

District I  
P.O. Box 900, Hobbs, NM  
District II  
P.O. Drawer DD, Artesia, NM 88211  
District III  
DEPUTY OIL & GAS INSPECTOR  
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

DEC 02 1997

## PIT REMEDIATION AND CLOSURE REPORT

Operator: Phillips Petroleum Company Telephone: (505) 599-3400

Address: 5525 Hwy. 64, NEBU 3004, Farmington, NM 87401

Facility Or: San Juan 31-6 Unit # 50  
Well Name L

Location: Unit or Qtr/Qtr Sec NWSW Sec 31 T 31N R 6W County Rio Arriba

Pit Type: Separator X Dehydrator \_\_\_\_\_ Other \_\_\_\_\_

Land Type: BLM X State \_\_\_\_\_ Fee \_\_\_\_\_ Other \_\_\_\_\_

Pit Location: Pit dimensions: Length 22 ft, width 22 ft, depth 4 ft  
(Attach diagram)

Reference: wellhead X other \_\_\_\_\_

Footage from reference: 45 ft

Direction from reference: 20 Degrees X East North X  
of  
West South \_\_\_\_\_

Depth to Ground Water: 85 ft  
(vertical distance from  
contaminants to seasonal  
highwater elevation of  
ground water)

|          |                       |             |           |
|----------|-----------------------|-------------|-----------|
| _____    | Less than 50 feet     | (20 points) |           |
| <u>X</u> | 50 ft to 99 feet      | (10 points) |           |
| _____    | Greater than 100 feet | (0 points)  | <u>10</u> |

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) |          |
| <u>X</u> | No  | (0 points)  | <u>0</u> |

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) |          |
| <u>X</u> | Greater than 1000 feet | (0 points)  | <u>0</u> |

RANKING SCORE (TOTAL POINTS): 10

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OIL CON. DIV.  
DIST. 3

Date Remediation Started: 7/6/93

Date Completed: 4/11/95

Excavation X

Approx. cubic yards 18

Landfarmed X

Insitu Bioremediation \_\_\_\_\_

Other Risk Assessment

Remediation Method:

Onsite X

Offsite \_\_\_\_\_

(Check all appropriate  
sections)

General Description of Remedial Action : Based on the initial assessment, soils were excavated to bedrock at a depth of 1 foot below the original pit bottom. A sample was tested and provided a concentration above NMOCD and BLM guidelines. The pit bottom and walls are encased in bedrock. The soils were landfarmed on location. The landfarm tested clean on 4/11/95. The landfarmed soils were then used to fill the excavation. Based on the information and the physical location of the pit, there is no risk to human health or environment.

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 North wall

Sample depth 4 feet below ground level

Sample date 5/19/94

Sample time \_\_\_\_\_

Sample Results

Benzene(ppm) \_\_\_\_\_

Total BTEX (PPM) \_\_\_\_\_

Field Headspace (ppm) 9

TPH 1300

Ground Water Sample: Yes \_\_\_\_\_ No X (if yes, attach sample results)

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

DATE 8/26/97

PRINTED NAME Bob Wirtanen

SIGNATURE Bob Wirtanen

and TITLE Sr. Safety & Environmental Specialist

# ENVIROTECH Inc.

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

PIT NO: PA020

C.D.C. NO: \_\_\_\_\_

## FIELD REPORT: SITE ASSESSMENT

JOB No: 93163  
PAGE No: 1 of 1

PROJECT: PIT ASSESSMENT  
CLIENT: PHILLIPS PETROLEUM  
CONTRACTOR: ENVIROTECH INC.  
EQUIPMENT USED: JOB EXTENDANCE

DATE STARTED: 7-6-93  
DATE FINISHED: 7-6-93  
ENVRO. SPCLT: REQ  
OPERATOR: Cimarron  
ASSISTANT: \_\_\_\_\_

LOCATION: LEASE: San Juan 31-6 WELL: #50 QD: 1450' FSL & 1190' FWL (L)  
SEC: 31 TWP: 31N RNG: 6W PM: NM CNTY: R.A. ST: NM PIT: Sep.

LAND USE: Range -- Lease # SF-078995  
SURFACE CONDITIONS: Earthen pit, dry

PIT CENTER IS LOCATED APPROXIMATELY 45 FEET N. 20°E. OF WELLHEAD.

CLOSURE STD: 1000 ppm

T1 : Silt-sand-clay mixture on bedrock.  
Brown/gray. Some odor.

RANKING SCORE: 10

Field 418.1 (1:10 dilution) : (500x2x10=10,000) CAC0096

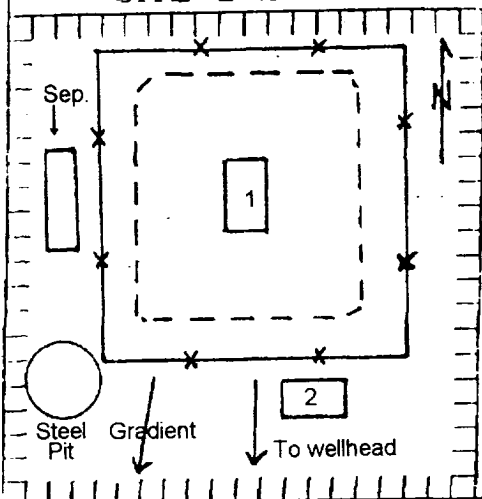
### SAMPLE INVENTORY

| SAMPL ID | SAMPL TYPE | LABORATORY ANALYSIS |
|----------|------------|---------------------|
| T1Q4     | Soil       | 10,000ppm           |
|          |            |                     |
|          |            |                     |
|          |            |                     |

### SCALE

0 5 10 FEET 30' x 30'

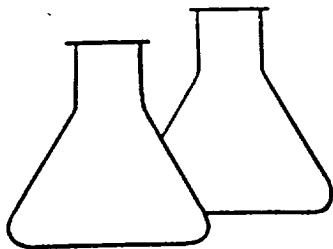
### SITE DIAGRAM



### TEST HOLE LOGS

| TH#: | 1          |             |         | TH#:       | 2           |         |  | TH#:       |             |         |  | TH#:       |             |         |  |
|------|------------|-------------|---------|------------|-------------|---------|--|------------|-------------|---------|--|------------|-------------|---------|--|
| GD   | SOIL TYPE: | SAMPL TYPE: | QVM/TPH | SOIL TYPE: | SAMPL TYPE: | QVM/TPH |  | SOIL TYPE: | SAMPL TYPE: | QVM/TPH |  | SOIL TYPE: | SAMPL TYPE: | QVM/TPH |  |
| 1    |            |             |         |            |             |         |  |            |             |         |  |            |             |         |  |
| 2    |            |             |         | SM         | GRB         | 4.0     |  |            |             |         |  |            |             |         |  |
| 3    | Pit bottom |             |         | TD         | =           | 2'      |  |            |             |         |  |            |             |         |  |
| 4    | SC         | GRB         | 284     |            |             |         |  |            |             |         |  |            |             |         |  |
| 5    | TD =5'     |             |         |            |             |         |  |            |             |         |  |            |             |         |  |
| 6    | Bedrock    |             |         |            |             |         |  |            |             |         |  |            |             |         |  |
| 7    |            |             |         |            |             |         |  |            |             |         |  |            |             |         |  |
| 8    |            |             |         |            |             |         |  |            |             |         |  |            |             |         |  |
| 9    |            |             |         |            |             |         |  |            |             |         |  |            |             |         |  |
| 10   |            |             |         |            |             |         |  |            |             |         |  |            |             |         |  |
| 11   |            |             |         |            |             |         |  |            |             |         |  |            |             |         |  |
| 12   |            |             |         |            |             |         |  |            |             |         |  |            |             |         |  |
| 13   |            |             |         |            |             |         |  |            |             |         |  |            |             |         |  |
| 14   |            |             |         |            |             |         |  |            |             |         |  |            |             |         |  |

SOIL TYPE: C - Clay, S - Sil, G - Sand, B - Gravel, Plasticity: L - Low, H - High, Plasticity: P - Poor, M - Med



# ENVIROTECH LABS

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

FIELD MODIFIED EPA METHOD 418.1  
TOTAL PETROLEUM HYDROCARBONS

Client: Phillips  
Sample ID: T1 @ 4' bgs  
Project Location: San Juan 31-6 #50  
Laboratory Number: GAC0096

Project #: 93163  
Date Analyzed: 07-06-93  
Date Reported: 07-08-93  
Sample Matrix: Soil

| <u>Parameter</u>       | <u>Result, mg/kg</u> | <u>Detection<br/>Limit, mg/kg</u> |
|------------------------|----------------------|-----------------------------------|
| Petroleum Hydrocarbons | 10000                | 100                               |

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

Comments: Separator Pit PA020

R. E. O'Neill  
Analyst

Maria D. Young  
Review

PIT NO: PA020

5798 US HWY. 64, FARMINGTON, NM 87401  
(505) 832-0815

C.O.C. NO: \_\_\_\_\_

## FIELD REPORT: CLOSURE VERIFICATION

JOB No: 93163

PAGE No: 1 of 1

LOCATION: NAME: San Juan 31-6 WELL #: 50 PIT: Sep.

DATE STARTED: 5/19/94

DATE FINISHED: 5/19/94

QUAD/UNIT: L SEC: 31 TWP: 31N RNG: 6W BM: NM CNTY: R.A. ST: NM

ENVIRONMENTAL TH  
SPECIALIST: \_\_\_\_\_

QTR/FOOTAGE: 1450' ESL & 1190' FWL CONTRACTOR: Cimarron

SOIL REMEDIATION: EXCAVATION APPROX. 22 FT. x 22 FT. x 4 FT. DEEP.

DISPOSAL FACILITY: On-site Landfarm CUBIC YARDAGE: \_\_\_\_\_

LAND USE: Range LEASE: # SF-078995

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 45 FEET N. 20° E. FROM WELLHEAD.

DEPTH TO GROUNDWATER: 85' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'

NMOC Ranking Score: 10 NMOC TPH Closure Std: 1000 PPM

SOIL AND EXCAVATION DESCRIPTION: -- Bedrock sides and floor -- can't excavate any more  
-- Brown silty sand to sandy silt, slightly moist  
-- No apparent staining

FIELD 418.1 CALCULATIONS

| FIELD 418J CALCULATIONS |         |            |           |          |         |           |
|-------------------------|---------|------------|-----------|----------|---------|-----------|
| SAMPLE I.D.             | LAB No: | WEIGHT (g) | mL. FREON | DILUTION | READING | CALC. ppm |
| T1 @ 4'                 | GAC#514 | 10         | 20        | ---      | 672     | 1344      |
|                         |         |            |           |          |         |           |
|                         |         |            |           |          |         |           |

### SCALE

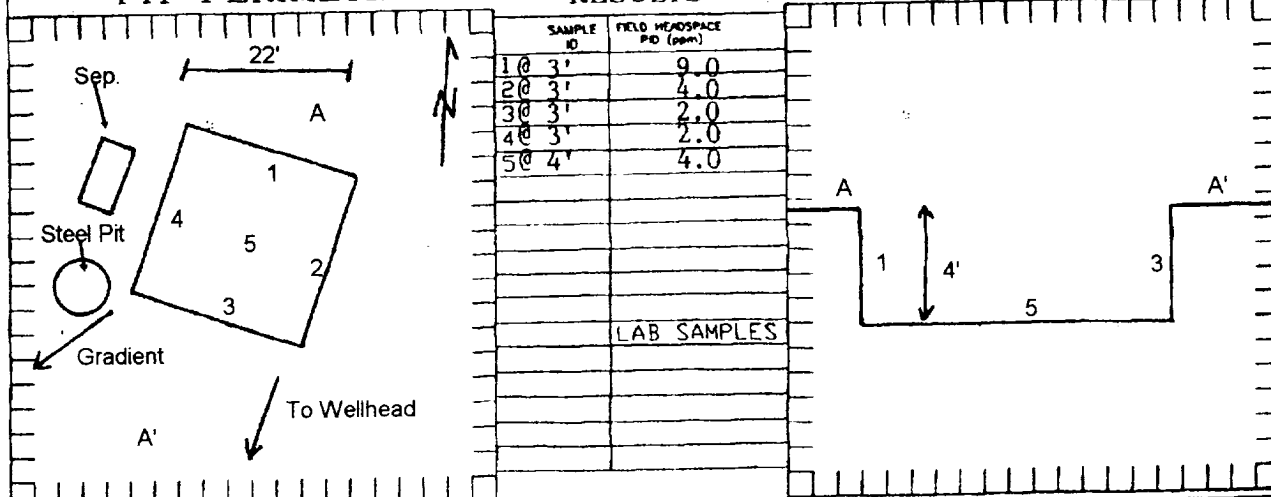
10/10/2016

0 10 FEET

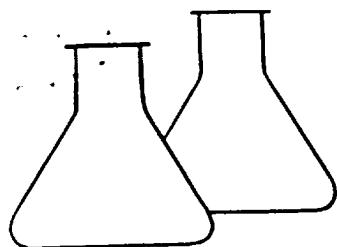
# PIT PERIMETER

## OVM RESULTS

## PIT PROFILE



TRAVEL NOTES: \_\_\_\_\_ CALLOUT: \_\_\_\_\_ ONSITE: 5/19/94



# ENVIROTECH LABS

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

## FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

|                    |                    |                |         |
|--------------------|--------------------|----------------|---------|
| Client:            | Phillips Petroleum | Project #:     | 93163   |
| Sample ID:         | NS @ 4'            | Date Analyzed: | 5-19-94 |
| Project Location:  | San Juan 31-6 #50  | Date Reported: | 5-23-94 |
| Laboratory Number: | GAC0514            | Sample Matrix: | Soil    |

| Parameter                                | Result, mg/kg | Detection Limit, mg/kg |
|--|---------------|------------------------|
| -----                                    | -----         | -----                  |
| Total Recoverable Petroleum Hydrocarbons | 1300          | 10                     |

ND = Not Detectable at stated detection limits.

|        |                        |                     |             |
|--------|------------------------|---------------------|-------------|
| QA/QC: | QA/QC Sample TPH mg/kg | Duplicate TPH mg/kg | %<br>*Diff. |
|        | -----                  | -----               | -----       |
|        | 7,860                  | 5,200               | 41          |

\*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 PA020

Tom Hanson  
Analyst

Marcia S. Young  
Review

# ENVIROTECH Inc

5796 US HWY. 84, FARMINGTON, NM 87401  
(505) 632-0815

PIT No: PA020  
C.O.C #: 4151

## FIELD REPORT: REMEDIATION FACILITY CLOSURE VERIFICATION

JOB No: 93163  
PAGE No: 1 of 1

FACILITY LOCATION: San Juan 31-6 # 50 DK  
SOURCE LOCATION: Section 31, T31N, R6W

DATE STARTED: 4-11-95  
DATE FINISHED: 4-11-95

SOURCE LOCATION: \_\_\_\_\_  
FACILITY CLASSIFICATION: On-site landfarm PIT TYPE: Sep.

ENVIRONMENTAL  
SPECIALIST: CJC

SOIL REMEDIATION: QUANTITY: 18 cy # OF COMP. SAMPLES: 1  
DIMENSIONS: 30' x 33' x .5' deep

VISIBLE OBSERVATIONS: \_\_\_\_\_  
SAMPLING PLAN: 1 5-point composite

FIELD NOTES & REMARKS: FACILITY CENTER LOCATED APPROX 29 YARDS West FROM WELLHEAD:

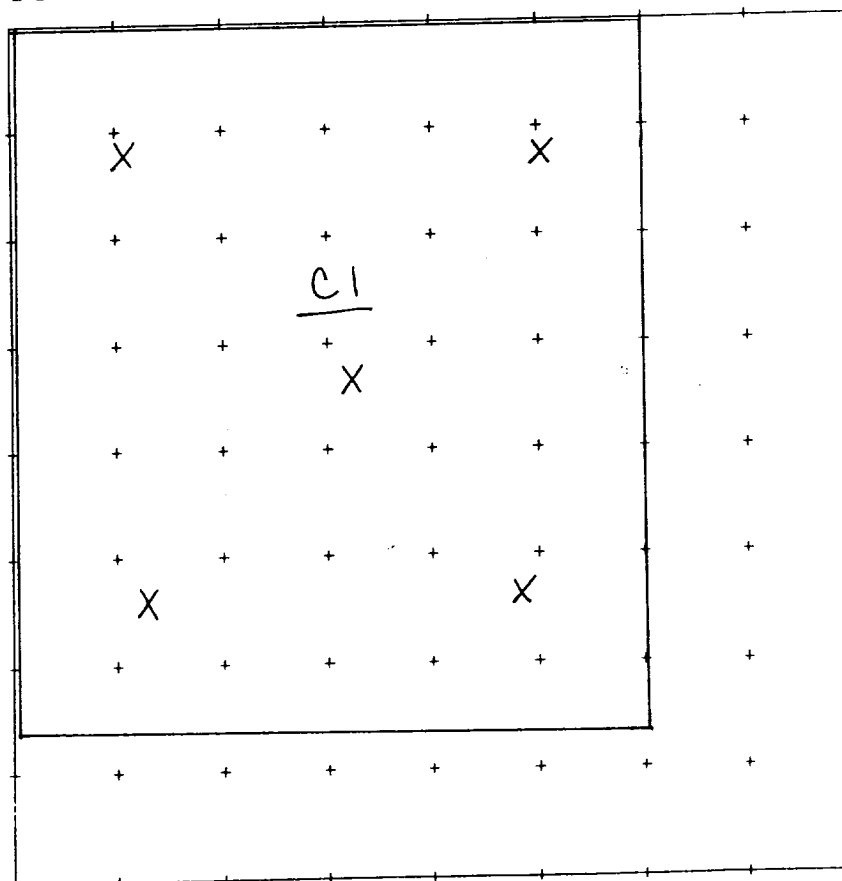
DEPTH TO GROUNDWATER: 85'  
NEAREST WATER SOURCE/TYPE: >1000'  
NEAREST SURFACE WATER: >1000'  
MAX TPH PER NMOC: 1000 ppm

Close

No. OF 5-POINT  
COMPOSITE SAMPLES:  
YARDAGE--#  
0-200=1  
201-400=2  
401-1000=3  
>1000=5

## FACILITY DIAGRAM

GRID SCALE: 5'



## OVM RESULTS

| SAMPLE ID: | FIELD HEADSPACE PID (ppm) |
|------------|---------------------------|
| C1         | 0.0                       |
|            |                           |
|            |                           |
|            |                           |
|            |                           |
|            |                           |
|            |                           |
|            |                           |
|            |                           |

## LAB RESULTS

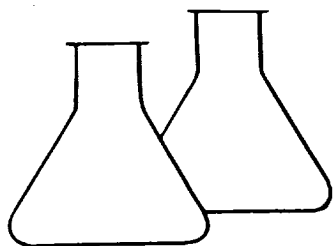
| SAMPLE ID: | ANALYSIS REQUESTED: | RESULTS PPM: |
|------------|---------------------|--------------|
| C1         | TPH                 | 316          |
|            |                     |              |
|            |                     |              |
|            |                     |              |
|            |                     |              |
|            |                     |              |
|            |                     |              |
|            |                     |              |
|            |                     |              |

4  
↑  
NORTH

→  
WELLHEAD

↘  
SURFACE  
FLOW DIR.

4  
→  
ESTIMATED  
GROUNDWATER  
FLOW DIR.



# 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:              | Phillips          | Project #:       | 93163    |
| Sample ID:           | S.J.31-6 #50DK C1 | Date Reported:   | 04-13-95 |
| Laboratory Number:   | 8346              | Date Sampled:    | 04-11-95 |
| Chain of Custody No: | 4151              | Date Received:   | 04-12-95 |
| Sample Matrix:       | Soil              | Date Extracted:  | 04-12-95 |
| Preservative:        | Cool              | Date Analyzed:   | 04-12-95 |
| Condition:           | Cool and Intact   | Analysis Needed: | TPH      |

| Parameter                       | Concentration<br>(mg/kg) | Det.<br>Limit<br>(mg/kg) |
|---------------------------------|--------------------------|--------------------------|
| -----                           | -----                    | -----                    |
| Total Petroleum<br>Hydrocarbons | 531                      | 10.0                     |

ND = Parameter not detected at the stated detection limit.

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

Comments:

Nathan Spence  
Analyst

Stacy W. Sandler  
Review



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

**Risk Assessment  
San Juan 31-6 # 50**

|                           |        |
|---------------------------|--------|
| Depth to Groundwater      | 85'    |
| Distance to Water Source  | >1000' |
| Distance to Surface Water | >1000' |
| TPH Limit (ppm)           | 10000  |

The subject pit was located in hard, well cemented sandstone at a depth of 4 feet. The initial size of the pit was 22' X 22' X 3' deep. The stained soil was excavated to a final pit size of 22' X 22' X 4' deep. Excavated soil amounted to approximately 18 total cubic yards, and was landfarmed on location.

On July 6, 1993 Envirotech Inc., performed a pit assessment. The assessment included excavation of two test holes. Test hole # 1 was established in the middle of the pit and excavated to a depth of 5 feet ( below ground level ), where bedrock was encountered. A soil sample at 4 feet provided a Total Petroleum Hydrocarbons (TPH) of 10,000 parts per million (ppm), and an Headspace concentration of 284 ppm. Test hole # 2 was established down gradient of the established pit to a depth of 2 feet, where bedrock was encountered. A headspace sample provided a concentration of 4 ppm.

Pit excavation and closure verification was performed on May 19, 1994 by Envirotech, Inc.. Total depth of the pit was established at 4 feet (average) due to encountering bedrock along the walls and bottom. A sample from the North wall at a depth of 4 feet provided a TPH concentration of 1344 ppm and a Headspace concentration of 9 ppm. No groundwater was encountered, and first water was not recorded on a nearby cathodic well until a depth of 85 feet. Excavated soils were landfarmed on location.

The landfarm was sampled by Envirotech, Inc. on April 4, 1995. A 5-point sample was extracted from the 18 cubic yard landfarm and analyzed. TPH concentration of the sample was 316 ppm with a Headspace concentration of 0.0.

With the associated pit encased in bedrock, lateral and vertical extent determined, and excavated soils within NMOCD and BLM requirements, this pit should be considered to have reached "final closure". Phillips Petroleum has removed and remediated all soils to the extent practical. By filling the excavation, the driving force created by additional fluids will be eliminated. Based on this information and the physical location of the pit, there is little to no risk to human health or environment.