RISK-bedrock

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

BJ658 .. SUBMIT 1 COPY TO NATURAL RESOURCE DEPT

AND OIL & GAS ADMINISTRATION

## PIT REMEDIATION AND CLOSURE REPORT

OIL	T Carro	
<u> </u>	is cold di	W.
Telephono	(505)326-9	200
NM 87401		<u> </u>
T #146-5		
ZSN R SW County RIO	ARRIBA	
25' , width 20'	_, depth14	·
Bast East	North	
	South X	
Less than 50 feet	(20 points)	
50 feet to 99 feet	(10 points) ( 0 points)	0
Greater times 700 1011	•	
Less than 100 feet	(10 points)	_
Greater than 100 feet	(0 points)	
Less than 100 feet	(10 points)	_
Greater than 100 feet	( 0 points)	
Yes	(20 points)	0
No	( U points)	
Less than 100 feet	(20 points)	-
100 feet to 1000 feet Greater than 1000 feet	(10 points) ( 0 points)	<u> </u>
		911
RANKING SCORE (TOTA	L POINTS):	0
	Telephone  NM 87401  Telephone  NM 87401  Telephone  NM 87401  Telephone  Telephone  NM 87401  Telephone  Telephone  Telephone  No R SU County R O  Telephone  Telephone  Telephone  Telephone  Telephone  Telephone  No R O  Telephone  Teleph	Telephone: (505) 326-9  NM 87401  # (46 - S  Z\$N R\$\times County R10 ARR1867

Date Remediation Started: _		Date Complete	ed:	3/98
Remediation Method: Excav				.00
The all appropriate	Farmed			
Other				
Remediation Location: (i.e. landfarmed onsite, name and location of offsite facility)	Onsite X Offsite			
General Description of Rem	edial Action: Excava	tion. Excauation	WOSLING REDI	iock,
THEREFORE NO THAT	JUDITIS WAS COUR	weren. RISK AS	3E32E0.	
Groundwater Encountered:				
Final Pit: Sample Closure Sampling: (if multiple samples,	location see Attac	hed Documents		
	depth 91 (50x	TH SIDEWALL)		
11	date 10/8/98		time	
•	Results	N 0 7210 Water	Benzene	(ppb)
So		,	Toluene	
		1.290		
	Field Headspace (ppm		Ethylbenzene	
	TPH (ppm	8.7	Total Xylenes	(ppb)
Groundwater Sample:	Yes NoX	(If yes, attach samp	ole results)	
I HEREBY CERTIFY THAT KNOWLEGE AND BELIEF	THE INFORMATION A	BOVE IS TRUE AND C	OMPLETE TO	THE BEST OF MY
DATE 16 8	98 PRINTE	D NAME Buddy D.	Shaw	
SIGNATURE BURLY		TITLE Environm		dinator
AFTER REVIEW OF THE P	IT CLOSURE INFORMA	TION, PIT CLOSURE		
APPROVED: YES 🗶 N	O (REASON)			·····
SIGNED: Let?	Mand DA'	re: <u>11-18-9</u>	8	

BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	C.D.C. ND: 6289
LOCATION: NAME: JICA: CONTR. 146 WELL #: 5 PIT: SEP.	PAGE No: _/ of _/  DATE STARTED: _/0/8/98  DATE FINISHED:
QUAD/UNIT: E SEC: 3 TWP: Z SN RNG: SW PM:NM CNTY: PA ST:NM  OTR/FOOTAGE: 1650 FNL 950 FNL CONTRACTOR: P+5	ENVIRONMENTAL NV SPECIALIST:
EXCAVATION APPROX. 25 FT. x 20 FT. x 14 FT. DEEP. CUBIC DISPOSAL FACILITY: 0N-SITE REMEDIATION METHOL LAND USE: LEASE: 110 146 FOI	D: <u>CANOFARM</u> RMATION: <u>PC</u> 537E FROM WELLHEAD.
DEPTH TO GROUNDWATER: >/00' NEAREST WATER SOURCE: >/000 NEAREST SURFACE  NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM   SOIL AND EXCAVATION DESCRIPTION:	E WATER: 2/03 CHECK ONE: PIT ABANDONED STEEL TANK INSTALLED FIBERGLASS TANK INSTALLED
SIDEWALLS - DR. VELL. BROWN SILTY MAD TO SILTY CLAY COMMIST, FIRM TO STIFF, NO APPARENT STAIN APPARENT HE ODOR PETECTED WIN EXCAUTE ODOR IN SOMTH SIDEWALL OUT SAMPLE ON	NE OSSERVED NO NEW, STRONG HC
BOTTOM - BEDROCK (SANDSTONE) DILLE TO LT. GRAY IN CO STRONG HE ODOR IN OUM SAMPLE.  BEDROCK BOTTOM  TIME SAMPLE I.D. LAB NO: WEIGHT (9) ML. FREON D	
SCALE  O FT  PIT PERIMETER NOVM  OVM	PROFILE
TO   BELL   TO   SAMPLE   FIELD HEADSPACE   PID (ppm)   PID (ppm	ZO' A' BEDROCK
LAB SAMPLES  SAMPLE ANALYSIS TIME  10  10  10  10  10  10  10  10  10  1	(55)
TRAVEL NOTES: CALLOUT: ONSITE: 10/8/98 -m	ole.

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

Jicarilla Contract 146 #5
Unit E, Sec. 3, T25N, R5W
Separator Pit
Pictured Cliffs
Non Vulnerable
> 1000 ft.
> 100 ft.

### RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone 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 sandstone 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 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 1.36 miles northeast of the nearest vulnerable area boundary (Gonzales Canyon wash).

(Refer to <u>Lapis Point Quadrangle</u>, <u>New Mexico - Rio Arriba County</u>, 7.5 <u>Minute Series</u> (<u>Topographic</u>), 1963, (vulnerable area boundary developed by Mr. William C. Olson, <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 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.



## EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	3 @ 9'	Date Reported:	10-10-98
Laboratory Number:	E047	Date Sampled:	10-08-98
Chain of Custody No:	6289	Date Received:	10-09-98
Sample Matrix:	Soil	Date Extracted:	10-09-98
Preservative:	Cool	Date Analyzed:	10-09-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	4.2	0.2
Diesel Range (C10 - C28)	4.5	0.1
Total Petroleum Hydrocarbons	8.7	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 - 5 Separator Pit.

Alexander agencies

Stacy W Sendler



# EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	3 @ 9'	Date Reported:	10-09-98
Laboratory Number:	E047	Date Sampled:	10-08-98
Chain of Custody:	6289	Date Received:	10-09-98
Sample Matrix:	Soil	Date Analyzed:	10-09-98
Preservative:	Cool	Date Extracted:	10-09-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	31.0	8.8
Toluene	165	8.4
Ethylbenzene	297	7.6
p,m-Xylene	580	10.8
o-Xylene	217	5.2
Total BTEX	1,290	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	96 %
	Bromofluorobenzene	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 Contract #146 - 5 Separator Pit.

Analyst P. Ofence

Stacy W Sendler
Review

# CHAIN OF CUSTODY RECORD

Farmington, New Mexico 87401  Farmington, New Mexico 87401  Cool - Ice/Blue Ice   Farmington   F			Relinquished by: (Signature)	Relinquished by: (Signature)	o Qianu						(3) @ 9' 1/8/98 1000 FD47 SOIL 1 V V PRESERV.	Con	Ofost10 of tainer	Client No.	Client / Project Name Project Location SEPARGYDA PIT  ANALYSIS / PARAMETERS  TICARILLA CONTRACT #146-5
Intact /	۲ ۷	Sample Receipt			Date Time	-					SERV - COOL			Remarks	

# 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**

O A NOGO PROPUGATON CONTRACTOR							
Operator: AMOCO PRODUCTION COMPANY	Telephone: (505) 326-9200						
Address: 200 Amoco Court, Farmington, NM 87401							
Facility or Well Name: JICARIUA CONTRACT	140.5						
Location: Unit or Qtr/Qtr Sec_ & Sec_ 3	TZSN RSN County PIO ARRIBA						
Land Type: RANGE							
Date Remediation Started:/D 8.98  Remediation Method: Landfarmed  Composted Other	Approx. cubic yards _200						
epth To Groundwater: (pts.) _O	Final Closure Sampling:						
Distance to an Ephemeral Stream (pts.)							
Distance to Nearest Lake, Playa, or Watering Pond (pts.) O  Wellhead Protection Area: (pts.) O  Distance To SurfaceWater: (pts.) O  RANKING SCORE (TOTAL POINTS): O	Sample Results:						
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEGE AND BELIEF							
DATE  5/13/99  PRINTED NAME  Buddy D. Shaw  SIGNATURE Buddy D. Shaw  AND TITLE Environmental Coordinator							
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) _							
SIGNED: I	DATE:						

BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199  FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION  DOATON NAMETRALIA CONTRACTION PILE CLOSURE VERIFICATION  DOATON NAMETRALIA CONTRACTOR PILE CLOSURE VERIFICATION  DOATON STATED SIZES  QUAD/UNIT & SEC \$ TWP 2SN RNG 5W PMMM CNTY PA ST NM  CPP/DOTAGE \$W/A NW/A CONTRACTOR PIS  IL REMEDIATION  REMEDIATION  REMEDIATION SYSTEM: LANDFARM  APPROX CUBIC YARDAGE 200  NOTES & REMARKS.  DEPT- TO GROUNDWATER 2/00' NEAREST VATER SDURCE \$/000' NEAREST SUNTACE VATER \$/1000'  NOTES & REMARKS.  DEPT- TO GROUNDWATER 2/00' NEAREST VATER SDURCE \$/000' NEAREST SUNTACE VATER \$/1000'  NOTES & REMARKS.  DEPT- TO GROUNDWATER 2/00' NEAREST VATER SDURCE \$/000' NEAREST SUNTACE VATER \$/1000'  NOTES & REMARKS.  DEPT- TO GROUNDWATER \$100 NAME CONTRACTOR \$100 NAME ST \$100 NAME S	4 .	DIAGO ENG		INC			
FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION  1.CATION: NAMESTORDIA CONTRACT 1910 WELL # 5 PITS SEP.  QUAD/UNIT E SEC 5 TYP 25N RNG: 5N PMMM CNTY: 2A ST.NM  GTR/FIDITAGE SM/4 NW/4 CONTRACTOR: P+5  1. REVEDIATION:  REMEDIATION SYSTEM: LANDFARM  LAND USE:  FIELD NOTES & REMARKS:  1. DEPTH TO GROUNDWATER 2/00' NEAREST WATER SOURCE 2/000' NEAREST SURFACE WATER: 2/00'  NMCIC FAMP NO SCORE 2. NMCCO TYPH CLOSURE STD 5000 PPM  PINE VELONICAS BEOMEN SAND. NON COMPENIE, SLIGHTLY MOIST, FIRM. TO BROWN STANDHING, NO HO COOR DESTREED. SAMPLE FIRE LAB ONLINES.  FIELD 418:1 CALCULATIONS  SKETCH/SAMPLE LOCATIONS  SKETCH/SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE ID LAS NO. WEIGHT (g) MILL FREDNI DILUTION TREADING CALC DPM  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LAB SAMPLES  1. DEPTH TIME SAMPLE LOCATIONS  1. DEPTH TIME SAMPLE LOCATIONS  OVM RESULTS LOCATIONS  OVM RES	CLIENT: <u>HMOCO</u>		•		LOCATIO	]N N□:	85658
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SKETCH/SAMPLE LOCATIONS  OVM RESULTS  SAMPLE   FILLD HEADSPACE   SAMPLE   ANALYSIS   TIME   RESULTS    LAB SAMPLES  SAMPLE   FILLD HEADSPACE   SAMPLE   ANALYSIS   TIME   RESULTS    LF . 1  (3.7)   LF . 1  (80.15)   0.940   4.44	GAUS THE CAL			Toulosion			
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25 1 73.7 25.1 (8015) 094D 4.4	8	5)	SAMPLE FIELD HEA	DSPACE SAMPLE	ANALYSIS	TIME	RESULTS
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TRAVEL NOTES: CALLOUT: NA ONSITE: 5.12.99	TRAVEL NOTES:			,, 00			



### EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	LF - 1	Date Reported:	05-13-99
Laboratory Number:	F216	Date Sampled:	05-12-99
Chain of Custody No:	6920	Date Received:	05-13-99
Sample Matrix:	Soil	Date Extracted:	05-13-99
Preservative:	Cool	Date Analyzed:	05-13-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	4.4	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	4.4	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 - 5 Landfarm. 5 Pt. Composite.

Asken L. Colecce

Stacy W sendler

# CHAIN OF CUSTODY RECORD

_	Cool - ice/Blue ice   1	0615	(505) 632-0615				
7	Received Intact +	hway 64 Mexico 87401	5796 U.S. Highway 64 Farmington. New Mexico 87401				
Y N N/A							
≯ipt	Sample Receipt	CHINC	ENVIROTECH IN				
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e Time	Date ליני?-9	Received by: (Signature)	Date Time Rece	LA.		ture)	Relinquished by: Signature)
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	cool						
reseale-	SAMPLE PRESERIE-						
3511E	SPT. COMPOSITE	7	5011	1-216	0940	5.12.990940	CF-1
			Sample Matrix	Lab Number	Sample Time	Sample Date	Sample No./ Identification
arks	Remarks	o. of ainers	014	Client No. +03410			Sampler:
	NMETERS	ANALYSIS / PARAMETERS	Project Location CAMPETARY  SICARILLA COMPACT 146-5	Project Location LANDFART 14		00	Client / Project Name  **ELACA   AMOCO