

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

BJ607

SUBMIT 1 COPY TO

NATURAL RESOURCE DEPT

AND OIL & GAS ADMINISTRATION

RECEIVED
AUG 18 1999

PIT REMEDIATION AND CLOSURE REPORT

OIL CON. DIV.
DIST. 8-9200

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 328-9200
Address: 200 Amoco Court, Farmington, NM 87401
Facility or Well Name: JICARILLA CONTRACT #147-2
Location: Unit or Qtr/Qtr Sec K Sec 5 T 25N R 5W County RIO ARIZONA
Pit Type: Separator Dehydrator Other BLOW
Land Type: RANGE

Pit Location:
(Attach diagram)

Pit dimensions: length 32', width 42', depth 15'
Reference: wellhead X, other
Footage from reference: 185'
Direction from reference: 49 Degrees X East of North
 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)	<u>0</u>
Greater than 100 feet	(0 points)	

Distance to Nearest Lake, Playa, or Watering Pond

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

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

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)	<u>0</u>
Greater than 1000 feet	(0 points)	

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: _____ Date Completed: 8/17/98

Remediation Method: Excavation ☒ Approx. cubic yards 400
 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 - BOTTOM HALF OF EXCAVATION CONSISTED OF BEDROCK, ALL SAMPLES COLLECTED FROM BEDROCK, THEREFORE NO TPH ANALYSIS WAS CONDUCTED

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 DocumentsSample depth 15' (PIT BOTTOM)Sample date 8/17/98 Sample time 1345

Sample Results

Soil: Benzene	(ppm)	_____	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	_____	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>561</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>NA</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 8/17/98 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) R.A. Attached

SIGNED: Ken C. M... DATE: 9-9-98

3003906157

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8J607</u> C.D.C. NO: _____																																										
FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>																																										
LOCATION: NAME: <u>JICA CONTR. 147</u> WELL #: <u>2</u> PIT: <u>Flow</u>		DATE STARTED: <u>8/17/98</u> DATE FINISHED: _____																																										
QUAD/UNIT: <u>K</u> SEC: <u>5</u> TWP: <u>25N</u> RNG: <u>5W</u> PM: <u>NM CNTY: RA ST: NM</u> QTR/FOOTAGE: <u>1650 FSL / 1650 FWL</u> CONTRACTOR: <u>P & S</u>		ENVIRONMENTAL SPECIALIST: <u>NV</u>																																										
EXCAVATION APPROX. <u>32</u> FT. x <u>42</u> FT. x <u>15</u> FT. DEEP. CUBIC YARDAGE: <u>400</u> DISPOSAL FACILITY: <u>ON-SITE</u> REMEDIATION METHOD: <u>LANDFARM</u> LAND USE: <u>RANGE</u> LEASE: <u>JIC 147</u> FORMATION: <u>DR</u>																																												
FIELD NOTES & REMARKS:																																												
PIT LOCATED APPROXIMATELY <u>185</u> FT. <u>549E</u> FROM WELLHEAD. DEPTH TO GROUNDWATER: <u>>100'</u> NEAREST WATER SOURCE: <u>>1000'</u> NEAREST SURFACE WATER: <u>>1000'</u> NMOC D RANKING SCORE: <u>0</u> NMOC D TPH CLOSURE STD: <u>5000</u> PPM																																												
SOIL AND EXCAVATION DESCRIPTION:																																												
SIDEWALLS - FROM GRADE TO 5' DR. YELL ORANGE SAND NON COHESIVE FROM 5' TO PIT BOTTOM VERY PALE ORANGE TO OLIVE GRAY SILTY CLAY TO BEDROCK (SHALE) SOFT NEAR TOP TO VERY HARD @ PIT BOTTOM STRONG HC ODOR W/IN SOUTH SIDEWALL OVM SAMPLE ALL SAMPLES COLLECTED DERIVED FROM BEDROCK, THEREFORE NO TPH ANALYSIS WAS CONDUCTED. BOTTOM - BEDROCK (SHALE) OLIVE TO MED. GRAY IN COLOR, STRONG HC ODOR IN OVM SAMPLE.																																												
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>BEDROCK BOTTOM</p> <p>SCALE</p> <p>0 FT</p> </div> <div style="width: 30%; text-align: center;"> <p>RISK ASSESSED</p> </div> <div style="width: 30%;"> <p>FIELD 418.1 CALCULATIONS</p> <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>1345</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> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> </div> </div>			TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm	1345																																	
TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm																																					
1345																																												
<p>PIT PERIMETER</p>	<p>OVM RESULTS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SAMPLE ID</th> <th>FIELD HEADSPACE PID (ppm)</th> </tr> </thead> <tbody> <tr><td>1 @ 9'</td><td>0.0 RK</td></tr> <tr><td>2 @ 9'</td><td>0.0 RK</td></tr> <tr><td>3 @ 11'</td><td>3.1 RK</td></tr> <tr><td>4 @ 11'</td><td>3.4 RK</td></tr> <tr><td>5 @ 15'</td><td>561 RK</td></tr> <tr><td> </td><td></td></tr> <tr><td> </td><td></td></tr> <tr><td> </td><td></td></tr> <tr><td> </td><td></td></tr> <tr><td> </td><td></td></tr> <tr><td> </td><td></td></tr> </tbody> </table> <p>LAB SAMPLES</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SAMPLE ID</th> <th>ANALYSIS</th> <th>TIME</th> </tr> </thead> <tbody> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> </tbody> </table>	SAMPLE ID	FIELD HEADSPACE PID (ppm)	1 @ 9'	0.0 RK	2 @ 9'	0.0 RK	3 @ 11'	3.1 RK	4 @ 11'	3.4 RK	5 @ 15'	561 RK													SAMPLE ID	ANALYSIS	TIME																<p>PIT PROFILE</p>
SAMPLE ID	FIELD HEADSPACE PID (ppm)																																											
1 @ 9'	0.0 RK																																											
2 @ 9'	0.0 RK																																											
3 @ 11'	3.1 RK																																											
4 @ 11'	3.4 RK																																											
5 @ 15'	561 RK																																											
SAMPLE ID	ANALYSIS	TIME																																										
TRAVEL NOTES: CALLOUT: <u>8/13/98 - MORN.</u> ONSITE: <u>8/17/98 - AFTER.</u>																																												

Well Name:	Jicarilla Contract 147 #2
Well Site location:	Unit K, Sec. 5, T25N, R5W
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 shale bedrock at 15 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 shale bedrock located 15 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below shale 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 0.70 miles north northwest of the nearest vulnerable area boundary (Gonzales Canyon wash).

(Refer to Gonzales Mesa 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 subsurface lateral impact from the earthen pit is very limited and that the shale 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.

83601

**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 CONTRACT 147-2
Location: Unit or Qtr/Qtr Sec 12 Sec 5 T25N R5W County RIO ARriba
Land Type: RANGE

Date Remediation Started: 8-17-98 Date Completed: 4/9/99
Remediation Method: Landfarmed ☒ Approx. cubic yards 400
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: 4-7-99 Time: 10:10

Sample Results:

Field Headspace (ppm) 3.3
TPH (ppm) 29.0 Method 8015
Other ☐

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

DATE 4/9/99 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: _____ DATE: _____

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>B5607</u> C.O.C. NO: <u>6879</u>
----------------------	--	---

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: <u>SICARILLA CONTRACT 147 WELL # 2</u>	PITS: <u>SEP, BLOW</u>	DATE STARTED: <u>4.7.99</u>
QUAD/UNIT: <u>14 SEC: 5 TWP: 25N RNG: 5W PM: NM CNTY: RA ST: NM</u>		DATE FINISHED: _____
QTR/FOOTAGE: <u>NE/4 SW/4</u>	CONTRACTOR: <u>P+S</u>	ENVIRONMENTAL SPECIALIST: <u>REP</u>

SOIL REMEDIATION:

REMEDICATION SYSTEM: LANDFARM

APPROX. CUBIC YARDAGE: 400

LAND USE: RANGE

LIFT DEPTH (ft): 1.5

FIELD NOTES & REMARKS:

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

NMOC D RANKING SCORE: 0 NMOC D TPH CLOSURE STD: 5000 PPM

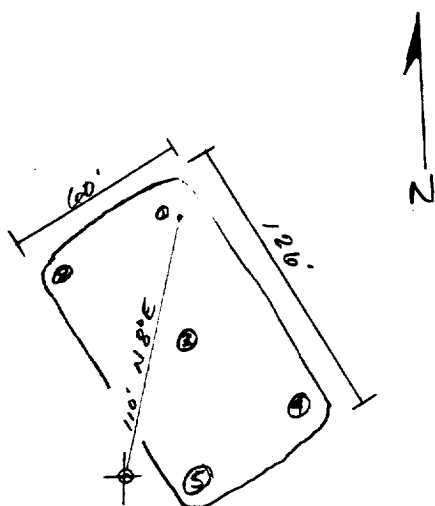
DK. YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM.
NO APPARENT STAINING. NO HC ODOR DETECTED. SAMPLING DEPTHS RANGE
FROM 6"-18". TOOK A 5 FT COMPOSITE SAMPLE FOR LAB ANALYSIS

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	3.3	LF-1	TPH (2015)	1010	29.0

SCALE

0  FT

TRAVEL NOTES:

CALLOUT: N/A

ONSITE: 4.7.99

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

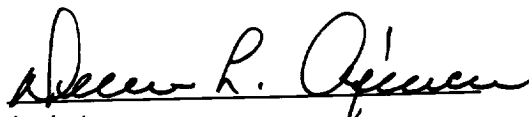
Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	LF - 1	Date Reported:	04-09-99
Laboratory Number:	E986	Date Sampled:	04-07-99
Chain of Custody No:	6879	Date Received:	04-08-99
Sample Matrix:	Soil	Date Extracted:	04-08-99
Preservative:	Cool	Date Analyzed:	04-09-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	2.3	0.2
Diesel Range (C10 - C28)	26.7	0.1
Total Petroleum Hydrocarbons	29.0	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 147 - 2 Landfarm. 5 Pt. Composite.


Analyst


Review

6879

[illegible]