DEPUTY OIL & GAS INSPERIOR ROMMENTAL PROTECTION OFFICE P.O. BOX 507

AUG 1 3 1999

DULCE, NEW MEXICO 87528

STETZ .. SUBMIT I COPY TO

NATURAL RESOURCE DEPT

AND OIL & GAS ADMINISTRATION

Zpto

PIT REMIDIATION AND CLOSURE REPORT

Operator: PMOCO PRODUCTION COMPANY	Telephone: (505)326-9200
Address: 200 Amoco Court, Farmington, NM	87401
Facility or Well Name:	# 8
Location: Unit or Qtr/Qtr Sec 5 Sec 13 T26	60 RSW County RID ARRIBA
Pit Type: Separator Dehydrator Other_ B	LOW
Land Type: RADEE	
(A made diagram)	other
Direction from reference:	Degrees \times East North of South \times
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)
	PANKING SCORE (TOTAL POINTS):

			1,/00
Date Remediation Star	rted:	Date Completed:9	
Remediation Method:	Excavation _X_	Approx. cubic yards	
heck all appropriate	Landfarmed _x	Insitu Bioremediation	
	Other		
Remediation Location: (i.e. landfarmed onsite, name and location of			
offsite facility) General Description o	of Remedial Action: Excavation	on. Bedrocit Bottom.	
Groundwater Encount	ered: No <u>Y</u> Yes _	Depth	
Closure Sampling:	Sample location see Attached		
attach sample results	Sample depth 5 (South) Sample date 5 28 98	Sample time 13	30
II.	Sample Results		
11	•	0.660 Water: Benzene	
		zs.570 Toluene	(ppb)
	Field Headspace (ppm)	4 44	ene (ppb)
		1. 375 m. 127 l	nes (ppb)
<u>[}</u>	: Yes No		
I HEREBY CERTIFY KNOWLEGE AND BI	THAT THE INFORMATION ABO	OVE IS TRUE AND COMPLETE	TO THE BEST OF MY
DATE	9//98 PRINTED N	NAME Buddy D. Shaw	
SIGNATURE BUD	ly S. Show AND TIT	TLE Environmental Co	
AFTER REVIEW OF TO THE JICARILLA	THE PIT CLOSURE INFORMATION APACHE TRIBE PIT CLOSURE OF	UKDINANCE.	ED IN ACCORDANCE
APPROVED: YES _	NO (REASON)	RA AHached	
SIGNED:	C Ma DATE:	99911	

BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	C.O.C. NO: 6049
FIELD REPORT: CLOSURE VERIFICATION	PAGE No: 1 of 1
QUAD/UNIT: E SEC: 13 TWP: 262 RNG: 5W PM: NM CNTY: RA ST: NM QTR/FDDTAGE: 1850 FNL 790 FWL CONTRACTOR: PLS	DATE STARTED: 82898 DATE FINISHED: ENVIRONMENTAL SPECIALIST:
	L
EXCAVATION APPROX. 25 FT. x 29 FT. x 8 FT. DEEP. CUBIC	YAKDAGE: 113
DISPOSAL FACILITY: ON-SITE REMEDIATION METHO	D: ZHNOFAICH
LAND USE: RANGE LEASE: C FOR	
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 114 FT.	SZIE FROM WELLHEAD.
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFAC	E WATER:
	PIT ABANDONED
	_ STEEL TANK INSTALLED _ FIBERGLASS TANK INSTALLED
SIDELIPLIS - OK. YELL. BROWN TO OUSKY LED SILTY SAND TO CLAY	
-1 and -1 and $-$	E-1 3 1 (P(-C) E-11) F-1 F
who excountry, strong the book in the sum	, samples except
porth spelling.	
BOTTOM - BEDROCK (SANDSTONE), WERY HARD, MED GRAY IN	strong tic
ODOL DETECTED 113 DUNG SAMPLE.	
BENESCH (RISK ASSESSED)	
TIME SAMPLE I.D. LAB NO: WEIGHT (g) mL. FREON DI	LUTION READING CALC. ppm
SCALE SAME LETTER	
O FT	DB OBIL H
PIT PERIMETER AD PIT	PROFILE
TO OVM RESULTS	
A SAMPLE FIELD HEADSPACE PIO (ppm)	
1 @ 4' 5.8	
3 @ 5' 1/26 ,7	6 T T T ,
29' D (5 8' D 8k)	17/9
3 3	BEDLOCK
	BEDLOCK (15)
A SLOPE SAMPLES	
DIRECTION ID ANALYSIS TIME	
25	
(BOH POSSED)	
TRAVEL NOTES: CALLOUT: 8/28/98 - MORN. ONSITE: 8/28/98 -	AFTER.



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	3 @ 5'	Date Reported:	09-02-98
Laboratory Number:	D876	Date Sampled:	08-28-98
Chain of Custody No:	6049	Date Received:	08-31-98
Sample Matrix:	Soil	Date Extracted:	08-31-98
Preservative:	Cool	Date Analyzed:	09-01-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	oncentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	2,800	0.2
Diesel Range (C10 - C28)	1,580	0.1
Total Petroleum Hydrocarbons	4,380	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 C #8 Blow Pit.

Analyst P. Queen

Stacy W Sendler
Review



EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	3 @ 5'	Date Reported:	09-01-98
Laboratory Number:	D876	Date Sampled:	08-28-98
Chain of Custody:	6049	Date Received:	08-31-98
Sample Matrix:	Soil	Date Analyzed:	09-01-98
Preservative:	Cool	Date Extracted:	08-31-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)	
Benzene	660	8.8	
Toluene	12,510	8.4	
Ethylbenzene	3,000	7.6	
p,m-Xylene	7,260	10.8	
o-Xylene	2,140	5.2	
Total BTEX	25,570		

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 C #8 Blow Pit.

Ahalyst P. Cyrien

87612

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)326-9200
Operator: AMOCO PRODUCTION COMPANY	Telephone: (505) 326-9200
Address: 200 Amoco Court, Farmington, N	IM 87401
Facility or Well Name: JICARLA C *	8 PID ARRIRA
Location: Unit or Qtr/Qtr Sec Sec 13 T 3	20 RSW County Kits 1980
Pit Type: Separator Nehydrator Other	
Land Type: Report	
Pit Location: Pit dimensions: length	20'_, width_ 18', depth_ 6'
	other
Footage from reference:	O'
Direction from reference: 6	Degrees East North of West South X
	West South X
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)
и .	RANKING SCORE (TOTAL POINTS):

			8761	2 ج	EP. PIT	
					l:9/	/ 1/98
Date Remediation Started:						
(01110000000000000000000000000000000000	ion <u>×</u>					0
heck all appropriate sections) Landfar	med <u>×</u>		Insitu E	Bioremedia	tion	
Other						
(i.e. landfarmed onsite, name and location of	Onsite X Offsite					
General Description of Remed	lial Action: <u>Exc</u>	cavatio	n. BEDRE	ock B	ollom.	
Groundwater Encountered:	No 🔀	Yes	Depth			
Final Pit: Sample Closure Sampling: (if multiple samples,	location <u>see</u> At	tached	Documen	ts		
attach sample results	lepth3' <	SOUTH	51DEWAL	د 🔪		
	date 8/27/				me0736	>
				1		
Sample		(ppm) <u>-</u>	2.0814	Water	Benzene	(ppb)
Soil	Benzene			water.	Toluene	(ppb)
	Total BTEX				Ethylbenzene	(ppb)
·	Field Headspace				•	(ppb)
	ТРН	(ppm) <u></u>	1,340		Total Aylenes	(ppo)
Groundwater Sample:	Yes No _	<u>×</u>	(If yes, atta	ch sample	results)	
I HEREBY CERTIFY THAT T KNOWLEGE AND BELIEF	THE INFORMATION	ON ABOV	E IS TRUE	AND CO	MPLETE TO '	THE BEST OF MY
DATE 9/1/9	8 _ , PR	INTED N	AME Bud	ddy D.	Shaw	
SIGNATURE BURLY	1. Show	AND TITI	LE Env	vironme	ntal Coord	
AFTER REVIEW OF THE PI'TO THE JICARILLA APACH	T CLOSURE INFO E TRIBE PIT CLO	DRMATIO DSURE O	N, PIT CLC RDINANCE	SURE IS	APPROVED I	N ACCORDANCE
APPROVED: YES X	(REASON	n <u>L</u>	A. A-	Hac	Led	<u> </u>
SIGNED: Lear Ch	land	DATE:	9-9	-98		

CLIENT: AMOCO	P.O. BOX 87, BLO	GINEERING, INC. DOMFIELD, NM 8 632-1199	37413	C.D.C. ND: <u>6049</u>
FIELD REPORTION: NAME: JOCA . QUAD/UNIT: SEC: 13 QTR/FODTAGE: 1850 FALL	C WELL #:	B PIT: 35P PM: NM CNTY: RA		PAGE No: of DATE STARTED: 8/27/98 DATE FINISHED: ENVIRONMENTAL SPECIALIST:
EXCAVATION APPROX ZO DISPOSAL FACILITY: LAND USE:	EFT. x 18 FT. > CON - SITE LEASE: _ KS: PIT LOCATED AP NEAREST WATER SOURCE NMOCD TPH CLOSURE ST	REMEDIATION C PROXIMATELY 100 E: >1000 NEARES	METHO FOF FT. S	D: LANDFORM RMATION: DK MV 567W FROM WELLHEAD.
BOTTOM - BEDI	ASSESSED	HARD (BEDROCK A) HARD (BEDROCK A) MED. GLAY '~ JIN EXCRUATION FIFI TI 418.1 CALCULA	ND EXC C DOOR ERR PT C PLOR V W	BOT JOUTH SIDEWALL) NOW COHESTIVE, TROTTOM). VELY HARD, HC OUM JAMPLE.
SCALE O FT PIT PERIMI	ETER	OVM CSULTS	PIT	PROFILE
JEP D J ZO,	SAMPLE 10 3' 2 @ 3' 3 @ 3' 4 @ 1' 5 @ 6' A LAB SAMPLE 10 3) @ 3'	FIELD HEADSPACE PID (ppm) O. O O. O 388 O. O 288 SAMPLES ANALYSIS TIME TPH/STEX 0130 PMSSED)	77/	BEDROCK (55)
TRAVEL NOTES: CALLOUT	8/26/98-AFTER	2. ONSITE: 8/27/	98	



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

0.2

0.1

0.2

Parameter		oncentration (mg/Kg)	Det. Limit (mg/Kg)
Condition.	Good and music	· · · · · · · · · · · · · · · · · · ·	
Condition:	Cool and Intact	Analysis Requested:	8015 TPH
Preservative:	Cool	Date Analyzed:	09-01-98
Sample Matrix:	Soil	Date Extracted:	08-31-98
Chain of Custody No:	6049	Date Received:	08-31-98
Laboratory Number:	D875	Date Sampled:	08-27-98
Sample ID:	3 @ 3'	Date Reported:	09-02-98
Client:	Blagg / AMOCO	Project #:	04034-10

ND - Parameter not detected at the stated detection limit.

References:

Gasoline Range (C5 - C10)

Diesel Range (C10 - C28)

Total Petroleum Hydrocarbons

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

605

738

1,340

SW-846, USEPA, December 1996.

Comments:

Jicarilla C #8 Separator Pit.

Analyst P. Referen



EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	3 @ 3'	Date Reported:	09-01-98
Laboratory Number:	D875	Date Sampled:	08-27-98
Chain of Custody:	6049	Date Received:	08-31-98
Sample Matrix:	Soil	Date Analyzed:	09-01-98
Preservative:	Cool	Date Extracted:	08-31-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	81.4	8.8
Toluene	873	8.4
Ethylbenzene	359	7.6
p,m-Xylene	4,850	10.8
o-Xylene	655	5.2
Total BTEX	6,820	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	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 C #8 Separator Pit,

Analyst . Chessen

	Cool - ica/Blue ice)615	(505) 632-0615				
1	Received Intact	lexico 87401	Farmington, New Mexico 87401				
		way 64	5796 II S Highway 64				
AN NA							
eceipt	Sample Receipt	CHIC	FOVIROTECH I			ļ	
		Received by: (Signature)	Receiv			ure)	Relinquished by: (Signature)
		Received by: (Signature)	Receiv			ure) Q	Relinquished by: (Signature)
3	~	paceived by: (Signature)	2080 8	00		7	
Date Time		Alter (Giorgettica)	Date Time Bossin				Delinquished by: (Signat
	-						-
-							
J COOL	WESEN.						
SAMPLES	s rang						
PT	Scow 1	~ < <	20/1	4484	/330	8/28/98 1330	3 @ 5
R 715	SEAROOTOR	\ \ \	2016	2489	0860	8/27/98	3 6 3
		1	Sample Matrix	Lab Number	Sample Time	Sample Date	Sample No./ Identification
		15)		01-25040			727
Remarks	R)		Client No.			Sampler:
	AMETERS	ANALYSIS / PARAMETERS	0 * 0	Project Location Ticklich		noco	SLAGG/ Amoco

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 COMPANY Telephone: (505) 326-9200
Address: 200 Amoco Court, Farmington, NM 87401
Facility or Well Name: SICARIUA C 8
Location: Unit or Qtr/Qtr Sec E Sec 13 T241 R51 County E10 APPIBA
Land Type:
Date Remediation Started: 8 27.98 Date Completed: 2/22/99 Remediation Method: Landfarmed
Depth To Groundwater: (pts.) O Final Closure Sampling:
Distance to an Ephemeral Stream (pts.) O Sampling Date: 2 18 99 Time: 1000
Distance to Nearest Lake, Playa, or Watering Pond (pts.)
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEGE AND BELIEF
DATE Z/ZZ/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: 1= EMa C DATE: 3-31-99

DO BOX 87 BLO	NEERING, INC. OMFIELD, NM 87413	LOCATION NO.	
(505)	332-1199	C.D.C. 14D.	
FIELD REPORT: LANDFARM/COMF		VERIFICA'	rion
LOCATION: NAME: TICADILLA C WELL #: 8	PITS: SP. BLOW	DATE STARTED: 2 DATE FINISHED:	18.47
QUAD/UNIT: E SEC: 13 TWP: 26 RNG: 5W QTR/FOOTAGE: 5W/4 NW/4 CONTRACTOR:	PM: NM CNTY: RA SI: NF	ENVIRONMENTAL SPECIALIST:	EP
SOIL REMEDIATION:	APPROX. CUBIC Y	ARDAGE: 24	.5
REMEDIATION SYSTEM: LANDFARM	LIFT DEPTH (ft):		
LAND USE: <u>PANGE</u>	LIFT DEPTH (ft):		
FIELD NOTES & REMARKS:		e Maren 7 188	o'
DEPTH TO GROUNDWATER JOO' NEAREST WATER SOURCE	7/000 NEAREST SURFAC	E WATERI - 100	
NAMES PANKING SCORES O NAMES THE CLUSURE STD	5000 PPM		
MODERATE LELLOWISH BROWN SAND NON CONE	SIVE, MOIST, PIRM		
SAMPLING DEPTIE RANGE FROM 6 -12 7002	A SPT. COMPOSITE SAMPLE		•
FOR LAB ANALYSIS			
CLOSED			
	3.1 CALCULATIONS (g) mL. FREON DILUTION READII	NG CALC. ppm	
- SAMP. TIME SAMPLE I.D. LAB No: WEIGHT	(g) ML. FREON DILOTION READIN	TO ONLESS PARTIES	
SKETCH/SAMPLE LOCATIONS	1		
1	,		
- N	OVM RESULTS	LAB SAMPI	ES
	SAMPLE FIELD HEADSPACE SAMPL		RESULTS
/ /8	10 PHD (Applie) 10 LF-1 34.6 LF-1	(8015) 1000	34.7
3/ /2			
To the Time			
3 7 6 5			
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	SCALE		
	· .		
45	O FT		
TRAVEL NOTES: CALLOUT: N/A	ONSITE: 2 18 99		



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Biagg / AMOCO LF - 1 E686 6574 Soil Cool	Project #: Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed:	403410 02-22-99 02-18-99 02-19-99 02-19-99
Cool and Intact	Analysis Requested:	8015 TPH
	LF - 1 E686 6574 Soil Cool	LF - 1 Date Reported: E686 Date Sampled: 6574 Date Received: Soil Date Extracted: Cool Date Analyzed:

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	9.3	0.2
Diesel Range (C10 - C28)	25.4	0.1
Total Petroleum Hydrocarbons	34.7	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 C - 8 Landfarm.

5 Pt. Composite.

Analyst

	+	Cool - Ice/Blue Ice /	0615	(505) 632-0615				
		Received Intact	hway 64 Mexico 87401	5796 U.S. Highway 64 Farmington, New Mexico 87401				
NA	≺ z	1						
	Ď	Sample Receipt	CHINC	ENVIROTECH IN				
			Received by: (Signature)	Rece			re)	Relinquished by: (Signature)
			Received by: (Signature)	Rece			re)	Relinquished by: (Signature)
Time		2.19.99	Received by: (Signature)	2.A.99 10/5	N			Relinquished by: (Signature)
-	_							
								-
-		Car						
326	R	SAMPLEBERRA						
	-							
'	8ME	577.Cor408116	7	3016	Elosto	1000	2.1899	CF-1
				Sample Matrix	Lab Number	Sample Time	Sample Date	Sample No./
	8	Remarks	o. of tainers	34-10	Client No.			Sampler:
		METERS	ANALYSIS / PARAMETERS	C-B	SICAPILLA C-8		co	Client / Project Name RAES / AMOCO
				- 12-13-1				