

**EL PASO FIELD SERVICES**  
**PRODUCTION PIT CLOSURE**

DEC 21 1998

**NORDHAUS #7**  
**Meter/Line ID - 87037**

RECEIVED  
JUL 2 1998

**SITE DETAILS**

Legals - ~~Twn: 25~~ Rng: 07  
NMOCD Hazard Ranking: 30  
Operator: DUGAN PRODUCTION CORP

Sec: 20 Unit: B  
Land Type: 2 - Federal  
Pit Closure Date: 07/19/94

OIL CON. DIV.  
RECEIVED

**RATIONALE FOR RISK-BASED CLOSURE:**

The above mentioned production pit was assessed and ranked according to the criteria in the New Mexico Conservation Division's Unlined Surface Impoundment Closure Guidelines.

The primary source discharge to the pit has been removed. There has been no discharge to the production pit for at least five years and the pit has been closed for at least three years.

The production pit has been remediated to the practical extent of the trackhoe or to the top of bedrock. Initial laboratory analysis has indicated that the soil remaining at the bottom of the excavation is above standards based on the hazard ranking score. Contaminated soil was removed and transported to an approved landfarm for disposal. The initial excavation was backfilled with clean soil and graded in a manner to divert precipitation away from the excavated area. Any rainfall that does infiltrate the ground surface must migrate through clean backfill before reaching any residual hydrocarbons remaining in the soil. Therefore, further mobility of residual hydrocarbons is unlikely.

Since the soil samples from the initial excavation were above standards, a test boring was drilled and a sample was collected to evaluate the vertical extent of impact to soils. Test boring sample results indicated soils below standards beneath the original excavation.

El Paso Field Services Company (EPFS) requests closure of the above mentioned production pit location for the following reasons:

- Discharge to the pit has not occurred in over five years and the pit has been closed for over three years.
- The bulk of the impacted soil was removed during the initial excavation.
- The excavation was backfilled with clean soil and graded to divert precipitation away from the excavation area.
- All source material has been removed from the ground surface, eliminating potential direct contact with livestock and the general public.
- Groundwater was not encountered in the initial excavation or test boring; therefore, impact to groundwater is unlikely.
- Soil samples collected beneath the initial excavation were below standards.
- No potential receptors are within 1,000 feet of the site.
- Residual hydrocarbons remaining in the soil at the bottom of the initial excavation will naturally degrade in time with minimal risk to the environment.

# FIELD PIT SITE ASSESSMENT FORM

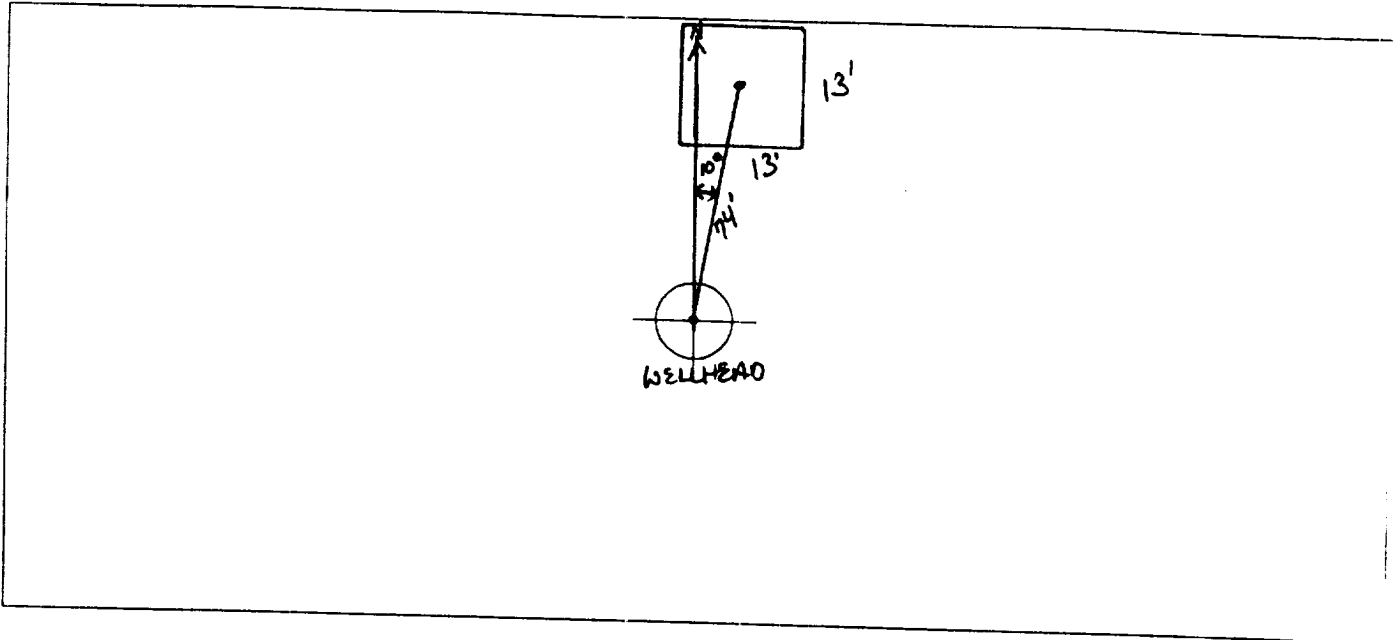
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|                        |   |
|------------------------|---|
| <b>GENERAL</b>         | <p>Meter: <u>87037</u> Location: <u>NORDHAUS #7</u></p> <p>Operator #: <u>1862</u> Operator Name: <u>DUGAN PROD. P/L</u> District: <u>BALLARD</u></p> <p>Coordinates: Letter: <u>B</u> Section <u>20</u> Township: <u>25</u> Range: <u>7</u></p> <p style="padding-left: 40px;">Or Latitude _____ Longitude _____</p> <p>Pit Type: Dehydrator _____ Location Drip: <u>X</u> Line Drip: _____ Other: _____</p> <p>Site Assessment Date: <u>6-23-94</u> Area: <u>07</u> Run: <u>41</u></p>  |
| <b>SITE ASSESSMENT</b> | <p><b>NMOCD Zone:</b> (From NMOCD Maps)</p> <p style="padding-left: 40px;">Inside <input checked="" type="checkbox"/> (1)</p> <p style="padding-left: 40px;">Outside <input type="checkbox"/> (2)</p> <p><b>Land Type:</b></p> <p style="padding-left: 40px;">BLM <input checked="" type="checkbox"/> (1)</p> <p style="padding-left: 40px;">State <input type="checkbox"/> (2)</p> <p style="padding-left: 40px;">Fee <input type="checkbox"/> (3)</p> <p style="padding-left: 40px;">Indian _____</p> <p><b>Depth to Groundwater</b></p> <p style="padding-left: 40px;">Less Than 50 Feet (20 points) <input checked="" type="checkbox"/> (1)</p> <p style="padding-left: 40px;">50 Ft to 99 Ft (10 points) <input type="checkbox"/> (2)</p> <p style="padding-left: 40px;">Greater Than 100 Ft (0 points) <input type="checkbox"/> (3)</p> <p><b>Wellhead Protection Area :</b></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><b>Horizontal Distance to Surface Water Body</b></p> <p style="padding-left: 40px;">Less Than 200 Ft (20 points) <input type="checkbox"/> (1)</p> <p style="padding-left: 40px;">200 Ft to 1000 Ft (10 points) <input checked="" type="checkbox"/> (2)</p> <p style="padding-left: 40px;">Greater Than 1000 Ft (0 points) <input type="checkbox"/> (3)</p> <p>Name of Surface Water Body <u>PALLUCHE CANYON</u></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) &lt; 100' (Navajo Pits Only)</p> <p style="padding-left: 40px;"><input type="checkbox"/> (2) &gt; 100'</p> <p><b>TOTAL HAZARD RANKING SCORE: <u>30</u> POINTS</b></p> |
| <b>REMARKS</b>         | <p>Remarks : <u>ONLY PIT ON LOCATION. PIT IS DRY. LOCATION IS IN PALLUCHE CANYON EAST OF THE WASH. REDLINE AND TOPD CONFIRMED LOCATION IS INSIDE V.Z.</u></p> <p style="text-align: right;"><u>DUGAN</u></p>  |

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 10° Footage from Wellhead 74'  
b) Length : 13' Width : 13' Depth : 2'

ORIGINAL PIT LOCATION



REMARKS

Remarks :

TOOK PICTURES AT 11:53 A.M.

END - DUMP

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Completed By:

Robert Thompson  
Signature

6.23.94  
Date

# **PHASE I EXCAVATION**

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 87032 Location: NORDHAUS #7  
 Coordinates: Letter: B Section 20 Township: 25 Range: 7  
 Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Date Started : 7-19-94 Area: 07 Run: 41

FIELD OBSERVATIONS

Sample Number(s): KP 137  
 Sample Depth: 12' Feet  
 Final PID Reading 793 PID Reading Depth 12' Feet  
 Yes No  
 Groundwater Encountered  (1)  (2) Approximate Depth \_\_\_\_\_ Feet

CLOSURE

Remediation Method :  
 Excavation  (1) Approx. Cubic Yards 40  
 Onsite Bioremediation  (2)  
 Backfill Pit Without Excavation  (3)  
 Soil Disposition:  
 Envirotech  (1)  (3) Tierra  
 Other Facility  (2) Name: \_\_\_\_\_  
 Pit Closure Date: 7-19-94 Pit Closed By: B.E.I

REMARKS

Remarks : Some line markers started remediating to 12'  
Soil turned gray with a smell. At 12' soil  
still

Signature of Specialist: Kelly Padilla



**FIELD SERVICES LABORATORY  
ANALYTICAL REPORT  
PIT CLOSURE PROJECT - Soil**

**SAMPLE IDENTIFICATION**

|                            | Field ID | Lab ID          |
|----------------------------|----------|-----------------|
| SAMPLE NUMBER:             | KP 137   | 945709          |
| MTR CODE   SITE NAME:      | 87037    | N/A             |
| SAMPLE DATE   TIME (Hrs):  | 7-19-94  | 1030            |
| SAMPLED BY:                | N/A      |                 |
| DATE OF TPH EXT.   ANAL.:  | 7/21/94  | 7/21/94         |
| DATE OF BTEX EXT.   ANAL.: | 7/22/94  | 7/23/94         |
| TYPE   DESCRIPTION:        | VC       | Brown Fine Sand |

REMARKS:

**RESULTS**

| PARAMETER      | RESULT | UNITS | QUALIFIERS |   |      |       |
|----------------|--------|-------|------------|---|------|-------|
|                |        |       | DF         | Q | M(g) | V(ml) |
| BENZENE        | 20.5   | MG/KG | 20         |   |      |       |
| TOLUENE        | 20.5   | MG/KG | 20         |   |      |       |
| ETHYL BENZENE  | 1.6    | MG/KG | 20         |   |      |       |
| TOTAL XYLENES  | 26     | MG/KG | 20         |   |      |       |
| TOTAL BTEX     | 29     | MG/KG |            |   |      |       |
| TPH (418.1)    | 440    | MG/KG |            |   | 2.18 | 28    |
| HEADSPACE PID  | 793    | PPM   |            |   |      |       |
| PERCENT SOLIDS | 91.80  | %     |            |   |      |       |

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

The Surrogate Recovery was at 160 % for this sample All QA/QC was acceptable.

Narrative:

ATI results attached. Surrogate recovery was outside  
ATI QC limits due to matrix interference.

DF = Dilution Factor Used

Approved By: J.P.

Date: 8/12/94

\*\*\*\*\*  
Test Method for  
Oil and Grease and Petroleum Hydrocarbons  
in Water and Soil  
Perkin-Elmer Model 1600 FT-IR  
Analysis Report  
\*\*\*\*\*

11/27/21 13:40

Sample Identification  
10707

Initial mass of sample, g  
0.120

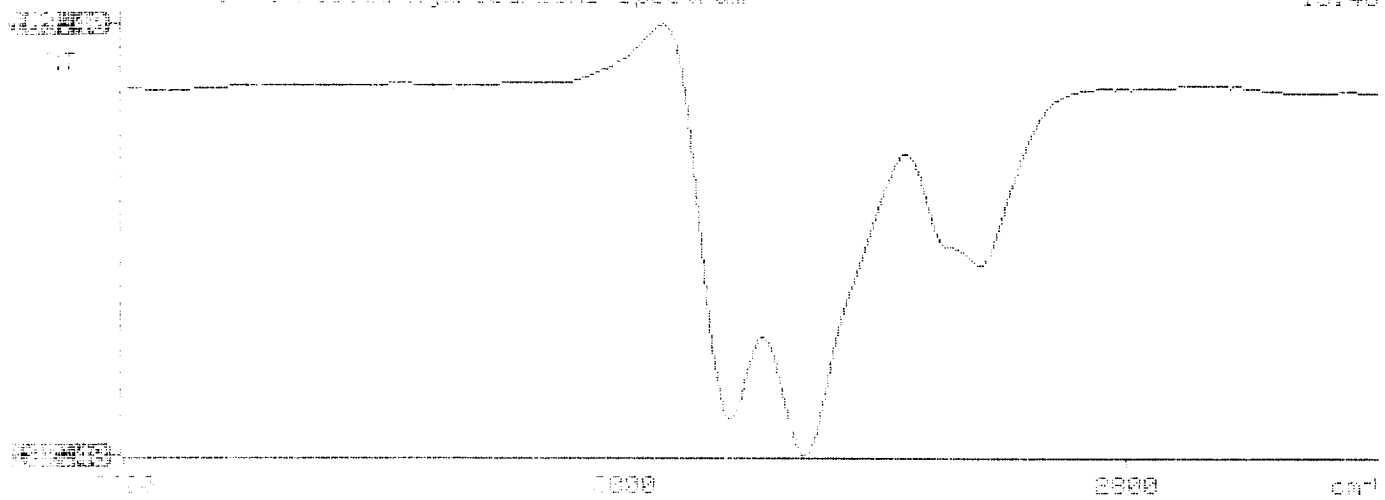
Volume of sample after extraction, ml  
10.000

Petroleum hydrocarbons, ppm  
440.101

Net absorbance of hydrocarbons (2930 cm<sup>-1</sup>)  
0.060

1. Petroleum hydrocarbons spectrum

13:46





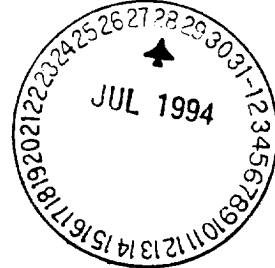
Analytical **Technologies**, Inc.

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

ATI I.D. 407395

July 27, 1994

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



Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

On 07/22/94, 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





GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)  
 CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 407395  
 PROJECT # : 24324  
 PROJECT NAME : PIT CLOSURE

| SAMPLE ID. #  | CLIENT I.D. | MATRIX | DATE SAMPLED | DATE EXTRACTED | DATE ANALYZED | DIL. FACTOR |
|---------------|-------------|--------|--------------|----------------|---------------|-------------|
| 01            | 945708      | NON-AQ | 07/19/94     | 07/22/94       | 07/23/94      | 1           |
| 02            | 945709      | NON-AQ | 07/19/94     | 07/22/94       | 07/23/94      | 20          |
| 03            | 945710      | NON-AQ | 07/19/94     | 07/22/94       | 07/23/94      | 20          |
| PARAMETER     |             |        | UNITS        | 01             | 02            | 03          |
| BENZENE       |             |        | MG/KG        | <0.025         | <0.5          | <0.5        |
| TOLUENE       |             |        | MG/KG        | <0.025         | <0.5          | <0.5        |
| ETHYLBENZENE  |             |        | MG/KG        | <0.025         | 1.6           | 1.1         |
| TOTAL XYLENES |             |        | MG/KG        | <0.025         | 26            | 12          |

SURROGATE:  
 BROMOFLUOROBENZENE (%) 93 160\* 81

\*OUTSIDE ATI QUALITY CONTROL LIMITS DUE TO MATRIX INTERFERENCE

# PHASE II

# RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-1  
 Well # \_\_\_\_\_  
 Page 1 of 1

**Burlington Environmental Inc.**

4000 Monroe Road  
 Farmington, New Mexico 87401  
 (505) 326-2262 FAX (505) 326-2388

Project Name EPNG PITS  
 Project Number 14509 Phase 6000.77  
 Project Location plordhaus #7 87037

Elevation \_\_\_\_\_  
 Borehole Location Letter B-S 20-725-R7  
 GWL Depth \_\_\_\_\_  
 Logged By J.F. LaBarbera  
 Drilled By K. Padilla  
 Date/Time Started 5/16/95 field 9/9/95 - 0908  
 Date/Time Completed - NID

Well Logged By J.F. LaBarbera  
 Personnel On-Site K. Padilla, F. Rivera, D. Charlie  
 Contractors On-Site \_\_\_\_\_  
 Client Personnel On-Site \_\_\_\_\_  
 Drilling Method 4 1/4 ID HSA  
 Air Monitoring Method PID, CGI

| Depth (Feet) | Sample Number | Sample Interval | Sample Type & Recovery (inches) | Sample Description<br>Classification System: USCS                    | USCS Symbol | Depth Lithology Change (feet) | Air Monitoring Units: ppm |     |                        | Drilling Conditions & Blow Counts |
|--------------|---------------|-----------------|---------------------------------|--|-------------|-------------------------------|---------------------------|-----|------------------------|-----------------------------------|
|              |               |                 |                                 |  |             |                               | BZ                        | BH  | S                      |                                   |
| 0            |               |                 |                                 |  |             |                               |                           |     |                        |                                   |
| 5            |               |                 |                                 | Fill   |             |                               |                           |     |                        |                                   |
| 15           | 1             | 15-16.25        | 15                              | Gray, v. loose, fm, SAND, some clay, damp, odor, some visual impact. | SC          |                               | 0                         | 20  | <del>552</del><br>587  | 0922                              |
| 20           | 2             | 20-20.5         | 7                               | Brown, loose, fm, SAND, some silt, damp, odor.                       | SM          |                               | 0.1                       | 46  | <del>2038</del><br>78  | 0926                              |
| 25           | 3             | 25-25.25        | <del>8</del><br>8 1/2           | Gray, v. stiff, CLAY, dry, sl odor, non plastic.                     | CL          |                               | 0                         | 155 | <del>2038</del><br>-   | 0934                              |
| 30           | 4             | 30-30.46        | 8                               | FR, Lt. Gray   |             |                               | 6.1                       | 45  | <del>1709</del><br>301 | 0947                              |
| 35           | 5             | 35-35.25        | 3                               | At 35.25 - Gray, hard, v. fr to fm, SANDSTONE, dry.                  |             |                               | 4                         | 155 | <del>92</del><br>70    | Hard drilling<br>1002             |
| 40           | 6             | 40-             |                                 | no Recovery<br>Refusal - TAB at 40'                                  |             |                               | 3.3                       | 58  | /                      | 1019                              |

Comments:

Sample JFL 49 from 35-35.25" sent to lab for BTEX/TPH analysis  
 ↳ around shoe end - Gray, silty, CLAY.

Geologist Signature

*John LaBarbera*



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

**SAMPLE IDENTIFICATION**

|                            | Field ID          | Lab ID           |
|----------------------------|-------------------|------------------|
| SAMPLE NUMBER:             | JFL 49            | 947180           |
| MTR CODE   SITE NAME:      | 87037             | Nordhaus #7      |
| SAMPLE DATE   TIME (Hrs):  | 08-08-95          | 10:02            |
| PROJECT:                   | Phase II Drilling |                  |
| DATE OF TPH EXT.   ANAL.:  | 8/9/95            | 8-9-95           |
| DATE OF BTEX EXT.   ANAL.: | 8-12-95           | 8-14-95          |
| TYPE   DESCRIPTION:        | VG                | grey sand + clay |

Field Remarks: (35-35.25')

**RESULTS**

| PARAMETER      | RESULT                                       | UNITS | QUALIFIERS |   |      |       |
|----------------|--|-------|------------|---|------|-------|
|                |  |       | DF         | Q | M(g) | V(ml) |
| BENZENE        | 20.025                                       | MG/KG |            |   |      |       |
| TOLUENE        | 20.025                                       | MG/KG |            |   |      |       |
| ETHYL BENZENE  | 20.025                                       | MG/KG |            |   |      |       |
| TOTAL XYLENES  | 20.025                                       | MG/KG |            |   |      |       |
| TOTAL BTEX     | 20.10  | MG/KG |            |   |      |       |
| TPH (418.1)    | <sup>RLB 8/28/95</sup><br><del>79</del> 78.6 | MG/KG |            |   | 2.05 | 28    |
| HEADSPACE PID  | 92   | PPM   |            |   |      |       |
| PERCENT SOLIDS | 94.6   | %     |            |   |      |       |

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

The Surrogate Recovery was at 100 for this sample All QA/QC was acceptable.

Narrative: ATI Results attached

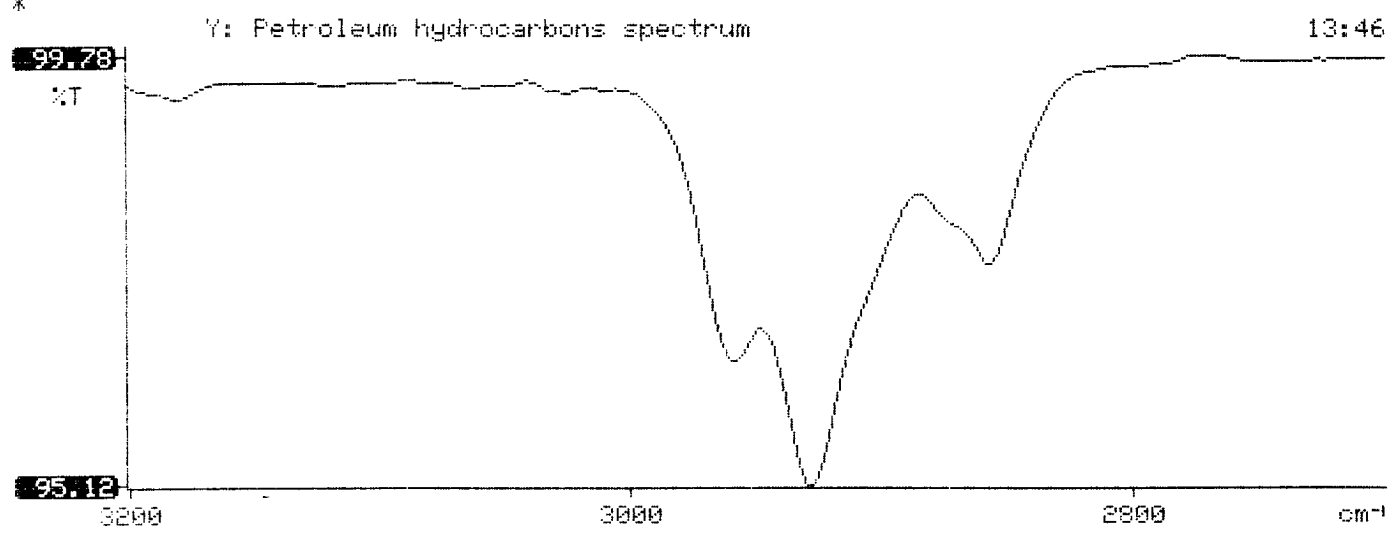
DF = Dilution Factor Used

Approved By: J.P.

Date: 8/28/95

\*\*\*\*\*  
\* Test Method for \*  
\* Oil and Grease and Petroleum Hydrocarbons \*  
\* in Water and Soil \*  
\* Perkin-Elmer Model 1600 FT-IR \*  
\* Analysis Report \*  
\*\*\*\*\*

\* 95/08/09 13:46 \*  
\* Sample identification \*  
\* 947180 \*  
\* Initial mass of sample, g \*  
\* 2.050 \*  
\* Volume of sample after extraction, ml \*  
\* 28.000 \*  
\* Petroleum hydrocarbons, ppm \*  
\* 78.571 \*  
\* Net absorbance of hydrocarbons (2930 cm-1) \*  
\* 0.020 \*  
\* \*  
\* \*





Analytical **Technologies**, Inc.

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

ATI I.D. 508367

August 17, 1995

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

Project Name/Number: PIT CLOSURE/PHASE I, II & III PITS 24324

Attention: John Lambdin

On 08/11/95, 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.

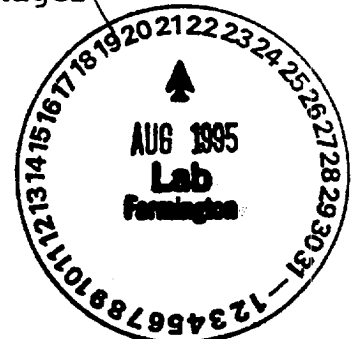
If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill  
Project Manager

MR:jt

Enclosure

H. Mitchell Rubenstein, Ph.D.  
Laboratory Manager





GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)  
CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 508367  
PROJECT # : 24324  
PROJECT NAME : PIT CLOSURE/PHASE I, II & III

| SAMPLE ID. #  | CLIENT I.D. | MATRIX | DATE SAMPLED | DATE EXTRACTED | DATE ANALYZED | DIL. FACTOR |
|---------------|-------------|--------|--------------|----------------|---------------|-------------|
| 16            | 947180      | NON-AQ | 08/08/95     | 08/12/95       | 08/14/95      | 1           |
| 17            | 947181      | NON-AQ | 08/08/95     | 08/12/95       | 08/14/95      | 1           |
| PARAMETER     |             |        | UNITS        | 16             | 17            |             |
| BENZENE       |             |        | MG/KG        | <0.025         | <0.025        |             |
| TOLUENE       |             |        | MG/KG        | <0.025         | <0.025        |             |
| ETHYLBENZENE  |             |        | MG/KG        | <0.025         | <0.025        |             |
| TOTAL XYLENES |             |        | MG/KG        | <0.025         | <0.025        |             |

SURROGATE:

BROMOFLUOROBENZENE (%) 100 102