JICARILLA APACHE TRIBE ENVIRONMENTAL PROTECTION OFFICE P.O. BOX 507 DULCE, NEW MEXICO 87528 PIT REMEDIATION AND CLOSURE REPORT PROTECTION OF FICE OF GRAPH OF A GAS AND PORT & GAS

NATURAL RESOURCE DEPT

	CUDIT \$ -00
COMPANY	Telephone: (505)326-9200
Operator: AMOCO PRODUCTION COMPANY	a. J
Address: 200 Amoco Court, Farmington, N	M 07-101
Facility or Well Name:	# 102 -146
Sec 9 TZ	SN RYW County K 10 171411817
Pit Type: Separator Dehydrator Other_ &	SLOW
Land Type:	
Pit Location: Pit dimensions: length	28' , width $42'$, depth $12'$
	other
Footage from reference: 17	D' North
Direction from reference: 9	Degrees X East North of West South X
	Less than 50 feet (20 points)
Depth To Groundwater: (Vertical distance from contaminants to seasonal high water elevation of	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 points)
groundwater) 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	Yes (20 points) No (0 points)
1000 feet from all other water sources) 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):

	BJ657 BLOW PIT
	Date Completed: 10 10 98.
ate Remediation Star	Approx cubic yards
emediation Method:	Excavation X Insitu Bioremediation
check all appropriate ections)	Landfarmed Insitu Bioremediation
, cit(nib)	Other
V	Offcite
emediation Location: e. landfarmed onsite,	C.1.5.1.0
ame and location of	
nsie iaciny)	of Remedial Action: Excavation. BEDROCK Bostom.
Sellerat Description	
	tered: No X Yes Depth
Groundwater Encoun	reference.
	Sample location see Attached Documents
Final Pit: Closure Sampling:	Sample location
if multiple samples,	
attach sample results and diagram of sample	Sample depth 7' (NORTH SIDEWRY)
locations and depths)	Sample depth/98 Sample time/30
	Sample Results
	Soil: Benzene (ppm) O.ZTI Water: Benzene (ppb)
	Total BTEX (ppm) 1.460 Toluene (ppb)
	Field Headspace (ppm) 223.8 Ethylbenzene (ppb)
	TPH (ppm) 14.2 Total Xylenes (ppb)
Groundwater Sampl	e: Yes No X (If yes, attach sample results)
Groundwater Samp	O. TOWE IS TRUE AND COMPLETE TO THE BEST OF M
I HEREBY CERTIF	Y THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF M
KNOWLEGE AND	DELIER.
DATE	PRINTED NAME Buddy D. Shaw
SIGNATURE BY	PRINTED NAME Buddy D. Shaw Oly J. Shaw AND TITLE Environmental Coordinator Oly J. AND TITLE Environmental Coordinator
AFTER REVIEW OF TO THE JICARILI	OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS ATTROVED IN A PACHE TRIBE PIT CLOSURE ORDINANCE.
APPROVED: YES	NO (REASON)
" "-	C Maul DATE: 11-18-98

3003922457 LOCATION NO 87657 BLAGG ENGINEERING, INC. CLIENT: AMOCO P.O. BOX 87, BLOOMFIELD, NM 87413 C.O.C. NO: 6288 (505) 632-1199 FIELD REPORT: CLOSURE VERIFICATION PAGE No: 1 of 1 DATE STARTED: 10/7/98 LOCATION: NAME: JICA-AP. 102 WELL #: 145 PIT: BLOW DATE FINISHED: QUAD/UNIT: M SEC: 9 TWP: Z6N RNG: YW PM: NM CNTY: RA ST:NM ENVIRONMENTAL SPECIALIST: __ OTR/FOOTAGE: 1110 FSL | 800 FWL CONTRACTOR: EXCAVATION APPROX. 28 FT. x 42 FT. x 12 FT. DEEP. CUBIC YARDAGE: 400 DISPOSAL FACILITY: ON-5/TE REMEDIATION METHOD: LANDERRY LEASE: _______ JC__/OZ FORMATION: LAND USE: RANGE FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 176 FT. 59E FROM WELLHEAD. DEPTH TO GROUNDWATER: 3/80 NEAREST WATER SOURCE: 3/80 NEAREST SURFACE WATER SOURCE: CHECK ONE: NMOCD RANKING SCORE: _____ NMOCD TPH CLOSURE STD: _____ PPM ____ STEEL TANK INSTALLED SOIL AND EXCAVATION DESCRIPTION: ____ FIBERGLASS TANK INSTALLED DUSKY RED/LT. GRAY CLAY RASTIC SLIGHTLY MOIST STIFF TO VERY STIFF, 510EWALLS -NO NOTICEABLE STAINING OR HC ODOR OBSERVED DETECTED WIND EXCALATION, HC ODOR M NORTH & EAST SIDEWALL OUM SAMPLES ONLY BOTTOM - BEDLOCK (SHALE) DUSKY RED/ LT. GARY IN COLOR, HARD, NO NOTICEABLE STOINING, NO APPARENT HE ODOR IN OUM SAMPLE. CLOSED BEOROCK FIELD 418.1 CALCULATIONS SAMPLE I.D. LAB No: WEIGHT (g) ML. FREON DILUTION READING CALC. ppm BOTTOM TIME 1130 SCALE FT PROFILE PIT PERIMETER 12 OVM A RESULTS A WELL WEAD FIELD HEADSPACE PID (ppm) 28 SAMPLE 233.8 0-0 BENROCK (sh) DIRECTION LAB SAMPLES ANALYSIS TPH BTEX BOTH PISSED ONSITE: 10/7/98 - morr. TRAVEL NOTES: CALLOUT: _



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 1 @ 7' E045 6288 Soil Cool Cool and Intact	Project #: Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed: Analysis Requested:	04034-10 10-10-98 10-07-98 10-09-98 10-09-98 10-09-98 8015 TPH
--	--	---	--

	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Parameter		
Gasoline Range (C5 - C10)	10.6	0.2
Diesel Range (C10 - C28)	3.6	0.1
Total Petroleum Hydrocarbons	14.2	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 - 14E Blow Pit.

Analyst Queen



EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

natina nomina are a socialità di la colore i comandia di a socialità di socialità di comandia di colore di socialità di colore di colo

Parameter Benzene		/Kg) 271 285	(ug/Kg) 8.8 8.4
Preservative: Condition:	Cool & Intact	Analysis Requested:	Det. Limit
Client: Sample ID: Laboratory Number: Chain of Custody: Sample Matrix:	Blagg / AMOCO 1 @ 7' E045 6288 Soil Cool	Project #: Date Reported: Date Sampled: Date Received: Date Analyzed: Date Extracted:	04034-10 10-09-98 10-07-98 10-09-98 10-09-98

	271	8.8
Benzene	285	8.4
Toluene	102	7.6
Ethylbenzene	598	10.8
p,m-Xylene o-Xylene	204	5.2
Takal DTEV	1,460	

Total BTEX 1,46

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene Bromofluorobenzene	96 % 96 %

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA,

December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846,

USEPA, December 1996.

Comments:

Jicarilla Apache #102 - 14E Blow Pit.

Alex L. Copera

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

RJ657 . SUBMIT 1 COPY TO

NATURAL RESOURCE DEPT

AND OIL & GAS ADMINISTRATION

PIT REMEDIATION AND CLOSURE REPORT

	m lambana. (505)326-9200
Operator: AMOCO PRODUCTION COMPANY		
Farming Conv.	87401	
Facility or Well Name:	# 104	PRRIB P
Location: Unit or Qtr/Qtr Sec_MSec_7 1265		
Pit Type: Separator \(\sum_\) Dehydrator Other		
Land Type:		1. 17 1
Di limengions: length Zt	o', widthZ4',	depin
(Attach diagram) Reference: wellhead X, ot	her	
Footage from reference: 165 Direction from reference: 31	Degrees of	1
Direction 43	<u></u> ✓ West	South <u>X</u>
Depth To Groundwater: (Vertical distance from contaminants to seasonal	Less than 50 feet 50 feet to 99 feet Greater than 100 feet	(20 points) (10 points) (0 points)
high water elevation of groundwater) Distance to an Ephemeral Stream	Less than 100 feet Greater than 100 feet	(10 points)
(Downgradient dry wash greater than ten feet in width) Distance to Nearest Lake, Playa, or Watering Pond	Less than 100 feet Greater than 100 feet	(10 points) <i>O</i> (0 points)
(Downgradient takes, havis the livestock or wildlife watering ponds)	Yes No	(20 points)
(Less than 200 feet from a private domestic water source, or: less than 1000 feet from all other water sources) 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)
angaton outlier and	RANKING SCORE (TOTA	L POINTS):

	81651 SET. TIL
	10/10/98
Date Remediation Sta	Approx. cubic yards
Remediation Method:	Approx. entire year
Theck all appropriate sections)	Landfarmed Insitu Bioremediation
	Other
Remediation Location	: Onsite X Offsite
(i.e. landfarmed onsite, name and location of	
offsite facility)	of Remedial Action: Excavation. BEDLOCK BOTTOM.
General Description	of Remedial Action
Groundwater Encoun	tered: No X Yes Depth
Final Pit: Closure Sampling:	Sample location see Attached Documents
(if multiple samples, attach sample results	Sample depth7' (SOUTH SIDEWALL)
and diagram of sample locations and depths)	Sample depth/ $\frac{7}{98}$ Sample time/230
	Sample date
	Soil: Benzene (ppm) 0-106 Water: Benzene (ppb)
	Soil: Benzene (ppm) 2.750 Water. Benzene (ppb)
	Field Headspace (ppm) 948 Ethylbenzene (ppb)
	TPH (ppm) 6.3 Total Xylenes (ppb)
Groundwater Sample	
I HERERY CERTIFY	Y THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY
KNOWLEGE AND B	BELIEF
DATE	PRINTED NAME Buddy D. Shaw
SIGNATURE SUS	AND TITLE Environmental Coordinator
	F THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE A APACHE TRIBE PIT CLOSURE ORDINANCE.
APPROVED: YES	NO (REASON)
signed: Les	C Mall DATE: 11-19-98

BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	C.O.C. NO: 63657
OCATION: NAME: JICA. AP. 102 WELL #: 14E PIT: SEP. QUAD/UNIT: M SEC: 9 TWP: Z6N RNG: YW PM: NM CNTY: RA ST: NM	
EXCAVATION APPROX. 20 FT. x 24 FT. x /Z FT. DEEP. CUBIC DISPOSAL FACILITY: 0N-SITE REMEDIATION METHO LAND USE: RANGE LEASE: JIC 102 FO	RMATION: <u>OK</u> 531W FROM WELLHEAD.
NEAREST WHILE STD: 5000 PPM NMOCD RANKING SCORE: NMOCD TPH CLOSURE STD: 5000 PPM SOIL AND EXCAVATION DESCRIPTION:	PIT ABANDONED STEEL TANK INSTALLED FIBERGLASS TANK INSTALLED STIFE TO VERY STIFF,
BEDROCK (SHALE), DISKY RED/LT. GRAY IN CO NOTICEABLE STAINING, SLIGHT HE ODOR IN BEDROCK CLOSED FIELD 418.1 CALCULATIONS OUTSON FIELD 418.1 CALCULATIONS	OUN SAMPLE.
SCALE O FT PIT PERIMETER N OVM RESULTS SAMPLE FIELD HEADSPACE PID (ppm) SAMPLE PID (ppm)	T PROFILE
ANTOLATION A	BEDROCIE (sh)
TRAVEL NOTES: CALLOUT: ONSITE:ONSITE:ONSITE:	



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 3 @ 7' E046 6288 Soil Cool Cool and Intact	Project #: Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed: Analysis Requested:	04034-10 10-10-98 10-07-98 10-09-98 10-09-98 10-09-98 8015 TPH
Parameter		Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C	C10)	3.5	0.2
Diesel Range (C10 - C	28)	2.8	0.1

ND - Parameter not detected at the stated detection limit.

References:

Diesel Range (C10 - C28)

Total Petroleum Hydrocarbons

Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste,

6.3

SW-846, USEPA, December 1996.

Comments:

Jicarilla Apache #102 - 14E Separator Pit.

Analyst R. Offersen

Stacy W Sendler

0.2



EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client: Sample ID: Laboratory Number: Chain of Custody: Sample Matrix: Preservative: Condition:	Blagg / AMOCO 3 @ 7' E046 6288 Soil Cool Cool & Intact	Project #: Date Reported: Date Sampled: Date Received: Date Analyzed: Date Extracted: Analysis Requested:	10 10 10 10 10	034-10 -09-98 -07-98 -09-98 -09-98 -09-98 TEX
Parameter		entration /Kg)	Det. Limit (ug/Kg)	
Benzene Toluene		106 309 155	8.8 8.4 7.6	

Ethylbenzene 10.8 1,300 p,m-Xylene 5.2 479 o-Xylene 2,350

Total BTEX

ND - Parameter not detected at the stated detection limit.

Percent Recovery Parameter Surrogate Recoveries:

99 % **Trifluorotoluene** 99 % Bromofluorobenzene

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA,

December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846,

USEPA, December 1996.

Comments:

Jicarilla Apache #102 - 14E Separator Pit.

CHAIN OF CUSTODY RECORD

-		(505) 632-0615	(5)			
7	Cool - Ice/Blue Ice 1/	Farmington, New Mexico 87401	Farmingtor			
	Received Intact	5796 U.S. Highway 64	5796			
z	Y			6	2870)	Tap cox
×	Sample Receipt	ATECH IOC.		ره		
		Received by: (Signature)			Signature)	Relinquished by: (Signature)
		Hecelved by: (Organizary)			Signature)	Relinquished by: (Signature)
			04 CO 88 6/01		chon Vel	Market
10.9.980240	10.9.9	B Received by: (Signature)	Date Time		Signature)	Relinquished by: (Signature)
Time	Date					
				-+		3/8/
779	SEPARATOR 1	/	501	1230 Engl.	plake	<i>_</i>
				1130 5043	8616101	(1) @ 7
7	Seau Pil	\ \ \ \ \	7/92		7 7	
		Cor T	Sample Matrix	Sample Lab Number	Sample	Sample No./
		lo. of ntainer PH > 15 J	01-75040	0		Sampler: ATV
	Hemanas	rs		Client No.		omoler:
	Domada	2-146	19 APACHE #102-	JEARIULA	Amoco	BLAGGI
	ETERS	ANALYSIS / PARAMETERS	cation	Project Location	,	lient / Project Name

U20-.

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

SUBMIT 1 COPY TO

NATURAL RESOURCE DEPI

AND OIL & GAS ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT

Operator: AMOCO PRODUCTION COM	MPANY	Telephone: (505) 326-9200
Address: 200 Amoco Court, Fa	armington,	NM 87401
Facility or Well Name: JICARILLA APA	KHE 102-14	E
Location: Unit or Qtr/Qtr Sec_M	Sec_9 T_2	CN RAW County BIO ARRIBA
Land Type: RANGE		
Date Remediation Started:	8	Date Completed:5/13/99
	<u>v_</u>	Approx. cubic yards 575
Composted		
pth To Groundwater: (1	pts.) <u>^</u>	Final Closure Sampling:
Distance to an Ephemeral Stream (p	ots.)	Sampling Date: <u>5.12.99</u> Time: <u>1340</u>
Distance to Nearest Lake, Playa,		Sample Results:
•	ots.) <u>0</u>	Field Headspace (ppm) 5.2
Wellhead Protection Area: (p	ots.) <u>0</u>	TPH (ppm) 4.6 Method (8015)
Distance To SurfaceWater: (p	pts.)	Other
RANKING SCORE (TOTAL POINTS		
I HEREBY CERTIFY THAT THE INFORM KNOWLEGE AND BELIEF	MATION ABOVE	E IS TRUE AND COMPLETE TO THE BEST OF MY
DATE 5/13/99	PRINTED N	IAME Buddy D. Shaw
SIGNATURE Buddy S. St		AND TITLE Environmental Coordinator
AFTER REVIEW OF THE SOIL REMEDIA ACCORDANCE TO THE JICARILLA APA	ATION INFORM ACHE TRIBE PIT	ATION, ON-SITE REMEDIATION IS APPROVED IN CLOSURE ORDINANCE.
APPROVED: YES X NO (R	REASON)	
SIGNED: LE C Mann	\mathcal{Q} DATE	: 6-18-99

CLIENT: AMOCO	P.O. BOX 87, B	GINEERING, IN BLOOMFIELD, NM 8 5) 632-1199	C. 87413	LOCATION C.O.C		35657 (A24
FIELD REPORT:	LANDFARM/CO	MPOST PILE CLO	SURE	VERIF	ICAT	ION
LOCATION: NAME: TICABILLA	APACHE 102 WELL #:	14E PITS: SEP, BLO	W ST-AIH	DATE START DATE FINISH		
QUAD/UNIT: M SEC: 9		OR: P46	51.74	ENVIRONMEN SPECIALIST:	ITAL 28	<u> </u>
SOIL REMEDIATION:	TEM: LANDFARM					5
	NEAREST WATER SO NEAREST WATER SO NAMED THE CLOSURE WAY SAND, NOW COVESTO WING, NO HE ODOR DES TO' COLLECTED A S FIELD		M TUS FOR			· · · · · · · · · · · · · · · · · · ·
SKETCH/SAMP	LE LOCATIONS	OVM RESULTS SAMPLE FIELD HEADSPACE PID (ppm)		LAB SE	AMPL)	ES RESULTS
	17 🗸	R I I I I I I I I I I I I I I I I I I I	11	(BOIS)		RESOLIS



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 F220 6924 Soil Cool Cool and Intact	Project #: Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed: Analysis Requested:	403410 05-13-99 05-12-99 05-13-99 05-13-99 05-13-99 8015 TPH
--	--	---	--

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	4.6	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	4.6	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 - 14 E Landfarm. 5 Pt. Composite.

Den L. Oginer

CHAIN OF CUSTODY RECORD

1	Cool - Ice/Blue Ice)615	Farmington, New Mexico 67401 (505) 632-0615				
7	Received Intact	way 64	5796 U.S. Highway 64				
Y Z							
eceipt	Sample Receipt	HINC	FOVIDOTECH IO				
		Received by: (Signature)	Receiv			ature)	Relinquished by: (Signature)
		ed by: (Signature)	Receive			ature)	Relinquished by: (Signature)
113.56 C 12.2	27	Received by: (Signature)	Date Time Receive			ature)	Relinquished by: (\$ignature)
-							
	2001						
BESERVE-	SAMPLE PRESERVE						
				7	1010	0.6.5.6	67.1
1POSITE	SPT. COMPOSITE		5016	F220	,	65C1.5	/E-/
		Cont	Sample Matrix	Lab Number	Sample Time	Sample Date	Sample No./
		tainer	403410				DEP.
Remarks	Rem)		Client No.			Sampler:
	METERS	ANALYSIS / PARAMETERS	JICARILLA AFACHE 102-14E	JICARILLA A		8	BLAGG/AMOCO
			ANDFACH	Project Location CANOFACH			Client / Project Name