DEPUTY OIL & GAS INSPECTOR

DEC 22 1997

Approved

Meter Number:93466
Location Name:JICARILLA 37-B #7
Location:TN-24 RG-05
SC-24 UL-F
6 - Jicarilla
NMOCD Zone:OUTSIDE
Hazard Ranking Score:00

RECEIVED
APR 14 1997
OIL CON. DIV.
DIST. 3

RATIONALE FOR RISK-BASED CLOSURE OF PRODUCTION PITS LOCATED OUTSIDE OF THE VULNERABLE ZONE IN THE SAN JUAN BASIN

This production pit location was ranked according to the criteria in the New Mexico Oil Conservation Division's Unlined Surface Impoundment Closure Guidelines and received a ranking score of zero. The estimated depth to groundwater is greater than 100-feet beneath ground surface (bgs), the pit is not in a well head protection area, and there are no surface water bodies within 1,000 horizontal feet of the pit location.

The primary source, discharge to the pit has been removed. There has been no discharge to the pits for at least 4 years and the pits have been closed for at least one year.

Each pit was backfilled with clean soil and graded in a manner to divert precipitation away from the excavated area. Minimal infiltration of rainfall is expected. Any rainfall that does infiltrate the ground surface must migrate through clean backfill before reaching the residual hydrocarbons.

There is no source material at the ground surface, so direct contact of hydrocarbons with livestock and the populous is not likely.

In general, outside of the vulnerable area and alluvial valleys, bedrock material is generally encountered within 20 feet of the ground surface. Bedrock material in the San Juan Basin consists of interbedded sandstones, shales and clays. According to Freeze and Cherry, 1979, the hydraulic conductivity of the bedrock material are as follows:

Sandstone	10^{-9} to 10^{-13} cm/sec
Shale	10^{-12} to 10^{-16} cm/sec
Clay	10^{-12} to 10^{-15} cm/sec

Based on this information, the residual hydrocarbons should not migrate to groundwater.

Natural process (bioremediation) are degrading the residual hydrocarbon to carbon dioxide and water and will continue until the source is gone, therefore minimizing any impact to the environment.

Based on the above information, it is highly unlikely that any source material will impact groundwater or ever find an exposure pathway to affect human health and therefore El Paso Field Services Company (EPFS) requests closure of this pit location.

FIELD PIT SITE ASSESSMENT FORM

5

GENERAL

Meter: 93466 Location: Jicarilla 37-B Well #7
Operator #: 0108 Operator Name: Alpine Oil P/L District: Ojito
Coordinates: Letter: F Section 24 Township: 24N Range: 5W
Or Latitude _____ Longitude _____
Pit Type: Dehydrator ___ Location Drip: X Line Drip: ___ Other: _____
Site Assessment Date: 7-12-94 Area: 08 Run: 81

SITE ASSESSMENT

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

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

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 _____
(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: 0 **POINTS**

REMARKS

Remarks : Redline Book - Outside Vulnerable Zone Topo - Outside
KGW 7-15-94
one pit on location - dry oil & water in pit

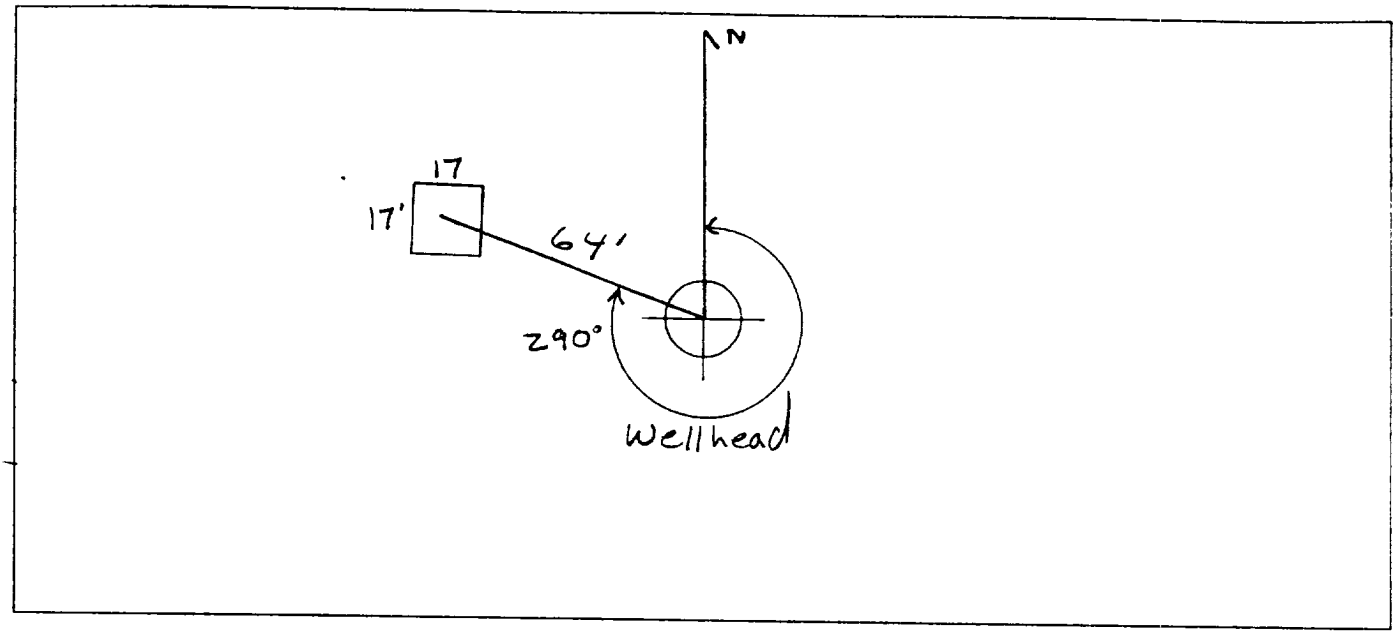
(SP3190) 04/08/94

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 290 Footage from Wellhead 64

b) Length : 17 Width : 17 Depth : 3



REMARKS

Remarks :

Pictures @ 1229 # 5 Roll # 2 (Disposable)

oil & water in pit

Completed By:

Signature

7-12-94

Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 93466 Location: JICARILLA 37-B WELL #7

Coordinates: Letter: E Section 24 Township: 24N Range: 5W

Or Latitude _____ Longitude _____

Date Started : 10-2-95 Run: 08 81

FIELD OBSERVATIONS

Sample Number(s): DS101 _____ _____ _____

Sample Depth: 9 Feet

Final PID Reading 10.0 PID Reading Depth 9 Feet

	Yes	No
Groundwater Encountered	☐	☒

Approximate Depth _____ Feet

CLOSURE

Remediation Method :

Excavation	☒	Approx. Cubic Yards 280 LF 10/5/95
Onsite Bioremediation	☐	Gabrial Jicarilla E.P.O. Approved
Backfill Pit Without Excavation	☐	closure 10-2-95

Soil Disposition:

Envirotech	☒	☐	Tierra
Other Facility	☐	Name:	_____

Pit Closure Date: 10-3-95 Pit Closed By: Philip

REMARKS

Remarks : PID READINGS (N-85)(S-0.6)(E-54)(W-65.3)

PIT SIZE 26x27x9 PIT LISTED OUTSIDE W.V. ZONE.

MORE THAN 100' FROM EPHEMERAL STREAM

FENCE SIZE 21x21x3 (NET)

Signature of Specialist: Nicholas Schmaltz

(SP3191) 03/16/94

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:	NS101	947570
MTR CODE | SITE NAME:	93466	Jic. 37-B #7
SAMPLE DATE | TIME (Hrs):	10-02-95	0945
PROJECT:	JicPits	
DATE OF TPH EXT. | ANAL.:		
DATE OF BTEX EXT. | ANAL.:	10/3/95	10/3/95
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)	194	MG/KG			2.0	2.0
HEADSPACE PID	10.0	PPM				
PERCENT SOLIDS	96.5	%				

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

The Surrogate Recovery was at 102% for this sample All QA/QC was acceptable.

Narrative:

DF = Dilution Factor Used

Approved By: _____ Date: 10-4-95

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

[illegible]5/10/03 15:51

Sample identification
4/570

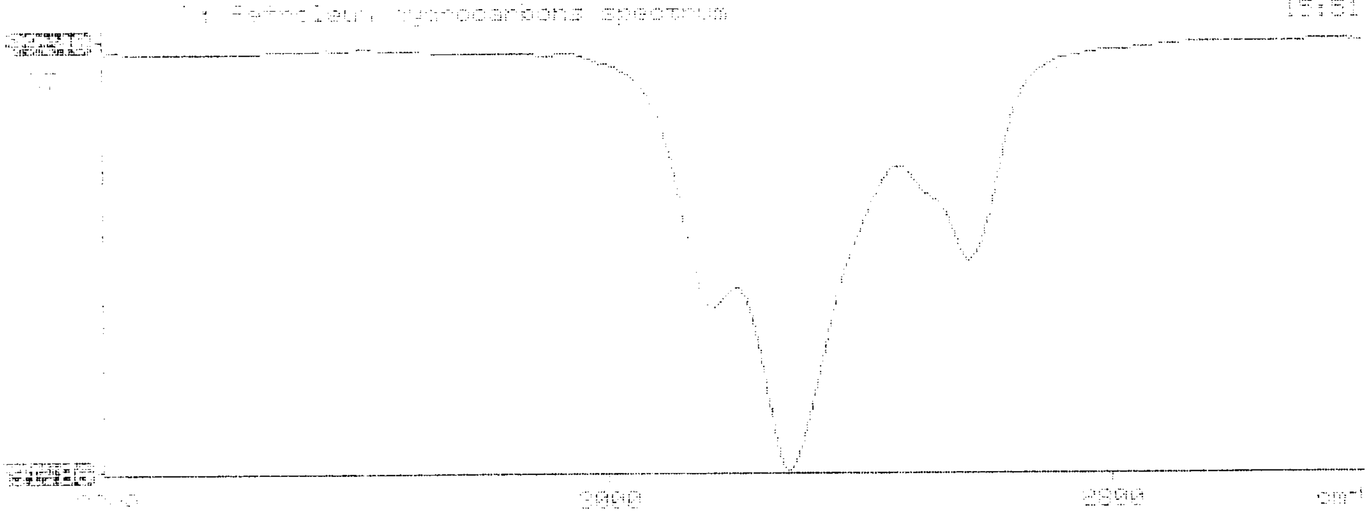
Initial mass of sample, g
[illegible]

Volume of sample after extraction, ml
12.000

Petroleum hydrocarbons, ppm
[illegible]

Net absorbance of hydrocarbons (2930 cm-1)
.174

1: Petroleum hydrocarbons spectrum



BTEX SOIL SAMPLE WORKSHEET

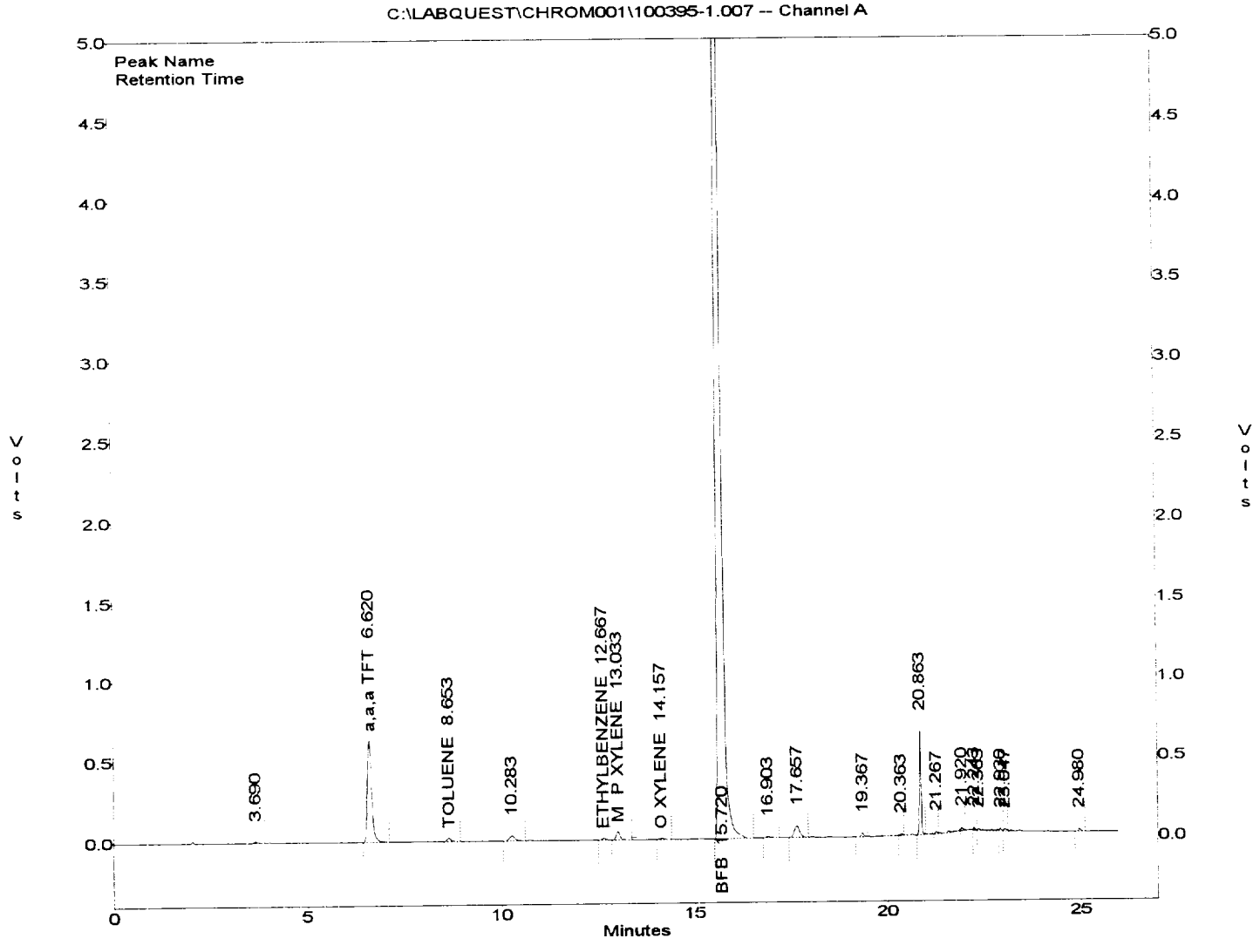
File	947570	**Date Printed**	10/4/95		
Soil Mass (g)	4.98	**Multiplier (L/g)**	0.00100		
Extraction vol. (mL)	10	**DF (Analytical)**	200		
Shot Volume (uL)	50	**DF (Report)**	0.20080		
					Det. Limit
Benzene (ug/L)	0.00	**Benzene (mg/Kg):**	**0.000**		0.502
Toluene (ug/L)	0.54	**Toluene (mg/Kg):**	**0.108**		0.502
Ethylbenzene (ug/L)	0.28	**Ethylbenzene (mg/Kg):**	**0.056**		0.502
p & m-xylene (ug/L)	1.04	p & m-xylene (mg/Kg):	0.209		1.004
o-xylene (ug/L)	0.25	o-xylene (mg/Kg):	0.050		0.502
		Total xylenes (mg/Kg):	**0.259**		1.506
		Total BTEX (mg/Kg):	**0.424**		

EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM001\100395-1.007
Method : C:\LABQUEST\METHODS\1-091895.MET
Sample ID : 947570,4.98G,50U
Acquired : Oct 01, 1995 15:26:24
Printed : Oct 01, 1995 15:52:48
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	4.917	0	0.0000
a,a,a TFT	6.620	4759010	103.0818
TOLUENE	8.653	149379	0.5379
ETHYLBENZENE	12.667	71195	0.2786
M & P XYLENE	13.033	343527	1.0368
O XYLENE	14.157	60702	0.2549
BFB	15.720	73588952	101.5171



Analytical**Technologies,**Inc.

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

ATI I.D. **510329**

October 13, 1995

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

Project Name/Number: PIT CLOSURE/JIC PITS 24324

Attention: John Lambdin

On **10/10/95**, 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.

Due to sample heterogeneity, varying results were obtained for sample "947575" on EPA method 418.1. The low and high values are submitted.

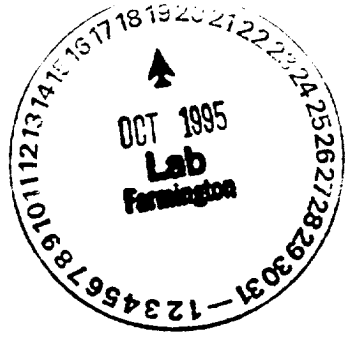
If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure



Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

Analytical**Technologies,**Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015 MODIFIED

CLIENT : EL PASO NATURAL GAS ATI I.D.: 510329

PROJECT # : 24324

PROJECT NAME : PIT CLOSURE/JIC PITS

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	947570	NON-AQ	10/02/95	10/10/95	10/10/95	1

PARAMETER	UNITS	01
FUEL HYDROCARBONS	MG/KG	25
HYDROCARBON RANGE		C12-C36
HYDROCARBONS QUANTITATED USING		DIESEL
SURROGATE:		
O-TERPHENYL (%)		91

93466

NS101