

George A. Frost
DEPUTY OIL & GAS INSPECTOR

DEC 10 1997

Approved

Meter Number: 95260
Location Name: T.L. RHODES C 2E
Location: TN-28 RG-11
SC-30 UL-N
3 - Navajo
NMOCD Zone: OUTSIDE
Hazard Ranking Score: 00

RECEIVED
APR 14 1997

OIL CONSERVATION
DIVISION
DEC 10

**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

GENERAL

Meter: 95260 Location: T.L. Rhodes C 2E
Operator #: 0203 Operator Name: Amoco P/L District: Angel Peak
Coordinates: Letter: N Section 30 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

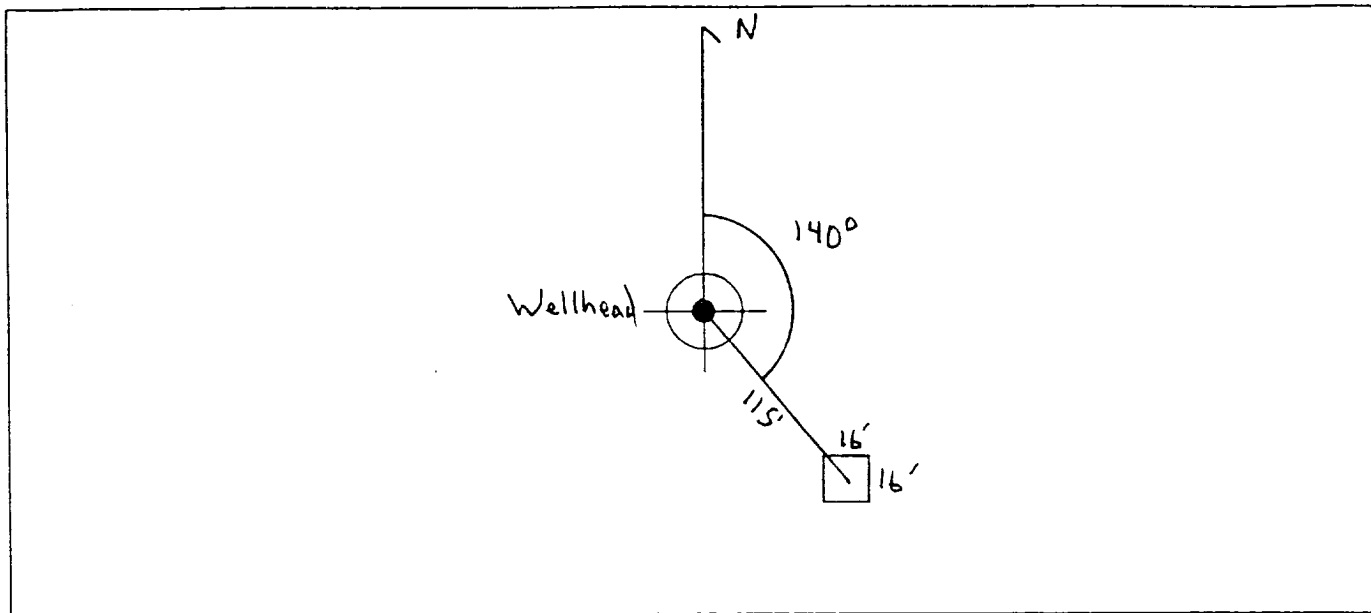
Remarks : Redline Book: Outside Vulnerable Zone Type: Outside
4 pits Close.

PUSH-IN

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 140° Footage from Wellhead 115'
b) Length : 16' Width : 16' Depth : 4'

ORIGINAL PIT LOCATION



REMARKS :

Pictures @ 1138 hr 16-20 rd 1/3

REMARKS

Completed By:

Cory Chase
Signature

11/20/95
Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 95260 Location: T.L. Rhodes C 2 E

Coordinates: Letter: N Section: 30 Township: 28 Range: 11

Or Latitude _____ Longitude _____

Date Started : 11/6/95 Run: 01 82

FIELD OBSERVATIONS

Sample Number(s): JK125

Sample Depth: 8' Feet

Final PID Reading 110.0 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 was a Push In
Fence size 19x19-361 Net yes
More than 100' From Ephemeral stream
E.P.I.G Not on site

Signature of Specialist: James H. Huley



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JK125	947750
MTR CODE SITE NAME:	95260	T.L. Rhodes C. 2E
SAMPLE DATE TIME (Hrs):	11-06-95	1439
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	LIGHT BROWN SAND & CLAY

Field Remarks: No wall reading

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	1.0	MG/KG				
TOLUENE	13.1	MG/KG				
ETHYL BENZENE	3.7	MG/KG				
TOTAL XYLENES	32.9	MG/KG				
TOTAL BTEX	50.7	MG/KG				
TPH (418.1)	6430	MG/KG			153	28
HEADSPACE PID	110	PPM				
PERCENT SOLIDS	87.7	%				

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

The Surrogate Recovery was at 106% for this sample All QA/QC was acceptable.
Narrative:

DF = Dilution Factor Used

Approved By: [Signature]

Date: 11-9-95

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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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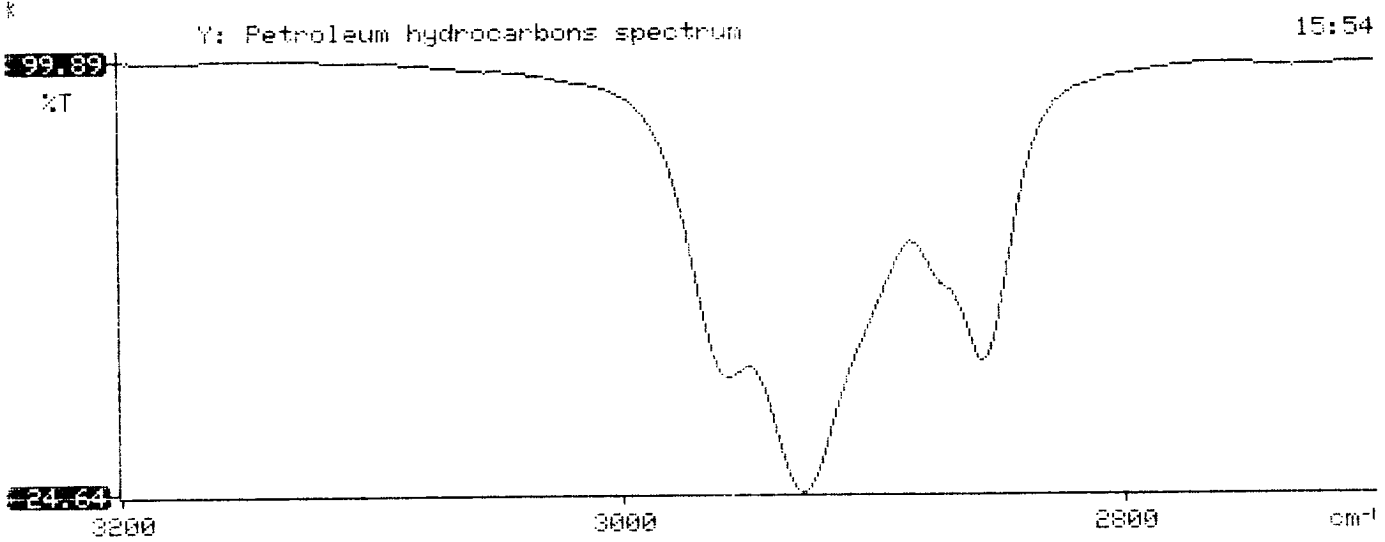
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95/11/07 15:54

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Sample identification
947750
Initial mass of sample, g
1.530
Volume of sample after extraction, ml
28.000
Petroleum hydrocarbons, ppm
6432.535
Net absorbance of hydrocarbons (2950 cm-1)
0.606

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BTEX SOIL SAMPLE WORKSHEET

File	:	947750	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)	:	4.70	Benzene (mg/Kg):	0.951 0.506
Toluene (ug/L)	:	64.81	Toluene (mg/Kg):	13.119 0.506
Ethylbenzene (ug/L)	:	18.23	Ethylbenzene (mg/Kg):	3.690 0.506
p & m-xylene (ug/L)	:	121.27	p & m-xylene (mg/Kg):	24.549 1.012
o-xylene (ug/L)	:	41.26	o-xylene (mg/Kg):	8.352 0.506
			Total xylenes (mg/Kg):	32.901 1.518
			Total BTEX (mg/Kg):	50.662

EL FASO NATURAL GAS

EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM000\110795-0.003
 Method : C:\LABQUEST\METHODS\0-110295.MET
 Sample ID : 947750,4.94G,50U
 Acquired : Nov 07, 1995 15:50:31
 Printed : Nov 07, 1995 16:20:59
 User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	8.433	2260706	4.6981
TOLUENE	13.060	31130204	64.8079
ETHYLBENZENE	17.340	8091027	18.2345
M, P-XYLENES	17.720	61918928	121.2745
O-XYLENE	18.883	18475180	41.2593
BFB	19.910	56085372	106.1073

