

Jenny
EL PASO FIELD SERVICES
PRODUCTION PIT CLOSURE

DEC 21 1998

Approved
BOLACK B #3 PC
Meter/Line ID - 72049

RECEIVED
JUL 2 1998

SITE DETAILS		OIL CON. DIV.
Legals - Twn: 28	Rng: 08	DIST. 3
NMOCD Hazard Ranking: 30	Sec: 33	Unit: N
Operator: AMOCO PRODUCTION COMPANY	Land Type: 2 - Federal	Pit Closure Date: 08/03/94

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>72049</u> Location: <u>BOLACK B #3 P.C.</u></p> <p>Operator #: <u>0203</u> Operator Name: <u>AMOCO</u> P/L District: <u>BALLARD</u></p> <p>Coordinates: Letter: <u>N</u> Section <u>33</u> Township: <u>28</u> Range: <u>8</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>6.9.94</u> Area: <u>07</u> Run: <u>32</u></p>
SITE ASSESSMENT	<p>NMOCD Zone: (From NMOCD Maps)</p> <p>Inside <input checked="" type="checkbox"/> (1) Outside <input type="checkbox"/> (2)</p> <p>Land Type: BLM <input checked="" type="checkbox"/> (1) State <input type="checkbox"/> (2) Fee <input type="checkbox"/> (3) Indian _____</p> <p>Depth to Groundwater</p> <p>Less Than 50 Feet (20 points) <input checked="" type="checkbox"/> (1) 50 Ft to 99 Ft (10 points) ^{6.9.94} <input checked="" type="checkbox"/> (2) 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) 200 Ft to 1000 Ft (10 points) <input checked="" type="checkbox"/> (2) Greater Than 1000 Ft (0 points) <input type="checkbox"/> (3)</p> <p>Name of Surface Water Body <u>FRESNO 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) <input type="checkbox"/> (2) > 100'</p> <p>TOTAL HAZARD RANKING SCORE: <u>30</u> 20 ^{6.9.94} RT POINTS</p>
REMARKS	<p>Remarks : <u>THREE PITS ON LOCATION. WILL CLOSE ONLY ONE. PIT IS DRY. LOCATION IS IN FRESNO CANYON WEST OF LARGO WASH. REDLINE AND TOPO CONFIRMED LOCATION IS INSIDE V.Z.</u></p> <p style="text-align: right;"><u>DEG. J. HALL</u></p>

ORIGINAL PIT LOCATION	<div data-bbox="639 282 1097 325" data-label="Section-Header">ORIGINAL PIT LOCATION</div> <div data-bbox="190 344 1560 451" data-label="Text"><p>Original Pit : a) Degrees from North <u>204°</u> Footage from Wellhead <u>53'</u> b) Length : <u>22'</u> Width : <u>20'</u> Depth : <u>3'</u></p></div> <div data-bbox="196 505 1560 1110" data-label="Diagram"></div>
REMARKS	<div data-bbox="190 1185 402 1223" data-label="Text">Remarks :</div> <div data-bbox="190 1236 716 1271" data-label="Text"><u>TOOK PICTURES AT 10:51 A.M.</u></div> <div data-bbox="190 1284 378 1319" data-label="Text"><u>END DUMP</u></div>
	<div data-bbox="190 1819 462 1857" data-label="Text">Completed By:</div> <div data-bbox="293 1876 831 2026" data-label="Text"><p><u>Robert Thompson</u> Signature</p></div> <div data-bbox="1092 1927 1256 2026" data-label="Text"><p><u>6-7-94</u> Date</p></div>

PHASE I EXCAVATION

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	<p>Meter: <u>72049</u> Location: <u>BOLACK B[#]3 PC</u></p> <p>Coordinates: Letter: <u>N</u> Section <u>33</u> Township: <u>28</u> Range: <u>8</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>8-3-94</u> Run: <u>07</u> <u>32</u></p>
FIELD OBSERVATIONS	<p>Sample Number(s): <u>KP/66</u></p> <p>Sample Depth: <u>10'</u> Feet</p> <p>Final PID Reading <u>285</u> PID Reading Depth <u>10'</u> Feet</p> <p>Yes No</p> <p>Groundwater Encountered <input type="checkbox"/> <input checked="" type="checkbox"/> Approximate Depth _____ Feet</p>
CLOSURE	<p>Remediation Method :</p> <p>Excavation <input checked="" type="checkbox"/> Approx. Cubic Yards <u>140</u></p> <p>Onsite Bioremediation <input type="checkbox"/></p> <p>Backfill Pit Without Excavation <input type="checkbox"/></p> <p>Soil Disposition:</p> <p>Envirotech <input checked="" type="checkbox"/> <input type="checkbox"/> Tierra</p> <p>Other Facility <input type="checkbox"/> Name: _____</p> <p>Pit Closure Date: <u>8-3-94</u> Pit Closed By: <u>B.E.T</u></p>
REMARKS	<p>Remarks : <u>Some LINE markers started Remediating to 12'</u></p> <p><u>Soil Turned BLACK. with a smell. DUAL LOCATION, Hit SAND STEN.</u></p> <p><u>At 10' Closed Pit</u></p>
Signature of Specialist:	<p><u>Kelly Palla</u></p>



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KP 166	945826
MTR CODE SITE NAME:	72049	N/A
SAMPLE DATE TIME (Hrs):	8-3-94	1550
SAMPLED BY:	N/A	
DATE OF TPH EXT. ANAL.:	8-4-94	8-4-94
DATE OF BTEX EXT. ANAL.:	8/8/94	8/9/94
TYPE DESCRIPTION:	VL	Black coarse sand

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	40.5	MG/KG	20			
TOLUENE	8.5	MG/KG	20			
ETHYL BENZENE	8.6	MG/KG	20			
TOTAL XYLENES	120	MG/KG	20			
TOTAL BTEX	138	MG/KG				
TPH (418.1)	1540	MG/KG			2.04	28
HEADSPACE PID	285	PPM				
PERCENT SOLIDS	91.3	%				

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

The Surrogate Recovery was at 145 % for this sample All QA/QC was acceptable.

Narrative:

ATI results attached. Surrogate recovery was outside AT2 QC limits due to matrix interference.

DF = Dilution Factor Used

Approved By:

J.P.

Date:

9/2/94

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100 *****
101 Test Method for
102 Oil and Grease and Petroleum Hydrocarbons
103 in Water and Soil
104
105 Perkin-Elmer Model 1600 FT-IR
106 Analytic Report
107 *****

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04/18/04 11:30

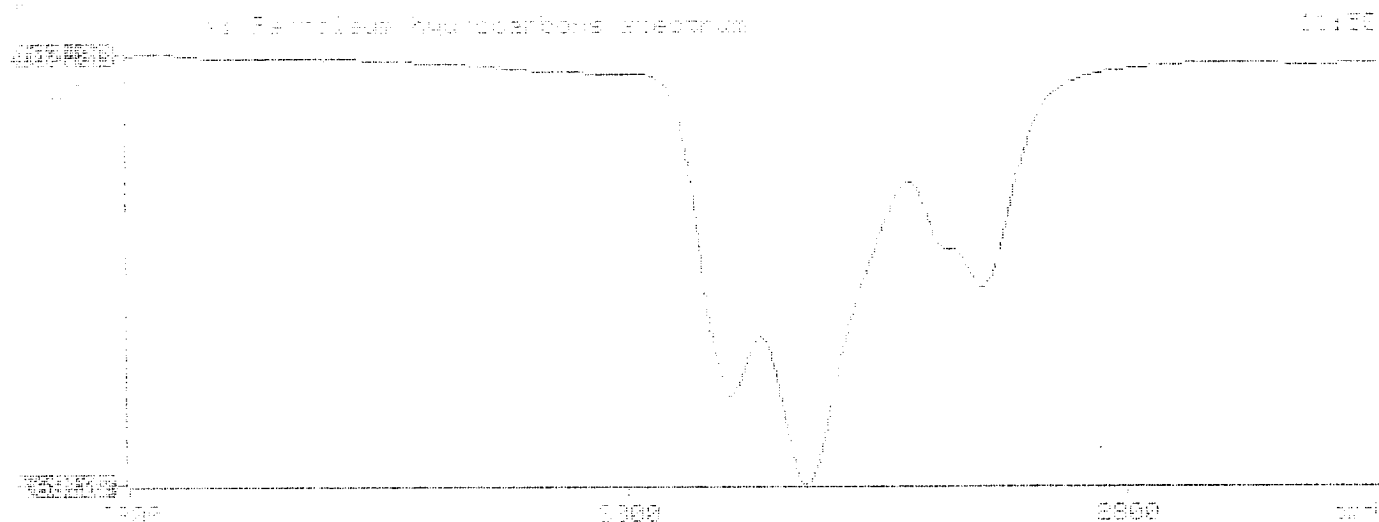
Oil Identification
008876

Initial mass of sample, g
0.040

Volume of sample after extraction, ml
25.00

Petroleum hydrocarbons, ppm
1175.07

Net absorbance of hydrocarbons (1730 cm-1)
0.176





Analytical**Technologies**, Inc.

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

ATI I.D. 408328

August 11, 1994

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

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

On 08/05/94, 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.

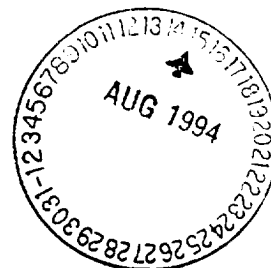
If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

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.: 408328
PROJECT # : 24324
PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
07	945825	NON-AQ	08/03/94	08/08/94	08/08/94	1
08	945826	NON-AQ	08/03/94	08/08/94	08/09/94	20
09	945827	NON-AQ	08/03/94	08/08/94	08/09/94	10
PARAMETER			UNITS	07	08	09
BENZENE			MG/KG	<0.025	<0.5	<0.25
TOLUENE			MG/KG	<0.025	8.5	7.5
ETHYLBENZENE			MG/KG	<0.025	8.6	1.1
TOTAL XYLENES			MG/KG	<0.025	120	17

SURROGATE:

BROMOFLUOROBENZENE (%) 96 145* 131*

*OUTSIDE ATI QUALITY CONTROL LIMITS DUE TO MATRIX INTERFERENCE

PHASE II

1. *Chlorophyll a* and *b* were determined in 90% methanol extracts of leaves and stems of *S. purpurea* and *S. purpurea* var. *rubra* by the method of Lichtenthaler and Sponholz (1980). The absorbance of the extracts was measured at 663 nm and 646 nm. The concentrations of *Chlorophyll a* and *b* were calculated using the following equations: $Chl\ a = 12.7 \times A_{663} - 2.13 \times A_{646}$ and $Chl\ b = 21.6 \times A_{646} - 5.10 \times A_{663}$ (Lichtenthaler and Sponholz, 1980). The total chlorophyll content was expressed as mg g⁻¹ of fresh weight.

\mathbb{R}^n is a vector space over \mathbb{R} with the standard inner product. Let \mathcal{H} be a Hilbert space. A linear operator T on \mathcal{H} is called self-adjoint if $T = T^*$, where T^* is the adjoint of T . The spectrum of T , denoted by $\sigma(T)$, is the set of all complex numbers λ such that $T - \lambda I$ is not invertible. The point spectrum, denoted by $\sigma_p(T)$, consists of all eigenvalues of T . The continuous spectrum, denoted by $\sigma_c(T)$, consists of all $\lambda \in \sigma(T)$ such that $T - \lambda I$ is injective but not surjective, and its range is dense in \mathcal{H} . The residual spectrum, denoted by $\sigma_r(T)$, consists of all $\lambda \in \sigma(T)$ such that $T - \lambda I$ is not injective and its range is not dense in \mathcal{H} . The essential spectrum, denoted by $\sigma_{\text{ess}}(T)$, is the set of all $\lambda \in \sigma(T)$ such that $T - \lambda I$ is not Fredholm. The discrete spectrum, denoted by $\sigma_d(T)$, is the set of all eigenvalues of T that are isolated points of $\sigma(T)$. The absolutely continuous spectrum, denoted by $\sigma_{\text{ac}}(T)$, is the set of all $\lambda \in \sigma(T)$ such that $T - \lambda I$ is injective and its range is dense in \mathcal{H} , and the spectral measure of T is absolutely continuous with respect to the Lebesgue measure. The singular continuous spectrum, denoted by $\sigma_{\text{sc}}(T)$, is the set of all $\lambda \in \sigma(T)$ such that $T - \lambda I$ is injective and its range is dense in \mathcal{H} , and the spectral measure of T is singular with respect to the Lebesgue measure. The pure point spectrum, denoted by $\sigma_{\text{pp}}(T)$, is the set of all eigenvalues of T that are not isolated points of $\sigma(T)$. The mixed spectrum, denoted by $\sigma_{\text{mix}}(T)$, is the set of all $\lambda \in \sigma(T)$ such that $T - \lambda I$ is injective and its range is dense in \mathcal{H} , and the spectral measure of T is mixed with respect to the Lebesgue measure. The absolutely continuous spectrum of T is the set of all $\lambda \in \sigma(T)$ such that $T - \lambda I$ is injective and its range is dense in \mathcal{H} , and the spectral measure of T is absolutely continuous with respect to the Lebesgue measure. The singular continuous spectrum of T is the set of all $\lambda \in \sigma(T)$ such that $T - \lambda I$ is injective and its range is dense in \mathcal{H} , and the spectral measure of T is singular with respect to the Lebesgue measure. The pure point spectrum of T is the set of all eigenvalues of T that are not isolated points of $\sigma(T)$. The mixed spectrum of T is the set of all $\lambda \in \sigma(T)$ such that $T - \lambda I$ is injective and its range is dense in \mathcal{H} , and the spectral measure of T is mixed with respect to the Lebesgue measure.

RECORD OF SUBSURFACE EXPLORATION

Burlington Environmental Inc.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2386

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

Project Name EPNG PITS
Project Number 14509 Phase 6000.77
Project Location Bolack B#3 PC 72049

Elevation _____
Borehole Location Letter N-538-T28-R8
GWL Depth _____
Logged By John LaBarbera
Drilled By Kelly Padilla
Date/Time Started 7/14/95 - 1400
Date/Time Completed _____

Well Logged By John LaBarbera
Personnel On-Site K. Padilla, D. Chantey, F. Riera
Contractors On-Site _____
Client Personnel On-Site _____
Drilling Method 4-25" ID HSP
Air Monitoring Method PEA & CGT

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring			Drilling Conditions & Blow Counts
							BZ	BH	Units: NOV/PSI MS	
0										
5										
10	1	10-11	11	Gray, v fine-grained SANDSTONE, friable, silty, poorly cemented			0	74	1713 7221	Refused at 10' Sandstone MS Able to drill down with different bit
15	2	15-15.75	8	Brown/Olive, AA			0	20	1321 1159	1434
20	3	20-20.75	9	Olive, AA			22	701	985 1238	1440
25	4	25-25.25	3	Brown, AA, trace silty			19.8	199	556 869	1457 Hard drilling at 25'
30	5	30-30.25	3	Olive, AA			18.9	801	70 112	1525
35				TOB at 30-25 Refusal						
40										

Comments: Sample JFH-7 sent for BTEX/TPH analysis
Refused at 30-25'

Geologist Signature John LaBarbera



Phase II

Block B#3 DC

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JFL 7	947006
MTR CODE SITE NAME:	72049	N/A
SAMPLE DATE TIME (Hrs):	7/14/95	15:25
SAMPLED BY:	N/A	
DATE OF TPH EXT. ANAL.:	7-18-95	7-18-95
DATE OF BTEX EXT. ANAL.:	7-19-95	7-19-95
TYPE DESCRIPTION:	V6	Gray-Brown sand and clay w/ sandstone

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	0.026	MG/KG	1			
TOLUENE	0.19	MG/KG	1			
ETHYL BENZENE	0.052	MG/KG	1			
TOTAL XYLENES	0.5	MG/KG	1			
TOTAL BTEX	0.768	MG/KG				
TPH (418.1)	86.0	MG/KG			2.52	28
HEADSPACE PID	70	PPM				
PERCENT SOLIDS	90.7	%				

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

The Surrogate Recovery was at 110 % for this sample All QA/QC was acceptable.
Narrative:

ATI Results attached.

DF = Dilution Factor Used

Approved By:

Date: 8/3/05

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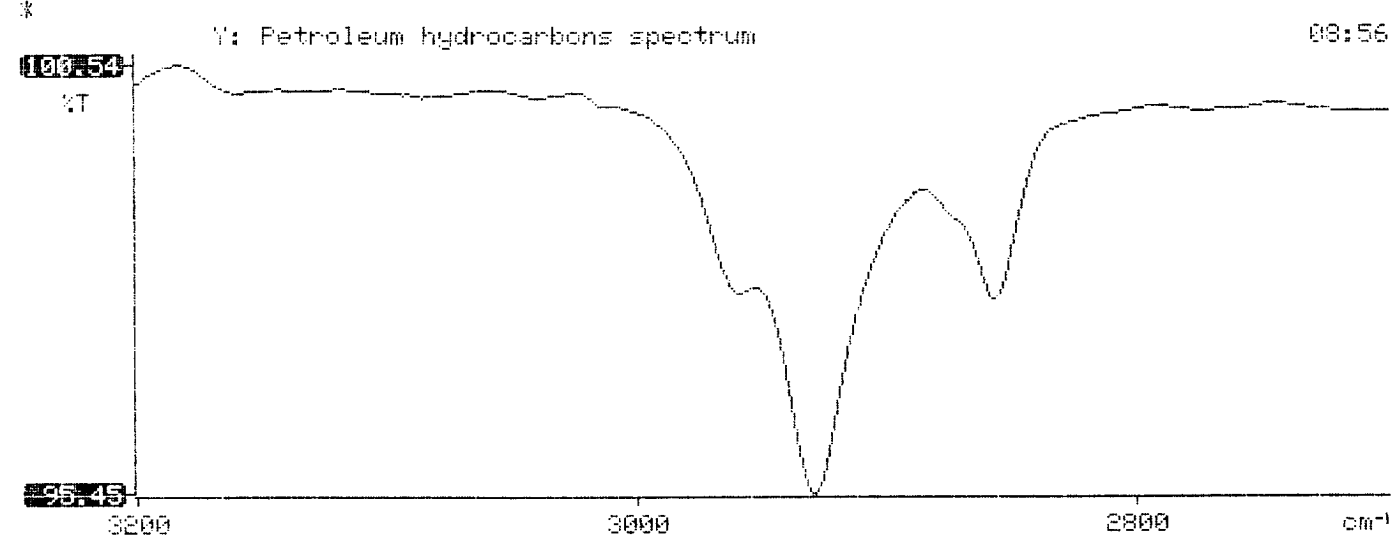
*****
*                               *
*      Test Method for         *
*      Oil and Grease and Petroleum Hydrocarbons      *
*      in Water and Soil      *
*                               *
*      Perkin-Elmer Model 1600 FT-IR                  *
*      Analysis Report      *
*****

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*
* 95/07/18 08:56
*
* Sample identification
* 947006
*
* Initial mass of sample, g
* 2.020
*
* Volume of sample after extraction, ml
* 28.000
*
* Petroleum hydrocarbons, ppm
* 85.979
* Net absorbance of hydrocarbons (2930 cm-1)
* 0.021
*
*
*

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Analytical **Technologies**, Inc.

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

ATI I.D. 507358

July 25, 1995

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

Project Name/Number: PIT CLOSURE/PHASE II DRIL M/W 24324

Attention: John Lambdin

On 07/19/95, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **aqueous and 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.

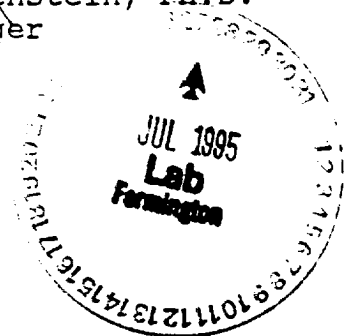
If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill
Project Manager

MR:jt

Enclosure

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager



GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)
CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 507358
PROJECT # : 24324
PROJECT NAME : PIT CLOSURE/PHASE II DRIL

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
11	947006	NON-AQ	07/14/95	07/19/95	07/19/95	1
12	947007	NON-AQ	07/17/95	07/19/95	07/20/95	1
13	947008	NON-AQ	07/17/95	07/19/95	07/20/95	1

PARAMETER	UNITS	11	12	13
BENZENE	MG/KG	0.026	<0.025	<0.025
TOLUENE	MG/KG	0.19	0.076	<0.025
ETHYLBENZENE	MG/KG	0.052	<0.025	<0.025
TOTAL XYLENES	MG/KG	0.5	0.13	<0.025

SURROGATE:

BROMOFLUOROBENZENE (%)	110	94	99
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