Denny E. Foust
DEPUTY OIL & GAS INSPECTOR

DEC 29 1997

Approved

**Meter Number:72782**
**Location Name:Jicarilla C-17 PC**
**Location:TN-25 RG-05**
**SC-28 UL-D**
**6 - Jicarilla**
**NMOCD Zone:OUTSIDE**
**Hazard Ranking Score:00**

RECEIVED
APR 14 1997
OIL CON. DIV.
DIST. 3

# RATIONALE FOR RISK-BASED CLOSURE OF PRODUCTION PITS LOCATED OUTSIDE OF THE VULNERABLE ZONE IN THE SAN JUAN BASIN

This production pit location was ranked according to the criteria in the New Mexico Oil Conservation Division's Unlined Surface Impoundment Closure Guidelines and received a ranking score of zero. The estimated depth to groundwater is greater than 100-feet beneath ground surface (bgs), the pit is not in a well head protection area, and there are no surface water bodies within 1,000 horizontal feet of the pit location.

The primary source, discharge to the pit has been removed. There has been no discharge to the pits for at least 4 years and the pits have been closed for at least one year.

Each pit was backfilled with clean soil and graded in a manner to divert precipitation away from the excavated area. Minimal infiltration of rainfall is expected. Any rainfall that does infiltrate the ground surface must migrate through clean backfill before reaching the residual hydrocarbons.

There is no source material at the ground surface, so direct contact of hydrocarbons with livestock and the populous is not likely.

In general, outside of the vulnerable area and alluvial valleys, bedrock material is generally encountered within 20 feet of the ground surface. Bedrock material in the San Juan Basin consists of interbedded sandstones, shales and clays. According to Freeze and Cherry, 1979, the hydraulic conductivity of the bedrock material are as follows:

| | |
|---|---|
| Sandstone | $10^{-9}$ to $10^{-13}$ cm/sec |
| Shale | $10^{-12}$ to $10^{-16}$ cm/sec |
| Clay | $10^{-12}$ to $10^{-15}$ cm/sec |

Based on this information, the residual hydrocarbons should not migrate to groundwater.

Natural process (bioremediation) are degrading the residual hydrocarbon to carbon dioxide and water and will continue until the source is gone, therefore minimizing any impact to the environment.

Based on the above information, it is highly unlikely that any source material will impact groundwater or ever find an exposure pathway to affect human health and therefore El Paso Field Services Company (EPFS) requests closure of this pit location.

EPFS
EL PASO FIELD SERVICES

# FIELD PIT SITE ASSESSMENT FORM

## GENERAL

Meter: 72782 Location: Jicarilla C-17 PC
Operator #: 0263 Operator Name: Texaco P/L District: Ojito
Coordinates: Letter: D Section 28 Township: 25N Range: 5W
Or Latitude _____ Longitude _____
Pit Type: Dehydrator ___ Location Drip: X Line Drip: ___ Other: _____
Site Assessment Date: 7-15-94 Area: 06 Run: 63

## SITE ASSESSMENT

**NMOCD Zone:** (From NMOCD Maps)
Inside ☐ (1)
Outside ☒ (2)

**Land Type:**
BLM ☐ (1)
State ☐ (2)
Fee ☐ (3)
Indian Jicarilla Apache

**Depth to Groundwater**
Less Than 50 Feet (20 points) ☐ (1)
50 Ft to 99 Ft (10 points) ☐ (2)
Greater Than 100 Ft (0 points) ☒ (3)

**Wellhead Protection Area :**
Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? ☐ (1) YES (20 points) ☒ (2) NO (0 points)

**Horizontal Distance to Surface Water Body**
Less Than 200 Ft (20 points) ☐ (1)
200 Ft to 1000 Ft (10 points) ☐ (2)
Greater Than 1000 Ft (0 points) ☒ (3)
Name of Surface Water Body _____
(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)
Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)
☒ (2) > 100'

**TOTAL HAZARD RANKING SCORE:** 0 **POINTS**

## REMARKS

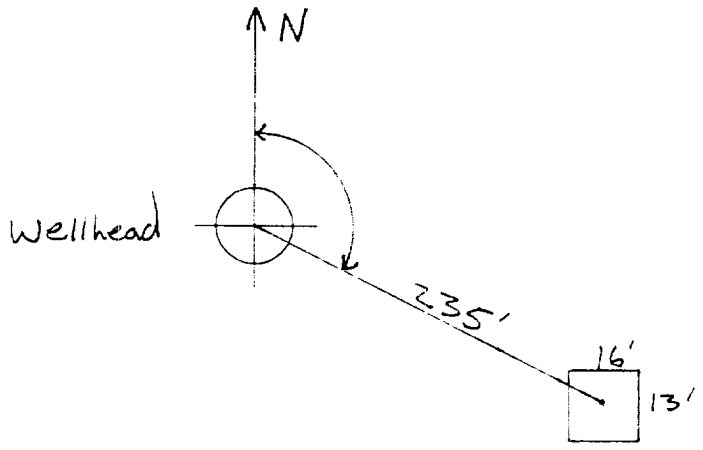
Remarks : Redline VZ - outside Topo V.Z. - outside
one pit - dry
Push in

ORIGINAL PIT LOCATION

## ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 116 Footage from Wellhead 235

b) Length : 16 Width : 13 Depth : 3




REMARKS

**Remarks :**

Photos - 17 - 20

Completed By:

Signature

7-15-94

Date

# FIELD PIT REMEDIATION/CLOSURE FORM

**GENERAL**

Meter: 72782 Location: Jicarilla C-17 PC

Coordinates: Letter: D Section 28 Township: 25 Range: 5

Or Latitude _____ Longitude _____

Date Started : 8/24/95 Run: 06 63

**FIELD OBSERVATIONS**

Sample Number(s): JK52 _____ _____ _____

Sample Depth: 14 Feet

Final PID Reading 239 PID Reading Depth 14 Feet

| | Yes | No |
|---|---|---|
| Groundwater Encountered | ☐ | ☒ |

Approximate Depth _____ Feet

**CLOSURE**

Remediation Method :

| | | |
|---|---|---|
| Excavation | ☒ | Approx. Cubic Yards 346 ~~378~~ 9/12/95 |
| Onsite Bioremediation | ☐ | Approved to Close by Kelly |
| Backfill Pit Without Excavation | ☐ | of JIC EPO 8-29-95 |

Soil Disposition:

Envirotech ☒ ☐ Tierra

Other Facility ☐ Name: _____

Pit Closure Date: 8-31-95 Pit Closed By: Phil P

**REMARKS**

**Remarks :** Pit PID Readings (W-7.5)(S-6.4)(E-4.1)(W-17.6)
Pit size: 22x17x14
Fence size: 19x16x3 No Wet
more than 100' Foot From Ephemral stream

Signature of Specialist: Jane K. Kelly

(SP3191) 03/16/94

El Paso Natural Gas Company

# FIELD SERVICES LABORATORY
# ANALYTICAL REPORT
# PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | JK57 | 947327 |
| MTR CODE \| SITE NAME: | 72782 | Jicarilla C-17 PC |
| SAMPLE DATE \| TIME (Hrs): | 08-24-95 | 1509 |
| PROJECT: | Jic Pits | |
| DATE OF TPH EXT. \| ANAL.: | 8/29/95 | |
| DATE OF BTEX EXT. \| ANAL.: | 8/28/95 | 8/30/95 |
| TYPE \| DESCRIPTION: | VG | Brown Clay |

Field Remarks: (N-7.8)(S-6.4)(E-4.1)(W-17.6)

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|---|---|---|---|---|---|---|
| | | | DF | Q | M(g) | V(ml) |
| BENZENE | < .5 | MG/KG | | | | |
| TOLUENE | < .5 | MG/KG | | | | |
| ETHYL BENZENE | < .5 | MG/KG | | | | |
| TOTAL XYLENES | < 1.5 | MG/KG | | | | |
| TOTAL BTEX | < 3 | MG/KG | | | | |
| TPH (418.1) | ~~69~~ 68.5 | MG/KG | | | 2.04 | 28 |
| HEADSPACE PID | 23.9 | PPM | | | | |
| PERCENT SOLIDS | 89.8 | % | | | | |

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 85% for this sample All QA/QC was acceptable.

**Narrative:**

DF = Dilution Factor Used

**********
Test Method for
Oil and Grease and Petroleum Hydrocarbons
in Water and Soil

Perkin-Elmer Model 1600 FT-IR
Analysis Report
**********

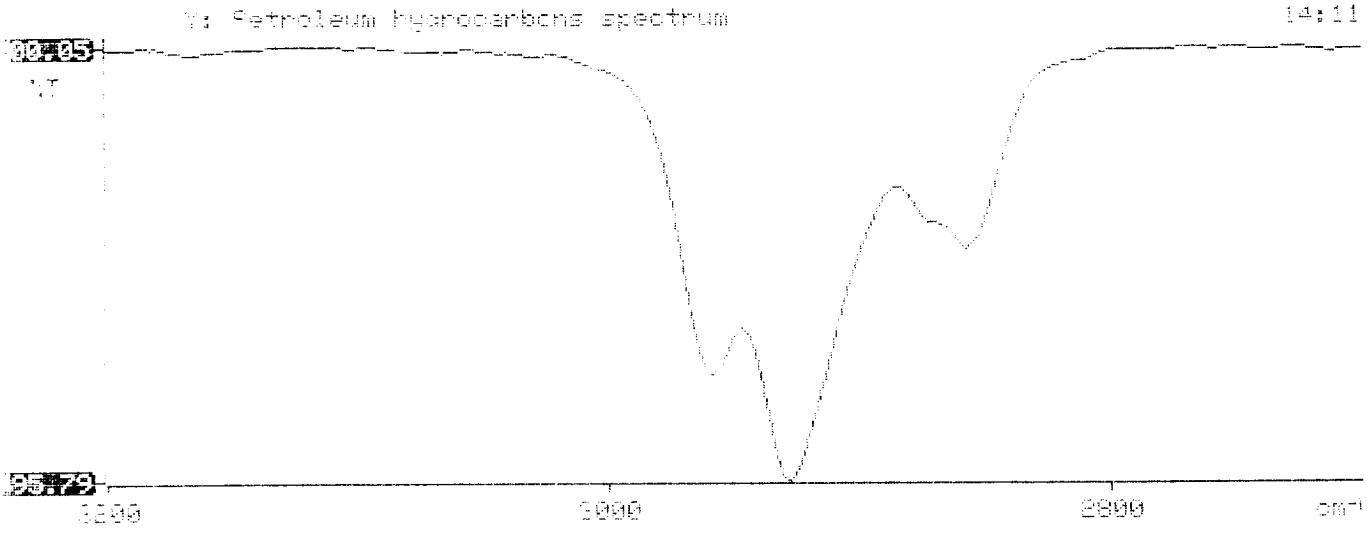
95/08/29 14:11

Sample identification
47327 REPEAT FROM 8-28-95

Initial mass of sample, g
1.040

Volume of sample after extraction, ml
30.000

Petroleum hydrocarbons, ppm
.542
Net absorbance of hydrocarbons (2930 cm-1)
.019



## BTEX SOIL SAMPLE WORKSHEET

| | | | | | |
|---|---|---|---|---|---|
| **File** | 947327 | **Date Printed** | 8/31/95 | | |
| **Soil Mass (g)** | 4.98 | **Multiplier (L/g)** | 0.00100 | | |
| **Extraction vol. (mL)** | 20 | **DF (Analytical)** | 200 | | |
| **Shot Volume (uL)** | 100 | **DF (Report)** | 0.20080 | | |
| | | | | | **Det. Limit** |
| **Benzene (ug/L)** | 0.00 | **Benzene (mg/Kg):** | **0.000** | | 0.502 |
| **Toluene (ug/L)** | 0.00 | **Toluene (mg/Kg):** | **0.000** | | 0.502 |
| **Ethylbenzene (ug/L)** | 0.00 | **Ethylbenzene (mg/Kg):** | **0.000** | | 0.502 |
| **p & m-xylene (ug/L)** | 0.00 | p & m-xylene (mg/Kg): | 0.000 | | 1.004 |
| **o-xylene (ug/L)** | 0.00 | o-xylene (mg/Kg): | 0.000 | | 0.502 |
| | | **Total xylenes (mg/Kg):** | **0.000** | | 1.506 |
| | | **Total BTEX (mg/Kg):** | **0.000** | | |

# EL PASO NATURAL GAS
# EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM001\083095-1.010
Method : C:\LABQUEST\METHODS\9001.MET
Sample ID : 947327,4.98G,100U
Acquired : Aug 30, 1995 17:57:53
Printed : Aug 30, 1995 18:24:16
User : MARLON

Channel A Results

| COMPONENT | RET TIME | AREA | CONC (ug/L) |
|---|---|---|---|
| BENZENE | 3.377 | 0 | 0.0000 |
| a,a,a TFT | 4.900 | 2507220 | 84.2361 |
| TOLUENE | 6.737 | 101581 | -0.6405 |
| ETHYLBENZENE | 10.487 | 0 | 0.0000 |
| M & P XYLENE | 10.860 | 0 | 0.0000 |
| O XYLENE | 11.903 | 0 | 0.0000 |
| BFB | 13.413 | 37820916 | 85.1364 |