



EXPLORING WHAT'S POSSIBLE

APACHE CORPORATION

P.O.Box 1849
Eunice, NM 88231
Phone 575.394.3159

Empire Abo Unit O-8
2RP-2141

Termination Request

API No. 30-015-00844

Release Date: December 19th, 2013

Unit Letter M, Section 3, Township 18S, Range 27E

January 5th, 2015

Mike Bratcher

New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau – District 2
811 S. First St.
Artesia, NM 88210

**RE: Termination Request
Apache Corporation – Empire Abo Unit O-8 (2RP-2141)
UL/M sec. 3 T18S R27E
API No. 30-015-00844**

Mr. Bratcher:

Apache Corporation (Apache) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately 9 miles southeast of Artesia, New Mexico at UL/M sec. 3 T18S R27E. Soil bore installation at the site shows that there is no groundwater beneath the site.

On December 19th, 2013, Apache discovered an oil and produced water release from a steel flow line. The line had been previously repaired with clamps and when the line was pressured up, the clamps leaked. A total of 6 barrels of produced water and 2 barrels of oil were released over 6,986 square feet of pasture land (Figure 1). A vacuum truck was called to the site and recovered 1 barrel of produced water and 1 barrel of oil. BLM was notified of the release on December 19th, 2013 and an initial C-141 was submitted to NMOCD and BLM for their approval. NMOCD approved the initial C-141 on January 7th, 2014 (Appendix A).

RECS was on site beginning on December 19th, 2013 to assess and GPS map the site. On February 6th, 2014, three soil bores were installed at the site to assess the level of contamination. As the soil bores were advanced, samples were taken every 3 feet and field tested for chlorides and organic vapors. Representative samples from the bores were taken to a commercial laboratory for analysis.

Based on the laboratory sampling, a Corrective Action Plan (CAP) was submitted to NMOCD and BLM on May 7th, 2014. BLM approved the CAP on May 8th, 2014 and NMOCD approved the CAP on May 15th, 2014. The CAP stated that the release areas to the south would be excavated to a depth of 4 ft bgs. In areas that are inundated with lines, the release area would be excavated to remove the highest concentration of

chlorides. If at any time, excavating around the lines posed a safety hazard, excavating would cease. All excavated soil would be taken to a NMOCD approved facility for disposal. Clean soil would be imported to the site to backfill the excavations to ground surface and contour the areas to the surrounding location.

Corrective action activities began at the site on July 18th, 2014. Excavation 1 was dug to 4 ft bgs. Final wall samples were taken and field tested for chlorides and organic vapors. The samples were then sent to a commercial laboratory for analysis (Appendix B). All wall samples returned chloride values between 48 mg/kg and 624 mg/kg. Gasoline Range Organics (GRO), Diesel Range Organics (DRO) and BTEX results were non-detect, except for East Wall 2, which returned a DRO value of 626 mg/kg. Excavation 4 was dug to 2 ft bgs, and final wall and bottom samples were taken and field tested for chlorides and organic vapors. The samples were then sent to a commercial laboratory for analysis and returned chloride values ranging from 80 mg/kg to 1,020 mg/kg. GRO, DRO and BTEX results returned values of non-detect. Given the final wall and bottom sampling date, on August 8th, 2014, Apache requested permission from BLM and NMOCD to backfill Excavation 1 and 4 with clean, imported soil. NMOCD approved the request to backfill the site on August 8th, 2014, and BLM approved the request to backfill the site on August 14th, 2014.

The remainder of the release was excavated as stated in the approved CAP. Excavation 2 was scraped down to 2 ft bgs, Excavation 5 was scraped down to 1 ft bgs, and Excavation 3 and Excavation 6 were excavated to 4 ft bgs. Final wall samples from each of these scrapes and composite bottom samples from Excavations 2 and 5 were field tested for chlorides and organic vapors. The samples were then taken to a commercial laboratory for analysis. Excavation 2 returned laboratory chloride readings for all the wall and bottom samples below 1,000 mg/kg, except for West Wall 1, which returned a chloride value of 6,560 mg/kg, West Wall 2, which returned a chloride value of 1,100 mg/kg and East Wall 2, which returned a chloride value of 1,090 mg/kg. GRO, DRO and BTEX readings returned values of non-detect, except for West Wall 2, which returned a DRO value of 3,770 mg/kg and East Wall 2, which returned a DRO value of 127 mg/kg.

On September 3rd, 2014, Apache requested permission to backfill the remainder of the excavations with clean, imported soil. BLM gave verbal approval to backfill the site on September 9th, 2014, while NMOCD approved the site to be backfilled on September 5th, 2014. As part of the approval from NMOCD to backfill the site, NMOCD requested that the West Wall 1 in Excavation 2 be expanded to obtain chloride readings below regulatory standards.

The area around West Wall 1 was excavated further to the west and re-sampled on September 8th, 2014. The sample was field tested for chlorides and organic vapors and then the sample was taken to a commercial laboratory for analysis. West Wall 1 returned a laboratory chloride value of 32 mg/kg. In response to this new data, on September 11th, 2014, NMOCD gave their approval to backfill the remaining excavations.

All excavated soil was taken to an NMOCD approved facility for disposal. Clean soil was imported to the site to replace the contaminated soil taken for disposal. The remaining excavations were backfilled with the clean, imported soil and contoured to the surrounding area. On October 17th, 2014, the disturbed area was seeded with BLM mix #3.

Photo documentation of all field activities can be found in Appendix C.

Given that NMOCD and BLM approved the site to be backfilled per the approved CAP, Apache respectfully requests 'remediation termination' and site closure. A final C-141 can be found in Appendix D.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,

A handwritten signature in black ink, appearing to read "L.W.", followed by a long, horizontal flourish.

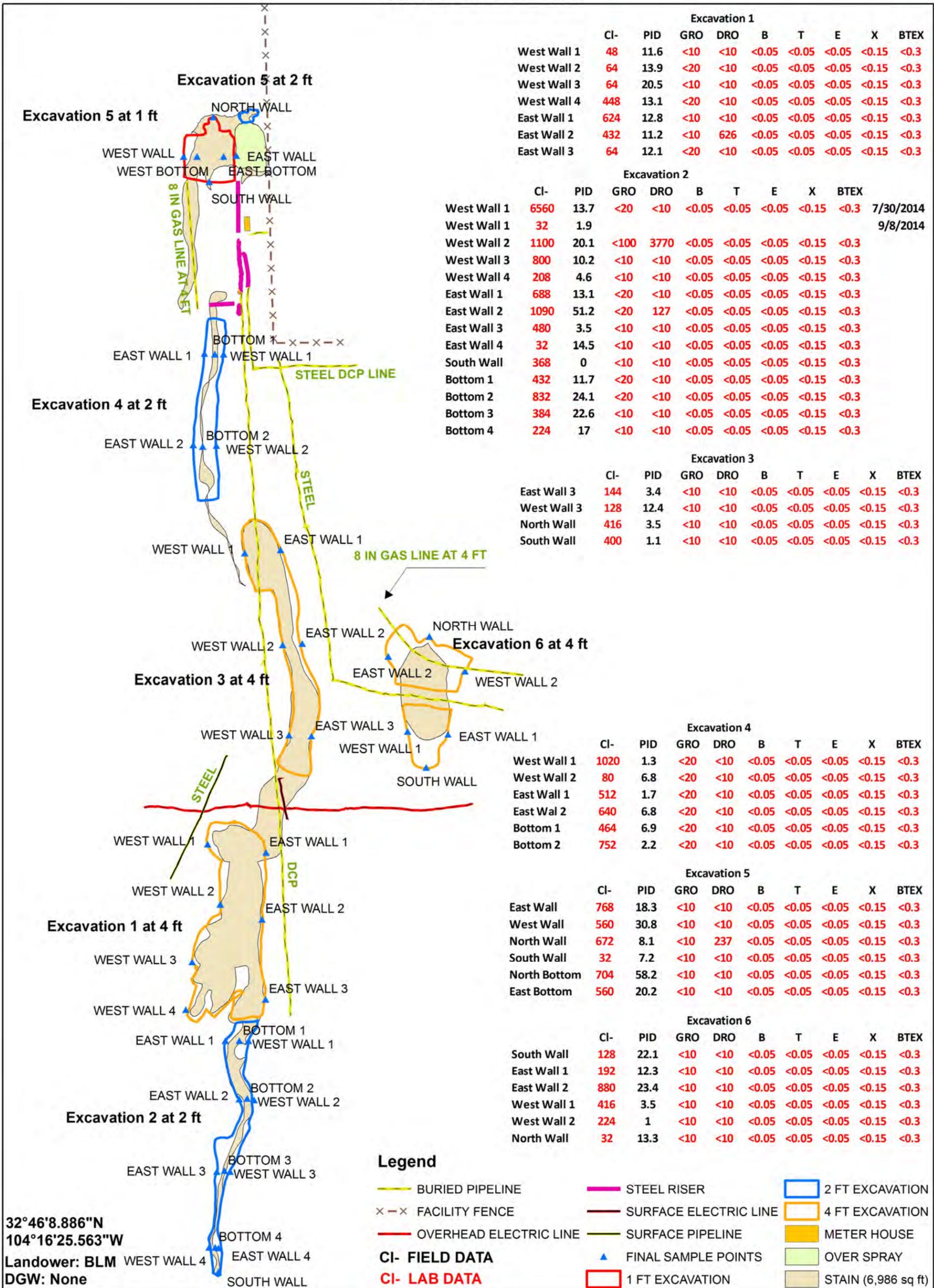
Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

- Figure 1 – Excavation Data
- Appendix A – Initial C-141
- Appendix B – Laboratory Analyses
- Appendix C – Photo Documentation
- Appendix D – Final C-141

Figures

Excavation Data



32°46'8.886"N
104°16'25.563"W
Landowner: BLM
DGW: None

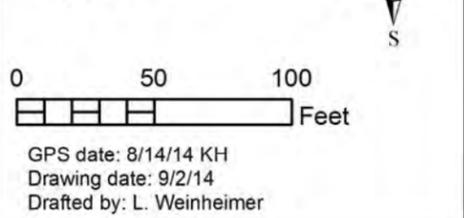
Legend

- BURIED PIPELINE
- STEEL RISER
- 2 FT EXCAVATION
- x-x-x FACILITY FENCE
- SURFACE ELECTRIC LINE
- 4 FT EXCAVATION
- OVERHEAD ELECTRIC LINE
- SURFACE PIPELINE
- METER HOUSE
- ▲ CI- FIELD DATA
- ▲ CI- LAB DATA
- STEEL DCP LINE
- ▲ FINAL SAMPLE POINTS
- OVER SPRAY
- 1 FT EXCAVATION
- STAIN (6,986 sq ft)

APACHE EMPIRE ABO UNIT #08

LEGALS: UL/M sec. 3
UL/ D sec. 10
T-18-S R-27E

Figure 1



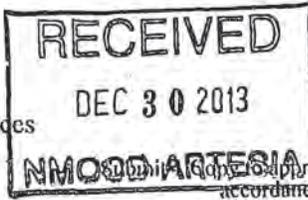
Appendix A

Initial C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505



Form C-141
Revised August 8, 2011

Submit Copy to Appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nJMW 1400 742612

OPERATOR Initial Report Final Report

Name of Company: Apache Corporation <i>873</i>	Contact: Bruce Baker
Address: 8 Ellison Lane Eunice, NM 88231	Telephone No. (432) 631-6982
Facility Name: Empire Abo Unit O-8	Facility Type: Oil Well
Surface Owner BLM	Mineral Owner
API No. 30-015-00844	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	3	18S	27E					Eddy

Latitude: 32°46'8.886"N Longitude: 104°16'25.563"W

NATURE OF RELEASE

Type of Release: oil and produced water	Volume of Release: 8 barrels (6 barrels water and 2 barrels oil)	Volume Recovered: 2 barrels (1 barrel oil and 1 barrel water)
Source of Release: Flow-line	Date and Hour of Occurrence	Date and Hour of Discovery: 12/19/13 at 8:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Left Message with Jeffery Robertson (BLM)	
By Whom? Bruce Baker	Date and Hour: 12/19/2013 at 2:00 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The steal flow line pressured up and released fluid from two previous line repair clamps. Well was shut in and vacuum truck was dispatched to pick-up fluid. Line was replaced with a new poly line.

Describe Area Affected and Cleanup Action Taken.*
The entire release was in the pasture (6,986 square feet). The site was mapped and surface samples collected and field tested for chlorides. The site will be delineated and corrective action plan will be submitted to resolve the issue.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Bruce Baker</i>	OIL CONSERVATION DIVISION	
Printed Name: Bruce Baker	Approved by Environmental Specialist: Signed By: <i>Mike Beaulieu</i>	
Title: Environmental Technician	Approval Date: IAN 07 2014	Expiration Date:
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval: Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION	Attached <input type="checkbox"/>
Date: 12/30/13	Phone: (432) 631-6982	

PROPOSAL NO LATER THAN:
February 7, 2014 **2RP-2141**

Appendix B

Laboratory Analyses

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

August 06, 2014

LAURA FLORES

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: EMPIRE ABO #08

Enclosed are the results of analyses for samples received by the laboratory on 08/01/14 12:00.

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:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: WEST WALL 1 (H402368-01)

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	08/04/2014	ND	1.65	82.7	2.00	8.41	
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43	
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40	
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49	
Total BTEX	<0.300	0.300	08/04/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/05/2014	ND	400	100	400	0.00	

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	08/04/2014	ND	200	99.8	200	2.11	
DRO >C10-C28	<10.0	10.0	08/04/2014	ND	207	104	200	4.91	

Surrogate: 1-Chlorooctane 89.1 % 65.2-140
Surrogate: 1-Chlorooctadecane 95.8 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: WEST WALL 2 (H402368-02)

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	08/04/2014	ND	1.65	82.7	2.00	8.41	
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43	
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40	
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49	
Total BTEX	<0.300	0.300	08/04/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/05/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<20.0	20.0	08/04/2014	ND	200	99.8	200	2.11	
DRO >C10-C28	<10.0	10.0	08/04/2014	ND	207	104	200	4.91	

Surrogate: 1-Chlorooctane 93.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 101 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

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 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: WEST WALL 3 (H402368-03)

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	08/04/2014	ND	1.65	82.7	2.00	8.41	
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43	
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40	
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49	
Total BTEX	<0.300	0.300	08/04/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/05/2014	ND	400	100	400	0.00	

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	08/04/2014	ND	200	99.8	200	2.11	
DRO >C10-C28	<10.0	10.0	08/04/2014	ND	207	104	200	4.91	

Surrogate: 1-Chlorooctane 85.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 93.1 % 63.6-154

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 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EAST WALL 1 (H402368-04)

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	08/04/2014	ND	1.65	82.7	2.00	8.41	
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43	
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40	
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49	
Total BTEX	<0.300	0.300	08/04/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	08/05/2014	ND	400	100	400	0.00	

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	08/04/2014	ND	200	99.8	200	2.11	
DRO >C10-C28	<10.0	10.0	08/04/2014	ND	207	104	200	4.91	

Surrogate: 1-Chlorooctane 90.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 95.4 % 63.6-154

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*=Accredited Analyte

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 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EAST WALL 2 (H402368-05)

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	08/04/2014	ND	1.65	82.7	2.00	8.41		
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43		
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40		
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49		
Total BTEX	<0.300	0.300	08/04/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	08/05/2014	ND	400	100	400	0.00		

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	08/04/2014	ND	200	99.8	200	2.11		
DRO >C10-C28	626	10.0	08/04/2014	ND	207	104	200	4.91		

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 129 % 63.6-154

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EAST WALL 3 (H402368-06)

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	08/04/2014	ND	1.65	82.7	2.00	8.41		
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43		
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40		
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49		
Total BTEX	<0.300	0.300	08/04/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	08/05/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<20.0	20.0	08/04/2014	10.1	199	99.4	200	1.66		
DRO >C10-C28	<10.0	10.0	08/04/2014	ND	212	106	200	2.11		

Surrogate: 1-Chlorooctane 89.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 94.4 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: WEST WALL 4 (H402368-07)

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	08/04/2014	ND	1.65	82.7	2.00	8.41	
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43	
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40	
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49	
Total BTEX	<0.300	0.300	08/04/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	08/05/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<20.0	20.0	08/04/2014	10.1	199	99.4	200	1.66	
DRO >C10-C28	<10.0	10.0	08/04/2014	ND	212	106	200	2.11	

Surrogate: 1-Chlorooctane 87.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 92.3 % 63.6-154

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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

Excavation I



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

Page 10 of 10

Company Name: RECS				BILL TO				ANALYSIS REQUEST																	
Project Manager: Laura Flores, Jacob Kamplain				P.O. #:				Chlorides TPH 8015 M BTEX Texas TPH Complete Cations/Anions TDS																	
Address:				Company:																					
City: Hobbs State: NM Zip: 88240				Attn:																					
Phone #: Fax #:				Address:																					
Project #: Project Owner:				City:																					
Project Name:				State: Zip:																					
Project Location: Empire A60 #00				Phone #:																					
Sampler Name: Kyle Schmidt				Fax #:																					
FOR LAB USE ONLY				MATRIX			PRESERV.		SAMPLING																
Lab I.D.	Sample I.D.	(GRAB OR C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME											
H402368																									
1	West wall 1	6	1			X					X		7-30-14	10:15	X	X	X								
2	West wall 2	6	1			X					X		}	10:50	X	X	X								
3	West wall 3	6	1			X					X			10:55	X	X	X								
4	East wall 2	6	1			X					X			11:00	X	X	X								
5	East wall 2	6	1			X					X			11:05	X	X	X								
6	East wall 3	6	1			X					X			11:00	X	X	X								
7	Bottom 1	6	1			X					X			11:15	X	X	X								
8	Bottom 2	6	1			X					X			11:20	X	X	X								
7	West Wall 4	6	1			X					X			11:00	X	X	X								

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Relinquished By: Kyle Schmidt		Date: 7-30-14	Received By: Jodi Benson	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Relinquished By:		Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		REMARKS: email: hconder@riceswd.com; lflores@rice-ecs.com; lweinheimer@rice-ecs.com; knorman@rice-ecs.com; jkamplain@rice-ecs.com; sedwards@rice-ecs.com; cursanic@rice-ecs.com Environmental Tech: @rice-ecs.com	
		CHECKED BY: (Initials) [Signature]			

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

#54

August 06, 2014

LAURA FLORES

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: EMPIRE ABO #08

Enclosed are the results of analyses for samples received by the laboratory on 08/01/14 12:00.

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:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 WEST WALL 1 (H402369-01)

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	08/04/2014	ND	1.65	82.7	2.00	8.41	
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43	
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40	
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49	
Total BTEX	<0.300	0.300	08/04/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6560	16.0	08/05/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<20.0	20.0	08/04/2014	10.1	199	99.4	200	1.66	
DRO >C10-C28	<10.0	10.0	08/04/2014	ND	212	106	200	2.11	

Surrogate: 1-Chlorooctane 98.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 105 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 WEST WALL 2 (H402369-02)

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	08/04/2014	ND	1.65	82.7	2.00	8.41	
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43	
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40	
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49	
Total BTEX	<0.300	0.300	08/04/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1100	16.0	08/05/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<100	100	08/04/2014	10.1	199	99.4	200	1.66		
DRO >C10-C28	3770	50.0	08/04/2014	ND	212	106	200	2.11		

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 174 % 63.6-154

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 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 EAST WALL 1 (H402369-03)

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	08/04/2014	ND	1.65	82.7	2.00	8.41		
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43		
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40		
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49		
Total BTEX	<0.300	0.300	08/04/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	688	16.0	08/05/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<20.0	20.0	08/04/2014	10.1	199	99.4	200	1.66		
DRO >C10-C28	<10.0	10.0	08/04/2014	ND	212	106	200	2.11		

Surrogate: 1-Chlorooctane 90.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 90.8 % 63.6-154

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 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 EAST WALL 2 (H402369-04)

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	08/04/2014	ND	1.65	82.7	2.00	8.41		
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43		
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40		
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49		
Total BTEX	<0.300	0.300	08/04/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1090	16.0	08/05/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<20.0	20.0	08/04/2014	10.1	199	99.4	200	1.66		
DRO >C10-C28	127	10.0	08/04/2014	ND	212	106	200	2.11		

Surrogate: 1-Chlorooctane 88.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.4 % 63.6-154

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 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 BOTTOM 1 (H402369-05)

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	08/04/2014	ND	1.65	82.7	2.00	8.41		
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43		
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40		
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49		
Total BTEX	<0.300	0.300	08/04/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	08/05/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<20.0	20.0	08/04/2014	10.1	199	99.4	200	1.66		
DRO >C10-C28	<10.0	10.0	08/04/2014	ND	212	106	200	2.11		

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 103 % 63.6-154

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 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 BOTTOM 2 (H402369-06)

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	08/04/2014	ND	1.65	82.7	2.00	8.41		
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43		
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40		
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49		
Total BTEX	<0.300	0.300	08/04/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	832	16.0	08/05/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<20.0	20.0	08/04/2014	10.1	199	99.4	200	1.66		
DRO >C10-C28	<10.0	10.0	08/04/2014	ND	212	106	200	2.11		

Surrogate: 1-Chlorooctane 97.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.7 % 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



Celey D. Keene, Lab Director/Quality Manager

Excavation 2



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

Company Name: RECS				BILL TO				ANALYSIS REQUEST																				
Project Manager: Laura Flores, Jacob Kamplain				P.O. #:				Chlorides TPH 8015 M BTEX Texas TPH Complete Cations/Anions TDS																				
Address:				Company:																								
City: Hobbs State: NM Zip: 88240				Attn:																								
Phone #: Fax #:				Address:																								
Project #: Project Owner:				City:																								
Project Name:				State: Zip:																								
Project Location: Empire ABO #08				Phone #:																								
Sampler Name: Lyle Schmidt				Fax #:																								
FOR LAB USE ONLY																												
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.		SAMPLING															
						GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME												
H402368																												
		1 Excavation 2 west wall 1		6	1			X				X			7-30-14	1:50	X	X	X									
		2 Excavation 2 west wall 2		6	1			X				X			}	1:55	X	X	X									
		3 Excavation 2 East wall 1		6	1			X				X				2:00	X	X	X									
		4 Excavation 2 East wall 2		6	1			X				X				2:05	X	X	X									
		5 Excavation 2 Bottom 1		6	1			X				X				2:10	X	X	X									
		6 Excavation 2 Bottom 2		6	1			X				X				2:15	X	X	X									

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Relinquished By: Kyle Schmidt		Date: 7-30-14		Received By: Jodi Benson		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #:	
Relinquished By:		Time: 12:00		Received By:		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #:	
Delivered By: (Circle One)		Date:		Time:		REMARKS:			
Sampler - UPS - Bus - Other:		Sample Condition		CHECKED BY: (Initials)		email: hconder@riceswd.com; lflores@rice-ecs.com; lweinheimer@rice-ecs.com; knorman@rice-ecs.com; jkamplain@rice-ecs.com; sedwards@rice-ecs.com; cursanic@rice-ecs.com			
		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		JS		Environmental Tech:		@rice-ecs.com	

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

#54

August 06, 2014

LAURA FLORES

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: EMPIRE ABO #08

Enclosed are the results of analyses for samples received by the laboratory on 08/01/14 12:00.

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:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 4 WEST WALL 1 (H402370-01)

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	08/04/2014	ND	1.65	82.7	2.00	8.41	
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43	
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40	
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49	
Total BTEX	<0.300	0.300	08/04/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1020	16.0	08/05/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<20.0	20.0	08/04/2014	10.1	199	99.4	200	1.66	
DRO >C10-C28	<10.0	10.0	08/04/2014	ND	212	106	200	2.11	

Surrogate: 1-Chlorooctane 87.1 % 65.2-140
Surrogate: 1-Chlorooctadecane 92.0 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 4 WEST WALL 2 (H402370-02)

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	08/04/2014	ND	1.65	82.7	2.00	8.41		
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43		
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40		
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49		
Total BTEX	<0.300	0.300	08/04/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	08/05/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<20.0	20.0	08/04/2014	10.1	199	99.4	200	1.66		
DRO >C10-C28	<10.0	10.0	08/04/2014	ND	212	106	200	2.11		

Surrogate: 1-Chlorooctane 93.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 99.9 % 63.6-154

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 4 EAST WALL 1 (H402370-03)

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	08/04/2014	ND	1.65	82.7	2.00	8.41		
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43		
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40		
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49		
Total BTEX	<0.300	0.300	08/04/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	512	16.0	08/05/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<20.0	20.0	08/05/2014	10.1	199	99.4	200	1.66		
DRO >C10-C28	<10.0	10.0	08/05/2014	ND	212	106	200	2.11		

Surrogate: 1-Chlorooctane 96.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.9 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 4 EAST WALL 2 (H402370-04)

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	08/04/2014	ND	1.65	82.7	2.00	8.41		
Toluene*	<0.050	0.050	08/04/2014	ND	1.68	84.1	2.00	7.43		
Ethylbenzene*	<0.050	0.050	08/04/2014	ND	1.66	83.0	2.00	7.40		
Total Xylenes*	<0.150	0.150	08/04/2014	ND	5.18	86.4	6.00	7.49		
Total BTEX	<0.300	0.300	08/04/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	640	16.0	08/05/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<20.0	20.0	08/05/2014	10.1	199	99.4	200	1.66		
DRO >C10-C28	<10.0	10.0	08/05/2014	ND	212	106	200	2.11		

Surrogate: 1-Chlorooctane 91.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.0 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 4 BOTTOM 1 (H402370-05)

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	08/05/2014	ND	2.07	103	2.00	1.58	
Toluene*	<0.050	0.050	08/05/2014	ND	2.10	105	2.00	1.01	
Ethylbenzene*	<0.050	0.050	08/05/2014	ND	2.13	106	2.00	1.52	
Total Xylenes*	<0.150	0.150	08/05/2014	ND	6.66	111	6.00	3.49	
Total BTEX	<0.300	0.300	08/05/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	08/05/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<20.0	20.0	08/05/2014	10.1	199	99.4	200	1.66	
DRO >C10-C28	<10.0	10.0	08/05/2014	ND	212	106	200	2.11	

Surrogate: 1-Chlorooctane 91.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.1 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 LAURA FLORES
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	08/01/2014	Sampling Date:	07/30/2014
Reported:	08/06/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 4 BOTTOM 2 (H402370-06)

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	08/05/2014	ND	2.07	103	2.00	1.58		
Toluene*	<0.050	0.050	08/05/2014	ND	2.10	105	2.00	1.01		
Ethylbenzene*	<0.050	0.050	08/05/2014	ND	2.13	106	2.00	1.52		
Total Xylenes*	<0.150	0.150	08/05/2014	ND	6.66	111	6.00	3.49		
Total BTEX	<0.300	0.300	08/05/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	752	16.0	08/05/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<20.0	20.0	08/05/2014	10.1	199	99.4	200	1.66		
DRO >C10-C28	<10.0	10.0	08/05/2014	ND	212	106	200	2.11		

Surrogate: 1-Chlorooctane 105 % 65.2-140

Surrogate: 1-Chlorooctadecane 112 % 63.6-154

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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



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

Company Name: RECS		BILL TO				ANALYSIS REQUEST														
Project Manager: Laura Flores, Jacob Kamplain		P.O. #:				Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS									
Address:		Company:																		
City: Hobbs State: NM Zip: 88240		Attn:																		
Phone #: Fax #:		Address:																		
Project #: Project Owner:		City:																		
Project Name:		State: Zip:																		
Project Location: Empire ABD #08		Phone #:																		
Sampler Name: Kyle Schwaick		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
H402570																				
1	Excavation 4 west wall 1	6	1			X							7-30-14	3:00						
2	Excavation 4 west wall 2	6	1			X								3:05						
3	Excavation 4 East wall 1	6	1			X								3:10						
4	Excavation 4 East wall 2	6	1			X								3:15						
5	Excavation 4 Bottom 1	6	1			X								3:20						
6	Excavation 4 Bottom 2	6	1			X								3:24						

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Relinquished By: Kyle Schwaick	Date: 7-30-14	Received By: Jaci Henson	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:	
Relinquished By:	Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Time:	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) JS	REMARKS: email: hconder@riceswd.com; lflores@rice-ecs.com; lweinheimer@rice-ecs.com; knorman@rice-ecs.com; jkamplain@rice-ecs.com; sedwards@rice-ecs.com; cursanic@rice-ecs.com Environmental Tech: @rice-ecs.com	

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

#54

August 29, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: EMPIRE ABO UNIT #08

Enclosed are the results of analyses for samples received by the laboratory on 08/27/14 9:00.

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 - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 WEST WALL 3 (H402627-01)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	800	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 110 % 65.2-140
Surrogate: 1-Chlorooctadecane 119 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 WEST WALL 4 (H402627-02)

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	08/28/2014	ND	1.85	92.7	2.00	10.1		
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4		
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9		
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6		
Total BTEX	<0.300	0.300	08/28/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	208	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01		
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54		

Surrogate: 1-Chlorooctane 111 % 65.2-140

Surrogate: 1-Chlorooctadecane 121 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 EAST WALL 3 (H402627-03)

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	08/28/2014	ND	1.85	92.7	2.00	10.1		
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4		
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9		
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6		
Total BTEX	<0.300	0.300	08/28/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	480	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01		
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54		

Surrogate: 1-Chlorooctane 97.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 EAST WALL 4 (H402627-04)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	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	32.0	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 110 % 65.2-140

Surrogate: 1-Chlorooctadecane 123 % 63.6-154

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Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 BOTTOM 3 (H402627-05)

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	08/28/2014	ND	1.85	92.7	2.00	10.1		
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4		
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9		
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6		
Total BTEX	<0.300	0.300	08/28/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	384	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01		
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54		

Surrogate: 1-Chlorooctane 97.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 BOTTOM 4 (H402627-06)

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	08/28/2014	ND	1.85	92.7	2.00	10.1		
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4		
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9		
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6		
Total BTEX	<0.300	0.300	08/28/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	224	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01		
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54		

Surrogate: 1-Chlorooctane 99.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 2 SOUTH WALL (H402627-07)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	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	368	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 108 % 65.2-140

Surrogate: 1-Chlorooctadecane 120 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 3 EAST WALL 3 (H402627-08)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	144	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 111 % 65.2-140

Surrogate: 1-Chlorooctadecane 124 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 3 WEST WALL 3 (H402627-09)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	128	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 106 % 65.2-140

Surrogate: 1-Chlorooctadecane 118 % 63.6-154

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Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
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 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 3 NORTH WALL (H402627-10)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	416	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 111 % 65.2-140

Surrogate: 1-Chlorooctadecane 122 % 63.6-154

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Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 3 SOUTH WALL (H402627-11)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	400	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 112 % 65.2-140

Surrogate: 1-Chlorooctadecane 124 % 63.6-154

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Analytical Results For:

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 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 5 NORTH WALL (H402627-12)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	672	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	237	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 110 % 65.2-140

Surrogate: 1-Chlorooctadecane 130 % 63.6-154

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Analytical Results For:

 APACHE - EUNICE
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 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 5 WEST WALL (H402627-13)

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	08/28/2014	ND	1.85	92.7	2.00	10.1		
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4		
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9		
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6		
Total BTEX	<0.300	0.300	08/28/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	560	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01		
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54		

Surrogate: 1-Chlorooctane 111 % 65.2-140

Surrogate: 1-Chlorooctadecane 123 % 63.6-154

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Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 5 SOUTH WALL (H402627-14)

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	08/28/2014	ND	1.85	92.7	2.00	10.1		
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4		
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9		
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6		
Total BTEX	<0.300	0.300	08/28/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	32.0	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01		
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54		

Surrogate: 1-Chlorooctane 116 % 65.2-140

Surrogate: 1-Chlorooctadecane 127 % 63.6-154

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Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 5 NORTH BOTTOM (H402627-15)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	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	704	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 99.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 109 % 63.6-154

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Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 5 EAST BOTTOM (H402627-16)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	560	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 114 % 65.2-140

Surrogate: 1-Chlorooctadecane 124 % 63.6-154

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Analytical Results For:

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 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 5 EAST WALL (H402627-17)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	768	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 108 % 65.2-140

Surrogate: 1-Chlorooctadecane 120 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 6 SOUTH WALL (H402627-18)

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	08/28/2014	ND	1.85	92.7	2.00	10.1		
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4		
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9		
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6		
Total BTEX	<0.300	0.300	08/28/2014	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	128	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01		
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54		

Surrogate: 1-Chlorooctane 111 % 65.2-140

Surrogate: 1-Chlorooctadecane 122 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 6 EAST WALL 1 (H402627-19)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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	192	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 106 % 65.2-140

Surrogate: 1-Chlorooctadecane 117 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 6 EAST WALL 2 (H402627-20)

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	08/28/2014	ND	1.85	92.7	2.00	10.1	
Toluene*	<0.050	0.050	08/28/2014	ND	1.71	85.3	2.00	12.4	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	1.92	96.1	2.00	15.9	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	5.74	95.7	6.00	16.6	
Total BTEX	<0.300	0.300	08/28/2014	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	880	16.0	08/27/2014	ND	416	104	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	08/27/2014	ND	186	93.2	200	8.01	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	187	93.6	200	8.54	

Surrogate: 1-Chlorooctane 113 % 65.2-140
Surrogate: 1-Chlorooctadecane 124 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 6 WEST WALL 1 (H402627-21)

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	08/28/2014	ND	2.08	104	2.00	2.16	
Toluene*	<0.050	0.050	08/28/2014	ND	2.12	106	2.00	2.21	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	2.17	108	2.00	2.63	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	6.81	113	6.00	1.95	
Total BTEX	<0.300	0.300	08/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	416	16.0	08/27/2014	ND	416	104	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	08/27/2014	10.3	200	100	200	0.943	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	203	102	200	1.18	

Surrogate: 1-Chlorooctane 112 % 65.2-140

Surrogate: 1-Chlorooctadecane 127 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 6 WEST WALL 2 (H402627-22)

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	08/28/2014	ND	2.08	104	2.00	2.16	
Toluene*	<0.050	0.050	08/28/2014	ND	2.12	106	2.00	2.21	
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	2.17	108	2.00	2.63	
Total Xylenes*	<0.150	0.150	08/28/2014	ND	6.81	113	6.00	1.95	
Total BTEX	<0.300	0.300	08/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	224	16.0	08/27/2014	ND	416	104	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	08/27/2014	10.3	200	100	200	0.943	
DRO >C10-C28	<10.0	10.0	08/27/2014	ND	203	102	200	1.18	

Surrogate: 1-Chlorooctane 118 % 65.2-140

Surrogate: 1-Chlorooctadecane 134 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

Received:	08/27/2014	Sampling Date:	08/15/2014
Reported:	08/29/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXC 6 NORTH WALL (H402627-23)

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	08/28/2014	ND	2.08	104	2.00	2.16		
Toluene*	<0.050	0.050	08/28/2014	ND	2.12	106	2.00	2.21		
Ethylbenzene*	<0.050	0.050	08/28/2014	ND	2.17	108	2.00	2.63		
Total Xylenes*	<0.150	0.150	08/28/2014	ND	6.81	113	6.00	1.95		
Total BTEX	<0.300	0.300	08/28/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	32.0	16.0	08/27/2014	ND	416	104	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	08/28/2014	10.3	200	100	200	0.943		
DRO >C10-C28	<10.0	10.0	08/28/2014	ND	203	102	200	1.18		

Surrogate: 1-Chlorooctane 122 % 65.2-140

Surrogate: 1-Chlorooctadecane 139 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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





CARDINAL LABORATORIES

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

Company Name: Apache		BILL TO		ANALYSIS REQUEST																						
Project Manager: Bruce Baker		P.O. #:		Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS																	
Address:		Company:																								
City: Hobbs State: NM Zip: 88240		Attn:																								
Phone #: Fax #:		Address:																								
Project #: Project Owner:		City:																								
Project Name:		State: Zip:																								
Project Location: Empire ADO HOS		Phone #:																								
Sampler Name: Kyle Humphrey		Fax #:																								
FOR LAB USE ONLY																										
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						
H402627																										
18	Excavation 6 South well	6	1			✓				✓			8-15-14	9:50	✓	✓	✓									
19	Excavation 6 East well 1	6	1			✓				✓				9:55	✓	✓	✓									
20	Excavation 6 East well 2	6	1			✓				✓				10:00	✓	✓	✓									
21	Excavation 6 West well 1	6	1			✓				✓				10:05	✓	✓	✓									
22	Excavation 6 West well 2	6	1			✓				✓				10:10	✓	✓	✓									
23	Excavation 6 North well	6	1			✓				✓				10:15	✓	✓	✓									

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Relinquished By: Kyle Humphrey	Date: 8/27/14 Time: 9:00	Received By: Jodi Henson	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:
Relinquished By:	Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #:
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	REMARKS:
Sampler - UPS - Bus - Other:	Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	[Signature]	email results Knorman@rice-ecs.com Kjones@riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com; Lweinheimer@rice-ecs.com Khumphrey@rice-ecs.com sedwards@rice-ecs.com, lflores@rice-ecs.com

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

#54

September 09, 2014

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: EMPIRE ABO #08

Enclosed are the results of analyses for samples received by the laboratory on 09/09/14 8:30.

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:	09/09/2014	Sampling Date:	09/08/2014
Reported:	09/09/2014	Sampling Type:	Soil
Project Name:	EMPIRE ABO #08	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: EXCAVATION 2 WEST WALL 1 (H402790-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/09/2014	ND	416	104	400	0.00	

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

Appendix C

Photo Documentation

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

Apache Empire Abo Unit #08

Unit Letter M, Section 3, & Unit Letter D, Section 10, T18S, R27E



Initial release area, facing south

12/19/13



Initial release area, facing north

12/19/13



Initial release area, facing south

12/19/13



Initial release area, facing southeast

12/19/13



Installing soil bores, facing east

2/6/14



Gauging SB-4 to determine evidence of groundwater, facing south

2/8/14



Conducting excavation at Excavation 1, facing south

7/24/14



Exporting soil, facing southeast

7/25/14



Conducting excavation at Excavation 4, facing south
7/28/14



Conducting excavation at Excavation 5, facing west
7/29/14



Conducting excavation at Excavation 3, facing east
7/31/14



Conducting excavation at Excavation 2, facing southeast
8/1/14



Conducting excavation at Excavation 6, facing northeast 8/1/14



Importing soil, facing east 9/8/14



Backfilling excavations, facing north 9/29/14



Disking site prior to seeding, facing north 10/17/14



Seeding site, facing west

10/17/14



Seeding site, facing northwest

10/17/14



Disking seed into soil, facing north

10/17/14



Site completed, facing south

10/17/14

Appendix D

Final C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company	Apache Corporation	Contact	Bruce Baker
Address	8 Ellison Lane Eunice, NM 88231	Telephone No.	(432) 631-6982
Facility Name	Empire Abo Unit O-8	Facility Type	Oil Well

Surface Owner	BLM	Mineral Owner		API No.	30-015-00844
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	3	18S	27E					Eddy

Latitude: 32°46'8.886"N Longitude: 104°16'25.563"W

NATURE OF RELEASE

Type of Release	Oil and Produced Water	Volume of Release	8 barrels (6 barrels water and 2 barrels oil)	Volume Recovered	2 barrels (1 barrel oil and 1 barrel water)
Source of Release	Flow-line	Date and Hour of Occurrence		Date and Hour of Discovery	12/19/13 at 8:00 a.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Left message with Jeffery Robertson (BLM)		
By Whom?		Date and Hour	12/19/2013 at 2:00 p.m.		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* The steel flow line was pressured up and released fluid from two previous line repair clamps. Well was shut in and vacuum truck was dispatched to pick-up fluid. Line was replaced with a new poly line.

Describe Area Affected and Cleanup Action Taken.* RECS was on site beginning on December 19th, 2013 to assess and GPS map the site. On February 6th, 2014, 3 soil bores were installed at the site to assess the level of contamination. Representative samples from the bores were taken to a commercial laboratory for analysis. Based on the laboratory sampling, a CAP was submitted to NMOCD and BLM on May 7th, 2014. BLM approved the CAP on May 8th, 2014 and NMOCD approved the CAP on May 15th, 2014. CAP activities began at the site on July 18th, 2014. Excavation 1 was dug to 4 ft bgs, and Excavation 4 was dug to 2 ft bgs. Final wall and bottom samples were taken and sent to a commercial laboratory for analysis. On August 8th, 2014, Apache requested permission from BLM and NMOCD to backfill Excavation 1 and 4 with clean, imported soil. NMOCD approved the request to backfill the site on August 8th, 2014, and BLM approved the request to backfill the site on August 14th, 2014. The remainder of the release was excavated as stated in the approved CAP. Excavation 2 was scraped down to 2 ft bgs, Excavation 5 was scraped down to 1 ft bgs, and Excavation 3 and Excavation 6 were excavated to 4 ft bgs. Final wall samples from each of these scrapes and composite bottom samples from Excavations 2 and 5 were taken to a commercial laboratory for analysis. On September 3rd, 2014, Apache requested permission to backfill the remainder of the excavations with clean, imported soil. BLM gave verbal approval to backfill the site on September 9th, 2014, while NMOCD approved the site to backfilled on September 5th, 2014. As part of the approval from NMOCD to backfill the site, NMOCD requested that the West Wall 1 in Excavation 2 be expanded to obtain chloride readings below regulatory standards. The area around West Wall 1 was excavated further to the west and re-sampled on September 8th, 2014. In response to this new data, on September 11th, 2014, NMOCD gave their approval to backfill the remaining excavations. All excavated soil was taken to an NMOCD approved facility for disposal. Clean soil was imported to the site to replace the contaminated soil taken for disposal. The remaining excavations were backfilled with the clean, imported soil and contoured to the surrounding area. On October 17th, 2014, the disturbed area was seeded with BLM mix #3.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Bruce Baker</i>	OIL CONSERVATION DIVISION	
Printed Name: Bruce Baker	Approved by Environmental Specialist:	
Title: Environmental Tech	Approval Date:	Expiration Date:
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 1-2-2015 Phone: (432) 631-6982		