

**June 15<sup>th</sup>, 2015**

**Kellie Jones**

Environmental Specialist– New Mexico Oil  
Conservation Division Energy, Minerals and Natural  
Resources Department 1625 N. French Dr.  
Hobbs, NM 88240

**APPROVED**

By OCD District 1 at 12:45 pm, Jun 19, 2015

**1. Ensure BLM concurrence**

**RE: Amended Path Forward  
Apache Hawk B-3 #9 (1RP-3572)  
UL/Q sec. 3 T21S R37E  
API No. 30-025-06501**

Ms. Jones:

A Path Forward was submitted to NMOCD and BLM on April 30<sup>th</sup>, 2015. NMOCD approved the Path Forward on April 30<sup>th</sup>, 2015, and BLM approved the Path Forward on May 7<sup>th</sup>, 2015.

The Path Forward stated that the bell hole is located under a series of high line electric lines, negating the possibility of installing soil bores at the site. Therefore, in order to hinder the movement of residual chlorides through the vadose zone, the area around Vertical 1 would be excavated to a depth of 13 ft bgs. Once the excavation was completed, wall samples would be taken and a 20-mil reinforced liner would be installed and properly seated at the base of the excavation. All excavated soil would be taken to a NMOCD approved facility for disposal. The excavation would then be backfilled with imported soil.

**Addendum to the Path Forward**

The bell hole has been excavated to a depth of 22 ft, and the area to the south of the bell hole has been excavated to a depth of 10 ft bgs. The excavated soil was evaluated for use as backfill, and soil that did not meet regulatory standards was taken to a NMOCD facility for disposal. The remaining soil was blended on site, and a sample of the blended soil was taken to a commercial laboratory for analyses. The blended soil returned a chloride reading of 656 mg/kg, a GRO reading of non-detect, a DRO reading of 464 mg/kg and a total BTEX reading of non-detect.

An additional vertical, Vertical 4, was installed north of the bell hole to determine the extent of contamination in this area. The vertical was installed to a depth of 4 ft bgs, and that sample was taken to a commercial laboratory for analyses. The 4 ft sample returned a chloride reading of 1,170 mg/kg with GRO and DRO readings of non-detect.

Based on these sampling data, a 20-mil, reinforced liner will be installed within the 22 ft bgs excavation. The 22 ft bgs and 10 ft bgs excavations will then be backfilled with the blended soil to 4 ft bgs. The northern portion of the release area will be excavated to a depth of 4 ft bgs. Once the entire release area reaches 4 ft bgs, discrete wall samples will be taken and sent to a

commercial laboratory. The samples will be tested for chlorides and volatile organic compounds to confirm that the walls return readings below regulatory standards.

At 4 ft bgs, a 20-mil reinforced poly liner will be installed and properly seated throughout the base of the excavation. The excavation will be backfilled with clean, imported soil as needed. The release area will be contoured to the surrounding location, and the site will be seeded with a blend of native vegetation.

Once these actions have been completed, a Termination Request will be submitted to NMOCD and BLM with a request for 'remediation termination' and site closure.

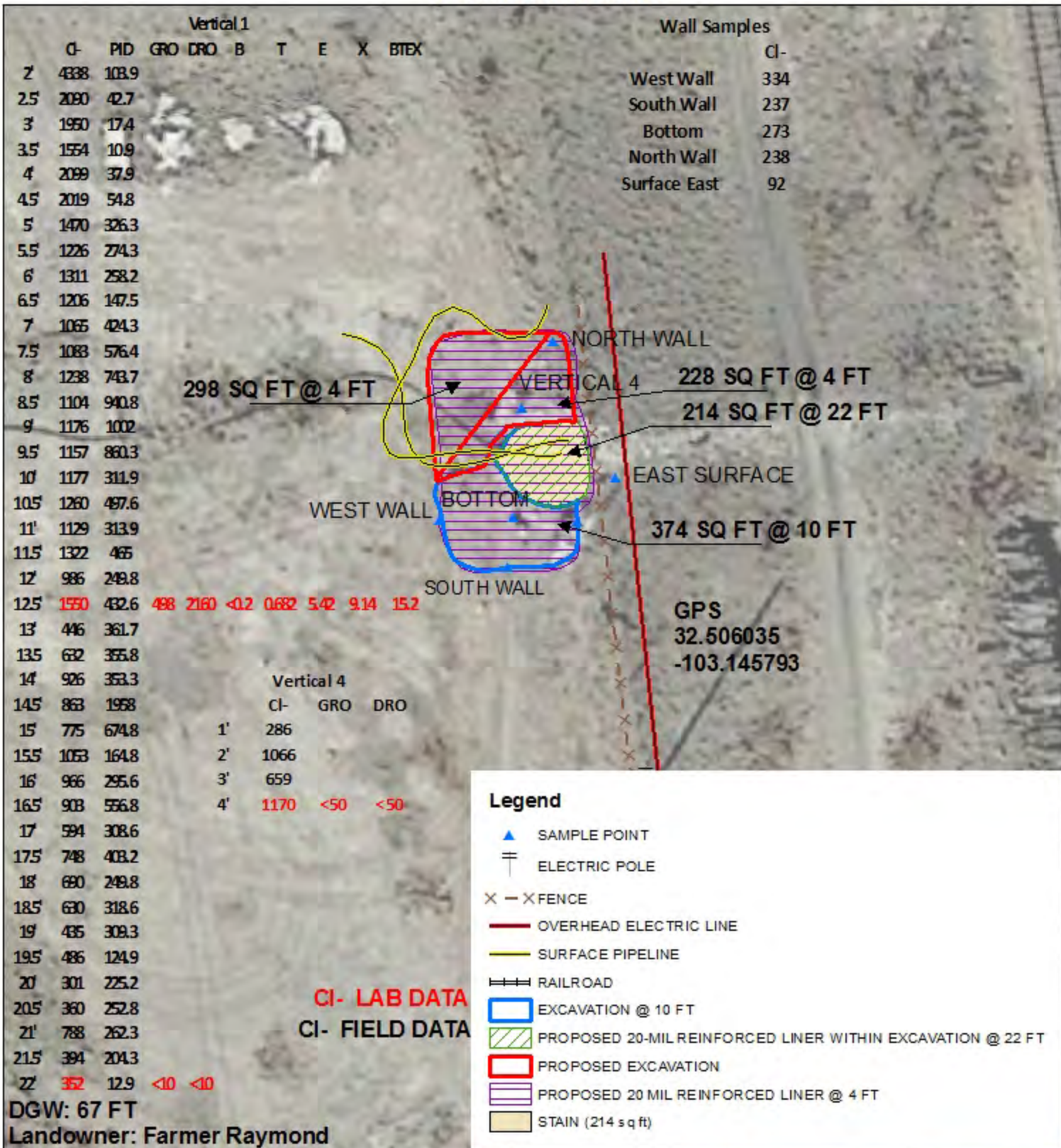
RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,

A handwritten signature in dark ink, appearing to read 'L.W.' followed by a stylized flourish.

Lara Weinheimer  
Project Scientist  
RECS  
(575) 441-0431

# Vertical Data

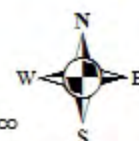


**APACHE**  
**HAWK B-3 #9**  
NMOCD Case #: 1RP-3572  
LEGALS: UL/ Q SEC. 3  
T-21-SR-37-E  
LEA COUNTY, NM

Underground facilities are  
spatially projected  
and need to be field verified.

0 10 20  
Feet

Drawing date: 5/29/15, 6/1 & 9/15  
Drafted by: L. Weinheimer, T. Grieco





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

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May 28, 2015

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: HAWK B -3 #9

Enclosed are the results of analyses for samples received by the laboratory on 05/27/15 16:34.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 05/27/2015  
Reported: 05/28/2015  
Project Name: HAWK B -3 #9  
Project Number: NONE GIVEN  
Project Location: HAWK B-3 #9

Sampling Date: 05/27/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: VERT 4 @ 4' (H501332-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	05/28/2015	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	05/28/2015	ND	186	92.9	200	0.301	
DRO >C10-C28	<50.0	50.0	05/28/2015	ND	203	102	200	0.397	
Surrogate: 1-Chlorooctane	93.6 %	47.2-157							
Surrogate: 1-Chlorooctadecane	134 %	52.1-176							

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 05/27/2015  
Reported: 05/28/2015  
Project Name: HAWK B -3 #9  
Project Number: NONE GIVEN  
Project Location: HAWK B-3 #9

Sampling Date: 05/27/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SPOIL PILE (H501332-02)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.051	0.050	05/28/2015	ND	1.83	91.4	2.00	0.634	
Toluene*	0.096	0.050	05/28/2015	ND	1.87	93.3	2.00	1.71	
Ethylbenzene*	<0.050	0.050	05/28/2015	ND	1.75	87.5	2.00	3.91	
Total Xylenes*	<0.150	0.150	05/28/2015	ND	5.04	84.0	6.00	3.69	
Total BTEx	<0.300	0.300	05/28/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	05/28/2015	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	05/28/2015	ND	186	92.9	200	0.301	
DRO >C10-C28	464	50.0	05/28/2015	ND	203	102	200	0.397	

Surrogate: 1-Chlorooctane 93.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 151 % 52.1-176

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\*=Accredited Analyte

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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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Celey D. Keene, Lab Director/Quality Manager



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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Relinquished By: <i>NR</i>		Date: <i>5-27-15</i> Time: <i>10:34</i>	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:
Relinquished By:		Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #:
Delivered By: (Circle One)		Time:	Sample Condition	REMARKS: <i>Samples taken 20 minutes before brought in</i>
Sampler - UPS - Bus - Other: <i>24.6°C</i>			Cool <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	email results: hconder@rice-ecs.com; knorman@rice-ecs.com; jkamplain@rice-ecs.com; lflores@rice-ecs.com; lweinheimer@rice-ecs.com; cursanic@rice-ecs.com; sedwards@rice-ecs.com environmental tech: @rice-ecs.com company: larry.baker@apachecorp.com
			CHECKED BY: <i>[Signature]</i> (Initials)	<i>RUSH!</i>

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

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