

*Denny S. Frost*  
DEPUTY OIL & GAS INSPECTOR

DEC 30 1997

*Approved*

Meter Number: 90326  
Location Name: B. M. Houck #1  
Location: TN-29 RG-11  
SC-13 UL-B  
2 - Federal  
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.

## FIELD PIT SITE ASSESSMENT FORM EL PASO FIELD SERVICES

GENERAL

Meter: 90326 Location: B.M. Houck #1  
 Operator #: \_\_\_\_\_ Operator Name: Four Star P/L District: Bloomfield  
 Coordinates: Letter: B Section 13 Township: 29 Range: 11  
 Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Pit Type: Dehydrator ☒ Location Drip: ☒ Line Drip: \_\_\_\_\_ Other: \_\_\_\_\_  
 Site Assessment Date: 9.26.95 Area: 10 Run: 12

SITE ASSESSMENT

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

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

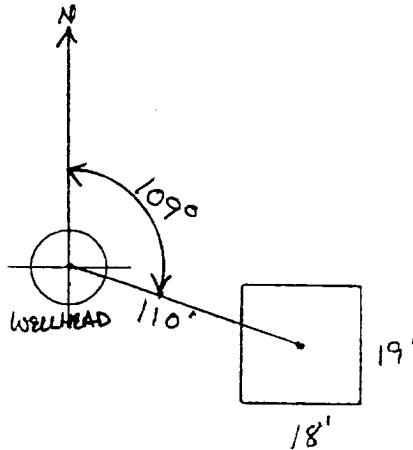
REMARKS

Remarks : REDLINE SHOWS INSIDE BUT TOPO SHOWS LOCATION OUTSIDE  
V.2 THREE PITS ON THIS LOCATION. THE <sup>RIGHT LOCATION</sup> ~~THREE~~ <sup>DRI</sup> PIT BELONGS  
TO EPNG. THE OTHER TWO PITS BELONGS TO THE OPERATOR. WILL CLOSE  
EPNG'S PIT. PUSH IN

ORIGINAL PIT LOCATION

## ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 109° Footage from Wellhead 110'  
b) Length : 19' Width : 18' Depth : 2'



REMARKS

Remarks :

PHOTOS - 1541

Completed By:

Robert Thompson  
Signature

9.26.85  
Date

# FIELD PIT REMEDIATION/CLOSURE FORM

<b>GENERAL</b>	Meter: <u>90326</u> Location: <u>B.m. HOUCK #1</u> Coordinates: Letter: <u>B</u> Section <u>13</u> Township: <u>29</u> Range: <u>11</u> Or Latitude _____ Longitude _____ Date Started : <u>10-10-95</u> Run: <u>10</u> <u>12</u>
<b>FIELD OBSERVATIONS</b>	Sample Number(s): <u>MK 484</u> Sample Depth: <u>3'</u> Feet Final PID Reading <u>156 PPM</u> PID Reading Depth <u>3'</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: right;"> <input type="checkbox"/> Approx. Cubic Yards _____  <input type="checkbox"/>  <input checked="" type="checkbox"/> </div> </div> Soil Disposition: <div style="display: flex; justify-content: space-between;"> <div>           Envirotech            Other Facility         </div> <div style="text-align: right;"> <input type="checkbox"/> <input type="checkbox"/> Tierra  <input type="checkbox"/> Name: _____         </div> </div> Pit Closure Date: <u>10-10-95</u> Pit Closed By: <u>Philip</u>
<b>REMARKS</b>	Remarks : <u>Arrived Dug Sample Hole soil was</u> <u>grey Hit Rock at 3'</u> _____ _____
<b>SIGNATURE</b>	Signature of Specialist: <u>Moya Lillian</u>



## FIELD SERVICES LABORATORY

### ANALYTICAL REPORT

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

#### SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	MR 484	94 7615
MTR CODE   SITE NAME:	90326	B.M. Houck <del>N/A</del> #1
SAMPLE DATE   TIME (Hrs):	10-10-95	0845
Project SAMPLED BY:	Phase I	<del>N/A</del>
DATE OF TPH EXT.   ANAL.:	10/11/95	
DATE OF BTEX EXT.   ANAL.:		
TYPE   DESCRIPTION:	VG	Light green sand 10cm

REMARKS:

#### RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
TPH (418.1)	5610	MG/KG			0.97	28
HEADSPACE PID	156	PPM				
PERCENT SOLIDS	23	%				

-- TPH is by EPA Method 418.1 --

Narrative:

DF = Dilution Factor Used

Approved By:

Date:

10-13-95

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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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02/10/11 14:17

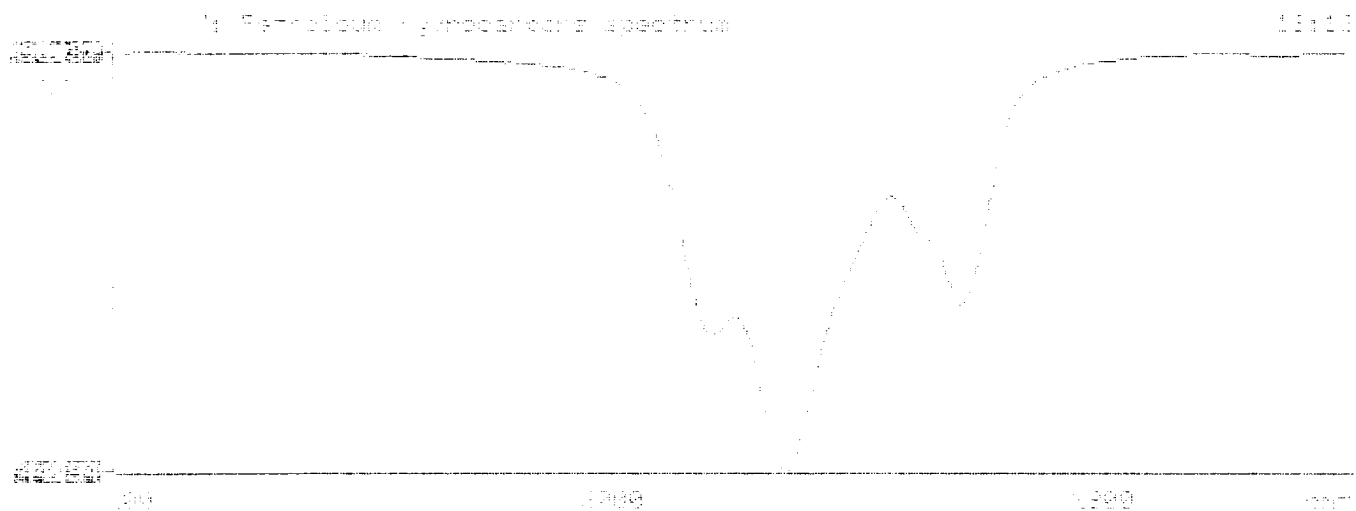
Sample Identification  
A7412

Initial mass of sample, g  
0.000

Volume of solvent added, ml  
0.000

Concentration of sample, ppm  
0.000

Concentration of solvent, ppm  
0.000



ILLEGIBLE