

Denny E. Faust
EPFS PIT CLOSURE SUMMARY
DEPUTY OIL & GAS INSPECTOR

JUL 17 1998

Koch Exploration Greer # 1
Meter/Line ID - 70771

Approved

SITE DETAILS

Legals - Twn: 26 Rng: 9
NMOCD Hazard Ranking: 20
Operator: Koch Exploration

Sec: 16 Unit: H
Land Type: STATE

PREVIOUS ACTIVITIES

Site Assessment: 6/20/94
Monitor Well: N/A

Excavation: 8/15/94
Re-Excavation: N/A

Soil Boring: 8/17/95
Geoprobe: N/A

CONCLUSIONS

The initial test pit was excavated to the practical extent of the trackhoe, which was 12 feet below ground surface (bgs). PID field screening indicated subsurface soils to be 0 ppm at 12 feet bgs. Excavation was terminated and a sample was collected and analyzed for BTEX and TPH. Sample analysis indicated total BTEX to be below standards at .144 mg/kg and TPH was above standards at 223 mg/kg. A test boring was drilled in the center of the initial excavation to determine the vertical extent of the impact to soils. The soil lithology consisted of inter-bedded sand and clay, which continued to 30 feet bgs. At 30 feet bgs the lithology changed to a gray stiff clay which continued to the termination of the boring at 40 feet bgs. A sample was collected for BTEX and TPH analysis at 38-40 feet bgs. Laboratory analysis showed total BTEX to be below laboratory detection limits and TPH present at 75.6 mg/kg.

RECOMMENDATIONS

No further action is recommended at the site for the following reasons:

- Test boring sample results indicated soils below standards 26 feet beneath the initial excavation.
- The soil lithology beneath the pit consists of a clay material, which would inhibit further downward migration of residual hydrocarbons.
- No groundwater was encountered in the test boring.
- No potential receptors are within 1,000 feet of the site.
- Residual hydrocarbons remaining in the soils at the bottom of the initial excavation will naturally degrade in time with minimal risk to the environment.

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MAR - 9 1998
OIL CON. DIV.
DIST. 3

FIELD PIT SITE ASSESSMENT FORM

7

| | | | | | |
|--|---|---|-------------------|--|---|
| GENERAL | Meter: <u>70771</u> Location: <u>Koch Exploration Greer #1</u> Operator #: <u>5540</u> Operator Name: <u>Koch Expl. P/L</u> District: <u>Ballard</u> Coordinates: Letter: <u>H</u> Section <u>16</u> Township: <u>26</u> Range: <u>9W</u> Or Latitude _____ Longitude _____ Pit Type: Dehydrator _____ Location Drip: <u>X</u> Line Drip: _____ Other: _____ Site Assessment Date: <u>6-20-94</u> Area: <u>11</u> Run: <u>91</u> | | | | |
| SITE ASSESSMENT | <table style="width:100%; border:none;"> <tr> <td style="width:50%; vertical-align:top;"> NMOCD Zone: (From NMOCD Maps) </td> <td style="width:50%; vertical-align:top;"> Land Type: </td> </tr> <tr> <td style="vertical-align:top;"> Inside <input checked="" type="checkbox"/> (1) Outside <input type="checkbox"/> (2) </td> <td style="vertical-align:top;"> BLM <input type="checkbox"/> (1) State <input checked="" type="checkbox"/> (2) Fee <input type="checkbox"/> (3) Indian _____ </td> </tr> </table> Depth to Groundwater Less Than 50 Feet (20 points) <input type="checkbox"/> (1) 50 Ft to 99 Ft (10 points) <input checked="" type="checkbox"/> (2) Greater Than 100 Ft (0 points) <input type="checkbox"/> (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? <input type="checkbox"/> (1) YES (20 points) <input checked="" type="checkbox"/> (2) NO (0 points) Horizontal Distance to Surface Water Body Less Than 200 Ft (20 points) <input type="checkbox"/> (1) 200 Ft to 1000 Ft (10 points) <input checked="" type="checkbox"/> (2) Greater Than 1000 Ft (0 points) <input type="checkbox"/> (3) Name of Surface Water Body <u>Reed Canyon Wash</u> (Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds) Distance to Nearest Ephemeral Stream <input type="checkbox"/> (1) < 100' (Navajo Pits Only) <input type="checkbox"/> (2) > 100' TOTAL HAZARD RANKING SCORE: <u>20</u> POINTS | NMOCD Zone: (From NMOCD Maps) | Land Type: | Inside <input checked="" type="checkbox"/> (1) Outside <input type="checkbox"/> (2) | BLM <input type="checkbox"/> (1) State <input checked="" type="checkbox"/> (2) Fee <input type="checkbox"/> (3) Indian _____ |
| NMOCD Zone: (From NMOCD Maps) | Land Type: | | | | |
| Inside <input checked="" type="checkbox"/> (1) Outside <input type="checkbox"/> (2) | BLM <input type="checkbox"/> (1) State <input checked="" type="checkbox"/> (2) Fee <input type="checkbox"/> (3) Indian _____ | | | | |
| REMARKS | Remarks : <u>Two pits, one with tank. Drip pits dry</u> <u>Inside V.Z. on Redline & Topo</u> | | | | |

RECEIVED
MAR - 9 1998

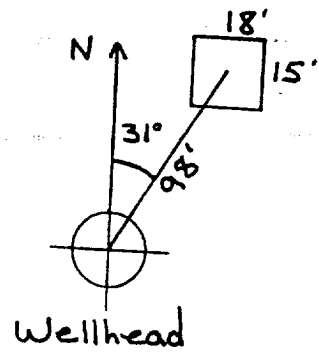
OIL CON. DIV.
DIST. 3

DRY PIT

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 31° Footage from Wellhead 98
b) Length : 18 Width : 15 Depth : 3



REMARKS

Remarks :

Photos - 1358

End Dump

Completed By:

K. W. [Signature]

Signature

6-20-94

Date

**PHASE I
EXCAVATION**

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 70771 Location: Koch Exploration Greer # 1
 Coordinates: Letter: H Section 16 Township: 26 Range: 9
 Or Latitude _____ Longitude _____
 Date Started : 8-15-94 Run: 11 91

FIELD OBSERVATIONS

Sample Number(s): KP 186
 Sample Depth: 12' Feet
 Final PID Reading 000 PID Reading Depth 12' Feet
 Yes No
 Groundwater Encountered Approximate Depth _____ Feet

CLOSURE

Remediation Method :

Excavation Approx. Cubic Yards _____
 Onsite Bioremediation
 Backfill Pit Without Excavation

Soil Disposition:
 Envirotech ¹⁸⁻⁸⁻¹⁵⁻⁹⁴ Tierra
 Other Facility Name: _____

Pit Closure Date: 8-15-94 Pit Closed By: B.EI

REMARKS

Remarks : Some line markers on location Pit looked
clean dug a test hole pid 000 closed pit.

Signature of Specialist: Kelly Radilla



SPLIT

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|----------------------------|----------|----------------------|
| SAMPLE NUMBER: | KP186 | 945931 |
| MTR CODE SITE NAME: | 70771 | N/A |
| SAMPLE DATE TIME (Hrs): | 8/15/94 | 1000 |
| SAMPLED BY: | N/A | |
| DATE OF TPH EXT. ANAL.: | 8/16/94 | 8/16/94 |
| DATE OF BTEX EXT. ANAL.: | 8/16/94 | 8/29/94 |
| TYPE DESCRIPTION: | VG | Coarse DK Brown Sand |

REMARKS: Split

RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | | ATI Results |
|----------------|--------|-------|------------|---|------|-------|----------------------|
| | | | DF | Q | M(g) | V(ml) | |
| BENZENE | 20.025 | MG/KG | | | | | 20.025 |
| TOLUENE | 0.065 | MG/KG | | | | | 20.025 |
| ETHYL BENZENE | 20.025 | MG/KG | | | | | 20.025 |
| TOTAL XYLENES | 0.029 | MG/KG | | | | | 20.025 |
| TOTAL BTEX | 0.144 | MG/KG | 0.010 | | 2.00 | 20 | 20.10 |
| TPH (418.1) | 223 | MG/KG | | | 2.04 | 28 | 220 |
| HEADSPACE PID | 0 | PPM | | | | | Surrogate % 84 |
| PERCENT SOLIDS | 88.6 | % | | | | | Dilution Factor 1 |

8/18/94

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

The Surrogate Recovery was at 119 for this samp All QA/QC was acceptable.

Narrative: ATI results attached. Used EPNG & TPT Surrogate recovery.

DF = Dilution Factor Used

Approved By: JS

Date: 9/2/94

EL PASO NATURAL GAS

EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM\945931A
 Method : C:\LABQUEST\METHODS\SOILS.MET
 Sample ID : 945831 1/2 2.00G/20
 Acquired : Aug 29, 1994 19:00:21
 Printed : Aug 30, 1994 10:00:26
 User : STACY

Channel A Results

| COMPONENT | RET TIME | AREA | AVG RF | CONC (ug/L) |
|--------------|----------|---------|--------------|--------------------------|
| BENZENE | 10.800 | 0 | 0.00000 | 0.0000 <i>L2.5</i> |
| a,a,a TFT | 12.933 | 436030 | 7303.77002 | 119.2434 |
| TOLUENE | 15.467 | 451705 | 128167.09375 | 6.5029 |
| ETHYLBENZENE | 19.617 | 60285 | 116407.63281 | 0.9452 <i>L2.5</i> |
| M & P XYLENE | 19.800 | 123437 | 167589.01563 | 1.7663 |
| O XYLENE | 20.333 | 70987 | 115447.89063 | <u>1.1326</u> <i>2.9</i> |
| BFB | 20.900 | 2769902 | 169985.04688 | 30.0780 |

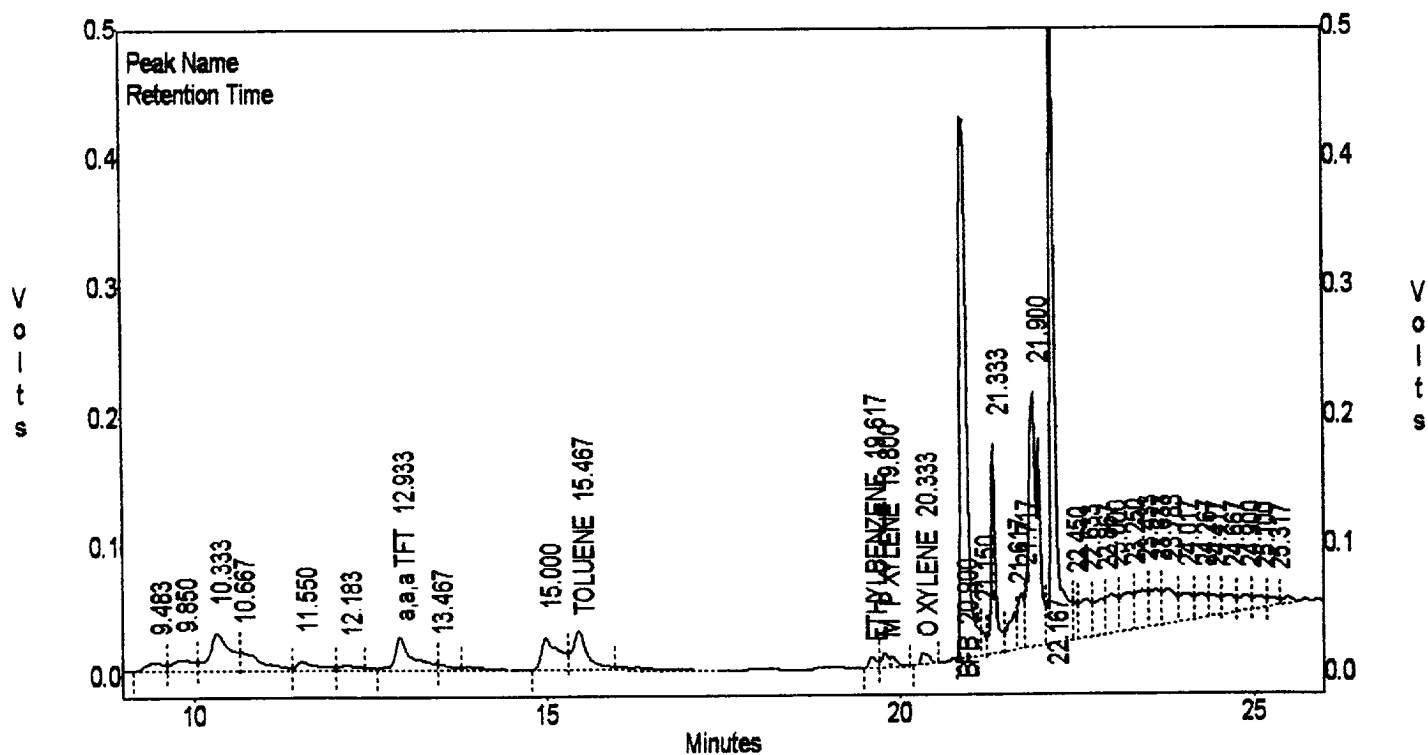
Totals :

3912348

159.6684

Stacy
 8/31/94

C:\LABQUEST\CHROM\945931A - Channel A



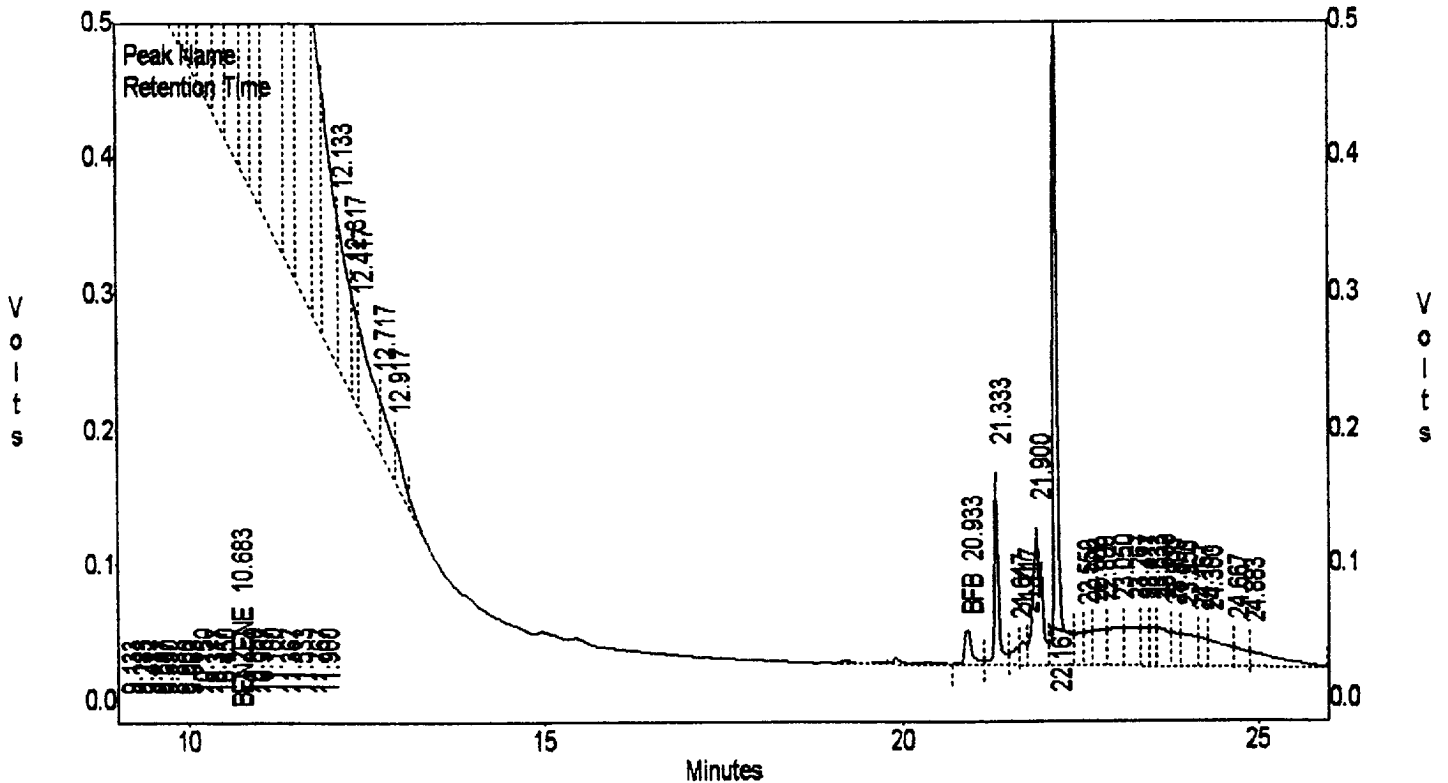
**EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS**

File : C:\LABQUEST\CHROM\945931A
 Method : C:\LABQUEST\METHODS\SOILS.MET
 Sample ID : 945831 1/2 2.00G/20
 Acquired : Aug 29, 1994 19:00:21
 Printed : Aug 30, 1994 10:00:32
 User : STACY

Channel B Results

| COMPONENT | RET TIME | AREA | AVG RF | CONC (ug/L) |
|--------------|----------|---------|-------------|-------------|
| BENZENE | 10.683 | 4085550 | 17134.41016 | 424.6366 |
| a,a,a TFT | 13.033 | 0 | 0.00000 | 0.0000 |
| TOLUENE | 15.550 | 0 | 0.00000 | 0.0000 |
| ETHYLBENZENE | 19.617 | 0 | 0.00000 | 0.0000 |
| M & P XYLENE | 19.800 | 0 | 0.00000 | 0.0000 |
| O XYLENE | 20.333 | 0 | 0.00000 | 0.0000 |
| BFB | 20.933 | 187439 | 18546.16797 | 20.7491 |
| Totals : | | 4272989 | | 445.3857 |

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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

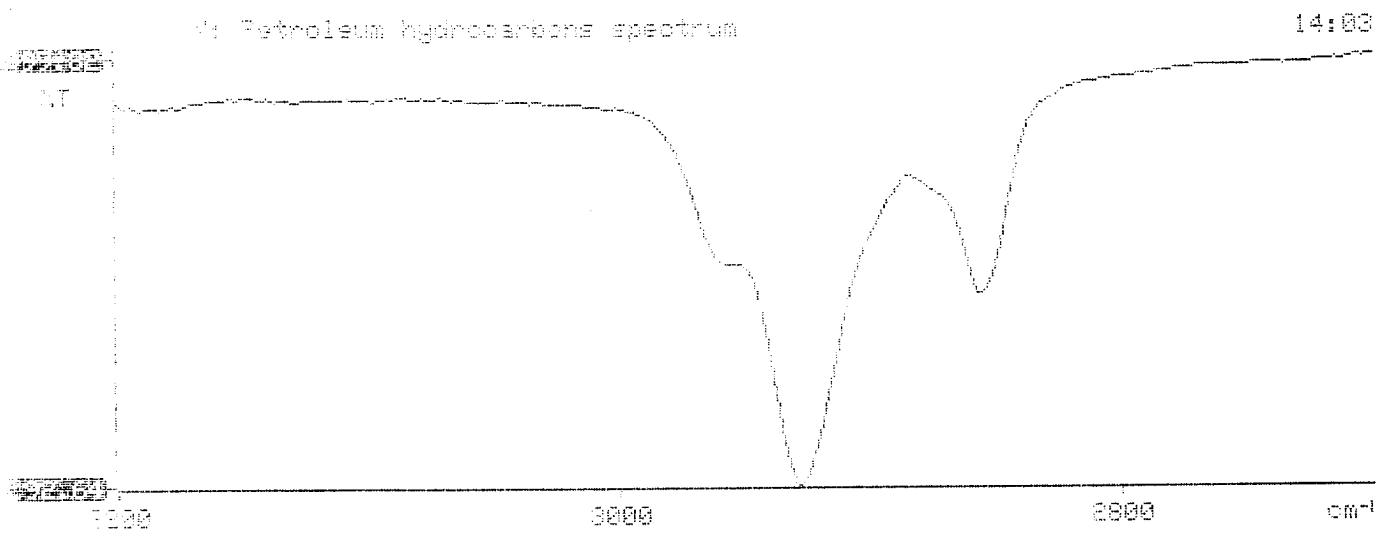
04/08/16 14:03

Sample Identification
945931

Initial mass of sample, g
0.040

Volume of sample after extraction, ml
10.000

Petroleum hydrocarbons, ppm
200.610
Net absorbance of hydrocarbons (2930 cm-1)
0.031





Analytical **Technologies**, Inc.

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

ATI I.D. 408364

August 24, 1994

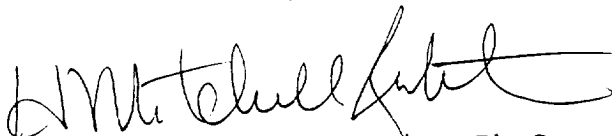
El Paso Natural Gas Company
P.O. Box 4990
Farmington, NM 87499

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

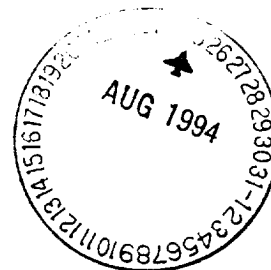
On 08/17/94, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

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





GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)
 CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 408364
 PROJECT # : 24324
 PROJECT NAME : PIT CLOSURE

| SAMPLE ID. # | CLIENT I.D. | MATRIX | DATE SAMPLED | DATE EXTRACTED | DATE ANALYZED | DIL. FACTOR |
|------------------------|-------------|--------|--------------|----------------|---------------|-------------|
| 19 | 945931 | NON-AQ | 08/15/94 | 08/17/94 | 08/20/94 | 1 |
| 20 | 945932 | NON-AQ | 08/15/94 | 08/17/94 | 08/20/94 | 1 |
| 21 | 945933 | NON-AQ | 08/15/94 | 08/17/94 | 08/20/94 | 1 |
| PARAMETER | | | UNITS | 19 | 20 | 21 |
| BENZENE | | | MG/KG | <0.025 | <0.025 | <0.025 |
| TOLUENE | | | MG/KG | <0.025 | 0.027 | <0.025 |
| ETHYLBENZENE | | | MG/KG | <0.025 | <0.025 | <0.025 |
| TOTAL XYLENES | | | MG/KG | <0.025 | <0.025 | <0.025 |
| SURROGATE: | | | | | | |
| BROMOFLUOROBENZENE (%) | | | | 84 | 87 | 88 |

Split Sample



Analytical **Technologies**, Inc.

GENERAL CHEMISTRY RESULTS

CLIENT : EL PASO NATURAL GAS CO. ATI I.D. : 408364
PROJECT # : 24324 DATE RECEIVED : 08/17/94
PROJECT NAME : PIT CLOSURE DATE ANALYZED : 08/18/94

| PARAMETER | UNITS | 03 | 19 |
|----------------------------|-------|------|-----|
| PETROLEUM HYDROCARBONS, IR | MG/KG | 3200 | <20 |

EPNG Sample #945931
Split Sample

PHASE II

RECORD OF SUBSURFACE EXPLORATION

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

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

Project Name EPNG Pits
 Project Number 14509 Phase 6000.77
 Project Location Koch Exploration Green #1 70771

Well Logged By Jeff W. Kindley
 Personnel On-Site G. Sudduth, D. Roberts, H. Keil
 Contractors On-Site _____
 Client Personnel On-Site _____

Elevation _____
 Borehole Location T26, R9W, S16, H
 GWL Depth _____
 Logged By Jeff W. Kindley
 Drilled By G. Sudduth
 Date/Time Started 08/17/95 1224
 Date/Time Completed 08/17/95 1404

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 | | | Drilling Conditions & Blow Counts |
|--------------|---------------|-----------------|---------------------------------|--|-------------|-------------------------------|---------------------------|----|---------|-----------------------------------|
| | | | | | | | BZ | BH | S/MS | |
| 0 | | | | Backfill material to 12' | | | | | | |
| 20 | 1 | 18-20 | 1.0 / 2.0 | SAND, Gray brown, medium grained, loose, dry, odor | | | | | 58 / 80 | 1240 |
| 25 | 2 | 23-25 | 1.0 / 2.0 | CLAY, gray, stiff, dry, odor | | | | | 25 / 73 | 1250 |
| 30 | 3 | 28-30 | 1.1 / 2.0 | Clayey sand (20% clay) stiff hard, dry, sand is medium grained, odor | | | | | 42 / 82 | 1302 |
| 35 | 4 | 33-35 | 1.1 / 2.0 | CLAY, gray, stiff, dry, odor | | | | | 34 / 51 | 1319 |
| 40 | 5 | 38-40 | 1.8 / 2.0 | S.A.A. with no odor | | | | | 13 / 12 | 1341 |

Comments:

Sample collected from 38 to 40' and submitted for analysis of BTEX and TPH. BH grouted to surface

Geologist Signature

Jeff W. Kindley



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|----------------------------|-------------------|-----------------------------|
| SAMPLE NUMBER: | Jwx 23 | 947272 |
| MTR CODE SITE NAME: | 70771 | Koch Exploration Greer #1 |
| SAMPLE DATE TIME (Hrs): | 08-17-95 | 13:41 |
| PROJECT: | Phase II Drilling | |
| DATE OF TPH EXT. ANAL.: | 8/21/95 | 8-21-95 |
| DATE OF BTEX EXT. ANAL.: | 8/21/95 | 8-21-95 |
| TYPE DESCRIPTION: | VG | Light brown sand w/ pebbles |

Field Remarks:

RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|----------------|----------------------------------|-------|------------|---|------|-------|
| | | | DF | Q | M(g) | V(ml) |
| BENZENE | < .5 | MG/KG | | F | | |
| TOLUENE | < .5 | MG/KG | | | | |
| ETHYL BENZENE | < .5 | MG/KG | | | | |
| TOTAL XYLENES | < 1.5 | MG/KG | | | | |
| TOTAL BTEX | < 3 | MG/KG | | | | |
| TPH (418.1) | ^{26 8/23/95} 76 75.6 | MG/KG | | | 2.02 | 28 |
| HEADSPACE PID | 12 | PPM | | | | |
| PERCENT SOLIDS | 99.7 | % | | | | |

-- 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:

Benzene Taken From FID

DF = Dilution Factor Used

Approved By:

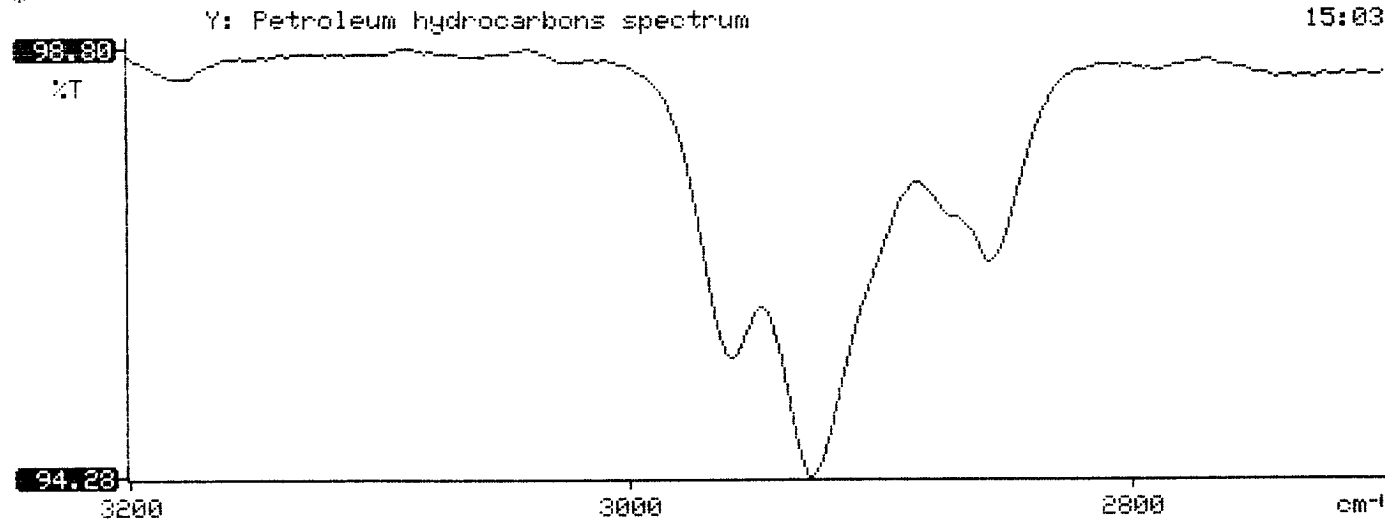
JR

Date:

8/24/95

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

* 95/08/21 15:03
*
* Sample identification
947272
*
* Initial mass of sample, g
2.020
*
* Volume of sample after extraction, ml
28.000
*
* Petroleum hydrocarbons, ppm
75.609
* Net absorbance of hydrocarbons (2930 cm⁻¹)
0.020
*
*
*



BTEX SOIL SAMPLE WORKSHEET

| | | | | | |
|----------------------|---|--------|------------------|---|---------|
| File | : | 947272 | Date Printed | : | 8/24/95 |
| Soil Mass (g) | : | 5.03 | Multiplier (L/g) | : | 0.00099 |
| Extraction vol. (mL) | : | 20 | DF (Analytical) | : | 200 |
| Shot Volume (uL) | : | 100 | DF (Report) | : | 0.19881 |

| | | | | Det. Limit |
|---------------------|---|------|------------------------|-------------|
| Benzene (ug/L) | : | 0.00 | Benzene (mg/Kg): | 0.000 0.497 |
| Toluene (ug/L) | : | 0.00 | Toluene (mg/Kg): | 0.000 0.497 |
| Ethylbenzene (ug/L) | : | 0.00 | Ethylbenzene (mg/Kg): | 0.000 0.497 |
| p & m-xylene (ug/L) | : | 0.00 | p & m-xylene (mg/Kg): | 0.000 0.994 |
| o-xylene (ug/L) | : | 0.13 | o-xylene (mg/Kg): | 0.026 0.497 |
| | | | Total xylenes (mg/Kg): | 0.026 1.491 |
| | | | Total BTEX (mg/Kg): | 0.026 |

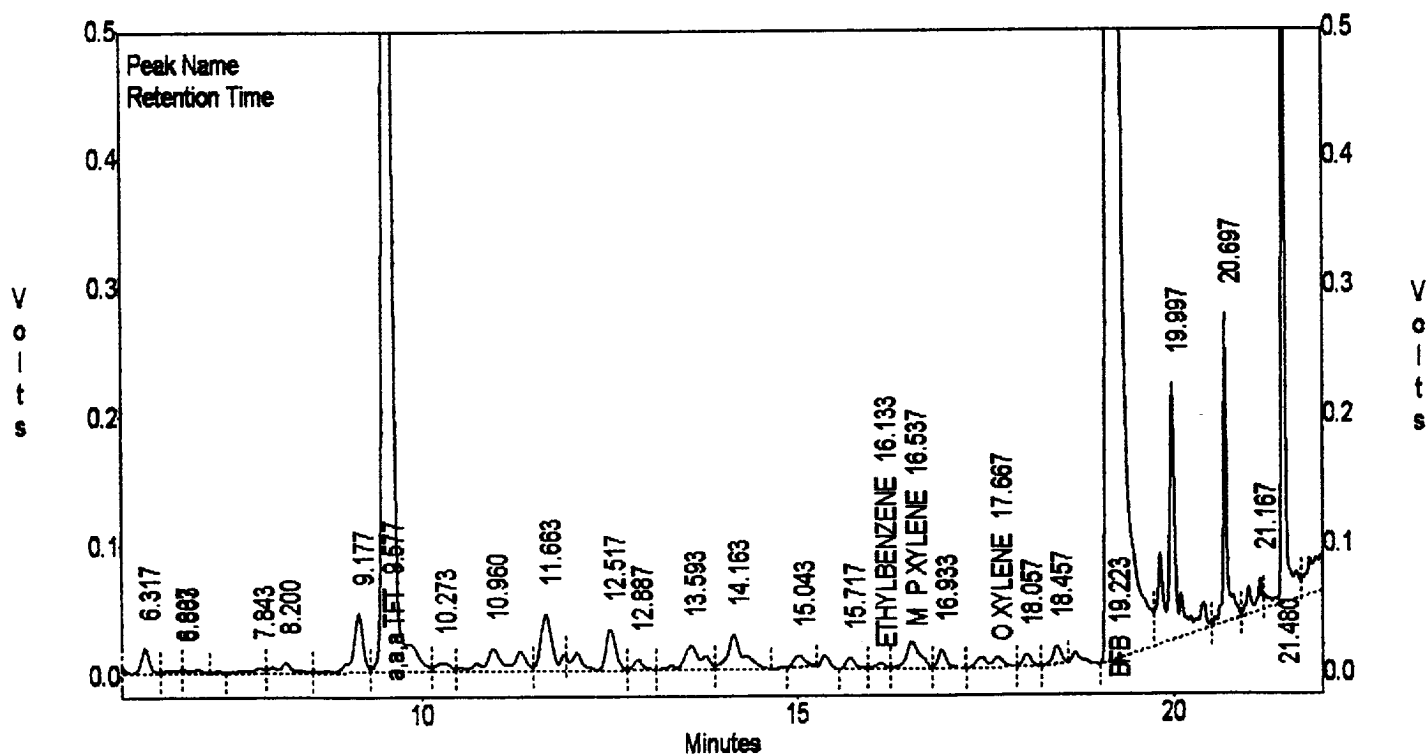
**EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS**

File : C:\LABQUEST\CHROM000\082195-0.010
 Method : C:\LABQUEST\METHODS\9000.MET
 Sample ID : 947272.5.03G,100U
 Acquired : Aug 21, 1995 18:38:21
 Printed : Aug 21, 1995 19:04:34
 User : MARLON

Channel A Results

| COMPONENT | RET TIME | AREA | CONC (ug/L) |
|--------------|----------|----------|-------------|
| BENZENE | 7.313 | 0 | 0.0000 |
| a,a,a TFT | 9.577 | 9689141 | 98.2644 |
| TOLUENE | 11.907 | 0 | 0.0000 |
| ETHYLBENZENE | 16.133 | 44273 | -0.2466 |
| M & P XYLENE | 16.537 | 281769 | -2.5425 |
| O XYLENE | 17.667 | 153752 | 0.1280 |
| BFB | 19.223 | 72509904 | 96.5035 |

C:\LABQUEST\CHROM000\082195-0.010 -- Channel A



EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM000\082195-0.010
 Method : C:\LABQUEST\METHODS\9000.MET
 Sample ID : 947272,5.03G,100U
 Acquired : Aug 21, 1995 18:38:21
 Printed : Aug 21, 1995 19:04:39
 User : MARLON

Channel B Results

| COMPONENT | RET TIME | AREA | CONC (ug/L) |
|--------------|----------|---------|-------------|
| BENZENE | 7.243 | 0 | 0.0000 |
| a,a,a TFT | 9.580 | 309153 | 101.2645 |
| TOLUENE | 11.887 | 0 | 0.0000 |
| ETHYLBENZENE | 16.123 | 0 | 0.0000 |
| M & P XYLENE | 16.500 | 0 | 0.0000 |
| O XYLENE | 17.637 | 0 | 0.0000 |
| BFB | 19.210 | 1792659 | 111.9307 |

C:\LABQUEST\CHROM000\082195-0.010 - Channel B

