SUBMIT T'COPY TO

NATURAL RESOURCE DEPT

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

DULCE, NEW MEXICO 87528

AND OIL & GAS ADMINISTRATION

PIT REMEDIATION AND CLOSURE REPORT

PIT REMEDIATION AND	©IL	CON. DUV
Operator: AMOCO PRODUCTION COMPANY	Telephone:	(505)326-9200
Address: 200 Amoco Court, Farmington, NM	87401	
Facility or Well Name:	- # 155 - 13M	
Location: Unit or Qtr/Qtr Sec_ L Sec_ 30 TZ6N	RSW County RIO AI	(R)&A
Pit Type: Separator Dehydrator Other_ BLO		
Land Type: RANGE		
Pit Location: Pit dimensions: length 45	, width49 /,	depth/4/
(Attach diagram) Reference: wellhead X , oth	ner	
Footage from reference: Z63'		
Direction from reference: 28		North
	West	South _X
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)
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)
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)
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, rrigation canals and ditches)	Less than 100 feet 100 feet to 1000 feet Greater than 1000 feet	(20 points) (10 points) (0 points)

RANKING SCORE (TOTAL POINTS):

OTCO	BLUW	DIT
BT697	5000	111

Date Remediation Sta	rted: Date Completed:/2 / z / 98.
Remediation Method:	Approx cubic wards 930
(Check all appropriate sections)	Landfarmed \nearrow Insitu Bioremediation
Scenary .	Other
Remediation Location: (i.e. landfarmed onsite, name and location of offsite facility)	Onsite X Offsite X TRARILLA CONTRACT # 155 - 10 (M-30-76-5)
General Description of	f Remedial Action: Excavation. BEDROCK BOTTOM.
Groundwater Encount	ered: No X Yes Depth
Closure Sampling:	Sample location see Attached Documents
attach sample results and diagram of sample	Sample depth 9' (SOUTH SIDEWALL)
	Sample date /2/1/98 Sample time 1040
	Sample Results
i	Soil: Benzene (ppm) 0.144 Water: Benzene (ppb)
	Total BTEX (ppm) 5.510 Toluene (ppb)
	Field Headspace (ppm) 356 Ethylbenzene (ppb)
	TPH (ppm) ZZ4 Total Xylenes (ppb)
Groundwater Sample:	Yes No X (If yes, attach sample results)
I HEREBY CERTIFY KNOWLEGE AND BE	THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY ELIEF
DATE	PRINTED NAME Buddy D. Shaw
SIGNATURE BUD.	ly D. Shaw AND TITLE Environmental Coordinator
AFTER REVIEW OF TO THE JICARILLA	THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE APACHE TRIBE PIT CLOSURE ORDINANCE.
APPROVED: YES 之	(REASON)
SIGNED:	CMan DATE: 12-28-94

BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	C.D.C. ND: 6415
FIELD REPORT: CLOSURE VERIFICATION LOCATION: NAME: JIGA, CONTR. 155 WELL #: 13 M PIT: BLOW QUAD/UNIT: L SEC: 30 TWP: 26D RNG: 50 PM: NM CNTY: RA ST: NM QTR/FOOTAGE: 1560 FSL 790 FWL CONTRACTOR: P&S	PAGE No:/_ of/_ DATE STARTED:// 198 DATE FINISHED: ENVIRONMENTAL SPECIALIST:
EXCAVATION APPROX. 45 FT. x 49 FT. x 14 FT. DEEP. CUBIC DISPOSAL FACILITY: 00-500 Jic. come. 155-10 REMEDIATION METHOD LAND USE: RANGE LEASE: Jic 155 FOR FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 263 FT. 5 DEPTH TO GROUNDWATER: >/30' NEAREST WATER SOURCE: >/000' NEAREST SURFACE	D: <u>LANDFARM</u> MATION: <u>DE/MV/CIR</u> 28 E FROM WELLHEAD.
SOIL AND EXCAVATION DESCRIPTION: SIDEWALLS - DK. YELL ORANGE SAND, NON COHESIVE SLIGHTLY MOTE CLAY NEAR PIT BOTTOM SLOPLING DOWNWARD FROM (SEE PIT PROFILE SCHEMATIC), PLASTIC, MOIST STIFT NO NOTICEABLE STRINING NO APPRIENT HE ODE STRONG HC DOOR IN SOUTH & WEST SIDEWALL	STEEL TANK INSTALLED FIBERGLASS TANK INSTALLED ST FIRM ONSKY RED WEST TO EAST TO VERY STIFF OR WILL EXCRUATION OUR SAMPLES.
BOTTOM - BEDROCK (SHALE), LT. GRAY IN COLOR, HARD, NO DOOR IN DUM SAMPLE. FIELD 418.1 CALCULATIONS TIME SAMPLE I.D. LAB NO: WEIGHT (9) ML. FREON DIII SCALE 1040 FT	LUTION READING CALC. ppm
PIT PERIMETER OVM RESULTS SAMPLE FIELD HEADSPACE PID (Dpm) 1 @ 8' 0.0 2 @ 8' 0.0 3 @ 9' 356 4 @ 9' 212.9 5 @ 14' 0.0	PROFILE
Dawn supe prect LAB SAMPLES SAMPLE ANALYSIS TIME (BOTH POSSED)	BÉDROCK (sh) OWSKY RED CLAY
TRAVEL NOTES: CALLOUT: ONSITE:	



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	3 @ 9'	Date Reported:	12-02-98
- · ·	E240	Date Sampled:	12-01-98
Laboratory Number:	6415	Date Received:	12-02-98
Chain of Custody No:		Date Extracted:	12-02-98
Sample Matrix:	Soil	Date Analyzed:	12-02-98
Preservative:	Cool		8015 TPH
Condition:	Cool and Intact	Analysis Requested:	0013 1111

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	65.1	0.2
Diesel Range (C10 - C28)	159	0.1
Total Petroleum Hydrocarbons	224	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 - 13M Blow Pit.

Analyst . (djeuen)

Stacy W Sendler



EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client: Sample ID: Laboratory Number: Chain of Custody: Sample Matrix: Preservative: Condition:	Blagg / AMOCO 3 @ 9' E240 6415 Soil Cool Cool & Intact	Project #: Date Reported: Date Sampled: Date Received: Date Analyzed: Date Extracted: Analysis Requested:	04034-10 12-02-98 12-01-98 12-02-98 12-02-98 12-02-98 BTEX
---	--	---	--

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	144	8.8
Toluene	1,090	8.4
Ethylbenzene	519	7.6
p,m-Xylene	2,450	10.8
o-Xylene	1,310	5.2
Total BTEX	5,510	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
v	Trifluorotoluene	97 %
	Bromofluorobenzene	97 %

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 Contract #155 - 13M Blow Pit.

Den L. Cepure

Stacy W sendler
Review

BJ697

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

		(505) 226 03	200
Operator: AMOCO PRODUCTION COMPANY	Telephone:	(505)326-92	
Address: 200 Amoco Court, Farmington, N	IM 87401		
Facility on Wall Name: JICARIUA CONTRE	ACT # 155 - 13M		
Location: Unit or Qtr/Qtr Sec L Sec 30 TZ	REN REW County K10	ARRIBA	
Pit Type: Separator X Dehydrator Other			
Land Type:			
Pit Location: Pit dimensions: length	30', width こo',		
Footage from reference: 15	5'		
Direction from reference:	8 Degrees X East of West		
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)	
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, rrigation canals and ditches)	Less than 100 feet 100 feet to 1000 feet Greater than 1000 feet	(20 points) (10 points) (0 points)	0
e de la companya del companya de la companya del companya de la co	RANKING SCORE (TOTAL	POINTS):	<u> </u>

85697 SEP. PIT

	Date Completed: 12 / 2 /98
Date Remediation Sta	Approx cubic yards 370
Remediation Method: (Check all appropriate	T : Diagonadiation
sections)	Landramed
	Other
Remediation Location (i.e. landfarmed onsite,	: Onsite X Offsite
name and location of	
offsite facility)	of Remedial Action: Excavation
General Description	or Remedial Medical Lands and Lands
Groundwater Encoun	tered: No <u>×</u> Yes Depth
Final Pit: Closure Sampling: (if multiple samples,	Sample location see Attached Documents
attach sample results and diagram of sample	Sample depth
locations and depths)	Sample date 12/1/98 Sample time 1140
	Sample Results
11	Soil: Benzene (ppm) 0.429 Water: Benzene (ppb)
	Total BTEX (ppm) 11.200 Toluene (ppb)
	Field Headspace (ppm) 636 Ethylbenzene (ppb)
	TPH (ppm) 159 Total Xylenes (ppb)
1	e: Yes No _X (If yes, attach sample results)
I HEREBY CERTIFY KNOWLEGE AND E	Y THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY SELIEF
DATE /	PRINTED NAME Buddy D. Shaw
SIGNATURE Such	My J. Jan AND TITLE Environmental Cooldinator
A TYPED DEVIEW OF	THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE A APACHE TRIBE PIT CLOSURE ORDINANCE.
APPROVED: YES	NO (REASON)
SIGNED:	-CMa-ll DATE: 12-28-94

CLIENT: AMOCO	BLAGG ENGINEERING, INC. O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199 LOCATION NO: 87697 C.D.C. ND: 64/5
FIELD REPOR	CLOSURE VERIFICATION PAGE NO: _/ of / FIG. 155 WELL #: 13M PIT: 5EP. DATE STATED: /2/1/98 DATE FINISHED:
QUAD/UNIT: L SEC: 30	TWP: 260 RNG: SW PM: NM CNTTN, ST. FITTE ENVIRONMENTAL SPECIALIST: NV
THE TON ADDDOX 30	FT. x 20 FT. x 18 FT. DEEP. CUBIC YARDAGE: 370 ON-SITE REMEDIATION METHOD: LANDFARM LEASE: JIC 155 FORMATION: DR/M/CK
FIELD NOTES & REMAR	S: PIT LOCATED APPROXIMATELY 155 FT. 5188 FROM WELLHEAD APPROXIMATELY 155 FT. 5188 FT. 5188 FROM WELLHEAD APPROXIMATELY 155 FT. 5188 FT. 5188 FROM WELLHEAD APPROXIMATELY 155 FT. 5188 FT. 5
MOSTLY DR. SLIGHTLY MOT PLASTIC, MOIS OWN IN ALL	ELL. ORENGE TO BROWN SAND TO SILTY SAND, NON COHESIVE, I FIRM PIT BOSTOM CONSISTED OF PALE YELL. BROWN CLAY, VERY STIFF UNABLE TO DISCERN ANY STAWING, STRONG HE OUM TAMPLES EXCEPT NORTH SIDEWALL.
Crozed	TIME SAMPLE I.D. LAB No: WEIGHT (g) mL. FREON DILUTION READING CALC. pp
SCALE 0 FT	nuo DIT DDOELLE
PIT PERIM	OVM RESULTS SAMPLE FIELD HEADSPACE PID (ppm) 1 @ 13' 0.0 2 @ 13' 229.3 3 @ 13' 454 4 @ 12' 133.7
20 A B 3	LAB SAMPLES SAMPLE ANALYSIS TIME
1	ID III

,



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 5 @ 18' E241 6415 Soil Cool Cool and Intact	Project #: Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed: Analysis Requested:	04034-10 12-02-98 12-01-98 12-02-98 12-02-98 12-02-98 8015 TPH
--	---	---	--

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	126	0.2
Diesel Range (C10 - C28)	32.8	0.1
Total Petroleum Hydrocarbons	159	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 - 13M Separator Pit.

Analyst P. Offeren

Stacy W Sendler



EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client: Sample ID: Laboratory Number: Chain of Custody: Sample Matrix: Preservative: Condition:	Blagg / AMOCO 5 @ 18' E241 6415 Soil Cool Cool & Intact	Project #: Date Reported: Date Sampled: Date Received: Date Analyzed: Date Extracted: Analysis Requested:	04034-10 12-02-98 12-01-98 12-02-98 12-02-98 12-02-98 BTEX
---	---	---	--

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene Toluene Ethylbenzene p,m-Xylene o-Xylene	429 1,760 859 6,000 2,150	8.8 8.4 7.6 10.8 5.2
Total BTEX	11,200	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	100 %
	Bromofluorobenzene	100 %

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 Contract #155 - 13M Separator Pit.

Analyst P. Quesa

Stacy W Sendler
Review

CHAIN OF CUSTODY RECORD

7	Cool - Ice/Blue Ice	Mexico e/→01	Farmington, New Mexico 67401				
1	Received Intact	ghway 64	5796 U.S. Highway 64				
Z Z				4 77 4	1-1-	36'3	Red COCI GILL ATT
eipt .	Sample Receipt			1 411	4131		>
		Received by: (Signature)	Recu			nature)	Relinquished by: (Signature)
		Received by: (Signature)	/2/7/98 07/5 A			nature)	Relinquished by: (Signature)
of a 2/1	Date	Received by: (Signature)	Time			nature)	Relinquished by: (Signature)
cool	PESTEN - COOL						
SAMPLES	8074 581						
1	SCHMOTO	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	50/1	£24/	8 1140	12/1/98	S e 18
200	X COLOX						
Cool 9	Tieseed	\ \ \	50/1	E240	1040	12/1/98	309'
76	BLOW F	Cor 77	Sample Matrix	Lab Number	Sample Time	Sample Date	Sample No./
		Io. of ntainers	4-10	Client No.			Sampler:
ढ	Remarks		JICARILLA CONTRACT #155-15M	JICARILLA		Moco	BLAGG AMOCO
	AETERS	ANALYSIS / PARAMETERS		Project Location			Client / Project Name

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
acility or Well Name: JICAPILLA CONTRACT 155-13 M
ocation: Unit or Qtr/Qtr Sec 4 Sec 30 T 26N R5W County R10 APRIBA
and Type: PANGE
Pate Remediation Started: 12 1 98 Date Completed: 6/8/99
demediation Method: Landfarmed Approx. cubic yards
Composted
Other
Depth To Groundwater: (pts.) Final Closure Sampling:
Distance to an Ephemeral Stream (pts.) o Sampling Date: 6.7 99 Time: 1340
Distance to Nearest Lake, Playa, (pts.) Sample Results:
Vellhead Protection Area: (pts.) _ o Field Headspace (ppm) $\frac{90.6}{543}$ Method $\frac{784}{8015}$
Distance To SurfaceWater: (pts.) Other
RANKING SCORE (TOTAL POINTS):
HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY NOWLEGE AND BELIEF
DATE 6/8/99 PRINTED NAME Buddy D. Shaw
IGNATURE Bully J. Show AND TITLE Environmental Coordinato:
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)
IGNED: DATE:

CLIENT: AMOCO P.C	D. BOX 87, BLO	NEERING, INC. OMFIELD, NM 874 32-1199		C.O.C. N]: <u>83697</u>]: <u>7067</u>
FIELD REPORT: L	ANDFARM/COMP	OST PILE CLOSU	JRE V	/ERIFIC	ATION
LOCATION: NAME: CONTRACT	156 WELL #:)3 N	PITS: CEP, BLOW		TE STARTED: .	
QUAD/UNIT: L SEC: 30 T	WP: 26N RNG: SW	PM: NM CNTY: RA ST: N	JM	VIRONMENTAL ECIALIST:	
OTR/FOOTAGE: NW/4 SW/4	CONTRACTOR: 1	7+5	SP	ECIALIST:	<u> </u>
SOIL REMEDIATION:		ADDON GUD	10 VAT	DACE. 3	סר
REMEDIATION SYSTEM		APPROX. CUBI			
LAND USE:		LIFT DEPTH (10).		
FIELD NOTES & REMARKS:	NEADEST WATER SHIPCE:	> 1000' NEAREST SU	JRFACE \	√ATER: >/ 0	00'
NMOCO RANKING SCORE:					
DK YELLOWISH BROWN SA					
SKETCH/SAMPLE	FIELD 418 E I.D. LAB No: WEIGHT	CTED A SPT. COMPOSITE SOME OF THE SOIL AND LANDFARMED ON 1 CALCULATIONS (g) mL. FREON DILUTION R	WAS RE		
John John John John John John John John	2				
(0)		OVM RESULTS	L	AB SAMI	PLES
	100,	SAMPLE FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS TIM	
	③ \\	LF-1 90.6 L	F.,	(8015) 134	10 543
17.					
N \					
\					
		SCALE 0 FT			
TRAVEL NOTES: CALLOUT: _	NA	ONSITE: 9°	9		



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Project #: Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed: Analysis Requested:	403410 06-08-99 06-07-99 06-08-99 06-08-99 8015 TPH
	Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed:

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	152	0.2
Diesel Range (C10 - C28)	391	0.1
Total Petroleum Hydrocarbons	543	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 - 13M Landfarm. 5 Pt. Composite.

Alexander L. Cejeccen

Stacy W Sendler
Review

CHAIN OF CUSTODY RECORD

	Cool - Ice/Blue Ice	615	(505) 632-0615				
	Received Intact 6	way 64 exico 87401	5796 U.S. Highway 64 Farmington, New Mexico 87401				
z							
e pipt	Sample Receipt	HINC	ENVIROTECH IN				
		Received by: (Signature)	Receive			re)	Relinquished by: (Signature)
		Received by: (Signature)	Receive			re)	Relinquished by: (Signature)
99 705	Date ሬ-	Received by: (Signature)	Date Time Receive			(6	Relinquished by (\$ignature)
	Cool						
अविड्ड	SAMPLE PRESERVE						
011500	OFF. COMPOSITION		2012	7760	1040	6.7.71	C7.
				7 (1.1.)	,	8	
		No Cont	Sample Matrix	Lab Number	Sample Time	Sample Date	Sample No./ Identification
		o. of tainer		403410			REP.
irks	Remarks			Client No.			Sampler:
	AMETERS	ANALYSIS / PARAMETERS	SICAPILLA CONTRACT 155-13M	SICARICLA (900	BLAGIS/AMOCO
			ANDEARM	Project Location LANDFARM			Client / Project Name