Pit
Soil Investigation

APPENDIX A
Laboratory Report

Linn Energy - Parachute, CO

Sample Delivery Group: L855711

Samples Received: 08/25/2016

Project Number:

Description: Pit Reclamation

Report To:

Tom Hogelin

235 Callahan Avenue

Parachute, CO 81635

Entire Report Reviewed By:



Mark W. Beasley

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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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



J15-P-1 L855711-01 Solid

Collected by
DK Nicholson

Collected date/time
08/23/16 12:10

Received date/time
08/25/16 09:00

¹ Cp

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Calculated Results | WG902700 | 1 | 08/29/16 14:47 | 09/01/16 09:35 | CCE |
| Mercury by Method 7471A | WG902397 | 1 | 08/25/16 18:10 | 08/26/16 11:24 | RDS |
| Metals (ICP) by Method 6010B | WG903373 | 1 | 08/29/16 17:59 | 08/30/16 12:28 | LTB |
| Metals (ICP) by Method 6010B | WG903373 | 5 | 08/29/16 17:59 | 08/30/16 16:58 | ST |
| Metals (ICP) by Method 6010B | WG903842 | 1 | 08/31/16 16:50 | 08/31/16 19:55 | ST |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG902371 | 1 | 08/30/16 02:30 | 08/31/16 05:11 | KMP |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG902439 | 1 | 08/26/16 07:35 | 08/26/16 19:30 | DMG |
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG903464 | 1 | 08/30/16 09:10 | 08/30/16 23:37 | JAH |
| Wet Chemistry by Method 3060A/7196A | WG901953 | 1 | 08/26/16 17:09 | 08/27/16 17:27 | MHM |
| Wet Chemistry by Method 9045D | WG902378 | 1 | 08/30/16 14:50 | 08/30/16 14:50 | MHM |
| Wet Chemistry by Method 9050AMod | WG902319 | 1 | 08/26/16 13:00 | 08/26/16 13:00 | AMC |

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

J15-P-2 L855711-02 Solid

Collected by
DK Nicholson

Collected date/time
08/23/16 12:20

Received date/time
08/25/16 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Calculated Results | WG902700 | 1 | 08/29/16 14:47 | 08/30/16 15:03 | RDS |
| Mercury by Method 7471A | WG902397 | 1 | 08/25/16 18:10 | 08/26/16 11:37 | RDS |
| Metals (ICP) by Method 6010B | WG903373 | 1 | 08/29/16 17:59 | 08/30/16 12:32 | LTB |
| Metals (ICP) by Method 6010B | WG903373 | 10 | 08/29/16 17:59 | 08/30/16 17:00 | ST |
| Metals (ICP) by Method 6010B | WG903842 | 1 | 08/31/16 16:50 | 08/31/16 19:42 | ST |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG902371 | 1 | 08/30/16 02:30 | 08/31/16 08:04 | KMP |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG902439 | 1 | 08/26/16 07:35 | 08/26/16 21:14 | DMG |
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG903464 | 1 | 08/30/16 09:10 | 08/30/16 23:59 | JAH |
| Wet Chemistry by Method 3060A/7196A | WG901953 | 1 | 08/26/16 17:09 | 08/27/16 17:28 | MHM |
| Wet Chemistry by Method 9045D | WG902378 | 1 | 08/30/16 14:50 | 08/30/16 14:50 | MHM |
| Wet Chemistry by Method 9050AMod | WG902319 | 1 | 08/26/16 13:00 | 08/26/16 13:00 | AMC |

J15-P-3 L855711-03 Solid

Collected by
DK Nicholson

Collected date/time
08/23/16 12:30

Received date/time
08/25/16 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Calculated Results | WG902700 | 1 | 08/29/16 14:47 | 08/30/16 15:05 | RDS |
| Mercury by Method 7471A | WG902397 | 1 | 08/25/16 18:10 | 08/26/16 11:39 | RDS |
| Metals (ICP) by Method 6010B | WG903373 | 1 | 08/29/16 17:59 | 08/30/16 12:35 | LTB |
| Metals (ICP) by Method 6010B | WG903373 | 10 | 08/29/16 17:59 | 08/30/16 17:03 | ST |
| Metals (ICP) by Method 6010B | WG903842 | 1 | 08/31/16 16:50 | 08/31/16 19:58 | ST |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG902371 | 1 | 08/30/16 02:30 | 08/31/16 07:21 | KMP |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG902439 | 1 | 08/26/16 07:35 | 08/26/16 20:59 | DMG |
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG903464 | 1 | 08/30/16 09:10 | 08/31/16 00:21 | JAH |
| Wet Chemistry by Method 3060A/7196A | WG901953 | 1 | 08/26/16 17:09 | 08/27/16 17:29 | MHM |
| Wet Chemistry by Method 9045D | WG902378 | 1 | 08/30/16 14:50 | 08/30/16 14:50 | MHM |
| Wet Chemistry by Method 9050AMod | WG902319 | 1 | 08/26/16 13:00 | 08/26/16 13:00 | AMC |

J15-P-4 L855711-04 Solid

Collected by
DK Nicholson

Collected date/time
08/23/16 12:40

Received date/time
08/25/16 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|------------------------------|----------|----------|-----------------------|--------------------|---------|
| Calculated Results | WG902700 | 1 | 08/29/16 14:47 | 08/30/16 15:08 | RDS |
| Mercury by Method 7471A | WG902397 | 1 | 08/25/16 18:10 | 08/26/16 11:42 | RDS |
| Metals (ICP) by Method 6010B | WG903373 | 1 | 08/29/16 17:59 | 08/30/16 12:38 | RDS |
| Metals (ICP) by Method 6010B | WG903373 | 10 | 08/29/16 17:59 | 08/30/16 17:06 | ST |

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



J15-P-4 L855711-04 Solid

Collected by
DK Nicholson

Collected date/time
08/23/16 12:40

Received date/time
08/25/16 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Metals (ICP) by Method 6010B | WG904327 | 1 | 09/01/16 10:25 | 09/01/16 13:11 | CCE |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG902371 | 1 | 08/30/16 02:30 | 08/31/16 07:42 | KMP |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG902439 | 1 | 08/26/16 07:35 | 08/26/16 20:29 | DMG |
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG903464 | 1 | 08/30/16 09:10 | 08/31/16 00:43 | JAH |
| Wet Chemistry by Method 3060A/7196A | WG901953 | 1 | 08/26/16 17:09 | 08/27/16 17:29 | MHM |
| Wet Chemistry by Method 9045D | WG902378 | 1 | 08/30/16 14:50 | 08/30/16 14:50 | MHM |
| Wet Chemistry by Method 9050AMod | WG902319 | 1 | 08/26/16 13:00 | 08/26/16 13:00 | AMC |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

J15-P-5 L855711-05 Solid

Collected by
DK Nicholson

Collected date/time
08/23/16 12:50

Received date/time
08/25/16 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Calculated Results | WG902700 | 1 | 08/29/16 14:47 | 08/30/16 15:11 | RDS |
| Mercury by Method 7471A | WG902397 | 1 | 08/25/16 18:10 | 08/26/16 11:44 | RDS |
| Metals (ICP) by Method 6010B | WG903373 | 1 | 08/29/16 17:59 | 08/30/16 12:47 | LTB |
| Metals (ICP) by Method 6010B | WG903373 | 10 | 08/29/16 17:59 | 08/30/16 17:08 | ST |
| Metals (ICP) by Method 6010B | WG903842 | 1 | 08/31/16 16:50 | 08/31/16 20:06 | ST |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG902371 | 1 | 08/30/16 02:30 | 08/31/16 05:32 | KMP |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG902439 | 1 | 08/26/16 07:35 | 08/26/16 20:44 | DMG |
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG903464 | 1 | 08/30/16 09:10 | 08/31/16 01:06 | JAH |
| Wet Chemistry by Method 3060A/7196A | WG901953 | 1 | 08/26/16 17:09 | 08/27/16 17:30 | MHM |
| Wet Chemistry by Method 9045D | WG901335 | 1 | 08/26/16 11:44 | 08/26/16 11:44 | JJL |
| Wet Chemistry by Method 9050AMod | WG902319 | 1 | 08/26/16 13:00 | 08/26/16 13:00 | AMC |

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



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.

Mark W. Beasley
Technical Service Representative

Sample Handling and Receiving

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

| <u>ESC Sample ID</u> | <u>Project Sample ID</u> | <u>Method</u> |
|----------------------------|--------------------------|---------------|
| L855711-01 | J15-P-1 | 9045D |
| L855711-02 | J15-P-2 | 9045D |
| L855711-03 | J15-P-3 | 9045D |
| L855711-04 | J15-P-4 | 9045D |
| L855711-05 | J15-P-5 | 9045D |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Calculated Results

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|-------------------------|--------|-----------|----------|----------------------|----------|
| Sodium Adsorption Ratio | 39.6 | | 1 | 09/01/2016 09:35 | WG902700 |

Wet Chemistry by Method 3060A/7196A

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|----------------------|--------|-----------|------|----------|----------------------|--------------------------|
| Chromium, Hexavalent | ND | | 2.00 | 1 | 08/27/2016 17:27 | WG901953 |

Wet Chemistry by Method 9045D

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|----------|----------------------|--------------------------|
| pH | 7.69 | | 1 | 08/30/2016 14:50 | WG902378 |

Sample Narrative:

9045D L855711-01 WG902378: 7.69 at 20.4C

Wet Chemistry by Method 9050AMod

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|----------------------|--------|-----------|----------|----------------------|--------------------------|
| Specific Conductance | 12800 | | 1 | 08/26/2016 13:00 | WG902319 |

Mercury by Method 7471A

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|--------|----------|----------------------|--------------------------|
| Mercury | 0.0293 | | 0.0200 | 1 | 08/26/2016 11:24 | WG902397 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|-------|----------|----------------------|--------------------------|
| Arsenic | 4.49 | | 2.00 | 1 | 08/30/2016 12:28 | WG903373 |
| Barium | 2620 | | 2.50 | 5 | 08/30/2016 16:58 | WG903373 |
| Boron | 17.4 | | 10.0 | 1 | 08/30/2016 12:28 | WG903373 |
| Cadmium | ND | | 0.500 | 1 | 08/30/2016 12:28 | WG903373 |
| Chromium | 30.6 | | 1.00 | 1 | 08/30/2016 12:28 | WG903373 |
| Copper | 17.2 | | 2.00 | 1 | 08/30/2016 12:28 | WG903373 |
| Lead | 13.2 | | 0.500 | 1 | 08/30/2016 12:28 | WG903373 |
| Nickel | 18.9 | | 2.00 | 1 | 08/30/2016 12:28 | WG903373 |
| Selenium | ND | | 2.00 | 1 | 08/30/2016 12:28 | WG903373 |
| Silver | ND | | 1.00 | 1 | 08/31/2016 19:55 | WG903842 |
| Zinc | 44.6 | | 5.00 | 1 | 08/30/2016 12:28 | WG903373 |

Volatile Organic Compounds (GC) by Method 8015/8021

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------------------------------|---------|-----------|----------|----------|----------------------|--------------------------|
| Benzene | 0.00110 | | 0.000500 | 1 | 08/30/2016 23:37 | WG903464 |
| Toluene | ND | | 0.00500 | 1 | 08/30/2016 23:37 | WG903464 |
| Ethylbenzene | ND | | 0.000500 | 1 | 08/30/2016 23:37 | WG903464 |
| Total Xylene | ND | | 0.00150 | 1 | 08/30/2016 23:37 | WG903464 |
| TPH (GC/FID) Low Fraction | ND | | 0.100 | 1 | 08/30/2016 23:37 | WG903464 |
| (S) a,a,a-Trifluorotoluene(FID) | 97.9 | | 59.0-128 | | 08/30/2016 23:37 | WG903464 |
| (S) a,a,a-Trifluorotoluene(PID) | 104 | | 54.0-144 | | 08/30/2016 23:37 | WG903464 |



Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|----------------------|-----------------|-----------|--------------|----------|-------------------------|--------------------------|
| C10-C28 Diesel Range | 12.9 | | 4.00 | 1 | 08/26/2016 19:30 | WG902439 |
| C28-C40 Oil Range | 5.75 | | 4.00 | 1 | 08/26/2016 19:30 | WG902439 |
| (S) o-Terphenyl | 55.9 | | 50.0-150 | | 08/26/2016 19:30 | WG902439 |

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

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|--------------------------|
| Anthracene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Acenaphthene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Acenaphthylene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Benzo(a)anthracene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Benzo(a)pyrene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Benzo(b)fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Benzo(g,h,i)perylene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Benzo(k)fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Chrysene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Dibenz(a,h)anthracene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Fluorene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Indeno(1,2,3-cd)pyrene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Naphthalene | 0.0265 | | 0.0200 | 1 | 08/31/2016 05:11 | WG902371 |
| Phenanthrene | 0.0193 | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| Pyrene | ND | | 0.00600 | 1 | 08/31/2016 05:11 | WG902371 |
| 1-Methylnaphthalene | 0.0341 | | 0.0200 | 1 | 08/31/2016 05:11 | WG902371 |
| 2-Methylnaphthalene | 0.0615 | | 0.0200 | 1 | 08/31/2016 05:11 | WG902371 |
| 2-Chloronaphthalene | ND | | 0.0200 | 1 | 08/31/2016 05:11 | WG902371 |
| (S) p-Terphenyl-d14 | 71.5 | | 32.2-131 | | 08/31/2016 05:11 | WG902371 |
| (S) Nitrobenzene-d5 | 60.6 | | 22.1-146 | | 08/31/2016 05:11 | WG902371 |
| (S) 2-Fluorobiphenyl | 77.1 | | 40.6-122 | | 08/31/2016 05:11 | WG902371 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Calculated Results

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|-------------------------|--------|-----------|----------|----------------------|----------|
| Sodium Adsorption Ratio | 18.2 | | 1 | 08/30/2016 15:03 | WG902700 |

Wet Chemistry by Method 3060A/7196A

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|----------------------|--------|-----------|------|----------|----------------------|--------------------------|
| Chromium, Hexavalent | ND | | 2.00 | 1 | 08/27/2016 17:28 | WG901953 |

Wet Chemistry by Method 9045D

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|----------|----------------------|--------------------------|
| pH | 7.88 | | 1 | 08/30/2016 14:50 | WG902378 |

Sample Narrative:

9045D L855711-02 WG902378: 7.88 at 21.0C

Wet Chemistry by Method 9050AMod

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|----------------------|--------|-----------|----------|----------------------|--------------------------|
| Specific Conductance | 6930 | | 1 | 08/26/2016 13:00 | WG902319 |

Mercury by Method 7471A

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|--------|----------|----------------------|--------------------------|
| Mercury | ND | | 0.0200 | 1 | 08/26/2016 11:37 | WG902397 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|-------|----------|----------------------|--------------------------|
| Arsenic | 3.62 | | 2.00 | 1 | 08/30/2016 12:32 | WG903373 |
| Barium | 6100 | | 5.00 | 10 | 08/30/2016 17:00 | WG903373 |
| Boron | 11.8 | | 10.0 | 1 | 08/30/2016 12:32 | WG903373 |
| Cadmium | ND | | 0.500 | 1 | 08/30/2016 12:32 | WG903373 |
| Chromium | 31.7 | | 1.00 | 1 | 08/30/2016 12:32 | WG903373 |
| Copper | 17.2 | | 2.00 | 1 | 08/30/2016 12:32 | WG903373 |
| Lead | 15.3 | | 0.500 | 1 | 08/30/2016 12:32 | WG903373 |
| Nickel | 18.7 | | 2.00 | 1 | 08/30/2016 12:32 | WG903373 |
| Selenium | ND | | 2.00 | 1 | 08/30/2016 12:32 | WG903373 |
| Silver | ND | | 1.00 | 1 | 08/31/2016 19:42 | WG903842 |
| Zinc | 44.2 | | 5.00 | 1 | 08/30/2016 12:32 | WG903373 |

Volatile Organic Compounds (GC) by Method 8015/8021

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------------------------------|---------|-----------|----------|----------|----------------------|--------------------------|
| Benzene | 0.00250 | | 0.000500 | 1 | 08/30/2016 23:59 | WG903464 |
| Toluene | ND | | 0.00500 | 1 | 08/30/2016 23:59 | WG903464 |
| Ethylbenzene | 0.00105 | | 0.000500 | 1 | 08/30/2016 23:59 | WG903464 |
| Total Xylene | 0.00234 | B | 0.00150 | 1 | 08/30/2016 23:59 | WG903464 |
| TPH (GC/FID) Low Fraction | 0.123 | B | 0.100 | 1 | 08/30/2016 23:59 | WG903464 |
| (S) a,a,a-Trifluorotoluene(FID) | 98.0 | | 59.0-128 | | 08/30/2016 23:59 | WG903464 |
| (S) a,a,a-Trifluorotoluene(PID) | 103 | | 54.0-144 | | 08/30/2016 23:59 | WG903464 |



Collected date/time: 08/23/16 12:20

L855711

Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|----------------------|-----------------|-----------|--------------|----------|-------------------------|--------------------------|
| C10-C28 Diesel Range | 77.6 | | 4.00 | 1 | 08/26/2016 21:14 | WG902439 |
| C28-C40 Oil Range | 31.8 | | 4.00 | 1 | 08/26/2016 21:14 | WG902439 |
| (S) o-Terphenyl | 49.6 | <u>J2</u> | 50.0-150 | | 08/26/2016 21:14 | WG902439 |

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

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|--------------------------|
| Anthracene | ND | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Acenaphthene | ND | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Acenaphthylene | ND | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Benzo(a)anthracene | ND | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Benzo(a)pyrene | ND | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Benzo(b)fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Benzo(g,h,i)perylene | ND | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Benzo(k)fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Chrysene | 0.00832 | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Dibenz(a,h)anthracene | ND | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Fluorene | 0.00910 | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Indeno(1,2,3-cd)pyrene | ND | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Naphthalene | 0.0665 | | 0.0200 | 1 | 08/31/2016 08:04 | WG902371 |
| Phenanthrene | 0.0303 | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| Pyrene | 0.0107 | | 0.00600 | 1 | 08/31/2016 08:04 | WG902371 |
| 1-Methylnaphthalene | 0.0658 | | 0.0200 | 1 | 08/31/2016 08:04 | WG902371 |
| 2-Methylnaphthalene | 0.133 | | 0.0200 | 1 | 08/31/2016 08:04 | WG902371 |
| 2-Chloronaphthalene | ND | | 0.0200 | 1 | 08/31/2016 08:04 | WG902371 |
| (S) p-Terphenyl-d14 | 74.4 | | 32.2-131 | | 08/31/2016 08:04 | WG902371 |
| (S) Nitrobenzene-d5 | 61.4 | | 22.1-146 | | 08/31/2016 08:04 | WG902371 |
| (S) 2-Fluorobiphenyl | 73.7 | | 40.6-122 | | 08/31/2016 08:04 | WG902371 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Calculated Results

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|-------------------------|--------|-----------|----------|----------------------|----------|
| Sodium Adsorption Ratio | 22.5 | | 1 | 08/30/2016 15:05 | WG902700 |

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 | 08/27/2016 17:29 | WG901953 |

Wet Chemistry by Method 9045D

| Analyte | Result su | Qualifier | Dilution | Analysis date / time | Batch |
|---------|-----------|-----------|----------|----------------------|--------------------------|
| pH | 7.98 | | 1 | 08/30/2016 14:50 | WG902378 |

Sample Narrative:

9045D L855711-03 WG902378: 7.98 at 20.7C

Wet Chemistry by Method 9050AMod

| Analyte | Result umhos/cm | Qualifier | Dilution | Analysis date / time | Batch |
|----------------------|-----------------|-----------|----------|----------------------|--------------------------|
| Specific Conductance | 4030 | | 1 | 08/26/2016 13:00 | WG902319 |

Mercury by Method 7471A

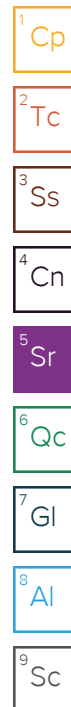
| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|--------------|-----------|-----------|----------|----------------------|--------------------------|
| Mercury | ND | | 0.0200 | 1 | 08/26/2016 11:39 | WG902397 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|----------|--------------|-----------|-----------|----------|----------------------|--------------------------|
| Arsenic | 5.05 | | 2.00 | 1 | 08/30/2016 12:35 | WG903373 |
| Barium | 5910 | | 5.00 | 10 | 08/30/2016 17:03 | WG903373 |
| Boron | 14.5 | | 10.0 | 1 | 08/30/2016 12:35 | WG903373 |
| Cadmium | ND | | 0.500 | 1 | 08/30/2016 12:35 | WG903373 |
| Chromium | 40.5 | | 1.00 | 1 | 08/30/2016 12:35 | WG903373 |
| Copper | 21.6 | | 2.00 | 1 | 08/30/2016 12:35 | WG903373 |
| Lead | 18.4 | | 0.500 | 1 | 08/30/2016 12:35 | WG903373 |
| Nickel | 23.7 | | 2.00 | 1 | 08/30/2016 12:35 | WG903373 |
| Selenium | ND | | 2.00 | 1 | 08/30/2016 12:35 | WG903373 |
| Silver | ND | | 1.00 | 1 | 08/31/2016 19:58 | WG903842 |
| Zinc | 50.1 | | 5.00 | 1 | 08/30/2016 12:35 | WG903373 |

Volatile Organic Compounds (GC) by Method 8015/8021

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------------|--------------|-----------|-----------|----------|----------------------|--------------------------|
| Benzene | 0.00216 | | 0.000500 | 1 | 08/31/2016 00:21 | WG903464 |
| Toluene | ND | | 0.00500 | 1 | 08/31/2016 00:21 | WG903464 |
| Ethylbenzene | 0.000789 | | 0.000500 | 1 | 08/31/2016 00:21 | WG903464 |
| Total Xylene | 0.00193 | B | 0.00150 | 1 | 08/31/2016 00:21 | WG903464 |
| TPH (GC/FID) Low Fraction | 0.106 | B | 0.100 | 1 | 08/31/2016 00:21 | WG903464 |
| (S) a,a,a-Trifluorotoluene(FID) | 97.8 | | 59.0-128 | | 08/31/2016 00:21 | WG903464 |
| (S) a,a,a-Trifluorotoluene(PID) | 104 | | 54.0-144 | | 08/31/2016 00:21 | WG903464 |





Collected date/time: 08/23/16 12:30

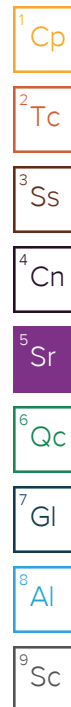
L855711

Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|----------------------|-----------------|-----------|--------------|----------|-------------------------|--------------------------|
| C10-C28 Diesel Range | 26.7 | | 4.00 | 1 | 08/26/2016 20:59 | WG902439 |
| C28-C40 Oil Range | 13.8 | | 4.00 | 1 | 08/26/2016 20:59 | WG902439 |
| (S) o-Terphenyl | 51.9 | | 50.0-150 | | 08/26/2016 20:59 | WG902439 |

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

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|--------------------------|
| Anthracene | ND | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Acenaphthene | ND | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Acenaphthylene | ND | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Benzo(a)anthracene | ND | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Benzo(a)pyrene | ND | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Benzo(b)fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Benzo(g,h,i)perylene | ND | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Benzo(k)fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Chrysene | 0.00641 | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Dibenz(a,h)anthracene | ND | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Fluorene | 0.00709 | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Indeno(1,2,3-cd)pyrene | ND | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Naphthalene | 0.0506 | | 0.0200 | 1 | 08/31/2016 07:21 | WG902371 |
| Phenanthrene | 0.0286 | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| Pyrene | 0.00656 | | 0.00600 | 1 | 08/31/2016 07:21 | WG902371 |
| 1-Methylnaphthalene | 0.0664 | | 0.0200 | 1 | 08/31/2016 07:21 | WG902371 |
| 2-Methylnaphthalene | 0.133 | | 0.0200 | 1 | 08/31/2016 07:21 | WG902371 |
| 2-Chloronaphthalene | ND | | 0.0200 | 1 | 08/31/2016 07:21 | WG902371 |
| (S) p-Terphenyl-d14 | 77.6 | | 32.2-131 | | 08/31/2016 07:21 | WG902371 |
| (S) Nitrobenzene-d5 | 58.6 | | 22.1-146 | | 08/31/2016 07:21 | WG902371 |
| (S) 2-Fluorobiphenyl | 81.2 | | 40.6-122 | | 08/31/2016 07:21 | WG902371 |





Calculated Results

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|-------------------------|--------|-----------|----------|----------------------|----------|
| Sodium Adsorption Ratio | 16.7 | | 1 | 08/30/2016 15:08 | WG902700 |

Wet Chemistry by Method 3060A/7196A

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|----------------------|--------|-----------|------|----------|----------------------|--------------------------|
| Chromium, Hexavalent | ND | | 2.00 | 1 | 08/27/2016 17:29 | WG901953 |

Wet Chemistry by Method 9045D

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|----------|----------------------|--------------------------|
| pH | 8.47 | | 1 | 08/30/2016 14:50 | WG902378 |

Sample Narrative:

9045D L855711-04 WG902378: 8.47 at 20.6C

Wet Chemistry by Method 9050AMod

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|----------------------|--------|-----------|----------|----------------------|--------------------------|
| Specific Conductance | 1890 | | 1 | 08/26/2016 13:00 | WG902319 |

Mercury by Method 7471A

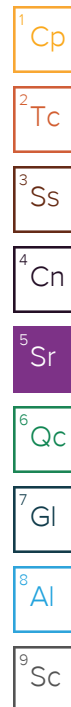
| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|--------|----------|----------------------|--------------------------|
| Mercury | ND | | 0.0200 | 1 | 08/26/2016 11:42 | WG902397 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|-------|----------|----------------------|--------------------------|
| Arsenic | 3.96 | | 2.00 | 1 | 08/30/2016 12:38 | WG903373 |
| Barium | 3260 | | 5.00 | 10 | 08/30/2016 17:06 | WG903373 |
| Boron | 11.5 | | 10.0 | 1 | 08/30/2016 12:38 | WG903373 |
| Cadmium | ND | | 0.500 | 1 | 08/30/2016 12:38 | WG903373 |
| Chromium | 31.3 | | 1.00 | 1 | 08/30/2016 12:38 | WG903373 |
| Copper | 15.2 | | 2.00 | 1 | 08/30/2016 12:38 | WG903373 |
| Lead | 12.6 | | 0.500 | 1 | 08/30/2016 12:38 | WG903373 |
| Nickel | 17.7 | | 2.00 | 1 | 08/30/2016 12:38 | WG903373 |
| Selenium | ND | | 2.00 | 1 | 08/30/2016 12:38 | WG903373 |
| Silver | ND | | 1.00 | 1 | 09/01/2016 13:11 | WG904327 |
| Zinc | 36.5 | | 5.00 | 1 | 08/30/2016 12:38 | WG903373 |

Volatile Organic Compounds (GC) by Method 8015/8021

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------------------------------|----------|-------------------|----------|----------|----------------------|--------------------------|
| Benzene | 0.00164 | | 0.000500 | 1 | 08/31/2016 00:43 | WG903464 |
| Toluene | ND | | 0.00500 | 1 | 08/31/2016 00:43 | WG903464 |
| Ethylbenzene | 0.000650 | | 0.000500 | 1 | 08/31/2016 00:43 | WG903464 |
| Total Xylene | 0.00185 | B | 0.00150 | 1 | 08/31/2016 00:43 | WG903464 |
| TPH (GC/FID) Low Fraction | ND | | 0.100 | 1 | 08/31/2016 00:43 | WG903464 |
| (S) a,a,a-Trifluorotoluene(FID) | 98.0 | | 59.0-128 | | 08/31/2016 00:43 | WG903464 |
| (S) a,a,a-Trifluorotoluene(PID) | 104 | | 54.0-144 | | 08/31/2016 00:43 | WG903464 |





Collected date/time: 08/23/16 12:40

L855711

Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|----------------------|-----------------|-----------|--------------|----------|-------------------------|--------------------------|
| C10-C28 Diesel Range | 21.2 | | 4.00 | 1 | 08/26/2016 20:29 | WG902439 |
| C28-C40 Oil Range | 8.09 | | 4.00 | 1 | 08/26/2016 20:29 | WG902439 |
| (S) o-Terphenyl | 62.7 | | 50.0-150 | | 08/26/2016 20:29 | WG902439 |

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

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|--------------------------|
| Anthracene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Acenaphthene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Acenaphthylene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Benzo(a)anthracene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Benzo(a)pyrene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Benzo(b)fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Benzo(g,h,i)perylene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Benzo(k)fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Chrysene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Dibenz(a,h)anthracene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Fluorene | 0.00655 | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Indeno(1,2,3-cd)pyrene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Naphthalene | 0.0345 | | 0.0200 | 1 | 08/31/2016 07:42 | WG902371 |
| Phenanthrene | 0.0203 | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| Pyrene | ND | | 0.00600 | 1 | 08/31/2016 07:42 | WG902371 |
| 1-Methylnaphthalene | 0.0476 | | 0.0200 | 1 | 08/31/2016 07:42 | WG902371 |
| 2-Methylnaphthalene | 0.0839 | | 0.0200 | 1 | 08/31/2016 07:42 | WG902371 |
| 2-Chloronaphthalene | ND | | 0.0200 | 1 | 08/31/2016 07:42 | WG902371 |
| (S) p-Terphenyl-d14 | 72.9 | | 32.2-131 | | 08/31/2016 07:42 | WG902371 |
| (S) Nitrobenzene-d5 | 54.1 | | 22.1-146 | | 08/31/2016 07:42 | WG902371 |
| (S) 2-Fluorobiphenyl | 85.4 | | 40.6-122 | | 08/31/2016 07:42 | WG902371 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Calculated Results

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|-------------------------|--------|-----------|----------|----------------------|----------|
| Sodium Adsorption Ratio | 20.7 | | 1 | 08/30/2016 15:11 | WG902700 |

Wet Chemistry by Method 3060A/7196A

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|----------------------|--------|-----------|------|----------|----------------------|--------------------------|
| Chromium, Hexavalent | ND | | 2.00 | 1 | 08/27/2016 17:30 | WG901953 |

Wet Chemistry by Method 9045D

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|----------|----------------------|--------------------------|
| pH | 8.67 | | 1 | 08/26/2016 11:44 | WG901335 |

Sample Narrative:

9045D L855711-05 WG901335: 8.67 at 22.5c

Wet Chemistry by Method 9050AMod

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|----------------------|--------|-----------|----------|----------------------|--------------------------|
| Specific Conductance | 6850 | | 1 | 08/26/2016 13:00 | WG902319 |

Mercury by Method 7471A

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|--------|----------|----------------------|--------------------------|
| Mercury | 0.0223 | | 0.0200 | 1 | 08/26/2016 11:44 | WG902397 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|-------|----------|----------------------|--------------------------|
| Arsenic | 7.74 | | 2.00 | 1 | 08/30/2016 12:47 | WG903373 |
| Barium | 4050 | | 5.00 | 10 | 08/30/2016 17:08 | WG903373 |
| Boron | 11.1 | | 10.0 | 1 | 08/30/2016 12:47 | WG903373 |
| Cadmium | ND | | 0.500 | 1 | 08/30/2016 12:47 | WG903373 |
| Chromium | 45.8 | | 1.00 | 1 | 08/30/2016 12:47 | WG903373 |
| Copper | 18.7 | | 2.00 | 1 | 08/30/2016 12:47 | WG903373 |
| Lead | 16.4 | | 0.500 | 1 | 08/30/2016 12:47 | WG903373 |
| Nickel | 25.3 | | 2.00 | 1 | 08/30/2016 12:47 | WG903373 |
| Selenium | ND | | 2.00 | 1 | 08/30/2016 12:47 | WG903373 |
| Silver | ND | | 1.00 | 1 | 08/31/2016 20:06 | WG903842 |
| Zinc | 46.5 | | 5.00 | 1 | 08/30/2016 12:47 | WG903373 |

Volatile Organic Compounds (GC) by Method 8015/8021

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------------------------------|---------|-----------|----------|----------|----------------------|--------------------------|
| Benzene | 0.00153 | | 0.000500 | 1 | 08/31/2016 01:06 | WG903464 |
| Toluene | ND | | 0.00500 | 1 | 08/31/2016 01:06 | WG903464 |
| Ethylbenzene | ND | | 0.000500 | 1 | 08/31/2016 01:06 | WG903464 |
| Total Xylene | ND | | 0.00150 | 1 | 08/31/2016 01:06 | WG903464 |
| TPH (GC/FID) Low Fraction | ND | | 0.100 | 1 | 08/31/2016 01:06 | WG903464 |
| (S) a,a,a-Trifluorotoluene(FID) | 97.9 | | 59.0-128 | | 08/31/2016 01:06 | WG903464 |
| (S) a,a,a-Trifluorotoluene(PID) | 104 | | 54.0-144 | | 08/31/2016 01:06 | WG903464 |



Collected date/time: 08/23/16 12:50

L855711

Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|----------------------|-----------------|-----------|--------------|----------|-------------------------|--------------------------|
| C10-C28 Diesel Range | 21.5 | | 4.00 | 1 | 08/26/2016 20:44 | WG902439 |
| C28-C40 Oil Range | 11.1 | | 4.00 | 1 | 08/26/2016 20:44 | WG902439 |
| (S) o-Terphenyl | 59.3 | | 50.0-150 | | 08/26/2016 20:44 | WG902439 |

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

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|----------|-------------------------|--------------------------|
| Anthracene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Acenaphthene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Acenaphthylene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Benzo(a)anthracene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Benzo(a)pyrene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Benzo(b)fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Benzo(g,h,i)perylene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Benzo(k)fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Chrysene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Dibenz(a,h)anthracene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Fluoranthene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Fluorene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Indeno(1,2,3-cd)pyrene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Naphthalene | 0.0224 | | 0.0200 | 1 | 08/31/2016 05:32 | WG902371 |
| Phenanthrene | 0.0148 | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| Pyrene | ND | | 0.00600 | 1 | 08/31/2016 05:32 | WG902371 |
| 1-Methylnaphthalene | 0.0318 | | 0.0200 | 1 | 08/31/2016 05:32 | WG902371 |
| 2-Methylnaphthalene | 0.0578 | | 0.0200 | 1 | 08/31/2016 05:32 | WG902371 |
| 2-Chloronaphthalene | ND | | 0.0200 | 1 | 08/31/2016 05:32 | WG902371 |
| (S) p-Terphenyl-d14 | 69.8 | | 32.2-131 | | 08/31/2016 05:32 | WG902371 |
| (S) Nitrobenzene-d5 | 63.0 | | 22.1-146 | | 08/31/2016 05:32 | WG902371 |
| (S) 2-Fluorobiphenyl | 80.6 | | 40.6-122 | | 08/31/2016 05:32 | WG902371 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3159786-1 08/27/16 17:12

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

L855707-03 Original Sample (OS) • Duplicate (DUP)

(OS) L855707-03 08/27/16 17:24 • (DUP) R3159786-4 08/27/16 17:25

| | 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 |

L856031-03 Original Sample (OS) • Duplicate (DUP)

(OS) L856031-03 08/27/16 17:31 • (DUP) R3159786-5 08/27/16 17:32

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

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

(LCS) R3159786-2 08/27/16 17:13 • (LCSD) R3159786-3 08/27/16 17:14

| | Spike Amount | LCS Result | LCSD Result | LCS Rec. | LCSD Rec. | Rec. Limits | LCS Qualifier | LCSD Qualifier | RPD | RPD Limits |
|---------------------|--------------|------------|-------------|----------|-----------|-------------|---------------|----------------|------|------------|
| Analyte | mg/kg | mg/kg | mg/kg | % | % | % | | | % | % |
| Chromium,Hexavalent | 56.9 | 48.6 | 50.2 | 85.0 | 88.0 | 80.0-120 | | | 3.00 | 20 |

L856031-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L856031-03 08/27/16 17:31 • (MS) R3159786-6 08/27/16 17:33 • (MSD) R3159786-7 08/27/16 17:33

| | 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 | U | 15.8 | 17.5 | 79.0 | 88.0 | 1 | 75.0-125 | | | 10.0 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L853915-03 Original Sample (OS) • Duplicate (DUP)

| | | | | | | |
|--|-----------------|------------|----------|---------|---------------|----------------|
| (OS) L853915-03 08/26/16 11:44 • (DUP) WG901335-3 08/26/16 11:44 | | | | | | |
| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
| Analyte | su | su | | % | | % |
| pH | 7.83 | 7.79 | 1 | 0.512 | | 1 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L855711-05 Original Sample (OS) • Duplicate (DUP)

| | | | | | | |
|--|-----------------|------------|----------|---------|---------------|----------------|
| (OS) L855711-05 08/26/16 11:44 • (DUP) WG901335-4 08/26/16 11:44 | | | | | | |
| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
| Analyte | su | su | | % | | % |
| pH | 8.67 | 8.60 | 1 | 0.811 | | 1 |

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

| | | | | | | | | | |
|--|--------------|------------|-------------|----------|-----------|-------------|---------------|----------------|-------|
| (LCS) WG901335-1 08/26/16 11:44 • (LCSD) WG901335-2 08/26/16 11:44 | | | | | | | | | |
| | Spike Amount | LCS Result | LCSD Result | LCS Rec. | LCSD Rec. | Rec. Limits | LCS Qualifier | LCSD Qualifier | RPD |
| Analyte | su | su | su | % | % | % | | | % |
| pH | 6.11 | 6.09 | 6.09 | 99.7 | 99.7 | 98.4-102 | | | 0.000 |
| | | | | | | | | | 1 |



L855419-01 Original Sample (OS) • Duplicate (DUP)

(OS) L855419-01 08/30/16 14:50 • (DUP) WG902378-3 08/30/16 14:50

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| | su | su | | % | | % |
| pH | 11.5 | 11.5 | 1 | 0.0869 | | 1 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L856349-04 Original Sample (OS) • Duplicate (DUP)

(OS) L856349-04 08/30/16 14:50 • (DUP) WG902378-4 08/30/16 14:50

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| | su | su | | % | | % |
| pH | 8.95 | 8.95 | 1 | 0.000 | | 1 |

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

(LCS) WG902378-1 08/30/16 14:50 • (LCSD) WG902378-2 08/30/16 14:50

| Analyte | Spike Amount | LCS Result | LCSD Result | LCS Rec. | LCSD Rec. | Rec. Limits | LCS Qualifier | LCSD Qualifier | RPD | RPD Limits |
|---------|--------------|------------|-------------|----------|-----------|-------------|---------------|----------------|-------|------------|
| | su | su | su | % | % | % | | | % | % |
| pH | 6.11 | 6.10 | 6.10 | 99.8 | 99.8 | 98.4-102 | | | 0.000 | 1 |



Method Blank (MB)

(MB) WG902319-5 08/26/16 13:00

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------------------|-----------|--------------|----------|----------|
| Analyte | umhos/cm | | umhos/cm | umhos/cm |
| Specific Conductance | 1.60 | | | |

L855707-01 Original Sample (OS) • Duplicate (DUP)

(OS) L855707-01 08/26/16 13:00 • (DUP) WG902319-1 08/26/16 13:00

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | umhos/cm | umhos/cm | | % | | % |
| Specific Conductance | 149 | 149 | 1 | 0.405 | | 20 |

L855711-05 Original Sample (OS) • Duplicate (DUP)

(OS) L855711-05 08/26/16 13:00 • (DUP) WG902319-2 08/26/16 13:00

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | umhos/cm | umhos/cm | | % | | % |
| Specific Conductance | 6850 | 6860 | 1 | 0.0876 | | 20 |

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

(LCS) WG902319-3 08/26/16 13:00 • (LCSD) WG902319-4 08/26/16 13:00

| | Spike Amount | LCS Result | LCSD Result | LCS Rec. | LCSD Rec. | Rec. Limits | LCS Qualifier | LCSD Qualifier | RPD | RPD Limits |
|----------------------|--------------|------------|-------------|----------|-----------|-------------|---------------|----------------|-------|------------|
| Analyte | umhos/cm | umhos/cm | umhos/cm | % | % | % | | | % | % |
| Specific Conductance | 542 | 553 | 551 | 102 | 102 | 90.0-110 | | | 0.362 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3159491-6 08/26/16 11:16

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Analyte | mg/kg | | mg/kg | mg/kg |
| Mercury | U | | 0.0028 | 0.0200 |

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

(LCS) R3159491-7 08/26/16 11:19 • (LCSD) R3159491-8 08/26/16 11:21

| | Spike Amount | LCS Result | LCSD Result | LCS Rec. | LCSD Rec. | Rec. Limits | LCS Qualifier | LCSD Qualifier | RPD | RPD Limits |
|---------|--------------|------------|-------------|----------|-----------|-------------|---------------|----------------|-----|------------|
| Analyte | mg/kg | mg/kg | mg/kg | % | % | % | | | % | % |
| Mercury | 0.300 | 0.274 | 0.275 | 91 | 92 | 80-120 | | | 0 | 20 |

L855711-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855711-01 08/26/16 11:24 • (MS) R3159491-9 08/26/16 11:26 • (MSD) R3159491-10 08/26/16 11:34

| | 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 | 0.300 | 0.0293 | 0.277 | 0.295 | 83 | 89 | 1 | 75-125 | | | 6 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3160227-1 08/30/16 11:37

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|----------|--------------------|--------------|-----------------|-----------------|
| Arsenic | U | | 0.65 | 2.00 |
| Barium | U | | 0.17 | 0.500 |
| Boron | U | | 1.26 | 10.0 |
| Cadmium | U | | 0.07 | 0.500 |
| Chromium | U | | 0.14 | 1.00 |
| Copper | U | | 0.53 | 2.00 |
| Lead | U | | 0.19 | 0.500 |
| Nickel | U | | 0.49 | 2.00 |
| Selenium | U | | 0.74 | 2.00 |
| Zinc | 1.51 | J | 0.59 | 5.00 |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

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

(LCS) R3160227-2 08/30/16 11:39 • (LCSD) R3160227-3 08/30/16 11:42

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|----------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Arsenic | 100 | 105 | 103 | 105 | 103 | 80-120 | | | 2 | 20 |
| Barium | 100 | 106 | 104 | 106 | 104 | 80-120 | | | 1 | 20 |
| Boron | 100 | 101 | 99.7 | 101 | 100 | 80-120 | | | 1 | 20 |
| Cadmium | 100 | 103 | 102 | 103 | 102 | 80-120 | | | 1 | 20 |
| Chromium | 100 | 102 | 101 | 102 | 101 | 80-120 | | | 2 | 20 |
| Copper | 100 | 104 | 103 | 104 | 103 | 80-120 | | | 1 | 20 |
| Lead | 100 | 98.5 | 97.7 | 99 | 98 | 80-120 | | | 1 | 20 |
| Nickel | 100 | 102 | 100 | 102 | 100 | 80-120 | | | 1 | 20 |
| Selenium | 100 | 106 | 104 | 106 | 104 | 80-120 | | | 1 | 20 |
| Zinc | 100 | 100 | 99.2 | 100 | 99 | 80-120 | | | 1 | 20 |

L855746-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855746-01 08/30/16 11:44 • (MS) R3160227-6 08/30/16 11:52 • (MSD) R3160227-7 08/30/16 11:55

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Arsenic | 100 | 4.80 | 106 | 103 | 101 | 98 | 1 | 75-125 | | | 3 | 20 |
| Barium | 100 | 79.3 | 183 | 185 | 104 | 106 | 1 | 75-125 | | | 1 | 20 |
| Boron | 100 | ND | 100 | 97.2 | 96 | 93 | 1 | 75-125 | | | 3 | 20 |
| Cadmium | 100 | ND | 101 | 97.2 | 101 | 97 | 1 | 75-125 | | | 4 | 20 |
| Chromium | 100 | 12.6 | 112 | 108 | 99 | 95 | 1 | 75-125 | | | 4 | 20 |
| Copper | 100 | 12.6 | 116 | 112 | 103 | 99 | 1 | 75-125 | | | 4 | 20 |
| Lead | 100 | 9.11 | 109 | 105 | 100 | 96 | 1 | 75-125 | | | 3 | 20 |



L855746-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855746-01 08/30/16 11:44 • (MS) R3160227-6 08/30/16 11:52 • (MSD) R3160227-7 08/30/16 11:55

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD % | RPD Limits % |
|----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Nickel | 100 | 14.0 | 117 | 116 | 103 | 102 | 1 | 75-125 | | | 1 | 20 |
| Selenium | 100 | ND | 103 | 98.6 | 103 | 99 | 1 | 75-125 | | | 5 | 20 |
| Zinc | 100 | 46.8 | 139 | 137 | 92 | 90 | 1 | 75-125 | | | 1 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3160713-1 08/31/16 19:34

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Analyte | mg/kg | | mg/kg | mg/kg |
| Silver | U | | 0.28 | 1.00 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3160713-2 08/31/16 19:36 • (LCSD) R3160713-3 08/31/16 19:39

| | Spike Amount | LCS Result | LCSD Result | LCS Rec. | LCSD Rec. | Rec. Limits | LCS Qualifier | LCSD Qualifier | RPD | RPD Limits |
|---------|--------------|------------|-------------|----------|-----------|-------------|---------------|----------------|-----|------------|
| Analyte | mg/kg | mg/kg | mg/kg | % | % | % | | | % | % |
| Silver | 100 | 103 | 99.8 | 103 | 100 | 80-120 | | | 3 | 20 |

L855711-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855711-02 08/31/16 19:42 • (MS) R3160713-6 08/31/16 19:50 • (MSD) R3160713-7 08/31/16 19:52

| | 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 | % | % | | % | | | % | % |
| Silver | 100 | ND | 103 | 101 | 103 | 101 | 1 | 75-125 | | | 2 | 20 |



Method Blank (MB)

(MB) R3160861-1 09/01/16 12:49

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---------|--------------------|--------------|-----------------|-----------------|
| Silver | U | | 0.28 | 1.00 |

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

(LCS) R3160861-2 09/01/16 12:52 • (LCSD) R3160861-3 09/01/16 12:54

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Silver | 100 | 97.0 | 99.6 | 97 | 100 | 80-120 | | | 3 | 20 |

L857009-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L857009-01 09/01/16 12:57 • (MS) R3160861-6 09/01/16 13:05 • (MSD) R3160861-7 09/01/16 13:08

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Silver | 100 | U | 96.9 | 94.5 | 97 | 95 | 1 | 75-125 | | | 3 | 20 |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3160670-5 08/30/16 12:03

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|--------------------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene | U | | 0.000120 | 0.000500 |
| Toluene | 0.000279 | ⬇ | 0.000150 | 0.00500 |
| Ethylbenzene | U | | 0.000110 | 0.000500 |
| Total Xylene | U | ⬇ | 0.000460 | 0.00150 |
| TPH (GC/FID) Low Fraction | 0.0380 | ⬇ | 0.0217 | 0.100 |
| (S) a,a,a-Trifluorotoluene(FID) 98.6 | | | 59.0-128 | |
| (S) a,a,a-Trifluorotoluene(PID) 104 | | | 54.0-144 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3160670-1 08/30/16 10:11 • (LCSD) R3160670-2 08/30/16 10:34

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.0500 | 0.0452 | 0.0453 | 90.3 | 90.5 | 70.0-130 | | | 0.190 | 20 |
| Toluene | 0.0500 | 0.0461 | 0.0458 | 92.3 | 91.5 | 70.0-130 | | | 0.810 | 20 |
| Ethylbenzene | 0.0500 | 0.0479 | 0.0480 | 95.7 | 96.0 | 70.0-130 | | | 0.270 | 20 |
| Total Xylene | 0.150 | 0.143 | 0.144 | 95.5 | 95.7 | 70.0-130 | | | 0.200 | 20 |
| (S) a,a,a-Trifluorotoluene(FID) | | | | 97.7 | 98.3 | 59.0-128 | | | | |
| (S) a,a,a-Trifluorotoluene(PID) | | | | 103 | 103 | 54.0-144 | | | | |

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

(LCS) R3160670-3 08/30/16 10:56 • (LCSD) R3160670-4 08/30/16 11:18

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| TPH (GC/FID) Low Fraction | 5.50 | 5.88 | 5.87 | 107 | 107 | 63.5-137 | | | 0.110 | 20 |
| (S) a,a,a-Trifluorotoluene(FID) | | | | 105 | 105 | 59.0-128 | | | | |
| (S) a,a,a-Trifluorotoluene(PID) | | | | 112 | 112 | 54.0-144 | | | | |

L855707-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855707-01 08/30/16 15:28 • (MS) R3160670-6 08/30/16 15:50 • (MSD) R3160670-7 08/30/16 16:13

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene | 0.0500 | ND | 0.0315 | 0.0258 | 62.0 | 50.7 | 1 | 49.7-127 | | | 19.6 | 23.5 |
| Toluene | 0.0500 | ND | 0.0317 | 0.0258 | 62.6 | 50.7 | 1 | 49.8-132 | | | 20.7 | 23.5 |
| Ethylbenzene | 0.0500 | ND | 0.0334 | 0.0266 | 66.4 | 52.9 | 1 | 40.8-141 | | | 22.5 | 23.8 |
| Total Xylene | 0.150 | ND | 0.0981 | 0.0769 | 65.4 | 51.3 | 1 | 41.2-140 | J J3 | | 24.2 | 23.7 |
| (S) a,a,a-Trifluorotoluene(FID) | | | | | 97.9 | 97.9 | | 59.0-128 | | | | |



L855707-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

| | | | | | | | | | | | | |
|---|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|---------------------|----------------------|-----|------------|
| (OS) L855707-01 08/30/16 15:28 • (MS) R3160670-6 08/30/16 15:50 • (MSD) R3160670-7 08/30/16 16:13 | | | | | | | | | | | | |
| | 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 | % | % | | % | | | % | % |
| (S) a,a,a-Trifluorotoluene(PID) | | | | | 103 | 103 | | 54.0-144 | | | | |

L855707-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

| (OS) L855707-01 08/30/16 15:28 • (MS) R3160670-8 08/30/16 16:35 • (MSD) R3160670-9 08/30/16 16:57 | | | | | | | | | | | | |
|---|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| | 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 | % | % | | % | | | % | % |
| TPH (GC/FID) Low Fraction | 5.50 | ND | 4.74 | 4.25 | 85.6 | 76.7 | 1 | 28.5-138 | | | 10.9 | 23.6 |
| (S) a,a,a-Trifluorotoluene(FID) | | | | | 104 | 103 | | 59.0-128 | | | | |
| (S) a,a,a-Trifluorotoluene(PID) | | | | | 111 | 110 | | 54.0-144 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3159566-1 08/26/16 11:12

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|----------------------|--------------------|--------------|-----------------|-----------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 |
| C28-C40 Oil Range | U | | 0.274 | 4.00 |
| (S) o-Terphenyl | 83.7 | | | 50.0-150 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3159566-2 08/26/16 11:27 • (LCSD) R3159566-3 08/26/16 11:42

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|----------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| C10-C28 Diesel Range | 60.0 | 39.5 | 41.9 | 65.9 | 69.8 | 50.0-150 | | | 5.70 | 20 |
| (S) o-Terphenyl | | | | 85.0 | 86.4 | 50.0-150 | | | | |

L855707-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855707-01 08/26/16 16:45 • (MS) R3159566-4 08/26/16 17:00 • (MSD) R3159566-5 08/26/16 17:15

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| C10-C28 Diesel Range | 60.0 | ND | 40.2 | 44.5 | 67.0 | 74.1 | 1 | 50.0-150 | | | 10.1 | 20 |
| (S) o-Terphenyl | | | | | 79.4 | 88.9 | | 50.0-150 | | | | |

Method Blank (MB)

(MB) R3160455-3 08/31/16 00:47

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene | U | | 0.000600 | 0.00600 |
| Acenaphthene | U | | 0.000600 | 0.00600 |
| Acenaphthylene | U | | 0.000600 | 0.00600 |
| Benzo(a)anthracene | U | | 0.000600 | 0.00600 |
| Benzo(a)pyrene | U | | 0.000600 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.000600 | 0.00600 |
| Benzo(g,h,i)perylene | U | | 0.000600 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.000600 | 0.00600 |
| Chrysene | U | | 0.000600 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.000600 | 0.00600 |
| Fluoranthene | U | | 0.000600 | 0.00600 |
| Fluorene | U | | 0.000600 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.000600 | 0.00600 |
| Naphthalene | U | | 0.00200 | 0.0200 |
| Phenanthrene | U | | 0.000600 | 0.00600 |
| Pyrene | U | | 0.000600 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| (S) p-Terphenyl-d14 | 83.9 | | | 32.2-131 |
| (S) Nitrobenzene-d5 | 71.1 | | | 22.1-146 |
| (S) 2-Fluorobiphenyl | 93.7 | | | 40.6-122 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3160455-1 08/31/16 00:03 • (LCSD) R3160455-2 08/31/16 00:25

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Anthracene | 0.0800 | 0.0689 | 0.0643 | 86.1 | 80.4 | 50.3-130 | | | 6.87 | 20 |
| Acenaphthene | 0.0800 | 0.0655 | 0.0624 | 81.9 | 78.0 | 52.4-120 | | | 4.94 | 20 |
| Acenaphthylene | 0.0800 | 0.0659 | 0.0637 | 82.4 | 79.7 | 49.6-120 | | | 3.31 | 20 |
| Benzo(a)anthracene | 0.0800 | 0.0694 | 0.0669 | 86.8 | 83.6 | 46.7-125 | | | 3.75 | 20 |
| Benzo(a)pyrene | 0.0800 | 0.0629 | 0.0602 | 78.6 | 75.3 | 42.3-119 | | | 4.34 | 20 |
| Benzo(b)fluoranthene | 0.0800 | 0.0642 | 0.0639 | 80.3 | 79.9 | 43.6-124 | | | 0.450 | 20 |
| Benzo(g,h,i)perylene | 0.0800 | 0.0723 | 0.0659 | 90.4 | 82.4 | 45.1-132 | | | 9.21 | 20 |
| Benzo(k)fluoranthene | 0.0800 | 0.0670 | 0.0627 | 83.8 | 78.4 | 46.1-131 | | | 6.59 | 20 |
| Chrysene | 0.0800 | 0.0693 | 0.0677 | 86.6 | 84.7 | 49.5-131 | | | 2.29 | 20 |
| Dibenz(a,h)anthracene | 0.0800 | 0.0735 | 0.0685 | 91.8 | 85.7 | 44.8-133 | | | 6.95 | 20 |
| Fluoranthene | 0.0800 | 0.0773 | 0.0722 | 96.6 | 90.3 | 49.3-128 | | | 6.75 | 20 |

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

(LCS) R3160455-1 08/31/16 00:03 • (LCSD) R3160455-2 08/31/16 00:25

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | <u>LCS Qualifier</u> | <u>LCSD Qualifier</u> | RPD % | RPD Limits % |
|------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|----------------------|-----------------------|----------|-----------------|
| Fluorene | 0.0800 | 0.0665 | 0.0654 | 83.2 | 81.8 | 50.6-121 | | | 1.63 | 20 |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0739 | 0.0691 | 92.4 | 86.4 | 46.1-135 | | | 6.73 | 20 |
| Naphthalene | 0.0800 | 0.0634 | 0.0618 | 79.2 | 77.2 | 49.6-115 | | | 2.59 | 20 |
| Phenanthrene | 0.0800 | 0.0671 | 0.0642 | 83.9 | 80.3 | 48.8-121 | | | 4.39 | 20 |
| Pyrene | 0.0800 | 0.0724 | 0.0690 | 90.5 | 86.2 | 44.7-130 | | | 4.82 | 20 |
| 1-Methylnaphthalene | 0.0800 | 0.0735 | 0.0668 | 91.9 | 83.5 | 50.6-122 | | | 9.56 | 20 |
| 2-Methylnaphthalene | 0.0800 | 0.0716 | 0.0674 | 89.5 | 84.3 | 50.4-120 | | | 5.99 | 20 |
| 2-Chloronaphthalene | 0.0800 | 0.0628 | 0.0607 | 78.4 | 75.8 | 53.9-121 | | | 3.41 | 20 |
| (S) p-Terphenyl-d14 | | | | 78.2 | 78.6 | 32.2-131 | | | | |
| (S) Nitrobenzene-d5 | | | | 72.1 | 69.9 | 22.1-146 | | | | |
| (S) 2-Fluorobiphenyl | | | | 87.6 | 87.5 | 40.6-122 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L855707-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855707-02 08/31/16 02:39 • (MS) R3160455-4 08/31/16 03:01 • (MSD) R3160455-5 08/31/16 03:22

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD % | RPD Limits % |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Anthracene | 0.0800 | ND | 0.0589 | 0.0620 | 73.6 | 77.5 | 1 | 26.5-141 | | | 5.17 | 21.2 |
| Acenaphthene | 0.0800 | ND | 0.0591 | 0.0609 | 73.9 | 76.1 | 1 | 31.9-130 | | | 2.95 | 20 |
| Acenaphthylene | 0.0800 | ND | 0.0648 | 0.0656 | 80.9 | 82.0 | 1 | 33.7-129 | | | 1.30 | 20 |
| Benzo(a)anthracene | 0.0800 | ND | 0.0494 | 0.0536 | 61.7 | 67.0 | 1 | 18.3-136 | | | 8.29 | 24.6 |
| Benzo(a)pyrene | 0.0800 | ND | 0.0508 | 0.0544 | 63.6 | 68.0 | 1 | 16.9-135 | | | 6.75 | 25.2 |
| Benzo(b)fluoranthene | 0.0800 | ND | 0.0388 | 0.0448 | 48.5 | 56.0 | 1 | 10.0-134 | | | 14.5 | 30.9 |
| Benzo(g,h,i)perylene | 0.0800 | ND | 0.0369 | 0.0484 | 46.2 | 60.5 | 1 | 14.1-140 | | J3 | 26.9 | 25.5 |
| Benzo(k)fluoranthene | 0.0800 | ND | 0.0498 | 0.0504 | 62.2 | 63.0 | 1 | 18.2-138 | | | 1.21 | 25.6 |
| Chrysene | 0.0800 | ND | 0.0543 | 0.0560 | 67.9 | 70.1 | 1 | 17.1-145 | | | 3.20 | 24.2 |
| Dibenz(a,h)anthracene | 0.0800 | ND | 0.0440 | 0.0569 | 54.9 | 71.1 | 1 | 18.5-138 | | J3 | 25.7 | 24.3 |
| Fluoranthene | 0.0800 | ND | 0.0542 | 0.0554 | 67.8 | 69.2 | 1 | 15.4-144 | | | 2.14 | 27.1 |
| Fluorene | 0.0800 | ND | 0.0590 | 0.0613 | 73.7 | 76.6 | 1 | 23.5-136 | | | 3.76 | 20 |
| Indeno(1,2,3-cd)pyrene | 0.0800 | ND | 0.0403 | 0.0518 | 50.4 | 64.8 | 1 | 14.5-142 | | | 25.0 | 25.8 |
| Naphthalene | 0.0800 | ND | 0.0646 | 0.0637 | 77.3 | 76.3 | 1 | 29.2-128 | | | 1.35 | 20 |
| Phenanthrene | 0.0800 | ND | 0.0550 | 0.0582 | 67.5 | 71.5 | 1 | 20.1-134 | | | 5.75 | 23.6 |
| Pyrene | 0.0800 | ND | 0.0554 | 0.0555 | 69.3 | 69.3 | 1 | 11.0-148 | | | 0.0300 | 26.1 |
| 1-Methylnaphthalene | 0.0800 | ND | 0.0677 | 0.0692 | 82.0 | 83.9 | 1 | 28.4-137 | | | 2.21 | 20 |
| 2-Methylnaphthalene | 0.0800 | ND | 0.0708 | 0.0736 | 80.6 | 84.1 | 1 | 26.6-137 | | | 3.90 | 20 |
| 2-Chloronaphthalene | 0.0800 | ND | 0.0600 | 0.0599 | 75.0 | 74.9 | 1 | 38.6-126 | | | 0.0700 | 20 |
| (S) p-Terphenyl-d14 | | | | | 85.5 | 80.0 | | 32.2-131 | | | | |
| (S) Nitrobenzene-d5 | | | | | 67.8 | 70.7 | | 22.1-146 | | | | |
| (S) 2-Fluorobiphenyl | | | | | 92.6 | 91.9 | | 40.6-122 | | | | |



Abbreviations and Definitions

| | |
|-----------------|--|
| SDG | Sample Delivery Group. |
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| RPD | Relative Percent Difference. |
| 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. |
| (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. |
| Rec. | Recovery. |

Qualifier Description

| | |
|----|--|
| B | The same analyte is found in the associated blank. |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| 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. |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ 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 ¹ | DW21704 |
| Florida | E87487 | North Carolina ² | 41 |
| Georgia | NELAP | North Dakota | R-140 |
| Georgia ¹ | 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 ¹ | 90010 | South Dakota | n/a |
| Kentucky ² | 16 | Tennessee ¹⁴ | 2006 |
| Louisiana | AI30792 | Texas | T 104704245-07-TX |
| Maine | TN0002 | Texas ⁵ | 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 | | |

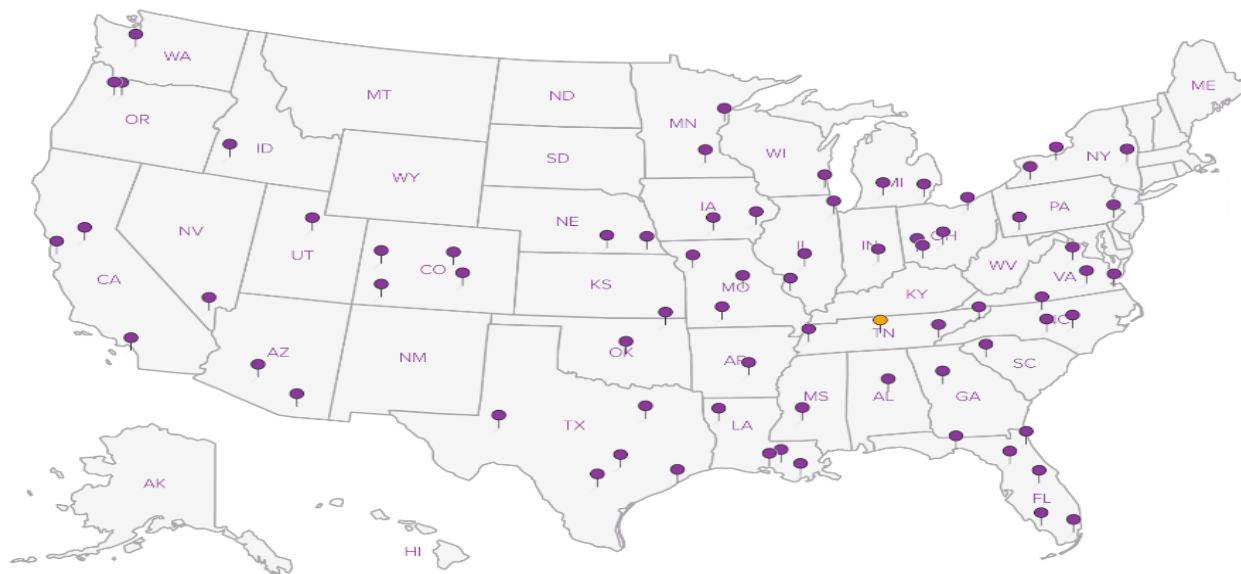
Third Party & Federal Accreditations

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

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ^{n/a} 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:

Berry Petroleum Co.~~1999 Broadway Suite 3700~~~~Denver, CO 80202~~

Nicholson GeoSolutions

Billing Information:

Tom Hogelin
Linn Energy LLC
235 Callahan Ave
Parachute, CO 81635

Report to:

Dave Nicholson

Email To:

dknicholson@q.com

Project

HRM Landfarm Sampling
Pit Reclamation

City/State

Collected:

Phone: 303-601-2023

Fax:

Lab Project #

BERPETDCO030615S

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

DK Nicholson

Rush? (Lab MUST Be Notified)

☐ Same Day200%
☐ Next Day100%
☐ Two Day50%
☐ Three Day25%

Date Results Needed

Email? ☐ No ☒ YesFAX? ☒ No ☐ YesNo.
of
Cntrs

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | TEPH(8015)Diesel & Oil Range (1) 4oz Clear-No Pres | BTEX/TVPH (1) 4oz Clear - No Pres | SAR, metals, Cr VI | SPCON, pH | PATB 8070 SIM | | | | | | | | |
|-----------|-----------|----------|-------|------|------|--|-----------------------------------|--------------------|-----------|---------------|---|--|--|--|--|--|--|----|
| J15-P-1 | | SS | | 8/23 | 1210 | 2 | X | X | X | X | X | | | | | | | 01 |
| J15-P-2 | | SS | | | 1220 | 2 | X | X | X | X | X | | | | | | | 02 |
| J15-P-3 | | SS | | | 1230 | 2 | X | X | X | X | X | | | | | | | 03 |
| J15-P-4 | | SS | | | 1240 | 2 | X | X | X | X | X | | | | | | | 04 |
| J15-P-5 | | SS | | | 1250 | 2 | X | X | X | X | X | | | | | | | 05 |
| | | SS | | | | 2 | | | | | | | | | | | | |
| | | SS | | | | 2 | | | | | | | | | | | | |
| | | SS | | | | 2 | | | | | | | | | | | | |
| | | SS | | | | 2 | | | | | | | | | | | | |
| | | SS | | | | 22 | | | | | | | | | | | | |

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: As, Ba, B, Cd, Cr, Co, Pb, Hg, Ni, Se, Ag, Zn + Cr VI

pH _____ Temp _____

Flow _____ Other _____

Relinquished by: (Signature)

Date: 8/24/16

Time: 1400

Received by: (Signature)

FedEx

Samples returned via: ☐ UPS☒ FedEx ☐ Courier ☐ _____

Relinquished by: (Signature)

Date: 8/24

Time: 1730

Received by: (Signature)

1.9

Temp: °C Bottles Received:

25 = 402

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

8.25.16 0900

Date: Time:

8.25.16 0900

Hold #

Condition: (lab use only)

DB9

COC Seal Intact: ☐ Y ☐ N ☒ NA

pH Checked:

NCF:

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



YOUR LAB OF CHOICE

 12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859


L # 855711

B161

Acctnum: BERPETDCO

Template:

Prelogin:

TSR:

Cooler:

Shipped Via:

Rem./Contaminant Sample # (lab only)



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

YOUR LAB OF CHOICE

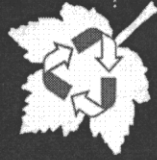
Cooler Receipt Checklist

Client: BERPETCO SDG# 88711

Cooler Received/Opened On: 8/25/2016 By: Nikki Farmer

Temperature Upon Receipt: 1.9 °C [Signature]
(Signature)

| Cooler Receipt Check List | | | |
|---|-----|----|-----|
| | Yes | No | N/A |
| Were custody seals on outside of cooler and intact? | | | ✓ |
| Were custody papers properly filled out (ink, signed, etc.)? | ✓ | | |
| 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 correct preservatives used? | | | ✓ |
| Were all applicable sample containers checked for preservation? | | | ✓ |
| (Any samples not in accepted pH range noted on COC.) | | | |
| If applicable, was an observable VOA headspace present? | | | |
| Non Conformance Generated? (If yes see attached NCF) | | | |



...Green Technology through
Innovation

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Est.
1970

NATION-WIDE