

*Denny*  
**DEPUTY OIL & GAS INSPECTOR**

DEC 8 6 1997

*Approved*

**Meter Number: 90058**

**Location Name: SAN JUAN 29-6 #11A**

**Location: TN-29 RG-06**

**SC-07 UL-D**

**2 - Federal**

**NMOCD Zone: OUTSIDE**

**Hazard Ranking Score: 00**

**RECEIVED**  
APR 14 1997

**OIL CON. DIV.**  
BMT 8

**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.

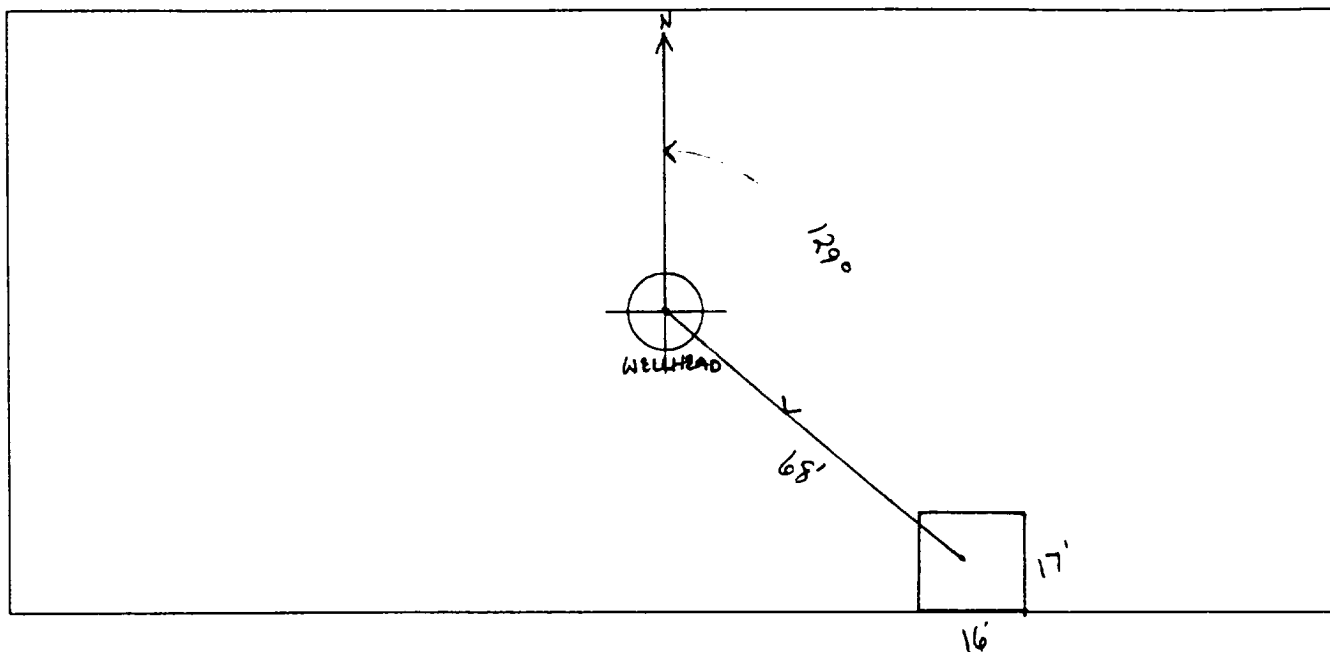
Based on the above information, it is highly unlikely that any source material will impact groundwater or ever find an exposure pathway to affect human health and therefore El Paso Field Services Company (EPFS) requests closure of this pit location.

- 1 -

# ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 129° Footage from Wellhead 68'  
 b) Length : 17 Width : 16 Depth : 3'

ORIGINAL PIT LOCATION



REMARKS

Remarks :

TOOK PICTURES AT 2:18 P.M.

END DUMP

Completed By:

Robert Thompson

Signature

5-26-94

Date

# FIELD PIT REMEDIATION/CLOSURE FORM

|                    |   |
|--------------------|---|
| GENERAL            | <p>Meter: <u>90058</u> Location: <u>SAN Juan 29-6 # 114</u></p> <p>Coordinates: Letter: <u>D</u> Section <u>7</u> Township: <u>29</u> Range: <u>6</u> <u>7/5/94 BPR</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>7-1-94</u> Area: <u>10</u> Run: <u>61</u></p>   |
| FIELD OBSERVATIONS | <p>Sample Number(s): <u>MK 75</u></p> <p>Sample Depth: <u>12'</u> Feet</p> <p>Final PID Reading <u>169</u> PID Reading Depth <u>12'</u> Feet</p> <p>Yes No</p> <p>Groundwater Encountered <input type="checkbox"/> (1) <input checked="" type="checkbox"/> (2) Approximate Depth _____ Feet</p>   |
| CLOSURE            | <p>Remediation Method :</p> <p>Excavation <input type="checkbox"/> (1) Approx. Cubic Yards _____</p> <p>Onsite Bioremediation <input type="checkbox"/> (2)</p> <p>Backfill Pit Without Excavation <input checked="" type="checkbox"/> (3)</p> <p>Soil Disposition:</p> <p>Envirotech <input type="checkbox"/> (1) <input type="checkbox"/> (3) Tierra</p> <p>Other Facility <input type="checkbox"/> (2) Name: _____</p> <p>Pit Closure Date: <u>7-1-94</u> Pit Closed By: <u>BEI</u></p> |
| REMARKS            | <p>Remarks : <u>EPNG LINES Marked Soil Dark Brown strong</u></p> <p><u>Hydrocarbon odor</u></p> <p>Signature of Specialist: <u>Morgan Killion</u></p>   |



## FIELD SERVICES LABORATORY

### ANALYTICAL REPORT

#### PIT CLOSURE PROJECT - Soil

#### SAMPLE IDENTIFICATION

|                            | Field ID | Lab ID                 |
|----------------------------|----------|------------------------|
| SAMPLE NUMBER:             | mk 75    | 945571                 |
| MTR CODE   SITE NAME:      | 90058    | N/A                    |
| SAMPLE DATE   TIME (Hrs):  | 7-1-94   | 1038                   |
| SAMPLED BY:                | N/A      |                        |
| DATE OF TPH EXT.   ANAL.:  | 7/7/94   | 7/7/94                 |
| DATE OF BTEX EXT.   ANAL.: | N/A      | N/A                    |
| TYPE   DESCRIPTION:        | VG       | Fine Brown / Grey Sand |

REMARKS:

#### RESULTS

| PARAMETER      | RESULT | UNITS | QUALIFIERS |   |      |       |
|----------------|--------|-------|------------|---|------|-------|
|                |        |       | DF         | Q | M(g) | V(ml) |
| BENZENE        |        | MG/KG |            |   |      |       |
| TOLUENE        |        | MG/KG |            |   |      |       |
| ETHYL BENZENE  |        | MG/KG |            |   |      |       |
| TOTAL XYLENES  |        | MG/KG |            |   |      |       |
| TOTAL BTEX     |        | MG/KG |            |   |      |       |
| TPH (418.1)    | 391    | MG/KG |            |   | 2.00 | 28    |
| HEADSPACE PID  | 169    | PPM   |            |   |      |       |
| PERCENT SOLIDS | 88.8   | %     |            |   |      |       |

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

The Surrogate Recovery was at N/A % for this sample All QA/QC was acceptable.  
Narrative:

DF = Dilution Factor Used

Approved By:

*[Signature]*

Date:

7/14/94

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 Test Method for  
 Oil and Grease and Petroleum Hydrocarbons  
 in Water and Soil  
 Perkin-Elmer Model 1600 FT-IR  
 Analysis Report  
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11/07/07 14:29

Sample Identification  
 143571

Initial mass of sample, g  
 1.00

Volume of sample after extraction, ml  
 5.00

Internal standard concentration, ppm  
 100.000

Net absorbance of hydrocarbons (2700 cm<sup>-1</sup>)  
 0.01

