

*Blayne E. ...*  
DIRECTOR OIL & GAS INSPECTOR

DEC 8 1997

*Approval*

Meter Number:89519  
Location Name:HILL #3A  
Location:TN-29 RG-08  
SC-10 UL-P  
2 - Federal  
NMOCD Zone:OUTSIDE  
Hazard Ranking Score:00

RECEIVED  
APR 14 1997

OIL CON. DIV.  
DEPT. 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.

# FIELD PIT SITE ASSESSMENT FORM



GENERAL

Meter: 89519 Location: HILL #3A  
 Operator #: 8367 Operator Name: SOUTHLAND ROYALTY P/L District: BLOOMFIELD  
 Coordinates: Letter: P Section 10 Township: 29 Range: 8  
 Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Pit Type: Dehydrator \_\_\_\_\_ Location Drip: X Line Drip: \_\_\_\_\_ Other: \_\_\_\_\_  
 Site Assessment Date: 6.7.94 Area: 10 Run: 72

SITE ASSESSMENT

## NMOCD Zone:

(From NMOCD Maps)

Inside

Outside

## Land Type:

BLM ☒ (1)

State ☐ (2)

Fee ☐ (3)

Indian \_\_\_\_\_

## 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 : THREE PITS ON LOCATION. WILL CLOSE ONLY ONE. PIT IS DRY.  
LOCATION IS N.W. OF HWY. 64 TO DULCE. REDLINE SHOWS LOCATION  
INSIDE V.Z. BUT TOPO SHOWS LOCATION IS OUTSIDE V.Z.

PUSH IN

# FIELD PIT REMEDIATION/CLOSURE FORM

<b>GENERAL</b>	Meter: <u>89519</u> Location: <u>Hill #3A</u> Coordinates: Letter: <u>P</u> Section <u>10</u> Township: <u>29</u> Range: <u>8</u> Or Latitude _____ Longitude _____ Date Started : <u>7-1-94</u> Area: <u>10</u> Run: <u>72</u>
<b>FIELD OBSERVATIONS</b>	Sample Number(s): <u>MK 77</u> Sample Depth: <u>5'</u> Feet Final PID Reading <u>142</u> PID Reading Depth <u>5'</u> Feet <div style="text-align: center;">Yes      No</div> Groundwater Encountered <input type="checkbox"/> (1) <input checked="" type="checkbox"/> (2) Approximate Depth _____ Feet
<b>CLOSURE</b>	Remediation Method : <div style="display: flex; justify-content: space-between;"> <div>Excavation</div> <div><input type="checkbox"/> (1) Approx. Cubic Yards _____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Onsite Bioremediation</div> <div><input type="checkbox"/> (2)</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Backfill Pit Without Excavation</div> <div><input checked="" type="checkbox"/> (3)</div> </div> Soil Disposition: <div style="display: flex; justify-content: space-between;"> <div>Envirotech</div> <div><input type="checkbox"/> (1)</div> <div><input type="checkbox"/> (3) Tierra</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Other Facility</div> <div><input type="checkbox"/> (2) Name: _____</div> </div> Pit Closure Date: <u>7-1-94</u> Pit Closed By: <u>BEI</u>
<b>REMARKS</b>	Remarks : <u>EPNG lines marked Soil light Brown strong</u> <u>Hydrocarbon odor Hit Sand stone 5'</u>
	Signature of Specialist: <u>Morgan Killian</u>



## FIELD SERVICES LABORATORY

### ANALYTICAL REPORT

#### PIT CLOSURE PROJECT - Soil

#### 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 77

945573

89519

N/A

7-1-94

1311

N/A

7/7/94

7/7/94

N/A

N/A

YG

Coarse Brown 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)	957	MG/KG			2.06	28
HEADSPACE PID	142	PPM				
PERCENT SOLIDS	90.7	%				

— 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

7/11/94

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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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04/07/07 14:26

Sample identification  
045573

Initial mass of sample, g  
0.060

Volume of sample after extraction, ml  
00.000

Petroleum hydrocarbons, ppm  
756.580

Net absorbance of hydrocarbons (2930 cm-1)  
0.105

