

1318W-2A  
- BT622  
- TANK # 146-23  
sep - OK

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

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

**PIT REMEDIATION AND CLOSURE REPORT**

**RECEIVED**  
AUG 16 1999  
OIL CON. DIV.  
DIST. 3

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

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

**Facility or Well Name:** JICARILLA CONTRACT # 146-23

**Location:** Unit or Qtr/Qtr Sec D Sec 9 T 25N R 5W County RIO ARriba

**Pit Type:** Separator      Dehydrator      Other BLOW

**Land Type:** RANGE

**Pit Location:** Pit dimensions: length 24', width 27', depth 18'  
(Attach diagram)

Reference: wellhead X, other     

Footage from reference: 336'

Direction from reference: 56 Degrees X East of North       
     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)	<u>0</u>
	Greater than 100 feet (0 points)	<u>    </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)	<u>0</u>
	Greater than 1000 feet (0 points)	<u>    </u>

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

Date Remediation Started: \_\_\_\_\_ Date Completed: 9/4/98  
 Remediation Method: Excavation ☒ Approx. cubic yards 300  
 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.

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 20' (PIT BOTTOM)  
 Sample date 9/4/98 Sample time 0745

Sample Results

Soil: Benzene	(ppm)	_____	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	_____	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>0.0</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>ND</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 9/4/98 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: Ken C. Manna DATE: 9-9-98

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BJ622</u> C.O.C. NO: _____
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FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME: <u>JICA CONTR. 146</u> WELL #: <u>23</u> PIT: <u>BLOW</u>		DATE STARTED: <u>9/4/98</u> DATE FINISHED: _____
QUAD/UNIT: <u>D SEC 9</u> TWP: <u>25N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u>		ENVIRONMENTAL SPECIALIST: <u>NV</u>
QTR/FOOTAGE: <u>870' FNL</u>   <u>790' FNL</u> CONTRACTOR: <u>P&amp;S</u>		

EXCAVATION APPROX. <u>24</u> FT. x <u>27</u> FT. x <u>18</u> FT. DEEP.	CUBIC YARDAGE: <u>300</u>
DISPOSAL FACILITY: <u>ON-SITE</u>	REMEDIALATION METHOD: <u>LANDFARM</u>
LAND USE: <u>RANGE</u>	LEASE: <u>JIC 146</u> FORMATION: <u>MU</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>336</u> FT. <u>SSGE</u> FROM WELLHEAD.
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
SOIL AND EXCAVATION DESCRIPTION:	

CHECK ONE:
<input checked="" type="checkbox"/> PIT ABANDONED
<input type="checkbox"/> STEEL TANK INSTALLED
<input type="checkbox"/> FIBERGLASS TANK INSTALLED

ENTIRE EXCAVATION CONSISTED OF DR. YELL. ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT STAINING OR HC ODOR OBSERVED/DETECTED WITH EXCAVATION, NO APPARENT HC ODOR IN ANY OF THE DUM SAMPLES.

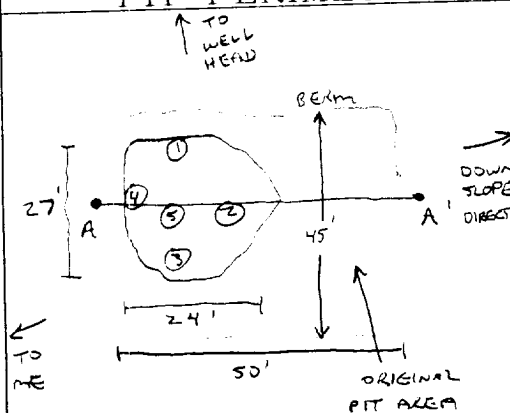
CLOSED

## FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
0745	⑤ @ 20'	TPH-2026	5	20	1:1	3	ND

SCALE  
0 FT

## PIT PERIMETER N



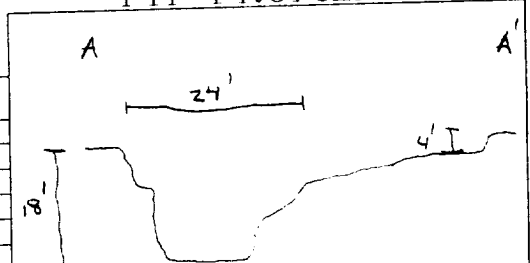
## OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 13'	0.0
2 @ 13'	0.0
3 @ 13'	0.0
4 @ 14'	0.0
5 @ 20'	0.0

## LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

## PIT PROFILE



TRAVEL NOTES:

CALLOUT: \_\_\_\_\_

ONSITE: \_\_\_\_\_

9/4/98 - M/W.

**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:	09-04-98
Project Location:	Jicarilla Contract # 146 - 23	Date Reported:	09-04-98
Laboratory Number:	TPH-2026	Sample Matrix:	Soil

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


ND = Not Detectable at stated detection limits.


QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	236	220	7.02

\*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 - BJ622

  
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

5 @ 20'

Jicarilla Contract # 146 - 23

TPH-2026

Project #:

Date Analyzed:

Date Reported:

Sample Matrix:

09-04-98

09-04-98

Soil

Sample Weight: 5.00 grams  
Volume Freon: 20.00 mL  
Dilution Factor: 1 (unitless)  
TPH Reading: 3 mg/kg

TPH Result: 12.0 mg/kg  
Reported TPH Result: 12 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.
	-----	-----	----
	236	220	7.02

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

Comments: Blow Pit - BJ622



Date Remediation Started: \_\_\_\_\_ Date Completed: 9/4/98  
Remediation Method: Excavation ☒ Approx. cubic yards 550  
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 15' (WEST SIDEWALL)  
Sample date 9/4/98 Sample time 0830  
Sample Results  
Soil: Benzene (ppm) \_\_\_\_\_ Water: Benzene (ppb) \_\_\_\_\_  
Total BTEX (ppm) \_\_\_\_\_ Toluene (ppb) \_\_\_\_\_  
Field Headspace (ppm) 47.4 Ethylbenzene (ppb) \_\_\_\_\_  
TPH (ppm) 2,720 Total Xylenes (ppb) \_\_\_\_\_  
Groundwater Sample: Yes \_\_\_\_\_ No ☒ (If yes, attach sample results)


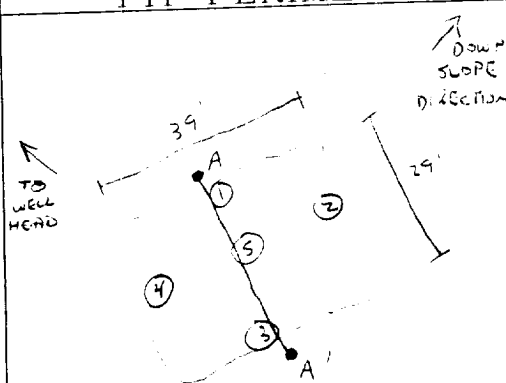
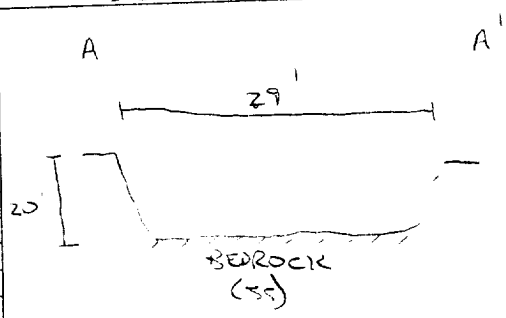
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DATE 9/4/98 PRINTED NAME Buddy D. Shaw  
SIGNATURE Buddy D. Shaw AND TITLE Environmental Coordinator

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: Kent M... DATE: 9-9-98

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8J622</u> C.D.C. NO: _____																																								
FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>																																								
LOCATION: NAME: <u>JICA. CONTR. 146</u> WELL #: <u>23</u> PIT: <u>PROD. TANK</u>		DATE STARTED: <u>9/4/98</u>																																								
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EXCAVATION APPROX. <u>38</u> FT. x <u>29</u> FT. x <u>20</u> FT. DEEP. CUBIC YARDAGE: <u>550</u>																																										
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FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY <u>147</u> FT. <u>N88E</u> FROM WELLHEAD.																																										
DEPTH TO GROUNDWATER: <u>&gt;100'</u> NEAREST WATER SOURCE: <u>&gt;1000'</u> NEAREST SURFACE WATER: <u>&gt;1000'</u>																																										
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SIDEWALLS - DK. YELL. ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM TO DENSE NO APPARENT STAINING OR HC ODOR OBSERVED / DETECTED w/in EXCAVATION, SLIGHT HC ODOR IN WEST SIDEWALL OUM SAMPLE ONLY.																																										
BOTTOM - BEDROCK (SANDSTONE), LT. GRAY IN COLOR, VERY HARD, NO APPARENT HC ODOR IN OUM.																																										
BEDROCK BOTTOM  SCALE 	CLOSED	FIELD 418.1 CALCULATIONS																																								
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>TIME</th> <th>SAMPLE I.D.</th> <th>LAB No:</th> <th>WEIGHT (g)</th> <th>ML. FREON</th> <th>DILUTION</th> <th>READING</th> <th>CALC. ppm</th> </tr> </thead> <tbody> <tr> <td>0830</td> <td>④ 15'</td> <td>TPH-2027</td> <td>5</td> <td>20</td> <td>10:1</td> <td>68</td> <td>2,720</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	ML. FREON	DILUTION	READING	CALC. ppm	0830	④ 15'	TPH-2027	5	20	10:1	68	2,720																								
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TRAVEL NOTES: CALLOUT: _____ ONSITE: <u>9/4/98 - MORN.</u>																																										



# 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:	4 @ 15'	Date Analyzed:	09-04-98
Project Location:	Jicarilla Contract # 146 - 23	Date Reported:	09-04-98
Laboratory Number:	TPH-2027	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	2,700	200

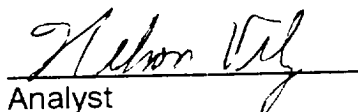
ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	236	220	7.02

\*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 - BJ622

  
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:

4 @ 15'

Date Analyzed:

09-04-98

Project Location:

Jicarilla Contract # 146 - 23

Date Reported:

09-04-98

Laboratory Number:

TPH-2027

Sample Matrix:

Soil

Sample Weight: 5.00 grams  
Volume Freon: 20.00 mL  
Dilution Factor: 10 (unitless)  
TPH Reading: 68 mg/kg

TPH Result: 2720.0 mg/kg  
Reported TPH Result: 2700 mg/kg  
Actual Detection Limit: 200.0 mg/kg  
Reported Detection Limit: 200 mg/kg

QA/QC:	Original TPH mg/kg -----	Duplicate TPH mg/kg -----	% Diff. -----
	236	220	7.02

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

Comments: Production Tank Pit - BJ622

85622

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

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

**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 Contract # 146-23  
Location: Unit or Qtr/Qtr Sec D Sec 9 T 25N R 5W County Rio Arriba  
Pit Type: Separator ☒ Dehydrator ☐ Other ☐  
Land Type: RANGE

Pit Location: Pit dimensions: length 20', width 26', depth 15'  
(Attach diagram) Reference: wellhead ☒, other ☐  
Footage from reference: 170'  
Direction from reference: 85 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 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: 9/4/98

Remediation 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

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

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

Sample location see Attached Documents

Sample depth 16' (PT Bottom)

Sample date 9/4/98 Sample time 0930

Sample Results

Soil: Benzene	(ppm)	_____	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	_____	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>0.0</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>ND</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 9/4/98 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: Ker C Mamm DATE: 9-9-98

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8J622</u> C.O.C. NO: _____
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FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME: <u>JICA CONTR. 146</u> WELL #: <u>23</u> PIT: <u>SEP</u>		DATE STARTED: <u>9/4/98</u> DATE FINISHED: _____
QUAD/UNIT: <u>D</u> SEC: <u>9</u> TWP: <u>25N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u>		ENVIRONMENTAL SPECIALIST: <u>MV</u>
QTR/FOOTAGE: <u>870' FWL</u> <u>790' FWL</u> CONTRACTOR: <u>P+S</u>		

EXCAVATION APPROX. <u>20</u> FT. x <u>26</u> FT. x <u>15</u> FT. DEEP.	CUBIC YARDAGE: <u>150</u>
DISPOSAL FACILITY: <u>ON-SITE</u>	REMEDIAL METHOD: <u>LANDFARM</u>
LAND USE: <u>RANGE</u>	LEASE: <u>JIC 146</u> FORMATION: <u>MU</u>

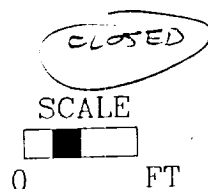
FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>170</u> FT. <u>S85E</u> FROM WELLHEAD.
DEPTH TO GROUNDWATER: <u>&gt;100'</u>	NEAREST WATER SOURCE: <u>&gt;1000'</u> NEAREST SURFACE WATER: <u>&gt;1000'</u>

NMDCD RANKING SCORE: 0 NMDCD TPH CLOSURE STD: 5000 PPM

### SOIL AND EXCAVATION DESCRIPTION:

CHECK ONE:	
<input checked="" type="checkbox"/>	PIT ABANDONED
<input type="checkbox"/>	STEEL TANK INSTALLED
<input type="checkbox"/>	FIBERGLASS TANK INSTALLED

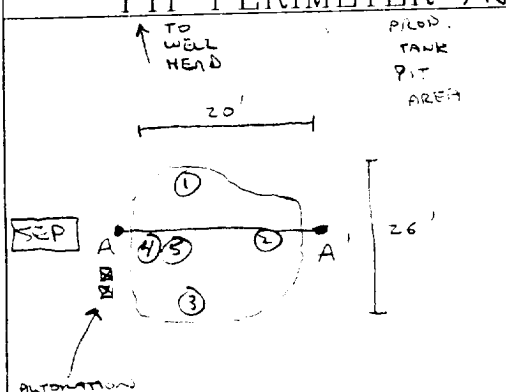
ENTIRE EXCAVATION CONSISTED OF DK. YELL. ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT STAINING OBSERVED, NO APPARENT HC ODOR DETECTED w/in EXCAVATION OR IN ANY OF THE OVM SAMPLES.



### FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
0930	③ @ 16'	TPH-2028	5	20	1:1	3	ND

### PIT PERIMETER



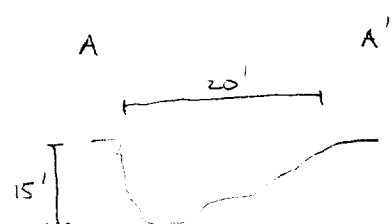
### OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 10'	0.0
2 @ 8'	0.0
3 @ 11'	0.0
4 @ 10'	0.0
5 @ 16'	0.0

### LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

### PIT PROFILE



TRAVEL NOTES: CALLOUT: \_\_\_\_\_ ONSITE: 9/4/98 - MORN.

**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 @ 16'	Date Analyzed:	09-04-98
Project Location:	Jicarilla Contract # 146 - 23	Date Reported:	09-04-98
Laboratory Number:	TPH-2028	Sample Matrix:	Soil

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

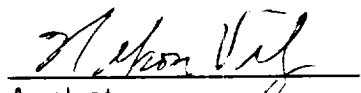
ND = Not Detectable at stated detection limits.

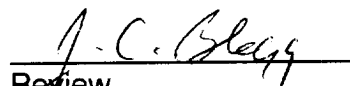
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	236	220	7.02

\* 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 - BJ622

  
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

5 @ 16'

Jicarilla Contract # 146 - 23

TPH-2028

Project #:

Date Analyzed:

Date Reported:

Sample Matrix:

09-04-98

09-04-98

Soil

Sample Weight:

5.00 grams

Volume Freon:

20.00 mL

Dilution Factor:

1 (unitless)

TPH Reading:

3 mg/kg

TPH Result:

12.0 mg/kg

Reported TPH Result:

12 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.

-----  
236

-----  
220

-----  
7.02

Comments:

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

Comments:

Separator Pit - BJ622

B5624

**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: <u>AMOCO PRODUCTION COMPANY</u>		Telephone: <u>(505) 326-9200</u>	
Address: <u>200 Amoco Court, Farmington, NM 87401</u>			
Facility or Well Name: <u>JICARILLA CONTRACT 146-23</u>			
Location: Unit or Qtr/Qtr Sec <u>D</u> Sec <u>9</u> <u>T25N</u> <u>R5W</u> County <u>RIO ARIZONA</u>			
Land Type: <u>RANGE</u>			
Date Remediation Started: <u>9.4.98</u>		Date Completed: <u>5/7/99</u>	
Remediation Method: Landfarmed <input checked="" type="checkbox"/>		Approx. cubic yards <u>1000</u>	
Composted <input type="checkbox"/>			
Other <input type="checkbox"/>			
Depth To Groundwater: (pts.) <u>0</u>		<b>Final Closure Sampling:</b>	
Distance to an Ephemeral Stream (pts.) <u>0</u>		Sampling Date: <u>5.6.99</u> Time: <u>1230</u>	
Distance to Nearest Lake, Playa, or Watering Pond (pts.) <u>0</u>		Sample Results:	
Wellhead Protection Area: (pts.) <u>0</u>		Field Headspace (ppm) <u>4.2</u>	
Distance To Surface Water: (pts.) <u>0</u>		TPH (ppm) <u>16.5</u> Method <u>TPH (8015)</u>	
Other <input type="checkbox"/>			
RANKING SCORE (TOTAL POINTS): <u>0</u>			
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF			
DATE <u>5/7/99</u>		PRINTED NAME <u>Buddy D. Shaw</u>	
SIGNATURE <u>Buddy D. Shaw</u>		AND TITLE <u>Environmental Coordinator</u>	
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.			
APPROVED: YES <input type="checkbox"/> NO <input type="checkbox"/> (REASON) _____			
SIGNED: _____ DATE: _____			



CLIENT <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BS622</u> C.O.C. NO: <u>6911</u>
---------------------	--	---

# FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION NAME: <u>SKARILLA CONTRACT 140 WELL # 23</u>	PITS: <u>SEP, BLOW PROD.</u>	DATE STARTED: <u>5.6.99</u>
QUAD/UNIT: <u>D SEC 9 TWP 25N RNG 5W PM: NM CNTY: RA ST: NM</u>		DATE FINISHED: _____
STR. FOOTAGE: <u>NW/4 NW/4</u>	CONTRACTOR: <u>P+S</u>	ENVIRONMENTAL SPECIALIST: <u>REP</u>

## SOIL REMEDIATION:

REMEDICATION SYSTEM: LANDFARM APPROX. CUBIC YARDAGE: 1000  
 LAND USE: RANGE LIFT DEPTH (ft): 2

## FIELD NOTES & REMARKS:

DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'

NMOC BANKING SCORE 0 NMOC TPH CLOSURE STD: 5000 PPM

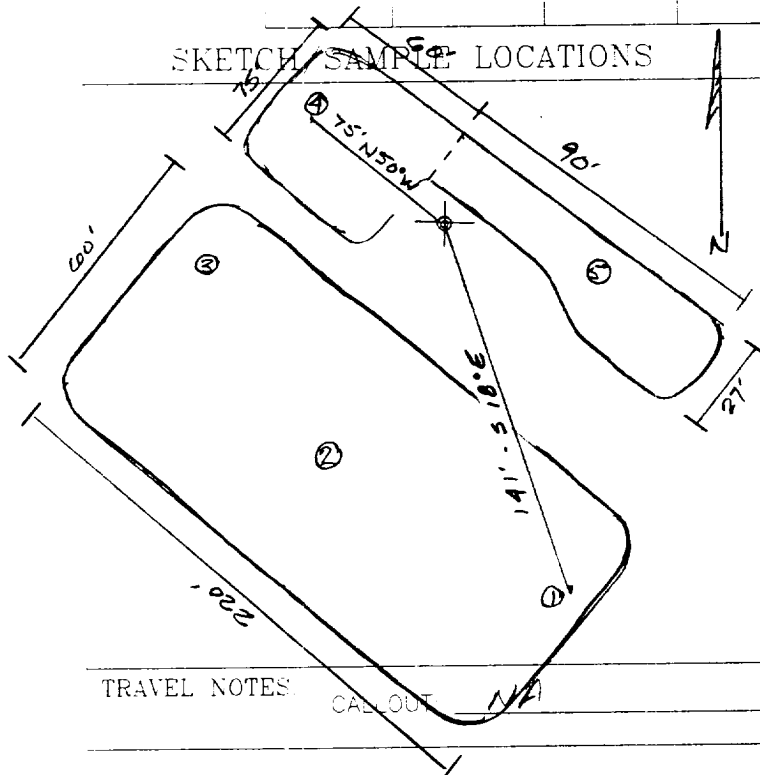
MODERATE YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM.  
 NO APPARENT STAINING, NO HC ODOR DETECTED. SAMPLING DEPTHS RANGE  
 FROM 6" - 18". COLLECTED A SPT. COMPOSITE SAMPLE FOR LAB ANALYSIS.

CLOSED

## 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	4.2	LF-1	TPH (B015)	1230	16.5

## SCALE

0 1 FT

## TRAVEL NOTES

CALCUT

ONSITE: 5.6.99

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

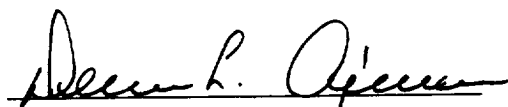
Client:	Blagg / Amoco	Project #:	403410
Sample ID:	LF - 1	Date Reported:	05-07-99
Laboratory Number:	F168	Date Sampled:	05-06-99
Chain of Custody No:	6911	Date Received:	05-07-99
Sample Matrix:	Soil	Date Extracted:	05-07-99
Preservative:	Cool	Date Analyzed:	05-07-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	5.8	0.2
Diesel Range (C10 - C28)	10.7	0.1
Total Petroleum Hydrocarbons	16.5	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 Contract 146 - 23 Landfarm. 5 Pt. Composite.

  
Analyst

  
Review

6911

[illegible]