

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

Blow-Risk assessed  
on basis of  
SUBMIT COPY TO  
NATURAL RESOURCE DEPT  
AND OIL & GAS ADMINISTRATION

RECEIVED  
AUG 09 1999

PIT REMEDIATION AND CLOSURE REPORT

Non-vulnerable, practical extent

CON. DIV.  
DIST. 8

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9200  
Address: 200 Amoco Court, Farmington, NM 87401  
Facility or Well Name: JICARILLA APACHE 102-17  
Location: Unit or Qtr/Qtr Sec H Sec 3 T 26N R 4W County RIO ARriba  
Pit Type: Separator      Dehydrator      Other BLOW  
Land Type: RANGE

Pit Location: Pit dimensions: length 35', width 25', depth 18'  
(Attach diagram) Reference: wellhead X, other       
Footage from reference: 150'  
Direction from reference: 20 Degrees      East of North       
X West South X

<b>Depth To Groundwater:</b> (Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet	(20 points)	<u>0</u>
	50 feet to 99 feet	(10 points)	
	Greater than 100 feet	(0 points)	
<b>Distance to an Ephemeral Stream</b> (Downgradient dry wash greater than ten feet in width)	Less than 100 feet	(10 points)	<u>0</u>
	Greater than 100 feet	(0 points)	
<b>Distance to Nearest Lake, Playa, or Watering Pond</b> (Downgradient lakes, playas and livestock or wildlife watering ponds)	Less than 100 feet	(10 points)	<u>0</u>
	Greater than 100 feet	(0 points)	
<b>Wellhead Protection Area:</b> (Less than 200 feet from a private domestic water source, or: less than 1000 feet from all other water sources)	Yes	(20 points)	<u>0</u>
	No	(0 points)	
<b>Distance To Surface Water:</b> (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 100 feet	(20 points)	<u>0</u>
	100 feet to 1000 feet	(10 points)	
	Greater than 1000 feet	(0 points)	

RANKING SCORE (TOTAL POINTS): 0

BJ400

Date Remediation Started: \_\_\_\_\_ Date Completed: 8/15/96

Remediation Method: Excavation ☒ Approx. cubic yards 280  
 Check all appropriate sections) Landfarmed ☒ Insitu Bioremediation \_\_\_\_\_  
 Other \_\_\_\_\_

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

General Description of Remedial Action: ExcavationGroundwater Encountered: No ☒ 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 20'  
 Sample date 8/12/96 Sample time 0850  
 Sample Results

Soil: Benzene	(ppm)	<u>ND</u>	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	<u>235.15</u>	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>591</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>3,500</u>	Total Xylenes	(ppb)	_____

Groundwater Sample: Yes \_\_\_\_\_ No ☒ (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 8/15/96 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 \_\_\_\_\_ NO ☒ (REASON) conditional closure till P&A.

SIGNED: Ken C. Mammall DATE: 8-21-96



**Well Name:**

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

**Jicarilla Apache 102 #17**

Unit H, Sec. 3, T26N, R4W

Blow Pit

Tapacito Pictured Cliffs

Non Vulnerable

&gt; 1000 ft.

&gt; 100 ft.

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

Pit remediation activities were terminated when trackhoe reached practical extent for abandoned pit (18 ft. below grade) and for safety concerns (underground piping and surface equipment).

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

1. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below presumed shallow sandstone bedrock (based on informal site observation of adjacent sandstone outcrop).
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 on the fringe of the Cottonwood Canyon wash **vulnerable area boundary**.

**(Refer to Pine Lake Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), Photorevised 1982, (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 subsurface vertical impact to groundwater is very unlikely. 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:	5 @ 20'	Date Analyzed:	08-12-96
Project Location:	Jicarilla Apache 102-17	Date Reported:	08-12-96
Laboratory Number:	TPH-1772	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
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Total Recoverable Petroleum Hydrocarbons	<b>3,500</b>	<b>20</b>

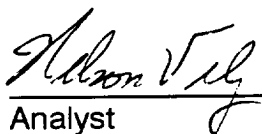
ND = Not Detectable at stated detection limits.

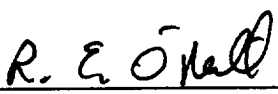
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	-----	-----	-----
	3292	3536	7.15

\*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: Blow Pit - BJ400

  
Analyst

  
Review

**VOLATILE AROMATIC HYDROCARBONS****Blagg Engineering, Inc.**



Project ID:	Jicarilla Apache 102-17	Report Date:	08/14/96
Sample ID:	5 @ 20'	Date Sampled:	08/12/96
Lab ID:	4707	Date Received:	08/13/96
Sample Matrix:	Soil	Date Extracted:	08/14/96
Preservative:	Cool	Date Analyzed:	08/14/96
Condition:	Intact		

Target Analyte	Concentration (mg/kg)	Detection Limit (mg/kg)
Benzene	ND	0.16
Toluene	47.2	1.57
Ethylbenzene	9.25	1.57
m,p-Xylenes	142	3.15
o-Xylene	36.7	1.57

ND - Analyte not detected at the stated detection limit.

<b>Quality Control:</b>	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	103	81 -117%
	Bromofluorobenzen	104	74 -121%

**Reference:** Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics;  
Test Methods for Evaluating Solid Wastes, SW-846, United States  
Environmental Protection Agency, Final Update I, July, 1992.

**Comments:**  
Analyst  
Review

# BLAGG ENGINEERING, INC.

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

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

## Field TPH-Worksheet

\*\*\*\*\*

Max Characters:

Client:

AMOCO

Project #:

Sample ID:

5 @ 20'

Date Analyzed:

08-12-96

Project Location:

Jicarilla Apache 102-17

Date Reported:

08-12-96

Laboratory Number:

TPH-1772

Sample Matrix:

Soil

Sample Weight: 5.00 grams  
Volume Freon: 20.00 mL  
Dilution Factor: 1 (unitless)  
TPH Reading: 877 mg/kg

TPH Result: 3508.0 mg/kg  
Reported TPH Result: 3500 mg/kg  
Actual Detection Limit: 20.0 mg/kg  
Reported Detection Limit: 20 mg/kg

QA/QC:

Original  
TPH mg/kg

Duplicate  
TPH mg/kg

%  
Diff.

-----  
3292

-----  
3536

-----  
7.15

Comments:

\*\*\*\*\*Max Characters\*\*\*\*\*

Comments:

Blow Pit - BJ400





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DULCE, NEW MEXICO 87528

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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 APACHE # 102 - 17  
Location: Unit or Qtr/Qtr Sec H Sec 3 T~~26~~6N R 4W County RIO ARriba  
Land Type: RANGE

Date Remediation Started: 8/12/96 Date Completed: 7/10/98  
Remediation Method: Landfarmed X Approx. cubic yards 280  
Composted         
Other       

Depth To Groundwater: (pts.) 0  
Distance to an Ephemeral Stream (pts.) 0  
Distance to Nearest Lake, Playa, or Watering Pond (pts.) 0  
Wellhead Protection Area: (pts.) 0  
Distance To Surface Water: (pts.) 0  
RANKING SCORE (TOTAL POINTS): 0

**Final Closure Sampling:**  
Sampling Date: 7/6/98 Time: 1030  
Sample Results:  
Field Headspace (ppm) 0.0  
TPH (ppm) ND Method 8015  
Other       

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

DATE 7/10/98 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 X NO        (REASON) use as Backfill

SIGNED: Kent C. M... DATE: 7-27-98

CLIENT: <u>AMOCO</u>	<b>BLAGG ENGINEERING, INC.</b> P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BT 400</u>  C.D.C. NO: <u>6089</u>
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## FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: <u>JICA. APACHE</u> 102 WELL #: <u>17</u> PITS: <u>BLOW</u> QUAD/UNIT: <u>H</u> SEC: <u>3</u> TWP: <u>26N</u> RNG: <u>4W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u> QTR/FOOTAGE: <u>SE1/4</u> <u>NE1/4</u> CONTRACTOR: <u>P+S</u>	DATE STARTED: <u>7/6/98</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV</u>
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SOIL REMEDIATION:	
REMEDIALATION SYSTEM: <u>LANDFARM</u>	APPROX. CUBIC YARDAGE: <u>280</u>
LAND USE: <u>RANGE</u>	LIFT DEPTH (ft): <u>1'-2'</u>

FIELD NOTES & REMARKS:		
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 MOSTLY MOD. YELL. BROWN SILTY SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, SAMPLING DEPTHS RANGE FROM 6" TO 1 1/2' NO DISCOLORATION OR HC ODOR OBSERVED @ ANY OF THE SAMPLING PTS., 5 PT. COMPOSITE SAMPLE COLLECTED FOR LAB ANALYSIS.		
<div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">             CLOSED           </div>		

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)	1030	ND

SCALE

0
FT

TRAVEL NOTES: CALLOUT: <u>NA</u>	ONSITE: <u>7/6/98</u>
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# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

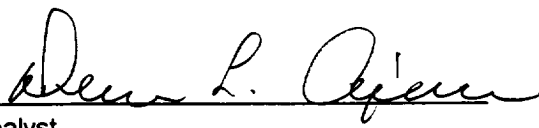
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	07-08-98
Laboratory Number:	D592	Date Sampled:	07-06-98
Chain of Custody No:	6089	Date Received:	07-06-98
Sample Matrix:	Soil	Date Extracted:	07-07-98
Preservative:	Cool	Date Analyzed:	07-07-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

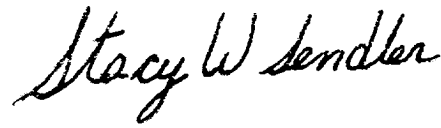
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

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 Apache #102 - 17 Landfarm. 5 Pt. Composite.

  
Analyst

  
Review

## 6089

[illegible]