AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.

App Number: pLWJ1011851263

1RP - 2498

APACHE CORP

7/22/2016

Rice Environmental Consulting & Safety
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

July 21th, 2011

Mr. Geoffrey Leking
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1625 N. French Drive
Hobbs, New Mexico 88240

RE: **Update Report**
Apache Corporation, Inc.
Walter Lynch Tank Battery: UL/F sec. 1 T22S R37E

Mr. Leking:

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

Background and Previous Work
This site is located approximately 2.5 miles south-east of Eunice, New Mexico at UL/F sec. 1 T22S R37E as shown on the Site Location Map (Figure 1 and 2). Monitor wells at the site indicate groundwater will be encountered at 56 +/- feet. On August 26, 2009 four soil bores were advanced at the site and the samples were taken to a commercial laboratory for field test confirmation. Soil bore #1 was drilled to a depth of 65 ft bgs and had laboratory chloride readings ranging from a high of 1,424 mg/kg at 35 ft bgs to a low of 96 mg/kg at 30 ft bgs. Soil bore #2 was drilled to 65 ft bgs and had laboratory chloride readings ranging from a high of 1,860 mg/kg at 40 ft bgs to a low of 96 mg/kg at 55 ft bgs. Soil bore #3 was drilled to a depth of 56 ft bgs and had laboratory chloride readings ranging from a high of 1,230 mg/kg at 25 ft bgs to a low of non-detect at 5 ft bgs. Finally, soil bore #4 was drilled to 56 ft bgs and had laboratory chloride readings ranging from a high of 672 mg/kg at 55 ft bgs to a low of 16 mg/kg at 5 ft bgs. BTEX, GRO, and DRO were all non-detect throughout all the bores and at all depths. All four soil bores were plugged and abandoned (P&A) on August 27, 2009 in conformance with NMOCD Rules and Regulations.

On December 8-9th, 2009, three monitor wells were installed at the site. Two soil samples from each monitor well installation were sent to a commercial laboratory for verification of field numbers. From monitor well #1, samples from 10 ft bgs and 60 ft bgs were taken. The laboratory chloride reading from the 10 ft bgs sample was non-detect and from 60 ft bgs sample was 64 mg/kg. From monitor well #2, the 10 ft bgs and 60 ft bgs samples were taken for laboratory analysis. The chloride reading for 10 ft bgs sample was non-detect and the reading from 60 ft bgs sample was 96 mg/kg. From monitor well #3, the 10 ft bgs and 57 ft bgs samples were taken for laboratory analysis. The chloride reading for the 10 ft bgs sample was 16 mg/kg

and the chloride reading for 57 ft bgs sample was 96 mg/kg. BTEX, GRO, and DRO were non-detect in the soils for all the wells.

On December 11th, 2009, the three monitor wells were sampled for BTEX, sulfates, chloride, TDS and metals in the water. Monitor well #1 had laboratory readings of non-detect for BTEX and metals. TDS laboratory reading was 1,720 mg/L, a sulfate reading of 283 mg/L and a chloride reading of 680 mg/L. Monitor well #2 had laboratory readings of non-detect for BTEX and all metals except mercury which had a reading of 0.002 mg/L. The TDS reading for monitor well #2 was 3,680 mg/L, a sulfate reading of 310 mg/L, and a chloride reading of 1,980 mg/L. Finally monitor well #3 also showed BTEX readings of non-detect. The well showed non-detect for all metals except for mercury which showed a reading of 0.003 mg/L. The well showed a TDS reading for the monitor well at 1,400 mg/L, a sulfate reading of 190 mg/L, and a chloride reading of 610 mg/L.

On January 20th, 2010, Apache submitted a Notice of Groundwater Impact to the NMOCD District 1 office.

On February 10th, 2010, Apache submitted a Remediation Proposal to the NMOCD District 1 office. In that report, Apache agreed that it would excavate the entire area to 4 ft bgs. The sidewalls would be excavated to whatever distance necessary to achieve chloride numbers at or below 250 mg/kg. Once the site was excavated, a 20 mil-polyethylene liner would be installed along the bottom and up the sidewalls to inhibit chloride migration through the vadose zone to groundwater. The site would then be backfilled to bring the excavation to surface level and seeded. The remediation proposal was approved by NMOCD and the soil work was subsequently completed.

On April 25th, 2011, RECS sampled the three monitor wells at the site and sent the samples to a commercial laboratory for analysis of chloride and TDS. Monitor well #1 had a laboratory chloride reading of 630 mg/L and a TDS reading of 1,700 mg/L. Monitor well #2 had a laboratory chloride reading of 1,540 mg/L and a TDS reading of 3,000 mg/L. Finally, Monitor well #3 had a laboratory chloride reading of 640 mg/L and a TDS reading of 1,530 mg/L.

Recommendations

Once this Update Report is approved, Apache proposes to develop a Corrective Action Plan (CAP) to estimate the chloride mass that may have contributed to groundwater impacts at the site. The up gradient monitor well (MW-1) shows chloride impacted water (630 mg/L) coming onto the site. However, it is apparent that although the up gradient groundwater is impaired before it moves across the site, it has also been affected by the downward migration of residual soil chlorides from the vadose zone. The down gradient well (MW-2), shows evidence of this contamination from the vadose zone beneath the site with a laboratory chloride reading of 1,540 mg/L. The chloride mass removal will take into account the chlorides present in the groundwater beneath the site.

Once the CAP is approved and the chloride mass removal is completed, Apache will submit a 'Termination Request' status for the site and ask for the closure of the regulatory file.

RECS appreciates the opportunity to work with you on this project. Please call me at (575) 393-9174 or Ms. Natalie Gladden of Apache Corporation at (575) 394-1503 if you have any questions or wish to discuss the site.

Sincerely,

Hack Conder
Environmental Manager
RECS

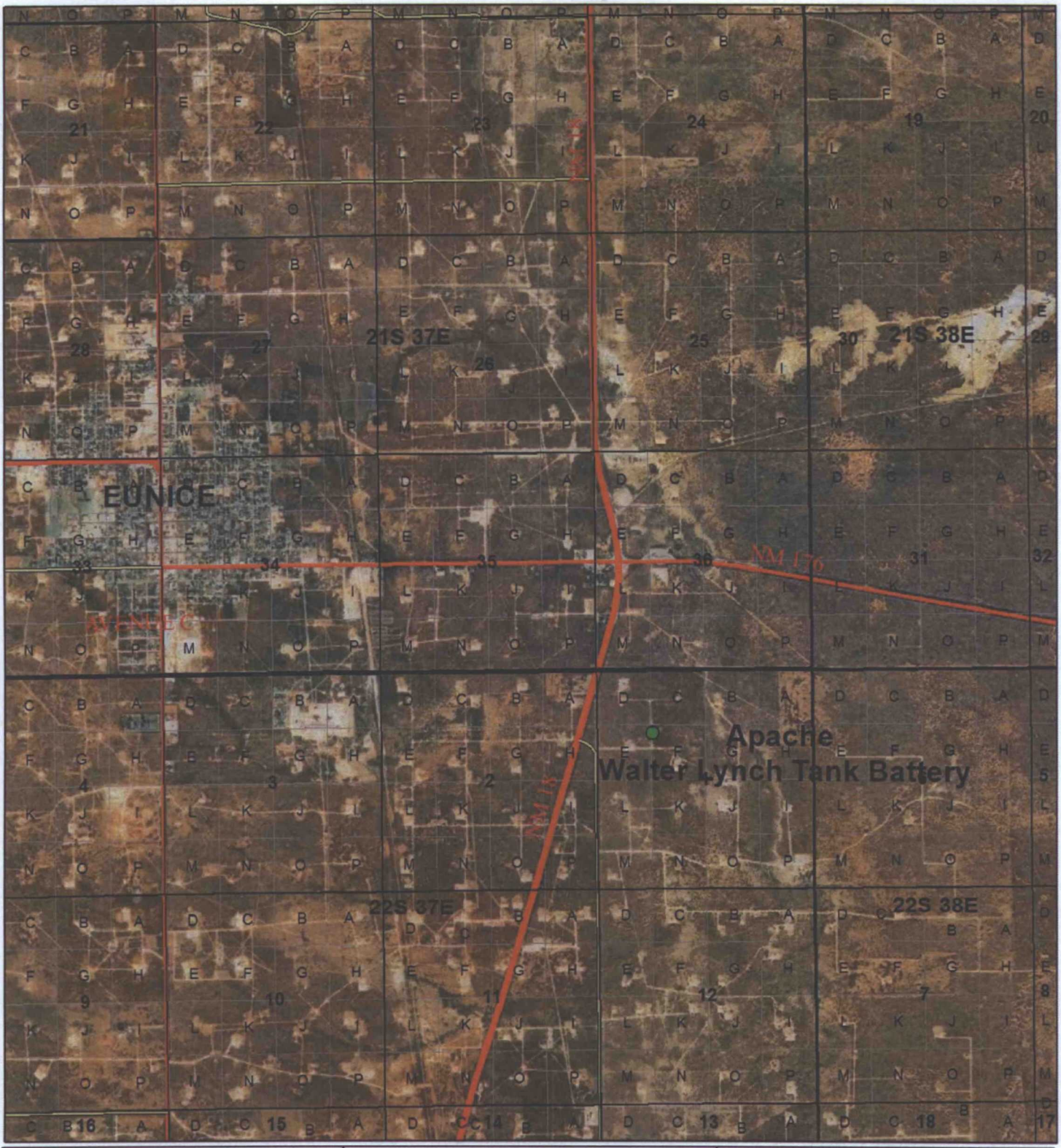
Attachments:

Figure 1 – Site Location Map
Figure 2 – Site Map
Appendix A – Monitor well sampling analysis April 25th, 2011

Figures

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

Site Map



RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

Apache Walter Lynch Tank Battery

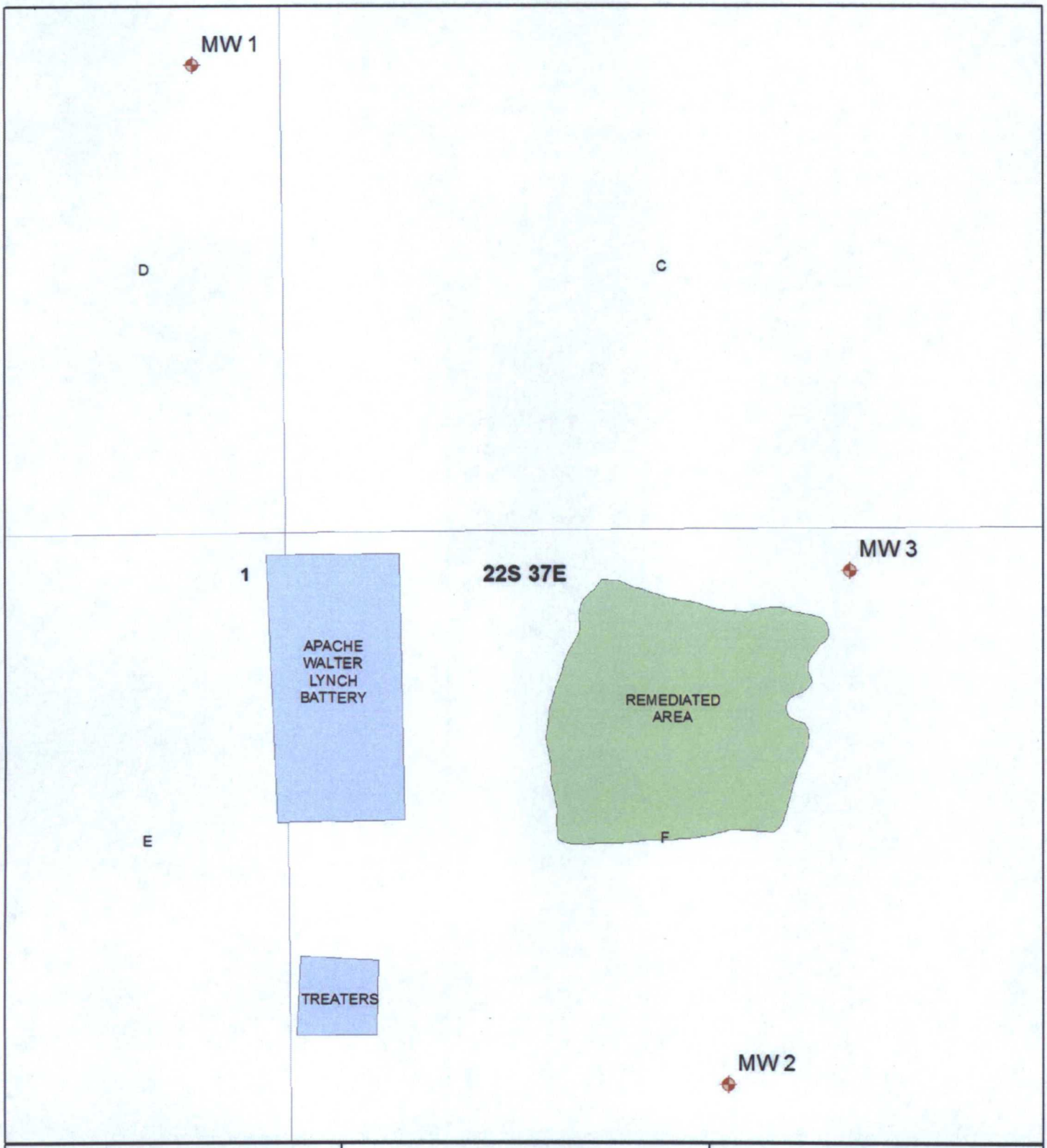
Legals: UL/F sec. 1 T22S R37E

Figure 1

N W E S

0 1,600 3,200 6,400 Feet

Drawing date:2-9-10
Drafted by: L. Weinheimer



RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC
RECS

APACHE WALTER LYNCH TANK BATTERY AREA

UL's C,D,E,F SECTION 1
T-22-S R-37-E

Figure 2

N
W E
S

0 20 40 80
Feet

Field Data: 4/25-26/11
Drawing date: 4/27/11
Drafted by: TONY GRIECO

Appendix A

Monitor well sampling analysis May 25th, 2011

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

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 29, 2011

NATALIE GLADDEN

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: APACHE WALTER LYNCH TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 04/27/11 8:05.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

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

Received:	04/27/2011	Sampling Date:	04/25/2011
Reported:	04/29/2011	Sampling Type:	Water
Project Name:	APACHE WALTER LYNCH TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: MW - 1 (H100865-01)

Chloride, SM4500Cl-B mg/L **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	630	4.00	04/27/2011	ND	112	112	100	3.64	

TDS 160.1 mg/L **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS	1700	5.00	04/27/2011	ND				1.28	

Sample ID: MW - 2 (H100865-02)

Chloride, SM4500Cl-B mg/L **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1540	4.00	04/27/2011	ND	112	112	100	3.64	

TDS 160.1 mg/L **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS	3000	5.00	04/27/2011	ND				1.28	

Sample ID: MW - 3 (H100865-03)

Chloride, SM4500Cl-B mg/L **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	640	4.00	04/27/2011	ND	112	112	100	3.64	

TDS 160.1 mg/L **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS	1530	5.00	04/27/2011	ND				1.28	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache	**BILL TO**
Project Manager: Natalie Gladden	P.O. #:
Address:	Company:
City: State: NM Zip:	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name: Apache Walter Lynch Tank Battery	State: Zip:
Project Location: Apache Walter Lynch Tank Battery	Phone #:
Sampler Name: L. Weinheimer	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS						
H10366 5-1	MW-1	G	1	✓							✓		4/25/11	03:15	✓					✓						
2	MW-2	G	1	✓							✓		4/26/11	2:47	✓					✓						
3	MW-3	G	1	✓							✓		4/26/11	11:10	✓					✓						

Relinquished By: L. Weinheimer	Date: 4-27-11 Time: 7:15 a.m.	Received By:	Phone Result: ☐ Yes ☑ No Add'l Phone #:
Relinquished By:	Date: 4.05 Time: 4/27/11	Received By: Yolanda Henson	Fax Result: ☐ Yes ☑ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com

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

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