

*George E. Trust*  
DEPUTY OIL & GAS INSPECTOR

DEC 26 1997

Meter Number: 73454  
Location Name: MEXICO FEDERAL N #1  
Location: TN-29 RG-11  
SC-15 UL-F  
2 - Federal  
NMOCD Zone: OUTSIDE  
Hazard Ranking Score: 00

RECEIVED  
APR 14 1997

OIL CONSERV. DIV.  
DALLAS, TEX.

*Approved*

### 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.

GENERAL

Meter: 73454 Location: Mexico Federal N-#1  
 Operator #: 2999 Operator Name: Meridian P/L District: Kutz  
 Coordinates: Letter: E Section 15 Township: 29 Range: 11  
 Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Pit Type: Dehydrator  Location Drip: \_\_\_\_\_ Line Drip: \_\_\_\_\_ Other: \_\_\_\_\_  
 Site Assessment Date: 5/12/94 Area: 02 Run: 53

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**

MARKS

Remarks : Pit was completely silted over with vegetation growing inside



**FIELD PIT REMEDIATION/CLOSURE FORM**

<b>GENERAL</b>	Meter: <u>73454</u> Location: <u>Mexico Federal N-#1</u> Coordinates: Letter: <u>E</u> Section <u>15</u> Township: <u>29</u> Range: <u>11</u> Or Latitude _____ Longitude _____ Date Started : <u>5/12/94</u> Area: <u>0.2</u> Run: <u>53</u>
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<b>FIELD OBSERVATIONS</b>	Sample Number(s): <u>MLC 4</u> Sample Depth: <u>6</u> Feet Final PID Reading _____ PID Reading Depth _____ Feet Yes No Groundwater Encountered <input type="checkbox"/> (1) <input checked="" type="checkbox"/> (2) Approximate Depth _____ Feet
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<b>CLOSURE</b>	Remediation Method : Excavation <input type="checkbox"/> (1) Approx. Cubic Yards _____ Onsite Bioremediation <input type="checkbox"/> (2) Backfill Pit Without Excavation <input checked="" type="checkbox"/> (3) Soil Disposition: Envirotech <input type="checkbox"/> (1) <input type="checkbox"/> (3) Tierra Other Facility <input type="checkbox"/> (2) Name: _____ Pit Closure Date: <u>5/12/94</u> Pit Closed By: <u>EPNG</u>
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<b>REMARKS</b>	Remarks : <u>Pit was completely silted in with</u> <u>vegetation growing inside</u>
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<b>SIGNATURE</b>	Signature of Specialist: <u>Manuel L. Harvey</u>
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**FIELD SERVICES LABORATORY  
ANALYTICAL REPORT  
PIT CLOSURE PROJECT - Soil**

**SAMPLE IDENTIFICATION**

SAMPLE NUMBER:

Field ID <del>245191</del> ✓ MLC4	Lab ID <del>5117194</del> ✓ 945141
MTR CODE   SITE NAME: 731521	N/A
SAMPLE DATE   TIME (Hrs): 5-12-94	1430
SAMPLED BY:	N/A
DATE OF TPH EXT.   ANAL.:	5/16/94
DATE OF BTEX EXT.   ANAL.:	N/A
TYPE   DESCRIPTION:	VG Brown 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)	<del>430</del> 433	MG/KG <i>June 6/12/94</i>			2.09	28
HEADSPACE PID	1480	PPM				
PERCENT SOLIDS	86.2	%				

- 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:

*John Lardi*

Date:

6/15/94

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Test Method for  
Oil and Grease and Petroleum Hydrocarbons  
in Water and Soil  
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Perkin-Elmer Model 1600 FT-IR  
Analysis Report  
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04/05/11 12:35

Sample Identification  
045141

Initial mass of sample, g  
1.00

Volume of sample after extraction, mL  
10.00

Petroleum hydrocarbons, ppm  
11,874

Net absorbance of hydrocarbons 2700-3000  
1.004

Net Petroleum hydrocarbons spectrum

0.01

