

2350 W Marland Blvd Hobbs, NM 88240

### **Corrective Action Plan**

By Olivia Yu at 8:29 am, Jul 27, 2018

**APPROVED** 

NMOCD approves of the delineation completed for 1RP-5006. For the proposed remediation, each different depth of excavation must have corresponding sidewall and bottom confirmation samples at no greater than 50 ft. apart.

July 2, 2018

Re: EBDU 28 API# 30-025-06538 Case # 1RP-5006

To: Olivia Yu

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

### Background:

On March 23, 2018 a release occurred due to a buried injection line failed resulting in the loss of produced water. An initial C-141 was submitted to NMOCD on March 30, 2018. The release area is located north of Eunice New Mexico (GPS Coordinates 32.499752 -103.1231003) in unit letter D section 12 Township 21S Range 37E. A search radius of 2000 meters for groundwater wells was conducted utilizing data from the NMOSE and USGS. A total of 5 USGS wells were found to be inside the radius. Two wells our located inside the bottom of Monument Draw and were excluded from the average the remaining three wells estimate groundwater below the release area to be 73 feet.

A total of 7 verticals were conducted utilizing a backhoe in one foot intervals to delineate the vertical extend of contamination on May 7 through May 9, 2018. Field samples were collected and titrated for chlorides. Representative samples were collected from all verticals and submitted to a commercial laboratory for analysis of CI-, TPH, and BTEX.

### **Corrective Action:**

Upon review of the vertical data collected Apache Corporation proposes that the area around SP 1 be excavated to a depth of two feet below ground surface. The area around SP 3 be excavated to a depth of 3 feet below ground surface. The area around SP 2, 4, 5, 6 be excavated to a depth of one foot below ground surface. The pasture area SP 7 be excavated to a depth of 4 feet below ground surface. Once the excavation is complete final wall and bottom samples will be collected and submitted to a commercial laboratory for analysis. All excavated material will be exported to a NMOCD approved disposal facility. The excavation will be backfield with imported caliche for the lease road and pad and topsoil for the excavation in the pasture. Attached is the data for your review.

*Enclosed: Initial C-141, Groundwater Data, Sample Diagram, Sample Data, and Laboratory Results* 

Submitted by;

Bruce Baker

Environmental Technician larry.baker@apachecorp.com Cell# 432-631-6982 Off# 575-393-7106

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

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

Revised August 8, 2011 Submit 1 Copy to appropriate District Office in

Form C-141

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 EBDU 28	Facility Type Injection Well		

Surface	Owner	Private	

Mineral Owner Federal

API No. 30-025-06538

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	12	21S	37E	330	FNL	660'	FWL	Lea

Latitude 37.499752 Longitude -103.1231003

### NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 50 barrels of produced water	Volume Recovered 40 barrels of produced water					
Source of Release fiberglass line	Date and Hour of Occurrence Date and Hour of Discovery 3/23/2018 at 8:00 a.m.						
Was Immediate Notice Given?	If YES, To Whom?						
🗌 Yes 🛛 No 🗌 Not Required	Olivia Yu (NMOCD) left message and sent email						
By Whom? Bruce Baker	Date and Hour 3/26/2018 at 9:30 a	m					
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.						
		the second se					
If a Watercourse was Impacted, Describe Fully.*	<b>RECEIVED</b> By Olivia Yu at 3:5	2 pm, Apr 02, 2018					

Describe Area Affected and Cleanup Action Taken.\*

The majority of the release was contained to lease road and pad except for a small portion of pasture was affected approximately 2000 square feet.

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.

	OIL CONSERVATION DIVISION
Signature: Bruce Bachen	<b>5</b> 4
Printed Name: Bruce Baker	Approved by Environmental Specialist:
Title: Environmental Technician	Approval Date: 4/2/2018 Expiration Date:
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval:
Date: 3/30/2018 Phone: (432) 631-6982	See attached directive
Attach Additional Sheets If Necessary	[1RP-5006]

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Search Results -- 1 sites found

Agency code = usgs site\_no list = • 323025103062801

### Minimum number of levels = 1

Save file of selected sites to local disk for future upload

### USGS 323025103062801 21S.37E.01.242422

Available data for this site Groundwater: Field measurements V GO Lea County, New Mexico Hydrologic Unit Code 13070007 Latitude 32°30'25", Longitude 103°06'28" NAD27 Land-surface elevation 3,556 feet above NAVD88 The depth of the well is 90 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	

https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels/?site\_no=323025103062801&agency\_c... 5/30/2018

USGS 323025103062801 215.37E.01.242422



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

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Agency code = usgs site\_no list = • 323022103062301

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### USGS 323022103062301 215.38E.06.133211

 Available data for this site
 Groundwater: Field measurements
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 Lea County, New Mexico
 Hydrologic Unit Code 13070007

 Latitude
 32°30'22", Longitude 103°06'23" NAD27

 Land-surface elevation 3,556 feet above NAVD88

 The depth of the well is 90 feet below land surface.

 This well is completed in the Ogallala Formation (1210GLL) local aquifer.

 Output formats

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 Graph of data

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### Minimum number of levels = 1

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### USGS 322901103071101 21S.37E.12.34331

Available data for this siteGroundwater: Field measurements✓GOLea County, New MexicoHydrologic Unit Code 13070007Latitude 32°29'01", Longitude 103°07'11" NAD27Land-surface elevation 3,431 feet above NAVD88The depth of the well is 100 feet below land surface.This well is completed in the Alluvium, Bolson Deposits and Other SurfaceDeposits (110AVMB) local aquifer.

### **Output formats**

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https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels/?site\_no=322901103071101&agency\_c... 5/30/2018

USGS 322901103071101 215,37E,12,34331



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### USGS 322932103082701 21S.37E.11.311111

Available data for this siteGroundwater:Field measurements✓GOLea County, New MexicoHydrologic Unit Code --Latitude 32°29'32", Longitude 103°08'27" NAD27Land-surface elevation 3,410 feet above NAVD88The depth of the well is 75 feet below land surface.This well is completed in the Alluvium, Bolson Deposits and Other SurfaceDeposits (110AVMB) local aquifer.

### **Output formats**

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USGS Water Resources

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Agency code = usgs site\_no list = • 322921103083001

### **Minimum number of levels =** 1

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### USGS 322921103083001 21S.37E.11.311114

Available data for this site Groundwater: Field measurements

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**

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Depth         Field CI-         Lab CI-         Benzene         Toluene         Ethybenzene         Toluene         Ethybenzene         Tota X           1'         1563         3800         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.050         <0.								i			1,178	Surface	
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SP1           Sp1           surface         3,295         3800         40,050 $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$ $< 0,050$										:			
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Spent         Field CI-         Banzene         Toluene         Ethybenzene         Total Mylenes         Total BTEX         GRO         DRO           1'         15.63         3800         -0.050         -0.0											450	<b>,</b> 6	
bepth         Field CI-         Lab CI-         Benzene         Toluene         Ethybenzen         Total BTX         GRO         4.00											367	8,	
Spent         Field CI         Lab CI-         Benzene         Toluene         Ethybenzene         Total BTX         GR0         DR0           1'         1563         3800         -0.050											498	7'	
Depth         Field Cl.         Lab Cl.         Benzene         Toluene         Ethybenzene         Total Nylenes         Total BTEX         GRO         DRO           1'         1563         3800         <0.050										128	613	<u>6</u>	
Depth         Field C1         Lab C1         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GR0         DR0           1''         1563         3800         <0.050										736	928	5'	
Depth         Field Cl-         Lab Cl-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GR0 $QOO<           1'         1563           QOO<$										352	583	4'	
SP1           SP1           surface         3,295         3800 $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ $< 0.050$ <											581	ω	
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h         Field CI-         Lab CI-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GRO         DRO           2e         3,295         3800         <0.050	-										308	1'	
Field CI-         Lab CI-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GR0         DR0           3,295         3800         <0.050	0.0	<10	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	6260	5,746	Surface	
Field Cl-         Lab Cl-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GRO         DRO           3,295         3800         <0.050	DRO	EXT	DRO	GRO	Total BTEX	Total Xylenes	Ethybenzene	Toluene	Benzene	Lab Cl-	Field Cl-	Depth	
Field CI-         Lab CI-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GRO         DRO           3,295         3800         <0.050						SP 2							
Field CI-         Lab CI-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GRO         DRO           3,295         3800         <0.050									·				
Field Cl-         Lab Cl-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GR0         DR0           3,295         3800         <0.050										320	226	11'	
Field Cl-         Lab Cl-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GRO         DRO           3,295         3800         <0.050										336	235	10'	
Field Cl-         Lab Cl-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GR0         DR0           3,295         3800         <0.050		-									420	وو	
Field Cl-         Lab Cl-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GRO         DRO           3,295         3800         <0.050											263	8	
Field Cl-         Lab Cl-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GRO         DRO           3,295         3800         <0.050											364	۲'	
Field Cl-         Lab Cl-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GRO         DRO           3,295         3800         <0.050											306	6,	
Field Cl-         Lab Cl-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GRO         DRO           3,295         3800         <0.050						2					418	Š	
Field Cl-         Lab Cl-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GRO         DRO           3,295         3800         <0.050											226	4'	
Field Cl-         Lab Cl-         Benzene         Toluene         Ethybenzene         Total Xylenes         Total BTEX         GRO         DRO           3,295         3800         <0.050										720	320	ع	
SP 1         Field Cl-       Lab Cl-       Benzene       Toluene       Ethybenzene       Total Xylenes       Total BTEX       GRO       DRO         3,295       3800       <0.050	0.0	<10	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	592	649	2'	
SP 1       SP 1         Field Cl-       Lab Cl-       Benzene       Toluene       Ethybenzene       Total Xylenes       Total BTEX       GRO       DRO         3,295       3800       <0.050											1563	1	
SP 1 Field Cl- Lab Cl- Benzene Toluene Ethybenzene Total Xylenes Total BTEX GRO DRO	0.0	<10	21.7	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	3800	3,295	Surface	
SP 1	DRO	EXTI	DRO	GRO	Total BTEX	<b>Total Xylenes</b>	Ethybenzene	Toluene	Benzene	Lab Cl-	Field Cl-	Depth	
						SP 1							

## **EBDU 28 Delineation Data**

2 <u>-</u>	4	3' 2'	2'	1' 2	Surface 8,	Depth   Fie		~		ice	Depth Fie		2'	1	Surface	Depth Fie		2'	<u>1</u>	Surface 2	Depth Fie		4		
147	240	447	226	2659	8,090	Field Cl-		1/4	193		Field CI-		181	210		Field CI-		112	184	2226	Field Cl-		184	229	
32	160	400	320			Lab Cl-	2	70	t &	39200	Lab Cl-		16	32	81600	Lab CI-		<16	304	64	Lab CI-		224	32	
			<0.050			Benzene				<0.050	Benzene				<0.050	Benzene				<0.050	Benzene				
			<0.050			Toluene				<0.050	Toluene				<0.050	Toluene				<0.050	Toluene				
			<0.050			Ethybenzene				<0.050	Ethybenzene				<0.050	Ethybenzene				<0.050	Ethybenzene				
			<0.150			<b>Total Xylenes</b>	SP 7			<0.150	Total Xylenes	SP 6			<0.150	Total Xylenes	SP 5			<0.150	<b>Total Xylenes</b>	SP 4			
			<0.300			Total BTEX				<0.300	Total BTEX				<0.300	Total BTEX				<0.300	Total BTEX	53			
			<10.0			GRO				<10.0	GRO				<10.0	GRO				<10.0	GRO				
			<10.0			DRO				63.8	DRO				63.8	DRO				<10.0	DRO				
			<10.0			EXT DRO				<10.0	EXT DRO				17.2	EXT DRO				<10.0	EXT DRO				
Tan Caliche	Tan Caliche	Tan Caliche	Brown Sand/Caliche	Brown Sand	Brown Sand	Soil Description			Brown Sand	Caliche	Soil Description		Brown Sand	Brown Sand	White Caliche	Soil Description		Brown Sand	White Caliche	White Caliche	Soil Description		Tan Caliche	Brown Sand	



May 11, 2018

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

**RE: E8DU 28** 

Enclosed are the results of analyses for samples received by the laboratory on 05/07/18 13:26.

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 <a href="https://www.tceq.texas.gov/field/qa/iab\_accred\_certif.html">www.tceq.texas.gov/field/qa/iab\_accred\_certif.html</a>.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celeg Di Kune

Celey D. Keene Lab Director/Quality Manager

Page 1 of 6



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

Received:	05/07/2018	Sampling Date:	05/07/2018
Reported:	05/11/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	** (See Notes)
Project Number: Project Location:	NONE GIVEN NOT GIVEN	Sample Received By:	Tamara Oldaker

### Sample ID: SP 1 SURFACE (H801257-01)

BTEX 80216	mg/l	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/09/2018	ND	1.75	87.5	2.00	1.44	
Toluene*	<0.050	0.050	05/09/2018	ND	1.83	91.5	2.00	2.31	
Ethylbenzene*	<0.050	0.050	05/09/2018	ND	1.85	92.3	2.00	1.80	
Total Xylenes*	<0.150	0.150	05/09/2018	ND	5.69	94.8	6.00	1.30	
Total BTEX	<0.300	0.300	05/09/2018	ND					3
Surrogate: 4-Bromofluorobenzene (PIL	102 %	6 72-148	3						
Chloride, SM4500CI-B	mg/l	kg	Analyze	d By: AC					

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3800	16.0	05/08/2018	ND	400	100	400	0.00	
TPH 8015M	mg;	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/08/2018	ND	200	100	200	2.85	
DRO >C10-C28*	21.7	10.0	05/08/2018	ND	193	96.3	200	4.44	
EXT DRO >C28-C36	<10.0	10.0	05/08/2018	ND					
Surrogate: 1-Chlorooctane	84.1	% 41-142	2						
Surrogate: 1-Chlorooctadecane	83.2	% 37.6-14	17						

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\*=Accredited Analyte

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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:	05/07/2018	Sampling Date:	05/07/2018
Reported:	05/11/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

### Sample ID: SP 1 2' (H801257-02)

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	05/09/2018	ND	1.75	87.5	2.00	1.44	
Toluene*	<0.050	0.050	05/09/2018	ND	1.83	91.5	2.00	2.31	
Ethylbenzene*	<0.050	0.050	05/09/2018	ND	1.85	92.3	2.00	1.80	
Total Xylenes*	<0.150	0.150	05/09/2018	ND	5.69	94.8	6.00	1.30	
Total BTEX	<0.300	0.300	05/09/2018	ND					
Surrogate: 4-Bromofluorobenzene (PIL	104	% 72-148	3						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	05/08/2018	ND	400	100	400	0.00	
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	05/08/2018	ND	200	100	200	2.85	
DRO >C10-C28*	<10.0	10.0	05/08/2018	ND	193	96.3	200	4.44	
EXT DRO >C28-C36	<10.0	10.0	05/08/2018	ND					
Surrogate: 1-Chlorooctane	94.8	% 41-142	?						
Surrogate: 1-Chlorooctadecane	91.2	% 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:	05/07/2018	Sampling Date:	05/07/2018
Reported:	05/11/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

### Sample ID: SP 1 3' (H801257-03)

Chloride, SM4500CI-B	- mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	05/08/2018	ND	400	100	400	0.00	

### Sample ID: SP 1 10' (H801257-04)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	05/08/2018	ND	400	100	400	0.00	

### Sample ID: SP 1 11' (H801257-05)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	05/08/2018	ND	432	108	400	0.00	

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

### **Notes and Definitions**

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
	Chloride by SM4500CI-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

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Relinquished By: **Relinquished By:** Project Location: Project Name: Project #: City: Project Manager: Company Name: malyses. All claims including those for negligence and any other cause whetsoever shall be deemed Sampler Name: Phone #: Address: ervice. In no event shall Cantinal be liable for incidental or cons fillates or successors articleg out of or related to the partymeter 4801 257 Delivered By: (Circle One) EASE NOTE: Liability and Damagas, Cantinal's liability and client's exclusive remedy for any clai FOR LABUSE ONLY Lab I.D. Bruce Bacher Hobbs aboratories 101 East Marland, Hobbs, NM 88240 SPI SP (575) 393-2326 FAX (575) 393-2476 3 S V ŝ EBOU Gruce Bruce Sample I.D. HOACHO 2 ó 1 13.42 ષ્ટ્ ext ave 80 BAKer BAKer equental damages, including without limitation, business late Time: 26pm Project Owner: Fax #: Date: Date: 7-18 Time: State: N/M Zip: Sample Condition Cool Intact 13.3 14.1 No No 90 Recei (G) (G) RAB OR (C) OMP. **Received By:** # CONTAINERS waived unless made in writing and received by Cardinal within 30 days after completion of the applicable Imritation, business Interruptions, loss of use, or loss of profits incurred by clent. Its subsidiaries, 88240 mara GROUNDWATER pd By WASTEWATER MATRIX SOIL waed in contract or tort, shall be limited OIL. SLUDGE State: City Attn: P.O. #: OTHER Phone #: Fax #: Address: Company: PRESERV. ACID/BASE: CHECKED BY: (Initials) ICE / COOL BILL TO OTHER 12101-1-5 to the amount paid by the client for the Zip: 5-7-18 12:00pm 5-7-18 9:4540 5-7-18 10:3014 5-7-18 10:15 AM DATE SAMPLING Phone Result: Fax Result: REMARKS: CHAIN-OF-CUSTODY AND ANALYSIS REQUEST TIME Email Results CI C Yes C No Ext. TPH BTEX < Add'l Phone #: Add'l Fax #: ANALYSIS REQUEST

Page 6 of 6

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Sampler - UPS - Bus - Other:



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

June 12, 2018

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

RE: EBDU 28

Enclosed are the results of analyses for samples received by the laboratory on 05/09/18 15:22.

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/ab 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.

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

Sincerely,

Celeg D. Keine

Celey D. Keene Lab Director/Quality Manager

Page 1 of 17



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

Received:	05/09/2018	Sampling Date:	05/08/2018
Reported:	06/12/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

### Sample ID: SP 2 @ SURFACE (H801291-01)

**BTEX 8021B** mg/kg Analyzed By: MS Reporting Limit Analyzed Method Blank BŞ True Value QC RPD Qualifier Analyte Result % Recovery Benzene\* < 0.050 0.050 05/10/2018 ND 1.70 85.0 2.00 2.95 < 0.050 0.050 05/10/2018 ND 90.9 2.00 Toluene\* 1.82 1.62 05/10/2018 Ethylbenzene\* < 0.050 0.050 ND 1.83 91.5 2.00 1.51 **Total Xylenes\*** 05/10/2018 1.21 <0.150 0.150 ND 5.65 94.1 6.00 Total BTEX < 0.300 0.300 05/10/2018 ND

Surrogate 4-Bromofluorobenzene (PIL 103 % 72-148

Chloride, SM4500CI-8	mg/kg		Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6260	16.0	05/11/2018	ND	432	108	400	0.00	
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	05/10/2018	ND	183	91.6	200	3.79	
DRO >C10-C28*	<10.0	10.0	05/10/2018	ND	194	96.9	200	4.28	
EXT DRO >C28-C36	<10.0	10.0	05/10/2018	ND					
Surrogate: 1-Chlorooctane	85.7	% +1-1+2	?						
Surrogate: 1-Chlorooctadecane	77.6	% 37.6-14	17						

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### \*=Accredited Analyte

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

Received:	05/09/2018	Sampling Date:	05/08/2018
Reported:	06/12/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

### Sample ID: SP 2 @ 4' (H801291-02)

Chloride, SM4500Cl-B	oride, SM4500Cl-B mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	05/11/2018	ND	432	108	400	0.00	

### Sample ID: SP 2 @ 5' (H801291-03)

Chloride, SM4500CI-B	-B mg/kg			Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	05/11/2018	ND	432	108	400	0.00	

### Sample ID: SP 2 @ 6' (H801291-04)

Chloride, SM4500CI-8	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	05/11/2018	ND	432	108	400	0.00	

### Sample ID: SP 2 @ 10' (H801291-05)

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	05/11/2018	ND	432	108	400	0.00	

### Sample ID: SP 2 @ 11' (H801291-06)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	05/11/2018	ND	432	108	400	0.00	

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

Re	ceived:	05/09/2018	Sampling Date:	05/08/2018
Rej	ported:	06/12/2018	Sampling Type:	Soil
Pro	oject Name:	EBDU 28	Sampling Condition:	Cool & Intact
Pro	oject Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Pro	oject Location:	NOT GIVEN		

### Sample ID: SP 3 @ 1' (H801291-07)

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	05/10/2018	ND	1.70	85.0	2.00	2.95	
Toluene*	<0.050	0.050	05/10/2018	ND	1.82	90.9	2.00	1.62	
Ethylbenzene*	<0.050	0.050	05/10/2018	ND	1.83	91.5	2.00	1.51	
Total Xylenes*	<0.150	0.150	05/10/2018	ND	5.65	94.1	6.00	1.21	
Total BTEX	<0.300	0.300	05/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PIL	103	% 72-148	1						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	05/11/2018	ND	432	108	400	0.00	
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	05/10/2018	ND	183	91.6	200	3.79	
DRO >C10-C28*	<10.0	10.0	05/10/2018	ND	194	96.9	200	4.28	
EXT DRO >C28-C36	<10.0	10.0	05/10/2018	ND					
Surrogate: 1-Chlorooctane	87.1	% 41-142							
Surrogate: 1-Chlorooctadecane	79.6	% 37.6-14	7						

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\*=Accredited Analyte

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

Received:	05/09/2018	Sampling Date:	05/08/2018
Reported:	06/12/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

### Sample ID: SP 3 @ 3' (H801291-08)

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	05/11/2018	ND	432	108	400	0.00	

### Sample ID: SP 3 @ 4' (H801291-09)

Chloride, SM4500CI-B mg/kg		Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	05/11/2018	ND	432	108	400	0.00	

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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:	05/09/2018	Sampling Date:	05/08/2018
Reported:	06/12/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

### Sample ID: SP 4 @ SURFACE (H801291-10)

**BTEX 8021B** Analyzed By: MS mg/kg Analyte Result **Reporting Limit** Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier < 0.050 0.050 05/10/2018 ND 1.70 85.0 2.00 2.95 Benzene\* 05/10/2018 < 0.050 0.050 ND 2.00 Toluene\* 1.82 90.9 1.62 Ethylbenzene\* < 0.050 0.050 05/10/2018 ND 1.83 91.5 2.00 1.51 Total Xylenes\* < 0.150 0.150 05/10/2018 ND 94.1 6.00 1.21 5.65 Total BTEX < 0.300 0.300 05/10/2018 ND Surrogate: 4-Bromofluorobenzene (PIL 103 % 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 64.0 16.0 05/11/2018 ND 432 108 400 0.00 **TPH 8015M** Analyzed By: MS mg/kg Analyte Reporting Limit Analyzed Method Blank BS True Value QC RPD Qualifier Result % Recovery GRO C6-C10\* <10.0 10.0 05/10/2018 ND 183 91.6 200 3.79 DRO >C10-C28\* <10.0 10.0 05/10/2018 ND 194 96.9 200 4.28 EXT DRO >C28-C36 <10.0 10.0 05/10/2018 ND 88.7% 41-142 Surrogate: 1-Chlorooctane Surrogate: 1-Chlorooctadecane 83.0% 37.6-147

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\*=Accredited Analyte

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

Received:	05/09/2018	Sampling Date:	05/08/2018
Reported:	06/12/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN	1.5	

### Sample ID: SP 4 @ 1' (H801291-11)

Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method 8lank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	05/11/2018	ND	432	108	400	0.00	

### Sample ID: SP 4 @ 2' (H801291-12)

Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AC		-			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	05/11/2018	ND	432	108	400	0.00	

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Received:	05/09/2018	Sampling Date:	05/09/2018
Reported:	06/12/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

### Sample ID: SP 5 @ SURFACE (H801291-13)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	05/10/2018	ND	1.70	85.0	2.00	2.95	
Toluene*	<0.050	0.050	05/10/2018	ND	1.82	90.9	2.00	1.62	
Ethylbenzene*	<0.050	0.050	05/10/2018	ND	1.83	91.5	2.00	1.51	
Total Xylenes*	<0.150	0.150	05/10/2018	ND	5.65	94.1	6.00	1.21	
Total BTEX	<0.300	0.300	05/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PIL	99.1	% 72-148	3						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifie
Chloride	81600	16.0	05/11/2018	ND	432	108	400	0.00	
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	05/10/2018	ND	183	91.6	200	3.79	
DRO >C10-C28*	63.8	10.0	05/10/2018	ND	194	96.9	200	4.28	
EXT DRO >C28-C36	17.2	10.0	05/10/2018	ND					
Surrogate 1-Chlorooctane	78.6	% 41-142	?						
Surrogate: 1-Chlorooctade cane	77.4	% 37.6-14	7						

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Received:	05/09/2018	Sampling Date:	05/09/2018
Reported:	06/12/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

### Sample ID: SP 5 @ 1' (H801291-14)

Chioride, 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	05/11/2018	ND	432	108	400	0.00	

### Sample ID: SP 5 @ 2' (H801291-15)

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	05/11/2018	ND	432	108	400	0.00	

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

Received:	05/09/2018	Sampling Date:	05/09/2018
Reported:	06/12/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

### Sample ID: SP 6 @ SURFACE (H801291-16)

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	05/10/2018	ND	1.70	85.0	2.00	2.95	
Toluene*	<0.050	0.050	05/10/2018	ND	1.82	90.9	2.00	1.62	
Ethyibenzene*	<0.050	0.050	05/10/2018	ND	1.83	91.5	2.00	1.51	
Total Xylenes*	<0.150	0.150	05/10/2018	ND	5.65	94.1	6.00	1.21	
Total BTEX	<0.300	0.300	05/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PIE	100 \$	% 72-148	2						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	39200	16.0	05/11/2018	ND	432	108	400	0.00	
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	05/10/2018	ND	183	91.6	200	3.79	
DRO >C10-C28*	63.8	10.0	05/10/2018	ND	194	96.9	200	4.28	
EXT DRO >C28-C36	<10.0	10.0	05/10/2018	ND					
Surrogate: 1-Chlorooctane	76.3	% 41-142	?						
Surrogate: 1-Chlorooctadecane	73.5	% 37.6-14	7						

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Received:	05/09/2018	Sampling Date:	05/09/2018
Reported:	06/12/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		12

### Sample ID: SP 6 @ 1' (H801291-17)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	8S	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/11/2018	ND	432	108	400	0.00	

### Sample ID: SP 6 @ 2' (H801291-18)

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	05/11/2018	ND	432	108	400	0.00	

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

Received:	05/09/2018	Sampling Date:	05/09/2018
Reported:	06/12/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

### Sample ID: SP 7 @ 2' (H801291-19)

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	05/10/2018	ND	1.70	85.0	2.00	2.95		
Toluene*	<0.050	0.050	05/10/2018	ND	1.82	90.9	2.00	1.62		
Ethylbenzene*	<0.050	0.050	05/10/2018	ND	1.83	91.5	2.00	1.51		
Total Xylenes*	<0.150	0.150	05/10/2018	ND	5.65	94.1	6.00	1.21		
Total BTEX	<0.300	0.300	05/10/2018	ND						
Surrogate: 4-Bromofluorobenzene (PIL	100	% 72-148	2							
Chloride, SM4500CI-8	mg,	/kg	Analyze	d By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	05/11/2018	ND	432	108	400	0.00		
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		05/10/2018	ND	183	91.6	200	3.79		
DRO >C10-C28*	<10.0	10.0	05/10/2018		194	96.9	200	4.28		
EXT DRO >C28-C36	<10.0	10.0	05/10/2018	ND						
Surrogate: 1-Chlorooctane	77.3	% 41-142	2							
Surrogate: 1-Chlorooctadecane	68.7	% 37.6-14	-							

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Received:	05/09/2018	Sampling Date:	05/09/2018
Reported:	06/12/2018	Sampling Type:	Soil
Project Name:	EBDU 28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

### Sample ID: SP 7 @ 3' (H801291-20)

Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	05/11/2018	ND	432	108	400	0.00	

### Sample ID: SP 7 @ 4' (H801291-21)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	05/11/2018	ND	432	108	400	0.00	

### Sample ID: SP 7 @ 5' (H801291-22)

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	05/11/2018	ND	432	108	400	0.00	

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### **Notes and Definitions**

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's. QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values. QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery. ND Analyte NOT DETECTED at or above the reporting limit RPD **Relative Percent Difference** \*\* Samples not received at proper temperature of 6°C or below. Insufficient time to reach temperature. ... Chloride by 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

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Cardinal rannot arrent vertai rhannee	(Circle One) Bus - Other: 4.82	2		Barr		o epun	*LEASE NOTE: Libbity and Carmages. Candina's labitity and clears exclusive remedy for any clears arising whether based in contract or lock shall be britted to the amount paid by the cleant for the malyses. All cleans including those for negligence and any other cause whetherway shall be deened where unkned unless made in writing and received by Candinal within 30 days after completion of the ag		ଁ ଅତି	20 30 31	3 ©	R B	8 (9)	ସ ତା		හ ල	e R		Sample I.D.			Bruce Br	EBDU 28						Bruce	Apache	101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476		borat	PRDI
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~ (575) 202.0 Vr	dition CHECKED/8			Uendo		m, loss of use, or loss of profits incurred b im is beted upon any of the above stated	ract or lort, shall be limited to th and neceived by Candinal within		2	- - - -	57	V 5	S 1A	5 1/2		115	2	SLUDO OTHEF ACID/E ICE / C OTHEF	R : BASE: COOL		PRESERV.	Fax #:	Phone #:	State: Zi	City:	Address:	Attn:	Company:	P.O. #:	BILL				
	X			REMARKS:		s incurred by client, its subsidiation in the state of th	he amount paid by the client fo In 30 days after completion of t					_	10000 1 81-8-5	WY82 21 BI-8-5	5-8-18 10: c2 Am	5-8-18 9:30AM	2-8-18 9:00 AM	DATE TIME			SAMPLING			Zip:						170		CHAIN-OF-CUSTODY AND ANALYSIS REQUEST		
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**Relinquished By:** efficients or successors arising out of or related to the pa Relinquished By: Phone #: City: Sampled - UPS - Bus - Other: PLEASE NOTE: Lability and Damages, Candinat's Bability and client's exclusive remacy for any clean withing whether based in contract or for, shat be limited to the amount paid by the client for the makevers. All claims including those for negligence and any other cards whatssever shall be deamed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable makevers. All claims including those for negligence and any other cards whatssever shall be deamed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable of the share of the share of the applicable of the share of the share of the applicable of the share of the applicable of the share of the applicable of the share of the share of the applicable of the share of the applicable of the share of Sampler Name: Project Location: Project Name: Project #: Project Manager: Company Name: ervice. In no event shall Cardinal be Eable for incidental or Address: Delivered By: (Circle One) 182nagh FOR LAB USE ONLY Lab I.D. + Corrlinal connet accent varbal channes Dlasca fav written channes to ISTSI 202-1996 Buce Baher 8 0 16 9 Ho bbs r S  $\overline{\mathbf{S}}$ <del>с</del> S Sp SP SP SP SP (575) 393-2326 FAX (575) 393-2476 101 East Marland, Hobbs, NM 88240 ŝ Sp EBOU 28 6 6 6 5 Bruce Baker 5 ſ Bruce Baker M Sample I.D HOAChe @ 11 B もも、 Ø 0 ୭ ひんしてもので Suntace 2 Ŕ 4.80 # Date: uental damages, including Time: Dane: 9-19 Project Owner: Fax #: State: NM tentunder by 4,75% 2<u>1</u>2 without I mits <u>6</u> 0 COCO (G)RAB OR (C)OMP Received By: # CONTAINERS eived By 04588 GROUNDWATER Sample Condition Cool Intact Yes P Yes No No No WASTEWATER MATRIX SOIL 5 7 4 OIL SLUDGE loss of use, or loss of profits incurred by client, its subsidiaries State: City: P.O. #: OTHER Fax #: Attn: Phone #: Address: Company: ACID/BASE: PRESERV CHECKED BY ICE / COOL any of the above stated BILL TO OTHER 5-9-18 5-7-18 Zip: 5-9-18 10: iTAM 8-9-18 5-9-18 9:154M 5-8-18 1:15 pm 5-8-18 1:07pm 5-9-18 9:001m 2-8-18 1:00pm DATE SAMPLING reasons or otherwise 10:2 AM 9:25AM Fax Result: REMARKS: CHAIN-OF-CUSTODY AND ANALYSIS REQUEST Phone Result: 10:01 Am TIME email <u>C</u> < O Yes Ext. TPH BTEX < N N N Add'l Phone #: Add'l Fax #: ANALYSIS REQUEST

Laboratories

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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

(0/0) JJJ-2J20 FAX (0/0) JJJ-24/6	393-2416							
Company Name: Apache		BILL TO	Contraction and Date	3		ANALYSIS RE	REQUEST	
Project Manager: Bruce BAKer		P.O. #		-	-			
Address:		Company:						
city: Hobbs State:	e: NM ZIP: 38240	Attn:						
Phone #: Fax #:	J.	Address:						
Project #: Projec	Project Owner:	City:						
Project Name:		State: Zip:			_			
Project Location: EBUL 28		*		_				
Bruce		Fax #:						
	MATRIX	PRESERV. SAMPLING	ING	1				
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