

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

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.

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

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 inconsistences 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

Revised August 8, 2011

Form C-141

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

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

			Rele	ease Notific	ation	n and Co	rrective A	ction	1			
						OPERA	ΓOR			l Report		Final Report
Name of Co	ompany A	pache Corpo	ration			Contact Br	uce Baker			•		
		rland Street,	Hobbs, N	NM 88240			No. (432) 631-6					
Facility Nar	me NEDL	613				Facility Typ	e Injection W	ell				
Surface Ow	ner State			Mineral O	wner	State			API No.	30-025-0	9919	
				LOCA	TIO	N OF REI	EASE					
Unit Letter H	Section 15	Township 21S	Range 37E	Feet from the 1980'	North	South Line FNL	Feet from the 660'		Vest Line FEL		County Lea	y
							-103.1444626					
				NAT	URE	OF RELI						
Type of Rele	ase Produ	ce Water				Volume of Release 30 Barrels Volume Reco				ecovered ()	
Source of Re	lease injec	tion line				Date and Hour of Occurrence 2/13/2018 Date and Hour of Discovery 2/13/2018 at 5:00 p.m.						
Was Immedia	ate Notice (Yes	No □ Not Re	quired	If YES, To Whom?						
By Whom? .	Jorge River	a				Date and H	lour 2/14/2018 at	3:00 p.	m.			
Was a Watercourse Reached? ☐ Yes ☑ No						If YES, Vo	lume Impacting t	he Wate	ercourse.			
Describe Cau	use of Probl	pacted, Descri	lial Action		e of flui	В	PECEIVEL y Olivia Yo yas isolated and re	u at a	8:22 ar	n, Feb	21, 2	2018
		and Cleanup A		en.* eet southeast of	the pad	and the rele	ase impacted th	e right	of way and	d pasture.		
regulations a public health should their of or the environ	Il operators or the envi operations h nment. In a	are required to ronment. The save failed to a	report an acceptanc dequately CD accep	is true and compled/or file certain re- e of a C-141 repo investigate and re- tance of a C-141 re-	elease north by the emediate	otifications ar e NMOCD ma e contaminati	nd perform correct arked as "Final Re on that pose a thre	tive acti eport" de at to gr	ions for rele loes not relic ound water.	ases which eve the oper , surface wa	may endrator of ter, hun	danger liability nan health
Signature:	Bruc	Bec	den .				OIL CONS	SERV	ATION	DIVISIO	<u>N</u>	
Printed Name						Approved by Environmental Specialist:						
Title: Enviro						Approval Date: 2/21/2018 Expiration Date:						
E-mail Addre	ess: larry.b	aker@apache	corp.com			Conditions of				Attached	J/	
Date: 2/20	0/2018		Phone	: (432) 631-6982		see attac	ched directiv	е			2000 P	

* Attach Additional Sheets If Necessary

1RP-4972

nOY1805230371

pOY1805231050





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 Sub-		Q	Q	Q							Depth De	enth Wa	ater
POD Number	Code	basin	County	64	16	4	Sec	Tws	Rng	Х	Υ	Distance		aterCol	
CP 01185 POD1		CP	LE		1	3	14	218	37E	674598	3594689 🍪	526	70		
CP 01185 POD2		CP	LE		1	3	14	218	37E	674623	3594674 🍪	549	70		
CP 01110 POD1		CP	LE		1	3	14	218	37E	674586	3594648 🍪	560	70		
CP 01110 POD2		CP	LĘ		1	3	14	218	37E	674586	3594648 🌑	560	70		
CP 01110 POD3		CP	LE		1	3	14	218	37E	674586	3594648 🌑	560	70		
CP 01110 POD4		CP	LE		1	3	14	218	37E	674586	3594648 🍪	560	20		
CP 01110 POD5		CP	LE		1	3	14	218	37E	674586	3594648 🌑	560	20		
CP 01185 POD3		CP	LE		1	3	14	218	37E	674592	3594620 🌑	589	70		
CP 01574 POD1		CP	LE	2	4	4	15	218	37E	674559	3594598	601	68	57	11
CP 01185 POD4		CP	LE		1	3	14	218	37E	674633	3594610 🍪	612	70		
CP 01574 POD2		CP	LE	1	3	3	14	218	37E	674666	3594578 🚳	654	68	57	11

Average Depth to Water: 57 feet

Minimum Depth: 57 feet

Maximum Depth: 57 feet

Record Count: 11

UTMNAD83 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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National Water Information System: Web Interface

USGS Water Resources

Data Category:	Geographic Area:	
Groundwater V	New Mexico V	GO

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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

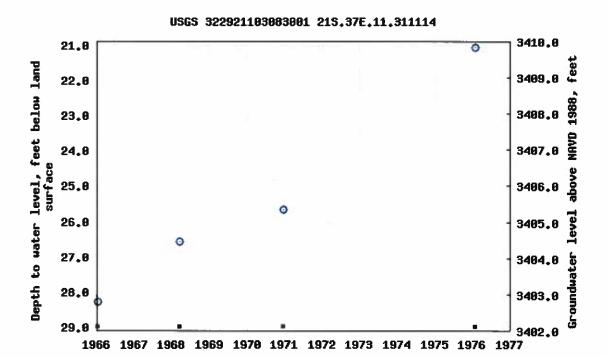
Land-surface elevation 3,431 feet above NAVD88

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	 	



Period of approved data

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

Download a presentation-quality graph

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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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National Water Information System: Web Interface

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Data Category:		Geographic Area:		
Groundwater	~	New Mexico	~	GO

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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 =** • 322805103080101

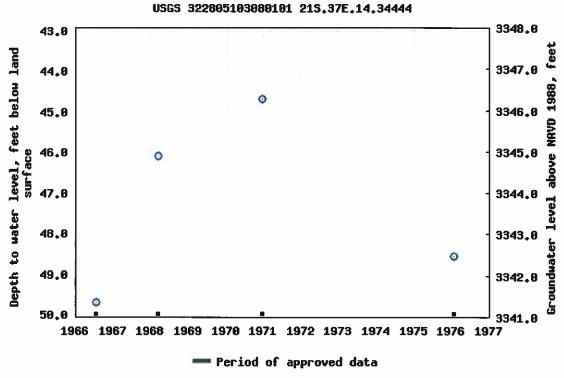
Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 322805103080101 21S.37E.14.34444

Available data for this site	Groundwater:	Field measurements	~	GO	
Lea County, New Mexico					
Hydrologic Unit Code 1307	0007				
Latitude 32°28'05", Longit	tude 103°08	3'01" NAD27			
Land-surface elevation 3,3	91 feet abov	ve NAVD88			
The depth of the well is 82	feet below	land surface.			
This well is completed in th	ne Alluvium,	Bolson Deposits	and	Other	Surface
Deposits (110AVMB) local	aquifer.	·			

	Output Ion	mats		
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.

Download a presentation-quality graph

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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 14:51:06 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							1	■ 1 / · · · · ·
	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					1000
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	33							
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

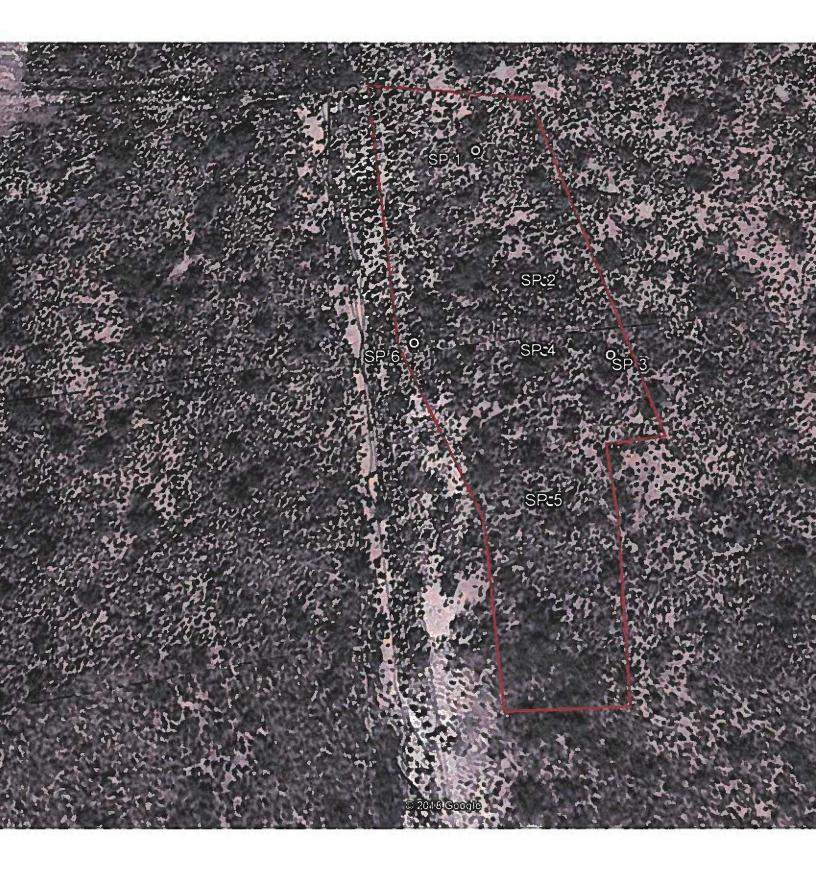
SP 3														
Surface	17,218	4880	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10				
1'	3,268	768												
2'	1,224	1600			-	-								
3'	501	256	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10				
4'	187	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10				
5'	157	48	<0.050	<0.050	< 0.050	<0.150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

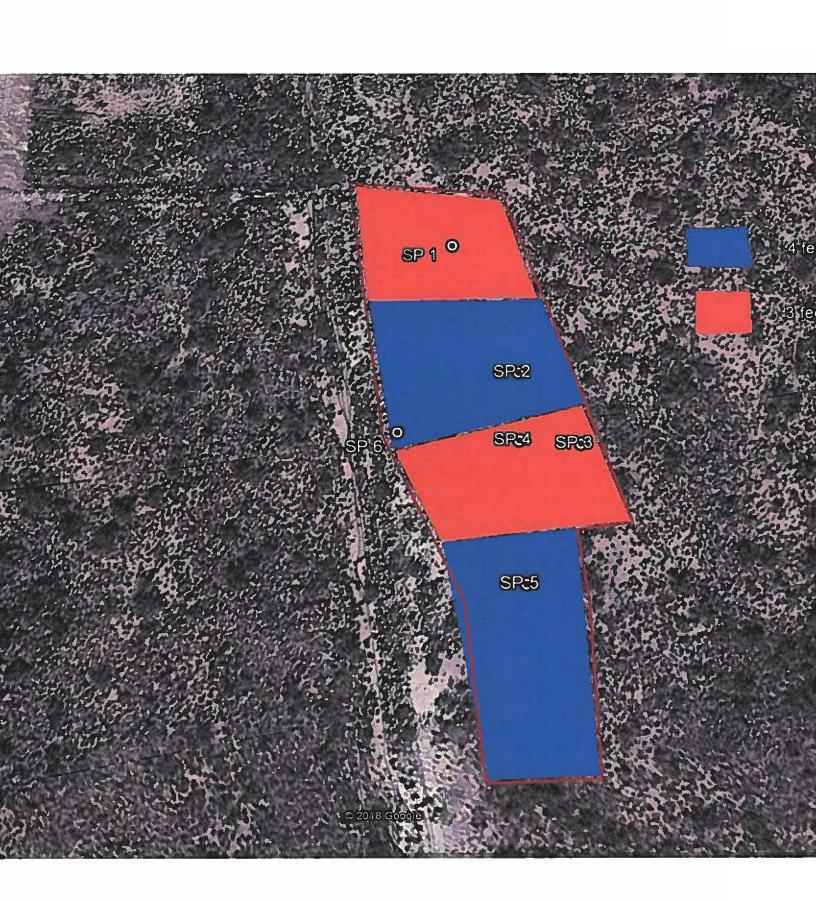
	IJ,				SP 4					
Surface	15,868	6800	<0.050	<0.050	< 0.050	<0.150	<0.300	<10	<10	<10
1'	1,931	1230								

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

SF	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







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/ga/lab-accred-certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Keine

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



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

Fax To:

(575) 393-2432

Annhand Sun MC

Received:

05/02/2018

Sampling Date:

04/30/2018

Reported:

DTEV PASID

05/08/2018 NEDU #613 Sampling Type:

Soil
Cool & Intact

Project Name: Project Number:

NEDU #613

Sampling Condition: Sample Received By:

Tamara Oldaker

Project Location:

NONE GIVEN

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

Result	Reporting Limit	Analyzed	Method Blank	BS				
<0.050				05	% Recovery	True Value QC	RPD	Qualifier
	0.050	05/04/2018	ND	1.95	97.5	2.00	8.57	
<0.050	0.050	05/04/2018	ND	1.99	99.7	2.00	8.85	
<0.050	0.050	05/04/2018	ND	2.01	101	2.00	9.27	
< 0.150	0.150	05/04/2018	ND	5.89	98.1	6.00	9.20	
<0.300	0.300	05/04/2018	ND					
102	% 72-148							
mg,	/kg	Analyzed By: AC						
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
6960	16.0	05/04/2018	ND	432	108	400	7.69	
mg,	/kg	Analyze	d By: MS					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<10.0	10.0	05/03/2018	ND	201	101	200	2.44	
<10.0	10.0	05/03/2018	ND	191	95.7	200	3.31	
<10.0	. 10.0	05/03/2018	ND					
74.4	% 41-142							
68.4	% 37.6-14	7						
	<0.050 <0.050 <0.150 <0.300 102 mg/ Result 6960 mg/ Result <10.0 <10.0 74.4	<0.050 0.050 <0.050 0.050 <0.150 0.150 <0.300 0.300 102 % 72-148 mg/kg Result Reporting Limit 6960 16.0 mg/kg Result Reporting Limit <10.0 10.0 <10.0 10.0 <10.0 10.0	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

Cardinal Laboratories

*=Accredited Analyte

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Cologi trans



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

Fax To:

(575) 393-2432

Received: Reported: 05/02/2018 05/08/2018 **NEDU #613** Sampling Date:

04/30/2018

Soil

Project Name:

BTEX 8021B

NEDU #613 NONE GIVEN

mg/kg

Sampling Type: Sampling Condition:

Sample Received By:

Cool & Intact Tamara Oldaker

Project Number: Project Location:

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

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 9	6 72-148							
Chloride, SM4500CI-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	160	16.0	05/04/2018	ND	432	108	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
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	

Analyzed By: MS

Surrogate: 1-Chlorooctane 41-142 73.3 % Surrogate: 1-Chlorooctadecane 67.7% 37.6-147

Cardinal Laboratories *=Accredited Analyte

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College Latrean -



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

Fax To:

(575) 393-2432

Received:

05/02/2018 05/08/2018 Sampling Date: Sampling Type: 04/30/2018

Reported: Project Name:

NEDU #613 NEDU #613

Sampling Condition:

Soil Cool & Intact

Project Number: Project Location:

NONE GIVEN

Sample Received By:

Tamara Oldaker

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

TEX 8021B	mg/	kg	Analyze	d 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 5	% 72-148	3						
Chloride, SM4500Cl-B mg/kg		kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	6S	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	05/04/2018	ND	432	108	400	7.69	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% 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	% 37.6-1-	17						

Cardinal Laboratories

*=Accredited Analyte

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Colony Lations -

Celey D. Keene, Lab Director/Quality Manager



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

Fax To:

(575) 393-2432

Received: Reported:

BTEX 8021B

05/02/2018 05/08/2018

Project Name: Project Number: Project Location: **NEDU #613 NEDU #613** NONE GIVEN Sampling Date:

04/30/2018

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

mg/kg

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% 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, SM4500CI-B	mg/	/kg	Analyze	d 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	Analyze	d By: M\$					
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	

ND

Analyzed By: MS

Surrogate: 1-Chlorooctane Surrogate: 1-Chlorooctadecane

EXT DRO >C28-C36

74.3 %

< 10.0

41-142

05/03/2018

10.0

67.4%

37.6-147

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Coday L. Kiena



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

Fax To:

(575) 393-2432

Received:

05/02/2018 05/08/2018

Sampling Date:

04/30/2018

Reported:

NEDU #613 NEDU #613 Sampling Type:

Soil Cool & Intact

Project Name: Project Number: Project Location:

NONE GIVEN

Sampling Condition: Sample Received By:

Tamara Oldaker

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

BTEX 8021B	mg/	/kg	Analyze	d 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	106	% 72-148	3						
Chloride, SM4500CI-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	Analyze	d 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	% 37.6-14	17						

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

Fax To:

(575) 393-2432

Received: Reported: 05/02/2018

Project Name:

BTEX 8021B

05/08/2018 NEDU #613 NEDU #613

Project Number: Project Location:

NONE GIVEN

mg/kg

Sampling Date:

04/30/2018

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

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

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 9	% 72-148							
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	6	444	Marked Wood	0.0	# D	True Value QC	000	Qualifier
	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True value Qu	RPD	Qualifier
Chloride	368	16.0	05/04/2018	ND ND	432	108	400	7.69	Qualifier
415		16.0	05/04/2018			1111	100		Qualifier
Chloride	368	16.0	05/04/2018	ND		1111	100		Qualifier
Chloride TPH 8015M	368 mg/	16.0 kg	05/04/2018 Analyze	.ND d By: MS	432	108	400	7.69	
Chłoride TPH 8015M Analyte	368 mg/ Result	16.0 kg Reporting Limit	05/04/2018 Analyze Analyzed	.ND d By: MS Method Blank	432 BS	108 % Recovery	400 True Value QC	7.69 RPD	

Analyzed By: MS

Surrogate: 1-Chlorooctane 79.4% 41-142 70.0 % 37.6-147 Surrogate: 1-Chlorooctadecane

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

Fax To:

(575) 393-2432

Received:

05/02/2018 05/08/2018

Sampling Date:

04/30/2018

Reported:

NEDU #613 NEDU #613 Sampling Type: Sampling Condition: Soil Cool & Intact

Project Name: Project Number: Project Location:

NONE GIVEN

Sample Received By:

Tamara Oldaker

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

BTEX 8021B

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Ana	ly	zed	Ву:	M:
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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 9	6 72-148							
Chloride, SM4500CI-B mg/kg		Analyze							
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	Analyze	d 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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APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

05/02/2018 05/08/2018 Sampling Date:

04/30/2018

Reported:

NEDU #613

Sampling Type:

Soil Cool & Intact

Project Name: Project Number: Project Location:

NEDU #613 NONE GIVEN Sampling Condition: Sample Received By:

Tamara Oldaker

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

BTEX 8021B

Anal	yzęd	By:	MS
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		<u></u>							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
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 9	6 72-148							
Chloride, SM4500CI-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	32.0	16.0	05/04/2018	ND	432	108	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
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	

Surrogate: I-Chlorooctane Surrogate: 1-Chlorooctadecane 80.3% 69.3 %

41-142 37.6-147

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

Fax To: (575) 393-2432

Received:

05/02/2018

Reported: Project Name:

Project Number:

Project Location:

05/08/2018 NEDU #613 NEDU #613 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 8021B	mg,	/kg	Analyze	d 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, SM4500CI-8	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chłoride	4880	16.0	05/04/2018	ND	432	108	400	7.69	
TPH 8015M	mg,	/kg	Analyze	d 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	% 37.6-14	7						

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

Fax To:

(575) 393-2432

Received: Reported: 05/02/2018 05/08/2018

Project Name: Project Number: NEDU #613 NEDU #613 NONE GIVEN Sampling Date:

04/30/2018

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Project Location:

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

BTEX 8021R

BIEX 8021B	mg,	ıkğ	Anaiyze	u by: M3					
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: J. Rromofluorohenzene (PIF

102.04

72 1 19

Chloride, SM4500CI-B	mg	/kg	Analyze	d 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	Analyze	d 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



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

Fax To:

(575) 393-2432

Received:

05/02/2018

Sampling Date:

05/01/2018

Reported:

05/08/2018 NEDU #613

Sampling Type:

Soil

Project Name: Project Number:

NEDU #613

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Location:

NONE GIVEN

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

BTEX 8021B	mg/	kg	Analyze	d 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	1049	% 72-148	}						
Chloride, SM4500CI-B	mg/	kg	Analyze	d 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	Analyze	d 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	% 37.6-14	7						

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

Fax To:

(575) 393-2432

Received: Reported:

Project Number:

Project Location:

05/02/2018 05/08/2018 **NEDU #613** Sampling Date:

05/01/2018

Project Name:

NEDU #613 NONE GIVEN Sampling Type: Sampling Condition: Soil Cool & Intact

Sample Received By:

Tamara Oldaker

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

BTEX 8021B	mg,	/kg	Analyze	d 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	3						
Chloride, SM4500CI-B	mg.	/kg	Analyze	d By: AC		_			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŚ	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/04/2018	ND	432	108	400	7.69	
TPH 8015M	mg	/kg	Analyze	d 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	% 37.6-14	17						

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Colog Litrens



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

Fax To:

(575) 393-2432

Received:

05/02/2018 05/08/2018 Sampling Date: Sampling Type: 04/30/2018

Soil

Reported: Project Name:

NEDU #613 NEDU #613

Sampling Condition:

Cool & Intact

Project Number: Project Location:

NONE GIVEN

Sample Received By:

Tamara Oldaker

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

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% 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, SM4500CI-B	mg/	/kg	Analyze	d 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	Analyze	d 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	% 37.6-14	7						

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College treens

Celey D. Keene, Lab Director/Quality Manager



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

Fax To:

(575) 393-2432

Received:

05/02/2018 05/08/2018 Sampling Date:

04/30/2018

Reported:

NEDU #613

Sampling Type:

Soil

Project Name: Project Number:

NEDU #613

Sampling Condition:

Cool & Intact

Project Location:

NONE GIVEN

Sample Received By:

Tamara Oldaker

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

BTEX 8021B	mg/	kg	Analyze	d 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	102	% 72-148							
Chloride, SM4500CI-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	Analyze	d 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	% 37.6-14	7						

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Carley Zatrana



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

Fax To:

(575) 393-2432

Received:

05/02/2018 05/08/2018 Sampling Date: Sampling Type: 05/01/2018

Reported: Project Name: NEDU #613

Sampling Condition:

Soil Cool & Intact

Project Number:

NEDU #613

Sample Received By:

Tamara Oldaker

Project Location:

NONE GIVEN

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

BTEX 8021B	mg/	kg	Analyze	d 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 9	6 72-148							
Chloride, SM4500CI-8	mg/	kg	Analyze	d 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	Analyze	d 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: I-Chlorooctadecane	58.2	% 37.6-14	7						

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

Fax To:

(575) 393-2432

Received: Reported: 05/02/2018 05/08/2018

Project Name: Project Number:

Project Location:

NEDU #613 NEDU #613 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	Analyze	d 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	1049	6 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d 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	Analyze	d 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	37.6-14	7						

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

Fax To:

(575) 393-2432

Received:

05/02/2018

Reported: Project Name: 05/08/2018 NEDU #613

Project Number: Project Location: NEDU #613 NONE GIVEN Sampling Date:

05/01/2018

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

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

BTEX 8021B	mg/	'kg	Analyze	d 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	101	% 72-148	}						
Chloride, SM4500CI-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	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



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

Fax To:

(575) 393-2432

Received:

05/02/2018 05/08/2018

Reported: Project Name:

Project Number:

Project Location:

NEDU #613 NEDU #613 NONE GIVEN Sampling Date:

g Date: 05/01/2018

Sampling Type:

Cool & Intact

Soil

Sampling Condition: 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-Bromosluorobenzene (PIE	100	% 72-148	ì						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% 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	% 37.6-14	7						

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

Fax To:

(575) 393-2432

Received:

05/02/2018 05/08/2018 Sampling Date:

05/01/2018

Reported:

NEDU #613 NEDU #613

Sampling Type:

Soil

Project Name: Project Number:

Sampling Condition:

Cool & Intact

Project Location:

NONE GIVEN

Sample Received By:

Tamara Oldaker

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

BTEX 80218	mg,	/kg	Analyze	d 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, SM4500CI-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	Analyze	d 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	% 37.6-14	7						

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

Fax To:

(575) 393-2432

Received:

05/02/2018

Sampling Date:

05/01/2018

Reported:

05/08/2018 **NEDU #613**

Sampling Type:

Soil

Project Name: Project Number: **NEDU #613**

Sampling Condition:

Cool & Intact

Project Location:

NONE GIVEN

Sample Received By:

Tamara Oldaker

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

BTEX 8021B	mg,	/kg	Analyze	d 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	99.0	% 72-148	}						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	8\$	% 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	Analyze	d 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	% 37.6-14	7						

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

Fax To:

(575) 393-2432

Analyzed By: AC

Received:

05/02/2018

Reported:

Chloride, SM4500CI-B

05/08/2018 NEDU #613

Project Name: Project Number:

NEDU #613

Project Location:

NONE GIVEN

ma/ka

Sampling Date:

05/01/2018

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

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

Chioride, SM45UUCI-B	mg	/кд	Anaiyze	о ву: АС					
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' (H8	•								
Chloride, SM4500CI-B	mg	/kg	Analyze	d 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' (H8	301216-23)								
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' (H8	301216-24)								
Chloride, SM4500CI-B	mg	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' (H8	301216-25)								
Chloride, SM4500CI-B	mg	/kg	Analyzed By: AC					_	
Analyte	Result	Reporting Limit	Anatyzed	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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Colony I trans



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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Color Line .



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

Company Name:	Apacha		B/LL 70	ANALYSIS REQUEST
Project Manager			P.O. #:	
Address:			Company:	
	Hobbs State: NM	zip: 88240	Attn:	
Phone #:	Fax #:		Address:	
Project #:	Project Owner:		City:	
Project Name:			State: Zip:	
Project Location:	" NEDU 613		Phone #:	
Sampler Name:	Bruce BAKEr		Fax#:	<u>-</u>
FOR UAB USE DNLY		MATRIX	PRESERV SAMPLING	-P.
Lab I.D.	Sample I.D.	AB OR (C)OMF NTAINERS UNDWATER TEWATER	/BASE: COOL	CI- Ext. 7 BTEX
H801216		# CC	-	
/	SP 1 @ Surface	6	05:01 St-05-h	
2	SP 1 @ 3'	6	V, 4-30-18 10:45	V V V
3	SP 1 @ 4'	6 / 1/	1-30-18 1:30	
4	SP 1 @ 51	6 1	V 4-30-18 1:38	
ς,	SP a @ Swrface		4-30-18 11:00 Am	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
,	SP A @ 3'	G11 1/	1 4-2-8 11 10 AM	
4	Sp 2 @ 10'	611 1	V 4-30-18 3 25pm	
×γ.		6 1 1	4-35-18 3-15 pm	*
s	SP 3 @ Swface	6 1	1 4-x-8 11 25am	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
10	SP 3 @ 3'	4	4-30-18 11:37A	
PLEASE NOTE: LIMBBy a	PLEASE NOTE: Libelity and Demages. Certificate all deletis activates memory five any during string years to contract or too, shall be instead to the amount paid by the client for the pLEASE NOTE: Libelity and Demages. Certificate and place of the second	ly claim arising whether based in contract	t or tort, shall be limited to the amount paid by the client fi	or street and office of the street of the st
enalyses. All claims includi service. In no event shall C		edined waved uness made in wind an without limitation, business interruptions,	gigence and say other Cause windspower state or beamed warver uncoses mour in minute and severes or years and minute and extended or place of the state of the st	(BL) of physical order (BL) order (B
Relinquished By:		Received By:	Phone Result:	esult: C yes C No Add'I Phone #:
		4		200

preclis

Sample Condition
Cool Intact
Cool Intact
Pes Lifes
No No

40 p

CHECKED BY: (Initials)

Email Results

3.46

Time: Date:

Sampler, UPS - Bus - Other: Delivered By: (Circle One) Relinquished By:

Bruce Bahr

Time: 9:17 4m

Received By:

Date: 2-18

Phone Result:
Fax Result:
REMARKS:

☐ Yes ☐ No Add'I Phone #:

Cordinal cannot account usehal channoe. Diagna fav unitten channoe to 1575) 184.2228 3.35



		}	70-475	₹ ĝ/	No.	25	Corneted 3.35	Sampley - UPS - Bus - Other:	Sampler - UPS
			CHECKED BY:	ondition	Sample Condition		3.40	Delivered By: (Circle One) 3.	Delivered By
	DENTI						Time:		
1 000 11					ed By:	Received	Date:	7:	Relinquished By:
		KEMARNO.	abil .		MANIA		Time: q:/7,44	Some some	me!
□ I	11	Fax Result:		4	eu by.	Vertein	5-2-18	". R_ /	Kelinquisned b
□ No Add'l Phone #:		Phone Result:	Post state and a Australia	h claim is based	DA RV	Chal regar	a of services hereunder by Ca	relates or successors winds out of or related to the performance of surfaces harvander by Cardinal, respectisors of whother Luch claims to based upon any of the Booke stated relations or consensate. Reventure of Proceedings of the Proceed	prilitates or successions and
	splicable	er completion of the ap client, its subsidiaries.	by Cardinal within 30 days of e, or loss of profits incurred by	nting and received uptions, loss of us	d unites made in w ion, business interr	emed waive idhout limble	r cause whatsoover shall be de requental damages, including w	analyses. All claims including those for negligence and any other ceuse 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 consequental damages, including without linitation, business interruptions, loss of use, or loss of profits insurand by demi, its subsidiaries.	unalyses. All claims include service. In no event shall C
		id by the clean for the	had be limited to the amount pr	contract or ton, s.	g whether besed in	claim arest	Sent's exclusive remedy for any	PLEASE NOTE: Lability and Demagna. Cardinate lability and client's exclusive remarks for any claim arraing whether based in contract or ton, shall be limited to the arrount paid by the client for the	PLEASE NOTE: Lieblity or
	/ /	10 hz; 61	81-1-18		~	1		15 35 85	20
\(\frac{1}{2}\)	1/ 1/	12:16 pm	81-1-8		7				19
	\ \ \ \	12:18pm	81-1-5			۲,	,	SP 50 31	81.
	ر بر	12:00 pm	8r1-5 /		1	1	Surface	SP 5@ 52	17
	\ \ \	10:45m	8-1-18		1	<u>\</u>	`	S1 40 S	16
	\ <u>\</u>	10:354	81-1-5		j			SP 4@ 41	5/.
	<u>'</u>	12:05	7-30-13		7	7		50 4 @ 3	14
	\\ \'\	11.50.11	4-30-18		1		wf ACC	SP 40 5	2
	\ <	9:554	5-1-8	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	7	7	07	SP 3 @	n
	2	9.45Am	8-1-5		7	7	141	SP3@ 3	11
		TIME	ICE	SLU					H861216
BTa	Cl' Ext	- 10	/ COOL	JDGE HER : D/BASE	OUNDW STEWA	RAB OR ONTAIN		Sample I.D.	Lab I.D.
<i>Ex</i>									
	TP	NG G	PRESERV. SAMPLING	$\frac{1}{2}$	MATRIX	P.			FOR LAB USE ONLY
	Н			Fa			84 Ker	Bruce 6	Sampler Name:
			· #:	Phone #:			W	" NEDU 613	Project Location:
			Zip:	State:					Project Name:
		į	·	City:			Project Owner:	;	Project #:
	_		ess:	Address:			Fax #:		Phone #:
				Attn:	28340	Zip: 2	State: MM	obs	city: Hobbs
			Company:	Com					Address:
			#:	P.O. #:			BAKET	E.	Project Manager:
ANALYSIS REQUEST			BILL TO					Apache	Company Name:
							((575) 393-2476	(575) 393-2326 FAX (575) 393-2476	
						0	lobbs, NM 8824	101 East Marland, Hobbs, NM 88240	



Company Name: ADACAR		BILL TO	ANALYSIS REQUEST
Project Manager: Bouce Bouce		P.O. #	
		Company:	
City: State:	Zip:	Attn:	
Phone #: Fax #:		Address:	
Project #: Project Owner:		City:	
Project Name:		State: Zip:	
Project Location: ルEOは、を13		*	
Sampler Name: Bruce Baker		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: DA	CI
1 SP 6 @ 41	1		\$
9	0 1		*
	6 7	V, 5-1-18 3.15pm	\
SP 6 @ 7'	6 /	5-1-18 3:21 pm	//
25 51 60 81	0	V 5-1-18 3:25m	

arusted 3.357

Sample Condition
Cool Intact
Tres Tres
No No

CHECKED BY:

Sampler)- UPS - Bus - Other: Delivered By: (Circle One) Relinquished By:

Bruce Baker

Time; 1744

Received By

S-2-18

Phone Result: Fax Result: REMARKS:

□ Yes

NO S

|Add'| Phone #: |Add'| Fax #:

Email Results

Time: Date: Relinquished By



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

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

Accreditation applies to public drinking water matrices.

Celeg L. Keene

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: Reported: 05/29/2018

05/31/2018

Project Name: Project Number: Project Location:

Analyte

Analyte

NEDU #613 NEDU #613 NONE GIVEN Sampling Date:

05/29/2018

Sampling Type:

Soil

Sampling Condition: Sample Received By: ** (See Notes)

Jodi Henson

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

Chloride, SM4500CI-B

mg/kg

Result

640

Result

192

Result

672

Analyzed By: AC

Reporting Limit Analyzed

Method Blank ND

BS 416 104

% Recovery

True Value QC 400

True Value QC

400

400

Qualifier RPD

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

Chloride, SM4500CI-B

mg/kg

16.0

Reporting Limit

16.0

16.0

Reporting Limit

16.0

16.0

Analyzed By: AC

Analyzed

05/30/2018

Method Blank

Chloride

Chloride

Chloride

Chloride

Chloride

784

05/30/2018

ΝD

B\$ 416

104

% Recovery

RPD 3.77

3.77

Qualifier

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

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Analyte Result Reporting Limit

Analyzed

05/30/2018

Analyzed

05/30/2018

05/30/2018

Method Blank ND

BS 416 % Recovery

104

True Value QC

RPD

3.77

Qualifier

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

Chloride, SM4500CI-B

Analyte

mg/kg

Analyzed By: AC

Method Blank

ND

ND

BS 416

88

% Recovery

104

104

True Value QC

400

RPD

3.77

Qualifier

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

Chloride, SM4500CI-B

Analyzed By: AC

Analyte

Result

608

Reporting Limit Analyzed

Method Blank

% Recovery 416

True Value QC 400

RPN 3.77

Qualifier

Cardinal Laboratories

*=Accredited Analyte

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College Thomas

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: Reported: 05/29/2018 05/31/2018

Project Name:

NEDU #613 **NEDU #613**

Project Number: Project Location:

NONE GIVEN

Sampling Date:

05/29/2018

Sampling Type:

Soil

Sampling Condition: Sample Received By: ** (See Notes)

Jodi Henson

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

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					<u></u>
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' (H	801457-11)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d 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' (H	801457-12)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d 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' (H	801457-13)								
Chloride, SM4500CI-B	•	/kg	Analyze	d 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' (H	801457-14)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d 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	

Cardinal Laboratories

*=Accredited Analyte

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Colog L. France



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

Chloride by SM4500CI-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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College trans



Company Name: 1901478 1901478 Phone #: Address: Project Manager: Sampler Name: Project Location: Project #: Project Name: FOR LAB USE ONLY Hobbs 101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476 Sp 750x Gruce Gruce HOMCHA Sample I.D. @ 1 613 BAKer Fax #: Project Owner: State: NM Zip: \$8240 00000 (G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER MATRIX SOIL OL SLUDGE City: Attn: State: Address: Company: P.O. #: Phone #: Fax #: OTHER PRESERV. ACID/BASE ICE / COOL BILL TO OTHER Zipi 209-18 9:44 AM 5-29-19 9:40m SAMPLING DATE TIME Cl ANALYSIS REQUEST

O

S/ 2 50 2 SP

الما

641 5 -00

SP

(S)

5-21-0 10:15AM

8-25-18 10:20m 8-29-18 10.2100 5-21-10:18Am 221-18 10:02m

5-29-18 10:03 m

5-29-10:11m

5-23-1 10:00m

+ Cardinal rannot arrest works channed

Diages

for written channes to (ETE) 202,2226



101 Ea	101 East Marland, Hobbs, NM 88240	•			ANALYSIS DECLIEST	
ompany Name:	Reache		BILL TO		ANALIGIS	
Project Manager:	Bruce BAKET		P.O. #:	<u></u>		
Address:		5	Company:			_
city: Hobbs	State: NM:	Zip: 882.40	Attn:			
1	Fax#:		Address:			_
HOIR H	Project Owner:		City:			_
Project #:			State: Zip:			_
Project Name:	1		#			
Project Location:	NEON GIS		THOUGH.			_
Sampler Name:	Bruce Baker		Fax #:	<u> </u>		
FOR LAB USE ONLY	- 1	MATRIX	TAROUNA GAME			_
Lab I.D.	Sample I.D.	RAB OR (C)OMF CONTAINERS COUNDWATER ASTEWATER OIL L UDGE	THER: CID/BASE: E / COOL THER:	CI-		
NORTH IN	SP 2 80 //	~ #	de	D:SSame V		
	ر در	6 - 1	201-101 Kr. 67-5	0: 40 a		
S	E	-	2001 1 6-12-5	7 - 200.		
S 41(P 4@21	7		-		
DI CASS MOTE: Liability and Dark	ne see acres. Lability and Darmose. Combinate abolity and clearly exclusive nemacy for any claim modely whether based in combined what, shall be limited to the semicon paid by the deart for the applicable.	any chain arising whether based in com	bect of tort, shall be limited to the amount paid and received by Cardinal within 30 times after	by the client for the completion of the applicable		i
partice. In no event shall Cardinal sittletes or successors wisting out o	samples. A limite is a state to incidental or consequental damages, including whold frameson, natures manufactures in based upon any of the above stated mesons or otherwise, service. In no event stated called called to the performance of services have under by Caudian particular by Caudian particular published such particular published and particular published and particular published particular published published particular published particular published publi	ng without immater, durantee manual of Cardinal, regardless of whether such of Cardinal Parks (New York)	aim is based upon any of the above stated real	Phone Result: D Yes D No	Add'l Phone #:	
Relinquished By:	Date: 31-18 Time: 12:39,m		Menson-			
Relinquished By:	#75 Time:	9	1	Q.		
Delivered By: (C	Delivered By: (Circle One)	Sample Con Inta	res Indicate			
Sampler - UPS - E		I W KI	No STA			

+ Perdinal rennot errent workel channes Blasce for written channes to (675) 263-2728



Analytical Results For:

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

Fax To:

Received: Reported: 05/29/2018

Project Name:

05/31/2018 NEDU #613 NEDU #613

Project Number: 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, SM4500CI-B	mg.	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	05/30/2018	ND	416	104	400	0.00	
Sample ID: SP 1 @ 2' (H	801457-02)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d 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' (H	801457-03)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d 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' (H	801457-04)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d 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	

*=Accredited Analyte Cardinal Laboratories

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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: <u>Hernandez, Christina, EMNRD</u>

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 < <u>Larry.Baker@apachecorp.com</u>>

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

APACHE CORPORATION 2350 W. MARLAND BLVD HOBBS , NM 88240

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