

**LEAK  
&  
CLOSURE  
REPORT**



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

April 11, 1999

**CERTIFIED MAIL**

**RETURN RECEIPT NO. P 288 259 104**

Mr. Michael Bernard  
Apache Corporation  
2000 Post Oak Boulevard  
Suite 100  
Houston, Texas 77056-4400

Re: Assessment of the Vertical Hydrocarbon Impact at the Skelly Penrose Trunkline Leak.  
Located: SE/4 NW/4 Sec 4-Ts23s-R37e, Lea County, New Mexico.

Dear Mr. Bernard:

The New Mexico Oil Conservation Division (NMOCD) is in receipt of Apache Corporation's (AC) letter dated October 9, 1998 for the release site referenced above. **The NMOCD hereby approves of your closure activities and requires no further action at this time.**

Please be advised that NMOCD approval of this site does not relieve AC 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 approval does not relieve AC of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you require any further information or assistance please do not hesitate to write or call me at (505-827-7155).

Sincerely Yours,

Wayne Price-Pet. Engr. Spec.  
Environmental Bureau

cc: OCD Hobbs District Office-Spill files.



2000 POST OAK BOULEVARD / SUITE 100 / HOUSTON, TEXAS 77056-4400

October 9, 1998

[713] 296-6000

OCT 12 1998

Mr. Wayne Price  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: Assessment of the Vertical Hydrocarbon Impact at the Skelly Penrose Trunkline Leak

Dear Mr. Price:

Apache Corporation contracted Rhino Environmental Services, Inc. to conduct an environmental investigation of a flowline leak at the above referenced facility. The site is located in the SE/4 of the NW/4 of Section 4, T23S, R37E, Lea County, New Mexico.

In December 1997, a small produced fluid spill occurred in a gathering line at the above referenced location. In an effort to determine the vertical extent of the contamination, a backhoe excavated a trench through the center of the spill site. Using a field analyzer for Total Petroleum Hydrocarbons (TPH), the bottom of the oil impacted zone was found to be at approximately 10 below surface grade. The analytical results for the 10 foot sample were:

TPH	374 ppm
Chlorides	21,800 ppm

The impacted area was excavated to a depth of 8 feet below surface grade and 240 cubic yards of soil were transported to EPI Landfarm for disposal.

On July 24, 1998, a ramp was cut in the north wall to allow a Hollow Stem Auger Rig access to the pit bottom. A single soil boring was placed in the center of the excavated area to determine the vertical extent of the chloride impacted soils. Sampling was conducted using a split spoon at 5' intervals to a depth of 29' below surface grade. The soil was analyzed on site for chlorides (Cl<sup>-</sup>). The results are as follows:

Sample Number	Depth Below Surface	Cl-
No. 1	10'-12'	11,600 ppm
No. 2	15'-17'	1,800 ppm
No. 3	20'-22'	700 ppm
No. 4	25'-27'	No Sample
No. 5	27'-29'	<500 ppm

Sample No. 5 was split and sent to a third party laboratory for confirmation of the field analytical results. The samples were analyzed for TPH, BTEX and Chlorides. The results are as follows:

Sample Number	Depth Below Surface	TPH ✓	BTEX	Cl- ✓
No. 5	27'-29'	6.1 ppm	<.50 ppm	48 ppm

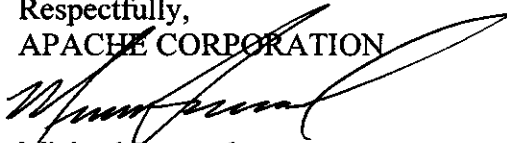
Copies of all analytical results and photographs of the project are included with this correspondence.

Upon completion of the soil boring, the borehole was plugged using a bentonite/cement grout. The plug was poured in from the surface and backfilled to the top of the borehole at the base of the excavation. This technique was used to seal the borehole and prevent any downward migration of contaminants.

According to the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases*, the soil cleanup goal for sites with a <19 point rating is 1000 ppm TPH. Therefore, no additional excavation of this site is required. Apache Corporation requests closure authorization for the spill site from the NMOCD, so the excavation can be backfilled, re-countered and the site closed.

Should you have any questions or comments, please feel free to call me at (713) 296-6555.

Respectfully,  
APACHE CORPORATION

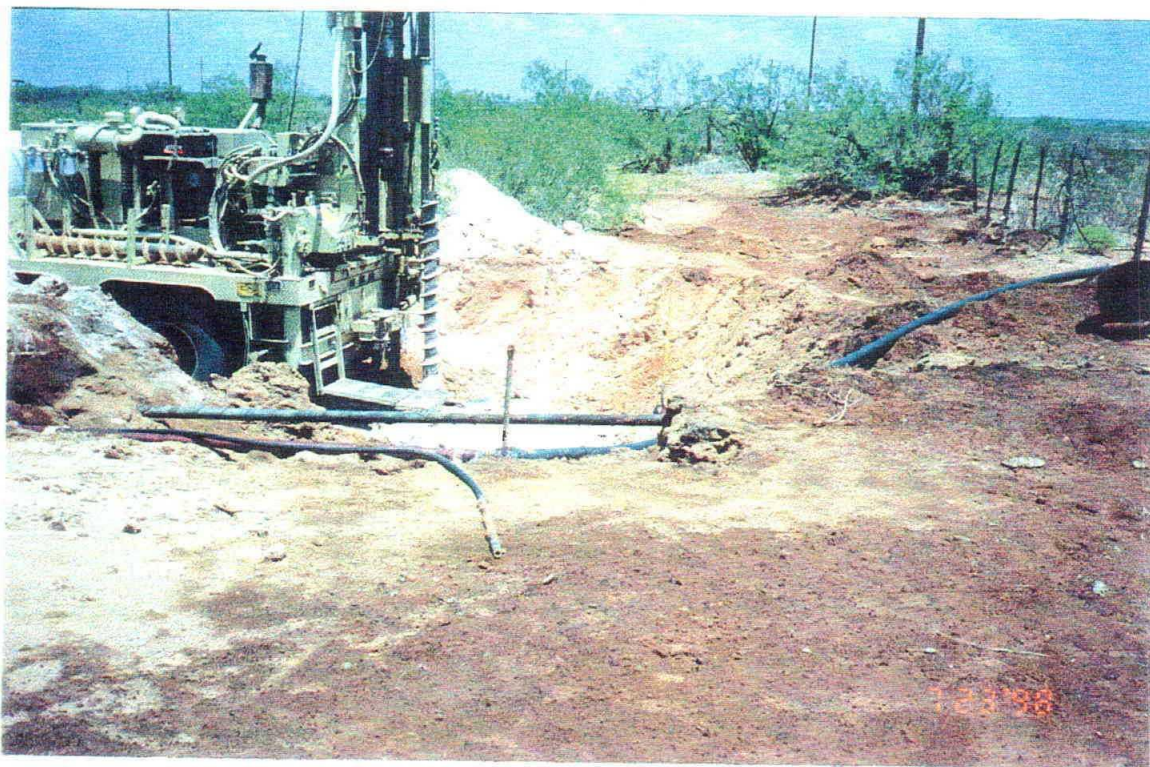


Michael Bernard  
Environmental Coordinator

CC: Paul Griesedieck - EH&S Manager  
Doug O'Neil - Production Manager  
Jon Hale - District Manager  
Jim Ellison - Superintendent







P.O. Box 1816  
Hobbs, New Mexico 88241



Phone (505) 392-5021  
Fax (505) 397-2597

## SOIL ANALYSIS REPORT

DATE : 12-16-97  
CLIENT: Apache Corp.  
SUPERVISOR: A. Hodge  
Sample Matrix: Soil

FACILITY: Skelly Penrose Spill Site  
Test Method: EPA 418.1  
Order No. Don Baucham  
SAMPLE RECEIVED: Intact on site

	TPH		DEPTH	LOCATION
SAMPLE NO. 1:	17,850	PPM	4"-6"	Composite of soils going off site
SAMPLE NO. 2:	691	PPM	8'	Skelly Penrose Spill Site
SAMPLE NO. 3:	374	PPM	10'	Skelly Penrose Spill Site
SAMPLE NO. 4:		PPM		
SAMPLE NO. 5:		PPM		
SAMPLE NO. 6:		PPM		
SAMPLE NO. 7:		PPM		
SAMPLE NO. 8:		PPM		
SAMPLE NO. 9:		PPM		
SAMPLE NO. 10:		PPM		

COMMENTS: These samples # 2 and # 3 were taken using a backhoe to define the vertical impact depth of hydrocarbons at the site during the first part of the cleanup.

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## SOIL ANALYSIS REPORT

DATE : 12-16-97  
CLIENT: Apache Corp.  
SUPERVISOR: A. Hodge  
Sample Matrix: Soil

FACILITY: Skelly Penrose Spill Site  
Test Method: EPA 325.3  
Order No. Don Baucham  
SAMPLE RECEIVED: Intact on site

	CL		DEPTH	LOCATION
SAMPLE NO. 1:	23,000	PPM	8'	Skelly Penrose Spill Site
SAMPLE NO. 2:	21,800	PPM	10'	Skelly Penrose Spill Site
SAMPLE NO. 3:	4,500	PPM	15'	Skelly Penrose Spill Site
SAMPLE NO. 4:		PPM		
SAMPLE NO. 5:		PPM		
SAMPLE NO. 6:		PPM		
SAMPLE NO. 7:		PPM		
SAMPLE NO. 8:		PPM		
SAMPLE NO. 9:		PPM		
SAMPLE NO. 10:		PPM		

COMMENTS: These samples were taken during the firts part of the cleanup to check the CL levels. No samples were sent to lab to confirm the levels of CL.



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## SOIL ANALYSIS REPORT

DATE : 7-23-98  
CLIENT: Apache Corp.  
SUPERVISOR: A. Hodge  
Sample Matrix: Soil

FACILITY: Skelly Penrose Spill Site  
Test Method: EPA 325.3  
Order No. Don Baucham  
SAMPLE RECEIVED: Intact on site

	CL		DEPTH	LOCATION
SAMPLE NO. 1:	11,600	PPM	10'-12'	Skelly Penrose Spill Site
SAMPLE NO. 2:	1,800	PPM	15'-17'	Skelly Penrose Spill Site
SAMPLE NO. 3:	700	PPM	20'-22'	Skelly Penrose Spill Site
SAMPLE NO. 4:	N/S	PPM	25'-27'	Skelly Penrose Spill Site
SAMPLE NO. 5:	<500	PPM	27'-29'	Skelly Penrose Spill Site
SAMPLE NO. 6:		PPM		
SAMPLE NO. 7:		PPM		
SAMPLE NO. 8:		PPM		
SAMPLE NO. 9:		PPM		
SAMPLE NO. 10:		PPM		

COMMENTS: These samples were taken using a Hollow Stem Auger and split spoon to sample. There was no sample recovered for sample # 4 due to rock at 25'. These samples were taken to define the vertical impact of chlorides at the spill site. Sample # 5 was split and sent to a third party lab to confirm CL levels.

## **LAB ANALYSIS REPORTS**



# ANACHEM INC.

8 Prestige Circle, Suite 104 Allen, Texas 75002  
972/727-9003 • FAX # 972/727-9686 • 1-800-966-1186

**Customer Name:** Rhino Env. - Hobbs  
**Date Received:** July 29, 1998 at 10:00:00  
**Date Reported:** August 6, 1998  
**Submission #:** 9807000410  
**Project:** APACHE OIL CO.


**SAMPLES** The submission consisted of 1 sample with sample I.D. shown in the attached data table.

**TESTS** The sample listed in the attached result pages was analyzed for:  
\* BTEX (EPA 8020)  
\* CHLORIDE (EPA 300.0)  
\* TPH DIESEL-RANGE (MOD 8015)

## Distribution Of Reports

1-Mr. Allen Hodge of Rhino Env. - Hobbs  
Ph. 505-392-4498 Fax 505-392-4498

Respectfully Submitted,  
Anachem, Inc.

  
Howard H. Hayden, B.S.  
Chemist

Submission #: 9807000410 lms

  
C.E. Newton, Ph.D.  
Chemist

**NOTE:** Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualities of apparently identical or similar materials.

111146 to 111146

Page 1 of 3

Visit us on the internet at <http://www.anachem.com>

Client Name: Rhino Env. - Hobbs  
Submission #: 9807000410  
Project Name: APACHE OIL CO.  
Report Date: 08/06/98

**Client Sample #: SPLIT SPOON SAMPLE 27-29**

Laboratory ID #: 111146 Order Type: Normal Matrix: Soil  
Sample Container: 4oz EPA Approved Glass Jar Aqua Lid  
Sampling Location: SKELLY PENROSE SPILL  
Sampling Date: 07/23/98

**BTEX (EPA 8020)**

Analyte	Results(mg/kg)	Detection Limit
Benzene	<0.40	0.40
Toluene	<0.50	0.50
Ethyl Benzene	<0.50	0.50
Xylenes	<0.50	0.50

**CHLORIDE (EPA 800.0)**

Analyte	Results(mg/l)	Detection Limit
Chloride	48.5	0.1

**TPH DIESEL-RANGE (MOD 8015)**

Analyte	Results(mg/kg)	Detection Limit
Diesel-Range Petroleum Hydrocarbons	6.1	5.0



Report To: Rhino Environmental Services  
 Lab Number: 9807000410  
 Page 2 of 2

Project: Apache Oil Co.

**QUALITY CONTROL DATA**

<u>METHOD</u>	<u>ANALYST</u>	<u>MATRIX</u>	<u>DATE EXTRACTED</u>	<u>DATE ANALYZED</u>
BTEX 8020	Howard Hayden	Solid	7/28/98	7/28/98

<u>SPIKE COMPOUND</u>	<u>SPIKE AMOUNT</u>	<u>% REC 1</u>	<u>% REC 2</u>	<u>% REC QC LIMIT</u>	<u>% VAR.</u>	<u>% VAR QC LIMIT</u>
Benzene	100 ppb	84.9	82.9	80-120	2.3	20.0
Toluene	100 ppb	86.8	84.8	80-120	2.3	20.0
Ethyl Benzene	100 ppb	90.2	88.5	80-120	1.8	20.0
Xylenes	300 ppb	90.2	88.5	80-120	1.8	20.0

**QUALITY CONTROL DATA**

<u>METHOD</u>	<u>ANALYST</u>	<u>MATRIX</u>	<u>DATE EXTRACTED</u>	<u>DATE ANALYZED</u>
8015 Mod.	Howard Hayden	Solid	7/29/98	7/29/98

<u>SPIKE COMPOUND</u>	<u>SPIKE AMOUNT</u>	<u>% REC 1</u>	<u>% REC 2</u>	<u>% REC QC LIMIT</u>	<u>% VAR.</u>	<u>% VAR QC LIMIT</u>
Diesel Fuel	6085 ppm	93.4	87.4	20-150	6.4	30

**QUALITY CONTROL DATA**

<u>ANALYTE</u>	<u>DATE ANALYZED</u>	<u>SPIKE (ppm)</u>	<u>STAND. DEV.</u>	<u>COEFF. OF VAR %</u>	<u>REC1/%</u>	<u>REC2/%</u>
Chloride	8/4/98	—	1.25	3.7	110	100

Standard Deviation =  $(x1-x2)/1.414$

Coefficient of Variability % =  $(S.D./Avg.) \times 100$

Recovery % =  $[(spiked-unsiked)/expected] \times 100$



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
DISTRICT I HOBBBS  
PO BOX 1980 Hobbs, NM 88241  
(505) 393-6161 Santa Fe, New Mexico 87505  
FAX (505) 393-6727-7131

Jennifer A. Salisbury  
CABINET SECRETARY

July 2, 1998

*COPY FOR  
HOBBS  
SF  
FILES!*

Mr. Don Baucham  
Apache Corp.  
P.O. Box 848  
Wink, Texas 79789

Re: C-141 Skelly Penrose A Unit Bty #7 UI ? Sec 4-Ts23s-R37e

Dear Mr. Baucham:

Please provide Final C-141 report for the above release. Please include closure information such as bottom hole analysis (TPH, BTEX, & Chlorides). Also provide analysis for any remediated soils. Include information pertaining to any waste disposed of off-site i.e disposal site.

The NMOCD has reviewed your initial report and it appears there is shallow groundwater in the area. Please perform a site assessment and provide a ranking score and clean-up level pursuant to NMOCD Guidelines for this site.

Please find enclosed new C-141 forms for your use. Please discard any old forms and start using the new one. **Please provide this information within 15 days of receipt of this letter.** NMOCD will allow addition time for good cause shown. If you require any further information or assistance please do not hesitate to call (505-393-6161) or write this office.

Sincerely Yours,

Wayne Price-Environmental Engineer

cc: Chris Williams-NMOCD District I Supervisor

file: wp98/Apbt7

attachments- C-141 forms