

Denny E. Frost
DEPUTY OIL & GAS INSPECTOR

DEC 29 1997

Approved

Meter Number: 95942
Location Name: Jic. Contract 148 #35
Location: TN-25 RG-05
SC-14 UL-P
6 - Jicarilla
NMOCD Zone: OUTSIDE
Hazard Ranking Score: 00

RECEIVED
APR 14 1997
OIL CONSERVATION
BUREAU

**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

Meter: 95942 Location: JIC CONTRACT 148 #35
 Operator #: 0203 Operator Name: AMOCO P/L District: QT/TO
 Coordinates: Letter: P Section 14 Township: 25 Range: 5
 Or Latitude _____ Longitude _____
 Pit Type: Dehydrator _____ Location Drip: X Line Drip: _____ Other: _____
 Site Assessment Date: 8-17-95 Area: 06 Run: 63

NMOCD Zone: (From NMOCD Maps)	Inside ☐ (1) Outside ☒ (2)	Land Type:	BLM ☐ (1) State ☐ (2) Fee ☐ (3) Indian <u>JICARILLA</u>
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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)

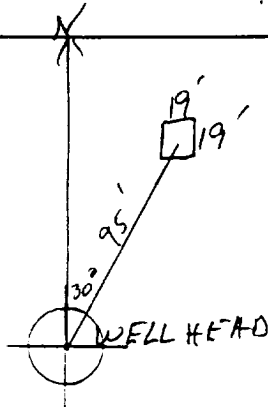
Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)
☒ (2) > 100'

TOTAL HAZARD RANKING SCORE: 0 **POINTS**

Remarks : PARAFFIN & OIL IN PIT

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 30° Footage from Wellhead 95'
b) Length : 19' Width : 19' Depth : 28"



Remarks :

Completed By:

Henry C. C. C.
Signature

8-17-95
Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	Meter: <u>95942</u> Location: <u>JIC CONTRACT 148 #35</u> Coordinates: Letter: <u>P</u> Section <u>14</u> Township: <u>25</u> Range: <u>5</u> Or Latitude _____ Longitude _____ Date Started : <u>8-30-95</u> Run: <u>06</u> <u>63</u>
FIELD OBSERVATIONS	Sample Number(s): <u>NS82</u> Sample Depth: <u>17</u> Feet Final PID Reading <u>0.2</u> PID Reading Depth <u>17</u> Feet Yes No Groundwater Encountered ☐ ☒ Approximate Depth _____ Feet
CLOSURE	Remediation Method : Excavation ☒ Approx. Cubic Yards <u>380 9/11/95</u> Onsite Bioremediation ☐ <u>Gabriel From Llanilla E.P.O. Approved</u> Backfill Pit Without Excavation ☐ <u>Closure 9-6-95</u> Soil Disposition: Envirotech ☒ Tierra ☐ Other Facility ☐ Name: _____ Pit Closure Date: <u>9-7-95</u> Pit Closed By: <u>Philip</u>
REMARKS	Remarks : <u>Pit full of RAIN WATER. PID READINGS (N-27)</u> <u>(33.7)(E 31)(W-0.2) LESS Than 100' From EPHEMERAL STREAM</u> <u>Pit SIZE 31x19x17.</u> <u>FENCE SIZE 28x28x3 NO NET</u>
	Signature of Specialist: <u>Dulles Schmitt</u>



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	NS82	947365
MTR CODE SITE NAME:	95942	Jic Contract 148 #35
SAMPLE DATE TIME (Hrs):	08-30-95	1615
PROJECT:	Jic Pits	
DATE OF TPH EXT. ANAL.:	8-31-95	
DATE OF BTEX EXT. ANAL.:	9/1/95	9/5/95
TYPE DESCRIPTION:	VG	BROWN SAND & CLAY

Field Remarks: (N-27)(S-33.7)(E-31)(W-0.2)

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	< 5	MG/KG				
TOLUENE	< .5	MG/KG				
ETHYL BENZENE	< .5	MG/KG				
TOTAL XYLENES	< 1.5	MG/KG				
TOTAL BTEX	< 3	MG/KG				
TPH (418.1)	54.9	MG/KG			2.11	25
HEADSPACE PID	0.2	PPM				
PERCENT SOLIDS	94.3	%				

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

The Surrogate Recovery was at 94% for this sample All QA/QC was acceptable.
Narrative:

DF = Dilution Factor Used

Approved By:

[Signature]

Date:

9-7-95

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

95/08/31 14:02

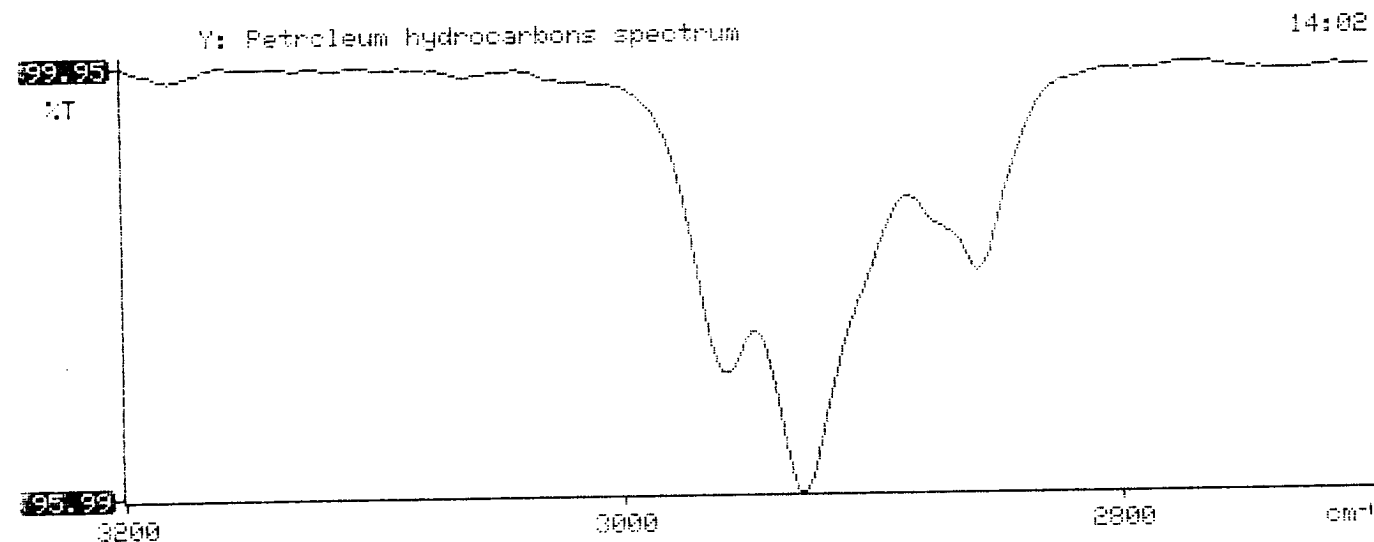
Sample identification
 947365

Initial mass of sample, g
 2.110

Volume of sample after extraction, ml
 28.000

Petroleum hydrocarbons, ppm
 34.889

Net absorbance of hydrocarbons (2930 cm^{-1})
 0.017



BTEX SOIL SAMPLE WORKSHEET

File	:	947365	Date Printed	:	9/6/95
Soil Mass (g)	:	4.97	Multiplier (L/g)	:	0.00101
Extraction vol. (mL)	:	20	DF (Analytical)	:	200
Shot Volume (uL)	:	100	DF (Report)	:	0.20121

				Det. Limit
Benzene (ug/L)	:	0.00	Benzene (mg/Kg):	0.000 0.503
Toluene (ug/L)	:	0.00	Toluene (mg/Kg):	0.000 0.503
Ethylbenzene (ug/L)	:	0.00	Ethylbenzene (mg/Kg):	0.000 0.503
p & m-xylene (ug/L)	:	0.00	p & m-xylene (mg/Kg):	0.000 1.006
o-xylene (ug/L)	:	0.00	o-xylene (mg/Kg):	0.000 0.503
			Total xylenes (mg/Kg):	0.000 1.509
			Total BTEX (mg/Kg):	0.000

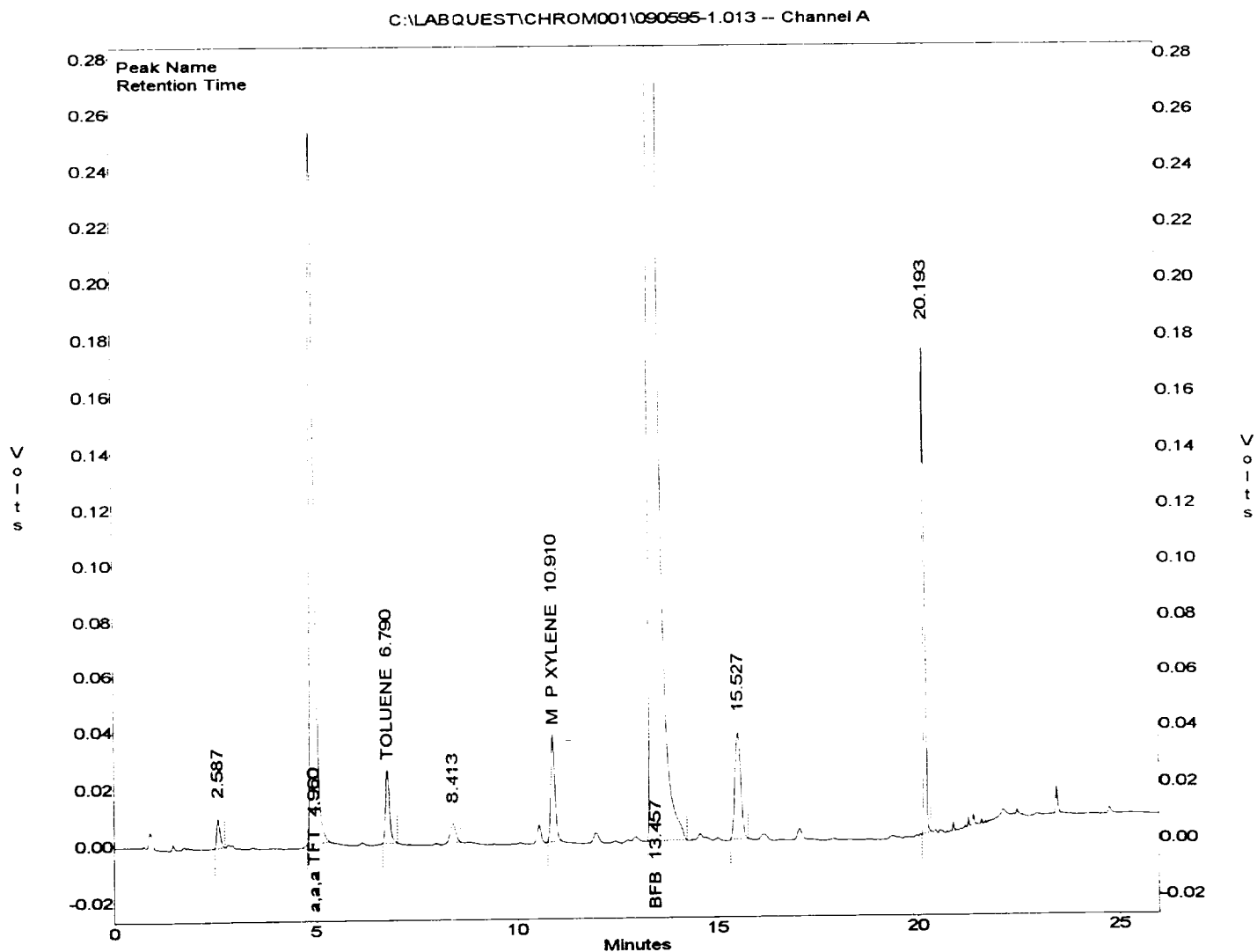
EL PASO NATURAL GAS

EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM001\090595-1.013
 Method : C:\LABQUEST\METHODS\9001.MET
 Sample ID : 947365,4.97G,100U
 Acquired : Sep 04, 1995 18:34:14
 Printed : Sep 04, 1995 19:00:32
 User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	3.390	0	0.0000
a,a,a TFT	4.960	2074350	87.1609
TOLUENE	6.790	179129	-0.3933
ETHYLBENZENE	10.540	0	0.0000
M & P XYLENE	10.910	263535	-2.8156
O XYLENE	11.877	0	0.0000
BFB	13.457	33010414	93.9806



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White - Testing Laboratory **Canary - EPNG Lab** **Pink - Field Sampler**