80259

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

Denny Foust
DEPUTY OIL & GAS INSPECTOR

SEP 19 1996

# 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:** V. W McMANUS #1

**Location:** Unit or Qtr/Qtr Sec M Sec 22 T 28N R 12W County SAN JUAN

**Pit Type:** Separator ___ Dehydrator ___ Other TANK BATTERY

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

**Pit Location:** (Attach diagram)
Pit dimensions: length 60', width 45', depth 22'
Reference: wellhead X, other ___
Footage from reference: 1850
Direction from reference: 90 Degrees X East North X 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)<br>50 feet to 99 feet (10 points)<br>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)<br>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)<br>200 feet to 1000 feet (10 points)<br>Greater than 1000 feet (0 points) | 0 |
| | **RANKING SCORE (TOTAL POINTS):** | 0 |

B0259

**Date Remediation Started:** _____ **Date Completed:** 4-18-95

**Remediation Method:** (Check all appropriate sections)
Excavation X Approx. cubic yards 2000
Landfarmed X Insitu Bioremediation ___
Other COMPOST

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

**General Description Of Remedial Action:**
Excavation - TO BEDROCK BOTTOM

**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 15' + 17'
Sample date 4-18-95 Sample time _____

Sample Results
Benzene(ppm) _____
Total BTEX(ppm) _____
Field headspace(ppm) 2 + 5
TPH 748 + 340 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 5-3-95
SIGNATURE B J Shaw
PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

CLIENT: AMOCO

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

LOCATION NO: B0259
C.O.C. NO: ———

# FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION: NAME: MCMANUS, UW WELL #: 1 PIT: TANK BATTERY
QUAD/UNIT: M SEC: 22 TWP: 28 N RNG: 12 W BM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: SW/SW CONTRACTOR: MOSS

DATE STARTED: 4-18-95
DATE FINISHED: ———
ENVIRONMENTAL SPECIALIST: REJ

EXCAVATION APPROX: 45 FT. x 60 FT. x 22 FT. DEEP. CUBIC YARDS: 2000
DISPOSAL FACILITY: ON SITE REMEDIATION METHOD: COMPOST/LANDFARM
LAND USE: RGRL./RANGE LEASE: SF-078905 FORMATION: ———

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 1850 FEET EAST FROM WELLHEAD.
DEPTH TO GROUNDWATER: >100 NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM

SOIL AND EXCAVATION DESCRIPTION: PIT DISPOSITION: ABANDONED

PIT EXCAVATED TO SANDSTONE BOTTOM. NO STAIN OR ODOR IN SIDEWALLS. MOIST, BROWN, SILTY SAND - HOMOGENEOUS. SAMPLE #3 HOT. INSTRUCTED EXCAVATOR TO REMOVE HOT SPOT IN SOUTHEAST CORNER. (#3)
SIDEWALLS PASS. - SANDSTONE BOTTOM HOT.

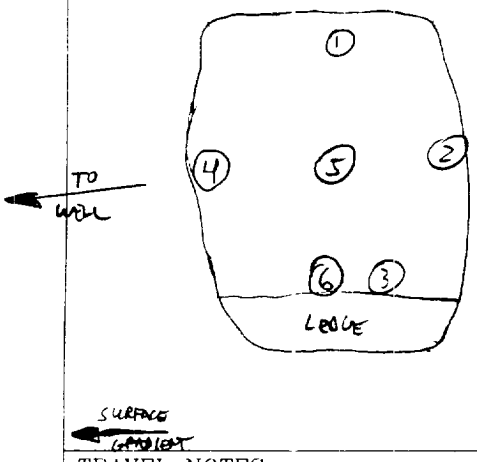
BEDROCK

FIELD 418.1 CALCULATIONS

| | SAMPLE I.D. | LAB No: | WEIGHT (g) | mL. FREON | DILUTION | READING | CALC. ppm |
|---|---|---|---|---|---|---|---|
| ③ | SES @ 15' | 1463 | 10.0 | 20.0 | 10 | 463 | 9260 |
| ④ | WS @ 17' | 1464 | 10.0 | 20.0 | — | 170 | 340 |
| ⑤ | SS @ 15' | 1465 | 10.0 | 20.0 | — | 374 | 748 |

SCALE
0 10 20 FT

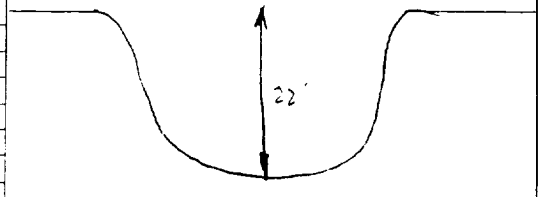
## PIT PERIMETER




## OVM RESULTS

| SAMPLE ID | FIELD HEADSPACE PID (ppm) |
|---|---|
| 1 NS - 15' | 3 |
| 2 ES - 15' | 3 |
| 3 SES - 15' | 22 |
| 4 WS - 17' | 5 |
| 5 CB - 22' | SANDSTONE - 649 |
| 6 SS - 15' | 2 |
| LAB | SAMPLES |

## PIT PROFILE




TRAVEL NOTES: CALLOUT: 4-18-95 ONSITE: 4-18-95 0900

**BLAGG ENGINEERING, INC.**
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: | Southeast Side @ 15' | Date Analyzed: | 4-18-95 |
| Project Location: | V.W. McManus #1 | Date Reported: | 4-18-95 |
| Laboratory Number: | TPH-1463 | Sample Matrix: | Soil |

| Parameter | Result, mg/kg | Detection Limit, mg/kg |
|---|---|---|
| Total Recoverable Petroleum Hydrocarbons | **9,300** | **100** |

ND = Not Detectable at stated detection limits.

| QA/QC: | QA/QC Sample TPH mg/kg | Duplicate TPH mg/kg | % *Diff. |
|---|---|---|---|
| | 14,000 | 13,000 | 7 |

*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: Tank Battery Pit - B0259

R. E. O'Neill
Analyst

Review

**BLAGG ENGINEERING, INC.**
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: | West Side @ 17' | Date Analyzed: | 4-18-95 |
| Project Location: | V.W. McManus #1 | Date Reported: | 4-18-95 |
| Laboratory Number: | TPH-1464 | Sample Matrix: | Soil |

| Parameter | Result, mg/kg | Detection Limit, mg/kg |
|---|---|---|
| Total Recoverable Petroleum Hydrocarbons | **340** | **10** |

ND = Not Detectable at stated detection limits.

| QA/QC: | QA/QC Sample TPH mg/kg | Duplicate TPH mg/kg | % *Diff. |
|---|---|---|---|
| | 14,000 | 13,000 | 7 |

*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: Tank Battery Pit - B0259

R. E. O'Neill
Analyst

Review

**BLAGG ENGINEERING, INC.**
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: | South Side @ 15' | Date Analyzed: | 4-18-95 |
| Project Location: | V.W. McManus #1 | Date Reported: | 4-18-95 |
| Laboratory Number: | TPH-1465 | Sample Matrix: | Soil |

| Parameter | Result, mg/kg | Detection Limit, mg/kg |
|---|---|---|
| Total Recoverable Petroleum Hydrocarbons | **750** | **10** |

ND = Not Detectable at stated detection limits.

QA/QC:

| QA/QC Sample TPH mg/kg | Duplicate TPH mg/kg | % *Diff. |
|---|---|---|
| 14,000 | 13,000 | 7 |

*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: Tank Battery Pit - B0259

R. E. O'Neill
Analyst

Review

| | |
|---|---|
| **Well Name:** | **V.W. McManus #1** |
| Well Site location: | Unit M, Sec. 22, T28N, R12W |
| Pit Type: | Tank Battery pit |
| Producing Formation: | Gallup |
| Pit Category: | Area III |
| Horizonal Distance to Surface Water: | > 1000 ft. |
| Vicinity Groundwater Depth: | > 100 ft. |

# RISK ASSESSMENT

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 22 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 22 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 (double sidewall steel tank installed). Prior discharge into the pit is believed to be under 5 barrels per day.

4. Field headspace readings (OVM/PID) on Gallup type locations do not reflect direct correlation to total BTEX per USEPA Method 8020 concentrations. Listed below are several typical AMOCO Gallup pit soil analyses comparing headspace to Benzene and total BTEX results.

| LOCATION | HEADSPACE (ppm) | BENZENE (ppm) | TOTAL BTEX (ppm) |
|---|---|---|---|
| **Chapson, Harold B. #1** | **376** | **2.040** | **30.360** |
| **Roy Sullivan A1** | **246** | **0.222** | **8.517** |
| **State GC BZ #1** | **1304** | **0.060** | **33.520** |

The comparisons listed above demonstrates that headspace testing is not an accurate measurement to Benzene or total BTEX concentrations when above standards for Gallup type pits.

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 a permeable 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.