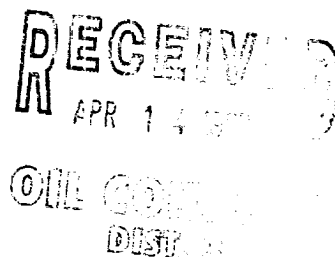


*Denny E. Foust*  
**DEPUTY OIL & GAS INSPECTOR**

**DEC 22 1997**

*Approved*

**Meter Number: 75790**  
**Location Name: FLORANCE #94**  
**Location: TN-30 RG-09**  
**SC-30 UL-L**  
**2 - Federal**  
**NMOCD Zone: OUTSIDE**  
**Hazard Ranking Score: 00**



**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.

**FIELD PIT SITE ASSESSMENT FORM**

GENERAL

Meter: 75790 Location: FLORENCE #94  
Operator #: 0203 Operator Name: AMOCO P/L District: BLOOMFIELD  
Coordinates: Letter: L Section 30 Township: 30 Range: 9  
Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Pit Type: Dehydrator \_\_\_\_\_ Location Drip: X Line Drip: \_\_\_\_\_ Other: \_\_\_\_\_  
Site Assessment Date: 2.21.95 Area: 10 Run: 83

SITE ASSESSMENT

NMOCD Zone:  
(From NMOCD  
Maps)

Inside

Outside

Land Type:

☐ (1)

☒ (2)

BLM

State

Fee

Indian

☒ (1)

☐ (2)

☐ (3)

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

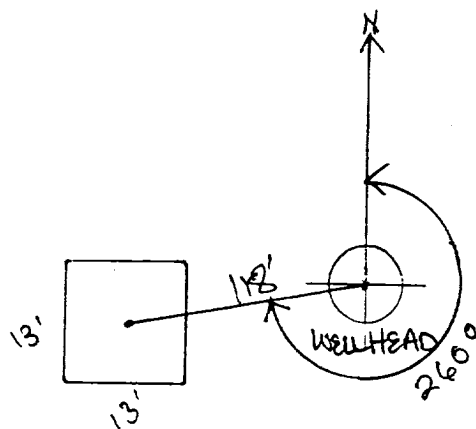
REMARKS

Remarks : REDLINE & TOPO SHOW LOCATION OUTSIDE VIZ. TWO PITS ON LOCATION. LOCATION DRIP BELONGS TO EPNG. WILL CLOSE PIT.

ORIGINAL PIT LOCATION

## ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 260° Footage from Wellhead 118'  
b) Length : 13' Width : 13' Depth : 2'



REMARKS

Remarks :

PHOTOS - 1410

Completed By:

Robert Thompson  
Signature

2.21.95  
Date

# FIELD PIT REMEDIATION/CLOSURE FORM

<b>GENERAL</b>	Meter: <u>75790</u> Location: <u>Florange #94</u> Coordinates: Letter: <u>L</u> Section <u>30</u> Township: <u>30</u> Range: <u>9</u> Or Latitude _____ Longitude _____ Date Started : <u>2-28-95</u> Run: <u>10</u> <u>83</u>
<b>FIELD OBSERVATIONS</b>	Sample Number(s): <u>MK409</u> Sample Depth: <u>12'</u> Feet Final PID Reading <u>300 PPM</u> PID Reading Depth <u>12'</u> Feet <div style="text-align: center;">Yes      No</div> Groundwater Encountered <input type="checkbox"/> <input checked="" type="checkbox"/> Approximate Depth _____ Feet
<b>CLOSURE</b>	Remediation Method : <div style="display: flex; justify-content: space-between;"> <div>           Excavation            Onsite Bioremediation            Backfill Pit Without Excavation         </div> <div style="text-align: center;"> <input type="checkbox"/>  <input type="checkbox"/>  <input checked="" type="checkbox"/> </div> <div>           Approx. Cubic Yards _____              Tierra         </div> </div> Soil Disposition: <div style="display: flex; justify-content: space-between;"> <div>           Envirotech            Other Facility         </div> <div style="text-align: center;"> <input type="checkbox"/>  <input type="checkbox"/> </div> <div>           Name: _____            Pit Closure Date: <u>2-28-95</u> </div> </div> Pit Closed By: <u>BEI</u>
<b>REMARKS</b>	Remarks : <u>Arrived dug sample hole soil was gray</u> <u>all the way through Had strong Hydrocarbon odor</u>
	Signature of Specialist: <u>Morgan Killion</u>



## FIELD SERVICES LABORATORY

### ANALYTICAL REPORT

#### PIT CLOSURE PROJECT - Soil Samples Outside the GWV Zone

#### SAMPLE IDENTIFICATION

SAMPLE NUMBER:

Field ID

Lab ID

MTR CODE | SITE NAME:

SAMPLE DATE | TIME (Hrs):

SAMPLED BY:

DATE OF TPH EXT. | ANAL.:

DATE OF BTEX EXT. | ANAL.:

TYPE | DESCRIPTION:

mk 409

0216713

75740

N/A

2-28-95

0955

N/A

3/3/95

3/3/95

N/A

N/A

VG

Light gray sand & clay

REMARKS:

#### RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
TPH (418.1)	1660	MG/KG			1.93	28
HEADSPACE PID	300	PPM				
PERCENT SOLIDS	90.7	%				

-- TPH is by EPA Method 418.1 --

Narrative:

DF = Dilution Factor Used

Approved By:

Date:

3-20-95

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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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05/03/03 15:14

Sample Identification  
446713

Initial mass of sample, g  
1.430

Volume of sample after extraction, ml  
15.000

Petroleum hydrocarbons, ppm  
153.725  
Net abundance of hydrocarbons (273 cm-1)  
100

