

Denny & Zant
DEPUTY OIL & GAS INSPECTOR

DEC 02 1997

Approved

Meter Number: 95623
Location Name: KERNAGHAN LS #1A
Location: TN-31 RG-08
SC-33 UL-E
2 - Federal
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.



EL PASO FIELD SERVICES

FIELD PIT SITE ASSESSMENT FORM

GENERAL

Meter: 95623 Location: KERNAGHAN LS #1A
Operator #: 0203 Operator Name: AMOCO P/L District: BLOOMFIELD
Coordinates: Letter: 52N 99E Section 33 Township: 31 Range: 8
Or Latitude _____ Longitude _____
Pit Type: Dehydrator _____ Location Drip: X Line Drip: _____ Other: _____
Site Assessment Date: 5-24-94 Area: 10 Run: 32

SITE ASSESSMENT

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

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

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'

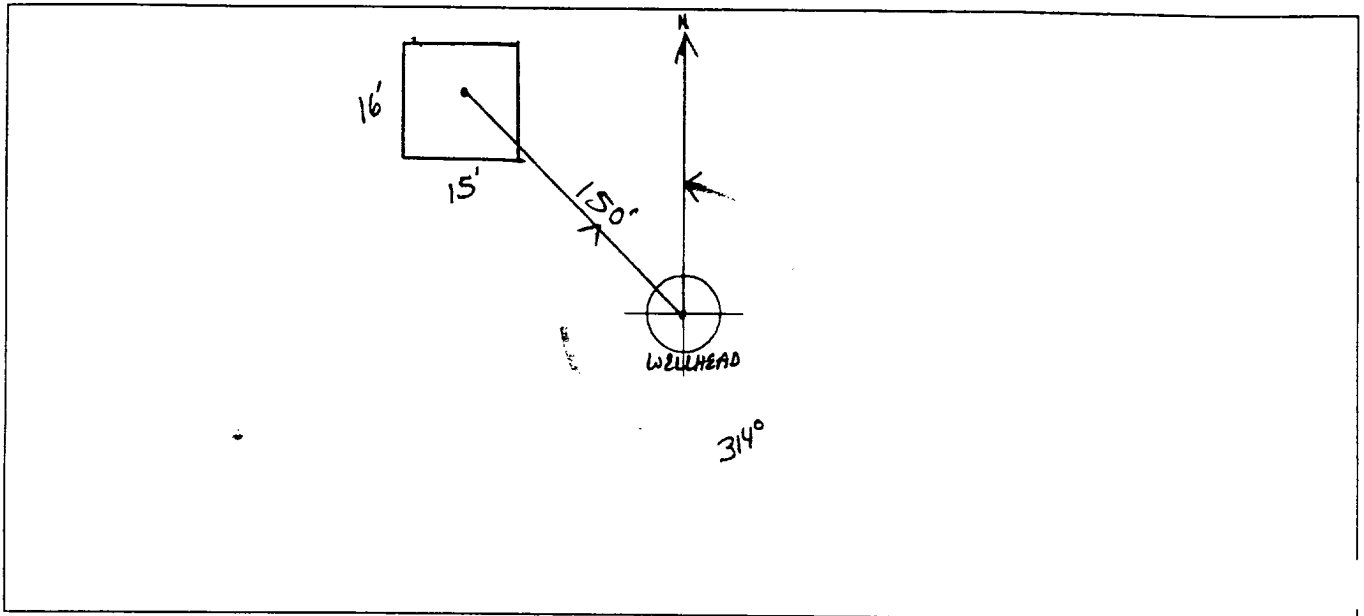
TOTAL HAZARD RANKING SCORE: 0 POINTS

REMARKS

Remarks : THREE PITS ON LOCATION. WILL CLOSE ONLY ONE. PIT IS DRY. LOCATION IS ON TOP OF PUMP MESA. REDLINE AND TOPO CONFIRMED LOCATION IS OUTSIDE V.Z.

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 314° Footage from Wellhead 150'
b) Length : 16' Width : 15' Depth : 5'



REMARKS :

TOOK PICTURES AT 11:47 A.M.

END DUMP

Completed By:

Robert Thompson

Signature

5.24.94

Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 95623 Location: Kerningham LS #1A
 Coordinates: Letter: E Section 33 Township: 31 Range: 8
 Or Latitude _____ Longitude _____
 Date Started : 6-14-94 Area: 10 Run: 32

FIELD OBSERVATIONS

Sample Number(s): JW201
 Sample Depth: 8 Feet
 Final PID Reading 0 PID Reading Depth 8 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: 6-14-94 Pit Closed By: BET

REMARKS

Remarks : line markers on site, H.t sandstone at 8'

Signature of Specialist: Vale Wilson



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil

SAMPLE IDENTIFICATION

SAMPLE NUMBER:

Field ID

Lab ID

MTR CODE | SITE NAME:

SAMPLE DATE | TIME (Hrs):

SAMPLED BY:

DATE OF TPH EXT. | ANAL.:

DATE OF BTEX EXT. | ANAL.:

TYPE | DESCRIPTION:

VW 201

945447

95623

N/A

6-14-94

0935

N/A

6/16/94

6/16/94

N/A

N/A

VG

Ten Fine Sand/clay

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		MG/KG				
TPH (418.1)	410	MG/KG			2.13	28
HEADSPACE PID	0	PPM				
PERCENT SOLIDS	92.4	%				

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

The Surrogate Recovery was at
Narrative:

N/A

% for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Approved By:

[Signature]

Date:

7/14/94

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

94/06/16 14:02

Sample identification
945447

Initial mass of sample, g
2.130

Volume of sample after extraction, ml
28.000

Petroleum hydrocarbons, ppm
17.517

Net absorbance of hydrocarbons (2930 cm-1)
0.000

