DEPUTY OIL & GAS INSPECTOR

DEC 3 9 1997

Approval

Meter Number:94125
Location Name:WARREN G #35-1
Location:TN-25 RG-06
SC-35 UL-K
3 - Navajo
NMOCD Zone:OUTSIDE
Hazard Ranking Score:00

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

EL PASO FIELD SERVICES

GENERAL

Meter: 94125 Location: WARREN G # 35-1

Operator #: _____ Operator Name: MERRION OIL P/L District: OJITO

Coordinates: Letter: K Section 35 Township: 25 Range: 6

Or Latitude _____ Longitude _____

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

Site Assessment Date: 2-7-95 Area: 06 Run: 52

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 & TOPO SHOW LOCATION OUTSIDE V.Z. TWO PITS ON LOCATION. LOCATION DRIP PIT BELONGS TO EPNG. WILL CLOSE PIT.

PUSH IN

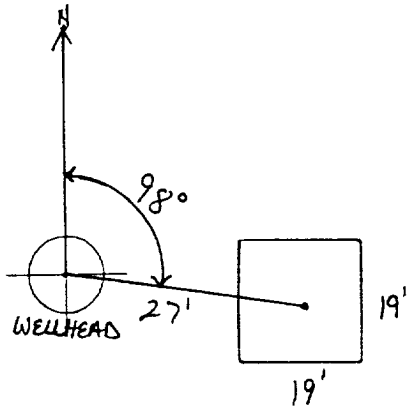
(SP3190) 04/08/94

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 98° Footage from Wellhead 27'

b) Length : 19' Width : 19' Depth : 2'



REMARKS

Remarks :

PHOTOS- 1004

Completed By:

Robert Thompson
Signature

2.7.95
Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 94125 Location: Warren 6 # 35-1

Coordinates: Letter: K Section 35 Township: 25 Range: 6

Or Latitude _____ Longitude _____

Date Started : 11/8/95 Run: 06 52

FIELD OBSERVATIONS

Sample Number(s): JK128 _____ _____ _____

Sample Depth: 8' Feet

Final PID Reading 106.1 PID Reading Depth 8' Feet

	Yes	No
Groundwater Encountered	☐	☒

Approximate Depth _____ Feet

CLOSURE

Remediation Method :

Excavation ☐ Approx. Cubic Yards 0 LF 11/10/95

Onsite Bioremediation ☐

Backfill Pit Without Excavation ☒

Soil Disposition:

Envirotech ☐ ☐ Tierra

Other Facility ☐ Name: _____

Pit Closure Date: 11/8/95 Pit Closed By: Philip

REMARKS

Remarks : This Pit was a Lush In Fence size 22x22 = 484 sq ft Not yes 484 sq FT more than 100' from Ephemral Strem E.P.U.6 on Site

Signature of Specialist: James K. Kirby

(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:	JK128	947761
MTR CODE | SITE NAME:	94125	Warren 6 # 35-1
SAMPLE DATE | TIME (Hrs):	11-08-95	1150
PROJECT:	Phase I Navajo	
DATE OF TPH EXT. | ANAL.:	11/9/95	
DATE OF BTEX EXT. | ANAL.:	11/9/95	11/9/95
TYPE | DESCRIPTION:	VG	BROWN SAND & CLAY

Field Remarks: (No wellhead)

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	2.0	MG/KG				
TOTAL BTEX	< 3	MG/KG				
TPH (418.1)	3240	MG/KG			2.0	28
HEADSPACE PID	106.1	PPM				
PERCENT SOLIDS	94.5	%				

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

The Surrogate Recovery was at 109% for this sample All QA/QC was acceptable.

Narrative:

DF = Dilution Factor Used

Approved By: _____ Date: 11-15-95

BTEX SOIL SAMPLE WORKSHEET

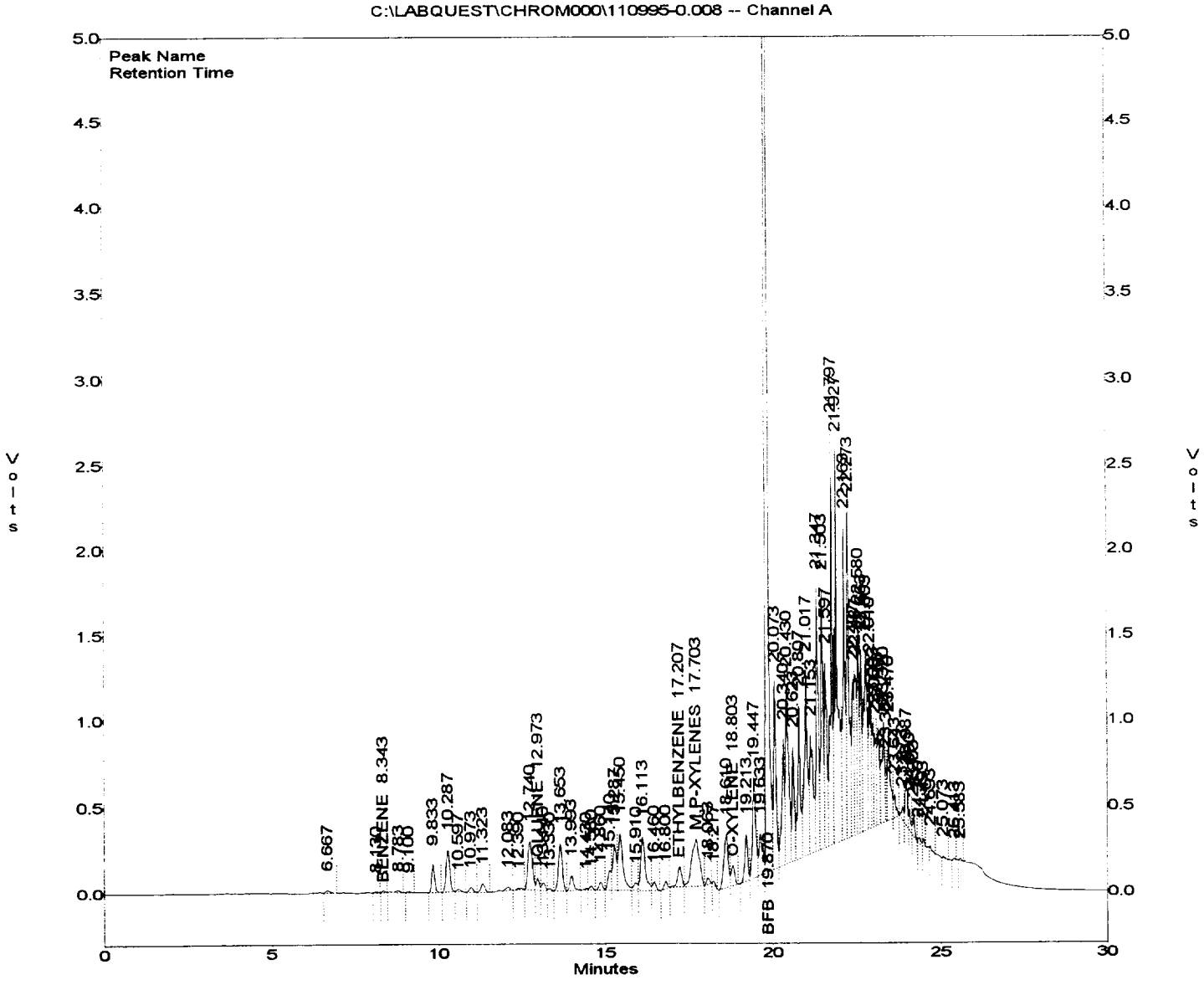
File :	947761	**Date Printed** :	11/10/95	
Soil Mass (g) :	4.98	**Multiplier (L/g)** :	0.00100	
Extraction vol. (mL) :	10	**CAL FACTOR (Analytical):**	200	
Shot Volume (uL) :	50	**CAL FACTOR (Report):**	0.20080	
		DILUTION FACTOR:	**1**	**Det. Limit**
Benzene (ug/L) :	0.13	**Benzene (mg/Kg):**	**0.026**	0.502
Toluene (ug/L) :	0.84	**Toluene (mg/Kg):**	**0.169**	0.502
Ethylbenzene (ug/L) :	2.45	**Ethylbenzene (mg/Kg):**	**0.492**	0.502
p & m-xylene (ug/L) :	8.18	p & m-xylene (mg/Kg):	1.643	1.004
o-xylene (ug/L) :	2.01	o-xylene (mg/Kg):	0.404	0.502
		Total xylenes (mg/Kg):	**2.046**	1.506
		Total BTEX (mg/Kg):	**2.733**	

EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM000\110995-0.008
Method : C:\LABQUEST\METHODS\0-110295.MET
Sample ID : 947761,4.98G,50U
Acquired : Nov 09, 1995 16:21:56
Printed : Nov 09, 1995 16:52:22
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	8.343	62348	0.1278
TOLUENE	12.973	455304	0.8443
ETHYLBENZENE	17.207	1093852	2.4456
M,P-XYLENES	17.703	4382296	8.1766
O-XYLENE	18.803	915109	2.0117
BFB	19.870	57762524	109.2803



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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
****

95/11/09 14:58

Sample identification
947761

Initial mass of sample, g
2.000

Volume of sample after extraction, ml
28.000

Petroleum hydrocarbons, ppm
3236.597

Net absorbance of hydrocarbons (2930 cm-1)
0.402