

Dennys E. Faust
DEPUTY OIL & GAS INSPECTOR

DEC 22 1997

Approved

Meter Number: 94529
Location Name: M & M #1
Location: TN-23 RG-04
SC-15 UL-I
6 - Jicarilla
NMOCD Zone: OUTSIDE
Hazard Ranking Score: 00

RECEIVED
APR 14 1997

OIL CON. DIV.
DIST. 3

**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: 94529 Location: M & M #1
Operator #: 5728 Operator Name: LUDWICK JAMES L P/L District: OSITO
Coordinates: Letter: I Section 15 Township: 23 Range: 4
Or Latitude _____ Longitude _____
Pit Type: Denydrator _____ Location Drip: X Line Drip: _____ Other: _____
Site Assessment Date: 2-27-95 Area: 08 Run: C3

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

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)

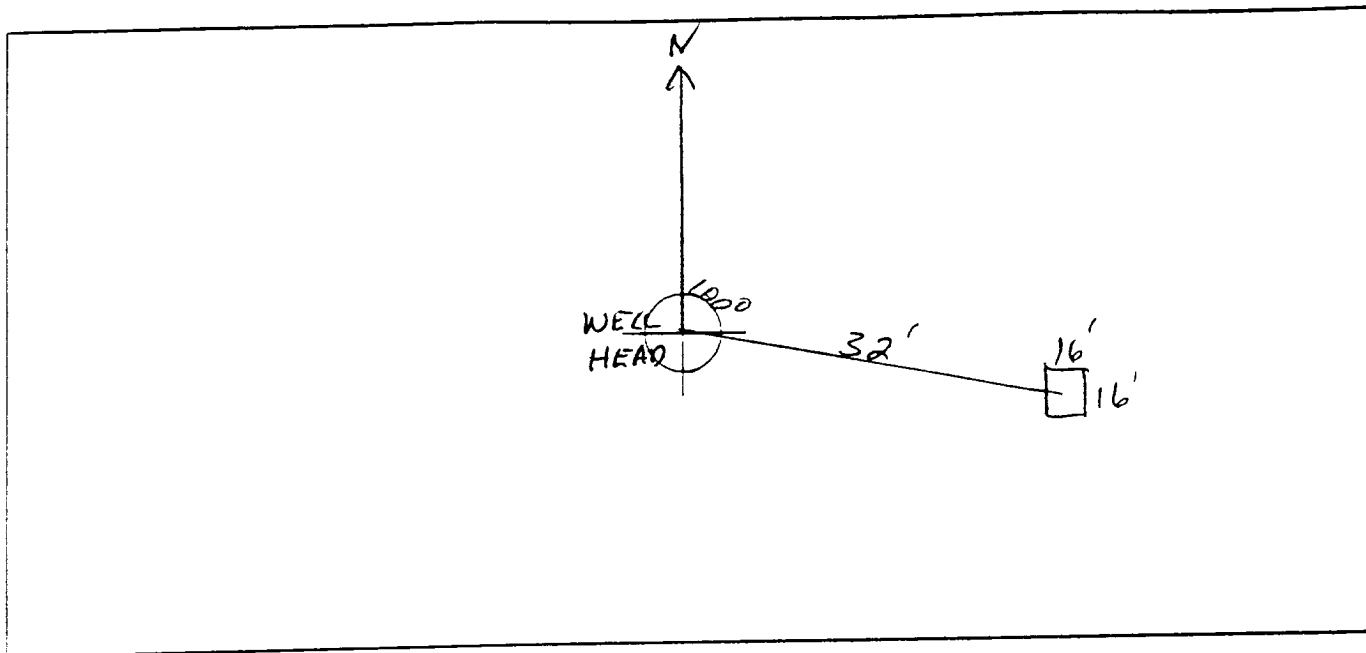
Name of Surface Water Body _____
Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks,
Irrigation Canals, Ditches, Lakes, Ponds)
Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)
☒ (2) > 100'

TOTAL HAZARD RANKING SCORE: 0 POINTS

Remarks : _____

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 100° Footage from Wellhead 32'
b) Length : 16' Width : 16' Depth : 36"



Remarks :

Completed By:

Henry Conley
Signature

7-27-95
Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	<p>Meter: <u>94529</u> Location: <u>M E M #1</u></p> <p>Coordinates: Letter: <u>I</u> Section <u>15</u> Township: <u>23</u> Range: <u>4</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>10/12/95</u> Run: <u>08</u> <u>C3</u></p>
FIELD OBSERVATIONS	<p>Sample Number(s): <u>JK104</u></p> <p>Sample Depth: <u>9'</u> Feet</p> <p>Final PID Reading <u>1.7</u> PID Reading Depth <u>9'</u> Feet</p> <p style="text-align: center;">Yes No</p> <p>Groundwater Encountered <input type="checkbox"/> <input checked="" type="checkbox"/> Approximate Depth _____ Feet</p>
CLOSURE	<p>Remediation Method :</p> <div style="display: flex; justify-content: space-between;"> <div> <p>Excavation</p> <p>Onsite Bioremediation</p> <p>Backfill Pit Without Excavation</p> </div> <div> <p><input type="checkbox"/> Approx. Cubic Yards <u>0</u> LT <u>10/14/95</u></p> <p><input type="checkbox"/> Keith From Jic E.P.O. approved</p> <p><input checked="" type="checkbox"/> closure 10-16-95</p> </div> </div> <p>Soil Disposition:</p> <div style="display: flex; justify-content: space-between;"> <p>Envirotech <input type="checkbox"/></p> <p>Tierra <input type="checkbox"/></p> </div> <p>Other Facility <input type="checkbox"/> Name: _____</p> <p>Pit Closure Date: <u>10-17-95</u> Pit Closed By: <u>Philip</u></p>
REMARKS	<p>Remarks : <u>Did not Excavate</u></p> <p><u>Fence size 19x19x3</u> <u>no net</u></p> <p><u>more than 100' from Ephemeral stream</u></p>
	<p>Signature of Specialist: <u>[Signature]</u></p>



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JK104	947636
MTR CODE SITE NAME:	94529	M E M #1
SAMPLE DATE TIME (Hrs):	10-12-95	1530
PROJECT:	Jic Pits	
DATE OF TPH EXT. ANAL.:	10-18-95	
DATE OF BTEX EXT. ANAL.:	10/16/95	10/17/95
TYPE DESCRIPTION:	VG	DARK BROWN SANDY CLAY

Field Remarks: (No wall PID readings)

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)	54.0	MG/KG			200	28
HEADSPACE PID	1.7	PPM				
PERCENT SOLIDS	87.8	%				

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

The Surrogate Recovery was at 93% for this sample All QA/QC was acceptable.
Narrative:

DF = Dilution Factor Used

Approved By: JJ.

Date: 10-18-95

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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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95/10/16 15:57

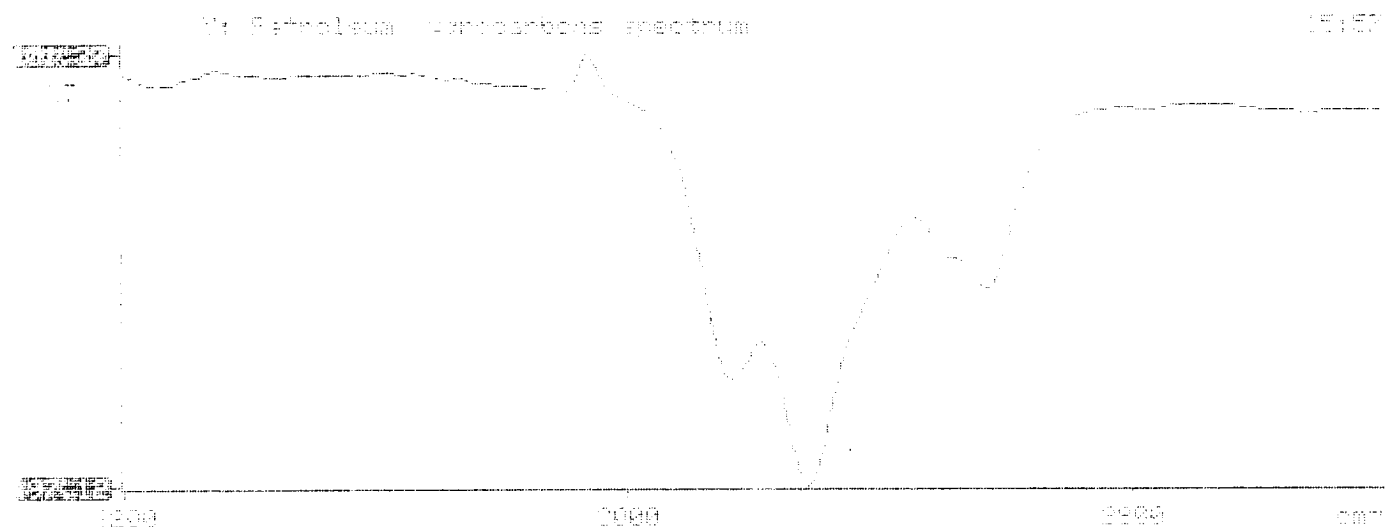
Sample identification
947636

Initial mass of sample, g
2.000

Volume of sample after extraction, ml
22.000

Petroleum hydrocarbons, ppm
74.057

Net absorbance of hydrocarbons (2930 cm⁻¹)
0.117



BTEX SOIL SAMPLE WORKSHEET

File	:	947636	Date Printed	:	10/18/95
Soil Mass (g)	:	5.13	Multiplier (L/g)	:	0.00097
Extraction vol. (mL)	:	10	CAL FACTOR (Analytical):	:	200
Shot Volume (uL)	:	50	CAL FACTOR (Report):	:	0.19493

		DILUTION FACTOR:	1	Det. Limit
Benzene (ug/L)	:	0.00	Benzene (mg/Kg):	0.000 0.487
Toluene (ug/L)	:	0.21	Toluene (mg/Kg):	0.041 0.487
Ethylbenzene (ug/L)	:	0.00	Ethylbenzene (mg/Kg):	0.000 0.487
p & m-xylene (ug/L)	:	0.35	p & m-xylene (mg/Kg):	0.068 0.975
o-xylene (ug/L)	:	0.00	o-xylene (mg/Kg):	0.000 0.487
			Total xylenes (mg/Kg):	0.068 1.462
			Total BTEX (mg/Kg):	0.109

EL PASO NATURAL GAS

EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM001\101795-2.014
 Method : C:\LABQUEST\METHODS\1-101395.MET
 Sample ID : 947636,5.13G,50U
 Acquired : Oct 16, 1995 01:44:08
 Printed : Oct 16, 1995 02:10:30
 User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	4.873	0	0.0000
a,a,a TFT	6.653	4239692	94.6493
TOLUENE	8.710	75933	0.2111
ETHYLBENZENE	12.740	0	0.0000
M & P XYLENE	13.093	142686	0.3524
O XYLENE	14.223	0	0.0000
BFB	15.773	63881720	92.6874

