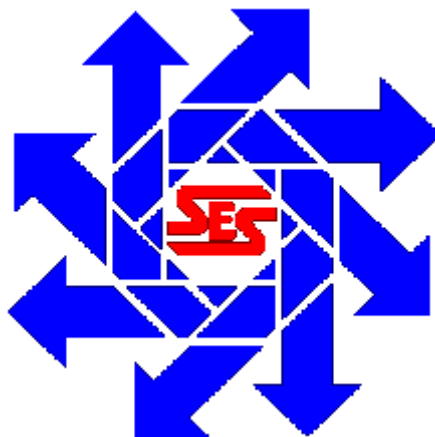


Devon Energy
Spud 16 State 8H
Delineation Report & Work Plan

Section 16, Township 23S, Range 29E
Eddy County, New Mexico

30-015-40038

April 17, 2019



Prepared for:
Devon Energy Production Company
6488 Seven Rivers Highway
By:

Safety & Environmental Solutions, Inc.
703 East Clinton Street
Hobbs, New Mexico 88240
(575) 397-0510

TABLE OF CONTENTS

| | |
|--|----------|
| I. COMPANY CONTACTS..... | 1 |
| II. BACKGROUND | 1 |
| III. SURFACE AND GROUND WATER | 1 |
| IV. CHARACTERIZATION | 1 |
| V. WORK PERFORMED | 2 |
| VII. FIGURES & APPENDICES..... | 3 |
| Figure 1 – Vicinity Map | 4 |
| Figure 2 – Site Plan | 5 |
| Appendix A – C-141 | 5 |
| Appendix B – Groundwater..... | 6 |
| Appendix C – Analytical Results | 7 |
| Appendix D – Site Photos..... | 8 |

I. Company Contacts

| Representative | Company | Telephone | E-mail |
|----------------|--------------------------|--------------|--|
| Amanda Davis | Devon Energy Corporation | 575-748-0176 | Amanda.Davis@dvnm.com |
| Bob Allen | SESI | 575-397-0510 | ballen@sesi-nm.com |

II. Background

Safety and Environmental Solutions, Inc., hereinafter referred to as (SESI) was engaged by Devon Energy Corporation to assess and remediate a spill area at the Spud 16 State #008H.

According to the C-141: According to the C-141 the cause of release, was a broken site glass on the heater treater. The affected area measured approximately 125' x 30'. All fluids remained on the location pad area. A Trimble Juno 3B handheld was used to map the spill area. (Figure 2). Approximately 11,307 cubic feet of surface area was impacted.

III. Surface and Ground Water

There is no record of depth to groundwater in the immediate vicinity of the site location. Further research of the New Mexico Office of the State Engineer records indicates the average depth to groundwater for the area to be 31' bgs. Please note: this location is surrounded in its entirety by the salt lakes, and the boundaries are periodically encroached upon by salt water. (Appendix B).

IV. Characterization

The target cleanup levels are determined using the NMAC 19.15.29 revisions dated July 24, 2018. The soil screening criteria presented below, and the applicable Recommended Remediation Action Levels (RRAL) are 10 parts per million (ppm) Benzene, 50 ppm combined Benzene, Toluene, Ethyl Benzene, and Total Xylenes (BTEX), and 2,500 ppm Total Petroleum Hydrocarbons (TPH). Characterization of vertical extent of chloride concentration to a level of 600 mg/kg (PPM) is also required for pasture impact. The soil in this area is characterized as a Reeves Gypsum. Classified as a loamy soils that are very shallow to moderately deep over Gypsum beds, and Gypsum land.

| Table 1 Closure Criteria for Soils Impacted by a Release | | | |
|---|-------------------|----------------------------------|--------------|
| Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l | Constituent | Method* | Limit** |
| TDS | | | |
| <50 feet | Chloride*** | EPA 300.0 or SM4500 Cl B | 600 mg/kg |
| | TPH (GRO+DRO+MRO) | EPA SW-846 Method 8015B | 100 mg/kg |
| | BTEX | EPA SW-846 Method 8021B or 8260B | 50 mg/kg |
| | Benzene | EPA SW-846 Method 8021B or 8260B | 10 mg/kg |
| 51 feet-100 feet | Chloride*** | EPA 300.0 or SM4500 Cl B | 10,000 mg/kg |
| | TPH (GRO+DRO+MRO) | EPA SW-846 Method 8015B | 2,500 mg/kg |
| | BTEX | EPA SW-846 Method 8021B or 8260B | 50 mg/kg |
| | Benzene | EPA SW-846 Method 8021B or 8260B | 10 mg/kg |
| >100 feet | Chloride*** | EPA 300.0 or SM4500 Cl B | 20,000 mg/kg |
| | TPH (GRO+DRO+MRO) | EPA SW-846 Method 8015B | 2,500 mg/kg |
| | BTEX | EPA SW-846 Method 8021B or 8260B | 50 mg/kg |
| | | | |

V. Work Performed

On March 27, 2019 SESI personnel were on site in order to meet with Devon Energy personnel regarding the safety issues, number of high pressure lines, as well as electrical lines on the location. The area was flagged for future New Mexico One Call clearance.

On April 02, 2019 SESI personnel, together with personnel from Devon Energy were on location in order to begin soil delineation of the spill area. Seven (7) Auger Holes were designated and advance to depths from surface to 2' bgs. Soil samples were grabbed at surface, and one foot increments, field tested, and packaged for laboratory confirmation. All samples were properly packaged, labeled, preserved, and transported to Hall Laboratories via Chain of Custody for analyses. The following constituencies were analyzed:

Chloride (CI Method 300.0 Anions), Total Petroleum Hydrocarbons (TPH Method 8015), and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX Method 8021B). The table below is a recap and tabulation of the results from the Hall Laboratory analyses for ease of reference (Appendix C)

Mr. Bob Allen (SESI) contacted Mr. Mike Bratcher of the NMOCD on April 10 or 11, 2019 by telephone. The close proximity of the Spud 16 8H to the salt lake (immediately adjacent) was discussed. Mr. Bratcher indicated that the primary concern at this location would be TPH contamination and not the chloride contamination. The action level for TPH will use the close proximity of the salt lake as a water body, therefore the TPH action level will be 100 mg/kg. The action plan will call for removal of all TPH contaminated soil above the 100 mg/kg level and the chloride levels at that depth will be sampled as retained in the documentation required for this release.

| Sample ID | Chloride EPA Method 300 Anions | MRO EPA Method 8015 | DRO EPA Method 8015 | GRO EPA Method 8015 | BTEX EPA Method 8021 |
|-------------------|--------------------------------------|---------------------------|---------------------------|---------------------------|----------------------------|
| AH-1 Surface | 10000 | 7600 | 21000 | 3100 | 130 |
| AH-1 @ 1 ft. | 7200 | 1200 | 2800 | 250 | 6.6 |
| AH-1 @ 2 ft. | 2700 | ND | 24 | ND | ND |
| AH-2 @ Surface | 1600 | 4700 | 15000 | 1900 | 65 |
| AH-2 @ 1 ft. | 3300 | 53 | 89 | ND | ND |
| AH-3 Surface | 910 | 1900 | 5600 | 210 | 4.6 |
| AH-3 @ 1 ft. | 140 | 55 | 89 | ND | ND |
| AH-4 @ Surface | 2400 | ND | 14000 | 46 | ND |
| AH-4 @ 1 ft. | 1700 | ND | 770 | 17 | ND |
| AH-5 @ Surface | 650 | 7400 | 15000 | 110 | 2.2 |
| AH-5 @ 1 ft. | ND | ND | ND | ND | ND |
| AH-6 @ Surface | 13000 | 6400 | 13000 | 23 | .62 |
| AH-6 @ 1 ft. | ND | ND | ND | ND | ND |
| AH-7 @ Surface | 21000 | 2500 | 4800 | ND | ND |
| AH-7 @ 1 ft. | 61 | ND | ND | ND | ND |

VI. Action Plan

Based on the NMOCD soil screening levels, depth to groundwater for this area, and number of lines: It is proposed to “hand dig” the interior of the bermed area to a depth whereby TPH levels are below 100 mg/kg. The estimated area of impact is Two Hundred Forty Nine (249) cubic feet. The interior of the bermed area will be backfilled with like material and the berm restored. There is TPH contamination on surface area of pad, however this a heavily trafficked area with transport trucks, and will need to be remediated with caution, and backfilled immediately in order to prevent accidents. The approximate area of impact for the surface area of the pad is Two Thousand Nine Hundred Sixty One (2,961) cubic feet. It is proposed to grab sidewall and bottom samples for field testing as confirmation of the vertical and horizontal remediation respectively. All confirmations samples will be sent to an NMOCD approved laboratory for final analyses.

Due to geographic location, and the salt lakes; chloride levels are naturally occurring on all surface areas. All impacted soils will be transported to an NMOCD approved facility and documented via manifests. The Sidewall and Bottom Samples will be retrieved as confirmation and included in all Closure Documentation.

Upon completion of remediation activities: all surface areas of the pad area will be backfilled with like material and restored to grade. All closure documentation will be drafted and submitted to the proper parties of concern.

VII. Figures & Appendices

Figure 1 - Vicinity Map

Figure 2 - Site Plan

Appendix A – C-141

Appendix B – Groundwater

Appendix C – Analytical Results

Appendix D – Photo Documentation

Figure 1

Vicinity Map



23S 29E

17

09

AH2 @ 1ft
AH1 @ 2ft
AH3 @ 1ft
AH7 @ 1ft
AH6 @ 1ft

Devon Spud 16 State 8H Battery



Figure 2 Site Plan

Spud 16 State #008H

Figure 2 Site Plan

Legend

- Devon Spud 16 State 8H Battery
- Feature 1
- Manual Excavation
- Mechanized Excavation



Appendix A

C-141

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

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

| | |
|----------------|--|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

Release Notification

Responsible Party

| | |
|-------------------------|------------------------------|
| Responsible Party | OGRID |
| Contact Name | Contact Telephone |
| Contact email | Incident # (assigned by OCD) |
| Contact mailing address | |

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

| | |
|-------------------------|----------------------|
| Site Name | Site Type |
| Date Release Discovered | API# (if applicable) |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| | | | | |

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (Name: _____)
** According to legal description, it appears as Private

Nature and Volume of Release

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

| | | |
|---|--|--|
| <input type="checkbox"/> Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| <input type="checkbox"/> Produced Water | Volume Released (bbls) | Volume Recovered (bbls) |
| | Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| <input type="checkbox"/> Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| <input type="checkbox"/> Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release

| | |
|----------------|--|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

| | |
|--|--|
| Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input type="checkbox"/> 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

| | |
|--|------------------|
| <input type="checkbox"/> The source of the release has been stopped. | |
| <input type="checkbox"/> The impacted area has been secured to protect human health and the environment. | |
| <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. | |
| <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately. | |
| If all the actions described above have <u>not</u> 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: _____ | Title: _____ |
| Signature: <u>Kendra DeHoyos</u> | Date: _____ |
| email: _____ | Telephone: _____ |
| <u>OCD Only</u> | |
| Received by: <u>Ana Botamante</u> | Date: _____ |

| | |
|----------------|---------------|
| Incident ID | NAB1835359072 |
| District RP | 2RP-5122 |
| Facility ID | |
| Application ID | PAB1835358538 |

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?

335 (ft bgs)

| | |
|---|---|
| Did this release impact groundwater or surface water? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Did the release impact areas not on an exploration, development, production, or storage site? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.

| | |
|----------------|---------------|
| Incident ID | NAB1835359072 |
| District RP | 2RP-5122 |
| Facility ID | |
| Application ID | PAB1835358538 |

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: Wesley Mathews Title: EHS Coordinator

Signature: Wesley Mathews Date: 09/04/19

Email Wesley.mathews@dm.com Telephone: 575-513-8608

OCD Only

Received by: _____ Date: _____

| | |
|----------------|---------------|
| Incident ID | NAB1835359072 |
| District RP | 2RP-5122 |
| Facility ID | |
| Application ID | PAB1835358538 |

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: Wesley Mathews Title: EHS Coordinator

Signature: Wesley Mathews Date 09/04/19

email: Wesley.mathews@dvn.com Telephone 575-513-8608

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Appendix B

Groundwater



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 | Code | Sub-basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng | X | Y | DepthWell | DepthWater | Water Column |
|-----------------------------------|------|-----------|--------|------|------|-----|-----|-----|--------|----------|----------|-----------|------------|--------------|
| C 00571 | | CUB | ED | 1 | 3 | 3 | 30 | 23S | 29E | 591241 | 3570957* | 90 | 38 | 52 |
| C 00571 CLW241602 | O | CUB | ED | 3 | 3 | 3 | 30 | 23S | 29E | 591241 | 3570757* | 89 | 38 | 51 |
| C 01217 S | | CUB | ED | 4 | 1 | 4 | 16 | 23S | 29E | 595413 | 3574403* | 350 | | |
| C 01627 | | C | ED | 1 | 4 | 4 | 28 | 23S | 29E | 595649 | 3570959* | 170 | | |
| C 02182 | | C | ED | | 4 | 30 | 23S | 29E | 592328 | 3571048* | 75 | 30 | 45 | |
| C 02608 | | CUB | ED | 3 | 1 | 4 | 17 | 23S | 29E | 593598 | 3574387* | 400 | | |
| C 02613 | | CUB | ED | 4 | 4 | 2 | 20 | 23S | 29E | 594203 | 3573176* | 400 | | |
| C 02704 | | C | ED | | 1 | 19 | 23S | 29E | 591531 | 3573493* | 174 | | | |
| C 02705 | | C | ED | | 2 | 17 | 23S | 29E | 593902 | 3575093* | 68 | 28 | 40 | |
| C 02706 | | C | ED | | 4 | 18 | 23S | 29E | 592302 | 3574291* | 17 | 10 | 7 | |
| C 02707 | | C | ED | | 2 | 28 | 23S | 29E | 595535 | 3571868* | 40 | 18 | 22 | |
| C 02715 | | CUB | ED | 4 | 1 | 3 | 15 | 23S | 29E | 596221 | 3574411* | 400 | | |
| C 02716 | | CUB | ED | 4 | 4 | 4 | 16 | 23S | 29E | 595818 | 3574002* | 400 | | |
| C 02717 | | CUB | ED | 4 | 2 | 4 | 16 | 23S | 29E | 595817 | 3574407* | 400 | | |
| C 02718 | | CUB | ED | 4 | 4 | 2 | 16 | 23S | 29E | 595816 | 3574812* | 400 | | |
| C 02720 | | CUB | ED | 2 | 1 | 21 | 23S | 29E | 594911 | 3573690* | 150 | | | |
| C 02721 | | CUB | ED | 2 | 3 | 21 | 23S | 29E | 594915 | 3572879* | 150 | | | |
| C 02792 | | CUB | ED | 4 | 3 | 04 | 23S | 29E | 594868 | 3577336* | 200 | | | |
| C 02793 | | CUB | ED | 4 | 3 | 04 | 23S | 29E | 594868 | 3577336* | 100 | | | |
| C 02794 | | CUB | ED | 4 | 3 | 10 | 23S | 29E | 596518 | 3575731* | 100 | | | |
| C 02795 | | CUB | ED | 4 | 3 | 10 | 23S | 29E | 596518 | 3575731* | 200 | | | |
| C 02797 | | CUB | ED | 2 | 3 | 22 | 23S | 29E | 596540 | 3572895* | 200 | | | |
| C 02804 | | CUB | ED | 2 | 1 | 08 | 23S | 29E | 593262 | 3576905* | 100 | | | |
| C 02805 | | CUB | ED | 2 | 1 | 08 | 23S | 29E | 593262 | 3576905* | 100 | | | |
| C 02806 | | CUB | ED | 1 | 1 | 09 | 23S | 29E | 594473 | 3576927* | 100 | | | |
| C 02807 | | CUB | ED | 1 | 1 | 09 | 23S | 29E | 594473 | 3576927* | 100 | | | |
| C 02808 | | CUB | ED | 2 | 3 | 16 | 23S | 29E | 594909 | 3574501* | 100 | | | |
| C 02809 | | CUB | ED | 2 | 3 | 16 | 23S | 29E | 594909 | 3574501* | 100 | | | |
| C 03057 EXPLORE | | CUB | ED | 4 | 1 | 1 | 21 | 23S | 29E | 594605 | 3573586* | 150 | | |
| C 03058 EXPLORE | | CUB | ED | 4 | 1 | 1 | 16 | 23S | 29E | 594605 | 3575206* | 150 | | |
| C 03059 EXPLORE | | CUB | ED | 4 | 1 | 3 | 17 | 23S | 29E | 592993 | 3574378* | | 65 | |
| C 03587 POD1 | | CUB | ED | 1 | 4 | 3 | 29 | 23S | 29E | 593338 | 3570754 | 99 | 44 | 55 |
| C 03587 POD2 | | CUB | ED | 1 | 2 | 4 | 19 | 23S | 29E | 592213 | 3572706 | 77 | 16 | 61 |

| | |
|-------------------------|----------------|
| Average Depth to Water: | 31 feet |
| Minimum Depth: | 10 feet |
| Maximum Depth: | 65 feet |

Record Count: 33

PLSS Search:

Township: 23S **Range:** 29E

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

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

4/16/19 2:27 PM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

Appendix C

Analytical Results



*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

April 10, 2019

Bob Allen
Safety & Environmental Solutions
PO Box 1613
Hobbs, NM 88241
TEL: (575) 397-0510
FAX (575) 393-4388

RE: Devon SPUD 16 State 8H

OrderNo.: 1904252

Dear Bob Allen:

Hall Environmental Analysis Laboratory received 15 sample(s) on 4/4/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**Date Reported: **4/10/2019****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH-1 Surface**Project:** Devon SPUD 16 State 8H**Collection Date:** 4/2/2019 9:45:00 AM**Lab ID:** 1904252-001**Matrix:** SOIL**Received Date:** 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|-----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: smb |
| Chloride | 10000 | 600 | | mg/Kg | 200 | 4/8/2019 5:34:46 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | 3100 | 230 | | mg/Kg | 50 | 4/6/2019 6:50:00 PM | 44098 |
| Surr: BFB | 105 | 70-130 | | %Rec | 50 | 4/6/2019 6:50:00 PM | 44098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: Irm |
| Diesel Range Organics (DRO) | 21000 | 380 | | mg/Kg | 40 | 4/5/2019 9:01:07 AM | 44126 |
| Motor Oil Range Organics (MRO) | 7600 | 1900 | | mg/Kg | 40 | 4/5/2019 9:01:07 AM | 44126 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 40 | 4/5/2019 9:01:07 AM | 44126 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | 4.8 | 0.11 | | mg/Kg | 5 | 4/5/2019 11:23:14 PM | 44098 |
| Toluene | 72 | 2.3 | | mg/Kg | 50 | 4/6/2019 6:50:00 PM | 44098 |
| Ethylbenzene | 22 | 0.23 | | mg/Kg | 5 | 4/5/2019 11:23:14 PM | 44098 |
| Xylenes, Total | 130 | 4.6 | | mg/Kg | 50 | 4/6/2019 6:50:00 PM | 44098 |
| Surr: 1,2-Dichloroethane-d4 | 96.3 | 70-130 | | %Rec | 5 | 4/5/2019 11:23:14 PM | 44098 |
| Surr: 4-Bromofluorobenzene | 120 | 70-130 | | %Rec | 5 | 4/5/2019 11:23:14 PM | 44098 |
| Surr: Dibromofluoromethane | 133 | 70-130 | S | %Rec | 5 | 4/5/2019 11:23:14 PM | 44098 |
| Surr: Toluene-d8 | 100 | 70-130 | | %Rec | 5 | 4/5/2019 11:23:14 PM | 44098 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**Date Reported: **4/10/2019****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH-1 1'**Project:** Devon SPUD 16 State 8H**Collection Date:** 4/2/2019 10:15:00 AM**Lab ID:** 1904252-002**Matrix:** SOIL**Received Date:** 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|-----|---------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: smb |
| Chloride | 7200 | 300 | | mg/Kg | 100 | 4/8/2019 5:47:11 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | 250 | 24 | | mg/Kg | 5 | 4/6/2019 3:12:08 AM | 44098 |
| Surr: BFB | 106 | 70-130 | | %Rec | 5 | 4/6/2019 3:12:08 AM | 44098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: Irm |
| Diesel Range Organics (DRO) | 2800 | 96 | | mg/Kg | 10 | 4/6/2019 9:30:09 PM | 44126 |
| Motor Oil Range Organics (MRO) | 1200 | 480 | | mg/Kg | 10 | 4/6/2019 9:30:09 PM | 44126 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 10 | 4/6/2019 9:30:09 PM | 44126 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.12 | | mg/Kg | 5 | 4/6/2019 7:18:40 PM | 44098 |
| Toluene | 1.1 | 0.24 | | mg/Kg | 5 | 4/6/2019 7:18:40 PM | 44098 |
| Ethylbenzene | 1.0 | 0.24 | | mg/Kg | 5 | 4/6/2019 7:18:40 PM | 44098 |
| Xylenes, Total | 6.6 | 0.48 | | mg/Kg | 5 | 4/6/2019 7:18:40 PM | 44098 |
| Surr: 1,2-Dichloroethane-d4 | 86.3 | 70-130 | | %Rec | 5 | 4/6/2019 7:18:40 PM | 44098 |
| Surr: 4-Bromofluorobenzene | 105 | 70-130 | | %Rec | 5 | 4/6/2019 7:18:40 PM | 44098 |
| Surr: Dibromofluoromethane | 88.7 | 70-130 | | %Rec | 5 | 4/6/2019 7:18:40 PM | 44098 |
| Surr: Toluene-d8 | 91.4 | 70-130 | | %Rec | 5 | 4/6/2019 7:18:40 PM | 44098 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**Date Reported: **4/10/2019****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH-1 2'**Project:** Devon SPUD 16 State 8H**Collection Date:** 4/2/2019 10:25:00 AM**Lab ID:** 1904252-003**Matrix:** SOIL**Received Date:** 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|---------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: smb |
| Chloride | 2700 | 150 | | mg/Kg | 50 | 4/8/2019 5:59:35 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 4/6/2019 3:40:33 AM | 44098 |
| Surr: BFB | 103 | 70-130 | | %Rec | 1 | 4/6/2019 3:40:33 AM | 44098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: Irm |
| Diesel Range Organics (DRO) | 24 | 10 | | mg/Kg | 1 | 4/5/2019 3:31:04 PM | 44126 |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 4/5/2019 3:31:04 PM | 44126 |
| Surr: DNOP | 90.9 | 70-130 | | %Rec | 1 | 4/5/2019 3:31:04 PM | 44126 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 4/6/2019 7:47:08 PM | 44098 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 4/6/2019 7:47:08 PM | 44098 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 4/6/2019 7:47:08 PM | 44098 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 4/6/2019 7:47:08 PM | 44098 |
| Surr: 1,2-Dichloroethane-d4 | 86.6 | 70-130 | | %Rec | 1 | 4/6/2019 7:47:08 PM | 44098 |
| Surr: 4-Bromofluorobenzene | 99.9 | 70-130 | | %Rec | 1 | 4/6/2019 7:47:08 PM | 44098 |
| Surr: Dibromofluoromethane | 88.3 | 70-130 | | %Rec | 1 | 4/6/2019 7:47:08 PM | 44098 |
| Surr: Toluene-d8 | 92.3 | 70-130 | | %Rec | 1 | 4/6/2019 7:47:08 PM | 44098 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**

Date Reported: **4/10/2019**

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-2 Surface

Project: Devon SPUD 16 State 8H

Collection Date: 4/2/2019 10:40:00 AM

Lab ID: 1904252-004

Matrix: SOIL

Received Date: 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|---------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | 1600 | 60 | | mg/Kg | 20 | 4/6/2019 2:19:25 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | 1900 | 93 | | mg/Kg | 20 | 4/6/2019 4:09:08 AM | 44098 |
| Surr: BFB | 112 | 70-130 | | %Rec | 20 | 4/6/2019 4:09:08 AM | 44098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: Irm |
| Diesel Range Organics (DRO) | 15000 | 190 | | mg/Kg | 20 | 4/5/2019 4:15:14 PM | 44126 |
| Motor Oil Range Organics (MRO) | 4700 | 930 | | mg/Kg | 20 | 4/5/2019 4:15:14 PM | 44126 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 20 | 4/5/2019 4:15:14 PM | 44126 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | 0.76 | 0.47 | | mg/Kg | 20 | 4/6/2019 8:15:35 PM | 44098 |
| Toluene | 28 | 0.93 | | mg/Kg | 20 | 4/6/2019 8:15:35 PM | 44098 |
| Ethylbenzene | 16 | 0.93 | | mg/Kg | 20 | 4/6/2019 8:15:35 PM | 44098 |
| Xylenes, Total | 65 | 1.9 | | mg/Kg | 20 | 4/6/2019 8:15:35 PM | 44098 |
| Surr: 1,2-Dichloroethane-d4 | 87.9 | 70-130 | | %Rec | 20 | 4/6/2019 8:15:35 PM | 44098 |
| Surr: 4-Bromofluorobenzene | 107 | 70-130 | | %Rec | 20 | 4/6/2019 8:15:35 PM | 44098 |
| Surr: Dibromofluoromethane | 93.3 | 70-130 | | %Rec | 20 | 4/6/2019 8:15:35 PM | 44098 |
| Surr: Toluene-d8 | 91.6 | 70-130 | | %Rec | 20 | 4/6/2019 8:15:35 PM | 44098 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**Date Reported: **4/10/2019****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH-2 1'**Project:** Devon SPUD 16 State 8H**Collection Date:** 4/2/2019 10:55:00 AM**Lab ID:** 1904252-005**Matrix:** SOIL**Received Date:** 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|---------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: smb |
| Chloride | 3300 | 150 | | mg/Kg | 50 | 4/8/2019 6:11:59 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 4/6/2019 4:37:49 AM | 44098 |
| Surr: BFB | 105 | 70-130 | | %Rec | 1 | 4/6/2019 4:37:49 AM | 44098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: Irm |
| Diesel Range Organics (DRO) | 89 | 9.6 | | mg/Kg | 1 | 4/5/2019 4:59:11 PM | 44126 |
| Motor Oil Range Organics (MRO) | 53 | 48 | | mg/Kg | 1 | 4/5/2019 4:59:11 PM | 44126 |
| Surr: DNOP | 91.9 | 70-130 | | %Rec | 1 | 4/5/2019 4:59:11 PM | 44126 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 4/6/2019 8:44:18 PM | 44098 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 4/6/2019 8:44:18 PM | 44098 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 4/6/2019 8:44:18 PM | 44098 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 4/6/2019 8:44:18 PM | 44098 |
| Surr: 1,2-Dichloroethane-d4 | 88.0 | 70-130 | | %Rec | 1 | 4/6/2019 8:44:18 PM | 44098 |
| Surr: 4-Bromofluorobenzene | 96.6 | 70-130 | | %Rec | 1 | 4/6/2019 8:44:18 PM | 44098 |
| Surr: Dibromofluoromethane | 90.7 | 70-130 | | %Rec | 1 | 4/6/2019 8:44:18 PM | 44098 |
| Surr: Toluene-d8 | 94.7 | 70-130 | | %Rec | 1 | 4/6/2019 8:44:18 PM | 44098 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**Date Reported: **4/10/2019****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH-3 Surface**Project:** Devon SPUD 16 State 8H**Collection Date:** 4/2/2019 11:00:00 AM**Lab ID:** 1904252-006**Matrix:** SOIL**Received Date:** 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|---------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | 910 | 60 | | mg/Kg | 20 | 4/6/2019 2:44:14 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | 210 | 4.9 | | mg/Kg | 1 | 4/6/2019 5:06:18 AM | 44098 |
| Surr: BFB | 120 | 70-130 | | %Rec | 1 | 4/6/2019 5:06:18 AM | 44098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: Irm |
| Diesel Range Organics (DRO) | 5600 | 98 | | mg/Kg | 10 | 4/5/2019 5:43:13 PM | 44126 |
| Motor Oil Range Organics (MRO) | 1900 | 490 | | mg/Kg | 10 | 4/5/2019 5:43:13 PM | 44126 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 10 | 4/5/2019 5:43:13 PM | 44126 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.049 | | mg/Kg | 2 | 4/6/2019 9:12:48 PM | 44098 |
| Toluene | ND | 0.098 | | mg/Kg | 2 | 4/6/2019 9:12:48 PM | 44098 |
| Ethylbenzene | 0.54 | 0.098 | | mg/Kg | 2 | 4/6/2019 9:12:48 PM | 44098 |
| Xylenes, Total | 4.6 | 0.20 | | mg/Kg | 2 | 4/6/2019 9:12:48 PM | 44098 |
| Surr: 1,2-Dichloroethane-d4 | 86.7 | 70-130 | | %Rec | 2 | 4/6/2019 9:12:48 PM | 44098 |
| Surr: 4-Bromofluorobenzene | 112 | 70-130 | | %Rec | 2 | 4/6/2019 9:12:48 PM | 44098 |
| Surr: Dibromofluoromethane | 88.2 | 70-130 | | %Rec | 2 | 4/6/2019 9:12:48 PM | 44098 |
| Surr: Toluene-d8 | 90.0 | 70-130 | | %Rec | 2 | 4/6/2019 9:12:48 PM | 44098 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**Date Reported: **4/10/2019****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH-3 1'**Project:** Devon SPUD 16 State 8H**Collection Date:** 4/2/2019 11:15:00 AM**Lab ID:** 1904252-007**Matrix:** SOIL**Received Date:** 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|---------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | 140 | 60 | | mg/Kg | 20 | 4/6/2019 3:21:26 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 4/9/2019 2:16:59 AM | 44098 |
| Surr: BFB | 106 | 70-130 | | %Rec | 1 | 4/9/2019 2:16:59 AM | 44098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: Irm |
| Diesel Range Organics (DRO) | 89 | 9.0 | | mg/Kg | 1 | 4/5/2019 6:27:19 PM | 44126 |
| Motor Oil Range Organics (MRO) | 55 | 45 | | mg/Kg | 1 | 4/5/2019 6:27:19 PM | 44126 |
| Surr: DNOP | 92.2 | 70-130 | | %Rec | 1 | 4/5/2019 6:27:19 PM | 44126 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 4/6/2019 9:41:13 PM | 44098 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 4/6/2019 9:41:13 PM | 44098 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 4/6/2019 9:41:13 PM | 44098 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 4/6/2019 9:41:13 PM | 44098 |
| Surr: 1,2-Dichloroethane-d4 | 89.9 | 70-130 | | %Rec | 1 | 4/6/2019 9:41:13 PM | 44098 |
| Surr: 4-Bromofluorobenzene | 100 | 70-130 | | %Rec | 1 | 4/6/2019 9:41:13 PM | 44098 |
| Surr: Dibromofluoromethane | 93.9 | 70-130 | | %Rec | 1 | 4/6/2019 9:41:13 PM | 44098 |
| Surr: Toluene-d8 | 94.5 | 70-130 | | %Rec | 1 | 4/6/2019 9:41:13 PM | 44098 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**Date Reported: **4/10/2019****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH-4 Surface**Project:** Devon SPUD 16 State 8H**Collection Date:** 4/2/2019 11:30:00 AM**Lab ID:** 1904252-008**Matrix:** SOIL**Received Date:** 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|-----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | 2400 | 60 | | mg/Kg | 20 | 4/6/2019 3:33:51 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | 46 | 4.6 | | mg/Kg | 1 | 4/6/2019 6:03:24 AM | 44098 |
| Surr: BFB | 110 | 70-130 | | %Rec | 1 | 4/6/2019 6:03:24 AM | 44098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: Irm |
| Diesel Range Organics (DRO) | 14000 | 960 | D | mg/Kg | 100 | 4/5/2019 6:49:22 PM | 44126 |
| Motor Oil Range Organics (MRO) | ND | 4800 | D | mg/Kg | 100 | 4/5/2019 6:49:22 PM | 44126 |
| Surr: DNOP | 0 | 70-130 | SD | %Rec | 100 | 4/5/2019 6:49:22 PM | 44126 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.12 | | mg/Kg | 5 | 4/6/2019 10:09:46 PM | 44098 |
| Toluene | ND | 0.23 | | mg/Kg | 5 | 4/6/2019 10:09:46 PM | 44098 |
| Ethylbenzene | ND | 0.23 | | mg/Kg | 5 | 4/6/2019 10:09:46 PM | 44098 |
| Xylenes, Total | ND | 0.46 | | mg/Kg | 5 | 4/6/2019 10:09:46 PM | 44098 |
| Surr: 1,2-Dichloroethane-d4 | 86.3 | 70-130 | | %Rec | 5 | 4/6/2019 10:09:46 PM | 44098 |
| Surr: 4-Bromofluorobenzene | 85.1 | 70-130 | | %Rec | 5 | 4/6/2019 10:09:46 PM | 44098 |
| Surr: Dibromofluoromethane | 87.0 | 70-130 | | %Rec | 5 | 4/6/2019 10:09:46 PM | 44098 |
| Surr: Toluene-d8 | 95.6 | 70-130 | | %Rec | 5 | 4/6/2019 10:09:46 PM | 44098 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**Date Reported: **4/10/2019****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH-4 1'**Project:** Devon SPUD 16 State 8H**Collection Date:** 4/2/2019 11:40:00 AM**Lab ID:** 1904252-009**Matrix:** SOIL**Received Date:** 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | 1700 | 60 | | mg/Kg | 20 | 4/6/2019 3:46:15 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | 17 | 4.8 | | mg/Kg | 1 | 4/6/2019 6:32:00 AM | 44111 |
| Surr: BFB | 104 | 70-130 | | %Rec | 1 | 4/6/2019 6:32:00 AM | 44111 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: Irm |
| Diesel Range Organics (DRO) | 770 | 9.7 | | mg/Kg | 1 | 4/5/2019 3:53:42 AM | 44126 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 4/5/2019 3:53:42 AM | 44126 |
| Surr: DNOP | 95.3 | 70-130 | | %Rec | 1 | 4/5/2019 3:53:42 AM | 44126 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.048 | | mg/Kg | 2 | 4/6/2019 10:38:24 PM | 44111 |
| Toluene | ND | 0.097 | | mg/Kg | 2 | 4/6/2019 10:38:24 PM | 44111 |
| Ethylbenzene | ND | 0.097 | | mg/Kg | 2 | 4/6/2019 10:38:24 PM | 44111 |
| Xylenes, Total | ND | 0.19 | | mg/Kg | 2 | 4/6/2019 10:38:24 PM | 44111 |
| Surr: 1,2-Dichloroethane-d4 | 86.8 | 70-130 | | %Rec | 2 | 4/6/2019 10:38:24 PM | 44111 |
| Surr: 4-Bromofluorobenzene | 85.7 | 70-130 | | %Rec | 2 | 4/6/2019 10:38:24 PM | 44111 |
| Surr: Dibromofluoromethane | 89.8 | 70-130 | | %Rec | 2 | 4/6/2019 10:38:24 PM | 44111 |
| Surr: Toluene-d8 | 92.2 | 70-130 | | %Rec | 2 | 4/6/2019 10:38:24 PM | 44111 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**

Date Reported: **4/10/2019**

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-5 Surface

Project: Devon SPUD 16 State 8H

Collection Date: 4/2/2019 11:50:00 AM

Lab ID: 1904252-010

Matrix: SOIL

Received Date: 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | 650 | 60 | | mg/Kg | 20 | 4/6/2019 3:58:40 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | 110 | 4.6 | | mg/Kg | 1 | 4/6/2019 7:57:40 AM | 44111 |
| Surr: BFB | 116 | 70-130 | | %Rec | 1 | 4/6/2019 7:57:40 AM | 44111 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: Irm |
| Diesel Range Organics (DRO) | 15000 | 200 | | mg/Kg | 20 | 4/5/2019 7:33:31 PM | 44126 |
| Motor Oil Range Organics (MRO) | 7400 | 1000 | | mg/Kg | 20 | 4/5/2019 7:33:31 PM | 44126 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 20 | 4/5/2019 7:33:31 PM | 44126 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.046 | | mg/Kg | 2 | 4/6/2019 11:07:04 PM | 44111 |
| Toluene | ND | 0.092 | | mg/Kg | 2 | 4/6/2019 11:07:04 PM | 44111 |
| Ethylbenzene | 0.27 | 0.092 | | mg/Kg | 2 | 4/6/2019 11:07:04 PM | 44111 |
| Xylenes, Total | 2.2 | 0.18 | | mg/Kg | 2 | 4/6/2019 11:07:04 PM | 44111 |
| Surr: 1,2-Dichloroethane-d4 | 88.8 | 70-130 | | %Rec | 2 | 4/6/2019 11:07:04 PM | 44111 |
| Surr: 4-Bromofluorobenzene | 102 | 70-130 | | %Rec | 2 | 4/6/2019 11:07:04 PM | 44111 |
| Surr: Dibromofluoromethane | 88.6 | 70-130 | | %Rec | 2 | 4/6/2019 11:07:04 PM | 44111 |
| Surr: Toluene-d8 | 90.5 | 70-130 | | %Rec | 2 | 4/6/2019 11:07:04 PM | 44111 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**Date Reported: **4/10/2019****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH-5 1'**Project:** Devon SPUD 16 State 8H**Collection Date:** 4/2/2019 12:10:00 PM**Lab ID:** 1904252-011**Matrix:** SOIL**Received Date:** 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | ND | 60 | | mg/Kg | 20 | 4/6/2019 4:11:05 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 4/8/2019 11:32:26 AM | 44111 |
| Surr: BFB | 104 | 70-130 | | %Rec | 1 | 4/8/2019 11:32:26 AM | 44111 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: CLP |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 4/5/2019 10:55:58 AM | 44127 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 4/5/2019 10:55:58 AM | 44127 |
| Surr: DNOP | 113 | 70-130 | | %Rec | 1 | 4/5/2019 10:55:58 AM | 44127 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 4/7/2019 12:32:55 AM | 44111 |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 4/7/2019 12:32:55 AM | 44111 |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 4/7/2019 12:32:55 AM | 44111 |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 4/7/2019 12:32:55 AM | 44111 |
| Surr: 1,2-Dichloroethane-d4 | 86.7 | 70-130 | | %Rec | 1 | 4/7/2019 12:32:55 AM | 44111 |
| Surr: 4-Bromofluorobenzene | 102 | 70-130 | | %Rec | 1 | 4/7/2019 12:32:55 AM | 44111 |
| Surr: Dibromofluoromethane | 90.2 | 70-130 | | %Rec | 1 | 4/7/2019 12:32:55 AM | 44111 |
| Surr: Toluene-d8 | 93.1 | 70-130 | | %Rec | 1 | 4/7/2019 12:32:55 AM | 44111 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**Date Reported: **4/10/2019****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH-6 Surface**Project:** Devon SPUD 16 State 8H**Collection Date:** 4/2/2019 12:20:00 PM**Lab ID:** 1904252-012**Matrix:** SOIL**Received Date:** 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|-----|---------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: smb |
| Chloride | 13000 | 600 | | mg/Kg | 200 | 4/8/2019 6:24:24 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | 23 | 4.7 | | mg/Kg | 1 | 4/6/2019 9:52:11 AM | 44111 |
| Surr: BFB | 108 | 70-130 | | %Rec | 1 | 4/6/2019 9:52:11 AM | 44111 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: CLP |
| Diesel Range Organics (DRO) | 13000 | 490 | | mg/Kg | 50 | 4/5/2019 3:14:13 PM | 44127 |
| Motor Oil Range Organics (MRO) | 6400 | 2500 | | mg/Kg | 50 | 4/5/2019 3:14:13 PM | 44127 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 50 | 4/5/2019 3:14:13 PM | 44127 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.047 | | mg/Kg | 2 | 4/7/2019 1:01:39 AM | 44111 |
| Toluene | 0.099 | 0.095 | | mg/Kg | 2 | 4/7/2019 1:01:39 AM | 44111 |
| Ethylbenzene | ND | 0.095 | | mg/Kg | 2 | 4/7/2019 1:01:39 AM | 44111 |
| Xylenes, Total | 0.62 | 0.19 | | mg/Kg | 2 | 4/7/2019 1:01:39 AM | 44111 |
| Surr: 1,2-Dichloroethane-d4 | 87.8 | 70-130 | | %Rec | 2 | 4/7/2019 1:01:39 AM | 44111 |
| Surr: 4-Bromofluorobenzene | 99.5 | 70-130 | | %Rec | 2 | 4/7/2019 1:01:39 AM | 44111 |
| Surr: Dibromofluoromethane | 88.3 | 70-130 | | %Rec | 2 | 4/7/2019 1:01:39 AM | 44111 |
| Surr: Toluene-d8 | 95.1 | 70-130 | | %Rec | 2 | 4/7/2019 1:01:39 AM | 44111 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**Date Reported: **4/10/2019****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH-6 1'**Project:** Devon SPUD 16 State 8H**Collection Date:** 4/2/2019 12:35:00 PM**Lab ID:** 1904252-013**Matrix:** SOIL**Received Date:** 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | ND | 60 | | mg/Kg | 20 | 4/6/2019 4:35:54 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 4/7/2019 1:30:17 AM | 44111 |
| Surr: BFB | 103 | 70-130 | | %Rec | 1 | 4/7/2019 1:30:17 AM | 44111 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: CLP |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 4/5/2019 12:08:51 PM | 44127 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 4/5/2019 12:08:51 PM | 44127 |
| Surr: DNOP | 99.2 | 70-130 | | %Rec | 1 | 4/5/2019 12:08:51 PM | 44127 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 4/7/2019 1:30:17 AM | 44111 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 4/7/2019 1:30:17 AM | 44111 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 4/7/2019 1:30:17 AM | 44111 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 4/7/2019 1:30:17 AM | 44111 |
| Surr: 1,2-Dichloroethane-d4 | 87.2 | 70-130 | | %Rec | 1 | 4/7/2019 1:30:17 AM | 44111 |
| Surr: 4-Bromofluorobenzene | 103 | 70-130 | | %Rec | 1 | 4/7/2019 1:30:17 AM | 44111 |
| Surr: Dibromofluoromethane | 91.2 | 70-130 | | %Rec | 1 | 4/7/2019 1:30:17 AM | 44111 |
| Surr: Toluene-d8 | 95.3 | 70-130 | | %Rec | 1 | 4/7/2019 1:30:17 AM | 44111 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**

Date Reported: **4/10/2019**

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-7 Surface

Project: Devon SPUD 16 State 8H

Collection Date: 4/2/2019 12:55:00 PM

Lab ID: 1904252-014

Matrix: SOIL

Received Date: 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|-----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: smb |
| Chloride | 21000 | 1500 | | mg/Kg | 500 | 4/8/2019 6:36:48 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 4/6/2019 10:49:18 AM | 44111 |
| Surr: BFB | 104 | 70-130 | | %Rec | 1 | 4/6/2019 10:49:18 AM | 44111 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: CLP |
| Diesel Range Organics (DRO) | 4800 | 99 | | mg/Kg | 10 | 4/5/2019 12:33:10 PM | 44127 |
| Motor Oil Range Organics (MRO) | 2500 | 490 | | mg/Kg | 10 | 4/5/2019 12:33:10 PM | 44127 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 10 | 4/5/2019 12:33:10 PM | 44127 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 4/7/2019 1:58:53 AM | 44111 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 4/7/2019 1:58:53 AM | 44111 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 4/7/2019 1:58:53 AM | 44111 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 4/7/2019 1:58:53 AM | 44111 |
| Surr: 1,2-Dichloroethane-d4 | 84.8 | 70-130 | | %Rec | 1 | 4/7/2019 1:58:53 AM | 44111 |
| Surr: 4-Bromofluorobenzene | 104 | 70-130 | | %Rec | 1 | 4/7/2019 1:58:53 AM | 44111 |
| Surr: Dibromofluoromethane | 89.3 | 70-130 | | %Rec | 1 | 4/7/2019 1:58:53 AM | 44111 |
| Surr: Toluene-d8 | 94.4 | 70-130 | | %Rec | 1 | 4/7/2019 1:58:53 AM | 44111 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1904252**Date Reported: **4/10/2019****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH-7 1'**Project:** Devon SPUD 16 State 8H**Collection Date:** 4/2/2019 1:25:00 PM**Lab ID:** 1904252-015**Matrix:** SOIL**Received Date:** 4/4/2019 8:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | 61 | 60 | | mg/Kg | 20 | 4/6/2019 5:00:43 PM | 44174 |
| EPA METHOD 8015D MOD: GASOLINE RANGE | | | | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 4/6/2019 11:17:44 AM | 44111 |
| Surr: BFB | 101 | 70-130 | | %Rec | 1 | 4/6/2019 11:17:44 AM | 44111 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: CLP |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 4/5/2019 1:04:05 PM | 44127 |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 4/5/2019 1:04:05 PM | 44127 |
| Surr: DNOP | 109 | 70-130 | | %Rec | 1 | 4/5/2019 1:04:05 PM | 44127 |
| EPA METHOD 8260B: VOLATILES SHORT LIST | | | | | | | Analyst: RAA |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 4/7/2019 2:27:29 AM | 44111 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 4/7/2019 2:27:29 AM | 44111 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 4/7/2019 2:27:29 AM | 44111 |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 4/7/2019 2:27:29 AM | 44111 |
| Surr: 1,2-Dichloroethane-d4 | 87.6 | 70-130 | | %Rec | 1 | 4/7/2019 2:27:29 AM | 44111 |
| Surr: 4-Bromofluorobenzene | 103 | 70-130 | | %Rec | 1 | 4/7/2019 2:27:29 AM | 44111 |
| Surr: Dibromofluoromethane | 90.4 | 70-130 | | %Rec | 1 | 4/7/2019 2:27:29 AM | 44111 |
| Surr: Toluene-d8 | 93.3 | 70-130 | | %Rec | 1 | 4/7/2019 2:27:29 AM | 44111 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|----|---|-----|---|
| Qualifiers: | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| | RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| | W | Sample container temperature is out of limit as specified at testcode | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904252

10-Apr-19

Client: Safety & Environmental Solutions

Project: Devon SPUD 16 State 8H

| | | | | | | | | | | |
|----------------------------|--------------------------------|---|---------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-44174 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: PBS | Batch ID: 44174 | RunNo: 58963 | | | | | | | | |
| Prep Date: 4/6/2019 | Analysis Date: 4/6/2019 | SeqNo: 1983569 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|---|---------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-44174 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: LCSS | Batch ID: 44174 | RunNo: 58963 | | | | | | | | |
| Prep Date: 4/6/2019 | Analysis Date: 4/6/2019 | SeqNo: 1983570 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 95.5 | 90 | 110 | | | |

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904252

10-Apr-19

Client: Safety & Environmental Solutions

Project: Devon SPUD 16 State 8H

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|---------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-44126 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: LCSS | Batch ID: 44126 | RunNo: 58882 | | | | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/4/2019 | SeqNo: 1980513 | | | Units: mg/Kg | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 50 | 10 | 50.00 | 0 | 99.6 | 63.9 | 124 | | | |
| Surr: DNOP | 4.4 | | 5.000 | | 88.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|--|-----------|-------------|---------------------|----------|-----------|------|----------|------|
| Sample ID: MB-44126 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: PBS | Batch ID: 44126 | RunNo: 58882 | | | | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/4/2019 | SeqNo: 1980514 | | | Units: mg/Kg | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 9.1 | | 10.00 | | 91.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-44142 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: LCSS | Batch ID: 44142 | RunNo: 58917 | | | | | | | | |
| Prep Date: 4/5/2019 | Analysis Date: 4/5/2019 | SeqNo: 1981087 | | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 4.4 | | 5.000 | | 87.5 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-44142 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: PBS | Batch ID: 44142 | RunNo: 58917 | | | | | | | | |
| Prep Date: 4/5/2019 | Analysis Date: 4/5/2019 | SeqNo: 1981088 | | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 10 | | 10.00 | | 101 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|--|-----------|-------------|---------------------|----------|-----------|------|----------|------|
| Sample ID: MB-44127 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: PBS | Batch ID: 44127 | RunNo: 58929 | | | | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/5/2019 | SeqNo: 1981904 | | | Units: mg/Kg | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 10 | | 10.00 | | 101 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|---------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-44127 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: LCSS | Batch ID: 44127 | RunNo: 58929 | | | | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/5/2019 | SeqNo: 1981905 | | | Units: mg/Kg | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|----|---|-----|---|
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| W | Sample container temperature is out of limit as specified at testcode | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904252

10-Apr-19

Client: Safety & Environmental Solutions

Project: Devon SPUD 16 State 8H

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|---------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-44127 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: LCSS | Batch ID: 44127 | RunNo: 58929 | | | | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/5/2019 | SeqNo: 1981905 | | | Units: mg/Kg | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 47 | 10 | 50.00 | 0 | 93.6 | 63.9 | 124 | | | |
| Surr: DNOP | 4.8 | | 5.000 | | 95.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-44128 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: LCSS | Batch ID: 44128 | RunNo: 58917 | | | | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/5/2019 | SeqNo: 1982023 | | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 4.3 | | 5.000 | | 86.1 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-44128 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: PBS | Batch ID: 44128 | RunNo: 58917 | | | | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/5/2019 | SeqNo: 1982024 | | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 9.8 | | 10.00 | | 98.1 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-44133 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: PBS | Batch ID: 44133 | RunNo: 58929 | | | | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/5/2019 | SeqNo: 1983932 | | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 13 | | 10.00 | | 130 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-44133 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: LCSS | Batch ID: 44133 | RunNo: 58929 | | | | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/5/2019 | SeqNo: 1983933 | | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 4.7 | | 5.000 | | 94.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-44145 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: LCSS | Batch ID: 44145 | RunNo: 58966 | | | | | | | | |
| Prep Date: 4/5/2019 | Analysis Date: 4/8/2019 | SeqNo: 1984035 | | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 4.5 | | 5.000 | | 90.4 | 70 | 130 | | | |

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904252

10-Apr-19

Client: Safety & Environmental Solutions

Project: Devon SPUD 16 State 8H

| | | | | | | | | | | |
|----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-44145 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
| Client ID: PBS | Batch ID: 44145 | RunNo: 58966 | | | | | | | | |
| Prep Date: 4/5/2019 | Analysis Date: 4/8/2019 | SeqNo: 1984036 | | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 9.7 | | 10.00 | | 97.0 | 70 | 130 | | | |

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904252

10-Apr-19

Client: Safety & Environmental Solutions

Project: Devon SPUD 16 State 8H

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-------|---|-------------|---------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-44098 | SampType: LCS | | TestCode: EPA Method 8260B: Volatiles Short List | | | | | | | |
| Client ID: LCSS | Batch ID: 44098 | | RunNo: 58934 | | | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/5/2019 | | SeqNo: 1982755 | | Units: mg/Kg | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.75 | 0.025 | 1.000 | 0 | 75.1 | 70 | 130 | | | |
| Toluene | 0.95 | 0.050 | 1.000 | 0 | 94.6 | 70 | 130 | | | |
| Ethylbenzene | 0.95 | 0.050 | 1.000 | 0 | 95.5 | 70 | 130 | | | |
| Xylenes, Total | 2.9 | 0.10 | 3.000 | 0 | 95.4 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.44 | | 0.5000 | | 88.2 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.51 | | 0.5000 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.44 | | 0.5000 | | 88.1 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.47 | | 0.5000 | | 95.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-------|---|-------------|---------------------|----------|-----------|------|----------|------|
| Sample ID: mb-44098 | SampType: MBLK | | TestCode: EPA Method 8260B: Volatiles Short List | | | | | | | |
| Client ID: PBS | Batch ID: 44098 | | RunNo: 58934 | | | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/5/2019 | | SeqNo: 1982756 | | Units: mg/Kg | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.45 | | 0.5000 | | 90.5 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.52 | | 0.5000 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.45 | | 0.5000 | | 89.8 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.46 | | 0.5000 | | 93.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|--------------------------------|-------|---|-------------|---------------------|----------|-----------|------|----------|------|
| Sample ID: 1904252-010ams | SampType: MS | | TestCode: EPA Method 8260B: Volatiles Short List | | | | | | | |
| Client ID: AH-5 Surface | Batch ID: 44111 | | RunNo: 58962 | | | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/6/2019 | | SeqNo: 1983539 | | Units: mg/Kg | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.71 | 0.047 | 0.9488 | 0 | 74.4 | 68.9 | 131 | | | |
| Toluene | 0.91 | 0.095 | 0.9488 | 0.03910 | 92.0 | 64.3 | 137 | | | |
| Ethylbenzene | 1.2 | 0.095 | 0.9488 | 0.2733 | 96.3 | 70 | 130 | | | |
| Xylenes, Total | 5.0 | 0.19 | 2.846 | 2.199 | 97.6 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.84 | | 0.9488 | | 88.7 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 0.9488 | | 108 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.83 | | 0.9488 | | 87.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.87 | | 0.9488 | | 91.8 | 70 | 130 | | | |

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904252

10-Apr-19

Client: Safety & Environmental Solutions

Project: Devon SPUD 16 State 8H

| | | | | | | | | | | |
|-----------------------------|--------|-------------------------|-----------|--|------|--------------|-----------|-------|----------|------|
| Sample ID: 1904252-010amsd | | SampType: MSD | | TestCode: EPA Method 8260B: Volatiles Short List | | | | | | |
| Client ID: AH-5 Surface | | Batch ID: 44111 | | RunNo: 58962 | | | | | | |
| Prep Date: 4/4/2019 | | Analysis Date: 4/7/2019 | | SeqNo: 1983540 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.71 | 0.050 | 0.9970 | 0 | 70.7 | 68.9 | 131 | 0.143 | 20 | |
| Toluene | 0.92 | 0.10 | 0.9970 | 0.03910 | 88.0 | 64.3 | 137 | 0.492 | 20 | |
| Ethylbenzene | 1.1 | 0.10 | 0.9970 | 0.2733 | 87.2 | 70 | 130 | 3.78 | 0 | |
| Xylenes, Total | 4.7 | 0.20 | 2.991 | 2.199 | 84.2 | 70 | 130 | 5.36 | 0 | |
| Surr: 1,2-Dichloroethane-d4 | 0.88 | | 0.9970 | | 88.7 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 0.9970 | | 110 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 0.89 | | 0.9970 | | 89.1 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 0.91 | | 0.9970 | | 91.4 | 70 | 130 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------------|-----------|---|------|----------|---------------------|------|----------|------|
| Sample ID: Ics-44111 | | SampType: LCS | | TestCode: EPA Method 8260B: Volatiles Short List | | | | | | |
| Client ID: LCSS | | Batch ID: 44111 | | RunNo: 58962 | | | | | | |
| Prep Date: 4/4/2019 | | Analysis Date: 4/6/2019 | | SeqNo: 1983547 | | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.73 | 0.025 | 1.000 | 0 | 73.1 | 70 | 130 | | | |
| Toluene | 0.91 | 0.050 | 1.000 | 0 | 91.4 | 70 | 130 | | | |
| Ethylbenzene | 0.92 | 0.050 | 1.000 | 0 | 91.8 | 70 | 130 | | | |
| Xylenes, Total | 2.8 | 0.10 | 3.000 | 0 | 94.1 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.43 | | 0.5000 | | 86.5 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.52 | | 0.5000 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.44 | | 0.5000 | | 89.0 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.47 | | 0.5000 | | 94.0 | 70 | 130 | | | |

| Sample ID: mb-44111 | | SampType: MBLK | | TestCode: EPA Method 8260B: Volatiles Short List | | | | | | |
|-----------------------------|--------|--------------------------------|-----------|---|------|----------|---------------------|------|----------|------|
| Client ID: PBS | | Batch ID: 44111 | | RunNo: 58962 | | | | | | |
| Prep Date: 4/4/2019 | | Analysis Date: 4/6/2019 | | SeqNo: 1983548 | | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.43 | | 0.5000 | | 85.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.52 | | 0.5000 | | 104 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.43 | | 0.5000 | | 86.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.47 | | 0.5000 | | 93.3 | 70 | 130 | | | |

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904252

10-Apr-19

Client: Safety & Environmental Solutions

Project: Devon SPUD 16 State 8H

| | | |
|-------------------------------|-------------------------|--|
| Sample ID: 1904252-009ams | SampType: MS | TestCode: EPA Method 8015D Mod: Gasoline Range |
| Client ID: AH-4 1' | Batch ID: 44111 | RunNo: 58934 |
| Prep Date: 4/4/2019 | Analysis Date: 4/6/2019 | SeqNo: 1982780 Units: mg/Kg |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Gasoline Range Organics (GRO) | 33 | 4.8 24.11 17.11 66.9 68.2 135 S |
| Surr: BFB | 520 | 482.2 109 70 130 |

| | | |
|-------------------------------|-------------------------|--|
| Sample ID: 1904252-009amsd | SampType: MSD | TestCode: EPA Method 8015D Mod: Gasoline Range |
| Client ID: AH-4 1' | Batch ID: 44111 | RunNo: 58934 |
| Prep Date: 4/4/2019 | Analysis Date: 4/6/2019 | SeqNo: 1982781 Units: mg/Kg |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Gasoline Range Organics (GRO) | 34 | 4.9 24.65 17.11 67.1 68.2 135 1.31 20 S |
| Surr: BFB | 500 | 493.1 102 70 130 0 0 |

| | | |
|-------------------------------|-------------------------|--|
| Sample ID: lcs-44098 | SampType: LCS | TestCode: EPA Method 8015D Mod: Gasoline Range |
| Client ID: LCSS | Batch ID: 44098 | RunNo: 58934 |
| Prep Date: 4/4/2019 | Analysis Date: 4/5/2019 | SeqNo: 1982789 Units: mg/Kg |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Gasoline Range Organics (GRO) | 21 | 5.0 25.00 0 85.5 70 130 |
| Surr: BFB | 500 | 500.0 100 70 130 |

| | | |
|-------------------------------|-------------------------|--|
| Sample ID: lcs-44111 | SampType: LCS | TestCode: EPA Method 8015D Mod: Gasoline Range |
| Client ID: LCSS | Batch ID: 44111 | RunNo: 58934 |
| Prep Date: 4/4/2019 | Analysis Date: 4/6/2019 | SeqNo: 1982790 Units: mg/Kg |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Gasoline Range Organics (GRO) | 21 | 5.0 25.00 0 82.8 70 130 |
| Surr: BFB | 510 | 500.0 103 70 130 |

| | | |
|-------------------------------|-------------------------|--|
| Sample ID: mb-44111 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Gasoline Range |
| Client ID: PBS | Batch ID: 44111 | RunNo: 58934 |
| Prep Date: 4/4/2019 | Analysis Date: 4/6/2019 | SeqNo: 1982791 Units: mg/Kg |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 |
| Surr: BFB | 520 | 500.0 105 70 130 |

| | | |
|---------------------|-------------------------|--|
| Sample ID: mb-44098 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Gasoline Range |
| Client ID: PBS | Batch ID: 44098 | RunNo: 58934 |
| Prep Date: 4/4/2019 | Analysis Date: 4/5/2019 | SeqNo: 1982792 Units: mg/Kg |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |

Qualifiers:

| | | | |
|----|---|-----|---|
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | PQL | Practical Quantitative Limit |
| RL | Reporting Detection Limit | S | % Recovery outside of range due to dilution or matrix |
| W | Sample container temperature is out of limit as specified at testcode | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904252

10-Apr-19

Client: Safety & Environmental Solutions

Project: Devon SPUD 16 State 8H

| | | | | | | | | | | |
|-------------------------------|--------------------------------|-----|-----------|-------------|---|---------------------|-----------|------|----------|------|
| Sample ID: mb-44098 | SampType: MBLK | | | | TestCode: EPA Method 8015D Mod: Gasoline Range | | | | | |
| Client ID: PBS | Batch ID: 44098 | | | | RunNo: 58934 | | | | | |
| Prep Date: 4/4/2019 | Analysis Date: 4/5/2019 | | | | SeqNo: 1982792 | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 500 | | 500.0 | | 99.8 | 70 | 130 | | | |

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

Sample Log-In Check List

Client Name: Safety Env Solutions

Work Order Number: 1904252

RcptNo: 1

Received By: Yazmine Garduno 4/4/2019 8:55:00 AM

Completed By: Anne Thorne 4/4/2019 9:24:57 AM

Reviewed By: *LB*
Labeled by: WC 4-4-19 4/4/19

Yazmine Garduno

Anne Thorne

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐

2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐

4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐

5. Sample(s) in proper container(s)? Yes ☒ No ☐

6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐

7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐

8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐

9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒

10. Were any sample containers received broken? Yes ☐ No ☒

11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐

13. Is it clear what analyses were requested? Yes ☒ No ☐

14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: *LB 4/4/19*

Special Handling (if applicable)

At 104101

15. Was client notified of all discrepancies with this order? Yes ☒ No ☐ NA ☒

Person Notified: *JS*

Date

By Whom: *AT*

Via:

☐ eMail

☒ Phone

☐ Fax

☐ In Person

Regarding:

collection time for AA-7 1'

Client Instructions:

16. Additional remarks: *per JS AA-7 1' collection time is 1325*

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.7 | Good | Yes | | | |
| 2 | 4.4 | Good | Yes | | | |

Appendix D

Site Photos

**Devon Energy
Spud 16 State 8H
30-015-40038**



Spill Source



Impact to pad area



Spill area post Vac Truck activity



Arial view of geographic location



Marked electrical lines on pad area