

EL PASO FIELD SERVICES
PRODUCTION PIT CLOSURE

NORDHAUS #8
Meter/Line ID - 87038

RECEIVED
JUL 2 1996

SITE DETAILS

Legals - Twn: 25 Rng: 07 Sec: 20 Unit: 1
NMOCD Hazard Ranking: 30
Operator: DUGAN PRODUCTION CORP

Land Type: 3 - Navajo
Pit Closure Date: 07/19/94

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:

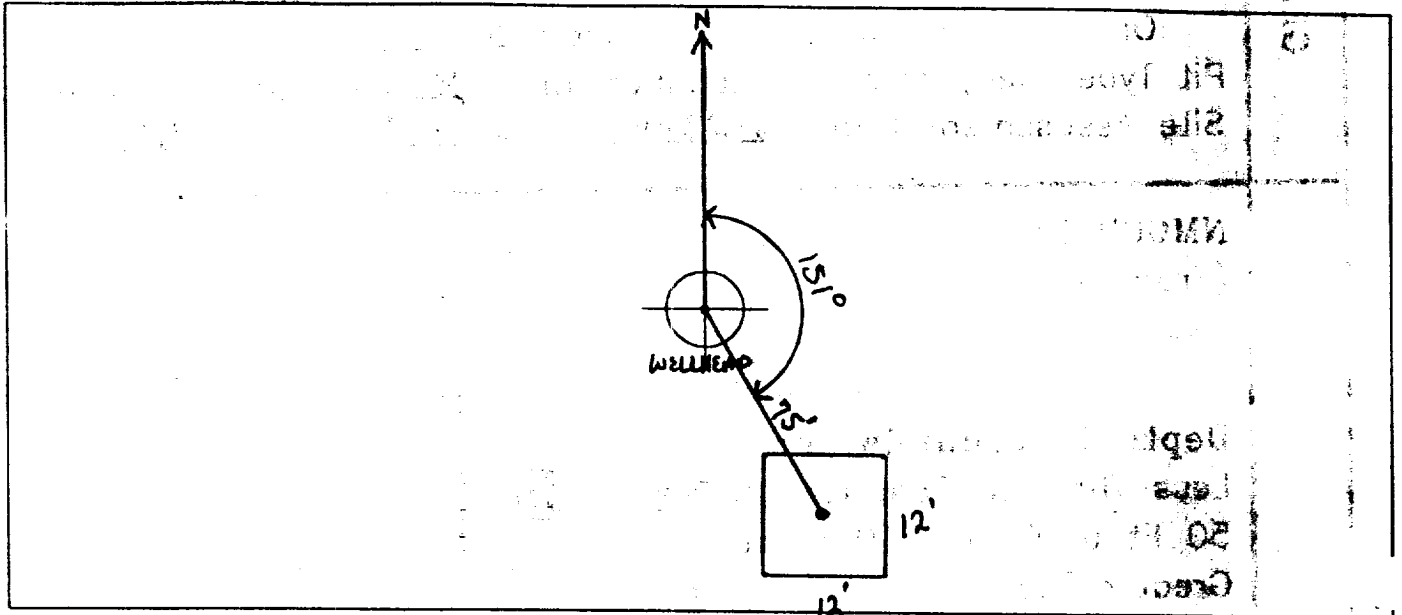
- Discharge to the pit has not occurred in over five years and the pit has been closed for over three years.
- The bulk of the impacted soil was removed during the initial excavation.
- The excavation was backfilled with clean soil and graded to divert precipitation away from the excavation area.
- All 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 | <p>Meter: <u>87038</u> Location: <u>NORDHAUS #8</u></p> <p>Operator #: <u>1862</u> Operator Name: <u>DUGAN PRO. P/L</u> District: <u>BALLARD</u></p> <p>Coordinates: Letter: <u>F</u> Section <u>20</u> Township: <u>25</u> Range: <u>7</u></p> <p>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> | | | | | | | | | | | | | | | | |
| SITE ASSESSMENT | <p>NMOCD Zone: (From NMOCD Maps)</p> <p>Land Type:</p> <table border="0"> <tr> <td>Inside</td> <td><input checked="" type="checkbox"/> (1)</td> <td>BLM</td> <td><input type="checkbox"/> (1)</td> </tr> <tr> <td>Outside</td> <td><input type="checkbox"/> (2)</td> <td>State</td> <td><input type="checkbox"/> (2)</td> </tr> <tr> <td></td> <td></td> <td>Fee</td> <td><input type="checkbox"/> (3)</td> </tr> <tr> <td></td> <td></td> <td>Indian</td> <td><u>ANATOL</u></td> </tr> </table> <p>Depth to Groundwater:</p> <p>Less Than 50 Feet (20 points) <input checked="" type="checkbox"/> (1)</p> <p>50 Ft to 99 Ft (10 points) <input type="checkbox"/> (2)</p> <p>Greater Than 100 Ft (0 points) <input type="checkbox"/> (3)</p> <p>Wellhead Protection Area :</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>Horizontal Distance to Surface Water Body</p> <p>Less Than 200 Ft (20 points) <input type="checkbox"/> (1)</p> <p>200 Ft to 1000 Ft (10 points) <input checked="" type="checkbox"/> (2)</p> <p>Greater Than 1000 Ft (0 points) <input type="checkbox"/> (3)</p> <p>Name of Surface Water Body <u>PALLACHE 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) < 100' (Navajo Pits Only)</p> <p><input type="checkbox"/> (2) > 100'</p> <p>TOTAL HAZARD RANKING SCORE: <u>30</u> POINTS</p> | Inside | <input checked="" type="checkbox"/> (1) | BLM | <input type="checkbox"/> (1) | Outside | <input type="checkbox"/> (2) | State | <input type="checkbox"/> (2) | | | Fee | <input type="checkbox"/> (3) | | | Indian | <u>ANATOL</u> |
| Inside | <input checked="" type="checkbox"/> (1) | BLM | <input type="checkbox"/> (1) | | | | | | | | | | | | | | |
| Outside | <input type="checkbox"/> (2) | State | <input type="checkbox"/> (2) | | | | | | | | | | | | | | |
| | | Fee | <input type="checkbox"/> (3) | | | | | | | | | | | | | | |
| | | Indian | <u>ANATOL</u> | | | | | | | | | | | | | | |
| REMARKS | <p>Remarks : <u>ONLY PIT ON LOCATION. PIT IS DRY. LOCATION IS IN PALLACHE CANYON NEXT TO THE WASH REDLINE AND TOEN (SOUTHWEST) DORON IS INSIDE V.Z.</u></p> | | | | | | | | | | | | | | | | |

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 151° Footage from Wellhead 75'
 b) Length : 12' Width : 12' Depth : 2'



REMARKS :

TOOK PICTURES AT 11:29 A.M.
END DUMP

Completed By:

Robert Thompson

Signature

6-23-94

Date

PHASE I EXCAVATION

FII) PIT REMEDIATION/CLOSURE FORM

| | |
|---------------------------|---|
| GENERAL | <p>Meter: <u>87038</u> Location: <u>NORDHAUS #8</u></p> <p>Coordinates: Letter: <u>I</u> Section <u>20</u> Township: <u>25</u> Range: <u>7</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>7-19-94</u> Area: <u>07</u> Run: <u>41</u></p> |
| FIELD OBSERVATIONS | <p>Sample Number(s): <u>KP #138</u></p> <p>Sample Depth: <u>12'</u> Feet</p> <p>Final PID Reading <u>440</u> PID Reading Depth <u>12'</u> Feet</p> <p style="text-align: center;">Yes No</p> <p>Groundwater Encountered <input type="checkbox"/> (1) <input checked="" type="checkbox"/> (2) Approximate Depth _____ Feet</p> |
| CLOSURE | <p>Remediation Method :</p> <p>Excavation <input checked="" type="checkbox"/> (1) Approx. Cubic Yards <u>40</u></p> <p>Onsite Bioremediation <input type="checkbox"/> (2)</p> <p>Backfill Pit Without Excavation <input type="checkbox"/> (3)</p> <p>Soil Disposition:</p> <p>Envirotech <input checked="" type="checkbox"/> (1) <input type="checkbox"/> (3) Tierra</p> <p>Other Facility <input type="checkbox"/> (2) Name: _____</p> <p>Pit Closure Date: <u>7-19-94</u> Pit Closed By: <u>B.E.I</u></p> |
| REMARKS | <p>Remarks : <u>SOME LINE MARKERS. STARTED REMEDIATING TO 12'</u> <u>SOIL TURNED DARK GRAY WITH A SMELL. AT 12' SOIL</u> <u>STILL THE SAME. CLOSED PIT</u></p> |
| | <p>Signature of Specialist: <u>Kelly Padella</u></p> |



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

| | | |
|----------------------------|----------|-------------|
| | Field ID | Lab ID |
| SAMPLE NUMBER: | KP138 | 945710 |
| MTR CODE SITE NAME: | 87038 | Nordhaus #8 |
| SAMPLE DATE TIME (Hrs): | 7/19/94 | 1230 |
| PROJECT: | Phase I | |
| 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 sand |

Field Remarks:

RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|----------------|--------|-------|------------|---|------|-------|
| | | | DF | Q | M(g) | V(ml) |
| BENZENE | <0.5 | MG/KG | 20 | D | | |
| TOLUENE | <0.5 | MG/KG | 20 | D | | |
| ETHYL BENZENE | 1.10 | MG/KG | 20 | D | | |
| TOTAL XYLENES | 12.0 | MG/KG | 20 | D | | |
| TOTAL BTEX | 13.1 | MG/KG | | | | |
| TPH (418.1) | 664 | MG/KG | | | 2.00 | 28 |
| HEADSPACE PID | 440 | PPM | | | | |
| PERCENT SOLIDS | 91.2 | % | | | | |

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

The Surrogate Recovery was at 81.0 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:

INGVZPIT.XLS

Date:

8/12/94



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil

SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|----------------------------|----------|------------|
| SAMPLE NUMBER: | KP 138 | 945710 |
| MTR CODE SITE NAME: | 87038 | N/A |
| SAMPLE DATE TIME (Hrs): | 7-19-94 | 1230 |
| 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 sand |

REMARKS:

RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|----------------|--------|--------|------------|---|------|-------|
| | | | DF | Q | M(g) | V(ml) |
| BENZENE | 40.5 | MG/KG | 20 | | | |
| TOLUENE | 40.5 | MG/KG | 20 | | | |
| ETHYL BENZENE | 1.1 | MG/KG | 20 | | | |
| TOTAL XYLENES | 12 | MG/KG | 20 | | | |
| TOTAL BTEX | 14 | MG/KG | | | | |
| TPH (418.1) | 664 | MG/KG | | | 2.00 | 28 |
| HEADSPACE PID | 440 | PPM | | | | |
| PERCENT SOLIDS | 91.19 | 91.2 % | | | | |

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

The Surrogate Recovery was at 81 % for this sample All QA/QC was acceptable.

Narrative:

ATI results attached.

DF = Dilution Factor Used

2.8

Date:

8/12/94

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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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13:48

1 Sample identification

00000

2 Initial mass of sample, g

0.000

3 Volume of sample after extraction, ml

75.000

4 Petroleum hydrocarbons, ppm

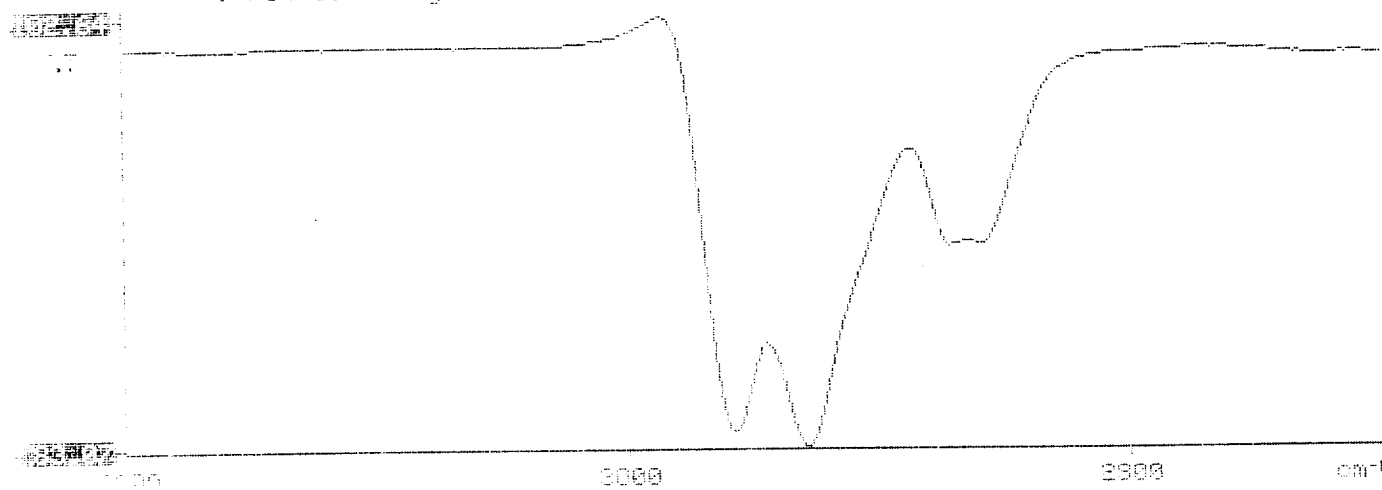
663.854

5 Net absorbance of hydrocarbons (2930 cm⁻¹)

0.055

6 Petroleum hydrocarbons spectrum

13:49





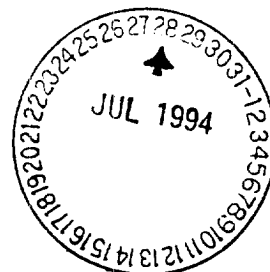
Analytical **Technologies**, Inc.

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

| 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 |
| ETHYLEENZENE | | | 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

PHILIP ENVIRONMENTAL SERVICES INC.

4000 Monroe Road

Farmington, New Mexico 87401

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

Borehole # BH-1

Well #

Page 1 of



Project Name

EPFS GW PITS

Project Number

17520

Phase

6001.77

Project Location

NORDHAUS #8-87038

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

Elevation

Borehole Location

Ltr I - S20 T25 R7

GWL Depth

N/A

Logged By

D Cesark

Drilled By

M Donohue

Date/Time Started

2-18-97 / 1430

Date/Time Completed

11 / 1530

| 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 | | | | | | |
| 5 | | | | TO | | | | | | |
| 10 | | | | 12' | | | | | | |
| 15 | 1 | 13'-15' | | (HS = 440ppm @ 12') SILTY-FINE SAND, SAND-SILT MIXTURE, YELLOW-ORANGE, FE-STAIN, SLT HC ODOR & HC STAIN. | SM | | | | 2/178 | 1440 |
| 20 | 2 | 18'-20' | | WELL-GRADED, MED. GRAVELLY SAND, SOME FINES, YELL-OR. | SW | | | | 1/26 | 1450 |
| 25 | | | | TD = 20' | | | | | | |
| 30 | | | | | | | | | | |
| 35 | | | | | | | | | | |
| 40 | | | | | | | | | | |

Comments:

TD=20', DRC 9 COLLECTED FROM 18'-20' BGS + SUBMITTED TO LAB
FOR BTEX & TPH ANALYSES. BORING GRouted TO SURFACE. NO GW ENCOUNTER

Geologist Signature



EL PASO FIELD SERVICES
FIELD SERVICES LABORATORY

ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

| | | |
|----------------------------|---------------------------------|-----------------------|
| | Field ID | Lab ID |
| SAMPLE NUMBER: | DRC9 | 970122 |
| MTR CODE SITE NAME: | 87038 | Nordhaus #8 |
| SAMPLE DATE TIME (Hrs): | 2/17/97 | 1450 |
| 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 | Brown/red 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) | 21.7 | MG/KG | | | | |
| HEADSPACE PID | 26 | PPM | | | | |
| PERCENT SOLIDS | 92.9 | % | | | | |

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

The Surrogate Recovery was at 97.9 % 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

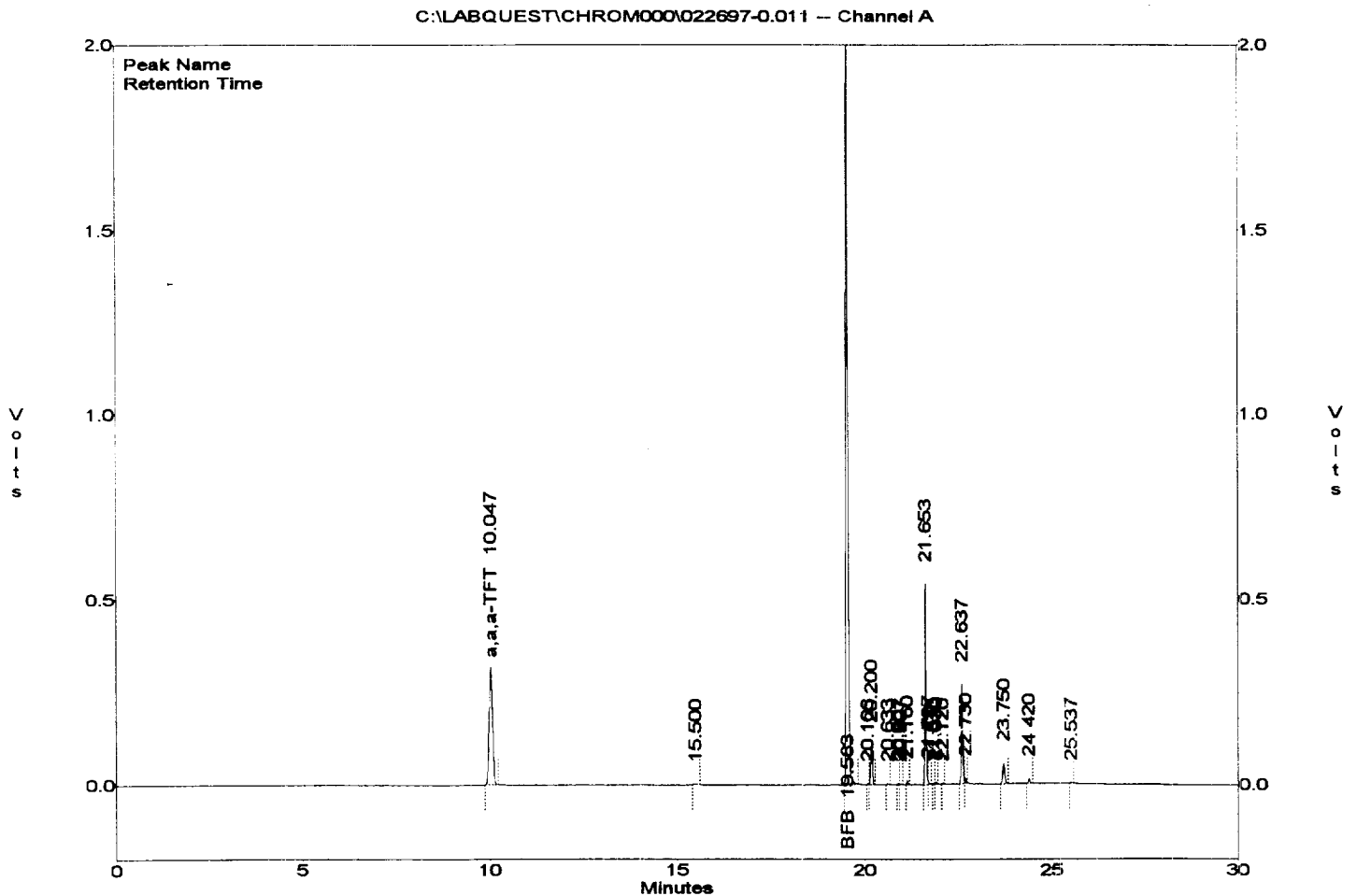
File : C:\LABQUEST\CHROM000\022697-0.011
Method : C:\LABQUEST\METHODS\0-013197.MET
Sample ID : 970122,5.23G,50U
Acquired : Feb 26, 1997 17:42:57
Printed : Feb 26, 1997 18:13:26
User : MARLON

Channel A Results

| COMPONENT | RET TIME | AREA | CONC (ug/L) |
|--------------|----------|---------|-------------|
| BENZENE | 7.800 | 0 | 0.0000 |
| a,a,a-TFT | 10.047 | 2003083 | 91.6043 |
| 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 | 19.563 | 8030991 | 97.9466 |

Channel A Group Results

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



BTEX SOIL SAMPLE WORKSHEET

| | | | | | |
|----------------------|---|--------|--------------------------|---|---------|
| File | : | 970122 | Date Printed | : | 3/4/97 |
| Soil Mass (g) | : | 5.23 | Multiplier (L/g) | : | 0.00096 |
| Extraction vol. (mL) | : | 10 | CAL FACTOR (Analytical): | : | 200 |
| Shot Volume (uL) | : | 50 | CAL FACTOR (Report): | : | 0.19120 |

| | | | DILUTION FACTOR: | 1 | Det. Limit |
|---------------------|---|------|------------------------|-------|------------|
| Benzene (ug/L) | : | 0.00 | Benzene (mg/Kg): | 0.000 | 0.478 |
| Toluene (ug/L) | : | 0.00 | Toluene (mg/Kg): | 0.000 | 0.478 |
| Ethylbenzene (ug/L) | : | 0.00 | Ethylbenzene (mg/Kg): | 0.000 | 0.478 |
| p & m-xylene (ug/L) | : | 0.00 | p & m-xylene (mg/Kg): | 0.000 | 0.956 |
| o-xylene (ug/L) | : | 0.00 | o-xylene (mg/Kg): | 0.000 | 0.478 |
| | | | Total xylenes (mg/Kg): | 0.000 | 1.434 |
| | | | 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                                *
*                               *
*****

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* 97/02/24 14:04
*
* Sample identification
* 970122
*
* Initial mass of sample, g
* 2.060
*
* Volume of sample after extraction, ml
* 28.000
*
* Petroleum hydrocarbons, ppm
* 21.653
* Net absorbance of hydrocarbons (2930 cm-1)
* 0.004
*
*
*

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