

HOBBS OCD

HOBBS OCD

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

JAN 06 2012 State of New Mexico
Energy Minerals and Natural Resources

JAN 06

Form C-141
Revised October 10, 2003

RECEIVED

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

RECEIVED

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Apache Corp.	Contact	Natalie Gladden
Address	P.O. Box 1849, Eunice, NM, 88231	Telephone No.	(575) 390-4186
Facility Name	Hanson State #12	Facility Type	Production
Surface Owner	SW Cattle Company	Mineral Owner	State of NM
		API No.	30-025-39563

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	16	20S	37E	1650	FNL	330	FEL	Lea

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release	Drilling fluids	Volume of Release	>30 bbls	Volume Recovered	0
Source of Release	Closed loop system	Date and Hour of Occurrence	10/27/2010	Date and Hour of Discovery	10/27/2010
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Larry Johnson		
By Whom?	Natalie Gladden	Date and Hour	10/27/10 8am		
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.*

DTW = 19'

Describe Cause of Problem and Remedial Action Taken.*

During drilling operations the closed loop system had leaked, bins were overflowed.

Describe Area Affected and Cleanup Action Taken.*

The leak impacted the well pad and an area of approximately 353 ft² located west of the well pad. The impacted soil, totaling 3,116 cubic yards, was removed to a NMOCD approved disposal facility. Samples of the remaining soil were sent to a commercial laboratory for chloride, TPH, and BTEX analyses. The excavations were backfilled with 3,592 cubic yards of clean imported soil and contoured to the surrounding area.

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>Natalie Gladden</i>	OIL CONSERVATION DIVISION	
Printed Name: Natalie Gladden	ENV. SPECIALIST:	
Title: EH&S Environmental Tech	Approved by District Supervisor: <i>Jeff Labring</i>	
E-mail Address: Natalie.gladden@apachecorp.com	Approval Date: 1/6/12	Expiration Date: -
Date: 1/17/11	Conditions of Approval: -	Attached <input type="checkbox"/>
Phone: (575) 390-4186		IRP-1-12-2774

* Attach Additional Sheets If Necessary

JUN 09 2014



EXPLORING WHAT'S POSSIBLE

HOBBS OCD

JAN 06 2012

RECEIVED

APACHE CORPORATION

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

Hanson State #12

Closure Report Update

API 30-025-39563

Release Date: October 27, 2010

Unit Letter H, Section 16, Township 20S, Range 37E

Approved
Jeff Blasing
Env. Specialist
NMOCB-HOBBS
01/06/12

Rice Environmental Consulting & Safety

P.O. Box 5630 Hobbs, NM 88241

Phone 575.393.4411 Fax 575.393.0293

December 22, 2011

Geoffrey Leking

New Mexico Energy, Minerals, & Natural Resources

Oil Conservation Division, Environmental Bureau – District 1

1625 N. French Dr.

Hobbs, NM 88240-9273

RE: TERMINATION REQUEST

Apache – Hanson State #12 AD Groundwater Addendum

UL/H sec. 16 T20S R37E

Mr. Leking:

Apache Corporation has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the site referenced above. A brief review of the site background and previous work is followed by the groundwater addendum.

Background and Previous Work

The site is an accidental discharge of fluids at the Hanson State #12 well when the closed loop system leaked during drilling activities. A section of the impacted area was situated above a recently installed 20 mil plastic liner buried approximately 2 ft below ground surface (bgs). The liner was installed as an environmental safeguard prior to regular drilling activities during well pad construction (Figure 1 and 2). An initial form C-141 was submitted by Apache Corporation on October 31, 2011 (Appendix A). The site is located east of NM State Highway 8 and south of Monument, NM in unit letter 'H' of section 16, T20S, R37E in Lea County, New Mexico.

On October 28, 2011, RECS personnel initiated work on the Hanson State #12. Surface soil samples were collected from the impacted area outside the boundary of the buried plastic liner and field tested for chloride. Headspace measurements were also taken in the field using a Photo Ionization Detector (PID). The samples were sent to a commercial laboratory for chloride, TPH (GRO/DRO), and BTEX analyses (Figure 1).

As excavation of the leak area progressed, additional samples were collected and similarly field tested. The impacted area was divided into two major excavations and two minor excavations (Figure 2). Final representative composite samples were collected from the major excavations (North Excavation and West Excavation), and were also sent to a commercial laboratory for chloride, TPH (GRO/DRO), and BTEX analyses (Appendix C).

In the North Excavation, chloride was 96 ppm (parts per million or mg/kg) in the composite floor sample. The 4 wall composite sample contained 464 ppm chloride. The south wall contained one sample point that showed field tests to be above guidelines (Figure 2). However, due to the proximity of the well head and the presence of the 20 mil plastic liner below, excavation was ceased. TPH was non-detect throughout, and BTEX was below standards. In the West

Excavation, chloride was below guidelines in both the floor and wall composite samples. TPH was non-detect throughout, and BTEX was below standards.

Final composite samples were also collected from the walls and floor of the minor excavations in the pasture west of the location pad (West off Pad North Excavation and West off Pad South Excavation). The samples were field tested and were submitted to a commercial laboratory for chloride analysis (Appendix C). Results showed chloride for both excavations at not above 32 ppm.

A total of 3,116 cubic yards of impacted soil was removed from the excavations, including the impacted soils above the plastic liner on the well pad, and transported to a NMOCD approved disposal facility. The excavations were backfilled with 3,592 cubic yards of clean imported soil and contoured to the surrounding area. See Appendix C for photographs of field activities.

Groundwater Addendum

A study of the US Geological Survey groundwater database revealed depth to groundwater southwest of the site approximated 19 ft bgs (<http://nwis.waterdata.usgs.gov/nm/nwis>, Appendix E). On October 29, 2010, RECS supervised the drilling of three (3) soil bores/observational wells at the site to determine depth to groundwater. The soil bores were each drilled to 60 ft bgs and were located at the northwest, northeast, and southwest corners of the caliche pad. Red bed clay was encountered at 34 ft bgs and no water was detected within the soil bores (Appendix E). The soil bores were barricaded and left open to allow potential groundwater to accumulate.

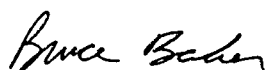
On November 2, 2010, RECS personnel used a Heron depth to water meter to determine depth to groundwater. No water was detected within any of the soil bores, and the soil bores were plugged with bentonite to ground surface (Appendix E). See site photographs for drilling activities in Appendix E.

Conclusion

Due to the removal of impacted soils and the nonexistence of groundwater at the site, Apache submits the final C-141 (Appendix D) and respectfully requests the closure of the regulatory file for this site.

Apache Corporation appreciates the opportunity to work with you on this project. Please call Natalie Gladden (575) 390-4186 if you have any questions or comments.

Sincerely,



Bruce Baker

Head Foreman
RECS
(575) 631-5157

Attachments:

- Figure 1: Site Diagram with Surface Samples
- Figure 2: Site Diagram with Final Sample Data
- Appendix A: Initial Form C-141
- Appendix B: Site Photographs
- Appendix C: Laboratory Results
- Appendix D: Final Form C-141
- Appendix E: Groundwater Addendum Packet



Figure

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Figure 1: Site Diagram with Surface Samples
Apache Hanson #12

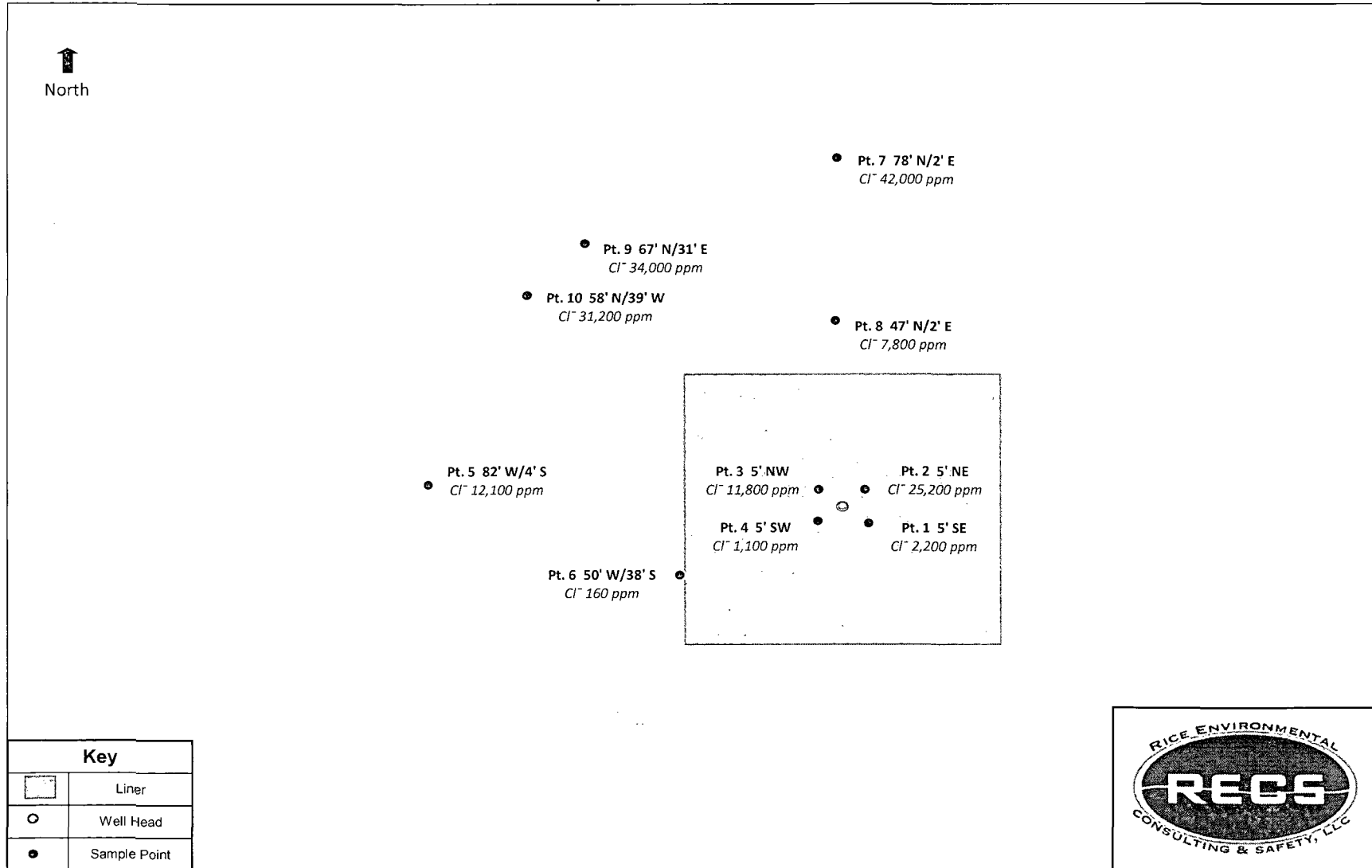
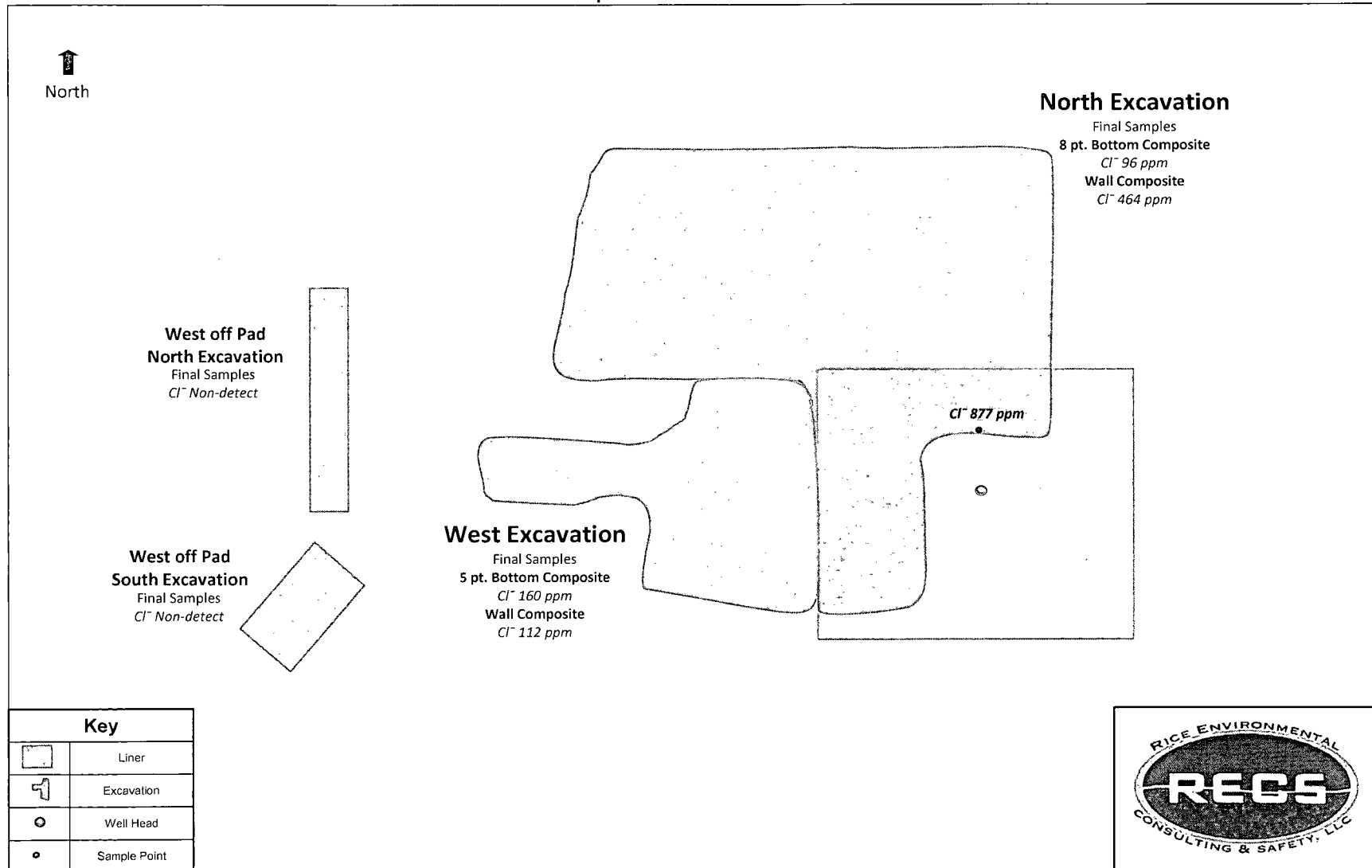


Figure 2: Site Diagram with Final Sample Data
Apache Hanson #12



Appendix A

Initial Form C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

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 Natalie Gladden
Address PO Box 1849 Eunice, NM 88231	Telephone No. 575-390-4186
Facility Name Hanson State #12	Facility Type Production

Surface Owner SW Cattle Company	Mineral Owner State of NM	API No. 30-025-39563
---------------------------------	---------------------------	----------------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	16	20S	37E	1650'	FNL	330'	FEL	Lea

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release Drilling fluids	Volume of Release >30bbls	Volume Recovered 0
Source of Release Closed loop system	Date and Hour of Occurrence 10/27/2010	Date and Hour of Discovery 10/27/2010
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Larry Johnson	
By Whom? Natalie Gladden	Date and Hour 10/27 8am	
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.*

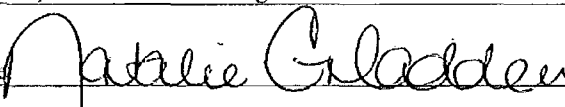
Describe Cause of Problem and Remedial Action Taken.*

During drilling operations the closed loop system had leaked, bins were overflowed.

Describe Area Affected and Cleanup Action Taken.*

This location pad has a poly liner 100' sq ft under the pad. The area above the liner will be excavated and the area outside of the liner will be remediated according the NMOCD Remediation Guidelines.

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 	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Natalie Gladden	Approved by Environmental Specialist:		
Title: EHS Environmental Tech	Approval Date:	Expiration Date:	
E-mail Address: natalie.gladden@apachecorp.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 10/31/2010 Phone: 575-390-4186			

* Attach Additional Sheets If Necessary

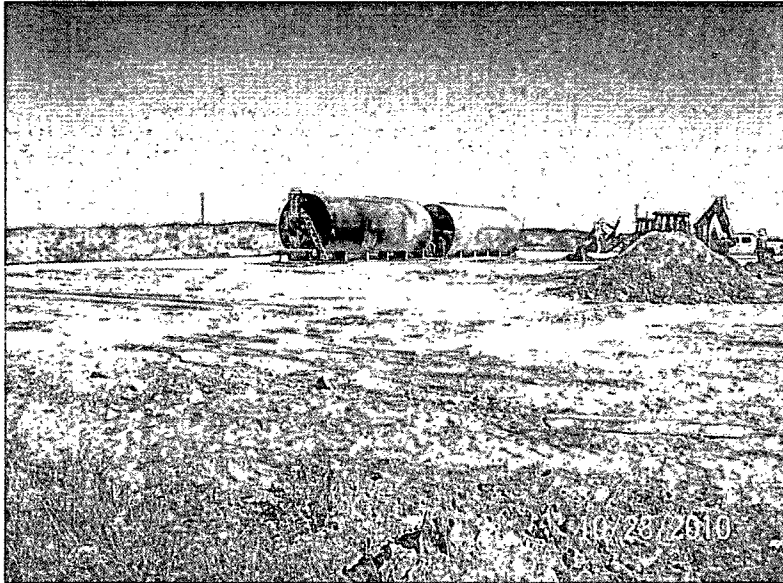
Appendix B

Site Photographs

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

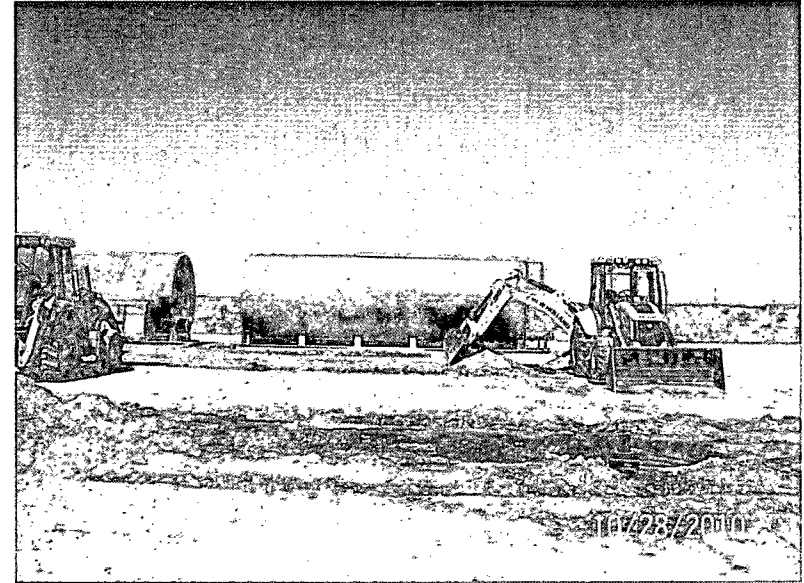
Hanson State #12

Unit Letter H, Section 16, T20S, R37E



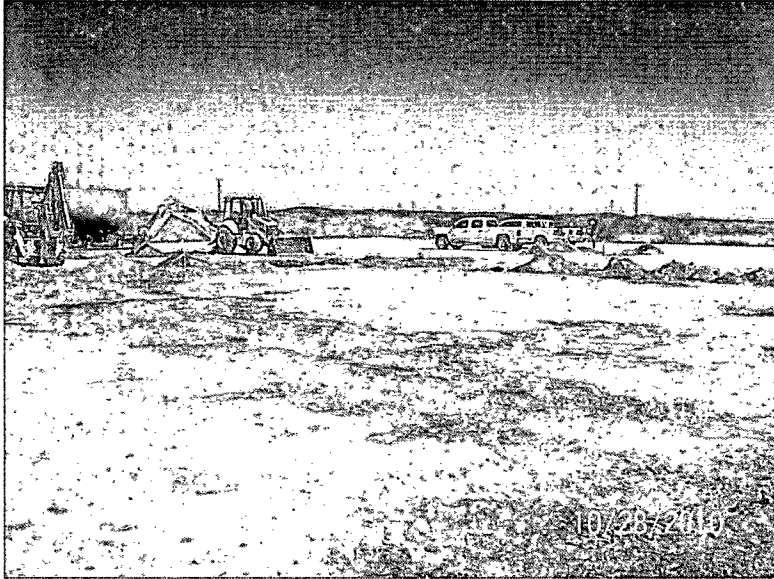
Prior to excavation, facing northeast

10/28/2010



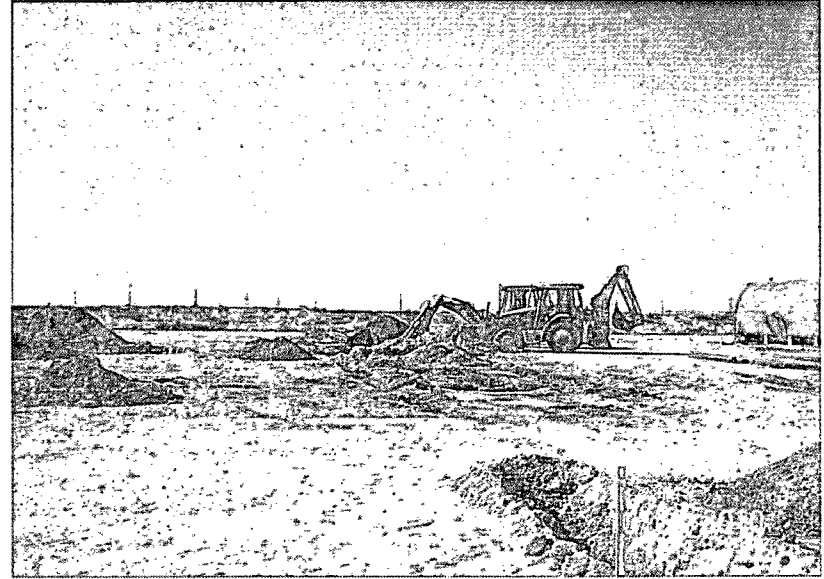
Prior to excavation, facing north

10/28/2010



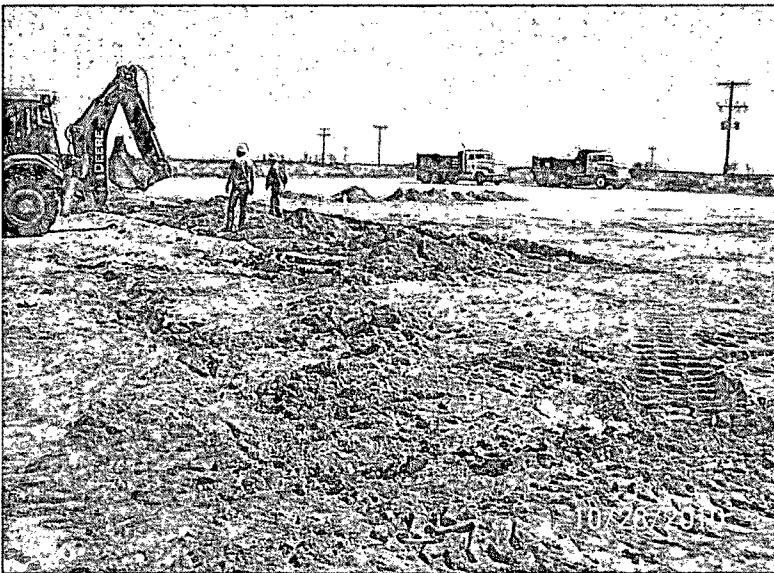
Locating liner, facing northeast

10/28/2010



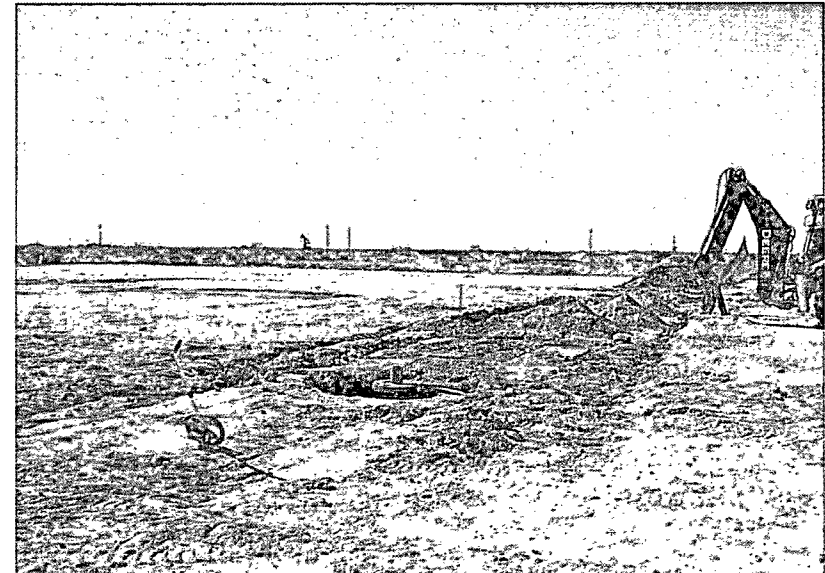
Locating liner, facing west

10/28/2010



Locating liner, facing southeast

10/28/2010

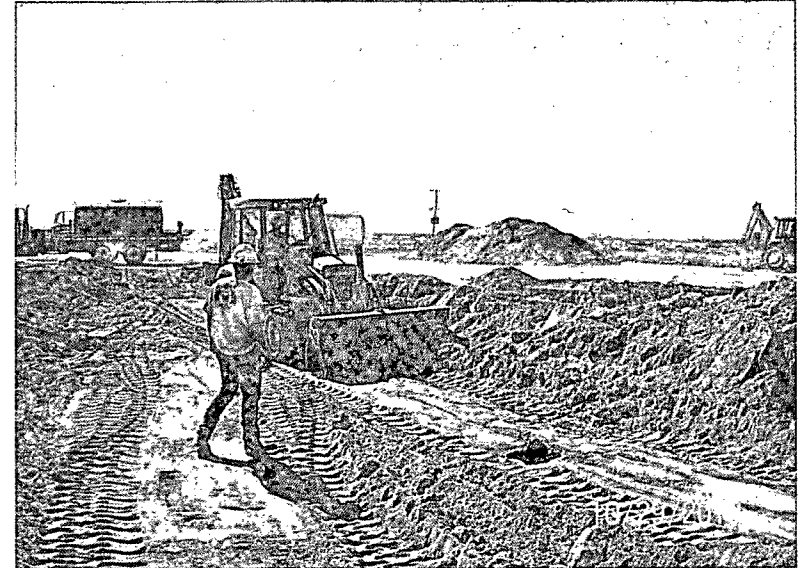


Locating liner, facing west

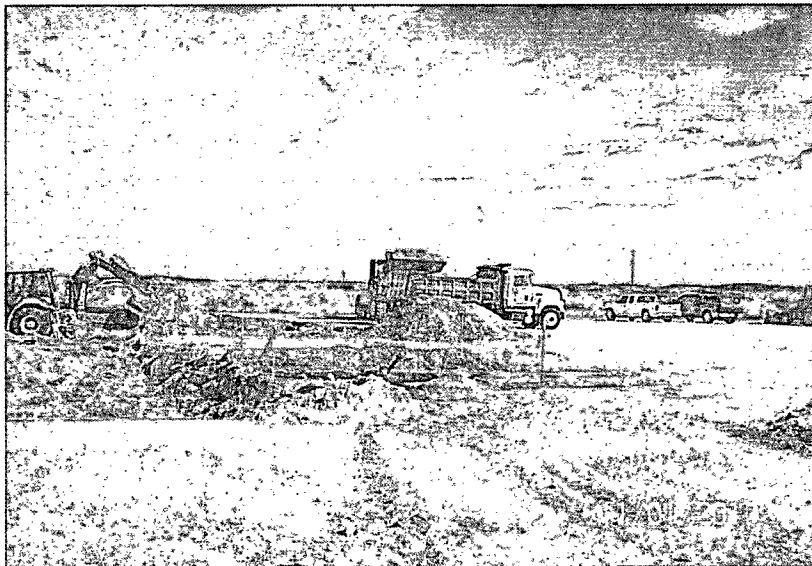
10/28/2010



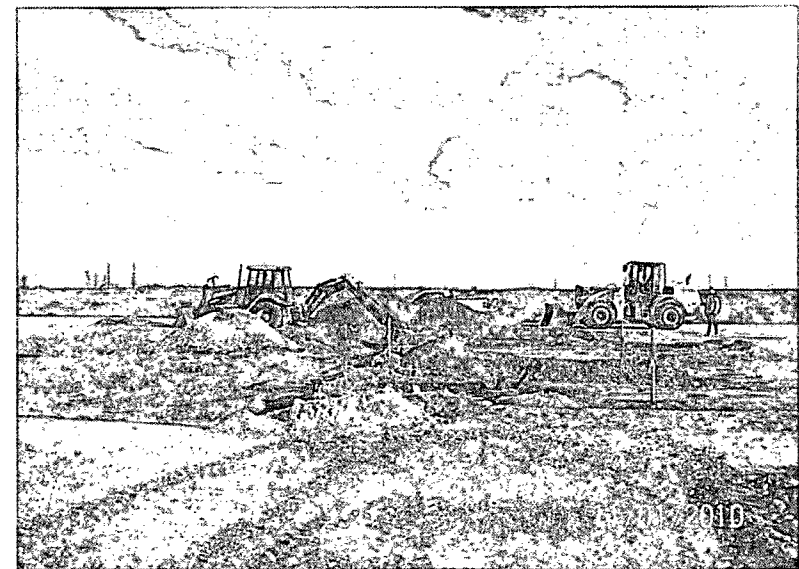
Excavating impacted area, facing west 10/29/2010



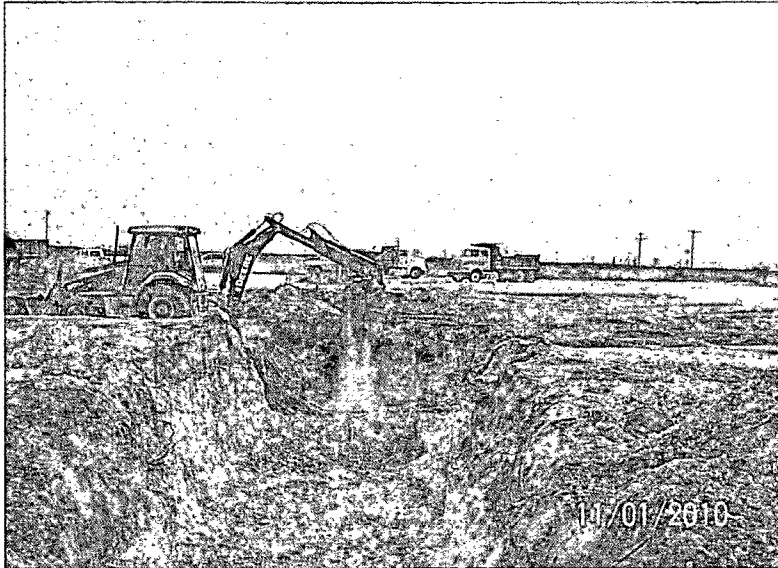
Scraping above liner, facing southwest 10/29/2010



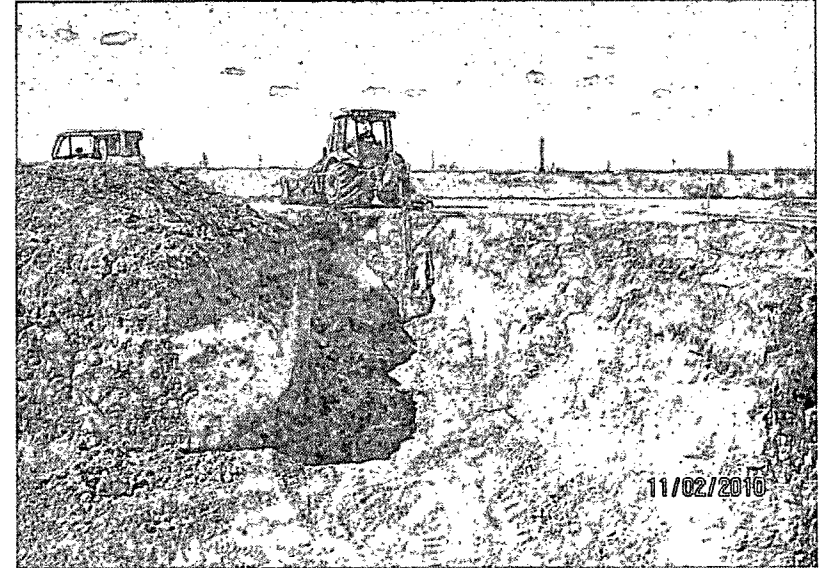
Excavating and hauling, facing north 11/1/2010



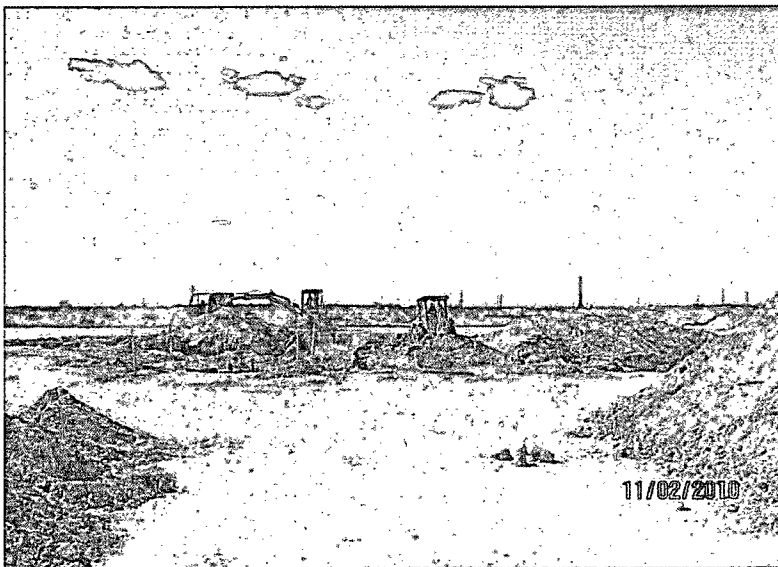
Digging North Excavation, facing north 11/1/2010



Digging West Excavation, facing east 11/1/2010



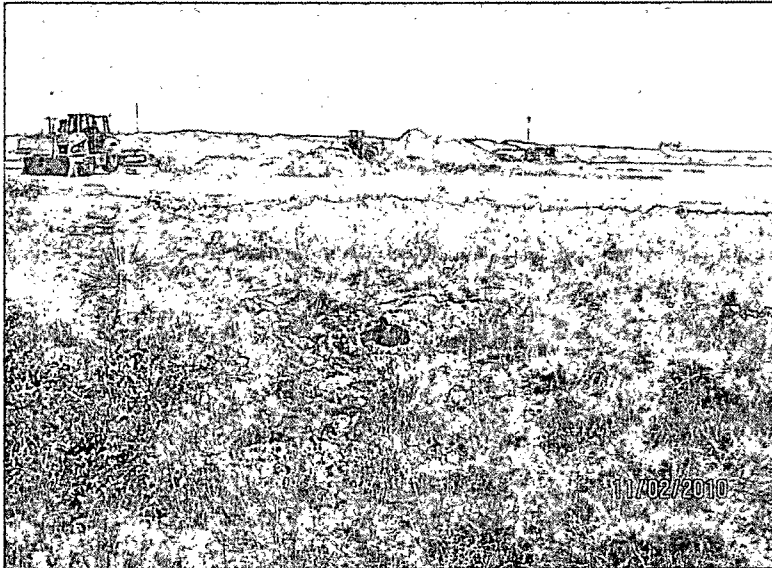
Final excavation, facing west 11/2/2010



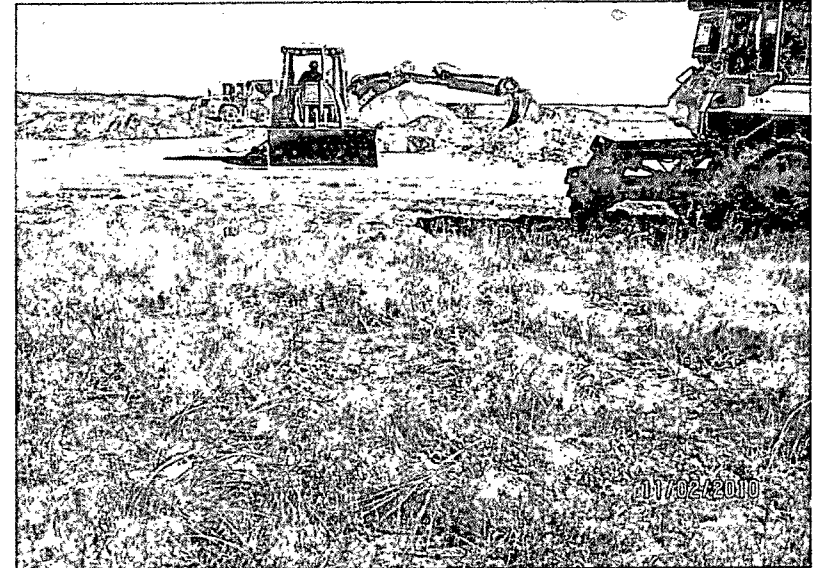
West Excavation, facing west 11/2/2010



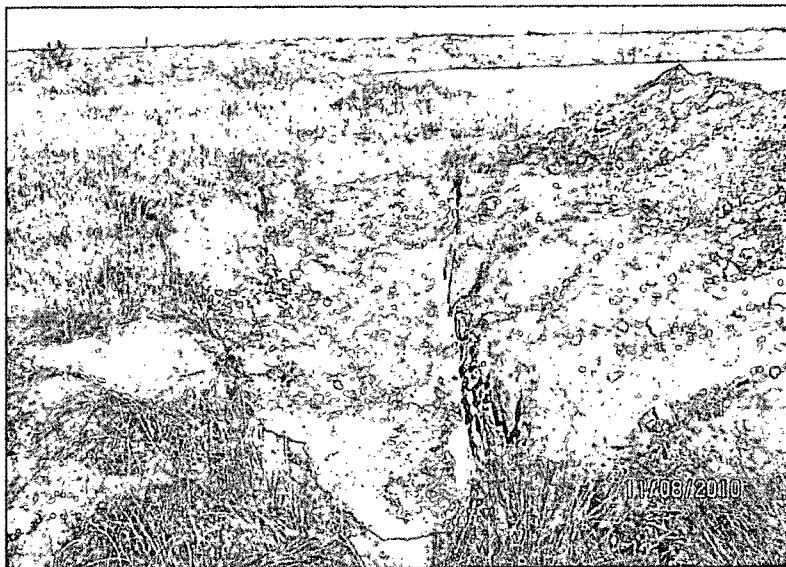
Collecting sample, facing west 11/2/2010



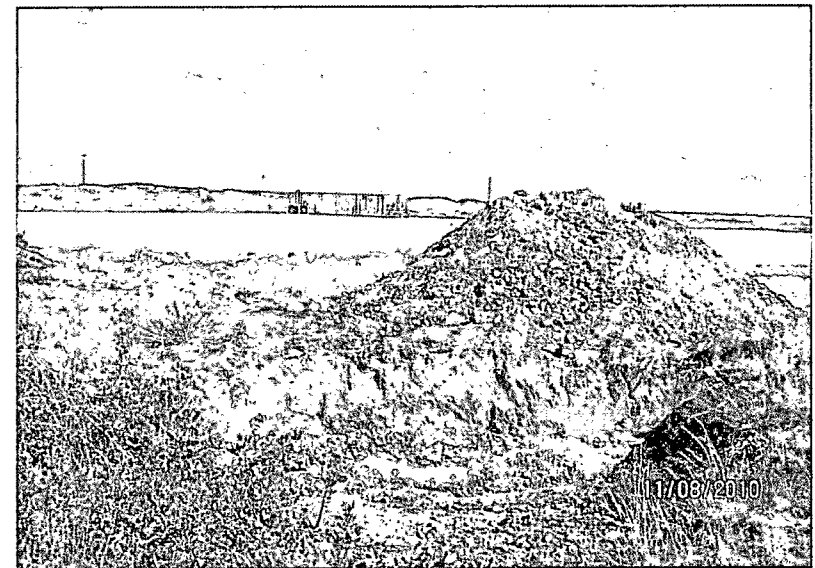
West off Pad North stain, facing northeast 11/2/2010



West off Pad South stain, facing east 11/2/2010



West off Pad North Excavation, facing north 11/8/2010



West off Pad South Exc and well pad complete 11/8/2010

Appendix C

Laboratory Results

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
HACK CONDER
112 W. TAYLOR
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 10/28/2010
Reported: 11/03/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 10/28/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: SAMPLE PT. 1 (H021173-01)

BTEX 8021B		mg/kg	Analyzed By: cms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2010	ND	2.20	110	2.00		
Toluene*	0.258	0.050	11/02/2010	0.080	2.07	103	2.00		
Ethylbenzene*	0.215	0.050	11/02/2010	ND	1.98	98.9	2.00		
Total Xylenes*	0.832	0.150	11/02/2010	ND	5.91	98.5	6.00		

Surrogate: 4-Bromofluorobenzene (PIL) 92.6 % 80-120

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2200	16.0	10/29/2010	ND	448	112	400	3.64	

TPH 8015M		mg/kg	Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	49.1	10.0	10/30/2010	ND	178	88.9	200	7.41	
DRO >C10-C28	4760	10.0	10/30/2010	ND	178	88.9	200	7.46	

Surrogate: 1-Chlorooctane 98.7 % 70-130

Surrogate: 1-Chlorooctadecane 109 % 70-130

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
HACK CONDER
112 W. TAYLOR
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 10/28/2010
Reported: 11/03/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 10/28/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: SAMPLE PT. 2 (H021173-02)

BTEX 8021B		mg/kg	Analyzed By: cms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2010	ND	2.20	110	2.00		
Toluene*	0.066	0.050	11/02/2010	0.080	2.07	103	2.00		
Ethylbenzene*	0.370	0.050	11/02/2010	ND	1.98	98.9	2.00		
Total Xylenes*	2.13	0.150	11/02/2010	ND	5.91	98.5	6.00		

Surrogate: 4-Bromofluorobenzene (PIL) 86.9 % 80-120

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	25200	16.0	10/29/2010	ND	448	112	400	3.64	

TPH 8015M		mg/kg	Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/30/2010	ND	178	88.9	200	7.41	
DRO >C10-C28	1640	10.0	10/30/2010	ND	178	88.9	200	7.46	

Surrogate: 1-Chlorooctane 96.3 % 70-130

Surrogate: 1-Chlorooctadecane 101 % 70-130

Cardinal Laboratories

*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
HACK CONDER
112 W. TAYLOR
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 10/28/2010
Reported: 11/03/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 10/28/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: SAMPLE PT. 3 (H021173-03)

BTEX 8021B		mg/kg	Analyzed By: cms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2010	ND	2.20	110	2.00		
Toluene*	0.187	0.050	11/02/2010	0.080	2.07	103	2.00		
Ethylbenzene*	<0.050	0.050	11/02/2010	ND	1.98	98.9	2.00		
Total Xylenes*	<0.150	0.150	11/02/2010	ND	5.91	98.5	6.00		

Surrogate: 4-Bromofluorobenzene (PIL) 91.0 % 80-120

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11800	16.0	10/29/2010	ND	448	112	400	3.64	

TPH 8015M		mg/kg	Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/30/2010	ND	178	88.9	200	7.41	
DRO >C10-C28	11400	50.0	11/02/2010	ND	178	88.9	200	7.46	

Surrogate: 1-Chlorooctane 97.4 % 70-130

Surrogate: 1-Chlorooctadecane 135 % 70-130

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: SAMPLE PT. 4 (H021173-04)

BTEX 8021B		mg/kg	Analyzed By: cms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2010	ND	2.20	110	2.00		
Toluene*	0.061	0.050	11/02/2010	0.080	2.07	103	2.00		
Ethylbenzene*	<0.050	0.050	11/02/2010	ND	1.98	98.9	2.00		
Total Xylenes*	<0.150	0.150	11/02/2010	ND	5.91	98.5	6.00		

Surrogate: 4-Bromofluorobenzene (PIL) 91.2 % 80-120

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11000	16.0	10/29/2010	ND	448	112	400	3.64	

TPH 8015M		mg/kg	Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/30/2010	ND	178	88.9	200	7.41	
DRO >C10-C28	833	10.0	10/30/2010	ND	178	88.9	200	7.46	

Surrogate: 1-Chlorooctane 102 % 70-130

Surrogate: 1-Chlorooctadecane 104 % 70-130

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
HACK CONDER
112 W. TAYLOR
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 10/28/2010
Reported: 11/03/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 10/28/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: SAMPLE PT. 5 (H021173-05)

BTX 8021B			mg/kg		Analyzed By: cms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/02/2010	ND	2.20	110	2.00			
Toluene*	0.145	0.050	11/02/2010	0.080	2.07	103	2.00			
Ethylbenzene*	<0.050	0.050	11/02/2010	ND	1.98	98.9	2.00			
Total Xylenes*	<0.150	0.150	11/02/2010	ND	5.91	98.5	6.00			

Surrogate: 4-Bromofluorobenzene (PIL) 86.1 % 80-120

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	12100	16.0	10/29/2010	ND	448	112	400	3.64		

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	10/30/2010	ND	178	88.9	200	7.41	
DRO >C10-C28	2220	50.0	10/30/2010	ND	178	88.9	200	7.46	

Surrogate: 1-Chlorooctane 102 % 70-130

Surrogate: 1-Chlorooctadecane 98.8 % 70-130

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
HACK CONDER
112 W. TAYLOR
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 10/28/2010
Reported: 11/03/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 10/28/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: SAMPLE PT. 6 (H021173-06)

BTEX 8021B		mg/kg	Analyzed By: cms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/02/2010	ND	2.20	110	2.00		
Toluene*	0.415	0.050	11/02/2010	0.080	2.07	103	2.00		
Ethylbenzene*	0.081	0.050	11/02/2010	ND	1.98	98.9	2.00		
Total Xylenes*	0.390	0.150	11/02/2010	ND	5.91	98.5	6.00		

Surrogate: 4-Bromofluorobenzene (PIL) 94.8 % 80-120

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	10/29/2010	ND	448	112	400	3.64	

TPH 8015M		mg/kg	Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/30/2010	ND	178	88.9	200	7.41	
DRO >C10-C28	17200	50.0	11/02/2010	ND	178	88.9	200	7.46	

Surrogate: 1-Chlorooctane 85.4 % 70-130

Surrogate: 1-Chlorooctadecane 105 % 70-130

Sample ID: SAMPLE PT. 7 (H021173-07)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	42000	16.0	10/29/2010	ND	464	116	400	3.51	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
HACK CONDER
112 W. TAYLOR
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 10/28/2010
Reported: 11/03/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 10/28/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: SAMPLE PT. 8 (H021173-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7800	16.0	10/29/2010	ND	464	116	400	3.51	

Sample ID: SAMPLE PT. 9 (H021173-09)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	34000	16.0	10/29/2010	ND	464	116	400	3.51		

Sample ID: SAMPLE PT. 10 (H021173-10)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	31200	16.0	10/29/2010	ND	464	116	400	3.51		

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

Company Name: <u>EC's</u>				BILL TO												ANALYSIS REQUEST											
Project Manager: <u>Natalie Gladde</u>				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH GCISM</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX</div> </div>																			
Address: <u>Apache</u>				Company:																							
City: _____ State: _____ Zip: _____				Attn: _____																							
Phone #: _____ Fax #: _____				Address: _____																							
Project #: _____ Project Owner: _____				City: _____																							
Project Name: _____				State: _____ Zip: _____																							
Project Location: <u>Apache HANCOCK #12</u>				Phone #: _____																							
Sampler Name: <u>Bruce Barker</u>				Fax #: _____																							
FOR LAB USE ONLY																											
Lab I.D.		Sample I.D.		GIRAB OR (COMP.		# CONTAINERS														MATRIX		PRESERV.		SAMPLING			
								GROUNDWATER		ACID/BASE:		DATE		TIME													
								WASTEWATER		ICE / COOL																	
								SOIL		OTHER:																	
								OIL																			
								SLUDGE																			
								OTHER:																			

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Relinquished By: <u>Bruce Barker</u>		Date: <u>10/20/10</u>	Received By: <u>Natalie Gladde</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:
Relinquished By: <u>[Signature]</u>		Time: <u>10:40 AM</u>	Received By: <u>[Signature]</u>	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #:
Delivered By: (Circle One)		Date: <u>10/20/10</u>	Time: <u>1:10</u>	REMARKS: <u>Email NATALIE.Gladde@usa.Apm-acc.com</u>
Sampler - UPS - Bus - Other:		Sample Condition: <input type="checkbox"/> Intact <input type="checkbox"/> Broken		<u>hcoaster@one-ec.com</u>
		CHECKED BY: (Initials)		<u>Rush CL- only</u>
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

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

Analytical Results For:

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

 Received: 11/02/2010
 Reported: 11/04/2010
 Project Name: APACHE HANSON #12
 Project Number: NONE GIVEN
 Project Location: APACHE HANSON #12

 Sampling Date: 11/02/2010
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Celey D. Keene

Sample ID: 20' OFF WEST SIDE OF PAD (H021213-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	36400	16.0	11/04/2010	ND	432	108	400	3.77		
pH		pH Units		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
pH	7.10	0.100	11/04/2010		7.05	101	7.00	0.428		

Sample ID: 4" WEST SIDE OF LOCATION (H021213-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	11/04/2010	ND	432	108	400	3.77		
pH		pH Units		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
pH	8.27	0.100	11/04/2010		7.05	101	7.00	0.428		

Sample ID: W EXCAVATION N CORNER (H021213-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride		384	16.0	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH		9.25	0.100	11/04/2010		6.97	99.6	7.00	0.431	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 11/02/2010
 Reported: 11/04/2010
 Project Name: APACHE HANSON #12
 Project Number: NONE GIVEN
 Project Location: APACHE HANSON #12

 Sampling Date: 11/02/2010
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Celey D. Keene

Sample ID: W S/E WALL (H021213-04)

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	11/04/2010	ND	432	108	400	3.77		
pH		pH Units		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
pH	8.31	0.100	11/04/2010		6.97	99.6	7.00	0.431		

Sample ID: W EXCAVATION S CENTER (H021213-05)

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	11/04/2010	ND	432	108	400	3.77		
pH		pH Units		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
pH	8.18	0.100	11/04/2010		6.97	99.6	7.00	0.431		

Sample ID: W EXCAVATION N/E CORNER (H021213-06)

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	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH		7.89	0.100	11/04/2010		6.97	99.6	7.00	0.431	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 11/02/2010
 Reported: 11/04/2010
 Project Name: APACHE HANSON #12
 Project Number: NONE GIVEN
 Project Location: APACHE HANSON #12

 Sampling Date: 11/02/2010
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Celey D. Keene

Sample ID: WEST TRENCH - 5' (H021213-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride		560	16.0	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH		8.22	0.100	11/04/2010		6.97	99.6	7.00	0.431	

Sample ID: WEST SIDE LOCATION PAD (H021213-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride		352	16.0	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH		12.8	0.100	11/04/2010		6.97	99.6	7.00	0.431	

Sample ID: W EXCAVATION N WALL (H021213-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride		1960	16.0	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH		7.97	0.100	11/04/2010		6.97	99.6	7.00	0.431	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/02/2010
Reported: 11/04/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/02/2010
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Celey D. Keene

Sample ID: W MIDDLE S/E CORNER 3' (H021213-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6640	16.0	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH	8.18	0.100	11/04/2010		6.97	99.6	7.00	0.431	

Sample ID: W / NORTH CORNER 8' (H021213-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3400	16.0	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH	8.61	0.100	11/04/2010		6.97	99.6	7.00	0.431	

Sample ID: WEST EXCAVATION SW CORNER (H021213-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2120	16.0	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH	8.08	0.100	11/04/2010		6.97	99.6	7.00	0.431	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/02/2010
Reported: 11/04/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/02/2010
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Celey D. Keene

Sample ID: WEST EXCAVATION N (H021213-13)

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	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH		8.01	0.100	11/04/2010		7.04	101	7.00	0.249	

Sample ID: NW LOCATION OF PAD (H021213-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/04/2010	ND	432	108	400	3.77		
pH		pH Units		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
pH	8.53	0.100	11/04/2010		7.04	101	7.00	0.249		

Sample ID: N W CORNER OFF PAD (H021213-15)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	11/04/2010	ND	432	108	400	3.77		
pH		pH Units		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
pH	7.52	0.100	11/04/2010		7.04	101	7.00	0.249		

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 11/02/2010
 Reported: 11/04/2010
 Project Name: APACHE HANSON #12
 Project Number: NONE GIVEN
 Project Location: APACHE HANSON #12

 Sampling Date: 11/02/2010
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Celey D. Keene

Sample ID: SURFACE 10' WEST SIDE (H021213-16)

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/04/2010	ND	432	108	400	3.77	
pH			pH Units		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH	8.37	0.100	11/04/2010		7.04	101	7.00	0.249	

Sample ID: WEST EXCAVATION WEST WALL (H021213-17)

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1360	16.0	11/04/2010	ND	432	108	400	3.77	
pH			pH Units		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH	8.15	0.100	11/04/2010		7.03	100	7.00	0.245	

Sample ID: WEST N/E CORNER (H021213-18)

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4960	16.0	11/04/2010	ND	432	108	400	3.77	
pH			pH Units		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH	7.90	0.100	11/04/2010		7.03	100	7.00	0.245	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 11/02/2010
 Reported: 11/04/2010
 Project Name: APACHE HANSON #12
 Project Number: NONE GIVEN
 Project Location: APACHE HANSON #12

 Sampling Date: 11/02/2010
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Celey D. Keene

Sample ID: W NORTH WALL 3' (H021213-19)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride		464	16.0	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH		9.38	0.100	11/04/2010		7.03	100	7.00	0.245	

Sample ID: N EXCAV. S WALL (H021213-20)

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	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH		7.94	0.100	11/04/2010		7.03	100	7.00	0.245	

Sample ID: WEST EXCAV S WALL CENTER (H021213-21)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride		96.0	16.0	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH		7.97	0.100	11/04/2010		7.03	100	7.00	0.245	

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Analytical Results For:

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

Received: 11/02/2010
Reported: 11/04/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/02/2010
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Celey D. Keene

Sample ID: W / SW CORNER 50' OFF PAD (H021213-22)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride		28000	16.0	11/04/2010	ND	432	108	400	3.77	
pH		pH Units		Analyzed By: HM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH		8.14	0.100	11/04/2010		7.03	100	7.00	0.245	

Sample ID: S / W SIDE OF WELLHEAD (H021213-23)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1400	16.0	11/04/2010	ND	432	108	400	3.77		
pH	pH Units		Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
pH	9.05	0.100	11/04/2010		7.03	100	7.00	0.245		

Sample ID: S / E WALL 2' (H021213-24)

Chloride, SM4500Cl-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	11/04/2010	ND	432	108	400	3.77		
pH	pH Units		Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
pH	8.39	0.100	11/04/2010		7.03	100	7.00	0.245		

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(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 3

Company Name: Apache		BILL TO		ANALYSIS REQUEST																				
Project Manager: Natalie Gladden		P.O. #:																						
Address:		Company:																						
City: State: NM Zip:		Attn:																						
Phone #: Fax #:		Address:																						
Project #: Project Owner:		City:																						
Project Name: Apache Hansen #12		State: Zip:																						
Project Location: Apache Hansen #12		Phone #: Fax #:																						
Sampler Name:																								
FOR LAB USE ONLY																								
Lab I.D.	Sample I.D.	GIRAB OR C/COMP.	# CONTAINERS	MATRIX					PRESERV		SAMPLING		Chlorides	TPH 8015 M EXP.	BTEX	Texas TPH	Complete Cations/Anions	TDS	Glycol	LOH	TTC SWA	TPH 418.1		
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER											DATE	TIME
121213.1	20' OFF WEST S. SIDE	1										11/1/10												
2	4" WEST S. SIDE																							
3	W EXCAVATION N CORNER																							
4	W SIDE WALL																							
5	W EXCAVATION SOUTH																							
6	W EXCAVATION N CORNER																							
7	WATER TRENCH - S																							
8	W SIDE LOCATION PH-1																							
9	W EXCAVATION N WALL																							
10	W MIDDLE S. CORNER	3																						

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Relinquished By:	Date: 11-2-10 10-22-10	Received By:	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
	Time: 1:00		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: *plastic bags	
	Time:		email results	
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	Hconder@riceswd.com; Bbaker@riceswd.com	
Sampler - UPS - Bus - Other:	Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	(Initials) GPH	Natalie.Gladden@usa.apachecorp.com	

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

#26



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2 of 3

Company Name: Apache				BILL TO												ANALYSIS REQUEST															
Project Manager: Natalie Gladden				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>																							
Address:				Company:																											
City: State: NM Zip:				Attn:																											
Phone #: Fax #:				Address:																											
Project #: Project Owner:				City:																											
Project Name: Apache Hansen #12				State: Zip:																											
Project Location: Apache Hansen #12				Phone #:																											
Sampler Name:				Fax #:																											
FOR LAB USE ONLY																															
Lab I.D.		Sample I.D.		GRAB OR (COMP. # CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:		DATE		TIME					
H21213-11		W / North corner																													
17		WEST EXCAVATION SW CORNER																													
13		WEST EXCAVATION NSCH																													
14		NEW LOCATION OF PHO																													
15		NEW CORNER OFFICE																													
10		4th W.S. DEPT LOCATION																													
16		SURFACE 10' WEST SIDE																													
17		WEST EXCAVATION WEST WALL																													
18		WEST N/E CORNER																													
19		W NORTH WALL 3'																													

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Relinquished By:		Date: 11-2-10		Received By:		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #:	
Time: 1:00		Time: 1:00				Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #:	
Relinquished By:		Date:		Received By:		REMARKS:		email results	
Time:								*plastic bags	
Delivered By: (Circle One)		Sample Condition:		CHECKED BY: (Initials)		Hconder@riceswd.com; Bbaker@riceswd.com			
Sampler - UPS - Bus - Other:		Cool Intact		21.5C		Natalie.Gladden@usa.apachecorp.com			
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					

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

#26

Analytical Results For:

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

Received: 11/02/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/02/2010
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Celey D. Keene

Sample ID: 20' OFF WEST SIDE OF PAD (H021213-01)

TPH 8015M	mg/kg	Analyzed By: AB							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	2940	10.0	11/05/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	11800	50.0	11/08/2010	ND					
<hr/>									
Surrogate: 1-Chlorooctane	91.7 %	70-130							
Surrogate: 1-Chlorooctadecane	94.3 %	70-130							

Sample ID: 4" WEST SIDE OF LOCATION (H021213-02)

TPH 8015M	mg/kg	Analyzed By: AB							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/09/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/09/2010	ND					
<hr/>									
Surrogate: 1-Chlorooctane	96.9 %	70-130							
Surrogate: 1-Chlorooctadecane	103 %	70-130							

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/02/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/02/2010
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Celey D. Keene

Sample ID: W EXCAVATION N CORNER (H021213-03)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/09/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/09/2010	ND					
Surrogate: 1-Chlorooctane	93.1 %	70-130							
Surrogate: 1-Chlorooctadecane	109 %	70-130							

Sample ID: W S/E WALL (H021213-04)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/09/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/09/2010	ND					
Surrogate: 1-Chlorooctane	97.3 %	70-130							
Surrogate: 1-Chlorooctadecane	103 %	70-130							

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Analytical Results For:

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

Received: 11/02/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/02/2010
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Celey D. Keene

Sample ID: W EXCAVATION S CENTER (H021213-05)

TPH 8015M	mg/kg	Analyzed By: AB							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/09/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/09/2010	ND					

Surrogate: 1-Chlorooctane 97.6 % 70-130

Surrogate: 1-Chlorooctadecane 115 % 70-130

Sample ID: W EXCAVATION N/E CORNER (H021213-06)

TPH 8015M	mg/kg	Analyzed By: AB							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/09/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/09/2010	ND					

Surrogate: 1-Chlorooctane 88.5 % 70-130

Surrogate: 1-Chlorooctadecane 97.7 % 70-130

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Analytical Results For:

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

 Received: 11/02/2010
 Reported: 11/09/2010
 Project Name: APACHE HANSON #12
 Project Number: NONE GIVEN
 Project Location: APACHE HANSON #12

 Sampling Date: 11/02/2010
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Celey D. Keene

Sample ID: WEST TRENCH - 5' (H021213-07)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/09/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/09/2010	ND					
Surrogate: 1-Chlorooctane	93.5 %	70-130							
Surrogate: 1-Chlorooctadecane	93.4 %	70-130							

Sample ID: WEST SIDE LOCATION PAD (H021213-08)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/09/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/09/2010	ND					
Surrogate: 1-Chlorooctane	95.2 %	70-130							
Surrogate: 1-Chlorooctadecane	97.5 %	70-130							

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 11/02/2010
 Reported: 11/09/2010
 Project Name: APACHE HANSON #12
 Project Number: NONE GIVEN
 Project Location: APACHE HANSON #12

 Sampling Date: 11/02/2010
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Celey D. Keene

Sample ID: W EXCAVATION N WALL (H021213-09)

TPH 8015M	mg/kg	Analyzed By: AB							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	163	10.0	11/06/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	382	10.0	11/06/2010	ND					

Surrogate: 1-Chlorooctane 101 % 70-130

Surrogate: 1-Chlorooctadecane 101 % 70-130

Sample ID: W MIDDLE S/E CORNER 3' (H021213-10)

TPH 8015M	mg/kg	Analyzed By: AB							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	111	10.0	11/06/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	83.5	10.0	11/06/2010	ND					

Surrogate: 1-Chlorooctane 95.0 % 70-130

Surrogate: 1-Chlorooctadecane 96.5 % 70-130

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Analytical Results For:

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

 Received: 11/02/2010
 Reported: 11/09/2010
 Project Name: APACHE HANSON #12
 Project Number: NONE GIVEN
 Project Location: APACHE HANSON #12

 Sampling Date: 11/02/2010
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Celey D. Keene

Sample ID: W / NORTH CORNER 8' (H021213-11)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	17.2	10.0	11/06/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	28.3	10.0	11/06/2010	ND					
Surrogate: 1-Chlorooctane	87.6 %	70-130							
Surrogate: 1-Chlorooctadecane	96.2 %	70-130							

Sample ID: WEST EXCAVATION SW CORNER (H021213-12)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	257	10.0	11/06/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	177	10.0	11/06/2010	ND					
Surrogate: 1-Chlorooctane	96.0 %	70-130							
Surrogate: 1-Chlorooctadecane	97.1 %	70-130							

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

Received: 11/02/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/02/2010
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Celey D. Keene

Sample ID: WEST EXCAVATION N (H021213-13)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	10.3	10.0	11/06/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	16.5	10.0	11/06/2010	ND					
Surrogate: 1-Chlorooctane	96.7 %	70-130							
Surrogate: 1-Chlorooctadecane	100 %	70-130							

Sample ID: NW LOCATION OF PAD (H021213-14)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/06/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/06/2010	ND					
Surrogate: 1-Chlorooctane	86.8 %	70-130							
Surrogate: 1-Chlorooctadecane	87.4 %	70-130							

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NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received: 11/02/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/02/2010
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Celey D. Keene

Sample ID: N W CORNER OFF PAD (H021213-15)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	497	10.0	11/06/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	392	10.0	11/06/2010	ND					
Surrogate: 1-Chlorooctane	94.5 %	70-130							
Surrogate: 1-Chlorooctadecane	108 %	70-130							

Sample ID: SURFACE 10' WEST SIDE (H021213-16)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/06/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/06/2010	ND					
Surrogate: 1-Chlorooctane	88.4 %	70-130							
Surrogate: 1-Chlorooctadecane	84.0 %	70-130							

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NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received: 11/02/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/02/2010
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Celey D. Keene

Sample ID: WEST EXCAVATION WEST WALL (H021213-17)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/06/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/06/2010	ND					
Surrogate: 1-Chlorooctane	89.2 %	70-130							
Surrogate: 1-Chlorooctadecane	92.3 %	70-130							

Sample ID: WEST N/E CORNER (H021213-18)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/06/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/06/2010	ND					
Surrogate: 1-Chlorooctane	93.3 %	70-130							
Surrogate: 1-Chlorooctadecane	99.6 %	70-130							

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Analytical Results For:

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

 Received: 11/02/2010
 Reported: 11/09/2010
 Project Name: APACHE HANSON #12
 Project Number: NONE GIVEN
 Project Location: APACHE HANSON #12

 Sampling Date: 11/02/2010
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Celey D. Keene

Sample ID: W NORTH WALL 3' (H021213-19)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/06/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/06/2010	ND					
Surrogate: 1-Chlorooctane	82.1 %	70-130							
Surrogate: 1-Chlorooctadecane	90.9 %	70-130							

Sample ID: N EXCAV. S WALL (H021213-20)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	173	86.5	200	6.28	
DRO >C10-C28	<10.0	10.0	11/06/2010	ND	165	82.7	200	2.58	
EXT DRO >C28-C35	<10.0	10.0	11/06/2010	ND					
Surrogate: 1-Chlorooctane	90.4 %	70-130							
Surrogate: 1-Chlorooctadecane	93.5 %	70-130							

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Analytical Results For:

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

Received: 11/02/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/02/2010
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Celey D. Keene

Sample ID: WEST EXCAV S WALL CENTER (H021213-21)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	171	85.3	200	15.6	
DRO >C10-C28	<10.0	10.0	11/06/2010	ND	167	83.5	200	5.47	
EXT DRO >C28-C35	<10.0	10.0	11/06/2010	ND					
Surrogate: 1-Chlorooctane	94.6 %	70-130							
Surrogate: 1-Chlorooctadecane	97.8 %	70-130							

Sample ID: W / SW CORNER 50' OFF PAD (H021213-22)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	171	85.3	200	15.6	
DRO >C10-C28	1040	10.0	11/06/2010	ND	167	83.5	200	5.47	
EXT DRO >C28-C35	2370	10.0	11/06/2010	ND					
Surrogate: 1-Chlorooctane	91.4 %	70-130							
Surrogate: 1-Chlorooctadecane	87.7 %	70-130							

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Analytical Results For:

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

Received: 11/02/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/02/2010
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Celey D. Keene

Sample ID: S /W SIDE OF WELLHEAD (H021213-23)

TPH 8015M	mg/kg	Analyzed By: AB							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	171	85.3	200	15.6	
DRO >C10-C28	4160	10.0	11/06/2010	ND	167	83.5	200	5.47	
EXT DRO >C28-C35	6760	50.0	11/08/2010	ND					
<hr/>									
Surrogate: 1-Chlorooctane	92.1 %	70-130							
Surrogate: 1-Chlorooctadecane	96.9 %	70-130							

Sample ID: S / E WALL 2' (H021213-24)

TPH 8015M	mg/kg	Analyzed By: AB							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2010	ND	171	85.3	200	15.6	
DRO >C10-C28	256	10.0	11/09/2010	ND	167	83.5	200	5.47	
EXT DRO >C28-C35	296	10.0	11/09/2010	ND					
<hr/>									
Surrogate: 1-Chlorooctane	92.5 %	70-130							
Surrogate: 1-Chlorooctadecane	94.8 %	70-130							

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(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 3

Company Name: Apache		BILL TO		ANALYSIS REQUEST											
Project Manager: Natalie Gladden		P.O. #:													
Address:		Company:													
City: State: NM Zip:		Attn:													
Phone #: Fax #:		Address:													
Project #: Project Owner:		City:													
Project Name: Apache Hansen #12		State: Zip:													
Project Location: Apache Hansen #12		Phone #:													
Sampler Name:		Fax #:													
FOR LAB USE ONLY															
Lab I.D.	Sample I.D.	(GIRAB OR C/COMP. # CONTAINERS)	MATRIX	PRESERV.	SAMPLING	Chlorides	TPH 8015 M EXP.	BTEX	Texas TPH	Complete Cations/Anions	TDS	Glycol	PH	TIC SWA	TPH 418.1
H21213-1	20' OFF WEST S. SIDE OF HWY 101	1	GROUNDWATER		DATE	TIME									
2	4th WEST SIDE OF LOCATION		WASTEWATER												
3	W EXCAVATION N CORNER		SOIL												
4	W SIDE WALL		SLUDGE												
5	W EXCAVATION SCENT		OTHER:												
6	W EXCAVATION N/E CORNER		ACID/BASE:												
7	Water Trench - S		ICE / COOL												
8	W SIDE LOCATION PH-17		OTHER:												
9	W EXCAVATION N WALL														
10	W PUBLIC SIDE CORNER	3													

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Relinquished By:	Date: 11-3-10 10-28-10 Time: 1:00	Received By:	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: 2150			REMARKS: email results # plastic bags	
Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			CHECKED BY: (Initials) Gole	
			Hconder@riceswd.com; Bbaker@riceswd.com Natalie.Gladden@usa.apachecorp.com	

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

#26



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2 of 3

Company Name: <u>Apache</u> Project Manager: <u>Natalie Gladden</u> Address: _____ City: _____ State: <u>NM</u> Zip: _____ Phone #: _____ Fax #: _____ Project #: _____ Project Owner: _____ Project Name: <u>Apache Hansen #12</u> Project Location: <u>Apache Hansen #12</u> Sampler Name: _____				BILL TO P.O. #: _____ Company: _____ Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____				ANALYSIS REQUEST <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Chlorides</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH 8015 M</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Texas TPH</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Complete Cations/Anions</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TDS</div> </div>														
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								
HZ1215-11	W / North corner												11/2/10									
12	West Excavation SW corner																					
13	West Excavation N side																					
14	New location SW NW																					
15	NW corner off rd																					
16	4" W.S. 10' E location																					
17	Surface 10' West side																					
18	West Excavation NW wall																					
19	West NW corner																					
20	W North wall 3'																					

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claims arising out of or based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <u>[Signature]</u> Date: <u>11-2-10</u> Time: <u>10:00</u> Relinquished By: _____ Date: _____ Time: _____		Received By: <u>[Signature]</u> Date: _____ Time: _____		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #: _____ Add'l Fax #: _____ REMARKS: <u>*plastic bags</u> <u>email results</u>	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: _____		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		CHECKED BY: (Initials) <u>[Signature]</u>	

Hconder@riceswd.com; Bbaker@riceswd.com
Natalie.Gladden@usa.apachecorp.com

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

#26

Analytical Results For:

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

 Received: 11/08/2010
 Reported: 11/16/2010
 Project Name: HANSON #12
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/05/2010
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: 40' W OF PAD S@6" (H021244-01)

BTEX 8021B			mg/kg		Analyzed By: cms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/15/2010	ND	2.14	107	2.00	11.3		
Toluene*	<0.050	0.050	11/15/2010	ND	2.03	102	2.00	6.55		
Ethylbenzene*	<0.050	0.050	11/15/2010	ND	1.84	92.2	2.00	5.23		
Total Xylenes*	<0.150	0.150	11/15/2010	ND	5.61	93.5	6.00	5.19		

Surrogate: 4-Bromofluorobenzene (PII) 105 % 80-120

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	11/08/2010	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/12/2010	ND	153	76.6	200	1.93	
DRO >C10-C28	<10.0	10.0	11/12/2010	ND	179	89.5	200	2.64	

Surrogate: 1-Chlorooctane 94.2 % 70-130

Surrogate: 1-Chlorooctadecane 97.2 % 70-130

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/08/2010
Reported: 11/16/2010
Project Name: HANSON #12
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: 22' W PAD CENTER @ 6" (H021244-02)

BTEX 8021B			mg/kg		Analyzed By: cms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/15/2010	ND	2.14	107	2.00	11.3		
Toluene*	0.055	0.050	11/15/2010	ND	2.03	102	2.00	6.55		
Ethylbenzene*	<0.050	0.050	11/15/2010	ND	1.84	92.2	2.00	5.23		
Total Xylenes*	<0.150	0.150	11/15/2010	ND	5.61	93.5	6.00	5.19		

Surrogate: 4-Bromofluorobenzene (PII) 101 % 80-120

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1730	16.0	11/08/2010	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/12/2010	ND	153	76.6	200	1.93	
DRO >C10-C28	152	10.0	11/12/2010	ND	179	89.5	200	2.64	

Surrogate: 1-Chlorooctane 99.9 % 70-130

Surrogate: 1-Chlorooctadecane 99.1 % 70-130

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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: <u>Apache</u>				BILL TO				ANALYSIS REQUEST											
Project Manager: <u>Natalie Gladden</u>				P.O. #:				<div style="display: flex; justify-content: space-around;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> </div>											
Address:				Company:															
City: State: NM Zip:				Attn:															
Phone #: Fax #:				Address:															
Project #: Project Owner:				City:															
Project Name:				State: Zip:															
Project Location: <u>Hanson #13</u>				Phone #:															
Sampler Name: <u>Dak Harris</u>				Fax #:															
FOR LAB USE ONLY																			
Lab I.D.	Sample I.D.	(G)RABOR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.	SAMPLING									
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME					
H21244-1	40' west side of pad south side 8"	G	1			✓				✓			11-5-10	5:06	✓				
2	22' west side of pad center 6"	G	1			✓				✓			11-5-10	5:16	✓				

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Relinquished By: <u>Dak Harris</u>	Date: <u>11/3/10</u>	Received By: <u>Natalie Gladden</u>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
	Time: <u>4:55</u>		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: <u>RUSH CL</u>	
	Time:		email results	
Delivered By: (Circle One)			natalie.gladden@apachecorp.com	
Sampler <input checked="" type="checkbox"/> UPS <input type="checkbox"/> Bus <input type="checkbox"/> Other:			Hconder@riceswd.com; regans@riceswd.com	
		Sample Condition	CHECKED BY: (Initials)	
		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	<u>DA</u>	
		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

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

NEED SAMPLES BACK, PLEASE

Analytical Results For:

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

Received: 11/03/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/03/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: NORTH EXC 8 PT BOT COMP @ 4' (H021220-01)

BTEX 8021B		mg/kg	Analyzed By: cms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2010	ND	2.26	113	2.00		
Toluene*	0.096	0.050	11/05/2010	ND	2.11	106	2.00		
Ethylbenzene*	<0.050	0.050	11/05/2010	ND	2.06	103	2.00		
Total Xylenes*	0.365	0.150	11/05/2010	ND	6.23	104	6.00		

Surrogate: 4-Bromofluorobenzene (PIL) 89.7 % 80-120

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/04/2010	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2010	ND	195	97.7	200	16.6	
DRO >C10-C28	<10.0	10.0	11/05/2010	ND	152	75.9	200	3.36	

Surrogate: 1-Chlorooctane 88.7 % 70-130

Surrogate: 1-Chlorooctadecane 95.0 % 70-130

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/03/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/03/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: NORTH EXC 4 WALL COMP (H021220-02)

BTX 8021B		mg/kg		Analyzed By: cms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2010	ND	2.26	113	2.00		
Toluene*	0.374	0.050	11/05/2010	ND	2.11	106	2.00		
Ethylbenzene*	0.210	0.050	11/05/2010	ND	2.06	103	2.00		
Total Xylenes*	0.818	0.150	11/05/2010	ND	6.23	104	6.00		

Surrogate: 4-Bromofluorobenzene (PIL) 99.2 % 80-120

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	11/04/2010	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2010	ND	195	97.7	200	16.6	
DRO >C10-C28	<10.0	10.0	11/05/2010	ND	152	75.9	200	3.36	

Surrogate: 1-Chlorooctane 89.4 % 70-130

Surrogate: 1-Chlorooctadecane 98.1 % 70-130

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/03/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/03/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: WEST EXC 5 PT BOT COMP (H021220-03)

BTEX 8021B		mg/kg		Analyzed By: cms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2010	ND	2.26	113	2.00		
Toluene*	0.090	0.050	11/05/2010	ND	2.11	106	2.00		
Ethylbenzene*	<0.050	0.050	11/05/2010	ND	2.06	103	2.00		
Total Xylenes*	0.185	0.150	11/05/2010	ND	6.23	104	6.00		

Surrogate: 4-Bromofluorobenzene (PIL) 82.7 % 80-120

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	11/04/2010	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2010	ND	195	97.7	200	16.6	
DRO >C10-C28	<10.0	10.0	11/05/2010	ND	152	75.9	200	3.36	

Surrogate: 1-Chlorooctane 91.4 % 70-130

Surrogate: 1-Chlorooctadecane 93.1 % 70-130

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/03/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/03/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: WEST EXC 4 WALL COMP (H021220-04)

BTEX 8021B			mg/kg		Analyzed By: cms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2010	ND	2.26	113	2.00		
Toluene*	<0.050	0.050	11/05/2010	ND	2.11	106	2.00		
Ethylbenzene*	<0.050	0.050	11/05/2010	ND	2.06	103	2.00		
Total Xylenes*	<0.150	0.150	11/05/2010	ND	6.23	104	6.00		

Surrogate: 4-Bromofluorobenzene (PIH) 87.0 % 80-120

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	11/04/2010	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: AB				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2010	ND	195	97.7	200	16.6	
DRO >C10-C28	<10.0	10.0	11/05/2010	ND	152	75.9	200	3.36	

Surrogate: 1-Chlorooctane 87.1 % 70-130

Surrogate: 1-Chlorooctadecane 92.6 % 70-130

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Relinquished By: <i>Robert Evans</i>		Date: <i>11/3/10</i>	Received By: <i>Jodi Henson</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
		Time: <i>4:41</i>		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date:	Received By:	REMARKS: <i>RUSH CL-</i>	
		Time:		email results	
Delivered By: (Circle One)				<i>Matilic.Gladene@USA.Hipacincorp.com</i>	
Sampler - UPS - Bus - Other:		Sample Condition Cool Intact <i>5.5</i> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CHECKED BY: (Initials) <i>GH</i>	<i>Hconder@riceswd.com; Bbaker@riceswd.com;</i> <i>Regans@riceswd.com kjones@riceswd.com</i>	

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

NEED SAMPLES BACK, PLEASE

Analytical Results For:

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

 Received: 11/08/2010
 Reported: 11/09/2010
 Project Name: APACHE HANSON #12
 Project Number: NONE GIVEN
 Project Location: APACHE HANSON #12

 Sampling Date: 11/08/2010
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Jodi Henson

Sample ID: W OFF PAD S EXC BTM (H021248-01)

Chloride, SM4500CI-B			mg/kg								Analyzed By: HM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	<16.0	16.0	11/09/2010	ND	416	104	400	0.00				

Sample ID: W OFF PAD S EXC N WALL (H021248-02)

Chloride, SM4500Cl-B			mg/kg								Analyzed By: HM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	<16.0	16.0	11/09/2010	ND	416	104	400	0.00				

Sample ID: W OFF PAD S EXC S WALL (H021248-03)

Chloride, SM4500CI-B			mg/kg								Analyzed By: HM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	<16.0	16.0	11/09/2010	ND	416	104	400	0.00				

Sample ID: W OFF PAD S EXC E WALL (H021248-04)

Chloride, SM4500Cl-B			mg/kg								Analyzed By: HM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	16.0	16.0	11/09/2010	ND	416	104	400	0.00				

Sample ID: W OFF PAD S EXC W WALL (H021248-05)

Chloride, SM4500Cl-B			mg/kg								Analyzed By: HM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	<16.0	16.0	11/09/2010	ND	416	104	400	0.00				

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

Company Name: <u>Apache</u>		BILL TO		ANALYSIS REQUEST																						
Project Manager: <u>Natalie Gladwin</u>		P.O. #:																								
Address: <u>Apache</u>		Company:																								
City: State: Zip:		Attn:																								
Phone #: Fax #:		Address:																								
Project #: Project Owner:		City:																								
Project Name: <u>Apache Hanson #12</u>		State: Zip:																								
Project Location: <u>Apache Hanson #12</u>		Phone #:																								
Sampler Name: <u>Bruce Baker</u>		Fax #:																								
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	(GRAB OR C/COMP. # CONTAINERS)	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE/COOL	OTHER	DATE	TIME												
	H21248-1	West off Pad South Excavation	1										11-8-10	12:10 pm												
	2	West off Pad South Excavation North Wall	1										11-8-10	12:13 pm												
	3	West off Pad South Excavation South Wall	1										11-8-10	12:15 pm												
	4	West off Pad South Excavation East Wall	1										11-8-10	12:17 pm												
	5	West off Pad South Excavation West Wall	1										11-8-10	12:20 pm												

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Relinquished By: <u>Bruce Baker</u>	Date: <u>11-8-10</u> Time: <u>2:03</u>	Received By: <u>Jodi Jensen</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:
Relinquished By:	Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #:
Delivered By: (Circle One) Sampler: <u>UPS</u> - Bus - Other:	Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CHECKED BY: (Initials) <u>JB</u>	REMARKS: Email remarks to Natalie.Gladwin@USA.Aprache.com cc hansen@rice-eos.com bbaker@rice-eos.com

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

Analytical Results For:

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

Received: 11/08/2010
Reported: 11/09/2010
Project Name: APACHE HANSON #12
Project Number: NONE GIVEN
Project Location: APACHE HANSON #12

Sampling Date: 11/08/2010
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: W OFF PAD N EXC BTM (H021249-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2010	ND	416	104	400	0.00	

Sample ID: W OFF PAD N EXC N WALL (H021249-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/09/2010	ND	416	104	400	0.00	

Sample ID: W OFF PAD N EXC S WALL (H021249-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/09/2010	ND	416	104	400	0.00		

Sample ID: W OFF PAD N EXC E WALL (H021249-04)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/09/2010	ND	416	104	400	0.00		

Sample ID: W OFF PAD N EXC W WALL (H021249-05)

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/09/2010	ND	416	104	400	0.00		

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



Company Name:						BILL TO								ANALYSIS REQUEST																									
Project Manager:						P.O. #:																																	
Address:						Company:																																	
City:						Attn:																																	
Phone #:						Address:																																	
Project #:						City:																																	
Project Name:						State:						Zip:																											
Project Location:						Phone #:																																	
Sampler Name:						Fax #:																																	
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING																													
Lab I.D.		Sample I.D.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME													
A21249-1		West off Pad North Excavation		G																				11-8-10		12:30pm		✓											
		Btm		G																																			
2		West off Pad North Excavation		G																						11-8-10		12:32pm		✓									
		North Wall		G																																			
3		West off Pad North Excavation		G																						11-8-10		12:35pm		✓									
		South Wall		G																																			
4		West off Pad North Excavation		G																						11-8-10		12:37pm		✓									
		East Wall		G																																			
5		West off Pad North Excavation		G																						11-8-10		12:40pm		✓									
		West Wall		G																																			

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Relinquished By:		Date:	Received By:	Phone Result:		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Add'l Phone #:
Bruce Baker		11-8-10	[Signature]	Fax Result:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Add'l Fax #:	
Time:		2:04pm		REMARKS:				
Relinquished By:		Date:	Received By:	Email				
		Time:		Remarks to Natalie Gladclen @ USA: Apachecon				
				cc hesseler@rice-ecs.com baker@ricesulce				

Delivered By: (Circle One)		Sample Condition		CHECKED BY:	
(Sampler) - UPS - Bus - Other:		Cool Intact?		(Initials)	
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No		[Signature]	

Appendix D

Final Form C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Apache Corp.	Contact	Natalie Gladden
Address	P.O. Box 1849, Eunice, NM, 88231	Telephone No.	(575) 390-4186
Facility Name	Hanson State #12	Facility Type	Production

Surface Owner	SW Cattle Company	Mineral Owner	State of NM	API No.	30-025-39563
---------------	-------------------	---------------	-------------	---------	--------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	16	20S	37E	1650	FNL	330	FEL	Lea

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release	Drilling fluids	Volume of Release	>30 bbls	Volume Recovered	0
Source of Release	Closed loop system	Date and Hour of Occurrence	10/27/2010	Date and Hour of Discovery	10/27/2010
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Larry Johnson		
By Whom?	Natalie Gladden	Date and Hour	10/27/10 8am		
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.*


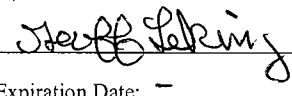
Describe Cause of Problem and Remedial Action Taken.*

During drilling operations the closed loop system had leaked, bins were overflowed.

Describe Area Affected and Cleanup Action Taken.*

The leak impacted the well pad and an area of approximately 353 ft² located west of the well pad. The impacted soil, totaling 3,116 cubic yards, was removed to a NMOCD approved disposal facility. Samples of the remaining soil were sent to a commercial laboratory for chloride, TPH, and BTEX analyses. The excavations were backfilled with 3,592 cubic yards of clean imported soil and contoured to the surrounding area.

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: 	OIL CONSERVATION DIVISION	
Printed Name: Natalie Gladden	ENV. SPECIALIST:	
Title: EH&S Environmental Tech	Approved by District Supervisor: 	
E-mail Address: Natalie.gladden@apachecorp.com	Approval Date: 11/2/12	Expiration Date: -
Date: 11/17/11 Phone: (575) 390-4186	Conditions of Approval: -	Attached <input type="checkbox"/>
		IRP-1-12-2774

* Attach Additional Sheets If Necessary

Appendix E

Groundwater Addendum Packet

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Apache
Company

Hanson State #12
site name

H
Unit Letter

16
Section

T20S
Township

R37E
Range

Groundwater Depth: 19 ft

Compiled by: Amy C. Ruth

Date: 9/28/2011

Comments:

○ = Wells of unknown use (USGS)

○

● = Non-production wells
(commercial, sanitation, domestic, stock)

★ = Subject Site

	8	9	10	
	17	16 ○ 16'	15	
	20 ○ 23'	21	22	

USGS 323355103154101 20S.37E.16.314141

Available data for this site

Groundwater: Field measurements

[\[GO \]](#)

Lea County, New Mexico

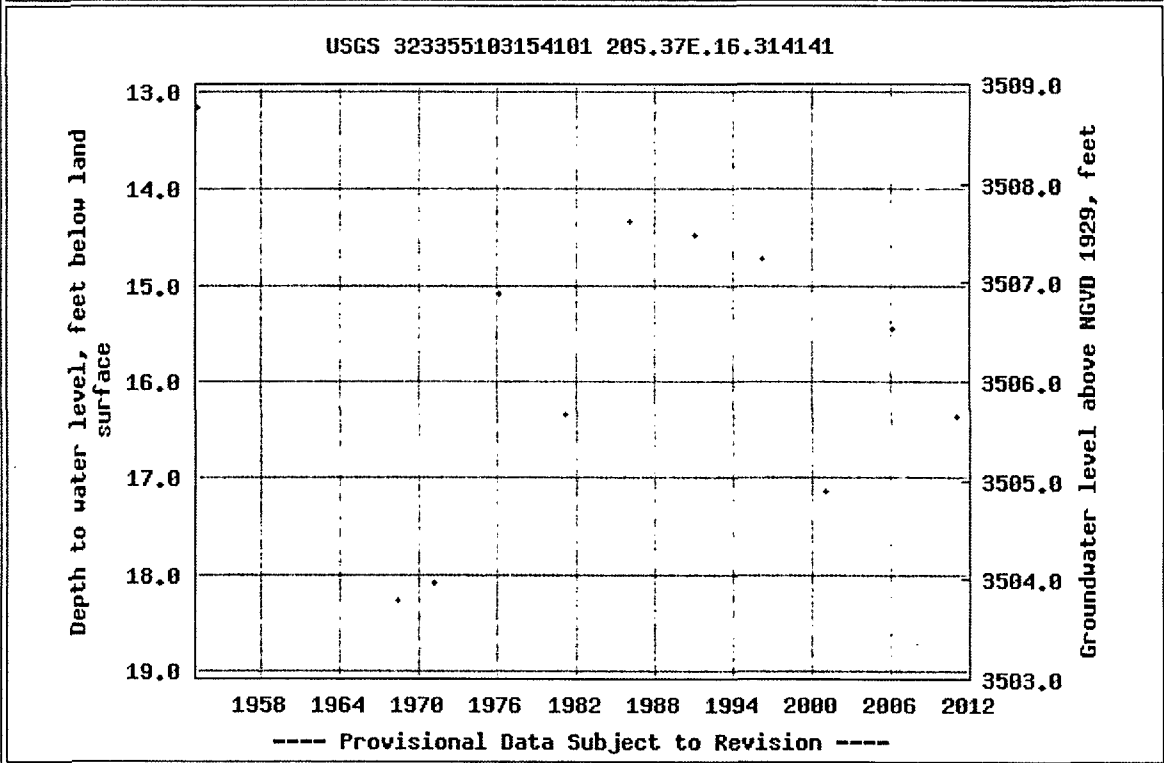
Hydrologic Unit Code 13070007

Latitude 32°34'15.4", Longitude 103°15'43.2" NAD83

Land-surface elevation 3,522.00 feet above NGVD29

The depth of the well is 38 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

USGS 323253103162101 20S.37E.20.43131

Available data for this site

Groundwater: Field measurements



Lea County, New Mexico

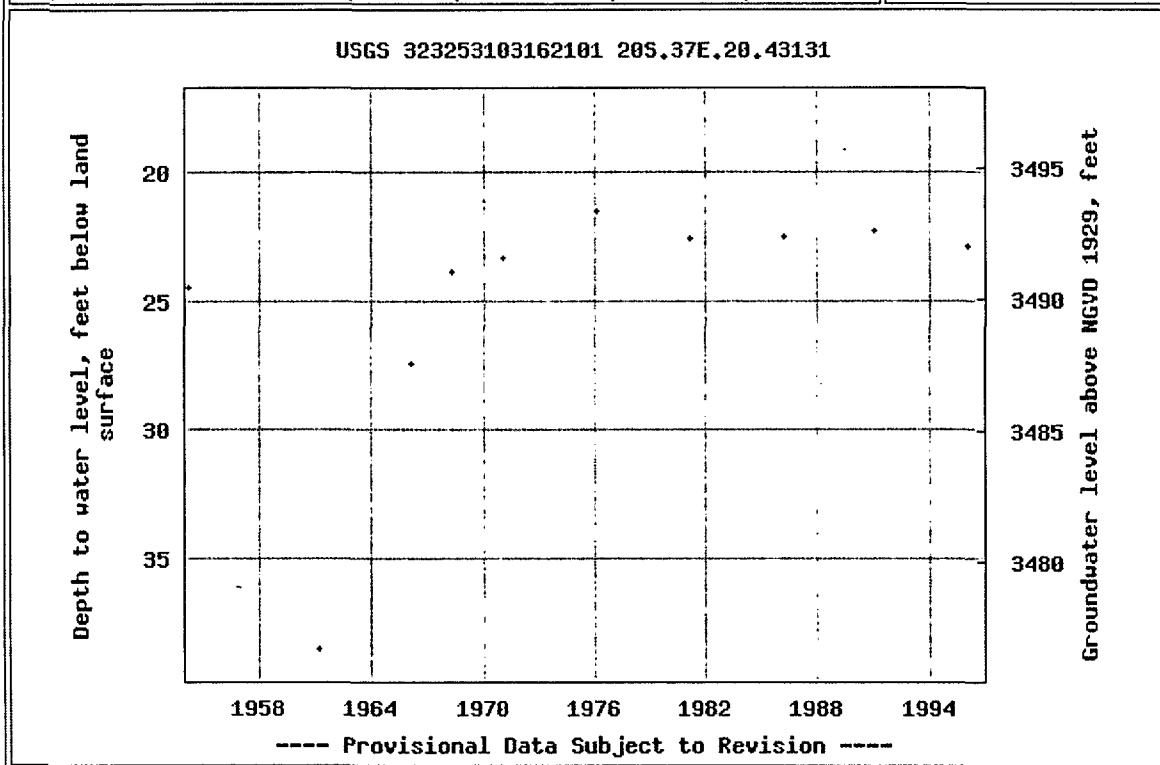
Hydrologic Unit Code 12080003

Latitude 32°33'14", Longitude 103°16'24" NAD27

Land-surface elevation 3,515.00 feet above NGVD29

The depth of the well is 40 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

HARRISON & COOPER, INC.

Drilling & Pump Professionals

7414 85th Street, Lubbock, Texas 79424-4951

P.O. Box 96, Wolfforth, Texas 79382-0096

Ph: (806) 866-4026

Fax: (806) 866-4044

Email: harrisoncooperinc@msn.com

BORING / WELL REPORT

Owner / RP / Name / Address: APACHESite Address: HANSON # 12Well Number: SB-1 GPS: _____ Type: MW WW SB Other: _____Start Date: 10-29-10 Finish Date: 10-29-10 Hole Diameter: 5 1/8 Total Depth: 60

DRILLERS LOG

From (ft) - To (ft)	Description & Color	From (ft) - To (ft)	Description & Color
0 - 2	Caliche White		
2 - 15	Sandy Clay		
15 - 23	SAND TAN		
23 - 29	Caliche White		
29 - 34	SAND TAN		
34 - 60	CLAY RED		

Drilling Method: A/R M/R Other: _____ Gravel Pack Size & Depth: NACsg. Size, Type & Depth: NA Screen Size, Type & Depth: NAAnnular Seal Type & Interval: P&A Surface Completion & Pad Size: NAWater Level: NONE Development/Well Test Info: NAPump Spec.'s: NADrilling Crew: KC GB Equipment On Site: TH-60 Rig

MATERIALS SUMMARY:

Sand: _____ Bentonite: 12 Concrete/Sackrete: _____ Drums: _____ Plastic: _____

Bottom Plugs/Points: _____ Locking Plugs: _____ Brass Liners: _____ Misc: _____

ADDITIONAL SERVICES / RENTALS:

P.I.D.: _____ IF/Water Level Probe: _____ Saw Cutting: _____ Well Development: _____

JOB NOTES / ADD. EXPENDABLES / MILEAGE / UTILITY CLEARANCE INFO / WATER QUALITY:

DRILLED TO 60' FEET NO GROUND
WATER ENCOUNTERED P&A BORE HOLE

HARRISON & COOPER, INC.

Drilling & Pump Professionals

7414 85th Street, Lubbock, Texas 79424-4951

P.O. Box 96, Wolfforth, Texas 79382-0096

Ph: (806) 866-4026

Fax: (806) 866-4044

Email: harrisoncooperinc@msn.com

BORING / WELL REPORT

Owner / RP / Name / Address: APACHESite Address: HANSON #12Well Number SB-3 GPS: _____ Type: MW WW SB Other: _____Start Date: 10-29-10 Finish Date: 10-29-10 Hole Diameter: 5 1/8 Total Depth: 60

DRILLERS LOG

From (ft) - To (ft)	Description & Color	From (ft) - To (ft)	Description & Color
0-1	CRACKLE WHITE		
1-12	SAND TAN		
12-23	SAND w/ CRACKLE		
23-33	CRACKLE WHITE		
33-34	SAND TAN		
34-60	CLAY RED		

Drilling Method: A/R M/R Other: _____ Gravel Pack Size & Depth: NACsg. Size, Type & Depth: NA Screen Size, Type & Depth: NAAnnular Seal Type & Interval: PEA Surface Completion & Pad Size: NAWater Level: None Development/Well Test Info: NAPump Spec.'s: NADrilling Crew: VC GB Equipment On Site: TH-60 RIG

MATERIALS SUMMARY:

Sand: _____ Bentonite: 12 Concrete/Sackrete: _____ Drums: _____ Plastic: _____

Bottom Plugs/Points: _____ Locking Plugs: _____ Brass Liners: _____ Misc: _____

ADDITIONAL SERVICES / RENTALS:

P.I.D.: _____ IF/Water Level Probe: _____ Saw Cutting: _____ Well Development: _____

JOB NOTES / ADD. EXPENDABLES / MILEAGE / UTILITY CLEARANCE INFO / WATER QUALITY:

DRILLED TO 60 FEET NO GROUND
WATER ENCOUNTERED PEA BORE

HARRISON & COOPER, INC.

Drilling & Pump Professionals

7414 85th Street, Lubbock, Texas 79424-4951

P.O. Box 96, Wolfforth, Texas 79382-0096

Ph: (806) 866-4026

Fax: (806) 866-4044

Email: harrisoncooperinc@msn.com

BORING / WELL REPORT

Owner / RP / Name / Address: APACHE

Site Address: HANSON # 12

Well Number SR-3 GPS: _____ Type: MW WW SB Other: _____

Start Date: 10-29-10 Finish Date: 10-29-10 Hole Diameter: _____ Total Depth: 60

DRILLERS LOG

From (ft) - To (ft)	Description & Color	From (ft) - To (ft)	Description & Color
<u>0-2</u>	<u>Caliche wk.</u>		
<u>2-13</u>	<u>SANDY CLAY</u>		
<u>13-23</u>	<u>SAND TAN</u>		
<u>23-32</u>	<u>Caliche wk.</u>		
<u>32-34</u>	<u>SAND TAN</u>		
<u>34-60</u>	<u>CLAY Red</u>		

Drilling Method: A/R M/R Other: _____ Gravel Pack Size & Depth: NA

Csg. Size, Type & Depth: NA Screen Size, Type & Depth: NA

Annular Seal Type & Interval: PEA Surface Completion & Pad Size: NA

Water Level: NONE Development/Well Test Info: NA

Pump Spec.'s: NA

Drilling Crew: KC GB Equipment On Site: TH-60 RIG

MATERIALS SUMMARY:

Sand: _____ Bentonite: 13 Concrete/Sackrete: _____ Drums: _____ Plastic: _____

Bottom Plugs/Points: _____ Locking Plugs: _____ Brass Liners: _____ Misc: _____

ADDITIONAL SERVICES / RENTALS:

P.I.D.: _____ IF/Water Level Probe: _____ Saw Cutting: _____ Well Development: _____

JOB NOTES / ADD. EXPENDABLES / MILEAGE / UTILITY CLEARANCE INFO / WATER QUALITY:

DRILLED TO 100' NO GROUND WATER
ENCOUNTERED PEA BOREHOLE

Rice Environmental Consulting & Safety

P.O. Box 5630 Hobbs, NM 88241

Phone 575.393.4411 Fax 575.393.0293

December 19, 2011

Natalie Gladden

Apache Corp.

P.O. Box 1849

Eunice, New Mexico 88231

Re: Apache Hanson State #12 AD

Ms. Gladden,

On October 29, 2010, RECS personnel drilled three (3) soil bores/observational wells at the Apache Hanson State #12 AD, each to a depth of 62 ft. On November 2, 2010, I supervised RECS personnel checking for water accumulation within all boreholes using a Heron depth to water meter. The meter indicated that no water had accumulated within the boreholes at the total depth of 62 ft.

Sincerely,



Bruce Baker

Head Foreman

Rice Environmental Consulting & Safety

APACHE NMGSAN 2100

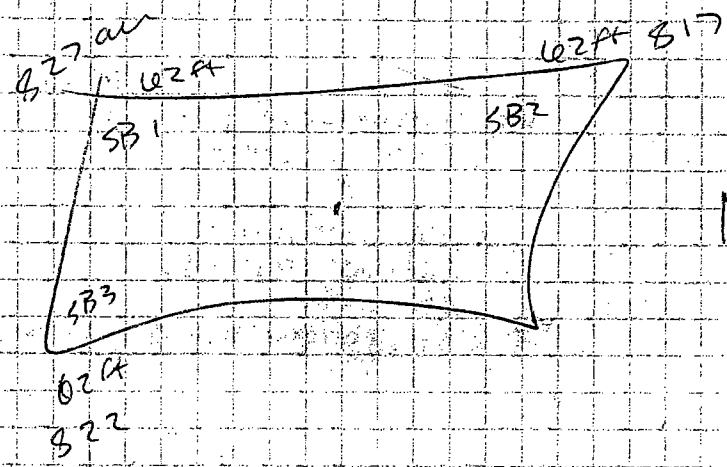
10-30-10

North Wall
Spt Camp

101 10.1 / 30.3 3.00 05 150 10.5

N ↑

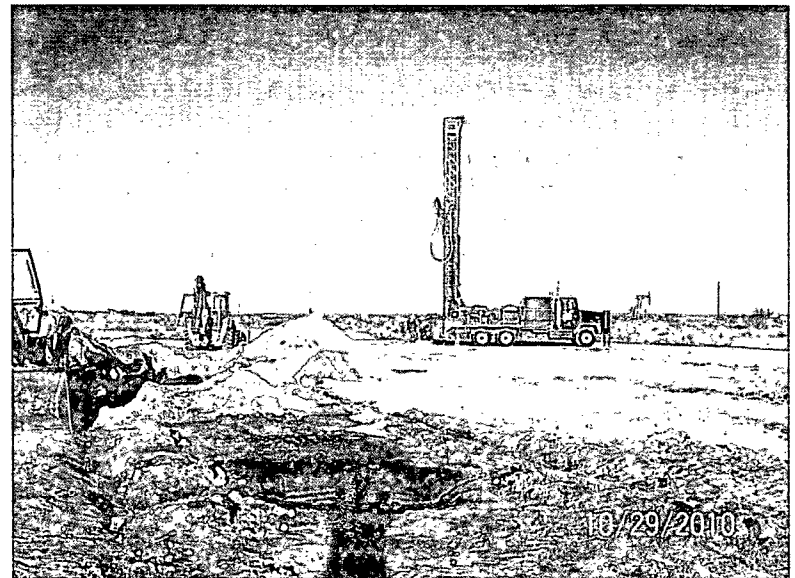
Apache Heuson 12
11-2-10



No Water
in any
Bore

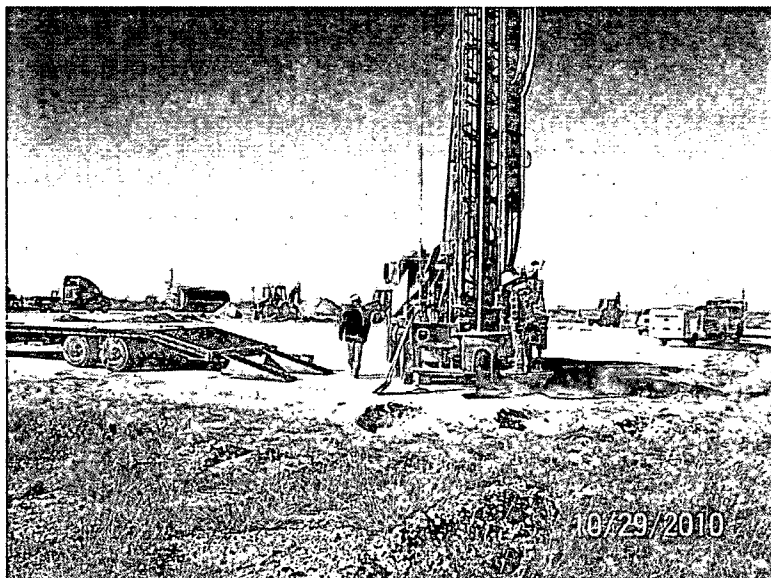
Hanson State #12

Unit Letter H, Section 16, T20S, R37E



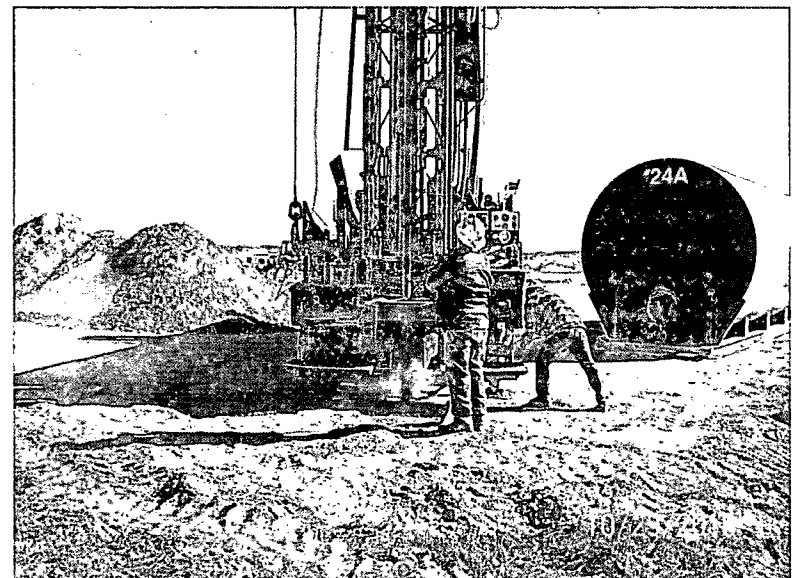
Drilling SB1, facing northwest

10/29/2011



Drilling SB2, facing southwest

10/29/2011



Drilling SB3, facing northeast

10/29/2011