District I
1625 N. French Dr., Hobbs, NM 88240
District II
311 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

Form C-141
Revised August 8, 2011

NSAD 1416132675 W

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19,15.29 NMAC.

		Data	حسيب مركب		and Co	orrective Acti						
		Keit	ase indimical		OPERA'	1 (2)		Report Final Repor				
Name of Co	ompany Apache Corp	oration			Contact Br		Initia Initia	i Keboti 🛛 Linai Keboi				
	PO Box 1849, Eunice,		1		Telephone No. (432) 631-6982							
	me Argo #7	1		Facility Type Injection Well								
Surface Ow	ner Apache		Mineral Owr	ıer				30-025-09915				
-			LOCAT	ION	OF REI	LEASE						
Unit Letter L	Section Township 15 21S	Range 37E		orth/S	outh Line SL		st/West Line FWL	County Lea				
		Lat	hitude		Longitud	le		,7.4 \$				
<i>y</i>			NATU	RE C	OF REL	EASE						
Type of Rele			,			Release Unknown		ecovered 70 bbls				
Source of Re	lease Injection Well					lour of Occurrence	Date and I 0800 hrs	four of Discovery 9/10/13				
Was Immedi	ate Notice Given?	Yes 🗌	No 🗌 Not Requi		If YES, To Geoff Leki	Whom? ng, NMOCD						
By Whom?						lour 9/10/13 11:17 a						
Was a Water	course Reached?] Yes 🖂	No		If YES, Vo	lume Impacting the W	atercourse.					
If a Watercon	urse was Impacted, Desc	ribe Fully.*	:	1				•				
· .							DTW=	53'				
Describe Cat	ise of Problem and Rem	dial Action	Taken.* The bull	plug w	as pulled or	at of valve and cattle o	pened the valv					
produced wa	ter was recovered using	vacuum true	ck. The site has been	n mapp	ped and surf	ace samples collected	10th 2013 to 2	ssess the site. Seven points				
throughout the laboratory for Organics (DI excavated so to a commercing/kg. A rea 497 mg/kg, it sample from 252 yards of analysis and	ne surface of the release r analysis. Chloride valuation of the centre of the release to a NMOCD cial laboratory for analysquest to backfill the site leeded to be scraped dow the bottom of the Pt. 7 soil was imported to the returned a chloride, GRO	were field to nes at all seed non-detect approved it is. The contwast sent to the to 1 ft be compensed was to site to served and DRO	ested for chlorides are ven points were elevaled or below regulatory facility for disposal. In posite returned a check NMOCD on Septems and then Apache haken to a commercial e as backfill. A 5 poresult of non-detect.	nd organted, Contact An 8 point of the contact and period labor int contact The s	anics vapors Jasoline Rai Jasoline Rai Jasoline Rai Jasoline Stone Jasoli	susing a PID meter. Inge Organics (GRO) note was scraped down so composite sample was 4 mg/kg, a GRO value MOCD responded that backfill the site. Pt. 7 values of chlorides and the filled, watered down kfilled, watered down	he samples we eadings were n ix inches and a as taken from the of non-detect to Pt. 7, which has scraped do I returned a restaken to a corand roller pack	re then taken to a commercial on-detect and Diesel Range total of 204 yards of the base of the scrape and sent and a DRO value of 17.3 ad a field chloride reading of wn another 6 inches and a ult of 144 mg/kg. A total of mmercial laboratory for ted.				
regulations a public health should their o or the enviro	Il operators are required or the environment. The operations have failed to	to report and e acceptance adequately OCD accep	d/or file certain releate of a C-141 report be investigate and reme	ise not by the lediate of	tifications as NMOCD m contaminati	nd perform corrective arked as "Final Repor on that pose a threat to	actions for rele t" does not relic ground water,	uant to NMOCD rules and ases which may endanger eve the operator of liability surface water, human health ampliance with any other				
						OIL CONSEI	RVATION	DIVISION				
Signature:	Buce Bal	Les .				es/v	HILLAN	- YORUMA				
Printed Name	e: Bruce Baker			A	pproved by	Environmental Specia	list. Environmen	ital Specialist				
Title: Enviro	onmental Technician			A	pproval Dat	e: 2/12/14	Expiration I	Date:				
E-mail Addre	ess: larry.baker@apach	есогр.сот		_ C	onditions of	Approval:		Attached				
Date:	11-18-13	Phone:	(432) 631-6982					IRP-2-13-2952				
	tional Sheets If Neces		<u>, , , , , , , , , , , , , , , , , , , </u>					JUN 1 0 2014				
. *							i i	MON FO TO				



APACHE CORPORATION

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

Argo #7 (1RP-9-13-2952)

Termination Request

approved

Environmental Specialist

NMOCD-DIST 1

2112114

API 30-025-09915

Release Discovery Date: September 10th, 2013

Unit Letter L, Section 15, Township 21S, Range 37E

Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241 Phone 575.393.2967

November 15th, 2013

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 Corporation – Argo #7 (1RP-9-13-2952) UL/L sec. 15 T21S R37E API No. 30-025-09915

Mr. Leking:

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

Background and Previous Work

The site is located approximately 2.4 miles north of Eunice, New Mexico at UL/L sec. 15 T21S R37E. NM OSE and BLM records indicate that groundwater will likely be encountered at a depth of approximately 53.5 +/- feet.

On September 10th, 2013, Apache discovered a release of produced water from an injection well. The bull plug was pulled out of the valve and cattle opened the valve. An unknown volume of produced water was released. A vacuum truck was called to the site and removed 70 barrels of produced water. A total 12,461 sq ft of lease pad and pasture land was affected by the release. An initial C-141 was submitted to NMOCD and approved on September 11th, 2013 (Appendix A).

RECS personnel were on site beginning on September 10th, 2013 to assess the site. Seven points throughout the surface of the release were field tested for chlorides and organic vapors using a PID meter (Figure 1). The samples were then taken to a commercial laboratory for analysis (Appendix B). Chloride values at all seven points were elevated, Gasoline Range Organics (GRO) readings were non-detect and Diesel Range Organics (DRO) readings were either non-detect or below regulatory standards.

The site was scraped down six inches and a total of 204 yards of excavated soil was sent to a NMOCD approved facility for disposal. An 8 point bottom composite sample was taken from the base of the scrape and sent to a commercial laboratory for analysis. The composite returned a chloride value of 224 mg/kg, a GRO value of non-detect and a DRO value of 17.3 mg/kg. A request to backfill the site was sent to NMOCD on September 25th, 2013. NMOCD responded that Pt. 7, which had a field chloride reading of 497 mg/kg, needed to be scraped down to 1 ft bgs and then Apache had permission to backfill

the site. Pt. 7 was scraped down another 6 inches and a sample from the bottom of the Pt. 7 scrape was taken to a commercial laboratory for analysis of chlorides and returned a result of 144 mg/kg (Figure 2).

A total of 252 yards of soil was imported to the site to serve as backfill. A 5 point composite sample of this backfill was taken to a commercial laboratory for analysis and returned a chloride, GRO and DRO result of non-detect (Appendix C). The site was backfilled, watered down and roller packed.

Photo documentation of these activities can be found in Appendix D.

Given that the contaminated soil was removed from the site and replaced with clean, imported soil, Apache requests 'remediation termination' and closure of the site. A final C-141 is located in Appendix E.

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

Sincerely,

Lara Weinheimer

Project Scientist

RECS

(575) 441-0431

Attachments:

Figure 1 – Initial Sampling Data

Figure 2 – Excavation Data

Appendix A – Initial C-141

Appendix B – Initial Laboratory Analysis

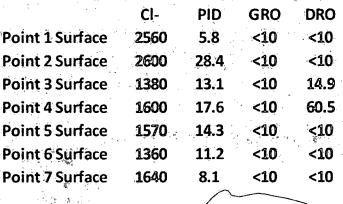
Appendix C – Excavation Laboratory Analyses

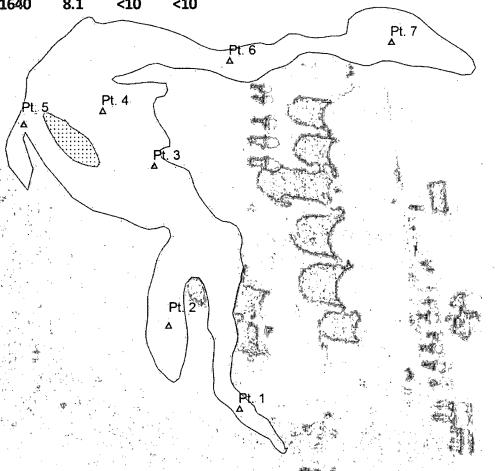
Appendix D – Photo Documentation

Appendix E - Final C-141



Initial Sampling Data





Legend

△ SAMPLE POINTS

STAIN (12,461 sq ft)

NO STAIN

OF LAB DATA

CI- FIELD DATA

DGW: 53.5 ft

Landowner: Apache Corp.

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

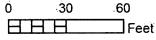


*APACHE ARGO #7*1RP-9-13-2952

LEGALS: UL/L sec. 15 T-21-S R-37-E LEA COUNTY, NM

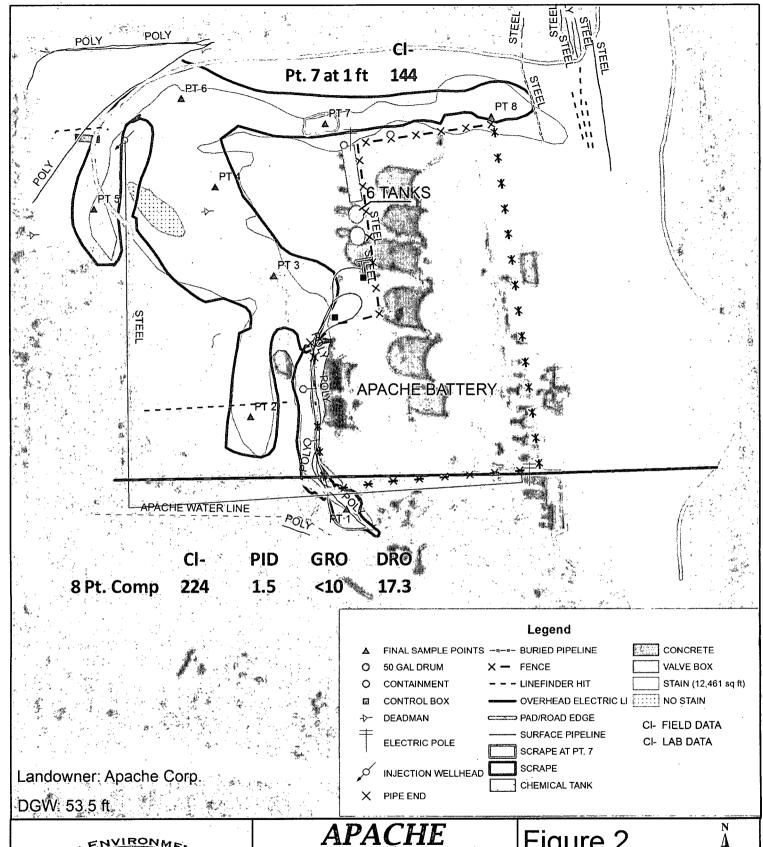
Figure 1





GPS date: 9/10/13 Drawing date: 9/11/13 Drafted by: L. Weinheimer

Excavation Data





ARGO #7 1RP-9-13-2952

LEGALS: UL/L sec. 15 T-21-S R-37-E LEA COUNTY, NM

Figure 2



60 30 Feet

GPS date: 10/16/13 ZC Drawing date: 10/17/13 Drafted by: L. Weinheimer

Appendix A Initial C-141

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240

State of New Mexico

HOBBS OCD State of New IVIEXICO Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

District II 811 S. First St., Artesia, NM 88210 District III

1000 Rio Brazos Road, Aztec, NM 87410 SEP 0 9 2013 District IV

Oil Conservation Division 1220 South St. Francis Dr. Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

* Attach Additional Sheets If Necessary

Santa Fe, NM 87505 DECENTED

		ı	Rele	ase Notific	ation	and Co	rrective A	ction				
						OPERAT	TOR	⊠ Initia	al Report	Final Report		
Name of Co						Contact Bruce Baker Telephone No. (432) 631-6982						
Address PC			M 88231				lo. (432) 631-6 e Injection Wel					
Facility Nar	ne Argo#	1				racinty Typ	e injection we					
Surface Ow	ner Apach	ne .		Mineral C)wner			API No	. 30-025-0	9915		
			,			OF REI	LEASE					
Unit Letter L	Section 15	Township 21S	Range 37E	Feet from the 2310		South Line FSL	Feet from the 990	East/West Line FWL		County Lea		
			Lat	itude		_Longitud	e					
				NAT	URE	OF RELI	EASE					
Type of Rele					· · ·		Release Unknow		Recovered 70			
Source of Re Was Immedia						If YES, To	our of Occurrence		Hour of Disc			
yv as ininicula	ale Ivolice e		Yes 🗌	No 🗌 Not Re	equired	Jeff Leking		בונטונף	0 300 M	ns Ant		
	y Whom? Bruce Baker						our 9/10/13 11:1					
Was a Water	⁷ as a Watercourse Reached? ☐ Yes ☒ No						lume Impacting t	he Watercourse.				
If a Watercou	irse was Im	pacted, Descr	be Fully.*			L						
Describe Cau The bull plug been mapped	was pulled		and cattle o		A total	of 70 bbls of	produced water v	vas recovered using	g vacuum tru	ick. The site has		
		•				•						
Describe Are	a Affected	and Cleanup A	Action Tak	en.								
The majority	of the affec	ted area is on	lease pad.	A one call was p	olaced an	nd the wet are	a will be scraped	and site will be de	lineated.			
regulations a public health should their of	Il operators or the envir operations h nment. In a	are required to conment. The ave failed to a ddition, NMC	o report an acceptance adequately OCD accept	d/or file certain reports of a C-141 reports of a C-141 reports and reports of the contract of	elease no ort by the emediate	otifications are NMOCD made contamination	nd perform correct arked as "Final Ro on that pose a thre	nderstand that purs tive actions for rele eport" does not reli eat to ground water responsibility for co	eases which reve the opera s, surface wat	may endanger ator of liability ter, human health		
Signature:		Baher				Approved by	OIL CON	Environment pecialist:	DP 200 al Special	ist O		
Títle: Enviro						Approval Date: 9 In 13			Expiration Date: 11/11/13			
									Date: •• [1	· \1 \		
E-mail Addre	ess: larry.ba /11/13	iker(wapachec		(432) 631-6982			Approval: SUBI	MM FINAL,	Attached VRP-9-	□ 13-2952		

Appendix A Initial Laboratory Analysis



September 12, 2013

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: ARGO #7

Enclosed are the results of analyses for samples received by the laboratory on 09/10/13 15:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celes D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Received:

09/10/2013

Reported:

09/12/2013

Project Name: Project Number: Project Location: ARGO #7 NONE GIVEN NOT GIVEN

Sampling Date: Sampling Type: 09/10/2013

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: PT. 1 SURFACE (H302179-01)

Chl	orida	SM45	00CI-B
Lni	oriae,	3M43	ひひしにち

Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
2560	16.0	09/11/2013	ND	416	104	400	3.92	
mg,	/kg	Analyze	d By: MS					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<10.0	10.0	09/11/2013	ND	193	96.4	200	1.08	
<10.0	10.0	09/11/2013	ND	185	92.3	200	2.55	
	2560 mg. Result <10.0	2560 16.0 mg/kg Result Reporting Limit <10.0 10.0	2560 16.0 09/11/2013 mg/kg Analyze Result Reporting Limit Analyzed <10.0	2560 16.0 09/11/2013 ND mg/kg Analyzed By: MS Result Reporting Limit Analyzed Method Blank <10.0	2560 16.0 09/11/2013 ND 416 mg/kg Analyzed By: MS Result Reporting Limit Analyzed Method Blank BS <10.0	2560 16.0 09/11/2013 ND 416 104 mg/kg Analyzed By: MS Result Reporting Limit Analyzed Method Blank BS % Recovery <10.0	2560 16.0 09/11/2013 ND 416 104 400 mg/kg Analyzed By: MS Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC <10.0	2560 16.0 09/11/2013 ND 416 104 400 3.92 mg/kg Analyzed By: MS Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD <10.0

Surrogate: 1-Chlorooctane

71.7%

65.2-140

Surrogate: 1-Chlorooctadecane

82.4 %

63.6-154

Sample ID: PT. 2 SURFACE (H302179-02)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2600	16.0	09/11/2013	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/11/2013	ND	193	96.4	200	1.08	
DRO >C10-C28	<10.0	10.0	09/11/2013	ND	185	92.3	200	2.55	
Surrogate: 1-Chlorooctane	81.5	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	94.0	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

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Celey & Keine



APACHE - EUNICE **BRUCE BAKER** P. O. BOX 1849 **EUNICE NM, 88231** 394-2425

Received:

09/10/2013

Reported: Project Name: 09/12/2013 ARGO #7

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

09/10/2013

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: PT. 3 SURFACE (H302179-03)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP			·		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1380	16.0	09/11/2013	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/11/2013	ND	193	96.4	200	1.08	
DRO >C10-C28	14.9	10.0	09/11/2013	ND	185	92.3	200	2.55	
Surrogate: 1-Chlorooctane	83.2	% 65,2-14	0						

Surrogate: 1-Chlorooctadecane

94.0 %

63.6-154

Sample ID: PT. 4 SURFACE (H302179-04)

Chloride, SM4500Cl-B	mg	/kg	Analyze	ed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1600	16.0	09/11/2013	ND	432	108	400	3.64	
TPH 8015M	mg	/kg .	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO_C6-C10	<10.0	10.0	09/11/2013	ND	193	96.4	200	1.08	
DRO >C10-C28	60.5	10.0	09/11/2013	ND	185	92.3	200	2.55	
Surrogate: 1-Chlorooctane	75.1	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	85.3	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keine



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

Received:

09/10/2013

Reported:

09/12/2013

Project Name: Project Number:

Project Location:

ARGO #7 NONE GIVEN

NOT GIVEN

Sampling Date:

09/10/2013

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By: Jodi Henson

Sample ID: PT. 5 SURFACE (H302179-05)

Chloride, SM4500CI-B

Analyzed By: AP

Cilioride, 3M4500CFB	my	/ kg	Allalyze	u by. Ar					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1570	16.0	09/11/2013	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/11/2013	ND	193	96.4	200	1.08	
DRO >C10-C28	<10.0	10.0	09/11/2013	ND	185	92.3	200	2.55	
Surrogate: 1-Chlorooctane	71.6	% 65.2-14	70						

Surrogate: 1-Chlorooctadecane

82.4%

63.6-154

Sample ID: PT. 6 SURFACE (H302179-06)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1360	16.0	09/11/2013	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/11/2013	ND	193	96.4.	200	1.08	
DRO >C10-C28	<10.0	10.0	09/11/2013	ND	185	92.3	200	2.55	

Surrogate: 1-Chlorooctane

74.3 %

65.2-140

Surrogate: 1-Chlorooctadecane

87.8 %

63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keine



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

Received:

09/10/2013

Reported:

09/12/2013 ARGO #7

Project Name: Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

09/10/2013

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: PT. 7 SURFACE (H302179-07)

Chloride,	SM4500CI-B
-----------	------------

mg/kg

Analyzed By: AP

		,	, , , , , , , , , , , , , , , , , , , ,						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1640	16.0	09/11/2013	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	·Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/11/2013	ND	193	96.4	200	1.08	
DRO >C10-C28	<10.0	10.0	09/11/2013	ND	185	92.3	200	2.55	

Surrogate: 1-Chlorooctane

66.9 %

65.2-140

Surrogate: 1-Chlorooctadecane

77.5 %

63.6-154

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 whistoever 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 liabile for incidental or consequential damages, including, without limitation, business interruptons, 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 Laboratones.

Celeg D. Keine



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

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

Cardinal Laboratories

*=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 incidental incidental incidental performance of the services hereunder by Cardinal, regardless of whether such claims 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 & Keene



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

Company Name	APACHE		BILL TO	ANALYSIS REQUEST
Project Manage	BRUCE BAKER		P.O. 4:	
Address:			Company:	
City:	State:	Zip:	Attn:	
Phone #:	Fax#:		Address:	
Project#:	Project Ov	wner:	City:	
Project Name:	Acan #7	*	State: Zip:	
Project Location	EUNICE SWA	5YSTEM	Phone #:	
Sampler Name:	EDWARD CESA	AREO	Fax #:	
FOR USE DISECULTY		MATRIX.	PRESERV SAMPLING	781
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Appendix C Excavation Laboratory Analyses



September 24, 2013

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: ARGO #7 AD

Enclosed are the results of analyses for samples received by the laboratory on 09/19/13 16:17.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accred certif.html

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celego Keena

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Received:

09/19/2013

Reported:

09/24/2013

Project Name: Project Number: ARGO #7 AD NOT GIVEN

Project Location:

NOT GIVEN

Sampling Date:

09/19/2013

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: 8 PT. BOTTOM COMP @ 6" (H302287-01)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride 22		16.0	09/23/2013	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/20/2013	ND	200	100	200	1.88	
DRO >C10-C28	17.3	10.0	09/20/2013	ND	195	97.5	200	2.24	
Surrogate: 1-Chlorooctane	108	% 65.2-14	70						

Surrogate: 1-Chlorooctane 108 % 65.2-140
Surrogate: 1-Chlorooctadecane 114 % 63.6-154

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 whistoever 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 claims 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. Keine



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

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

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keine



Bruce Biker

Company Name:

Project Manager:

Address:

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

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BERNILL TO

P.O. #:

Company:



October 17, 2013

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: ARGO #7

Enclosed are the results of analyses for samples received by the laboratory on 10/16/13 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accred certif.html.

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Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

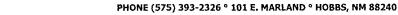
Celes D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager





APACHE - EUNICE **BRUCE BAKER** P. O. BOX 1849 **EUNICE NM, 88231**

Fax To:

394-2425

Received: Reported: 10/16/2013

10/17/2013

Project Name:

ARGO #7

Project Number: Project Location:

Analyte

NONE GIVEN

NOT GIVEN

Sampling Date:

10/16/2013

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: POINT 7 @ 1' (H302511-01)

Chloride, SM4500Cl-B

Analyzed By: AP

Result

Reporting Limit

Analyzed

Method Blank

% Recovery

True Value QC

RPD

Qualifie

16.0

10/17/2013

ND

400

100

400

3.92

Chloride

144

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 a 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 damage 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 dains 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. Keine Celey D. Keene, Lab Director/Quality Manager

Page 2 of



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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*** Insufficient time to reach temperature.

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

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Celey D. Keine

Rush

ARDINAL LABORATORIES

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

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Relinquished By: To-1/- 13	
Relinquished By: Date: By Ceived By: REMARKS: REMARKS: REMARKS: KSchnaidt@rice-ecs.com	
Relinquished By: Date: Received By: kschnaidt@rice-ecs.com	Mar. 1
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Time: Knorman@rice-ecs.com	į.
Delivered By: (Circle One) Sample Condition CHECKER BY: Kjones@riceswd.com; jkamplain@rice-ecs.com	gje.
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Sampler - UPS - Bus - Other: Cool intact hconder@rice-ecs.com; Lweinheimer@rice-ecs.com larry baker@apachecorp.com	

[†] Cardinal cannot accept verbal changes. Please fax written changes to 505-393-24



October 21, 2013

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: ARGO #7

Enclosed are the results of analyses for samples received by the laboratory on 10/16/13 16:15.

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Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Kune

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

ma/ka

Received: 10/16/2013 Reported: 10/21/2013

Project Name: ARGO #7 Project Number: NONE GIVEN

Project Location: NOT GIVEN

Chlorido SMAEGOCLE

Sampling Date:

10/16/2013

Sampling Type:

Soil Sampling Condition: Cool & Intact

Sample Received By: Jodi Henson

Sample ID: 5 PT COMP CALICHE BACKFILL (H302512-01)

• • •	Chioride, SM4500CI-B	mg	/ Kg	Anaiyze	а ву: АР					
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
	Chloride	<16.0	16.0	10/18/2013	ND	400	100	400	3.92	
•	TPH 8015M	mg	/kg	Analyze	d By: MS					
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
_	GRO C6-C10	<10.0	10.0	10/18/2013	ND	204	102	200	8.49	
	DRO >C10-C28	<10.0	10.0	10/18/2013	ND	199	99.4	200	8.56	
~	Surrogate: 1-Chlorooctane	113	% 65.2-14	0						
	Surrogate: 1-Chlorooctadecane	116	% 63.6-15	4						

Analyzed By AD

Cardinal Laboratories *=Accredited Analyte

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. Keine



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

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

Cardinal Laboratories *=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 whistoever 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 claims 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. Keine

ARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603

Company Name	: Apache						276979	ii.		RI	ll to		-			- 1	ANAL	YSIS	RE	QUE	ST	:	•	
Project Manager	Kyle Norman						1	2.0.	#:								,							
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City: Hobbs	State: NM	Zip	: 882	240		-		\ttn:	:								o						. *	
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Sampler Name:		٠					F	ax	#:				l 음	3	B1	(a)	Ü							
FOR LAB USE ONLY			П		MA.	rix		P	RES	ERV.	SAMPLI	NG	じ	H	-	jê)	9		,					
Lab I.D. H <i>3</i> 02512	Sample I.D.	(G)RAB OR (C)OM	# CONTAINERS	GROUNDWATER	SOIL	OIL	SLUDGE .	OTHER:	ACIU/BASE:	OTHER:	DATE	TIME				-	Complete							
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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.

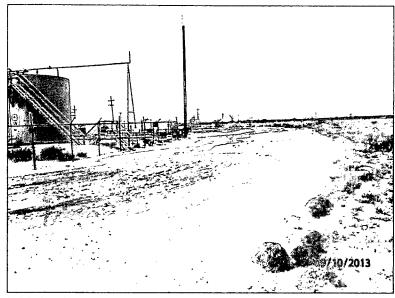
Relinquished By:	Date:	Received by:	Phone Result: U Yes 12 No Add Phone #:
	10-16-13	Ind h	Fax Result: ☐ Yes ☑ No Add'l Fax #:
111611	Time: 15	Man Denson	REMARKS:
Kyle Schnaidt			l
Relinguished By:	Date:	Received By:	kschnaidt@rice-ecs.com
			Knorman@rice-ecs.com
	Time:	•	
		Completion Outcomes DV	Kjones@riceswd.com; jkamplain@rice-ecs.com
Delivered By: (Circle One)		Sample Condition CHECKED BY:	
O		Cool Intact hitsald	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
Sampler - UPS - Bus - Other:			
		1 1 140 1 140 1 27 1	L

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



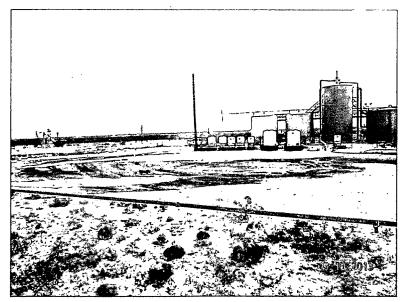
Appendix D Photo Documentation

Apache Argo #7
Unit Letter L, Section 15, T21S, R37E



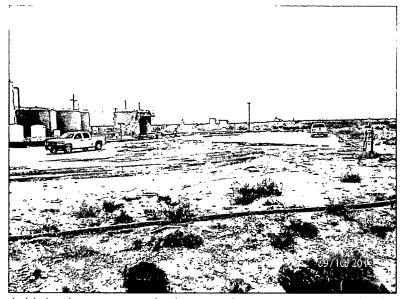
Initial release area, facing west

9/10/13



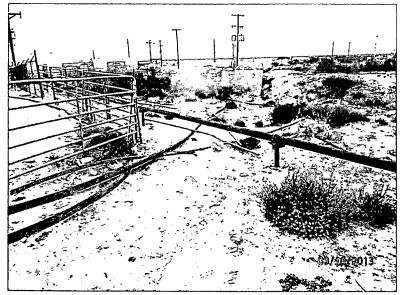
Initial release area, facing northeast

9/10/13



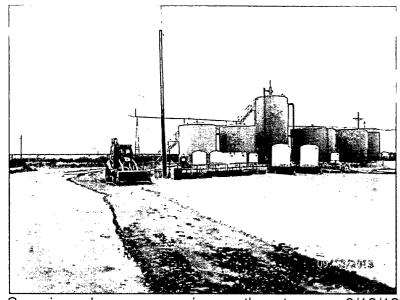
Initial release area, facing southeast

9/10/13



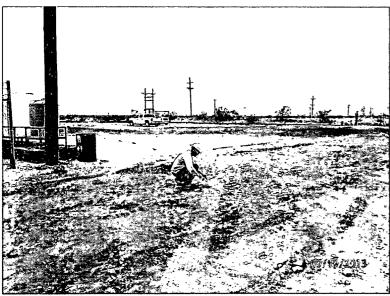
Initial release area, facing southeast

9/10/13



Scraping release area, acing southeast

9/18/13



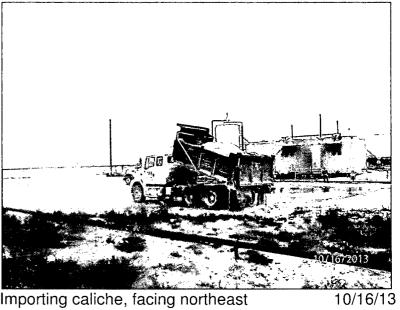
Sampling scrape, facing southwest

9/19/13

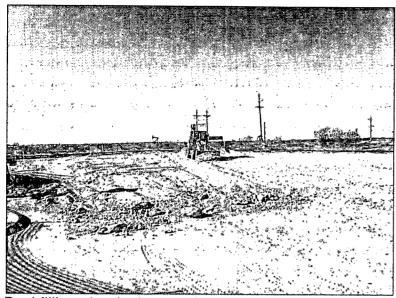


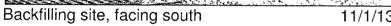
Exporting soil, facing east

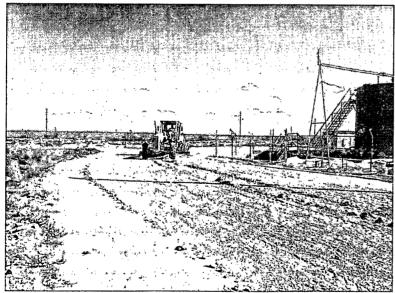
9/18/13



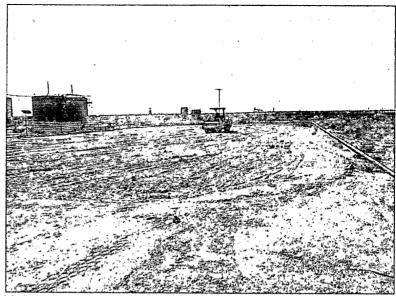
Importing caliche, facing northeast



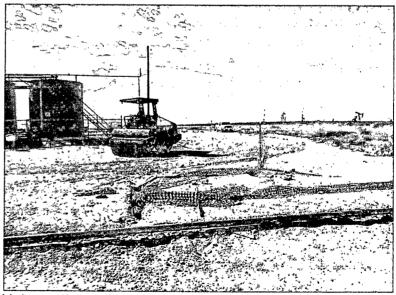




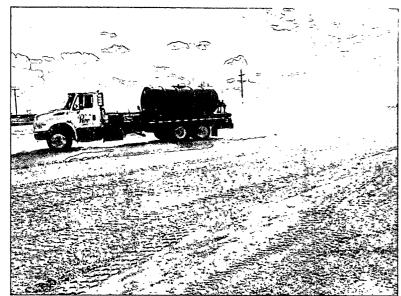
Using maintainer on road, facing east 11/4/13



Using roller to compact caliche, facing south 11/1/13

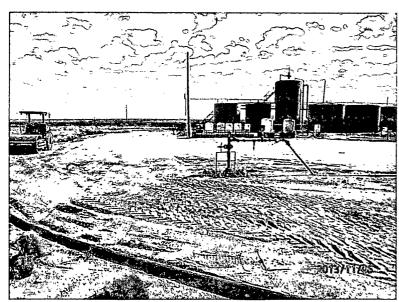


Using roller to compact road, facing west 11/4/13



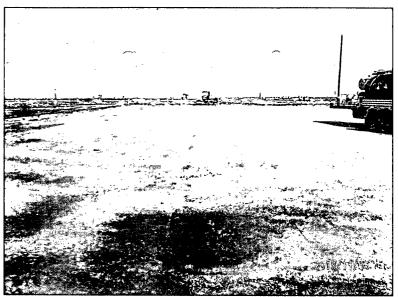
Watering location, facing southwest

11/4/13



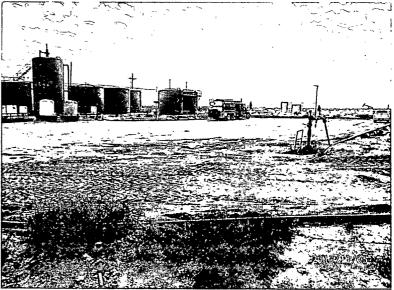
Site completed, facing east

11/5/13



Site completed, facing north

11/5/1



Site completed, facing southeast

11/5/13

Appendix E Final C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
311 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

IRP-9-13-2952

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe. NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

1220 S. St. Fran	icis Dr., Santa F	e, NM 87505		Sa	ınta F	e, NM 875	505										
			Relo	ease Notific	catio	n and Co	orrective A	ctio	n								
						OPERA'	ГOR		Initi:	al Report	\boxtimes	Final Repor					
Name of Co	mpany Apa	ache Corpo	oration		1	Contact Br	uce Baker			•		<u>.</u>					
	O Box 1849		IM 8823	31			No. (432) 631-6										
Facility Na	me Argo #7				1	Facility Type Injection Well											
Surface Ow	ner Apache			Mineral C)wner	r API No. 30-025-09915											
				LOCA	ATIO	ION OF RELEASE											
Unit Letter L	Section 1	Feet from the 2310		rth/South Line Feet from the East/West Line County FSL 990 FWL Lea													
			La	titude		Longitud	le										
				NAT	URE	OF REL	EASE										
Type of Rele							Release Unkno			Recovered							
Source of Re	lease Injectio	n Well				Date and H	lour of Occurrent	ce	Date and 1 0800 hrs	Hour of Dis	covery	9/10/13					
Was Immedia	ate Notice Giv		Yes 🗌	No Not Re	equired	If YES, To Whom? Geoff Leking, NMOCD											
By Whom?							lour 9/10/13 11										
Was a Water	course Reache		Yes 🛚	No		If YES, Vo	lume Impacting t	the Wat	tercourse.								
If a Watercou	rse was Impac	cted, Descri	e Fully.*	•					DT	w=53	3						
				Taken.* The buck. The site has b					ened the valv	e. A total o	f 70 bb	ols of					
throughout th laboratory for Organics (DR excavated soi to a commerc mg/kg. A req 497 mg/kg, no sample from t 252 yards of s analysis and re	e surface of the analysis. Chl analysis. Chl (O) readings well was sent to a ial laboratory west to backfill beded to be ser he bottom of tool was impor- eturned a chlo-	e release wo loride value: vere either n NMOCD a for analysis. Il the site wa raped down he Pt. 7 sera ted to the si ride, GRO a	ere field to s at all seven on-detect pproved for the con- as sent to to 1 ft bgrape was to te to serve and DRO	en.* RECS persested for chloride ven points were el or below regulate acility for disposanosite returned a NMOCD on Septs and then Apachaken to a commercas backfill. A 5 result of non-dete	s and or levated ory stan al. An chloric ember c had p cial lab point c cct. The	rganics vapors, Gasoline Rar dards. The sir 8 point bottom de value of 22: 25 th , 2013. No ermission to be composite same e site was back	using a PID metage Organics (GR to was scraped do composite samp 4 mg/kg, a GRO MOCD responder ackfill the site. Palysis of chloride ple of this backfilled, watered do	er. The O) read own six ole was value o d that P t. 7 wa s and re ll was to	samples we dings were n inches and a taken from t f non-detect t. 7, which h s scraped do eturned a res aken to a co d roller pack	ore then take on-detect and a total of 20 he base of the and a DRO and a field of what another ult of 144 minumercial laced.	en to a cond Dies 4 yards he scrap value hloride 6 inche ng/kg.	commercial sel Range s of pe and sent of 17.3 reading of es and a A total of ry for					
regulations all public health o should their o or the environ	operators are or the environ perations have	required to ment. The a failed to addition, NMOC	report and acceptance lequately D accept	is true and compl d/or file certain re e of a C-141 repo investigate and re ance of a C-141 r	elease not by the content of the con	otifications ar e NMOCD ma e contamination	d perform correct trked as "Final Room that pose a three	tive act eport" c cat to g	tions for rele loes not relic round water	ases which eve the oper , surface wa	may en ator of ter, hu	ndanger Hiability man health					
Signature: Bruce Baker OIL CONSERVATION DIVISION Approved by Environmental Specialist Environmental Specialist												ď					
	nmental Techr					Approval Date	: 2112114		Expiration I								
	s: larry.bakei		огр.сот			Conditions of Approval: Attached											

Phone: (432) 631-6982