EL PASO FIELD SERVICES
PRODUCTION PIT CLOSURE

DEC 2 1 1998

RECEIVED
JUL 2 1998
OIL CON. DIV.

NORDHAUS FEDERAL #4
Meter/Line ID - 74494

SITE DETAILS

Legals - Twn: 25 **Rng:** 07 **Sec:** 17 **Unit:** O
NMOCD Hazard Ranking: 40 **Land Type:** 3 - Navajo
Operator: DEVON ENERGY CORP **Pit Closure Date:** 07/18/94

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: 74494 Location: NORDHAUS FEDERAL #4
Operator #: 1790 Operator Name: DEVON ENERGY P/L District: BALLARD
Coordinates: Letter: O Section 17 Township: 25 Range: 7
Or Latitude _____ Longitude _____
Pit Type: Dehydrator ___ Location Drip: X Line Drip: ___ Other: _____
Site Assessment Date: 6.23.94 Area: 07 Run: 41

SITE ASSESSMENT

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

Land Type:
BLM ☐ (1)
State ☐ (2)
Fee ☐ (3)
Indian NAVAJO

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 PALLUCHE 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: 40 **POINTS**

REMARKS

Remarks : ONLY PIT ON LOCATION. PIT IS DRY. LOCATION IS IN PALLUCHE CANYON RIGHT NEXT TO SOUTH SIDE OF WASH. REDLINE AND TOPO CONFIRMED LOCATION IS INSIDE U.Z.

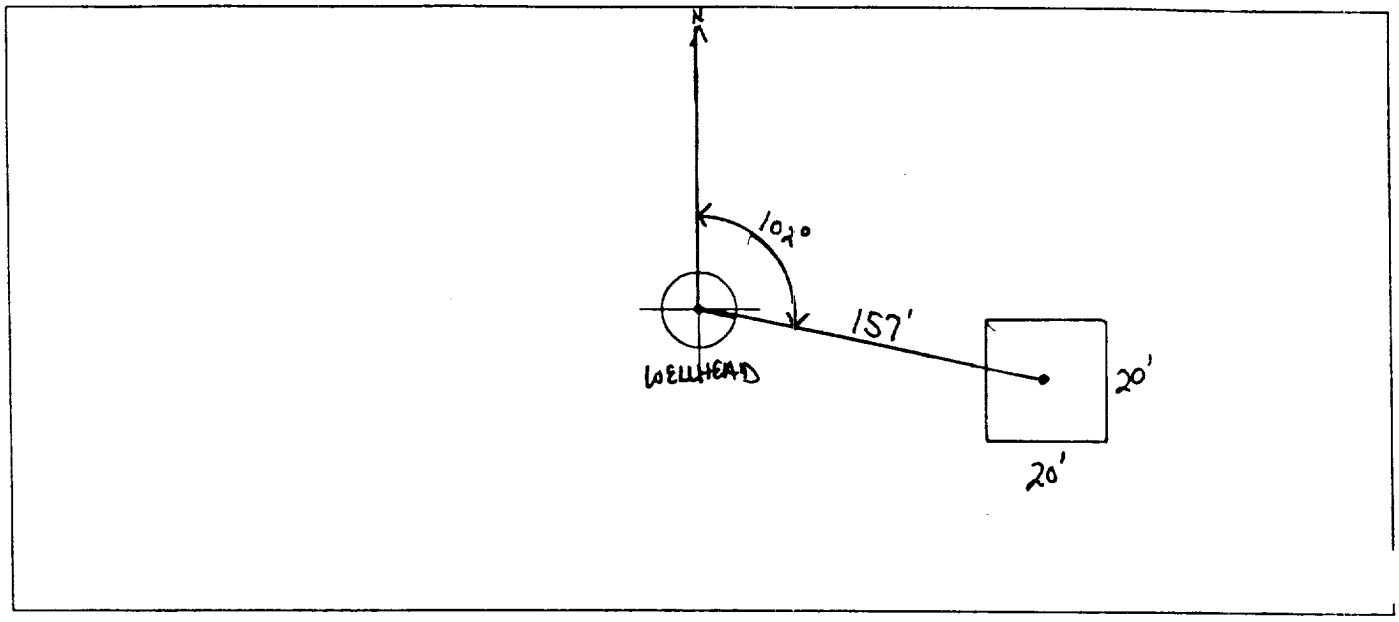
DIG & HAUL

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 102° Footage from Wellhead 157'

b) Length : 20' Width : 20' Depth : 3'



REMARKS

Remarks :

TOOK PICTURES AT 1:05 P.M.

END DUMP

Completed By:

Robert Thompson

Signature

6.23.94

Date

PHASE I
EXCAVATION

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 74494 Location: Nordhaus Federal #4

Coordinates: Letter: O Section 17 Township: 25 Range: 7

Or Latitude _____ Longitude _____

Date Started : 7/15/94 Run: 07 41

FIELD OBSERVATIONS

Sample Number(s): KD 153 KD 154 KD 155 _____

Sample Depth: 12' Feet

Final PID Reading 1520 ppm PID Reading Depth 12' Feet

	Yes	No
Groundwater Encountered	☐	☒

Approximate Depth _____ Feet

CLOSURE

Remediation Method :

Excavation ☒ Approx. Cubic Yards 80

Onsite Bioremediation ☐

Backfill Pit Without Excavation ☐

Soil Disposition:

Envirotech ☒ ☐ Tierra

Other Facility ☐ Name: _____

Pit Closure Date: 7/18/94 Pit Closed By: BEI

REMARKS

Remarks : Continued Excavation from 7/15/94, Excavated pit to 12', Took PID Sample, Closed pit.

Signature of Specialist: [signature]

(SP3181) 03/1

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KD153	945695
MTR CODE | SITE NAME:	74494	Nordhaus Fed #4
SAMPLE DATE | TIME (Hrs):	7/18/94	1115
PROJECT:	Phase I	
DATE OF TPH EXT. | ANAL.:	7/19/94	7/19/94
DATE OF BTEX EXT. | ANAL.:	7/24/94	7/24/94
TYPE | DESCRIPTION:	VC	Brown fine sand

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.13	MG/KG	5	D		
TOLUENE	<0.13	MG/KG	5	D		
ETHYL BENZENE	0.58	MG/KG	5	D		
TOTAL XYLENES	11.0	MG/KG	5	D		
TOTAL BTEX	11.6	MG/KG				
TPH (418.1)	266	MG/KG			2.00	28
HEADSPACE PID	1520	PPM				
PERCENT SOLIDS	93.9	%				

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

The Surrogate Recovery was at 73.0 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:

ATI Results Attached.

DF = Dilution Factor Used

Approved By: John Scott INGVZPIT.XLS Date: 8/12/94

El Paso Natural Gas Company

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KD 153	945695
MTR CODE | SITE NAME:	74494	N/A
SAMPLE DATE | TIME (Hrs):	7/18/94	1115
SAMPLED BY:	N/A	
DATE OF TPH EXT. | ANAL.:	7/19/94	7/19/94
DATE OF BTEX EXT. | ANAL.:	7/24/94	7/24/94
TYPE | DESCRIPTION:	VC	Brown Fine Sand

REMARKS: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.13	MG/KG	5			
TOLUENE	<0.13	MG/KG	5			
ETHYL BENZENE	0.58	MG/KG	5			
TOTAL XYLENES	11	MG/KG	5			
TOTAL BTEX	12	MG/KG				
TPH (418.1)	266	MG/KG			2.00	28
HEADSPACE PID	1520	PPM				
PERCENT SOLIDS	~~93.85~~ 8/1/94	93.9 %				

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

The Surrogate Recovery was at 73 % for this sample All QA/QC was acceptable.

Narrative:

ATI results attached.

DF = Dilution Factor Used

Approved By: J.S. Date: 8/2/94

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*****************************   *************************
*                    Test Met..od for                   *
*      Oil and Grease and Petroleum Hydrocarbons        *
*                  in Water and Soil                    *
*                                                       *
*           Perkin-Elmer Model 1600 FT-IR               *
*                   Analysis Report                     *
*********************************************************
*
 94/07/19   14:51
*
*  Sample identification
 745695
*
*  Initial mass of sample, g
 1.000
*
*  Volume of sample after extraction, ml
 29.000
*
*  Petroleum hydrocarbons, ppm
 265.648
*  Net absorbance of hydrocarbons (2930 cm-1)
 0.036
*
*
*
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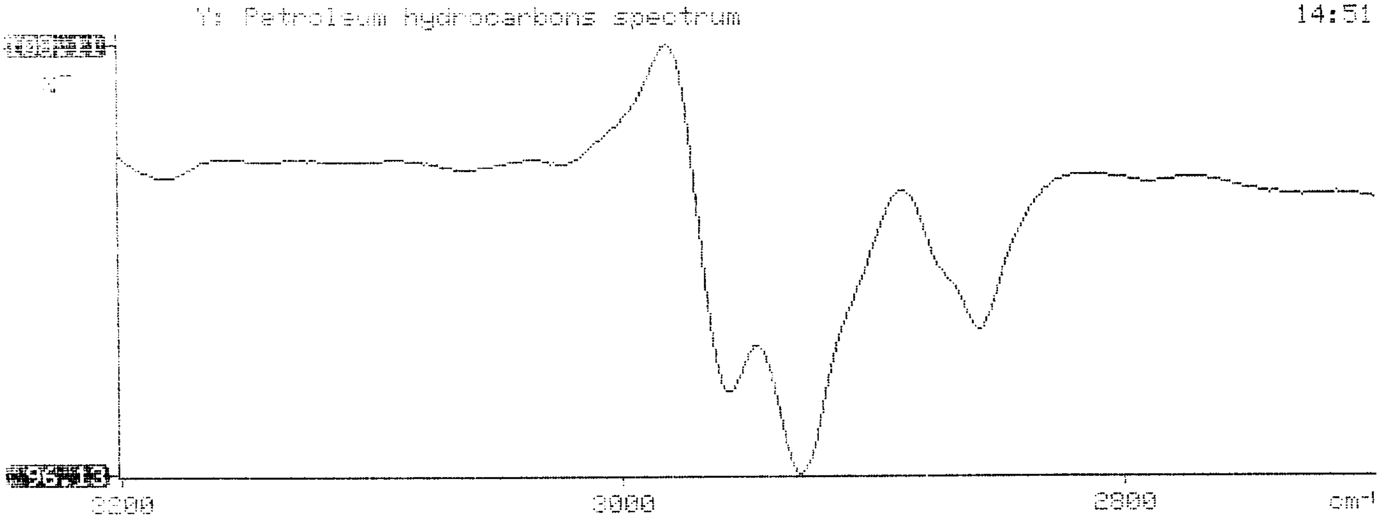
Y: Petroleum hydrocarbons spectrum

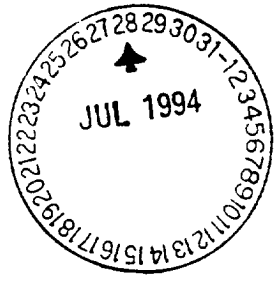
14:51



Analytical Technologies, Inc.

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

ATI I.D. **407376**



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 **07/20/94**, 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

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)

CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 407376

PROJECT # : 24324

PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
13	945686	NON-AQ	07/15/94	07/24/94	07/24/94	20
14	945687	NON-AQ	07/15/94	07/21/94	07/22/94	5
15	945695	NON-AQ	07/18/94	07/24/94	07/24/94	5

PARAMETER	UNITS	13	14	15
BENZENE	MG/KG	<0.5	<0.13	<0.13
TOLUENE	MG/KG	50	6.1	<0.13
ETHYLBENZENE	MG/KG	<0.5	0.93	0.58
TOTAL XYLENES	MG/KG	11	6.9	11
SURROGATE:				
BROMOFLUOROBENZENE (%)		73	88	73

PHASE II

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 NORDHAUS FED. #4-74494

Elevation
Borehole Location Ltr O - S 17 - T 25 R 7
GWL Depth N/A
Logged By D Cesark
Drilled By M Donohue
Date/Time Started 2-18-97 / 1245
Date/Time Completed 11 / 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/HS	Drilling Conditions & Blow Counts
0				BACKFILL TO 12' (HS = 1,520 ppm @ 12')					S/HS	
15	1	18'-20'	12"	SILTY - FINE SAND, SAND SILT MIXTURE, YELLOW-OR. MED. DENSE, IRON + GYPSUM CONCRETIONS, NO HC STAIN/ODOR	SM				0/1	13/5
20				TD = 20'						
40										

Comments: TD = 20' DRC & COLLECTED FROM 18'-20' BGS & SUBMITTED TO LAB FOR BTEX + TPH ANALYSES. BORING GROUTED TO SURFACE. NO GW ENCOUNTD.

Geologist Signature

EPFS

EL PASO FIELD SERVICES
FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	DRC8	970121
MTR CODE | SITE NAME:	74494	Nordhaus Fed #4
SAMPLE DATE | TIME (Hrs):	2/17/97	1315
PROJECT:	PHASE II Drilling 18-20'	
DATE OF TPH EXT. | ANAL.:	2/24/97	2/24/97
DATE OF BTEX EXT. | ANAL.:	2/24/97	2/26/97
TYPE | DESCRIPTION:	VG	Light brown 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)	17.4	MG/KG				
HEADSPACE PID	1	PPM				
PERCENT SOLIDS	94.9	%				

– 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.

Narrative:

DF = Dilution Factor Used

Approved By: _____ INGVZPIT.XLS Date: 3-4-97

EL PASO FIELD SERVICES LABORATORY

EPA METHOD 8020 - BTEX

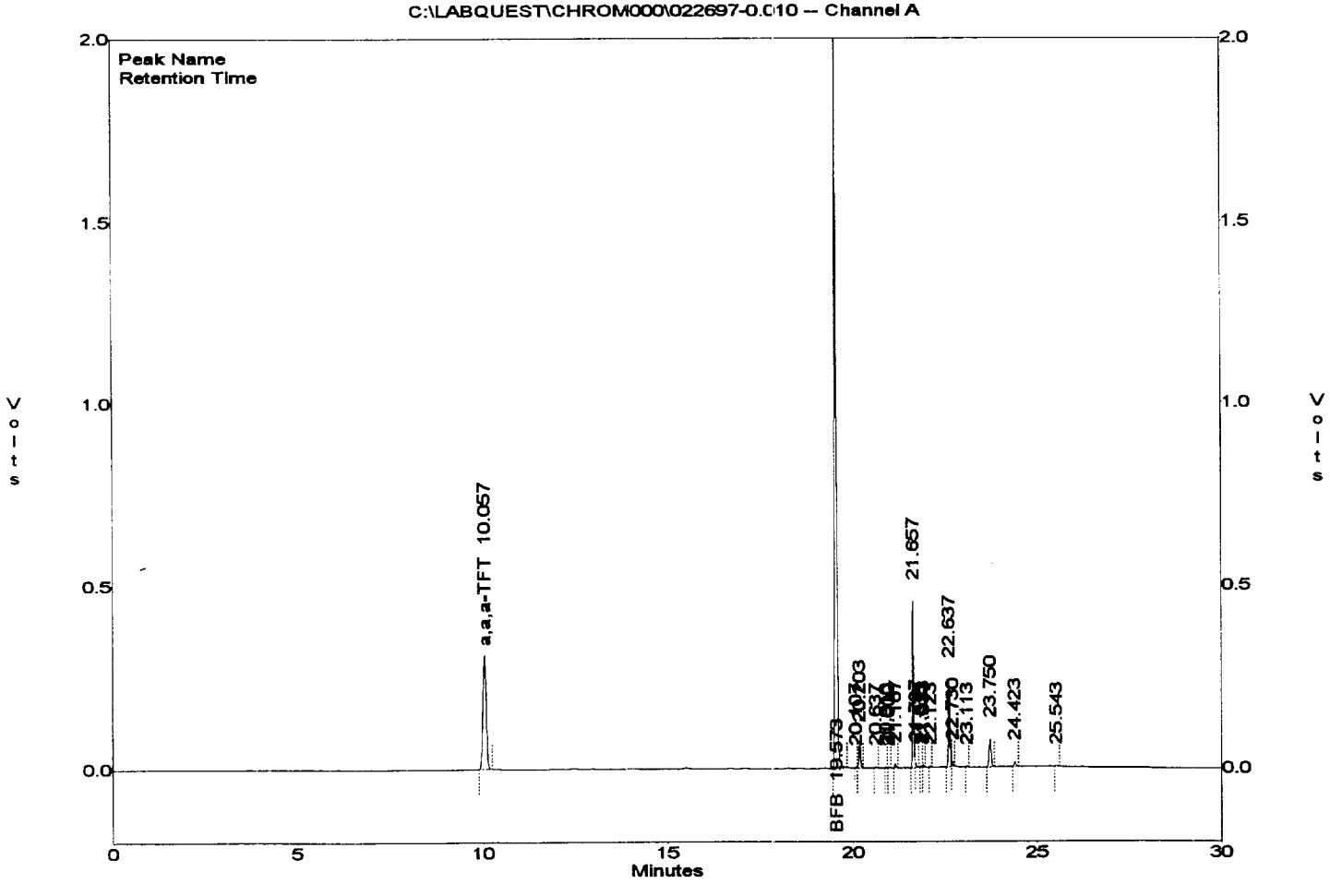
File : C:\LABQUEST\CHROM000\022697-0.010
Method : C:\LABQUEST\METHODS\0-013197.MET
Sample ID : 970121,5.13G,50U
Acquired : Feb 26, 1997 17:01:22
Printed : Feb 26, 1997 17:31:51
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	7.800	0	0.0000
a,a,a-TFT	10.057	2005417	91.7110
TOLUENE	12.470	0	0.0000
ETHYLBENZENE	16.833	0	0.0000
M,P-XYLENES	17.217	0	0.0000
O-XYLENE	18.250	0	0.0000
BFB	19.573	8068887	98.4087

Channel A Group Results

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



BTEX SOIL SAMPLE WORKSHEET

File	970121	**Date Printed**	3/4/97		
Soil Mass (g)	5.13	**Multiplier (L/g)**	0.00097		
Extraction vol. (mL)	10	**CAL FACTOR (Analytical):**	200		
Shot Volume (uL)	50	**CAL FACTOR (Report):**	0.19493		
		DILUTION FACTOR:	1	**Det. Limit**	
Benzene (ug/L)	0.00	**Benzene (mg/Kg):**	**0.000**	0.487	
Toluene (ug/L)	0.00	**Toluene (mg/Kg):**	**0.000**	0.487	
Ethylbenzene (ug/L)	0.00	**Ethylbenzene (mg/Kg):**	**0.000**	0.487	
p & m-xylene (ug/L)	0.00	p & m-xylene (mg/Kg):	0.000	0.975	
o-xylene (ug/L)	0.00	o-xylene (mg/Kg):	0.000	0.487	
		Total xylenes (mg/Kg):	**0.000**	1.462	
		Total BTEX (mg/Kg):	**0.000**		

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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                     *
**********************************************************
*
 97/02/24  14:03
*
*  Sample identification
 970121
*
*  Initial mass of sample, g
 2.090
*
*  Volume of sample after extraction, ml
 28.000
*
*  Petroleum hydrocarbons, ppm
 17.419
*  Net absorbance of hydrocarbons (2930 cm-1)
 0.004
*
*
*
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