

Denny E. Faust
DEPUTY OIL & GAS INSPECTOR

DEC 29 1997

Approved

Meter Number: 75733
Location Name: HODGES #14 (PIT 1)
Location: TN-26 RG-08
SC-21 UL-O
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

p: 1

GENERAL

Meter: 75733 Location: Hodges #14
 Operator #: 0177 Operator Name: Merit Energy P/L District: Ballard
 Coordinates: Letter: Q Section 21 Township: 26 Range: 8W
 Or Latitude _____ Longitude _____
 Pit Type: Dehydrator ☒ Location Drip: _____ Line Drip: _____ Other: _____
 Site Assessment Date: 6-27-94 Area: 11 Run: 21

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

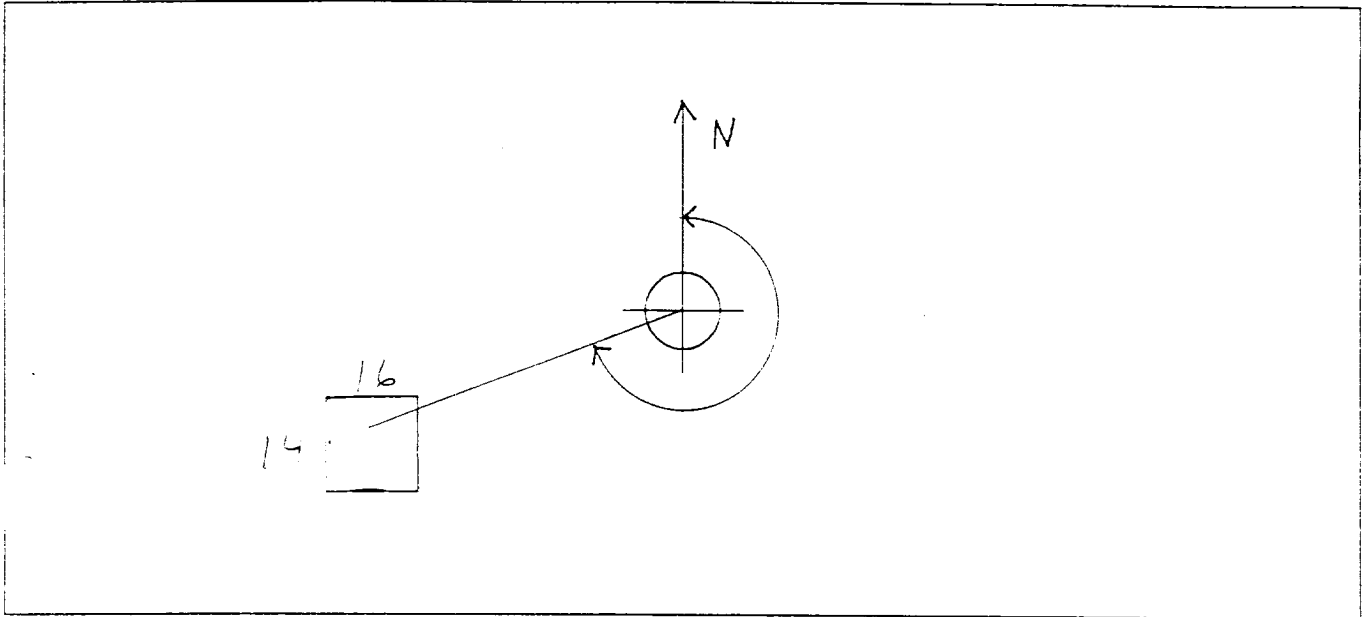
REMARKS

Remarks : Three pits on location. Dehy pit dry. Dehy still on location - not operating. Drip pit to be closed also - see other assessment for this location
Outside H.Z. on Redline & TORD Push on

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 250 Footage from Wellhead 81
b) Length : 16 Width : 14 Depth : 3

ORIGINAL PIT LOCATION



Remarks :

Photos - 1049 hrs

Two pits to be closed on this
location. See accompanying assessment.

REMARKS

Completed By:

[Signature]

Signature

6-27-94

Date

FIELD PIT REMEDIATION/CLOSURE FORM

| | |
|---------------------------|--|
| GENERAL | Meter: <u>75733</u> Location: <u>Hodges #14</u> Coordinates: Letter: <u>0</u> Section <u>21</u> Township: <u>26</u> Range: <u>8</u> Or Latitude _____ Longitude _____ Date Started : <u>9-28-94</u> Run: <u>11</u> <u>21</u> |
| FIELD OBSERVATIONS | Sample Number(s): <u>KP261</u> Sample Depth: <u>12</u> Feet Final PID Reading <u>003</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 |
| CLOSURE | 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 <input type="checkbox"/> Other Facility <input type="checkbox"/> </div> <div style="text-align: right;"> <input type="checkbox"/> Tierra Name: _____ </div> </div> Pit Closure Date: <u>9-28-94</u> Pit Closed By: <u>B.E.I</u> |
| REMARKS | Remarks : <u>Some line markers. Soil Look Brown Looking</u> <u>003 Closed Pit</u> |
| | Signature of Specialist: <u>Kelly Padgett</u> |



outside

**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|----------------------------|----------|------------------------|
| SAMPLE NUMBER: | KP 261 | 946247 |
| MTR CODE SITE NAME: | 1 75733 | N/A |
| SAMPLE DATE TIME (Hrs): | 9-28-94 | 1445 |
| SAMPLED BY: | N/A | |
| DATE OF TPH EXT. ANAL.: | 9-29-94 | 9-29-94 |
| DATE OF BTEX EXT. ANAL.: | 10-3-94 | 10-6-94 |
| TYPE DESCRIPTION: | VG | Brown fine sand & clay |

REMARKS:

RESULTS

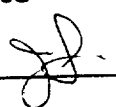
| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|----------------|-------------------|-------|------------|---|------|-------|
| | | | DF | Q | M(g) | V(ml) |
| BENZENE | 20.025 | MG/KG | 1 | | | |
| TOLUENE | 20.025 | MG/KG | 1 | | | |
| ETHYL BENZENE | 20.025 | MG/KG | 1 | | | |
| TOTAL XYLENES | 20.025 | MG/KG | 1 | | | |
| TOTAL BTEX | 20.10 | MG/KG | | | | |
| TPH (418.1) | 10/3/94 73.6 73.7 | MG/KG | | | 2.02 | 28 |
| HEADSPACE PID | 3 | PPM | | | | |
| PERCENT SOLIDS | 91.2 | % | | | | |

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

Surrogate Recovery was at 96% for this sample All QA/QC was acceptable.
Narrative:

ATT Results attached.

F = Dilution Factor Used

Approved By: 

Date: 10/23/94

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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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04/09/20 13:49

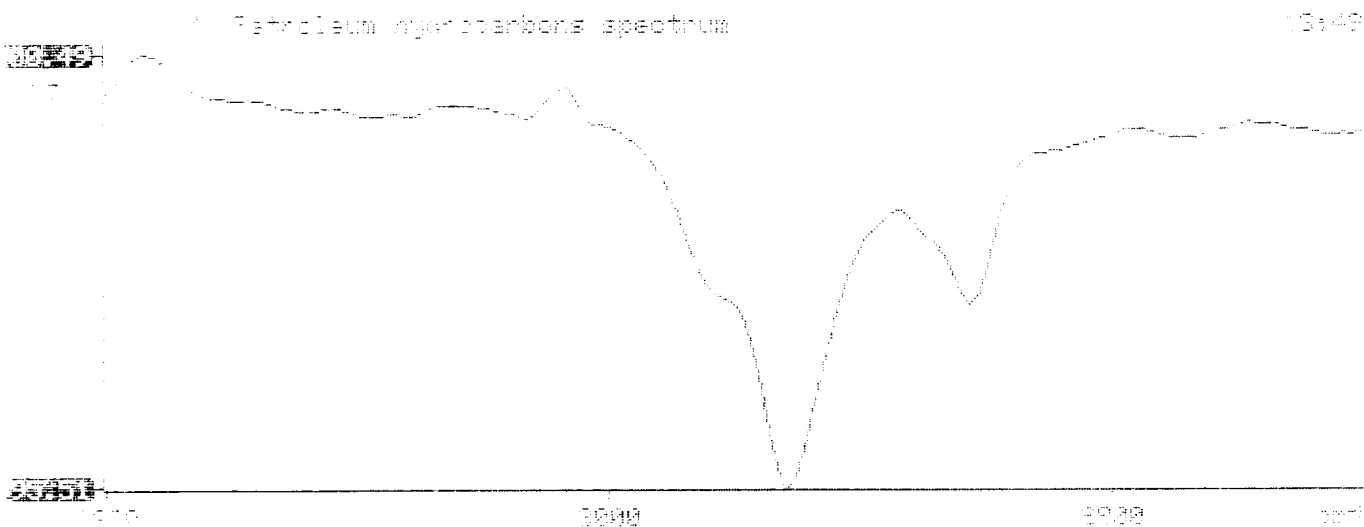
Sample identification
#46247

Initial mass of sample, g
0.000

Volume of sample after extraction, ml
09.000

Petroleum hydrocarbons, ppm
75.674

Net absorbance of hydrocarbons (2930 cm⁻¹)
0.019



GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)
 CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 409445
 PROJECT # : 24324
 PROJECT NAME : PIT CLOSURE

| SAMPLE ID. # | CLIENT I.D. | MATRIX | DATE SAMPLED | DATE EXTRACTED | DATE ANALYZED | DIL. FACTOR |
|--------------|-------------|--------|--------------|----------------|---------------|-------------|
| 07 | 946245 | NON-AQ | 09/28/94 | 10/03/94 | 10/10/94 | 50 |
| 08 | 946246 | NON-AQ | 09/28/94 | 10/03/94 | 10/06/94 | 1 |
| 09 | 946247 | NON-AQ | 09/28/94 | 10/03/94 | 10/06/94 | 1 |

| PARAMETER | UNITS | 07 | 08 | 09 |
|---------------|-------|-----|-------|--------|
| BENZENE | MG/KG | 8.6 | <0.50 | <0.025 |
| TOLUENE | MG/KG | 14 | 2.4 | <0.025 |
| ETHYLBENZENE | MG/KG | 1.0 | 0.99 | <0.025 |
| TOTAL XYLENES | MG/KG | 6.3 | 9.4 | <0.025 |

SURROGATE:

BROMOFLUOROBENZENE (%) 87 73 96



2709-D Pan American Freeway, NE Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. 409445

October 13, 1994

El Paso Natural Gas Co.
P.O. Box 4990
Farmington, NM 87499

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

On 09/30/94, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Little Water.

Letitia Krakowski, Ph.D.
Project Manager

12 Mitchell Smith

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure

