

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

87547

28113  
SUBMIT 1 COPY TO

NATURAL RESOURCE DEPT

AND OIL & GAS ADMINISTRATION

RECEIVED  
AUG 09 1999

PIT REMEDIATION AND CLOSURE REPORT

OIL CON. DIV.

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9200  
Address: 200 Amoco Court, Farmington, NM 87401  
Facility or Well Name: JICARILLA APACHE 10Z - 7E  
Location: Unit or Qtr/Qtr Sec D Sec 3 T26N R4W County RIO ARriba  
Pit Type: Separator      Dehydrator      Other BLOW  
Land Type: RANGE

Pit Location: Pit dimensions: length 45', width 45', depth 4'  
(Attach diagram) Reference: wellhead X, other       
Footage from reference: 237'  
Direction from reference: 77 Degrees      East of North       
X West of South X

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

**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 SurfaceWater:**

(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

BJS49

BLOW PIT

Date Remediation Started: \_\_\_\_\_

Date Completed: 4/23/98Remediation Method: Excavation ☒Approx. cubic yards 150

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: Excavation. BEDROCK Bottom

Groundwater 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 4/23/98 Sample time 1315

Sample Results

Soil: Benzene (ppm) \_\_\_\_\_ Water: Benzene (ppb) \_\_\_\_\_

Total BTEX (ppm) \_\_\_\_\_ Toluene (ppb) \_\_\_\_\_

Field Headspace (ppm) 296 Ethylbenzene (ppb) \_\_\_\_\_TPH (ppm) 176 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 4/23/98 PRINTED NAME Buddy D. ShawSIGNATURE 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: [Signature] DATE: 4-29-98

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8JS49</u> C.O.C. NO: _____
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FIELD REPORT: CLOSURE VERIFICATION	PAGE No: <u>1</u> of <u>1</u>
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LOCATION: NAME: <u>JICA, APACHE 102</u> WELL #: <u>7E</u> PIT: <u>BLOW</u> QUAD/UNIT: <u>D</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>NW/4</u> <u>NW/4</u> CONTRACTOR: <u>P+S</u>	DATE STARTED: <u>4/23/98</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV</u>
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EXCAVATION APPROX. <u>45</u> FT. x <u>45</u> FT. x <u>4</u> FT. DEEP.	CUBIC YARDAGE: <u>150</u>
DISPOSAL FACILITY: <u>ON-SITE</u> REMEDIATION METHOD: <u>LANDFARMED</u>	
LAND USE: <u>RANGE</u> LEASE: <u>TIC 102</u> FORMATION: <u>OK</u>	

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>237</u> FT. <u>577W</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:
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CHECK ONE:  
☒ PIT ABANDONED  
☐ STEEL TANK INSTALLED  
☐ FIBERGLASS TANK INSTALLED

SIDEWALLS - MOSTLY MOD. TO DR. YELL. BROWN SAND NON COHESIVE, SLIGHTLY MOIST FIRM, SOME BEDROCK OBSERVED THROUGHOUT VARIOUS LOCATIONS NO APPARENT STAINING OR HC ODOR OBSERVED WITH TOP HALF OF EXCAVATION NO APPARENT HC ODOR DETECTED IN ANY OF THE OVM SAMPLES.  
 BOTTOM - MOSTLY LT. GRAY BEDROCK (SANDSTONE) VERY HARD VERY MOIST DUSKY BROWN SAND (PARAFFIN MIXED) THROUGHOUT MAJORITY OF PIT BOTTOM (SEE PIT PERIMETER DIAGRAM), STRONG HC ODOR DETECTED IN OVM SAMPLE.

BEDROCK BOTTOM

RISK ASSESSED

FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1315	2 @ 2'	TPH-1963	5	20	1:1	44	176

SCALE

0 FT

PIT PERIMETER

PIT PROFILE

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 2'	0.0
2 @ 2'	0.0
3 @ 2'	0.0
4 @ 2'	0.0
5 @ 4'	296

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

TRAVEL NOTES:	CALLOUT: <u>4/22/98 - AFTER.</u> ONSITE: <u>4/23/98 - AFTER.</u>
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Well Name:	Jicarilla Contract 102 #7E
Well Site location:	Unit D, Sec. 3, T26N, R4W
Pit Type:	Blow Pit
Producing Formation:	Basin Dakota
Pit Category:	Non Vulnerable
Horizontal Distance to Surface Water:	> 1000 ft.
Vicinity Groundwater Depth:	> 100 ft.

## RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 4 feet below grade.

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 within the non-vulnerable area and is approximately 0.26 miles west of the nearest vulnerable area boundary (Cottonwood Canyon wash).

(Refer to Pine Lake Quadrangle, New Mexico – Rio Arriba County, 7.5 Minute Series (Topographic), 1982 photorevised, (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:	2 @ 2'	Date Analyzed:	04-23-98
Project Location:	Jicarilla Apache 102 - 7E	Date Reported:	04-23-98
Laboratory Number:	TPH-1963	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	180	20

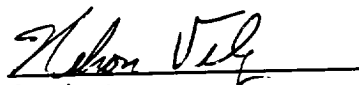
ND = Not Detectable at stated detection limits.

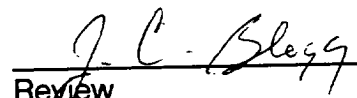
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	608	568	6.80

\*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 - BJ549

  
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:

Sample ID:

Project Location:

Laboratory Number:

AMOCO

2 @ 2'

Jicarilla Apache 102 - 7E

TPH-1963

Project #:

Date Analyzed:

Date Reported:

Sample Matrix:

04-23-98

04-23-98

Soil

Sample Weight: 5.00 grams  
Volume Freon: 20.00 mL  
Dilution Factor: 1 (unitless)  
TPH Reading: 44 mg/kg

TPH Result: 176.0 mg/kg  
Reported TPH Result: 180 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. ----
	608	568	6.80

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

Comments: Blow Pit - BJ549

**JICARILLA APACHE TRIBE  
ENVIRONMENTAL PROTECTION OFFICE  
P.O. BOX 507  
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8JS49

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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 APACHE 102 - 7E  
**Location:** Unit or Qtr/Qtr Sec D Sec 3 T26N R4W County RD ARIZONA  
**Pit Type:** Separator ☒ Dehydrator ☐ Other ☐  
**Land Type:** RANGE

**Pit Location:** (Attach diagram) Pit dimensions: length 25', width 22', depth 5'  
Reference: wellhead ☒, other ☐  
Footage from reference: 150'  
Direction from reference: 67 Degrees ☐ East of North ☒  
☒ West of South ☐

<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 SurfaceWater:</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: 4/28/98

Remediation Method: Excavation ☒ Approx. cubic yards 80  
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: Excavation, BEDROCK BOTTOM, SPRAYED  
NORTH & WEST SIDEWALLS w/ FERTILIZER.

Groundwater 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 2'

Sample date 4/23/98 Sample time 1215

Sample Results

Soil: Benzene	(ppm)	<u>1,580</u>	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	<u>46.030</u>	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>472</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>3,610</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 4/28/98 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: Kenn C. Mamm DATE: 5-7-98



CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>87549</u> C.O.C. NO: <u>5752</u>
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FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME: <u>JICA APACHE 102</u> WELL #: <u>7E</u> PIT: <u>SEP</u>		DATE STARTED: <u>4/23/98</u>
QUAD/UNIT: <u>D</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>		DATE FINISHED: _____
QTR/FOOTAGE: <u>NW/4</u> <u>NW/4</u> CONTRACTOR: <u>P+S</u>		ENVIRONMENTAL SPECIALIST: <u>NV</u>

EXCAVATION APPROX. <u>25</u> FT. x <u>22</u> FT. x <u>5</u> FT. DEEP.	CUBIC YARDAGE: <u>80</u>
DISPOSAL FACILITY: <u>ON-SITE</u>	REMEDIALATION METHOD: <u>LANDFARMED</u>
LAND USE: <u>RANGE</u>	LEASE: <u>JIC 102</u> FORMATION: <u>OK</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>150</u> FT. <u>N67W</u> FROM WELLHEAD.	
DEPTH TO GROUNDWATER: <u>2100'</u>	NEAREST WATER SOURCE: <u>21000'</u>	NEAREST SURFACE WATER: <u>21000'</u>
NMOC D RANKING SCORE: <u>0</u>	NMOC D TPH CLOSURE STD: <u>5000</u> PPM	
SOIL AND EXCAVATION DESCRIPTION:		

CHECK ONE:  
☒ PIT ABANDONED  
☐ STEEL TANK INSTALLED  
☐ FIBERGLASS TANK INSTALLED

SIDEWALLS - MOSTLY GRAYISH BROWN SILTY SAND TO SILTY CLAY, COHESIVE, SLIGHTLY MOIST, FIRM TO STIFF, NO APPARENT STAINING OR HC ODOOR EVIDENT W/IN EXCAVATION, STRONG HC ODOOR DETECTED IN NORTH & WEST SIDEWALL OVM SAMPLES.

BOTTOM - LT. GRAY BEDROCK (SANDSTONE), VERY HARD, HC ODOOR DETECTED IN OVM SAMPLE.

**BEDROCK BOTTOM**

SCALE

0 FT

**RISK ASSESSED**

FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1215							

**PIT PERIMETER**

**PIT PROFILE**

OVM RESULTS	
SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 2'	472
2 @ 2'	0.0
3 @ 2'	76.5
4 @ 2'	457
5 @ 5'	202

LAB SAMPLES		
SAMPLE ID	ANALYSIS	TIME
① @ 2'	TPH/BTEX	1215
<b>BOTH PASSED</b>		

TRAVEL NOTES:	CALLOUT: <u>4/22/98 - AFTER</u>	ONSITE: <u>4/22/98 - AFTER</u>
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<b>Well Name:</b>	<b>Jicarilla Contract 102 #7E</b>
<b>Well Site location:</b>	<b>Unit D, Sec. 3, T26N, R4W</b>
<b>Pit Type:</b>	<b>Separator Pit</b>
<b>Producing Formation:</b>	<b>Basin Dakota</b>
<b>Pit Category:</b>	<b>Non Vulnerable</b>
<b>Horizontal Distance to Surface Water:</b>	<b>&gt; 1000 ft.</b>
<b>Vicinity Groundwater Depth:</b>	<b>&gt; 100 ft.</b>

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

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 5 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 5 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 0.5 miles west northwest of the nearest vulnerable area boundary (Cottonwood Canyon wash).

**(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 lateral impact from the earthen pit is very limited and 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.

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client: Blagg / AMOCO  
Sample ID: 1 @ 2'  
Laboratory Number: D168  
Chain of Custody No: 5752  
Sample Matrix: Soil  
Preservative: Cool  
Condition: Cool and Intact

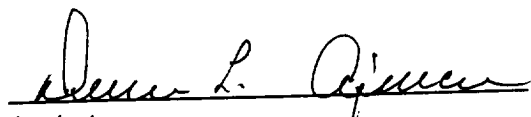
Project #: 04034-10  
Date Reported: 04-28-98  
Date Sampled: 04-23-98  
Date Received: 04-24-98  
Date Extracted: 04-27-98  
Date Analyzed: 04-28-98  
Analysis Requested: 8015 TPH

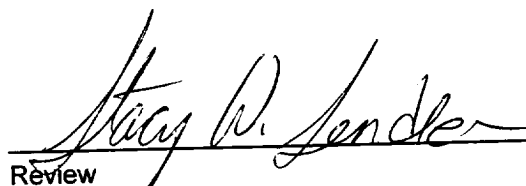
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	2,490	0.2
Diesel Range (C10 - C28)	1,120	0.1
Total Petroleum Hydrocarbons	3,610	0.2

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 - 7E Separator Pit.

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	1 @ 2'	Date Reported:	04-28-98
Laboratory Number:	D168	Date Sampled:	04-23-98
Chain of Custody:	5752	Date Received:	04-24-98
Sample Matrix:	Soil	Date Analyzed:	04-27-98
Preservative:	Cool	Date Extracted:	04-27-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	1,580	17.5
Toluene	1,860	16.7
Ethylbenzene	1,090	15.2
p,m-Xylene	25,040	21.6
o-Xylene	16,460	10.4
Total BTEX	46,030	

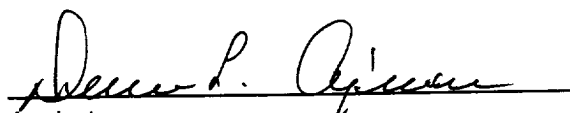
ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	99 %
	Bromofluorobenzene	99 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Jicarilla Apache 102 - 7E Separator Pit.

  
Analyst

  
Review

**ENVIROTECH INC.**

**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

## 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 #102-7E  
**Location:** Unit or Qtr/Qtr Sec D Sec 3 T 26N R 4W County Rio Arriba  
**Land Type:** RANGE

**Date Remediation Started:** 4/23/98 **Date Completed:** 6/8/99  
**Remediation Method:** Landfarmed ☒ **Approx. cubic yards** 230  
 Composted ☐  
 Other ☐

**Distance 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:** 6/7/99 **Time:** 0930

### Sample Results:

**Field Headspace (ppm)** 0.0  
LF-2  
**TPH (ppm)** 1,380 **Method** 8015

**Other** PREVIOUSLY SAMPLED ON 3/30/99

LF-1 TPH 5,070 ppm

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

**DATE** 6/8/99 **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:** Kurt M. Shaw **DATE:** 6-18-99

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BJ549</u> C.O.C. NO: <u>6632</u>
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FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION	
LOCATION: NAME: <u>JICA AP. 102</u> WELL #: <u>7E</u> PITS: <u>SEP., BLOW</u>	DATE STARTED: <u>3/30/99</u> DATE FINISHED: _____
QUAD/UNIT: <u>D SEC: 3 TWP: 26N RNG: 4W PM: NM CNTY: RA ST: NM</u>	ENVIRONMENTAL SPECIALIST: <u>NV</u>
QTR/FOOTAGE: <u>nw14 nw14</u> CONTRACTOR: <u>P+S</u>	

SOIL REMEDIATION:	
REMEDIATION SYSTEM: <u>LANDFARM</u>	APPROX. CUBIC YARDAGE: <u>230</u>
LAND USE: <u>RANGE</u>	LIFT DEPTH (ft): <u>1</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>
NMOCB RANKING SCORE: <u>0</u>	NMOCB TPH CLOSURE STD: <u>5000</u> PPM
<p>MOSTLY MOD. YELL. BROWN TO OLIVE/MED. GRAY SILTY SAND W/ SOME BEDROCK FRAGMENTS, NON COHESIVE, SLIGHTLY MOIST, FIRM SAMPLING DEPTHS @ 6 INCHES, NO NOTICEABLE DISCOLORATION OBSERVED @ ANY OF THE SAMPLING PTS. NO HC ODOR DETECTED W/IN OVM SAMPLE, COLLECTED 5 PT. COMPOSITE FOR LAB ANALYSIS.</p>	

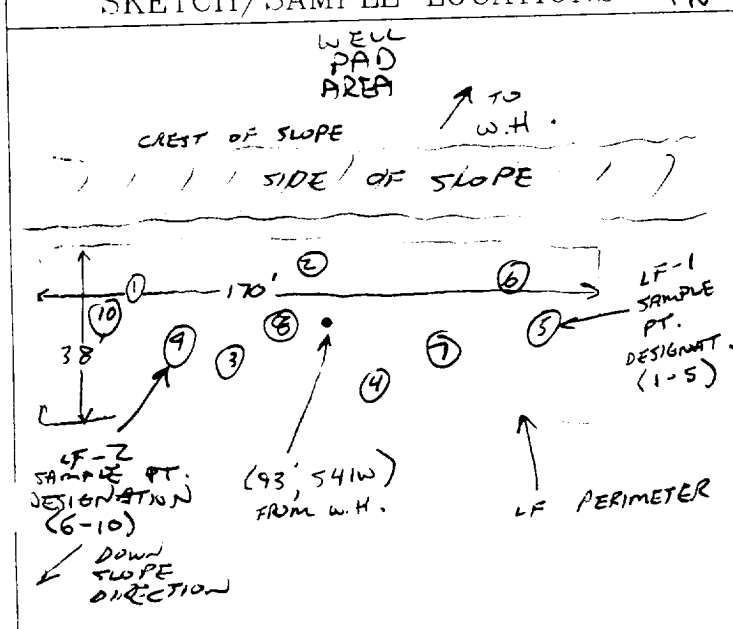
CLOSED

#### FIELD 418.1 CALCULATIONS

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

#### SKETCH/SAMPLE LOCATIONS

LF-2 COLLECTED 6/7/99



#### OVM RESULTS

#### LAB SAMPLES

SAMPLE ID	FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS	TIME	RESULTS
LF-1	0.0	LF-1	TPH (2015)	0945	5,070
		LF-2	TPH (2015)	0930	1,380

SCALE



TRAVEL NOTES:	CALLOUT: <u>NA</u>	ONSITE: <u>3/30/99 - MORN.</u>
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EPA METHOD 8015 Modified  
Nonhalogenated Volatile Organics  
Total Petroleum Hydrocarbons

Client: Blagg / AMOCO  
Sample ID: LF - 1  
Laboratory Number: E914  
Chain of Custody No: 6632  
Sample Matrix: Soil  
Preservative: Cool  
Condition: Cool and Intact

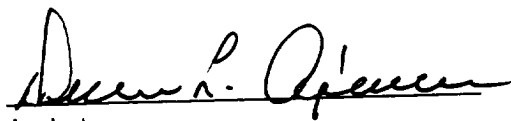
Project #: 403410  
Date Reported: 04-01-99  
Date Sampled: 03-30-99  
Date Received: 03-30-99  
Date Extracted: 03-30-99  
Date Analyzed: 04-01-99  
Analysis Requested: 8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	9.8	0.2
Diesel Range (C10 - C28)	5,060	0.1
Total Petroleum Hydrocarbons	5,070	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 - 7 E Landfarm. 5 Pt. Composite.

  
Analyst

  
Review



# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

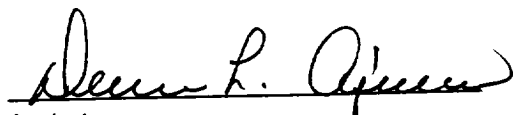
Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	LF - 2	Date Reported:	06-08-99
Laboratory Number:	F466	Date Sampled:	06-07-99
Chain of Custody No:	6693	Date Received:	06-08-99
Sample Matrix:	Soil	Date Extracted:	06-08-99
Preservative:	Cool	Date Analyzed:	06-08-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	31.1	0.2
Diesel Range (C10 - C28)	1,350	0.1
Total Petroleum Hydrocarbons	1,380	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 - 7E Landfarm.

  
Analyst

  
Review

6632

[illegible]

6693

[illegible]