Denny G. Foust
DEPUTY OIL & GAS INSPECTOR
DEC 22 1997

Meter Number:94535
Location Name:MARTIN BLACKFORD #1
Location:TN-24 RG-05
SC-24 UL-A
6 - Jicarilla
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.

6

FIELD PIT SITE ASSESSMENT FORM

EPFS EL PASO FIELD SERVICES

GENERAL

Meter: 94535 Location: Martin Blackford #1

Operator #: 5728 Operator Name: Ludwick P/L District: Ojito

Coordinates: Letter: A Section 24 Township: 24 Range: 5

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

One pit on location

Push In

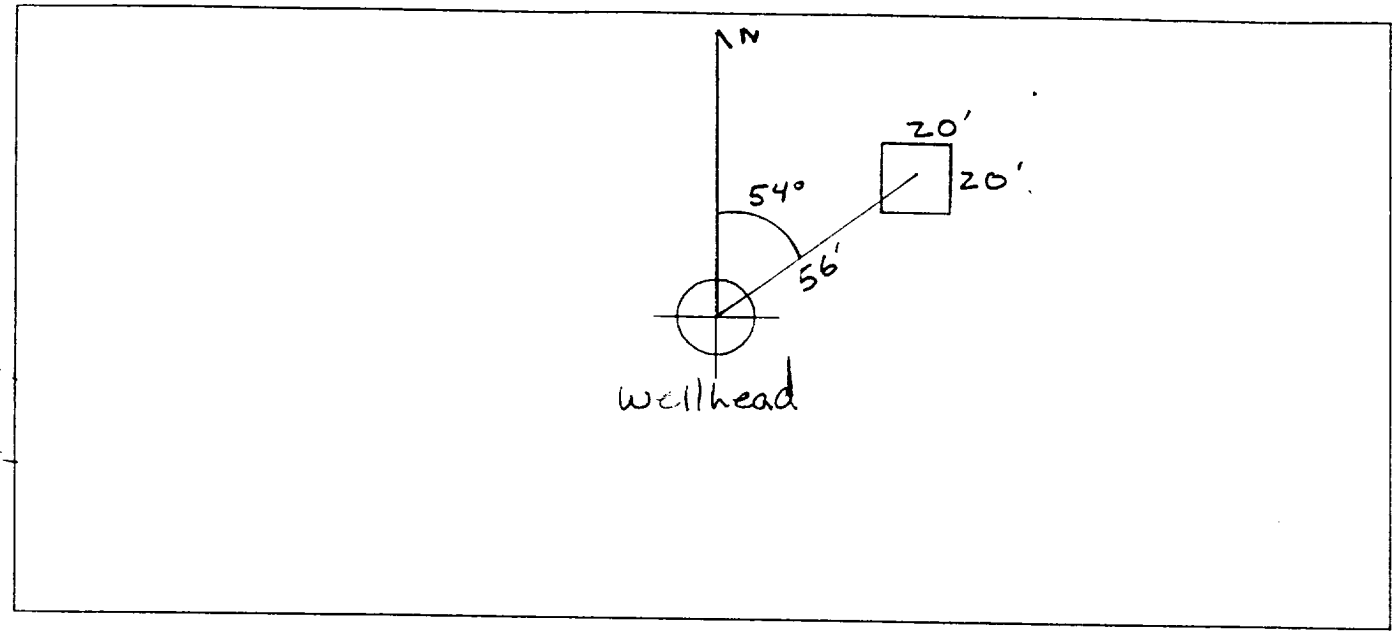
(SP3190) 04/08/94

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 54 Footage from Wellhead 56

b) Length : 20 Width : 20 Depth : 4



REMARKS

Remarks :

Pictures @ 1245 #9 Disp #2

Water & oil in pit

Completed By:

Signature

7-12-94

Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 94535 Location: MARTIN BLACKFORD #1

Coordinates: Letter: A Section 24 Township: 24 Range: 5

Or Latitude ________ Longitude ________

Date Started : 9-27-95 Run: 08 81

FIELD OBSERVATIONS

Sample Number(s): NS100 ________ ________ ________

Sample Depth: 15 Feet

Final PID Reading 28.7 PID Reading Depth 15 Feet

Groundwater Encountered Yes ☐ No ☒ Approximate Depth ______ Feet

CLOSURE

Remediation Method :

Excavation ☒ Approx. Cubic Yards 264 LF 10/5/95

Onsite Bioremediation ☐ Gabrial Jicarilla E.P.O. approved closure 10-2-95

Backfill Pit Without Excavation ☐

Soil Disposition:

Envirotech ☒ ☐ Tierra

Other Facility ☐ Name: ________

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

REMARKS

Remarks : PID READINGS: (N 6.0) (S 4.1) (E 18) (W 0.7)
Pit SIZE 22X26X15 Pit OUTSIDE W.U. ZONE
EPNG ONSITE
FENCE 28X28X3 (NET)

Signature of Specialist: Nicholas Schmoltz

(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:	NS100	947553
MTR CODE | SITE NAME:	94535	Martin Blackford #1
SAMPLE DATE | TIME (Hrs):	09-27-95	1230
PROJECT:	JicPits	
DATE OF TPH EXT. | ANAL.:	9/28/95	
DATE OF BTEX EXT. | ANAL.:	9/28/95	9/28/95
TYPE | DESCRIPTION:	VG	Light brown Sand & Clay

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)	8400	MG/KG			1.01	28
HEADSPACE PID	28.7	PPM				
PERCENT SOLIDS	93.4	%				

-- 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: _____ Date: 9-29-95

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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                   *
****************************************************
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[illegible]3/09/28 15:59

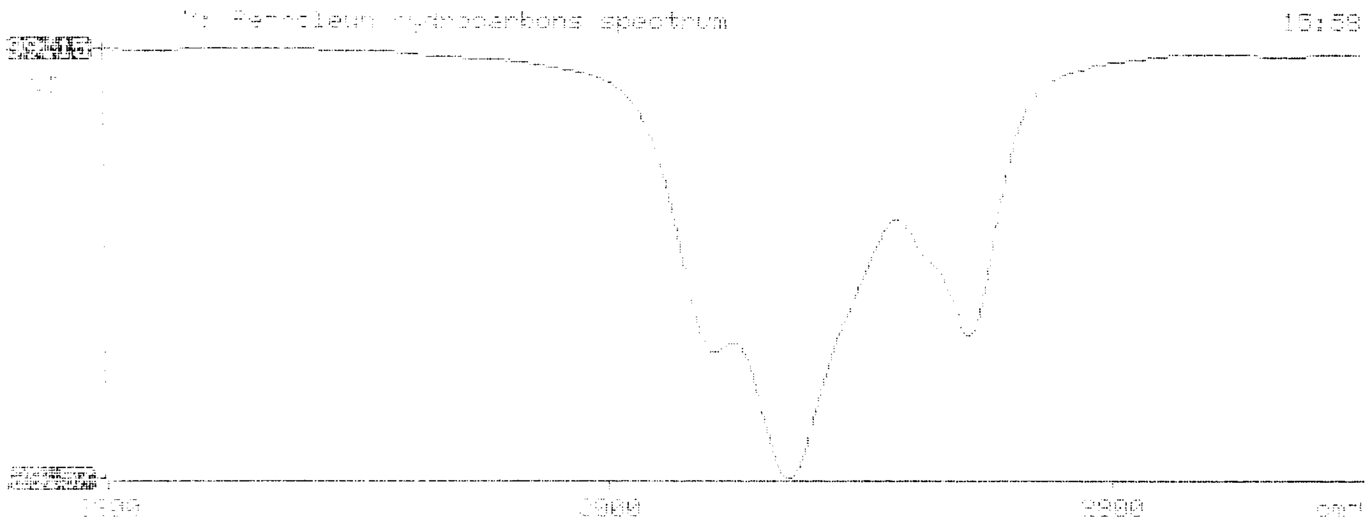
Sample identification
47553

Initial mass of sample, g
.010

Volume of sample after extraction, ml
[illegible]3.000

Petroleum hydrocarbons, ppm
40[illegible]

Net absorbance of hydrocarbons (2930 cm-1)
[illegible]



BTEX SOIL SAMPLE WORKSHEET

File	947553	**Date Printed**	9/29/95
Soil Mass (g)	5.06	**Multiplier (L/g)**	0.00099
Extraction vol. (mL)	10	**DF (Analytical)**	200
Shot Volume (uL)	50	**DF (Report)**	0.19763

				Det. Limit
Benzene (ug/L)	0.00	**Benzene (mg/Kg):**	**0.000**	0.494
Toluene (ug/L)	0.67	**Toluene (mg/Kg):**	**0.132**	0.494
Ethylbenzene (ug/L)	0.35	**Ethylbenzene (mg/Kg):**	**0.069**	0.494
p & m-xylene (ug/L)	1.23	p & m-xylene (mg/Kg):	0.243	0.988
o-xylene (ug/L)	0.57	o-xylene (mg/Kg):	0.113	0.494
		Total xylenes (mg/Kg):	**0.356**	1.482
		Total BTEX (mg/Kg):	**0.557**	

EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM001\092895-1.007
Method : C:\LABQUEST\METHODS\9001.MET
Sample ID : 947553,5.06G,50U
Acquired : Sep 28, 1995 16:33:09
Printed : Sep 28, 1995 16:59:37
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	4.917	0	0.0000
a,a,a TFT	6.643	4599946	99.6365
TOLUENE	8.687	186592	0.6719
ETHYLBENZENE	12.703	89369	0.3497
M & P XYLENE	13.073	407636	1.2303
O XYLENE	14.197	135018	0.5670
BFB	15.757	68427656	94.3970