Blow - OK
sep - risk bed rock NM 0498

District I
P.O. Box 1980, Hobbes, NM

District II
P.O. Drawer DD, Artesia, NM 88211

District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resource Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE
(Revised 3/9/94)

PIT REMEDIATION AND CLOSURE REPORT

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9216

Address: 200 AMOCO COURT, FARMINGTON, NM 87401

Facility Or: SHUMACHER #1
Well Name

Location: Unit or Qtr/Qtr Sec SW/NE Sec 8 T 30 R 12 County SAN JUAN

Pit Type: Separator ____ Dehydrator ____ Other BLOW DOWN

Land Type: BLM XX State ____ Fee ____ Other ____

Pit Location: (Attach diagram)
Pit dimensions: Length 57 width 54 depth 8

Reference: wellhead XX Other ____

Footage from reference: 227'

Direction from reference: 84 Degrees ____ East North EAST of ____ West South ____

Depth To Ground Water: (Vertical Distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet	(20 points)	
	50 feet to 99 feet	(10 points)	
	Greater than 100 feet	(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	(20 points)	
	No	(0 points)	0
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	(20 points)	
	200 feet to 1000 feet	(10 points)	
	Greater than 1000 feet	(0 points)	0

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: 05/03/94 Date Completed: 05/05/94

Remediation Method: Excavation XX Approx. cubic yards 912

Landfarmed _____ Insitu Bioremediation _____

Other _____

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) Onsite XX Offsite _____

General Description of Remediation Action: CONTAMINATED SOIL WAS REMEDIATED BY DILUTION AND AERIATION.

Ground Water Encountered: No _____ Yes _____ Depth _____

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

Sample location See Attached

Sample depth _____

Sample date 05/04/94 Sample time 08:00:00

Sample Results

Benzene (ppm) _____

Total BTEX (ppm) _____

Field headspace (ppm) 0.0 @ 9' 11/20/97 9W5

TPH 646 @ 8'

Ground Water Sample: Yes _____ No XX (If yes, attach sample results)

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

DATE ~~07/07/94~~ 5/25/98 9W5

SIGNATURE BJ Shaw

PRINTED NAME BUDDY SHAW EH&S AND TITLE

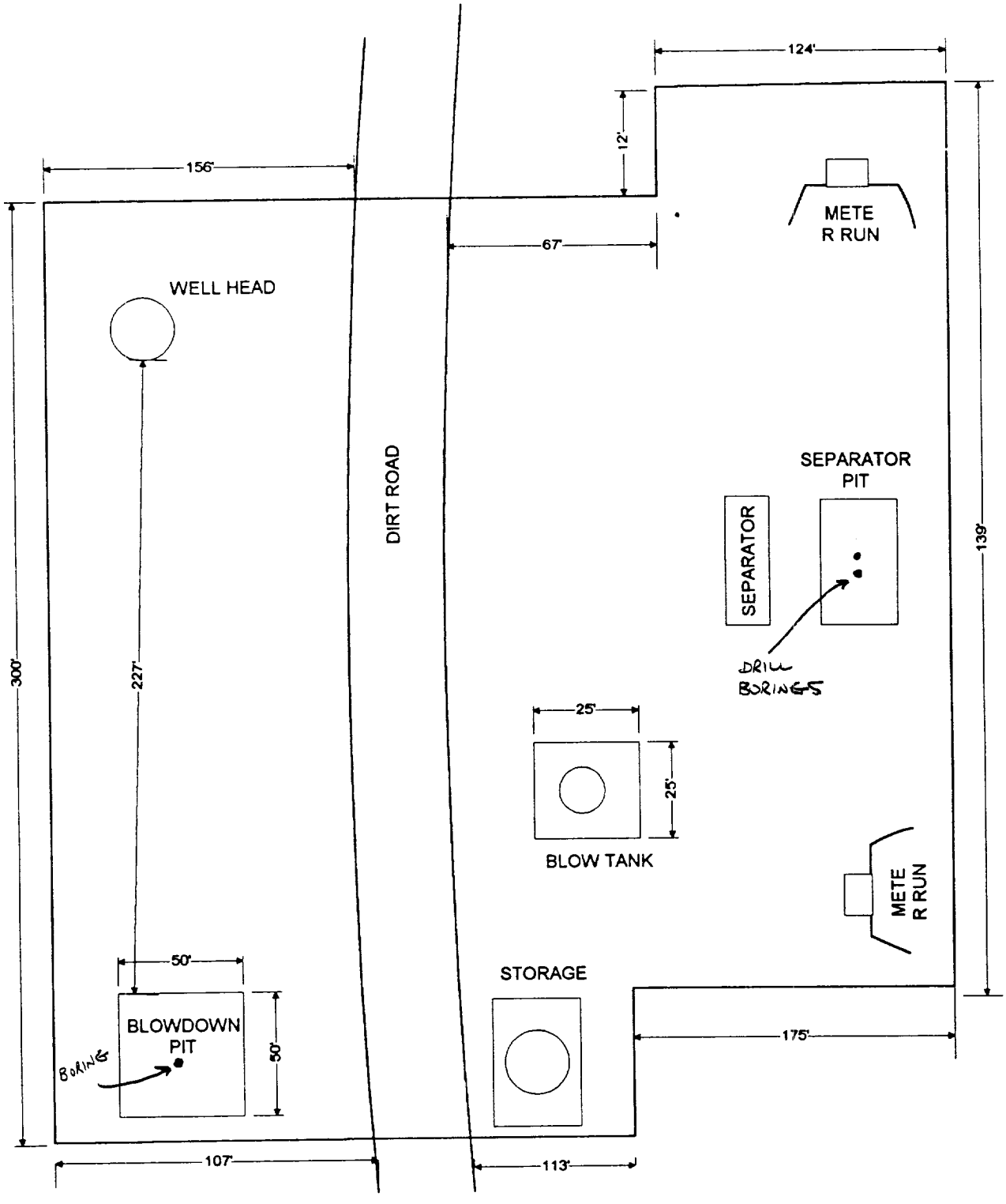
PIT LOCATION DIAGRAM

Operator: AMOCO PRODUCTION CO. Telephone: (505) 326-9219

Address: 200 AMOCO COURT, FARMINGTON, NM 87401

Facility Or: SHUMACHER 1
Well Name

Location: Unit or Qtr/Qtr Sec G Sec 8 T 30N R 12W County SAN JUAN



FINAL PIT CLOSURE SAMPLING REPORT

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9216

Address: 200 AMOCO COURT, FARMINGTON, NM 87401

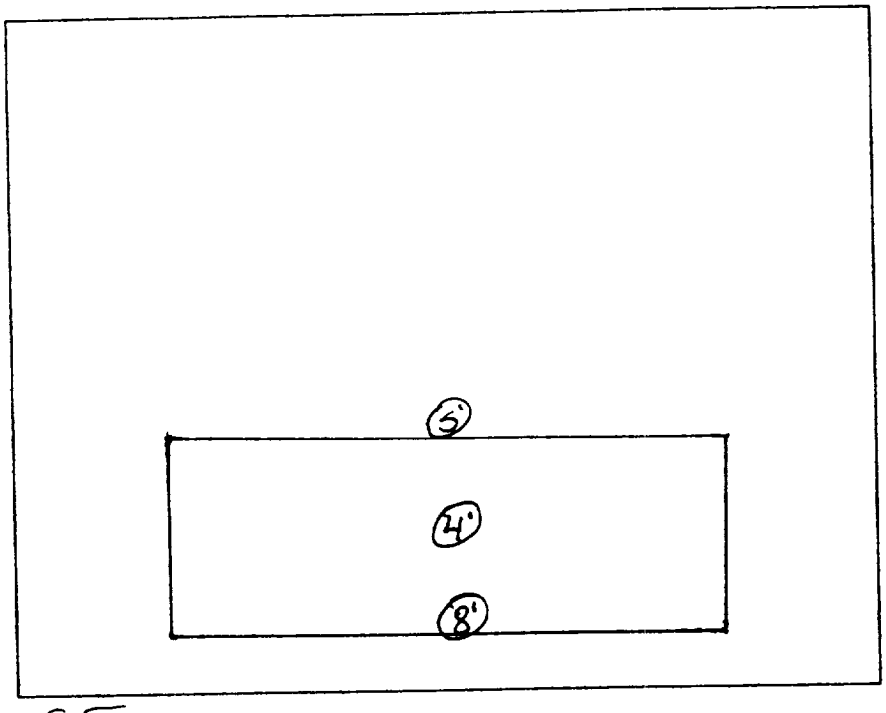
Facility Or: SHUMACHER #1
Well Name

Location: Unit or Qtr/Qtr Sec SW/NE Sec 8 T 30 R 12 County SAN JUAN

Depth	TPH
Surface	212 ppm
2 ft.	1890 ppm
4 ft.	1250 ppm
6 ft.	1100 ppm
8 ft.	646 ppm
10 ft.	ppm
12 ft.	ppm
14 ft.	ppm
16 ft.	ppm
18 ft.	ppm
20 ft.	ppm
ft.	ppm
ft.	ppm
ft.	ppm
9 ft.	0.0 ppm

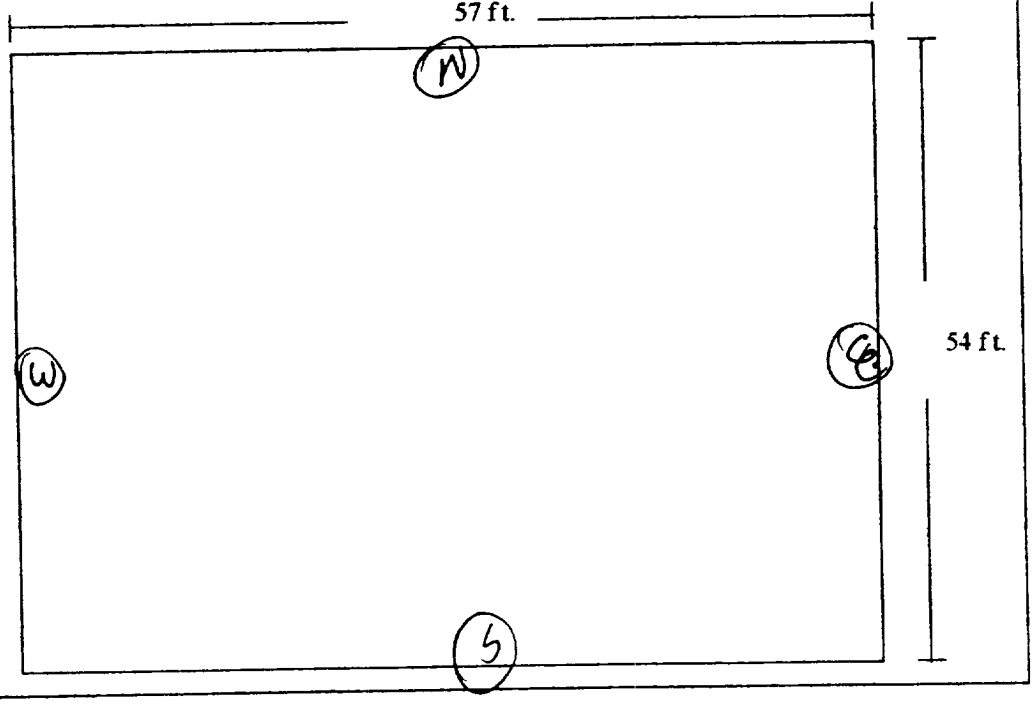
0.0m

SIDE VIEW



TOP VIEW

North Side	445 ppm
East Side	89 ppm
South Side	708 ppm
West Side	587 ppm



CLIENT: AMOCO

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

LOCATION NO: WEE
C.O.C. NO: 5566

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: SCHUMACHER, JOHN WELL #: 1 PITS: BLOW
QUAD/UNIT: G SEC: 8 TWP: 30N RNG: 12W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: SW¼ NE¼ CONTRACTOR: WHOLE EARTH

DATE STARTED: 11/20/97
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: NV/JCB

SOIL REMEDIATION:

REMEDIATION SYSTEM: DILUTION & AERATION
APPROX. CUBIC YARDAGE: 912
LAND USE: RANGE
LIFT DEPTH (ft): NA

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

BORING CONDUCTED @ PIT CENTER ACCORDING TO PIT CLOSURE REPORT, REACHED 9' DEPTH FROM GRADE, SOIL CONSIST OF DK. YELL. BROWN SAND W/ NO DISCOLORATION OR HC ODOR OBSERVED THROUGHOUT ENTIRE BORING, COLLECTED 3 SAMPLE PTS. USING HAND AUGER (1-3' DEPTHS BELOW GRADE), 5 PT. COMPOSITE COLLECTED FOR LAB ANALYSIS OF SUPPOSEDLY DILUTED & AERATED SOIL PLACED BACK INTO EXCAVATED AREA.

FIELD 418.1 CALCULATIONS

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

SKETCH/SAMPLE LOCATIONS

SEE SITE MAP

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
DA-1	0.0
5@9'	0.0

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME	RESULTS
DA-1	TPH (8015)	1215	ND

SCALE
0 FT

TRAVEL NOTES: CALLOUT: NA ONSITE: 11/20/97

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:	DA - 1	Date Reported:	11-25-97
Laboratory Number:	C540	Date Sampled:	11-20-97
Chain of Custody No:	5566	Date Received:	11-21-97
Sample Matrix:	Soil	Date Extracted:	11-21-97
Preservative:	Cool	Date Analyzed:	11-24-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**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: **Schumacher, John #1 Blow Pit. 5 Pt. Composite.**

Analyst

Review

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

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
BLAGG / AMOCO	BLOW PIT SCHUMACHER JOHN #1	

Sampler: (Signature)	Chain of Custody Tape No.
Nelson Velez	04034-10

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TPH (8015)						Remarks
												PRESERV. - COOL
DA-1	11/20/97	1215	C540	SOIL	1	✓						5 PT. COMPOSITE
				Sample received cool ice intact								

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson Velez	11/21/97	0904	Debra L. Quiroz	11-21-97	0904
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

Ref COC's 5564 → 5574

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

District I
P.O. Box 1980, Hobbes, NM

District II
P.O. Drawer DD, Arteus, NM 88211

District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resource Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE
(Revised 3/9/94)

PIT REMEDIATION AND CLOSURE REPORT

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9216

Address: 200 AMOCO COURT, FARMINGTON, NM 87401

Facility Or: SHUMACHER #1
Well Name

Location: Unit or Qtr Qtr Sec SW/NE Sec 8 T 30 R 12 County SAN JUAN

Pit Type: Separator XX Dehydrator ____ Other ____

Land Type: BLM XX State ____ Fee ____ Other ____

Pit Location: (Attach diagram) Pit dimensions: Length 50 width 30 depth 5

Reference: wellhead XX Other ____

Footage from reference: 180'

Direction from reference: 11 Degrees ~~North~~ East North ____

of

____ West South ____

Depth To Ground Water: (Vertical Distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet	(20 points)	
	50 feet to 99 feet	(10 points)	
	Greater than 100 feet	(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	(20 points)	
	No	(0 points)	0
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	(20 points)	
	200 feet to 1000 feet	(10 points)	
	Greater than 1000 feet	(0 points)	0

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: 05/03/94 Date Completed: 05/05/94

Remediation Method: Excavation XX Approx. cubic yards 277

Landfarmed _____ Insitu Bioremediation _____

Other _____

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) Onsite XX Offsite _____

General Description of Remediation Action: CONTAMINATED SOIL WAS REMEDIATED BY DILUTION AND AERIATION. RISK ASSESSED. SV
BEDROCK BOTTOM -

Ground Water Encountered: No _____ Yes _____ Depth _____

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

Sample location See Attached

Sample depth _____

Sample date 05/05/94 Sample time 09:00:00

Sample Results

Benzene (ppm) _____

Total BTEX (ppm) _____

Field headspace (ppm) 1,607 @ 5' 11/24/97 SV

TPH 1250 @ 4'

Ground Water Sample: Yes _____ No XX (If yes, attach sample results)

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

DATE ~~07/07/94~~ 5/25/98 SV

SIGNATURE BS Shaw

PRINTED NAME BUDDY SHAW EH&S AND TITLE

FINAL PIT CLOSURE SAMPLING REPORT

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9216

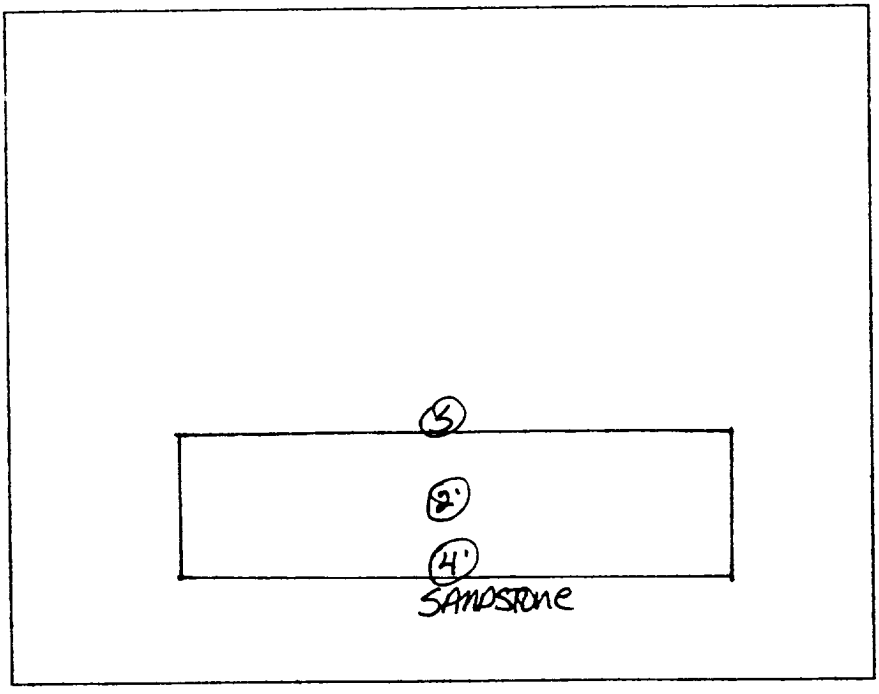
Address: 200 AMOCO COURT, FARMINGTON, NM 87401

Facility Or: SHUMACHER #1
Well Name

Location: Unit or Qtr/Qtr Sec SW/NE Sec 8 T 30 R 12 County SAN JUAN

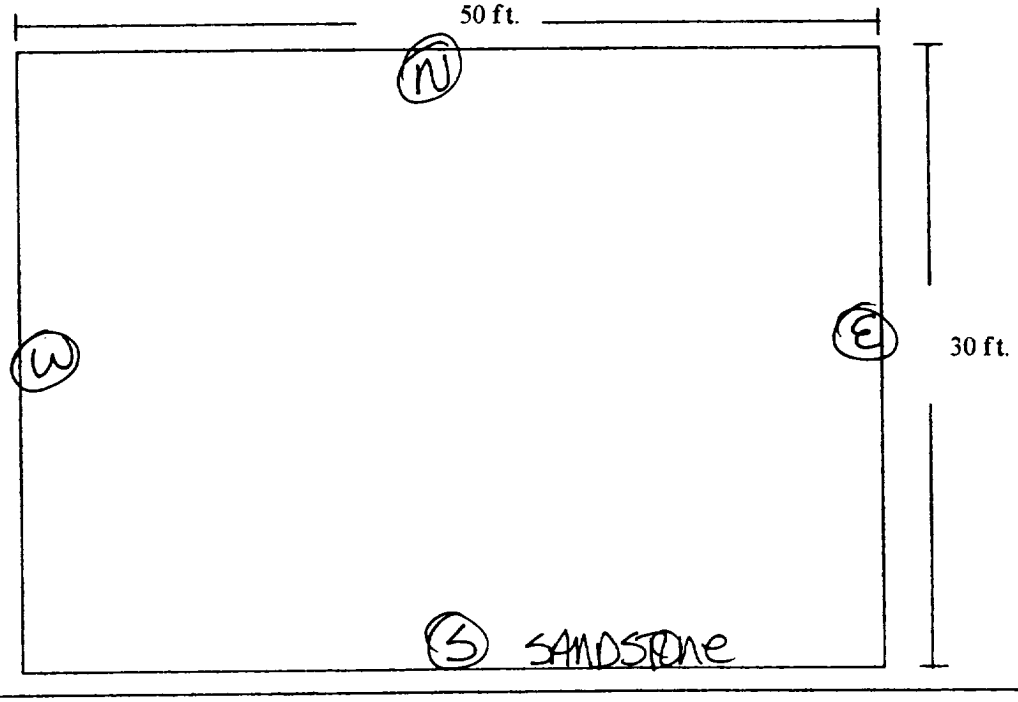
Depth	TPH
Surface	486 ppm
2 ft.	2040 ppm
4 ft.	1250 ppm
6 ft.	ppm
8 ft.	ppm
10 ft.	ppm
12 ft.	ppm
14 ft.	ppm
16 ft.	ppm
18 ft.	ppm
20 ft.	ppm
5' ft.	2590 ppm
ft.	ppm
ft.	ppm
5 FT.	0 ppm 1,607 ppm

SIDE VIEW



TOP VIEW

North Side	279 ppm
East Side	886 ppm
South Side	1950 ppm
West Side	676 ppm



North

Well Name:	**Schumacher, John #1**
Well Site location:	Unit G. Sec. 8, T30N, R12W
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 loader encountered sandstone bedrock at 8 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 8 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 **non-vulnerable area** and is approximately 0.02 miles southwest of the nearest vulnerable area boundary (Flora Vista Arroyo).

(Refer to Flora Vista Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), photorevised 1979, (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 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.

CLIENT: AMOCO

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

LOCATION NO: WEE
C.O.C. NO: 5576

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: SCHUMACHER, JOHN WELL #: 1 PITS: SEP
QUAD/UNIT: G SEC: 8 TWP: 30N RNG: 12W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: SW/4 NE/4 CONTRACTOR: WHOLE EARTH

DATE STARTED: 11/21/97
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: NV/JCB

SOIL REMEDIATION:

REMEDIATION SYSTEM: DILUTION + AERATION
APPROX. CUBIC YARDAGE: 277
LAND USE: RANGE
LIFT DEPTH (ft): NA

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

2 BORINGS CONDUCTED @ PIT CENTER ACCORDING TO PIT CLOSURE REPORT, REACHED 5' DEPTH BELOW GRADE, BORINGS CONSIST OF DK. YELL. BROWN SAND FROM 0 - 2½', DK. GRAY SAND W/ STRONG HC ODOR BETWEEN 2½' - 4½', & COMPETENT SANDSTONE @ 5' W/ STRONG HC ODOR, COLLECTED 1 SAMPLE PT. USING HAND AUGER (2' DEPTH BELOW GRADE), 5 PT. COMPOSITE COLLECTED FOR LAB ANALYSIS OF SUPPOSEDLY DILUTED & AERATED SOIL PLACED BACK INTO EXCAVATED AREA.

FIELD 418.1 CALCULATIONS

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

SKETCH/SAMPLE LOCATIONS

SEE SITE MAP

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
DA-1	210
(5) @ 5'	1,607

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME	RESULTS
DA-1	TPH (8015)	1110	ND

SCALE
0 FT

TRAVEL NOTES: CALLOUT: NA ONSITE: 11/21/97

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:	DA - 1	Date Reported:	11-26-97
Laboratory Number:	C553	Date Sampled:	11-21-97
Chain of Custody No:	5576	Date Received:	11-24-97
Sample Matrix:	Soil	Date Extracted:	11-24-97
Preservative:	Cool	Date Analyzed:	11-25-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**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: **Schumacher, John #1 Separator Pit. 5 Pt. Composite.**

Analyst

Review

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

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
BLAGG / AMOCO	SEPARATOR PIT SCHUMACHER, JOHN #1	
Sampler: (Signature)	Chain of Custody Tape No.	
	04034-10	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TPH (8015)						Remarks
												PRESERV. - COOL
DA-1	11/21/97	1110	C553	SOIL	1	✓						5 PT. COMPOSITE
				SAMPLE RECEIVED COOL & INTACT								

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	11/24/97	0805		11-24-97	0905
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

Ref COC's 5575 → 5584
5605 → 5615

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