

*Dennis E. Faust*  
DEPUTY OIL & GAS INSPECTOR

AUG 13 1999

JICARILLA APACHE TRIBE  
ENVIRONMENTAL PROTECTION OFFICE  
P.O. BOX 507  
DULCE, NEW MEXICO 87528

OK 85432  
1 p.t.  
SUBMIT 1 COPY TO:  
NATURAL RESOURCE DEPT  
AND OIL & GAS ADMINISTRATION

PIT REMEDIATION AND CLOSURE REPORT

*Approved*  
Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9200

Address: 200 Amoco Court, Farmington, NM 87401

Facility or Well Name: JICARILLA C #7

Location: Unit or Qtr/Qtr Sec M Sec 13 T 26 N R 5 W County Rio ARIZONA

Pit Type: Separator X Dehydrator      Other     

Land Type: RANGE

Pit Location: Pit dimensions: length 30', width 25', depth 20'  
(Attach diagram)

Reference: wellhead X, other     

Footage from reference: 75

Direction from reference: 0 Degrees      East of North X  
     West      South     

**Depth To Groundwater:**

(Vertical distance from  
contaminants to seasonal  
high water elevation of  
groundwater)

Less than 50 feet	(20 points)	
50 feet to 99 feet	(10 points)	
Greater than 100 feet	(0 points)	<u>0</u>

**Distance to an Ephemeral Stream**

(Downgradient dry wash greater than  
ten feet in width)

Less than 100 feet	(10 points)	
Greater than 100 feet	(0 points)	<u>0</u>

**Distance to Nearest Lake, Playa, or Watering Pond**

(Downgradient lakes, playas and  
livestock or wildlife watering ponds)

Less than 100 feet	(10 points)	
Greater than 100 feet	(0 points)	<u>0</u>

**Wellhead Protection Area:**

(Less than 200 feet from a private  
domestic water source, or: less than  
1000 feet from all other water sources)

Yes	(20 points)	
No	(0 points)	<u>0</u>

**Distance To Surface Water:**

(Horizontal distance to perennial  
lakes, ponds, rivers, streams, creeks,  
irrigation canals and ditches)

Less than 100 feet	(20 points)	
100 feet to 1000 feet	(10 points)	
Greater than 1000 feet	(0 points)	<u>0</u>

**RANKING SCORE (TOTAL POINTS):** 0

Date Remediation Started: \_\_\_\_\_ Date Completed: 9-10-96

Remediation Method: Excavation X Approx. cubic yards 550  
Check all appropriate sections) Landfarmed X Insitu Bioremediation \_\_\_\_\_  
Other \_\_\_\_\_

Remediation Location: Onsite X Offsite \_\_\_\_\_  
(i.e. landfarmed onsite, name and location of offsite facility) \_\_\_\_\_

General Description of Remedial Action: Excavation TO BEDROCK BOTTOM

Groundwater Encountered: No X Yes \_\_\_\_\_ Depth \_\_\_\_\_

Final Pit: Sample location see Attached Documents

Closure Sampling: \_\_\_\_\_  
(if multiple samples, attach sample results and diagram of sample locations and depths)

Sample depth 10'

Sample date 9-10-96 Sample time \_\_\_\_\_

Sample Results

Soil: Benzene	(ppm)	_____	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	_____	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>3</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>720</u>	Total Xylenes	(ppb)	_____

Groundwater Sample: Yes \_\_\_\_\_ No X (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 9-11-96 PRINTED NAME Buddy D. Shaw

SIGNATURE Buddy D. Shaw AND TITLE Environmental Coordinator

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO \_\_\_\_\_ (REASON) \_\_\_\_\_

SIGNED: [Signature] DATE: 9-17-96

140-

## FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION: JICARILLA C #7	PIT TYPE: SEP.	DATE STARTED: 9-10-96
QUAD/UNIT: M SEC: 13 TWP: 26 N RNG: 5 W BM: NM CNTY: RA ST: NM		DATE FINISHED: _____
QTR/FOOTAGE: SW/SW	CONTRACTOR: PAUL	ENVIRONMENTAL SPECIALIST: R Eo

EXCAVATION APPROX. 25 FT. x 30 FT. x 20 FT. DEEP. CUBIC YARDS: ~550  
DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD: LANDFARM  
LAND USE: RANGE LEASE: 09000108 FORMATION: OK/MR

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>75</u> FEET <u>NORTH</u> FROM WELLHEAD.		
DEPTH TO GROUNDWATER: <u>&gt;100'</u>	NEAREST WATER SOURCE: <u>&gt;1000'</u>	NEAREST SURFACE WATER: <u>&gt;1000'</u>	
NMOC D RANKING SCORE: <u>0</u>	NMOC D TPH CLOSURE STD: <u>5000</u> PPM		

SOIL AND EXCAVATION DESCRIPTION:      PIT DISPOSITION:      ABANDONED  
EXCAVATED TO BEDROCK ON NORTH SIDEWALL AND BOTTOM. SIDET CONSIST OF  
SILTY SAND. SOME STAIN ON WEST SIDE WALL.

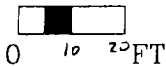
RISK ASSESSED

REPORT

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
W5-10'	1817	10.0	20.0	1	360	720

SCALE



# PIT PERIMETER

## OVM RESULTS

PIT PROFILE

[illegible]

TRAVEL NOTES: CALLOUT: 9.9.96 ONSITE: 9.10.96 1030

**Well Name:**

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

**Jicarilla C #7**

Unit M, Sec. 13, T26N, R5W

Separator Pit

Basin Dakota/Blanco Mesaverde

Non Vulnerable

&gt; 1000 ft.

&gt; 100 ft.

**RISK ASSESSMENT (non-vulnerable area)**

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 20 feet below grade.

No past or future threat to surface water or groundwater is likely based on the following considerations:

1. Past production fluids were contained locally by a relatively shallow sandstone bedrock located 20 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below sandstone bedrock.
2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.
3. Daily discharge into the earthen pit has been terminated (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
4. Well site located within the **non-vulnerable area** and is approximately 0.31 miles north northwest of the nearest vulnerable area boundary (Tapacito Creek).

**(Refer to Lapis Point Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), 1963, (vulnerable area boundary developed by Mr. William C. Olson, Hydrogeologist, Environmental Bureau, New Mexico Oil Conservation Division).**

Based upon the information given, we conclude that the sandstone bottom creates enough of an impermeable barrier as to subdue impact to groundwater below it (please refer to AMOCO's report "Post Excavation Pit Closure Investigation Summary, July, 1995", with cover letter dated November 30, 1995). AMOCO requests pit closure approval on this location.

**BLAGG ENGINEERING, INC.**

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1  
TOTAL PETROLEUM HYDROCARBONS**

Client:	Amoco	Project #:	
Sample ID:	West Side @ 10'	Date Analyzed:	9-10-96
Project Location:	Jicarilla C #7	Date Reported:	9-11-96
Laboratory Number:	TPH #1817	Sample Matrix:	Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	<b>720</b>	<b>10</b>

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg -----	Duplicate TPH mg/kg -----	% *Diff. -----
	1,420	1,344	5

\*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total  
Recoverable, Chemical Analysis of Water and Waste,  
USEPA Storet No.4551, 1978

Comments: Separator Pit - BJ432

R. E. O'Neill  
Analyst

Michael V. [Signature]  
Review

**JICARILLA APACHE TRIBE  
ENVIRONMENTAL PROTECTION OFFICE  
P.O. BOX 507  
DULCE, NEW MEXICO 87528**

8J432

SUBMIT 1 COPY TO  
NATURAL RESOURCE DEPT  
AND OIL & GAS ADMINISTRATION

**ON-SITE SOIL REMEDIATION REPORT**

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9200

Address: 200 Amoco Court, Farmington, NM 87401

Facility or Well Name: JICARILLA C # 7

Location: Unit or Qtr/Qtr Sec M Sec 13 T 26N R 5W County RIO ARriba

Land Type: RANGE

Date Remediation Started: 9/10/96 Date Completed: 5/7/98

Remediation Method: Landfarmed X Approx. cubic yards 550

Composted       

Other       

<p>Depth To Groundwater: (pts.) <u>0</u></p> <p>Distance to an Ephemeral Stream (pts.) <u>0</u></p> <p>Distance to Nearest Lake, Playa, or Watering Pond (pts.) <u>0</u></p> <p>Wellhead Protection Area: (pts.) <u>0</u></p> <p>Distance To Surface Water: (pts.) <u>0</u></p> <p><b>RANKING SCORE (TOTAL POINTS):</b> <u>0</u></p>	<p style="text-align: center;"><b>Final Closure Sampling:</b></p> <p>Sampling Date: <u>5/6/98</u> Time: <u>1130</u></p> <p>Sample Results:</p> <p>Field Headspace (ppm) <u>0.0</u></p> <p>TPH (ppm) <u>298</u> Method <u>8015</u></p> <p>Other <u>      </u></p>
--	--

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 5/7/98 PRINTED NAME Buddy D. Shaw

SIGNATURE Buddy D. Shaw AND TITLE Environmental Coordinator

AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES        NO        (REASON)       

SIGNED:        DATE:

CLIENT: AMOCOBLAGG ENGINEERING, INC.  
P.O. BOX 87, BLOOMFIELD, NM 87413  
(505) 632-1199LOCATION NO: 8J432C.O.C. NO: 5774

## FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: JICORILLA C WELL #: 7 PITS:  
QUAD/UNIT: M SEC: 13 TWP: 26N RNG: 5W PM: NM CNTY: RA ST: NM  
QTR/FOOTAGE: SW/4 SW/4 CONTRACTOR: P+SDATE STARTED: 5/6/98

DATE FINISHED: \_\_\_\_\_

ENVIRONMENTAL  
SPECIALIST: NV

## SOIL REMEDIATION:

REMEDICATION SYSTEM: LANDFARMAPPROX. CUBIC YARDAGE: 550LAND USE: RANGELIFT DEPTH (ft): 2'-3'

## FIELD NOTES &amp; REMARKS:

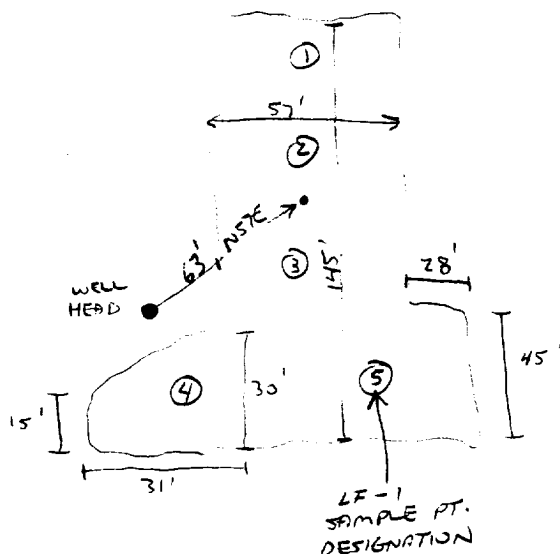
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'NMOCD RANKING SCORE: 6 NMOCD TPH CLOSURE STD: 5000 PPM

SOIL CONSIST OF MOD. TO DK. YELL. BROWN SAND, NON COHESIVE, SLIGHTLY MOIST,  
FIRM NO APPARENT DISCOLORATION OR HC ODOR OBSERVED IN ANY OF THE  
SAMPLE PTS., SAMPLING DEPTH RANGE FROM 6" TO 24", COLLECTED 5 PT.  
COMPOSITE FOR LAB ANALYSIS.

## FIELD 418.1 CALCULATIONS

SAMP. TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

## SKETCH/SAMPLE LOCATIONS



## OVM RESULTS

## LAB SAMPLES

SAMPLE ID	FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS	TIME	RESULTS
LF-1	0.0	LF-1	TPH (8015)	1130	298

## SCALE

0 FT

## TRAVEL NOTES:

CALLOUT: NAONSITE: 5/6/98

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

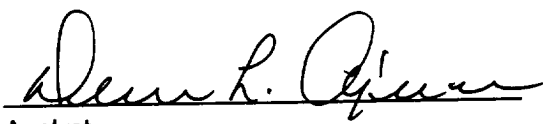
Client:	Blagg / Amoco	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	05-07-98
Laboratory Number:	D233	Date Sampled:	05-06-98
Chain of Custody No:	5774	Date Received:	05-06-98
Sample Matrix:	Soil	Date Extracted:	05-07-98
Preservative:	Cool	Date Analyzed:	05-07-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

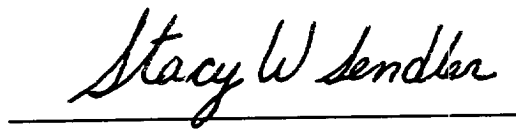
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	298	0.1
Total Petroleum Hydrocarbons	298	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Jicarilla C #7 Landfarm. 5 Pt. Composite.

  
Analyst

  
Review



**ENVIROTECH INC.**  
5796 U.S. Highway 64-3014  
Farmington, New Mexico 87401  
(505) 632-0615