

Denny E. Foust
DEPUTY OIL & GAS INSPECTOR

AUG 13 1999

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

BJ 460

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

OK
one pit
checked

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 8 #7E

Location: Unit or Qtr/Qtr Sec C Sec 16 T26N R5W County RIO ARRIBA

Pit Type: Separator Dehydrator Other

Land Type: RANGE

Pit Location: Pit dimensions: length 33', width 60', depth 17'
(Attach diagram)

Reference: wellhead , other

Footage from reference: 80'

Direction from reference: 74 Degrees East of North
 West South

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)	<u>0</u>

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)	<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)	<u>0</u>
	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)	<u>0</u>
	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)	<u>0</u>
	100 feet to 1000 feet	(10 points)	<u>0</u>
	Greater than 1000 feet	(0 points)	<u>0</u>

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: _____ Date Completed: 10/18/96

Remediation Method: Excavation Approx. cubic yards 1100
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,
SOUTH SIDEWALL CONDITIONAL - RISK ASSESSED.

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 10'
Sample date 10/16/96 Sample time 1220

Sample Results

Soil: Benzene	(ppm)	<u>0.458</u>	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	<u>79.10</u>	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>688</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>3,910</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 10/18/96 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 / Spray

SIGNED: [Signature] DATE: 10/22/96

CLIENT: AMOCO BLAGG ENGINEERING, INC. LOCATION NO: BT460
 P.O. BOX 87, BLOOMFIELD, NM 87413 C.O.C. NO: 4916
 (505) 632-1199

FIELD REPORT: CLOSURE VERIFICATION PAGE No: 1 of 1

LOCATION: NAME: TICARILLA B WELL #: 7E PIT: SEP DATE STARTED: 10/16/96
 QUAD/UNIT: C SEC: 16 TWP: ZGN RNG: SW PM: NM CNTY: RA ST: NM DATE FINISHED: _____
 DTR/FOOTAGE: 810' ENL / 1850' FWL NEW/OLD CONTRACTOR: P+S ENVIRONMENTAL SPECIALIST: NV

EXCAVATION APPROX. 33 FT. x 60 FT. x 17 FT. DEEP. CUBIC YARDAGE: 1100
 DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD: LANDFARMED
 LAND USE: RANGE LEASE: JICA CONTR. #109 FORMATION: OK/OCK

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 80 FT. N74E FROM WELLHEAD.
 DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
 NMOCB RANKING SCORE: 0 NMOCB TPH CLOSURE STD: 5000 PPM
 SOIL AND EXCAVATION DESCRIPTION:

- CHECK ONE:
- PIT ABANDONED
 - STEEL TANK INSTALLED
 - FIBERGLASS TANK INSTALLED

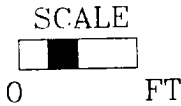
SIDEWALLS - OK. YELL. ORANGE (NORTH + EAST) TO DK. YELL. BROWN (SOUTH + WEST)
 SILTY SAND, NON-COHESIVE, SLIGHTLY MOIST FIRM TO DENSE,
 STRONG HC ODDOR IN NORTH + SOUTH OVM SAMPLES NO
 DISTINCT HC STAINING OBSERVED WITH EXCAVATION.
 BOTTOM - BEDROCK SHALE, HARD, GRAYISH RED IN COLOR, STRONG HC ODDOR
 IN OVM SAMPLE.

BEDROCK

RISK ASSESSED

FIELD 418.1 CALCULATIONS

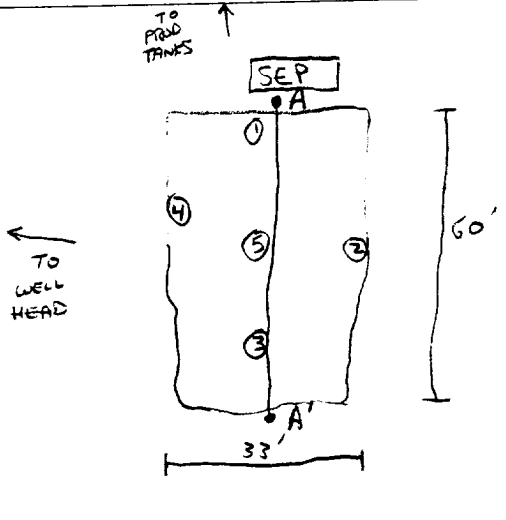
TIME	SAMPLE I.D.	LAB No.	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1220							



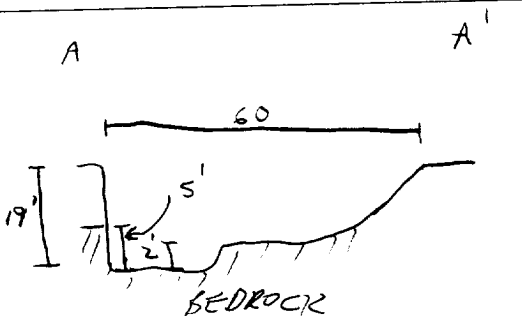
PIT PERIMETER

OMV RESULTS

PIT PROFILE



SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 11'	322
2 @ 13'	8.6
3 @ 10'	688
4 @ 10'	0.0
5 @ 17'	248.6



LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
3 @ 10'	TPH / BTEX	1220

FAILED

TRAVEL NOTES: CALLOUT: 10/15/96 MORN. ONSITE: 10/16/96 AFTER.

Well Name:	Jicarilla B #7E
Well Site location:	Unit C. Sec. 16, T26N, R5W
Pit Type:	Separator Pit
Producing Formation:	Gallup/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 17 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 17 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 1.44 miles north northeast of the nearest vulnerable area boundary (Tapacito Creek).

(Refer to Lapis Point 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 lateral impact of the excavation is 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.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

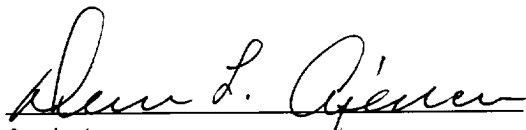
Client:	Blagg / Amoco	Project #:	04034
Sample ID:	3 @ 10'	Date Reported:	10-18-96
Laboratory Number:	A688	Date Sampled:	10-16-96
Chain of Custody No:	4916	Date Received:	10-17-96
Sample Matrix:	Soil	Date Extracted:	10-17-96
Preservative:	Cool	Date Analyzed:	10-18-96
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

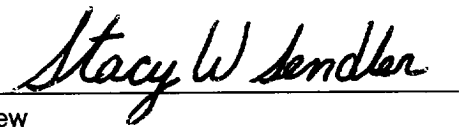
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	1,900	0.2
Diesel Range (C10 - C28)	2,010	0.1
Total Petroleum Hydrocarbons	3,910	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Comments: **Jicarilla B #7E Separator Pit.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034
Sample ID:	3 @ 10'	Date Reported:	10-18-96
Laboratory Number:	A688	Date Sampled:	10-16-96
Chain of Custody:	4916	Date Received:	10-17-96
Sample Matrix:	Soil	Date Analyzed:	10-18-96
Preservative:	Cool	Date Extracted:	10-17-96
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	458	17.5
Toluene	24,000	16.7
Ethylbenzene	7,930	15.2
p,m-Xylene	25,100	21.6
o-Xylene	21,600	10.4
Total BTEX	79,100	

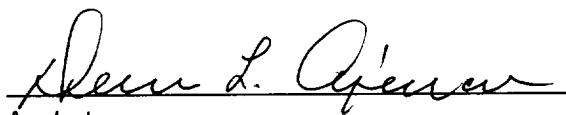
ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	100 %
	Bromofluorobenzene	98 %

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1994.

Comments: Jicarilla B #7E Separator Pit.


Analyst


Review

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

8J460

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 B # 7E</u>	
Location: Unit or Qtr/Qtr Sec <u>C</u> Sec <u>16</u> T <u>26N</u> R <u>5W</u> County <u>RIO ARRIBA</u>	
Land Type: <u>RANGE</u>	
Date Remediation Started: <u>10/16/96</u>	Date Completed: <u>4/30/98</u>
Remediation Method: Landfarmed <input checked="" type="checkbox"/>	Approx. cubic yards <u>1,100</u>
Composted <input type="checkbox"/>	
Other <input type="checkbox"/>	
Depth To Groundwater: (pts.) <u>0</u>	Final Closure Sampling: Sampling Date: <u>4/28/98</u> Time: <u>1115</u> Sample Results: Field Headspace (ppm) <u>0.0</u> TPH (ppm) <u>438</u> Method <u>8015</u> Other <u>2ND SAMPLE = OUM 0.0 ppm</u> <u>TPH 550 ppm</u>
Distance to an Ephemeral Stream (pts.) <u>0</u>	
Distance to Nearest Lake, Playa, or Watering Pond (pts.) <u>0</u>	
Wellhead Protection Area: (pts.) <u>0</u>	
Distance To Surface Water: (pts.) <u>0</u>	
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>4/30/98</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 checked="" type="checkbox"/> NO <input type="checkbox"/> (REASON) <u>NOT for use as Backfill</u>	
SIGNED: <u>Kenneth M. ...</u>	DATE: <u>5-7-98</u>

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BJ460</u> C.D.C. NO: <u>5879</u>
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FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: <u>JICARILLA</u> B WELL #: <u>7E</u> PITS: <u>SEP.</u>	DATE STARTED: <u>4/28/98</u> DATE FINISHED: <u>4/30/98</u>
QUAD/UNIT: <u>C SEC: 16 TWP: 26N RNG: 5W PM: NM CNTY: RA ST: NM</u>	ENVIRONMENTAL SPECIALIST: <u>NV</u>
QTR/FOOTAGE: <u>NE/4 NW/4</u> CONTRACTOR: <u>P & S</u>	

SOIL REMEDIATION:

REMEDIATION SYSTEM: LANDFARMED APPROX. CUBIC YARDAGE: 1,100
 LAND USE: RANGE LIFT DEPTH (ft): 1'-3'

FIELD NOTES & REMARKS:

DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
 NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM

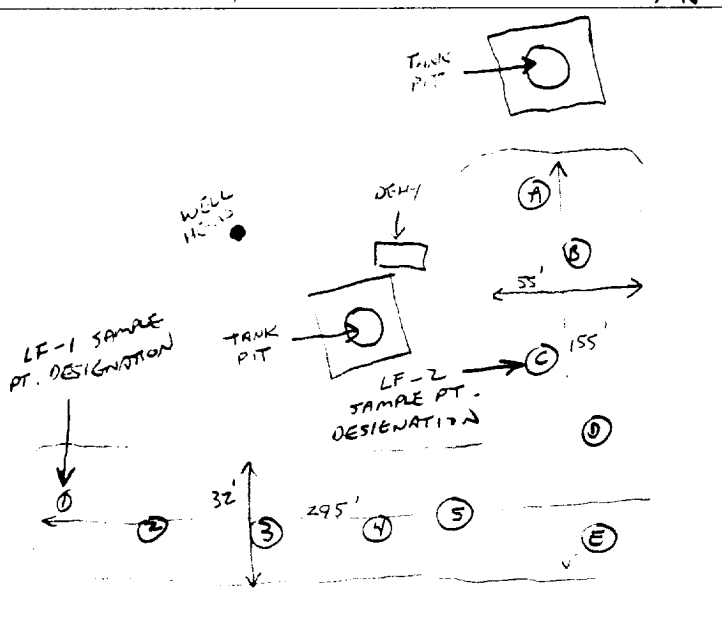
MOSTLY DUSKY BROWN SILTY SAND TO CLAY COHESIVE TO SLIGHTLY PLASTIC, SLIGHTLY MOIST FIRM TO SLIGHTLY STIFF. NO APPARENT HC ODOR OBSERVED IN ANY OF THE SAMPLE PTS. OR OVM SAMPLES.

CLOSED

FIELD 418.1 CALCULATIONS

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

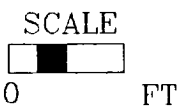
SKETCH/SAMPLE LOCATIONS 



OVM RESULTS

LAB SAMPLES

SAMPLE ID	FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS	TIME	RESULTS
LF-1	0.0	LF-1	TPH (2015)	1115	438
LF-2	0.0	LF-2	TPH (2015)	1200	550



TRAVEL NOTES: CALLOUT: NA ONSITE: 4/28/98

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

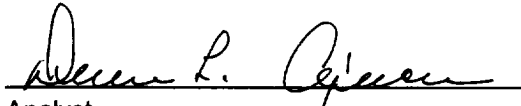
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	05-01-98
Laboratory Number:	D197	Date Sampled:	04-28-98
Chain of Custody No:	5879	Date Received:	04-28-98
Sample Matrix:	Soil	Date Extracted:	04-29-98
Preservative:	Cool	Date Analyzed:	04-30-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

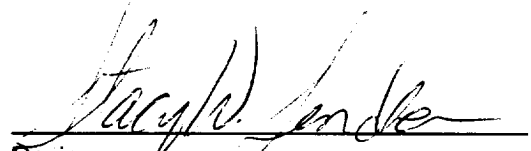
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	438	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	438	0.2

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 B #7E Landfarm 5 Pt. Composite.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

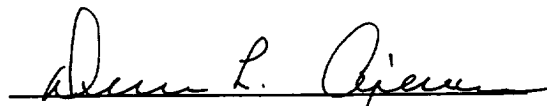
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 2	Date Reported:	05-01-98
Laboratory Number:	D197	Date Sampled:	04-28-98
Chain of Custody No:	5879	Date Received:	04-28-98
Sample Matrix:	Soil	Date Extracted:	04-29-98
Preservative:	Cool	Date Analyzed:	05-01-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

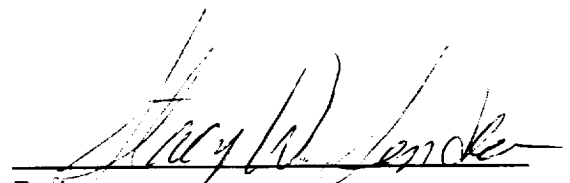
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	550	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	550	0.2

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 B #7E Landfarm 5 Pt. Composite.**


Analyst


Review

