

talonlpe.com • 866.742.0742



## **Remediation and Closure Report**

EAU D-40 Battery \* 30-015-01555 \* 2RP-2922

Talon Project No. 700745.074.01

### **Prepared For:**

Apache Corporation  
2350 W Marland Blvd  
Hobbs, New Mexico 88240

### **Prepared By:**

Kimberly M. Wilson  
Talon/LPE  
408 West Texas  
Artesia, New Mexico 88210

**February 14, 2017**

Mr. Mike Bratcher  
**NMOCD District 2**  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210

Subject:       **Remediation Closure Report**  
                  Apache Corporation  
                  EAU D-40 Battery  
                  API # 30-015-01555 \* 2RP-2922

Dear Mr. Bratcher,

Apache Corporation (Apache) had contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The incident description, soil sampling results, remediation activities and closure request are submitted herein.

### **Site Information**

The EAU D-40 Battery is located approximately sixteen (16) miles east of Artesia, New Mexico. The legal location for this site is Unit Letter H of Section 25, Township 17 South, and Range 28 East in Eddy County, New Mexico. More specifically the latitude and longitude for the location are 32.807655 North and -104.12471 West.

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services (NRSC) the soil in this area is made up of Simona-Bippus land complex soils with 0 to 5 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology, Quaternary Age sedimentary deposits, is comprised of alluvium and eolian sands which includes silty soils under lain by dense caliche layers. Drainage courses in this area are normally dry.

### **Ground Water and Site Ranking**

According to the New Mexico State Engineer web site there's not any groundwater within 4,000 meters of the release area. However, according to the Chevron Texaco Groundwater Trend Map, the groundwater in this area is greater than 175-feet below ground surface (BGS). See [Appendix II](#) for the referenced groundwater data.

Depth to ground water	>100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

Based upon the site ranking of **0**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 5,000 mg/kg for TPH and 1,000 mg/kg for total chlorides.

### Remedial Actions Taken

The remediation activities were completed pursuant to the work plan approved by the NMOCD.

The impacted area in the vicinity of sample location S-1 was excavated to a depth of 1.5-foot deep. Sample locations S-2, S-3 and S-4 were excavated to a depth of 0.5-foot deep.

All contaminated soil was transported to Lea Land, LLC, an approved disposal facility.

December 6, 2016

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	1.5	--	--	<10	1480
S-2	0.5'	--	--	<10	<10
S-3	0.5'	0.728	--	<10	<10
S-4	0.5'	<0.300	--	<10	2500


### Closure

On behalf of Apache Corporation we respectfully request that no further actions be required and that closure with respect to this release be granted. A Final C-141 is also attached.

Should you have any questions or if further information is required, please do not hesitate to contact our office at (575)-746-8768

Respectfully submitted,

TALON/LPE

  
Kimberly M. Wilson  
Project Manager



David J. Adkins  
District Manager

Attachments:

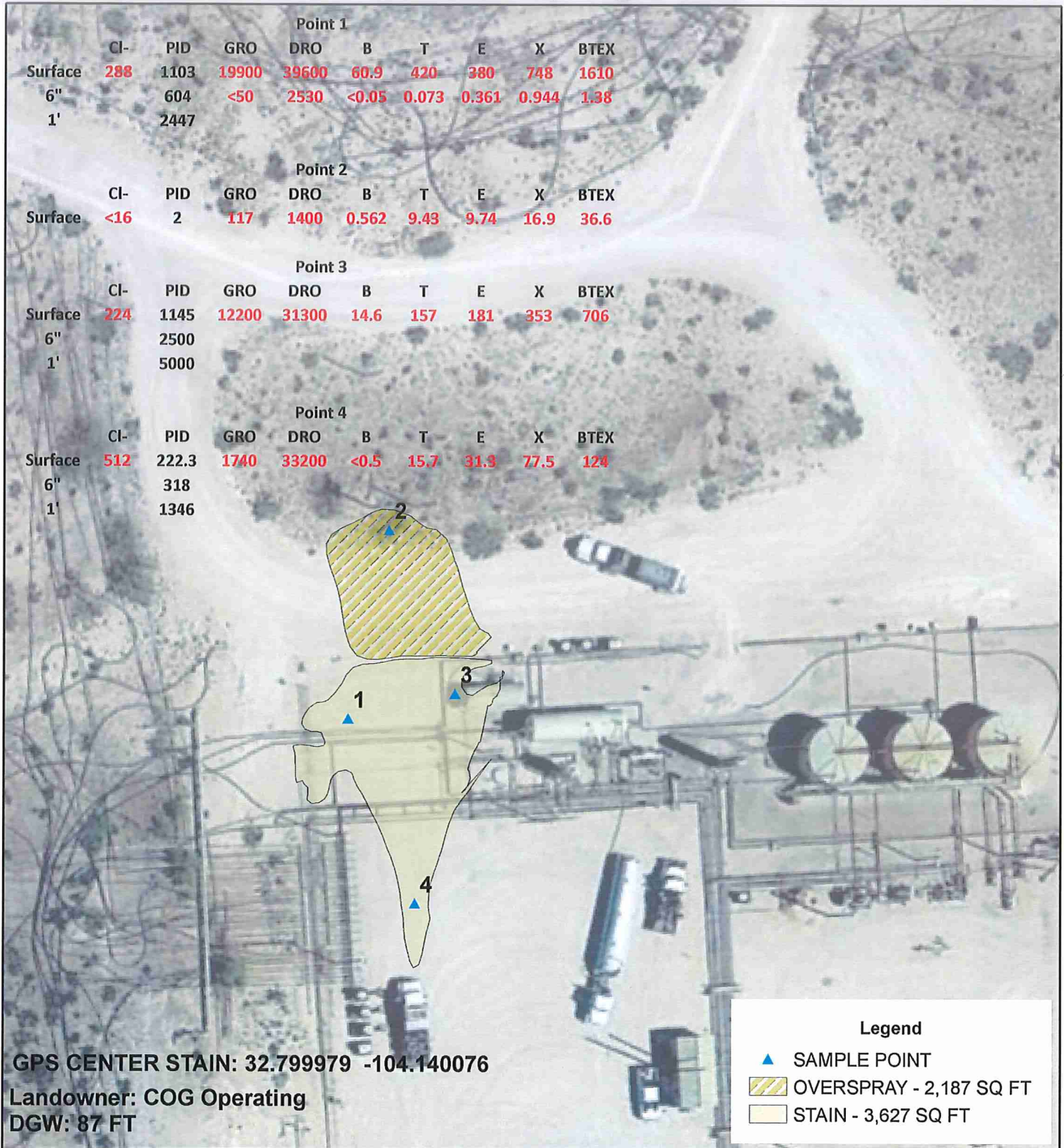
Appendix I Site Map  
Appendix II Laboratory Report

## **APPENDIX I**

### **SITE MAP**



# Initial Sampling Data



**APACHE  
EAU D-40  
BATTERY**  
 UL P SECTION 26  
 T-17-S R-28-E  
 EDDY COUNTY, NM

Underground facilities are spatially projected and need to be field verified.

0 25 50  
 Feet

GPS date: 3/6/15 KH  
 Drawing date: 5/22/15  
 Drafted by: T. Grieco, L. Weinheimer

**APPENDIX II**  
**GROUNDWATER DATA**



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

### UTMNAD83 Radius Search (in meters):

**Easting (X):** 580558 ✓

**Northing (Y):** 3629438 ✓

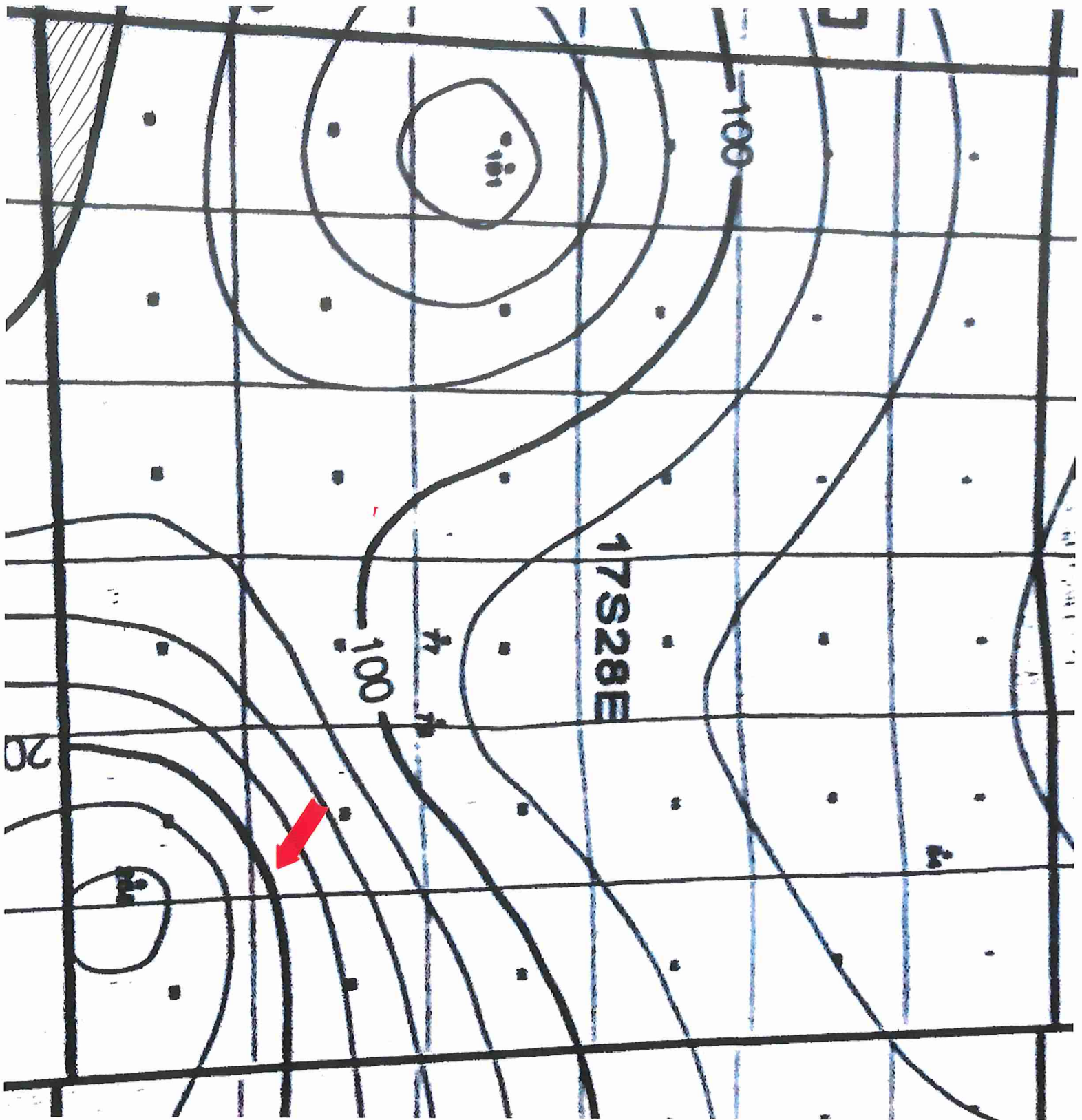
**Radius:** 3000

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.

1/11/17 6:24 AM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

EAU D-40  
P-26-175-28E





**APPENDIX III**

**LABORATORY RESULTS**

December 06, 2016

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: EAU D-40

Enclosed are the results of analyses for samples received by the laboratory on 11/29/16 15:30.

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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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 D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 KIMBERLY WILSON  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

 Received: 11/29/2016  
 Reported: 12/06/2016  
 Project Name: EAU D-40  
 Project Number: 700745.074.01  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 11/22/2016  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S-1 (H602658-01)**

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	11/30/2016	ND	191	95.3	200	2.60	
DRO >C10-C28	1480	10.0	11/30/2016	ND	210	105	200	4.38	QM-07, QR-03
Surrogate: 1-Chlorooctane	81.3 %	35-147							
Surrogate: 1-Chlorooctadecane	117 %	28-171							

**Sample ID: S-2 (H602658-02)**

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/30/2016	ND	191	95.3	200	2.60	
DRO >C10-C28	<10.0	10.0	11/30/2016	ND	210	105	200	4.38	
Surrogate: 1-Chlorooctane	92.0 %	35-147							
Surrogate: 1-Chlorooctadecane	90.1 %	28-171							

Cardinal Laboratories

\* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TALON LPE  
KIMBERLY WILSON  
408 W. TEXAS AVE.  
ARTESIA NM, 88210  
Fax To: (575) 745-8905

Received: 11/29/2016  
Reported: 12/06/2016  
Project Name: EAU D-40  
Project Number: 700745.074.01  
Project Location: EDDY COUNTY, NM

Sampling Date: 11/22/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-3 (H602658-03)**

BTEX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.138</b>	0.050	11/30/2016	ND	2.10	105	2.00	1.81	
<b>Toluene*</b>	<b>0.430</b>	0.050	11/30/2016	ND	2.16	108	2.00	1.71	
<b>Ethylbenzene*</b>	<b>0.160</b>	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	
<b>Total BTEX</b>	<b>0.728</b>	0.300	11/30/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 114 % 73.6-140

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	11/30/2016	ND	191	95.3	200	2.60	
DRO >C10-C28	<10.0	10.0	11/30/2016	ND	210	105	200	4.38	


Surrogate: 1-Chlorooctane 84.3 % 35-147

Surrogate: 1-Chlorooctadecane 93.2 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

TALON LPE  
KIMBERLY WILSON  
408 W. TEXAS AVE.  
ARTESIA NM, 88210  
Fax To: (575) 745-8905

Received: 11/29/2016  
Reported: 12/06/2016  
Project Name: EAU D-40  
Project Number: 700745.074.01  
Project Location: EDDY COUNTY, NM

Sampling Date: 11/22/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-4 (H602658-04)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	
Total BTX	<0.300	0.300	11/30/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 113 % 73.6-140

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	11/30/2016	ND	191	95.3	200	2.60	
DRO >C10-C28	2500	10.0	11/30/2016	ND	210	105	200	4.38	

Surrogate: 1-Chlorooctane 78.8 % 35-147

Surrogate: 1-Chlorooctadecane 125 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

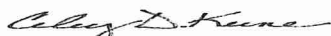
- QR-03      The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07      The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted 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 SM4500Cl-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

---

Cardinal Laboratories

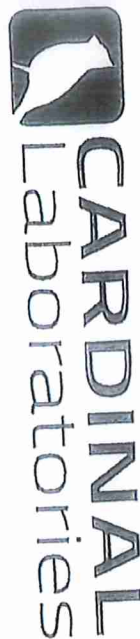
\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



---

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

ANALYSIS REQUEST

Company Name: Talon/LPE		P.O. #:							
Project Manager: Kimberly Wilson		Company: Apache							
Address: 408 W. Texas Ave.		Attn:							
City: Artesia		Address:							
State: NM Zip: 88210		City:							
Phone #: 575-746-8768		State:							
Fax #: 575-746-8905		Zip:							
Project #: 700745.074.01		Project Owner: Apache							
Project Name: EAL D-40		Phone #:							
Project Location: Edley City		Fax #:							
Sampler Name: Kim Wilson		PRESERV.							
FOR LAB USE ONLY		SAMPLING							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	DATE	TIME	TPH	BTEX	
H000458	S-1	G	1	GROUNDWATER	11/21/16	11:35	✓	✓	
	S-2	G	1	WASTEWATER		11:20	✓	✓	
	S-3	G	1	SOIL		11:30	✓	✓	
	S-4	G	1	OIL		11:40	✓	✓	
				SLUDGE					
				OTHER :					
				ACID/BASE:					
				ICE / COOL.					
				OTHER :					
Relinquished By: Kim Wilson		Date: 11/21/16		Time: 11:30		Received By: [Signature]		CHECKED BY: [Signature]	
Relinquished By: [Signature]		Date: 11/21/16		Time: 11:30		Received By: [Signature]		CHECKED BY: [Signature]	
Delivered By: (Circle One)		Sample Condition		Cool		Intact		Yes	
Sampler - UPS - Bus - Other: #75 U.30		Yes		No		Yes		No	
Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326		REMARKS:		Phone Result: Yes No		Fax Result: Yes No		Add'l Phone #: Add'l Fax #:	

**FINAL C-141**



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

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised August 8, 2011

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

## Release Notification and Corrective Action

### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Apache Corporation	Contact Bruce Baker	
Address 2350 W Marland Street, Hobbs, NM 88240	Telephone No. (432) 631-6982	
Facility Name EAU D-40	Facility Type Battery	
Surface Owner BLM	Mineral Owner	API No. 30-015-01555 2RP-2922

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	26	17S	28E					Eddy

Latitude 32.799979 Longitude -104.140076

### NATURE OF RELEASE

Type of Release Oil	Volume of Release 30 barrels Oil	Volume Recovered 21 bbls Oil
Source of Release Unknown	Date and Hour of Occurrence 3/01/15	Date and Hour of Discovery 3/1/2015
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher (OCD) -email	
By Whom? Bruce Baker	Date and Hour 10/30/2015 9:09 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		

#### Describe Cause of Problem and Remedial Action Taken.\*

The gasket on the 3 phase separator failed. The separator was isolated and repaired resulting in a 30 barrel oil spill. A vac truck was immediately called to the location and recovered 21 barrels of oil. All fluids stayed on the location.

#### Describe Area Affected and Cleanup Action Taken.\*

Talon/LPE was contracted by Apache Corporation for the correction of this release. The remediation activities were completed pursuant to the corrective action plan approved by the NMOCD. The impacted area surrounding S-1 was excavated to the depth of 1.5-feet deep. Sample locations S-2, S-3 and S-4 were excavated to a depth of 0.5-foot deep. All contaminated soil was transported to Lea Land, LLC, an approved disposal facility. On behalf of Apache Corporation no further actions are required.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <u>Bruce Baker</u>		<u>CONSERVATION DIVISION</u>	
Printed Name: Bruce Baker		Approved by Environmental Specialist:	
Title: Environmental Technician	Approval Date:	Expiration Date:	
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 2/20/2017	Phone: (432) 631-6982		

\* Attach Additional Sheets If Necessary