Dennis L. Foust

DEPUTY OIL & GAS INSPECTOR

DEC 21 1995

OK

# EL PASO FIELD SERVICES
# PRODUCTION PIT CLOSURE

Approved

**JOHNSON GAS COM D#1E**
**Meter/Line ID - 94322**

RECEIVED
JUL 2 1998
OIL CON. DIV.

## SITE DETAILS

**Legals - Twn:** 30 **Rng:** 12 **Sec:** 15 **Unit:** E
**NMOCD Hazard Ranking:** 10 **Land Type:** 2 - Federal
**Operator:** AMOCO PRODUCTION COMPANY **Pit Closure Date: 04/26/94**

## 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: 94322 Location: JOHNSON GAS COM D #1E

Operator #: _____ Operator Name: M.R. SCHALK P/L District: KUTZ

Coordinates: Letter: E Section 15 Township: 30 Range: 12

Or Latitude _____ Longitude _____

Pit Type: Dehydrator X Location Drip: ___ Line Drip: ___ Other: ___

Site Visit Date: 3.31.94 Run: 02 63

## SITE ASSESSMENT

**NMOCD Zone:** (From NMOCD Maps)
Inside Vulnerable Zone ☒
Outside ☐

**Land Type:**
BLM ☒
State ☐
Fee ☐
Indian _____

**Depth to Groundwater**
Less Than 50 Feet (20 points) ☐
50 Ft to 99 Ft (10 points) ☐
Greater Than 100 Ft (0 points) ☒

**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? ☐ YES (20 points) ☒ NO (0 points)

**Horizontal Distance to Surface Water Body**
Less Than 200 Ft (20 points) ☐
200 Ft to 1000 Ft (10 points) ☐
Greater Than 1000 Ft (0 points) ☒
Name of Surface Water Body _____
(Surface Water Body : Perennial Rivers,Major Wash,Streams,Creeks, Irrigation Canals,Ditches,Lakes,Ponds)

**TOTAL HAZARD RANKING SCORE:** 0 **POINTS**

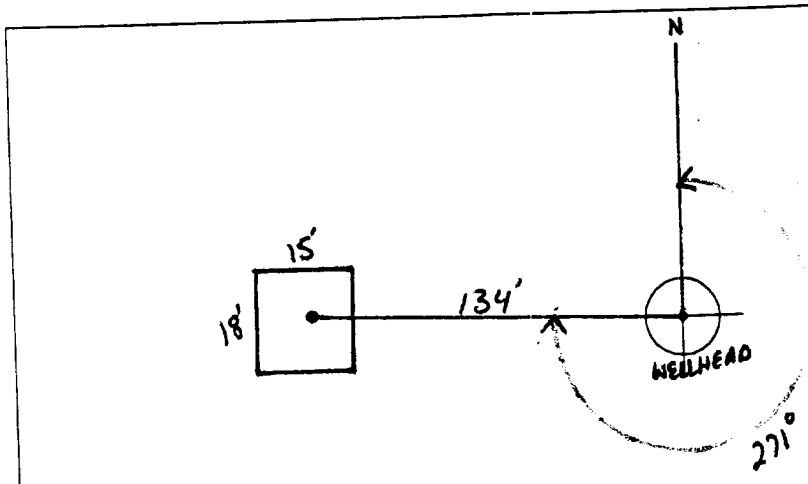
## REMARKS

Remarks : TWO PITS ON LOCATION. WILL CLOSE ONLY ONE. LOCATION IS UP ON A HILL IN A SEMI-RESIDENTIAL AR
PIT IS DRY.

ORIGINAL PIT LOCATION

## ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 271° Footage to Wellhead 134'
b) Degrees from North _____ Footage to Dogleg _____
Dogleg Name _____
c) Length : 18' Width : 15' Depth : 3'




REMARKS

Remarks :
STARTED TAKING PICTURES AT 12:23 P.M.
END DUMP

Completed By:
Robert Thompson
Signature

3-31-94
Date

(SP31908) C

4-22-94

# FIELD PIT SITE ASSESSMENT FORM

## GENERAL

Meter:

Operator:

Coordinates:

Or:

Pit Type:

Pit Status:

## SITE ASSESSMENT

NMOCD Zone:

(From NMOCD Maps) Inside [ ] (1) Feet

**Depth to Groundwater**

Less Than 50 Feet (20 Points) [ ] (3)

50 Ft to 99 Ft (10 Points) [ ] (2)

Greater Than 100 Ft (0 Points) [ ] (1)

**Wellhead Protection Area**

Is it less than 1000 ft from a Water Source, or Less than 200 ft from a Private Domestic Water Source? [ ] (1) Yes (20 Points) [ ] No

**Distance to Surface Water Body**

Less Than 200 Ft (20 Points) [ ] (3)

200 Ft to 1000 Ft (10 Points) [ ] (2)

Greater Than 1000 Ft (0 Points) [ ] (1)

Name of Surface Water Body:

(Surface Water Body - Perennial Rivers, Ponds, Arroyo, Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)

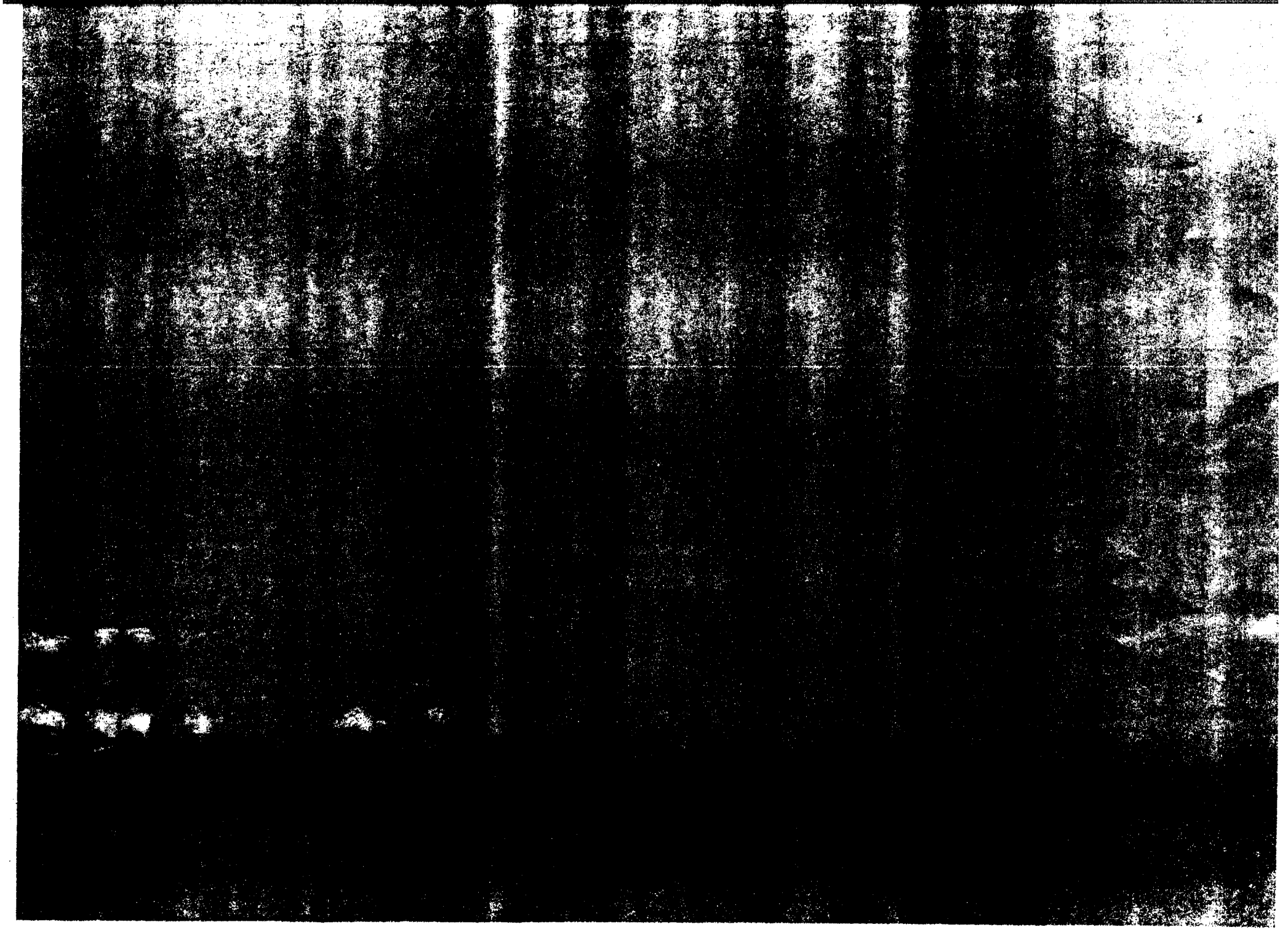
Distance to Nearest Ephemeral Stream: [ ] (1) < 100 (Navajo Lands Only)

[ ] (2) > 100

**TOTAL HAZARD RANKING SCORE: 10 POINTS**

## REMARKS

Remarks:



# PHASE I
# EXCAVATION

# FIELD PIT REMEDIATION/CLOSURE FORM

**GENERAL**

Meter: 94322 Location: Johnson Gas Com D #1E

Coordinates: Letter: E Section 15 Township: 30 Range: 12

Or Latitude _____ Longitude _____

Date Started : 4-26-93 Area: 02 Run: 63

**FIELD OBSERVATIONS**

Sample Number(s): 945008 KD 31 _____ _____ _____

Sample Depth: 3' Feet

Final PID Reading 272 ppm PID Reading Depth 3' Feet

Yes No

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

**CLOSURE**

Remediation Method :

Excavation ☐ (1) Approx. Cubic Yards 0

Onsite Bioremediation ☐ (2)

Backfill Pit Without Excavation ☒ (3)

Soil Disposition:

Envirotech ☐ (1) ☒ (3) Tierra

Other Facility ☐ (2) Name: _____

Pit Closure Date: 4-26-94 Pit Closed By: BEI

**REMARKS**

Remarks : Bottom of Pit was Pure Sandstone under approximately 6" of soil, Bottom of Pit was Approximately 3' Below Ground surface Took PID Reading closed Pit

Signature of Specialist: Kenny Weaver

(SP3191) 04/07/94

El Paso Natural Gas Company

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

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | KD31 | 945008 |
| MTR CODE \| SITE NAME: | 94322 | JOHNSON GAS COM D #12 |
| SAMPLE DATE \| TIME (Hrs): | 26-Apr-94 | 805 |
| PROJECT: | Phase I Excavation | |
| DATE OF TPH EXT. \| ANAL.: | 4/28/94 | 4/29/94 |
| DATE OF BTEX EXT. \| ANAL.: | 5/6/94 | 5/6/94 |
| TYPE \| DESCRIPTION: | VG | Brown Coarse Sand |

Field Remarks: _____

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|---|---|---|---|---|---|---|
| | | | DF | Q | M(g) | V(ml) |
| BENZENE | <0.20 | MG/KG | | | | |
| TOLUENE | 1.09 | MG/KG | | | | |
| ETHYL BENZENE | 0.73 | MG/KG | | | | |
| TOTAL XYLENES | 8.05 | MG/KG | | | | |
| TOTAL BTEX | 10.1 | MG/KG | | | | |
| TPH (418.1) | 9,560 | MG/KG | | | 1.09 | 28.0 |
| HEADSPACE PID | 272 | PPM | | | | |
| PERCENT SOLIDS | 92.2 | % | | | | |

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

The Surrogate Recovery was at 68.4 % for this sample All QA/QC was acceptable.

Narrative:

DF = Dilution Factor Used

Approved By: _____

Date: original: 5/21/94 re-print: 4/14/98

El Paso Natural Gas Company

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

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | KD31 | 945008 |
| MTR CODE \| SITE NAME: | 94322 | N/A |
| SAMPLE DATE \| TIME (Hrs): | 4/26/94 | 0805 |
| SAMPLED BY: | N/A | |
| DATE OF TPH EXT. \| ANAL.: | 4/28/94 | 4/29/94 |
| DATE OF BTEX EXT. \| ANAL.: | | |
| TYPE \| DESCRIPTION: | VG | Brown Coarse Sand |

REMARKS: _____

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS DF | Q | M(g) | V(ml) | |
|---|---|---|---|---|---|---|---|
| BENZENE | | MG/KG | | | | | |
| TOLUENE | | MG/KG | | | | | |
| ETHYL BENZENE | | MG/KG | | | | | |
| TOTAL XYLENES | | MG/KG | | | | | IDF |
| [redacted] | | MG/KG | 1.177 | | .51 | 30 | 20 |
| [redacted] | 9560 | MG/KG | | | 1.09 | 28 | |
| HEADSPACE PID | 272 | PPM | | | | | |
| [redacted] SOLIDS | 92.2 | % | | | | | |

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

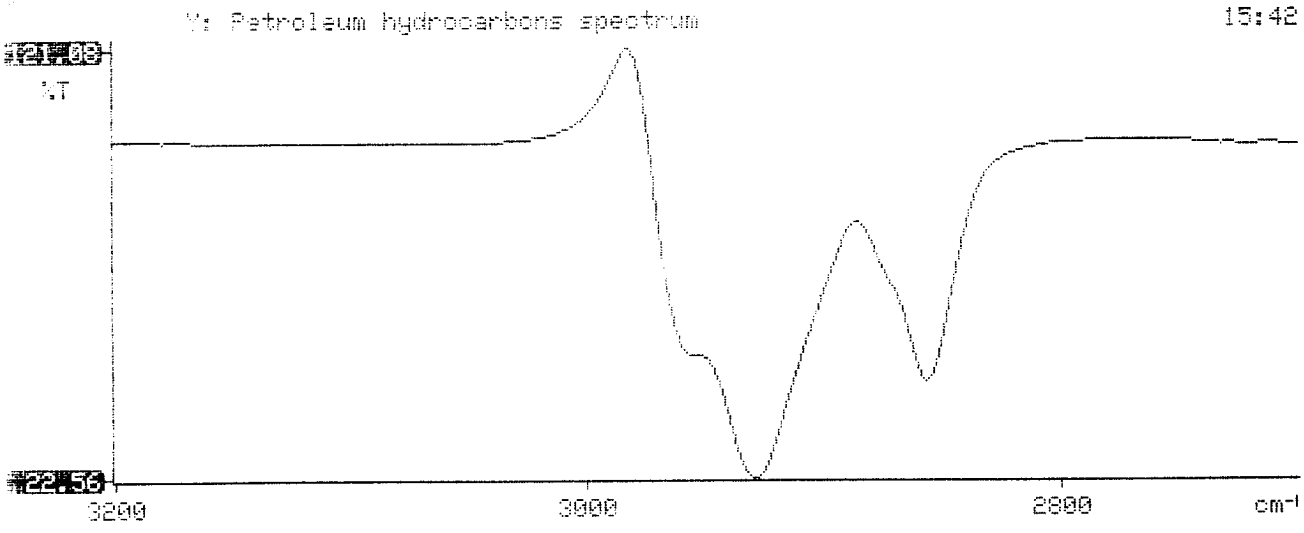
The Surrogate Recovery was at _____ % for this sample All QA/QC was acceptable.

Narrative:

DF = Dilution Factor Used

Approved By: _____ Date: _____

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

 94/04/28  15:42

  Sample identification
 745002

  Initial mass of sample, g
 1.090

  Volume of sample after extraction, ml
 28.000

  Petroleum hydrocarbons, ppm
 9559.568
  Net absorbance of hydrocarbons (2930 cm-1)
 0.646
```



[illegible] John Lambdin
[illegible] Sample

[illegible] May 16 1994 [illegible]
[illegible] May 16 1994 [illegible]
[illegible] May 16 1994 [illegible]

[illegible] Dilution [illegible]

EXTERNAL STANDARD ( AREA )

| RT | Area | BC | ExpRT | RF | | ug/L | Name |
|---|---|---|---|---|---|---|---|
| 10.180 | 152279 | T | | 0.00000e+0 | | 0.0000 | Unknown |
| 10.220 | 123407 | T | | 0.00000e+0 | | 0.0000 | Unknown |
| 10.300 | [illegible] | | | 0.00000e+0 | | 0.0000 | Unknown |
| 11.180 | 538760 | | | 0.00000e+0 | | 0.0000 | Unknown |
| | | | 11.442 | 7.84227e-6 | <0.2 | | Benzene |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | 57840 | V | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | 178428 | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | 100960 | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | | [illegible] | [illegible]e-6 | | [illegible] | T a,a,a TFT |
| [illegible] | [illegible] | | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | V | [illegible] | 5.82700e-6 | 3.9 | 19.2815 | Toluene |
| [illegible] | 72361 | V | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | 704907 | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | | | 0.00000e+0 | | 0.0000 | Unknown |
| | | | [illegible] | ~~[illegible]e-6~~ → | 2.57 | | Ethylbenzene x5 = 12. |
| [illegible] | [illegible] | T | ~~[illegible]~~ | ~~[illegible]~~ → | 23.21 | ~~[illegible]~~ | m & p-Xylene x5 = 116.1 |
| [illegible] | [illegible] | | 6.27948e-6 ← | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | 1019143 | T | ~~[illegible]~~ | ~~[illegible]e-6~~ → | 5.24 | ~~[illegible]~~ | o-Xylene x5 = 26.2 |
| [illegible] | 375771 | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| 21.103 | 1925440 | T | | 0.00000e+0 | | 0.0000 | Unknown |
| 21.107 | 196609 | T | ~~[illegible]~~ | ~~[illegible]e-6~~ → | 68.4 | ~~[illegible]~~ | BFB |
| 21.170 | 18953434 | T | 5.43709e-6 ← | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | 1405747 | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | V | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | 161500 | V | | 0.00000e+0 | | 0.0000 | Unknown |
| [illegible] | 956211 | | | 0.00000e+0 | | 0.0000 | Unknown |

5/16/94

10.130
10.320
10.606
11.162
12.353
13.023
13.392
13.577
13.847 a,a,a TFT
15.227
15.608
15.870
16.102
16.417 Toluene
19.157
19.472
19.605
19.807
20.113 m & p-Xylene
20.282
20.495
20.668 o-Xylene
20.918
21.107 BFB
21.296
21.818
22.306
22.665
22.805
23.086
25.0
20.0
15.0
10.0

John Lambdin
Type : Sample

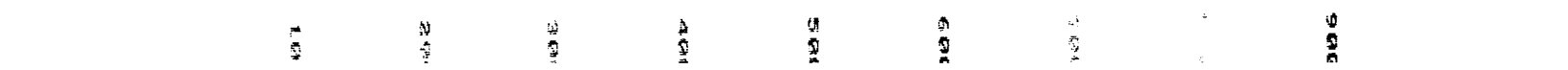
Method(6): BETX
Method(6): BETX
Method(6): BETX

Dilution: 5.00000e+0

INTERNAL STANDARD ( AREA )

| PT | Area | BC | ExpRT | RF | ug/L | Name |
|---|---|---|---|---|---|---|
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | 3463248 | V | 11.521 | 2.14583e-4 | 3715.7656 | Benzene |
| | | | | 0.00000e+0 | 0.0000 | Unknown |
| | | | 14.070 | 0.00000e+0 | | a,a,a TFT |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | 16.470 | 4.10554e-5 | 0.0513 | Toluene |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | V | | 0.00000e+0 | 0.0000 | Unknown |
| | | | 20.127 | 2.22220e-4 | | Ethylbenzene |
| | | T | 20.290 | 1.57102e-4 | 105.3040 | m & p-Xylene |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | 20.748 | 1.85500e-4 | 55.8365 | o-Xylene |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | 21.230 | 5.47670e-7 | 0.7788 | 3FB |
| | | V | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | V | | 0.00000e+0 | 0.0000 | Unknown |
| | | | | 0.00000e+0 | 0.0000 | Unknown |

(BETX__12.D02) mV

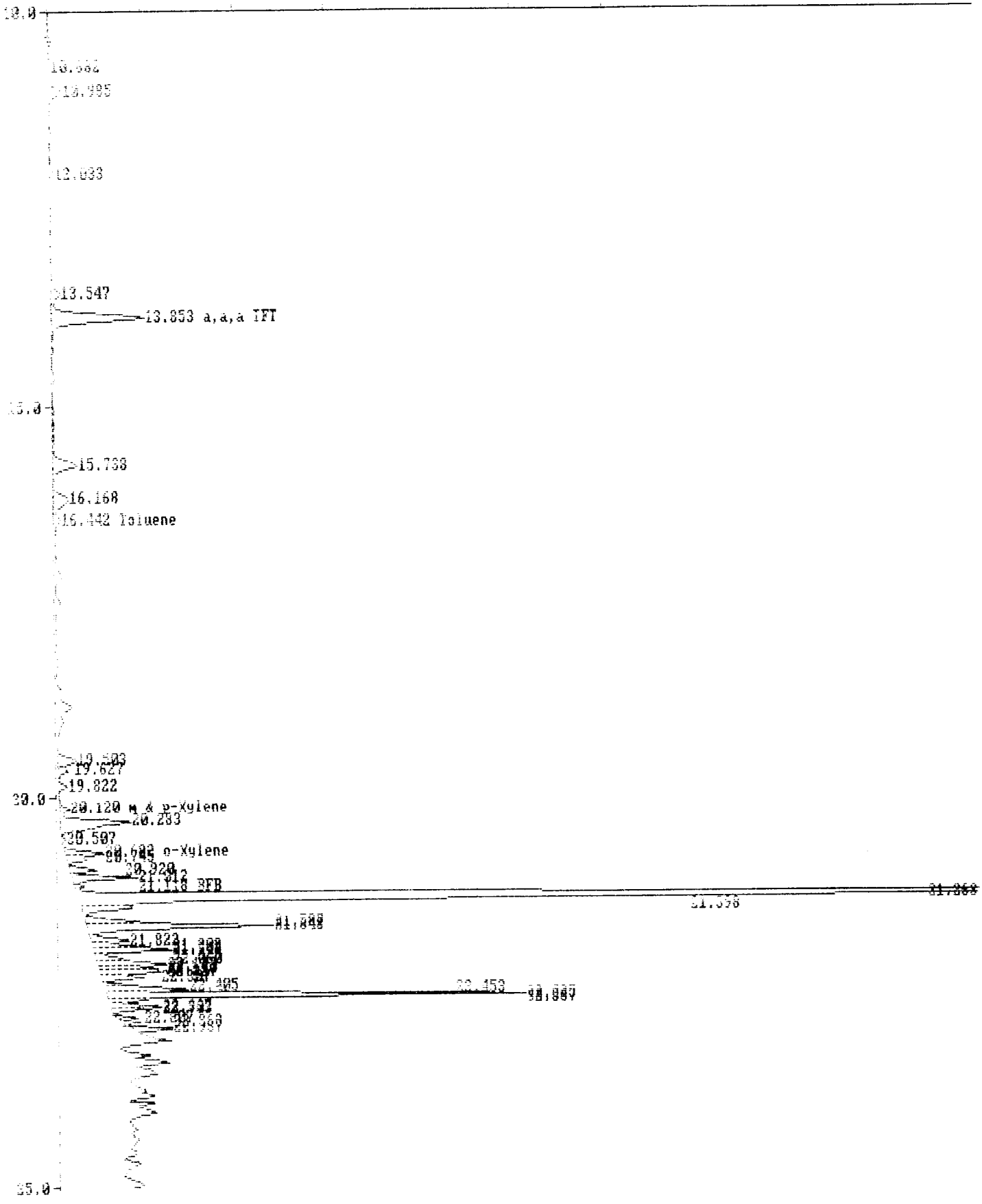



Benzene
13.043
16.133
16.413 Toluene
19.457
19.613
19.810
o-Xylene
21.672
22.525
22.665
22.947

```
       BETX__11.D01               S45008 1/20                    John Lambain
                                                                 Type : Sample
            [illegible]
Injection   : 10:01:04 May 16 1994   Meth(A): BETX      [ 14:42:29 May 16 1994 ]
Integration : 10:01:04 May 16 1994   Meth(A): BETX      [ 14:42:29 May 16 1994 ]
Report      : 10:21:42 May 16 1994   Meth(A): BETX      [ 14:42:29 May 16 1994 ]

Sample Amt : 1.00000e+0     Dilution: 2.00000e+1

                      EXTERNAL STANDARD ( AREA )

  RT           Area  BC   ExpRT      RF                        ug/L     Name

[illegible]    33155 T               0.00000e+0                0.0000   Unknown
 10.085       108114                 0.00000e+0                0.0000   Unknown
                          11.448     7.04227e-6   <0.2                  Benzene
 12.133        42375                 0.00000e+0                0.0000   Unknown
[illegible]   154145 T               0.00000e+0                0.0000   Unknown
[illegible] [illegible] T 15.382     1.00271e-5             1641.8528   ? a,a,a TFT
[illegible]   376700 V               0.00000e+0                0.0000   Unknown
[illegible] [illegible] T            0.00000e+0                0.0000   Unknown
[illegible]    72204 T  [illegible]  ?.39905e-6   <0.2    ~~[illegible]~~ Toluene
[illegible] [illegible] T            0.00000e+0                0.0000   Unknown
[illegible] [illegible] T            0.00000e+0                0.0000   Unknown
[illegible]    70222 V               0.00000e+0                0.0000   Unknown
                        ~~[illegible]~~ ~~?.27175e-6~~ → 0.73            Ethylbenzene x20 14.6
[illegible]    57817 T  ~~[illegible]~~ ~~?.44289e-6~~ → 6.1  ~~???.4193~~ m & p-Xylene x20 122.3
[illegible]   170548 T  6,27948e-6 ← 0.00000e+0                0.0000   Unknown
[illegible]    33511 V               0.00000e+0                0.0000   Unknown x20
[illegible]   227260 T  ~~[illegible]~~ ~~?.?1?1?e-?~~ → 2.20  ~~?.7156~~ o-Xylene 44.0
[illegible]   203846 T  6,53037e-6 ← 0.00000e+0                0.0000   Unknown
[illegible]   216647 T               0.00000e+0                0.0000   Unknown
[illegible]   141957 -6,             0.00000e+0                0.0000   Unknown
 21.118        50350 T  ~~21.148~~ ~~2.33749e-6~~ → 76.9  ~~?.????~~  BFB
[illegible] [illegible] T 2.55618e-6 ← 0.00000e+0              0.0000   Unknown
[illegible]   198247 T               0.00000e+0                0.0000   Unknown
[illegible]   200910 T               0.00000e+0                0.0000   Unknown
[illegible]  1555406 T               0.00000e+0                0.0000   Unknown
[illegible]   204040 T               0.00000e+0                0.0000   Unknown
[illegible]   242058 T               0.00000e+0                0.0000   Unknown
[illegible]   491570 T               0.00000e+0                0.0000   Unknown
 22.160       231274 T               0.00000e+0                0.0000   Unknown
[illegible]   370500 T               0.00000e+0                0.0000   Unknown
[illegible]   323423 T               0.00000e+0                0.0000   Unknown
[illegible]   190681 T               0.00000e+0                0.0000   Unknown
[illegible]   270210 T               0.00000e+0                0.0000   Unknown
[illegible]   155800 T               0.00000e+0                0.0000   Unknown
[illegible]   561030 T               0.00000e+0                0.0000   Unknown
[illegible]  2123900 T               0.00000e+0                0.0000   Unknown
[illegible] [illegible] T            0.00000e+0                0.0000   Unknown
[illegible] [illegible] T            0.00000e+0                0.0000   Unknown
[illegible] [illegible] V            0.00000e+0                0.0000   Unknown
[illegible] [illegible] T            0.00000e+0                0.0000   Unknown
[illegible]    36700 V               0.00000e+0                0.0000   Unknown
[illegible]   175143                 0.00000e+0                0.0000   Unknown
```

5/16/9

(BETX__11.D01)   mV


10.0
13.547
13.853 a,a,a TFT
15.0
15.738
16.168
16.442 Toluene
19.627
19.822
20.0
20.120 m & p-Xylene
20.283
20.597
o-Xylene
21.118 BFB
21.823
20.0
35.0

[illegible] 49008 1/20 John Lambdin
Type : Sample

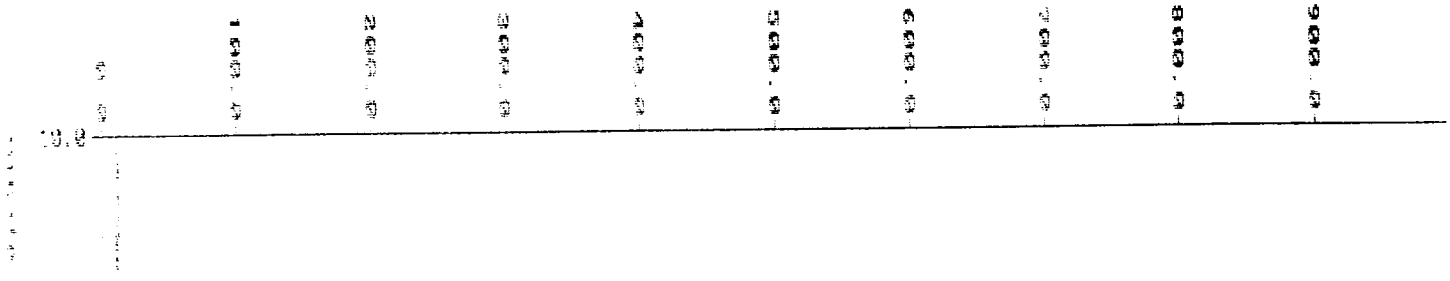
[illegible] Meth(B): BETX : 12:44:28 May 16 1994 1
[illegible] Meth(B): BETX : 13:44:29 May 16 1994 1
[illegible] Meth(B): BETX : 17:44:29 May 16 1994 1

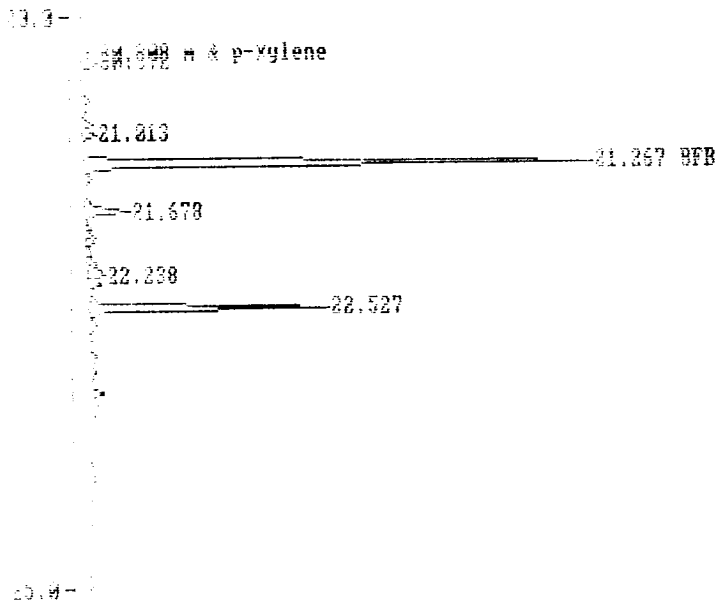
[illegible] Wt : 1.00000e+0 Dilution: 1.00000e+1

EXTERNAL STANDARD ( AREA )

| | Area | BC | ExpRT | RF | ug/L | Name |
|---|---|---|---|---|---|---|
| | | | 11.521 | 2.16475e-4 | | Benzene |
| [illegible] | [illegible] | | | 0.00000e+0 | 0.0000 | Unknown |
| | | | 14.070 | 0.00000e+0 | | a,a,a TFT |
| 15.170 | 30330 | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | | 16.470 | 2.12004e-4 | | Toluene |
| | | | 20.107 | 2.22330e-4 | | Ethylbenzene |
| [illegible] | 15121 | T | 20.150 | 2.31047e-5 | -18.1521 | m & p-Xylene |
| [illegible] | 905% | T | | 0.00000e+0 | 0.0000 | Unknown |
| | | | 21.717 | 2.10710e-4 | | o-Xylene |
| [illegible] | [illegible] | T | | 0.00000e+0 | 0.0000 | Unknown |
| [illegible] | [illegible] | T | 31.511 | 2.31309e-6 | 129.8998 | BFB |
| [illegible] | [illegible] | T | | 0.00000e+0 | 0.0000 | Unknown |
| [illegible] | 34720 | T | | 0.00000e+0 | 0.0000 | Unknown |
| [illegible] | [illegible] | T | | 0.00000e+0 | 0.0000 | Unknown |

(BETX__11.062) mV





m & p-xylene
21.813
21.867 BFB
21.678
22.238
22.527

Analytical Technologies, Inc.

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

ATI I.D. **405313**


May 13, 1994

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

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

On **05/03/94**, 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.

EPA Method 8015 analysis was added on 05/05/94 for sample 945008 per Stacy Sendler.

The matrix spike/spike duplicate data from the samples extracted on 05/05/94 is reported twice reflecting quantification using both the internal standard and external standard protocols. Both protocols were employed to quantify the samples submitted for this project.

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:jd

Enclosure

Analytical Technologies, Inc.

# GAS CHROMATOGRAPHY RESULTS

TEST : BTEX, MTBE (EPA 8020)

CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 405313

PROJECT # : 24324

PROJECT NAME : PIT CLOSURE

| SAMPLE ID. # | CLIENT I.D. | MATRIX | DATE SAMPLED | DATE EXTRACTED | DATE ANALYZED | DIL. FACTOR |
|---|---|---|---|---|---|---|
| 01 | 945008 | NON-AQ | 04/26/94 | 05/09/94 | 05/10/94 | 1 |
| 02 | 945009 | NON-AQ | 04/26/94 | 05/09/94 | 05/10/94 | 20 |
| 03 | 945010 | NON-AQ | 04/26/94 | 05/09/94 | 05/10/94 | 20 |

| PARAMETER | UNITS | EPNG | 01 | 02 | 03 |
|---|---|---|---|---|---|
| BENZENE | MG/KG | < 0.2 | <0.025 | <0.50 | 4.1 |
| TOLUENE | MG/KG | 1.09 | <0.025 | 3.6 | 88 |
| ETHYLBENZENE | MG/KG | 0.73 | 0.14 | 3.7 | 32 |
| TOTAL XYLENES | MG/KG | 8.05 | 3.9 | 58 | 380 |
| METHYL-t-BUTYL ETHER | MG/KG | N/A | <0.12 | <2.4 | 2.5 |
| SURROGATE: | | | | | |
| BROMOFLUOROBENZENE (%) | | | 170* | 84 | 187* |

*OUTSIDE ATI QUALITY CONTROL LIMITS DUE TO MATRIX INTERFERENCE

Analytical Technologies, Inc.

# GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015 MODIFIED

CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 405313

PROJECT # : 24324

PROJECT NAME : PIT CLOSURE

| SAMPLE ID. # | CLIENT I.D. | MATRIX | DATE SAMPLED | DATE EXTRACTED | DATE ANALYZED | DIL. FACTOR |
|---|---|---|---|---|---|---|
| 01 | 945008 | NON-AQ | 04/26/94 | 05/09/94 | 05/09/94 | 20 |

| PARAMETER | UNITS | 01 | EPA 418.1 |
|---|---|---|---|
| FUEL HYDROCARBONS | MG/KG | 3700 | 9560 mg/kg |
| HYDROCARBON RANGE | | C8-C34 | |
| HYDROCARBONS QUANTITATED USING | | DIESEL | |

SURROGATE:

O-TERPHENYL (%) 101

# PHASE II

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-1
Well #
Page 1 of 1

Philip Environmental Services Corp.
4000 Monroe Road
Farmington, New Mexico 87401
(606) 326-2262 FAX (606) 326-2388

Project Name EPNG Pits
Project Number 14509 Phase ~~601~~ 6000
Project Location Johnson Gas Com D#1E, 94322

Elevation
Borehole Location T30, R12, S.15, E
GWL Depth
Logged By S.Kelly
Drilled By M. Donahue
Date/Time Started 10/5/95, 1115
Date/Time Completed 10/5/95, 1230

Well Logged By S.Kelly
Personnel On-Site M. Donahue, J. Long
Contractors On-Site
Client Personnel On-Site
Drilling Method 4¼" 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/HS | Drilling Conditions & Blow Counts |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | Backfill to 3'. | | | | | | |
| 5 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 15 | 1 | 13-15 | .8'/2.0' | SAND, tan, trace silt, fine sand, v. dense, poorly graded, dry. | | | | | 1/9 | 1130 |
| 20 | | | | TOB - 15.0' | | | | | | |
| 25 | | | | | | | | | | |
| 30 | | | | | | | | | | |
| 35 | | | | | | | | | | |
| 40 | | | | | | | | | | |

Comments: 13'-15' sample (SEK 92) sent to lab, (BTEX & TPH) Sample was bagged and iced prior to being put in jar. BH grouted to surface.

Geologist Signature S. Kelly

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: | SEK92 | 947594 |
| MTR CODE \| SITE NAME: | 94322 | Johnson Gas Com D #1E |
| SAMPLE DATE \| TIME (Hrs): | 10-05-95 | 1130 |
| PROJECT: | Phase II Drilling | |
| DATE OF TPH EXT. \| ANAL.: | 10/6/95 | |
| DATE OF BTEX EXT. \| ANAL.: | 10/6/95 | 10/6/95 |
| 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) | <10 | MG/KG | | | 2.13 | 28 |
| HEADSPACE PID | 9 | PPM | | | | |
| PERCENT SOLIDS | 92.4 | % | | | | |

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

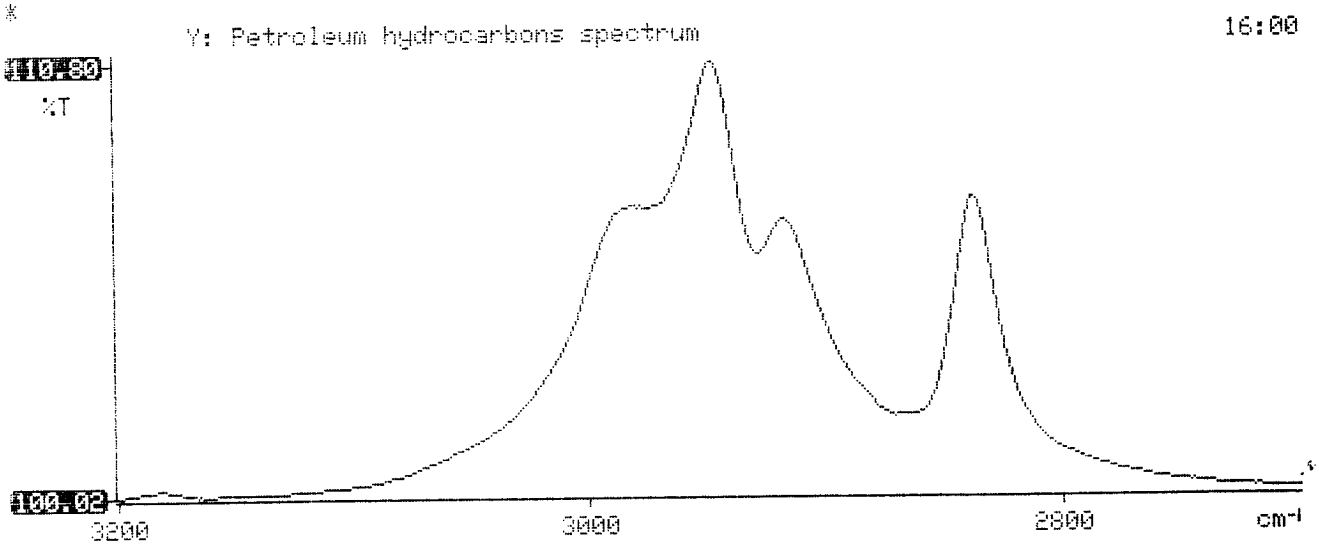
The Surrogate Recovery was at 97% for this sample All QA/QC was acceptable.

Narrative:

DF = Dilution Factor Used

Approved By: _____ Date: 10-11-95

```
**************************************************
*                    Test Method for             *
*      Oil and Grease and Petroleum Hydrocarbons  *
*                  in Water and Soil             *
*                                                *
*            Perkin-Elmer Model 1600 FT-IR       *
*                  Analysis Report               *
**************************************************
*
 95/10/06  16:00
*
*  Sample identification
 947594
*
*  Initial mass of sample, g
 2.130
*
*  Volume of sample after extraction, ml
 28.000
*
*  Petroleum hydrocarbons, ppm
 -274.866
*  Net absorbance of hydrocarbons (2930 cm-1)
 -0.025
*
*
*
```



# BTEX SOIL SAMPLE WORKSHEET

| | | | |
|---|---|---|---|
| **File** | 947594 | **Date Printed** | 10/7/95 |
| **Soil Mass (g)** | 5.06 | **Multiplier (L/g)** | 0.00099 |
| **Extraction vol. (mL)** | 10 | **DF (Analytical)** | 200 |
| **Shot Volume (uL)** | 50 | **DF (Report)** | 0.19763 |

| | | | | **Det. Limit** |
|---|---|---|---|---|
| **Benzene (ug/L)** | 0.17 | **Benzene (mg/Kg):** | **0.034** | 0.494 |
| **Toluene (ug/L)** | 0.20 | **Toluene (mg/Kg):** | **0.040** | 0.494 |
| **Ethylbenzene (ug/L)** | 0.00 | **Ethylbenzene (mg/Kg):** | **0.000** | 0.494 |
| **p & m-xylene (ug/L)** | 0.34 | p & m-xylene (mg/Kg): | 0.067 | 0.988 |
| **o-xylene (ug/L)** | 0.17 | o-xylene (mg/Kg): | 0.034 | 0.494 |
| | | **Total xylenes (mg/Kg):** | **0.101** | 1.482 |
| | | **Total BTEX (mg/Kg):** | **0.174** | |

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

File : C:\LABQUEST\CHROM000\100695-0.010
Method : C:\LABQUEST\METHODS\0-092095.MET
Sample ID : 947594,5.06G,50U
Acquired : Oct 06, 1995 21:27:33
Printed : Oct 06, 1995 21:57:57
User : MARLON

Channel A Results

| COMPONENT | RET TIME | AREA | CONC (ug/L) |
|---|---|---|---|
| BENZENE | 8.113 | 62385 | 0.1667 |
| a,a,a-TFT | 10.480 | 9064037 | 103.6058 |
| TOLUENE | 12.900 | 73998 | 0.2033 |
| ETHYLBENZENE | 17.170 | 0 | 0.0000 |
| M,P-XYLENES | 17.627 | 136046 | 0.3391 |
| O-XYLENE | 18.803 | 54035 | 0.1650 |
| BFB | 19.873 | 52812620 | 96.8895 |