Blow-risk bedrock C4081 sep-risk bedrock

District I
P O Box 1980, Hobbs, 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 Resources 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

RECEIVED
AUG 12 1999
OIL CON. DIV.
DIST. 3

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company **Telephone:** (505) 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: Well Name: STATE GC BD #1

Location: Unit or Qtr/Qtr Sec K Sec 32 T 31N R 12W County SAN JUAN

Pit Type: Separator ___ Dehydrator ___ Other Blow

Land Type: BLM ___, State X, Fee ___, Other ___

Pit Location: (Attach diagram)
Pit dimensions: length 40', width 45', depth 5'
Reference: wellhead X, other ___
Footage from reference: 195'
Direction from reference: 60 Degrees ___ East North X of X 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

C4081 Blow pit

Date Remediation Started: _____ **Date Completed:** 9/17/93

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

Landfarmed ___ Insitu Bioremediation ___

Other _____

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) Onsite ___ Offsite X Amoco Crouch Mesa Facility

General Description Of Remedial Action: _____

Excavation. Bedrock Bottom - Risk Assessed.

Ground Water 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' (Pit Bottom)

Sample date 9/16/93 Sample time 1035

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) 868

TPH 8100 ppm

Ground Water 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 KNOWLEDGE AND BELIEF

DATE 9/17/93

SIGNATURE B J Shaw

PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

FINAL REPORT - 2 YEAR REMEDIATION (MOSS EXCAVATION) 9-17-93 by NV. No Recommendations.

COCR 3018

C4081

ENVIROTECH Inc.

5796 US HWY. 64, FARMINGTON, NM 87401
(505) 632-0615

JOB No: 92140
PAGE No: 1 of 1

FIELD REPORT: CLOSURE VERIFICATION

LOCATION: LEASE: STATE GC BD WELL: 1 QD: NE 4 SW 4 (K)
SEC 32 TWP 31N RNG: 12W BM: NM CNTY: SAN JUAN ST: NM PIT: BLOW
CONTRACTOR: MOSS EXCAVATION
EQUIPMENT USED: TRACKHOE

DATE STARTED: 9/16/93
DATE FINISHED: 9/16/93
ENVIRONMENTAL SPECIALIST: NV

SOIL REMEDIATION: QUANTITY: 40 x 45 x 5' 250 c.y. NV
DISPOSAL FACILITY: CROUCH MESA COMPOST
LAND USE: RANGE
SURFACE CONDITIONS: HEAVILY STAINED

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 65 YARDS N60W FROM WELLHEAD.

DEPTH TO GROUNDWATER: >100'
NEAREST WATER SOURCE: ~~>2000'~~ >1000' NV
NEAREST SURFACE WATER: ~~>1150'~~ >1000' NV

1 @ 3' DK YELL. OR.
2 @ 1' GREEN GRAY BEDROCK
3 @ 1' GRAY. OR.
4 @ 3' MED. LT. GRAY BEDROCK
5 @ 3' MED BLK. GRAY BEDROCK
6 @ 3' DK. YELL. BR. BEDROCK

GREYISH ORANGE TO MED. BLUISH GRAY SAND, NON-COHESIVE, SLIGHTLY MOIST, LOOSE TO HARD (BEDROCK). PIT EXCAVATED TO AND WITHIN BEDROCK. NEARLY ALL OF THE APPARENT HIGHLY CONTAMINATED SOIL LIES ON OR WITHIN TOP OF BEDROCK STRATA.

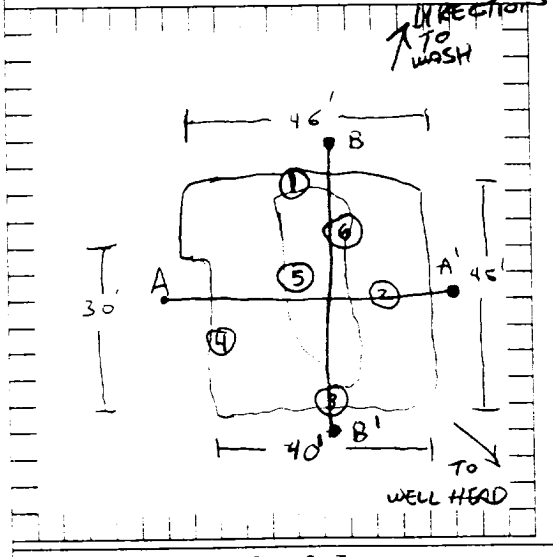
NV RISK ASSESSED

FIELD 418.1 CALCULATIONS

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

SCALE
0 FEET

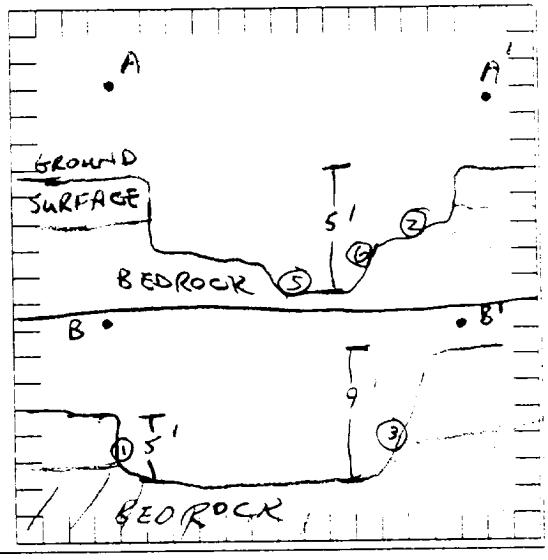
PIT PERIMETER



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 3'	0.0
2 @ 1'	412
3 @ 1'	1.5
4 @ 0'	102.3
5 @ 5'	868
6 @ 3'	623
LAB TPH (418.1)	
(5) @ 5'	= 1035

PIT PROFILE



TRAVEL NOTES: CALLOUT: ONSITE:

Well Name:	**State GC BD #1**
Well Site location:	Unit K, Sec. 32, T31N, R12W
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 loader encountered sandstone 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 sandstone 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 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 0.46 miles southeast of the nearest vulnerable area boundary (Farmington Glade).

(Refer to Farmington North 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.

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	92140
Sample ID:	5 @ 5'	Date Sampled:	09-16-93
Laboratory Number:	6119	Date Received:	09-16-93
Sample Matrix:	Soil	Date Analyzed:	09-17-93
Preservative:	Cool	Date Reported:	09-17-93
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	8,100	50.0

ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: State GC BD #1, Blow Pit, C4081.

Analyst

Review

3018

C4081

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location		ANALYSIS/PARAMETERS
Amoco 92140	BD #1 Blow Pit STATE GC ~~GC #1E~~ 9/16/93		
Sampler: (Signature) Nelson Velez	Chain of Custody Tape No.		

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TPH (418.1)						Remarks
(5) @ 5'	9/16/93	1035	6119	SOIL	1	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson Velez	9/16/93	1419	Cheri Thackeray	9-16-93	1420
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

CH082

District I
P O Box 1980, Hobbs, 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 Resources 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

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company **Telephone:** (505) - 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: STATE GC 80 #1
Well Name

Location: Unit or Qtr/Qtr Sec K Sec 32 T 31N R 12W County SAN JUAN

Pit Type: Separator X Dehydrator ___ Other ___

Land Type: BLM ___, State X, Fee ___, Other ___

Pit Location: (Attach diagram)
Pit dimensions: length 24', width 30', depth 6'
Reference: wellhead X, other ___
Footage from reference: 150'
Direction from reference: 80 Degrees ___ East North X of X 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

C4082 SEP. PIT

Date Remediation Started: _____ **Date Completed:** 9/17/93

emediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards 150

Landfarmed ___ Insitu Bioremediation ___

Other _____

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) Onsite ___ Offsite X Amoco Crouch Mesa Facility.

General Description Of Remedial Action: _____

Excavation. Bedrock Bottom - Risk Assessed.

Ground Water 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 4' (pit bottom)

Sample date 9/16/93 Sample time 0920

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) 205.8

TPH 4760 ppm

Ground Water 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 KNOWLEDGE AND BELIEF

DATE 9/17/93

SIGNATURE B J Shaw PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

LAB RESULTS REPORTED TO [illegible] (MOSS EXCAVATION) [illegible]

ENVIROTECH Inc.

COCR 3017

5796 US HWY. 64, FARMINGTON, NM 87401
(505) 632-0615

C4082

FIELD REPORT: CLOSURE VERIFICATION

JOB No: 92140
PAGE No: 1 of 1

LOCATION: LEASE: STATE GC WELL: BD #1 QD: NE/4 SW/4 (K)
SEC 32 TWP: 31N RNG: 12W BM: NM CNTY: SAN JUAN ST: NM PIT: SEP.
CONTRACTOR: MOSS EXCAVATION
EQUIPMENT USED: TRACKHOE

DATE STARTED: 9/16/93
DATE FINISHED: 9/16/93
ENVIRONMENTAL SPECIALIST: NV

SOIL REMEDIATION: QUANTITY: 24 x 30 x 6' (APPROXIMATE) 150 C.Y. NV
DISPOSAL FACILITY: CROUCH MESA COMPOST
LAND USE: RANGE
SURFACE CONDITIONS: UNKNOWN

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 50 YARDS N80W FROM WELLHEAD
DEPTH TO GROUNDWATER: >100'
NEAREST WATER SOURCE: ~~>2000'~~ >10000' NV
NEAREST SURFACE WATER: ~~≅ 250'~~ >1000' NV

1 @ 2' MOD YELL BR.
2 @ 2' DK YEL OR.
3 @ 1' DK YELL OR BEDROCK
4 @ 4' MED DK GRAY
5 @ 4' DK YELL OR.
6 @ 6' MED. BLUISH GRAY BEDROCK

DK. YELLOWISH ORANGE TO MED. BLUISH GRAY SAND, NON-COHESIVE, SLIGHTLY MOIST TO MOIST, LOOSE TO HARD (BEDROCK), SOME GRAVEL ENCOUNTERED NEAR THE WEST AND SOUTH SIDEWALLS. PIT EXCAVATED TO AND WITHIN BEDROCK. NEARLY ALL OF THE HIGHLY CONTAMINATED SOIL LIES ON OR WITHIN TOP OF BEDROCK STRATA.

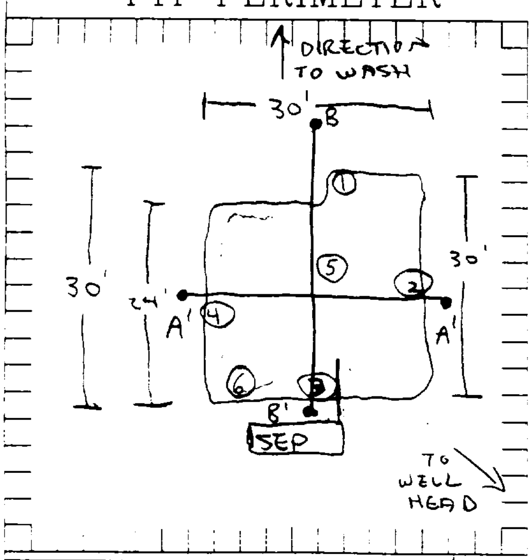
FIELD 418.1 CALCULATIONS

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

SCALE

0 FEET

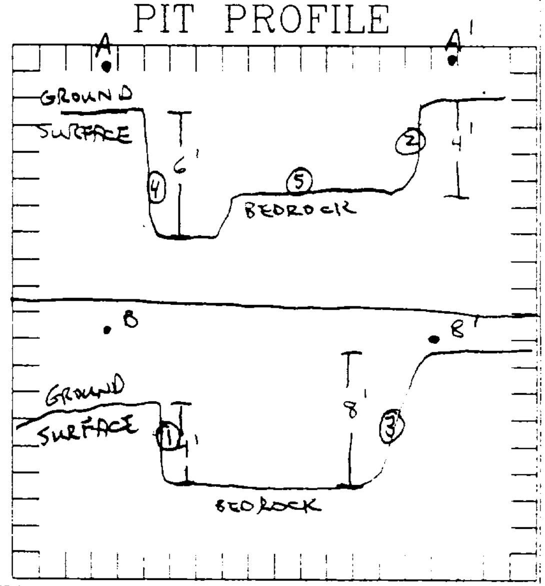
PIT PERIMETER



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 2'	94.9
2 @ 2'	1.0
3 @ 1'	0.0
4 @ 4'	614
5 @ 4'	205.8
6 @ 6'	384
LAB TPH (418.1)	
① @ 4'	-0920
⑥ @ 6'	-A30

PIT PROFILE



TRAVEL NOTES CALLOUT: 9/15/93 ONSITE: 9/16/93

Well Name:	**State GC BD #1**
Well Site location:	Unit K, Sec. 32, T31N, 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 6 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 6 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 0.46 miles southeast of the nearest vulnerable area boundary (Farmington Glade).

(Refer to Farmington North 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.

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	92140
Sample ID:	5 @ 4'	Date Sampled:	09-16-93
Laboratory Number:	6117	Date Received:	09-16-93
Sample Matrix:	Soil	Date Analyzed:	09-17-93
Preservative:	Cool	Date Reported:	09-17-93
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	4,760	50.0

ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: State GC BD #1, Separator Pit, C4082.

Analyst

Review

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	92140
Sample ID:	6 @ 6'	Date Sampled:	09-16-93
Laboratory Number:	6118	Date Received:	09-16-93
Sample Matrix:	Soil	Date Analyzed:	09-17-93
Preservative:	Cool	Date Reported:	09-17-93
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	920	5.0

ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: State GC BD #1, Separator Pit, C4082.

Analyst

Review

3017

CHAIN OF CUSTODY RECORD

C4082

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
Amoco 92140	SEP PIT STATE GC BD #1	
Sampler: (Signature) Nelson Velez	Chain of Custody Tape No.	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TPH (418.1)						Remarks
(5) @ 4'	9/16/93	0920	6117	SOIL	1	✓						
(6) @ 6'	9/16/93	0930	6118	SOIL	1	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson Velez	9/16/93	1417	Cheryl Chatterton	9-16-93	1420
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