

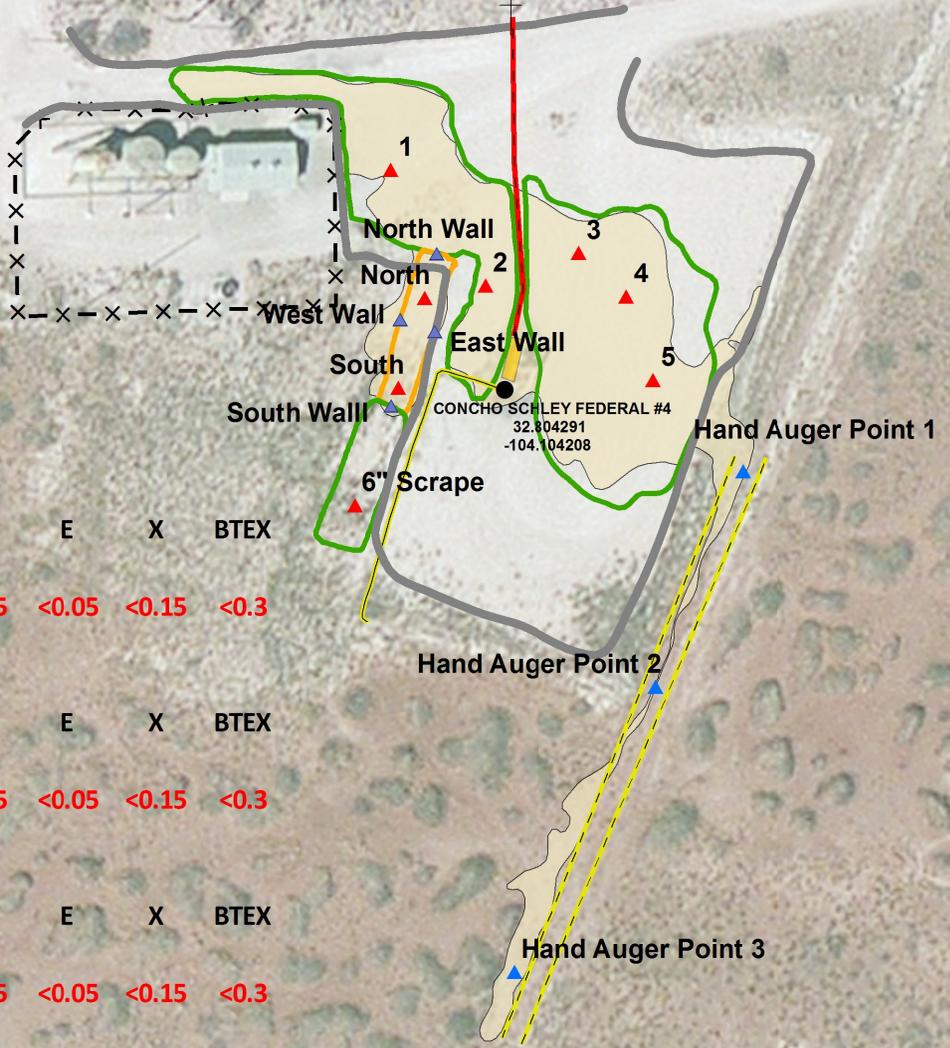
Excavation Data

1.5 ft Excavation

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
Nort	912	0.5	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Sout	64	0.6	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Nort	<16	0.6	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
East	224	0.6	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Sout	144	0.3	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Wes	<16	0.3	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3

6 in Scrape

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
Point 1	752	0.5	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Point 2	384	0.1	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Point 3	752	0.4	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Point 4	<16	0.8	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Point 5	576	1	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3



Hand Auger Point 1

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
SS	5370	2.2							
1'	768	0.2	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3

Hand Auger Point 2

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
SS	2832	0.1							
1'	720	0.6	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3

Hand Auger Point 3

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
SS	8549	0.7							
1'	144	0.3	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
6" Scrape	240	0.2	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3

Legend

- ⊥ ELECTRIC POLE
- ▲ AUGER POINT
- ▲ BOTTOM SAMPLING POINT
- ▲ WALL SAMPLES
- WELLHEAD
- BURIED PIPELINE
- BURIED ELECTRIC LINE
- × — × FENCE
- PAD/ROAD EDGE
- SURFACE PIPELINE
- 1.5 FT EXCAVATION
- 6 IN SCRAPE
- PUMPJACK
- STAIN - 28,604 SQ FT

CI- FIELD DATA
CI- LAB DATA

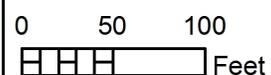
Landowner: BLM
DGW: None

Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community



**APACHE
EMPIRE ABO UNIT
C-49 SWD**

UL L SECTION 29
T-17-S R-29-E
EDDY COUNTY, NM



GPS date: 12/03/14 CF, 12/10/14 AR
Drawing date: 12/19/14
Drafted by: L. Weinheimer





December 10, 2014

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: EMPIRE ABO C-49 SWD

Enclosed are the results of analyses for samples received by the laboratory on 12/04/14 16:56.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

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:	12/04/2014	Sampling Date:	12/03/2014
Reported:	12/10/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO C-49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

Sample ID: POINT 1 BOTTOM @ 6" (H403711-01)

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	12/09/2014	ND	1.87	93.7	2.00	3.16	
Toluene*	<0.050	0.050	12/09/2014	ND	1.72	86.2	2.00	3.97	
Ethylbenzene*	<0.050	0.050	12/09/2014	ND	1.63	81.5	2.00	1.82	
Total Xylenes*	<0.150	0.150	12/09/2014	ND	4.90	81.6	6.00	2.34	
Total BTEX	<0.300	0.300	12/09/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.6 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	12/05/2014	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/06/2014	ND	195	97.6	200	0.501	
DRO >C10-C28	<10.0	10.0	12/06/2014	ND	202	101	200	1.55	

Surrogate: 1-Chlorooctane 126 % 47.2-157
Surrogate: 1-Chlorooctadecane 145 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



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:	12/04/2014	Sampling Date:	12/04/2014
Reported:	12/10/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO C-49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

Sample ID: POINT 2 BOTTOM @ 6" (H403711-02)

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	12/09/2014	ND	1.87	93.7	2.00	3.16		
Toluene*	<0.050	0.050	12/09/2014	ND	1.72	86.2	2.00	3.97		
Ethylbenzene*	<0.050	0.050	12/09/2014	ND	1.63	81.5	2.00	1.82		
Total Xylenes*	<0.150	0.150	12/09/2014	ND	4.90	81.6	6.00	2.34		
Total BTEX	<0.300	0.300	12/09/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.9 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	12/05/2014	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/06/2014	ND	195	97.6	200	0.501		
DRO >C10-C28	<10.0	10.0	12/06/2014	ND	202	101	200	1.55		

Surrogate: 1-Chlorooctane 126 % 47.2-157

Surrogate: 1-Chlorooctadecane 141 % 52.1-176

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:	12/04/2014	Sampling Date:	12/04/2014
Reported:	12/10/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO C-49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

Sample ID: POINT 3 BOTTOM @ 6" (H403711-03)

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	12/09/2014	ND	1.87	93.7	2.00	3.16		
Toluene*	<0.050	0.050	12/09/2014	ND	1.72	86.2	2.00	3.97		
Ethylbenzene*	<0.050	0.050	12/09/2014	ND	1.63	81.5	2.00	1.82		
Total Xylenes*	<0.150	0.150	12/09/2014	ND	4.90	81.6	6.00	2.34		
Total BTEX	<0.300	0.300	12/09/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.2 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	752	16.0	12/05/2014	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/06/2014	ND	195	97.6	200	0.501		
DRO >C10-C28	<10.0	10.0	12/06/2014	ND	202	101	200	1.55		

Surrogate: 1-Chlorooctane 121 % 47.2-157

Surrogate: 1-Chlorooctadecane 140 % 52.1-176

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	12/04/2014	Sampling Date:	12/03/2014
Reported:	12/10/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO C-49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

Sample ID: POINT 4 BOTTOM @ 6" (H403711-04)

BTEX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/09/2014	ND	1.81	90.5	2.00	7.27		
Toluene*	<0.050	0.050	12/09/2014	ND	1.79	89.5	2.00	7.66		
Ethylbenzene*	<0.050	0.050	12/09/2014	ND	1.71	85.7	2.00	7.88		
Total Xylenes*	<0.150	0.150	12/09/2014	ND	5.27	87.8	6.00	7.94		
Total BTEX	<0.300	0.300	12/09/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/05/2014	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/06/2014	ND	195	97.6	200	0.501		
DRO >C10-C28	<10.0	10.0	12/06/2014	ND	202	101	200	1.55		

Surrogate: 1-Chlorooctane 122 % 47.2-157

Surrogate: 1-Chlorooctadecane 140 % 52.1-176

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	12/04/2014	Sampling Date:	12/03/2014
Reported:	12/10/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO C-49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

Sample ID: POINT 5 BOTTOM @ 6" (H403711-05)

BTEX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/09/2014	ND	1.81	90.5	2.00	7.27		
Toluene*	<0.050	0.050	12/09/2014	ND	1.79	89.5	2.00	7.66		
Ethylbenzene*	<0.050	0.050	12/09/2014	ND	1.71	85.7	2.00	7.88		
Total Xylenes*	<0.150	0.150	12/09/2014	ND	5.27	87.8	6.00	7.94		
Total BTEX	<0.300	0.300	12/09/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	576	16.0	12/05/2014	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/06/2014	ND	195	97.6	200	0.501		
DRO >C10-C28	<10.0	10.0	12/06/2014	ND	202	101	200	1.55		

Surrogate: 1-Chlorooctane 121 % 47.2-157
Surrogate: 1-Chlorooctadecane 138 % 52.1-176

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



Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Apache
 Project Manager: Bruce Baker, Laura Flores, Jacob Kamplain
 Address: 419 W Cain State: NM Zip: 88240
 City: Hobbs Attn:
 Phone #: Fax #:
 Project #: Project Owner:
 Project Name: Apache
 Project Location: Empire A80 C-49 SWD
 Sampler Name: Chris Flores P.O. #:
 FOR LAB USE ONLY: Company:

Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							PRESERV		DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS	
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :									
<u>EH03711</u>																				
<u>Point 1 Bottom 0.6"</u>		<u>9</u>				<u>X</u>						<u>12-3-2014</u>	<u>1:10 PM</u>	<u>X</u>	<u>X</u>	<u>X</u>				
<u>Point 2 Bottom 0.6"</u>		<u>6</u>				<u>X</u>						<u>12-4-2014</u>	<u>1:30 PM</u>	<u>X</u>	<u>X</u>	<u>X</u>				
<u>Point 3 Bottom 0.6"</u>		<u>6</u>				<u>X</u>						<u>12-4-2014</u>	<u>2:00 PM</u>	<u>X</u>	<u>X</u>	<u>X</u>				
<u>Point 4 Bottom 0.6"</u>		<u>6</u>				<u>X</u>						<u>12-3-2014</u>	<u>8:00 PM</u>	<u>X</u>	<u>X</u>	<u>X</u>				
<u>Point 5 Bottom 0.6"</u>		<u>6</u>				<u>X</u>						<u>12-3-2014</u>	<u>8:15 PM</u>	<u>X</u>	<u>X</u>	<u>X</u>				

Relinquished By: [Signature] Date: 12-4-2014 Time: 4:50
 Received By: [Signature] Date: 12-4-2014 Time: 4:50
 Delivered By: (Circle One) UPS 419c Sample Condition: Intact Checked By: [Signature]
 Sampler - UPS - Bus - Other: 419c Cool Yes No Intact Yes No

email results: hcompler@rice-ecs.com; knorman@rice-ecs.com; jkamplain@rice-ecs.com; regans@rice-ecs.com; lflores@rice-ecs.com; lweinheimer@rice-ecs.com; cursanic@rice-ecs.com; environmental tech: cflores@rice-ecs.com
 Fax Result: Yes No Add'l Phone #: 419c
 Add'l Fax #: 419c

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

December 17, 2014

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: EAU C 49 SWD

Enclosed are the results of analyses for samples received by the laboratory on 12/12/14 8:00.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	12/12/2014	Sampling Date:	12/09/2014
Reported:	12/17/2014	Sampling Type:	Soil
Project Name:	EAU C 49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: NORTH BOTTOM 1.5' (H403792-01)

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	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	12/12/2014	ND	400	100	400	3.92	

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	12/15/2014	ND	185	92.6	200	2.97	
DRO >C10-C28	<10.0	10.0	12/15/2014	ND	197	98.4	200	1.88	

Surrogate: 1-Chlorooctane 91.2 % 47.2-157
Surrogate: 1-Chlorooctadecane 86.8 % 52.1-176

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:	12/12/2014	Sampling Date:	12/09/2014
Reported:	12/17/2014	Sampling Type:	Soil
Project Name:	EAU C 49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SOUTH BOTTOM 1.5' (H403792-02)

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	12/15/2014	ND	1.90	95.1	2.00	3.04		
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356		
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736		
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413		
Total BTEX	<0.300	0.300	12/15/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/12/2014	ND	400	100	400	3.92		

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	12/15/2014	ND	185	92.6	200	2.97		
DRO >C10-C28	<10.0	10.0	12/15/2014	ND	197	98.4	200	1.88		

Surrogate: 1-Chlorooctane 89.1 % 47.2-157

Surrogate: 1-Chlorooctadecane 84.7 % 52.1-176

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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:	12/12/2014	Sampling Date:	12/09/2014
Reported:	12/17/2014	Sampling Type:	Soil
Project Name:	EAU C 49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: NORTH WALL (H403792-03)

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	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/12/2014	ND	400	100	400	3.92	

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	12/15/2014	ND	185	92.6	200	2.97	
DRO >C10-C28	<10.0	10.0	12/15/2014	ND	197	98.4	200	1.88	

Surrogate: 1-Chlorooctane 89.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 84.5 % 52.1-176

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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:	12/12/2014	Sampling Date:	12/09/2014
Reported:	12/17/2014	Sampling Type:	Soil
Project Name:	EAU C 49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EAST WALL (H403792-04)

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	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	12/12/2014	ND	400	100	400	3.92	

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	12/15/2014	ND	185	92.6	200	2.97	
DRO >C10-C28	<10.0	10.0	12/15/2014	ND	197	98.4	200	1.88	

Surrogate: 1-Chlorooctane 84.4 % 47.2-157
Surrogate: 1-Chlorooctadecane 80.5 % 52.1-176

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 12/12/2014
 Reported: 12/17/2014
 Project Name: EAU C 49 SWD
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 12/09/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SOUTH WALL (H403792-05)

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	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	12/12/2014	ND	400	100	400	3.92	

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	12/15/2014	ND	185	92.6	200	2.97	
DRO >C10-C28	<10.0	10.0	12/15/2014	ND	197	98.4	200	1.88	

Surrogate: 1-Chlorooctane 86.3 % 47.2-157

Surrogate: 1-Chlorooctadecane 83.0 % 52.1-176

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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:	12/12/2014	Sampling Date:	12/09/2014
Reported:	12/17/2014	Sampling Type:	Soil
Project Name:	EAU C 49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: WEST WALL (H403792-06)

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	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/12/2014	ND	400	100	400	3.92	

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	12/15/2014	ND	185	92.6	200	2.97	
DRO >C10-C28	<10.0	10.0	12/15/2014	ND	197	98.4	200	1.88	

Surrogate: 1-Chlorooctane 84.0 % 47.2-157

Surrogate: 1-Chlorooctadecane 81.7 % 52.1-176

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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:	12/12/2014	Sampling Date:	12/09/2014
Reported:	12/17/2014	Sampling Type:	Soil
Project Name:	EAU C 49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: 6" SCRAPE (H403792-07)

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	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 61-154

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	12/12/2014	ND	400	100	400	3.92	

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	12/15/2014	ND	185	92.6	200	2.97	
DRO >C10-C28	<10.0	10.0	12/15/2014	ND	197	98.4	200	1.88	

Surrogate: 1-Chlorooctane 89.0 % 47.2-157

Surrogate: 1-Chlorooctadecane 84.8 % 52.1-176

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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



CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: <u>Apache</u>		P.O. #:																		
Project Manager: <u>Bruce Baker</u>		Company:																		
Address:		Attn:																		
City:		Address:																		
Phone #:		City:																		
Project #:		State:																		
Project Name: <u>HH037 ERM 49 SWD *</u>		Project Owner:																		
Project Location: <u>Barnwell Federal Tank Battery</u>		Phone #:																		
Sample Name: <u>Asv Redscap</u>		Fax #:																		
FOR LAB USE ONLY		MATRIX	PRESERV	SAMPLING																
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS
<u>HH03702</u>	<u>North Bottom 1.5'</u>	<u>6</u>	<u>1</u>	<u>✓</u>		<u>✓</u>							<u>12-9-14</u>	<u>3:15</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>		
	<u>South Bottom 1.5'</u>	<u>6</u>	<u>1</u>	<u>✓</u>		<u>✓</u>							<u>3:10</u>	<u>3:20</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>		
	<u>North Wall</u>	<u>6</u>	<u>1</u>	<u>✓</u>		<u>✓</u>							<u>3:25</u>	<u>3:30</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>		
	<u>East Wall</u>	<u>6</u>	<u>1</u>	<u>✓</u>		<u>✓</u>							<u>3:30</u>	<u>3:35</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>		
	<u>South Wall</u>	<u>6</u>	<u>1</u>	<u>✓</u>		<u>✓</u>							<u>3:35</u>	<u>3:40</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>		
	<u>West Wall</u>	<u>6</u>	<u>1</u>	<u>✓</u>		<u>✓</u>							<u>3:40</u>		<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>		
	<u>G=scraps</u>	<u>6</u>	<u>1</u>	<u>✓</u>		<u>✓</u>									<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>		

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Relinquished By: AK Date: 12-11-14 Time: 8:00 Received By: John Jensen

Delivered By: (Circle One) UPS - Bus - Other: 10c Sample Condition: Cool Intact Yes No

Checked By: [Signature] (Initials)

Phone Result: Yes No Add'l Phone #: _____

Fax Result: Yes No Add'l Fax #: _____

REMARKS: affix name change as per Jacob. 12/17/14

email results: hconder@rice-ecs.com; knorman@rice-ecs.com; ikampain@rice-ecs.com; regans@rice-ecs.com; flores@rice-ecs.com; lweihelmer@rice-ecs.com; kiones@riceswd.com; cursanic@rice-ecs.com; aredecop@rice-ecs.com

+ Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476 #54 Bruce Baker

December 17, 2014

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: EAU C 49 SWD

Enclosed are the results of analyses for samples received by the laboratory on 12/12/14 8:00.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	12/12/2014	Sampling Date:	12/09/2014
Reported:	12/17/2014	Sampling Type:	Soil
Project Name:	EAU C 49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: HAND AUGER PT 1 @ 1' (H403795-01)

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	12/16/2014	ND	1.81	90.3	2.00	10.1	
Toluene*	<0.050	0.050	12/16/2014	ND	1.76	87.8	2.00	10.6	
Ethylbenzene*	<0.050	0.050	12/16/2014	ND	1.67	83.4	2.00	11.8	
Total Xylenes*	<0.150	0.150	12/16/2014	ND	5.02	83.6	6.00	12.5	
Total BTEX	<0.300	0.300	12/16/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	768	16.0	12/12/2014	ND	400	100	400	3.92	

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	12/15/2014	ND	185	92.6	200	2.97	
DRO >C10-C28	<10.0	10.0	12/15/2014	ND	197	98.4	200	1.88	

Surrogate: 1-Chlorooctane 89.6 % 47.2-157
Surrogate: 1-Chlorooctadecane 87.2 % 52.1-176

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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



Celey D. Keene, Lab Director/Quality Manager

December 17, 2014

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: EAU C 49 SWD

Enclosed are the results of analyses for samples received by the laboratory on 12/12/14 8:00.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	12/12/2014	Sampling Date:	12/09/2014
Reported:	12/17/2014	Sampling Type:	Soil
Project Name:	EAU C 49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: HAND AUGER PT 2 @ 1' (H403793-01)

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	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	12/12/2014	ND	400	100	400	3.92	

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	12/15/2014	ND	185	92.6	200	2.97	
DRO >C10-C28	<10.0	10.0	12/15/2014	ND	197	98.4	200	1.88	

Surrogate: 1-Chlorooctane 88.0 % 47.2-157
Surrogate: 1-Chlorooctadecane 86.6 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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



Celey D. Keene, Lab Director/Quality Manager

December 17, 2014

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: EAU C 49 SWD

Enclosed are the results of analyses for samples received by the laboratory on 12/12/14 8:00.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	12/12/2014	Sampling Date:	12/09/2014
Reported:	12/17/2014	Sampling Type:	Soil
Project Name:	EAU C 49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: HAND AUGER PT 3 @ 1' (H403794-01)

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	12/15/2014	ND	1.90	95.1	2.00	3.04	
Toluene*	<0.050	0.050	12/15/2014	ND	1.88	93.8	2.00	0.356	
Ethylbenzene*	<0.050	0.050	12/15/2014	ND	1.79	89.5	2.00	0.736	
Total Xylenes*	<0.150	0.150	12/15/2014	ND	5.39	89.9	6.00	0.413	
Total BTEX	<0.300	0.300	12/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	12/12/2014	ND	400	100	400	3.92	

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	12/15/2014	ND	185	92.6	200	2.97	
DRO >C10-C28	<10.0	10.0	12/15/2014	ND	197	98.4	200	1.88	

Surrogate: 1-Chlorooctane 87.0 % 47.2-157
Surrogate: 1-Chlorooctadecane 83.1 % 52.1-176

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: <u>Apache Brass Bellco</u>		P.O. #:		
Project Manager: <u>Brace Baker</u>		Company:		
Address:		Attn:		
City:	State:	Zip:		
Phone #:	Fax #:	Address:		
Project #:	Project Owner:	City:	State:	Zip:
Project Name: <u>ERA 049 SWD #</u>		Phone #:		
Project Location: <u>Beardsley Federal Tank Battery</u>		Fax #:		
Sampler Name: <u>Asa Rader</u>		PRESERV:		
FOR LAB USE ONLY				
Lab I.D. <u>H403794</u>	Sample I.D.	(G)GRAB OR (C)COMP.	DATE	TIME
	<u>Hand Auger PT3 @ 1'</u>	# CONTAINERS	<u>12-9-14</u>	<u>3:49</u>
		GROUNDWATER		
		WASTEWATER		
		SOIL		
		OIL		
		SLUDGE		
		OTHER:		
		ACID/BASE:		
		ICE / COOL		
		OTHER:		
		SAMPLING		
		Chlorides		
		TPH 8015 M		
		BTEX		
		Texas TPH		
		Complete Cations/Anions		
		TDS		

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Relinquished By: <u>AK</u>	Date: <u>12-11-14</u>	Received By: <u>Michael Henderson</u>
Relinquished By: <u>AK</u>	Time: <u>5:00</u>	Received By: <u>Michael Henderson</u>
Delivered By: (Circle One)	Sample Condition	CHECKED BY: <u>AK</u>
Sampler - UPS - Bus - Other: <u>12</u>	Cool <input type="checkbox"/> Intact <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:	
Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:	
REMARKS: <u>Project name changed as per Jacob.</u>		
email results: <u>hconder@rice-ecs.com; knorman@rice-ecs.com;</u>		
<u>jkampain@rice-ecs.com; regans@rice-ecs.com; jlflores@rice-ecs.com;</u>		
<u>lweihelmer@rice-ecs.com; kiones@riceswd.com;</u>		
<u>cursanic@rice-ecs.com</u>		
<u>aredecop@rice-ecs.com</u>		

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

#54

Brace Baker