

*George E. Frost*  
DEPUTY OIL & GAS INSPECTOR

DEC 29 1997

*Approval*

Meter Number: 75733 75733-2  
Location Name: HODGES #14 (Pit #2)  
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.  
ENV. 6

**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**

3

Pit 2

GENERAL

Meter: 75733 Location: Hodges #14  
 Operator #: 0177 Operator Name: New Energy P/L District: Ballard  
 Coordinates: Letter: Q Section 21 Township: 26 Range: 8W  
 Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Pit Type: Denhydrator \_\_\_\_\_ Location Drip: ☒ Line Drip: ☒ Other: 6-27-94  
 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

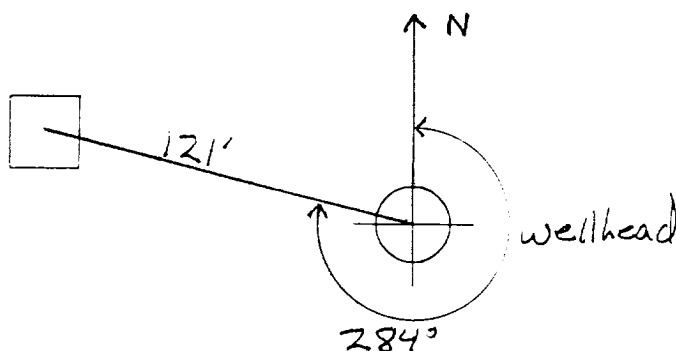
REMARKS

Remarks : Three pits on location. Drip pit is dry  
dehy pit to be closed also - see other assessment  
outside 1/2 in. distance to r.

## ORIGINAL PIT LOCATION

## ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 284 Footage from Wellhead 121  
b) Length : 16 Width : 15 Depth : 3



## REMARKS

Remarks :

Photos - 1107

Bobtail

Completed By:

[Signature]

Signature

6-27-94

Date

# FIELD PIT REMEDIATION/CLOSURE FORM

2

<b>GENERAL</b>	<p>Meter: <u>75733</u> Location: <u>Hodges #14</u> <span style="float: right;">(Pit #2)</span></p> <p>Coordinates: Letter: <u>0</u> Section <u>21</u> Township: <u>26</u> Range: <u>8</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>9-28-94</u> Run: <u>11</u> <u>21</u></p>
<b>FIELD OBSERVATIONS</b>	<p>Sample Number(s): <u>KP 262</u></p> <p>Sample Depth: <u>12'</u> Feet</p> <p>Final PID Reading <u>003</u> PID Reading Depth <u>12'</u> Feet</p> <p style="text-align: center;">Yes No</p> <p>Groundwater Encountered <input type="checkbox"/> <input checked="" type="checkbox"/> Approximate Depth _____ Feet</p>
<b>CLOSURE</b>	<p>Remediation Method :</p> <p>Excavation <input type="checkbox"/> Approx. Cubic Yards _____</p> <p>Onsite Bioremediation <input type="checkbox"/></p> <p>Backfill Pit Without Excavation <input checked="" type="checkbox"/></p> <p>Soil Disposition:</p> <p>Envirotech <input type="checkbox"/> Tierra <input type="checkbox"/></p> <p>Other Facility <input type="checkbox"/> Name: _____</p> <p>Pit Closure Date: <u>9-28-94</u> Pit Closed By: <u>B.E.I</u></p>
<b>REMARKS</b>	<p><b>Remarks :</b> <u>Some line markers. Soil clean</u></p> <p>_____</p> <p>_____</p>
	<p>Signature of Specialist: <u>Kelly Pachella</u></p>



outside

**FIELD SERVICES LABORATORY**  
**ANALYTICAL REPORT**  
**PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone**

**SAMPLE IDENTIFICATION**

	Field ID	Lab ID
SAMPLE NUMBER:	KP 262	946248
MTR CODE   SITE NAME:	2 75733	N/A
SAMPLE DATE   TIME (Hrs):	2-28-94	1510
SAMPLED BY:	N/A	
DATE OF TPH EXT.   ANAL.:	2-29-94	2-29-94
DATE OF BTEX EXT.   ANAL.:	10-3-94	10-6-94
TYPE   DESCRIPTION:	VG	light brown fine sand & clay

REMARKS:

**RESULTS**

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	40.025	MG/KG	1			
TOLUENE	40.025	MG/KG	1			
ETHYL BENZENE	40.025	MG/KG	1			
TOTAL XYLENES	40.025	MG/KG	1			
TOTAL BTEX	40.10	MG/KG				
TPH (418.1)	48.0	MG/KG			2.03	28
HEADSPACE PID	3	PPM				
PERCENT SOLIDS	92.7	%				

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

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

ATI Results attached.

DF = Dilution Factor Used

Approved By:

Date: 10/23/94

\*\*\*\*\*  
 Test Method for  
 Oil and Grease and Petroleum Hydrocarbons  
 in Water and Soil  
 \*\*\*\*\*

Perkin-Elmer Model 1600 FT-IR  
 Analysis Report  
 \*\*\*\*\*

04/09/2011 13:11

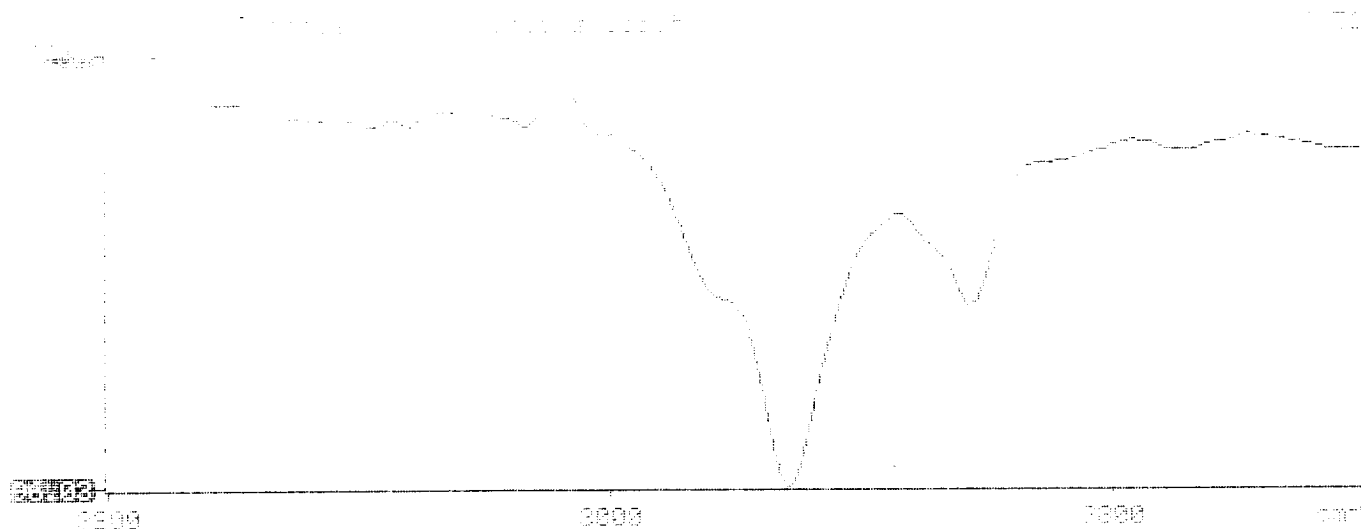
Sample Identification  
 040242

Sample Name of Analysis  
 040242

Sample Location of Analysis  
 040242

Sample Date of Analysis  
 040242

Sample Time of Analysis  
 040242





## 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
10	946248	NON-AQ	09/28/94	10/03/94	10/06/94	1
PARAMETER			UNITS	10		
BENZENE			MG/KG	<0.025		
TOLUENE			MG/KG	<0.025		
ETHYLBENZENE			MG/KG	<0.025		
TOTAL XYLENES			MG/KG	<0.025		

## SURROGATE:

BROMOFLUOROBENZENE (%)      96



Analytical **Technologies**, Inc.

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.

Letitia Krakowski, Ph.D.  
Project Manager

H. Mitchell Rubenstein, Ph.D.  
Laboratory Manager

MR:jt

Enclosure

