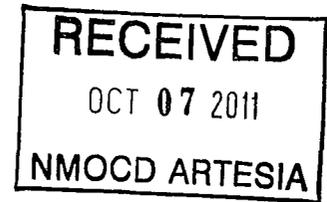




EXPLORING WHAT'S POSSIBLE



APACHE CORPORATION

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

Empire Abo Unit C49 SWD

Closure Report

2RP-722

API 30-015-03184

Release Date: March 29, 2011

Unit Letter K, Section 29, Township 17S, Range 29E

Rice Environmental Consulting & Safety

P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

September 22, 2011

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

**RE: TERMINATION REQUEST
Apache – Empire Abo Unit C-49 SWD AD
UL/L sec. 29 T17S R29E**

Mr. Bratcher:

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

Background and Previous Work

The site is an accidental discharge of fluids from a tank overflow within the battery firewall at the Apache Empire Abo C-49 SWD when an automation failure caused the tanks to overflow. Standing fluids were recovered with a vacuum truck, and an initial form C-141 was submitted by Apache Corporation on March 29, 2011 (Appendix A). The site is located less than one mile south of U.S. Highway 82 west of Loco Hills, NM in unit letter 'L', section 29, T17S, R29E in Eddy County, New Mexico.

On April 11, 2011, RECS personnel initiated work on the Empire Abo C-49 SWD (See Site Photographs in Appendix C). The leak affected the east, northeast, and south portions of the containment floor from which soil samples were collected. Samples were taken from near surface and at depth and were screened for chlorides. Headspace measurements were also taken in the field using a Photo Ionization Detector (PID) (Figure). Soil samples from Pt. 1, Pt. 4, and Pt. 6 were sent to a commercial laboratory for analysis of chloride.

On April 15, 2011, a soil bore was drilled at the southwest end of the leak area to delineate vertical impact near Pt. 6 which showed the highest concentrations of chloride with 18,000 ppm (parts per million or mg/kg) at 6" bgs (below ground surface) and 2,120 ppm at 1.5 ft. bgs. From the soil bore, 5 samples were sent to a commercial laboratory for analysis of chloride, BTEX, and TPH including GRO (Gasoline Range Organics) and DRO (Diesel Range Organics). All samples were non-detect for BTEX. TPH was only present in the SB1 @ 6" sample as DRO at 43.0 ppm. Chloride in the SB1 @ 6" sample was 2,800 ppm, SB1 @ 6 ft. was 288 ppm, SB1 @ 9 ft. was 208, SB1 @ 12 ft. was 160 ppm, and SB1 @ 18 ft. was 64 ppm (Appendix D).

The impacted area was excavated using a shovel crew due to proximity and array of equipment and underground utilities. The area of Pt.1 was excavated to 1.5 ft. bgs and the remaining area from 6 inches to 1 ft. bgs. A total of 72 cubic yards of impacted soil was removed from the leak area and transported to a NMOCD approved facility for disposal. The excavation was backfilled with 125 cubic yards of clean imported caliche and contoured to the battery floor.

On May 26, 2011, a temporary monitor well was drilled northwest of the leak site to verify the existence of groundwater (Appendix B). A red bed clay formation was encountered from 40 ft. to 55 ft. bgs and drilling ceased at 100 ft. bgs. The temporary well was set with 2 inch PVC casing and screen from 80 ft. to 100 ft. bgs to allow potential groundwater to accumulate. On June 28, 2011, RECS personnel used a Solinst Water Level Meter to verify any accumulation of groundwater. No water was detected within the borehole at the total depth of 99.12 ft. bgs. On July 7, 2011, RECS personnel removed the monitoring well casing and plugged the borehole with bentonite.

Conclusion

Due to confirmed nonexistence of groundwater, the removal of soils of highest impact, and rate of chloride decline, Apache submits the final C-141 (Appendix E) 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.

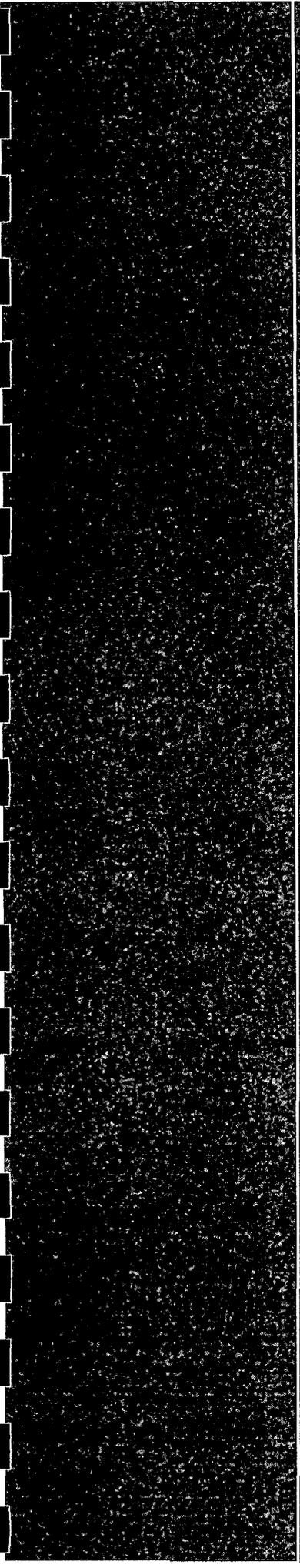
Sincerely,



Bruce Baker
Head Foreman
RECS
(575) 631-5157

Attachments:

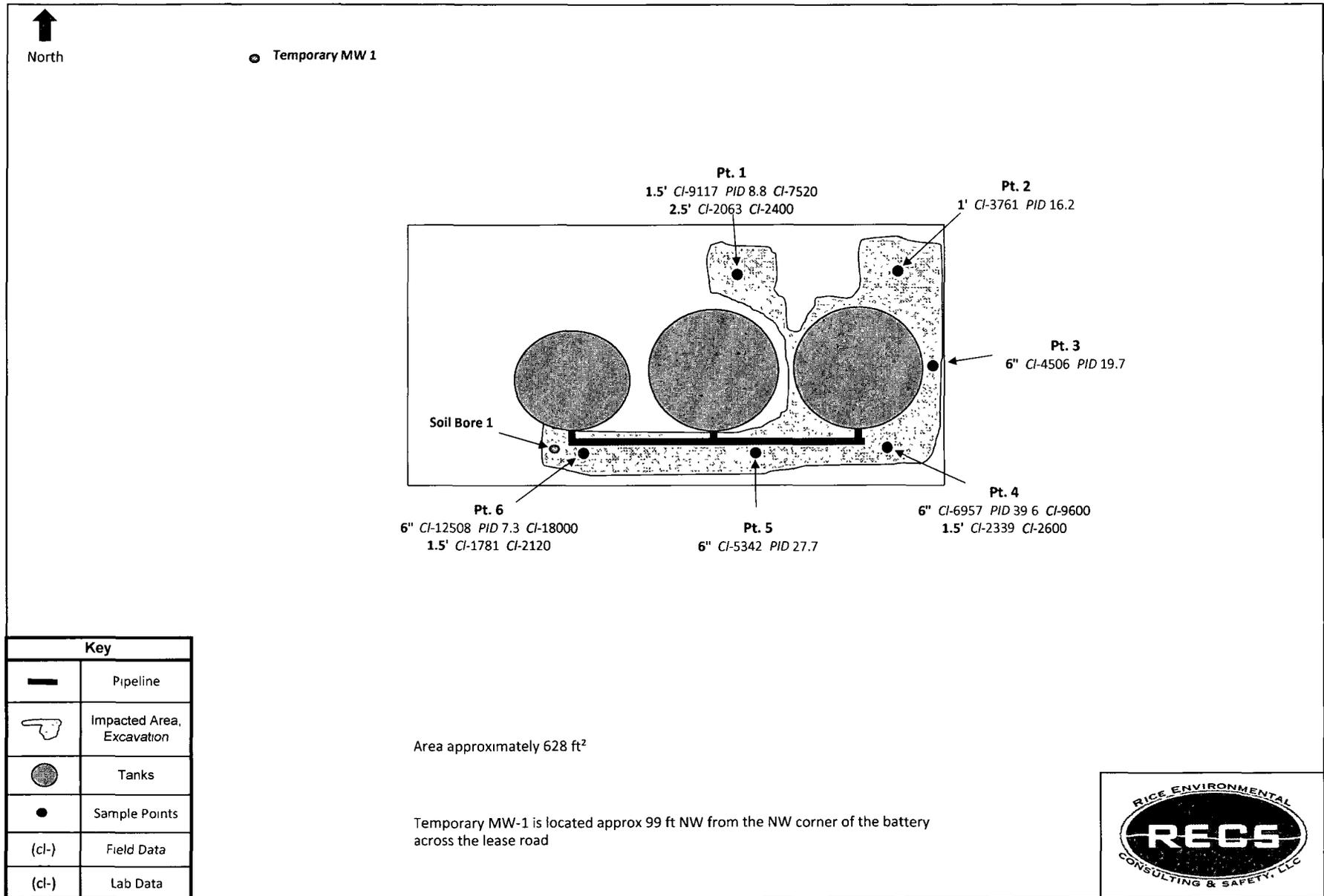
- Figure: Site Diagram with Sample Summary
- Appendix A: Initial Form C-141
- Appendix B: Soil Bore and Temporary Monitoring Well Logs, Letter of Groundwater Verification, and Plugging Report
- Appendix C: Site Photographs
- Appendix D: Laboratory Results
- Appendix E: Final Form C-141



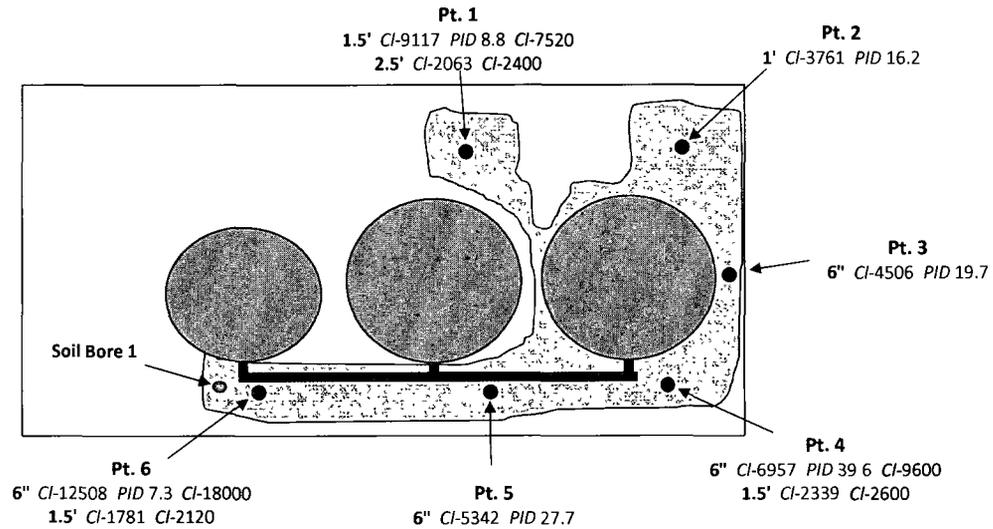
Figure

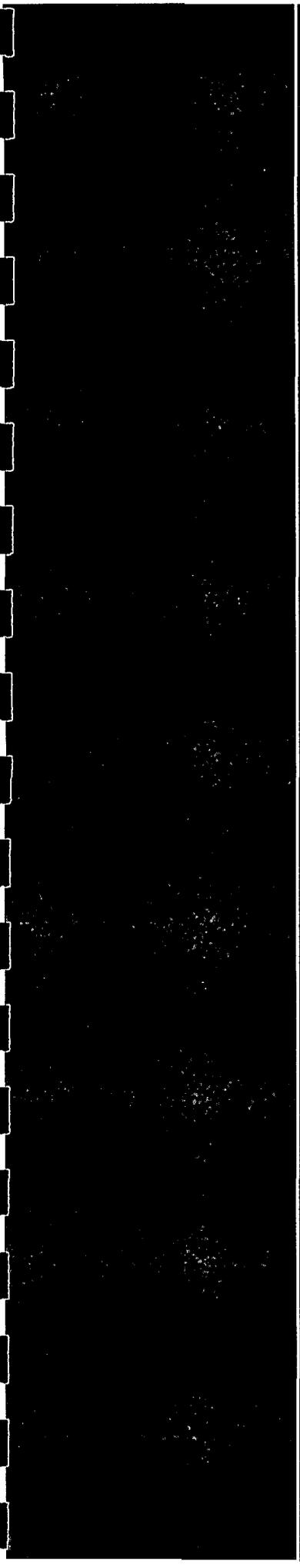
RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Figure: Site Diagram with Sample Summary
Apache Empire Abo C-49 SWD



Temporary MW 1





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
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 Corporation	Contact Natalie Gladden
Address PO Box 1849 Eunice, NM 88231	Telephone No. 575-390-4186
Facility Name Empire Abo Unit C49 SWD (nearest well EAU C50)	Facility Type SWD

Surface Owner BLM	Mineral Owner OCD	Lease No. 30-015-03184
-------------------	-------------------	------------------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	29	17S	29E	2310'	FSL	1650'	FWL	Eddy

Latitude _____ Longitude _____

NATURE OF RELEASE

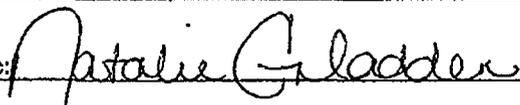
Type of Release Produced Water	Volume of Release 525	Volume Recovered 500
Source of Release Automation failure	Date and Hour of Occurrence 03/29/11 8am	Date and Hour of Discovery 03/29/11 8am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Randy Dade	
By Whom? Natalie Gladden	Date and Hour 03/29/11 @ 3:11pm	
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.*

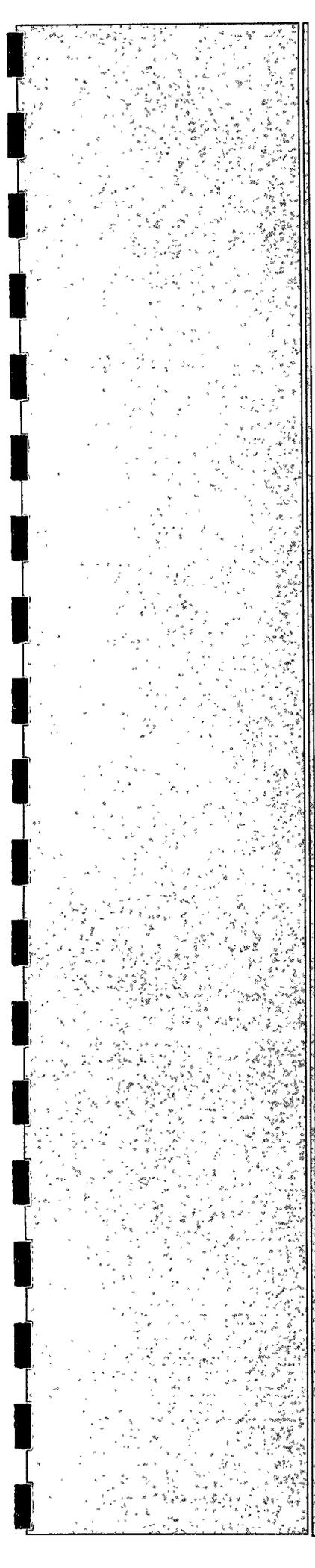
Describe Cause of Problem and Remedial Action Taken.*
Automation failure caused tanks to overflow. Standing fluid was vacuumed up immediately and soil was pushed up towards metal berms to keep fluid from exiting the containment walls.

Describe Area Affected and Cleanup Action Taken.*
8-10" of contaminated soil will be hand dug to keep from compromising the integrity of the tanks and vessels. The area excavated will be backfilled with caliche and pea gravel. The metal containment walls will be taken out and caliche firewalls will be installed to meet the SPCC requirements.

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	Approved by District Supervisor:	
Title: EHS Environmental Tech	Approval Date:	Expiration Date:
E-mail Address: natalie.gladden@apachecorp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 03/29/11 Phone: 575-3904186		

* Attach Additional Sheets If Necessary



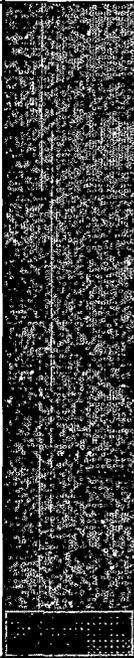
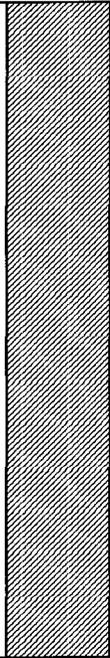
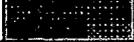
Appendix B

Soil Bore and Temporary Monitoring Well Logs, Letter
of Groundwater Verification, and Plugging Report

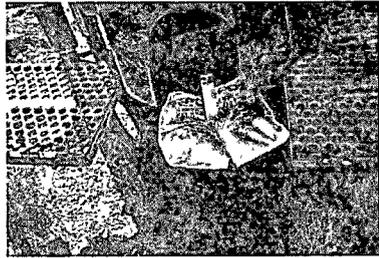
RICE Environmental Consulting and Safety (RECS)

P.O. Box 5630 Hobbs, NM 88241

Phone 575.393.4411 Fax 575.393.0293

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
18 ft	148	Cl-64	0.4	Brown fine sand with caliche mix NO SAMPLES TAKEN BELOW 18 ft		
	B <0.05 T <0.05	GRO <10				
	E <0.05 X <0.15	DRO <10				
21 ft						
24 ft						
27 ft						
30 ft				RED BED CLAY		

Logger: Jordan Woodfin
Driller: Harrison & Cooper, Inc
Drilling Method: Air rotary
Start Date: 4/15/2011
End Date: 4/15/2011



Company: Apache
Project Name: Empire Abo Unit C-49 SWD
Well ID: MW-1 temp
Project Consultant: RECS

Comments:
 No sampling occurred on this well Well was set as a temporary well

Location: UL/L sec 29 T17S R29E

DRAFTED BY: L. Weinheimer
 TD = 55 ft GW = none

Lat: N32°48.294'
Long: W104°06.310'
County: Eddy
State: NM

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction	
5 ft				NO SAMPLES TAKEN		annular space left open	
10 ft							
15 ft							
20 ft							
25 ft							
30 ft							
35 ft							
40 ft					RED BED CLAY MIXED WITH SAND		
45 ft					RED BED CLAY		

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
50 ft						
55 ft						

Rice Environmental Consulting & Safety

P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

July 11th, 2011

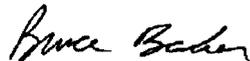
Natalie Gladden
Apache Corp.
P.O. Box 1849
Eunice, New Mexico 88231

Re: Empire Abo Unit C-49 SWD

Ms. Gladden,

On May 26th, 2011, RECS personnel drilled an observational well at the Empire Abo Unit C-49 SWD. On June 28th, I supervised RECS personnel checking for water accumulation within the borehole using a Solinst Water Level Meter. The meter indicated no water had accumulated within the borehole at the total depth of 99.12 ft.

Sincerely,



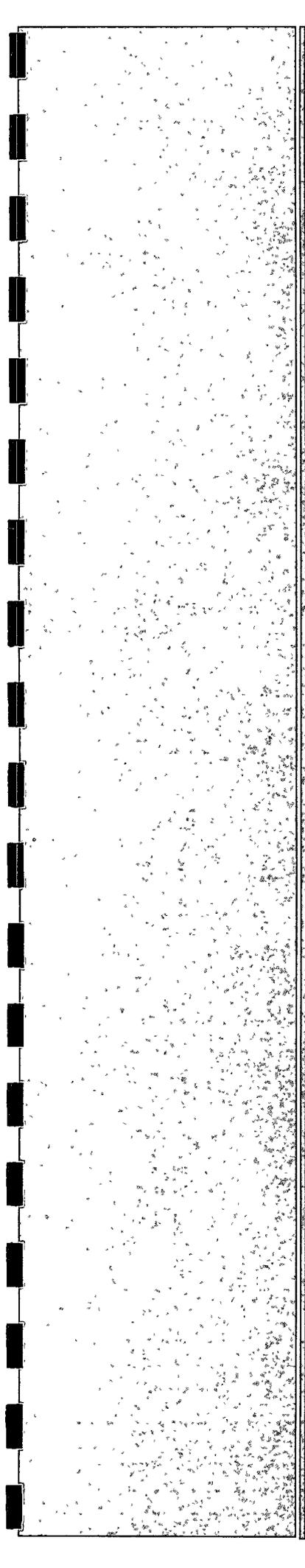
Bruce Baker
Head Foreman
Rice Environmental Consulting & Safety



Monitor Well Plugging Report

P.O. Box 5630
Hobbs, NM 88241
Phone: 575-393-4411

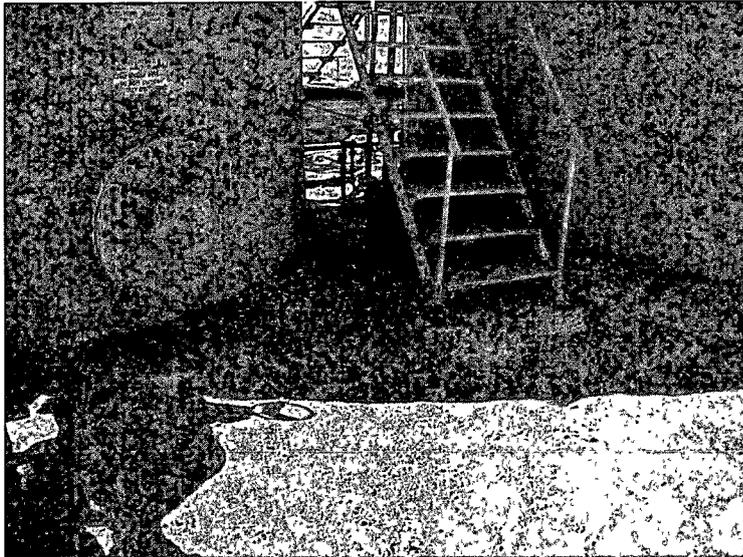
Client	Apache Corp.
Contractor	RECS
Date Completed	7/7/2011
Site	Empire Abo Unit C-49 SWD
County	Eddy
Legal Description	UL/L sec. 29 T17S R29E
Well ID	Temp. MW-1
Casing Diameter	2"
Well Depth	100'
Casing Material	PVC
Plugging Material	Bentonite



Appendix C

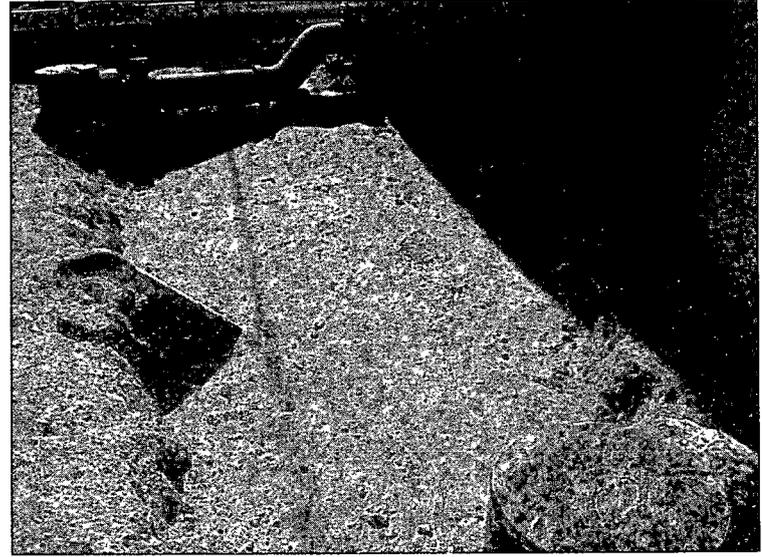
Site Photographs

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

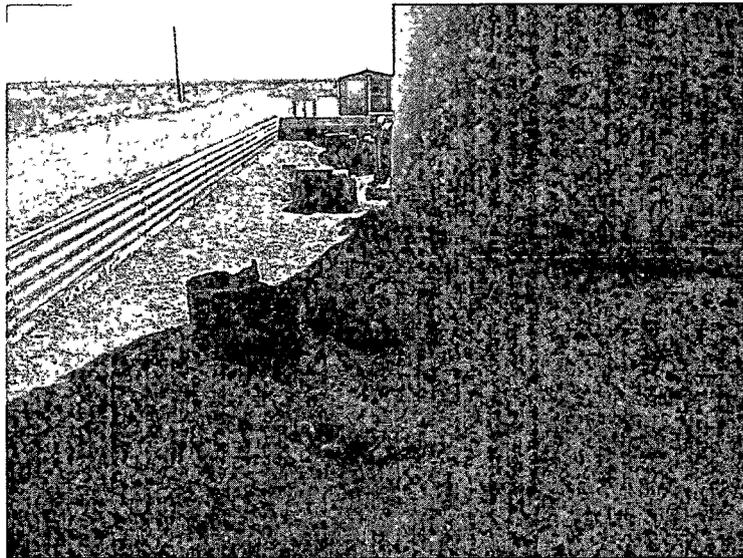


Between Tanks, Facing SW

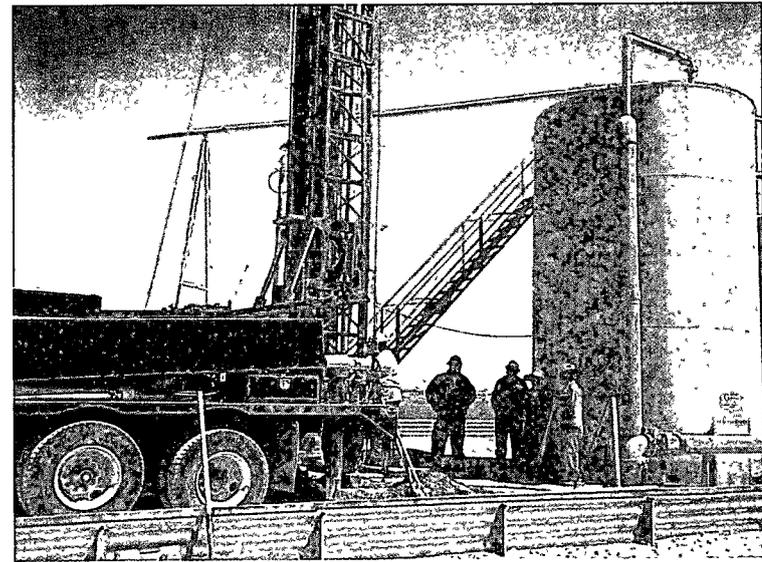
4/11/2011



Initial Impacted Area Excavation, Facing E 4/11/2011

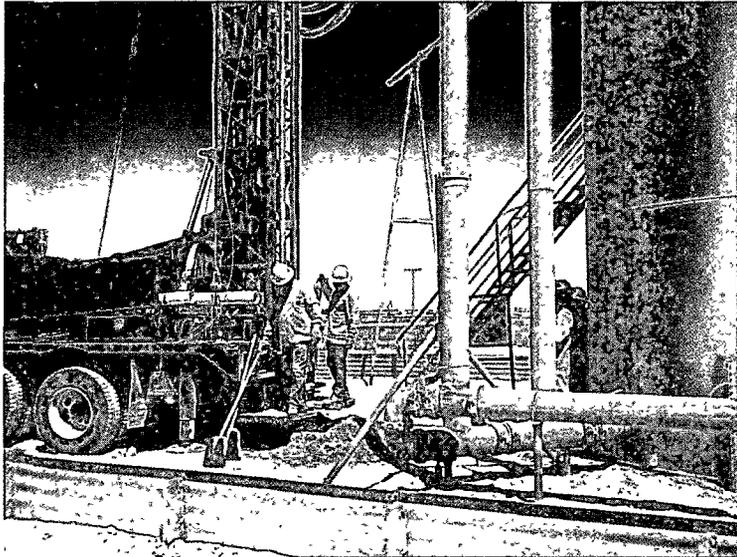


Initial Impacted Area Excavation, Facing E 4/11/2011



Drilling Soil Bore 1, Facing N

4/15/2011



Drilling Soil Bore 1, Facing NW

4/15/2011



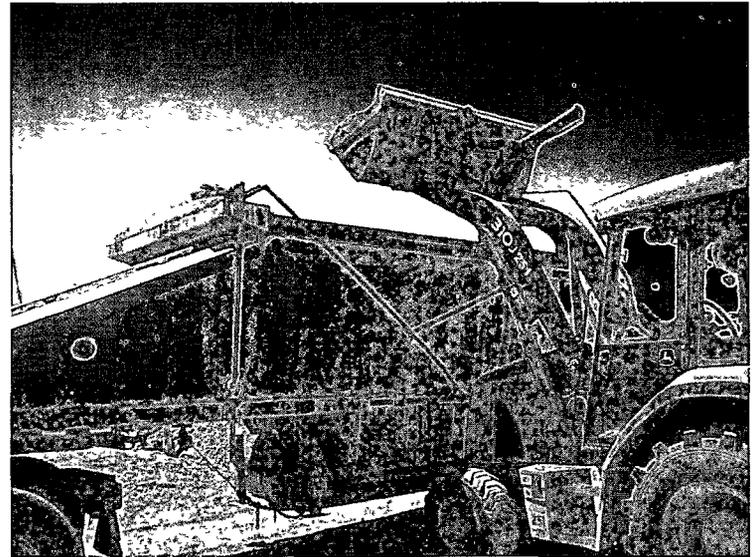
Field Testing Soil Samples, Facing E

4/15/2011



Plugging Soil Bore, Facing W

4/15/2011

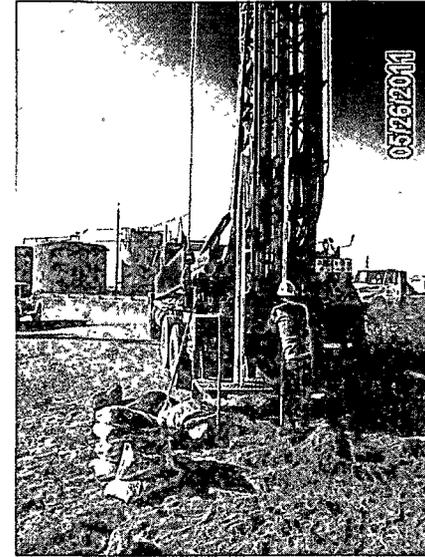


Removing Soil, Facing SW

4/15/2011



Drilling Temporary MW, Facing SE 5/26/2011



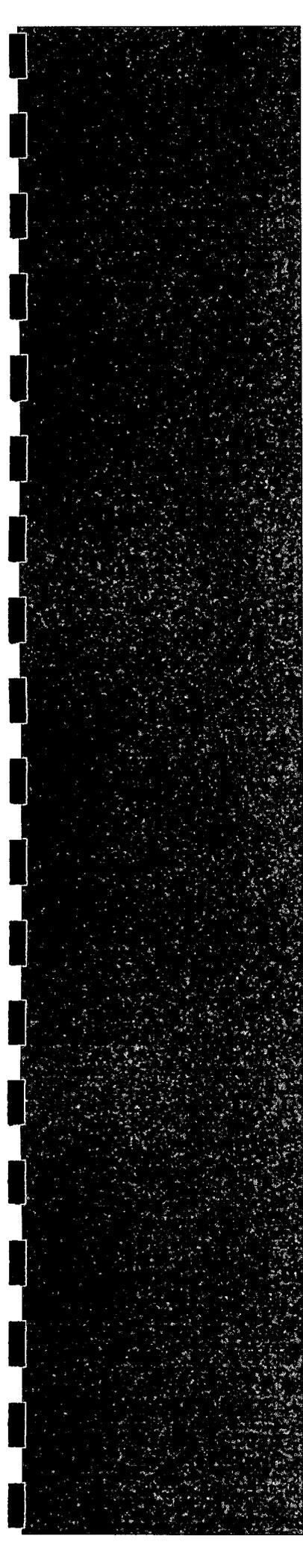
Installing Casing, Facing SE 5/26/2011



Removing Casing, Facing S 7/7/2011



Plugged and Staked, Facing SE 7/7/2011



Appendix D

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:

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

Received:	04/19/2011	Sampling Date:	04/11/2011
Reported:	04/20/2011	Sampling Type:	Soil
Project Name:	EMPIRE APO C-49 SWD AD	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 1 @ 1.5' (H100789-01)

Chloride, SM4500CI-B	mg/kg	Analyzed By: HM								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7520	16.0	04/20/2011	ND	400	100	400	0.00		

Sample ID: PT. 4 @ 6" (H100789-02)

Chloride, SM4500CI-B	mg/kg	Analyzed By: HM								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9600	16.0	04/20/2011	ND	400	100	400	0.00		

Sample ID: PT. 6 @ 6" (H100789-03)

Chloride, SM4500CI-B	mg/kg	Analyzed By: HM								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	18000	16.0	04/20/2011	ND	400	100	400	0.00		

Sample ID: PT. 1 @ 2.5' (H100789-04)

Chloride, SM4500CI-B	mg/kg	Analyzed By: HM								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2400	16.0	04/20/2011	ND	400	100	400	0.00		

Cardinal Laboratories

*=Accredited Analyte

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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:	04/19/2011	Sampling Date:	04/14/2011
Reported:	04/20/2011	Sampling Type:	Soil
Project Name:	EMPIRE APO C-49 SWD AD	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 4 @ 1.5' (H100789-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2600	16.0	04/20/2011	ND	400	100	400	0.00		

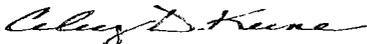
Sample ID: PT. 6 @ 1.5' (H100789-06)

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	04/20/2011	ND	400	100	400	0.00		

Cardinal Laboratories

*=Accredited Analyte

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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: 04/15/2011
 Reported: 04/20/2011
 Project Name: EMPIRE ABO UNIT C-49 SWD
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 04/15/2011
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SB 1 @ 6" (H100776-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2800	16.0	04/19/2011	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	04/18/2011	ND	206	103	200	1.31		
DRO >C10-C28	43.0	10.0	04/18/2011	ND	207	104	200	1.30		
<i>Surrogate 1-Chlorooctane</i>	93.1 %	70-130								
<i>Surrogate 1-Chlorooctadecane</i>	103 %	70-130								

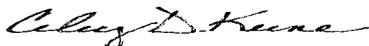
Sample ID: SB 1 @ 6 FT (H100776-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	04/19/2011	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	04/19/2011	ND	206	103	200	1.31		
DRO >C10-C28	<10.0	10.0	04/19/2011	ND	207	104	200	1.30		
<i>Surrogate 1-Chlorooctane</i>	93.0 %	70-130								
<i>Surrogate 1-Chlorooctadecane</i>	95.3 %	70-130								

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* = Accredited Analyte

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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:	04/15/2011	Sampling Date:	04/15/2011
Reported:	04/20/2011	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT C-49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 1 @ 9 FT (H100776-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	04/19/2011	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	04/19/2011	ND	206	103	200	1.31		
DRO >C10-C28	<10.0	10.0	04/19/2011	ND	207	104	200	1.30		

Surrogate 1-Chlorooctane	88.5 %	70-130
Surrogate 1-Chlorooctadecane	87.8 %	70-130

Sample ID: SB 1 @ 12 FT (H100776-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	04/19/2011	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	04/19/2011	ND	206	103	200	1.31		
DRO >C10-C28	<10.0	10.0	04/19/2011	ND	207	104	200	1.30		

Surrogate 1-Chlorooctane	95.1 %	70-130
Surrogate 1-Chlorooctadecane	97.4 %	70-130

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* = Accredited Analyte

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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:	04/15/2011	Sampling Date:	04/15/2011
Reported:	04/20/2011	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT C-49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 1 @ 18 FT (H100776-05)

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	04/19/2011	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	04/19/2011	ND	206	103	200	1.31		
DRO >C10-C28	<10.0	10.0	04/19/2011	ND	207	104	200	1.30		

<i>Surrogate 1-Chlorooctane</i>	93.0 %	70-130
<i>Surrogate 1-Chlorooctadecane</i>	96.6 %	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:	04/15/2011	Sampling Date:	04/15/2011
Reported:	04/20/2011	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT C-49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 1 @ 6" (H100776-01)

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	04/20/2011	ND	2.35	118	2.00	15.9		
Toluene*	<0.050	0.050	04/20/2011	ND	2.32	116	2.00	16.4		
Ethylbenzene*	<0.050	0.050	04/20/2011	ND	2.31	115	2.00	14.4		
Total Xylenes*	<0.150	0.150	04/20/2011	ND	6.84	114	6.00	14.1		

Surrogate 4-Biomofluorobenzene (PIL) 87.9% 70-130

Sample ID: SB 1 @ 6 FT (H100776-02)

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	04/20/2011	ND	2.35	118	2.00	15.9		
Toluene*	<0.050	0.050	04/20/2011	ND	2.32	116	2.00	16.4		
Ethylbenzene*	<0.050	0.050	04/20/2011	ND	2.31	115	2.00	14.4		
Total Xylenes*	<0.150	0.150	04/20/2011	ND	6.84	114	6.00	14.1		

Surrogate 4-Biomofluorobenzene (PIL) 95.3% 70-130

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*=Accredited Analyte

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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:	04/15/2011	Sampling Date:	04/15/2011
Reported:	04/20/2011	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT C-49 SWD,	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 1 @ 9 FT (H100776-03)

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	04/20/2011	ND	2.35	118	2.00	15.9		
Toluene*	<0.050	0.050	04/20/2011	ND	2.32	116	2.00	16.4		
Ethylbenzene*	<0.050	0.050	04/20/2011	ND	2.31	115	2.00	14.4		
Total Xylenes*	<0.150	0.150	04/20/2011	ND	6.84	114	6.00	14.1		

Surrogate 4-Bromofluorobenzene (PIL) 94.1% 70-130

Sample ID: SB 1 @ 12 FT (H100776-04)

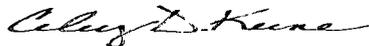
BTEX 8021B		mg/kg		Analyzed By: CMS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/20/2011	ND	2.35	118	2.00	15.9		
Toluene*	<0.050	0.050	04/20/2011	ND	2.32	116	2.00	16.4		
Ethylbenzene*	<0.050	0.050	04/20/2011	ND	2.31	115	2.00	14.4		
Total Xylenes*	<0.150	0.150	04/20/2011	ND	6.84	114	6.00	14.1		

Surrogate 4-Bromofluorobenzene (PIL) 94.7% 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:	04/15/2011	Sampling Date:	04/15/2011
Reported:	04/20/2011	Sampling Type:	Soil
Project Name:	EMPIRE ABO UNIT C-49 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 1 @ 18 FT (H100776-05)

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	04/20/2011	ND	2.35	118	2.00	15.9		
Toluene*	<0.050	0.050	04/20/2011	ND	2.32	116	2.00	16.4		
Ethylbenzene*	<0.050	0.050	04/20/2011	ND	2.31	115	2.00	14.4		
Total Xylenes*	<0.150	0.150	04/20/2011	ND	6.84	114	6.00	14.1		

Surrogate 4-Bromofluorobenzene (PIL) 93.8% 70-130

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache		BILL TO		ANALYSIS REQUEST																						
Project Manager: Natalie Gladden		P.O. #:		Chlorides TPH 8015 M BTEX * <i>added 4/20/11</i> Texas TPH Complete Cations/Anions TDS																						
Address:		Company:																								
City: State: NM Zip:		Attn:																								
Phone #: Fax #:		Address:																								
Project #: Project Owner:		City:																								
Project Name: Empire Abo Unit C-49 SWD		State: Zip:																								
Project Location:		Phone #:																								
Sampler Name: Jordan Woodfin		Fax #:																								
FOR LAB USE ONLY																										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						PRESERV.		SAMPLING														
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME												
H100776-1	SB 1 @ 6"	3	1			✓				✓		4/15/11	1130	✓	✓	✓										
2	SB 1 @ 6ft	3	1			✓				✓		"	1135	✓	✓	✓										
3	SB 1 @ 9ft	3	1			✓				✓		"	1138	✓	✓	✓										
4	SB 1 @ 12ft	3	1			✓				✓		"	1140	✓	✓	✓										
5	SB 1 @ 18ft	3	1			✓				✓		"	1206	✓	✓	✓										

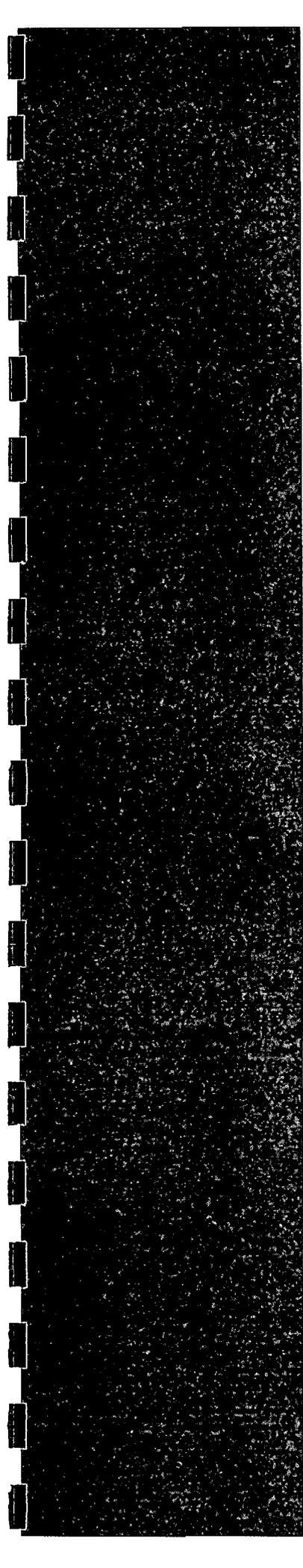
PLEASE NOTE: Liability and Damages, Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed 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: <i>Jordan Woodfin</i>	Date: <i>4/15/11</i> Time: <i>4:45</i>	Received By: <i>Jodi Henson</i>	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: <i>3.50</i>		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: <i>JH</i>	
REMARKS: email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com <i>*Lara added BTEX, report on separate report. ch</i>				

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

#26

4/20/11



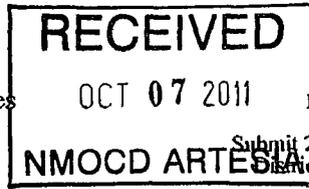
Appendix E

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 Empire Abo Unit C49 SWD (nearest well EAUC50)	Facility Type SWD

Surface Owner BLM	Mineral Owner OCD	Lease No. 30-015-03184
-------------------	-------------------	------------------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	29	17S	29E	2310'	FSL	1650'	FWL	Eddy

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 525	Volume Recovered 500
Source of Release Automation Failure	03/29/11 8am	07/15/11 1030am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Randy Dade	
By Whom?	Date and Hour 03/29/11 @ 3:11pm	
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.*
Automation failure caused tanks to overflow. Standing fluid was vacuumed up immediately and soil was pushed up towards metal berms to keep fluid from exiting the containment walls.

Describe Area Affected and Cleanup Action Taken.*
The leak affected the south, east, and northeast areas of the containment floor. The impacted area was excavated to 10 in. to 1.5 ft. below ground surface, and 72 cubic yards of impacted soil were taken to a NMOCD approved disposal facility. Samples were collected from the excavation and tested. A soil bore was drilled to determine depth of impact and then plugged. Samples were sent to a NMOCD approved laboratory. A temporary monitoring well was installed on location to a depth of 100 ft below ground surface, and no water was detected. The temporary well was plugged, and the excavation was backfilled with clean caliche.

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	Approved by District Supervisor:		
Title: EHS Environmental Tech	Approval Date:	Expiration Date:	
E-mail Address: Natalie.gladden@apachecorp.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 10/5/11 Phone: (575) 390-4186			

* Attach Additional Sheets If Necessary