

*Denny E. Faust*  
DEPUTY OIL & GAS INSPECTOR  
JICARILLA APACHE TRIBE  
ENVIRONMENTAL PROTECTION OFFICE  
P.O. BOX 507

AUG 13 1999

DULCE, NEW MEXICO 87528

OK 85434  
2 pits  
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 # 8E  
Location: Unit or Qtr/Qtr Sec A Sec 13 T26N R5W County RIO ARriba  
Pit Type: Separator      Dehydrator      Other PROD. TANK  
Land Type: RANGE

Pit Location: Pit dimensions: length     , width     , depth       
(Attach diagram) Reference: wellhead X, other       
Footage from reference: 135  
Direction from reference: 60 Degrees      East of North       
X West of South X

<b>Depth To Groundwater:</b> (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>
<b>Distance to an Ephemeral Stream</b> (Downgradient dry wash greater than ten feet in width)	Less than 100 feet (10 points) Greater than 100 feet (0 points)	<u>0</u>
<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) Greater than 100 feet (0 points)	<u>0</u>
<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) No (0 points)	<u>0</u>
<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) 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 ☒ (check all appropriate sections) Landfarmed ☐ Insitu Bioremediation ☐ Other \_\_\_\_\_

Remediation Location: Onsite ☐ Offsite NO SOIL TO REMEDIATE  
(i.e. landfarmed onsite, name and location of offsite facility)General Description of Remedial Action: Excavation - TEST HOLE DUG - NO CONTAMINATION ENCOUNTEREDGroundwater 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 4'

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

## Sample Results

Soil: Benzene (ppm)	_____	Water: Benzene (ppb)	_____
Total BTEX (ppm)	_____	Toluene (ppb)	_____
Field Headspace (ppm)	<u>5</u>	Ethylbenzene (ppb)	_____
TPH (ppm)	<u>20</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 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 ☒ NO ☐ (REASON) \_\_\_\_\_SIGNED: Kent M. Marshall DATE: 9-17-96



# 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:	Test Hole #1 @ 4'	Date Analyzed:	9-10-96
Project Location:	Jicarilla C #8E	Date Reported:	9-11-96
Laboratory Number:	TPH #1819	Sample Matrix:	Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	20	10

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: Production Tank Pit - BJ434

R. E. O'Neil  
Analyst

William V. J.  
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:

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Client:

Amoco

Date Sampled:

9-10-96

Sample ID:

Test Hole #1 @ 4'

Date Analyzed:

9-10-96

Project Location:

Jicarilla C #8E

Date Reported:

9-11-96

Laboratory Number:

TPH #1819

Sample Matrix:

Soil

Sample Weight:

10.00 grams

Volume Freon:

20.00 mL

Dilution Factor:

1 (unitless)

TPH Reading:

10 mg/kg

TPH Result:

20.0 mg/kg

Reported TPH Result:

20.0 mg/kg

Actual Detection Limit:

10.0 mg/kg

Reported Detection Limit

10 mg/kg

QA/QC:

Original  
TPH mg/kg

Duplicate  
TPH mg/kg

%  
Diff.

-----  
1420

-----  
1344

-----  
5

Comments:

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

Comments:

Production Tank Pit - BJ434

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

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

**PIT REMEDIATION AND CLOSURE REPORT**

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

**Address:** 200 Amoco Court, Farmington, NM 87401

**Facility or Well Name:** JICARILLA C # 8E

**Location:** Unit or Qtr/Qtr Sec A Sec 13 T26N R5W County RIO ARriba

**Pit Type:** Separator X Dehydrator      Other     

**Land Type:** RANGE

**Pit Location:** Pit dimensions: length 35', width 16', depth 14'  
(Attach diagram)

Reference: wellhead X, other     

Footage from reference: 130

Direction from reference: 10 Degrees      East of North       
X West of South X

<b>Depth To Groundwater:</b> (Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet 50 feet to 99 feet Greater than 100 feet	(20 points) (10 points) ( 0 points)	<u>0</u>
<b>Distance to an Ephemeral Stream</b> (Downgradient dry wash greater than ten feet in width)	Less than 100 feet Greater than 100 feet	(10 points) ( 0 points)	<u>0</u>
<b>Distance to Nearest Lake, Playa, or Watering Pond</b> (Downgradient lakes, playas and livestock or wildlife watering ponds)	Less than 100 feet Greater than 100 feet	(10 points) ( 0 points)	<u>0</u>
<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 No	(20 points) ( 0 points)	<u>0</u>
<b>Distance To Surface Water:</b> (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 100 feet 100 feet to 1000 feet Greater than 1000 feet	(20 points) (10 points) ( 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 300  
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: ExcavationGroundwater 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 15'

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

## Sample Results

Soil: Benzene	(ppm)	_____	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	_____	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>85</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>3060</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: 9-11-96

CLIENT: <u>Amoco</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>B5434</u> C.D.C. NO: _____
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## FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION: JICARILLA C # 8E	PIT TYPE: SEP.	DATE STARTED: 9-10-96
QUAD/UNIT: A SEC: 13 TWP: 26 N RNG: 5 W BM: NM CNTY: RA ST: NM		DATE FINISHED: _____
QTR/FOOTAGE: 1020' FNL. 870' FEL.	CONTRACTOR: PAUL	ENVIRONMENTAL SPECIALIST: PEG

EXCAVATION APPROX. 35 FT. x 16 FT. x 14 FT. DEEP. CUBIC YARDS: ~300  
DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD: LANDFARM  
LAND USE: RANGE LEASE: \_\_\_\_\_ FORMATION: DAKOTA

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>130</u> FEET <u>S10°W</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

SOIL CONSISTS OF MOIST, BROWN, SILTY SAND TO CLAYEY SAND  $\rightarrow$  SAND BOTTOM.  
SLIGHT BOTTOM OASIS.

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
NB@15'	1818	10.0	20.0	10	153	3060

(CLOSED)

SCALE

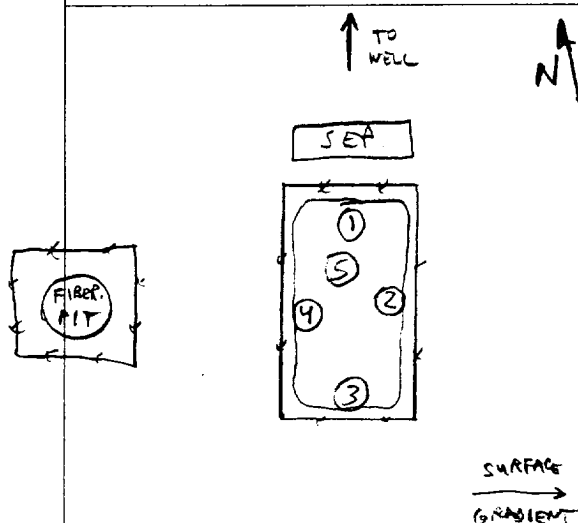
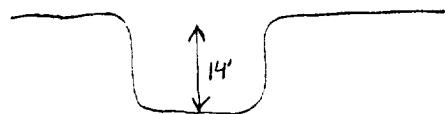


0 10 20 FT

PIT PERIMETER

## OVM RESULTS

PIT PROFILE

[illegible]

TRAVEL NOTES: CALL OUT: 9-9-96 ONSITE: 9-10-96 1120

**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:	North Bottom @ 15'	Date Analyzed:	9-10-96
Project Location:	Jicarilla C #8E	Date Reported:	9-11-96
Laboratory Number:	TPH #1818	Sample Matrix:	Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	<b>3,100</b>	<b>100</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 - BJ434

R. E. O'Neill  
Analyst

Kirkon Telf  
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	Date Sampled:	9-10-96
Sample ID:	North Bottom @ 15'	Date Analyzed:	9-10-96
Project Location:	Jicarilla C #8E	Date Reported:	9-11-96
Laboratory Number:	TPH #1818	Sample Matrix:	Soil

Sample Weight:	10.00	grams
Volume Freon:	20.00	mL
Dilution Factor:	10	(unitless)
TPH Reading:	153	mg/kg

TPH Result:	3060.0	mg/kg
Reported TPH Result:	3100.0	mg/kg
Actual Detection Limit:	100.0	mg/kg
Reported Detection Limit	100	mg/kg

QA/QC:	Original TPH mg/kg	Duplicate TPH mg/kg	% Diff.
	----- 1420	----- 1344	----- 5

Comments: \*\*\*\*\*Max Characters\*\*\*\*\*

Comments: Separator Pit - BJ434

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

BJ434

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 #8E  
Location: Unit or Qtr/Qtr Sec A 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 ☒ Approx. cubic yards 300  
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: 5/6/98 Time: 0955  
Sample Results:  
Field Headspace (ppm) 0.0  
TPH (ppm) 94.6 Method 8015  
Other ☐

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: <u>AMOCO</u>	<b>BLAGG ENGINEERING, INC.</b> P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8J434</u>  C.O.C. NO: <u>5772</u>
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<b>FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION</b>	
LOCATION: NAME: <u>JICARILLA</u> C    WELL #: <u>8E</u> PITS: _____ QUAD/UNIT: <u>A</u> SEC: <u>13</u> TWP: <u>26N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u> QTR/FOOTAGE: <u>NE/4 NE/4</u> CONTRACTOR: <u>P+S</u>	DATE STARTED: <u>5/6/98</u> DATE FINISHED: _____  ENVIRONMENTAL SPECIALIST: <u>NV</u>

SOIL REMEDIATION: REMEDIATION SYSTEM: <u>LANDFARM</u> APPROX. CUBIC YARDAGE: <u>300</u> LAND USE: <u>RANGE</u> LIFT DEPTH (ft): <u>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> NMOCD RANKING SCORE: <u>0</u> NMOCD TPH CLOSURE STD: <u>5000</u> PPM SOIL VARYS FROM DR. YELL. BROWN SAND TO DUSKY BROWN CLAY, NON COHESIVE, SAND TO PLASTIC CLAY, SLIGHTLY MOIST, FIRM TO SLIGHTLY STIFF (CLAY), BLACK DISCOLORATION w/ NO APPARENT HC OADR OBSERVED IN ALL SAMPLE PTS., SAMPLING DEPTH RANGED FROM 6" TO 1 1/2' DEEP, 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)	0955	94.6

SCALE

0
FT

TRAVEL NOTES:    CALLOUT: <u>NA</u>	ONSITE: <u>5/6/98</u>
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# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

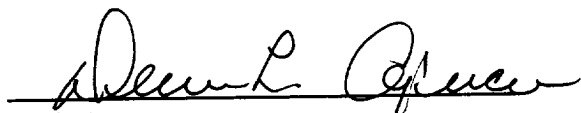
Client:	Blagg / Amoco	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	05-07-98
Laboratory Number:	D231	Date Sampled:	05-06-98
Chain of Custody No:	5772	Date Received:	05-06-98
Sample Matrix:	Soil	Date Extracted:	05-07-98
Preservative:	Cool	Date Analyzed:	05-07-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

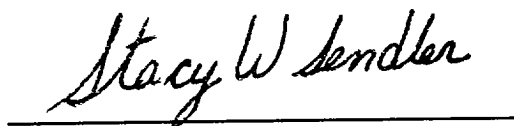
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	85.8	0.2
Diesel Range (C10 - C28)	8.8	0.1
Total Petroleum Hydrocarbons	94.6	0.2

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 #8E Landfarm. 5 Pt. Composite.

  
Analyst

  
Review

**ENVIROTECH INC.**  
5796 U.S. Highway 64-3014  
Farmington, New Mexico 87401