



EXPLORING WHAT'S POSSIBLE

APACHE CORPORATION

P.O.Box 1849
Eunice, NM 88231
Phone 575.394.3159

Red Lake 36 C State Battery (2RP-2328)

Termination Request

API No. 30-015-33581

Release Date: May 28th, 2014

Unit Letter C, Section 36, Township 17S, Range 27E

November 21st, 2014

Mike Bratcher

New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau – District 2
811 S. First St.
Artesia, NM 88210

**RE: Termination Request
Apache Red Lake 36 C State Battery (2RP-2328)
UL/C sec. 36 T17S R27E
API No. 30-015-33581**

Mr. Bratcher:

Apache Corporation (Apache) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately 10.3 miles southeast of Artesia, New Mexico at UL/C sec. 36 T17S R27E. NM OSE and USGS records indicate that groundwater will likely be encountered at a depth of approximately 129 +/- feet.

On May 28th, 2014, a fire tube gasket on a heater-treater at the site failed releasing 19 barrels of produced water and 1 barrel of oil. The released fluid covered 5,142 square feet of pasture land as overspray and 6,380 square feet of battery pad and pasture land as standing fluid. The treater was isolated, and the gasket was replaced. A vacuum truck was dispatched to the site and recovered 14.5 barrels of produced water and 0.5 barrels of oil. NMOCD was notified of the release on May 28th, 2014, and an initial C-141 was submitted to NMOCD on June 2nd, 2014. NMOCD approved the initial C-141 on June 6th, 2014 (Appendix A).

RECS personnel were on site beginning on May 28th, 2014. The site was photographed and GPS mapped. Seven points within the stain and one point in the battery pad were sampled at the surface and with depth (Figure 1). The soil samples from each point were field tested for chlorides and organic vapors. Representative samples from five points in the stain and the one point in the battery pad were taken to a commercial laboratory for analysis (Appendix B). One point in the overspray, Point 9, was sampled at the surface and field tested for chlorides and organic vapors. The sample was then taken to a commercial laboratory for analysis. Point 9 returned a laboratory chloride value of 32 mg/kg and a Diesel Range Organics (DRO) value of 143 mg/kg. The Gasoline Range Organics (GRO) reading and BTEX reading returned values of non-detect. Point 10 was installed on the lease pad between the edge of the bermed battery pad and the pasture. As Point 10 was installed, soil samples were taken every 6 inches to 1 ft and

field tested for chlorides. The 1 ft bgs sample and the 11 ft bgs sample were taken to a commercial laboratory for analysis. The 1 ft bgs sample returned a laboratory chloride value of 1,460 mg/kg and a DRO value of 31.4 mg/kg. The GRO reading and BTEX reading returned values of non-detect. The 11 ft bgs sample returned a laboratory chloride value of 272 mg/kg.

Based on the laboratory analysis, the release area in the pasture was excavated in three parts to remove the contaminated soil. The area around Point 1, Point 3 and Point 4 was scraped down 1 ft. The area around Point 5 and Point 8 were scraped down 1.5 ft, and the area around Point 6 was scraped down 2.5 ft (Figure 2). All scrapes remained 5 ft away from any underground pipelines to provide safety measures for equipment and personnel.

The overspray area in the pasture did not require remediation efforts. The laboratory readings for this area were below regulatory standards, and the recent rains eliminated all evidence of contamination from the vegetation.

All excavated soils were taken to a NMOCD approved facility for disposal. Clean top soil was imported to the site to serve as backfill. The scrapes in the pasture were backfilled with the imported top soil and contoured to the surrounding location. On October 3rd, 2014, the disturbed areas in the pasture were disked and seeded with a 50/50 ratio of BLM mix #2 and BLM mix #4.

Photo documentation of field activities can be found in Appendix C.

The release areas around Point 10 and within the battery pad were not addressed at this time. Safety issues constrained work in this area, since these two areas enclose multiple production components. Therefore, the release area around Point 10 and the battery pad will be addressed during site abandonment.

Given that Apache has remediated the pasture area per NMOCD standards, Apache requests 'remediation termination' and site closure with the caveat that the lease pad will be remediated upon site closure. A final C-141 for the site can be found in Appendix D.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Lara Weinheimer', with a stylized flourish at the end.

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

Figure 1 – Initial Sampling Data

Figure 2 – Excavation Data

Appendix A – Initial C-141

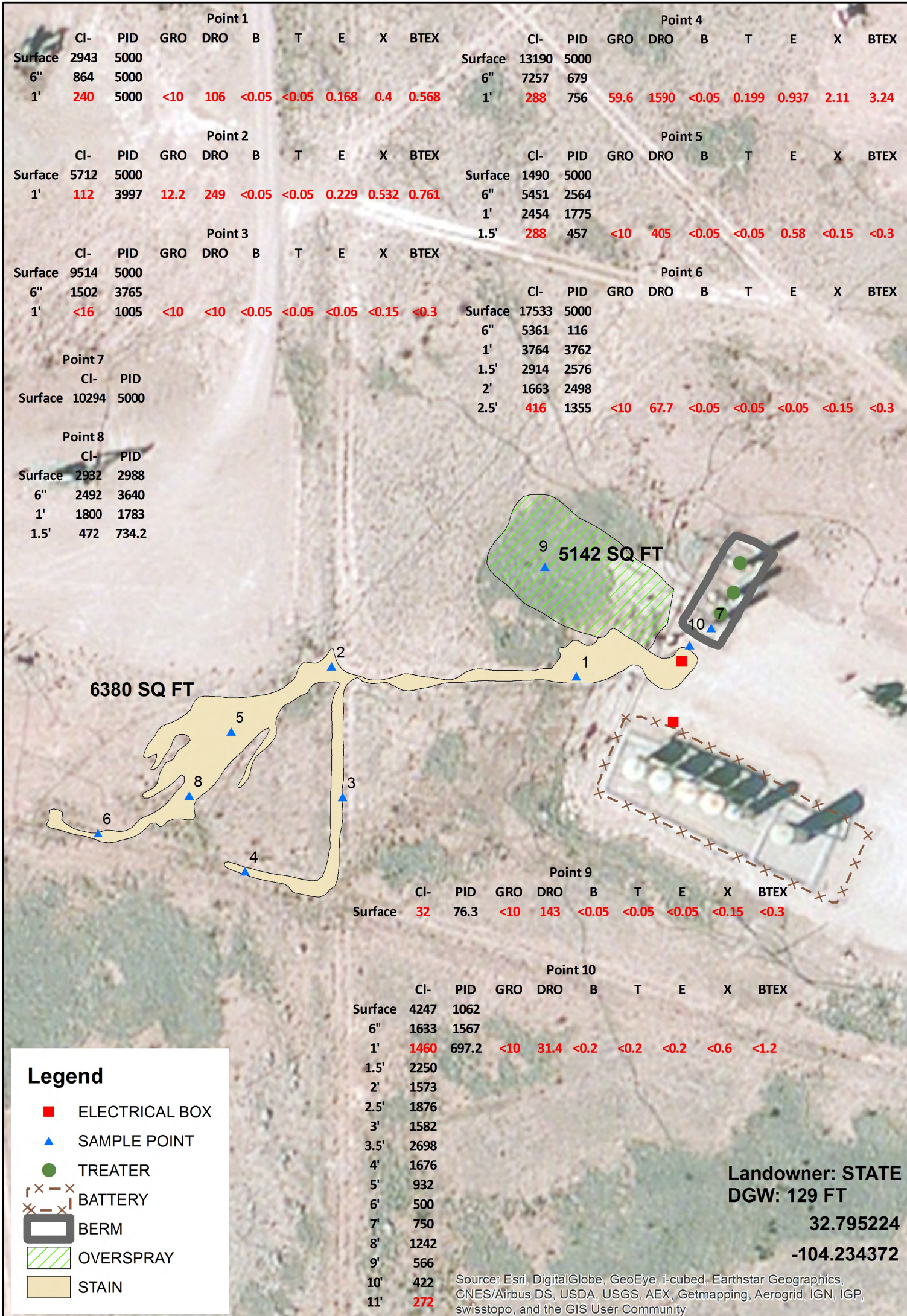
Appendix B – Initial Sampling Labs

Appendix C – Photo Documentation

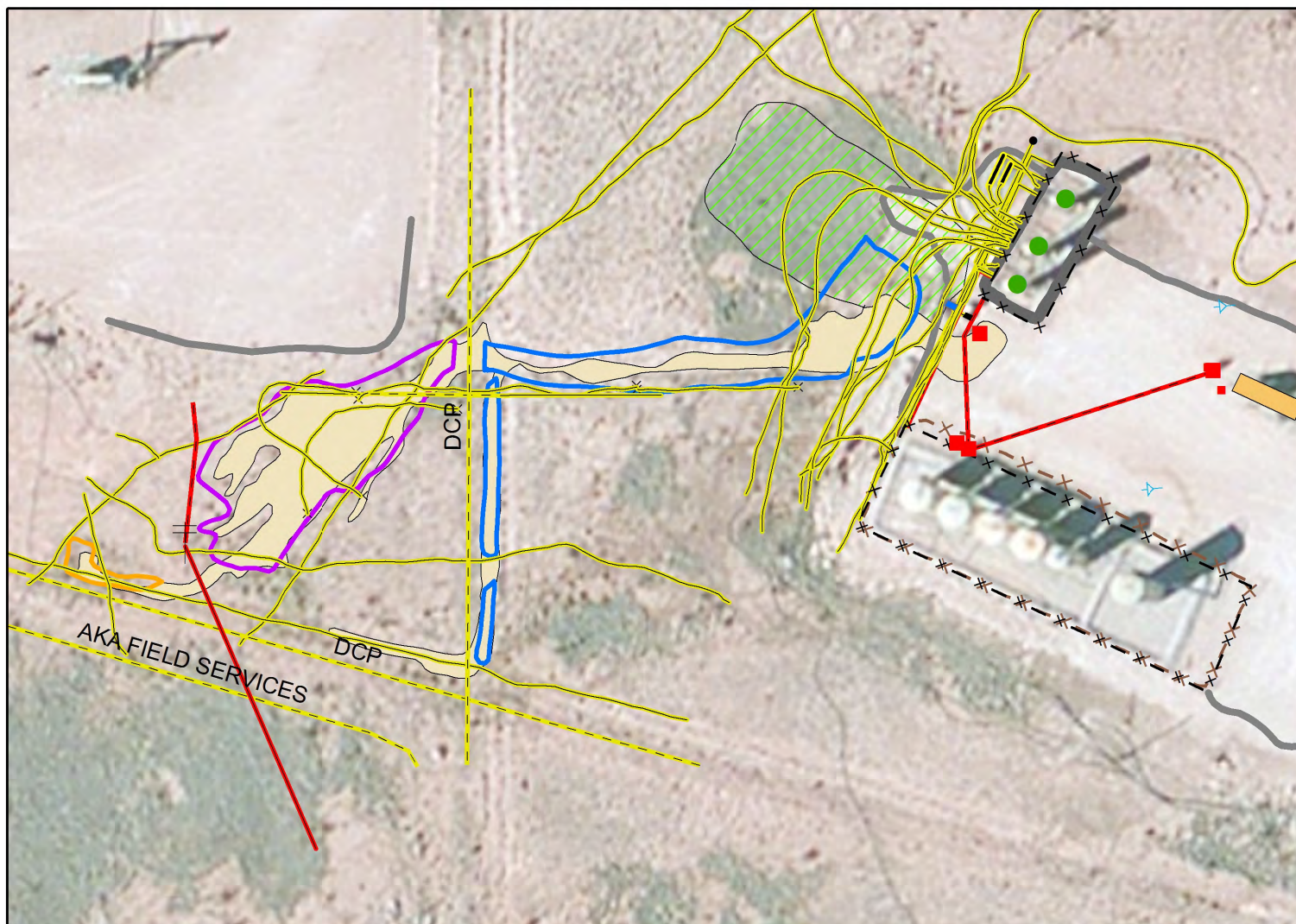
Appendix D – Final C-141

Figures

Initial Sampling Data



Excavation Data



Legend

■ CONTROL BOX	■ PUMP	× PIPE END
⚡ DEADMAN	■ PUMPJACK	□ 1 FT EXCAVATION
⚡ ELECTRIC POLE	■ TANK	□ 1.5 FT EXCAVATION
■ ELECTRICAL BOX	— BURIED ELECTRIC	□ 2.5 FT EXCAVATION
● TREATER	— BURIED PIPELINE	⌈ × × ⌋ BATTERY
• VERTICAL PIPE	— OVERHEAD ELECTRIC LINE	▬ BERM
⌈ × × ⌋ FENCE	— PAD/ROAD EDGE	▨ OVERSPRAY- 5,142 SQ FT
	— RISER	■ STAIN - 6,380 SQ FT
	— SURFACE ELECTRIC	
	— SURFACE PIPELINE	

Landowner: STATE
 DGW: 129 FT
 32.795224
 -104.234372

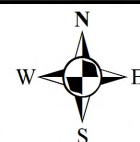
USDA, USGS, AEX,
 and the GIS User Community



APACHE RED LAKE #36 C STATE BATTERY

UL C SECTION 36
 T-17-S R-27-E
 EDDY COUNTY, NM

Figure 2



0 50 100
 Feet

GPS date: 5/28/14 KH
 Drawing date: 6/13/14
 Drafted by: T. Grieco/L. Weinheimer

Appendix A

Initial 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

RECEIVED

JUN 02 2014

Form C-141
Revised August 8, 2011

NMOC District Office in
Artesia, NM 88210
in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Apache Corporation	873	Contact	Bruce Baker	
Address	8 Ellison Lane Eunice, NM 88231			Telephone No.	432-631-6982
Facility Name	Red Lake 36 C State Battery			Facility Type	Battery
Surface Owner	State	Mineral Owner	State	API No.	30-015-33581

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	36	17S	27E	990'	FNL	2130'	FWL	Eddy

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release	Oil and Produced Water	Volume of Release	19 barrels of water and 1 barrel of oil	Volume Recovered	14.5 barrels of water and 0.5 barrels of oil
Source of Release	Heater Treater	Date and Hour of Occurrence	5/28/2014	Date and Hour of Discovery	5/28/2014 at 8:20 a.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Left message with Mike Bratcher		
By Whom?	Bruce Baker	Date and Hour	5/28/2014 at 2:35 p.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 fire tube gasket on the heater-treater failed resulting in the loss of fluid. The treater was isolated and the gasket was replaced.

Describe Area Affected and Cleanup Action Taken.*

The release impacted inside the bermed facility and lease pad and approximately 3,500 square feet of pasture west to south-west of the facility. A vacuum truck was dispatched to pick-up standing fluid. The area was mapped and field surface samples were collected. A one call was placed for delineation and remediation activities.

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: <i>Bruce Baker</i>	OIL CONSERVATION DIVISION	
Printed Name: Bruce Baker	Approved by Environmental Specialist:	<i>[Signature]</i>
Title: Environmental Technician	Approval Date: <i>6/6/14</i>	Expiration Date: <i>NA</i>
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 6/2/2014 Phone: 432-631-6982	Remediation per OCD Rule & Guidelines. SUBMIT REMEDIATION PROPOSAL NO LATER THAN: <i>7/6/14</i>	

* Attach Additional Sheets If Necessary

2PP-2328

Appendix B

Initial Sampling Labs

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967



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

June 17, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: RED LAKE 36 ST. C BATTERY AD

Enclosed are the results of analyses for samples received by the laboratory on 06/10/14 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	06/10/2014	Sampling Date:	06/05/2014
Reported:	06/17/2014	Sampling Type:	Soil
Project Name:	RED LAKE 36 ST. C BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 1 @ 1' (H401760-01)

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2014	ND	1.96	97.8	2.00	3.08	
Toluene*	<0.050	0.050	06/12/2014	ND	2.09	105	2.00	3.06	
Ethylbenzene*	0.168	0.050	06/12/2014	ND	1.89	94.6	2.00	3.08	
Total Xylenes*	0.400	0.150	06/12/2014	ND	5.94	99.0	6.00	2.18	
Total BTX	0.568	0.300	06/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	06/16/2014	ND	416	104	400	3.77	

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	06/13/2014	ND	174	86.9	200	3.98	
DRO >C10-C28	106	10.0	06/13/2014	ND	172	85.9	200	5.65	

Surrogate: 1-Chlorooctane 69.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 86.6 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

APACHE - EUNICE
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	06/10/2014	Sampling Date:	06/05/2014
Reported:	06/17/2014	Sampling Type:	Soil
Project Name:	RED LAKE 36 ST. C BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 2 @ 1' (H401760-02)

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2014	ND	1.96	97.8	2.00	3.08	
Toluene*	<0.050	0.050	06/12/2014	ND	2.09	105	2.00	3.06	
Ethylbenzene*	0.229	0.050	06/12/2014	ND	1.89	94.6	2.00	3.08	
Total Xylenes*	0.532	0.150	06/12/2014	ND	5.94	99.0	6.00	2.18	
Total BTEX	0.761	0.300	06/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/16/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	12.2	10.0	06/13/2014	ND	174	86.9	200	3.98	
DRO >C10-C28	249	10.0	06/13/2014	ND	172	85.9	200	5.65	

Surrogate: 1-Chlorooctane 80.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 86.0 % 63.6-154

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APACHE - EUNICE
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	06/10/2014	Sampling Date:	06/05/2014
Reported:	06/17/2014	Sampling Type:	Soil
Project Name:	RED LAKE 36 ST. C BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 3 @ 1' (H401760-03)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/12/2014	ND	1.96	97.8	2.00	3.08		
Toluene*	<0.050	0.050	06/12/2014	ND	2.09	105	2.00	3.06		
Ethylbenzene*	<0.050	0.050	06/12/2014	ND	1.89	94.6	2.00	3.08		
Total Xylenes*	<0.150	0.150	06/12/2014	ND	5.94	99.0	6.00	2.18		
Total BTX	<0.300	0.300	06/12/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/16/2014	ND	400	100	400	0.00		

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	06/13/2014	ND	174	86.9	200	3.98	
DRO >C10-C28	<10.0	10.0	06/13/2014	ND	172	85.9	200	5.65	

Surrogate: 1-Chlorooctane 74.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 74.3 % 63.6-154

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

APACHE - EUNICE
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	06/10/2014	Sampling Date:	06/05/2014
Reported:	06/17/2014	Sampling Type:	Soil
Project Name:	RED LAKE 36 ST. C BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 4 @ 1' (H401760-04)

BTEx 8021B		mg/kg		Analyzed By: CK				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2014	ND	1.96	97.8	2.00	3.08	
Toluene*	0.199	0.050	06/12/2014	ND	2.09	105	2.00	3.06	
Ethylbenzene*	0.937	0.050	06/12/2014	ND	1.89	94.6	2.00	3.08	
Total Xylenes*	2.11	0.150	06/12/2014	ND	5.94	99.0	6.00	2.18	
Total BTEX	3.24	0.300	06/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 159 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	06/16/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	59.6	10.0	06/13/2014	ND	174	86.9	200	3.98	
DRO >C10-C28	1590	10.0	06/13/2014	ND	172	85.9	200	5.65	

Surrogate: 1-Chlorooctane 73.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 96.5 % 63.6-154

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 EUNICE NM, 88231
 Fax To: 394-2425

Received:	06/10/2014	Sampling Date:	06/05/2014
Reported:	06/17/2014	Sampling Type:	Soil
Project Name:	RED LAKE 36 ST. C BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 5 @ 1.5' (H401760-05)

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2014	ND	1.96	97.8	2.00	3.08	
Toluene*	<0.050	0.050	06/12/2014	ND	2.09	105	2.00	3.06	
Ethylbenzene*	0.058	0.050	06/12/2014	ND	1.89	94.6	2.00	3.08	
Total Xylenes*	<0.150	0.150	06/12/2014	ND	5.94	99.0	6.00	2.18	
Total BTX	<0.300	0.300	06/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	06/16/2014	ND	400	100	400	0.00	

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	06/16/2014	ND	174	86.9	200	3.98	
DRO >C10-C28	405	10.0	06/16/2014	ND	172	85.9	200	5.65	

Surrogate: 1-Chlorooctane 79.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 93.4 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 BRUCE BAKER
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 EUNICE NM, 88231
 Fax To: 394-2425

Received:	06/10/2014	Sampling Date:	06/05/2014
Reported:	06/17/2014	Sampling Type:	Soil
Project Name:	RED LAKE 36 ST. C BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 6 @ 2.5' (H401760-06)

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2014	ND	1.96	97.8	2.00	3.08	
Toluene*	<0.050	0.050	06/12/2014	ND	2.09	105	2.00	3.06	
Ethylbenzene*	<0.050	0.050	06/12/2014	ND	1.89	94.6	2.00	3.08	
Total Xylenes*	<0.150	0.150	06/12/2014	ND	5.94	99.0	6.00	2.18	
Total BTX	<0.300	0.300	06/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	06/16/2014	ND	400	100	400	0.00	

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	06/16/2014	ND	174	86.9	200	3.98	
DRO >C10-C28	67.7	10.0	06/16/2014	ND	172	85.9	200	5.65	

Surrogate: 1-Chlorooctane 73.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 83.9 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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

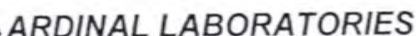
Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Relinquished By: <i>Kyle Humphrey</i>		Date: <i>6/10/14</i>	Received By: <i>Jodi Benson</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Relinquished By:		Time: <i>2:50</i>	Received By:	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One)		Date:	Sample Condition	REMARKS:	
Sampler - UPS - Bus - Other: <i>-8.0°C #54</i>		Time:	Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	email results Knorman@rice-ecs.com Kjones@riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com; Lweinheimer@rice-ecs.com Khumphrey@rice-ecs.com sedwards@rice-ecs.com, lflores@rice-ecs.com	
			CHECKED BY: <i>[Signature]</i>		

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54



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

June 17, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: RED LAKE 36 ST. C BATTERY AD

Enclosed are the results of analyses for samples received by the laboratory on 06/10/14 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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.

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:

APACHE - EUNICE
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	06/10/2014	Sampling Date:	06/09/2014
Reported:	06/17/2014	Sampling Type:	Soil
Project Name:	RED LAKE 36 ST. C BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 9 @ SURFACE (H401763-01)

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2014	ND	2.10	105	2.00	2.72	
Toluene*	<0.050	0.050	06/12/2014	ND	2.25	113	2.00	3.44	
Ethylbenzene*	<0.050	0.050	06/12/2014	ND	2.03	102	2.00	3.01	
Total Xylenes*	<0.150	0.150	06/12/2014	ND	6.28	105	6.00	3.21	
Total BTX	<0.300	0.300	06/12/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/16/2014	ND	400	100	400	0.00	

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	06/13/2014	ND	174	86.9	200	3.98	
DRO >C10-C28	143	10.0	06/13/2014	ND	172	85.9	200	5.65	

Surrogate: 1-Chlorooctane 69.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 79.3 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 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

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Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache		BILL TO		ANALYSIS REQUEST																
Project Manager: Brucy Becker		P.O. #:		Chlorides TPH 8015 M BTX Texas TPH Complete Cations/Anions TDS																
Address:		Company:																		
City: Hobbs State: NM Zip: 88240		Attn:																		
Phone #:		Address:																		
Project #:		City:																		
Project Name:		State: Zip:																		
Project Location: RED Lake 36 C State Butte		Phone #:																		
Sampler Name: Kyle Humphrey		Fax #:																		
FOR LAB USE ONLY																				
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS		MATRIX				PRESERV.		SAMPLING									
		GROUNDWATER		WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE/COOL	OTHER:	DATE	TIME							
H401763	Point 9 @ Surface				<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		6-9-14	9:00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				

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Relinquished By:	Date:	Received By:	Phone Result:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Kyle Humphrey	6/10/14	Jodi Hanson	Fax Result:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:		
			email results		
Delivered By: (Circle One)		Sample Condition	Kjones@rice-ecs.com		
Sampler - UPS - Bus - Other:		Cool Intact	Lweineheimer@rice-ecs.com		
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Khumphrey@rice-ecs.com		
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	sedwards@rice-ecs.com, lflores@rice-ecs.com		

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54

#54



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

June 19, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: RED LAKE 36 ST. C BATTERY AD

Enclosed are the results of analyses for samples received by the laboratory on 06/12/14 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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.

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:

APACHE - EUNICE
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	06/12/2014	Sampling Date:	06/11/2014
Reported:	06/19/2014	Sampling Type:	Soil
Project Name:	RED LAKE 36 ST. C BATTERY AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 10 @ 1' (H401794-01)

BTEX 8021B			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	06/14/2014	ND	2.05	102	2.00	0.355	
Toluene*	<0.200	0.200	06/14/2014	ND	2.21	111	2.00	1.10	
Ethylbenzene*	<0.200	0.200	06/14/2014	ND	2.00	99.9	2.00	0.225	
Total Xylenes*	<0.600	0.600	06/14/2014	ND	6.24	104	6.00	0.594	
Total BTEX	<1.20	1.20	06/14/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1460	16.0	06/18/2014	ND	416	104	400	0.00	

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	06/18/2014	ND	207	104	200	7.29	
DRO >C10-C28	31.4	10.0	06/18/2014	ND	216	108	200	8.55	

Surrogate: 1-Chlorooctane 90.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 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

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Relinquished By: <i>Kyle Hurrey</i>		Date: <i>6/12/14</i> Time: <i>9:15</i>		Received By: <i>Jodi Henson</i>		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No REMARKS:	
Relinquished By:		Date:		Received By:		email results Knorman@rice-ecs.com Kjones@riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com; Lweinheimer@rice-ecs.com Khumphrey@rice-ecs.com sedwards@rice-ecs.com, lflores@rice-ecs.com	
Time:							
Delivered By: (Circle One) Sampler - UPS - Bus - Other:				Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No		CHECKED BY: (Initials) <i>[Signature]</i>	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54



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

September 15, 2014

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: RED LAKE 36 C STATE BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 09/09/14 8:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	09/09/2014	Sampling Date:	09/04/2014
Reported:	09/15/2014	Sampling Type:	Soil
Project Name:	RED LAKE 36 C STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 10 VERTICAL 11' (H402793-01)**Chloride, SM4500Cl-B****mg/kg****Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	09/11/2014	ND	400	100	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 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

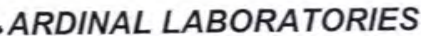
Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Relinquished By:		Date: 9/19/14	Received By: Jodi Henson	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
		Time: 8:30		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date:	Received By:	REMARKS: BIO Bruce Barker	
		Time:		email: hconder@niceswd.com; lflores@rice-ecs.com; lweinheimer@rice-ecs.com; knorman@rice-ecs.com; jkamplain@rice-ecs.com; sedwards@rice-ecs.com; cursanic@rice-ecs.com	
Delivered By: (Circle One)		Sample Condition	CHECKED BY:	Environmental Tech: Jbalcom @rice-ecs.com	
Sampler - UPS - Bus - Other:		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	(Initials) JH		

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54

Appendix C

Photo Documentation

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

Apache Red Lake 36 C State Battery

Unit Letter C, Section 36, T17S, R27E



Source of release, facing west

5/28/14



Initial release area, facing north

5/28/14



Initial release area, facing northwest

5/28/14



Initial release area, facing south

5/28/14



Scraping release, facing northwest

6/4/14



Scraping release, facing west

6/4/14



Exporting soil, facing south

6/11/14



Scrape completed, facing west

6/11/14



Scrape completed, facing south

6/11/14



Scrape completed, facing northeast

6/11/14



Importing soil, facing southeast

8/19/14



Backfilling scrape, facing southwest

8/19/14



Site backfilled, facing southwest

8/19/14



Site backfilled, facing west

8/19/14



Site backfilled, facing west

8/19/14



Installing vertical at Point 10, facing northeast

9/3/14



Disking soil prior to seeding, facing east 10/3/14



Seeding site, facing south 10/3/14



Raking seed into soil, facing southeast 10/3/14



Site completed, facing northwest 10/3/14



Site completed, facing north

10/3/14



Site completed, facing south

10/3/14

Appendix D

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	Red Lake 36 C State Battery	Facility Type	Battery

Surface Owner	State	Mineral Owner	State	API No.	30-015-33581
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	36	17S	27E	990	FNL	2130	FWL	Eddy

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release	Oil and Produced Water	Volume of Release	19 barrels of water and 1 barrel of oil	Volume Recovered	14.5 barrels of water and 0.5 barrels of oil
Source of Release	Heater Treater	Date and Hour of Occurrence	5/28/2014	Date and Hour of Discovery	5/28/2014 at 8:20 a.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Left message with Mike Bratcher		
By Whom?	Bruce Baker	Date and Hour	5/28/2014 at 2:35 p.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 fire tube gasket on the heater-treater failed resulting in the loss of fluid. The treater was isolated and the gasket was replaced.

Describe Area Affected and Cleanup Action Taken.* The released fluid covered 5,142 square feet of pasture land as overspray and 6,380 square feet of battery pad and pasture land as standing fluid. RECS personnel were on site beginning on May 28th, 2014. Seven points within the stain and one point in the battery pad were sampled at the surface and with depth. Representative samples from five points in the stain and the one point in the battery pad were taken to a commercial laboratory for analysis. One point in the overspray, Point 9, was sampled at the surface and taken to a commercial laboratory for analysis. Point 9 returned a laboratory chloride value of 32 mg/kg and a DRO value of 143 mg/kg. The GRO reading and BTEX reading returned values of non-detect. Point 10 was installed on the lease pad between the edge of the bermed battery pad and the pasture. As Point 10 was installed, soil samples were taken every 6 inches to 1 ft and field tested for chlorides. The 1 ft bgs sample and the 11 ft bgs sample were taken to a commercial laboratory for analysis. The 1 ft bgs sample returned a laboratory chloride value of 1,460 mg/kg and a DRO value of 31.4 mg/kg. The GRO reading and BTEX reading returned values of non-detect. The 11 ft bgs sample returned a laboratory chloride value of 272 mg/kg. Based on the laboratory analysis, the release area in the pasture was excavated in three parts to remove the contaminated soil. The area around Point 1, Point 3 and Point 4 was scraped down 1 ft. The area around Point 5 and Point 8 were scraped down 1.5 ft, and the area around Point 6 was scraped down 2.5 ft. All scrapes remained 5 ft away from any underground pipelines to provide safety measures for equipment and personnel. The overspray area in the pasture did not require remediation efforts. The laboratory readings for this area were below regulatory standards, and the recent rains eliminated all evidence of contamination from the vegetation. All excavated soils were taken to a NMOC approved facility for disposal. Clean top soil was imported to the site to serve as backfill. The scrapes in the pasture were backfilled with the imported top soil and contoured to the surrounding location. On October 3rd, 2014, the disturbed areas in the pasture were disked and seeded with a 50/50 ratio of BLM mix #2 and BLM mix #4. The release areas around Point 10 and within the battery pad were not addressed at this time. Safety issues constrained work in this area, since these two areas enclose multiple production components. Therefore, the release area around Point 10 and the battery pad will be address during site abandonment.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC 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, NMOC 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: <i>Bruce Baker</i>	OIL CONSERVATION DIVISION		
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: 11-21-14	Phone: (432) 631-6982		