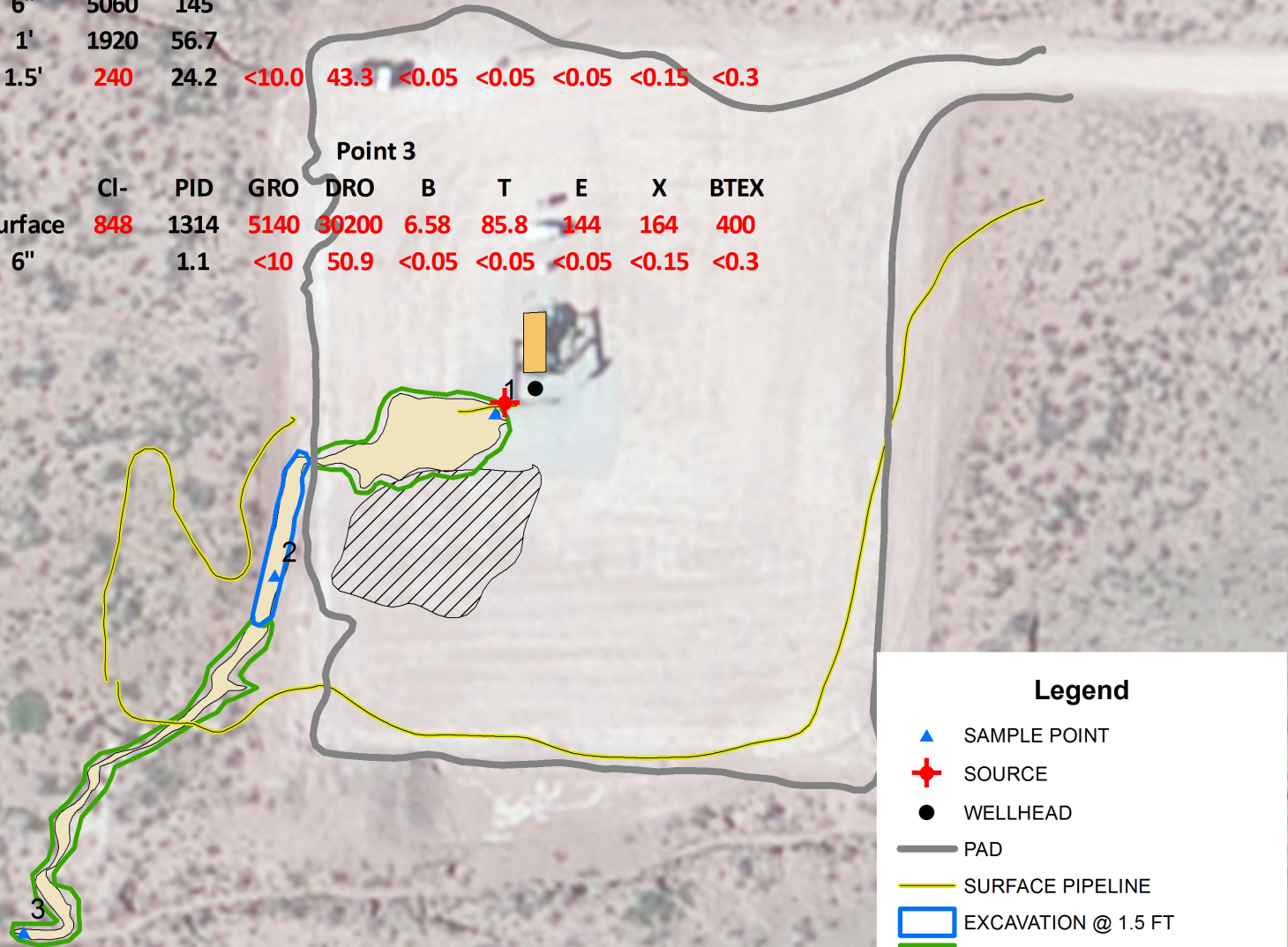


# Excavation Map

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
Point 1									
Surface	8800	2090	6520	35100	36.2	194	208	214	653
6"	2680	145	<10.0	<10.0	<0.05	<0.05	<0.05	<0.15	<0.3

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
Point 2									
Surface	9330	1185	3580	28400	3.61	44.3	78.4	89.2	215
6"	5060	145							
1'	1920	56.7							
1.5'	240	24.2	<10.0	43.3	<0.05	<0.05	<0.05	<0.15	<0.3

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
Point 3									
Surface	848	1314	5140	30200	6.58	85.8	144	164	400
6"		1.1	<10	50.9	<0.05	<0.05	<0.05	<0.15	<0.3



Landowner: BLM  
DGW: None

Source: Esri, DigitalGlobe, GeoEye, IGN, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, swisstopo, and the GIS User Community

## Legend

- ▲ SAMPLE POINT
- ★ SOURCE
- WELLHEAD
- PAD
- SURFACE PIPELINE
- EXCAVATION @ 1.5 FT
- SCRAPE @ 6 IN
- ▨ OVERSPRAY AREA- 3224 SQ FT
- PUMP JACK
- STAIN- 2741 SQ FT



## APACHE NFE FEDERAL #11

UL G SECTION 8  
T-17-S R-31-E  
EDDY COUNTY, NM



0 50 100  
Feet

GPS date: 8/17/14 KL, 9/16/14 KS  
Drawing date: 9/18/14  
Drafted by: T. Grieco, L. Weinheimer



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

---

August 22, 2014

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NFE FEDERAL #11

Enclosed are the results of analyses for samples received by the laboratory on 08/19/14 9:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	08/19/2014	Sampling Date:	08/17/2014
Reported:	08/22/2014	Sampling Type:	Soil
Project Name:	NFE FEDERAL #11	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: PT. 1 (H402528-01)**

BTX 8021B		mg/kg		Analyzed By: ck					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>36.2</b>	5.00	08/20/2014	ND	1.80	89.8	2.00	5.15	
<b>Toluene*</b>	<b>194</b>	5.00	08/20/2014	ND	1.65	82.6	2.00	4.46	
<b>Ethylbenzene*</b>	<b>208</b>	5.00	08/20/2014	ND	1.84	91.8	2.00	4.49	
<b>Total Xylenes*</b>	<b>214</b>	15.0	08/20/2014	ND	5.47	91.1	6.00	5.21	
<b>Total BTX</b>	<b>653</b>	30.0	08/20/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>8800</b>	16.0	08/19/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10</b>	<b>6520</b>	500	08/19/2014	ND	191	95.7	200	0.146		
<b>DRO &gt;C10-C28</b>	<b>35100</b>	500	08/19/2014	ND	207	103	200	0.978		

Surrogate: 1-Chlorooctane 380 % 65.2-140

Surrogate: 1-Chlorooctadecane 855 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 08/19/2014  
 Reported: 08/22/2014  
 Project Name: NFE FEDERAL #11  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 08/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: PT. 2 (H402528-02)**

BTX 8021B		mg/kg		Analyzed By: ck					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	3.61	2.00	08/20/2014	ND	1.80	89.8	2.00	5.15	
Toluene*	44.3	2.00	08/20/2014	ND	1.65	82.6	2.00	4.46	
Ethylbenzene*	78.4	2.00	08/20/2014	ND	1.84	91.8	2.00	4.49	
Total Xylenes*	89.2	6.00	08/20/2014	ND	5.47	91.1	6.00	5.21	
Total BTX	215	12.0	08/20/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9330	16.0	08/19/2014	ND	400	100	400	0.00	
TPH 8015M	mg/kg		Analyzed By: CK						S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>3580</b>	500	08/19/2014	ND	191	95.7	200	0.146	
<b>DRO &gt;C10-C28</b>	<b>28400</b>	500	08/19/2014	ND	207	103	200	0.978	

Surrogate: 1-Chlorooctane 275 % 65.2-140

Surrogate: 1-Chlorooctadecane 691 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 08/19/2014  
Reported: 08/22/2014  
Project Name: NFE FEDERAL #11  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/17/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: PT. 3 (H402528-03)**

BTX 8021B		mg/kg		Analyzed By: ck					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	6.58	5.00	08/20/2014	ND	1.80	89.8	2.00	5.15	
Toluene*	85.8	5.00	08/20/2014	ND	1.65	82.6	2.00	4.46	
Ethylbenzene*	144	5.00	08/20/2014	ND	1.84	91.8	2.00	4.49	
Total Xylenes*	164	15.0	08/20/2014	ND	5.47	91.1	6.00	5.21	
Total BTX	400	30.0	08/20/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	848	16.0	08/19/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	5140	500	08/19/2014	ND	191	95.7	200	0.146	
DRO >C10-C28	30200	500	08/19/2014	ND	207	103	200	0.978	

Surrogate: 1-Chlorooctane 354 % 65.2-140

Surrogate: 1-Chlorooctadecane 700 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



### 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.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



September 11, 2014

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NFE FED #11

Enclosed are the results of analyses for samples received by the laboratory on 09/04/14 14:43.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

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

Received: 09/04/2014  
Reported: 09/11/2014  
Project Name: NFE FED #11  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/26/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: PT. 1 @ 6" (H402748-01)**

BTEx 8021B		mg/kg		Analyzed By: MS				O-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2014	ND	2.04	102	2.00	3.90	
Toluene*	<0.050	0.050	09/10/2014	ND	1.83	91.4	2.00	3.90	
Ethylbenzene*	<0.050	0.050	09/10/2014	ND	1.70	84.8	2.00	3.77	
Total Xylenes*	<0.150	0.150	09/10/2014	ND	5.15	85.8	6.00	3.51	
Total BTEx	<0.300	0.300	09/10/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 89.4-126

Chloride, SM4500Cl-B			mg/kg					Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2680	16.0	09/10/2014	ND	400	100	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	09/06/2014	ND	180	90.1	200	0.353	
DRO >C10-C28	<10.0	10.0	09/06/2014	ND	213	107	200	0.664	

Surrogate: 1-Chlorooctane 72.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 84.0 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 09/04/2014  
Reported: 09/11/2014  
Project Name: NFE FED #11  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/26/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: PT. 2 @ 1.5' (H402748-02)**

BTX 8021B		mg/kg		Analyzed By: MS				O-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2014	ND	2.04	102	2.00	3.90	
Toluene*	<0.050	0.050	09/10/2014	ND	1.83	91.4	2.00	3.90	
Ethylbenzene*	<0.050	0.050	09/10/2014	ND	1.70	84.8	2.00	3.77	
Total Xylenes*	<0.150	0.150	09/10/2014	ND	5.15	85.8	6.00	3.51	
Total BTX	<0.300	0.300	09/10/2014	ND					

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

Chloride, SM4500CI-B			mg/kg					Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	09/10/2014	ND	400	100	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	09/06/2014	ND	180	90.1	200	0.353	
DRO >C10-C28	43.3	10.0	09/06/2014	ND	213	107	200	0.664	

Surrogate: 1-Chlorooctane 90.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 96.6 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

O-04	This sample was analyzed outside the EPA recommended holding time.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager

ORDINAL LABORATORIES

**ORDINAL LABORATORIES**  
101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 76603  
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:  
Project Manager:  
Address:  
City:  
Phone #:  
Project #:  
Project Name:  
Project Location:  
Sample Name:  
FOR LAB USE ONLY

Apache  
Bruce Baker  
  
  
  
  
NFE Fed #11  
Kyle H.

P.O. #:  
Company:  
Attn:  
Address:  
City:  
State:  
Zip:  
Phone #:  
Fax #:

BILL TO

ANALYSIS REQUEST

Lab I.D.  
Sample I.D.

4402148  
PC1 B6  
PC2 1-5

(G)RAB OR (C)OMP.  
# CONTAINERS  
GROUNDWATER  
WASTEWATER  
SOIL  
OIL  
SLUDGE  
OTHER :  
ACID/BASE:  
ICE / COOL  
OTHER :

DATE  
TIME

8-26-14 11:00  
8-26-14 10:00

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

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

546

Sample Condition  
Cool ☐ Intact ☐  
Yes ☐ No ☐  
Yes ☐ No ☐

CHECKED BY: (Initials)  
B

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Relinquished By:  
Relinquished By:  
Date:  
Time:  
Received By:  
Received By:

8-4-14  
8-4-14  
J. Flores

REMARKS:  
email results:  
honder@rice-ecs.com; knorman@rice-ecs.com; jkamlain@rice-ecs.com;  
regans@rice-ecs.com; flores@rice-ecs.com; weinheimer@rice-ecs.com;  
kjones@riceswd.com; cursanic@rice-ecs.com  
environmental tech:   
@rice-ecs.com





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

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September 25, 2014

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NFE FED #11

Enclosed are the results of analyses for samples received by the laboratory on 09/24/14 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 09/24/2014  
 Reported: 09/25/2014  
 Project Name: NFE FED #11  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 09/23/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: PT. 3 @ 6" (H402923-01)**

BTEX 8021B			mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/24/2014	ND	1.75	87.6	2.00	3.42		
Toluene*	<0.050	0.050	09/24/2014	ND	1.64	81.8	2.00	3.34		
Ethylbenzene*	<0.050	0.050	09/24/2014	ND	1.52	75.9	2.00	4.67		
Total Xylenes*	<0.150	0.150	09/24/2014	ND	4.50	75.0	6.00	4.67		
Total BTEX	<0.300	0.300	09/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 89.4-126

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	09/24/2014	ND	183	91.6	200	1.51	
DRO >C10-C28	50.9	10.0	09/24/2014	ND	190	95.1	200	7.86	

Surrogate: 1-Chlorooctane 91.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 99.2 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

