

Page 1 of 93

Received by OCD: 10/1/2019 4:53:49 PM Received by OCD: 10/1/2019 4:53:49 PM DAVID FEATHER ENVIRONMENTAL SUPERVISOR DIRECT (432) 818-1615 E-MAIL: DAVID.FEATHER @ APACHECORP COM

October 1, 2019

Mr. Bradford Billings State of New Mexico Oil Conservation Division 1220 South St Francis Drive Santa Fe, NM 87505

RE: 1RP-4516 Warn State AC Battery

Mr. Billings,

In compliance with 19.15.29.15(B) NMAC and the agreement submitted by Apache Corporation on November 8, 2018, Apache Corporation is submitting information related to deferment request for the release occurring October 10, 2016. Apache is respectfully submitting the deferment request for your approval. Unless further information is requested by NMOCD, Apache Corporation considers this release deferred.

If there are any questions, please feel free to contact me by telephone at 432-818-1615 or by e-mail at David.Feather@ApacheCorp.com.

Sincerely,

David Feather Environmental Supervisor Apache Corporation - Permian Basin Region

Attachment: Deferment Report Dated September 27, 2019

PARK

APACHE CORPORATION - PERMIAN BASIN REGION - 303 VETERANS AIRPARK LANE, STE 3000, MIDLAND, TEXAS 79705

# 1RP-4516 DELINEATION AND DEFERRAL REPORT Warn State AC Battery Crude Oil and Produced Water Release Lea County, New Mexico

Latitude: N 32.7706032° Longitude: W -103.49811995°

LAI Project No. 19-0112-47

September 27, 2019

Prepared for: Apache Corporation 2350 W. Marland Blvd Hobbs, New Mexico 88240

Prepared by: Larson & Associates, Inc. 507 North Marienfeld Street, Suite 205 Midland, Texas 79701

Mark J. Larson, P.G. Certified Professional Geologist #10490

Rachel E. Owen Sr. Geoscientist

Page 2 of 93

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Page 3 of 93

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# Tables

Table 1

**Delineation Soil Sample Analytical Data Table Summary** 

#### **Figures**

| Figure 1 | Topographic Map  |
|----------|--|
| Figure 2 | Aerial Map showing Soil Sample Location and Proposed Microblaze Area |

# Appendices

Appendix AInitial C-141Appendix BArcadis U.S., Inc. DataAppendix COCD CommunicationsAppendix DLaboratory ReportAppendix EPhotographs

1RP-4516 Delineation and Deferral Report Warn State AC Battery September 27, 2019

# **1.0 INTRODUCTION**

Larson & Associates, Inc. (LAI) has prepared this delineation and deferral report on behalf of Apache Corporation (Apache) for submittal to the New Mexico Oil Conservation (OCD) District I for a crude oil and produced water release at the Warn State AC Battery located in Unit N (SE/4, SW/4), Section 6, Township 18 South, Range 35 East in Lea County, New Mexico. The geodetic position is North 32.7706032° and West -103.49811995°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

# **1.1 Background**

The release occurred on October 10, 2016 when a gasket on a heater treater failed. The failure allowed for approximately 50 barrels (bbls) of crude oil and 30 bbls of produced water to be released. Approximately 40 bbls of crude oil and 20 bbls of produced water were recovered. The liquid accumulated on the facility pad and crude oil mist was sprayed in the pasture northeast of the facility. Mr. Bruce Baker with Apache provided verbal and email notification to Kristen Lynch with NMOCD District 1 on October 11, 2016. The initial C-141 was submitted on October 24, 2016, and assigned remediation permit number of 1RP-4516.

Initial sampling was conducted by Arcadis U.S, Inc. (Arcadis) on October 27, 2016. Soil samples were collected from five (5) locations (SP 1, SP 2, SP 3, SP 4, and SP 5) in the spill area at 4 inches below ground surface (bgs). Cardinal Laboratories (Cardinal), in Hobbs, New Mexico, which analyzed the samples, shows that four (4) additional soil samples were collected (SP 6 through SP 9), but are not indicated on the Arcadis map. OCD correspondence suggests that SP 9 is located in the crude oil overspray area northeast of the well pad. Cardinal analyzed the samples for gasoline range organics (GRO), diesel range organics (DRO), benzene, toluene, ethylbenzene and xylenes (BTEX), and chloride by EPA SW-846 Method 8015, Method 8021B and titration method SM4500 CL-B, respectively. GRO and DRO concentrations were reported above the OCD remediation action level of 2,500 milligrams per kilogram (mg/Kg) at SP 1 (13,030 mg/Kg), SP 2 (8,010 mg/Kg), SP 3 (37,500 mg/Kg), SP 4 (8,320 mg/Kg), and SP 5 (34,020 mg/Kg). DRO was reported above remediation action level in the overspray area (SP 9) at the surface (4,310 mg/Kg) and below remediation action level at SP 9, 1 foot bgs (56 mg/Kg). Benzene was reported below the remediation action level of 10 mg/Kg in all samples. BTEX was reported above the remediation action level of 50 mg/Kg at SP 1 (390 mg/Kg), SP 2 (83.2 mg/Kg), SP 3 (1,240 mg/Kg), and SP 5 (116 mg/Kg). Chloride was reported below the remediation action level of 10,000 mg/Kg for all soil samples. Appendix B presents the Arcadis data. Appendix C presents OCD correspondence.

# **1.2 Physical Setting**

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The physical setting is as follows:

- The surface elevation is approximately 3,981 feet above mean sea level (msl);
- The topography slopes gently towards the southeast;
- There are no surface water features within 1,000 feet of the Site;
- The soils are designated as "Kimbrough-Lea complex, dry, 0 to 3 percent slopes", consisting of 0 to 3 inches of gravelly loam underlain by 3 to 10 inches of loam and 10 to 00 inches of cemented material (caliche);
- The surface geology consists of alluvial and eolian deposits (Lower Pliocene to middle Miocene)
  petrocalcic soils of the southern High Plains;

1RP-4516 Delineation and Deferral Report Warn State AC Battery September 27, 2019

- Groundwater occurs in the Ogallala formation at 60 feet bgs based on the New Mexico Office of the State Engineer (NMOSE) website;
- According to the New Mexico Office of the State Engineer (OSE) website the nearest groundwater well is located in Unit O, Section 6, Township 18 South, Range 35 East, approximately 0.19 miles or about 1,009.47 feet south of the Site.

# 1.3 Remediation Levels

Page 6 of 93

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The following remediation standards are based on closure criteria for soils impacted by a release as presented in Table 1 of 19.15.29 NMAC:

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg
- TPH 2,500 mg/Kg
- Chloride 10,000 mg/Kg

Further, 19.15.29.13 NMAC (Restoration, Reclamation and Re-Vegetation) requires the operator to restore the impacted surface area that existed prior to the release or their final land use.

# **2.0 DELINEATION**

On August 28, 2019, Scarborough Drilling, Inc. (SDI), under supervision from LAI, used an air rotary drilling rig to vertically delineate the spill inside of the firewall and northeast of the heater treater (SP 5). Soil samples were collected every 5 feet to 30 feet bgs. The soil samples were delivered under chain of custody and preservation to Permian Basin Environmental Laboratory (PBEL) in Midland, Texas, and were analyzed for BTEX, total petroleum hydrocarbons (TPH), including gasoline range organics (C6-C12), diesel range organics (>C12-C28) and oil range organics (>C28-C35) by EPA SW-846 Methods 8021B and 8015M, respectively.

The laboratory reported benzene and BTEX below the remediation limits of 10 mg/Kg and 50 mg/kg, respectively, in all soil samples. TPH was reported above the remediation action level of 2,500 mg/Kg in sample SP 5, 0 feet bgs (11,400 mg/Kg), and SP 5, 5 feet bgs (3,030 mg/Kg). TPH was reported below the remediation action level at SP 5, 10 feet bgs (<27.5 mg/Kg). Table 1 presents the delineation soil sample analytical data summary.

Figure 2 presents the soil sampling location. Appendix D presents the PBEL laboratory data. Appendix E presents photographs.

# **3.0 DEFERRAL REQUEST**

Apache has delineated BTEX, TPH and chloride below the remediation limits of 50 mg/Kg, 2,500 mg/Kg and 10,000 mg/Kg, respectively. Apache proposes to apply a 6% solution of Microblaze® microbial amendment and water to the affected soil and vegetation in the overspray area northeast of the facility to remediate DRO concentrations in the upper foot of soil. The overspray area measures approximately 8,450 square feet. Due to the spill area being in close proximity to production equipment and underground lines, Apache respectfully requests a deferral to complete delineation on the caliche road and remediation of the Warn State AC Battery (1RP-4516) until abandonment.



| Table 1  |
|--|
| <b>Delineation Soil Sample Analytical Data Summary</b> |
| Apache Corporation, Warn State AC Battery              |
| Lea County, New Mexico                                 |
| 32 46' 11.23" North, -103 29' 57.94" West              |

Page 1 of 1

| Sample      | Depth<br>(Feet) | Collection<br>Date | Status  | Benzene<br>(mg/Kg | BTEX<br>(mg/Kg) | C6 - C12<br>(mg/Kg) | C12 - C28<br>(mg/Kg) | C28 - C35<br>(mg/Kg) | TPH<br>(mg/Kg) | Chloride<br>(mg/Kg) |
|-------------|-----------------|--------------------|---------|-------------------|-----------------|---------------------|----------------------|----------------------|----------------|---------------------|
| Remediation | Level:          |                    |         | 10                | 50              |                     |                      |                      | 2,500          | 10,000              |
| SP-5        | 0               | 8/28/2019          | ln-situ | <0.0208           | <0.1249         | <260                | 8,730                | 2,650                | 11,400         | -                   |
|             | 5               | 8/28/2019          | In-situ | <0.0217           | <0.1303         | 180                 | 2,480                | 368                  | 3,030          |                     |
|             | 10              | 8/28/2019          | In-situ | <0.00110          | <0.00660        | <27.5               | <27.5                | <27.5                | <27.5          | 12                  |
| 1           | 15              | 8/28/2019          | In-situ | <0.00106          | <0.00637        | <26.6               | <26.6                | <26.6                | <26.6          | 125                 |
|             | 20              | 8/28/2019          | in-situ | <0.00110          | <0.00660        | <27.5               | <27.5                | <27.5                | <27.5          | -                   |
|             | 25              | 8/28/2019          | In-situ | <0.00106          | <0.00637        | <26.6               | <26.6                | <26.6                | <26.6          | -                   |
|             | 30              | 8/28/2019          | In-situ | <0.00108          | <0.00647        | <26.9               | <26,9                | <26.9                | <26.9          | -                   |
|             |                 | 1                  |         |                   |                 |                     |                      |                      |                |                     |

Notes: Analysis performed by Permian Basin Environmental Laboratory by EPA SW-846 Methods 80218 (BTEX), and 8015M (TPH)

Depth in feet below ground surface (bgs) mg/Kg: milligrams per kilogram equivalent to parts per million (ppm) <: denotes concentration less than analytical method reporting limit Bold and Highlighted exceeds OCD remediation levels

Page 8 of 93







Appendix A

Initial C-141

Page 12 of 93

District 1 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

Page 13 of 93

# State of New Mexico **Energy Minerals and Natural Resources**

**Oil Conservation Division** 1220 South St. Francis Dr. Form C-141 Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Santa Fe, NM 87505

# **Release Notification and Corrective Action**

|  | OPERATOR                     | Initial Report | Final Report |
|--|------------------------------|----------------|--------------|
| Name of Company: Apache Corporation          | Contact Bruce Baker          |                |              |
| Address: 2350 W Marland Blvd Hobbs, NM 88240 | Telephone No. (432) 631-6982 |                |              |
| Facility Name Warn State A/C Battery         | Facility Type: Battery       |                |              |
|  |                              |                |              |

| Surface Owner State | Mineral Owner | API No. 30-025-03082 |
|---------------------|---------------|----------------------|
|                     |               |                      |

|  | LOCA | TION | <b>OF R</b> | ELEASE |
|--|------|------|-------------|--------|
|--|------|------|-------------|--------|

| Unit LetterSectionTownshipRangeFeet from theNorth/South LineFeet from theEast/West LineCountyN18S35E330FSL2233FWLLea |  |
|--|--|
|--|--|

Latitude N32.7706032 Longitude W103.49811995

| NATURE  | OF RELEASE  |   |   |
|---|---|---|---|
| Type of Release: Produced water and oil   | Volume of Release 50 barrels of<br>Oil and 30 barrels of water  | Volume Re<br>20 barrels o                         | covered 40 barrels of Oil and   |
| Source of Release: Heater Treater   | Date and Hour of Occurrence<br>10/10/2016   | our of Discovery                                  |   |
| Was Immediate Notice Given?   | If YES, To Whom?<br>Kristen Lynch (NMOCD)   | 10/10/2016  |   |
| By Whom? Bruce Baker  | Date and Hour 10/11/2016 via phot   | ne and email :                                    | ut 3:23 p.m.  |
| Was a Watercourse Reached?  | If YES, Volume Impacting the Wat  | tercourse.  |   |
| Describe Cause of Problem and Remedial Action Taken.*<br>A release occurred due to gasket on heater treater failed. The treater was<br>was replaced.  | isolated and a vacuum truck was dispa   | atched to pick                                    | -up standing fluid. The gask  |
| I hereby certify that the information given above is true and complete to t<br>regulations all operators are required to report and/or file certain release n<br>public health or the environment. The acceptance of a C-141 report by th<br>should their operations have failed to adequately investigate and remediat<br>or the environment. In addition, NMOCD acceptance of a C-141 report d<br>federal, state, or local laws and/or regulations. | notifications and perform corrective active active active active NMOCD marked as "Final Report" (<br>the contamination that pose a threat to perform the second active | tions for relea<br>does not relie<br>round water. | ses which may endanger<br>we the operator of liability<br>surface water, human health |
|   | OIL CONSERV   | VATION I  | NOISION   |
| Signature: Bure Bah   | <u>OIL COMBER (</u>   |   |   |
|   | Approved by Environmental Specialis   | st: Tudo  | adynch  |
| Title: Environmental Technician   | Approval Date: 11/22/2016   | Expiration D                                      | ate: 1/22/2017  |
| 3   | Conditions of Approval:   |   | Attached  |
| Date: 10/24/2016 Phone: (432) 631-6982  | Please see attached directive   | e I   | 1RP 4516  |

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# Operator/Responsible Party,

The OCD has received the form C-141 you provided on 10/24/2016 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 1RP 4516 has been assigned. Please refer to this case number in all future correspondence.

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete <u>division-approved corrective action</u> for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 1 office in Hobbs on or before 12/22/2016. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

• Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

• Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.

• Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold OCD Environmental Bureau Chief 1220 South St. Francis Drive Santa Fe, New Mexico 87505 505-476-3465 jim.griswold@state.nm.us Appendix B

Arcadis U.S., Inc. Data

Page 16 of 93



Imagine the result

**Apache Corporation** 

# WARN STATE A/C BATTERY Remediation Plan Proposal 1RP 4516

Lea County, New Mexico

January 31, 2017

Page 17 of 93

Warn State A/C Battery

Remediation Plan Proposal

Prepared for Apache Corporation Lea County, New Mexico

Prepared by ARCADIS U.S., Inc. 1004 North Big Spring Street Suite 300 Midland Texas 79701 Tel 432 687 5400 Fax 432 687 5401

Our Ref: MT001200.0000.0000

Date January 31, 2017

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Jennifer Van Curen Environmental Project Scientist

Page 18 of 93

Remediation Plan Proposal

Apache Corporation Lea County, New Mexico

| 1. | INTRODUCTION                             |      | 2 |
|----|--|------|---|
| 2. | Summary of site investigation Activities |      | 2 |
| 3. | Environmental Assessment                 |      | 3 |
|    | 3.1 Hydrology                            | 1    | 3 |
| 4. | Remediation Plan                         | , es | 3 |
|    | 4.1 Soil Remediation Plan                | I,   | 4 |
| 5. | REMEDIATION WORK SCHEDULE                |      | 4 |
| 6. | FOLLOW-UP SCHEDULE                       |      | 4 |
| 8. | APPENDICES                               |      | 5 |
|    | Appendix A                               |      |   |

#### Appendix A Attachments Initial C-141 Depth to Groundwater Report

Appendix B Tables Photos

Appendix C Laboratory Sample Results



1

Page 19 of 93

Remediation Plan Proposai 1RP 4516

Apache Corporation Lea County, New Mexico

#### 1. INTRODUCTION

The subject site is located on the facility pad at 32°46'14.16"N and 103°29'55.00"W in Section 6, T18S, R35E in Lea County. The site is operated by Apache Corporation.

## 2. SUMMARY OF SITE INVESTIGATION ACTIVITIES

The New Mexico Oil Conservation Division (NMOCD) was notified of the 50 barrels (bbls.) oil and 30 bbls of water released with 40 bbls oil and 20 bbls water recovered at the site via form C-141, submitted on October 24, 2016 by Bruce Baker with Apache Corporation.

The release was reported to have had a gasket fail on the heater treater. The heater treater was isolated and a vacuum truck was dispatched to pick-up the standing fluid. The gasket was then replaced. All of the standing fluid was contained inside the facility and well pad areas. There was a spray to the northeast of the heater treater encompassing 7,698 square feet area.

Initial release site investigation activities were conducted in October 2016 by completing field and lab sampling to 4 inches below ground surface (bgs) before hitting refuse.

Five samples were taken within the release site. The soil samples were taken to a depth to reach the NMOCD delineation guidelines for chlorides.

Soil sampling results are shown in the Table 1 with sample point locations in Figure 1 below. The laboratory results are attached in Appendix A.

|            |          |          |      | Lab Data |      |
|------------|----------|----------|------|----------|------|
| Date       | Sample # | Depth    | BTEX | TPH      | CL's |
| 10/27/2016 |          |          |      |          |      |
|            | SP 1     | 4inches  | 390  | 13030    | 96   |
|            | SP 2     | 4 inches | 83.2 | 8010     | 448  |
|            | SP 3     | 4 inches | 1240 | 37500    | 64   |
|            | SP 4     | 4 inches | 2.67 | 8320     | 2360 |
|            | SP 5     | 4inches  | 116  | 34020    | 768  |

Table1: Soil Sample Results

ARCADIS Constrained

Page 20 of 93

2

Remediation Plan Proposal 1RP 4516

Apache Corporation Lea County, New Mexico



# 3. ENVIRONMENTAL ASSESSMENT

#### 3.1 Hydrology

Groundwater depths in the area average 90 feet bgs (Waters Map). There is no surface water near this release site.

The site ranking for this site is a 10 based on the following:

| Depth to ground water          | >50' = 10  |
|--------------------------------|------------|
| Wellhead Protection Area       | >1000' = 0 |
| Distance to surface water body | >1000' = 0 |

# 4. REMEDIATION PLAN

After review of various remedial options, we propose the following Remediation Plan for this release site is as follows:



3

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Remediation Plan Proposal 1RP 4516

Apache Corporation Lea County, New Mexico

4.1 Soil Remediation Plan

The chloride impacted soils on the well and facility pad (1,933 square feet) will be removed via a backhoe and transported to a NMOCD approved disposal facility. The active well and facility pad will be resurfaced with compacted caliche. Further remediation analysis will be completed when the well and facility are abandoned.

A light mist of hydrocarbon was blown to the north and covered the vegetation in the pasture covering an area of 7,698 square feet. Apache will spray wash the vegetation in the pasture.

There is an area inside the battery firewall that will be tilled in order to lower the TPH levels. This area will be sampled again next year after TPH has had time to flash off.

#### 5. REMEDIATION WORK SCHEDULE

Soil remediation activities are expected to be completed within 5 working days (Monday through Friday) with work commencing after receiving approval and funding for this Remediation Proposal.

### 6. FOLLOW-UP SCHEDULE

A Remediation Report with Form C-141 will be completed and mailed within 30 days of remediation work being completed.



Page 22 of 93

4

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Appendix A

Attachments





Page 25 of 93

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

| (A CLW##### in the<br>POD suffix indicates the<br>POD has been replaced<br>& no longer serves a<br>water right file.) | (R=POD has<br>been replaced<br>O=orphaned,<br>C=the file is<br>closed) | (quai |            |   |             |    |        | IE 3=SW |        | 3 UTM in meters) |                                | (in fee            | t)              |
|---|--|-------|------------|---|-------------|----|--------|---------|--------|------------------|--------------------------------|--------------------|-----------------|
|   | POD<br>Sub-  |       |            | Q |             |    | Store. |         |        |                  | a ditta                        | lease i            | Ser Star        |
| POD Number  | Code basin C   | ounty | (Constant) |   | Contract of |    | Twa    | Rng     | x      | Y                | CONTRACTOR OF THE OWNER OF THE | Concerns a support | Water<br>Column |
| L 02348   | L  | LE    |            |   |             | 06 | 18S    |         | 640791 | 3627548* 😜       | 215                            | 105                | 110             |
| L 04796   | L  | LE    | 4          | 4 | 3           | 06 | 185    | 35E     | 640667 | 3626847* 🌍       | 150                            | 95                 | 55              |
| L 05411   | L  | LE    |            | 3 | 4           | 06 | 18S    | 35E     | 640970 | 3626952* 🌍       | 120                            | 60                 | 60              |
| L 05523   | L  | LE    | 3          | 3 | 2           | 06 | 185    | 35E     | 640855 | 3627660* 🌍       | 147                            | 85                 | 62              |
| L 07119   | L.   | LE    | 1          | 1 | 1           | 06 | 18S    | 35E     | 640068 | 3628255* 🍪       | 233                            | 95                 | 138             |
| L 07119 S   | L  | LE    | 1          | 2 | 1           | 06 | 18S    | 35E     | 640445 | 3628259* 🕒       | 233                            | 95                 | 138             |
| L 10337   | L  | LE    | 4          | 1 | 1           | 06 | 18S    | 35E     | 640268 | 3628055* 🕒       | 190                            | 100                | 90              |
| L 13041 POD1  | L  | LE    |            | 2 | 2           | 06 | 185    | 35E     | 641152 | 3628026 🌍        | 130                            |                    |                 |
| L 13041 POD2  | L  | LE    |            | 2 | 2           | 06 | 18S    | 35E     | 641152 | 3628026 🌑        | 140                            |                    |                 |
| L 13041 POD3  | L  | LE    |            | 2 | 2           | 06 | 18S    | 35E     | 641152 | 3628026 🌍        | 140                            |                    |                 |
| L 13041 POD4  | L  | LE    |            | 2 | 2           | 06 | 185    | 35E     | 641152 | 3628026 🌍        | 140                            |                    |                 |
|   |  |       |            |   |             |    |        |         |        | Average Depth (  | o Water:                       | 90 (               | feet            |
|   |  |       |            |   |             |    |        |         |        | Minimu           | n Depth                        | 60 1               | feet            |
|   |  |       |            |   |             |    |        |         |        | Maximur          | n Depth;                       | 105 (              | føet            |

## Record Count: 11

PLSS Search: Section(s): 6

Township: 18S

Range: 35E

\*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.

12/18/16 10:30 AM

Page 1 of 1

WATER COLUMN/ AVERAGE DEPTH TO WATER



# PHOTOGRAPH LOG

Apache Corp 1RP 4516 Warn State A/C Battery



## Photograph: 1

ARCADIS Design & Consultancy for natural and built assets

> Description: Facing west viewing mist in pasture

Location: Warn State A/C Battery

Photograph taken by: Jennifer Van Curen

Date: 10/24/2016

# Photograph: 2

Description: Facing west viewing stain from fluid

Location: Warn State A/C Battery

Photograph taken by: Jennifer Van Curen

Date: 10/24/2016



arcadis.com

Received by OCD: 10/1/2019 4:53:49 PM

1

# PHOTOGRAPH LÓG

Apache Corp 1RP 4516 Warn State A/C Battery



# Photograph: 3

ARCADIS Design & Consultancy for natural and built assets

Description: Facing west viewing stain from fluid

Location: Warn State A/C Battery

Photograph taken by: Jennifer Van Curen

Date: 10/24/2016

## Photograph: 4

Description: Facing west viewing stain from fluid

Location: Warn State A/C Battery

Photograph taken by: Jennifer Van Curen

Date: 10/24/2016



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# **PHOTOGRAPH LOG**

Apache Corp 1RP 4516 Warn State A/C Battery



## Photograph: 5

ARCADIS Consultancy tornatural and tulit assets

> Description: Facing west viewing stain inside firewall

Location: Warn State A/C Battery

Photograph taken by: Jennifer Van Curen

Date: 10/24/2016

# Photograph: 6

Description: Facing north viewing mist in pasture

Location: Warn State A/C Battery

Photograph taken by: Jennifer Van Curen

Date: 10/24/2016



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# PHOTOGRAPH LOG

Apache Corp 1RP 4516 Warn State A/C Battery



# Photograph: 7

ARCADIS Design & Consultancy for natural and built essets

**Description:** Facing north viewing mist in pasture

Location: Warn State A/C Battery

Photograph taken by: Jennifer Van Curen

Released to Imaging: 7/1/2021 3:01:17 PM

Date: 10/24/2016

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# ARCADIS

Appendix C

Laboratory Sample Results



PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

November 02, 2016

Dage 32 of 93

BRUCE BAKER APACHE CORP - HOBBS 2350 W. MARLAND BLVD. HOBBS, NM 88240

**RE: WARN BATTERY 1RP 4516** 

Enclosed are the results of analyses for samples received by the laboratory on 10/27/16 16:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

| Method EPA 552.2 | Haloacetic Acids (HAA-5)     |
|------------------|------------------------------|
| Method EPA 524.2 | Total Trihalomethanes (TTHM) |
| Method EPA 524.4 | Regulated VOCs (V1, V2, V3)  |

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Received by OCD: 10/1/2019 4:53:49 PM

Celeg D. Keine

Celey D. Keene Lab Director/Quality Manager

# CARDINAL

#### PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

10/26/2016 Soil Cool & Intact Jodi Henson

#### Analytical Results For:

APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240 Fax To: (575) 393-2432

| Received:         | 10/27/2016            | Sampling Date:      |
|-------------------|-----------------------|---------------------|
| Reported:         | 11/02/2016            | Sampling Type:      |
| Project Name:     | WARN BATTERY 1RP 4516 | Sampling Condition: |
| Project Number:   | NONE GIVEN            | Sample Received By: |
| Project Location: | EDDY COUNTY, NM       |                     |

#### Sample ID: SP 1 (H602421-01)

8TEX 80218 mg/kg Analyzed By: CK **Reporting Limit** Analyte Result Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier 11/01/2016 Benzene\* <\$.00 5.00 NÐ 2.38 119 2.00 0.619 Toluene\* 105 5.00 11/01/2016 ND 2.43 122 2.00 0.0870 Ethylbenzene\* 106 11/01/2016 5.00 ND 2.35 118 2.00 0.173 Total Xylenes\* 179 15.0 11/01/2016 ND 7.09 118 6.00 0.343 **Total BTEX** 390 30.0 11/01/2016 ND

Surrogate 4-Bromofluorobenzene (PIE 112 % 73 6-140

| Chloride, SM4500CI-B          | mg.              | /kg             | Analyze    | d By; AC        |     |            |               |      |           |
|-------------------------------|------------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte                       | Result           | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                      | 96.0             | 16.0            | 11/01/2016 | ND              | 416 | 104        | 400           | 0.00 |           |
| TPH 8015M                     | i ing            | /kg             | Analyze    | Analyzed By: MS |     |            |               |      | S-06      |
| Analyte                       | Result           | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                    | 3080             | 50.0            | 10/29/2016 | ND              | 176 | 88.0       | 200           | 1.06 |           |
| DR0 >C10-C28                  | <del>9</del> 950 | 50.0            | 10/29/2016 | ND              | 186 | 92.8       | 200           | 11.9 |           |
| Surrogate: 1-Chlorooctane     | 198              | % 35-147        |            |                 |     |            |               |      |           |
| Surrogate: 1-Chlorooctadecane | 240              | % 28-171        |            |                 |     |            |               |      |           |

**Cardinal Laboratories** 

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 8

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Received by OCD: 10/1/2019 4:53:49 PM

Page 33 of 93

# Laboratories

PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

# Analytical Results For:

APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240 Fax To: (575) 393-2432

10/27/2016 **Received:** 11/02/2016 Reported: WARN BATTERY 1RP 4516 Project Name: NONE GIVEN **Project Number:** EDDY COUNTY, NM **Project Location:** 

Sampling Date: Sampling Type: Sampling Condition: Sample Received By:

10/26/2016 Soil Cool & Intact Jodi Henson

### Sample ID: SP 2 (H602421-02)

| BTEX 80218     | mg/kg  |                 | Analyzed By: CK |              |      |            | _             |        |           |
|----------------|--------|-----------------|-----------------|--------------|------|------------|---------------|--------|-----------|
| Anatyte        | Result | Reporting Limit | Analyzed        | Method Blank | BS   | % Recovery | True Value QC | RPD    | Qualifier |
| Benzene*       | 0.575  | 0.500           | 11/01/2016      | ND           | 2.38 | 119        | 2.00          | 0.619  |           |
| Toluene*       | 15.5   | 0.500           | 11/01/2016      | ND           | 2.43 | 122        | 2.00          | 0.0870 |           |
| Ethylbenzene*  | 22.9   | 0.500           | 11/01/2016      | ND           | 2.35 | 118        | 2.00          | 0.173  |           |
| Total Xylenes* | 44.2   | 1.50            | 11/01/2016      | ND           | 7.09 | 118        | 6.00          | 0.343  |           |
| Total BTEX     | 63.2   | 3.00            | 11/01/2016      | ND           |      |            |               |        |           |

Surrogate 4-Bromofluorobenzene (PIC 134 94 73 6-140

| Chloride, SM4500CI-B         | mg/kg  |                 | Analyzed By: AC |              |     |            |               |      | 26           |
|------------------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|--------------|
| Analyte                      | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier    |
| Chloride                     | 448    | 16.0            | 11/01/2015      | ND           | 416 | 104        | 400           | 0.00 |              |
| TPH 8015M                    | mg/kg  |                 | Analyzed By: MS |              |     |            |               |      | 5-06         |
| Analyte                      | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier    |
| GRO C6-C10                   | 1040   | 50.0            | 10/29/2016      | ND           | 186 | 93.1       | 200           | 6.85 | QR-03        |
| DR0 >C10-C28                 | 6970   | 50.0            | 10/29/2016      | ND           | 208 | 104        | 200           | 3.30 | QR-03, QM-07 |
| Surrogate 1-Chlorooctane     | 217 9  | % 35-147        |                 |              |     |            |               |      |              |
| Surrogate 1-Chlorooctadecane | 172 9  | % 28-171        |                 |              |     |            |               |      |              |

Page 34 of 93

#### \*=Accredited Analyte

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**Cardinal Laboratories** 

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 8

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# CARDINAL

#### PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 68240

#### Analytical Results For:

APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240 Fax To: (575) 393-2432

### Sample ID: SP 3 (H602421-03)

Page 35 of 93

| 51EX 80218   | mg      | /kg    | Analyze         | Analyzed By: CK |              |      |            |               |        |           |
|--------------|---------|--------|-----------------|-----------------|--------------|------|------------|---------------|--------|-----------|
|              | inalyte | Result | Reporting Limit | Analyzed        | Method Blank | BS   | % Recovery | True Value QC | RPD    | Qualifier |
| Benzene*     |         | 74.1   | 5.00            | 11/01/2016      | ND           | 2.38 | 119        | 2.00          | 0.619  |           |
| Toluana*     |         | 459    | 5.00            | 11/01/2016      | ND           | 2.43 | 122        | 2.00          | 0.0870 |           |
| Ethylbenzen  | e*      | 275    | 5.00            | 11/01/2016      | ND           | 2.35 | 118        | 2.00          | 0.173  |           |
| Total Xylene | s*      | 435    | 15.0            | 11/01/2016      | ND           | 7.09 | 118        | 6.00          | 0.343  |           |
| Total BTEX   |         | 1240   | 30.0            | 11/01/2016      | ND           |      |            |               |        |           |

Surrogate 4-Bromofluorobenzene (PIE 118 % 73 6-140

| Chloride, SM4500CI-B<br>Analyte | mg/kg  |                 | Analyzed By: AC |              |     |            |               |      |           |
|---------------------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                         | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                        | 64.0   | 16.0            | 11/01/2016      | ND           | 416 | 104        | 400           | 0.00 |           |
| TPH 8015M                       | mg/kg  |                 | Analyzed By: MS |              |     |            |               |      | S-06      |
| Analyte                         | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                      | 10700  | 100             | 10/29/2016      | ND           | 186 | 93.1       | 200           | 6.85 |           |
| DR0 >C10-C28                    | 26800  | 100             | 10/29/2016      | ND           | 208 | 104        | 200           | 3,30 |           |
| Surrogate: 1-Chloroociane       | 395 %  | 35-147          |                 |              |     |            |               |      |           |
| Surrogate: I-Chlorooctadecane   | 673 %  | 28-171          |                 |              |     |            |               |      |           |

**Cardinal Laboratories** 

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\*=Accredited Analyte

Page 4 of 8

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Celey D. Keene, Lab Director/Quality Manager

# CARDINAL

PHONE (\$75) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

10/26/2016 Soil Cool & Intact Jodi Henson

## Analytical Results For:

APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240 Fax To: (575) 393-2432

| Received:         | 10/27/2016            | Sampling Date:      |
|-------------------|-----------------------|---------------------|
| Reported:         | 11/02/2016            | Sampling Type:      |
| Project Name:     | WARN BATTERY 1RP 4516 | Sampling Condition: |
| Project Number:   | NONE GIVEN            | Sample Received By: |
| Project Location: | EDDY COUNTY, NM       |                     |

#### Sample ID: SP 4 (H602421-04)

| BTEX 80218     | mg/kg  |                 | Analyzed By: CK |              |      |            |               |        |           |
|----------------|--------|-----------------|-----------------|--------------|------|------------|---------------|--------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed        | Method Blank | 85   | % Recovery | True Value QC | RPD    | Qualifier |
| Benzene*       | 0.180  | 0.050           | 11/01/2016      | ND           | 2.38 | 119        | 2.00          | 0.619  |           |
| Toluene*       | 0.537  | 0.050           | 11/01/2016      | ND           | 2.43 | 122        | 2.00          | 0.0870 |           |
| Ethylbenzene*  | 0.637  | 0.050           | 11/01/2016      | ND           | 2.35 | 118        | 2.00          | 0.173  |           |
| Total Xylenes* | 1.32   | 0.150           | 11/01/2016      | ND           | 7.09 | 118        | 6.00          | 0.343  |           |
| Total BTEX     | 2.67   | 0.300           | 11/01/2016      | ND           |      |            |               |        |           |

Surrogate: 4-Bromofluorobenzene (PIE 117 % 73 6-140

| Chloride, SM4500CI-B         | mg/    | 'kg             | Analyze    | d By: AC     |     |            |               |      |           |
|------------------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                      | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chioride                     | 2360   | 16.0            | 11/01/2016 | ND           | 416 | 104        | 400           | 0.00 |           |
| TPH 8D15N mg                 |        | 'kg             | Analyze    | d By: MS     |     |            |               |      | S-06      |
| Analyte                      | Result | Reporting Limit | Analyzed   | Method Blank | 8S  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                   | <50.0  | 50.0            | 10/29/2016 | ND           | 186 | 93.1       | 200           | 6.85 |           |
| DRO >C10-C28                 | 6320   | 50.0            | 10/29/2016 | ND           | 208 | 104        | 200           | 3.30 |           |
| Surrogate 1-Chlorooctane     | 102 5  | 6 35-147        |            |              |     |            |               |      |           |
| Surrogate I-Chlorooctadecane | 325 1  | 38-171          |            |              |     |            |               |      |           |

**Cardinal Laboratories** 

#### \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 5 of 8

Page 36 of 93
### **CARDINAL** Laboratories

#### PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 68240

#### Analytical Results For:

**APACHE CORP - HOBBS BRUCE BAKER** 2350 W. MARLAND BLVD. HOB85 NM, 88240 Fax To: (575) 393-2432

| Received:<br>Reported:<br>Project Name:<br>Project Number:<br>Project Location: | 10/27/2016<br>11/02/2016<br>WARN BATTERY 1RP 4516<br>NONE GIVEN<br>EDDY COUNTY, NM | Sampling Date:<br>Sampling Type:<br>Sampling Condition:<br>Sample Received By: | 10/26/2016<br>Soil<br>Cool & Intact<br>Jodi Henson |
|---|--|--|--|
|---|--|--|--|

#### Sample ID: SP 5 (H602421-05)

| STEX 80218     | mg/kg  |                 | Analyzed By: CK |              |      |            |               |        |           |
|----------------|--------|-----------------|-----------------|--------------|------|------------|---------------|--------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed        | Method Blank | 85   | % Recovery | True Value QC | RPD    | Qualifier |
| Benzene*       | 2.92   | 1.00            | 11/01/2016      | ND           | 2.38 | 119        | 2.00          | 0.619  |           |
| Toluene*       | 34.2   | 1.00            | 11/01/2016      | ND           | 2.43 | 122        | 2.00          | 0.0870 | 1         |
| Ethylbenzene*  | 26.4   | 1.00            | 11/01/2016      | ND           | 2.35 | 118        | 2.00          | 0.173  |           |
| Total Xylenes* | 52.3   | 3.00            | 11/01/2016      | ND           | 7.09 | 118        | 6.00          | 0.343  |           |
| Total BTEX     | 116    | 6.00            | 11/01/2016      | ND           |      |            |               |        |           |

Surrogate: 4-Bromofluorobenzene (PIL 115 94 73.6-140

| Chloride, SM4500CI-B          | mg/kg  |                 | Analyzed By: AC |              |     |            |               |      | _         |
|-------------------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                       | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                      | 768    | 16.0            | 11/01/2016      | ND           | 416 | 104        | 400           | 0.00 |           |
| TPH 8015M                     | mg,    | 'kg             | Analyze         | d By: MS     |     |            |               |      | S-06      |
| Analyte                       | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                    | 1620   | 100             | 10/29/2016      | ND           | 186 | 93.1       | 200           | 6.85 |           |
| DRO >C10-C28                  | 32400  | 100             | 10/29/2016      | ND           | 208 | 104        | 200           | 3.30 |           |
| Surragate: 1-Chlorooctane     | 236    | % 35-147        |                 |              |     |            |               |      |           |
| Surrogate: 1-Chlorooctadecane | 1220   | % 28-171        |                 |              |     |            |               |      |           |

#### **Cardinal Laboratories**

#### \*=Accredited Analyte

Page 6 of 8

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Celey D. Keene, Lab Director/Quality Manager

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Page 37 of 93

Page 38 of 93

#### PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### **Notes and Definitions**

| 5-06  | The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or<br>matrix interference's.                                  |
|-------|--|
| QR-03 | The RPD value for the sample duplicate or MS/MSD was outside If QC acceptance limits due to matrix Interference. QC batch<br>accepted based on LCS and/or LCSD recovery and/or RPD values. |
| QM-07 | The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.   |
| ND    | Analyte NOT DETECTED at or above the reporting limit   |
| RPD   | Relative Percent Difference  |
| **    | Samples not received at proper temperature of 6°C or below.  |
| •••   | Insufficient time to reach temperature.  |
|       | Chloride by SM4500CI-8 does not require samples be received at or below 6°C  |
|       | Samples reported on an as received basis (wet) unless otherwise noted on report  |

**Cardinal Laboratories** 

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\*=Accredited Analyte

Page 7 of 8

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Celey D. Keene, Lab Director/Quality Manager

Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



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PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

April 03, 2017

Page 40 of 93

JENNIFER VAN CUREN ARCADIS U.S., INC. 2999 OAK ROAD, SUITE 300 WALNUT CREEK, CA 94597

RE: WARN STATE BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/28/17 12:56.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceo.texas.gov/field/ga/ab">www.tceo.texas.gov/field/ga/ab</a> accredited analytes.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

| Method EPA 552.2 | Haloacetic Acids (HAA-5)     |
|------------------|------------------------------|
| Method EPA 524.2 | Total Trihalomethanes (TTHM) |
| Method EPA 524.4 | Regulated VOCs (V1, V2, V3)  |

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Received by OCD: 10/1/2019 4:53:49 PM

Celegit Keine

Celey D. Keene Lab Director/Quality Manager

#### PHONE (575) 393-2326 \* 101 E. MARLAND \* HOB85, NM 88240

#### Analytical Results For:

ARCADIS U.S., INC. JENNIFER VAN CUREN 2999 OAK ROAD, SUITE 300 WALNUT CREEK CA, 94597 Fax To: NOT GIVEN

| Received:         | 03/28/2017         | Sampling Date:      | 03/28/2017     |
|-------------------|--------------------|---------------------|----------------|
| Reported:         | 04/03/2017         | Sampling Type:      | Soil           |
| Project Name:     | WARN STATE BATTERY | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN         | Sample Received By: | Celey D. Keene |
| Project Location: | N-6-18-35          |                     |                |

#### Sample ID: SP6.1 0' (H700809-01)

| TPH 8015M                    | mg/kg  |                 | Analyze    | d By: MS     |     |            | _             |      | S-06      |
|------------------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                      | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                   | 885    | 50.0            | 03/29/2017 | ND           | 183 | 91.5       | 200           | 1.44 |           |
| DR0 >C10-C28                 | 6330   | 50.0            | 03/29/2017 | ND           | 196 | 98.0       | 200           | 1.72 |           |
| Surrogate: 1-Chlorooctane    | 197 %  | 25.1-15         | 8          |              |     |            |               |      |           |
| Surrogate I-Chlorooctadecane | 134 %  | 26.8-17         | 0          |              |     |            |               |      |           |

#### Sample ID: SP6.1 1' (H700809-02)

| TPH 8015M                     | mg,    | /kg             | Analyze    | d By: MS     |     | _          |               |      |           |
|-------------------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                       | Result | Reporting Limit | Analyzed   | Method Blank | 8S  | % Recovery | True Value QC | RPD  | Qualifier |
| GR0 C6-C10                    | 328    | 50.0            | 03/29/2017 | ND           | 183 | 91,5       | 200           | 1.44 |           |
| DRO >C10-C28                  | 3270   | 50.0            | 03/29/2017 | ND           | 196 | 98.0       | 200           | 1.72 |           |
| Surrogate: 1-Chlorooctane     | 127    | % 25.1-15       | 8          |              |     |            |               |      |           |
| Surrogate: 1-Chlorooctadecane | 142    | % 26.8-17       | 0          |              |     |            |               |      |           |

**Cardinal Laboratories** 

#### \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 41 of 93

#### PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### Analytical Results For:

ARCADIS U.S., INC. JENNIFER VAN CUREN 2999 OAK ROAD, SUITE 300 WALNUT CREEK CA, 94597 Fax To: NOT GIVEN

| Received:         | 03/28/2017         | Sampling Date:      | 03/28/2017     |
|-------------------|--------------------|---------------------|----------------|
| Reported:         | 04/03/2017         | Sampling Type:      | Soil           |
| Project Name:     | WARN STATE BATTERY | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN         | Sample Received By: | Celey D. Keene |
| Project Location: | N-6-18-35          |                     |                |

#### Sample ID: SP6.1 2' (H700809-03)

| TPH 8015M                    | mg/k   |                 | Analyzed By: MS |              |     |            |               | S-06 |           |
|------------------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analytic                     | Result | Reporting Limit | Analyzed        | Method Blank | 85  | % Recovery | True Value QC | RPD  | Qualifier |
| GR0 C6-C10                   | 255    | 50.0            | 03/29/2017      | ND           | 183 | 91.5       | 200           | 1.44 |           |
| DR0 >C10-C28                 | 3970   | 50.0            | 03/29/2017      | ND           | 196 | 98.0       | 200           | 1.72 |           |
| Surrogate: 1-Chlorooctane    | 122 %  | 25.1-15         | 8               |              |     |            |               |      |           |
| Surrogate 1-Chlorooctadecane | 191 %  | 26.8-17         | o               |              |     |            |               |      |           |

#### Sample ID: SP6.1 3' REFUSAL (H700809-04)

| TPH 8015M                    | mg/    | kg              | Analyze    | d By: MS     |     |            |               |      |           |
|------------------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyliz                     | Result | Reporting Limit | Analyzed   | Method Blank | BŞ  | % Recovery | True Value QC | RPD  | Qualifier |
| GR0 C6-C10                   | 85.3   | 50.0            | 03/29/2017 | ND           | 183 | 91.5       | 200           | 1,44 |           |
| DRO >C10-C28                 | 973    | 50.0            | 03/29/2017 | ND           | 196 | 98.0       | 200           | 1.72 |           |
| Surrogute 1-Chlorooctane     | 107 5  | K 25.1-15       | 18         |              |     |            |               |      |           |
| Surrogate 1-Chlorooctadecane | 115 9  | 6 26.8-17       | 0          |              |     |            |               |      |           |

**Cardinal Laboratories** 

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 6

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Page 42 of 93

### **CARDINAL** Laboratories

#### PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 68240

#### Analytical Results For:

ARCADIS U.S., INC. JENNIFER VAN CUREN 2999 OAK ROAD, SUITE 300 WALNUT CREEK CA, 94597 Fax To: NOT GIVEN

| Received:         | 03/28/2017         | Sampling Date:      | 03/28/2017     |
|-------------------|--------------------|---------------------|----------------|
| Reported:         | 04/03/2017         | Sampling Type:      | Soil           |
| Project Name:     | WARN STATE BATTERY | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN         | Sample Received By: | Celey D. Keene |
| Project Location: | N-6-18-35          |                     |                |

#### Sample ID: SP2 1' (H700809-05)

| Chloride, SM4509CI-B          | mg/kg  |                 | Analyzed By: HM |              |     |            |               |      |           |
|-------------------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                       | Result | Reporting Limit | Analyzed        | Method Blank | 85  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                      | 64.0   | 16.0            | 03/29/2017      | ND           | 448 | 112        | 400           | 3.51 |           |
| TPH 8015M                     | mg/kg  |                 | Analyzed By: MS |              |     |            |               |      |           |
| Analyte                       | Result | Reporting Limit | Analyzed        | Method Blank | 85  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                    | <10.0  | 10.0            | 03/29/2017      | ND           | 183 | 91.5       | 200           | 1.44 |           |
| DRO >C10-C28                  | <10.0  | 10.0            | 03/29/2017      | ND           | 196 | 98.0       | 200           | 1.72 |           |
| Surrogate I-Chlorvoctone      | 85 9   | % 25.1-15       | 8               |              |     |            |               |      |           |
| Surrogate, 1-Chlorooctadecane | 93.8   | % 26.8-17       | 0               |              |     |            |               |      |           |

### Sample ID: SP4 1' (H700809-06)

| Chloride, SM4500CI-B         | mg/kg  |                 | Analyzed By: HM |              |     |            |               |      |           |
|------------------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                      | Result | Reporting Limit | Analyzed        | Method Blank | 85  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                     | 80.0   | 16.0            | 03/29/2017      | ND           | 448 | 112        | 400           | 3,51 |           |
| TPH BOLSM                    | mg/kg  |                 | Analyzed By: MS |              |     |            |               |      |           |
| Analyte                      | Result | Reporting Limit | Analyzed        | Method Blank | 85  | % Recovery | True Value QC | RPD  | Quatifier |
| GRO C6-C10                   | <10.0  | 10.0            | 03/29/2017      | ND           | 189 | 94.5       | 209           | 1.59 |           |
| DRO >C10-C28                 | 12.1   | 10.0            | 03/29/2017      | ND           | 197 | 98.7       | 200           | 1.50 |           |
| Surrogate I-Chlorooctane     | 96 5   | % 25.1-15       | 8               |              |     |            |               |      |           |
| Surrogate 1-Chlorooctadecane | 106    | % 26.8-17       | 0               |              |     |            |               |      |           |

#### **Cardinal Laboratories**

#### \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 6

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Page 43 of 93

### **CARDINAL** Laboratories

PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### **Notes and Definitions**

 S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
 ND Analyte NOT DETECTED at or above the reporting limit
 RPD Relative Percent Difference
 Samples not received at proper temperature of 6°C or below.
 Insufficient time to reach temperature.
 Chloride by SM4500CI-8 does not require samples be received at or below 6°C
 Samples reported on an as received basis (wet) unless otherwise noted on report

**Cardinal Laboratories** 

#### \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 5 of 6

Page 44 of 93

Page 45 of 93

| Delivered By: (Circle One)<br>Belivered By: (Circle One)<br>Sampler - UP8 - Bus - Other<br>Circle One)<br>Circle One) | GROUNDWATER   | 101 East Martand, Hobbs, NM 89240<br>(675) 393-2328 FAX (675) 393-2476 |
|---|---|--|
| Sample Condition<br>CHECKED BY:   | OIL<br>SLUDGE<br>OTHER<br>ACTORASE<br>ACTORASE<br>ACTORASE<br>COMPTON<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE<br>STATE | CHAIN-OF-CL  |
| Ve Dite IAdd Prove P  |   | CHAIN-OF-CUSTODY AND ANALYSIS REQUEST                                  |

Page 6 of 6

November 02, 2016

Page 46 of 93

BRUCE BAKER APACHE CORP - HOBBS 2350 W. MARLAND BLVD. HOBBS, NM 88240

**RE: WARREN BATTERY** 

Enclosed are the results of analyses for samples received by the laboratory on 10/27/16 16:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tcea.texas.oov/field/ga/lab">www.tcea.texas.gov/field/ga/lab</a> accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tcea.texas.gov/field/ga/lab">www.tcea.texas.gov/field/ga/lab</a> accredited through Texas NELAP under certificate number T104704398-16-8. Accredited by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tcea.texas.gov/field/ga/lab">www.tcea.texas.gov/field/ga/lab</a> accredited through Texas NELAP under certificate number T104704398-16-8. Accredited by an asterisk (\*).

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

| Method EPA 552-2 | Haloacetic Acids (HAA-5)     |
|------------------|------------------------------|
| Method EPA 524.2 | Total Trihalomethanes (TTHM) |
| Method EPA 524.4 | Regulated VOCs (V1, V2, V3)  |

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey L. Kune

Celey D. Keene Lab Director/Quality Manager

Page 1 of 8

## **CARDINAL** Laboratories

PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NH 88240

#### Analytical Results For:

**APACHE CORP - HOBBS BRUCE BAKER** 2350 W. MARLAND BLVD. HOBBS NM, B8240 (575) 393-2432 Fax To:

| Received:         | 10/27/2016      | Sampling Date:      | 10/26/2016    |
|-------------------|-----------------|---------------------|---------------|
| Reported:         | 11/02/2016      | Sampling Type:      | Soil          |
| Project Name:     | WARREN BATTERY  | Sampling Condition: | Cool & Intact |
| Project Number:   | NONE GIVEN      | Sample Received By: | Jodi Henson   |
| Project Location: | EDDY COUNTY, NM |                     |               |

#### Sample ID: SP 1 (H602421-01)

| BTEX 80218     | mg/kg  |                 | Analyze    | Analyzed By: CK |      |            |               |        |           |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|--------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD    | Qualifier |
| Benzene*       | <5.00  | 5.00            | 11/01/2016 | ND              | 2.38 | 119        | 2.00          | 0.619  |           |
| Toluene*       | 105    | 5.00            | 11/01/2016 | ND              | 2.43 | 122        | 2.00          | 0.0870 |           |
| Ethylbenzene*  | 106    | 5.00            | 11/01/2016 | ND              | Z.35 | 118        | 2.00          | 0.173  |           |
| Total Xylenes* | 179    | 15.0            | 11/01/2016 | ND              | 7.09 | 118        | 6.00          | 0.343  |           |
| Total BTEX     | 390    | 30.0            | 11/01/2016 | ND              |      |            |               |        |           |

Surrogate: 4-Bromofluorobenzene (PIL 112 % 73 6-140

| Chloride, SM4500CI-8          | mg/kg         |                 | Analyzed By: AC |              |     |            |               |      |           |
|-------------------------------|---------------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                       | Result        | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                      | 96.0          | 16.0            | 11/01/2016      | ND           | 416 | 104        | 400           | 0.00 |           |
| трн 8015м                     | H 8015M mg/kg |                 | Analyzed By: MS |              |     |            |               |      | S-06      |
| Analyte                       | Result        | Reporting Limit | Analyzed        | Method Blank | ßS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                    | 3080          | 50.0            | 10/29/2016      | ND           | 176 | 88.0       | 200           | 1.06 |           |
| DRO >C10-C28                  | 9950          | 50.0            | 10/29/2016      | ND           | 186 | 92.8       | 200           | 11.9 |           |
| Surrogate: 1-Chlorooctane     | 198           | 96 35-147       | ,               |              |     |            |               |      |           |
| Surrogate: 1-Chlorooctadecane | 240           | % 28-171        |                 |              |     |            |               |      |           |

**Cardinal Laboratories** 

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 8

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Page 47 of 93

PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

March 29, 2017

Page 48 of 93

JENNIFER VAN CUREN ARCADIS U.S., INC. 2999 OAK ROAD, SUITE 300 WALNUT CREEK, CA 94597

**RE: WARN STATE BATTERY** 

Enclosed are the results of analyses for samples received by the laboratory on 03/28/17 12:56.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceo.texas.gov/field/ga/ab">www.tceo.texas.gov/field/ga/ab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceo.texas.gov/field/ga/ab">www.tceo.texas.gov/field/ga/ab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceo.texas.gov/field/ga/ab">www.tceo.texas.gov/field/ga/ab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceo.texas.gov/field/ga/ab">www.tceo.texas.gov/field/ga/ab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceo.texas.gov/field/ga/ab">www.tceo.texas.gov/field/ga/ab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceo.texas.gov/field/ga/ab">www.tceo.texas.gov/field/ga/ab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceo.texas.gov/field/ga/ab">www.tceo.texas.gov/field/ga/ab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceo.texas.gov/field/ga/ab">www.tceo.texas.gov/field/ga/ab</a> accredited analytes and set of the set

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

| Method EPA 552.2 | Haloacetic Acids (HAA-5)     |
|------------------|------------------------------|
| Method EPA 524.2 | Total Trihalomethanes (TTHM) |
| Method EPA 524.4 | Regulated VOCs (V1, V2, V3)  |

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celeg L. Keine

Celey D. Keene Lab Director/Quality Manager

PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### Analytical Results For:

ARCADIS U.S., INC. JENNIFER VAN CUREN 2999 OAK ROAD, SUITE 300 WALNUT CREEK CA, 94597 Fax To: NOT GIVEN

| Received:         | 03/28/2017         | Sampling Date:      | 03/28/2017     |
|-------------------|--------------------|---------------------|----------------|
| Reported:         | 03/29/2017         | Sampling Type:      | Soil           |
| Project Name:     | WARN STATE BATTERY | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN         | Sample Received By: | Celey D. Keene |
| Project Location: | N-6-18-35          |                     |                |

#### Sample ID: SP7 - 0' (H700808-01)

| TPH 8015M                     | mg/kg  |                 | Analyzed By: MS |              |     |            |               |      | _         |
|-------------------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                       | Result | Reporting Limit | Analyzed        | Method Blank | 85  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                    | <50.0  | 50.0            | 03/29/2017      | ND           | 183 | 91.5       | 200           | 1.44 |           |
| DRO >C10-C28                  | 1540   | 50.0            | 03/29/2017      | ND           | 196 | 98.0       | 200           | 1.72 |           |
| Surrogate: 1-Chlorouctane     | 64.3 % | 25.1-15         | 8               |              |     |            |               |      |           |
| Surrogate: 1-Chlorooctadecane | 166 %  | 26.8-17         | 0               |              |     |            |               |      |           |

#### Sample ID: SP7 - 1' (H700808-02)

| TPH 8015M                    | mg/kg  |                 | Analyzed By: MS |              |     |            |               |      |           |
|------------------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                      | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                   | <\$0.0 | 50.0            | 03/29/2017      | ND           | 183 | 91.5       | 200           | 1.44 |           |
| DR0 >C10-C28                 | 2250   | 50.0            | 03/29/2017      | ND           | 196 | 98.0       | 200           | 1.72 |           |
| Surrogate: 1-Chlorooctane    | 81.4   | % 25.1-15       | 8               |              |     |            |               |      |           |
| Surrogate I-Chlorooctadecane | 47.2   | 56 26.8-17      | 0               |              |     |            |               |      |           |

Cardinal Laboratories

#### \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 5

Page 49 of 93

03/28/2017

03/29/2017

NONE GIVEN

N-6-18-35

WARN STATE BATTERY

#### PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### Analytical Results For:

ARCADIS U.S., INC. JENNIFER VAN CUREN 2999 OAK ROAD, SUITE 300 WALNUT CREEK CA, 94597 Fax To: NOT GIVEN

> Sampling Date: Sampling Type: Sampling Condition: Sample Received By:

03/28/2017 Soil Cool & Intact Celey D. Keene

#### Sample ID: SP7 - 1.5' REFUSAL (H700808-03)

Received:

**Reported:** 

Project Name:

Project Number:

Project Location:

| TPH 8015M                     | mg/kg  |                 | Analyzed By: MS |              |     |            |               |      |           |
|-------------------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                       | Result | Reporting Limit | Analyzed        | Method Blank | 85  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                    | 88.8   | 50.0            | 03/29/2017      | ND           | 183 | 91.5       | 200           | 1.44 |           |
| DRO >C10-C28                  | 3250   | 50.0            | 03/29/2017      | ND           | 196 | 98.0       | 200           | 1.72 |           |
| Surrogate: 1-Chloroactane     | 94,3 % | 25.1-15         | 8               |              |     |            |               |      |           |
| Surrogate: 1-Chloroociadecane | 58.4 % | 26.8-17         | n               |              |     |            |               |      |           |

**Cardinal Laboratories** 

#### \*=Accredited Analyte

Page 3 of 5

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Celey D. Keene, Lab Director/Quality Manager

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Page 50 of 93

PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### **Notes and Definitions**

| ND  | Analyte NOT DETECTED at or above the reporting limit                            |
|-----|---|
| RPD | Relative Percent Difference   |
| **  | Samples not received at proper temperature of 6°C or below.                     |
| ••• | Insufficient time to reach temperature.   |
|     | Chloride by SM4500CI-B does not require samples be received at or below 6°C     |
|     | Samples reported on an as received basis (wet) unless otherwise noted on report |

#### \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 5

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Page 51 of 93

Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

| Uncador Antina   |   |                 |
|--|---|-----------------|
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| City: State: Zip: At   | Atm: Della  |                 |
|  | Address:  |                 |
| Project Owner:   | City:   |                 |
| 11 have State Baltery  | Stuta: Zip:   |                 |
| 1)-10-18-35  | Phone #:  |                 |
| En da Balan  |   |                 |
|  | PRESERV SAMPLING  |                 |
| SAB OR (C)OMP<br>CONTAINERS<br>ROUNDWATER<br>ASTEWATER<br>DIL<br>LUDGE   |   |                 |
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Page 5 of 5

Page 52 of 93

Received by OCD: 10/1/2019 4:53:49 PM

April 03, 2017

Dage 53 of 93

JENNIFER VAN CUREN ARCADIS U.S., INC. 2999 OAK ROAD, SUITE 300 WALNUT CREEK, CA 94597

**RE: WARN STATE BATTERY** 

Enclosed are the results of analyses for samples received by the laboratory on 03/28/17 12:56.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accredited to the total texas.gov/field/ga/lab\_accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceg.texas.gov/field/ga/lab\_accred\_certif.html">www.tceg.texas.gov/field/ga/lab\_accredited analytes</a>

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

| Method EPA 552.2 | Haloacetic Acids (HAA-5)     |
|------------------|------------------------------|
| Method EPA 524.2 | Total Trihalomethanes (TTHM) |
| Method EPA 524.4 | Regulated VOCs (V1, V2, V3)  |

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celegit Keine

Celey D. Keene Lab Director/Quality Manager

Page 1 of 5

03/28/2017

04/03/2017

NONE GIVEN

N-6-18-35

WARN STATE BATTERY

#### PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### Analytical Results For:

ARCADIS U.S., INC. JENNIFER VAN CUREN 2999 OAK ROAD, SUITE 300 WALNUT CREEK CA, 94597 NOT GIVEN Fax To:

> Sampling Date: Sampling Type: Sampling Condition: Sample Received By:

03/28/2017 Soil Cool & Intact Celey D. Keene

#### Sample ID: SP9.1 0' (H700810-01)

Received:

Reported:

Project Name:

Project Number:

**Project Location:** 

| Chloride, SH4509CI-B         | /gm           | mg/kg           |                     | Analyzed By: HM |           |            |                      |          | _         |
|------------------------------|---------------|-----------------|---------------------|-----------------|-----------|------------|----------------------|----------|-----------|
| Analyte                      | Result<br>352 | Reporting Limit | Analyzed 03/29/2017 | Method Blank    | BS<br>448 | % Recovery | True Value QC<br>400 | RPD 3.51 | Qualifier |
| TPH 8015M                    | mg/           | mg/kg           |                     | Analyzed By: NS |           |            |                      |          |           |
| Analyte                      | Result        | Reporting Limit | Analyzed            | Method Blank    | 65        | % Recovery | True Value QC        | RPD      | Qualifier |
| GRO C6-C10                   | <50.0         | 50.0            | 03/29/2017          | ND              | 189       | 94.5       | 200                  | 1.59     |           |
| DRO >C10-C28                 | 4310          | 50.0            | 03/29/2017          | ND              | 197       | 98.7       | 200                  | 1.50     |           |
| Surrogate 1-Chlorooctane     | 87 6          | % 25 1-15       | 8                   |                 |           |            |                      |          |           |
| Surrogate 1-Chloroactadecane | 140 1         | \$ 26.8-17      | a                   |                 |           |            |                      |          |           |

#### Sample ID: SP9.1 1' (H700810-02)

| Chloride, SM4500CI-8         | mg/kg  |                   | Analyzed By: HM |              |     |            | _             |      | _         |
|------------------------------|--------|-------------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                      | Result | Reporting Limit   | Analyzed        | Method Blank | 85  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                     | 32.0   | 16.0              | 03/29/2017      | ND           | 448 | 112        | 400           | 3.51 |           |
| TPH 8015M                    | mg/kg  |                   | Analyzed By: MS |              |     |            |               |      |           |
| Analyte                      | Result | Reporting Limit   | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                   | <10.0  | 10.0              | 03/29/2017      | ND           | 189 | 94.5       | 200           | 1.59 |           |
| DRO >C10-C28                 | 56.0   | 10.0              | 03/29/2017      | ND           | 197 | 98.7       | 200           | 1.50 |           |
| Surrogate 1-Chlorooctane     | 88 4 5 | <b>6</b> 25 1-158 | 5               |              |     |            |               |      |           |
| Surrogate 1-Chlorooctadecane | 8955   | 6 26.8-174        | 2               |              |     |            |               |      |           |

#### **Cardinal Laboratories**

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 5

Page 54 of 93

Page 55 of 93

#### PHONE (575) 393-2326 \* 101 E. HARLAND \* HOB85, NM 66240

#### Analytical Results For:

ARCADIS U.S., INC. JENNIFER VAN CUREN 2999 OAK ROAD, SUITE 300 WALNUT CREEK CA, 94597 Fax To: NOT GIVEN

| Received:         | 03/28/2017         | Sampling Date:      | 03/28/2017     |
|-------------------|--------------------|---------------------|----------------|
| Reported:         | 04/03/2017         | Sampling Type:      | Soil           |
| Project Name:     | WARN STATE BATTERY | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN         | Sample Received By: | Celey D. Keene |
| Project Location: | N-6-18-35          |                     |                |

#### Sample ID: SP9.1 2' (H700810-03)

Chloride, SN4500CI-B Analyzed By: HM mg/kg Analyte Result **Reporting Limit** Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Chloride 32.0 16.0 03/29/2017 ND 448 112 400 3.51 **TPH 8015M** mg/kg Analyzed By: MS Analyte Result **Reporting Limit** Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier GRO C6-C10 <10.0 10.0 03/29/2017 NÐ 189 94.5 200 1.59 DRO >C10-C28 <10.0 10.0 03/29/2017 ND 197 98.7 200 1.50 Surrogate: 1-Chlorooctane 80,4% 25.1-158 88 1 % 26.8-170 Surrogate 1-Chlorooctadecane

**Cardinal Laboratories** 

Received by OCD: 10/1/2019 4:53:49 PM

#### \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### **Notes and Definitions**

| ND   | Analyte NOT DETECTED at or above the reporting limit                            |
|------|---|
| RPD  | Relative Percent Difference   |
| 8.m. | Samples not received at proper temperature of 6°C or below.                     |
| ***  | Insufficient time to reach temperature.   |
| -    | Chloride by SM4500CI-B does not require samples be received at or below 6°C     |
|      | Samples reported on an as received basis (wet) unless otherwise noted on report |

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Page 56 of 93

| Delivered By: (Circle One)<br>Bampler - UPS - Bus - Other   | Lab I.D.<br>H 700810-<br>01 3<br>(72 3)  | Project Manuager:<br>Address:<br>Phone #:<br>Project #<br>Project Name:<br>Address:<br>Project Name:<br>Sampler Name: | Company Hame:   |
|---|--|---|---|
| Circle One)   | <b>Sample I.D.</b>   | Jesierry & Ulei Ule Ule<br>States<br>Fax 8:<br>Project Owner:<br>Al - la - 18 - 35<br>Sesierr the Aler ( but Cert     | aboratories<br>101 East Martand, Hobba, NM 88240<br>(575) 383-2376 FAX (675) 383-2476 |
| 1.9°C F. F.   | GIRAB OR (C)OM   | a: Zig:<br>::<br>::<br>::<br>::<br>::<br>::<br>::<br>::<br>::   |   |
| CHECKED BY:   | CONTAINERS CONTAINERS CROUNOWATER CROUNOWATER CRUNOWATER CRUNOWATE | Protect   | 8/11  |
| Fax Resource Contraction of the | 17242<br>7242<br>X TPH<br>1242<br>X TPH<br>1242<br>X TPH   |   | CHAIN-OF-CUSTODY  |
| C Ho<br>No Add Phone P<br>Add Fare  |  |   | ODY AND ANALYSIS REQUEST  |
|   |  |   | REQUEST   |

Page 5 of 5

Appendix C

**OCD Communications** 

Page 58 of 93

#### Baker, Larry

Page 59 of 93

| From:        | Groves, Amber <agroves@slo.state.nm.us></agroves@slo.state.nm.us> |
|--------------|---|
| Sent:        | Thursday, February 23, 2017 1:12 PM                               |
| To:          | Van Curen, Jennifer; Yu, Olivia, EMNRD                            |
| Cc:          | Oberding, Tomas, EMNRD; Baker, Larry                              |
| Subject:     | RE: 1RP 4516 Apache Corp Warn State AC Battery 10-10-16           |
| Attachments: | February 23, 2017 007 JPG   |

#### Good Morning, Jennifer,

Attached, please see a photo taken this morning in the overspray area of product on the ground. NMSLO is in agreement with the conditions set forth by NMOCD and would like to request representative soil sampling in the overspray area. Please run for CL, TPH and BTEX.

Thank you,

Amber Groves Remediation Specialist Field Operations Division (575)392-3697 (575)263-3209 cell New Mexico State Land Office 2827 N. Dal Paso Suite 117 Hobbs, NM 88260

#### .....

CONFIDENTIALITY NOTICE - This e-mail transmission, including all documents, files, or previous e-mail messages attached hereto, may contain confidential and/or legally privileged information. If you are not the intended recipient, or a person responsible for delivering it to the intended recipient, you are hereby notified that you must not read this transmission and that any disclosure, copying, printing, distribution, or use of any of the information contained in and/or attached to this transmission is STRICTLY PROHIBITED. If you have received this transmission in error, please immediately notify the sender and delete the original transmission and its attachments without reading or saving in any manner. Thank you.

-----Original Message-----From: Van Curen, Jennifer (mailto:Jennifer.VanCuren@arcadis.com) Sent: Monday, February 20, 2017 3:39 PM To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us> Cc: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>; Groves, Amber <agroves@slo.state.nm.us> Subject: Re: 1RP 4516 Apache Corp Warn State AC Battery 10-10-16

1

Hi Olivia,

Received by OCD: 10/1/2019 4:53:49 PM

on o 2 I had spoken to Tomas on this one and the plan was to delineate with PID as we do the cleanup and send a bottom and side walls to lab. Everything should be right at surface due to ground hardness. We will also delineate inside the firewall area. The pasture doesn't have any hydrocarbon on the ground. It is only on the vegetation. I will go ahead and grab a sample if you feel it is necessary.

I will make the changes to the plan for approval to start work.

Thanks,

Jennifer

Sent from my iPhone

> On Feb 20, 2017, at 2:07 PM, Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us> wrote:

> Dear Ms. Van Curen:

>

> Please address the following concerns with the workplan for 1RP-4516.

> 1. Complete vertical delineation until permissible BTEX, TPH, and Chloride levels are achieved.

> 2. There appears to be some pooling around SP3. Request another sample point north of SP3 (within berm).

> 3. Obtain a soil sample within the area where the vegetation was misted with oil.

>

> Thanks,

>

> Olivia Yu

> Environmental Specialist

> NMOCD, District I

> Olivia.yu@state.nm.us

> 575-393-6161 x113

>

> OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

>

>

>

.

> ----- Original Message-----

> From: Van Curen, Jennifer [mailto:Jennifer.VanCuren@arcadis.com]

> Sent: Tuesday, January 31, 2017 12:36 PM

> To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>

> Cc: 'agroves@slo.state.nm.us' <agroves@slo.state.nm.us>; Yu, Olivia,

> EMNRD <Olivia.Yu@state.nm.us>

> Subject: 1RP 4516 Apache Corp Warn State AC Battery 10-10-16

>

> >

need to a with one of the set

> Resending with OCD release number on the pages as requested.

> Please find attached plan for the Warn State AC battery.

>

Received by OCD: 10/1/2019 4:53:49 PM

> > > Your message is ready to be sent with the following file or link attachments: > > Binder1.pdf > >

> Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

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3



| From:    | Groves, Amber <agroves@slo.state.nm.us></agroves@slo.state.nm.us> |
|----------|---|
| Sent:    | Wednesday, July 05, 2017 3:09 PM                                  |
| To:      | Yu, Olivia, EMNRD; 'Van Curen, Jennifer'                          |
| Cc:      | Billings, Bradford, EMNRD; Baker, Larry                           |
| Subject: | RE: 1RP-4516 Warn State A/C Battery                               |

#### Good Afternoon,

As Apache is proposing tilling at SP9, a noxious weed plan without a full revegetation plan is insufficient. Please revise your work plan accordingly and re-submit for approval.

Thank you,

Amber Groves Remediation Specialist Field Operations Division (575)392-3697 (575)263-3209 cell New Mexico State Land Office 2827 N. Dal Paso Suite 117 Hobbs, NM 88260

#### .....

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-----Original Message-----From: Yu, Olivia, EMNRD [mailto:Olivia.Yu@state.nm.us] Sent: Monday, July 03, 2017 10:59 AM To: 'Van Curen, Jennifer' <Jennifer.VanCuren@arcadis.com> Cc: Groves, Amber <agroves@slo.state.nm.us>; Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Larry Baker <Larry.Baker@apachecorp.com> Subject: RE: 1RP-4516 Warn State A/C Battery

Ms. Van Curen:

Thank you for your prompt response with the additional information. If you have written communication between you and Tomáš, please send them to me.

Olivia

Received by OCD: 10/1/2019 4:53:49 PM

-----Original Message-----From: Van Curen, Jennifer [mailto:Jennifer.VanCuren@arcadis.com] Sent: Monday, July 3, 2017 9:44 AM To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us> Cc: Groves, Amber <agroves@slo.state.nm.us>; Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Larry Baker <Larry.Baker@apachecorp.com> Subject: Re: 1RP-4516 Warn State A/C Battery

Hi Olivia,

This area has a solid layer of rock that is very shallow. The bottom sample is the soil scraped from that rock layer.

I discussed this one with Tomas sometime ago and he was fine with addressing it at abandonment due to the equipment and lines and the sheer difficulty of getting through material and getting samples other than rock. I attached a photo of the bottom of one of the samples points to the report and it will show a solid white area. I can also send you a video where the backhoe did try to break through and was not successful with even cracking the rock.

I will look for the video as soon as I return from the field to send you. We did make a long driven effort to go deeper.

Thank you for your time to help us find a solution to this site and others in the same area. We realize that this site will remain open until and after abandonment and are in approval of this action.

Thanks again.

Jennifer

Sent from my iPhone

> On Jul 3, 2017, at 10:08 AM, Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us> wrote:

> Dear Ms. Van Curen:

>

> Please address these concerns regarding 1RP-4516:

>

> 1. Vertical and horizontal delineation at sample locations SP1 - SP5 are not complete. At 6" bgs, all sample location exceed permissible TPH levels, BTEX levels are exceeded at all sample locations except SP4, and chloride levels are exceeded at SP4 and 5. Vertical and horizontal delineation must be advanced until permissible levels are obtained for BTEX, TPH, and chlorides at SP1- SP5. Permissible levels must be obtained and maintained for a minimum of 2 ft. further in depth.

> 2. SP6 and SP7 exceeds permissible TPH levels. Further vertical delineation is required.

> 3. All confirmation bottom and sidewall samples must have BTEX, TPH, and chloride analyzed.

> Thanks,

> Olivia

>

>

Received by OCD: 10/1/2019 4:53:49 PM

> ----- Original Message-----

- > From: Van Curen, Jennifer (mailto:Jennifer.VanCuren@arcadis.com)
- > Sent: Monday, June 19, 2017 10:12 AM
- > To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; Oberding, Tomas, EMNRD
- > <Tomas.Oberding@state.nm.us>

| > Cc: Groves, Amber <agroves@slo.state.nm.us><br/>&gt; Subject: RE: 1RP-4516 Warn State A/C Battery</agroves@slo.state.nm.us>   |
|---|
|   |
| > Olivia,   |
| > I checked on this and found that it did not get sent out. Thanks  |
| >   |
| > Jennifer Van Curen  |
| > T. 432.217.2699   |
| > C. 432.270.8753   |
| > ARCADIS, Imagine the result   |
| > Please consider the environment before printing this email.   |
| >   |
| > Connect with us! https://urldefense.proofpoint.com/v2/url?u=http-<br>3Awww.arcadis.com&d=DwlFBA&c=dbuucrGls9xXk6Z5aWDgzQ&r=bhTyka8Jnva1WGpZhi63j83ilRSIUBr3E_uWI9VT2G<br>0&m=DqGNF6wOx0ufLKIxFcuahFn0Bnh9tbCmRK4GpcBhL6M&s=rujZxS0d0clYjXvlh-KBj-GGwVZpNb1AjX0fSc1rltI&e=  <br>LinkedIn   Twitter   Facebook<br>> |
| > Be green, leave it on the screen.   |
| > be green, leave it on the screen.   |
| >Original Message   |
| > From: Yu, Olivia, EMNRD [mailto:Olivia.Yu@state.nm.us]  |
| > Sent: Tuesday, June 06, 2017 11:07 AM   |
| > To: Van Curen, Jennifer <jennifer.vancuren@arcadis.com>; Oberding,</jennifer.vancuren@arcadis.com>  |
| > Tomas, EMNRD <tomas.oberding@state.nm.us></tomas.oberding@state.nm.us>  |
| > Cc: Groves, Amber <a browses@slo.state.nm.us=""></a>  |
| Subject: RE: 1RP-4516 Warn State A/C Battery  |
|   |
| > Ms. Van Curen:  |
| >   |
| > The provided image in the report for 1RP-4516 is not clear. Please include a scaled map with sample locations visible.  |
| >   |
| > Thanks,   |
| > Olivia  |
| >   |
| >Original Message   |
| > From: Van Curen, Jennifer [mailto:Jennifer.VanCuren@arcadis.com]  |
| > Sent: Thursday, May 11, 2017 11:59 AM   |
| > To: Yu, Olivia, EMNRD <olivia.yu@state.nm.us>; Oberding, Tomas, EMNRD</olivia.yu@state.nm.us>   |
| < Tomas. Oberding@state.nm.us>  |
| > Subject: 1RP-4516 Warn State A/C Battery  |
| >   |
| > Olivia,   |
| >   |
| > Please see the attached revised plan with further sampling completed  |
| > you had requested. We will complete remediation after approval.   |
| > Thanks  |
|   |
| > Jennifer  |
| >   |
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Laboratory Report

Page 67 of 93

PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



### Analytical Report

#### **Prepared for:**

Mark Larson Larson & Associates, Inc. P.O. Box 50685 Midland, TX 79710

Project: Warn State A/C Battery Project Number: 19-0112-47 Location: Warn State A/C Battery

Lab Order Number: 9H29015



NELAP/TCEQ # T104704516-18-9

Report Date: 09/09/19

Page 68 of 93

Page 1 of 17

Page 69 of 93

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

#### Project Warn State A/C Battery Project Number: 19-0112-47 Project Manager: Mark Larson

Fax: (432) 687-0456

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| SP-5 (0')  | 9H29015-01    | Soil   | 08/28/19 12:36 | 08-29-2019 11 00 |
| SP-5 (5')  | 9H29015-02    | Soil   | 08/28/19 12:38 | 08-29-2019 11:00 |
| SP-5 (10') | 9H29015-03    | Soil   | 08/28/19 12:41 | 08-29-2019 11:00 |
| SP-5 (15') | 9H29015-04    | Soil   | 08/28/19 12 48 | 08-29-2019 11:00 |
| SP-5 (20') | 9H29015-05    | Soil   | 08/28/19 12 50 | 08-29-2019 11:00 |
| SP-5 (25') | 9H29015-06    | Soil   | 08/28/19 12 54 | 08-29-2019 [1:00 |
| SP-5 (30') | 9H29015-07    | Soil   | 08/28/19 12:57 | 08-29-2019 11:00 |
|            |               |        |                |                  |

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Page 2 of 17

| Larson & Associates, Inc.<br>P.O. Box 50685<br>Midland TX, 79710 |        | Proje<br>Project Numb<br>Project Manag | er: 19-01             |          | ttery |          |            | Fax: (432) 6 | 87-0456 |
|--|--------|--|-----------------------|----------|-------|----------|------------|--------------|---------|
|  |        |  | P-5 (0')<br>)15-01 (S | oil)     |       |          |            |              |         |
| Analyte  | Result | Reporting<br>Limit                     | Units                 | Dilution | Batch | Prepared | Analyzed   | Method       | Notes   |
| Organics by GC   |        | ian Basin E                            |                       | _        | -     | ricparcu | rsnaty 200 |              |         |

| Organica Di OC                        |                    |        |           |    |         |          |          |            |
|---------------------------------------|--------------------|--------|-----------|----|---------|----------|----------|------------|
| Benzene                               | ND                 | 0.0208 | mg/kg dry | 20 | P910302 | 09/03/19 | 09/05/19 | EPA 8021B  |
| Toluene                               | ND                 | 0.0208 | mg/kg dry | 20 | P910302 | 09/03/19 | 09/05/19 | EPA 8021B  |
| Ethylbenzene                          | ND                 | 0.0208 | mg/kg dry | 20 | P9I0302 | 09/03/19 | 09/05/19 | EPA 8021B  |
| Xylene (p/m)                          | ND                 | 0.0417 | mg/kg dry | 20 | P910302 | 09/03/19 | 09/05/19 | EPA 8021B  |
| Xylene (0)                            | ND                 | 0.0208 | mg/kg dry | 20 | P910302 | 09/03/19 | 09/05/19 | EPA 8021B  |
| Surrogate: 4-Bromofluorobenzene       |                    | 116%   | 75-125    |    | P910302 | 09 03 19 | 09 05 19 | EPA 8021B  |
| Surrogate: 1,4-Difluorohenzene        |                    | 80.1 % | % 75-125  |    | P910102 | 09 03 19 | 09 05 19 | EPA 8021B  |
| General Chemistry Parameters by EPA   | / Standard Method  | ls     |           |    |         |          |          |            |
| % Moisture                            | 4.0                | 0.1    | %         | i  | р9н3ф02 | 08/30/19 | 08/30/19 | ASTM D2216 |
| Total Petroleum Hydrocarbons C6-C3    | 5 by EPA Method 80 | 015M   | _         | _  |         |          |          |            |
| C6-C12                                | ND                 | 260    | mg/kg dry | 10 | P9H2908 | 08/29/19 | 09/01/19 | TPH 8015M  |
| >C12-C28                              | 8730               | 260    | mg/kg dry | 10 | P9H2908 | 08/29/19 | 09/01/19 | TPH 8015M  |
| >C28-C35                              | 2650               | 260    | mg/kg dry | 10 | P9H2908 | 08/29/19 | 09/01/19 | TPH 8015M  |
| Surrogate 1-Chlorooctane              |                    | 84.5 % | 70-130    |    | P9H2908 | 08 29 19 | 09 01 19 | TPH 8015M  |
| Surrogate o-Terphenyl                 |                    | 93.4 % | 70-130    |    | P9H2908 | 08 29 19 | 09 01 19 | TPH 8015M  |
| Total Petroleum Hydrocarbon<br>C6-C35 | 11400              | 260    | mg/kg dry | 10 | [CALC]  | 08/29/19 | 09/01/19 | calc       |

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Page 3 of 17

| Larson & Associates, Inc.<br>P.O. Box 50685<br>Midland TX, 79710 |                    | Proje<br>Project Numb<br>Project Manag |            | -47         | Fax (432) 68 | 7-0456   |          |            |      |
|--|--------------------|--|------------|-------------|--------------|----------|----------|------------|------|
|  |                    |  | P-5 (5')   |             |              |          |          |            |      |
|  |                    | 9H29                                   | 015-02 (So | il)         |              |          |          |            |      |
| Analyte  | Result             | Reporting<br>Limit                     | Units      | Dilution    | Batch        | Prepared | Analyzed | Method     | Note |
| ···  | Per                | mian Basin E                           | avironmer  | ital Lab, I | L.P.         |          |          |            |      |
| Organics by GC   |                    |  |            |             |              |          |          |            |      |
| Benzene  | ND                 | 0.0217                                 | mg/kg dry  | 20          | P910302      | 09/03/19 | 09/04/19 | EPA 8021B  |      |
| l'oluene   | ND                 | 0.0217                                 | mg/kg dry  | 20          | P910302      | 09/03/19 | 09/04/19 | EPA 8021B  |      |
| Ethylbenzene   | ND                 | 0.0217                                 | mg/kg dry  | 20          | P910302      | 09/03/19 | 09/04/19 | EPA 8021B  |      |
| Xylene (p/m)   | ND                 | 0.0435                                 | mg/kg dry  | 20          | P910302      | 09/03/19 | 09/04/19 | EPA 8021B  |      |
| Kylene (o)   | ND                 | 0.0217                                 | mg/kg dry  | 20          | P910302      | 09/03/19 | 09/04/19 | EPA 8021B  |      |
| Surrogate: 1,4-Difluorohenzene                                   |                    | 82.2 %                                 | 75-125     |             | P910302      | 09 03/19 | 09 04/19 | EPA 8021B  |      |
| Surrogate: 4-Bromofluorobenzene                                  |                    | 116%                                   | 75-125     |             | P9/0302      | 09 03/19 | 09 04/19 | EPA 8021B  |      |
| General Chemistry Parameters by El                               | PA / Standard Meth | ods                                    |            |             |              |          |          |            | _    |
| % Moisture   | 8.0                | 0.1                                    | %          | 1           | P9H3002      | 08/30/19 | 08/30/19 | ASTM D2216 |      |
| Total Petroleum Hydrocarbons C6-C                                | 35 by EPA Method   | 8015M                                  |            |             |              |          |          |            |      |
| C6-C12   | 180                | 27.2                                   | mg/kg dry  | 1 L         | P9H2908      | 08/29/19 | 09/01/19 | TPH 8015M  |      |
| >C12-C28   | 2.480              | 27.2                                   | mg/kg dry  | 1           | P9H2908      | 08/29/19 | 09/01/19 | TPH 8015M  |      |
| >C28-C35   | 368                | 27.2                                   | mg/kg dry  | 1           | P9H2908      | 08/29/19 | 09/01/19 | TPH 8015M  |      |
| Surrogate: 1-Chlorooctane  |                    | 119%                                   | 70-1       | 30          | P9H2908      | 08 29 19 | 09 01 19 | TPH 8015M  |      |
| Surrogate: o-Terphenyl   |                    | 123 %                                  | 70         | 130         | P9H2908      | 08 29 19 | 09 01 19 | TPH 8015M  |      |
| Total Petroleum Hydrocarbon<br>C6-C35                            | 3030               | 27.2                                   | mg/kg dry  | 1           | [CALC]       | 08/29/19 | 09/01/19 | calc       |      |

Page 71 of 93

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Page 4 of 17

| Larson & Associates, Inc.<br>P.O. Box 50685 |                  |                    |              |             |              |          |          | Fax (432) 687-0456 |       |
|---|------------------|--------------------|--------------|-------------|--------------|----------|----------|--------------------|-------|
| Midland TX, 79710                           |                  | Project Manag      | ger: Mark Li | arson       |              |          |          |                    |       |
|   |                  | S                  | P-5 (10')    |             |              |          |          |                    |       |
|   |                  | 9H29               | 015-03 (Soi  | il)         |              |          |          |                    |       |
| Analyte                                     | Result           | Reporting<br>Limit | Units        | Dilution    | Batch        | Prepared | Analyzed | Method             | Notes |
|   | Perr             | nian Basin E       | avironmen    | ital Lab, l | L. <b>P.</b> |          |          |                    |       |
| Organics by GC                              |                  |                    |              |             |              |          |          |                    |       |
| Benzene                                     | ND               | 0.00110            | mg/kg dry    | 1           | P910302      | 09/03/19 | 09/04/19 | EPA 8021B          |       |
| Toluene                                     | ND               | 0.00110            | mg/kg dry    | 1           | P910302      | 09/03/19 | 09/04/19 | EPA 8021B          |       |
| Ethylbenzene                                | ND               | 0,00110            | mg/kg dry    | 1           | P910302      | 09/03/19 | 09/04/19 | EPA 8021B          |       |
| Xylene (p/m)                                | ND               | 0.00220            | mg/kg dry    | 1           | P910302      | 09/03/19 | 09/04/19 | EPA 8021B          |       |
| Xylene (0)                                  | ND               | 0.00110            | mg/kg dry    | L           | P910302      | 09/03/19 | 09/04/19 | EPA 8021B          |       |
| Surrogate 1,4-Difluorobenzene               |                  | 86.5 %             | 75-1         | 25          | P9/0302      | 09 03 19 | 09 04 19 | EPA 8021B          |       |
| Surrogate: 4-Bromofluorobenzene             |                  | 104 %              | 75-125       |             | P910302      | 09 03 19 | 09 04 19 | EPA 8021B          |       |
| General Chemistry Parameters by EPA         | / Standard Metho | ds                 |              |             |              |          |          |                    |       |
| % Moisture                                  | 9.0              | 0.1                | %            | 1           | P9H3002      | 08/30/19 | 08/30/19 | ASTM D2216         |       |
| Total Petroleum Hydrocarbons C6-C35         | by EPA Method 8  | 015M               |              |             |              |          |          |                    |       |
| C6-C12                                      | ND               | 27.5               | mg/kg dry    | L           | P9H2908      | 08/29/19 | 09/01/19 | TPH 8015M          |       |
| >C12-C28                                    | ND               | 27.5               | mg/kg dry    | '           | P9H2908      | 08/29/19 | 09/01/19 | TPH 8015M          |       |
| >C28-C35                                    | ND               | 27.5               | mg/kg dry    | 1           | P9H2908      | 08/29/19 | 09/01/19 | TPH 8015M          |       |
| Surroyate: 1-Chlorooctane                   |                  | 107 %              | 70-1         | 30          | P9H2908      | 08 29 19 | 09 01 19 | TPH 8015M          |       |
| Surrogate: o-Terphenyl                      |                  | 113 %              | 70-1         | 30          | P9H2908      | 08 29 19 | 09 01 19 | TPH 8015M          |       |
| Total Petroleum Hydrocarbon C6-C35          | ND               | 27.5               | mg/kg dry    | L           | [CALC]       | 08/29/19 | 09/01/19 | calc               |       |

Page 72 of 93

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|--|------------------|--------------------|--------------|-----------|--------------|----------|----------|------------|-------|
|  |                  |                    | P-5 (15')    |           |              |          |          |            |       |
|  |                  | 9H29               | 015-04 (Soil | )         |              |          |          |            |       |
| Analyte  | Result           | Reporting<br>Limit | Units        | Dilution  | Batch        | Prepared | Analyzed | Method     | Notes |
|  | Per              | mian Basin E       | Invironment  | al Lab, l | L. <b>P.</b> |          |          |            |       |
| Organics by GC   |                  |                    |              |           |              |          |          |            |       |
| Benzene  | ND               | 0.00106            | mg/kg dry    | 1         | P910302      | 09/03/19 | 09/04/19 | EPA 8021B  |       |
| Tolucne  | ND               | 0.00106            | mg/kg dry    | 1         | P910302      | 09/03/19 | 09/04/19 | EPA 8021B  |       |
| Ethylbenzene   | ND               | 0.00106            | mg/kg dry    | 1         | P910302      | 09/03/19 | 09/04/19 | EPA 8021B  |       |
| Xylene (p/m)   | ND               | 0.00213            | mg/kg dry    | L         | P910302      | 09/03/19 | 09/04/19 | EPA 8021B  |       |
| Xylene (o)   | ND               | 0.00106            | mg/kg dry    | ι         | P910302      | 09/03/19 | 09/04/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene                                   |                  | 82.9 %             | 75-12        | 5         | P910302      | 09 03 19 | 09 04 19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene                                  |                  | 111%               | 75-12        | 5         | P910302      | 09 03 19 | 09 04 19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA                              | / Standard Metho | ds                 |              |           |              |          |          |            |       |
| % Moisture   | 6.0              | 0 1                | %            | 1         | P9H3002      | 08/30/19 | 08/30/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35                              | hy EPA Method 8  | 8015M              |              |           |              |          |          |            |       |
| C6-C12   | ND               | 26.6               | mg/kg dry    | L         | P9H2908      | 08/29/19 | 09/01/19 | TPH 8015M  |       |
| >C12-C28   | ND               | 26.6               | mg/kg dry    | L         | P9H2908      | 08/29/19 | 09/01/19 | TPH 8015M  |       |
| >C28-C35   | ND               | 26.6               | mg/kg dry    | 1         | P9H2908      | 08/29/19 | 09/01/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane  |                  | 105 %              | 70-13        | 0         | P9H2908      | 08/29/19 | 09 01/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl   |                  | 109 %              | 70-13        | 0         | P9H2908      | 08 29/19 | 09 01/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35                               | ND               | 26.6               | mg/kg dry    | 1         | [CALC]       | 08/29/19 | 09/01/19 | calc       |       |

Page 73 of 93

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Page 6 of 17

| Larson & Associates, Inc.<br>P.O. Box 50685 |                  |                    | ect: Warn Star<br>ber: 19-0112-4 |           | attery       |          |          | Fax: (432) 687-0456 |       |  |
|---|------------------|--------------------|----------------------------------|-----------|--------------|----------|----------|---------------------|-------|--|
| Midland TX, 79710                           |                  |                    | ger Mark Lar                     |           |              |          |          |                     |       |  |
|   |                  | S                  | P-5 (20')                        |           |              |          |          |                     |       |  |
|   |                  | 91129              | 015-05 (Soil)                    |           |              |          |          |                     |       |  |
| Analyte                                     | Result           | Reporting<br>Limit | Units                            | Dilution  | Batch        | Prepared | Analyzed | Method              | Notes |  |
|   |                  |                    | -                                | _         | -            |          |          |                     |       |  |
|   | Peri             | nian Basin E       | Invironment                      | al Lab, I | L. <b>P.</b> |          |          |                     |       |  |
| Drganics by GC                              |                  |                    |                                  |           |              |          |          |                     |       |  |
| Benzene                                     | ND               | 0,00110            | mg/kg dry                        | 1         | P910302      | 09/03/19 | 09/04/19 | EPA 8021B           |       |  |
| Foluene                                     | ND               | 0.00110            | mg/kg dry                        | 1         | P910302      | 09/03/19 | 09/04/19 | EPA 8021B           |       |  |
| Ethylbenzene                                | ND               | 0.00110            | mg/kg dry                        | 1         | P910302      | 09/03/19 | 09/04/19 | EPA 8021B           |       |  |
| Xylene (p/m)                                | ND               | 0.00220            | mg/kg dry                        | 1         | P910302      | 09/03/19 | 09/04/19 | EPA 8021B           |       |  |
| Xylene (o)                                  | ND               | 0.00110            | mg/kg dry                        | L.        | P910302      | 09/03/19 | 09/04/19 | EPA 8021B           |       |  |
| Surrogate: J-Bromofluorobenzene             |                  | 94.2 %             | 75-12                            | 5         | P910302      | 09 03 19 | 09 04 19 | EPA 8021B           |       |  |
| Surrogate: 1,4-Difluorobenzene              |                  | 80.2 %             | 75-12                            | 5         | P910302      | 09 03 19 | 09 04 19 | EPA 8021B           |       |  |
| General Chemistry Parameters by EPA         | / Standard Metho | ds                 |                                  |           |              |          |          |                     |       |  |
| % Moisture                                  | 9.0              | 0.1                | %                                | 1         | P9H3002      | 08/30/19 | 08/30/19 | ASTM D2216          |       |  |
| Total Petroleum Hydrocarbons C6-C35         | hv EPA Method 8  | 015M               |                                  |           |              |          |          |                     |       |  |
| C6-C12                                      | ND               | 27.5               | mg/kg dry                        | 1         | P9H2908      | 08/29/19 | 09/01/19 | TPH 8015M           |       |  |
| >C12-C28                                    | ND               | 27.5               | mg/kg dry                        | 1         | P9H2908      | 08/29/19 | 09/01/19 | TPH 8015M           |       |  |
| >C28-C35                                    | ND               | 27.5               | mg/kg dry                        | 1         | P9H2908      | 08/29/19 | 09/01/19 | TPH 8015M           |       |  |
| Surrogate: 1-Chlorooctane                   |                  | 124%               | 70-13                            | 7         | P9H2908      | 08 29 19 | 09 01 19 | TPH 8015M           |       |  |
| Surrogate: o-Terphenyl                      |                  | 131 %              | 70-130                           | 7         | P9H2908      | 08/29/19 | 09 01 19 | TPH 8015M           | S-GC  |  |
| Total Petroleum Hydrocarbon C6-C35          | ND               | 27.5               | mg/kg đry                        | 1         | [CALC]       | 08/29/19 | 09/01/19 | calc                |       |  |

Page 74 of 93

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1400 Rankin HWY Midland, TX 79701 432-686-7235

Page 7 of 17

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| Larson & Associates, Inc.<br>P.O. Box 50685<br>Midland TX, 79710 |                 | Project Num        | ect: Warn Sta<br>ber: 19-0112<br>ger: Mark Lar | 47        | ittery  |          |          | Fax: (432) 68 | 7-0456 |
|--|-----------------|--------------------|--|-----------|---------|----------|----------|---------------|--------|
|  |                 |                    | P-5 (25')<br>015-06 (Soil)                     | 1         |         |          |          |               |        |
| Analyte  | Result          | Reporting<br>Limit | Units  | Dilution  | Batch   | Prepared | Analyzed | Method        | Notes  |
|  | Per             | mian Basin B       | Invironment                                    | al Lab, I | P,      |          |          |               |        |
| Organics by GC   |                 |                    |  |           |         |          |          | 100 C         |        |
| Benzene  | ND              | 0.00106            | mg/kg dry                                      | ı         | P910302 | 09/03/19 | 09/04/19 | EPA 8021B     |        |
| Toluene  | ND              | 0.00106            | mg/kg dry                                      | L         | P910302 | 09/03/19 | 09/04/19 | EPA 8021B     |        |
| Ethylbenzene   | ND              | 0.00106            | mg/kg dry                                      | L         | P910302 | 09/03/19 | 09/04/19 | EPA 8021B     |        |
| Xylene (p/m)   | ND              | 0.00213            | mg/kg dry                                      | ι         | P910302 | 09/03/19 | 09/04/19 | EPA 8021B     |        |
| Xylene (o)   | ND              | 0.00106            | mg/kg dry                                      | 1         | P910302 | 09/03/19 | 09/04/19 | EPA 8021B     |        |
| Surrogate 4-Bromofluorobenzene                                   |                 | 115%               | 75-12  | 5         | P910302 | 09 03 19 | 09 04 19 | EPA 8021B     |        |
| Surrogate: 1.4-Difluorobenzene                                   |                 | 88.7 %             | 75-12  | 5         | P910302 | 09 03 19 | 09 04 19 | EPA 8021B     |        |
| General Chemistry Parameters by EPA                              | Standard Metho  | ods                |  |           |         |          |          |               |        |
| % Moisture   | 6.0             | 0.1                | %  | 1         | P9H3002 | 08/30/19 | 08/30/19 | ASTM D2216    |        |
| Total Petroleum Hydrocarbons C6-C35                              | by EPA Method 8 | 8015M              |  |           |         |          |          |               |        |
| C6-C12   | ND              | 26.6               | mg/kg dry                                      | 1         | P9H2908 | 08/29/19 | 09/01/19 | TPH 8015M     |        |
| >C12-C28   | ND              | 26.6               | mg/kg dry                                      | 1         | P9H2908 | 08/29/19 | 09/01/19 | TPH 8015M     |        |
| >C28-C35   | ND              | 26.6               | mg/kg dry                                      | 1         | P9H2908 | 08/29/19 | 09/01/19 | TPH 8015M     |        |
| Surrogate 1-Chlorooctane   |                 | 124 %              | 70-130   | )         | P9H2908 | 08 29 19 | 09 01 19 | TPH 8015M     |        |
| Surrogate: o-Terphenyl   |                 | 132 %              | 70-130   | )         | P9H2908 | 08 29 19 | 09 01/19 | TPH 8015M     | S-GC   |
| Total Petroleum Hydrocarbon C6-C35                               | ND              | 26.6               | mg/kg dry                                      | 1         | [CALC]  | 08/29/19 | 09/01/19 | calc          |        |

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Page 8 of 17

| Larson & Associates, Inc.           |                  | Proj               | ect: Warn St | ate A/C Ba | ittery  |          |          | Fax: (432) 687-0456 |       |  |
|-------------------------------------|------------------|--------------------|--------------|------------|---------|----------|----------|---------------------|-------|--|
| P.O. Box 50685                      |                  | Project Num        | ber: 19-0112 | -47        |         |          |          |                     |       |  |
| Midland TX, 79710                   |                  | ger Mark La        | urson        |            |         |          |          |                     |       |  |
|                                     |                  | S                  | P-5 (30')    |            |         |          |          |                     |       |  |
|                                     |                  | 9H29               | 015-07 (Soi  | l)         |         |          |          |                     |       |  |
| Analyte                             | Result           | Reporting<br>Limit | Units        | Dilution   | Batch   | Prepared | Analyzed | Method              | Notes |  |
|                                     | Perr             | nian Basin E       | nvironmen    | tal Lab, I | L.P.    |          |          |                     |       |  |
| Organics by GC                      |                  |                    |              |            |         |          |          |                     |       |  |
| Benzene                             | ND               | 0.00108            | mg/kg dry    | L          | P9I0302 | 09/03/19 | 09/04/19 | EPA 8021B           |       |  |
| Foluene                             | ND               | 0.00108            | mg/kg dry    | L          | P910302 | 09/03/19 | 09/04/19 | EPA 8021B           |       |  |
| Ethylbenzene                        | ND               | 80100.0            | mg/kg dry    | 1          | P910302 | 09/03/19 | 09/04/19 | EPA 8021B           |       |  |
| Kylene (p/m)                        | ND               | 0.00215            | mg/kg đry    | 1          | P910302 | 09/03/19 | 09/04/19 | EPA 8021B           |       |  |
| Kylene (o)                          | ND               | 0.00108            | mg/kg dry    | 1          | P910302 | 09/03/19 | 09/04/19 | EPA 8021B           |       |  |
| Surrogate 1,4-Difluorobenzene       |                  | 86.3 %             | 75-1.        | 25         | P910302 | 09 03 19 | 09 04 19 | EPA 8021B           |       |  |
| Surrogate. 4-Bromofluorobenzene     |                  | 104%               | 75-1.        | 25         | P910302 | 09 03 19 | 09 04 19 | EPA 8021B           |       |  |
| General Chemistry Parameters by EPA | / Standard Metho | ds                 |              |            |         |          | _        |                     |       |  |
| % Moisture                          | 7.0              | 0.1                | %            | 1          | P9H3002 | 08/30/19 | 08/30/19 | ASTM D2216          |       |  |
| Total Petroleum Hydrocarhons C6-C35 | by EPA Method 8  | 015M               |              |            |         |          | ÷        |                     |       |  |
| C6-C12                              | ND               | 26.9               | mg/kg dry    | 1          | P9H2908 | 08/29/19 | 09/01/19 | TPH 8015M           |       |  |
| C12-C28                             | ND               | 26.9               | mg/kg dry    | 1          | P9H2908 | 08/29/19 | 09/01/19 | TPH 8015M           |       |  |
| C28-C35                             | ND               | 26.9               | mg/kg dry    | 1          | P9H2908 | 08/29/19 | 09/01/19 | TPH 8015M           |       |  |
| Surrogate 1-Chlorooctane            |                  | 93.8 %             | 70-1.        | 30         | P9H2908 | 08 29 19 | 09 01 19 | TPH 8015M           |       |  |
| Surrogate: o-Terphenyl              |                  | 101 %              | 70-1.        | 30         | P9H2908 | 08 29 19 | 09.01/19 | TPH 8015M           |       |  |
| Fotal Petroleum Hydrocarbon C6-C35  | ND               | 26.9               | mg/kg dry    | 1          | [CALC]  | 08/29/19 | 09/01/19 | calc                |       |  |

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Page 9 of 17

#### Project: Warn State A/C Battery Project Number: 19-0112-47 Project Manager: Mark Larson

Fax: (432) 687-0456

### **Organics by GC - Quality Control**

### Permian Basin Environmental Lab, L.P.

| Analyte                                | Result    | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|--|-----------|--------------------|-----------|----------------|------------------|-------------|----------------|------|--------------|-------|
| Batch P910302 - General Preparation (G | (C)       |                    |           |                |                  |             |                |      |              |       |
| Blank (P910302-BLK1)                   |           | _                  |           | Prepared: 0    | 09/03/19 Ar      | alvzed: 09  | /04/19         |      |              |       |
| Benzene                                | ND        | 0.00100            | mg/kg wet |                |                  |             |                |      |              |       |
| Toluene                                | ND        | 0.00100            | *         |                |                  |             |                |      |              |       |
| Ethylbenzene                           | ND        | 0.00100            | 49        |                |                  |             |                |      |              |       |
| Xylene (p/m)                           | ND        | 0.00200            | 9         |                |                  |             |                |      |              |       |
| Xylene (o)                             | ND        | 0.00100            | *         |                |                  |             |                |      |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.0984    |                    |           | 0.120          |                  | 82.0        | 75-125         |      |              |       |
| Surrogate: 4-Bromofluorobenzene        | 0.123     |                    | "         | 0.120          |                  | 103         | 75-125         |      |              |       |
| LCS (P910302-BS1)                      |           |                    |           | Prepared: (    | 09/03/19 Ai      | nalyzed: 09 | /04/19         |      |              |       |
| Benzene                                | 0.0879    | 0.00100            | mg/kg wet | 0.100          |                  | 87.9        | 70-130         |      |              |       |
| Toluene                                | 0.0972    | 0.00100            | "         | 0.100          |                  | 97.2        | 70-130         |      |              |       |
| Ethylbenzene                           | 0.105     | 0.00100            |           | 0.100          |                  | 105         | 70-130         |      |              |       |
| Xylene (p/m)                           | 0.209     | 0.00200            |           | 0.200          |                  | 104         | 70-130         |      |              |       |
| Xylene (o)                             | 0.105     | 0.00100            | **        | 0,100          |                  | 105         | 70-130         |      |              |       |
| Surrogate: 4-Bromofluorobenzene        | 0.131     |                    |           | 0.120          |                  | 109         | 75-125         |      |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.128     |                    | **        | 0.120          |                  | 107         | 75-125         |      |              |       |
| LCS Dup (P910302-BSD1)                 | 2.2 morth |                    |           | Prepared (     | 09/03/19 Ai      | nalyzed: 09 | /04/19         |      |              |       |
| Benzene                                | 0.0968    | 0.00100            | mg/kg wet | 0.100          |                  | 96.8        | 70-130         | 9.58 | 20           |       |
| Toluene                                | 0.104     | 0.00100            | н         | 0,100          |                  | 104         | 70-130         | 6.50 | 20           |       |
| Ethylbenzene                           | 0.104     | 0.00100            | U         | 0.100          |                  | 104         | 70-130         | 1.18 | 20           |       |
| Xylene (p/m)                           | 0.216     | 0.00200            |           | 0.200          |                  | 108         | 70-130         | 3.28 | 20           |       |
| Xylene (o)                             | 0.113     | 0.00100            | "         | 0.100          |                  | 113         | 70-130         | 7.03 | 20           |       |
| Surrogate 1,4-Difluorobenzene          | 0.121     |                    | ц         | 0.120          |                  | 101         | 75-125         |      | 10 mm        |       |
| Surrogate: 4-Bromofluorobenzene        | 0.122     |                    | м         | 0.120          |                  | 102         | 7 <b>5-125</b> |      |              |       |
| Calibration Blank (P910302-CCB1)       |           |                    |           | Prepared: (    | 09/03/19 Ai      | nalyzed: 09 | /04/19         |      |              |       |
| Benzene                                | 0.00      |                    | mg/kg wet |                |                  |             |                |      |              |       |
| Toluene                                | 0.00      |                    | "         |                |                  |             |                |      |              |       |
| Ethylbenzene                           | 0,00      |                    | 10        |                |                  |             |                |      |              |       |
| Xylene (p/m)                           | 0.00      |                    |           |                |                  |             |                |      |              |       |
| Xylene (o)                             | 0.00      |                    | *         |                |                  |             |                |      |              |       |
| Surrogate: 4-Bromofluorobenzene        | 0.122     |                    | *         | 0.120          |                  | 102         | 75-125         |      |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.107     |                    | *         | 0.120          |                  | 89.2        | 75-125         |      |              |       |

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Page 10 of 17

| Larson & Associates, Inc.<br>P.O. Box 50685<br>Midland TX, 79710 |        | Project Nu               | roject War<br>umber 19-0<br>mager Mar | 112-47      | Battery     |            |        |       | Fax: (432) | 687-0456 |
|--|--------|--------------------------|---------------------------------------|-------------|-------------|------------|--------|-------|------------|----------|
|  |        | rganics by<br>lian Basin |                                       | -           |             |            |        |       |            |          |
| <u> </u>   |        | Reporting                |                                       | Spike       | Source      | · · · ·    | *REC   |       | RPD        |          |
| Analyte  | Result | Limit                    | Units                                 | Level       | Result      | *REC       | Limits | RPD   | Limit      | Notes    |
| Batch P910302 - General Preparation (C                           | GC)    |                          |                                       |             |             |            |        |       |            |          |
| Calibration Blank (P910302-CCB2)                                 |        |                          |                                       | Prepared (  | )9/03/19 An | alyzed: 09 | /04/19 |       |            |          |
| Benzene  | 0.00   |                          | mg/kg wet                             |             |             |            |        |       |            |          |
| Foluene  | 0.00   |                          |                                       |             |             |            |        |       |            |          |
| Ethylbenzene   | 0,00   |                          | •                                     |             |             |            |        |       |            |          |
| Kylene (p/m)   | 0.00   |                          |                                       |             |             |            |        |       |            |          |
| Kylene (o)   | 0.00   |                          |                                       |             |             |            |        |       |            |          |
| Surrogate: 4-Bromofluorobenzene                                  | 0.134  |                          | N                                     | 0.120       |             | Ш          | 75-125 |       |            | 1        |
| urrogate: 1,4-Difluorobenzene                                    | 0.101  |                          | "                                     | 0.120       |             | 84.0       | 75+125 |       |            |          |
| Calibration Blank (P910302-CCB3)                                 |        |                          |                                       | Prepared: ( | )9/03/19 An | alyzed 09  | /05/19 |       |            |          |
| Benzene  | 0,00   |                          | mg/kg wet                             |             |             |            |        |       |            | 1        |
| oluene   | 0.00   |                          |                                       |             |             |            |        |       |            |          |
| Ethylbenzene   | 0.00   |                          | "                                     |             |             |            |        |       |            |          |
| Kylene (p/m)   | 0.00   |                          |                                       |             |             |            |        |       |            |          |
| Kylene (o)   | 0.00   |                          |                                       |             |             |            |        |       |            | 12       |
| Surrogate: 1.4-Difluorobenzene                                   | 0.0964 |                          | n                                     | 0.120       |             | 80.4       | 75-125 |       |            |          |
| Surrogate: 4-Bromofluorobenzene                                  | 0.135  |                          | *                                     | 0.120       |             | 112        | 75-125 |       |            |          |
| Calibration Check (P910302-CCV1)                                 |        |                          |                                       | Prepared: ( | 09/03/19 An | alyzed: 09 | /04/19 |       |            |          |
| Benzene  | 0.0819 | 0.00100                  | mg/kg wet                             | 0.100       |             | 81.9       | 80-120 |       |            |          |
| Toluene  | 0.0885 | 0.00100                  |                                       | 0.100       |             | 88.5       | 80-120 |       |            |          |
| Ethylbenzene   | 0.0922 | 0.00100                  | 9                                     | 0.100       |             | 92.2       | 80-120 |       |            |          |
| Kylene (p/m)   | 0.172  | 0.00200                  | **                                    | 0.200       |             | 86.1       | 80-120 |       |            |          |
| Kylene (o)   | 0.0978 | 0.00100                  | 10                                    | 0.100       |             | 97.8       | 80-120 |       |            |          |
| Surrogate: 1,4-Difluorobenzene                                   | 0.120  |                          | м                                     | 0.120       |             | 99.9       | 75-125 | 0.000 |            |          |
| Surrogate 4-Bromofluorobenzene                                   | 0.114  |                          | *                                     | 0.120       |             | 950        | 75-125 |       |            |          |
| Calibration Check (P910302-CCV2)                                 |        |                          |                                       | Prepared (  | )9/03/19 An | alvzed: 09 | /04/19 |       |            |          |
| Benzene  | 0.0987 | 0.00100                  | mg/kg wet                             | 0.100       |             | 98.7       | 80-120 |       |            | 100      |
| Foluene  | 0.114  | 0.00100                  | 11                                    | 0.100       |             | 114        | 80-120 |       |            |          |
| Ethylbenzene   | 0.119  | 0.00100                  | 38                                    | 0.100       |             | 119        | 80-120 |       |            |          |
| Kylene (p/m)   | 0.235  | 0.00200                  | в                                     | 0.200       |             | 118        | 80-120 |       |            |          |
| Sylene (o)   | 0.120  | 0.00100                  | **                                    | 0.100       |             | 120        | 80-120 |       |            |          |
| Surrogate: 1,4-Difluorobenzene                                   | 0.135  |                          |                                       | 0.120       |             | 113        | 75-125 |       |            |          |
| Surrogate: 4-Bromofluorohenzene                                  | 0.139  |                          |                                       | 0.120       |             | 115        | 75-125 |       |            |          |

Page 78 of 93

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Page 11 of 17

| Larson & Associates, Inc.<br>P.O. Box 50685<br>Midland TX, 79710 | -      | Project N          | Project: Wa<br>umber: 19-<br>anager: Ma |                | Battery          |             |                |      | Fax: (432)   | 687-0456 |
|--|--------|--------------------|---|----------------|------------------|-------------|----------------|------|--------------|----------|
|  | 0      | rganics by         | GC - Q                                  | uality Co      | ontrol           |             |                |      |              |          |
|  | Perm   | ian Basin          | Enviror                                 | imental l      | Lab, L.P         | •           |                |      |              |          |
| Алајуtе  | Result | Reporting<br>Limit | Units                                   | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD  | RPD<br>Limit | Notes    |
| Batch P910302 - General Preparation (C                           | GC)    |                    |   |                |                  |             |                |      |              |          |
| Calibration Check (P910302-CCV3)                                 |        |                    |   | Prepared: (    | 09/03/19 A       | nalyzed: 09 | 9/04/19        |      |              |          |
| Benzene  | 0,0870 | 0.00100            | mg/kg wet                               | 0.100          |                  | 87.0        | 80-120         |      |              |          |
| Toluene  | 0.105  | 0.00100            | "                                       | 0,100          |                  | 105         | 80-120         |      |              |          |
| Ethylbenzene   | 0.113  | 0,00100            | "                                       | 0.100          |                  | 113         | 80-120         |      |              |          |
| Xylene (p/m)   | 0.216  | 0,00200            | "                                       | 0.200          |                  | 108         | 80-120         |      |              |          |
| Xylene (o)   | 0.116  | 0,00100            | -1                                      | 0.100          |                  | 116         | 80-120         |      |              |          |
| Surrogate: 1,4-Difluorobenzene                                   | 0.125  |                    | "                                       | 0.120          |                  | 104         | 75-125         |      |              |          |
| Surrogate 4-Bromofluorobenzene                                   | 0.135  |                    | *                                       | 0.120          |                  | 113         | 75-125         |      |              |          |
| Matrix Spike (P910302-MS1)                                       | Sou    | rce: 9H30018       | 3-01                                    | Prepared (     | 09/03/19 A       | nalyzed: 09 | 9/04/19        |      |              |          |
| Benzene  | 0.0653 | 0.00103            | mg/kg dry                               | 0.103          | ND               | 63.4        | 80-120         |      |              | OM-05    |
| Toluene  | 0.0812 | 0.00103            | 92                                      | 0.103          | ND               | 78.7        | 80-120         |      |              | QM-05    |
| Ethylbenzene   | 0.0976 | 0.00103            | 45                                      | 0.103          | ND               | 94,7        | 80-120         |      | 1.0          |          |
| Xylene (p/m)   | 0,149  | 0.00206            | 45                                      | 0,206          | ND               | 72.2        | 80-120         |      |              | OM-05    |
| Xylene (o)   | 0.0713 | 0.00103            | 9                                       | 0.103          | ND               | 69.2        | 80-120         |      | 15           | QM-05    |
| Surrogate: 1,4-Difluorobenzene                                   | 0.126  |                    | н                                       | 0.124          | 2.00             | 102         | 75-125         |      |              |          |
| Surrogate: 4-Bromofluorobenzene                                  | 0.142  |                    | *                                       | 0.124          |                  | 115         | 75-125         |      |              |          |
| Matrix Spike Dup (P910302-MSD1)                                  | Sou    | rce: 9H30018       | 8-01                                    | Prepared (     | 09/03/19 A       | nalyzed: 0  | 9/04/19        |      |              |          |
| Benzene  | 0.0675 | 0.00103            | mg/kg dry                               | 0.103          | ND               | 65,4        | 80-120         | 3.20 | 20           | QM-05    |
| Toluene  | 0.0853 | 0.00103            |   | 0.103          | ND               | 82.7        | 80-120         | 4.95 | 20           |          |
| Ethylbenzene   | 0.102  | 0.00103            | **                                      | 0,103          | ND               | 99.2        | 80-120         | 4.72 | 20           |          |
| Xylene (p/m)   | 0.158  | 0.00206            | *                                       | 0.206          | ND               | 76.6        | 80-120         | 5.94 | 20           | QM-05    |
| Xylene (o)   | 0.0823 | 0.00103            | в                                       | 0.103          | ND               | 79.9        | 80-120         | 14.3 | 20           | QM-05    |
| Surrogate: 1,4-Difluorobenzene                                   | 0.126  |                    |   | 0.124          |                  | 102         | 75-125         |      |              |          |
| Surrogate: 4-Bromofluorobenzene                                  | 0.138  |                    | *                                       | 0.124          |                  | 111         | 75-125         |      |              |          |

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Page 12 of 17

Project: Warn State A/C Battery Project Number: 19-0112-47 Project Manager: Mark Larson Fax: (432) 687-0456

### General Chemistry Parameters by EPA / Standard Methods - Quality Control

### Permian Basin Environmental Lab, L.P.

| Analyte                              | Result | Reporting<br>Limit | Units | Spike<br>Level               | Source<br>Result | %REC     | %REC<br>Límits | RPD  | RPD<br>Limit | Note |
|--------------------------------------|--------|--------------------|-------|------------------------------|------------------|----------|----------------|------|--------------|------|
| Batch P9H3002 - *** DEFAULT PREP *** |        |                    |       |                              |                  |          |                |      |              |      |
| Blank (P9113002-BLK1)                |        |                    |       | Prepared &                   | : Analyzed       | 08/30/19 |                |      |              |      |
| % Moisture                           | ND     | 0.1                | %     |                              |                  |          |                |      |              |      |
| Duplicate (P9113002-DUP1)            | Sou    | rce: 91129005-     | 09    | Prepared & Analyzed 08/30/19 |                  |          |                |      |              |      |
| % Moisture                           | 1.0    | 0.1                | %     |                              | 1.0              |          |                | 0.00 | 20           |      |
| Duplicate (P9113002-DUP2)            | Sou    | rce: 9H29012-      | D1    | Prepared &                   | : Analyzed       | 08/30/19 |                |      |              |      |
| % Moisture                           | 11.0   | 0 I                | %     |                              | 11.0             |          |                | 0.00 | 20           |      |
| Duplicate (P9H3002-DUP3)             | Sou    | rce: 9H29015-      | D7    | Prepared &                   | : Analyzed       | 08/30/19 |                |      |              |      |
| % Moisture                           | 7.0    | 0.1                | %     |                              | 7.0              |          |                | 0.00 | 20           | -    |

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Page 13 of 17

### Project Warn State A/C Battery Project Number 19-0112-47 Project Manager Mark Larson

Fax (432) 687-0456

## Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

### Permian Basin Environmental Lab, L.P.

| Analyte                           | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|-----------------------------------|--------|--------------------|-----------|----------------|------------------|-------------|----------------|-------|--------------|-------|
| Batch P9H2908 - TX 1005           |        |                    |           |                |                  | -           |                |       | _            |       |
| Blank (P9112908-BLK1)             |        |                    |           | Prepared: (    | 08/29/19 A       | nalyzed: 09 | /01/19         |       |              |       |
| C6-C12                            | ND     | 25,0               | mg/kg wet |                |                  |             |                |       |              |       |
| >C12-C28                          | ND     | 25.0               | м         |                |                  |             |                |       |              |       |
| >C28-C35                          | ND     | 25,0               | 41        |                |                  |             |                |       |              |       |
| Surrogate: 1-Chlorooctane         | 96.7   |                    | "         | 100            |                  | 96.7        | 70-130         |       |              | _     |
| Surrogate: o-Terphemyl            | 513    |                    | 64        | 50.0           |                  | 103         | 70-130         |       |              |       |
| LCS (P9H2908-BS1)                 |        |                    |           | Prepared (     | 08/29/19 A       | nalyzed 08  | /31/19         |       |              |       |
| C6-C12                            | 1130   | 25,0               | mg/kg wet | 1000           |                  | 113         | 75-125         |       |              |       |
| C12-C28                           | 1140   | 25.0               |           | 1000           |                  | 114         | 75-125         |       |              |       |
| Surrogate: 1-Chlorooctane         | 102    |                    | м         | 100            |                  | 102         | 70-130         |       |              | -     |
| Surrogate: o-Terphenyl            | 54.0   |                    | м         | 50.0           |                  | 108         | 70-130         |       |              |       |
| LCS Dup (P9H2908-BSD1)            |        |                    |           | Prepared: (    | 08/29/19 A       | nalyzed 09  | /01/19         |       |              |       |
| C6-C12                            | 1180   | 25.0               | mg/kg wet | 1000           |                  | 118         | 75-125         | 4.19  | 20           |       |
| >C12-C28                          | 1130   | 25.0               | 14        | 1000           |                  | 113         | 75-125         | 0.647 | 20           |       |
| Surrogate: 1-Chlorooctane         | 97.3   |                    | N         | 100            |                  | 97.3        | 70-130         |       |              |       |
| Surrogate: o-Terphenyl            | 46.6   |                    | M         | \$0.0          |                  | 93.2        | 70-130         |       |              |       |
| Calibration Blank (P9H2908-CCB1)  |        |                    |           | Prepared (     | 08/29/19 A       | nalyzed 08  | /31/19         |       |              |       |
| C6-C12                            | 7 13   |                    | mg/kg wet |                |                  |             |                |       |              |       |
| >C12-C28                          | 16.2   |                    | 10        |                |                  |             |                |       |              |       |
| Surrogate 1-Chlorooctane          | 96.5   |                    | M         | 100            |                  | 96.5        | 70-130         |       | 2            |       |
| Surrogate: o-Terphenyl            | 51.7   |                    | **        | 50.0           |                  | 103         | 70-130         |       |              |       |
| Calibration Blank (P9112908-CCB2) |        |                    |           | Prepared: (    | 08/29/19 A       | nalyzed: 09 | /01/19         |       |              |       |
| C6-C12                            | 6.41   |                    | mg/kg wet | 1              |                  |             |                |       |              |       |
| >C12-C28                          | 18.8   |                    | 14        |                |                  |             |                |       |              |       |
| Surrogate: 1-Chlorooctane         | 95.6   |                    |           | 100            |                  | 95.6        | 70-130         |       |              |       |
| Surrogate: o-Terphenyl            | 51.2   |                    | *         | 50.0           |                  | 102         | 70-130         |       |              |       |

Permian Basin Environmental Lab, L.P.

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Page 14 of 17

### Project: Warn State A/C Battery Project Number: 19-0112-47 Project Manager: Mark Larson

Fax: (432) 687-0456

## Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

### Permian Basin Environmental Lab, L.P.

| Analyte                           | Result | Reporting<br>Limit  | Units     | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|-----------------------------------|--------|---|-----------|----------------|------------------|-------------|----------------|------|--------------|-------|
| Batch P9H2908 - TX 1005           |        |   |           |                |                  |             |                |      |              |       |
| Calibration Check (P9H2908-CCV1)  |        |   |           | Prepared: (    | 08/29/19 A       | nalyzed: 08 | /31/19         |      |              |       |
| C6-C12                            | 544    | 25.0  | mg/kg wei | 500            |                  | 109         | 85-115         |      |              |       |
| >C12-C28                          | 574    | 25.0  | н         | 500            |                  | 115         | 85-115         |      |              |       |
| Surrogate: 1-Chlorooctane         | 120    |   | N         | 100            |                  | 120         | 70-130         |      |              |       |
| Surrogate: o-Terphenyl            | 51.0   |   | "         | 50.0           |                  | 102         | 70-130         |      |              |       |
| Calibration Check (P9112908-CCV2) |        |   |           | Prepared (     | 08/29/19 A       | nalyzed: 09 | /01/19         |      |              |       |
| C6-C12                            | 538    | 25.0  | mg/kg wet | 500            |                  | 108         | 85-115         |      |              |       |
| >C12-C28                          | 562    | 25.0  | M         | 500            |                  | 112         | 85-115         |      |              |       |
| Surrogate: 1-Chlorooctane         | 116    |   |           | 100            |                  | 116         | 70-130         |      |              |       |
| Surrogate: o-Terphenyl            | 50.0   |   | •         | 50.0           |                  | 100         | 70-130         |      |              |       |
| Calibration Check (P9H2908-CCV3)  |        |   |           | Prepared: (    | 08/29/19 A       | nalyzed: 09 | /01/19         |      |              |       |
| C6-C12                            | 573    | 25.0  | mg/kg wet | 500            |                  | 115         | 85-115         |      |              |       |
| >C12-C28                          | 533    | 25.0  | "         | 500            |                  | 107         | 85-115         |      |              |       |
| Surrogate 1-Chlorooctane          | 118    |   | *         | 100            |                  | 118         | 70-130         |      |              | _     |
| Surrogate: o-Terphenyl            | 50.9   |   | *         | \$0.0          |                  | 102         | 70-130         |      |              |       |
| Duplicate (P9H2908-DUPI)          | Sou    | Source: 91129019-05 Prepared: 08/29/19 Analyzed: 09/01/19 |           |                |                  |             |                |      |              |       |
| C6-C12                            | ND     | 25.8  | mg/kg dry |                | 10.7             |             |                |      | 20           |       |
| >C12-C28                          | 18.4   | 25.8  | м         |                | 14.2             |             |                | 26.0 | 20           |       |
| Surrogate: 1-Chlorooctane         | 108    |   | "         | 103            | 11               | 104         | 70-130         |      |              |       |
| Surrogate: o-Terphenyl            | 58.1   |   | "         | 51.5           |                  | 113         | 70-130         |      |              |       |

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Page 15 of 17

| P.O. Box | Associates, Inc.<br>50685<br>FX, 79710   | Project;<br>Project Number;<br>Project Manager; |   | Fax. (432) 687-0456 |
|----------|--|---|---|---------------------|
|          |  | Notes and De                                    | finitions                                       |                     |
| S-GC     | Surrogate recovery outside of control limits. The dat  | a was accepted base                             | ed on valid recovery of the remaining surrogate |                     |
| QM-05    | The spike recovery was outside acceptance limits for<br>within acceptance limits showing that the laboratory |   |   | LCSD were           |
| BULK     | Samples received in Bulk soil containers   |   |   |                     |
| DET      | Analyte DETECTED   |   |   |                     |
| ND       | Analyte NOT DETECTED at or above the reporting limit   |   |   |                     |
| NR       | Not Reported   |   |   |                     |
| dry      | Sample results reported on a dry weight basis  |   |   |                     |
| RPD      | Relative Percent Difference  |   |   |                     |
| LCS      | Laboratory Control Spike   |   |   |                     |
| MS       | Matrix Spike   |   |   | 1.1                 |
| Dup      | Duplicate  |   |   |                     |
|          |  |   |   |                     |

Report Approved By:

Jarros

Date: 9/9/2019

Brent Barron, Laboratory Director/Technical Director

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Page 16 of 17

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Page 83 of 93

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| da sa  |                    | CVIDAOL       | RECEIVED BY (Signature)                                | 16     | DATE/TIME            | gnature)          | RELINQUISHED BY:(Signature)                    |
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|  |                    |               |  | -      | 12.61                |                   |  |
|  |                    |               |  | _      | 84:21                | ~                 | (15,1)   |
|  |                    |               |  |        | 12:41                | 5                 | (101)  |
|  |                    |               |  |        | 12:38                | 2 1               | (51)   |
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|  |                    | UNPR          | # of C<br>HCI<br>HNO <sub>3</sub><br>H <sub>2</sub> SO | Matrix | e Time               | Lab # Date        | Field<br>Sample I.D.                           |
|  |                    | all all       |  |        |                      |                   | 1212   |
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| CS STATE                                     | 1                  |               | 0  | _      | OT=OTHER             |                   |  |
| 100  |                    |               | PRESERVATION   |        | P=PAINT<br>SL=SLUDGE | S=SOIL<br>W=WATER | 2  |
| COLLECTOR: R.                                | PROJECT #: 19-0112 |               |  |        |                      |                   | Data Reported to:                              |
| Warn State A/C Bate                          | ECT LOCATION OR N  |               | Midland, TX 79701<br>432-687-0901                      |        | 2                    | Onsultonts        | T ssociates, Inc.<br>Environmental Consultants |
|  | þ                  | te. 200 DATE: | 507 N. Marienfeld, Ste. 200                            | 507    |                      |                   | Aarson &                                       |
| -  | p-20               | 7             |  |        |                      |                   | -  |

Appendix E

Photographs

1RP-4516 Warn State AC Battery 9/20/2019



Site Viewing Southwest, September 17, 2019

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Page 86 of 93

1RP-4516 Warn State AC Battery 9/20/2019



SP 5 sample point Viewing Southwest, September 17, 2019

Page 87 of 93

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 Apache Corporation                   | OGRID 873                             |  |
|--|---------------------------------------|--|
| Contact Name Bruce Baker                               | Contact Telephone 432-631-6982        |  |
| Contact email Larry.Baker@apachecorp.com               | Incident # (assigned by OCD) 1RP-4516 |  |
| Contact mailing address 2350 West Marland Blvd. Hobbs, | New Mexico 88240                      |  |

## **Location of Release Source**

Latitude 32.77060° N

NAD 83 in decimal degrees to 5 decimal places)

| Site Name Warn State A/C Battery   | Site Type Tank Battery            |
|------------------------------------|-----------------------------------|
| Date Release Discovered 10/10/2016 | API# (if applicable) 30-025-03082 |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| N           | 6       | 185      | 35E   | Lea    |

Surface Owner: X State Federal Tribal Private (Name:

## **Nature and Volume of Release**

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

| X Crude Oil      | Volume Released (bbls) 50 bbls  | Volume Recovered (bbls) 40 bbls         |
|------------------|---|---|
| X Produced Water | Volume Released (bbls) 30 bbls  | Volume Recovered (bbls) 20 bbls         |
|                  | Is the concentration of total dissolved solids (TDS)<br>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) | Volume/Weight Released (provide units)  | Volume/Weight Recovered (provide units) |
|                  |   |   |

Cause of Release

The release was caused due to a gasket failure on the heater treater.

| 89  |          |      |   |
|-----|----------|------|---|
| age | Form     | C-14 | 1 |
| Ā   | 1 Office | C-14 | ı |
|     | Page 2   |      |   |

## State of New Mexico Oil Conservation Division

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

| Was this a major<br>release as defined by<br>19.15.29.7(A) NMAC?<br>X Yes No | If YES, for what reason(s) does the responsible party consider this a major release?<br>The release was greater than 25 bbls of liquid.                 |  |
|--|---|--|
|  | otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?<br>Sten Lynch (NMOCD) on 10/11/2016 at 15:23 via phone and email. |  |

## **Initial Response**

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

X The source of the release has been stopped.

X The impacted area has been secured to protect human health and the environment.

X Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

X 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: Bruce Baker

Signature:

Title: Sr. Environmental Tech

\_\_\_\_\_ Date: 9/27/2019

email: Larry.Baker@apachecorp.com

Since Baher

Telephone: 432-631-6982

OCD Only

Received by: \_\_\_\_

Date: \_\_\_\_

State of New Mexico Oil Conservation Division

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

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## 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?  | <u>60</u> (ft bgs) |
|--|--------------------|
| Did this release impact groundwater or surface water?  | Yes X No           |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?   | Yes X 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 X No           |
| Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used<br>by less than five households for domestic or stock watering purposes? | Yes X No           |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?   | Yes X No           |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?  | Yes X No           |
| Are the lateral extents of the release within 300 feet of a wetland?   | Yes X No           |
| Are the lateral extents of the release overlying a subsurface mine?  | Yes X 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 X No           |
| Did the release impact areas not on an exploration, development, production, or storage site?  | Yes X 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
- X Data table of soil contaminant concentration data
- X Depth to water determination
   X Determination of water source
- x Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- X Boring or excavation logs
- X Photographs including date and GIS information
- X Topographic/Aerial maps
- X 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 or 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

| orm C-141<br>age 4   |  | f New Mexico<br>rvation Division   |   | Incident ID<br>District RP<br>Facility ID<br>Application ID   |                               |
|--|--|--|---|---|-------------------------------|
| regulations all operators are re-<br>public health or the environme<br>failed to adequately investigat<br>addition, OCD acceptance of a<br>and/or regulations. | equired to report and/or<br>ent. The acceptance of<br>e and remediate contar<br>a C-141 report does no | r file certain release no<br>a C-141 report by the<br>nination that pose a the | tifications and perform<br>OCD does not relieve<br>reat to groundwater, so<br>f responsibility for co | ge and understand that pursuant to OCD<br>in corrective actions for releases which is<br>the operator of liability should their op<br>urface water, human health or the enviro<br>mpliance with any other federal, state, o | nay endanger<br>erations have |
| Printed Name: Bruce Bake<br>Signature: Bruce P   |  |  | Title: <u>Sr. Enviro</u>  |   |                               |
|  |  |  | Date: <u>9/27/2019</u>  |   |                               |
| email: Larry.Baker@apac  | hecorp.com   |  | Telephone: 432-6  | 531-6982  | -                             |
| OCD Only   |  |  |   |   |                               |
| Received by:   |  |  | Date:   |   |                               |
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Page 91 of 93

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Page 5

State of New Mexico Oil Conservation Division

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

| Incident ID    | nKL163273093 |
|----------------|--------------|
| District RP    |              |
| Facility ID    |              |
| Application ID |              |

# **Remediation Plan**

| <ul> <li>X Detailed description of proposed remediation technique</li> <li>X Scaled sitemap with GPS coordinates showing delineation poin</li> <li>X Estimated volume of material to be remediated</li> <li>X Closure criteria is to Table 1 specifications subject to 19.15.29.</li> <li>X Proposed schedule for remediation (note if remediation plan time)</li> </ul> | 12(C)(4) NMAC  |
|--|--|
| Deferral Requests Only: Each of the following items must be co   | nfirmed as part of any request for deferral of remediation.  |
| X Contamination must be in areas immediately under or around p deconstruction.   | roduction equipment where remediation could cause a major facility   |
| X Extents of contamination must be fully delineated.   |  |
| X Contamination does not cause an imminent risk to human healt   | h, the environment, or groundwater.  |
|  | ete 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<br>ance of a C-141 report by the OCD does not relieve the operator of<br>the and remediate contamination that pose a threat to groundwater,<br>acceptance of a C-141 report does not relieve the operator of |
| Printed Name: Bruce Baker  | Title: Sr. Environmental Tech  |
| Signature: Bruce Bacher  | Date:  |
| email: <u>Larry.Baker@apachecorp.com</u>   | Telephone: <u>432-631-6982</u>   |
| OCD Only   |  |
| Received by:   | Date:  |
| Approved Approved with Attached Conditions of  | Approval Denied XDeferral Approved   |
| Signature: Bradford Billings   | Date: 07/01/2021   |

District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

## **State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

| Operator:               | OGRID:                                    |
|-------------------------|---|
| APACHE CORPORATION      | 873                                       |
| 303 Veterans Airpark Ln | Action Number:                            |
| Midland, TX 79705       | 1611                                      |
|                         | Action Type:                              |
|                         | [C-141] Release Corrective Action (C-141) |

#### CONDITIONS

| Created By | Condition  | Condition Date |
|------------|--|----------------|
| bbillings  | This approval is for a deferral not Closure on this incident | 7/1/2021       |

Page 93 of 93 CONDITIONS

Action 1611