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

1010W-07 BJ 578 NATURAL RESOURCE BEPT

AND OIL & GAS ADMINISTRATION

PIT REMEDIATION AND CLOSURE REPORT

	OH CON DRY
Operator: AMOCO PRODUCTION COMPANY	Telephone: (505)326-9200
Address: 200 Amoco Court, Farmington	n, NM 87401
Facility or Well Name: JICARILLA CO	
Location: Unit or Qtr/Qtr Sec_N Sec_9	TZSN R SW County RIO ARRIBA
Pit Type: Separator Dehydrator Other Land Type: RANGE	- BLOW
(Attach diagram) Reference: wellhead X Footage from reference:	n
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 Ephenieral 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 Por (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)
	RANKING SCORE (TOTAL POINTS):

Date Remediation St	arted:	Date	e Completed:	1/2/98
Remediation Method:			ox. cubic yards	300
eck all appropriate sections)	Landfarmed ×		Bioremediation	
	Other			
Remediation Location (i.e. landfarmed onsite, name and location of offsite facility)	: Onsite Offsite	X JICARIULE (P+A'D)	A CONTRACT 146	
General Description	of Remedial Action: Exca	avation. Bed	ROCK BOTTOM.	
Groundwater Encoun	tered: No	Yes Dep	ih	
Final Pit: Closure Sampling: (if multiple samples,	Sample location see Att	cached Docume	ents	
attach sample results and diagram of sample	Sample depth 12'			
locations and depths)	Sample date 7/2/9	18	Sample time	5
	Sample Results			
	Soil: Benzene (ppm)	Water: Benzene	(ppb)
	Total BTEX (ppm)	Toluene	(ppb)
	Field Headspace (ppm) <u>0.0</u>	Ethylbenzene	(ppb)
	ТРН (р	opm) <u>no</u>	Total Xylenes	(ppb)
Groundwater Sample:	Yes No	≺ (If yes, att	ach sample results)	
I HEREBY CERTIFY KNOWLEGE AND BE	THAT THE INFORMATION	N ABOVE IS TRUI	E AND COMPLETE TO	THE BEST OF MY
DATE	7/2/98 PRIN	TED NAME Bu	ddy D. Shaw	
SIGNATURE BUD.	ly D. Shaw AN	D TITLE En	vironmental Coor	dinator
AFTER REVIEW OF TO THE JICARILLA	THE PIT CLOSURE INFORMAPACHE TRIBE PIT CLOS	MATION, PIT CL URE ORDINANCE	OSURE IS APPROVED E.	IN ACCORDANCE
APPROVED: YES _>	NO (REASON) _			
SIGNED: Low	Ma D -)ате: <u>7-2</u>	7 -98	

3003906079 CLIENT: AMOCO BLAGG ENGINEERING, INC. INCATION NO. 87578 P.O. BOX 87, BLOOMFIELD, NM 87413 C.D.C. ND: (505) 632-1199FIELD REPORT: CLOSURE VERIFICATION PAGE No: 1 of 1 DATE STARTED: 7/2/98 LOCATION: NAME: JICA, CONTR. 146 WELL #: 10 PIT: BLOW DATE FINISHED: QUAD/UNIT: N SEC: 9 TWP: 25N RNG: 5W PM: NM CNTY: RA ST: NM ENVIRONMENTAL SPECIALIST: OTP/FOOTAGE 1190' FOL 1550 FWL CONTRACTOR: P+5 EXCAVATION APPROX. 37 FT. x 38 FT. x (5 FT. DEEP. CUBIC YARDAGE: 300 DISPOSAL FACILITY: JICARILLA CATARCT 146- REMEDIATION METHOD: LANDFARM RANGE LEASE: JIC 146 FORMATION: LAND USE: ___ FIELD NOTES & REMARKS: PIT LUCATED APPROXIMATELY <u>NO</u> FT. <u>5700</u> FROM WELLHEAD. DEPTH TO GROUNDWATER: >100 NEAREST WATER SOURCE: >1000 NEAREST SURFACE WATER: >1000 NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM _✓ PIT ABANDONED SOIL AND EXCAVATION DESCRIPTION: __ STEEL TANK INSTALLED __ FIBERGLASS TANK INSTALLED MUSTRY LT. BROWN TO DK. YELL. ORANGE SAND TO SILTY CLAY NON COHESINE TO COMESTUE SUGATLY MOIST FIRM TO STIFF, NO APPARENT STAINING OR HC ODOR OBSERVED WIN EXCAUPTION NO APPARENT HE ODOR IN ANY OF THE OUM SAMPLES. BOTTOM - BEDROCK (SHOLE) MOD. BROWN TO LT. GKRY HARD NO APPARENT STINING OR HC DOUR DESERVED / DETECTED. みといろってに FIELD 418.1 CALCULATIONS KOTTOM SAMPLE I.D. LAB NO: WEIGHT (g) ml. FREON DILUTION READING CALC. ppm 3012 TPH-1999 **SCALE** 0745 1:1 FT PIT PERIMETER PIT PROFILE OVM3.1, RESULTS FIELD HEADSPACE PID (pom) . в 15 € 10 0.0 @ 10' 3 @ 121 0.0 ふいひょうへん 38' 0.0 Ŧ LAB SAMPLES TO 146-28 BEDROCK RUDW PIT ANAL) SIS TRAVEL NOTES: CALLOUT. 7/1/98 - MORN. ONSITE: 7/2/98 - MORN.

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

Sample ID:

3 @ 12'

Project #:

Date Analyzed:

07-02-98

Project Location:

Jicarilla Contract # 146 - 10

Date Reported:

07-02-98

Laboratory Number:

TPH-1999

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	Duplicate	%
TPH mg/kg	TPH mg/kg	*Diff.
1684	1712	1.65

^{*}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 - BJ578

Analyst

Review 75 CCG

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: 3 @ 12' Date Analyzed: 07-02-98 Project Location: Jicarilla Contract # 146 - 10 Date Reported: 07-02-98

Laboratory Number: TPH-1999 Sample Matrix: Soil

Sample Weight: 5.00 grams Volume Freon: 20.00 mL

Dilution Factor: 1 (unitless) TPH Reading: 5 mg/kg

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

QA/QC:	Original TPH mg/kg	Duplicate TPH mg/kg	% Diff.
	1684	1712	1.65

Comments: Blow Pit - BJ578

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

SJ578 SUBMIT 1 COPY TO

NATURAL RESOURCE DEPT

AND OIL & GAS ADMINISTRATION

PIT REMEDIATION AND CLOSURE REPORT

Operator: AMOCO PRODUCTION COMPANY Telephone: (505)326-9200							
Address: 200 Amoco Court, Farmington, NM 87401							
Facility or Well Name: JICARINA CO.	NTROCT #146-10						
Location: Unit or Qtr/Qtr Sec_N Sec_N T_	250 R SW County RID ARRIBA						
Pit Type: Separator \(\sum \) Dehydrator Other							
Land Type: RANGE							
Pit Location: Pit dimensions: length	NA, width NA, depth NA						
Reference: wellhead X,	, other						
Footage from reference:	'\						
Direction from reference:	44 Degrees <u>×</u> East North <u>×</u> of West South						
	West Bouth						
Depth To Groundwater: (Vertical distance from contaminants to seasonal high water elevation of groundwater) Less than 50 feet (20 points) (10 points) (20 points) (10 points) (20 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 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 (20 points) 100 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)						
	RANKING SCORE (TOTAL POINTS):						

87 578 SEP. PIT

Date Remediation Started:		Date	Completed:	7/2/98
Pemediation Method: Exc	avation	Approx	c. cubic yards	N 9
eck all appropriate sections) Lan	dfarmed	Insitu	Bioremediation	
Oth	er No Rem	sa Coltrida	cessary.	
Remediation Location: (i.e. landfarmed onsite, name and location of offsite facility)	Onsite X Offsite			
General Description of Re				
BEDROCK THEREFOR				2E 42 D.
Groundwater Encountered:	No 🔀	Yes Depti	1	
Closure Sampling: (if multiple samples,	le location <u>see Att</u>	cached Docume	nts	
attach sample results and diagram of sample Sampl	le depth	(PIT BOTTON	\sim	
locations and depths) Sampl	le date	98	Sample time	50
Sampl	le Results			
l S	Soil: Benzene (1	ppm)	Water: Benzene	(ppb)
	Total BTEX (ppm)	Toluene	(ppb)
	Field Headspace (ppm) 🔼	Ethylbenzene	e (ppb)
	трн (г	opm) <u>\\</u>	Total Xylene	es (ppb)
Groundwater Sample:	Yes No	≺ (If yes, atta	ach sample results)	
I HEREBY CERTIFY THA' KNOWLEGE AND BELIEF		N ABOVE IS TRUI	E AND COMPLETE TO	O THE BEST OF MY
DATE7/7	2 98 PRIN	TED NAME Bu	ddy D. Shaw	
SIGNATURE BURLLY	S. Shaw M	D TITLE En	vironmental Coo	rdinator
AFTER REVIEW OF THE TO THE JICARILLA APAC	PIT CLOSURE INFOR CHE TRIBE PIT CLOS	MATION, PIT CLO URE ORDINANCE	OSURE IS APPROVEE) IN ACCORDANCE
APPROVED: YES X	NO (REASON) _			·
SIGNED: Kear C'M	James I	DATE: <u> </u>	98	

BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	C.O.C. NO:
FIELD REPORT: CLOSURE VERIFICATION LOCATION: NAME: J.C.A., CONTR. 146 WELL #: 10 PIT: SEP QUAD/UNIT: N SEC: 9 TWP: 25N RNG: 5W PM: PM. CNTY: RP ST: NM QTR/FOOTAGE: 1190 FSC 1550 FWL CONTRACTOR: P & S	PAGE No: 1 of 1 DATE STARTED: 7/2/98 DATE FINISHED: ENVIRONMENTAL SPECIALIST:
EXCAVATION APPROX. NA FT. x NA FT. DEEP. CUBIC DISPOSAL FACILITY: POSTE REMEDIATION METHOLAND USE: RANGE LEASE: JIC 146 FOR FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 17 FT. NOTES.	D: CLOSE AS IS.
DEPTH TO GROUNDWATER: >103' NEAREST WATER SOURCE: >1000' NEAREST SURFACE NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM SOIL AND EXCAVATION DESCRIPTION:	WATER: >// DOS' CHECK DNE: PIT ABANDONED STEEL TANK INSTALLED FIBERGLASS TANK INSTALLED
ORIGINAL PIT CONTAINED FIBERGLOSS OR STEEL TANK PIT REMOVED PRIOR TO SAMPLING (EUIDENT W) ROCK PLATFOR SAMPLES CONSISTED OF PRIABLE SHALE OLIKY RED ORANGE IN COLOR, VERY HARD NEAR PIT BOTTOM, NO HE ODUR EUIDENT, OLE TO ALL OUM SAMPLES CONDUCTED.	PO VERY PAVE TO VERY PAVE TRIPING OR
PIT AREA N°STCY FIELD 418.1 CALCULATIONS TIME SAMPLE I.D. LAB NO: WEIGHT (g) ml. FREON DI SCALE 1250 PIT PERIMETER AN PIT	PROFILE
OVM RESULTS SAMPLE FIELD HEADSPALE PID (popm) 1	Z)' A' Z'T
TRAVEL NOTES: CALLOUT: 7/1/98-morn. ONSITE: 7/2/98-A	

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:	A CONTRACT	146-10				
Location: Unit or Qtr/Qtr Sec^/	Sec9 T2	PSN RSW County EIO ABZIBA				
Land Type: <u>PANGE</u>						
Date Remediation Started: 7 2 9	18	Date Completed: 3/12/99				
Remediation Method: Landfarmed		Approx. cubic yards //000				
Composted						
Other						
Depth To Groundwater:	(pts.)O	Final Closure Sampling:				
Distance to an Ephemeral Stream	(pts.)	Sampling Date: 3 10 99 Time: 1200				
Distance to Nearest Lake, Playa, or Watering Pond Wellhead Protection Area: Distance To SurfaceWater: RANKING SCORE (TOTAL POIN	(pts.)	Sample Results: Field Headspace (ppm) 33.7 TPH (ppm) 9.3 Method 8015 Other				
	10/-	IS TRUE AND COMPLETE TO THE BEST OF MY				
DATE3/12/99		AME Buddy D. Shaw				
SIGNATURE Bully D. S	haw	AND TITLE Environmental Coordinator				
ACCORDANCE TO THE JICARILLA A	APACHE TRIBE PIT					
APPROVED: YES NO						
SIGNED:	DATE:	3-31-99				

CLIENT: AMOCO

BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199

LOCATION NO BJ578

C.O.C. NO: 6576

				OT ACLIDE	VEDIEICATION
DITT D	DDDADT.	LANDFARM/COMPOST	PILE	CLOSURE	A PILL LOW HOLD
FIELD	REPORT	LAMDI ARM COM OST	1 1111-		

LOCATION: NAME: JEARILLA CONTRACT 146 WELL #: 10

PITS: SEP, BLOW

DATE STARTED: 3.1099 DATE FINISHED: _

QUAD/UNIT: N SEC: 9 TWP: 25N RNG: 5W PM: NM CNTY: RA ST:NM

ENVIRONMENTAL REP :

QTR/FOOTAGE: SE/4 SW/4

CONTRACTOR: P+5

SOIL REMEDIATION:

REMEDIATION SYSTEM: LANDFARM

APPROX. CUBIC YARDAGE: 1000

LAND USE:

RANGE

LIFT DEPTH (ft): -

SPECIALIST: _

FIELD NOTES & REMARKS:

DEPTH TO GROUNDWATER: 2/00 NEAREST WATER SOURCE: 2/000 NEAREST SURFACE WATER: 2/006

NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM

MODERATE YELLOWISH BEOWN SAND, NON CONESIVE, SCILONITEY MOIST. FIRM LARGE AREA OF STAWING OBSERVED IN LANDFARM AREA (SEE SKETCH BELOW!) SOME HE ODOR DETECTED AT SAMPLING POINT () SAMPLE DEPTHS RANGE FROM 6"- 18" TOOK A SPT COMPOSITE SAMPLE FOR LAB ANALYSIS.

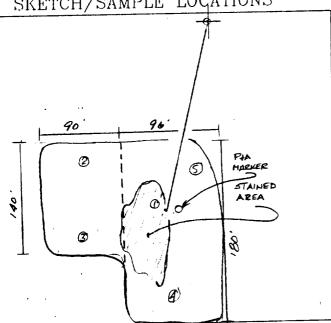
NOTE: THE SOIL WAS MOVED FROM THE 146# 28 AND COMBINET INITH THIS LANDFARM, (APPROX 700 C.Y.)

CLOSEL

FIELD	418.1	CALCULATIONS	S

		L 11	FLD 410	.1	7200					
SAMP. TIME	SAMPLE I.D.	LAB No:	WEIGHT	(g)	mL.	FREON	DILUTION	READING	CALC.	ppm
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SKETCH/SAMPLE LOGATIONS



OVM RESULTS LAB SAMPLES

OAM	CITOCAL		1/11/	11/11	
SAMPLE ID	FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS	TIME	RESULTS
LF.1	33.7	LF.1	80.57	1200	9.3
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			ļ		·
	<u> </u>	<u> </u>		 -	ļ
				J	<u> </u>

SCALE FT

TRAVEL NOTES:

ONSITE:



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	LF - 1	Date Reported:	03-12-99
Laboratory Number:	E802	Date Sampled:	03-10-99
Chain of Custody No:	6576	Date Received:	03-11-99
Sample Matrix:	Soil	Date Extracted:	03-11-99
Preservative:	Cool	Date Analyzed:	03-12-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	5.2	0.2
Diesel Range (C10 - C28)	4.1	0.1
Total Petroleum Hydrocarbons	9.3	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 146 - 10 Landfarm. 5 Pt. Composite.

Aleen P. General

Stacy W Sendler
Review

CHAIN OF CUSTODY RECORD

			_			
Client / Project Name	Project Location CAUCHALY	MUHARM		ANALYSIS / PARAMETERS		
BLACKI/AMCCO	JICARILLA CO	SICARILLA CONTRACT 146-10				
Sampler:	Client No.		s	- Re	Remarks	
PEP		403410	o. of ainer			
Sample No./ Sample Sample		Sample	ont			
Date	Lab Number	Matrix				1
LF-1 3.1099 1200	£802	SOIL	7	SPT. COMPOSITE	172517	10,
				SAMPLE PRESED	PRESE	ta
				2001		
Relinquished by (Signature)		Date Time	Received by: (Signature)			Time
Ell thatie		3.1199 810	I'mit Wash	w	3.11.98 8:11.8	Ī
Relinquished by: (Signature)			Reveived by: (Signature)			
Relinquished by: (Signature)			Received by: (Signature)			
		FOVIROTECH	FCH INC	Sample Receipt	eceipt	
					۲ Z	Z
		5796 U.S.	5796 U.S. Highway 64 Earmington New Mexico 87401	Received Intact	7	
		(505)	(505) 632-0615	Cool - Ice/Blue Ice	7	