JICARILLA APACHE TRIBE

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P.O. BOX 507 **DULCE, NEW MEXICO 87528**

ENVIRONMENTAL PROTECTION OFFERUTY OIL & GAS INSPECTOR DEPT AUG 1 3 1999

0

RANKING SCORE (TOTAL POINTS):

OIL COM. PUT REMEDIATION AND CLOSURE REPORT

DIST. 3 Telephone: (505) 326-9200 Operator: AMOCO PRODUCTION COMPANY Address: 200 Amoco Court, Farmington, NM 87401 Unit or Qtr/Qtr Sec_ O Sec_ 18 T_ ZGN R SW County RIO ARRIBA Location: Separator___ Other PRODUCTION TRAK Pit Type: Land Type: RANGE length z3, width zo, depth z' Pit dimensions: Pit Location: Reference: wellhead X , other_____ (Attach diagram) Footage from reference: 123' Direction from reference: _______ Degrees ______ East South West (20 points) Less than 50 feet Depth To Groundwater: (10 points) 50 feet to 99 feet (Vertical distance from (0 points) Greater than 100 feet contaminants to seasonal high water elevation of groundwater) (10 points) Less than 100 feet Distance to an Ephemeral Stream (0 points) Greater than 100 feet (Downgradient dry wash greater than ten feet in width) (10 points) Distance to Nearest Lake, Playa, or Watering Pond Less than 100 feet (0 points) Greater than 100 feet (Downgradient lakes, playas and livestock or wildlife watering ponds) (20 points) Yes Wellhead Protection Area: (0 points) No (Less than 200 feet from a private domestic water source, or: less than 1000 feet from all other water sources) (20 points) Less than 100 feet Distance To SurfaceWater: (10 points) 100 feet to 1000 feet (Horizontal distance to perennial (0 points) Greater than 1000 feet lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)

		Date Completed:	11/23/98		
Date Remediation Sta	arted:	Date Completed:	7.0		
emediation Method:	Excavation	Approx. cubic yards	20		
(Check all appropriate sections)	Landfarmed	Insitu Bioremediation			
	Other				
Remediation Location (i.e. landfarmed onsite, name and location of offsite facility)	·				
General Description	of Remedial Action: Excavation	on. Excauation mostly	BEDROCK, THESE FORE		
NO THE ANALY	1515 WAS CONDUCTED. LISH	Pryessed.			
Groundwater Encoun	tered: No Yes	Depth	_		
Final Pit: Closure Sampling:	Sample locationsee Attached	d Documents			
(if multiple samples, attach sample results	Sample depth $Z' \langle \rho_{17} \rangle$	· Bottom)			
and diagram of sample locations and depths)	Sample depth Z 3/	Sample time	1245		
	Sample date	Sample time			
н	Sample Results	_	(h)		
		Water: Benze			
	Total BTEX (ppm)		ne (ppb)		
	Field Headspace (ppm)	Ethyll	penzene (ppb)		
	TPH (ppm)	<u>rA</u> Total 1	Xylenes (ppb)		
Groundwater Sample	e: Yes No	(If yes, attach sample resul	ts)		
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEGE AND BELIEF					
DATE	11/23/98 PRINTED M	NAME Buddy D. Shaw			
SIGNATURE BUS					
A EXCED DEVIEW OF	THE PIT CLOSURE INFORMATION APACHE TRIBE PIT CLOSURE (ON, PIT CLOSURE IS APPE	ROVED IN ACCORDANCE		
APPROVED: YES 7	NO (REASON)	A. Attach	rd .		
SIGNED:		12-28-98			

CLIENT: <u>AMOCO</u> P.	BLAGG ENGINEERING, I O. BOX 87, BLOOMFIELD, N (505) 632-1199	NC. M 87413 C.O.C. NO:
	: CLOSURE VERIFIC	
OCATION: NAME: TIEF.	A WELL #: ZE PIT: PKG	DATE STARTED: ///23/95
OHAD/HNIT O SEC. 18	TWP: ZGN RNG: SW PM:NYM CNTY:	RA ST: NM ENVIRONMENTAL
OTD (EDBIAGE: Use See Lie)	20 FEL CONTRACTOR: P&S	SPECIALIST:
EXCAVATION APPROX. 23	FT. x _ 20 FT. x _ 7 FT. DEI	EP. CUBIC YARDAGE:
DISPOSAL FACILITY:	DO - SITE REMEDIATION	ON METHOD: LANDER RM
AND USE RANGE	LEASE: JIC A	FORMATION: DK
IELD NOTES & REMARKS	S: PIT LOCATED APPROXIMATELY _/	CURRENCE VALUE >1000
DEPTH TO GROUNDWATER. >100	NEAREST WATER SOURCE: >,000 N	CHECK ONE
MODER PANKING SCORE:	NMOCD TPH CLOSURE STD 5000 PPM	PIT ABANDONED
SOIL AND EXCAVATION	DESCRIPTION:	STEEL TANK INSTALLED
		FIBERGLASS TANK INSTALLED
EXCAUATION	INSTRY BEDROCK (SMUSTUNE)	MUSTER VERY POLE ORANGE
ul some ok	AY IN COLOR HE ODOR DETERMENT OF THE COLLECTED FROM BEDROCK;	JERY HARD, own sample
WOS MED. GR	AY IN COLOR HE SOOR DETE	ECTED WIN DUM SOMPLE,
was conducti	COLLECTED LICEN BEDGOCK	THERE - SIZE NO THIS HARLYS
שאל פאשוני ו	, υ,	
EXCHANTOR	ASSESSED)	
MOSTLY BEOLOCK	FIELD 418.1 CA	ALCULATIONS) ml. FREON DILUTION READING CALC. ppm
	TIME SAMPLE I.D. LAB No: WEIGHI (9)	THE PRESENTED SECTION
SCALE	1245	
O FT		PIT PROFILE
PIT PERIME	TER N	PH PROPILE
	OVM RESULTS	
1500 /	CAMPLE FIELD HEADSPACE	Α ,
(TANK)	DE PIO (ppm)	23
TO LEFED .	2 @	
SEAD -	3 @	71,
	7 4 e 5 e	
	20'	(71)
_ Z3 ′	LAB SAMPLES	
	SAMPLE ANALYSIS TIME	
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1 44		
SW PE		
SWFE / DIRECTI	لىن	
V DIRECTI	w = ==================================	
TRAVEL NOTES: CALLOUT:	ONSITE:	

Well Name:
Well Site location:
Pit Type:
Producing Formation:
Pit Category:
Horizonal Distance to Surface Water:
Vicinity Groundwater Depth:

Jicarilla A #2E
Unit O, Sec. 18, T26N, R5W
Production Tank Pit
Basin Dakota
Non Vulnerable
> 1000 ft.
> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 2 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 2 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 <u>non-vulnerable area</u> and is approximately 0.17 miles north of the nearest vulnerable area boundary (Albert 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 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.

BT683

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)326-92	200
Operator: Anoto i Reserve	м 87401		
Address: 200 Amoco Court, Farmington, N			
Facility or Well Name: JICARILLA A	# Lt	0.20.20	
Location: Unit or Qtr/Qtr Sec O Sec 18 T 20	County X/O	HINCLEST	
Pit Type: Separator X Dehydrator Other			
Land Type: RANGE			
₹		1	
It Location.	写', width_ とつ',		
(Attach diagram) Reference: wellhead X,	other		
Footage from reference:	8'		
Direction from reference:4		North	
Direction from reference.	of West	South <u>×</u>	
Depth To Groundwater: (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)	0
Distance to an Ephemeral Stream (Downgradient dry wash greater than ten feet in width)	Less than 100 feet Greater than 100 feet	(10 points) (0 points)	<u> </u>
Distance to Nearest Lake, Playa, or Watering Pond (Downgradient lakes, playas and livestock or wildlife watering ponds)	Less than 100 feet Greater than 100 feet	(10 points) (0 points)	<u> </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 No	(20 points) (0 points)	<i>></i>
Distance To SurfaceWater: (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> </u>
! .	RANKING SCORE (TOTAL	, POINTS):	<i>></i>

	Date Completed: 11/24/98.
Date Remediation Sta	Approx cubic vards 80
Remediation Method: Check all appropriate	Discussion
sections)	Landraduct
	Other
Remediation Location (i.e. landfarmed onsite, name and location of offsite facility)	
General Description	of Remedial Action: Excavation. Reonock Roman.
Groundwater Encoun	tered: No X Yes Depth
Final Pit: Closure Sampling: (if multiple samples,	Sample location see Attached Documents
attach sample results	Sample depth 5' (EAST SIDEWALL)
and diagram of sample locations and depths)	Sample date $\frac{11/23/98}{98}$ Sample time $\frac{1300}{98}$
	Sample Results
и	Soil: Benzene (ppm) Water: Benzene (ppb)
	Total BTEX (ppm) p _j 8 o n s m Toluene (ppb)
	Field Headspace (ppm) 28.4 Ethylbenzene (ppb)
	TPH (ppm) 16.3 Total Xylenes (ppb)
Groundwater Sample	e: Yes No (If yes, attach sample results)
I HEREBY CERTIFY KNOWLEGE AND B	Y THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY SELIEF
DATE	11/24/98 PRINTED NAME Buddy D. Shaw
SIGNATURE BUS	Oly D. Show AND TITLE _Environmental Coordinator
ADDED DEVIEW OF	THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE A APACHE TRIBE PIT CLOSURE ORDINANCE.
APPROVED: YES	NO (REASON)
SIGNED:	CMank DATE: 12-28-98

BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	C.D.C. NO: 63/3
FIELD REPORT: CLOSURE VERIFICATION	PAGE No: of
LOCATION: NAME: TICA. A WELL #: ZE PIT: JEP	DATE STARTED: 11/23/98
QUAD/UNIT: 0 SEC: 18 TWP: 26 -> RNG: 5W PM: NM CNITY: RA ST: NM	DATE FINISHED:
OTR/FOOTAGE: 1120 FSL 1520 FEL CONTRACTOR: P& 5	SPECIALIST: NV
EXCAVATION APPROX. 18 FT. x 20 FT. x 7 FT. DEEP. CUBIC	YARDAGE: 85
DISPOSAL FACILITY: 00-517E REMEDIATION METHO	D. LANDFARM
LAND USE: LEASE: TIC A FO	RMATION: <u>OK</u>
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 108 FT.	54/E FROM WELLHEAD.
DEPTH TO GROUNDWATER: 3100 NEAREST WATER SOURCE: 31000 NEAREST SURFAI	CE WATER:
NMBCD RANKING SCORE: NMBCD TPH CLOSURE STD: 5300 PPM	PIT ABANDONED
SEIL THIS CONTRACTOR	_ STEEL TANK INSTALLED
<u> </u>	_ FIBERGLASS TANK INSTALLED
SIDEWALLY - DK. YELL, RLOWN SILTY TAND NON COISESILE, SLICH NO APPARENT STAINING OR AC DOOR DETECT NO APPARENT HE OVER IN ANY OF THE OU	ED WIN EMPORIS
NO APPRICAT HE ODER IN ANY OF THE OU	n samples.
BOTTOM - BEDROCK (SHOLE), MED. GRAY IN COWR, VERY HAM	EU, SUGAT HE GOOR
REDROCK CLOSED FIELD 418.1 CALCULATIONS	
TIME SAMPLE I.D. LAB NO: WEIGHT (g) ML. FREON [ILUTION READING CALC. ppm
SCALE	
0 FT PERIMETER PIT	PROFILE
OVM	,
NESULTS SAMPLE FIELD HEADSPACE	, A
SAMPLE FIELD HEADSPACE PID (pm)	18
205/ 0.0	·
4 6 4 0.0	
zó P A 9 (3) D A = ro, 5 @ 7' 28.4	TITT
HEAD HEAD	(sk)
3	
LAD SAMPLES	
SAMPLE ANALYSIS TIME	
Des' TAH (418.1) 1300	
MISSED	
TRAVEL NOTES: CALLOUT: ONSITE:	



EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	2 @ 5'	Date Reported:	11-24-98
Laboratory Number:	E211	Date Sampled:	11-23-98
Chain of Custody No:	6313	Date Received:	11-24-98
Sample Matrix:	Soil	Date Extracted:	11-24-98
Preservative:	Cool	Date Analyzed:	11-24-98
Condition:	Cool and Intact	Analysis Needed:	TPH-418.1

		Det.
	oncentration	Limit
Parameter	(mg/kg)	(mg/kg)

Total Petroleum Hydrocarbons

16.3

5.0

ND = Parameter not detected at the stated detection limit.

References:

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water

and Waste, USEPA Storet No. 4551, 1978.

Comments:

Jicarilla A #2E Separator Pit.

Den L. apene

Stacy W Sendler

CHAIN OF CUSTODY RECORD

				Relinquished by: (Signature)	Relinquished by: (Signature)	Relinquished W: (Signature)						(20°5)	Sample No./ Identification	Sampler: NTV	pmagi M	Client / Project Name	
				ture)	ture) 0	ture)						11/23/98	Sample Date		3000		
												1300	Sample Time				
												C211	Lab Number	Of 03 4-10	TICARILLA	Project Location	
(505) 6	5796 U.S. Highway 64	11 17 17 () 1	EOVIDOTECH IO			Date Time 1	1					5011	Sample Matrix	0	A #2E	Ž	
(505) 632-0615	5796 U.S. Highway 64		ECT 5	Received by: (Signature)	Received by: (Signa	Received by: (Signature)						- <	N Con	o. of tainers			
	2		ろ	ature)	ature)	ature)							(47)				
) Justin										ANALYSIS / PARAMETERS	
Cool - Ice/Blue Ice	Received Intact		Sample Receipt			6-11						PRESERV				RAMETERS	
7	7	≺ z	eceipt			8	Date					- 0062		Tenance			
		¥.				575	Time					7					

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 A ZE						
Location: Unit or Qtr/Qtr Sec	Sec_/8 T_2	REN RSW County RIO ARRIBA				
Land Type:						
Date Remediation Started:// 23	98	Date Completed: 6/1/99				
Remediation Method: Landfarmed		Approx. cubic yards				
Composted		,				
Other						
Depth To Groundwater:	(pts.)	Final Closure Sampling:				
Distance to an Ephemeral Stream	(pts.)	Sampling Date: 5.28.99 Time: 1336				
Distance to Nearest Lake, Playa, or Watering Pond	(pts.)	Sample Results:				
Wellhead Protection Area:	(pts.)	Field Headspace (ppm) 16.2				
Distance To SurfaceWater:	(pts.) <u>6</u>	TPH (ppm) $\frac{12.5}{}$ Method (80.15)				
DANIZING SCODE /TOTAL DOIN	TIC).	Other				
RANKING SCORE (TOTAL POIN	15):					
I HEREBY CERTIFY THAT THE INFO KNOWLEGE AND BELIEF	RMATION ABOVE	IS TRUE AND COMPLETE TO THE BEST OF MY				
DATE 6/199 , PRINTED NAME Buddy D. Shaw						
SIGNATURE Bully J. Show 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: Le C Ma	DATE:	6-18-99				

CLIENT: AMOCO BLAGG ENGINEERING, INC. LOCATION NO: 83683 P.O. BOX 87, BLOOMFIELD, NM 87413 C.O.C. NO: 6939 (505) 632-1199FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION LOCATION: NAME: JICARILLA A WELL #: 2E PITS: SEP, PROD DATE STARTED: 5 28 99 DATE FINISHED: _ QUAD/UNIT: O SEC: 18 TWP: 26N RNG: SW PM: NM CNTY: RA ST: NM ENVIRONMENTAL REP DIR/FOOTAGE: SW/A SE/A CONTRACTOR: P+5 50 L REMEDIATION: REMEDIATION SYSTEM: LANDFARM RANGE LIFT DEPTH (ft): /.o` LAND USE: FELD NOTES & REMARKS DEFTH IO GROUNDWATER: > 100' NEAREST WATER SOURCE: > 1000' NEAREST SURFACE WATER: > 1000' NMSSD RANKING SCORE: _ O NMOCD TPH CLOSURE STD: 5000 PPM MODERATE - DARK OLIVE GRAY GAND, NON COHESIVE, SCIGHTLY MOIST, EIRM NO APPARENT STAINING, HC. OBOR DETECTED IN SAMPLING PT. B. SAMPLING DEPTHS RANGE FROM 6"-10". COLLECTED A SPT COMPOSITE SAMPLE FOR LAB ANALYSIS. CWSED FIELD 418.1 CALCULATIONS SAMP. TIME SAMPLE I.D. LAB No: |WEIGHT (g) |mL. FREON | DILUTION | READING | CALC. ppm SKETCH/SAMPLE LOCATIONS **MPLES** 0 RESULTS 12.5 1330 0 ₹

	A	OVM	RESULTS	Ι	LAB SA	ΔŅ
	ß	SAMPLE ID	FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS	
>	\mathcal{N}	LF-1	16.2	LF.1	TPH (8015)	1.
λ	'				 	H
	N					-
					!	<u></u>
		SCAL	Æ			

TRAVEL NOTES:

CALLOUT: NA

ONSITE: 5 28 99

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EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	LF - 1	Date Reported:	06-01-99
Laboratory Number:	F437	Date Sampled:	05-28-99
Chain of Custody No:	6939	Date Received:	06-01-99
Sample Matrix:	Soil	Date Extracted:	06-01-99
Preservative:	Cool	Date Analyzed:	06-01-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	2.2	0.2
Diesel Range (C10 - C28)	10.3	0.1
Total Petroleum Hydrocarbons	12.5	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 A - 2E Landfarm. 5 Pt. Composite.

Analyst . Office.

Stacy W Sendler

CHAIN OF CUSTODY RECORD

	7	Cool - Ice/Blue Ice	3-0615	(505) 632-0615				
	7	Received Intact	ighway 64	5796 U.S. Highway 64				
z	~							
×	eceipt	Sample Receipt	CHINC	FOVIROTECH IO				
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705	Date 6.7.99	7.7	Received by: (Signature)	Date Time Rev	6		Jure)	Relinquished by (Signature)
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esseu	(4	SAMPLE PRESON						
Corrosine	Ŕ	SPT CO	-	501r	¥437	1336	5.28.97 1330	LF-1
				Sample Matrix	Lab Number	Sample Time	Sample Date	Sample No./ Identification
		-	o. of tainers	410	403410			RED.
0	Ramarke	Ben		1	Client No.		000	Sampler.
		AMETERS	ANALYSIS / PARAMETERS	A A OF	Ti CARIOII		000	Client, Project Name
				D. MITA ORA	Brief Contin / D. MTA			Clinat / Brainst Name