

*Dennis*  
**EL PASO FIELD SERVICES**  
**DEPUTY OPERATOR**  
**PRODUCTION PIT CLOSURE**

*Approved*  
JUL 2 1993

**HOWELL K #2R**  
**Meter/Line ID - 75703**

**RECEIVED**  
JUL 2 1993

**OIL CON. DIV.**  
DIST. 3

**SITE DETAILS**

**Legals - Twn: 30**  
**NMOCD Hazard Ranking: 40**  
**Operator: MERIDIAN OIL INC**

**Rng: 08**

**Sec: 22**

**Unit: M**

**Land Type: 2 - Federal**

**Pit Closure Date: 02/21/95**

**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:

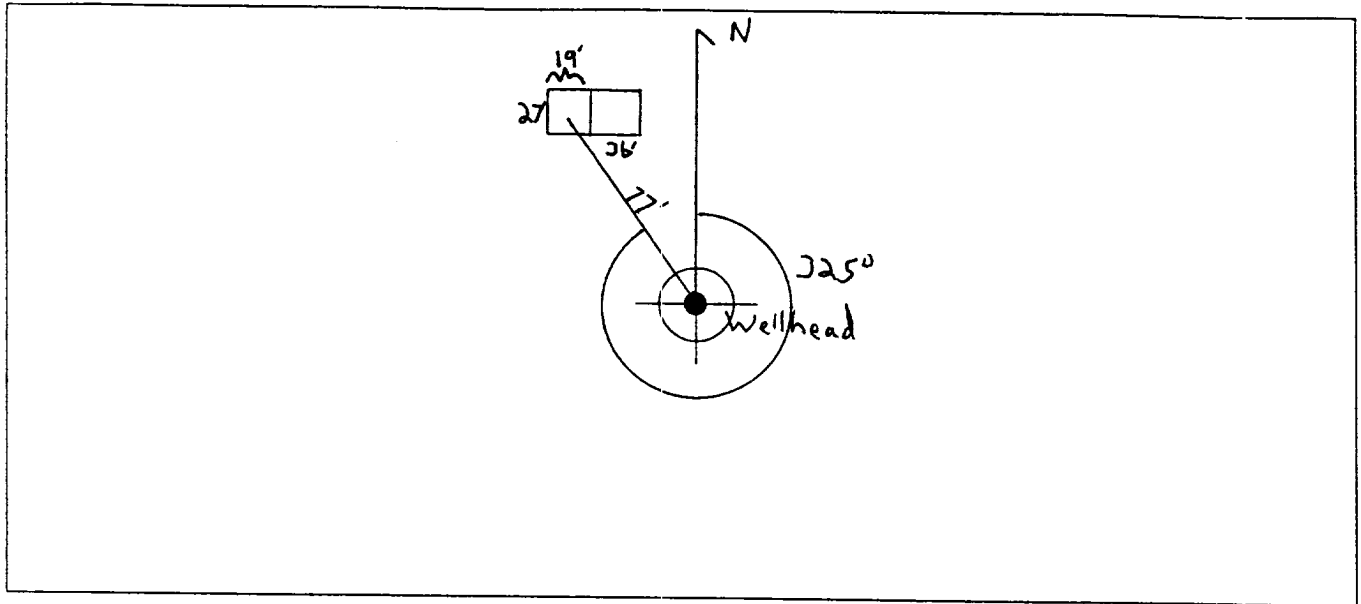
- Discharge to the pit has not occurred in over five years and the pit has been closed for over three years.
- The bulk of the impacted soil was removed during the initial excavation.
- The excavation was backfilled with clean soil and graded to divert precipitation away from the excavation area.
- All 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

GENERAL	<p>Meter: <u>75703</u> Location: <u>Howell K No. 2R</u></p> <p>Operator #: _____ Operator Name: <u>Meridian</u> P/L District: <u>Bloomfield</u></p> <p>Coordinates: Letter: <u>M</u> Section <u>22</u> Township: <u>30</u> Range: <u>8</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Pit Type: Dehydrator <input checked="" type="checkbox"/> Location Drip: _____ Line Drip: _____ Other: _____</p> <p>Site Assessment Date: <u>1/19/95</u> Area: <u>10</u> Run: <u>63</u></p>
SITE ASSESSMENT	<p><b>NMOCD Zone:</b> (From NMOCD Maps)</p> <p>Inside <input checked="" type="checkbox"/> (1) Outside <input type="checkbox"/> (2)</p> <p><b>Land Type:</b> BLM <input checked="" type="checkbox"/> (1) State <input type="checkbox"/> (2) Fee <input type="checkbox"/> (3) Indian _____</p> <p><b>Depth to Groundwater</b></p> <p>Less Than 50 Feet (20 points) <input checked="" type="checkbox"/> (1) 50 Ft to 99 Ft (10 points) <input type="checkbox"/> (2) Greater Than 100 Ft (0 points) <input type="checkbox"/> (3)</p> <p><b>Wellhead Protection Area :</b> 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>Less Than 200 Ft (20 points) <input checked="" type="checkbox"/> (1) 200 Ft to 1000 Ft (10 points) <input type="checkbox"/> (2) Greater Than 1000 Ft (0 points) <input type="checkbox"/> (3)</p> <p>Name of Surface Water Body <u>Gobernador Canyon</u> (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) <input type="checkbox"/> (2) &gt; 100'</p> <p><b>TOTAL HAZARD RANKING SCORE:</b> <u>40</u> POINTS</p>
REMARKS	<p>Remarks : <u>Redline Book: Inside</u> <u>Vulnerable Zone Type: Inside</u></p> <p><u>2 pits. Close. Dehydrator pit.</u></p> <p style="text-align: right;"><u>DIG + Haul</u></p>

# ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 325° Footage from Wellhead 77'  
 b) Length : 36' Width : 27' Depth : 4'



## REMARKS :

Pictures @ 0838 hr 5-8 roll 2

Fenced + Bermed area is 36' x 27'. Actual pit area is 27' x 19' x 4'  
M.H. is T.D.

Completed By:

Cory Chase  
 Signature

1/19/95  
 Date

# **PHASE I EXCAVATION**

# FIELD PIT REMEDIATION/CLOSURE FORM

<b>GENERAL</b>	Meter: <u>75703</u> Location: <u>Howell K No. 2 R</u> Coordinates: Letter: <u>M</u> Section <u>22</u> Township: <u>30</u> Range: <u>8</u> Or Latitude _____ Longitude _____ Date Started : <u>2-21-95</u> Run: <u>10</u> <u>63</u>
<b>FIELD OBSERVATIONS</b>	Sample Number(s): <u>KP 426</u> Sample Depth: <u>12'</u> Feet Final PID Reading <u>.059</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
<b>CLOSURE</b>	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 checked="" type="checkbox"/> Approx. Cubic Yards <u>90</u>  <input type="checkbox"/>  <input type="checkbox"/> </div> </div> Soil Disposition: <div style="display: flex; justify-content: space-between;"> <div>           Envirotech <input checked="" type="checkbox"/>            Other Facility <input type="checkbox"/> </div> <div> <input type="checkbox"/> Tierra            Name: _____         </div> </div> Pit Closure Date: <u>2-21-95</u> Pit Closed By: <u>B.E.F</u>
<b>REMARKS</b>	Remarks : <u>Some Line markers started Remediating to 12'</u> <u>soil gray looking with A H.C order. At 12' Soil light BROWN</u> <u>with No H.C. order. closed pit.</u>
	Signature of Specialist: <u>Kelly Padilla</u>



FIELD SERVICES LABORATORY  
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KP 426	946685
MTR CODE   SITE NAME:	75703	N/A
SAMPLE DATE   TIME (Hrs):	2-21-95	1435
SAMPLED BY:	N/A	
DATE OF TPH EXT.   ANAL.:	2-28-95	2-28-95
DATE OF BTEX EXT.   ANAL.:	2/26/95	3/2/95
TYPE   DESCRIPTION:	VC	Brown sand + clay

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<1.00	MG/KG	0.20040		4.99	2.0
TOLUENE	<1.00	MG/KG	I		I	I
ETHYL BENZENE	<1.00	MG/KG	I		I	I
TOTAL XYLENES	<3.00	MG/KG	I		I	I
TOTAL BTEX	<6.00	MG/KG				
TPH (418.1)	206	MG/KG			1.94 2.24 3.75	28 28
HEADSPACE PID	59	PPM				
PERCENT SOLIDS	92.0	%				

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

The Surrogate Recovery was at 79.5 % for this sample All QA/QC was acceptable.  
Narrative:

DF = Dilution Factor Used

Approved By:

*John L. L...*

Date:

3-20-95

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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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05/02/95 18:01

Sample Identification

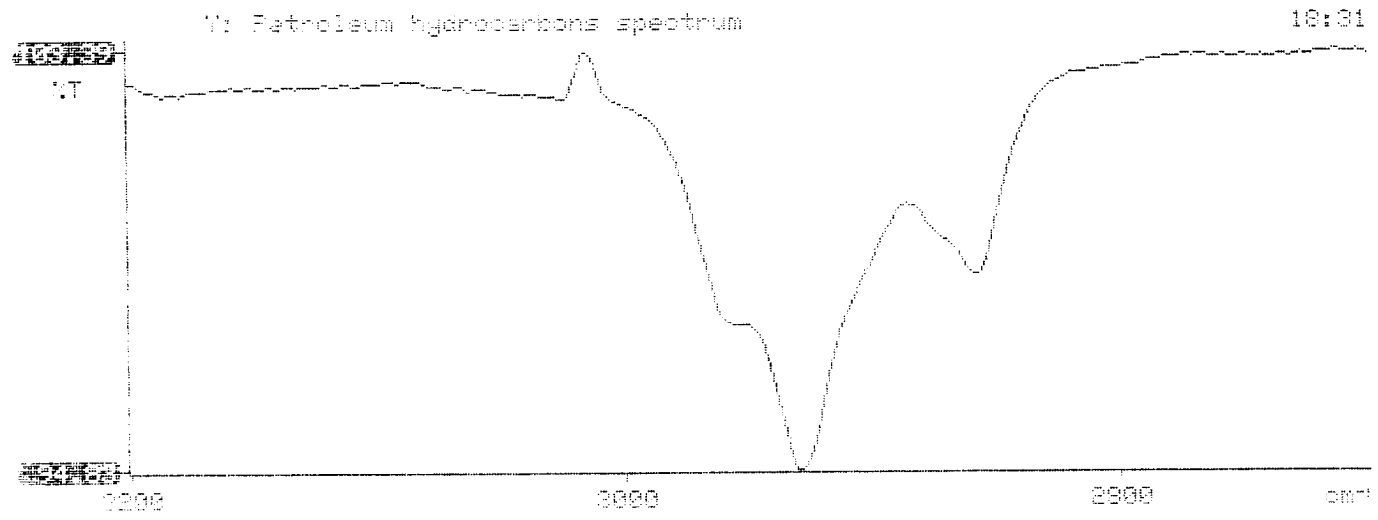
030589 ~~000~~ TJB

Initial mass of sample, g  
0.040

Volume of sample after extraction, ml  
28.000

Petroleum hydrocarbons, ppm  
205.689

Net absorbance of hydrocarbons (2930 cm<sup>-1</sup>)  
0.036



## BTEX SOIL SAMPLE WORKSHEET

File : 946685A  
Soil Mass (g) : 4.99  
Extraction vol. (mL) : 20  
Shot Volume (uL) : 100

Date Printed : 3/7/95  
Multiplier (L/g) : 0.00100  
DF (Analytical) : 200  
DF (Report) : 0.20040

			Det. Limit
Benzene (ug/L) :	0.00	Benzene (mg/Kg):	0.000 1.002
Toluene (ug/L) :	0.00	Toluene (mg/Kg):	0.000 1.002
Ethylbenzene (ug/L) :	0.00	Ethylbenzene (mg/Kg):	0.000 1.002
p & m-xylene (ug/L) :	1.05	p & m-xylene (mg/Kg):	0.210 2.004
o-xylene (ug/L) :	0.00	o-xylene (mg/Kg):	0.000 1.002
		Total xylenes (mg/Kg):	0.210 3.006
		Total BTEX (mg/Kg):	0.210



**EL PASO NATURAL GAS****EPA METHOD 8020 - BTEX SOILS**

File : C:\LABQUEST\CHROM001\946685A  
 Method : C:\LABQUEST\METHODS\8001.MET  
 Sample ID : 946685,4.99/100uL  
 Acquired : Mar 02, 1995 15:14:17  
 Printed : Mar 02, 1995 15:40:33  
 User : Tony

## Channel A Results

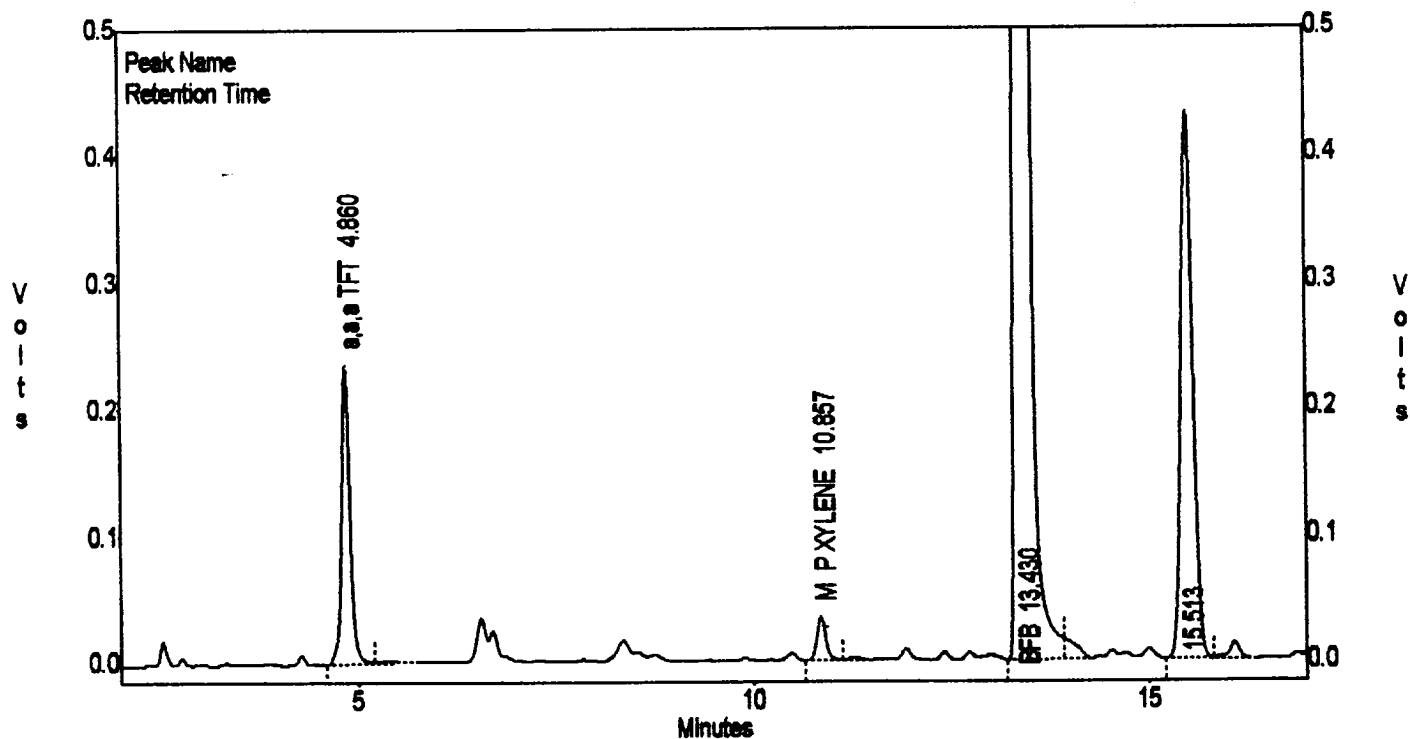
COMPONENT	RET TIME	AREA	AVG RF	CONC (ug/L)
BENZENE	3.403	0	0.00000	0.0000
a,a,a TFT	4.860	1749816	20732.91797	83.6298
TOLUENE	6.707	0	0.00000	0.0000
ETHYLBENZENE	10.523	0	0.00000	0.0000
M & P XYLENE	10.857	274712	315892.00000	1.0484
O XYLENE	11.943	0	0.00000	0.0000
BFB	13.430	65880860	825330.37500	79.4647

Totals :

67905392

164.1429

C:\LABQUEST\CHROM001\946685A - Channel A



# EL PASO NATURAL GAS

## EPA METHOD 8020 - BTEX SOILS

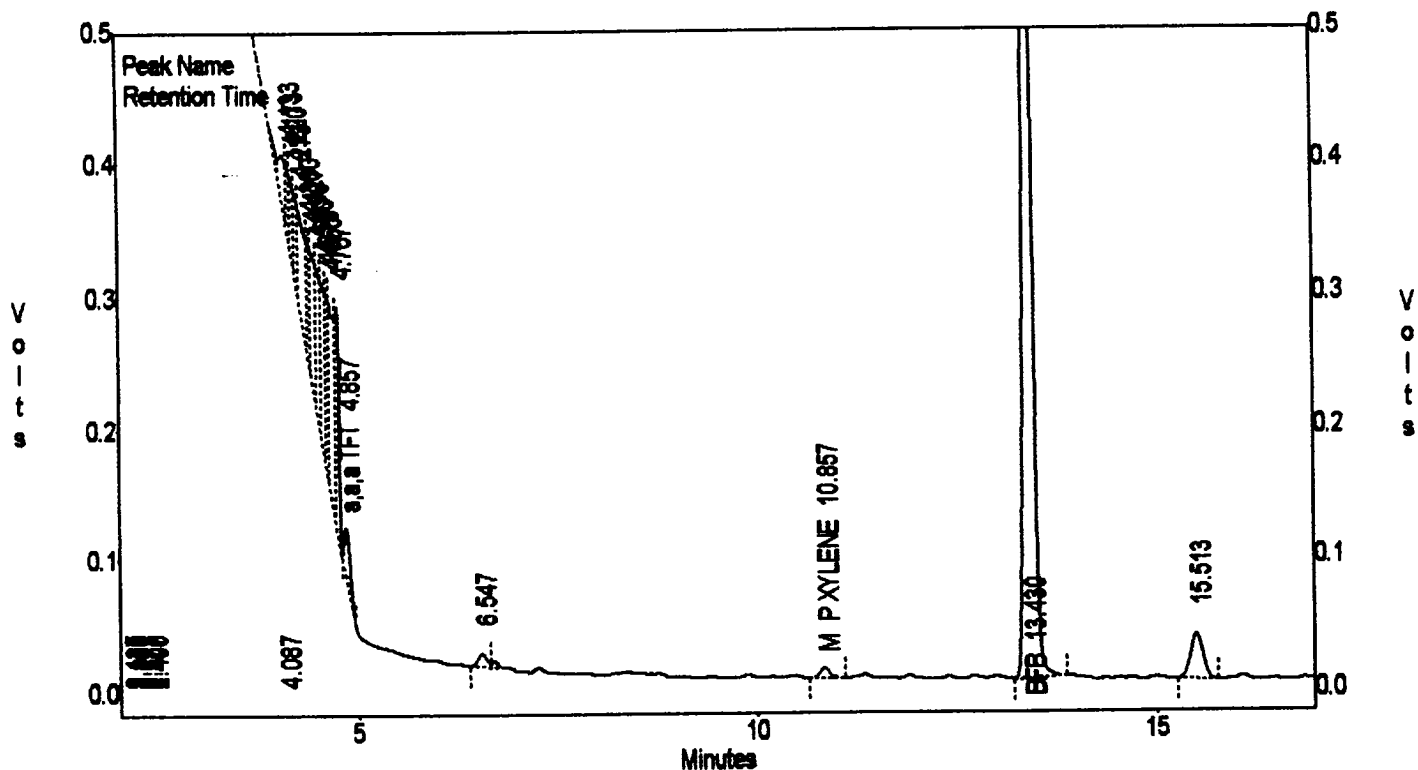
File : C:\LABQUEST\CHROM001\946685A  
 Method : C:\LABQUEST\METHODS\9001.MET  
 Sample ID : 946685,4.99/100uL  
 Acquired : Mar 02, 1995 15:14:17  
 Printed : Mar 02, 1995 15:40:37  
 User : Tony

### Channel B Results

COMPONENT	RET TIME	AREA	AVG RF	CONC (ug/L)
BENZENE	3.357	0	0.00000	0.0000
a,a,a TFT	4.857	192174	6878.05664	26.3052
TOLUENE	6.703	0	0.00000	0.0000
ETHYLBENZENE	10.523	0	0.00000	0.0000
M & P XYLENE	10.857	65337	47699.00781	1.3049
O XYLENE	11.943	0	0.00000	0.0000
BFB	13.430	6294733	79386.75781	78.7401

Totals :  
 6552244  
 106.3503

C:\LABQUEST\CHROM001\946685A - Channel B



# PHASE II

# RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.

4000 Monroe Road

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

Borehole # BH-1  
Well # 1  
Page 1 of 2

Project Name EPNG Pits  
Project Number 14509 Phase 601 6000  
Project Location Howell K No. 2R 75703

Elevation                       
Borehole Location T30, R8, S. 22, M1  
GWL Depth                       
Logged By S. Kelly  
Drilled By K. Padilla  
Date/Time Started 7/11/95, 1215  
Date/Time Completed 7/11/95,

Well Logged By S. Kelly  
Personnel On-Site K. Padilla, F. Rivera, D. Charley  
Contractors On-Site                       
Client Personnel On-Site                       
Drilling Method 4 1/4" ID HSA  
Air Monitoring Method CGI, PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ BH S			Drilling Conditions & Blow Counts
0				Backfill to 12'						
15	1	15-17	1.1' / 1.5'	SAND, black, fine to med. sand, poorly graded, loose, damp.					326 / 32	1235
20	2	20-22	0.7' / 2.0'	SAA, but with grey and black mottled color.					96 / 24	1240
25	3	25-27	1.3' / 1.5'	SAA, but dense					20 / 20	1250 may be weathered rock drilling is slow.
30	4	30-31.5	1.1' / 1.5'	SAA, w/ 5-15% coarse sand.					131 / 500	1305
35	5	35-32.5	1.2' / 1.5'	<del>SAA with some "vi"</del> SILT, brown with some "veins" of black sand. dense, dry		37	6	61	2 / 5	1320 continued drilling to 40' to insure that we are in a clean interval
40										

Comments:

Geologist Signature

Paul Kelly

# RECORD OF SUBSURFACE EX RATION

Philip Environmental Services Corp.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole #

BH-1

Well #

Page 2 of 2

Project Name

EPNG Pits

Project Number

14509

Phase

601

Project Location

Howell K No. 2R, 75703

Elevation

Borehole Location

GWL Depth

Logged By S.Kelly

Drilled By

Date/Time Started

Date/Time Completed

Well Logged By

S.Kelly

Personnel On-Site

Contractors On-Site

Client Personnel On-Site

Drilling Method

Air Monitoring Method

CGI, PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
40	6	40-42	10' / 2.0	BoH- 42.01					3/8	1335
45										
50										
55										
60										
65										
70										
75										
80										
85										
90										
95										
100										
105										
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135										
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160										
165										
170										
175										
180										
185										
190										
195										
200										

Comments:

40'-42' sample (SEK 34) sent to lab (BTEX & TPH). BH grouted to surface.

Geologist Signature

Amah Kelly



Phase II

FIELD SERVICES LABORATORY  
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	SEK 34	946973
MTR CODE   SITE NAME:	75703	N/A
SAMPLE DATE   TIME (Hrs):	7/11/95	13:35
SAMPLED BY:	N/A	
DATE OF TPH EXT.   ANAL.:	7-12-95	7-12-95
DATE OF BTEX EXT.   ANAL.:	07-17-95	07-18-95
TYPE   DESCRIPTION:	VG	light brown sand + clay

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	20.025	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)	103	MG/KG			1.96	28
HEADSPACE PID	8	PPM				
PERCENT SOLIDS	93.4%	%				

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

The Surrogate Recovery was at 106 % for this sample All QA/QC was acceptable.

Narrative:

AT 1 Results for BTEX and Modified 8015 attached

DF = Dilution Factor Used

Approved By:

Date:

8/3/95

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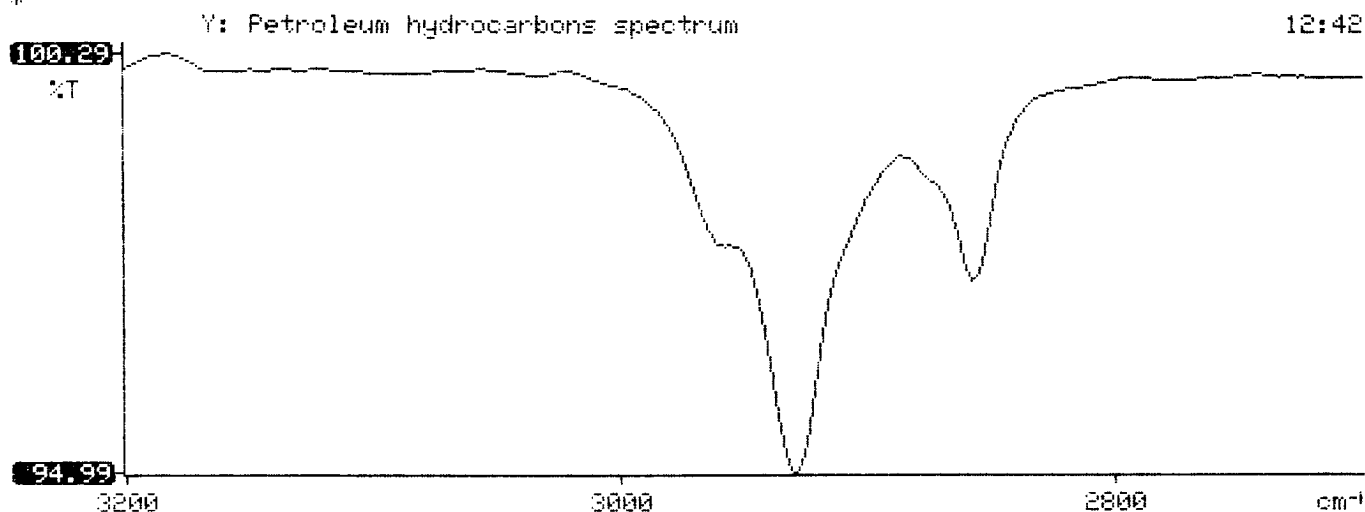
*****
*                               *
*      Test Method for         *
*      -Oil and Grease and Petroleum Hydrocarbons*
*      in Water and Soil      *
*                               *
*      Perkin-Elmer Model 1600 FT-IR *
*      Analysis Report         *
*                               *
*****

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*
* 95/07/12 12:42
*
* Sample identification
* 946973
*
* Initial mass of sample, g
* 1.960
*
* Volume of sample after extraction, ml
* 28.000
*
* Petroleum hydrocarbons, ppm
* 102.529
* Net absorbance of hydrocarbons (2930 cm-1)
* 0.022
*
*
*

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Analytical **Technologies**, Inc.

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

ATI I.D. 507340

July 20, 1995

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

Project Name/Number: PIT CLOSURE/PHASE I PHASE II 24324

Attention: John Lambdin

On 07/14/95, 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

H. Mitchell Rubenstein, Ph.D.  
Laboratory Manager

MR:jt

Enclosure





Analytical Technologies, Inc.

## GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)  
CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 507340  
PROJECT # : 24324  
PROJECT NAME : PIT CLOSURE/PHASE I PHASE II

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
10	946973	NON-AQ	07/11/95	07/17/95	07/18/95	1
12	946981	NON-AQ	07/12/95	07/17/95	07/18/95	1
13	946982	NON-AQ	07/12/95	07/17/95	07/18/95	1

PARAMETER	UNITS	10	12	13
BENZENE	MG/KG	<0.025	<0.025	<0.025
TOLUENE	MG/KG	<0.025	<0.025	<0.025
ETHYLBENZENE	MG/KG	<0.025	<0.025	<0.025
TOTAL XYLENES	MG/KG	<0.025	<0.025	<0.025

### SURROGATE:

BROMOFLUOROBENZENE (%)	106	103	98
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Analytical Technologies, Inc.

## GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015 MODIFIED  
CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 507340  
PROJECT # : 24324  
PROJECT NAME : PIT CLOSURE/PHASE I PHASE II

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
02	946963	NON-AQ	07/10/95	07/14/95	07/14/95	1
05	946966	NON-AQ	07/10/95	07/14/95	07/14/95	1
10	946973	NON-AQ	07/11/95	07/14/95	07/14/95	1
PARAMETER			UNITS	02	05	10
FUEL HYDROCARBONS			MG/KG	15	7	<5
HYDROCARBON RANGE				C10-C18	C6-C10	-
HYDROCARBONS QUANTITATED USING				DIESEL	GASOLINE	-
SURROGATE:						
O-TERPHENYL (%)				116	100	121