Denny E. Foust
DEPUTY OIL & GAS INSPECTOR

AUG 1 3 1999

UK BJ463
2 pits
risked
Bedrock

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

Approved

Operator: ~~AMOCO PRODUCTION~~ COMPANY **Telephone:** (505)326-9200

Address: 200 Amoco Court, Farmington, NM 87401

Facility or Well Name: JICARILLA B #2

Location: **Unit or Qtr/Qtr Sec** M **Sec** 16 **T** 26N **R** 5W **County** RIO ARRIBA

Pit Type: **Separator**____ **Dehydrator**____ **Other** BLOW

Land Type: RANGE

Pit Location: (Attach diagram)

Pit dimensions: length 38', width 30', depth 15'

Reference: wellhead X, other_____

Footage from reference: 90'

Direction from reference: 6 Degrees X East North X of

_____ West South _____

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)	0
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)	0
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, irrigation canals and ditches)	Less than 100 feet 100 feet to 1000 feet Greater than 1000 feet	(20 points) (10 points) (0 points)	0

RANKING SCORE (TOTAL POINTS): 0

BJ463 / Blow Pit

Date Remediation Started: _____ **Date Completed:** 10/23/96

Remediation Method: (Check all appropriate actions) Excavation X Approx. cubic yards 500

Landfarmed X Insitu Bioremediation _____

Other _____

Remediation Location: (i.e. landfarmed onsite, name and location of offsite facility) Onsite X Offsite _____

General Description of Remedial Action: Excavation. BEDROCK BOTTOM.

Groundwater Encountered: No X Yes ____ Depth _____

Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents

Sample depth 11'

Sample date 10/22/96 Sample time 1150

Sample Results

Soil: Benzene	(ppm)	0.145	Water: Benzene	(ppb)	
Total BTEX	(ppm)	81.7	Toluene	(ppb)	
Field Headspace	(ppm)	1,356	Ethylbenzene	(ppb)	
TPH	(ppm)	3,380	Total Xylenes	(ppb)	

Groundwater Sample: Yes ____ No X (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEGE AND BELIEF

DATE 10/23/96 **PRINTED NAME** Buddy D. Shaw

SIGNATURE Buddy D. Shaw **AND TITLE** Environmental Coordinator

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES ____ NO X (REASON) Conditional Closure Failed Total BTEX

SIGNED: Kurt C. Mandl **DATE:** 11-5-96

CLIENT: AMOCO

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO: BJ463
C.O.C. NO: 4920

FIELD REPORT: CLOSURE VERIFICATION

PAGE No: 1 of 1

LOCATION: NAME: JICARILLA B WELL #: 2 PIT: BLOW
QUAD/UNIT: M SEC: 16 TWP: 26N RNG: 5W PM: NM CNTY: RA ST: NM
QTR/FOOTAGE: 815'FSL/845'FWL CONTRACTOR: P+S

DATE STARTED: 10/22/96
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: NV

EXCAVATION APPROX. 38 FT. x 30 FT. x 15 FT. DEEP. CUBIC YARDAGE: 500
DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD: LANDFARMED
LAND USE: RANGE LEASE: JICA. CONT. 109 FORMATION: DK

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 90 FT. N6E FROM WELLHEAD.
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM

CHECK ONE:
- ___ PIT ABANDONED
- ✓ STEEL TANK INSTALLED
- ___ FIBERGLASS TANK INSTALLED

SOIL AND EXCAVATION DESCRIPTION:

SIDEWALLS - GRAYISH ORANGE PINK TO DK. YELL. BROWN SILTY SAND TO SILTY CLAY, NON-COHESIVE, SLIGHTLY MOIST, FIRM TO VERY STIFF, STRONG HC ODOR IN EAST SIDEWALL OVM SAMPLE ONLY, HC STAINING OBSERVED W/IN EAST SIDEWALL AFTER CLOSE INSPECTION.

BOTTOM - BEDROCK, OLIVE GRAY IN COLOR, VERY HARD SHALE, HC ODOR IN OVM SAMPLE

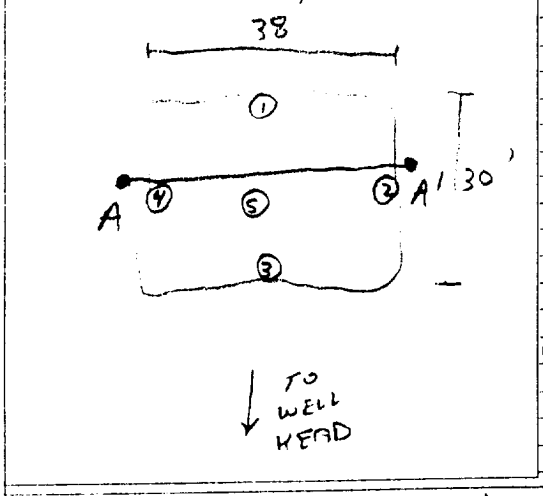
CONDITIONAL BEDROCK

RISK ASSESSED - NMOCD FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

SCALE
0 FT

PIT PERIMETER



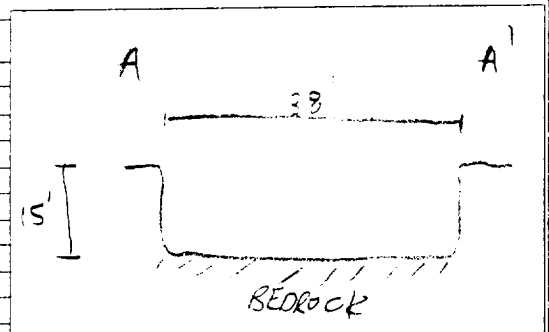
OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 11'	0.0
2 @ 11'	1356
3 @ 10'	0.0
4 @ 12'	0.0
5 @ 15'	208.1

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
③ @ 11'	TPH/BTEX	1150
	8015	

PIT PROFILE



TRAVEL NOTES: CALLOUT: 10/21/96 MORN. ONSITE: 10/22/96 MORN.

Well Name:	**Jicarilla B #2**
Well Site location:	Unit M, Sec. 16, T26N, R5W
Pit Type:	Blow Pit
Producing Formation:	Basin Dakota
Pit Category:	Non Vulnerable
Horizontal Distance to Surface Water:	> 1000 ft.
Vicinity Groundwater Depth:	> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered shale bedrock at 15 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 shale bedrock located 15 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below shale 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 **non-vulnerable area** and is approximately 0.72 miles north northeast of the nearest vulnerable area boundary (Tapacito Creek).

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

Based upon the information given, we conclude that the lateral impact of the excavation is limited and that the shale 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.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg / Amoco	Project #:	04034
Sample ID:	2 @ 11'	Date Reported:	10-23-96
Laboratory Number:	A707	Date Sampled:	10-22-96
Chain of Custody No:	4920	Date Received:	10-23-96
Sample Matrix:	Soil	Date Extracted:	10-23-96
Preservative:	Cool	Date Analyzed:	10-23-96
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**1,190**	**0.2**
Diesel Range (C10 - C28)	**2,190**	**0.1**
Total Petroleum Hydrocarbons	**3,380**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Comments: **Jicarilla B #2 Blow Pit.**

Analyst

Review

5796 U.S. Highway 64-3014 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034
Sample ID:	2 @ 11'	Date Reported:	10-23-96
Laboratory Number:	A707	Date Sampled:	10-22-96
Chain of Custody:	4920	Date Received:	10-23-96
Sample Matrix:	Soil	Date Analyzed:	10-23-96
Preservative:	Cool	Date Extracted:	10-23-96
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**145**	**17.5**
Toluene	**9,520**	**16.7**
Ethylbenzene	**5,750**	**15.2**
p,m-Xylene	**47,300**	**21.6**
o-Xylene	**19,000**	**10.4**
Total BTEX	**81,700**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**102 %**
	Bromofluorobenzene	**99 %**

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1994.

Comments: **Jicarilla B #2 Blow Pit.**

Analyst

Review

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4920

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
BLAGG / AMOCO	BLOW PIT JICARILLA B #2	
Sampler: (Signature) Nelson Velez	Chain of Custody Tape No.	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TPH (8015)	BTEX (8020)					Remarks
												FREEZER - COOL
② @ 11'	10/22/96	1150	A707	SOIL	1	✓	✓					IF TPH < 5000 ppm
												RUN BTEX

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson Velez	10/23/96	0300	[signature]	10/23/96	0300
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64-3014
Farmington, New Mexico 87401
(505) 632-0615

BJ 463

SUBMIT 1 COPY TO
NATURAL RESOURCE DEPT
AND OIL & GAS ADMINISTRATION

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

PIT REMEDIATION AND CLOSURE REPORT

Operator: AMOCO PRODUCTION COMPANY **Telephone:** (505)326-9200

Address: 200 Amoco Court, Farmington, NM 87401

Facility or Well Name: JICARILLA B #2

Location: **Unit or Qtr/Qtr Sec** M **Sec** 16 **T** 26N **R** 5W **County** RIO ARRIBA

Pit Type: **Separator** X **Dehydrator** ____ **Other** ____

Land Type: RANGE

Pit Location: (Attach diagram)

Pit dimensions: length 35', width 25', depth 9'

Reference: wellhead X, other ____

Footage from reference: 95'

Direction from reference: 53 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 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)	0
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)	0
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, irrigation canals and ditches)	Less than 100 feet 100 feet to 1000 feet Greater than 1000 feet	(20 points) (10 points) (0 points)	0
RANKING SCORE (TOTAL POINTS):			0

BJ463 / SEP. PIT

Date Remediation Started: _____ **Date Completed:** 10/22/96

Remediation Method: (Check all appropriate actions) Excavation X Approx. cubic yards 250

Landfarmed X Insitu Bioremediation _____

Other _____

Remediation Location: (i.e. landfarmed onsite, name and location of offsite facility) Onsite X Offsite _____

General Description of Remedial Action: Excavation. ENTIRE EXCAVATION CONSIST MOSTLY OF BEDROCK, THEREFORE NO TPH ANALYSIS WAS CONDUCTED.

Groundwater Encountered: No X Yes ____ Depth _____

Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents

Sample depth 5'

Sample date 10/22/96 Sample time 1300

Sample Results

Soil: Benzene	(ppm)		Water: Benzene	(ppb)	
Total BTEX	(ppm)		Toluene	(ppb)	
Field Headspace	(ppm)	1,119	Ethylbenzene	(ppb)	
TPH	(ppm)		Total Xylenes	(ppb)	

Groundwater Sample: Yes ____ No X (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEGE AND BELIEF

DATE 10/22/96 **PRINTED NAME** Buddy D. Shaw

SIGNATURE Buddy D. Shaw **AND TITLE** Environmental Coordinator

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO ____ (REASON) Spray + close

SIGNED: _____ **DATE:** 11-5-96

CLIENT: AMOCO	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: BJ463 C.O.C. NO:

FIELD REPORT: CLOSURE VERIFICATION

PAGE No: 1 of 1

LOCATION: NAME: JICARILLA B WELL #: 2 PIT: SEP

QUAD/UNIT: M SEC: 16 TWP: 26N RNG: 5W PM: NM CNTY: RA ST: NM

QTR/FOOTAGE: 815'FSL/845'FWL SWSW CONTRACTOR: P&S

DATE STARTED: 10/22/96

DATE FINISHED:

ENVIRONMENTAL SPECIALIST: NV

EXCAVATION APPROX. 35 FT. x 25 FT. x 9 FT. DEEP. CUBIC YARDAGE: 250

DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD: LANDFARMED

LAND USE: RANGE LEASE: JICA CONT 109 FORMATION: OK

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 95 FT. N53W FROM WELLHEAD.

DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'

NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM

CHECK ONE:

- ✓ PIT ABANDONED
- ___ STEEL TANK INSTALLED
- ___ FIBERGLASS TANK INSTALLED

SOIL AND EXCAVATION DESCRIPTION:

ENTIRE EXCAVATION CONSIST MOSTLY OF BEDROCK (SHALE), VERY DUSKY RED TO DK. GREENISH GRAY IN COLOR, SOFT IN MOST OF SIDEWALL TO VERY HARD NEAR PIT BOTTOM, MAJORITY OF EAST SIDEWALL APPEARS FREE OF HC STAINING & ODOR, STRONG HC ODOR IN ALL OTHER DUM SAMPLES PIT BOTTOM LT GRAY IN COLOR, VERY HARD, NO APPARENT HC ODOR IN DUM SAMPLE, UNABLE TO DISTINGUISH HC STAINING TO WHAT APPEARS TO BE THE NATURAL SUBSURFACE COLOR WITH THE BEDROCK. NO TPH ANALYSIS WAS CONDUCTED DUE TO BEDROCK

ALL BEDROCK

RISK ASSESSED

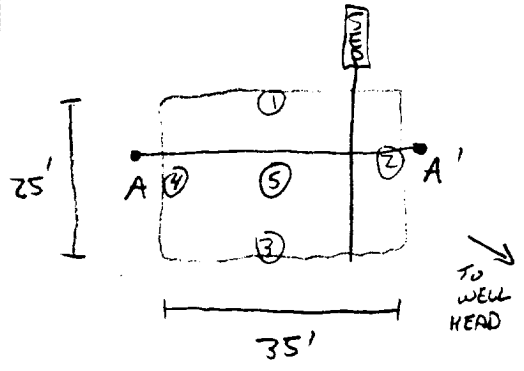
FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1300							

SCALE

0 FT

PIT PERIMETER



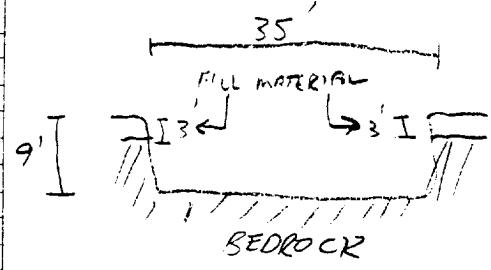
OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 5'	1119
2 @ 5'	0.0
3 @ 4'	609
4 @ 5'	579
5 @ 9'	18.4

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

PIT PROFILE



TRAVEL NOTES: CALLOUT: 10/21/96 MORN. ONSITE: 10/22/96 MORN.

Well Name:	**Jicarilla B #2**
Well Site location:	Unit M, Sec. 16, T26N, R5W
Pit Type:	Separator Pit
Producing Formation:	Basin Dakota
Pit Category:	Non Vulnerable
Horizontal Distance to Surface Water:	> 1000 ft.
Vicinity Groundwater Depth:	> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered very hard shale bedrock at 9 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 shale bedrock located 9 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below shale 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 **non-vulnerable area** and is approximately 0.72 miles north northeast of the nearest vulnerable area boundary (Tapacito Creek).

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

Based upon the information given, we conclude that the lateral impact of the excavation is limited and that the very hard shale 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.

BJ463

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NATURAL RESOURCE DE
AND OIL & GAS ADMINISTRATI

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

ON-SITE SOIL REMEDIATION REPORT

Operator: AMOCO PRODUCTION COMPANY **Telephone:** (505) 326-9200

Address: 200 Amoco Court, Farmington, NM 87401

Facility or Well Name: JICARILLA B #2

Location: Unit or Qtr/Qtr Sec M Sec 16 T 26N R 5W County RIO ARRIBA

Land Type: RANGE

Date Remediation Started: 10/22/96 **Date Completed:** 4/27/98

Remediation Method: Landfarmed X Approx. cubic yards 750

Composted ____

Other + STOCKPILED

pth To Groundwater:	(pts.)	0
Distance to an Ephemeral Stream	(pts.)	0
Distance to Nearest Lake, Playa, or Watering Pond	(pts.)	0
Wellhead Protection Area:	(pts.)	0
Distance To SurfaceWater:	(pts.)	0
RANKING SCORE (TOTAL POINTS):		0

Final Closure Sampling:

Sampling Date: 4/21/98 Time: 0945

Sample Results: BENZENE 0.0067 ppm
TOTAL BTEX 0.257 ppm

Field Headspace (ppm) 102.6 ← LANDFARM

TPH (ppm) 23.3 Method 8015

Other STOCKPILE 0.0 ppm OVM

165 ppm TPH

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEGE AND BELIEF

DATE 4/27/98 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 X NO ____ (REASON) NOT for use as Backfill

SIGNED: Kent C Mansell DATE: 5-7-98

CLIENT: AMOCO

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO: BJ463
C.O.C. NO: 5745

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: JICARILLA B WELL #: 2 PITS: BLOW, SEP.
QUAD/UNIT: M SEC: 16 TWP: 26N RNG: 5W PM: NM CNTY: RA ST: NM
QTR/FOOTAGE: SW/4 SW/4 CONTRACTOR: P & S

DATE STARTED: 4/21/98
DATE FINISHED: 4/27/98
ENVIRONMENTAL SPECIALIST: NV

SOIL REMEDIATION:
REMEDIATION SYSTEM: LF/SP
LAND USE: RANGE
APPROX. CUBIC YARDAGE: 750
LIFT DEPTH (ft): 1½'-3'

FIELD NOTES & REMARKS:
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM

SAMPLE PT. 2 FOR LF-1 DISCOLORED STRONG HC ODOR

CLOSED

STOCKPILE - 132' S10W FROM WELL HEAD. 50' DIAMETER

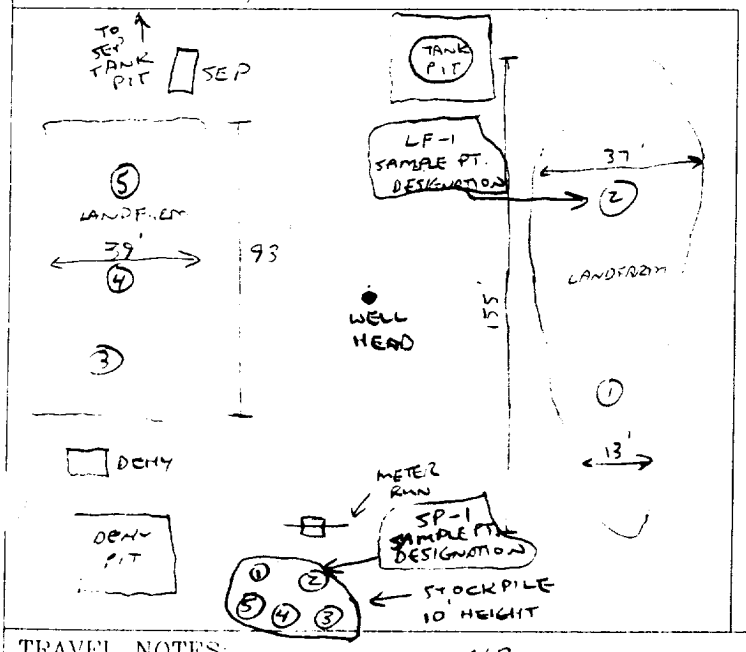
FIELD 418.1 CALCULATIONS

SAMP. TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

OTHER LF AREA BET. SEP. TANK PIT & PROD. TANK (NOT SHOWN)

SOIL MOSTLY BY WELL PAD SAND TO SILTY SAND SEE PIT CLOSURE F/CONSISTENCY

SKETCH/SAMPLE LOCATIONS N



SCALE
0 FT

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
LF-1	102.6
SP-1	0.0

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME	RESULTS
LF-1	TPH BTEX	0945	23.3
SP-1	TPH 8015	1010	165
LF-1	BTEX (8021)	0945	BEN: 0.067 TOT. 0.257

TRAVEL NOTES: CALLOUT: NA ONSITE: 4/21/98 - MORN.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	04-24-98
Laboratory Number:	D130	Date Sampled:	04-21-98
Chain of Custody No:	5745	Date Received:	04-22-98
Sample Matrix:	Soil	Date Extracted:	04-22-98
Preservative:	Cool	Date Analyzed:	04-23-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**0.5**	**0.2**
Diesel Range (C10 - C28)	**22.8**	**0.1**
Total Petroleum Hydrocarbons	**23.3**	**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 B #2 Landfarms.**

Analyst

Review

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	SP - 1	Date Reported:	04-24-98
Laboratory Number:	D131	Date Sampled:	04-21-98
Chain of Custody No:	5745	Date Received:	04-22-98
Sample Matrix:	Soil	Date Extracted:	04-22-98
Preservative:	Cool	Date Analyzed:	04-23-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**46.2**	**0.2**
Diesel Range (C10 - C28)	**119**	**0.1**
Total Petroleum Hydrocarbons	**165**	**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 B #2 Stockpile.**

Analyst

Review

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	04-28-98
Laboratory Number:	D130	Date Sampled:	04-21-98
Chain of Custody:	5745	Date Received:	04-22-98
Sample Matrix:	Soil	Date Analyzed:	04-27-98
Preservative:	Cool	Date Extracted:	04-27-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**6.7**	**6.1**
Toluene	**19.2**	**16.7**
Ethylbenzene	**37.3**	**15.2**
p,m-Xylene	**88.4**	**21.6**
o-Xylene	**112**	**10.4**
Total BTEX	**257**	

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-84 USEPA, December 1996.

Comments: **Jicarilla B #2 Landfarms.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
BLAGG / AMOCO	JICARILLA B #2
Sampler: (Signature)	**Chain of Custody Tape No.**
Nikon Vely	04034-10

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TPH (8015)	BTEX (8021)					Remarks
												BOTH SAMPLES
LF-1	4/21/98	1010	D130	SOIL	1	✓	✓			LANDFARM		PRESERV. - COOL
												& ARE 5 PT.
SP-1	4/21/98	0945	D131	SOIL	1	✓				STOCKPILE		COMPOSITES.
				SAMPLES RECEIVED COOL & INTACT								

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nikon Vely	4/22/98	0704	Dawn L. Quinn	4-22-98	0704
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

Rp COC's 5745, 5746, 5747, 5748

ENVIROTECH INC.
5796 U.S. Highway 64-3014
Farmington, New Mexico 87401
(505) 632-0615