Kenny G. Trust
DEPUTY OIL & GAS INSPECTOR

DEC 21 1998

EL PASO FIELD SERVICES
PRODUCTION PIT CLOSURE

RECEIVED
JUL 2 1998
OIL CON. DIV.

MARSHALL A #3
Meter/Line ID - 92603

SITE DETAILS

Legals - Twn: 27 **Rng:** 09 **Sec:** 15 **Unit:** G
NMOCD Hazard Ranking: 20 **Land Type:** 3 - Navajo
Operator: TEXACO E&P INC **Pit Closure Date: 08/18/94**

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

Meter: 92603 Location: Marshall A well No. 3
Operator #: 0263 Operator Name: Texaco P/L District: Ballard
Coordinates: Letter: G Section 15 Township: 27 Range: 9
Or Latitude _____ Longitude _____
Pit Type: Dehydrator X Location Drip: ___ Line Drip: ___ Other: _____
Site Assessment Date: 6-15-94 Area: 11 Run: 71

SITE ASSESSMENT

NMOCD Zone: (From NMOCD Maps)
Inside ☒ (1)
Outside ☐ (2)

Land Type:
BLM ☐ (1)
State ☐ (2)
Fee ☐ (3)
Indian Eastern Navajo Agency

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 Jaquez Canyon
(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: 20 **POINTS**

REMARKS

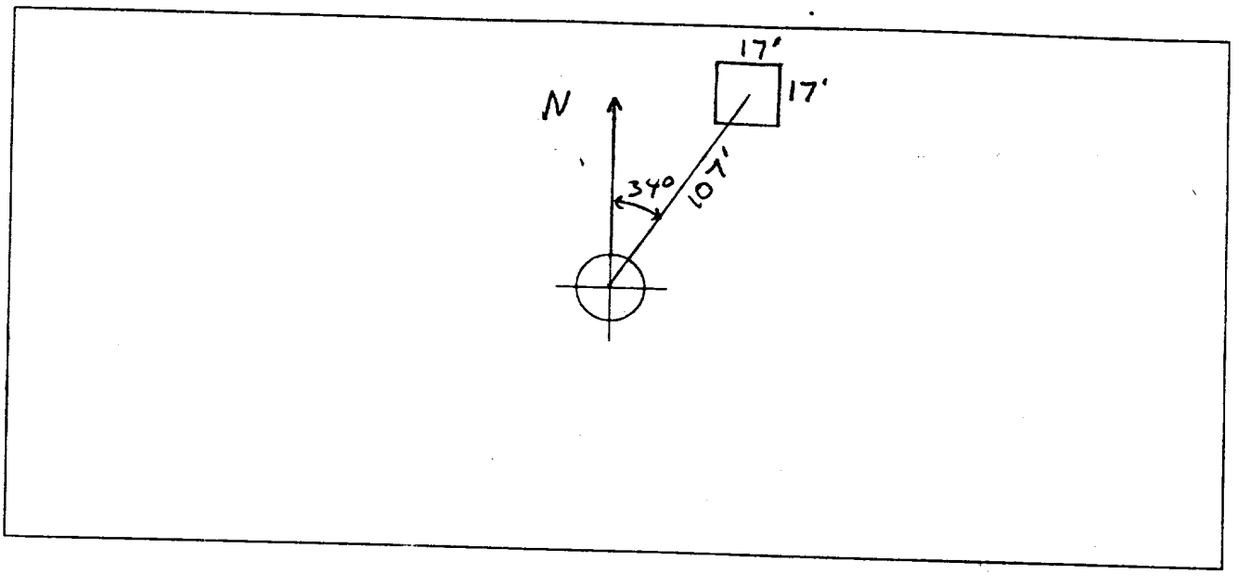
Remarks : one pit - dry
Inside V.Z. on Redline & Topo

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 34 Footage from Wellhead 107

b) Length : 17 Width : 17 Depth : 4



REMARKS

Remarks : Photos - 0814

Completed By:

Signature

6-15-94

Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 92603 Location: Marshall A #3

Coordinates: Letter: G Section 15 Township: 27 Range: 9

Or Latitude _____ Longitude _____

Date Started : 8/18/94 Run: 11 7L

FIELD OBSERVATIONS

Sample Number(s): KD 224 _____ _____ _____

Sample Depth: 12' Feet

Final PID Reading 9 ppm PID Reading Depth 12' Feet

	Yes	No
Groundwater Encountered	☐	☒

Approximate Depth _____ Feet

CLOSURE

Remediation Method :

- Excavation ☐ Approx. Cubic Yards 0
- Onsite Bioremediation ☐
- Backfill Pit Without Excavation ☒

Soil Disposition:

- Envirotech ☐ ☐ Tierra
- Other Facility ☐ Name: _____

Pit Closure Date: 8/18/94 Pit Closed By: BEI

REMARKS

Remarks : Dug test Hole to 12', took PID Sample, closed pit.

Signature of Specialist: _____

(SP3191) 03/16/94

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KD224	945965
MTR CODE | SITE NAME:	92603	Marshall A #3
SAMPLE DATE | TIME (Hrs):	8/18/94	1325
PROJECT:	Phase I	
DATE OF TPH EXT. | ANAL.:	8/24/94	8/24/94
DATE OF BTEX EXT. | ANAL.:	8/25/94	8/25/94
TYPE | DESCRIPTION:	VG	Fine brown sand

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.03	MG/KG				
TOLUENE	0.18	MG/KG				
ETHYL BENZENE	0.06	MG/KG				
TOTAL XYLENES	0.33	MG/KG				
TOTAL BTEX	0.57	MG/KG				
TPH (418.1)	220	MG/KG			2.23	28
HEADSPACE PID	9	PPM				
PERCENT SOLIDS	93.7	%				

-- 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: John Fowler INGVZPIT.XLS Date: 9/30/94

El Paso Natural Gas Company

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

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KD 224 RLB 9/26/95	945965
MTR CODE | SITE NAME:	~~92600~~ 92603	N/A
SAMPLE DATE | TIME (Hrs):	8-18-94	1325
SAMPLED BY:	N/A	
DATE OF TPH EXT. | ANAL.:	8-24-94	8/24/94
DATE OF BTEX EXT. | ANAL.:	8/25/94	8/25/94
TYPE | DESCRIPTION:	VG	fine brown Sand

REMARKS: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.025	MG/KG	1			
TOLUENE	0.18	MG/KG	1			
ETHYL BENZENE	0.060	MG/KG	1			
TOTAL XYLENES	0.33	MG/KG	1			
TOTAL BTEX 9/16/94 RLB ~~22~~	0.60	MG/KG				
TPH (418.1)	220	MG/KG			2.23	25
HEADSPACE PID	9	PPM				
PERCENT SOLIDS	93.7	%				

-- 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: ATT results attached.

DF = Dilution Factor Used

Approved By: _____ Date: 9/30/94

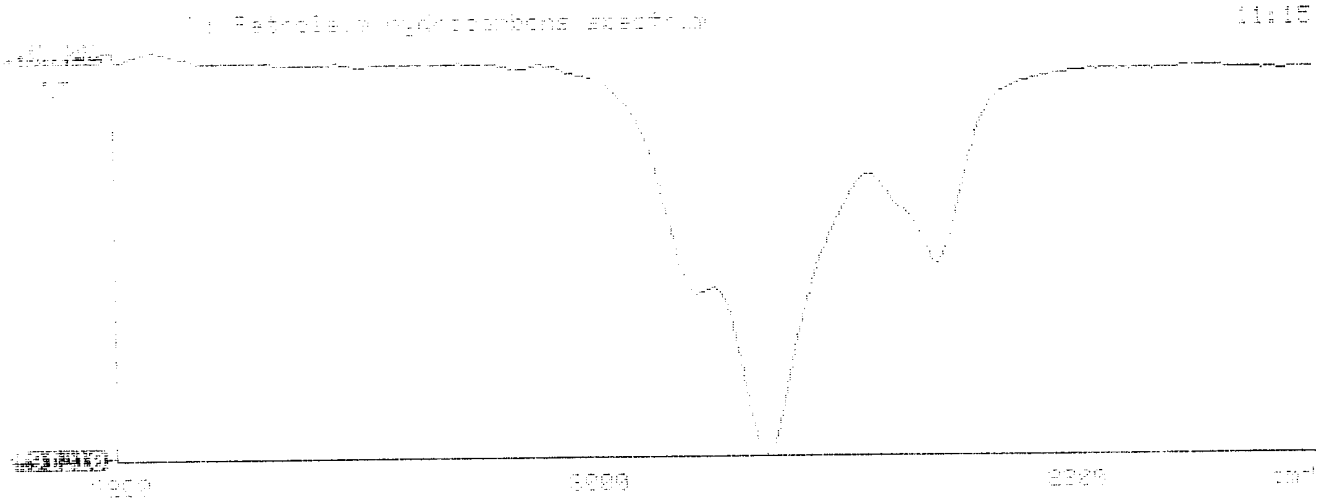
Test Method for

Oil and Grease and Petroleum Hydrocarbons

in Water and Soil

Perkin Elmer Model 1600 FT-IR

Analysis Report



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)
CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 408397
PROJECT # : 24324
PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	945963	NON-AQ	08/18/94	08/25/94	08/26/94	10
02	945964	NON-AQ	08/18/94	08/28/94	08/28/94	1
03	945965	NON-AQ	08/18/94	08/25/94	08/25/94	1

PARAMETER	UNITS	01	02	03
BENZENE	MG/KG	<0.25	<0.025	<0.025
TOLUENE	MG/KG	<0.25	<0.025	0.18
ETHYLBENZENE	MG/KG	1.6	<0.025	0.060
TOTAL XYLENES	MG/KG	15	0.026	0.33
SURROGATE:				
BROMOFLUOROBENZENE (%)		147*	90	100

*OUTSIDE ATI QUALITY CONTROL LIMITS DUE TO MATRIX INTERFERENCE

Analytical Technologies, Inc.

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

ATI I.D. **408397**

August 29, 1994

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

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

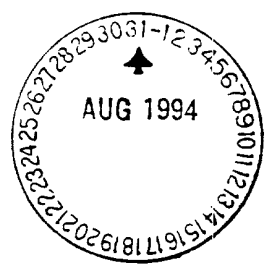
On **08/25/94**, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

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

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure



PHASE II
EXCAVATION

FIELD PIT REMEDIATION/CLOSURE FORM/PHASE II

GENERAL

Meter: 92603 Location: Marshall A well No. 3

Coordinates: Letter: G Section 15 Township: 27 Range: 9

Or Latitude _____ Longitude _____

Date Started : 11/15/95 Area: 27 Run: 9

FIELD OBSERVATIONS

Sample Number(s): JK137 _____ _____ _____

Sample Depth: 18' Feet

Final PID Reading 207.1 PID Reading Depth 18' Feet

Yes No

Groundwater Encountered ☐ (1) ☒ (2) Approximate Depth _____ Feet

Final Dimensions: Length 22' Width 18' Depth 18'

CLOSURE

Remediation Method :

Excavation ☒ (1) Approx. Cubic Yards 228 LY 12/1/95

Onsite Bioremediation ☐ (2) BRP. BY ALTON JAMES EPNG

Backfill Pit Without Excavation ☐ (3)

Overburden Cubic Yards 43 LY 12/1/95

Soil Disposition:

Envirotech ☒ (1) ☐ (3) Tierra

Other Facility ☐ (2) Name: _____

Pit Closure Date: 11-18-95 Pit Closed By: Philip

REMARKS

Remarks : Pit Pid Readings (W-10.5)(S-118.0)(E-4.9)(W-20.0)
Had Drip Pot on south side could not Dig That wall
More than 100' from Ephemral Strem
No Fence No ERDs on Site Hit Rock At 18'

Signature of Specialist: Jo K. King

(SP3195) 05/01/95

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JK137	947786
MTR CODE | SITE NAME:	92603	Marshall A #3
SAMPLE DATE | TIME (Hrs):	11/15/95	1000
PROJECT:	PHASE II Excavation	
DATE OF TPH EXT. | ANAL.:	11/17/95	11/17/95
DATE OF BTEX EXT. | ANAL.:	11/16/95	11/16/95
TYPE | DESCRIPTION:	VG	Light gray sand & clay

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	0.73	MG/KG				
TOLUENE	18.4	MG/KG				
ETHYL BENZENE	13.6	MG/KG				
TOTAL XYLENES	93.3	MG/KG	2	D		
TOTAL BTEX	126	MG/KG				
TPH (418.1)	4,160	MG/KG			1.99	28
HEADSPACE PID	207	PPM				
PERCENT SOLIDS	77.5	%				

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

The Surrogate Recovery was at 98.4 for this sample All QA/QC was acceptable.
The "D" qualifier indicates the reported result for this analyte is calculated based on a secondary dilution factor.
Narrative:

DF = Dilution Factor Used

Approved By: John Labbe INGVZPIT.XLS Date: 11/21/95

El Paso Natural Gas Company

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

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JK137	94 7786
MTR CODE | SITE NAME:	92603	Marsall A #3
SAMPLE DATE | TIME (Hrs):	11-15-95	1000
PROJECT:	~~Phase II Navajo~~ EXCAVATION	9/21/97
DATE OF TPH EXT. | ANAL.:	11/17/95	
DATE OF BTEX EXT. | ANAL.:	11/16/95	11/16/95
TYPE | DESCRIPTION:	VG	~~Lt brn~~ gray sand & clay

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	0.7	MG/KG				
TOLUENE	18.4	MG/KG				
ETHYL BENZENE	13.6	MG/KG				
TOTAL XYLENES	93.3	MG/KG	2	D		
TOTAL BTEX	126	MG/KG				
TPH (418.1)	416.0	MG/KG			1.99	28
HEADSPACE PID	207.1	PPM				
PERCENT SOLIDS	77.5	%				

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

The Surrogate Recovery was at 98% / 93% for this sample All QA/QC was acceptable.

Narrative: _____

DF = Dilution Factor Used

Approved By: _____ Date: 11/21/95

BTEX SOIL SAMPLE WORKSHEET

File :	947786	**Date Printed** :	11/20/95
Soil Mass (g) :	5.01	**Multiplier (L/g)** :	0.00100
Extraction vol. (mL) :	10	**CAL FACTOR (Analytical):**	200
Shot Volume (uL) :	50	**CAL FACTOR (Report):**	0.19960

		DILUTION FACTOR:	**1**
Benzene (ug/L) :	3.63	**Benzene (mg/Kg):**	**0.725**
Toluene (ug/L) :	92.41	**Toluene (mg/Kg):**	**18.445**
Ethylbenzene (ug/L) :	68.18	**Ethylbenzene (mg/Kg):**	**13.609**
p & m-xylene (ug/L) :	351.22	p & m-xylene (mg/Kg):	70.104
o-xylene (ug/L) :	95.84	o-xylene (mg/Kg):	19.130
		Total xylenes (mg/Kg):	**89.234**
		Total BTEX (mg/Kg):	**122.012**

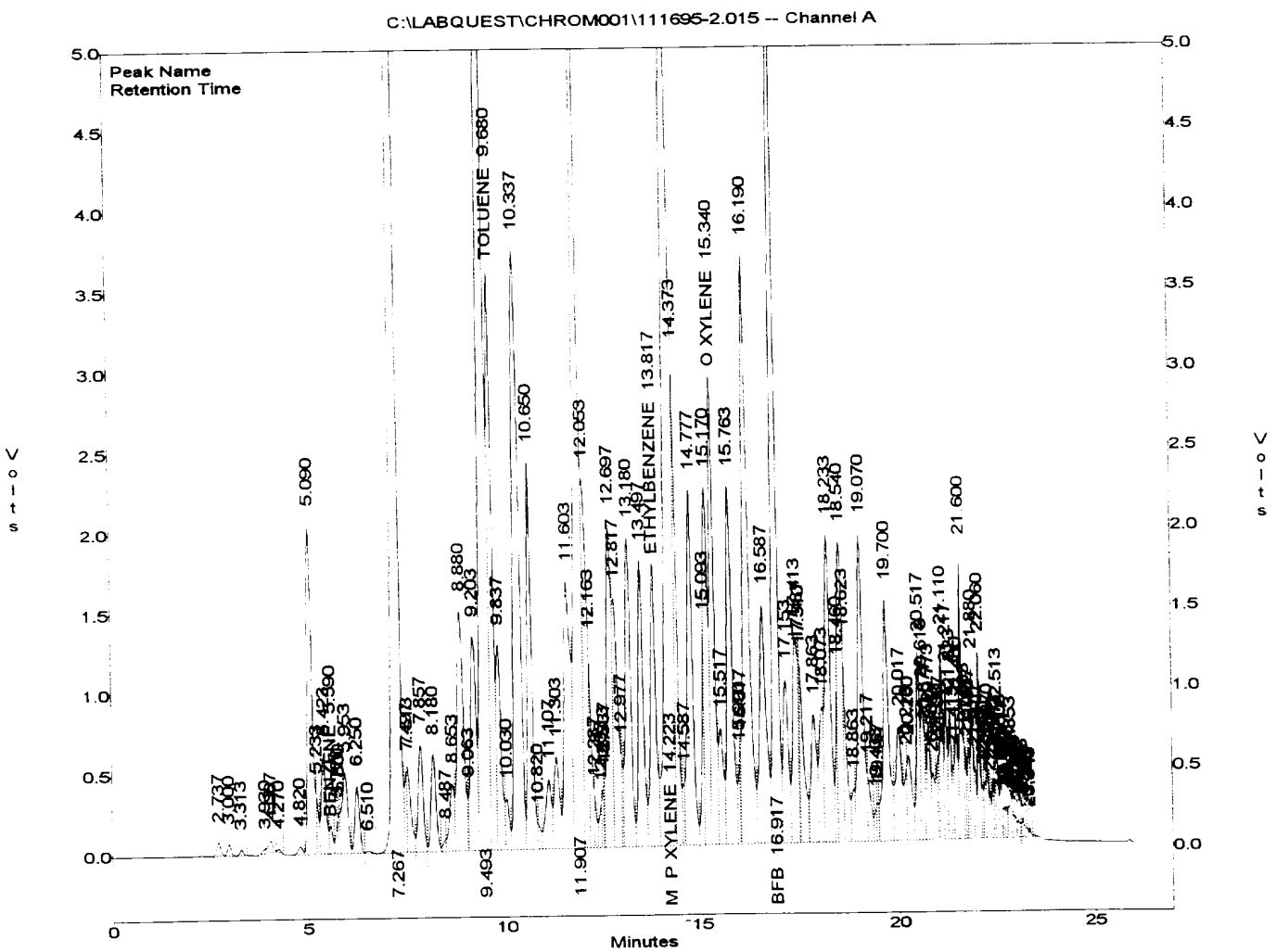
Det. Limit
0.499
0.499
0.499
0.998
0.499
1.497

EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM001\111695-2.015
Method : C:\LABQUEST\METHODS\1-111695.MET
Sample ID : 947786,5.01G,50U
Acquired : Nov 17, 1995 01:23:41
Printed : Nov 17, 1995 01:50:16
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	5.590	1048168	3.6298
TOLUENE	9.680	24548280	92.4146
ETHYLBENZENE	13.817	16618020	68.1815
M & P XYLENE	14.223	90243160	351.2188
O XYLENE	15.340	22241232	95.8407
BFB	16.917	55450160	98.4089



BTEX SOIL SAMPLE WORKSHEET

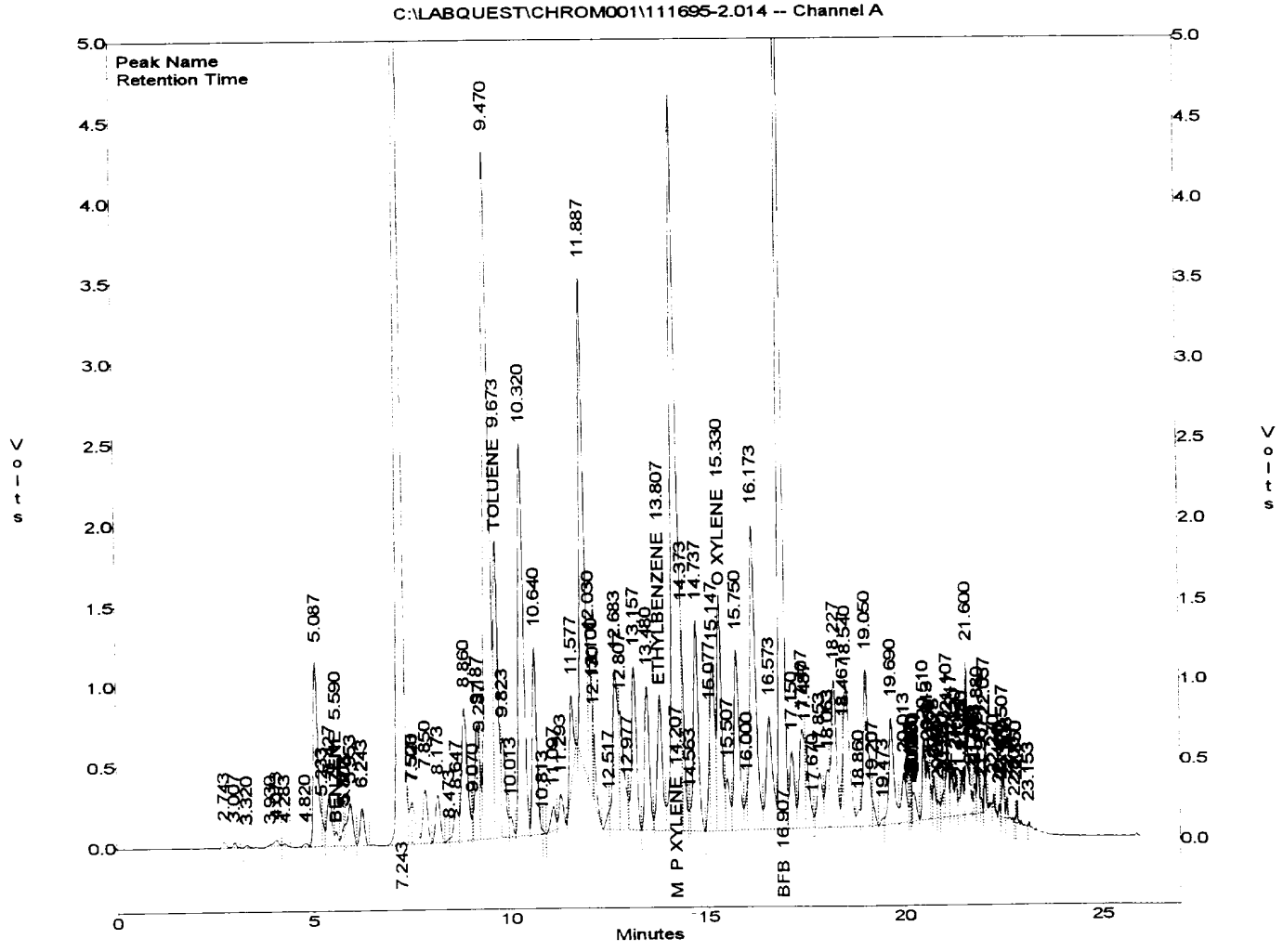
File	: 947786	**Date Printed**	: 11/20/95		
Soil Mass (g)	: 5.01	**Multiplier (L/g)**	: 0.00100		
Extraction vol. (mL)	: 10	**CAL FACTOR (Analytical):**	400		
Shot Volume (uL)	: 25	**CAL FACTOR (Report):**	0.39920		
		DILUTION FACTOR:	**2**	**Det. Limit**	
Benzene (ug/L)	: 1.90	**Benzene (mg/Kg):**	**0.758**	0.998	
Toluene (ug/L)	: 47.19	**Toluene (mg/Kg):**	**18.838**	0.998	
Ethylbenzene (ug/L)	: 30.34	**Ethylbenzene (mg/Kg):**	**12.112**	0.998	
p & m-xylene (ug/L)	: 186.16	p & m-xylene (mg/Kg):	74.315	1.996	
o-xylene (ug/L)	: 47.59	o-xylene (mg/Kg):	18.998	0.998	
		Total xylenes (mg/Kg):	**93.313**	2.994	
		Total BTEX (mg/Kg):	**125.022**		

EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM001\111695-2.014
Method : C:\LABQUEST\METHODS\1-111695.MET
Sample ID : 947786,5.01G,25U
Acquired : Nov 17, 1995 00:43:33
Printed : Nov 17, 1995 01:10:01
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	5.590	553425	1.9004
TOLUENE	9.673	12905418	47.1935
ETHYLBENZENE	13.807	7494244	30.3372
M & P XYLENE	14.207	48833928	186.1648
O XYLENE	15.330	11005081	47.5916
BFB	16.907	52325204	92.8629



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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                     *
**********************************************************
*
 95/11/17  15:12
*
*  Sample identification
 947786
*
*  Initial mass of sample, g
 1.990
*
*  Volume of sample after extraction, ml
 28.000
*
*  Petroleum hydrocarbons, ppm
 4163.040
*  Net absorbance of hydrocarbons (2930 cm-1)
 0.511
*
*
*
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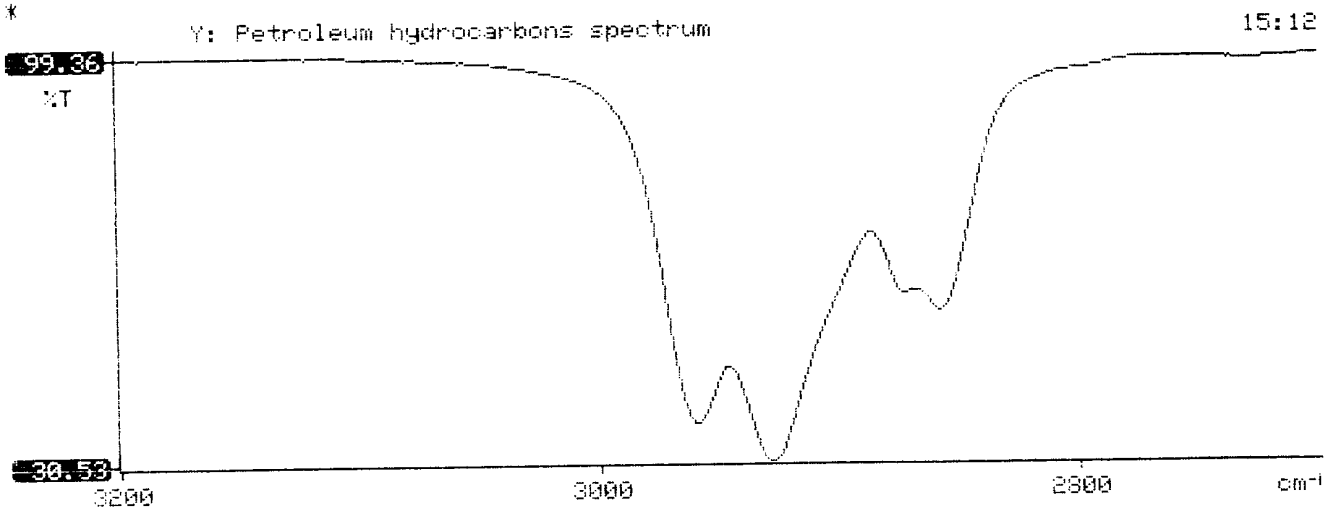


PHASE II DRILL

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-1
Well # ~~MW-1 CMC~~
Page 1 of 2

PHILIP ENVIRONMENTAL SERVICES INC.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPFS GW PITS
Project Number 17520 Phase 6001
Project Location Marshall A#3 92602

Elevation
Borehole Location T27-R9-S15-Ltr G
GWL Depth NA
Logged By CM CHANCE
Drilled By K Padilla
Date/Time Started 5/20/97 - 0945
Date/Time Completed 5/20/97 - 1200

Well Logged By CM CHANCE
Personnel On-Site D CHARLEY
Contractors On-Site
Client Personnel On-Site

Drilling Method 4 1/4 ID HSA
Air Monitoring Method 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: PPM BZ	BH	S/HS	Drilling Conditions & Blow Counts
0										
5										
10										
15				Backfill to 18'						
20	1	20-22	18	Lt Grey sandy CLAY, dry, v. stiff, low plastic			0	420	~~680~~ 767	1000 hr
25	2	25-27	18	Lt Grey-Br sandy CLAY, dry, hard, low plastic			0	210	820/980	1012 hr
30	3	30-32	12	Tan silty SAND, med-coarse, tr F, med dense, dry.			10	120	680/1600	Hard Drilling 1030 hr
35	4	35-37	8	Tan clayey SAND, f-med sand, med dense, moist			0	290	824/922	1050
40	5	40-42	8	Lt Grey silty SAND, vf-F, tr med, med dense, sl moist			0	200	15-	1120

Comments: CMC 315 sent to lab for BTEX, TPH. Sample collected from 44-45'. Refusal @ 45' w/ augers. Not enough sample for PID & lab sample. Submitted lab sample. BH grouted to surface. GW not encountered

Geologist Signature Cory Chance

5-2-97\DRILLOG.XLS

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-1
Well # ~~MW-1~~ Cmp
Page 2 of 2

PHILIP ENVIRONMENTAL SERVICES INC.

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

Project Name EPFS GW PITS
Project Number 17520 Phase 6001
Project Location Marshall A#J 92607

Elevation
Borehole Location T27-R9-S15-LtrG
GWL Depth NA
Logged By CM CHANCE
Drilled By K Padilla
Date/Time Started 5/20/97-0945
Date/Time Completed 5/20/97-1300

Well Logged By CM CHANCE
Personnel On-Site D CHARLEY
Contractors On-Site
Client Personnel On-Site

Drilling Method 4 1/4 ID HSA
Air Monitoring Method 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: PPM BZ	BH	S	Drilling Conditions & Blow Counts
40										
45	6	44-45	4	Med-dk gry SANDSTONE, weathered, poorly cemented, f-med sand			0	78	NA	-v hard drilling -refusal @ 45' -1140h
				TOB 45'						
50										
55										
60										
65										
70										
75										
80										

Comments:

Geologist Signature

5.2/97\DRILLOG.XLS

EL PASO FIELD SERVICES

6-11-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC315	970477
MTR CODE | SITE NAME:	92603	Marshall A #3
SAMPLE DATE | TIME (Hrs):	5/20/97	1140
PROJECT:	Phase II Drilling - Initial	
DATE OF TPH EXT. | ANAL.:	5/28/97	5/28/97
DATE OF BTEX EXT. | ANAL.:	5/29/97	5/30/97
TYPE | DESCRIPTION:	VG	Light gray sand

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.5	MG/KG				
TOLUENE	<0.5	MG/KG				
ETHYL BENZENE	<0.5	MG/KG				
TOTAL XYLENES	<1.5	MG/KG				
TOTAL BTEX	<3	MG/KG				
TPH (418.1)	<10	MG/KG			2.05	28
HEADSPACE PID	N/A	PPM				
PERCENT SOLIDS	88.7	%				

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

The Surrogate Recovery was at 101 for this sample All QA/QC was acceptable.

Narrative:

DF = Dilution Factor Used

Approved By: John Saville INGVZPIT.XLS Date: 6/9/97

BTEX SOIL SAMPLE WORKSHEET

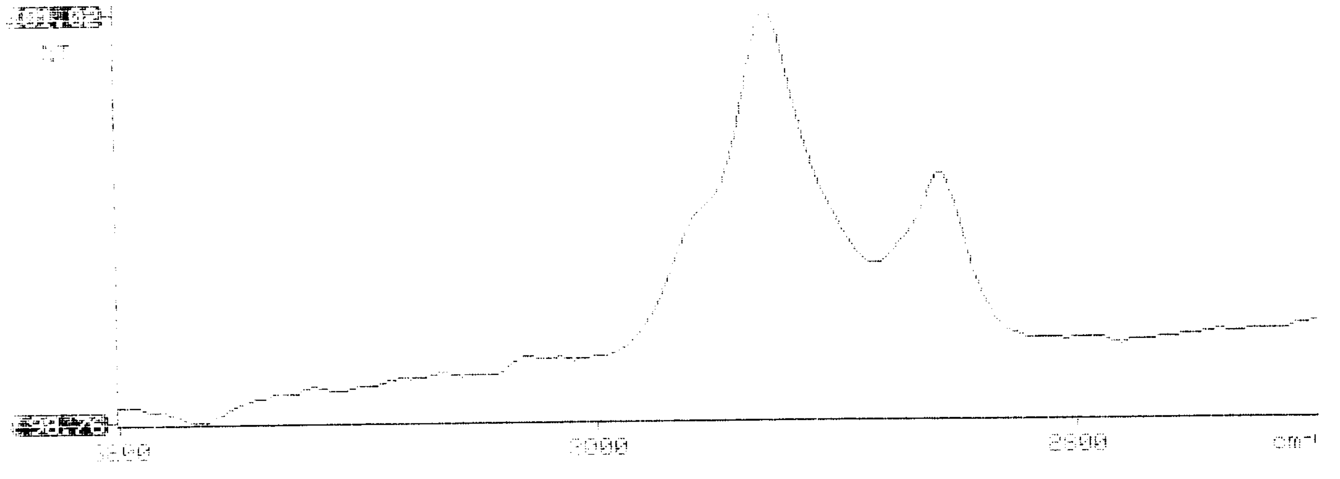
File :	970477	**Date Printed** :	6/4/97
Soil Mass (g) :	5.05	**Multiplier (L/g)** :	0.00099
Extraction vol. (mL) :	10	**CAL FACTOR (Analytical):**	200
Shot Volume (uL) :	50	**CAL FACTOR (Report):**	0.19802

		DILUTION FACTOR:	**1**	**Det. Limit**
Benzene (ug/L) :	0.00	**Benzene (mg/Kg):**	**0.000**	0.495
Toluene (ug/L) :	0.00	**Toluene (mg/Kg):**	**0.000**	0.495
Ethylbenzene (ug/L) :	0.00	**Ethylbenzene (mg/Kg):**	**0.000**	0.495
p & m-xylene (ug/L) :	0.00	p & m-xylene (mg/Kg):	0.000	0.990
o-xylene (ug/L) :	0.00	o-xylene (mg/Kg):	0.000	0.495
		Total xylenes (mg/Kg):	**0.000**	1.485
		Total BTEX (mg/Kg):	**0.000**	

```
******************************************************
*                  Test Method for                   *
*     Oil and Grease and Petroleum Hydrocarbons      *
*                in Water and Soil                   *
*                                                    *
*          Perkin-Elmer Model 1600 FT-IR             *
*                 Analysis Report                    *
******************************************************
*
 97/05/28   11:17

*  Sample identification
 #70477
*
*  Initial mass of sample, g
 2.050
*
*  Volume of sample after extraction, ml
 28.000
*
*  Petroleum hydrocarbons, ppm
 -122.852
*  Net absorbance of hydrocarbons (2930 cm-1)
 1.497
```

*: Petroleum hydrocarbons spectrum 11:17



EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

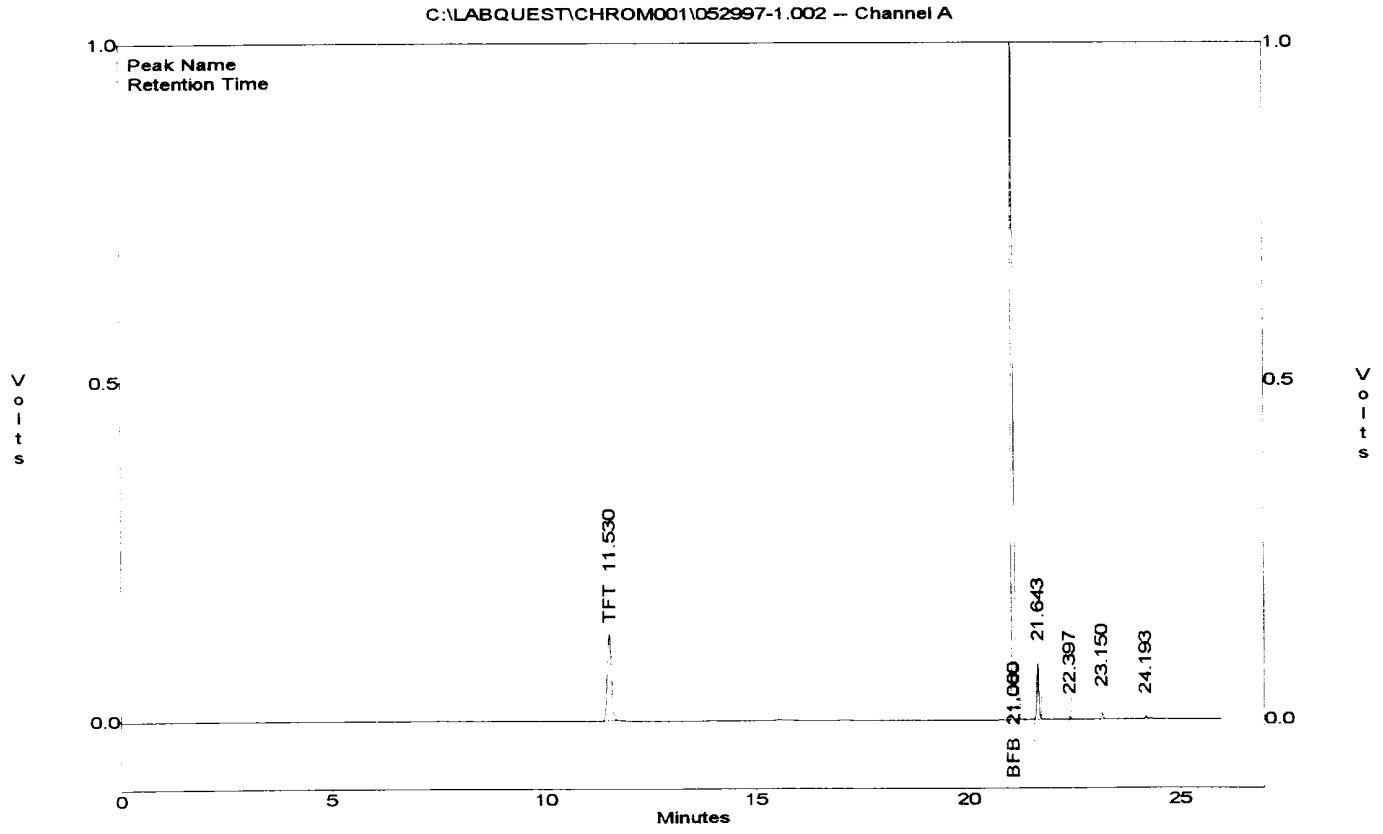
File : C:\LABQUEST\CHROM001\052997-1.002
Method : C:\LABQUEST\METHODS\1-052297.MET
Sample ID : 970477,5.05G,50U
Acquired : May 29, 1997 13:27:29
Printed : May 30, 1997 08:35:01
User : MARLON

Channel A Results

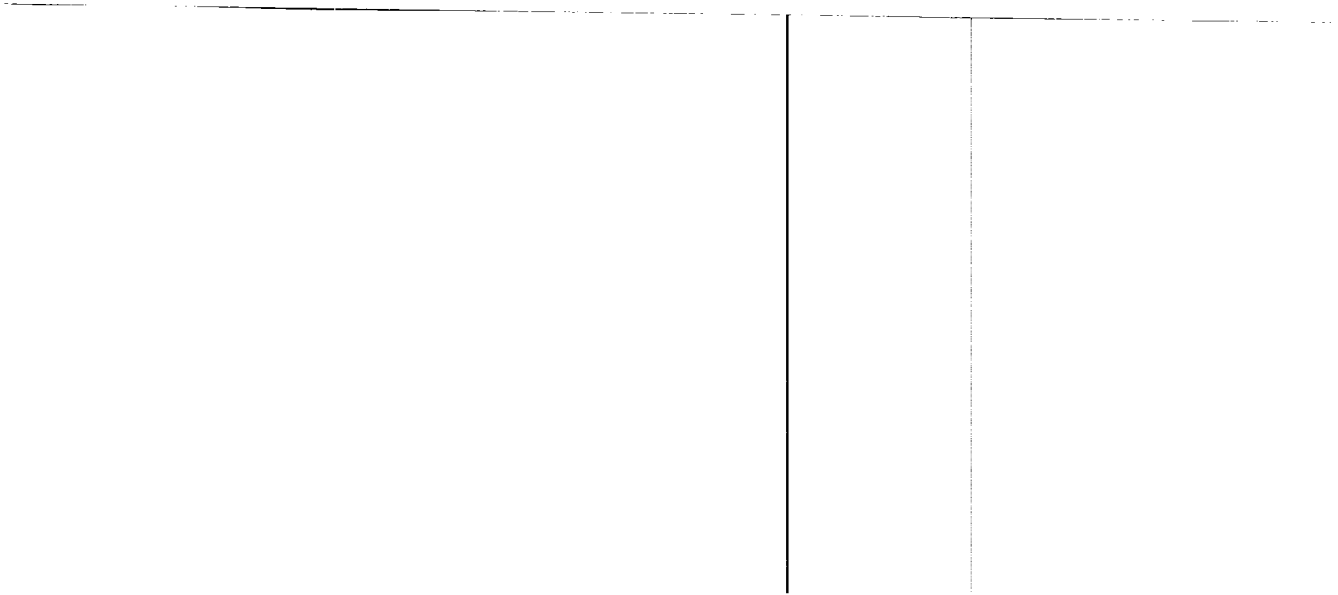
COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	9.300	0	0.0000
TFT	11.530	910077	95.5591
TOLUENE	13.920	0	0.0000
ETHYLBENZENE	18.300	0	0.0000
M & P XYLENE	18.700	0	0.0000
O XYLENE	19.900	0	0.0000
BFB	21.060	4388697	101.2782

Channel A Group Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
TOTAL XYLENES		0	0.0000



PHASE III DRILL



Phase III Drilling

3-21-97

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH 1

Well #

Page 1 of 1

PHILIP ENVIRONMENTAL SERVICES INC.

4000 Monroe Road

Farmington, New Mexico 87401

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

Project Name EPFS GW PITS

Project Number 17520 Phase 6001.77

Project Location MARSHALL A #3 - 92603

Elevation

Borehole Location G Ltr 15 S 27 T 9-R 8

GWL Depth

Logged By D Cesark

Drilled By M Donohue

Date/Time Started 2/11/97 - 1300

Date/Time Completed 2/11/97 - 1400

Well Logged By D Cesark

Personnel On-Site D. Charley

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 Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ	BH	S	Drilling Conditions & Blow Counts
0				BACKFILL TO 12'					1/45	
5										
10										
15	1	13-15'	24"	SILTY-SANDS, SAND-SILT, MIXTURES. YELLOWISH-ORANGE NO HC STAIN/ODOR. TD = 15'	SM				0/1	1315
20										
25										
30										
35										
40										

Comments: TD=15', DRCS COLLECTED FROM 13'-15' BGS & SUBMITTED TO LAB FOR BTEX + TPH ANALYSES. GW NOT ENCOUNTERED. GROUTED TO SURFACE.

Geologist Signature

2/11/97\DRILLOG.XLS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	DRC5	970092
MTR CODE | SITE NAME:	92603	Marshall A #3
SAMPLE DATE | TIME (Hrs):	2/11/97	1315
PROJECT:	Phase IIIDrilling 13-15'	
DATE OF TPH EXT. | ANAL.:	2/13/97	2/13/97
DATE OF BTEX EXT. | ANAL.:	2/14/97	2/14/97
TYPE | DESCRIPTION:	VG	Brown sand

DF 3/12/97

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.5	MG/KG				
TOLUENE	<0.5	MG/KG				
ETHYL BENZENE	<0.5	MG/KG				
TOTAL XYLENES	<1.5	MG/KG				
TOTAL BTEX	<3	MG/KG				
TPH (418.1)	<10	MG/KG			2.29	28
HEADSPACE PID	1	PPM				
PERCENT SOLIDS	91.7	%				

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

The Surrogate Recovery was at 93.6 % for this sample All QA/QC was acceptable.

Narrative:

DF = Dilution Factor Used

Approved By: John Talbot Date: 2-19-97

EL PASO FIELD SERVICES LABORATORY
EPA METHOD 8020 - BTEX

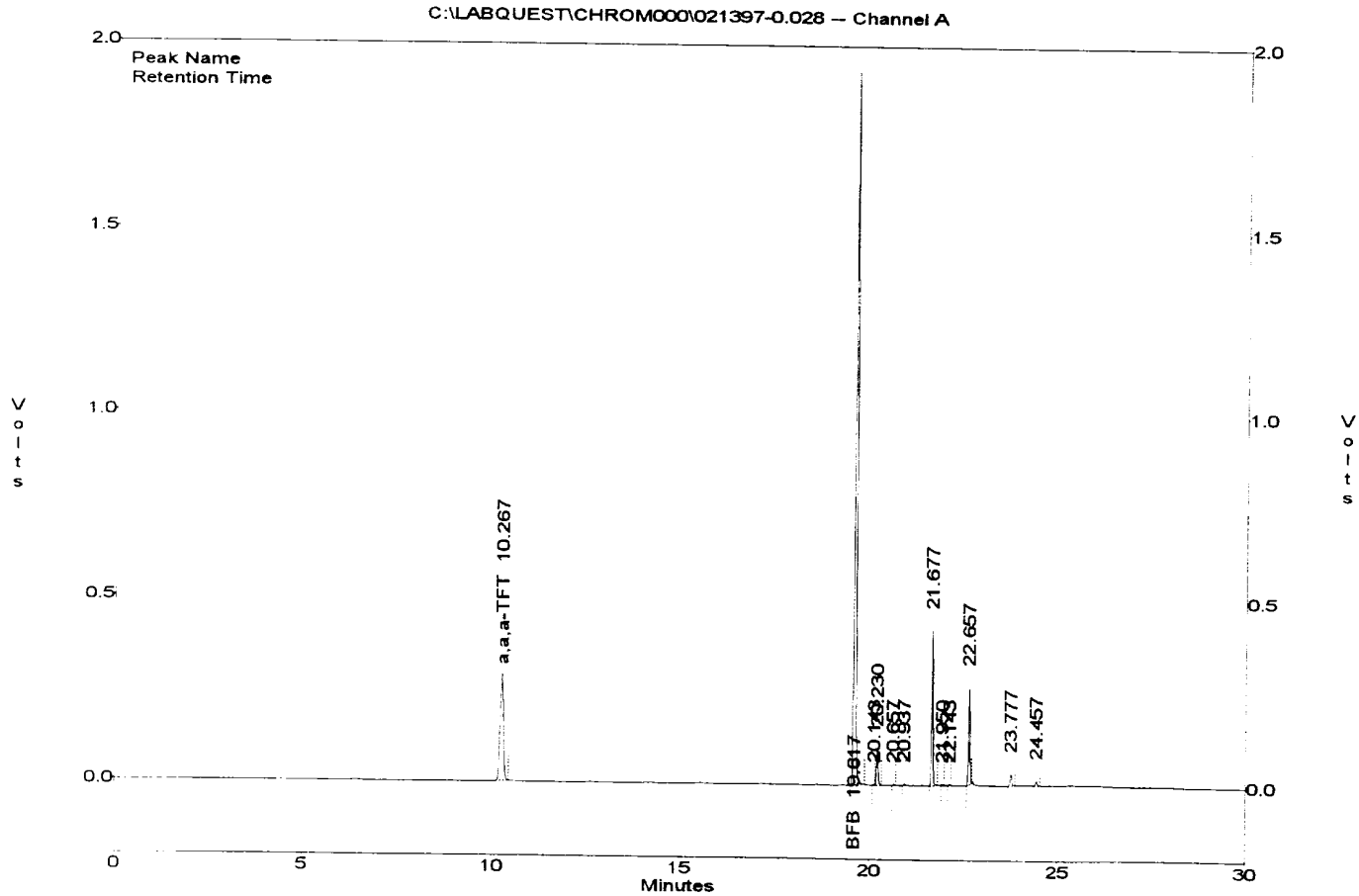
File : C:\LABQUEST\CHROM000\021397-0.028
Method : C:\LABQUEST\METHODS\0-021297.MET
Sample ID : 970092,5.12G,50U
Acquired : Feb 14, 1997 10:44:13
Printed : Feb 14, 1997 11:14:36
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	8.050	0	0.0000
a,a,a-TFT	10.267	1791137	94.9103
TOLUENE	12.567	0	0.0000
ETHYLBENZENE	16.790	0	0.0000
M,P-XYLENES	17.170	0	0.0000
O-XYLENE	18.310	0	0.0000
BFB	19.617	6834136	93.5558

Channel A Group Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
TOTAL XYLENES		0	0.0000



BTEX SOIL SAMPLE WORKSHEET

File :	970092	**Date Printed** :	2/18/97
Soil Mass (g) :	5.12	**Multiplier (L/g)** :	0.00098
Extraction vol. (mL) :	10	**CAL FACTOR (Analytical):**	200
Shot Volume (uL) :	50	**CAL FACTOR (Report):**	0.19531

		DILUTION FACTOR:	**1**	**Det. Limit**
Benzene (ug/L) :	0.00	**Benzene (mg/Kg):**	**0.000**	0.488
Toluene (ug/L) :	0.00	**Toluene (mg/Kg):**	**0.000**	0.488
Ethylbenzene (ug/L) :	0.00	**Ethylbenzene (mg/Kg):**	**0.000**	0.488
p & m-xylene (ug/L) :	0.00	p & m-xylene (mg/Kg):	0.000	0.977
o-xylene (ug/L) :	0.00	o-xylene (mg/Kg):	0.000	0.488
		Total xylenes (mg/Kg):	**0.000**	1.465
		Total BTEX (mg/Kg):	**0.000**	

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

 97/02/12   15:15

  Sample identification
 970092

  Initial mass of sample, g
 2.290

  Volume of sample after extraction, ml
 28.000

  Petroleum hydrocarbons, ppm
 -9.518
  Net absorbance of hydrocarbons (2930 cm-1)
 0.185
```

: Petroleum hydrocarbons spectrum 15:15