Denny E. Foust
DEPUTY OIL & GAS INSPECTOR
DEC 30 1997
Approved

Meter Number:95254
Location Name:TL RHODES C 3E
Location:TN-28 RG-11
SC-31 UL-E
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.

EL PASO FIELD SERVICES

FIELD PIT SITE ASSESSMENT FORM

GENERAL

Meter: 95254 Location: TL Rhodes C 3E
Operator #: 0203 Operator Name: Amoco P/L District: Angel Peak
Coordinates: Letter: E Section 31 Township: 28 Range: 11
Or Latitude _____ Longitude _____
Pit Type: Dehydrator ✓ Location Drip: ___ Line Drip: ___ Other: _____
Site Assessment Date: 1/20/95 Area: 01 Run: 82

SITE ASSESSMENT

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

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

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
2 pits. Closed.

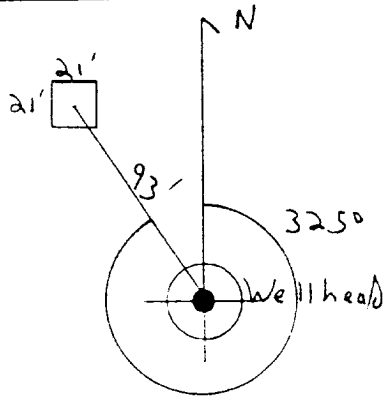
PUSH-IN

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 325° Footage from Wellhead 93'

b) Length : 21' Width : 21' Depth : 1'



REMARKS

Remarks :

Pictures @ 1200 hr 21-24 roll 3

Completed By:

Cory Chance
Signature

1/20/95
Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 95254 Location: TL Rhodes C 3E

Coordinates: Letter: ___ Section ___ Township: ___ Range: ___

Or Latitude _____ Longitude _____

Date Started : _____ Run: ___ ___

FIELD OBSERVATIONS

Sample Number(s): JK126 _____ _____ _____

Sample Depth: 8' Feet

Final PID Reading 133.0 PID Reading Depth 8' Feet

	Yes	No
Groundwater Encountered	☐	☒

Approximate Depth _____ Feet

CLOSURE

Remediation Method :

- Excavation ☐ Approx. Cubic Yards 0 LT 11/8/95
- Onsite Bioremediation ☐
- Backfill Pit Without Excavation ☒

Soil Disposition:

- Envirotech ☐ ☐ Tierra
- Other Facility ☐ Name: _____

Pit Closure Date: 11/6/95 Pit Closed By: Philip

REMARKS

Remarks : This Pit is a Push Fill
Fence Size 24x24 576 Netting yes
More than 100' From Ephemeral Stream
E.P.W.G Not on site

Signature of Specialist: James K. Kirby

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:	JK126	947751
MTR CODE | SITE NAME:	95254	T.L. Rhodes C 3E
SAMPLE DATE | TIME (Hrs):	11-06-95	1545
PROJECT:	Phase I Navajo	
DATE OF TPH EXT. | ANAL.:	11-7-95	
DATE OF BTEX EXT. | ANAL.:	11/7/95	11/7/95
TYPE | DESCRIPTION:	VG	BROWN SANDY CLAY

Field Remarks: No wall reading

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	< 0.5	MG/KG				
TOLUENE	17.5	MG/KG				
ETHYL BENZENE	17.1	MG/KG				
TOTAL XYLENES	114	MG/KG				
TOTAL BTEX	148	MG/KG		D1		
TPH (418.1)	19500	MG/KG			.55	28
HEADSPACE PID	133	PPM				
PERCENT SOLIDS	93.8	%				

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

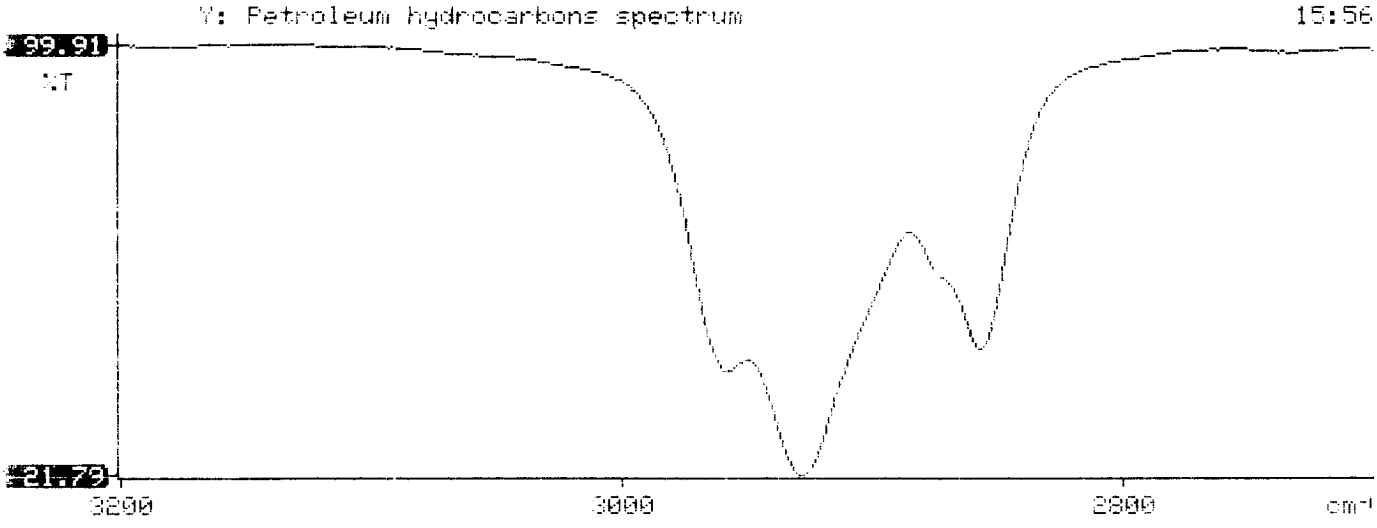
The Surrogate Recovery was at 97% for this sample All QA/QC was acceptable.

Narrative: Result for m/p xylenes exceeded calibration range.

DF = Dilution Factor Used

Approved By: _____ Date: 11-9-95

```
*************************************************************
*                    Test Method for                        *
*      Oil and Grease and Petroleum Hydrocarbons            *
*                    in Water and Soil                      *
*                                                           *
*             Perkin-Elmer Model 1600 FT-IR                 *
*                    Analysis Report                        *
*************************************************************
*
 95/11/07  15:56
*
*  Sample identification
 947751
*
*  Initial mass of sample, g
 0.550
*
*  Volume of sample after extraction, ml
 28.000
*
*  Petroleum hydrocarbons, ppm
 19494.001
*  Net absorbance of hydrocarbons (2930 cm-1)
 0.659
*
*
*
```



BTEX SOIL SAMPLE WORKSHEET

File	947751	**Date Printed**	11/8/95		
Soil Mass (g)	4.94	**Multiplier (L/g)**	0.00101		
Extraction vol. (mL)	10	**CAL FACTOR (Analytical):**	200		
Shot Volume (uL)	50	**CAL FACTOR (Report):**	0.20243		
		DILUTION FACTOR:	**1**	**Det. Limit**	
Benzene (ug/L)	0.12	**Benzene (mg/Kg):**	**0.024**	0.506	
Toluene (ug/L)	86.69	**Toluene (mg/Kg):**	**17.549**	0.506	
Ethylbenzene (ug/L)	84.49	**Ethylbenzene (mg/Kg):**	**17.103**	0.506	
p & m-xylene (ug/L)	344.59	p & m-xylene (mg/Kg):	69.755	1.012	
o-xylene (ug/L)	217.51	o-xylene (mg/Kg):	44.030	0.506	
		Total xylenes (mg/Kg):	**113.785**	1.518	
		Total BTEX (mg/Kg):	**148.462**		

EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM000\110795-0.004
Method : C:\LABQUEST\METHODS\0-110295.MET
Sample ID : 947751,4.94G,50U
Acquired : Nov 07, 1995 16:31:50
Printed : Nov 07, 1995 17:02:23
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	8.437	59112	0.1212
TOLUENE	13.067	41433836	86.6912
ETHYLBENZENE	17.360	36963296	84.4873
M,P-XYLENES	17.830	176160512	344.5948
O-XYLENE	18.933	90452352	217.5105
BFB	19.917	51308824	97.0706