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

BJ644 Sepsubmit 1 copy to
NATURAL RESOURCE DEPT

AND OIL & GAS ADMINISTRATION

AUG 1 6 1999

# PIT REMEDIATION AND CLOSURE REPORT

Operator: AMOCO PRODUCTION COMPANY	Telephone: (505) 326-9200
Address: 200 Amoco Court, Farmington, NM	87401
Facility or Well Name:	
Location: Unit or Qtr/Qtr Sec_B Sec_A T_Z520	R5W County R10 ARRIBA
Pit Type: Separator Dehydrator Other_ &c.	
D	
Pit Location: Pit dimensions: length 35	, width 35', depth 23'
	ner
Footage from reference: ZZS	
Direction from reference: 72	Degrees East North _X of
	_X West South
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)

RANKING SCORE (TOTAL POINTS):

				9/25/98
Date Remediation Sta	arted:	Dat	e Completed:	1125/10
Pemediation Method:	Excavation	Appro	ox. cubic yards	
Sheck all appropriate sections)	Landfarmed 🔀	Insitu	1 Bioremediation	
	Other			
Remediation Location (i.e. landfarmed onsite, name and location of offsite facility)				
General Description	of Remedial Action: Exc	cavation		
Groundwater Encoun	tered: No 🔀	Yes Dep	pth	_
Final Pit: Closure Sampling: (if multiple samples,	Sample location see At	T SIDELLALL		
attach sample results	Sample depth 25	(PIT ROTTOR)	/n' (west	51Deurl)
and diagram of sample locations and depths)	Sample depth $\frac{23}{9/24}$	198	Sample time	1130
		. , , ,		
II	Sample Results	(	Water: Benzer	ne (ppb)
	Soil: Benzene	(ppm)		ne (ppb)
	Total BTEX	(ppm)	4617	
		(ppm) <u>0-0</u>		enzene (ppb) Kylenes (ppb)
	ТРН	(ppm)		,
Groundwater Sample	: Yes No	(If yes, a	attach sample result	s)
I HEREBY CERTIFY KNOWLEGE AND B	THAT THE INFORMATION ELIEF	ON ABOVE IS TR	UE AND COMPLE	TE TO THE BEST OF MY
DATE O	9/25/98 PR	INTED NAMEI	Buddy D. Shaw	Coordinator
SIGNATURE (Sud	Ly U. Ohaw	AND TITLE	ELIATI OHIIGH CAT	OVED IN ACCOUNTANCE
AFTER REVIEW OF TO THE JICARILLA	THE PIT CLOSURE INFO APACHE TRIBE PIT CLO	ORMATION, PIT O DSURE ORDINAN	LOSURE IS APPR CE.	OVED IN ACCURDANCE.
APPROVED: YES	X NO (REASON	)		
SIGNED: Lex	C Maull	DATE:	-1-98	

30039 2316 D BLAGG ENGINEERING, INC. CLIENT: AMOCO LOCATION NO: 87644 P.O. BOX 87, BLOOMFIELD, NM 87413 C.D.C. ND: 6216 (505) 632-1199 FIELD REPORT: CLOSURE VERIFICATION PAGE No: of 1 DATE STARTED: 9/24/98 LOCATION: NAME: JCA. CONTR. 146 WELL #: 13E PIT: BLOW DATE FINISHED: QUAD/UNIT: 6 SEC: 9 TWP: Z50 RNG: 5W PM: NM CNTY: RA ST: NM ENVIRONMENTAL OTR/FOOTAGE: 790 FAL/1580 FEL CONTRACTOR: PAS SPECIALIST: \_\_\_ EXCAVATION APPROX. 35 FT. x 35 FT. x 23 FT. DEEP. CUBIC YARDAGE: 600 DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD: LANDFARM LEASE: JC 146 FORMATION: LAND USE: \_\_ RANGE FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 225 FT. NOZW FROM WELLHEAD. DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000' CHECK ONE: NMOCD RANKING SCORE: 8 NMOCD TPH CLOSURE STD: 5006 PPM ✓ PIT ABANDONED \_\_ STEEL TANK INSTALLED SOIL AND EXCAVATION DESCRIPTION: FIBERGLASS TANK INSTALLED SOIL MOSTLY DK. YELL, ORANGE SAND LT. BRAY SAND W GRAVEL COLLECTED FROM WEST SIDEWALL PIT BOSTOM DINE TO LT. GERY SAND NON CORESIVE SUGHTLY MOIST, FIRM, STRINING OBSERVED ON MAJORITY ROTTOM 3/3'S OF WEST SIDEWALL. ITO LATED PATCH IN SONTHERST CORNER (APPROX. 15 BELOW GRADE), + BOTTOM 4'OF EAST SIDEWALL NO APPARENT HE ODOR DETECTED WIN EXCAUATION STRONG HE ODOR IN WEST SIDEWALL DIM SAMPLE ONLY COLLECTED 4 PT. COMPOSITE SAMPLE FOR LAB ANALYSIS FROM THE SIDENALL SAMPLING PTS. CLOSED FIELD 418.1 CALCULATIONS SAMPLE I.D. LAB No: WEIGHT (g) ML. FREON DILUTION READING CALC. ppm TIME 88 1:1 Be 25' TAH - 20 44 20 SCALE 1130 FT PROFILE PIT PERIMETER N OVM 35 RESULTS FIELD HEADSPACE SAMPLE @ 18 0.0 @ 18 3 @ 18 0.0 35 ' 4 @ 17' 607 3 LAB\_SAMPLES SAMPLE ANALYSIS TPHIBTEX 1130 BOTH PRISED ONSITE: 9/24/98 - MORN. TRAVEL NOTES: CALLOUT: \_

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

Project #:

Sample ID:

5 @ 25'

Date Analyzed:

09-24-98

Project Location:

Jicarilla Contract # 146 - 13E

Date Reported:

09-24-98

Laboratory Number:

TPH-2044

Sample Matrix:

Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
	<del>-</del>	
Total Recoverable Petroleum Hydrocarbons	88	20

ND = Not Detectable at stated detection limits.

QA/QC:

QA/QC Sample TPH mg/kg Duplicate
TPH mg/kg

220

% \*Diff.

7.02

2

\*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 - BJ644

Mikon Vil Analyst



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

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	SW - C	Date Reported:	09-25-98
Laboratory Number:	D964	Date Sampled:	09-24-98
Chain of Custody No:	6216	Date Received:	09-24-98
Sample Matrix:	Soil	Date Extracted:	09-25-98
Preservative:	Cool	Date Analyzed:	09-25-98
	Cool and Intact	Analysis Requested:	8015 TPH
Condition:	Cool and intact	,, 5.5	

Parameter	oncentration (mg/Kg)	Limit (mg/Kg)
Gasoline Range (C5 - C10)	21.1	0.2
Diesel Range (C10 - C28)	345	0.1
Total Petroleum Hydrocarbons	366	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 - 13E Blow Pit. 4 Pt. Composite of Sidewalls,

Alexander A. Company



# EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client: Sample ID:	Blagg / AMOCO SW - C D964	Project #: Date Reported: Date Sampled:	04034-10 09-25-98 09-24-98
Laboratory Number: Chain of Custody: Sample Matrix:	6216 Soil	Date Gampled:  Date Received:  Date Analyzed:	09-24-98 09-25-98
Preservative: Condition:	Cool Cool & Intact	Date Extracted: Analysis Requested:	09-25-98 BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)	
Benzene	11.5	8.8	
Toluene	30.2	8.4	
Ethylbenzene	328	7.6	
p,m-Xylene	1,530	10.8	
o-Xylene	899	5.2	
Total BTEX	2,800		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene Bromofluorobenzene	98 % 98 %

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 - 13E Blow Pit. 4 Pt. Composite of Sidewalls.

P. Ojem Stacy W Sendler
Review

# CHAIN OF CUSTODY RECORD

7	Cool - Ice/Blue Ice	15	(505) 632-0615				
7	Received Intact	/ay 64 xico 87401	5796 U.S. Highway 64 Farmington New Mexico 87401				
Y NA							
eipt	Sample Receipt	HIDC	FOVIROTECH INC				
		Received by: (Signature)	Received			ure)	Relinquished by: (Signature)
		Received by: (Signature)	Received		•	ure)	Relinquished by: (Signature)
te Time	9.24.8k	Received by: (Signature)	Date Time Received 9/24/98 (6)7	9	10.	ure)	Relinquished by: (Signature)
-							
Mas	OF SIDEWALLS						
PT. COMPOSITE	48.6						
-				-			
, Cool	PRESERV, - COOL	1 1	5012	P169	1130	9/24/98	50-0
			Sample Z Matrix	Lab Number	Sample Time	Sample Date	Sample No./ Identification
		tainer	o. of	01-45040			NIN.
arks	Remarks	rs		Client No.			Sampler:
	7	ANALI GIO A FATTO	TICARILLA CONTRACT \$146-13E	TICARILLA CO		000	BLAGG/ Amoco
	METERS	ANALYSIS / PARAMETERS	BLOW PIT	Project Location			Client / Project Name

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Client: Amoco Project #:

Sample ID: 5 @ 25' Date Analyzed: 09-24-98 Project Location: Jicarilla Contract # 146 - 13E Date Reported: 09-24-98

Laboratory Number: TPH-2044 Sample Matrix: Soil

Sample Weight: 5.00 grams Volume Freon: 20.00 mL

Dilution Factor: 1 (unitless) TPH Reading: 22 mg/kg

TPH Result: 88.0 mg/kg
Reported TPH Result: 88 mg/kg
Actual Detection Limit: 20.0 mg/kg
Reported Detection Limit: 20 mg/kg

QA/QC: Original Duplicate %

TPH mg/kg TPH mg/kg Diff.

----236 220 7.02

Comments: Blow Pit - BJ644

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

AND OIL & GAS ADMINISTRATION

NATURAL RESOURCE DEPT

BJ644

DULCE, NEW MEXICO 87528

## PIT REMEDIATION AND CLOSURE REPORT

	Telephone: (505) 326-9200
Operator: AMOCO PRODUCTION COMPANY	
Address: 200 Amoco Court, Farmington, M	NM 87401
Facility or Well Name: JICARILLA CONTR	net # 146-13E
racinty of vicin terms	5N R SW County RIO ARRIBA
Location: Unit or Qtr/Qtr Sec Sec 1 1	·
Pit Type: Separator Other	
Land Type: RANGE	
	25'_, width_25'_, depth_10'
(Attach diagram)  Reference: wellhead X,	other
Footage from reference:	83'
Direction from reference:	Z Degrees East North X
	West South
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 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)
H	RANKING SCORE (TOTAL POINTS):

	Date Completed: 9/24/98.
	A wards 150
Remediation Method: Theck all appropriate sections)	Landfarmed Insitu Bioremediation
	Other
Remediation Location (i.e. landfarmed onsite, name and location of	V 000 11
· A 191 \	of Remedial Action: Excavation. BEDROCK BOTTOM. RISK ASSESSED.
Groundwater Encoun	tered: No Yes Depth
Final Pit: Closure Sampling: (if multiple samples,	Sample location see Attached Documents
attach sample results and diagram of sample locations and depths)	Sample depth
	Sample Results
H	Soil: Benzene (ppm) Water: Benzene (ppb)
	Total BTEX (ppm) Toluene (ppb)
	Field Headspace (ppm) 8.6 340 Ethylbenzene (ppb)
	TPH (ppm) 224 Total Xylenes (ppb)
11	e: Yes No (If yes, attach sample results)
KNOWLEGE AND I	
DATE	9/24/98, PRINTED NAME Buddy D. Shaw
SIGNATURE BUS	9/24/98 PRINTED NAME Buddy D. Shaw  Oly J. Shaw AND TITLE Environmental Coordinator
AFTER REVIEW OF	F THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANC A APACHE TRIBE PIT CLOSURE ORDINANCE.
APPROVED: YES_	X NO (REASON) R-A. Attached
SIGNED:	-CMe_l DATE: 10-1-98

P.O. BO	( 87, BLOOMFIELD, NM 87413 (505) 632-1199	C.D.C. ND:
FIELD REPORT: CI	LOSURE VERIFICATION	PAGE No: of
LOCATION: NAME: TICH. CONTR. 146	WELL #:13E PIT: SEP.	DATE STARTED: 9/24/18  DATE FINISHED:
QUAD/UNIT: B SEC: 9 TWP: Z5N QTR/FOOTAGE: 790 FNL/1580 FEL	RNG: 5W PM: NM CNTY: RA ST:NM CONTRACTOR: P+5	ENVIRONMENTAL SPECIALIST: NV
DUGANATION ADDROY 25 FT X	75 FT. x 10 FT. DEEP. CUBIC	YARDAGE: 150
0 2 1 7 1 CH IMV	REMEDIATION METHO	D: ZANOFAKI C
SIELD MOTEC & DEMARKS	LUCATED APPROXIMATELY 183 FT. L	12W FROM WELLHEAD.
DEPTH TO GROUNDWATER >100' NEAREST	WATER SOURCE: NEARES! SURFAC	CHECK DNE
NMOCD RANKING SCORE NMOCD T	PH CLOSURE STD: <u>5000</u> PPM	_ PIT ABANDONED _ STEEL TANK INSTALLED
	NO NON COHESIVE, SLIGHTLY MOIST, FIL	FIBERGLASS TANK INSTALLED
BOTTOM I OF WE	OR IN ANY OF THE DUM SAMPLES	HC ODOR DETECTED
WIN EXCONION		
	DUE SOMPLE	in color very hard,
SOFFOR - REDECT (SHINDS)	R IN OUM SAMPLE.	
BEDROCK RISK ASSESSED	FIELD 418.1 CALCULATIONS	
	AMPLE I.D. LAB No: WEIGHT (g) ML. FREON D	1: ( 56 ZZ4
	Des IFR	
0 FT PERIMETER	PIT	PROFILE
	OVM RESULTS A SAMPLE FIELD HEADSPACE	A'
25	SAMPLE FIELD HEADSPACE PID (Lppm)  1 @ 5'	
	3 @ 5' O.O 10' 4 @ 5' \$.6	
	5 @ 10' 340	BEOREE
		(55)
*A'	LAB SAMPLES	
WELL HEAD	SAMPLE ANALYSIS T.ME	
TRAVEL NOTES: CANADUTE	ONSITE: 9/24/98 - MA	2RN .
TRAVEL NOTES: CALLOUT:	ONSITE: 7/27/78 - 70	· · ·

Well Name:

Well Site location:

Pit Type:

**Producing Formation:** 

Pit Category:

Horizonal Distance to Surface Water:

Vicinity Groundwater Depth:

Jicarilla Contract 146 #13E

Unit B, Sec. 9, T25N, R5W Separator Pit Basin Dakota

Non Vulnerable

> 1000 ft. > 100 ft.

### RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 10 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 10 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 0.46 miles north of the nearest vulnerable area boundary (Gonzales Canyon wash).

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

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

Project #:

Sample ID:

4 @ 5'

Date Analyzed:

09-24-98

Project Location:

Jicarilla Contract # 146 - 13E

Date Reported:

09-24-98

Laboratory Number:

TPH-2043

Sample Matrix:

Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	220	20

ND = Not Detectable at stated detection limits.

OA/OC:

QA/QC Sample
TPH mg/kg

Duplicate TPH mg/kg % \*Diff. — — — =

236

220

7.02

\*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:

Separator Pit - BJ644

Millson Vil Analyst

P.O. Box 87, Bloomfield, New Mexico 87413 Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Client: Amoco Project #:

Sample ID: 4 @ 5' Date Analyzed: 09-24-98
Project Location: Jicarilla Contract # 146 - 13E Date Reported: 09-24-98

Laboratory Number: TPH-2043 Sample Matrix: Soil

Sample Weight: 5.00 grams Volume Freon: 20.00 mL

Dilution Factor: 1 (unitless)
TPH Reading: 56 mg/kg

TPH Result: 224.0 mg/kg
Reported TPH Result: 220 mg/kg
Actual Detection Limit: 20.0 mg/kg
Reported Detection Limit: 20 mg/kg

QA/QC: Original Duplicate %

TPH mg/kg TPH mg/kg Diff.

----236 220 7.02

Comments: Separator Pit - BJ644

# 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 C	OMPANY	<b>Telephone:</b> (505) 326-9200
Address: 200 Amoco Court,	Farmington,	NM 87401
Facility or Well Name: SICARILLA	CONTRACT 146	13E
Location: Unit or Qtr/Qtr Sec	Sec9 T <u>2</u>	SN RSW County RIO ARRIBA
Land Type: <i>EAVEE</i>		
Date Remediation Started: 9.24	98	Date Completed: 6/16/99
Remediation Method: Landfarmed		Approx. cubic yards
Composted		
Other		
`pth To Groundwater:	(pts.) _O	Final Closure Sampling:
Distance to an Ephemeral Stream	(pts.) <u>o</u>	Sampling Date: 6/14/99 Time: 1020
Distance to Nearest Lake, Playa,	(pts.)	Sample Results:
Wellhead Protection Area:	(pts.) <u></u>	Field Headspace (ppm) <u>154.8</u> 8015/  TPH (ppm) <u>1,070</u> Method <u>8021</u>
Distance To SurfaceWater:	(pts.)	Other BENZENE = 0.0306 ppm
RANKING SCORE (TOTAL POINT	'S): <u>o</u>	TOT. BTEX = 6.750 ppm
I HEREBY CERTIFY THAT THE INFOR KNOWLEGE AND BELIEF	MATION ABOVE	IS TRUE AND COMPLETE TO THE BEST OF MY
DATE 6/16/99 SIGNATURE BUDLY D. SI		AME Buddy D. Shaw AND TITLE Environmental Coordinator
AFTER REVIEW OF THE SOIL REMED ACCORDANCE TO THE JICARILLA AF	IATION INFORM PACHE TRIBE PIT	ATION, ON-SITE REMEDIATION IS APPROVED IN CLOSURE ORDINANCE.
APPROVED: YES NO (I	REASON)	
	<del>-n.u</del>	
SIGNED:	DATE:	

		1
BLAGG ENGI	NEERING, INC.	40
	·	FOCATION NO B3644
	OMFIELD, NM 87413	C.O.C. NO. 6902
(505) 6	332-1199 	t.u.t. Nu. <u>29702</u>
FIELD REPORT: LANDFARM/COMF	POST PILE CLOSURI	E VERIFICATION
NAME JICARILLA CONTRACT 146 WELL # 13	E PITS: SEP., BLOW	DATE STARTED: 4 . 20 99
QUAD/UNIT: 8 SEC: 9 TWP: 25N RNG: 5W		DATE FINISHED:
STEVEBOTAGE NW/4 NE/4 CONTRACTOR: 1		ENVIRONMENTAL SPECIALIST: <u>REP</u>
PEMEDIATION:		
	DDDON GUDIO	W.DD. (0B 7-7)
REMEDIATION SYSTEM: 2 AND FARM	APPRCX. CUBIC	YARDAGE: _/>
LAND USE	LIFT DEPTH (ft):	1.5
FIELD NOTES & REMARKS:		
IERTH TO GROUNDWATER 2/00" NEAREST WATER SQURCE:	71000° NEAREST SURFA	CE WATER: >1000 .
MMONI FAMHING SCOREONMOOD TPH CLOSURE STD	5000 PPM	
DK YELLOWEN BROWN SAND, NON CONESIVE, HO	15T, FIRM	,
LARGE AREA OF STRIKING OBSERVE IN LE	ALEA (SEE SKETCH BE	iow)
HE OLDE DETECTED IN SAMPLING PTS BAG	3).	TIME 1 T 6"
SAMPLING DEPTHS BANGE FROM 6"-12" SAMPLE FOR LAB ANALYSIS.	COLLECTED A STI, EUR	/~'D5/
	1 CALCULATIONS	
SAMP, TIME SAMPLE I.D. LAB No: WEIGHT	(g) mL. FREON DILUTION READI	NG CALC. ppm
CHETCH /CAMPLE LOCATIONS		
SKETCH/SAMPLE LOCATIONS	4F-Z 50M	pred on 6/14/99
Eo.	17-2 5NM	
1 (0)		
	OVM RESULTS	LAB SAMPLES
STAINED AREA	SAMPLE FIELD HEADSPACE SAMPL 10 PID (ppm) 10	
LINY CA	LF-1 154.8 LF-1	18015) 1250 9,070
		GENZENE 1, 30.6 ppb
		TUT. 87EX " 6750 PPB
	4F.Z	1020 1,070
	C.FC	1020 1,010
© (10°)		
1,00		
	SCALE	
/ \	O FT	
TRAVEL NOTES:		



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

Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	LF - 1	Date Reported:	04-22-99
Laboratory Number:	F071	Date Sampled:	04-20-99
Chain of Custody No:	6902	Date Received:	04-21-99
Sample Matrix:	Soil	Date Extracted:	04-21-99
Preservative:	Cool	Date Analyzed:	04-22-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	566	0.2
Diesel Range (C10 - C28)	8,500	0.1
Total Petroleum Hydrocarbons	9,070	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 - 13E Landfarm. 5 Pt. Composite.

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### 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 - 2 F512 7078 Soil Cool	Project #: Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed: Analysis Requested:	403410 06-16-99 06-14-99 06-15-99 06-16-99 8015 TPH
--	---	---	--

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	17.9	0.2
Diesel Range (C10 - C28)	1,050	0.1
Total Petroleum Hydrocarbons	1,070	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 - 13E Landfarm. 5 Pt. Composite.

Analyst

Stacy W Sendler



# EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	LF - 1	Date Reported:	04-22-99
Laboratory Number:	F071	Date Sampled:	04-20-99
Chain of Custody:	6902	Date Received:	04-21-99
Sample Matrix:	Soil	Date Analyzed:	04-22-99
Preservative:	Cool	Date Extracted:	04-21-99
Condition:	Cool & Intact	Analysis Requested:	BTEX

	Concentration	Det. Limit
Parameter	(ug/Kg)	(ug/Kg)
Benzene	30.6	8.8
Toluene	716	8.4
Ethylbenzene	540	7.6
p,m-Xylene	3,090	10.8
o-Xylene	2,370	5.2
Total BTEX	6,750	

ND - Parameter not detected at the stated detection limit.

Parameter	Percent Recovery
Trifluorotoluene	97 %
Bromofluorobenzene	97 %
	Trifluorotoluene

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 - 13E Landfarm. 5 Pt. Composite.

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

Analyst R. Ogencer

				Relinquished by: (Signature)	Relinquished by: (Signature)	Relinquished by: (Signature)						(F-1) 429 1780 FOT	Sample No./ Sample Sample Lab Number	REP		BLAGG/AMOCO SICAPIL	
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	METERS	ANALYSIS / PARAMETERS	Project Location LANDFARM	Project Location			Client / Project Name