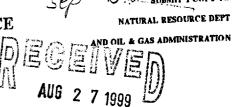
JICARILLA APACHE TRIBE ENVIRONMENTAL PROTECTION OFFICE P.O. BOX 507

DULCE, NEW MEXICO 87528



PIT REMEDIATION AND CLOSURE REPORTING COM. DIV

	D	1911 2 - 100	
		(505)326-92	00
Operator: AMOCO PRODUCTION COMPANY			
Address: 200 Amoco Court, Farmington, NM	87401		
Basilian on Wall Name: JICARINA CONTRACT	# 155 - 22		
Location: Unit or Qtr/Qtr Sec Sec T	R 5W County RIO A	ARRIBF)	
D. Landacton Other Bu			
Pit Type: Separator Denydrator Other			
Land Type: Lange			
Pit Location: Pit dimensions: length 42	y', width z 9 '	, depth7'	
(Attach diagram) Reference: wellhead X , ot	her		
Footage from reference: 180			
Direction from reference: 68	Degrees East	North X	
	<u></u> ∠ West	South	
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_
groundwater) 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)	0
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)	0
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)	0
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

RANKING SCORE (TOTAL POINTS):

	BIGIS BLOW PIT
	Date Completed: 9/2 98
Date Remediation Star	teu: 275
emediation Method:	Excavation Insitu Bioremediation
Theck all appropriate sections)	Landfarmed \nearrow Insitu Bioremediation
	Other
Remediation Location:	Onsite X Offsite
(i.e. landfarmed onsite, name and location of	
	Product Rottom.
General Description of	f Remedial Action: Excavation . BEDROCK BOTTOM.
Groundwater Encount	ered: No <u>×</u> Yes Depth
Final Pit: Closure Sampling:	Sample location see Attached Documents
	Sample depth 3 (NORTH SIDEWALL)
and diagram of sample locations and depths)	Sample depth Sample time D975
locations and deprits)	Sample date $9/z/98$ Sample time $09/25$
н	Sample Results Water: Benzene (ppb)
11	Soil: Benzene (ppm)
	Total BTEX (ppin)
	Field Headspace (ppm) Ethylbenzene (ppb)
	TPH (ppm) ND Total Xylenes (ppb)
Groundwater Sample	Yes No _X (If yes, attach sample results)
	THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY
I KNOWLEGE AND B	RITER
DATE	9/z/98 PRINTED NAME Buddy D. Shaw Oly D. Shaw Environmental Coordinator One of the state of t
SIGNATURE BUS	Dy D. Show AND TITLE Environmental Coordinator
AFTER REVIEW OF TO THE JICARILLA	THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE. A APACHE TRIBE PIT CLOSURE ORDINANCE.
APPROVED: YES	NO (REASON)
SIGNED:	C Ma DATE: 9-9-98

BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	C.O.C. NO:
FIELD REPORT: CLOSURE VERIFICATION	PAGE No: of
QUAD/UNIT: I SEC: 31 TWP: 25N RNG: 5W PM: NM CNTY: LA ST: NM QTR/FOOTAGE: 1600' FSL/1100 FEL CONTRACTOR: P + 5	DATE STARTED: 9/2/98 DATE FINISHED: ENVIRONMENTAL SPECIALIST:
EXCAVATION APPROX. 4Z FT. x 29 FT. x 7 FT. DEEP. CUBIC DISPOSAL FACILITY: ON-SITE REMEDIATION METHOL LAND USE: RANGE LEASE: J1C 155 FOI	D: LANDFREET
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 180 FT. 10 DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE NUMBER RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM V SOIL AND EXCAVATION DESCRIPTION:	FROM WELLHEAD. E WATER: >/000 / CHECK ONE: PIT ABANDONED STEEL TANK INSTALLED FIBERGLASS TANK INSTALLED
SIDELLES - GRATISH ORANGE TO DK. YELL. BROWN SAND NOW MORE! FIRM TO HARD (FRIARLE SANDSTONE) NO APPENDENT FOR BOTTOM Z' FEET ON SOUTH SIDEWIND AND APPIRENT HE GOOR DETECTED WITH EXCAUATION THE OUTH SAMPLES. BOTTOM - BEDROCK (SANDSTONE) INED. ERAY IN COLOR, VERY	ALL (NED. GROY SALOSIDLE)
FIELD 418.1 CALCULATIONS FIELD 418.1 CALCUL	
TRAVEL NOTES: CALLOUT: TO WELL LAB SAMPLES SAMPLE ANALYSIS TIME ONSITE: 9/2/98 - MOSTER ON	ν2 <i>λ</i> ,

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:

1 @ 3'

Date Analyzed:

09-02-98

Project Location:

Laboratory Number:

Jicarilla Contract # 155 - 22

Date Reported:

09-02-98

TPH-2022

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.
228	244	6.78

^{*}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 - BJ618

Muham VIJ Analyst

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:

1 @ 3'

Date Analyzed:

09-02-98 09-02-98

Project Location:

Jicarilla Contract # 155 - 22

Date Reported: Soil

Laboratory Number:

TPH-2022

Sample Matrix:

Sample Weight: Volume Freon:

5.00 grams 20.00 mL

Dilution Factor:

1 (unitless)

TPH Reading:

5 mg/kg

TPH Result: Reported TPH Result: Actual Detection Limit: Reported Detection Limit: 20.0 mg/kg 20 mg/kg

20.0 mg/kg 20 mg/kg

QA/QC:

Original TPH mg/kg ____

Duplicate TPH mg/kg

% Diff. ____

228

244

6.78

Comments:

Comments:

Blow Pit - BJ618

87618

. 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

COMPANY	Telephone: (505)326-9200
Operator: AMOCO PRODUCTION COMPANY	
Address: 200 Amoco Court, Farmington, N	M 0/4U1
Facility or Well Name: JI CARILLA Con	STRACT # 155-44
Location: Unit or Qtr/Qtr Sec Sec31 T_2	SN R SW County KIO HARRY
Pit Type: Separator X Dehydrator Other	
Dana Typot	
	3 z', width
(Attach diagram) Reference: wellhead X,	other
Footage from reference:	5
Direction from reference:	Degrees X East North A
	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) 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) 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) 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)
Distance To SurfaceWater: (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)
1 ·	RANKING SCORE (TOTAL POINTS):

	BJ618 SEP. PIT
	9/2/98
Date Remediation Started:	Approx. cubic yards
emediation Method: Excavation	Insitu Bioremediation
sections) Landfarmed \nearrow	Insitu Diolemetration
Other	
(i.e. landfarmed onsite, name and location of	1e
General Description of Remedial Action: Ex	cavation. Excavation ALL BEOLOCK
THEREFORE NO JPH ANALY	SIS WAS CONDUCTED. RISK ASSESSED.
Groundwater Encountered: No	Yes Depth
Final Pit: Sample locationsee I Closure Sampling: (if multiple samples,	Attached Documents
attach sample results and diagram of sample Sample depth	3 (PIT BOTTOM)
locations and depths) Sample date9/	
Sample Results	
Soil: Benzene	(ppm) Water: Benzene (ppb)
Total BTEX	(ppm) Toluene (ppb)
Field Headspac	779 71 11 (774)
	(ppm) Total Xylenes (ppb)
Groundwater Sample: Yes No	(If yes, attach sample results)
KNOWLEGE AND BELIEF	TION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY
DATE 9/2/98 P	RINTED NAME Buddy D. Shaw AND TITLE Environmental Coordinator
SIGNATURE BURLY D. Show	AND TITLEEnvironmental Coordinator
	CORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE
APPROVED: YES X NO (REASO	n) R.A. Attached
SIGNED: Ken C Man la	DATE: 9-9-98

CLIENT: AMOCO	BLAGG ENGINER P.O. BOX 87, BLOOMF (505) 632-	IELD, NM 87413	C.O.C. NO:
LOCATION: <u>name: J) CA.</u> QUAD/UNIT: I SEC: 31	CONTR. 155 WELL #: 22 TWP: 250 RNG: 5W PM: SL/100 FEL CONTRACTOR:	PIT: SEP NM CNTY: RA ST: NM	PAGE No: 1 of 1 DATE STARTED: 9/2/98 DATE FINISHED: ENVIRONMENTAL NV
DISPOSAL FACILITY:	FT. x 19 FT. x 5 ON-SITE F LEASE: RKS: PIT LOCATED APPROXI	REMEDIATION METHO	D: LANDFARM RMATION: DE MU NIGE FROM WELLHEAD.
DEPTH TO GROUNDWATER > 10 NMOCD RANKING SCORE: C SOIL AND EXCAVATI	NEAREST WATER SOURCE:	PPM PPM	CHECK ONE: PIT ABANDONED STEEL TANK INSTALLED FIBERGLASS TANK INSTALLED
EXEAUATION IN COLOR I YELL BROW EXCAUATION FROM DEL	EONSIST OF BEDZOCK (SA IERY HARD PHAFFIN LIE N TO KINCK) NO DRIO N STRONG HC ODOK I ORBOCK, THEZEFOKE NO TH	INDSTONE) PRIMARILE OF STAINLY ON A OUT HE PASE DE NOUM SAMPLE NOUM SAMPLE NOUM SAMPLE	Y OR YELL, S. SWEE PIT BOTTAM COLSNY TECTED WIND SAMPLE COLLECTED CONDUCTED,
SCALE O FT	TIME SAMPLE I.D. LAB No:		DEOFILE
A		HEADSPACE D (ppm)	PROFILE 19 15 15 15 15 15 15 15 15 15
TRAVEL NOTES: CALLOU	JT: (ONSITE: 9/2/98-/	motal.

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

Jicarilla Contract 155 #22
Unit I. Sec. 31, T26N, R5W
Separator Pit
Basin Dakota/Mesa Verde
Non Vulnerable
> 1000 ft.
> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 3 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 3 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 0.28 miles southwest of the nearest vulnerable area boundary (tributary to Tapacito Creek).

(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 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.

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: \(\subseteq \in A2\) LUS	CONTRACT !	£5 · 22
Location: Unit or Qtr/Qtr Sec/	Sec_3/ T2	6N RSW County PIO APRIBA
Land Type: <u>PanhE</u>		
Date Remediation Started: 9.2.	98	Date Completed: 5/10/99
Remediation Method: Landfarmed		Approx. cubic yards 325
Composted		
Other		
epth To Groundwater:	(pts.) <u>O</u>	Final Closure Sampling:
Distance to an Ephemeral Stream	(pts.)	Sampling Date: 5799 Time: 0935
Distance to Nearest Lake, Playa, or Watering Pond	(pts.)	Sample Results:
		Field Headspace (ppm) 42.6
Wellhead Protection Area:	(pts.) <u>o</u>	TPH (ppm) 3,900 Method (8015)
Distance To SurfaceWater:	(pts.) o	Other
RANKING SCORE (TOTAL POIN	TS):	
I HEREBY CERTIFY THAT THE INFO KNOWLEGE AND BELIEF	RMATION ABOVE	E IS TRUE AND COMPLETE TO THE BEST OF MY
DATE Sholan	DDINTED A	NAME Buddy D. Shaw
SIGNATURE Bully S. S	haw	AND TITLE Environmental Coordinator
A ETED DEVIEW OF THE SOIL DEME	DIATION INFORM	ATION ON-SITE REMEDIATION IS APPROVED IN
ACCORDANCE TO THE JICARILLA	APACHE TRIBE PI	IATION, ON-SITE REMEDIATION IS APPROVED IN T CLOSURE ORDINANCE.
APPROVED: YESNO	(REASON)	
SIGNED:	DATE	:

P.O. BOX 87, BLO	NEERING, INC. OMFIELD, NM 87413 332-1199	C.O.C. NO: 6913
FIELD REPORT: LANDFARM/COME	POST PILE CLOSURE	VERIFICATION
QUAD/UNIT: / SEC: 3/ TWP: 26N RNG:5W	PM: NM CNTY: PA ST:NM	DATE STARTED: 5.7.99 DATE FINISHED: ENVIRONMENTAL SPECIALIST: REF
QTR/FOOTAGE: NE/4 SE/4 CONTRACTOR:	F45	31 LCIALIST.
REMEDIATION: REMEDIATION SYSTEM: LANDFARM LAND USE: RANGE	_ APPROX. CUBIC Y _ LIFT DEPTH (ft):	ı
FIRS NOTES & REMARKS		
DEPTH TO GROUNDWATER: >/00' NEAREST WATER SOURCE	: >/000 ' NEAREST SURFAC	E WATER: > 1000
NMCID PANKING SCORE: _ O NMOCD TPH CLOSURE STI	5000 PPM	
ساور و مساور و المراجع و ا	ALLIGHTI U MOIST - MOIST.	FIRM
LARGE WREN OF STANING OBSERVED IN LA HE POOR DETECTED IN SAMPLING PTS.	INTADIA HUEM / DOE DE	
FROM 6"-12" CILLECTED A SPT. COMPOSIT		
CLOSED)		
FIELD 418	3.1 CALCULATIONS	10 04 0
SAMP. TIME SAMPLE I.D. LAB No: WEIGHT	(g) mL. FREON DILUTION READIN	NG CALC. ppm
CONTRACTOR OF THE PROPERTY OF		
SKETCH/SAMPLE LOCATIONS	_	
1		
45.	OVM RESULTS	LAB SAMPLES
	SAMPLE FIELD HEADSPACE SAMPL ID PID (ppm) ID	
	UF-1 43.4 LF-1	(8015) 0935 3900
l l N		
STAINED AREA		
3 3		
1 / 21		
6	SCALE	
	0 FT	
TRAVEL NOTES: CALOUT: N/F	ONSITE: 5.7.99	



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 F178 6913 Soil Cool Cool and Intact	Project #: Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed: Analysis Requested:	403410 05-10-99 05-07-99 05-10-99 05-10-99 8015 TPH
--	--	---	--

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	80.4	0.2
Diesel Range (C10 - C28)	3,820	0.1
Total Petroleum Hydrocarbons	3,900	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 155 - 22 Landfarm. 5 Pt. Composite.

Alexan R. Oglecen

Stacy W Sendler

CHAIN OF CUSTODY RECORD

		Received Intact Cool - Ice/Blue Ice		401	yay 64 xico 87 115	6 U.S. Highway ton, New Mexico (505) 632-0615	5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615				
Z	~				-						
	Sample Receipt	Samp		3		1 Π Τ					
				nature)	Received by: (Signature)	Receive				ature)	Relinquished by: (Signature)
			1	nature)	Received by: (Signature)	Received				ature)	Relinquished by: (Signature)
720	5-10-99		2ine	nature)	Received by: (Signature)	Received	Date Time			ature)	Relinquished by (Signature)
1											
	Cool	0			-						
316	SAMPLE PRESE	SAM									
1). Contrastic	277.6			7		5016	F178	0935	8/7/89	CF-1
i				(80			Sample Matrix	Lab Number	Sample Time	Sample Date	Sample No./ Identification
	Contained			15)	ntainers	lo. of	0	Client No. 403410			Sampler:
	Bemarks	METERS	ANALYSIS / PARAMETERS			10	Project Location CANICHECT TICARILLA CONTIGENT 155-22	Project Location CANDERCY TICARIUM CONTRACT 155		ОСО	Client / Project Name BLAGG/AMOCO
		ļ				_	10-10-				