

Denny S. Foust
DEPUTY OIL & GAS INSPECTOR

DEC 30 1997

Approved

Meter Number:90756
Location Name:FLORANCE #61R
Location:TN-29 RG-09
SC-12 UL-A
2 - Federal
NMOCD Zone:OUTSIDE
Hazard Ranking Score:00

RECEIVED
APR 14 1997
OIL & GAS DIV.
DATE 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.

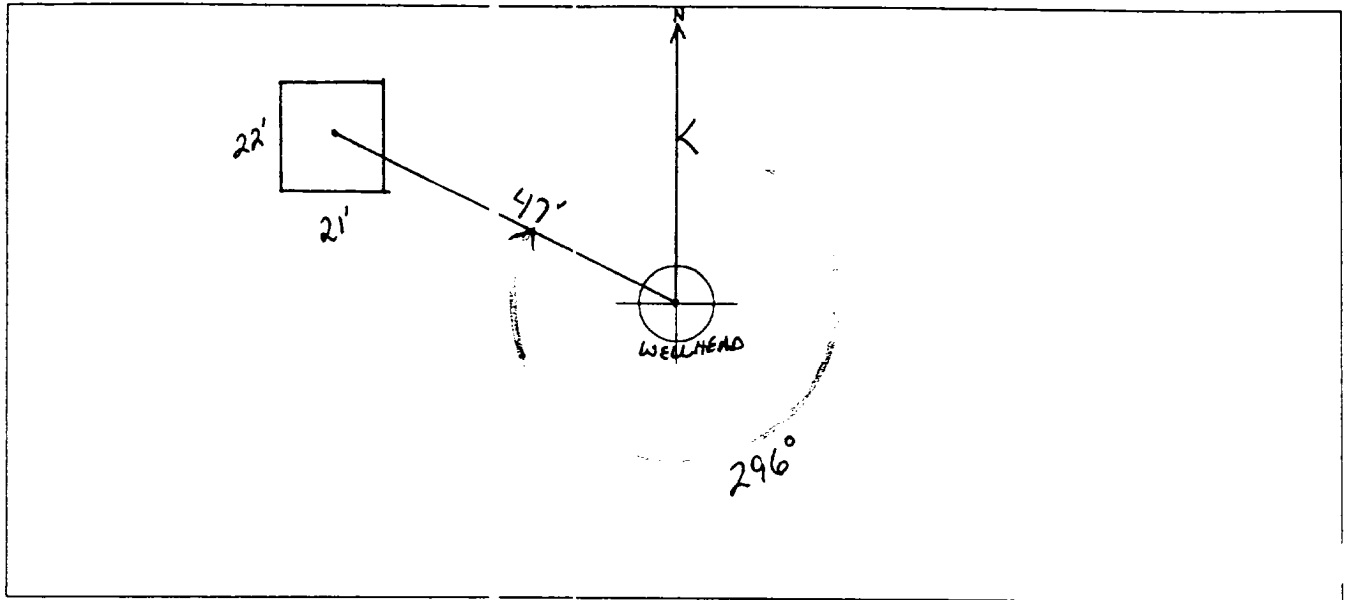
FIELD PIT SITE ASSESSMENT FORM



GENERAL	<p>Meter: <u>90756</u> Location: <u>FLORANCE #61R</u></p> <p>Operator #: <u>0203</u> Operator Name: <u>AMOCO</u> P/L District: <u>BLOOMFIELD</u></p> <p>Coordinates: Letter: <u>A</u> Section <u>12</u> Township: <u>29</u> Range: <u>9</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Pit Type: Dehydrator _____ Location Drip: <u>X</u> Line Drip: _____ Other: _____</p> <p>Site Assessment Date: <u>5-8-94</u> Area: <u>10</u> Run: <u>31</u></p>																
SITE ASSESSMENT	<p>NMOCD Zone: (From NMOCD Maps)</p> <p>Land Type:</p> <table border="0"> <tr> <td>Inside</td> <td><input type="checkbox"/> (1)</td> <td>BLM</td> <td><input checked="" type="checkbox"/> (1)</td> </tr> <tr> <td>Outside</td> <td><input checked="" type="checkbox"/> (2)</td> <td>State</td> <td><input type="checkbox"/> (2)</td> </tr> <tr> <td></td> <td></td> <td>Fee</td> <td><input type="checkbox"/> (3)</td> </tr> <tr> <td></td> <td></td> <td>Indian</td> <td>_____</td> </tr> </table> <p>Depth to Groundwater</p> <p>Less Than 50 Feet (20 points) <input type="checkbox"/> (1)</p> <p>50 Ft to 99 Ft (10 points) <input type="checkbox"/> (2)</p> <p>Greater Than 100 Ft (0 points) <input checked="" type="checkbox"/> (3)</p> <p>Wellhead Protection Area :</p> <p>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? <input type="checkbox"/> (1) YES (20 points) <input checked="" type="checkbox"/> (2) NO (0 points)</p> <p>Horizontal Distance to Surface Water Body</p> <p>Less Than 200 Ft (20 points) <input type="checkbox"/> (1)</p> <p>200 Ft to 1000 Ft (10 points) <input type="checkbox"/> (2)</p> <p>Greater Than 1000 Ft (0 points) <input checked="" type="checkbox"/> (3)</p> <p>Name of Surface Water Body _____</p> <p>(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)</p> <p>Distance to Nearest Ephemeral Stream <input type="checkbox"/> (1) < 100' (Navajo Pits Only)</p> <p><input type="checkbox"/> (2) > 100'</p> <p>TOTAL HAZARD RANKING SCORE: <u>0</u> POINTS</p>	Inside	<input type="checkbox"/> (1)	BLM	<input checked="" type="checkbox"/> (1)	Outside	<input checked="" type="checkbox"/> (2)	State	<input type="checkbox"/> (2)			Fee	<input type="checkbox"/> (3)			Indian	_____
Inside	<input type="checkbox"/> (1)	BLM	<input checked="" type="checkbox"/> (1)														
Outside	<input checked="" type="checkbox"/> (2)	State	<input type="checkbox"/> (2)														
		Fee	<input type="checkbox"/> (3)														
		Indian	_____														
REMARKS	<p>Remarks : <u>ONLY PIT ON LOCATION. PIT IS DRY. LOCATION IS UP ON MANANARES MESA. REDLINE AND TOPO CONFIRMED LOCATION TO BE OUTSIDE THE V.Z.</u></p> <p style="text-align: right;"><u>PUSH IN</u></p>																

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 296° Footage from Wellhead 47'
 b) Length : 22' Width : 21' Depth : 4'



REMARKS :

TOOK PICTURES AT 11:48 A.M.
 DUMP TRUCK-BORTAIL

Completed By:

Robert Thompson
 Signature

5.8.94
 Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	<p>Meter: <u>90756</u> Location: <u>Florence #61R</u></p> <p>Coordinates: Letter: <u>A</u> Section <u>12</u> Township: <u>29</u> Range: <u>9</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>6-27-94</u> Area: <u>10</u> Run: <u>31</u></p>
FIELD OBSERVATIONS	<p>Sample Number(s): <u>MK 42</u></p> <p>Sample Depth: <u>7'</u> Feet</p> <p>Final PID Reading <u>127</u> PID Reading Depth <u>7'</u> Feet</p> <p style="text-align: center;">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>6-27-94</u> Pit Closed By: <u>BEI</u></p>
REMARKS	<p>Remarks : <u>EPNG lines were mark soil Blackish Gray</u></p> <p><u>Strong Hydrocarbon odor Hit sand stone 7'</u></p>
<p>Signature of Specialist: <u>Morgan Killian</u></p>	



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 42

945530

90756

N/A

6-27-94

1236

N/A

6/30/94

6/30/94

N/A

N/A

VG

fine sand & clay

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)	1040	MG/KG			2.04	28
HEADSPACE PID	127	PPM				
PERCENT SOLIDS	89.0	%				

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

The Surrogate Recovery was at
Narrative:

N/A

% for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Date:

7/14/06

Perkin-Elmer Model 1600 FT-IR
Analysis Report

1. $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The *Agrobacterium* strains were grown in the YEA medium for 24 h at 28 °C. The cell concentration of the strains was adjusted to 1.0 × 10⁸ cells/ml. The cell suspension was mixed with the plant tissue and the transformation efficiency was determined. The results were expressed as the mean ± SD of three independent experiments. The different letters indicate significant differences (*p* < 0.05) by the Duncan's multiple range test.

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The *Agrobacterium* strains were cultured in YEA medium for 24 h and then adjusted to the concentration of 1×10^8 cells/ml. The cells were then mixed with the plant tissue and the transformation efficiency was determined. The results are shown in Table 1.

0 0 10 20 30 40 50 60 70 80 90 100

the 1990s, the number of people in the world who are undernourished has declined from 1.1 billion to 800 million. The number of people who are malnourished has declined from 1.5 billion to 1 billion. The number of people who are obese has increased from 100 million to 300 million. The number of people who are overweight has increased from 100 million to 300 million. The number of people who are obese and overweight has increased from 100 million to 300 million. The number of people who are obese and overweight has increased from 100 million to 300 million.

100

ILLEGIBLE