

Kennerly, T. H.
DEPUTY CHIEF OF BUREAU

DEC 30 1997

Approved

Meter Number: 93065

Location Name: ANNIE L. ELLIOTT C #4

Location: TN-29 RG-09

SC-15 UL-A

2 - Federal

NMOCD Zone: OUTSIDE

Hazard Ranking Score: 00

RECEIVED
APR 14 1998

CR 1118, ENV.
11/18

**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.

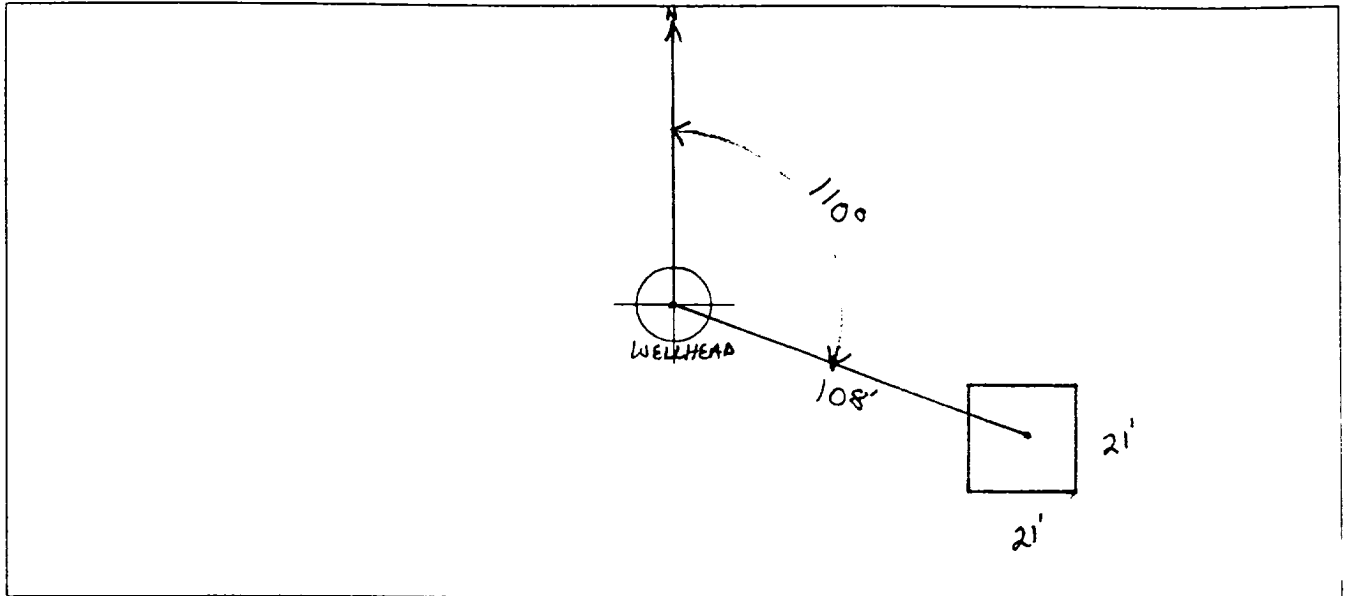
EPFS
EL PASO FIELD SERVICES

- 1 -

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 110° Footage from Wellhead 108'
b) Length : 21' Width : 21' Depth : 3'

ORIGINAL PIT LOCATION



Remarks :

TOOK PICTURES AT 10:20 AM.

END DUMP

REMARKS

Completed By:

Robert Thompson
Signature

5.8.94
Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	Meter: <u>93065</u> Location: <u>ANNIE L. ELLIOT C#4</u> Coordinates: Letter: <u>A</u> Section <u>15</u> Township: <u>29</u> Range: <u>7</u> Or Latitude _____ Longitude _____ Date Started : <u>6-27-94</u> Area: <u>10</u> Run: <u>31</u>
FIELD OBSERVATIONS	Sample Number(s): <u>MK40</u> Sample Depth: <u>12'</u> Feet Final PID Reading <u>263</u> PID Reading Depth <u>12'</u> Feet Yes No Groundwater Encountered ☐ (1) ☒ (2) Approximate Depth _____ Feet
CLOSURE	Remediation Method : Excavation ☐ (1) Approx. Cubic Yards _____ Onsite Bioremediation ☐ (2) Backfill Pit Without Excavation ☒ (3) Soil Disposition: Envirotech ☐ (1) ☐ (3) Tierra Other Facility ☐ (2) Name: _____ Pit Closure Date: <u>6-27-94</u> Pit Closed By: <u>BEI</u>
REMARKS	Remarks : <u>EPNG LINES marked Soil was greyish brown at</u> <u>Sample Depth Strong HYDRO carbon odor</u> _____ _____
Signature of Specialist: <u>Morgan Killian</u>	



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	mk 40	945528
MTR CODE SITE NAME:	93045	N/A
SAMPLE DATE TIME (Hrs):	6-27-94	1058
SAMPLED BY:	N/A	
DATE OF TPH EXT. ANAL.:	6/30/94	6/30/94
DATE OF BTEX EXT. ANAL.:	N/A	N/A
TYPE DESCRIPTION:	VG	Brown Clay / Sand

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE		MG/KG				
TOLUENE		MG/KG				
ETHYL BENZENE		MG/KG				
TOTAL XYLENES		MG/KG				
TOTAL BTEX	4280	MG/KG			1.19	760/94
TPH (418.1)	1910	MG/KG			0.32	6/30/94
HEADSPACE PID	263	PPM			2.03	28
PERCENT SOLIDS	87.3	%				

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

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

DF = Dilution Factor Used

Approved By:

John F. Linder

Date:

7/14/94

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

14/04/30 13:06

Sample Identification
 000000

Initial mass of sample, g
 1.00

Volume of sample after extraction, ml
 1.00

Extraction solvent, cm
 10.00

Concentration of hydrocarbon (ppm in 1)
 100

