District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 <u>District III</u> 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

61

Form C-141 Revised August 8, 2011

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

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

	· · · · · · · · · · · · · · · · · · ·					e, INIM 8/2						
			Rele	ease Notific	eatio	n and Co	orrective A	ction	1			
						OPERA	FOR		🔲 Initi	al Report	\boxtimes	Final Report
		pache Corpo					Larry Bruce Ba					
		9, Eunice, N		l			No. (432) 631-6	5982				
Facility Nai	ne NEDU	J Satellite #4				Facility Typ	be Satellite					
Surface Ow	ner Apac	he Corporat	ion	Mineral C)wner				API No	. 3002509	916	
						N OF RE	FASE					
Unit Letter	Section	Township	Range	Feet from the		/South Line	Feet from the	East/	West Line	County		
				1050		601						
<u>L</u>	15	21S	37E	1858	I	FSL	1233	ļ	FWL	Lea		
			La	titude		Longitud	le					
				NAT	URE	OF REL	EASE					
Type of Rele							Release 85 bbls			Recovered 7		
Source of Re	lease Oil ta	ank ran over					Iour of Occurrent	ce		Hour of Dis	covery	6/15/13
Was Immedi	ate Notice (Given?	<u> </u>			Unknown If YES, To	Whom?		5:28 pm			
ii us innitedi			Yes 🛛	No 🗌 Not Re	equired		Whom:					,
By Whom?						Date and H	lour					
Was a Water	course Read			-		If YES, Vo	olume Impacting	the Wat	ercourse.			
			Yes 🛛	No								
If a Waterco	urse was Im	pacted, Descr	ibe Fully.*	*				DI	W=	42'		
Describe Ca	ise of Probl	em and Reme	dial Action	n Taken *				10 Y	<u> </u>	12		
The oil tank	at the site ra		he comm.	system failed. A	total of	f 85 barrels of	oil was released	and a to	otal of 70 bl	ols of oil was	s recove	ered. The
were on site then taken to The release a composite sa DRO reading throughout th 7 th , 2013, RE install the cla October 8 th , 2 test showed a ground surfa I hereby cert regulations a public health should their or the enviro	to begin ini- a commerce rea was ser mple of the greturned a he release in CS personn by barrier an 2013, Pettig a Dry Densi ce. A samp fify that the II operators or the envi- operations h nment. In a	tial sampling. ial laboratory aped down 1 - excavation w result of 290 in the lease pad nel were on sit ind backfill the grew & Associ ty % Max of 9 <u>ele of the calic</u> information gi are required t ronment. The nave failed to a	Surface sa for analys - 1.5 feet a as taken to mg/kg. Ba and then a e to begin site. At th ates were 07.1% at S he was tak ven above o report ar acceptanc adequately OCD accep	ten.* A total of 2 amples were taken is. The results of and a total of 105 b a commercial lab ased on an Apach backfill the site w the liner installat he base of the exc on site to conduct G 1 and 95.6% at ten to a commercial is true and comp nd/or file certain r ce of a C-141 report path of a C-141	n through this tes yards of boratory e meetin ith clea ion. A to avation a clay of SG-2. al labor dete to to release r ort by the emediation	ghout the site ting showed of f excavated so y for analysis. ng with NMO n, imported co total of 48 yan a 6 inch clay compaction to Caliche was ratory for anal the best of my notifications a ne NMOCD m te contaminat	and field tested for the levels be bil was taken to a Laboratory GRC CD – District 1, a aliche to bring the ds of clay and 84 barrier was instal est at two points of then backfilled ov ysis and returned knowledge and to nd perform correct arked as "Final F ion that pose a the	or chlori low 250 NMOC D readin a decisic e excava yards o lled thro over the over the c a chlor andersta ctive acc Report or reat to g	ides and hy mg/kg and D approved on vas mad ation back t of clean cali oughout the clay barrier clay barrier clay barrier tide result o and that pur tions for rel does not rel ground wate	drocarbons. I elevated hy I facility for a result of no e to install a o ground sur che was imp release area c. The result to bring the f 32 mg/kg. suant to NM eases which ieve the ope r, surface was	The sa drocard disposa on-dete 6 inch face. C borted t in the t s of the excavat OCD r may er rator of ater, hu	mples were bon levels. al. A bottom ct and the clay barrier on October o site to facility. On e compaction tion up to ules and ndanger flability man health
Signature:	0	Bruce	Bah	er		Approved by	Environmental S	Envi	fonment:	al Special	₩V. ist	б
Printed Nam	e: Larry B	ruce Baker	<u> </u>							<u></u>	<u>_</u>	
Title: Enviro	onmental Te	ech				Approval Da	te: 10131113		Expiration	Date:		
E-mail Addr	ess: larry.b	aker@apached	corp.com			Conditions o	f Approval:			Attached		
Data	10-3	1-13	D1	(422) 621 6082						IRD 0	· L. -15-	7950
Date: Attach Addi		ets If Necess		: (432) 631-6982	1					001	<u>ر ر</u>	2-100
		0.0 11 1400033	ury					25. 18	JUN 1	Attached IRP-9 0 2014	r	

נבק **EXPLORING WHAT'S POSSIBLE**

APACHE CORPORATION

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

NEDU Satellite #4 (1RP-9-13-2950)

Termination Request

approved Environmental Specialist NMOCD - DIST 10/31/13

API No. 3002509916

Release Date: June 15th, 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

October 17th, 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 – NEDU Satellite #4 (1RP-9-13-2950) UL/L sec. 15 T21S R37E API No. 3002509916

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 2.5 miles north of Eunice, New Mexico at UL/L sec. 15 T21S R37E. NMOCD – District 1 records indicate that groundwater will likely be encountered at a depth of approximately 43 +/- feet.

On June 15th, 2013, Apache discovered that when the communication system failed at the NEDU Satellite #4, an oil tank ran over releasing 85 barrels of oil. 70 barrels of oil was recovered. The transfer pumps were run to get the levels down at the site. A total of 2,606 sq ft of facility pad and pasture was affected. An initial C-141 was submitted to NMOCD on September 9th, 2013 (Appendix A).

On June 17th, 2013, RECS personnel were on site to begin initial sampling. Surface samples were taken throughout the site and field tested for chlorides and hydrocarbons (Figure 1). The samples were then taken to a commercial laboratory for analysis. The results of this testing showed chloride levels below 250 mg/kg and elevated hydrocarbon levels (Appendix B). The release area was scraped down 1 - 1.5 feet and a total of 105 yards of excavated soil was taken to a NMOCD approved facility for disposal. A bottom composite sample of the excavation was taken to a commercial laboratory for analysis (Figure 2). Laboratory GRO reading returned a result of non-detect and the DRO reading returned a result of 290 mg/kg (Appendix C).

Based on an Apache meeting with NMOCD – District 1, a decision was made to install a 6 inch clay barrier throughout the release in the lease pad and then backfill the site with clean, imported caliche to bring the excavation back to ground surface. The clay barrier would serve as an infiltration barrier for the site that will inhibit the downward migration of residual constituents in the vadose zone to groundwater.

On October 7th, 2013, RECS personnel were on site to begin the liner installation. A total of 48 yards of clay and 84 yards of clean caliche was imported to site to install the clay barrier and backfill the site. At the base of the excavation a 6 inch clay barrier was installed throughout the release area in the facility (Figure 2). On October 8th, 2013, Pettigrew & Associates were on site to conduct a clay compaction test at two points over the clay barrier. The results of the compaction test showed a Dry Density % Max of 97.1% at SG 1 and 95.6% at SG-2. Caliche was then backfilled over the clay barrier to bring the excavation up to ground surface. A sample of the caliche was taken to a commercial laboratory for analysis and returned a chloride result of 32 mg/kg. The clay compaction test results and the imported caliche laboratory can be found in Appendix D.

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

Given that the majority of contaminated soil was removed from the site and a clay barrier was install at the site to prevent the migration of residual contaminates to groundwater, RECS on behalf of Apache respectfully requests 'remediation termination' or similar site closure for this site. A final C-141 can be found in Appendix F.

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,

AC.W~

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 Sampling Lab
Appendix C – 5 Point Bottom Composite Lab
Appendix D – Clay Compaction Test and Imported Caliche Lab
Appendix E – Photo Documentation
Appendix F – Final C-141



Figures

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

Initial Sampling Data







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

HOBBS	OCD	Sta
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ate of New Mexico 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 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

1625 N. French Dr., Hobbs, NM 88240

<u>District I</u>

SEP 0 9 2013 Oil Conservation Division 1220 South St. Francis Dr.

RECEIVED Santa Fe, NM 87505

Release Notification and Corrective Action

	OPERATOR	Initial Report	Final Report
Name of Company Apache Corporation	Contact Larry Bruce Baker		
Address PO Box 1849, Eunice, NM 88231	Telephone No. (432) 631-6982		
Facility Name NEDU Satellite #4 UNAREST MAL MOU 701	Facility Type Satellite		

Surface Owner Apache Corporation

Type of Release Oil tank

Source of Release Oil tank ran over

Mineral Owner

API No. 3002509916

Submit 1 Copy to appropriate District Office in

accordance with 19,15.29 NMAC.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	15	21S	37E	1858	FSL	1233	FWL	Lea

Longitude Latitude

NATURE	OF RELEASE	SEDIW	
	Volume of Release 85 bbls		Volume Recovered 70 bbls
	Date and Hour of Occurrence		Date and Hour of Discovery 6/15/13

		Unknown	5:28 pm
Was Immediate Notice Given?		If YES, To Whom?	
	Yes No Not Required		
By Whom?		Date and Hour	
Was a Watercourse Reached?		If YES, Volume Impacting the Wat	ercourse.
	🗌 Yes 🖾 No		

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The oil tank at the site ran over when the comm. system failed. A total of 85 barrels of oil was released and a total of 70 bbls of oil was recovered. The transfer pumps were run to get the levels down at the site.

Describe Area Affected and Cleanup Action Taken.*

A total of 2,606 sq ft of facility pad and pasture was affected. The release was sampled and then scraped down 1 ft by hand. Composite samples were taken to a commercial laboratory for analysis. The site will be assessed for further action.

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: Larry Bruce Backer	OIL CONSER	XATION I KUSPAN NVIFORMAN	DIVISION JERWY tal Specialist		
Title: Environmental Tech	Approval Date: 6/15/13 Expiration Date: 8/15/13				
E-mail-Address:-larry.baker@apachecorp.com Date: 8-28-13 Phone: (432) 631-6982	Conditions of Approval: SVBMR L-141 BY 8/15/13		Attached [] 1RP-9-13-2950		

* Attach Additional Sheets If Necessary



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



WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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Steven Fleming Apache Corp.-Midland 303 Veterans Airpark Lane Suite #3000 Midland, TX, 79705

Report Date: July 2, 2013

Work Order: 13062108

Project Location: Apache NEDU Sat. #4 AD, NM Project Number: Apache NEDU Sat. #4 AD

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
332871	PT 1 Surface	soil	2013-06-17	10:00	2013-06-21
332872	PT 2 Surface	soil	2013-06-17	10:05	2013-06-21
332873	PT 3 Surface	soil	2013-06-17	10.10	2013-06-21
332874	PT 4 Surface	soil	2013-06-17	10:15	2013-06-21

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 16 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director Dr. Michael Abel, Project Manager

Report Contents

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Case Narrative	3
Analytical ReportSample 332871 (PT 1 Surface)Sample 332872 (PT 2 Surface)Sample 332873 (PT 3 Surface)Sample 332874 (PT 4 Surface)	4 4 5 6 7
Method Blanks QC Batch 102572 - Method Blank (1)	9 9 9 9
QC Batch 102572 - LCS (1)	10 10 11 11 11 12
QC Batch 102572 - CCV (1)	13 13 13 13 13 13 14
Report Definitions Laboratory Certifications Standard Flags	15 15 15 15 15

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Case Narrative

Samples for project were received by TraceAnalysis, Inc. on 2013-06-21 and assigned to work order 13062108. Samples for work order 13062108 were received intact at a temperature of 5.5 C.

Samples were analyzed for the following tests using their respective methods.

		Prep	Prep	$\rm QC$	Analysis
Test	Method	Batch	Date	Batch	Date
Chloride (Titration)	SM 4500-Cl B	87058	2013-07-02 at 08:30	102767	2013-07-02 at 11:00
TPH DRO - NEW	S 8015 D	86903	2013-06-25 at $11:45$	102589	2013-06-25 at $12:09$
TPH GRO	S 8015 D	86891	2013-06-24 at $09:48$	102572	2013-06-24 at $09:48$

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 13062108 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

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Analytical Report

Sample: 332871 - PT 1 Surface

Laboratory: Analysis: QC Batch: Prep Batch:	Lubbock Chloride (Titration) 102767 87058	Date A	ical Method: analyzed: e Preparation:	SM 4500-Cl B 2013-07-02 2013-07-02	Prep Method: Analyzed By: Prepared By:	GS
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			59.0	mg/Kg	1	5.00

•

Sample: 332871 - PT 1 Surface

Laboratory: Analysis: QC Batch: Prep Batch:	Lubbock TPH DR 102589 86903		W	Date	lytical Metho e Analyzed: ple Preparatio	2013-0	6-25	Prep Me Analyze Prepare	d By: DS
Parameter			Flag	Cert	Resu		Units	Dilution	RL
DRO				1	462	20	mg/Kg	20	50.0
Surrogate		Flag	Cert	. Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		312	mg/Kg	20	100	312	35.2 - 240

Sample: 332871 - PT 1 Surface

Analysis: QC Batch:	Lubbock TPH GRO 102572 86891		Γ	Date Ana	al Method alyzed: Preparatio	2013-0	6-24		Prep Metho Analyzed E Prepared B	By: MT
						RL				
Parameter		Flag		Cert	l	Result	Uni	ts	Dilution	RL
GRO		Qs		1		1710	mg/k	g	20	4.00
Surrogate			Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluer	ne (TFT)	Qsr	Qsr		0.752	mg/Kg	20	2.00	38	69.6 - 124
							cont	inued		

Report Date: July 2, 2013	Work Order: 13062108	Page Number: 5 of 16
Apache NEDU Sat. #4 AD		Apache NEDU Sat. #4 AD, NM

sample continued ...

sumple continued							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		35.7	mg/Kg	20	2.00	1785	77.7 - 120

Sample: 332872 - PT 2 Surface

Laboratory: Analysis: QC Batch: Prep Batch:	Analysis: Chloride (Titration)		al Method: alyzed: Preparation:	SM 4500-Cl B 2013-07-02 2013-07-02	Prep Method: Analyzed By: Prepared By:	
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	··· ··· ·· ·· · · · · · · · · · · · ·		49.0	mg/Kg	1	5.00

Sample: 332872 - PT 2 Surface

Laboratory: Analysis: QC Batch: Prep Batch:	: TPH DRO - NEW h: 102589			Date	lytical Metho e Analyzed: ple Preparat	2013-0	06-25	Prep Me Analyze Preparec	0
Parameter			Flag	Cert	Res	RL	Units	Dilution	\mathbf{RL}
DRO			1 100	1	146		mg/Kg	20	50.0
Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		545	$\mathrm{mg/Kg}$	20	100	545	35.2 - 240

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Sample: 332872 - PT 2 Surface

Laboratory: Analysis: QC Batch: Prep Batch:	Lubbock TPH GRO 102572 86891		Analytical M Date Analyz Sample Prep	ed: 2013-06	-24	Prep Method: Analyzed By: Prepared By:	MT
				RL			
Parameter		Flag	Cert	\mathbf{Result}	Units	Dilution	RL
GRO		Qs	1	4390	mg/Kg	100	4.00

Report Date: July 2, 2013	Work Order: 13062108	Page Number: 6 of 16
Apache NEDU Sat. #4 AD		Apache NEDU Sat. #4 AD, NM

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		2.91	mg/Kg	100	2.00	146	69.6 - 124
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		162	mg/Kg	100	2.00	8100	77.7 - 120

Sample: 332873 - PT 3 Surface

Analysis: C QC Batch: 10	ubbock Thloride (Titration) 02767 7058	Date An	al ⁻ Method: alyzed: Preparation: RL	SM 4500-Cl B 2013-07-02 2013-07-02	Prep Method: Analyzed By: Prepared By:	GS
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			34.0	mg/Kg	1	5.00

Sample: 332873 - PT 3 Surface

Laboratory: Analysis: QC Batch: Prep Batch:	Lubbock TPH DF 102589 86903		W	Date	lytical Metho e Analyzed: ple Preparatio	2013-0	6-25	Prep Me Analyze Preparee	d By: DS
					R	L			
Parameter			Flag	Cert	Resu	lt	Units	Dilution	RL
DRO				1	3060	00	mg/Kg	40	50.0
Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	0010	1020	mg/Kg	40	100	1020	35.2 - 240

Sample: 332873 - PT 3 Surface

Analysis: QC Batch:	Lubbock TPH GRO 102572 86891		Analytical M Date Analyz Sample Prep	ed: 2013-06	-24	Prep Method: Analyzed By: Prepared By:	\mathbf{MT}
				\mathbf{RL}			
Parameter		Flag	Cert	Result	Units	Dilution	RL
GRO		Qs	1	5850	mg/Kg	50	4.00

Report I	ate: July 2, 2013	
Apache I	NEDU Sat. #4 AD	

Work Order: 13062108

Page Number: 7 of 16 Apache NEDU Sat. #4 AD, NM

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		0.643	mg/Kg	50	2.00	32	69.6 - 124
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		132	mg/Kg	50	2.00	6600	77.7 - 120

Sample: 332874 - PT 4 Surface

Laboratory: Analysis: QC Batch: Prep Batch:	Lubbock Chloride (Titration) 102767 87058	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-07-02 2013-07-02	Prep Method: Analyzed By: Prepared By:	,
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride	· · · · · · · · · · · · · · · · · · ·		44.0	mg/Kg	1	5.00

Sample: 332874 - PT 4 Surface

Laboratory: Analysis: QC Batch: Prep Batch:	Lubbock TPH DF 102589 86903		W	Date	lytical Metho e Analyzed: ple Preparat	2013-0)6-25	Prep Me Analyze Prepared	d By: DS
]	RL			
Parameter			Flag	Cert	Res	ult	Units	Dilution	\mathbf{RL}
DRO				1	130	00	mg/Kg	20	50.0
Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		551	mg/Kg	20	100	551	35.2 - 240

Sample: 332874 - PT 4 Surface

Parameter		Flag	Cert	RL Result 1330	Units mg/Kg	Dilution 20	RL 4.00
QC Batch: Prep Batch:	102572		Date Analyz Sample Prep	ed: 2013-00 paration: 2013-00	5-24	Analyzed By:	MT MT
Laboratory: Analysis:	Lubbock TPH GRO		Analytical M	fethod: S 8015	D	Prep Method:	S 503

Report Date: July 2, 2013 Apache NEDU Sat. #4 AD			Work (Order: 130	062108		Apache	-	ber: 8 of 16 #4 AD, NM
Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	Qsr	Qur		$1.55 \\ 51.7$	mg/Kg mg/Kg	20 20	$2.00 \\ 2.00$	78 2585	69.6 - 124 77.7 - 120

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Method Blanks

Method Blank (1)	QC Batch: 102572							
QC Batch: 102572 Prep Batch: 86891	1		nalyzed: eparation:	2013-06-2 2013-06-2			Analyzec Preparec	
					MDL			
Parameter	Flag		Cert		Result		Units	RL
GRO			1		< 0.230		mg/Kg	4
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.06	mg/Kg	1	2.00	103	69.6 - 124
4-Bromofluorobenzene (4-E	BFB)		2.14	mg/Kg	1	2.00	107	77.7 - 120

Method Blank (1) QC Batch: 102589

QC Batch: Prep Batch:	$102589 \\ 86903$				Analyzed: reparation:	2013-06-25 2013-06-25		0	red By: DS red By: DS
]	MDL		
Parameter			Fla	ag	Cert	R	esult	Units	RL
DRO					1	<	<15.3	mg/Kg	50
			a .	D L	T T 1 .		Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane				98.8	mg/Kg	1	100	99	35.2 - 240

Method Blank (1) QC Batch: 102767

	-		0 0	
		MDL		
Flag	Cert	Result	Units	RL
		<3.05	mg/Kg	5
		QC Preparation:	QC Preparation: 2013-07-02 MDL Flag Cert Result	QC Preparation: 2013-07-02 Prepared By: MDL Flag Cert Result Units

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 102572 Prep Batch: 86891			Analyzec Preparatic		13-06-24 13-06-24				yzed By ared By	
]	LCS			Spike	Ma	trix		Rec.
Param	F		esult	Units	Dil.	Amount		sult Re	c.	Limit
GRO		1	17.6	mg/Kg	1	20.0	<0	.230 88	3 66	.9 - 120
Percent recovery is based on the spi	ke rest	ılt. RPD	is based o	on the s	pike and	spike dupli	cate res	sult.		
		LCSD			Spike	Matrix		Rec.		RPD
Param	F C	Result	Units	Dil.	Amount		Rec.	Limit	RPD	Limit
GRO	1	17.9	mg/Kg	1	20.0	< 0.230	90	66.9 - 120	2	20
Percent recovery is based on the spi	ke res	ılt. RPD	is based o	on the s	pike and	spike dupli	cate res	sult.		
		\mathbf{LC}	S LCS	SD		Spi	ke	LCS LCS	SD	Rec.
Surrogate		Rest	ilt Resi	ult I	Units	Dil. Amo		Rec. Re	с.	Limit
Trifluorotoluene (TFT)		1.7			ıg/Kg	1 2.0		86 10		.6 - 124
4-Bromofluorobenzene (4-BFB)		2.2	6 2.2	5 n	ıg/Kg	1 2.0	0	113 11	2 77	.7 - 120
Laboratory Control Spike (LCS QC Batch: 102589	-1)									
Prep Batch: 86903			e Analyze Preparati)13-06-25)13-06-25				lyzed B pared By	
		$\rm QC$	Preparati			Spike	Mε	Prej		
	F	QC				Spike Amount			pared B	y: DS
Prep Batch: 86903	F	QC C R	Preparati LCS tesult	on: 20	Dil.	-	Re	Prej	pared By	y: DS Rec.
Prep Batch: 86903 Param		QC C R	Preparati LCS tesult 228	on: 20 Units mg/Kg	Dil.	Amount 250	Re <1	Prep atrix sult Re 15.3 91	pared By	v: DS Rec. Limit
Prep Batch: 86903 Param DRO		QC C R 1 ılt. RPD	Preparati LCS tesult 228	on: 20 Units mg/Kg	Dil. Dil. 1 Spike and	Amount 250 spike dupli	Re <1	Prep atrix sult Re 15.3 91 sult.	pared By	7: DS Rec. Limit .8 - 138
Prep Batch: 86903 Param DRO Percent recovery is based on the spi		QC C R	Preparati LCS tesult 228	on: 20 Units mg/Kg	Dil.	Amount 250 spike dupli Matrix	Re <1	Prep atrix sult Re 15.3 91	pared By	v: DS Rec. Limit
Prep Batch: 86903 Param DRO Percent recovery is based on the spi	ke res	QC C R 1 1lt. RPD LCSD	Preparati LCS cesult 228 is based o	on: 20 Units mg/Kg on the s	Dil. Dil. 1 spike and Spike	Amount 250 spike dupli Matrix	Re <2 cate res	Prej atrix sult Re 15.3 91 sult. Rec.	c. 64	7: DS Rec. Limit .8 - 138 RPD
Prep Batch: 86903 Param DRO Percent recovery is based on the spi Param	ke rest $\overline{F} = \frac{C}{1}$	QC C R 1 ult. RPD LCSD Result 232	Preparati LCS tesult 228 is based o Units mg/Kg	on: 20 Units mg/Kg on the : Dil. 1	Dil3-06-25 Dil. 1 spike and Spike Amount 250	Amount 250 spike dupli Matrix Result <15.3	Re cate res Rec. 93	Prej atrix sult Re 15.3 9 sult. Rec. Limit 64.8 - 138	c. RPD	y: DS Rec. Limit .8 - 138 RPD Limit
Prep Batch: 86903 Param DRO Percent recovery is based on the spin PARAM DRO Percent recovery is based on the spin	ke rest $\overline{F} = \frac{C}{1}$	QC C R 1 ult. RPD LCSD Result 232	Preparati LCS cesult 228 is based o Units mg/Kg is based o	on: 20 Units mg/Kg on the : Dil. 1	Dil3-06-25 Dil. 1 spike and Spike Amount 250	Amount 250 spike dupli Matrix Result <15.3 spike dupli	Re cate res Rec. 93	Prej atrix sult Re 15.3 9 sult. Rec. Limit 64.8 - 138 sult.	c. 64 RPD 2	y: DS Rec. Limit .8 - 138 RPD Limit
Prep Batch: 86903 Param DRO Percent recovery is based on the spin PARAM PARAM Param PRO Percent recovery is based on the spin	ke rest	QC C R 1 1 LCSD Result 232 1 1 L. RPD	Preparati LCS Cesult 228 is based o Units mg/Kg is based o	on: 20 Units mg/Kg on the : Dil. 1	Dil3-06-25 Dil. 1 spike and Spike Amount 250	Amount 250 spike dupli Matrix Result <15.3	Rec. Rec. 93 cate res	Prej atrix sult Re 15.3 9 sult. Rec. Limit 64.8 - 138 sult. Sult.	c. 64 RPD 2	y: DS Rec. Limit .8 - 138 RPD Limit 20

Report Date: July 2, 2013 Apache NEDU Sat. #4 AD		Work Order: 13062108						Page Number: 11 of 1 Apache NEDU Sat. #4 AD, NN				
Laboratory Control Spike (LC	CS-1)										
QC Batch: 102767 Prep Batch: 87058				e Analy: Prepara)13-07-02)13-07-02					vzed By ured By	
Param		F	C	LCS Result	Units	Dil.		pike nount	Matrix Result	Re		Rec. Limit
Chloride				101	mg/Kg	g1]	.00	<3.05	10	1 8	85 - 115
Percent recovery is based on the s	pike	resul	t. RPD	is based	l on the s	spike and	spike d	uplicate	result.			
			LCSD			Spike	Ma	trix	F	lec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Unit	s Dil.	Amount	t Res	ult R	ec. L	imit	RPD	Limit
Chloride			102	mg/k	Kg 1	100	<3	.05 1	02 85	- 115	1	20
	-		t. RPD 332872	is based	l on the s	pike and	spike d	uplicate	result.			
Matrix Spike (MS-1) Spiked QC Batch: 102572	-		332872 Date	is basec Analyz Prepara	zed: 20	pike and 13-06-24 13-06-24	spike d	uplicate	result.		zed By red By	
Matrix Spike (MS-1) Spiked QC Batch: 102572 Prep Batch: 86891	-	nple:	332872 Date QC I	: Analyz Prepara MS	ed: 20 tion: 20	13-06-24 13-06-24	Spi	ke I	Matrix	Prepa	red By	: MT Rec.
Matrix Spike (MS-1) Spiked QC Batch: 102572 Prep Batch: 86891 Param	l Saı	nple: F	332872 Date QC 1 C F	Analyz Prepara MS Result	ed: 20 tion: 20 Units	13-06-24 13-06-24 Dil.	Spi Amo	ke I unt	Matrix Result	Prepa Rec.	red By	: MT Rec. Limit
Matrix Spike (MS-1) Spiked QC Batch: 102572 Prep Batch: 86891 Param GRO 9	l Saı	nple: F	332872 Date QC I C F	Analyz Prepara MS Cesult 3920	ed: 20 tion: 20 <u>Units</u> mg/Kg	13-06-24 13-06-24 Dil. 100	Spi Amo 20.	ke I unt I 0	Matrix Result 4390	Prepa	red By	MT Rec.
Matrix Spike (MS-1) Spiked QC Batch: 102572 Prep Batch: 86891 Param GRO 9	l Saı	nple: F	332872 Date QC I C F	Analyz Prepara MS Cesult 3920	ed: 20 tion: 20 <u>Units</u> mg/Kg	13-06-24 13-06-24 Dil. 100	Spi Amo 20.	ke I unt I 0	Matrix Result 4390	Prepa Rec.	red By	: MT Rec. Limit
Matrix Spike (MS-1) Spiked QC Batch: 102572 Prep Batch: 86891 Param GRO Q Percent recovery is based on the s	l Saı ₂s pike	nple: F _{Qs} resul	332872 Date QC $C = F$ $\frac{1}{1}$ t. RPD MSD	Analyz Prepara MS Cesult 3920 is basec	ed: 20 tion: 20 <u>Units</u> <u>mg/Kg</u> d on the s	13-06-24 13-06-24 Dil. 100 pike and Spike	Spi Amo 20. spike d Matr	ke I unt 1 0 uplicate ix	Matrix Result 4390 result. F	Prepar Rec. -2350	red By	: MT Rec. Limit .8 - 120 RPD
Matrix Spike (MS-1) Spiked QC Batch: 102572 Prep Batch: 86891 Param GRO Q Percent recovery is based on the s Param	l Saı	nple: F	332872 Date QC $C = F$ 1 t. RPD MSD Result	Analyz Prepara MS Cesult 3920 is basec Units	ed: 20 tion: 20 <u>Units</u> <u>mg/Kg</u> l on the s	13-06-24 13-06-24 Dil. 100 ppike and Spike Amount	Spi Amo 20. spike d Matr Resu	ke I unt 1 0 uplicate ix It Rea	Matrix Result 4390 result. F c. Li	Prepar Rec. -2350 tec. mit	red By	: MT Rec. Limit .8 - 120 RPD Limit
Matrix Spike (MS-1) Spiked QC Batch: 102572 Prep Batch: 86891 Param GRO Q Percent recovery is based on the s Param GRO Qs	l Saı ¹⁸ pike F Qs	F Qs resul 1	332872 $Date QC$ $C = F$ 1 t. RPD MSD $Result$ 3890	Analyz Prepara MS Result 3920 is basec Units mg/K	ed: 20 tion: 20 <u>Units</u> mg/Kg I on the s <u>s Dil.</u> g 100	13-06-24 13-06-24 Dil. 100 pike and Spike Amount 20.0	Spi Amo 20. spike d Matr Resu 4390	ke I unt 2 uplicate ix It Rec 0 -250	Matrix Result 4390 result. c. Li 00 38.8	Prepar Rec. -2350	red By	: MT Rec. Limit .8 - 120 RPD
Matrix Spike (MS-1) Spiked QC Batch: 102572 Prep Batch: 86891 Param GRO Q Percent recovery is based on the s Param GRO Qs	l Saı ¹⁸ pike F Qs	F Qs resul 1	332872 $Date QC$ $C = F$ 1 t. RPD MSD $Result$ 3890	Analyz Prepara MS Result 3920 is basec Units mg/K	ed: 20 tion: 20 <u>Units</u> mg/Kg I on the s <u>s Dil.</u> g 100	13-06-24 13-06-24 Dil. 100 pike and Spike Amount 20.0	Spi Amo 20. spike d Matr Resu 4390	ke I unt 2 uplicate ix It Rec 0 -250	Matrix Result 4390 result. c. Li 00 38.8	Prepar Rec. -2350 tec. mit	red By	: MT Rec. Limit .8 - 120 RPD Limit
Matrix Spike (MS-1) Spiked QC Batch: 102572 Prep Batch: 86891 Param GRO Q Percent recovery is based on the s Param GRO Q Percent recovery is based on the s	l Saı ¹⁸ pike F Qs	F Qs resul 1	332872 Date QC t. RPD MSD Result 3890 It. RPD	Analyz Prepara MS Cesult 3920 is basec Units mg/K is basec MS	$\frac{\text{Units}}{\text{mg/Kg}}$ $\frac{\text{Units}}{\text{mg/Kg}}$ $\frac{\text{d on the s}}{\text{g} - 100}$ $\frac{\text{d on the s}}{\text{MSD}}$	13-06-24 13-06-24 Dil. 100 ppike and Spike Amount 20.0 spike and	Spi Amo 20. spike d Matr Resu 4390 spike d	ke I unt 2 uplicate ix lt Rea 0 -250 uplicate Spike	Matrix Result 4390 result. c. Li 00 38.8 result. MS	Prepar Rec. -2350 dec. mit - 120 MSI	RPD 1	Rec. Limit .8 - 120 RPD Limit 20 Rec.
Matrix Spike (MS-1) Spiked QC Batch: 102572 Prep Batch: 86891 Param Q GRO Q Percent recovery is based on the s Param Q GRO Q Percent recovery is based on the s Surrogate Surrogate	l Saı ¹⁸ pike F Qs	F Qs resul 1	332872 Date QC t. RPD MSD Result 3890 It. RPD	Analyz Prepara MS Result 3920 is basec Units mg/K is basec MS esult	ed: 20 tion: 20 <u>Units</u> mg/Kg d on the s <u>s Dil.</u> <u>g 100</u> d on the s MSD Result	13-06-24 13-06-24 Dil. 100 pike and Spike Amount 20.0 spike and units	Spi Amo 20. spike d Matr Resu 4390 spike d Dil.	ke I unt 2 uplicate ix lt Rea 0 -250 uplicate Spike Amoun	Matrix Result 4390 result. E. Li 00 38.8 result. MS t Rec.	Prepar Rec. -2350 Lec. mit - 120 MSI Rec	RPD 1	Rec. Limit .8 - 120 RPD Limit 20 Rec. Limit
QC Batch: 102572 Prep Batch: 86891 Param GRO Q Percent recovery is based on the s Param	l Saı ¹⁸ pike F Qs	F Qs resul 1	332872 Date QC	Analyz Prepara MS Cesult 3920 is basec Units mg/K is basec MS	$\frac{\text{Units}}{\text{mg/Kg}}$ $\frac{\text{Units}}{\text{mg/Kg}}$ $\frac{\text{mg/Kg}}{1 \text{ on the s}}$ $\frac{\text{s}}{\text{g}} \frac{100}{100}$ $\frac{1 \text{ on the s}}{1 \text{ on the s}}$ $\frac{\text{MSD}}{\text{Result}}$ $\frac{2.97}{100}$	13-06-24 13-06-24 Dil. 100 ppike and Spike Amount 20.0 spike and	Spi Amo 20. spike d Matr Resu 4390 spike d	ke I unt 2 uplicate ix lt Rea 0 -250 uplicate Spike	Matrix Result 4390 result. c. Li 00 38.8 result. MS	Prepar Rec. -2350 dec. mit - 120 MSI Rec 148	RPD 1 0 38 8 8 69	Rec. Limit .8 - 120 RPD Limit 20 Rec.

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QC Batch:	102589	Date Analyzed:	2013-06-25	Analyzed By:	DS
Prep Batch:	86903	QC Preparation:	2013-06-25	Prepared By:	DS

Matrix Spike (MS-1) Spiked Sample: 333112

Report Date: July 2, 2013 Apache NEDU Sat. #4 AD											
Param		F	С	MS Result	Units	Dil.	Spike Amount		trix sult Rec		Rec. Limit
DRO		I.	1	214	mg/Kg		250		15.3 86		.5 - 174
							•••			10	.0 - 174
Percent recovery is based on th	e spike	e rest	lit. RPI) is based	on the s	spike and s	spike dupi	cate res	suit.		
			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO		1	254	mg/Kg	g 1	250	<15.3	102	15.5 - 174	17	20
Percent recovery is based on th	ie spike	e resu	ılt. RPI) is based	on the s	pike and s	spike dupli	cate res	sult.		
	Μ	IS	MS	D			Spike	MS	S MSD		Rec.
Surrogate		sult	Res		Units	Dil.	Amount	Ree			Limit
n-Tricosane	90).4	11	5 n	ng/Kg	1	100	99		35	2 - 240
Matrix Spike (MS-1) Spi QC Batch: 102767 Prep Batch: 87058	ked Sa	mple		2 te Analyz Prepara		13-07-02 13-07-02				yzed By ared By	
QC Batch: 102767	ked Sa	mple	Da	te Analyz							
QC Batch: 102767	ked Sa	mple	Da	te Analyz			Spike	Ма		ared By	
QC Batch: 102767		mple F	Da QC	te Analyz Prepara			Spike Amount		Prepa	ared By	: GS
QC Batch: 102767 Prep Batch: 87058		-	Da QC	te Analyz Prepara MS	tion: 20	Dil.	-	Re	Prepa	ared By	: GS Rec.
QC Batch: 102767 Prep Batch: 87058 Param		F	Da QC C	te Analyz Prepara MS Result 1620	tion: 20 Units mg/Kg	Dil.	Amount 500	Re 12	Prepa trix sult Rec 201 84	ared By	: GS Rec. Limit
QC Batch: 102767 Prep Batch: 87058 Param Chloride		F	Da QC C	te Analyz Prepara MS Result 1620	tion: 20 Units mg/Kg	Dil.	Amount 500	Re 12	Prepa trix sult Rec 201 84	ared By	: GS Rec. Limit
QC Batch: 102767 Prep Batch: 87058 Param Chloride		F	Da QC C	te Analyz Prepara MS Result 1620	tion: 20 Units mg/Kg	13-07-02 Dil. 1 spike and s	Amount 500 spike duplie	Re 12	Prepa trix sult Rec 201 84 sult.	ared By	: GS Rec. Limit 6 - 131

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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Calibration Standards

Standard (CCV-1)

QC Batch:	102572		Date	Analyzed:	2013-06-24		Analy	zed By: MT
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	1.07	107	80 - 120	2013-06-24

Standard (CCV-2)

QC Batch:	102572		Date	Analyzed:	2013-06-24		Analy	zed By: MT
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	1.04	104	80 - 120	2013-06-24

Standard (CCV-1)

QC Batch:	102589		Date	Analyzed:	2013-06-25		Analy	zed By: DS
				CCVs	CCVs	CCVs	Percent	5
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	228	91	80 - 120	2013-06-25

Standard (CCV-2)

QC Batch:	102589		Date	Analyzed:	2013-06-25		Analyzed By: DS					
				CCVs True	CCVs Found	CCVs	Percent Recovery	Date				
				rue	round	rercent	necovery	Date				
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed				
DRO		1	mg/Kg	250	240	96	80 - 120	2013-06-25				

Report Date: . Apache NEDU	• •		Work	Order: 13	062108	Page Number: 14 of 1 Apache NEDU Sat. #4 AD, Ni					
Standard (IC	CV-1)		*								
QC Batch: 10	02767		Date 4	Analyzed:	2013-07-02		Analy	yzed By: GS			
Param Chloride	Flag	Cert	Units mg/Kg	ICVs True Conc. 100	ICVs Found Conc. 100	ICVs Percent Recovery 100	Percent Recovery Limits 85 - 115	Date Analyzed 2013-07-02			
Standard (CO	CV-1)										
QC Batch: 10	02767		Date .	Analyzed:	2013-07-02		Analy	vzed By: GS			
				CCVs	CCVs	CCVs	Percent				

ParamFlagCertUnitsConc.Conc.RecoveryDateChloridemg/Kg10010085 - 1152013-07-02

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Work Order: 13062108

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

	Certifying	Certification	Laboratory
С	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-13-9	Lubbock

Standard Flags

- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- .Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.

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- Je Estimated concentration exceeding calibration range.
- MI1 Split peak or shoulder peak
- MI2 Instrument software did not integrate
- MI3 Instrument software misidentified the peak
- MI4 Instrument software integrated improperly
- MI5 Baseline correction
- Qc Calibration check outside of laboratory limits.
- Qr RPD outside of laboratory limits
- Qs Spike recovery outside of laboratory limits.
- Qsr Surrogate recovery outside of laboratory limits.
- U The analyte is not detected above the SDL

Attachments

Work Order: 13062108

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The scanned attachments will follow this page.

Please note, each attachment may consist of more than one page.

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Appendix C 5 Point Bottom Composite Lab

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



Analytical and Quality Control Report

Steven Fleming Apache Corp.-Midland 303 Veterans Airpark Lane Suite #3000 Midland, TX, 79705

Report Date: July 1, 2013

Work Order: 13062720

Project Location: Apache NEDU Sat. #4 AD, NM Project Number: Apache NEDU Sat. #4 AD

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
333521	NEDU Satellite #4 Battery 5 pt. Composite	soil	2013-06-25	13:30	2013-06-27

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael Q

Dr. Blair Leftwich, Director Dr. Michael Abel, Project Manager

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Case Narrative

Samples for project were received by TraceAnalysis, Inc. on 2013-06-27 and assigned to work order 13062720. Samples for work order 13062720 were received intact at a temperature of 1.8 C.

Samples were analyzed for the following tests using their respective methods.

		Prep	Prep	$\rm QC$	Analysis
Test	Method	Batch	Date	Batch	Date
TPH DRO - NEW	S 8015 D	86961	2013-06-27 at 14:00	102661	2013-06-27 at 14:09
TPH GRO	S 8015 D	87002	2013-06-28 at 16:07	102705	2013-06-28 at 16:07

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 13062720 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 333521 - NEDU Satellite #4 Battery 5 pt. Composite

Laboratory:	Lubbock							
Analysis:	TPH DRO - NE	W	Ana	lytical Meth	od: S 8015	5 D	Prep Me	ethod: N/A
QC Batch:	102661		Dat	e Analyzed:	2013-0	6-27	Analyze	d By: DS
Prep Batch:	86961		San	ple Prepara	tion: 2013-0	06-27	Prepare	d By: DS
					RL			
Parameter		Flag	Cert	${ m Re}$	sult	Units	Dilution	RL
DRO			1		291	mg/Kg	1	50.0
						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			120	mg/Kg	1	100	120	35.2 - 240

Sample: 333521 - NEDU Satellite #4 Battery 5 pt. Composite

Laboratory: Analysis: QC Batch: Prep Batch:	Lubbock TPH GRO 102705 87002		Date An	al Methoo alyzed: Preparatio	2013-0	06-28		Prep Methe Analyzed E Prepared B	By: JS
					\mathbf{RL}				
Parameter		Flag	Cert		Result	Un	its	Dilution	RL
GRO	1		1		<8.00	mg/l	ζg	2	4.00
Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolue	ene (TFT)			1.73	mg/Kg	2	2.00	86	69.6 - 124
	obenzene (4-BFB)			1.92	mg/Kg	2	2.00	96	77.7 - 120

Method Blanks

Method Blank (1)	QC Batch: 1026	51					
QC Batch: 102661 Prep Batch: 86961			analyzed: eparation:	2013-06-27 2013-06-27			ed By: DS ed By: DS
Parameter DRO	Flag	5	Cert	Re	IDL sult 15.3	Units mg/Kg	RL 50
Surrogate	Flag Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		99.4	mg/Kg	1	100	99	35.2 - 240
Method Blank (1)	QC Batch: 1027	05					
QC Batch: 102705 Prep Batch: 87002			Analyzed: reparation:	2013-06-28 2013-06-28		•	zed By: JS red By: JS
				N	IDL		

Parameter	Flag		Cert		Result		Units	\mathbf{RL}
GRO			1		< 0.230	í mg/Kg		4
Concerned	El	Quet	Darrelt	TT. 't.	Dilution	Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.71	$\mathrm{mg/Kg}$	1	2.00	86	69.6 - 124
4-Bromofluorobenzene (4-BFB)			1.77	mg/Kg	1	2.00	88	77.7 - 120

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 102661 Prep Batch: 86961	ŗ		e Analyzed: Preparation:	2013-06-27 2013-06-27				vzed By: ured By:	DS DS
Param DRO	F	C R		nits Dil. 5/Kg 1	Spike Amount 250	Matrix Result <15.3	Rec.	Liı	ec. mit - 138
Percent recovery is based on the	spike res			·				0110	100
Tercent recovery is based on the	spike ie		is based off	-					
Param	F C	$\begin{array}{c} \mathrm{LCSD} \\ \mathrm{Result} \end{array}$	Units I	Spike Dil. Amount	Matrix t Result		Rec. Limit		RPD
DRO	1	249	mg/Kg	1 250	<15.3	100 64	.8 - 138	18	20
Percent recovery is based on the	spike res	ult. RPD	is based on	the spike and	spike dupli	cate result.			
	LCS	LCSI)		Spike	LCS	LCSD	B	ec.
Surrogate	Result	Resul		Dil.	Amount	Rec.	Rec.		mit
n-Tricosane	92.0	115	mg/K		100	92	115		- 240
Laboratory Control Spike (L QC Batch: 102705 Prep Batch: 87002	CS-1)		e Analyzed: Preparation	2013-06-28 : 2013-06-28				yzed By: ared By:	JS JS
			LCS		Spike	Matrix			ec.
Param	F			nits Dil.	Amount	Result			mit
GRO				5/Kg 1	20.0	< 0.230		66.9	- 120
Percent recovery is based on the	spike res	ult. RPD	is based on	the spike and	spike dupli	cate result.			
		LCSD		Spike	Matrix		Rec.		RPD
Param	F C	Result		Dil. Amoun			Limit	RPD .	Limit
GRO	1	< 0.230	mg/Kg	1 20.0	< 0.230	66	.9 - 120		20
Percent recovery is based on the	spike res	ult. RPD	is based on	the spike and	spike dupli	cate result.			
		LC	S LCSD		Spi	ke LCS	5 LCSI	D R	ec.
Surrogate		Resu	lt Result	Units	Dil. Amo				mit
Trifluorotoluene (TFT)		1.75	2 0.00	mg/Kg	1 2.0	00 86		69.6	
4-Bromofluorobenzene (4-BFB)		1.93	5 0.00	mg/Kg	1 2.0	0 98			- 124 - 120

Apache NEDU Sat. #4 AD	Wo	rk Order: 13	3062720		Page Number: 7 of 11 Apache NEDU Sat. #4 AD, NM					
Matrix Spike (MS-1) Spil	ked Sampl	e: 333496								
QC Batch: 102661 Prep Batch: 86961			e Analyzed: Preparation	2013-06-27 2013-06-27					zed By ared By	
Param	F		MS Acsult U	nits Dil.	Spike Amount		atrix esult	Rec.		Rec. Limit
DRO	-			s/Kg = 1	250		730	80		5 - 174
Percent recovery is based on the	e spike res	ult. RPD			spike dupli	icate re	sult.			
	• • F			_						חחח
Param	F C	MSD Result	Units I	Spike Dil. Amount	Matrix Result	Rec.	' Re Lir		RPD	RPD Limit
DRO	1 0	2920		$\frac{1}{1}$ 250	2730	76	15.5		0	20
Percent recovery is based on the										
release recovery is based on an	-			one spine and				_		
Course and a	MS	MSI			Spike	M		MSD		Rec.
Surrogate	Result	Resu			Amount	Re		Rec.		Limit
n-Tricosane	102	104	mg/K	<u>lg 1</u>	100	10	12	104	35.	2 - 240
Matrix Spike (MS-1) Spil QC Batch: 102705	ed Sample	e: 333008 Dat	e Analyzed:	2013-06-28		10	12	Anal	yzed B	y: JS
Matrix Spike (MS-1) Spil QC Batch: 102705 Prep Batch: 87002 Param		e: 333008 Dat QC C R	e Analyzed: Preparation MS Lesult U:	2013-06-28 : 2013-06-28 nits Dil.	Spike Amount	Ma Re	atrix sult	Anal Prep. Rec.	yzed Bj ared By	y: JS 7: JS Rec. Limit
Matrix Spike (MS-1) Spil QC Batch: 102705 Prep Batch: 87002 Param GRO	xed Sample F	e: 333008 Dat QC <u>C</u> R	e Analyzed: Preparation MS Lesult U: 12.2 mg	2013-06-28 : 2013-06-28 nits Dil. ;/Kg 1	Spike Amount 20.0	Ma Re <0	atrix esult 0.230	Anal Prep	yzed Bj ared By	y: JS 7: JS Rec.
Matrix Spike (MS-1) Spil QC Batch: 102705 Prep Batch: 87002 Param	xed Sample F	e: 333008 Dat QC <u>C</u> R	e Analyzed: Preparation MS Lesult U: 12.2 mg	2013-06-28 : 2013-06-28 nits Dil. ;/Kg 1	Spike Amount 20.0	Ma Re <0	atrix esult 0.230	Anal Prep. Rec.	yzed Bj ared By	y: JS 7: JS Rec. Limit
Matrix Spike (MS-1) Spil QC Batch: 102705 Prep Batch: 87002 Param GRO	xed Sample F	e: 333008 Dat QC <u>C</u> R	e Analyzed: Preparation MS Lesult U: 12.2 mg is based on	2013-06-28 : 2013-06-28 nits Dil. ;/Kg 1	Spike Amount 20.0 spike dupli Matrix	Ma Re <0	atrix esult 0.230	Anal Prep Rec. 61	yzed Bj ared By	y: JS 7: JS Rec. Limit
Matrix Spike (MS-1) Spil QC Batch: 102705 Prep Batch: 87002 Param <u>GRO</u> Percent recovery is based on the	xed Sample F e spike res	e: 333008 Dat QC <u>C</u> F ult. RPD	e Analyzed: Preparation MS Lesult U 12.2 mg is based on	2013-06-28 : 2013-06-28 nits Dil. ;/Kg 1 the spike and Spike	Spike Amount 20.0 spike dupli Matrix	Ma Re <0	atrix sult 0.230 sult.	Anal Prep Rec. 61	yzed Bj ared By 38.	y: JS 7: JS Rec. Limit 8 - 120 RPD
Matrix Spike (MS-1) Spil QC Batch: 102705 Prep Batch: 87002 Param GRO Percent recovery is based on the Param	ed Sample F e spike res F C	e: 333008 Dat QC <u>C R</u> ult. RPD MSD Result 12.3	e Analyzed: Preparation MS Lesult U 12.2 mg is based on Units I mg/Kg	2013-06-28 : 2013-06-28 nits Dil. ;/Kg 1 the spike and Spike Dil. Amount 1 20.0	Spike Amount 20.0 spike dupli Matrix Result <0.230	Ma Re icate re <u>Rec.</u> 62	atrix esult 0.230 sult. Re Lir 38.8	Anal Prep Rec. 61	yzed B ared By 1 38. RPD	y: JS 7: JS Rec. Limit 8 - 120 RPD Limit
Matrix Spike (MS-1) Spil QC Batch: 102705 Prep Batch: 87002 Param GRO Percent recovery is based on the Param GRO Percent recovery is based on the Surrogate	ed Sample F e spike res F C	e: 333008 Dat QC <u>C R</u> ult. RPD <u>MSD</u> Result 12.3 ult. RPD M: Res	e Analyzed: Preparation MS tesult U 12.2 mg is based on Units I mg/Kg is based on S MSD ult Result	2013-06-28 : 2013-06-28 nits Dil. :/Kg 1 the spike and Spike Dil. Amount 1 20.0 the spike and Units	Spike Amount 20.0 spike dupli Matrix Result <0.230 spike dupli Sp Dil. Am	Ma Re <0 icate res 62 icate res oike ount	atrix esult 0.230 sult. Re Lir 38.8 sult. MS Rec.	Anal; Prep. Rec. 61 ec. nit - 120 MSI Rec	yzed B ared By 38. RPD 1	y: JS 7: JS Rec. Jimit 8 - 120 RPD Limit 20 Rec. Jimit
Matrix Spike (MS-1) Spil QC Batch: 102705 Prep Batch: 87002 Param GRO Percent recovery is based on the Param GRO Percent recovery is based on the	ed Sample F e spike res F C	e: 333008 Dat QC <u>C R</u> ult. RPD <u>MSD</u> <u>Result</u> 12.3 ult. RPD	e Analyzed: Preparation MS Lesult U: 12.2 mg is based on Units I mg/Kg is based on S MSD ult Result 6 1.77	2013-06-28 : 2013-06-28 nits Dil. ;/Kg 1 the spike and Spike Dil. Amount 1 20.0 the spike and	Spike Amount 20.0 spike dupli Matrix Result <0.230 spike dupli Sp Dil. Am 1	Ma Re <0 icate res <u>Rec.</u> 62 icate res icate res	atrix esult 0.230 sult. Re Lir 38.8 sult. MS	Anal Prep. Rec. 61 ec. nit - 120 MSI	yzed B; ared B; 38. <u>RPD</u> 1 . I 69.	y: JS 7: JS Rec. Limit 8 - 120 RPD Limit 20 Rec.

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Calibration Standards

Standard (CCV-1)

QC Batch:	102661	Date	Analyzed:	2013-06-27 An			zed By: DS	
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	216	86	80 - 120	2013-06-27

Standard (CCV-2)

QC Batch:	102661		Date	Analyzed:	ed: 2013-06-27 And			zed By: DS
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	211	84	80 - 120	2013-06-27

Standard (CCV-1)

QC Batch:	102705	Date	Analyzed:	2013-06-28		yzed By: JS		
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	0.899	90	80 - 120	2013-06-28

Standard (CCV-2)

QC Batch:	102705		Date	Analyzed:	2013-06-28	x	Analyzed By: JS							
				CCVs	CCVs Form d	CCVs Demonst	Percent	Data						
				True	Found	Percent	Recovery	Date						
Param	Flag	Cert	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed						
GRO		1	mg/Kg	1.00	0.848	85	80 - 120	2013-06-28						
•	: July 1, 2013 9U Sat. #4 AD)	Wor	k Order: 13	062720	Ap	Page Number: 9 of 1 Apache NEDU Sat. #4 AD, NM							
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Standard (O	CCV-3)				,									
QC Batch:	102705		Date	Analyzed:	2013-06-28		Anal	yzed By: JS						
				CCVs True	CCVs Found	CCVs	Percent Recovery	Date						
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed						
GRO		1	mg/Kg	1.00	0.820	82	80 - 120	2013-06-28						

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Work Order: 13062720

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Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

	Certifying	Certification	Laboratory
С	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-13-9	Lubbock

Standard Flags

- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
- Je Estimated concentration exceeding calibration range.
- MI1 Split peak or shoulder peak
- MI2 Instrument software did not integrate
- MI3 Instrument software misidentified the peak
- MI4 Instrument software integrated improperly
- MI5 Baseline correction
- Qc Calibration check outside of laboratory limits.
- Qr RPD outside of laboratory limits
- Qs Spike recovery outside of laboratory limits.
- Qsr Surrogate recovery outside of laboratory limits.
- U The analyte is not detected above the SDL

Result Comments

Report Date: July 1, 2013 Apache NEDU Sat. #4 AD Work Order: 13062720

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1 Dilution due to hydrocarbons.

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Attachments

The scanned attachments will follow this page. Please note, each attachment may consist of more than one page.

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Appendix D Clay Compaction Test and Imported Caliche Lab

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



	PETTIGREW & A 100 E. Nava Hobbs, N	TEST REPORT ASSOCIATES, P.A. ajo, Suite 100 M 88240 393-9827		AABHTO RIB RA P. HICKS, P.E./L.S.I. AM M. HICKS, III, P.E./P.S.
Το:	Rice Environmental Consulting & Safety, LLC 419 W. Cain Hobbs, NM 88240	Material: Test Method:	ASTM: D 6938	
Project:	Apache Nedu Satellite #4 Project No. 2013.1287			
Date of Test:	October 8, 2013	Depth:	See Below	
		Depth of Probe:	8"	١
Test No.	Location	Dry Density % Max %	6 Moisture	Depth
SG 1	Nedu Sat. #4 10' W. & 2' S. of NE Corner	97.1	11.4	FSG
SG 2	Nedu Sat. #4 20' E. & 5' S. of NW Comer	95.6	7.8	FSG

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Control Density: 100.2 ASTM: D 698

Required Compaction: 90%

Lab No.:: 13 6015 6017
Copies To:: Kyle Norman:

Copies To:: Kyle Norman:

Copies To:: Cert Hill BY: ASSOciates

Copies To:: Cert Hill BY: Cert Hill



October 15, 2013

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: NEDU SATELLITE #4

Enclosed are the results of analyses for samples received by the laboratory on 10/14/13 16:30.

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.qov/field/ga/lab accredited 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.

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,

Celez D. Kune

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

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

Received:	10/14/2013	Sampling Date:	10/08/2013
Reported:	10/15/2013	Sampling Type:	Soil
Project Name:	NEDU SATELLITE #4	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		
,			

Sample ID: IMPORTED CALICHE (H302484-01)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/15/2013	ND	416	104	400	0.00	

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 claim thin thirty (30) days after completion of the applicable service. In no event shall cardinal be liable for incidential or consequential damages, including, writiout limitation, business interruptions, loss of use, or loss of profits incurred by client, its sublidiaries, affiliates or successors arising out 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. Kune

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

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

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Cardinal Laboratories

*=Accredited Analyte

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Celeg D. Kune

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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ARDINAL LABORATORIES

	101 East Marland, Hobbs, NM 882 (505) 393-2326 FAX (505) 393-24											•						· ·					
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Refinquished By:	Date: Regeived By: Time:	email results knorman@rice-ecs.com;hconder@rice-ecs.com;
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+ Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

Appendix E Photo Documentation

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

Apache NEDU Satellite #4

Unit Letter L, Section 15, T21S, R37E



Initial release area, facing southeast

Initial release area, facing northeast 6/17/13

Initial release area, facing southeast

6/17/13



2013/0s/25

Scrape to 1' completed, facing southwest 6/25/13









Importing clay, facing north

10/7/13







Clay barrier completed, facing southeast



Importing caliche, facing southeast

10/8/13









Site completed, facing northwest

10/8/13



Appendix F Final C-141

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

I.

i.

Form C-141 Revised August 8, 2011

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	i Fe, NM 87503	•	Sa	inta Fe	e, NM 875	05											
	Release Notification and Corrective Action																	
						OPERA	FOR		Initiz	al Report	\boxtimes	Final Report						
Name of Co	mpany A	pache Corpo	ration				Larry Bruce Bal	ker		пторон	<u> </u>							
		, Eunice, N					No. (432) 631-6											
Facility Nat]	Facility Typ	e Satellite											
Surface Ow	mer Apac	he Corporat	ion	Mineral C	Owner				API No	. 3002509	916							
				LOCA	ATION	N OF REI												
Unit Letter	Section	Township	Range	Feet from the	North/	South Line	Feet from the	East/V	st/West Line County									
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			La	titude		Longitud	e											
				NAT	TIRE	OF REL	FASE											
Type of Rele	ase Oil tan	k			UKE		Release 85 bbls		Volume F	Recovered 7	0 bbls							
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Was Immedi	ate Notice C		Yes 🛛	No 🗌 Not R	equired	If YES, To	Whom?											
By Whom?						Date and H												
Was a Water	course Read		Yes 🗵	No		If YES, Vo	olume Impacting t	he Wate	ercourse.									
If a Watercon	urse was Im	pacted, Descr	ibe Fully.'	*		DTW=43												
The oil tank transfer pum Describe Are were on site then taken to The release a composite sa DRO reading throughout th 7 th , 2013, RE install the cla October 8 th , 2 test showed a ground surfa I hereby certi regulations a public health should their or the enviro	at the site ra ps were run a Affected a to begin init a commerc area was scra mple of the greturned a ne release in CCS personn ay barrier an 2013, Pettig a Dry Densig ce. A samp ify that the i Il operators or the enviro operations h nment. In a	to get the lev- and Cleanup A ial sampling. ial laboratory aped down 1 - excavation w result of 290 the lease pad el were on sit d backfill the rew & Associ ty % Max of 9 le of the calic nformation g are required t ronment. The ave failed to a	the comm. els down a Action Tal Surface s for analys - 1.5 feet a as taken to mg/kg. Ba and then e to begin site. At tl ates were 07.1% at S he was tak ven above o report an acceptand adequately OCD accep	system failed. A at the site. amples were take is. The results of and a total of 105 o a commercial la ased on an Apach backfill the site w the liner installat he base of the exc on site to conduct G I and 95.6% at en to a commercial is true and comp nd/or file certain in ce of a C-141 report	2,606 sq n throug f this test yards of boratory e meetin vith clear ion. A tr avation a t a clay c t SG-2. d ial labora olete to th release n- ort by the remediate	ft of facility hout the site ing showed of excavated so for analysis. g with NMO n, imported ca otal of 48 yar a 6 inch clay compaction te Caliche was t atory for anal ne best of my otifications a e NMOCD me	oil was released a pad and pasture w and field tested fo hloride levels bel il was taken to a 1 Laboratory GRC CD – District 1, a liche to bring the ds of clay and 84 barrier was install st at two points o hen backfilled ov ysis and returned knowledge and u nd perform correct arked as "Final R on that pose a thre e the operator of the	vas affec or chlori ow 250 NMOCI) readin decisio excava yards o led thro ver the c a chlori inderstai ctive act eport" c eat to gr	cted. On Ju des and hyo mg/kg and D approved g returned a n was made tion back to f clean cali- ughout the clay barrier lay barrier lay barrier de result of nd that purs ions for rel- loes not rel- round wate	ne 17 th , 201 drocarbons. elevated hy facility for a result of no to install a o ground sur che was imp release area . The result to bring the 32 mg/kg. suant to NM eases which ieve the oper r, surface wa	3, REC The sa drocarb disposa on-deter 6 inch face. O orted to in the f s of the excavat OCD ru may er rator of iter, hu	CS personnel mples were oon levels. al. A bottom ct and the clay barrier on October o site to facility. On e compaction tion up to ules and ndanger f liability man health						
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Date:	10-3	1-13	Phone	: (432) 631-6982						IRP-9	-15-1	z9,50						

* Attach Additional Sheets If Necessary