



2350 W Marland Blvd Hobbs, NM 88240

Corrective Action Plan

APPROVED

By CHernandez at 12:42 pm, Jul 25, 2018

July 2, 2018

Re: NEDU 613
API# 30-025-09919
Case # 1RP-4972

To: Olivia Yu

Environmental Specialist-New Mexico Oil Conservation Division Energy, Minerals and
Natural Resources Department 1625 N. French Drive Hobbs, New Mexico 88240

The map does not have a scale. Please provide a scaled map with the GPS coordinates of the delineation sample locations marked and the approximate dimensions represented by each of the test trenches. Please be advised that each proposed differing depths of excavation will require a set of confirmation sidewalls and bottom samples at no greater than 50 ft. apart (except at SP2 and SP6 where liner is used; sidewall samples only) . Please provide dated photo documentation of the remedial activities, including the proper emplacement of the liner. Please submit a scaled map with the confirmation sample locations in relation to the delineation sample points.

Background:

On February 13, 2018 a release occurred due to a steel flange inside the valve box corroded resulting in the release of fluid. An initial C-141 was submitted to NMOCD on February 20, 2018. The release area is located north of Eunice New Mexico (GPS Coordinates 32.4807014 - 103.1444626) in unit letter H section 15 Township 21S Range 37E. A search radius of 2000 meters for groundwater wells was conducted utilizing data from the NMOSE and USGS. The average depth to groundwater is 45 feet below ground surface.

A total of 6 verticals were conducted utilizing a backhoe in one foot intervals to delineate the vertical extend of contamination on April 30 and May 1, 2018. The samples collected were field tested for chlorides. Representative samples were collected from all verticals and submitted to a commercial laboratory for analysis of Cl-, TPH, and BTEX. Due to inconsistencies between field data and laboratory results for chloride the area near sample points 1-4 were revisited and samples were collected and submitted to a commercial laboratory for analysis of chlorides.

Corrective Action:

Upon review of the vertical data collected Apache Corporation proposes that the area around SP 1, 3, 4 be excavated to a depth of 3 feet below ground surface. The area in the vicinity of SP 2 and 6 be excavated to a depth of 4 feet below ground surface and the installation of a 20 ml reinforced liner. The area in the vicinity of SP 5 will be excavated to a depth of 4 feet below ground surface. Once excavation is complete final wall samples will be collected and submitted to a commercial laboratory for analysis of Cl-, TPH and BTEX. All excavated material will be disposed of at an NMOCD approved facility. The excavation will be backfilled with top soil and contoured to the surrounding area and reseeded.

Enclosed: Initial C-141, Groundwater Data, Sample Data, Sample Diagram, Excavation Diagram, Laboratory Results, Revegetation and Noxious Weed Plan

Submitted by;

Bruce Baker

Environmental Technician

larry.baker@apachecorp.com

Cell# 432-631-6982

Off# 575-393-7106

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 NEDU 613	Facility Type Injection Well

Surface Owner State	Mineral Owner State	API No. 30-025-09919
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LOCATION OF RELEASE

Unit Letter H	Section 15	Township 21S	Range 37E	Feet from the 1980'	North/South Line FNL	Feet from the 660'	East/West Line FEL	County Lea
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Latitude 32.4807014 Longitude -103.1444626

NATURE OF RELEASE

Type of Release Produce Water	Volume of Release 30 Barrels	Volume Recovered 0
Source of Release injection line	Date and Hour of Occurrence 2/13/2018	Date and Hour of Discovery 2/13/2018 at 5:00 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Olivia Yu (NMOCD)	
By Whom? Jorge Rivera	Date and Hour 2/14/2018 at 3:00 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.*

RECEIVED

By Olivia Yu at 8:22 am, Feb 21, 2018

Describe Cause of Problem and Remedial Action Taken.*

A steel flange inside the valve box corroded resulting in the release of fluid. The line was isolated and repaired.

Describe Area Affected and Cleanup Action Taken.*

The entire release was approximately 200 feet southeast of the pad and the release impacted the right of way and pasture.

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: 2/21/2018	Expiration Date:
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>
Date: 2/20/2018	Phone: (432) 631-6982	

* Attach Additional Sheets If Necessary

1RP-4972

nOY1805230371

pOY1805231050

USGS 322921103083001

NEDU 613 32.4807014 -103.1444626

CP 01574 POD.2

CP 01574 POD 1

USGS-322805103080101

18

38

Veduten

Jones City

Isop Ln



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

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

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 01185 POD1	CP	LE		1	3	14	21S	37E		674598	3594689	526	70		
CP 01185 POD2	CP	LE		1	3	14	21S	37E		674623	3594674	549	70		
CP 01110 POD1	CP	LE		1	3	14	21S	37E		674586	3594648	560	70		
CP 01110 POD2	CP	LE		1	3	14	21S	37E		674586	3594648	560	70		
CP 01110 POD3	CP	LE		1	3	14	21S	37E		674586	3594648	560	70		
CP 01110 POD4	CP	LE		1	3	14	21S	37E		674586	3594648	560	20		
CP 01110 POD5	CP	LE		1	3	14	21S	37E		674586	3594648	560	20		
CP 01185 POD3	CP	LE		1	3	14	21S	37E		674592	3594620	589	70		
CP 01574 POD1	CP	LE		2	4	4	15	21S	37E	674559	3594598	601	68	57	11
CP 01185 POD4	CP	LE		1	3	14	21S	37E		674633	3594610	612	70		
CP 01574 POD2	CP	LE		1	3	3	14	21S	37E	674666	3594578	654	68	57	11

Average Depth to Water: 57 feet

Minimum Depth: 57 feet

Maximum Depth: 57 feet

Record Count: 11

UTM NAD83 Radius Search (in meters):

Easting (X): 674412.22

Northing (Y): 3595181.66

Radius: 1000

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.

2/16/18 9:21 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



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[USGS Water Resources](#)

Data Category:

Groundwater ▼

Geographic Area:

New Mexico ▼

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Groundwater levels for New Mexico

Click to hide state-specific text

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 322921103083001

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 322921103083001 21S.37E.11.311114

Available data for this site

Groundwater: Field measurements ▼

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°29'21", Longitude 103°08'30" NAD27

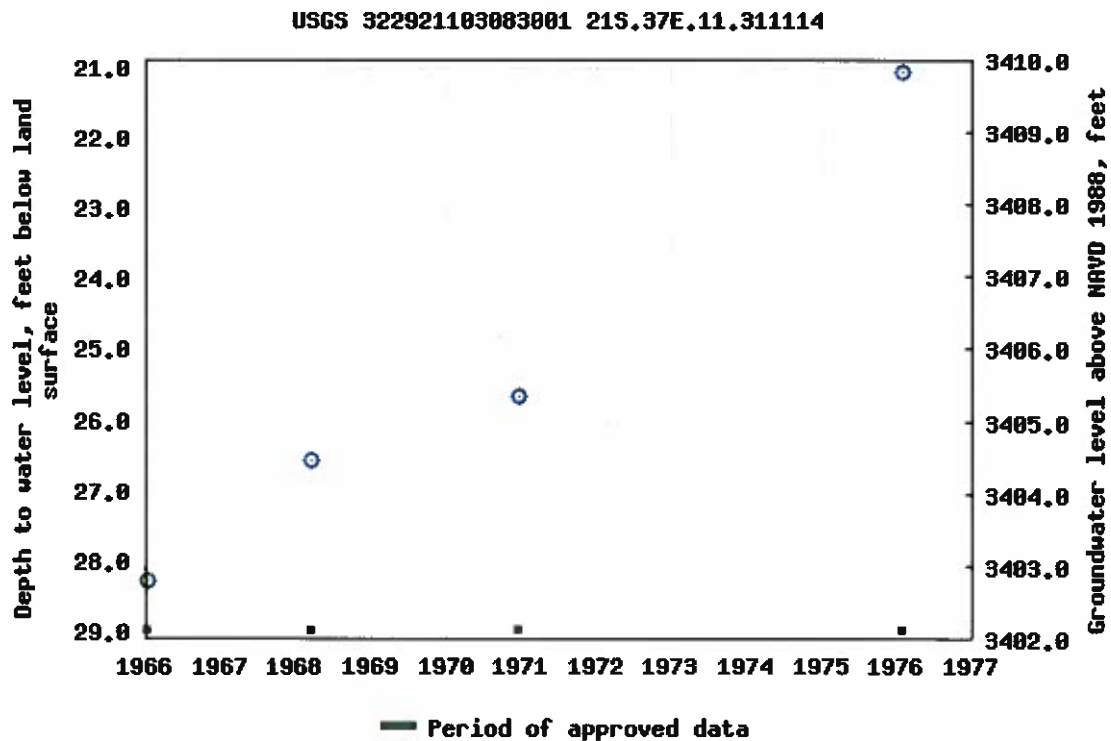
Land-surface elevation 3,431 feet above NAVD88

The depth of the well is 76 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.

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Title: Groundwater for New Mexico: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>



Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2018-06-28 14:34:28 EDT

1.41 1.3 nadww01



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Groundwater levels for New Mexico

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Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 322805103080101

Minimum number of levels = 1

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USGS 322805103080101 21S.37E.14.34444

Available data for this site

Groundwater: Field measurements ▼

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°28'05", Longitude 103°08'01" NAD27

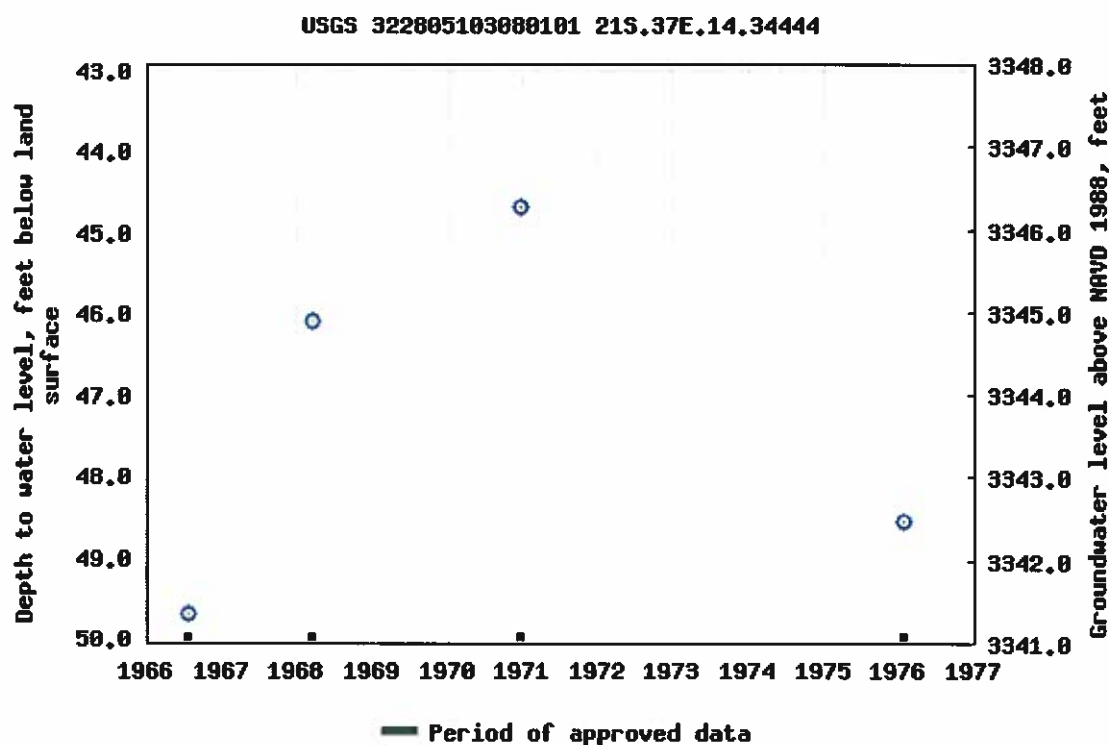
Land-surface elevation 3,391 feet above NAVD88

The depth of the well is 82 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.

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Title: Groundwater for New Mexico: Water Levels

URL: [https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?](https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?site_no=322805103080101&agency_c...)



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Page Last Modified: 2018-06-28 14:51:06 EDT

1.17 1.06 nadww01

NEDU 613

SP 1	Depth	Field CL	Lab CL	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO
	Surface	9,060	6960	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	1'	3,587	960								
	2'	2,279	1490								
	3'	1,056	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	4'	222	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	5'	135	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10

SP 2											
	Surface	6,038	1200	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	1'	2,036	1260								
	2'	1,534	1360								
	3'	1,888	368	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	4'	1,374	640								
	5'	945	785								
	6'	1,380	192								
	7'	1,043	672								
	8'	702	608								
	9'	305	864								
	10'	241	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	11'	208	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10

SP 3											
	Surface	17,218	4880	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	1'	3,268	768								
	2'	1,224	1600								
	3'	501	256	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	4'	187	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	5'	157	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10

SP 4											
	Surface	15,868	6800	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	1'	1,931	1230								

	2'	665	1710								
	3'	693	256	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	4'	169	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	5'	202	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10

SP 5											
	Surface	16,063	12300	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	1'	966									
	2'	868									
	3'	812	1150	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	4'	173	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	5'	211	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10

SP 6			
	Surface	10,717	
	1'	1,345	
	2'	1,268	
	3'	1,596	
	4'	614	608
	5'	631	816
	6'	581	32
	7'	218	48
	8'	152	32





SP 1

SP 2

SP 6

SP 4

SP 3

SP 5



4 fe



3 fe



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

May 08, 2018

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU #613

Enclosed are the results of analyses for samples received by the laboratory on 05/02/18 9:17.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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,

Celely 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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 04/30/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ SURFACE (H801216-01)

BTEX 80218		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTEX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6960	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					


Surrogate: 1-Chlorooctane 74.4 % 41-142

Surrogate: 1-Chlorooctadecane 68.4 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 04/30/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 3' (H801216-02)

BTEX 80218		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTEX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 105 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

Surrogate: 1-Chlorooctane 73.3 % 41-142

Surrogate: 1-Chlorooctadecane 67.7 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 04/30/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 4' (H801216-03)

BTX 80218		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

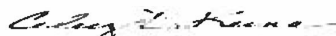
Surrogate: 1-Chlorooctane 75.1 % 41-142

Surrogate: 1-Chlorooctadecane 67.8 % 37.6-147

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 04/30/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 5' (H801216-04)

BTX 80218		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

Surrogate: 1-Chlorooctane 74.3 % 41-142

Surrogate: 1-Chlorooctadecane 67.4 % 37.6-147

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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: 05/02/2018
 Reported: 05/08/2018
 Project Name: NEDU #613
 Project Number: NEDU #613
 Project Location: NONE GIVEN

 Sampling Date: 04/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 2 @ SURFACE (H801216-05)

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	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1200	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

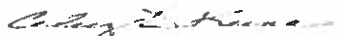
Surrogate: 1-Chlorooctane 66.2 % 41-142

Surrogate: 1-Chlorooctadecane 57.1 % 37.6-147

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 04/30/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 2 @ 3' (H801216-06)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTEX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 105 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

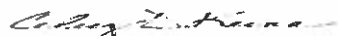
Surrogate: 1-Chlorooctane 79.4 % 41-142

Surrogate: 1-Chlorooctadecane 70.0 % 37.6-147

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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: 05/02/2018
 Reported: 05/08/2018
 Project Name: NEDU #613
 Project Number: NEDU #613
 Project Location: NONE GIVEN

 Sampling Date: 04/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 2 @ 10' (H801216-07)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTEX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 104 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

Surrogate: 1-Chlorooctane 81.1 % 41-142

Surrogate: 1-Chlorooctadecane 70.4 % 37.6-147

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 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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 04/30/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 2 @ 11' (H801216-08)

BTEX 80218		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTEX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

Surrogate: 1-Chlorooctane 80.3 % 41-142

Surrogate: 1-Chlorooctadecane 69.3 % 37.6-147

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 04/30/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 3 @ SURFACE (H801216-09)

BTEX 80218		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTEX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4880	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

Surrogate: 1-Chlorooctane 75.7 % 41-142

Surrogate: 1-Chlorooctadecane 64.6 % 37.6-147

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 04/30/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 3 @ 3' (H801216-10)

BTX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 103 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

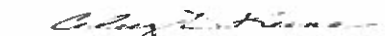
Surrogate: 1-Chlorooctane 78.6 % 41-142

Surrogate: 1-Chlorooctadecane 67.7 % 37.6-147

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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: 05/02/2018
 Reported: 05/08/2018
 Project Name: NEDU #613
 Project Number: NEDU #613
 Project Location: NONE GIVEN

 Sampling Date: 05/01/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 3 @ 4' (H801216-11)

BTEX 80218		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTEX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 104 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

Surrogate: 1-Chlorooctane 73.2 % 41-142

Surrogate: 1-Chlorooctadecane 60.3 % 37.6-147

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* = Accredited Analyte

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 05/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 3 @ 5' (H801216-12)

BTEX 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	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTEX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 106 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

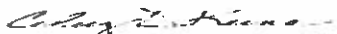
Surrogate: 1-Chlorooctane 71.3 % 41-142

Surrogate: 1-Chlorooctadecane 58.6 % 37.6-147

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 04/30/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 4 @ SURFACE (H801216-13)

BTEX 80218		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTEX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6800	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

Surrogate: 1-Chlorooctane 79.1 % 41-142

Surrogate: 1-Chlorooctadecane 66.8 % 37.6-147

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 04/30/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 4 @ 3' (H801216-14)

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	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

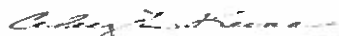
Surrogate: 1-Chlorooctane 74.5 % 41-142

Surrogate: 1-Chlorooctadecane 64.6 % 37.6-147

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 05/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 4 @ 4' (H801216-15)

BTEX 80218		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTEX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 72-148

Chloride, SM4500Cl-8		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

Surrogate: 1-Chlorooctane 69.3 % 41-142

Surrogate: 1-Chlorooctadecane 58.2 % 37.6-147

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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: 05/02/2018
 Reported: 05/08/2018
 Project Name: NEDU #613
 Project Number: NEDU #613
 Project Location: NONE GIVEN

 Sampling Date: 05/01/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 4 @ 5' (H801216-16)

BTEX 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	05/04/2018	ND	1.95	97.5	2.00	8.57		
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85		
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27		
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20		
Total BTEX	<0.300	0.300	05/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	05/04/2018	ND	432	108	400	7.69		

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					


Surrogate: 1-Chlorooctane 69.0 % 41-142

Surrogate: 1-Chlorooctadecane 57.6 % 37.6-147

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 05/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 5 @ SURFACE (H801216-17)

BTX 80218		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
Toluene*	<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
Ethylbenzene*	<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
Total Xylenes*	<0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
Total BTX	<0.300	0.300	05/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 101 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12300	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

Surrogate: 1-Chlorooctane 74.8 % 41-142

Surrogate: 1-Chlorooctadecane 61.4 % 37.6-147

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 05/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 5 @ 3' (H801216-18)

BTEX 80218		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2018	ND	1.70	85.0	2.00	2.48	
Toluene*	<0.050	0.050	05/07/2018	ND	1.82	91.2	2.00	1.23	
Ethylbenzene*	<0.050	0.050	05/07/2018	ND	1.84	91.8	2.00	2.48	
Total Xylenes*	<0.150	0.150	05/07/2018	ND	5.66	94.4	6.00	3.03	
Total BTEX	<0.300	0.300	05/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 100 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1150	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					


Surrogate: 1-Chlorooctane 63.7 % 41-142

Surrogate: 1-Chlorooctadecane 52.0 % 37.6-147

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 05/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 5 @ 4' (H801216-19)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2018	ND	1.70	85.0	2.00	2.48	
Toluene*	<0.050	0.050	05/07/2018	ND	1.82	91.2	2.00	1.23	
Ethylbenzene*	<0.050	0.050	05/07/2018	ND	1.84	91.8	2.00	2.48	
Total Xylenes*	<0.150	0.150	05/07/2018	ND	5.66	94.4	6.00	3.03	
Total BTEX	<0.300	0.300	05/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.9 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	05/04/2018	ND	432	108	400	7.69	

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					

Surrogate: 1-Chlorooctane 71.5 % 41-142

Surrogate: 1-Chlorooctadecane 58.7 % 37.6-147

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 05/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 5 @ 5' (H801216-20)

BTEX 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	05/07/2018	ND	1.70	85.0	2.00	2.48	
Toluene*	<0.050	0.050	05/07/2018	ND	1.82	91.2	2.00	1.23	
Ethylbenzene*	<0.050	0.050	05/07/2018	ND	1.84	91.8	2.00	2.48	
Total Xylenes*	<0.150	0.150	05/07/2018	ND	5.66	94.4	6.00	3.03	
Total BTEX	<0.300	0.300	05/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.0 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	05/04/2018	ND	432	108	400	7.69	QR-03

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	05/03/2018	ND	201	101	200	2.44	
DRO >C10-C28*	<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	05/03/2018	ND					


Surrogate: 1-Chlorooctane 68.9 % 41-142

Surrogate: 1-Chlorooctadecane 57.1 % 37.6-147

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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: 05/02/2018
Reported: 05/08/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 05/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 6 @ 4' (H801216-21)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	05/04/2018	ND	432	108	400	7.69	

Sample ID: SP 6 @ 5' (H801216-22)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	816	16.0	05/04/2018	ND	432	108	400	7.69	

Sample ID: SP 6 @ 6' (H801216-23)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/04/2018	ND	432	108	400	7.69	

Sample ID: SP 6 @ 7' (H801216-24)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/04/2018	ND	432	108	400	7.69	


Sample ID: SP 6 @ 8' (H801216-25)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/04/2018	ND	432	108	400	7.69	

Cardinal Laboratories

*=Accredited Analyte

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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.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Apache</u>				BILL TO				ANALYSIS REQUEST			
Project Manager: <u>Bruce Baker</u>				P.O. #:							
Address:				Company:							
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>				Attn:							
Phone #:				Address:							
Project #:				City:							
Project Name:				State:				Zip:			
Project Location: <u>NEBU 413</u>				Phone #:							
Sample Name: <u>Bruce Baker</u>				Fax #:							
FOR LAB USE ONLY				MATRIX				PRESERV.			
Lab I.D.				Sample I.D.							
H801214				(G)RAB OR (C)OMP.							
1 SP 1 @ Surface				# CONTAINERS							
2 SP 1 @ 3'				GROUNDWATER							
3 SP 1 @ 4'				WASTEWATER							
4 SP 1 @ 5'				SOIL							
5 SP 2 @ Surface				OIL							
6 SP 2 @ 3'				SLUDGE							
7 SP 2 @ 10'				OTHER:							
8 SP 2 @ 11'				ACID/BASE:							
9 SP 3 @ Surface				ICE / COOL							
10 SP 3 @ 3'				OTHER:							
				DATE				TIME			
				4-30-18 10:30				C1 -			
				4-30-18 10:45				Ext. TPH			
				4-30-18 1:30				BTEX			
				4-30-18 1:38							
				4-30-18 11:00 AM							
				4-30-18 11:10 AM							
				4-30-18 3:25 PM							
				4-30-18 3:45 PM							
				4-30-18 11:25 AM							
				4-30-18 11:37 AM							

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Relinquished By: <u>Bruce Baker</u>		Date: <u>5-2-18</u>		Received By: <u>Guillermo Velazquez</u>		Date: <u>5-2-18</u>	
Relinquished By:		Time: <u>4:17 AM</u>		Received By:		Time:	
Delivered By: (Circle One) <u>3.4c</u>		Sample Condition		CHECKED BY: (Initials) <u>YS</u>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:	
Sampler <u>UPS - Bus - Other:</u> <u>Corrected 3.35c</u>		Cool <input type="checkbox"/> Yes <input type="checkbox"/> No		Impact <input type="checkbox"/> Yes <input type="checkbox"/> No		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #:	
REMARKS: <u>Email Results</u>							

①

ANALYSIS REQUEST

Company Name:						P.O. #:					
Apache											
Project Manager:						Company:					
Bruce Baker											
Address:						Attn:					
City: Hobbs						State: NM Zip: 88240					
Phone #:						Address:					
Fax #:						City:					
Project #: Project Owner:						State: Zip:					
Project Location: NEdu 613						Phone #:					
Sample Name: Bruce Baker						Fax #:					
FOR LAB USE ONLY											
Lab I.D.						Sample I.D.					
H861216											
SP 3 @ 4'						(G)RAB OR (C)OMP.					
11						# CONTAINERS					
SP 3 @ 5'						GROUNDWATER					
12						WASTEWATER					
SP 4 @ Surface						SOIL					
13						OIL					
SP 4 @ 3'						SLUDGE					
14						OTHER :					
SP 4 @ 4'						ACID/BASE:					
15						ICE / COOL					
SP 4 @ 5'						OTHER :					
16						DATE					
SP 5 @ Surface						TIME					
17											
SP 5 @ 3'											
18											
SP 5 @ 4'											
19											
SP 5 @ 5'											
20											
<small>PLEASE NOTE: Liability and Damages: Contractor's liability and claims exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated theories or otherwise.</small> Relinquished By: _____ Date: 5-2-18 Received By: _____ Relinquished By: _____ Time: 9:17 AM Relinquished By: _____ Date: _____ Received By: _____ Relinquished By: _____ Time: _____ Delivered By: (Circle One) 3.42 Sample Condition Cool Intact Yes No Checked BY: (Initials) 70-#75 Sample - UPS - Bus - Other: _____ Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: _____ Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #: _____ REMARKS: Email Results						BILL TO ANALYSIS REQUEST					

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]



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

May 31, 2018

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU #613

Enclosed are the results of analyses for samples received by the laboratory on 05/29/18 12:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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 CORP - HOBBS
BRUCE BAKER
2350 W. MARLAND BLVD.
HOBBS NM, 88240
Fax To: (575) 393-2432

Received: 05/29/2018
Reported: 05/31/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 05/29/2018
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 4' (H801457-05)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	640	16.0	05/30/2018	ND	416	104	400	3.77	

Sample ID: SP 2 @ 5' (H801457-06)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	05/30/2018	ND	416	104	400	3.77	

Sample ID: SP 2 @ 6' (H801457-07)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	05/30/2018	ND	416	104	400	3.77	

Sample ID: SP 2 @ 7' (H801457-08)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	05/30/2018	ND	416	104	400	3.77	

Sample ID: SP 2 @ 8' (H801457-09)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	05/30/2018	ND	416	104	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

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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: 05/29/2018
Reported: 05/31/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 05/29/2018
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 9' (H801457-10)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	864	16.0	05/30/2018	ND	416	104	400	3.77	

Sample ID: SP 3 @ 1' (H801457-11)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	768	16.0	05/30/2018	ND	416	104	400	3.77	

Sample ID: SP 3 @ 2' (H801457-12)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1600	16.0	05/30/2018	ND	416	104	400	3.77	

Sample ID: SP 4 @ 1' (H801457-13)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1230	16.0	05/30/2018	ND	416	104	400	3.77	

Sample ID: SP 4 @ 2' (H801457-14)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1710	16.0	05/30/2018	ND	416	104	400	3.77	

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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

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

Company Name: <u>Apache</u>		P.O. #:	BILL TO																		
Project Manager: <u>Bruce Baker</u>		Company:	ANALYSIS REQUEST																		
Address:		Attn:																			
City: <u>Hobbs</u>		State: <u>NM</u> Zip: <u>88240</u>																			
Phone #:		Fax #:																			
Project #:		Project Owner:																			
Project Name: <u>NEON 613</u>		State: Zip:																			
Project Location:		Phone #:																			
Sample Name: <u>Bruce Baker</u>		Fax #:																			
FOR LAB USE ONLY		MATRIX		PRESERV		SAMPLING															
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME							
1	SP 1 @ 1'	G 1	1										5-21-18	9:40am	✓						
2	SP 1 @ 2'	G 1	1										5-21-18	9:44am	✓						
3	SP 2 @ 1'	G 1	1										5-21-18	10:00am	✓						
4	SP 2 @ 2'	G 1	1										5-21-18	10:03am	✓						
5	SP 2 @ 4'	G 1	1										5-21-18	10:07am	✓						
6	SP 2 @ 5'	G 1	1										5-21-18	10:11am	✓						
7	SP 2 @ 6'	G 1	1										5-21-18	10:15am	✓						
8	SP 2 @ 7'	G 1	1										5-21-18	10:18am	✓						
9	SP 2 @ 8'	G 1	1										5-21-18	10:21am	✓						
10	SP 2 @ 9'	G 1	1										5-21-18	10:25am	✓						

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Relinquished By: Bruce Baker Date: 5-21-18 Time: 12:55pm Received By: Heidi Hunter

Relinquished By: #75 Date: Time: Received By:

Delivered By: (Circle One) UPS 26.12/26.05c Sample Condition: ☒ Cool ☒ Intact ☐ Yes ☐ No

Sample - UPS - Bus - Other: 26.12/26.05c ☐ Yes ☐ No

Checked By: [Signature] (Initials)

REMARKS: email results

Phone Result: ☐ Yes ☐ No Add'l Phone #:
 Fax Result: ☐ Yes ☐ No Add'l Fax #:

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ANALYSIS REQUEST

Company Name: Apache		P.O. #:
Project Manager: Bruce Baker		Company:
Address:		Attn:
City: Hobbs	State: NM	Address:
Phone #:	Fax #:	City:
Project #:		State:
Project Name: NEOU 613		Phone #:
Project Location: NEOU 613		Fax #:
Sample Name: Bruce Baker		PRESERV
FOR LAB USE ONLY		SAMPLING

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE			ICE / COOL
57													
11	SP 3 @ 1'		1								5-21-13	10:55am	✓
12	SP 3 @ 2'		1								5-29-13	10:40am	✓
13	SP 4 @ 1'		1								5-25-13	11:00am	✓
14	SP 4 @ 2'		1								5-29-13	11:06am	✓

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Relinquished By: Bruce Baker	Date: 8-29-13	Received By: John Henderson
Relinquished By: #75	Date: 12-29-13	Received By: John Henderson
Delivered By: (Circle One) 26.1c	Sample Condition: <input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact	CHECKED BY: [Signature]
Other: 26.05c	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Sample - UPS - Bus - Other: 26.1c	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

REMARKS: **email results**

Analytical Results For:

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

Received: 05/29/2018
Reported: 05/31/2018
Project Name: NEDU #613
Project Number: NEDU #613
Project Location: NONE GIVEN

Sampling Date: 05/29/2018
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 1' (H801457-01)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	05/30/2018	ND	416	104	400	0.00	

Sample ID: SP 1 @ 2' (H801457-02)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1490	16.0	05/30/2018	ND	416	104	400	0.00	

Sample ID: SP 2 @ 1' (H801457-03)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1260	16.0	05/30/2018	ND	416	104	400	3.77	

Sample ID: SP 2 @ 2' (H801457-04)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1360	16.0	05/30/2018	ND	416	104	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



NEDU 613
1RP-4972
Revegetation
and
Noxious Weed Plan

Revegetation Plan:

All the disturbed area in the pasture will be properly prepared and prior to seeding will contact the Authorized Officer for seed mixture and will be reseeded. The disturbed area will be monitored to ensure successful revegetation is achieved. If revegetation is not successful after a couple of growing seasons the site will be reseeded.

Noxious Weed Plan:

Apache Corporation will treat noxious weeds if they become established within the area of remediation. Weed control will be maintained on the disturbed land where noxious weeds exist both prior to remediation and restoration. Apache Corporation will consult with the Authorized Officer for acceptable weed control methods.

From: [Hernandez, Christina, EMNRD](#)
To: ["Larry.Baker@apachecorp.com"](#); [Yu, Olivia, EMNRD](#); ["rmann@slo.state.nm.us"](#)
Subject: RE: Corrective Action Plan NEDU 613 1RP-4972
Date: Wednesday, July 25, 2018 12:47:00 PM
Attachments: [ApprovedNEDU 613 Corrective Action Plan.pdf](#)

Dear Mr. Baker,

NMOCD will consider vertical delineation completed for 1RP-4924 but is pending sidewall confirmation samples for horizontal delineation completion. Please address these concerns regarding the proposed remediation plan:

1. The map does not have a scale. Please provide a scaled map with the GPS coordinates of the delineation sample locations marked and the approximate dimensions represented by each of the test trenches.
2. Please properly label sample location names and dates sampled on Lab Results table as it will facilitate interpretation and approval.
3. Please be advised that each proposed differing depths of excavation will require a set of confirmation sidewalls and bottom samples at no greater than 50 ft. apart (except at SP2 and SP6 where liner is used; sidewall samples only) . In other words, the border between the proposed 3 ft. excavation for SP1 area and proposed 4 ft. excavation for SP2 will require a sidewall/edge sample taken.
4. Please provide dated photo documentation of the remedial activities, including the proper emplacement of the liner.
5. Please submit a scaled map with the confirmation sample locations in relation to the delineation sample points.

Thanks,

Christina Hernandez
EMNRD-OCD
Environmental Specialist
1625 N. French Drive
Hobbs, NM 88240
575-393-6161 x111
Christina.Hernandez@state.nm.us

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.

From: Baker, Larry <Larry.Baker@apachecorp.com>

Sent: Monday, July 2, 2018 2:03 PM

To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; rmann@slo.state.nm.us

Subject: Corrective Action Plan NEDU 613 1RP-4972

All,

Attached is the corrective action plan for your review. Please let me know if you have any questions or wish to discuss. Thanks and have a good day.

BRUCE BAKER

ENVIRONMENTAL TECHNICIAN SR

direct 575-393-7106 ext 1523 | *Cell* 432-631-6982

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