JICARILLA APACHE TRIBE ENVIRONMENTAL PROTECTION OFFICE

P.O. BOX 507 DULCE, NEW MEXICO 87528 AUG U 9 1990

SUBMIT 1 COPY TO

87637

PIT REMEDIATION AND CLOSURE REPORT

	Telephone: (505) 326-9200
Operator: AMOCO PRODUCTION COMPANY	A ST Company of the state of th
200 Amoco Court, Farmington, A	NW R1401
JICARILLA APRO	CHE #102 - 7
1 Son 4 TZ	-6N R YW County RIO ARRIBA
Location: Unit or Qtr/Qtr Sec Other	BLOW
Pit Type: Separator Dehydrator Other	
Dand I J / C.	
	26', width 53', depth 14'
I IL LOCATION.	
(Attach diagram) Reference: wellhead X,	other
Footage from reference: 3	03'
Direction from reference:	Degrees Past North
1	West South
	Less than 50 feet (20 points)
Depth To Groundwater:	50 feet to 99 feet (10 points)
(Vertical distance from contaminants to seasonal	Greater than 100 feet (0 points)
high water elevation of groundwater)	
Distance to an Ephemeral Stream	Less than 100 feet (10 points) \bigcirc
(Downgradient dry wash greater than	Greater than 100 feet (0 points)
ten feet in width)	Less than 100 feet (10 points)
Distance to Nearest Lake, Playa, or Watering Pond (Downgradient lakes, playas and	Greater than 100 feet (0 points)
livestock or wildlife watering ponds)	Yes (20 points)
Wellhead Protection Area: (Less than 200 feet from a private	No (0 points)
domestic water source, or: less than 1000 feet from all other water sources)	
Distance To SurfaceWater:	Less than 100 feet (20 points)
(Horizontal distance to perennial	100 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)
lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	
п	RANKING SCORE (TOTAL POINTS):
u ·	MAINTING BOOKE (101112)

	B1637 Brom bit
	Date Completed: 9/16/98
Date Remediation Sta	rted: Date Completed:
Pemediation Method:	Excavation X
_heck all appropriate	Landfarmed Insitu Bioremediation
Sections)	
Remediation Location:	Other Offsite _ X
(i.e. landfarmed onsite, name and location of	
offsite facility)	EVERUATION MOSTLY BEDROCK THERE FORE
General Description of	of Remedial Action: Excavation. Excavation mosny Bedrock, THERE FORE
NO THE ANALYSIS	WAS CONDUCTED. RISK ASSESSED.
Groundwater Encount	tered: No <u>></u> Yes Depth
Closure Sampling:	Sample location see Attached Documents
(if multiple samples, attach sample results	Sample depth 10' (WEST SIDEWALL - HIGHEST OUR READING - BEDRICK)
and diagram of sample locations and depths)	Sample date 9/16/98 Sample time 1215
"	Sample Results Soil: Benzene (ppm) Water: Benzene (ppb)
	Soil: Benzene (ppm) Water. Benzene (ppb) Total BTEX (ppm) Toluene (ppb)
	Field Headspace (ppm) 737 Ethylbenzene (ppb)
	TPH (ppm) Total Xylenes (ppb)
Groundwater Sample	: Yes No _> (If yes, attach sample results)
	THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY
I HEREBY CERTIFY KNOWLEGE AND B	ELIEF
	9/16/98 PRINTED NAME Buddy D. Shaw
20	AND TITLE Environmental Coordinator
SIGNATURE DUS	THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE
AFTER REVIEW OF TO THE JICARILLA	A APACHE TRIBE PIT CLOSURE ORDINANCE.
A.	X NO (REASON) R.A. Attached
" V —	ma DATE: 10-1-98
SIGNED: 1	

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

Jicarilla Apache 102 #9
Unit G, Sec. 4, T26N, R4W
Blow Pit
Basin Dakota
Non Vulnerable
> 1000 ft.
> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered shale bedrock at 14 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 14 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 <u>non-vulnerable area</u> and is approximately 0.74 miles southeast of the nearest vulnerable area boundary (Jaramillo Canyon wash).

(Refer to <u>Vigas Canyon Quadrangle</u>, <u>New Mexico - Rio Arriba County</u>, 7.5 <u>Minute Series</u> (<u>Topographic</u>), photorevised 1982, (vulnerable area boundary developed by Mr. William C. <u>Olson</u>, <u>Hydrogeologist</u>, <u>Environmental Bureau</u>, <u>New Mexico Oil Conservation Division</u>).

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.

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

8 J 63 . SUBMIT 1 COPY TO

NATURAL RESOURCE DEPT

AND OIL & GAS ADMINISTRATION

PIT REMEDIATION AND CLOSURE REPORT

COMPANY	Telephone:	(505)326-92	200
Operator: AMOCO PRODUCTION COMPANY			
Address: 200 Amoco Court, Farmington, M	NM 87401		
Facility or Well Name: TRARILLA APACHE	#104-1	HRRIRA	
Location: Unit or Qtr/Qtr Sec_ Sec_ 4 T_	ZON R 7w County NO		
Pit Type: Separator Other			
Land Type: RANGE			
Pit Location: Pit dimensions: length	てく', width ²⁸ '	, depth13 '	
I'll Lacatton.	other		
Reference: weithead			
Pootage from reference:	Degrees East	North	
Direction from reference:	Degrees Fast of West	f South $\underline{\times}$	
Depth To Groundwater: (Vertical distance from contaminants to seasonal high water elevation of	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)	
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)	0 :
ıt .	RANKING SCORE (TOTA)	L POINTS):	0

	BJ637 SEP. P11
	D. Completed: 9/16/98
Date Remediation Stat	rted: Pare Completed: 400
Remediation Method:	Approx. Clinic yards
_heck all appropriate sections)	Landfarmed Insitu Bioremediation
	Other
Remediation Location:	Other Onsite \times Offsite \times TICA: AP. 102-A (G-4-26-4)
(i.e. landfarmed onsite, name and location of	
offsite facility)	of Remedial Action: Excavation . EXCAUATION MOSTLY BEDROCK THEREFOLE
avo TPH ANALY	4515 WAS CONDUCTED. RISK ASSESSED.
Croundwater Encount	ered: No 🔀 Yes Depth
Groundwater Islemin	
Final Pit:	Sample locationsee Attached Documents
Closure Sampling:	
(if multiple samples, attach sample results	Sample depth 8' (South SIDEWAL - HIGHEST OWN REMONDS - BEDROOK)
and diagram of sample locations and depths)	Sample date 9/16/98 Sample time 1400
	Sample Results
	Soil: Benzene (ppm) Water: Benzene (ppb)
	Total BTEX (ppm) Toluene (ppb)
	Field Headspace (ppm) 583 Ethylbenzene (ppb)
	TPH (ppm) Total Xylenes (ppb)
	Yes No <u>×</u> (If yes, attach sample results)
Groundwater Sample	
I HEREBY CERTIFY	THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF M
KNOWLEGE AND B	
DATE	9/16/98 PRINTED NAME Buddy D. Shaw
SIGNATURE BLA	dy S. Shaw AND TITLE Environmental Coordinator
TO THE JICARILLA	THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE APACHE TRIBE PIT CLOSURE ORDINANCE.
APPROVED: YES _	X NO (REASON) R.A. AHACLED
 SIGNED:	C Man DATE: 10-1-98

BLAGG ENGINEERING, INC.	LOCATION NO: 83637
BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	C.D.C. ND:
FIELD REPORT: CLOSURE VERIFICATION	PAGE No: of
LOCATION: NAME: THA BP. 102 WELL #: 9 PIT: 5EP	DATE STARTED: 9/16/98
OHAD / UNIT & SEC: 4 TWP: 260 RNG: 9W PM: NATCHIT AT STATE	ENVIRONMENTAL SPECIALIST:
DIR/FUUTAGE: 1600 FNL / 1800 FEL CONTRACTOR: FTS	
EXCAVATION APPROX. 26 FT. x 28 FT. x 13 FT. DEEP. CUBIC	YARDAGE: 400
REMEDIATION METHO	D:
LAND USE: LEASE: JIC 102 FOI	
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 160 FT.	567W FROM WELLHEAD.
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE	CHECK DNE :
MILLI KANKING SCENE,	PIT ABANDONED
	_ STEEL TANK INSTALLED _ FIBERGLASS TANK INSTALLED
EXCOLATION CONSET OF MUSTLY BEDROCK (SHALE) ONSKY &	ED DUSKY RED LT. GRAY
EXCALATION CONSTST OF MUSTLY BEDROCK (SHALE) DUSKY & MED GROY (SOUTH SIDEWALL), SOFT TOWARD GROWN SURFACE	TO VERY HARD &
AT ROTTON LT GREY DISCOLORITION ON TIDEWIND THE	SUMED TO BE
STAINED FRI HE NO APPARENT HE ODOR DETECTED , ALL OUM SAMPLES CONTAINED STRONG HE ODOR ALL FROM BEDROCK THEREFORE NO THE ANALYSIS WAS	SAMPLES WILECTED
FROM BEORDER, THEREFORE NO THE ANALYSIS WAS C	conducted,
MOSTLY RISK ASSESSED	
TIME SAMPLE I.D. LAB NO: WEIGHT (g) ML. FREON [DILUTION READING CALC. ppm
SCALE 1400 LAB NO: WEIGHT (g) IIIL. TREON E	
SCALE 1430	
0 FT PIT	PROFILE
PIT PERIMETER 7N OVM	111011111
RESULTS	26'
SAMPLE FIELD HEADSPACE PID (ppm)	
26 8' Z72 S' I 3 8 8' 583	5' I T12'
J 40 7 561	
· · · · · · · · · · · · · · · · · · ·	BEDROCK
A & S A' WELL HEAD	(34)
HEAD	
LAB SAMPLES	
SAMPLE ANALYSIS TIME	
TRAVEL NOTES: ONSITE 9/16/98	
TRAVEL NOTES: CALLOUT: ONSITE: 7//6 /48	

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

Jicarilla Apache 102 #9
Unit G, Sec. 4, T26N, R4W
Separator Pit
Basin Dakota
Non Vulnerable
> 1000 ft.
> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

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(Refer to <u>Vigas Canyon Quadrangle</u>, New Mexico - Rio Arriba County, 7.5 Minute Series (<u>Topographic</u>), 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 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.

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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	102-9
Location: Unit or Qtr/Qtr Sec 6 Sec 4 TZ	CN R 4W County EIO ARRIBA
Land Type: RANGE	
Date Remediation Started: 9 16 98	Date Completed:4/12/99
Remediation Method: Landfarmed	Approx. cubic yards
Composted	
Other	
epth To Groundwater: (pts.)	Final Closure Sampling:
Distance to an Ephemeral Stream (pts.)	Sampling Date: <u>4.8 99</u> Time: <u>1200</u>
Distance to Nearest Lake, Playa, or Watering Pond (pts.) Wellhead Protection Area: (pts.)	Sample Results: Field Headspace (ppm)
Distance To SurfaceWater: (pts.)	TPH (ppm) 628 Method 8015 Other
RANKING SCORE (TOTAL POINTS):	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE KNOWLEGE AND BELIEF	IS TRUE AND COMPLETE TO THE BEST OF MY
DATE 4/12/99, PRINTED N	AME Buddy D. Shaw
SIGNATURE Buddy D. Show	AND TITLE Environmental Coordinator
AFTER REVIEW OF THE SOIL REMEDIATION INFORM ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT	CLOSURE ORDINANCE.
APPROVED: YES X NO (REASON)	
SIGNED: La CMa DATE:	6-18-79

BLAGG ENGINEERING, INC. CLIENT: __AMOCO LOCATION NO: 85637 P.O. BOX 87, BLOOMFIELD, NM 87413 C.O.C. NO: 6884 (505) 632-1199LANDFARM/COMPOST PILE CLOSURE VERIFICATION FIELD REPORT: DATE STARTED: 4.8.99 LOCATION: NAME SICARIUA APACHE 102 WELL #: 9 PITS: SEP., BLOW DATE FINISHED: QUAD/UNIT: G SEC: 4 TWP: 26N RNG: 4W PM: NM CNTY: RA ST: NM ENVIRONMENTAL REP STEVEDTAGE: 3W/4 NE/4 CONTRACTOR: P+S SING REMEDIATION: APPROX. CUBIC YARDAGE: 950 REMEDIATION SYSTEM: LANDFARM LIFT DEPTH (ft): ______ RANDE LAND USE: FIELD NOTES & REMARKS: TEFT- TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000' NMOCT RANKING SCORE: _ O NMOCD THE CLOSURE STD: 5000 PPM DK. YELLOWISH BROWN SAND, NON COHESIVE SLIGHTLY MOIST, FIRM NO APPARENT CININING OBSERVED, NO HC ODOR DETECTED SAMPLING DEPTUS RANGE FROM 6"-18", TOOK A SPT, COMPOSITE SAMPLE APPROX. 350 C.Y. DISPOSED FOR LAB ANALYSIS TO JICA. AP. 102 - 19 CLOSED FIELD 418.1 CALCULATIONS LAB No: | WEIGHT (g) | mL. FREON | DILUTION | READING | CALC. ppm SAMP, TIME SAMPLE I.D. SKETCH/SAMPLE LOCATIONS OVM RESULTS LAB SAMPLES FIELD HEADSPACE PID (ppm) SAMPLE ANALYSIS RESULTS SAMPLE 8 628 1F.1 LF-1 0.0 (8015) 1200 150 150' . 5 85°W SCALE

TRAVEL NOTES: CALLOUT: _______

ONSITE: 4.8.99

FΤ



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client: Sample ID: Laboratory Number: Chain of Custody No: Sample Matrix: Preservative: Condition:	Blagg / AMOCO LF - 1 E998 6884 Soil Cool Cool and Intact	Project #: Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed: Analysis Requested:	403410 04-12-99 04-08-99 04-09-99 04-09-99 04-12-99 8015 TPH
--	--	---	--

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	68.3	0.2
Diesel Range (C10 - C28)	560	0.1
Total Petroleum Hydrocarbons	628	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 - 9 Landfarm. 5 Pt. Composite.

Analyst Register

Stacy W Sendler

Date Time V.9.99 8:75 Ce V N NA	SA-RE PREPIE COOL Sample Receipt Cool - Ice/Blue Ice ST. Con/R51 Tes PREPIE A-PRE PREEPIE A-PRE PREEPIE	Received by: (Signature)	Sample Matrix Solut Solut Solut Solut Solut Faceived by: (Signatur Farmington, New Mexico 87401 (505) 632-0615	£998	Sample Time	Sample Date ### Page Page	Sample No./ Identification LF-/ Relinquished by: (Signature) Relinquished by: (Signature)
arks	Remarks	o. of tainers	1	Client No.			Sampler:
	METERS	ANALYSIS / PARAMETERS	Project Location CANDEARY TICARIUM APACHE 102-9	Project Location CANDEAD		8	Client / Project Name BLAENEN/AMOCO