# SITE INFORMATION

## Report Type: Deferral Request 1RP-5578

| General Site Information: | | | | | | |
|---|---|---|---|---|---|---|
| **Site:** | **Elvis Tank Battery Release** | | | | | |
| **Company:** | **ConocoPhillips** | | | | | |
| **Section, Township and Range** | **Unit Letter F** | **Sec. 20** | **T 17S** | **R 32E** | | |
| **Lease Number:** | **API No. 30-025-33584** | | | | | |
| **County:** | **Lea** | | | | | |
| **Release GPS:** | **32.82216°** | | | **-103.79091°** | | |
| **Surface Owner:** | Federal | | | | | |
| **Mineral Owner:** | | | | | | |
| **Directions:** | From Maljamar, NM (Hwy 82/Maljamar Rd): Head south on Maljamar Rd. for 2.74 miles. Turn right on Conoco Rd. Head west for 1.62 miles. Turn right onto dirt road. Head north for 0.37 miles. Arrive at location. | | | | | |

| Release Data: | |
|---|---|
| *Date Released:* | 6/3/2019 |
| *Type Release:* | Oil |
| *Source of Contamination:* | Tank Overflow |
| *Fluid Released:* | 5.1 bbls of oil |
| *Fluids Recovered:* | 1.3 bbls oil and 3.7 bbls of rainwater |

| Official Communication: | | | |
|---|---|---|---|
| *Name:* | Marvin Soriwei | | Christian M. Llull, P.G. |
| *Company:* | ConocoPhillips | | Tetra Tech |
| *Address:* | 935 N. Eldridge Pkwy. | | 8911 North Capital of Texas Hwy. |
| | | | Building 2, Suite 2310 |
| *City:* | Houston, TX 77079 | | Austin, Texas 78759 |
| *Phone number:* | 1-832-486-2730 | | (512) 338-2861 |
| *Fax:* | | | |
| *Email:* | marvin.soriwei@conocophillips.com | | christian.llull@tetratech.com |

| Site Characterization | |
|---|---|
| ***Depth to Groundwater:*** | *82' below surface* |
| ***Impact to groundwater or surface water:*** | *No* |
| ***Extents within 300 feet of a watercourse:*** | *No* |
| ***Extents within 200 feet of lakebed, sinkhole, or playa lake:*** | *No* |
| ***Extents within 300 feet of an occupied structure:*** | *No* |
| ***Extents within 500 horizontal feet of a private water well:*** | *No* |
| ***Extents within 1000 feet of any water well or spring:*** | *No* |
| ***Extents within incorporated municipal well field:*** | *No* |
| ***Extents within 300 feet of a wetland:*** | *No* |
| ***Extents overlying a subsurface mine:*** | *No* |
| ***Karst Potential:*** | *Low* |
| ***Extents within a 100-year floodplain:*** | *No* |
| ***Impact to areas not on a production site:*** | *No* |

| Recommended Remedial Action Levels (RRALs) | | | | |
|---|---|---|---|---|
| ***Benzene*** | ***Total BTEX*** | ***TPH (GRO+DRO)*** | ***TPH (GRO+DRO+MRO)*** | ***Chlorides*** |
| *10 mg/kg* | *50 mg/kg* | *1,000 mg/kg* | *2,500 mg/kg* | *10,000 mg/kg* |

TETRA TECH

August 24, 2020

District Supervisor
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

**Re: Release Characterization and Deferral Request**
**ConocoPhillips Company**
**Elvis Tank Battery**
**Unit Letter F, Section 20, Township 17 South, Range 32 East**
**Lea County, New Mexico**
**1RP-5578**
**Incident ID: NDHR1917849099**

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips Company (COP) to evaluate a release that occurred at the Elvis Tank Battery, Unit Letter F, Section 20, Township 17 South, Range 32 East, in Lea County, New Mexico (Site). The Site coordinates are 32.82216°, -103.79091°. The Site location is shown on Figures 1 and 2.

## BACKGROUND

According to the State of New Mexico C-141 Initial Report, the release was discovered on June 3, 2019, and released approximately 5.1 barrels (bbls) of crude oil due to a tank overflow. The reported release footprint was contained within the earthen berm of the tank battery. Vacuum trucks were dispatched to remove the freestanding fluids, recovering approximately 3.7 bbls of rainwater and 1.3 bbls of oil. New Mexico Oil Conservation Division (NMOCD) was notified of the release on June 12, 2019. NMOCD received the initial C-141 on June 18, 2019 and it is associated with 1RP-5578. The incident ID for this release is NDHR1917849099. The initial C-141 Form is included in Appendix A.

## SITE CHARACTERIZATION

A site characterization was performed and no watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances. The site is in a low karst potential area.

No water wells are listed in Section 20 on the New Mexico Office of the State Engineer's (NMOSE) website. The nearest water wells are in Sections 21 and 28, with an average depth to groundwater of 82 feet below ground surface (bgs). The groundwater data is shown in Appendix B.

## REGULATORY FRAMEWORK

Based upon the release footprint and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data was used to determine recommended remedial action levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total

Tetra Tech
901 West Wall St., Suite 100, Midland, TX 79701
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

petroleum hydrocarbons (TPH), and chlorides in soil. Based on the depth to groundwater at the Site, the RRALs for the Site are as follows:

| CONSTITUENT | RRAL |
|---|---|
| Chloride (0 – 4 ft bgs) | 600 mg/kg |
| Chloride (>4 ft bgs) | 10,000 mg/kg |
| TPH (GRO+DRO+MRO) | 2,500 mg/kg |
| BTEX | 50 mg/kg |
| Benzene | 10 mg/kg |

As this reported contamination is in areas immediately under or around production tanks and pipelines, full remediation would cause a major facility deconstruction. The full final remediation, restoration and reclamation for this release is requested to be deferred until the equipment is removed during other operations, or when the facility is retrofitted or abandoned, whichever comes first.

A Deferral Request was previously submitted to NMOCD on August 28, 2019 by COP. This request for deferral of the 1RP-5578 release was denied on September 20, 2019 due to incomplete vertical and horizontal delineation of the release footprint and insufficient documentation of the release assessment and characterization.

## SITE ASSESSMENT

Tetra Tech personnel were onsite to delineate the release footprint and sample the release area in February 2020. On February 18, 2020, a total of five (5) soil borings (AH-1 through AH-5) were installed using a hand auger to define the extents of the release and to assess the extent of impacted soil. Soil boring AH-1 was installed south of the tank battery containment berm to a depth of 3 feet bgs. Borings AH-2 through AH-5 were installed within the lined containment berm, and soil samples were collected above the liner.

On February 25, 2020, A total of three (3) soil borings (BH-1 through BH-3) were installed to a depth of 7 feet bgs around the perimeter of the secondary containment to define the horizontal extents of the release. Additionally, two (2) hand auger soil borings (AH-6 and AH-7) were installed to a depth of 5 feet bgs to the west and northwest of the tank battery. Boring locations are shown on Figure 3.

A total of 20 soil samples were collected from the 10 boring locations from within and around the release area. Selected samples were field screened and submitted to an analytical laboratory to be analyzed for TPH by EPA method 8015 modified, BTEX by EPA Method 8260B and chlorides by EPA method 300.0. Copies of analytical reports and chain-of-custody documentation are included in Appendix C.

The analytical results associated with sample locations within the containment berm (AH-2 through AH-4) were above the RRALs for TPH and/or chloride. However, the area within the containment berm has a liner at an approximate depth of 0.5 feet bgs. Analytical results from AH-5 were below the RRALs for TPH, BTEX and chloride.

The analytical results associated with the perimeter boring locations (AH-1, AH-6, AH-7, BH-2 and BH-3) were below the RRALs for TPH, BTEX and chloride with the exception of the 0-1' interval at BH-2, which was slightly above the most stringent RRAL for TPH in the top four feet with a result of 141 mg/kg. As the release footprint was limited to the interior of the containment berm, the TPH detection was on a caliche pad, and given the proximity of boring BH-2 to the onsite wellhead, the slight presence of TPH at the surface at BH-2 is assumed to be related to operating conditions or the result of routine production at the Site and unrelated to the 1RP-5578 release footprint. All other samples collected at BH-2 were well below the closure and reclamation criteria limits. The sample locations are shown on Figure 3. The results of the February 2020 sampling event are summarized in Table 1.

No soil samples were collected for analysis at soil boring location BH-1. The boring location was abandoned due to safety concerns for underground utilities and/or obstructions. Instead, soil boring AH-7 was installed

west of BH-1 and samples were collected and analyzed to effectively horizontally delineate the release to the west.

Photographic documentation of the assessment activities is included as Appendix D. The soil boring logs containing soil descriptions are included as Appendix E.

## CONCLUSION

ConocoPhillips respectfully requests that NMOCD will consider delaying remediation activities at the Site until the end of life of the battery. At the time of abandonment, retrofit, or inactivity, remediation will be completed in addition to reclamation. Based on the results of the site assessment and release delineation, ConocoPhillips considers the current release footprint to be fully delineated. The contamination is located in areas immediately under and around production tanks and does not cause an imminent risk to human health, the environment, or groundwater. Final remediation and reclamation shall take place in accordance with 19.15.29.12 and 19.15.29.13 NMAC once the Site is no longer being used for oil and gas operations.

Based on the above, ConocoPhillips requests deferral for this impacted area inside the firewall. The completed C-141 forms are enclosed in Appendix A.

If you have any questions or comments concerning the assessment or remediation activities for this site, please call us at either (512) 338-2861 or (432) 682-4559.

Sincerely,
**Tetra Tech, Inc.**

Christian M. Llull, P.G.
Project Manager

Greg W. Pope, P.G.
Program Manager

cc:
Ms. Marvin Soriwei, RMR – ConocoPhillips
Mr. Charles Beauvais, GPBU - ConocoPhillips

**List of Attachments**

Figures:

- Figure 1 – Site Location Map
- Figure 2 – Site Location/Topographic Map
- Figure 3 – Approximate Release and Assessment Map

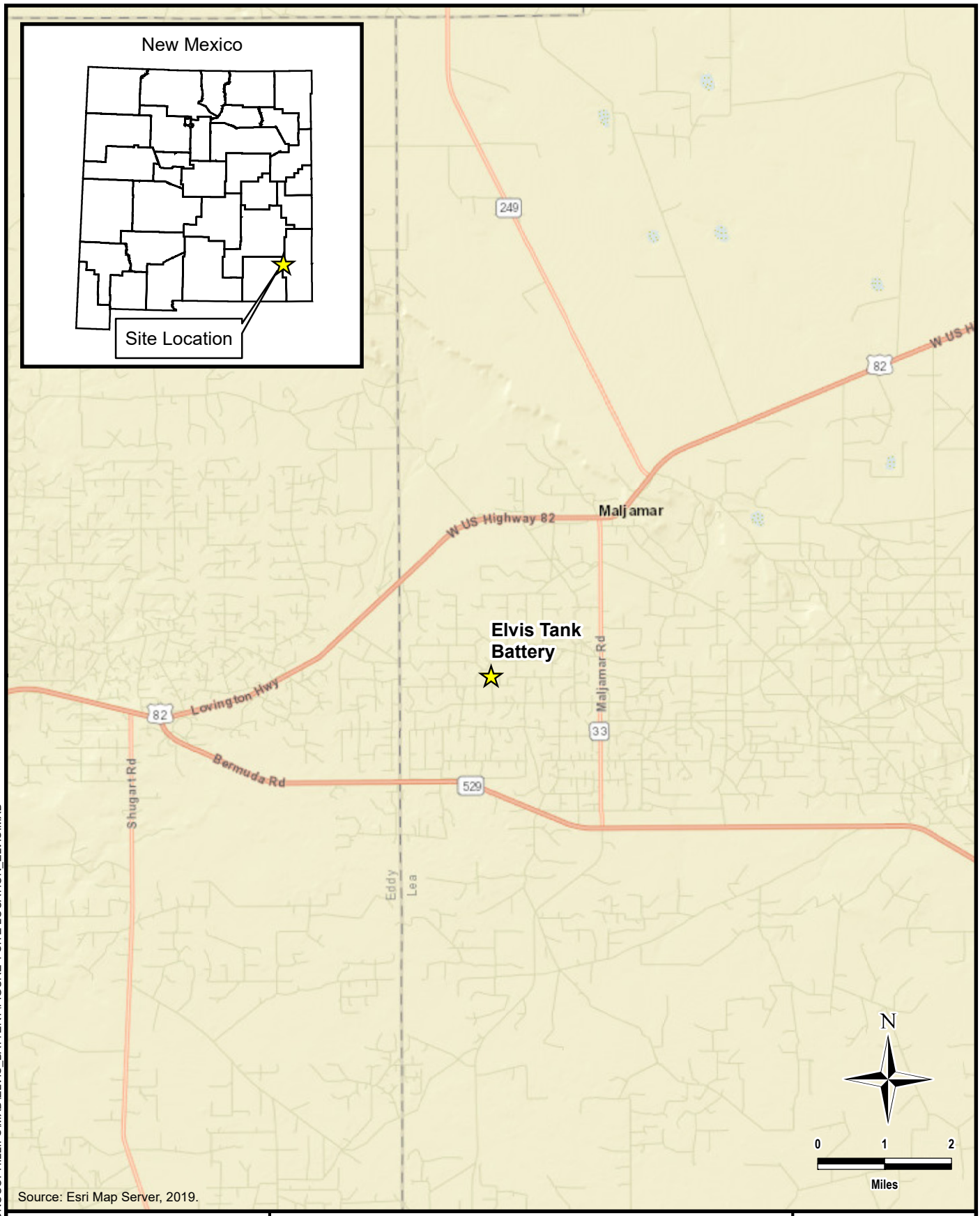
Tables:

- Table 1 – Summary of Analytical Results – Soil Assessment

Appendices:

- Appendix A – C-141 Form
- Appendix B – NMOSE Site Characterization Data
- Appendix C – Laboratory Analytical Reports
- Appendix D – Photographic Documentation
- Appendix E – Soil Boring Logs

# FIGURES




DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\ELVIS_BATTERY\FIGURE 1 SITE LOCATION_ELVIS.MXD

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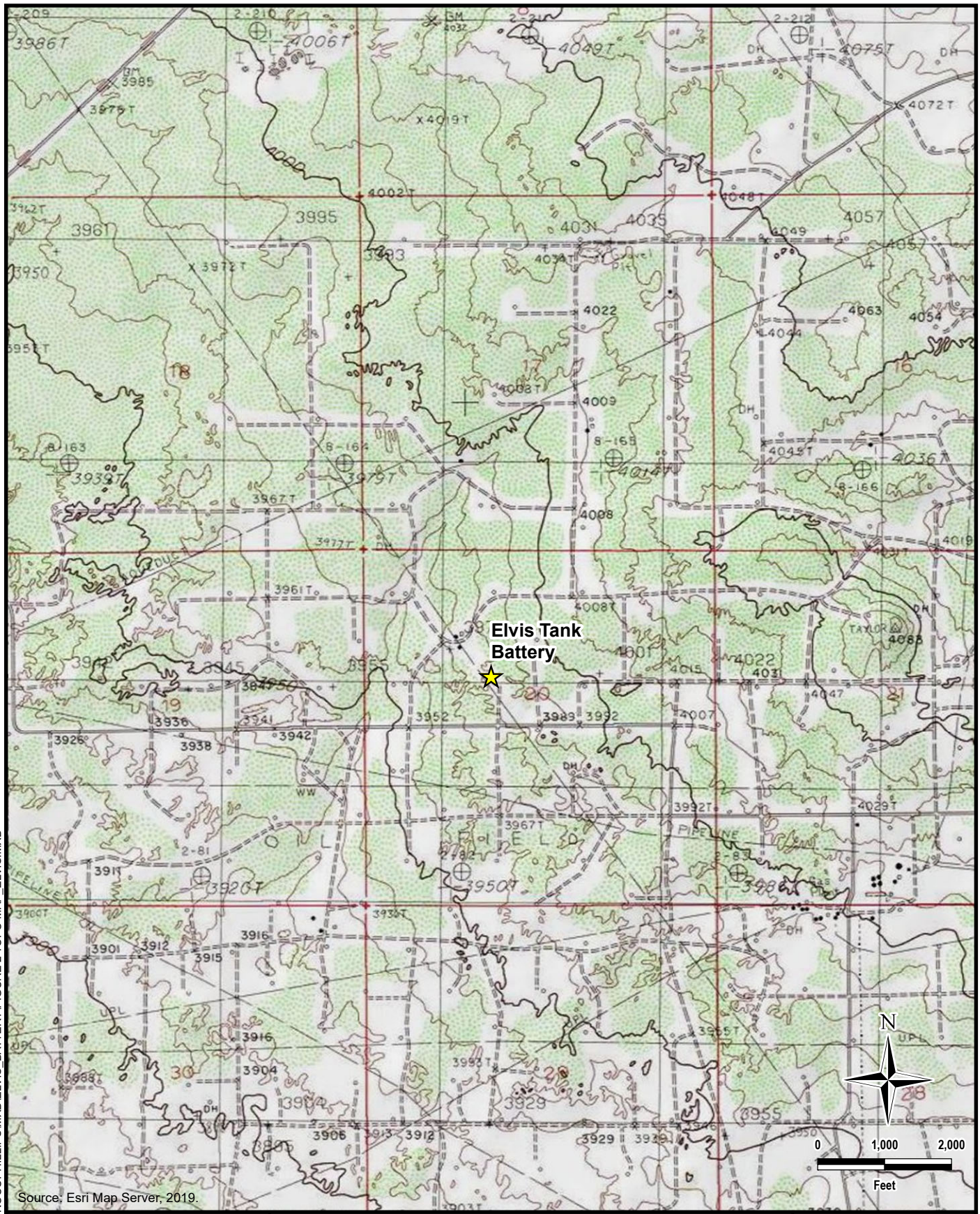
CONOCOPHILLIPS

1RP-5578
(32.822160°, -103.790910°)
LEA COUNTY, NEW MEXICO

**ELVIS TANK BATTERY RELEASE**
**SITE LOCATION MAP**

| | |
|---|---|
| PROJECT NO.: | 212C-MD-02060 |
| DATE: | MARCH 18, 2020 |
| DESIGNED BY: | AAM |

Figure No.
**1**




Source: Esri Map Server, 2019.

DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\ELVIS_BATTERY\FIGURE 2 TOPO MAP_ELVIS.MXD

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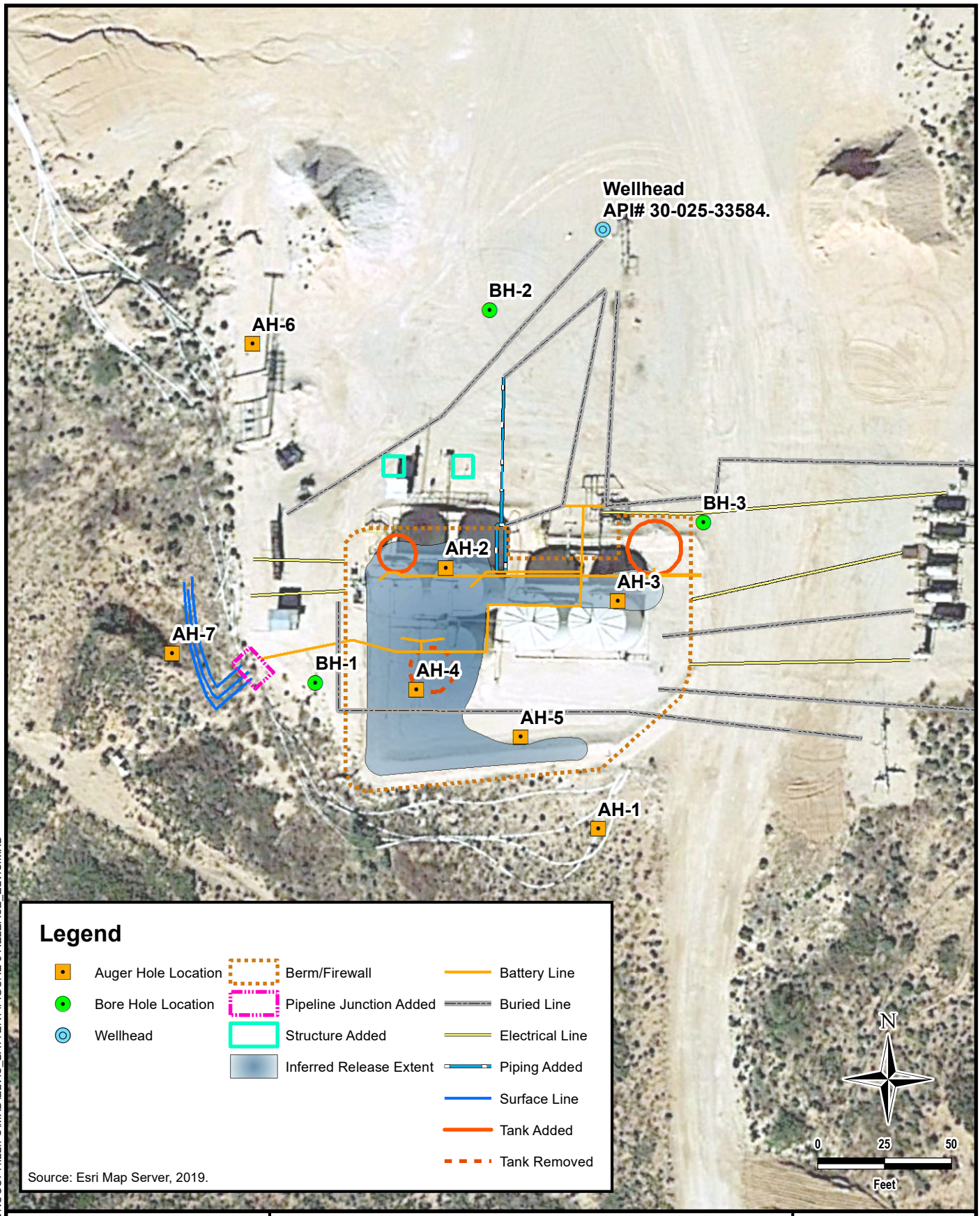
CONOCOPHILLIPS

1RP-5578
(32.822160°, -103.790910°)
LEA COUNTY, NEW MEXICO

**ELVIS TANK BATTERY RELEASE**
**TOPOGRAPHIC MAP**

| | |
|---|---|
| PROJECT NO.: | 212C-MD-02060 |
| DATE: | MARCH 18, 2020 |
| DESIGNED BY: | AAM |

Figure No.
**2**




DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\ELVIS_BATTERY\FIGURE 3 RELEASE_ELVIS.MXD

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CONOCOPHILLIPS

1RP-5578
(32.822160°, -103.790910°)
LEA COUNTY, NEW MEXICO

**ELVIS TANK BATTERY RELEASE**
**APPROXIMATE RELEASE EXTENT AND ASSESSMENT MAP**

| | |
|---|---|
| PROJECT NO.: | 212C-MD-02060 |
| DATE: | MAY 18, 2020 |
| DESIGNED BY: | AAM |

Figure No.
**3**

# TABLES

# TABLE 1
# SUMMARY OF ANALYTICAL RESULTS
# SOIL ASSESSMENT - 1RP-5578
# CONOCOPHILLIPS
# ELVIS TANK BATTERY RELEASE
# LEA COUNTY, NM

| Sample ID | Sample Date | Sample Depth Interval | Field Screening Results | | Chloride[1] | | BTEX[2] | | | | | | | | | | TPH[3] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | | Toluene | | Ethylbenzene | | Total Xylenes | | Total BTEX | | GRO[4] | | DRO | | ORO | | Total TPH | |
| | | | Chloride | PID | | | | | | | | | | | | | $C_3$ - $C_{10}$ | | $C_{10}$ - $C_{28}$ | | $C_{28}$ - $C_{40}$ | | | |
| | | ft. bgs | ppm | | mg/kg | Q | mg/kg | Q | mg/kg | Q | mg/kg | Q | mg/kg | Q | mg/kg | | mg/kg | Q | mg/kg | Q | mg/kg | Q | mg/kg | |
| AH-1 | 2/18/2020 | 0-1 | 109 | 0.0 | 10.6 | B | < 0.00102 | | < 0.00512 | | < 0.00256 | | < 0.00665 | | - | | < 0.102 | | 2.98 | J | 12.9 | | 15.9 | |
| | | 2-3 | 130 | 0.0 | 26.8 | B | < 0.00103 | | < 0.00515 | | < 0.00257 | | < 0.00669 | | - | | < 0.103 | | 9.90 | | 33.2 | | 43.1 | |
| AH-2 | 2/18/2020 | 0-0.5 | - | 0.0 | ***999*** | | 0.000830 | J | 0.0248 | | 0.00983 | | 0.0473 | | 0.0828 | | 9.12 | | 4490 | | 2000 | | ***6499*** | |
| AH-3 | 2/18/2020 | 0-0.5 | - | 0.0 | ***4520*** | | 0.0239 | | 0.0415 | J | 0.0167 | J | 0.696 | | 0.778 | | 48.6 | | 10400 | | 4760 | | ***15209*** | |
| AH-4 | 2/18/2020 | 0-0.5 | - | 0.0 | 458 | | 0.000507 | J | < 0.00507 | | < 0.00254 | | < 0.00660 | | 0.000507 | | < 0.101 | | 71.4 | | 69.7 | | ***141*** | |
| AH-5 | 2/18/2020 | 0-0.5 | - | 0.0 | 269 | | < 0.00108 | | < 0.00538 | | < 0.00269 | | < 0.00699 | | - | | < 0.108 | | 6.38 | | 4.13 | J | 10.5 | |
| AH-6 | 2/25/2020 | 0-1 | 481 | 0.2 | 155 | | < 0.00130 | | < 0.00650 | | < 0.00325 | | < 0.00845 | | - | | < 0.130 | | 2.65 | J | 4.42 | J | 7.07 | |
| | | 2-3 | 509 | 0.0 | 13.0 | B | < 0.00124 | | < 0.00620 | | < 0.00310 | | < 0.00806 | | - | | 0.0802 | B J | < 4.96 | | 3.17 | J | 3.25 | |
| | | 4-5 | 423 | 0.1 | 81.8 | | < 0.00124 | | < 0.00619 | | < 0.00309 | | < 0.00804 | | - | | 0.0651 | B J | 2.26 | J | 1.97 | J | 4.30 | |
| AH-7 | 2/25/2020 | 0-1 | 97 | 0.1 | 5.84 | B J | < 0.00118 | | < 0.00588 | | < 0.00294 | | < 0.00765 | | - | | 0.0631 | B J | 2.31 | J | 3.73 | J | 6.10 | |
| | | 2-3 | 107 | 0.1 | 12.2 | B J | < 0.00124 | | < 0.00622 | | < 0.00311 | | < 0.00809 | | - | | 0.468 | | < 4.98 | | 0.789 | J | 1.26 | |
| | | 4-5 | 277 | 0.0 | 43.1 | | < 0.00114 | | < 0.00571 | | < 0.00285 | | < 0.00742 | | - | | < 0.114 | | < 4.57 | | 0.717 | J | 0.717 | |
| BH-2 | 2/25/2020 | 0-1 | 401 | < 1.0 | 235 | | < 0.00114 | | < 0.00569 | | < 0.00285 | | < 0.00740 | | - | | < 0.114 | | 49.0 | | 92.2 | | ***141*** | |
| | | 2-3 | 523 | < 1.0 | 93.6 | | < 0.00102 | | < 0.00510 | | < 0.00255 | | < 0.00663 | | - | | < 0.102 | | 2.37 | B J | 4.67 | | 7.04 | |
| | | 4-5 | 194 | < 1.0 | 33.0 | | < 0.00102 | | < 0.00509 | | < 0.00254 | | < 0.00662 | | - | | < 0.102 | | < 4.07 | | 3.05 | J | 3.05 | |
| | | 6-7 | 157 | < 1.0 | 46.0 | | < 0.00101 | | < 0.00507 | | < 0.00253 | | < 0.00659 | | - | | < 0.101 | | < 4.05 | | 2.94 | J | 2.94 | |
| BH-3 | 2/25/2020 | 0-1 | 312 | < 1.0 | 136 | | < 0.00108 | | < 0.00538 | | < 0.00269 | | < 0.00699 | | - | | < 0.108 | | < 4.30 | | 5.28 | | 5.28 | |
| | | 2-3 | 285 | < 1.0 | 73.9 | | < 0.00102 | | < 0.00509 | | < 0.00255 | | < 0.00662 | | - | | < 0.102 | | 4.74 | | 20.4 | | 25.1 | |
| | | 4-5 | 198 | < 1.0 | 47.4 | | < 0.00102 | | < 0.00509 | | < 0.00255 | | < 0.00662 | | - | | < 0.102 | | < 4.07 | | 2.65 | J | 2.65 | |
| | | 6-7 | 290 | < 1.0 | 93.9 | | < 0.00116 | | < 0.00578 | | < 0.00289 | | < 0.00751 | | - | | < 0.116 | | < 4.62 | | 1.58 | J | 1.58 | |
| | | 9-10 | 304 | < 1.0 | NS | | NS | | NS | | NS | | NS | | - | | NS | | NS | | NS | | - | |
| | | 11-12 | - | < 1.0 | NS | | NS | | NS | | NS | | NS | | - | | NS | | NS | | NS | | - | |
| | | 14-15 | - | < 1.0 | NS | | NS | | NS | | NS | | NS | | - | | NS | | NS | | NS | | - | |

NOTES:

ft. Feet
bgs Below ground surface
ppm Parts per million
mg/kg Milligrams per kilogram
NS Not sampled
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics
ORO Oil range organics
1 EPA Method 300.0
2 EPA Method 8260B
3 EPA Method 8015
4 EPA Method 8015D/GRO

***Bold and italicized values indicate exceedance of proposed RRALs***

QUALIFIERS:

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

# APPENDIX A
# C-141 Forms

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

HOBBS OCD
JUN 18 2019
RECEIVED

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

| | |
|---|---|
| Incident ID | NDHR1917849099 |
| District RP | 1RP-5578 |
| Facility ID | fDHR1917848956 |
| Application ID | pDHR1917848216 |

# Release Notification

## Responsible Party

| | |
|---|---|
| Responsible Party ConocoPhillips | OGRID CONOCOPHILLIPS COMPANY 217817 DHR 6/27/2019 |
| Contact Name Gustavo Fejervary | Contact Telephone (432)210-7037 |
| Contact email G.Fejervary@conocophillips.com | Incident # *(assigned by OCD)* |
| Contact mailing address 3300 N A Street Midland TX 79705 | |

## Location of Release Source

Latitude 32.82216 Longitude -103.79091
*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name ELVIS | Site Type Tank Battery Facility |
| Date Release Discovered 6/3/2019 | API# *(if applicable)* |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| F | 20 | 17S | 32E | Lea |

Surface Owner: ☒ State ☐ Federal ☒ Tribal ☐ Private (*Name:* _____)
Incorrect OCD website indicates Federal
DHR 6/27/2019

## Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

| | | |
|---|---|---|
| ☒ Crude Oil | Volume Released (bbls) 5.1 | Volume Recovered (bbls) |
| ☐ Produced Water | Volume Released (bbls) | Volume Recovered (bbls) |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | ☐ Yes ☐ No |
| ☐ Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| ☐ Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| ☒ Other (describe) Oil with rain water | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) 5 bbl |

Cause of Release

Tank Overflow

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NDHR1917849099 |
| District RP | 1RP-5578 |
| Facility ID | fDHR1917848956 |
| Application ID | pDHR1917848216 |

| | |
|---|---|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br>☐ Yes ☒ No | If YES, for what reason(s) does the responsible party consider this a major release? |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? | |

## Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Gustavo Fejervary  Title: Environmental Coordinator

Signature: [signature]  Date: 6/12/19

email: G.Fejervary@conocophillips.com  Telephone: (432)210-7037

**OCD Only**

Received by: Dylan Rose-Coss  Date: 06/27/2019

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nDHR1917849099 |
| District RP | 1RP-5578 |
| Facility ID | fDHR1917848956 |
| Application ID | pDHR1917848216 |

# Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

| | |
|---|---|
| What is the shallowest depth to groundwater beneath the area affected by the release? | 82 (ft bgs) |
| Did this release impact groundwater or surface water? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? | ☐ Yes ☒ No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of a wetland? | ☐ Yes ☒ No |
| Are the lateral extents of the release overlying a subsurface mine? | ☐ Yes ☒ No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | ☐ Yes ☒ No |
| Are the lateral extents of the release within a 100-year floodplain? | ☐ Yes ☒ No |
| Did the release impact areas **not** on an exploration, development, production, or storage site? | ☐ Yes ☒ No |

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

**Characterization Report Checklist**: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nDHR1917849099 |
| District RP | 1RP-5578 |
| Facility ID | fDHR1917848956 |
| Application ID | pDHR1917848216 |

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Marvin Soriwei Title: Program Manager, Risk Management & Remediation

Signature: Date: 8/24/2020

email: marvin.soriwei@conocophillips.com Telephone: 832-486-2730

**OCD Only**

Received by: Date:

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nDHR1917849099 |
| District RP | 1RP-5578 |
| Facility ID | fDHR1917848956 |
| Application ID | pDHR1917848216 |

# Remediation Plan

**Remediation Plan Checklist**: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only**: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

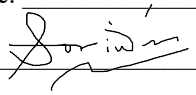
☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Marvin Soriwei  Title: Program Manager, Risk Management & Remediation.

Signature:   Date: 8/24/2020

email: marvin.soriwei@conocophillips.com  Telephone: 832-486-2730

**OCD Only**

Received by: _____  Date: _____

☐ Approved  ☐ Approved with Attached Conditions of Approval  ☐ Denied  ☐ Deferral Approved

Signature: _____  Date: _____

# APPENDIX B
# NMOSE Site Characterization Data

# New Mexico Office of the State Engineer
# Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

| POD Number | POD Sub-basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng | X | Y | Distance | Depth Well | Depth Water | Water Column |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RA 12042 POD1 | RA | LE | 2 | 2 | 1 | 28 | 17S | 32E | 614891 | 3631181 | 2003 | 400 | | |
| RA 10175 | RA | LE | | 2 | 1 | 28 | 17S | 32E | 614814 | 3631005* | 2037 | 158 | | |
| RA 12522 POD1 | RA | LE | 3 | 3 | 4 | 21 | 17S | 32E | 614941 | 3631122 | 2076 | 100 | | |
| RA 12020 POD1 | RA | LE | 2 | 2 | 1 | 28 | 17S | 32E | 614828 | 3630954 | 2078 | 120 | 81 | 39 |
| RA 12522 POD2 | RA | LE | 2 | 2 | 1 | 28 | 17S | 32E | 614949 | 3631098 | 2096 | 100 | | |
| RA 12522 POD3 | RA | LE | 4 | 4 | 3 | 28 | 17S | 32E | 614980 | 3631093 | 2125 | 100 | | |
| RA 12521 POD1 | RA | LE | 3 | 3 | 4 | 21 | 17S | 32E | 615127 | 3631271 | 2167 | 105 | 92 | 13 |
| RA 12020 POD3 | RA | LE | 2 | 1 | 2 | 28 | 17S | 32E | 615152 | 3631019 | 2310 | 112 | 83 | 29 |
| RA 12721 POD1 | RA | LE | 3 | 2 | 3 | 28 | 17S | 32E | 614645 | 3630141 | 2543 | 125 | | |
| RA 12721 POD2 | RA | LE | 1 | 1 | 4 | 28 | 17S | 32E | 615055 | 3630407 | 2609 | 124 | 75 | 49 |

Average Depth to Water: **82 feet**

Minimum Depth: **75 feet**

Maximum Depth: **92 feet**

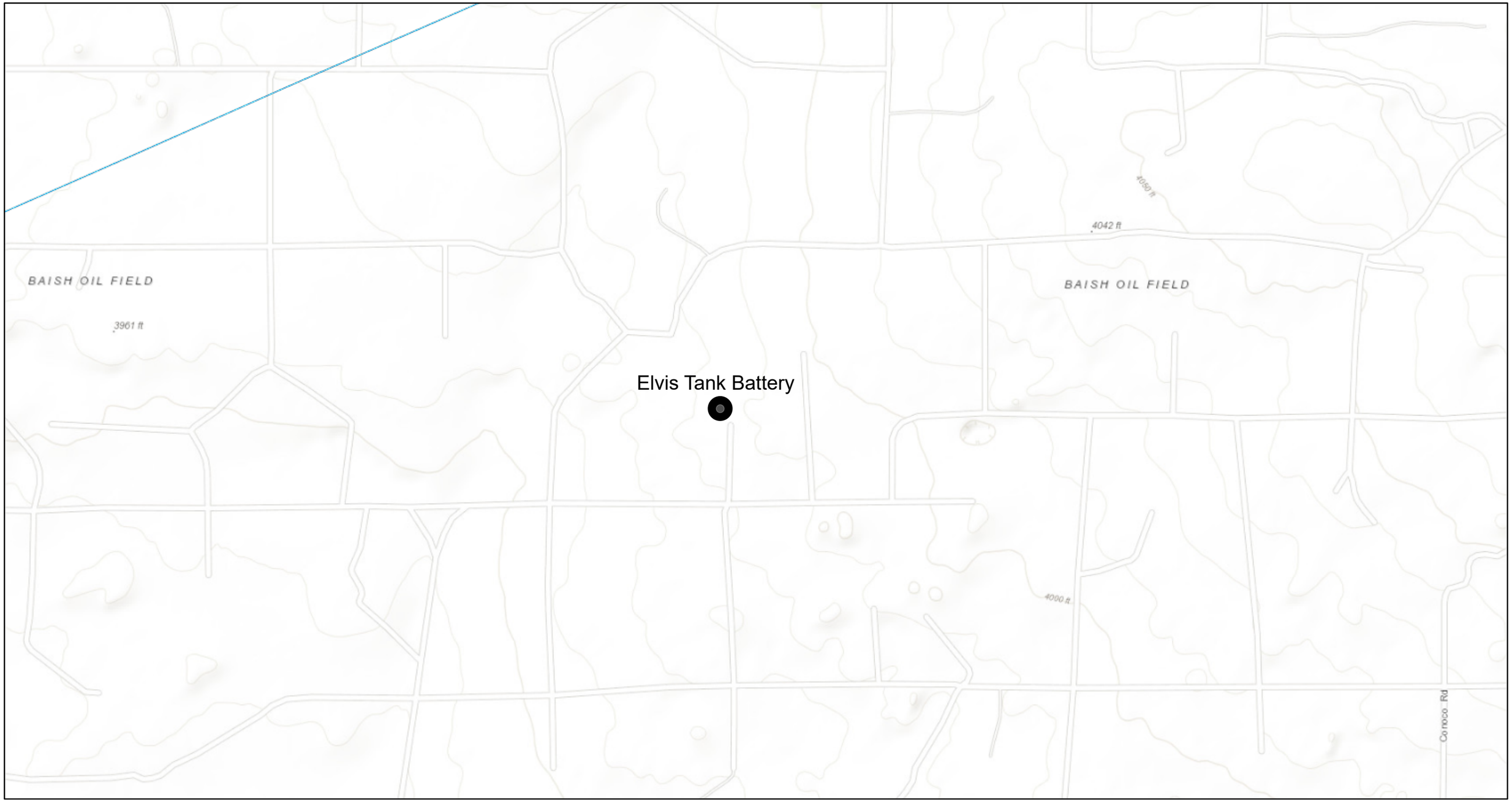
**Record Count:** 10

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 613177.69 **Northing (Y):** 3632219.21 **Radius:** 3000

***UTM location was derived from PLSS - see Help**

# Elvis Tank Battery




3/25/2020, 9:36:36 AM

- Override 1
- OSE Water-bodies
- PLJV Probable Playas
- OSE Streams

1:10,144

0 0.1 0.2 0.4 mi

0 0.15 0.3 0.6 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

# Karst Potential Map

Elvis Tank Battery
1RP-5578


**Legend**

- Elvis Battery
- High
- Low
- Medium

121

Hwy 82

249

Maljamar

Elvis Battery

Loco Hills

82

Bermuda Rd

529

360

Bluegill Rd

Google Earth

Image Landsat / Copernicus

N

9 mi

# APPENDIX C
# Laboratory Analytical Reports

Pace Analytical®
National Center for Testing & Innovation

# ANALYTICAL REPORT

March 05, 2020



## ConocoPhillips - Tetra Tech

| | |
|---|---|
| Sample Delivery Group: | L1193167 |
| Samples Received: | 02/26/2020 |
| Project Number: | 212C-MD-02060 |
| Description: | COP Elvis Tank Battery |
| Site: | LEA COUNTY, NEW MEXICO |
| Report To: | Christian Llull |
| | 901 West Wall |
| | Suite 100 |
| | Midland, TX 79701 |

Entire Report Reviewed By:

Chris McCord
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.

# TABLE OF CONTENTS

## AH-1 (0'-1') L1193167-01 Solid

Collected by: Joe Tyler | Collected date/time: 02/18/20 11:30 | Received date/time: 02/26/20 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1434655 | 1 | 02/27/20 21:30 | 02/27/20 21:45 | KBC | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1437134 | 1 | 03/03/20 23:00 | 03/04/20 00:56 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1435244 | 1 | 02/27/20 09:01 | 02/28/20 12:17 | ACG | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435261 | 1 | 02/27/20 09:01 | 02/27/20 22:09 | BMB | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436142 | 1 | 02/29/20 16:18 | 03/01/20 13:59 | KME | Mt. Juliet, TN |

## AH-1 (2'-3') L1193167-02 Solid

Collected by: Joe Tyler | Collected date/time: 02/18/20 11:45 | Received date/time: 02/26/20 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1434657 | 1 | 02/27/20 21:49 | 02/27/20 22:02 | KBC | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1437134 | 1 | 03/03/20 23:00 | 03/04/20 01:05 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437020 | 1 | 02/27/20 09:01 | 03/03/20 16:30 | DWR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435261 | 1 | 02/27/20 09:01 | 02/27/20 22:28 | BMB | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436142 | 1 | 02/29/20 16:18 | 03/01/20 15:02 | KME | Mt. Juliet, TN |

## AH-2 (0'-0.5') L1193167-03 Solid

Collected by: Joe Tyler | Collected date/time: 02/18/20 13:00 | Received date/time: 02/26/20 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1434657 | 1 | 02/27/20 21:49 | 02/27/20 22:02 | KBC | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1437134 | 20 | 03/03/20 23:00 | 03/04/20 01:14 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437020 | 25 | 02/27/20 09:01 | 03/03/20 16:54 | BMB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1436313 | 1 | 02/27/20 09:01 | 03/01/20 11:25 | BMB | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436428 | 20 | 03/03/20 08:41 | 03/04/20 11:59 | KME | Mt. Juliet, TN |

## AH-3 (0'-0.5') L1193167-04 Solid

Collected by: Joe Tyler | Collected date/time: 02/18/20 13:10 | Received date/time: 02/26/20 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1434657 | 1 | 02/27/20 21:49 | 02/27/20 22:02 | KBC | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1437134 | 20 | 03/03/20 23:00 | 03/04/20 01:24 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437020 | 100 | 02/27/20 09:01 | 03/03/20 17:18 | BMB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1436313 | 10 | 02/27/20 09:01 | 03/01/20 11:45 | BMB | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436428 | 40 | 03/03/20 08:41 | 03/04/20 12:25 | KME | Mt. Juliet, TN |

## AH-4 (0'-0.5') L1193167-05 Solid

Collected by: Joe Tyler | Collected date/time: 02/18/20 13:20 | Received date/time: 02/26/20 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1434657 | 1 | 02/27/20 21:49 | 02/27/20 22:02 | KBC | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1437134 | 1 | 03/03/20 23:00 | 03/04/20 01:33 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1436167 | 1 | 02/27/20 09:01 | 03/01/20 17:07 | ADM | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435277 | 1 | 02/27/20 09:01 | 02/27/20 20:52 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436428 | 1 | 03/03/20 08:41 | 03/04/20 08:46 | KME | Mt. Juliet, TN |

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

## AH-5 (0'-0.5') L1193167-06 Solid

Collected by: Joe Tyler
Collected date/time: 02/18/20 13:30
Received date/time: 02/26/20 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1434657 | 1 | 02/27/20 21:49 | 02/27/20 22:02 | KBC | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1437134 | 1 | 03/03/20 23:00 | 03/04/20 01:43 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1436167 | 1 | 02/27/20 09:01 | 03/01/20 17:31 | ADM | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435277 | 1 | 02/27/20 09:01 | 02/27/20 22:09 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436428 | 1 | 03/03/20 08:41 | 03/04/20 08:21 | KME | 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 McCord
Project Manager

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 97.7 | | 1 | 02/27/2020 21:45 | WG1434655 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 10.6 | B | 0.814 | 10.2 | 1 | 03/04/2020 00:56 | WG1437134 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0222 | 0.102 | 1 | 02/28/2020 12:17 | WG1435244 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *94.3* | | | *77.0-120* | | *02/28/2020 12:17* | WG1435244 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000409 | 0.00102 | 1 | 02/27/2020 22:09 | WG1435261 |
| Toluene | U | | 0.00128 | 0.00512 | 1 | 02/27/2020 22:09 | WG1435261 |
| Ethylbenzene | U | | 0.000542 | 0.00256 | 1 | 02/27/2020 22:09 | WG1435261 |
| Total Xylenes | U | | 0.00489 | 0.00665 | 1 | 02/27/2020 22:09 | WG1435261 |
| *(S) Toluene-d8* | *99.1* | | | *75.0-131* | | *02/27/2020 22:09* | WG1435261 |
| *(S) 4-Bromofluorobenzene* | *95.9* | | | *67.0-138* | | *02/27/2020 22:09* | WG1435261 |
| *(S) 1,2-Dichloroethane-d4* | *98.1* | | | *70.0-130* | | *02/27/2020 22:09* | WG1435261 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | 2.98 | J | 1.65 | 4.09 | 1 | 03/01/2020 13:59 | WG1436142 |
| C28-C40 Oil Range | 12.9 | | 0.280 | 4.09 | 1 | 03/01/2020 13:59 | WG1436142 |
| *(S) o-Terphenyl* | *61.7* | | | *18.0-148* | | *03/01/2020 13:59* | WG1436142 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 97.1 | | 1 | 02/27/2020 22:02 | WG1434657 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 26.8 | B | 0.818 | 10.3 | 1 | 03/04/2020 01:05 | WG1437134 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0223 | 0.103 | 1 | 03/03/2020 16:30 | WG1437020 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *98.2* | | | *77.0-120* | | *03/03/2020 16:30* | WG1437020 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000412 | 0.00103 | 1 | 02/27/2020 22:28 | WG1435261 |
| Toluene | U | | 0.00129 | 0.00515 | 1 | 02/27/2020 22:28 | WG1435261 |
| Ethylbenzene | U | | 0.000546 | 0.00257 | 1 | 02/27/2020 22:28 | WG1435261 |
| Total Xylenes | U | | 0.00492 | 0.00669 | 1 | 02/27/2020 22:28 | WG1435261 |
| *(S) Toluene-d8* | *98.3* | | | *75.0-131* | | *02/27/2020 22:28* | WG1435261 |
| *(S) 4-Bromofluorobenzene* | *94.1* | | | *67.0-138* | | *02/27/2020 22:28* | WG1435261 |
| *(S) 1,2-Dichloroethane-d4* | *101* | | | *70.0-130* | | *02/27/2020 22:28* | WG1435261 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | 9.90 | | 1.66 | 4.12 | 1 | 03/01/2020 15:02 | WG1436142 |
| C28-C40 Oil Range | 33.2 | | 0.282 | 4.12 | 1 | 03/01/2020 15:02 | WG1436142 |
| *(S) o-Terphenyl* | *55.5* | | | *18.0-148* | | *03/01/2020 15:02* | WG1436142 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 96.4 | | 1 | 02/27/2020 22:02 | WG1434657 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 999 | | 16.5 | 207 | 20 | 03/04/2020 01:14 | WG1437134 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | 9.12 | | 0.563 | 2.59 | 25 | 03/03/2020 16:54 | WG1437020 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *100* | | | *77.0-120* | | *03/03/2020 16:54* | WG1437020 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | 0.000830 | J | 0.000415 | 0.00104 | 1 | 03/01/2020 11:25 | WG1436313 |
| Toluene | 0.0248 | | 0.00130 | 0.00518 | 1 | 03/01/2020 11:25 | WG1436313 |
| Ethylbenzene | 0.00983 | | 0.000550 | 0.00259 | 1 | 03/01/2020 11:25 | WG1436313 |
| Total Xylenes | 0.0473 | | 0.00496 | 0.00674 | 1 | 03/01/2020 11:25 | WG1436313 |
| *(S) Toluene-d8* | *107* | | | *75.0-131* | | *03/01/2020 11:25* | WG1436313 |
| *(S) 4-Bromofluorobenzene* | *109* | | | *67.0-138* | | *03/01/2020 11:25* | WG1436313 |
| *(S) 1,2-Dichloroethane-d4* | *112* | | | *70.0-130* | | *03/01/2020 11:25* | WG1436313 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | 4490 | | 33.4 | 83.0 | 20 | 03/04/2020 11:59 | WG1436428 |
| C28-C40 Oil Range | 2000 | | 5.68 | 83.0 | 20 | 03/04/2020 11:59 | WG1436428 |
| *(S) o-Terphenyl* | *467* | J7 | | *18.0-148* | | *03/04/2020 11:59* | WG1436428 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 97.2 | | 1 | 02/27/2020 22:02 | WG1434657 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 4520 | | 16.4 | 206 | 20 | 03/04/2020 01:24 | WG1437134 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | 48.6 | | 2.23 | 10.3 | 100 | 03/03/2020 17:18 | WG1437020 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *99.1* | | | *77.0-120* | | *03/03/2020 17:18* | WG1437020 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | 0.0239 | | 0.00412 | 0.0103 | 10 | 03/01/2020 11:45 | WG1436313 |
| Toluene | 0.0415 | J | 0.0129 | 0.0515 | 10 | 03/01/2020 11:45 | WG1436313 |
| Ethylbenzene | 0.0167 | J | 0.00545 | 0.0257 | 10 | 03/01/2020 11:45 | WG1436313 |
| Total Xylenes | 0.696 | | 0.0492 | 0.0669 | 10 | 03/01/2020 11:45 | WG1436313 |
| *(S) Toluene-d8* | *105* | | | *75.0-131* | | *03/01/2020 11:45* | WG1436313 |
| *(S) 4-Bromofluorobenzene* | *108* | | | *67.0-138* | | *03/01/2020 11:45* | WG1436313 |
| *(S) 1,2-Dichloroethane-d4* | *116* | | | *70.0-130* | | *03/01/2020 11:45* | WG1436313 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | 10400 | | 66.3 | 165 | 40 | 03/04/2020 12:25 | WG1436428 |
| C28-C40 Oil Range | 4760 | | 11.3 | 165 | 40 | 03/04/2020 12:25 | WG1436428 |
| *(S) o-Terphenyl* | *1640* | J7 | | *18.0-148* | | *03/04/2020 12:25* | WG1436428 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 98.5 | | 1 | 02/27/2020 22:02 | WG1434657 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 458 | | 0.807 | 10.1 | 1 | 03/04/2020 01:33 | WG1437134 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0220 | 0.101 | 1 | 03/01/2020 17:07 | WG1436167 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *98.3* | | | *77.0-120* | | *03/01/2020 17:07* | WG1436167 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | 0.000507 | J | 0.000406 | 0.00101 | 1 | 02/27/2020 20:52 | WG1435277 |
| Toluene | U | | 0.00127 | 0.00507 | 1 | 02/27/2020 20:52 | WG1435277 |
| Ethylbenzene | U | | 0.000538 | 0.00254 | 1 | 02/27/2020 20:52 | WG1435277 |
| Total Xylenes | U | | 0.00485 | 0.00660 | 1 | 02/27/2020 20:52 | WG1435277 |
| *(S) Toluene-d8* | *101* | | | *75.0-131* | | *02/27/2020 20:52* | WG1435277 |
| *(S) 4-Bromofluorobenzene* | *94.1* | | | *67.0-138* | | *02/27/2020 20:52* | WG1435277 |
| *(S) 1,2-Dichloroethane-d4* | *86.6* | | | *70.0-130* | | *02/27/2020 20:52* | WG1435277 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | 71.4 | | 1.63 | 4.06 | 1 | 03/04/2020 08:46 | WG1436428 |
| C28-C40 Oil Range | 69.7 | | 0.278 | 4.06 | 1 | 03/04/2020 08:46 | WG1436428 |
| *(S) o-Terphenyl* | *15.0* | J2 | | *18.0-148* | | *03/04/2020 08:46* | WG1436428 |

Sample Narrative:

L1193167-05 WG1436428: Surrogate failure due to matrix interference

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 92.9 | | 1 | 02/27/2020 22:02 | WG1434657 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 269 | | 0.855 | 10.8 | 1 | 03/04/2020 01:43 | WG1437134 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0234 | 0.108 | 1 | 03/01/2020 17:31 | WG1436167 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *98.9* | | | *77.0-120* | | *03/01/2020 17:31* | WG1436167 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000430 | 0.00108 | 1 | 02/27/2020 22:09 | WG1435277 |
| Toluene | U | | 0.00135 | 0.00538 | 1 | 02/27/2020 22:09 | WG1435277 |
| Ethylbenzene | U | | 0.000570 | 0.00269 | 1 | 02/27/2020 22:09 | WG1435277 |
| Total Xylenes | U | | 0.00514 | 0.00699 | 1 | 02/27/2020 22:09 | WG1435277 |
| *(S) Toluene-d8* | *96.7* | | | *75.0-131* | | *02/27/2020 22:09* | WG1435277 |
| *(S) 4-Bromofluorobenzene* | *94.6* | | | *67.0-138* | | *02/27/2020 22:09* | WG1435277 |
| *(S) 1,2-Dichloroethane-d4* | *88.8* | | | *70.0-130* | | *02/27/2020 22:09* | WG1435277 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | 6.38 | | 1.73 | 4.30 | 1 | 03/04/2020 08:21 | WG1436428 |
| C28-C40 Oil Range | 4.13 | J | 0.295 | 4.30 | 1 | 03/04/2020 08:21 | WG1436428 |
| *(S) o-Terphenyl* | *63.7* | | | *18.0-148* | | *03/04/2020 08:21* | WG1436428 |

## Method Blank (MB)

(MB) R3503973-1 02/27/20 21:45

| Analyte | MB Result % | MB Qualifier | MB MDL % | MB RDL % |
|---|---|---|---|---|
| Total Solids | 0.00600 | | | |

## L1193150-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1193150-05 02/27/20 21:45 • (DUP) R3503973-3 02/27/20 21:45

| Analyte | Original Result % | DUP Result % | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Total Solids | 89.8 | 89.5 | 1 | 0.360 | | 10 |

## Laboratory Control Sample (LCS)

(LCS) R3503973-2 02/27/20 21:45

| Analyte | Spike Amount % | LCS Result % | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Total Solids | 50.0 | 50.0 | 100 | 85.0-115 | |

## Method Blank (MB)

(MB) R3503974-1 02/27/20 22:02

| Analyte | MB Result % | MB Qualifier | MB MDL % | MB RDL % |
|---|---|---|---|---|
| Total Solids | 0.00100 | | | |

## L1193167-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1193167-02 02/27/20 22:02 • (DUP) R3503974-3 02/27/20 22:02

| Analyte | Original Result % | DUP Result % | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Total Solids | 97.1 | 97.2 | 1 | 0.0273 | | 10 |

## Laboratory Control Sample (LCS)

(LCS) R3503974-2 02/27/20 22:02

| Analyte | Spike Amount % | LCS Result % | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Total Solids | 50.0 | 50.0 | 100 | 85.0-115 | |

## Method Blank (MB)

(MB) R3505117-1 03/04/20 00:10

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| Chloride | 2.72 | J | 0.795 | 10.0 |

## L1193765-39 Original Sample (OS) • Duplicate (DUP)

(OS) L1193765-39 03/04/20 02:50 • (DUP) R3505117-5 03/04/20 02:59

| Analyte | Original Result mg/kg | DUP Result mg/kg | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Chloride | 10900 | 8660 | 100 | 23.0 | J3 | 20 |

## L1194117-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1194117-07 03/04/20 04:34 • (DUP) R3505117-6 03/04/20 04:44

| Analyte | Original Result mg/kg | DUP Result mg/kg | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Chloride | 1210 | 1180 | 5 | 2.31 | | 20 |

## Laboratory Control Sample (LCS)

(LCS) R3505117-2 03/04/20 00:20

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Chloride | 200 | 195 | 97.5 | 90.0-110 | |

## L1193167-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1193167-06 03/04/20 01:43 • (MS) R3505117-3 03/04/20 01:52 • (MSD) R3505117-4 03/04/20 02:02

| Analyte | Spike Amount (dry) mg/kg | Original Result (dry) mg/kg | MS Result (dry) mg/kg | MSD Result (dry) mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 538 | 269 | 805 | 823 | 99.7 | 103 | 1 | 80.0-120 | | | 2.22 | 20 |

## Method Blank (MB)

(MB) R3503849-5 02/28/20 02:57

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | U | | 0.0217 | 0.100 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *91.6* | | | *77.0-120* |

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

(LCS) R3503849-3 02/28/20 01:56 • (LCSD) R3503849-4 02/28/20 02:16

| 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 | 5.83 | 5.07 | 106 | 92.2 | 72.0-127 | | | 13.9 | 20 |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | | *107* | *102* | *77.0-120* | | | | |

## Method Blank (MB)

(MB) R3504820-3 03/01/20 09:42

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | U | | 0.0217 | 0.100 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *99.3* | | | *77.0-120* |

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

(LCS) R3504820-1 03/01/20 08:30 • (LCSD) R3504820-2 03/01/20 08:54

| 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 % |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | 5.50 | 5.91 | 5.42 | 107 | 98.5 | 72.0-127 | | | 8.65 | 20 |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | | *109* | *106* | *77.0-120* | | | | |

## Method Blank (MB)

(MB) R3504970-2 03/03/20 14:07

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | U | | 0.0217 | 0.100 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *98.8* | | | *77.0-120* |

## Laboratory Control Sample (LCS)

(LCS) R3504970-1 03/03/20 13:19

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | 5.50 | 5.91 | 107 | 72.0-127 | |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | *108* | *77.0-120* | |

## Method Blank (MB)

(MB) R3504206-2 02/27/20 19:56

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| Benzene | U | | 0.000400 | 0.00100 |
| Ethylbenzene | U | | 0.000530 | 0.00250 |
| Toluene | U | | 0.00125 | 0.00500 |
| Xylenes, Total | U | | 0.00478 | 0.00650 |
| *(S) Toluene-d8* | *99.4* | | | *75.0-131* |
| *(S) 4-Bromofluorobenzene* | *96.9* | | | *67.0-138* |
| *(S) 1,2-Dichloroethane-d4* | *101* | | | *70.0-130* |

## Laboratory Control Sample (LCS)

(LCS) R3504206-1 02/27/20 18:59

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.125 | 0.126 | 101 | 70.0-123 | |
| Ethylbenzene | 0.125 | 0.0982 | 78.6 | 74.0-126 | |
| Toluene | 0.125 | 0.0991 | 79.3 | 75.0-121 | |
| Xylenes, Total | 0.375 | 0.307 | 81.9 | 72.0-127 | |
| *(S) Toluene-d8* | | | *93.9* | *75.0-131* | |
| *(S) 4-Bromofluorobenzene* | | | *97.8* | *67.0-138* | |
| *(S) 1,2-Dichloroethane-d4* | | | *113* | *70.0-130* | |

## L1193167-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1193167-02 02/27/20 22:28 • (MS) R3504206-3 02/28/20 03:50 • (MSD) R3504206-4 02/28/20 04:08

| Analyte | Spike Amount (dry) mg/kg | Original Result (dry) mg/kg | MS Result (dry) mg/kg | MSD Result (dry) mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.129 | U | 0.143 | 0.138 | 111 | 107 | 1 | 10.0-149 | | | 3.66 | 37 |
| Ethylbenzene | 0.129 | U | 0.114 | 0.114 | 88.8 | 88.8 | 1 | 10.0-160 | | | 0.000 | 38 |
| Toluene | 0.129 | U | 0.120 | 0.119 | 93.6 | 92.8 | 1 | 10.0-156 | | | 0.858 | 38 |
| Xylenes, Total | 0.386 | U | 0.370 | 0.349 | 95.7 | 90.4 | 1 | 10.0-160 | | | 5.73 | 38 |
| *(S) Toluene-d8* | | | | | *97.3* | *97.7* | | *75.0-131* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | | *98.7* | *96.3* | | *67.0-138* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | | *106* | *100* | | *70.0-130* | | | | |

## Method Blank (MB)

(MB) R3503885-2 02/27/20 20:13

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| Benzene | U | | 0.000400 | 0.00100 |
| Ethylbenzene | U | | 0.000530 | 0.00250 |
| Toluene | U | | 0.00125 | 0.00500 |
| Xylenes, Total | U | | 0.00478 | 0.00650 |
| *(S) Toluene-d8* | *97.2* | | | *75.0-131* |
| *(S) 4-Bromofluorobenzene* | *93.2* | | | *67.0-138* |
| *(S) 1,2-Dichloroethane-d4* | *88.4* | | | *70.0-130* |

## Laboratory Control Sample (LCS)

(LCS) R3503885-1 02/27/20 19:14

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.125 | 0.146 | 117 | 70.0-123 | |
| Ethylbenzene | 0.125 | 0.129 | 103 | 74.0-126 | |
| Toluene | 0.125 | 0.110 | 88.0 | 75.0-121 | |
| Xylenes, Total | 0.375 | 0.387 | 103 | 72.0-127 | |
| *(S) Toluene-d8* | | | *89.6* | *75.0-131* | |
| *(S) 4-Bromofluorobenzene* | | | *96.1* | *67.0-138* | |
| *(S) 1,2-Dichloroethane-d4* | | | *99.7* | *70.0-130* | |

## L1193167-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1193167-06 02/27/20 22:09 • (MS) R3503885-3 02/28/20 03:59 • (MSD) R3503885-4 02/28/20 04:18

| Analyte | Spike Amount (dry) mg/kg | Original Result (dry) mg/kg | MS Result (dry) mg/kg | MSD Result (dry) mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.135 | U | 0.153 | 0.146 | 114 | 109 | 1 | 10.0-149 | | | 4.32 | 37 |
| Ethylbenzene | 0.135 | U | 0.139 | 0.138 | 103 | 102 | 1 | 10.0-160 | | | 0.778 | 38 |
| Toluene | 0.135 | U | 0.128 | 0.123 | 95.2 | 91.2 | 1 | 10.0-156 | | | 4.29 | 38 |
| Xylenes, Total | 0.404 | U | 0.418 | 0.406 | 103 | 101 | 1 | 10.0-160 | | | 2.88 | 38 |
| *(S) Toluene-d8* | | | | | *97.5* | *96.3* | | *75.0-131* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | | *96.2* | *94.9* | | *67.0-138* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | | *90.4* | *91.5* | | *70.0-130* | | | | |

## Method Blank (MB)

(MB) R3504946-3 03/01/20 07:36

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| Benzene | U | | 0.000400 | 0.00100 |
| Ethylbenzene | U | | 0.000530 | 0.00250 |
| Toluene | U | | 0.00125 | 0.00500 |
| Xylenes, Total | U | | 0.00478 | 0.00650 |
| *(S) Toluene-d8* | *109* | | | *75.0-131* |
| *(S) 4-Bromofluorobenzene* | *89.8* | | | *67.0-138* |
| *(S) 1,2-Dichloroethane-d4* | *93.9* | | | *70.0-130* |

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

(LCS) R3504946-1 03/01/20 06:19 • (LCSD) R3504946-2 03/01/20 06:38

| 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 | 0.125 | 0.122 | 0.128 | 97.6 | 102 | 70.0-123 | | | 4.80 | 20 |
| Ethylbenzene | 0.125 | 0.117 | 0.120 | 93.6 | 96.0 | 74.0-126 | | | 2.53 | 20 |
| Toluene | 0.125 | 0.118 | 0.123 | 94.4 | 98.4 | 75.0-121 | | | 4.15 | 20 |
| Xylenes, Total | 0.375 | 0.348 | 0.374 | 92.8 | 99.7 | 72.0-127 | | | 7.20 | 20 |
| *(S) Toluene-d8* | | | | *101* | *104* | *75.0-131* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | *96.1* | *96.8* | *67.0-138* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | *105* | *105* | *70.0-130* | | | | |

## Method Blank (MB)

(MB) R3504350-2 03/01/20 13:21

| 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 | 0.421 | J | 0.274 | 4.00 |
| *(S) o-Terphenyl* | *60.8* | | | *18.0-148* |

## Laboratory Control Sample (LCS)

(LCS) R3504350-1 03/01/20 11:51

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| C10-C28 Diesel Range | 50.0 | 33.8 | 67.6 | 50.0-150 | |
| *(S) o-Terphenyl* | | | *67.1* | *18.0-148* | |

## L1193150-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1193150-03 03/01/20 14:24 • (MS) R3504350-3 03/01/20 14:37 • (MSD) R3504350-4 03/01/20 14:49

| Analyte | Spike Amount (dry) mg/kg | Original Result (dry) mg/kg | MS Result (dry) mg/kg | MSD Result (dry) mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C10-C28 Diesel Range | 55.3 | 14.4 | 52.4 | 41.9 | 68.8 | 50.0 | 1 | 50.0-150 | | J3 | 22.3 | 20 |
| *(S) o-Terphenyl* | | | | | *61.0* | *54.8* | | *18.0-148* | | | | |

## Method Blank (MB)

(MB) R3505106-1 03/04/20 04:26

| 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* | *62.8* | | | *18.0-148* |

## Laboratory Control Sample (LCS)

(LCS) R3505106-2 03/04/20 04:38

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| C10-C28 Diesel Range | 50.0 | 40.0 | 80.0 | 50.0-150 | |
| *(S) o-Terphenyl* | | | *77.0* | *18.0-148* | |

## 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

| | |
|---|---|
| (dry) | Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils]. |
| MDL | Method Detection Limit. |
| MDL (dry) | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| RDL (dry) | 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. |
| 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. |
| J7 | Surrogate recovery cannot be used for control limit evaluation due to dilution. |

# ACCREDITATIONS & LOCATIONS





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 [1] | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina [1] | DW21704 |
| Georgia | NELAP | North Carolina [3] | 41 |
| Georgia [1] | 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 | LAO00356 |
| Kentucky [1 6] | 90010 | South Carolina | 84004 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana [1] | LA180010 | Texas | T104704245-18-15 |
| Maine | TN0002 | Texas [5] | 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 |

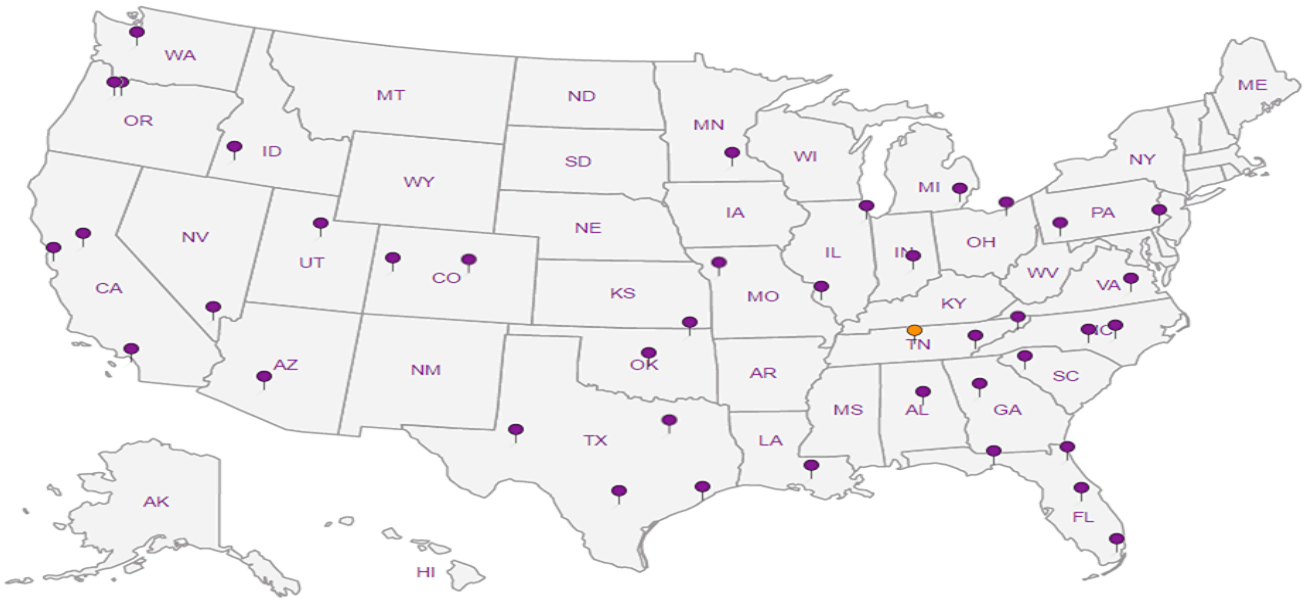
## Third Party Federal Accreditations

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

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] 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.



Analysis Request of Chain of Custody Record

Page : 1 of 1

# Tetra Tech, Inc.

901 West Wall Street, Suite 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

| | | | |
|---|---|---|---|
| **Client Name:** | Conoco Phillips | **Site Manager:** | Christian Llull |
| **Project Name:** | COP Elvis Tank Battery | **Contact Info:** | Email: christian.llull@tetratech.com<br>Phone: (512) 338-1667 |
| **Project Location:** (county, state) | Lea County, New Mexico | **Project #:** | 212C-MD-02060 |
| **Invoice to:** | Accounts Payable<br>901 West Wall Street, Suite 100 Midland, Texas 79701 | | |
| **Receiving Laboratory:** | Pace Analytical | **Sampler Signature:** | Joe Tyler |
| **Comments:** | COPTETRA Acctnum | | |

**ANALYSIS REQUEST**
**(Circle or Specify Method No.)**

J069

| LAB # (LAB USE ONLY) | SAMPLE IDENTIFICATION | SAMPLING DATE | SAMPLING TIME | MATRIX: WATER | MATRIX: SOIL | MATRIX: | PRESERVATIVE METHOD: HCL | PRESERVATIVE METHOD: $HNO_3$ | PRESERVATIVE METHOD: ICE | PRESERVATIVE METHOD: NONE | # CONTAINERS | FILTERED (Y/N) | BTEX 8021B BTEX 8260B | TPH TX1005 (Ext to C35) | TPH 8015M ( GRO - DRO - ORO - MRO) | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8260B / 624 | GC/MS Semi. Vol. 8270C/625 | PCB's 8082 / 608 | NORM | PLM (Asbestos) | Chloride 300.0 | Chloride Sulfate TDS | General Water Chemistry (see attached list) | Anion/Cation Balance | TPH 8015R | | HOLD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L1193167 | | YEAR: 2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -01 | AH-1 (0'-1') | 2/18/2020 | 1130 | | X | | | | X | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | |
| -02 | AH-1 (2'-3') | 2/18/2020 | 1145 | | X | | | | X | | 1 | N | | | | | | | | | | | | | | | | | | | | | |
| -03 | AH-2 (0'-0.5') | 2/18/2020 | 1300 | | X | | | | X | | 1 | N | | | | | | | | | | | | | | | | | | | | | |
| -04 | AH-3 (0'-0.5') | 2/18/2020 | 1310 | | X | | | | X | | 1 | N | | | | | | | | | | | | | | | | | | | | | |
| -05 | AH-4 (0'-0.5') | 2/18/2020 | 1320 | | X | | | | X | | 1 | N | | | | | | | | | | | | | | | | | | | | | |
| -06 | AH-5 (0'-0.5') | 2/18/2020 | 1330 | | X | | | | X | | 1 | N | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Relinquished by: | Joe Tyler | Date: 2-25-20 | Time: 1410 | Received by: | | Date: 2-25-20 | Time: 1410 |
| Relinquished by: | | Date: 2-25-20 | Time: 1710 | Received by: | Sen A | Date: 2-25-20 | Time: 1710 |
| Relinquished by: | | Date: | Time: | Received by: | W Lee | Date: 2/26/20 | Time: 808 |

ORIGINAL COPY

Containers Received 6

**LAB USE ONLY**

Sample Temperature - NP #2
3.4 + .1 = 3.5

**REMARKS:**

- [X] Standard
- [ ] RUSH: Same Day 24 hr. 48 hr. 72 hr.
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

RAD SCREEN: <0.5 mR/hr

## Pace Analytical National Center for Testing & Innovation
## Cooler Receipt Form

| | | |
|---|---|---|
| Client: | L1193167 | |
| Cooler Received/Opened On: 2/26/20 Temperature: | 3.5 | |
| Received by: Willie Taylor 800 | | |
| Signature: Willie Taylor | | |

| 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? | | | |

Pace Analytical®
National Center for Testing & Innovation

# ANALYTICAL REPORT

March 06, 2020



## ConocoPhillips - Tetra Tech

| | |
|---|---|
| Sample Delivery Group: | L1193661 |
| Samples Received: | 02/27/2020 |
| Project Number: | 212C-MD-02060 |
| Description: | COP Elvis Tank Battery |
| Site: | LEA COUNTY, NEW MEXICO |
| Report To: | Christian Llull |
| | 901 West Wall |
| | Suite 100 |
| | Midland, TX 79701 |

Entire Report Reviewed By:

Chris McCord
Project Manager



# TABLE OF CONTENTS

## BH-2 (0'-1') L1193661-01 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 11:00 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435869 | 1 | 03/02/20 14:29 | 03/02/20 14:38 | KDW | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 12:18 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437039 | 1 | 02/28/20 14:19 | 03/03/20 06:12 | JHH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 18:41 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436663 | 1 | 03/02/20 10:16 | 03/02/20 19:47 | KME | Mt. Juliet, TN |

## BH-2 (2'-3') L1193661-02 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 11:10 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435869 | 1 | 03/02/20 14:29 | 03/02/20 14:38 | KDW | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 12:28 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437039 | 1 | 02/28/20 14:19 | 03/03/20 06:36 | JHH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 19:01 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436663 | 1 | 03/02/20 10:16 | 03/04/20 10:02 | KME | Mt. Juliet, TN |

## BH-2 (4'-5') L1193661-03 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 11:20 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435871 | 1 | 03/02/20 14:15 | 03/02/20 14:27 | KDW | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 12:38 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437039 | 1 | 02/28/20 14:19 | 03/03/20 07:00 | JHH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 19:21 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436869 | 1 | 03/04/20 07:41 | 03/04/20 19:47 | FM | Mt. Juliet, TN |

## BH-2 (6'-7') L1193661-04 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 11:30 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435871 | 1 | 03/02/20 14:15 | 03/02/20 14:27 | KDW | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 12:47 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437039 | 1 | 02/28/20 14:19 | 03/03/20 07:24 | JHH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 19:41 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436869 | 1 | 03/04/20 07:41 | 03/04/20 18:56 | FM | Mt. Juliet, TN |

## BH-3 (0'-1') L1193661-05 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 11:50 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435871 | 1 | 03/02/20 14:15 | 03/02/20 14:27 | KDW | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 12:57 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437039 | 1 | 02/28/20 14:19 | 03/03/20 07:48 | JHH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 20:01 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436869 | 1 | 03/04/20 07:41 | 03/04/20 19:09 | FM | Mt. Juliet, TN |

## BH-3 (2'-3') L1193661-06 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 12:00 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435871 | 1 | 03/02/20 14:15 | 03/02/20 14:27 | KDW | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 13:06 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437039 | 1 | 02/28/20 14:19 | 03/03/20 08:12 | JHH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 20:22 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436869 | 1 | 03/04/20 07:41 | 03/04/20 20:12 | FM | Mt. Juliet, TN |

## BH-3 (4'-5') L1193661-07 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 12:10 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435871 | 1 | 03/02/20 14:15 | 03/02/20 14:27 | KDW | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 13:25 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437039 | 1 | 02/28/20 14:19 | 03/03/20 09:26 | JHH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 20:42 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436869 | 1 | 03/04/20 07:41 | 03/04/20 19:21 | FM | Mt. Juliet, TN |

## BH-3 (6'-7') L1193661-08 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 12:20 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435871 | 1 | 03/02/20 14:15 | 03/02/20 14:27 | KDW | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 13:54 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437039 | 1 | 02/28/20 14:19 | 03/03/20 09:50 | JHH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 21:02 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436869 | 1 | 03/04/20 07:41 | 03/04/20 19:34 | FM | Mt. Juliet, TN |

## AH-6 (0'-1') L1193661-09 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 13:00 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435871 | 1 | 03/02/20 14:15 | 03/02/20 14:27 | KDW | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 14:03 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437326 | 1 | 02/28/20 14:19 | 03/03/20 21:17 | DWR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 21:22 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1438752 | 1 | 03/05/20 17:20 | 03/06/20 04:28 | JDG | Mt. Juliet, TN |

## AH-6 (2'-3') L1193661-10 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 13:10 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435871 | 1 | 03/02/20 14:15 | 03/02/20 14:27 | KDW | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 14:13 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437251 | 1 | 02/28/20 14:19 | 03/03/20 17:02 | ACG | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 21:42 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436869 | 1 | 03/04/20 07:41 | 03/04/20 18:30 | FM | Mt. Juliet, TN |

## AH-6 (4'-5') L1193661-11 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 13:20 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435871 | 1 | 03/02/20 14:15 | 03/02/20 14:27 | KDW | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 14:22 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437251 | 1 | 02/28/20 14:19 | 03/03/20 17:25 | ACG | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 22:02 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436869 | 1 | 03/04/20 07:41 | 03/04/20 18:43 | FM | Mt. Juliet, TN |

## AH-7 (0'-1') L1193661-12 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 14:00 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435871 | 1 | 03/02/20 14:15 | 03/02/20 14:27 | KDW | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 14:32 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437251 | 1 | 02/28/20 14:19 | 03/03/20 17:47 | ACG | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 22:22 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436869 | 1 | 03/04/20 07:41 | 03/04/20 17:39 | FM | Mt. Juliet, TN |

## AH-7 (2'-3') L1193661-13 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 14:10 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435873 | 1 | 02/29/20 23:47 | 02/29/20 23:58 | KBC | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 14:41 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1438732 | 1 | 02/28/20 14:19 | 03/05/20 15:22 | ADM | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 22:43 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436869 | 1 | 03/04/20 07:41 | 03/04/20 17:52 | FM | Mt. Juliet, TN |

## AH-7 (4'-5') L1193661-14 Solid

Collected by: Joe Tyler | Collected date/time: 02/25/20 14:20 | Received date/time: 02/27/20 08:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG1435873 | 1 | 02/29/20 23:47 | 02/29/20 23:58 | KBC | Mt. Juliet, TN |
| Wet Chemistry by Method 300.0 | WG1436108 | 1 | 03/04/20 10:46 | 03/04/20 15:00 | ST | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG1437041 | 1 | 02/28/20 14:19 | 03/03/20 02:00 | ACG | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1435956 | 1 | 02/28/20 14:19 | 02/28/20 23:03 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1436869 | 1 | 03/04/20 07:41 | 03/04/20 18:04 | FM | Mt. Juliet, TN |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 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 McCord
Project Manager

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 87.8 | | 1 | 03/02/2020 14:38 | WG1435869 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 235 | | 0.905 | 11.4 | 1 | 03/04/2020 12:18 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0247 | 0.114 | 1 | 03/03/2020 06:12 | WG1437039 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *97.8* | | | *77.0-120* | | *03/03/2020 06:12* | WG1437039 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000455 | 0.00114 | 1 | 02/28/2020 18:41 | WG1435956 |
| Toluene | U | | 0.00142 | 0.00569 | 1 | 02/28/2020 18:41 | WG1435956 |
| Ethylbenzene | U | | 0.000604 | 0.00285 | 1 | 02/28/2020 18:41 | WG1435956 |
| Total Xylenes | U | | 0.00544 | 0.00740 | 1 | 02/28/2020 18:41 | WG1435956 |
| *(S) Toluene-d8* | *111* | | | *75.0-131* | | *02/28/2020 18:41* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *102* | | | *67.0-138* | | *02/28/2020 18:41* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *102* | | | *70.0-130* | | *02/28/2020 18:41* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | 49.0 | | 1.83 | 4.55 | 1 | 03/02/2020 19:47 | WG1436663 |
| C28-C40 Oil Range | 92.2 | | 0.312 | 4.55 | 1 | 03/02/2020 19:47 | WG1436663 |
| *(S) o-Terphenyl* | *67.8* | | | *18.0-148* | | *03/02/2020 19:47* | WG1436663 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 98.0 | | 1 | 03/02/2020 14:38 | WG1435869 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 93.6 | | 0.811 | 10.2 | 1 | 03/04/2020 12:28 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0221 | 0.102 | 1 | 03/03/2020 06:36 | WG1437039 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *98.4* | | | *77.0-120* | | *03/03/2020 06:36* | WG1437039 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000408 | 0.00102 | 1 | 02/28/2020 19:01 | WG1435956 |
| Toluene | U | | 0.00128 | 0.00510 | 1 | 02/28/2020 19:01 | WG1435956 |
| Ethylbenzene | U | | 0.000541 | 0.00255 | 1 | 02/28/2020 19:01 | WG1435956 |
| Total Xylenes | U | | 0.00488 | 0.00663 | 1 | 02/28/2020 19:01 | WG1435956 |
| *(S) Toluene-d8* | *111* | | | *75.0-131* | | *02/28/2020 19:01* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *104* | | | *67.0-138* | | *02/28/2020 19:01* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *102* | | | *70.0-130* | | *02/28/2020 19:01* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | 2.37 | B J | 1.64 | 4.08 | 1 | 03/04/2020 10:02 | WG1436663 |
| C28-C40 Oil Range | 4.67 | | 0.280 | 4.08 | 1 | 03/04/2020 10:02 | WG1436663 |
| *(S) o-Terphenyl* | *66.7* | | | *18.0-148* | | *03/04/2020 10:02* | WG1436663 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 98.2 | | 1 | 03/02/2020 14:27 | WG1435871 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 33.0 | | 0.809 | 10.2 | 1 | 03/04/2020 12:38 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0221 | 0.102 | 1 | 03/03/2020 07:00 | WG1437039 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *98.2* | | | *77.0-120* | | *03/03/2020 07:00* | WG1437039 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000407 | 0.00102 | 1 | 02/28/2020 19:21 | WG1435956 |
| Toluene | U | | 0.00127 | 0.00509 | 1 | 02/28/2020 19:21 | WG1435956 |
| Ethylbenzene | U | | 0.000539 | 0.00254 | 1 | 02/28/2020 19:21 | WG1435956 |
| Total Xylenes | U | | 0.00487 | 0.00662 | 1 | 02/28/2020 19:21 | WG1435956 |
| *(S) Toluene-d8* | *110* | | | *75.0-131* | | *02/28/2020 19:21* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *101* | | | *67.0-138* | | *02/28/2020 19:21* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *90.8* | | | *70.0-130* | | *02/28/2020 19:21* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | U | | 1.64 | 4.07 | 1 | 03/04/2020 19:47 | WG1436869 |
| C28-C40 Oil Range | 3.05 | J | 0.279 | 4.07 | 1 | 03/04/2020 19:47 | WG1436869 |
| *(S) o-Terphenyl* | *55.0* | | | *18.0-148* | | *03/04/2020 19:47* | WG1436869 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 98.7 | | 1 | 03/02/2020 14:27 | WG1435871 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 46.0 | | 0.806 | 10.1 | 1 | 03/04/2020 12:47 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0220 | 0.101 | 1 | 03/03/2020 07:24 | WG1437039 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *97.6* | | | *77.0-120* | | *03/03/2020 07:24* | WG1437039 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000405 | 0.00101 | 1 | 02/28/2020 19:41 | WG1435956 |
| Toluene | U | | 0.00127 | 0.00507 | 1 | 02/28/2020 19:41 | WG1435956 |
| Ethylbenzene | U | | 0.000537 | 0.00253 | 1 | 02/28/2020 19:41 | WG1435956 |
| Total Xylenes | U | | 0.00484 | 0.00659 | 1 | 02/28/2020 19:41 | WG1435956 |
| *(S) Toluene-d8* | *112* | | | *75.0-131* | | *02/28/2020 19:41* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *102* | | | *67.0-138* | | *02/28/2020 19:41* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *101* | | | *70.0-130* | | *02/28/2020 19:41* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | U | | 1.63 | 4.05 | 1 | 03/04/2020 18:56 | WG1436869 |
| C28-C40 Oil Range | 2.94 | J | 0.278 | 4.05 | 1 | 03/04/2020 18:56 | WG1436869 |
| *(S) o-Terphenyl* | *67.2* | | | *18.0-148* | | *03/04/2020 18:56* | WG1436869 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 93.0 | | 1 | 03/02/2020 14:27 | WG1435871 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 136 | | 0.855 | 10.8 | 1 | 03/04/2020 12:57 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0233 | 0.108 | 1 | 03/03/2020 07:48 | WG1437039 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *97.9* | | | *77.0-120* | | *03/03/2020 07:48* | WG1437039 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000430 | 0.00108 | 1 | 02/28/2020 20:01 | WG1435956 |
| Toluene | U | | 0.00134 | 0.00538 | 1 | 02/28/2020 20:01 | WG1435956 |
| Ethylbenzene | U | | 0.000570 | 0.00269 | 1 | 02/28/2020 20:01 | WG1435956 |
| Total Xylenes | U | | 0.00514 | 0.00699 | 1 | 02/28/2020 20:01 | WG1435956 |
| *(S) Toluene-d8* | *110* | | | *75.0-131* | | *02/28/2020 20:01* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *102* | | | *67.0-138* | | *02/28/2020 20:01* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *96.5* | | | *70.0-130* | | *02/28/2020 20:01* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | U | | 1.73 | 4.30 | 1 | 03/04/2020 19:09 | WG1436869 |
| C28-C40 Oil Range | 5.28 | | 0.295 | 4.30 | 1 | 03/04/2020 19:09 | WG1436869 |
| *(S) o-Terphenyl* | *55.4* | | | *18.0-148* | | *03/04/2020 19:09* | WG1436869 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 98.2 | | 1 | 03/02/2020 14:27 | WG1435871 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 73.9 | | 0.810 | 10.2 | 1 | 03/04/2020 13:06 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0221 | 0.102 | 1 | 03/03/2020 08:12 | WG1437039 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *97.7* | | | *77.0-120* | | *03/03/2020 08:12* | WG1437039 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000408 | 0.00102 | 1 | 02/28/2020 20:22 | WG1435956 |
| Toluene | U | | 0.00127 | 0.00509 | 1 | 02/28/2020 20:22 | WG1435956 |
| Ethylbenzene | U | | 0.000540 | 0.00255 | 1 | 02/28/2020 20:22 | WG1435956 |
| Total Xylenes | U | | 0.00487 | 0.00662 | 1 | 02/28/2020 20:22 | WG1435956 |
| *(S) Toluene-d8* | *111* | | | *75.0-131* | | *02/28/2020 20:22* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *101* | | | *67.0-138* | | *02/28/2020 20:22* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *94.0* | | | *70.0-130* | | *02/28/2020 20:22* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | 4.74 | | 1.64 | 4.08 | 1 | 03/04/2020 20:12 | WG1436869 |
| C28-C40 Oil Range | 20.4 | | 0.279 | 4.08 | 1 | 03/04/2020 20:12 | WG1436869 |
| *(S) o-Terphenyl* | *55.7* | | | *18.0-148* | | *03/04/2020 20:12* | WG1436869 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 98.2 | | 1 | 03/02/2020 14:27 | WG1435871 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 47.4 | | 0.809 | 10.2 | 1 | 03/04/2020 13:25 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0221 | 0.102 | 1 | 03/03/2020 09:26 | WG1437039 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *98.7* | | | *77.0-120* | | *03/03/2020 09:26* | WG1437039 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000407 | 0.00102 | 1 | 02/28/2020 20:42 | WG1435956 |
| Toluene | U | | 0.00127 | 0.00509 | 1 | 02/28/2020 20:42 | WG1435956 |
| Ethylbenzene | U | | 0.000540 | 0.00255 | 1 | 02/28/2020 20:42 | WG1435956 |
| Total Xylenes | U | | 0.00487 | 0.00662 | 1 | 02/28/2020 20:42 | WG1435956 |
| *(S) Toluene-d8* | *114* | | | *75.0-131* | | *02/28/2020 20:42* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *93.2* | | | *67.0-138* | | *02/28/2020 20:42* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *90.0* | | | *70.0-130* | | *02/28/2020 20:42* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | U | | 1.64 | 4.07 | 1 | 03/04/2020 19:21 | WG1436869 |
| C28-C40 Oil Range | 2.65 | J | 0.279 | 4.07 | 1 | 03/04/2020 19:21 | WG1436869 |
| *(S) o-Terphenyl* | *62.0* | | | *18.0-148* | | *03/04/2020 19:21* | WG1436869 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 86.6 | | 1 | 03/02/2020 14:27 | WG1435871 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 93.9 | | 0.918 | 11.6 | 1 | 03/04/2020 13:54 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0251 | 0.116 | 1 | 03/03/2020 09:50 | WG1437039 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *97.8* | | | *77.0-120* | | *03/03/2020 09:50* | WG1437039 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000462 | 0.00116 | 1 | 02/28/2020 21:02 | WG1435956 |
| Toluene | U | | 0.00144 | 0.00578 | 1 | 02/28/2020 21:02 | WG1435956 |
| Ethylbenzene | U | | 0.000612 | 0.00289 | 1 | 02/28/2020 21:02 | WG1435956 |
| Total Xylenes | U | | 0.00552 | 0.00751 | 1 | 02/28/2020 21:02 | WG1435956 |
| *(S) Toluene-d8* | *111* | | | *75.0-131* | | *02/28/2020 21:02* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *95.4* | | | *67.0-138* | | *02/28/2020 21:02* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *87.3* | | | *70.0-130* | | *02/28/2020 21:02* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | U | | 1.86 | 4.62 | 1 | 03/04/2020 19:34 | WG1436869 |
| C28-C40 Oil Range | 1.58 | J | 0.317 | 4.62 | 1 | 03/04/2020 19:34 | WG1436869 |
| *(S) o-Terphenyl* | *53.2* | | | *18.0-148* | | *03/04/2020 19:34* | WG1436869 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 76.9 | | 1 | 03/02/2020 14:27 | WG1435871 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 155 | | 1.03 | 13.0 | 1 | 03/04/2020 14:03 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0282 | 0.130 | 1 | 03/03/2020 21:17 | WG1437326 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *98.6* | | | *77.0-120* | | *03/03/2020 21:17* | WG1437326 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000520 | 0.00130 | 1 | 02/28/2020 21:22 | WG1435956 |
| Toluene | U | | 0.00162 | 0.00650 | 1 | 02/28/2020 21:22 | WG1435956 |
| Ethylbenzene | U | | 0.000689 | 0.00325 | 1 | 02/28/2020 21:22 | WG1435956 |
| Total Xylenes | U | | 0.00621 | 0.00845 | 1 | 02/28/2020 21:22 | WG1435956 |
| *(S) Toluene-d8* | *109* | | | *75.0-131* | | *02/28/2020 21:22* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *100* | | | *67.0-138* | | *02/28/2020 21:22* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *91.8* | | | *70.0-130* | | *02/28/2020 21:22* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | 2.65 | J | 2.09 | 5.20 | 1 | 03/06/2020 04:28 | WG1438752 |
| C28-C40 Oil Range | 4.42 | J | 0.356 | 5.20 | 1 | 03/06/2020 04:28 | WG1438752 |
| *(S) o-Terphenyl* | *56.2* | | | *18.0-148* | | *03/06/2020 04:28* | WG1438752 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 80.7 | | 1 | 03/02/2020 14:27 | WG1435871 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 13.0 | B | 0.985 | 12.4 | 1 | 03/04/2020 14:13 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | 0.0802 | B J | 0.0269 | 0.124 | 1 | 03/03/2020 17:02 | WG1437251 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *107* | | | *77.0-120* | | *03/03/2020 17:02* | WG1437251 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000496 | 0.00124 | 1 | 02/28/2020 21:42 | WG1435956 |
| Toluene | U | | 0.00155 | 0.00620 | 1 | 02/28/2020 21:42 | WG1435956 |
| Ethylbenzene | U | | 0.000657 | 0.00310 | 1 | 02/28/2020 21:42 | WG1435956 |
| Total Xylenes | U | | 0.00593 | 0.00806 | 1 | 02/28/2020 21:42 | WG1435956 |
| *(S) Toluene-d8* | *114* | | | *75.0-131* | | *02/28/2020 21:42* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *104* | | | *67.0-138* | | *02/28/2020 21:42* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *99.3* | | | *70.0-130* | | *02/28/2020 21:42* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | U | | 2.00 | 4.96 | 1 | 03/04/2020 18:30 | WG1436869 |
| C28-C40 Oil Range | 3.17 | J | 0.340 | 4.96 | 1 | 03/04/2020 18:30 | WG1436869 |
| *(S) o-Terphenyl* | *58.0* | | | *18.0-148* | | *03/04/2020 18:30* | WG1436869 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 80.8 | | 1 | 03/02/2020 14:27 | WG1435871 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 81.8 | | 0.984 | 12.4 | 1 | 03/04/2020 14:22 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | 0.0651 | B J | 0.0269 | 0.124 | 1 | 03/03/2020 17:25 | WG1437251 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *106* | | | *77.0-120* | | *03/03/2020 17:25* | WG1437251 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000495 | 0.00124 | 1 | 02/28/2020 22:02 | WG1435956 |
| Toluene | U | | 0.00155 | 0.00619 | 1 | 02/28/2020 22:02 | WG1435956 |
| Ethylbenzene | U | | 0.000656 | 0.00309 | 1 | 02/28/2020 22:02 | WG1435956 |
| Total Xylenes | U | | 0.00592 | 0.00804 | 1 | 02/28/2020 22:02 | WG1435956 |
| *(S) Toluene-d8* | *114* | | | *75.0-131* | | *02/28/2020 22:02* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *98.2* | | | *67.0-138* | | *02/28/2020 22:02* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *94.3* | | | *70.0-130* | | *02/28/2020 22:02* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | 2.26 | J | 1.99 | 4.95 | 1 | 03/04/2020 18:43 | WG1436869 |
| C28-C40 Oil Range | 1.97 | J | 0.339 | 4.95 | 1 | 03/04/2020 18:43 | WG1436869 |
| *(S) o-Terphenyl* | *42.3* | | | *18.0-148* | | *03/04/2020 18:43* | WG1436869 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 85.0 | | 1 | 03/02/2020 14:27 | WG1435871 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 5.84 | B J | 0.935 | 11.8 | 1 | 03/04/2020 14:32 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | 0.0631 | B J | 0.0255 | 0.118 | 1 | 03/03/2020 17:47 | WG1437251 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *107* | | | *77.0-120* | | *03/03/2020 17:47* | WG1437251 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000471 | 0.00118 | 1 | 02/28/2020 22:22 | WG1435956 |
| Toluene | U | | 0.00147 | 0.00588 | 1 | 02/28/2020 22:22 | WG1435956 |
| Ethylbenzene | U | | 0.000623 | 0.00294 | 1 | 02/28/2020 22:22 | WG1435956 |
| Total Xylenes | U | | 0.00562 | 0.00765 | 1 | 02/28/2020 22:22 | WG1435956 |
| *(S) Toluene-d8* | *111* | | | *75.0-131* | | *02/28/2020 22:22* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *96.2* | | | *67.0-138* | | *02/28/2020 22:22* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *96.2* | | | *70.0-130* | | *02/28/2020 22:22* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | 2.31 | J | 1.89 | 4.71 | 1 | 03/04/2020 17:39 | WG1436869 |
| C28-C40 Oil Range | 3.73 | J | 0.322 | 4.71 | 1 | 03/04/2020 17:39 | WG1436869 |
| *(S) o-Terphenyl* | *62.9* | | | *18.0-148* | | *03/04/2020 17:39* | WG1436869 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 80.3 | | 1 | 02/29/2020 23:58 | WG1435873 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 12.2 | B J | 0.989 | 12.4 | 1 | 03/04/2020 14:41 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | 0.468 | | 0.0270 | 0.124 | 1 | 03/05/2020 15:22 | WG1438732 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *80.5* | | | *77.0-120* | | *03/05/2020 15:22* | WG1438732 |

Sample Narrative:

L1193661-13 WG1438732: Previous run also had low IS recovery. Matrix effect.

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000498 | 0.00124 | 1 | 02/28/2020 22:43 | WG1435956 |
| Toluene | U | | 0.00156 | 0.00622 | 1 | 02/28/2020 22:43 | WG1435956 |
| Ethylbenzene | U | | 0.000660 | 0.00311 | 1 | 02/28/2020 22:43 | WG1435956 |
| Total Xylenes | U | | 0.00595 | 0.00809 | 1 | 02/28/2020 22:43 | WG1435956 |
| *(S) Toluene-d8* | *111* | | | *75.0-131* | | *02/28/2020 22:43* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *93.8* | | | *67.0-138* | | *02/28/2020 22:43* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *89.7* | | | *70.0-130* | | *02/28/2020 22:43* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | U | | 2.00 | 4.98 | 1 | 03/04/2020 17:52 | WG1436869 |
| C28-C40 Oil Range | 0.789 | J | 0.341 | 4.98 | 1 | 03/04/2020 17:52 | WG1436869 |
| *(S) o-Terphenyl* | *39.8* | | | *18.0-148* | | *03/04/2020 17:52* | WG1436869 |

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|---|---|---|---|---|---|
| | % | | | date / time | |
| Total Solids | 87.6 | | 1 | 02/29/2020 23:58 | WG1435873 |

## Wet Chemistry by Method 300.0

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Chloride | 43.1 | | 0.908 | 11.4 | 1 | 03/04/2020 15:00 | WG1436108 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH (GC/FID) Low Fraction | U | | 0.0248 | 0.114 | 1 | 03/03/2020 02:00 | WG1437041 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *97.8* | | | *77.0-120* | | *03/03/2020 02:00* | WG1437041 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Benzene | U | | 0.000457 | 0.00114 | 1 | 02/28/2020 23:03 | WG1435956 |
| Toluene | U | | 0.00143 | 0.00571 | 1 | 02/28/2020 23:03 | WG1435956 |
| Ethylbenzene | U | | 0.000605 | 0.00285 | 1 | 02/28/2020 23:03 | WG1435956 |
| Total Xylenes | U | | 0.00546 | 0.00742 | 1 | 02/28/2020 23:03 | WG1435956 |
| *(S) Toluene-d8* | *114* | | | *75.0-131* | | *02/28/2020 23:03* | WG1435956 |
| *(S) 4-Bromofluorobenzene* | *100* | | | *67.0-138* | | *02/28/2020 23:03* | WG1435956 |
| *(S) 1,2-Dichloroethane-d4* | *94.8* | | | *70.0-130* | | *02/28/2020 23:03* | WG1435956 |

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

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| C10-C28 Diesel Range | U | | 1.84 | 4.57 | 1 | 03/04/2020 18:04 | WG1436869 |
| C28-C40 Oil Range | 0.717 | J | 0.313 | 4.57 | 1 | 03/04/2020 18:04 | WG1436869 |
| *(S) o-Terphenyl* | *37.1* | | | *18.0-148* | | *03/04/2020 18:04* | WG1436869 |

## Method Blank (MB)

(MB) R3504748-1 03/02/20 14:38

| Analyte | MB Result % | MB Qualifier | MB MDL % | MB RDL % |
|---|---|---|---|---|
| Total Solids | 0.000 | | | |

## L1193661-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1193661-01 03/02/20 14:38 • (DUP) R3504748-3 03/02/20 14:38

| Analyte | Original Result % | DUP Result % | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Total Solids | 87.8 | 90.6 | 1 | 3.14 | | 10 |

## Laboratory Control Sample (LCS)

(LCS) R3504748-2 03/02/20 14:38

| Analyte | Spike Amount % | LCS Result % | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Total Solids | 50.0 | 50.0 | 100 | 85.0-115 | |

## Method Blank (MB)

(MB) R3504740-1 03/02/20 14:27

| Analyte | MB Result % | MB Qualifier | MB MDL % | MB RDL % |
|---|---|---|---|---|
| Total Solids | 0.000 | | | |

## L1193661-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1193661-10 03/02/20 14:27 • (DUP) R3504740-3 03/02/20 14:27

| Analyte | Original Result % | DUP Result % | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Total Solids | 80.7 | 80.6 | 1 | 0.113 | | 10 |

## Laboratory Control Sample (LCS)

(LCS) R3504740-2 03/02/20 14:27

| Analyte | Spike Amount % | LCS Result % | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Total Solids | 50.0 | 50.0 | 100 | 85.0-115 | |

## Method Blank (MB)

(MB) R3504448-1 02/29/20 23:58

| Analyte | MB Result % | MB Qualifier | MB MDL % | MB RDL % |
|---|---|---|---|---|
| Total Solids | 0.00800 | | | |

## L1193715-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1193715-04 02/29/20 23:58 • (DUP) R3504448-3 02/29/20 23:58

| Analyte | Original Result % | DUP Result % | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Total Solids | 79.1 | 79.8 | 1 | 0.895 | | 10 |

## Laboratory Control Sample (LCS)

(LCS) R3504448-2 02/29/20 23:58

| Analyte | Spike Amount % | LCS Result % | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Total Solids | 50.0 | 50.0 | 99.9 | 85.0-115 | |

## Method Blank (MB)

(MB) R3505422-1 03/04/20 11:50

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| Chloride | 3.07 | J | 0.795 | 10.0 |

## L1193661-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1193661-06 03/04/20 13:06 • (DUP) R3505422-3 03/04/20 13:16

| Analyte | Original Result (dry) mg/kg | DUP Result (dry) mg/kg | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Chloride | 73.9 | 76.9 | 1 | 4.02 | | 20 |

## L1193661-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1193661-13 03/04/20 14:41 • (DUP) R3505422-4 03/04/20 14:51

| Analyte | Original Result (dry) mg/kg | DUP Result (dry) mg/kg | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Chloride | 12.2 | 13.7 | 1 | 11.3 | | 20 |

## Laboratory Control Sample (LCS)

(LCS) R3505422-2 03/04/20 11:59

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Chloride | 200 | 193 | 96.7 | 90.0-110 | |

## L1193765-36 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1193765-36 03/04/20 17:55 • (MS) R3505422-7 03/04/20 18:04 • (MSD) R3505422-8 03/04/20 18:14

| 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 % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 500 | 5950 | 4880 | 5160 | 0.000 | 0.000 | 1 | 80.0-120 | E V | E V | 5.47 | 20 |

## Method Blank (MB)

(MB) R3504923-2 03/02/20 23:25

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | U | | 0.0217 | 0.100 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *98.0* | | | *77.0-120* |

## Laboratory Control Sample (LCS)

(LCS) R3504923-1 03/02/20 22:54

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | 5.50 | 5.78 | 105 | 72.0-127 | |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | *108* | *77.0-120* | |

## Method Blank (MB)

(MB) R3505709-2 03/03/20 00:59

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | U | | 0.0217 | 0.100 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *98.2* | | | *77.0-120* |

## Laboratory Control Sample (LCS)

(LCS) R3505709-1 03/03/20 00:17

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | 5.50 | 5.17 | 94.0 | 72.0-127 | |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | *105* | *77.0-120* | |

## L1193718-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1193718-08 03/03/20 04:45 • (MS) R3505709-3 03/03/20 08:48 • (MSD) R3505709-4 03/03/20 09:08

| 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 % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | 30.3 | ND | 26.3 | 27.1 | 86.8 | 89.4 | 25 | 10.0-151 | | | 3.00 | 28 |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | | | *111* | *112* | | *77.0-120* | | | | |

## Method Blank (MB)

(MB) R3505734-3 03/03/20 16:16

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | 0.0520 | J | 0.0217 | 0.100 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *107* | | | *77.0-120* |

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

(LCS) R3505734-1 03/03/20 15:09 • (LCSD) R3505734-2 03/03/20 15:31

| 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 | 5.73 | 5.61 | 104 | 102 | 72.0-127 | | | 2.12 | 20 |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | | *109* | *107* | *77.0-120* | | | | |

## Method Blank (MB)

(MB) R3505252-2 03/03/20 14:07

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | U | | 0.0217 | 0.100 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *98.8* | | | *77.0-120* |

## Laboratory Control Sample (LCS)

(LCS) R3505252-1 03/03/20 13:19

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | 5.50 | 5.91 | 107 | 72.0-127 | |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | *108* | *77.0-120* | |

## Method Blank (MB)

(MB) R3505930-3 03/05/20 12:15

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | 0.0242 | J | 0.0217 | 0.100 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *99.2* | | | *77.0-120* |

## Laboratory Control Sample (LCS)

(LCS) R3505930-2 03/05/20 11:34

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| TPH (GC/FID) Low Fraction | 5.50 | 5.24 | 95.3 | 72.0-127 | |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | *107* | *77.0-120* | |

## Method Blank (MB)

(MB) R3505598-1 02/28/20 17:46

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| Benzene | U | | 0.000400 | 0.00100 |
| Ethylbenzene | U | | 0.000530 | 0.00250 |
| Toluene | U | | 0.00125 | 0.00500 |
| Xylenes, Total | U | | 0.00478 | 0.00650 |
| *(S) Toluene-d8* | *112* | | | *75.0-131* |
| *(S) 4-Bromofluorobenzene* | *98.6* | | | *67.0-138* |
| *(S) 1,2-Dichloroethane-d4* | *103* | | | *70.0-130* |

## Laboratory Control Sample (LCS)

(LCS) R3505598-2 02/28/20 23:44

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.00500 | 0.00422 | 84.4 | 70.0-123 | |
| Ethylbenzene | 0.00500 | 0.00415 | 83.0 | 74.0-126 | |
| Toluene | 0.00500 | 0.00406 | 81.2 | 75.0-121 | |
| Xylenes, Total | 0.0150 | 0.0119 | 79.3 | 72.0-127 | |
| *(S) Toluene-d8* | | | *109* | *75.0-131* | |
| *(S) 4-Bromofluorobenzene* | | | *103* | *67.0-138* | |
| *(S) 1,2-Dichloroethane-d4* | | | *109* | *70.0-130* | |

## Method Blank (MB)

(MB) R3504697-1 03/02/20 18:28

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| C10-C28 Diesel Range | 2.85 | J | 1.61 | 4.00 |
| C28-C40 Oil Range | U | | 0.274 | 4.00 |
| *(S) o-Terphenyl* | *75.1* | | | *18.0-148* |

## Laboratory Control Sample (LCS)

(LCS) R3504697-2 03/02/20 18:41

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| C10-C28 Diesel Range | 50.0 | 41.2 | 82.4 | 50.0-150 | |
| *(S) o-Terphenyl* | | | *88.1* | *18.0-148* | |

## L1193548-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1193548-03 03/02/20 20:13 • (MS) R3504697-3 03/02/20 20:26 • (MSD) R3504697-4 03/02/20 20:39

| 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 | 743 | 1450 | 1820 | 1570 | 49.8 | 15.8 | 14.9 | 50.0-150 | J6 | J6 | 14.7 | 20 |
| *(S) o-Terphenyl* | | | | | *89.1* | *84.1* | | *18.0-148* | | | | |

## Method Blank (MB)

(MB) R3505452-1 03/04/20 17:01

| 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* | *53.9* | | | *18.0-148* |

## Laboratory Control Sample (LCS)

(LCS) R3505452-2 03/04/20 17:14

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| C10-C28 Diesel Range | 50.0 | 33.9 | 67.8 | 50.0-150 | |
| *(S) o-Terphenyl* | | | *65.9* | *18.0-148* | |

## L1193661-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1193661-06 03/04/20 20:12 • (MS) R3505452-3 03/04/20 20:25 • (MSD) R3505452-4 03/04/20 20:38

| Analyte | Spike Amount (dry) mg/kg | Original Result (dry) mg/kg | MS Result (dry) mg/kg | MSD Result (dry) mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C10-C28 Diesel Range | 50.9 | 4.74 | 43.5 | 41.9 | 76.1 | 72.9 | 1 | 50.0-150 | | | 3.82 | 20 |
| *(S) o-Terphenyl* | | | | | *60.5* | *58.0* | | *18.0-148* | | | | |

## Method Blank (MB)

(MB) R3506000-1 03/06/20 04:03

| 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* | *65.8* | | | *18.0-148* |

## Laboratory Control Sample (LCS)

(LCS) R3506000-2 03/06/20 04:15

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| C10-C28 Diesel Range | 50.0 | 34.7 | 69.4 | 50.0-150 | |
| *(S) o-Terphenyl* | | | *69.8* | *18.0-148* | |

## L1193661-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1193661-09 03/06/20 04:28 • (MS) R3506000-3 03/06/20 04:41 • (MSD) R3506000-4 03/06/20 04:53

| Analyte | Spike Amount (dry) mg/kg | Original Result (dry) mg/kg | MS Result (dry) mg/kg | MSD Result (dry) mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C10-C28 Diesel Range | 65.0 | 2.65 | 51.1 | 50.4 | 74.5 | 73.5 | 1 | 50.0-150 | | | 1.28 | 20 |
| *(S) o-Terphenyl* | | | | | *69.1* | *65.3* | | *18.0-148* | | | | |

## 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

| | |
|---|---|
| (dry) | Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils]. |
| MDL | Method Detection Limit. |
| MDL (dry) | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| RDL (dry) | 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. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |

# ACCREDITATIONS & LOCATIONS



ONE LAB. NATIONWIDE.



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 [1] | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina [1] | DW21704 |
| Georgia | NELAP | North Carolina [3] | 41 |
| Georgia [1] | 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 | LAO00356 |
| Kentucky [1 6] | 90010 | South Carolina | 84004 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana [1] | LA180010 | Texas | T104704245-18-15 |
| Maine | TN0002 | Texas [5] | 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 |

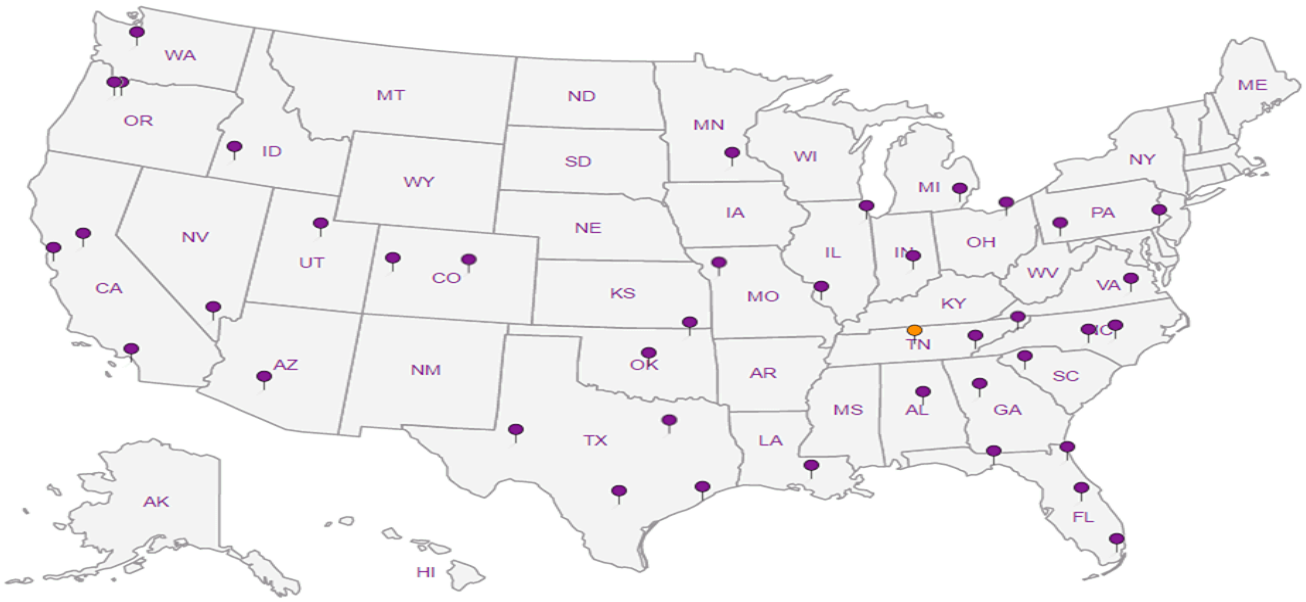
## Third Party Federal Accreditations

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

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] 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.



Analysis Request of Chain of Custody Record

Page : 1 of 2

# Tetra Tech, Inc.

901 West Wall Street, Suite 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

1212

| | | | |
|---|---|---|---|
| **Client Name:** | Conoco Phillips | **Site Manager:** | Christian Llull |
| **Project Name:** | COP Elvis Tank Battery | **Contact Info:** | Email: christian.llull@tetratech.com<br>Phone: (512) 338-1667 |
| **Project Location: (county, state)** | Lea County, New Mexico | **Project #:** | 212C-MD-02060 |
| **Invoice to:** | Accounts Payable<br>901 West Wall Street, Suite 100 Midland, Texas 79701 | | |
| **Receiving Laboratory:** | Pace Analytical | **Sampler Signature:** | Joe Lyle |
| **Comments:** | COPTETRA Acctnum | | |

**ANALYSIS REQUEST**
**(Circle or Specify Method No.)**

| LAB # (LAB USE ONLY) | SAMPLE IDENTIFICATION | SAMPLING DATE | SAMPLING TIME | MATRIX: WATER | MATRIX: SOIL | MATRIX: | PRESERVATIVE METHOD: HCL | PRESERVATIVE METHOD: $HNO_3$ | PRESERVATIVE METHOD: ICE | PRESERVATIVE METHOD: NONE | PRESERVATIVE METHOD: | # CONTAINERS | FILTERED (Y/N) | BTEX 8021B BTEX 8260B | TPH TX1005 (Ext to C35) | TPH 8015M ( GRO - DRO - ORO - MRO) | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8260B / 624 | GC/MS Semi. Vol. 8270C/625 | PCB's 8082 / 608 | NORM | PLM (Asbestos) | Chloride 300.0 | Chloride Sulfate TDS | General Water Chemistry (see attached list) | Anion/Cation Balance | TPH 8015R | | HOLD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L1193661 | | YEAR: 2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -01 | BH-2 (0'-1') | 2/25/2020 | 1100 | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | |
| -02 | BH-2 (2'-3') | 2/25/2020 | 1110 | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | |
| -03 | BH-2 (4'-5') | 2/25/2020 | 1120 | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | |
| -04 | BH-2 (6'-7') | 2/25/2020 | 1130 | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | |
| -05 | BH-3 (0'-1') | 2/25/2020 | 1150 | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | |
| -06 | BH-3 (2'-3') | 2/25/2020 | 1200 | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | |
| -07 | BH-3 (4'-5') | 2/25/2020 | 1210 | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | |
| -08 | BH-3 (6'-7') | 2/25/2020 | 1220 | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | |
| -09 | AH-6 (0'-1') | 2/25/2020 | 1300 | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | |
| -10 | AH-6 (2'-3') | 2/25/2020 | 1310 | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Relinquished by: | Joe Lyle | Date: 2-26-20 | Time: 14:00 | Received by: | Date: 2-26-20 | Time: 14:00 |
| Relinquished by: | | Date: 2-26-20 | Time: 16:00 | Received by: | Date: 2-26-20 | Time: 16:00 |
| Relinquished by: | | Date: | Time: | Received by: | Date: 2-27-20 | Time: 0736 |

ORIGINAL COPY

**LAB USE ONLY**
Sample Temperature

**REMARKS:**
- [X] Standard
- [ ] RUSH: Same Day 24 hr. 48 hr. 72 hr.
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

.5+0=.5 uy AG

RAD SCREEN: <0.5 mR/hr

Analysis Request of Chain of Custody Record

Page : 2 of 2

# Tetra Tech, Inc.

901 West Wall Street, Suite 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

| | | | |
|---|---|---|---|
| **Client Name:** | Conoco Phillips | **Site Manager:** | Christian Llull |
| **Project Name:** | COP Elvis Tank Battery | **Contact Info:** | Email: christian.llull@tetratech.com<br>Phone: (512) 338-1667 |
| **Project Location:** (county, state) | Lea County, New Mexico | **Project #:** | 212C-MD-02060 |
| **Invoice to:** | Accounts Payable<br>901 West Wall Street, Suite 100 Midland, Texas 79701 | | |
| **Receiving Laboratory:** | Pace Analytical | **Sampler Signature:** | Joe Tyler |
| **Comments:** | COPTETRA Acctnum | | |

**ANALYSIS REQUEST**
**(Circle or Specify Method No.)**

| LAB # (LAB USE ONLY) | SAMPLE IDENTIFICATION | SAMPLING DATE | SAMPLING TIME | MATRIX: WATER | MATRIX: SOIL | MATRIX: | PRESERVATIVE METHOD: HCL | PRESERVATIVE METHOD: $HNO_3$ | PRESERVATIVE METHOD: ICE | PRESERVATIVE METHOD: NONE | # CONTAINERS | FILTERED (Y/N) | BTEX 8021B BTEX 8260B | TPH TX1005 (Ext to C35) | TPH 8015M ( GRO - DRO - ORO - MRO) | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8260B / 624 | GC/MS Semi. Vol. 8270C/625 | PCB's 8082 / 608 | NORM | PLM (Asbestos) | Chloride 300.0 | Chloride Sulfate TDS | General Water Chemistry (see attached list) | Anion/Cation Balance | TPH 8015R | | HOLD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L1193661 | YEAR: 2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -11 | AH-6 (4'-5') | 2/25/2020 | 1320 | | X | | | | X | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | |
| -12 | AH-7 (0'-1') | 2/25/2020 | 1400 | | X | | | | X | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | |
| -13 | AH-7 (2'-3') | 2/25/2020 | 1410 | | X | | | | X | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | |
| -14 | AH-7 (4'-5') | 2/25/2020 | 1420 | | X | | | | X | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: Joe Tyler | Date: 2-26-20 | Time: 1400 | Received by: [signature] |
| Relinquished by: [signature] | Date: 2-26-20 | Time: 1600 | Received by: [signature] |
| Relinquished by: | Date: | Time: | Received by: [signature] |

Date: 2-26-20 Time: 1400
Date: 2-26-20 Time: 1600
Date: 2-27-20 Time: 0730

ORIGINAL COPY

**LAB USE ONLY**
Sample Temperature

**REMARKS:**
- [X] Standard
- [ ] RUSH: Same Day 24 hr. 48 hr. 72 hr.
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

.510=.5 MM AG

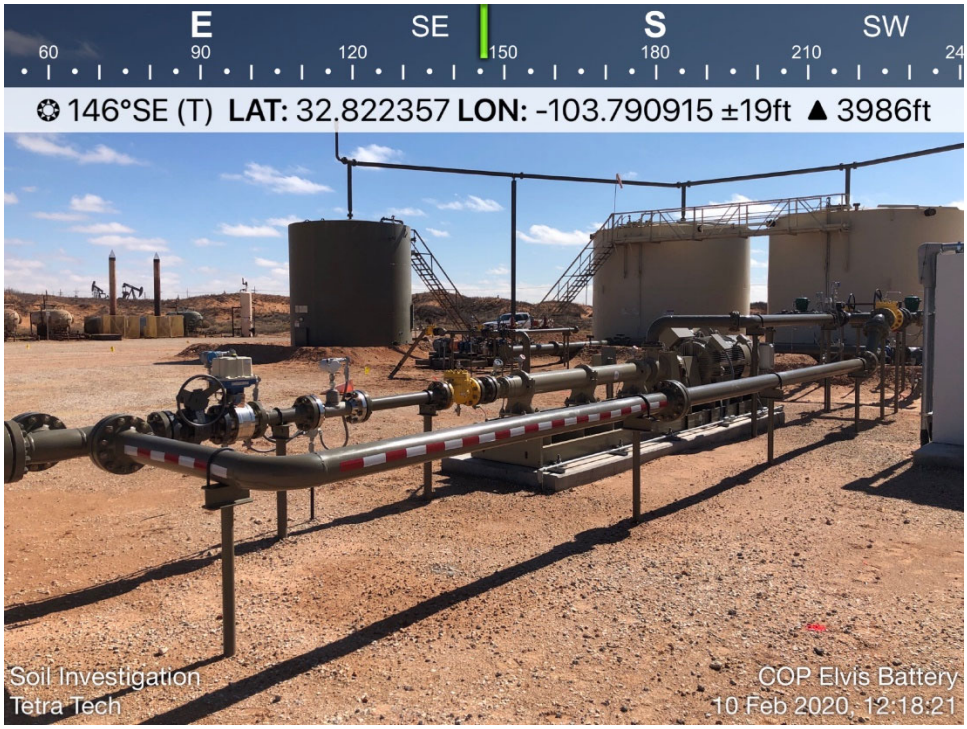
RAD SCREEN: <0.5 mR/hr

# Pace Analytical National Center for Testing & Innovation
## Cooler Receipt Form

| | | |
|---|---|---|
| Client: | L1193661 | |
| Cooler Received/Opened On: 2 /27/ 20 Temperature: | .5 | |
| Received By: Tanner Windham | | |
| 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? | | | |

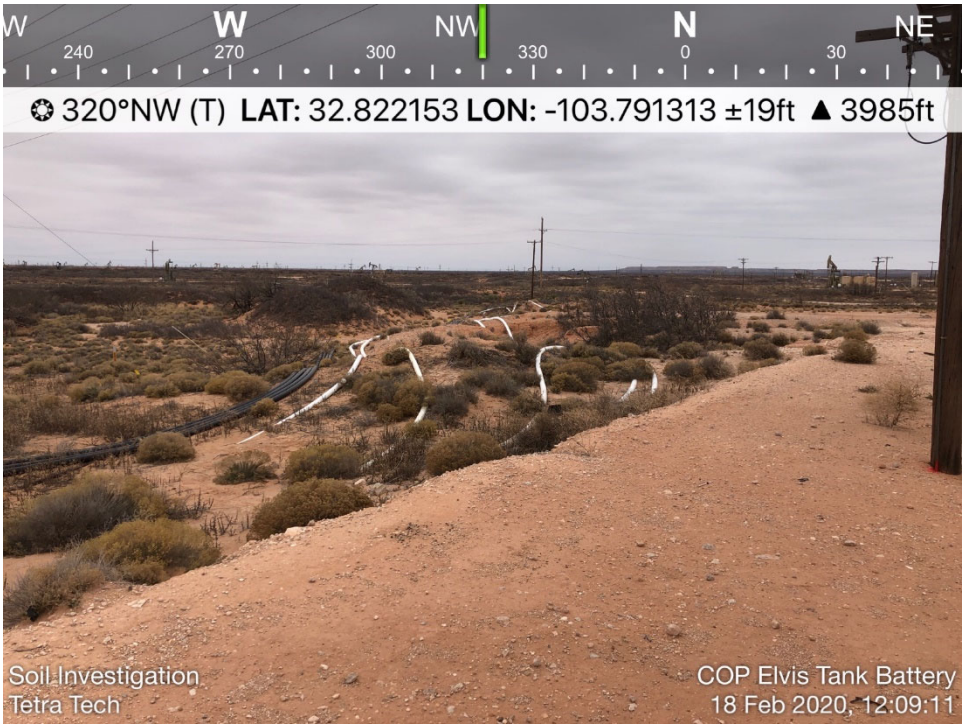
# APPENDIX D
# Photographic Documentation



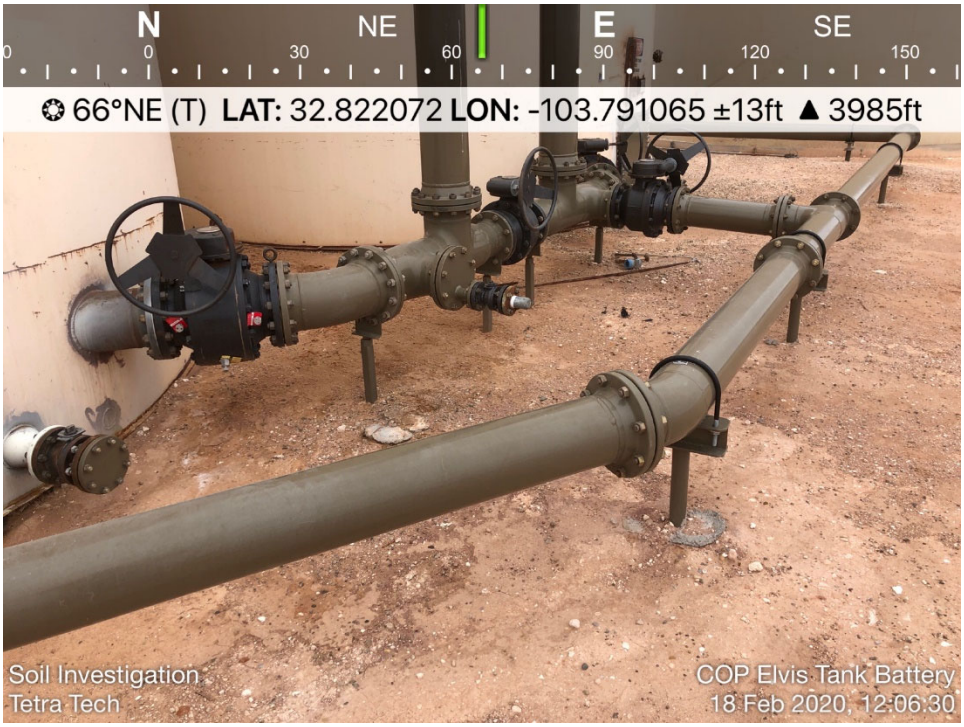

| | | | |
|---|---|---|---|
| TETRA TECH, INC. PROJECT NO. 212C-MD-02060 | DESCRIPTION | View southeast. Elvis Tank Battery north of containment berm. | 1 |
| | SITE NAME | Elvis Tank Battery Release | 2/10/2020 |


| | | | |
|---|---|---|---|
| TETRA TECH, INC. PROJECT NO. 212C-MD-02060 | DESCRIPTION | View south. Central portion of the release area south of the northern tank battery. | 2 |
| | SITE NAME | Elvis Tank Battery Release | 2/10/2020 |


| | | | |
|---|---|---|---|
| TETRA TECH, INC. PROJECT NO. 212C-MD-02060 | DESCRIPTION | View east. Production equipment north of the tank battery. | 3 |
| | SITE NAME | Elvis Tank Battery Release | 2/18/2020 |




| | | | |
|---|---|---|---|
| TETRA TECH, INC. PROJECT NO. 212C-MD-02060 | DESCRIPTION | View northwest. Flowlines west of lease pad. | 4 |
| | SITE NAME | Elvis Tank Battery Release | 2/18/2020 |




| | | | |
|---|---|---|---|
| TETRA TECH, INC.<br>PROJECT NO.<br>212C-MD-02060 | DESCRIPTION | View northeast. Soil staining near tanks and lines inside berm. | 5 |
| | SITE NAME | Elvis Tank Battery Release | 2/18/2020 |

# APPENDIX E
# Soil Boring Logs

212C-MD-02060 | TETRA TECH | **LOG OF BORING AH-1** | Page 1 of 1

Project Name: Elvis Tank Battery Release

Borehole Location: GPS: 32.821911°, -103.790781° | Surface Elevation: 3983 ft

Borehole Number: AH-1 | Borehole Diameter (in.): 8 | Date Started: 2/18/2020 | Date Finished: 2/18/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

| DEPTH (ft) | OPERATION TYPE | SAMPLE | CHLORIDE FIELD SCREENING (ppm) ExStik | VOC FIELD SCREENING (ppm) PID | SAMPLE RECOVERY (%) | MOISTURE CONTENT (%) | DRY DENSITY (pcf) | LIQUID LIMIT LL | PLASTICITY INDEX PI | MINUS NO. 200 (%) | GRAPHIC LOG | MATERIAL DESCRIPTION | DEPTH (ft) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 109 | 0 | | | | | | | | **-SM-** SILTY SAND; Brown, with no cementation, with no odor, with no staining. | | AH-1 (0'-1') |
| | | | 130 | 0 | | | | | | | | **--** Refusal met @ 3 ft. due to gravel pack and caprock. | 3 | AH-1 (2'-3') |

Bottom of borehole at 3.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Hand Auger | Driller: Tetra Tech

| 212C-MD-02060 | TETRA TECH | **LOG OF BORING AH-2** | Page 1 of 1 |
|---|---|---|---|

Project Name: Elvis Tank Battery Release

Borehole Location: GPS: 32.822179°, -103.790965° | Surface Elevation: 3987 ft

Borehole Number: AH-2 | Borehole Diameter (in.): 8 | Date Started: 2/18/2020 | Date Finished: 2/18/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

| DEPTH (ft) | OPERATION TYPE | SAMPLE | CHLORIDE FIELD SCREENING (ppm) ExStik | VOC FIELD SCREENING (ppm) PID | SAMPLE RECOVERY (%) | MOISTURE CONTENT (%) | DRY DENSITY (pcf) | LIQUID LIMIT LL | PLASTICITY INDEX PI | MINUS NO. 200 (%) | GRAPHIC LOG | MATERIAL DESCRIPTION | DEPTH (ft) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | | | | | | | | **-SM-** SILTY SAND; Tan, with heavy gravel, with low odor, with low staining. -- Refusal met @ 0.5 ft. due to presence of polyethylene liner. | 0.5 | AH-2 (0'-0.5') |
| | | | | | | | | | | | | Bottom of borehole at 0.5 feet. | | |

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Hand Auger | Driller: Tetra Tech

| 212C-MD-02060 | TETRA TECH | **LOG OF BORING AH-3** | Page 1 of 1 |
|---|---|---|---|

Project Name: Elvis Tank Battery Release

Borehole Location: GPS: 32.822144°, -103.790756° | Surface Elevation: 3987 ft

Borehole Number: AH-3 | Borehole Diameter (in.): 8 | Date Started: 2/18/2020 | Date Finished: 2/18/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

| DEPTH (ft) | OPERATION TYPE | SAMPLE | CHLORIDE FIELD SCREENING (ppm) ExStik | VOC FIELD SCREENING (ppm) PID | SAMPLE RECOVERY (%) | MOISTURE CONTENT (%) | DRY DENSITY (pcf) | LIQUID LIMIT LL | PLASTICITY INDEX PI | MINUS NO. 200 (%) | GRAPHIC LOG | MATERIAL DESCRIPTION | DEPTH (ft) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | | | | | | | | **-SM-** SILTY SAND; Tan, with heavy gravel, with low odor, with low staining.<br>-- Refusal met @ 0.5 ft. due to presence of polyethylene liner.<br>Bottom of borehole at 0.5 feet. | 0.5 | AH-3 (0'-0.5') |

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:
Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Hand Auger | Driller: Tetra Tech

| 212C-MD-02060 | TETRA TECH | **LOG OF BORING AH-4** | Page 1 of 1 |
|---|---|---|---|

Project Name: Elvis Tank Battery Release

Borehole Location: GPS: 32.822054°, -103.791001° | Surface Elevation: 3985 ft

Borehole Number: AH-4 | Borehole Diameter (in.): 8 | Date Started: 2/18/2020 | Date Finished: 2/18/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

| DEPTH (ft) | OPERATION TYPE | SAMPLE | CHLORIDE FIELD SCREENING (ppm) ExStik | VOC FIELD SCREENING (ppm) PID | SAMPLE RECOVERY (%) | MOISTURE CONTENT (%) | DRY DENSITY (pcf) | LIQUID LIMIT LL | PLASTICITY INDEX PI | MINUS NO. 200 (%) | GRAPHIC LOG | MATERIAL DESCRIPTION | DEPTH (ft) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | | | | | | | | **-SM-** SILTY SAND; Tan, with heavy gravel, with low odor, with low staining.<br>-- Refusal met @ 0.5 ft. due to presence of polyethylene liner.<br>Bottom of borehole at 0.5 feet. | 0.5 | AH-4 (0'-0.5') |

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:
Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Hand Auger | Driller: Tetra Tech

| 212C-MD-02060 | TETRA TECH | **LOG OF BORING AH-5** | Page 1 of 1 |
|---|---|---|---|

Project Name: Elvis Tank Battery Release

Borehole Location: GPS: 32.822005°, -103.790875° | Surface Elevation: 3984 ft

Borehole Number: AH-5 | Borehole Diameter (in.): 8 | Date Started: 2/18/2020 | Date Finished: 2/18/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

| DEPTH (ft) | OPERATION TYPE | SAMPLE | CHLORIDE FIELD SCREENING (ppm) ExStik | VOC FIELD SCREENING (ppm) PID | SAMPLE RECOVERY (%) | MOISTURE CONTENT (%) | DRY DENSITY (pcf) | LIQUID LIMIT LL | PLASTICITY INDEX PI | MINUS NO. 200 (%) | GRAPHIC LOG | MATERIAL DESCRIPTION | DEPTH (ft) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | | | | | | | | **-SM-** SILTY SAND; Tan, with heavy gravel, with low odor, with low staining.<br>-- Refusal met @ 0.5 ft. due to presence of polyethylene liner.<br>Bottom of borehole at 0.5 feet. | 0.5 | AH-5 (0'-0.5') |

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:
Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Hand Auger | Driller: Tetra Tech

| 212C-MD-02060 | TETRA TECH | **LOG OF BORING AH-6** | Page 1 of 1 |
|---|---|---|---|

Project Name: Elvis Tank Battery Release

Borehole Location: GPS: 32.822410°, -103.791198° | Surface Elevation: 3986 ft

Borehole Number: AH-6 | Borehole Diameter (in.): 2 | Date Started: 2/25/2020 | Date Finished: 2/25/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

| DEPTH (ft) | OPERATION TYPE | SAMPLE | CHLORIDE FIELD SCREENING (ppm) ExStik | VOC FIELD SCREENING (ppm) PID | SAMPLE RECOVERY (%) | MOISTURE CONTENT (%) | DRY DENSITY (pcf) | LIQUID LIMIT LL | PLASTICITY INDEX PI | MINUS NO. 200 (%) | GRAPHIC LOG | MATERIAL DESCRIPTION | DEPTH (ft) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 481 | 0.2 | | | | | | | | **-SM-** SILTY SAND; Tan, with heavy gravel, with low odor, with low staining. | 1.5 | AH-6 (0'-1') |
| | | | 509 | 0 | | | | | | | | **-SM-** SILTY SAND; Brown, with no cementation, with no odor, with no staining. | | AH-6 (2'-3') |
| 5 | | | 423 | 0.1 | | | | | | | | | 5 | AH-6 (4'-5') |

Bottom of borehole at 5.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Hand Auger | Driller: Tetra Tech

| 212C-MD-02060 | TETRA TECH | **LOG OF BORING AH-7** | Page 1 of 1 |
|---|---|---|---|

Project Name: Elvis Tank Battery Release

Borehole Location: GPS: 32.822093°, -103.791298° | Surface Elevation: 3981 ft

Borehole Number: AH-7 | Borehole Diameter (in.): 2 | Date Started: 2/25/2020 | Date Finished: 2/25/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

| DEPTH (ft) | OPERATION TYPE | SAMPLE | CHLORIDE FIELD SCREENING (ppm) ExStik | VOC FIELD SCREENING (ppm) PID | SAMPLE RECOVERY (%) | MOISTURE CONTENT (%) | DRY DENSITY (pcf) | LIQUID LIMIT LL | PLASTICITY INDEX PI | MINUS NO. 200 (%) | GRAPHIC LOG | MATERIAL DESCRIPTION | DEPTH (ft) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 97 | 0.1 | | | | | | | | **-SM-** SILTY SAND; Brown, with no cementation, with no odor, with no staining. | | AH-7 (0'-1') |
| | | | 101 | 0.1 | | | | | | | | | | AH-7 (2'-3') |
| 5 | | | 277 | 0 | | | | | | | | | 5 | AH-7 (4'-5') |

Bottom of borehole at 5.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Hand Auger | Driller: Tetra Tech

212C-MD-02060 | TETRA TECH | **LOG OF BORING BH-2** | Page 1 of 1

Project Name: Elvis Tank Battery Release

Borehole Location: GPS: 32.822443°, -103.790910° | Surface Elevation: 3984 ft

Borehole Number: BH-2 | Borehole Diameter (in.): 2 | Date Started: 2/10/2020 | Date Finished: 2/10/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

| DEPTH (ft) | OPERATION TYPE | SAMPLE | CHLORIDE FIELD SCREENING (ppm) ExStik | VOC FIELD SCREENING (ppm) PID | SAMPLE RECOVERY (%) | MOISTURE CONTENT (%) | DRY DENSITY (pcf) | LIQUID LIMIT LL | PLASTICITY INDEX PI | MINUS NO. 200 (%) | GRAPHIC LOG | MATERIAL DESCRIPTION | DEPTH (ft) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 401 | 1 | | | | | | | | **-SM-** SILTY SAND; Brown, mixed with pad caliche, heavily cemented, with low odor, with no staining, wet. | 1.5 | BH-2 (0'-1') |
| | | | 523 | 1 | | | | | | | | **-SM-** SILTY SAND; Brown, with no cementation, with no odor, with no staining, wet. | | BH-2 (2'-3') |
| 5 | | | 194 | 1 | | | | | | | | | | BH-2 (4'-5') |
| | | | 157 | 1 | | | | | | | | | 7 | BH-2 (6'-7') |

Bottom of borehole at 7.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02060 | TETRA TECH | **LOG OF BORING BH-3** | Page 1 of 1

Project Name: Elvis Tank Battery Release

Borehole Location: GPS: 32.822224°, -103.790651° | Surface Elevation: 3985 ft

Borehole Number: BH-3 | Borehole Diameter (in.): 2 | Date Started: 2/10/2020 | Date Finished: 2/10/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

| DEPTH (ft) | OPERATION TYPE | SAMPLE | CHLORIDE FIELD SCREENING (ppm) ExStik | VOC FIELD SCREENING (ppm) PID | SAMPLE RECOVERY (%) | MOISTURE CONTENT (%) | DRY DENSITY (pcf) | LIQUID LIMIT LL | PLASTICITY INDEX PI | MINUS NO. 200 (%) | GRAPHIC LOG | MATERIAL DESCRIPTION | DEPTH (ft) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 312 | 1 | | | | | | | | **-SM-** SILTY SAND; Brown, mixed with pad caliche, heavily cemented, with low odor, with no staining, wet. | 1.5 | BH-3 (0'-1') |
| | | | 285 | 1 | | | | | | | | **-SM-** SILTY SAND; Brown, with no cementation, with no odor, with no staining, wet. | | BH-3 (2'-3') |
| 5 | | | 198 | 1 | | | | | | | | | | BH-3 (4'-5') |
| | | | 290 | 1 | | | | | | | | | | BH-3 (6'-7') |
| | | | | | | | | | | | | | 8 | |
| | | | | | | | | | | | | **-SM-** SILTY SAND; Brown, with few pebble gravel, with moderate cementation, with no odor, with no staining, wet. | | |
| 10 | | | 304 | 1 | | | | | | | | | | |
| 15 | | | | | | | | | | | | | 15 | |

Bottom of borehole at 15.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling