Denny G. Foust
DEPUTY OIL & GAS INSPECTOR

DEC 02 1997

Approved

Meter Number:70236
Location Name:KERNAGHAN B #4
Location:TN-31 RG-08
SC-30 UL-H
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.

EPFS
EL PASO FIELD SERVICES

FIELD PIT SITE ASSESSMENT FORM

GENERAL

Meter: 70236 Location: KERNAGHAN B #4
Operator #: 0203 Operator Name: Amoco P/L District: BLOOMFIELD
Coordinates: Letter: H Section 30 Township: 31 Range: 8
Or Latitude _____ Longitude _____
Pit Type: Dehydrator X Location Drip: ___ 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 sour e? ☐ (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 FUMP MESA. REDLINE AND TOPO CONFIRMED LOCATION IS OUTSIDE V-2.

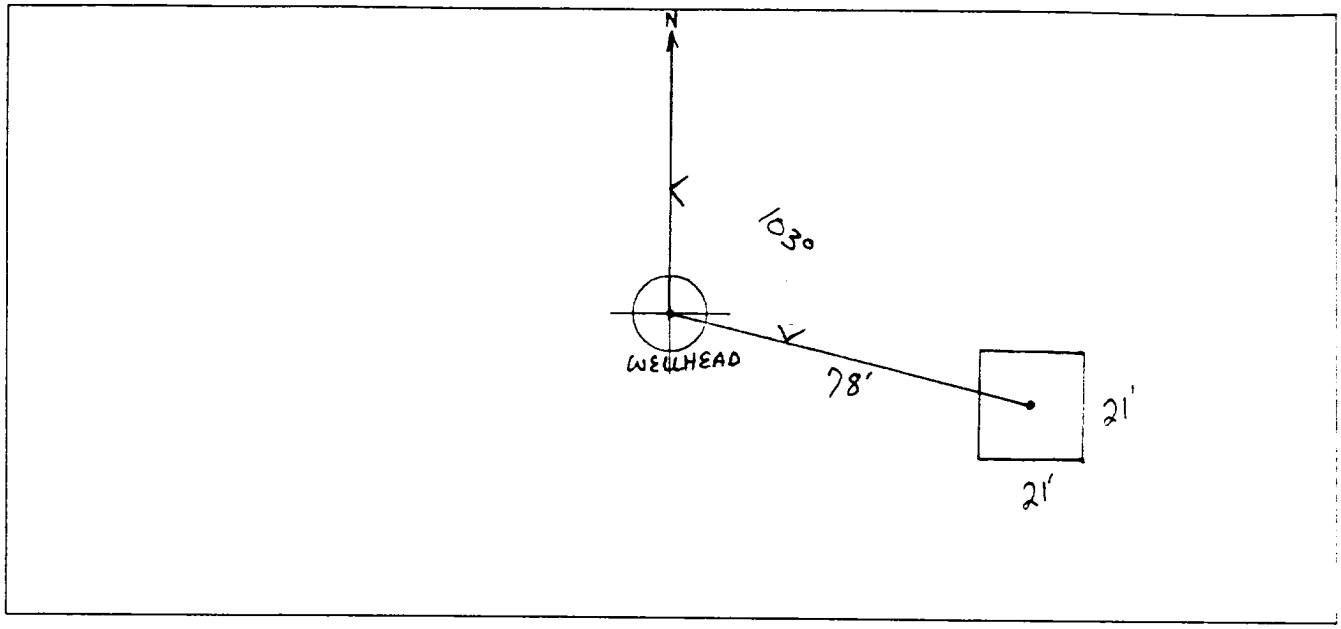
DISTURBED

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 103° Footage from Wellhead 78'

b) Length : 21' Width : 21' Depth : 3'



REMARKS

Remarks :

TOOK PICTURES AT 11:03 A.M.

END DUMP

Completed By:

Robert Thompson

Signature

5.24.94

Date

FIELD REMEDIATION/CLOSURE FORM

GENERAL

Meter: 70236 Location: Kernaghan B #4

Coordinates: Letter: H Section 30 Township: 31 Range: 8

Or Latitude _____ Longitude _____

Date Started : 6-14-94 Area: 10 Run: 3.2 6/15/94 BR

FIELD OBSERVATIONS

Sample Number(s): VW207 _____ _____ _____

Sample Depth: 12' Feet

Final PID Reading 217 PID Reading Depth 12' 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: BLT

REMARKS

Remarks : EPNG Line Markers

Signature of Specialist: Vale Wilson

(SP3191) 04/07/94

El Paso Natural Gas Company

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	VW202	94548
MTR CODE | SITE NAME:	70236	N/A
SAMPLE DATE | TIME (Hrs):	6-14-94	1100
SAMPLED BY:	N/A	
DATE OF TPH EXT. | ANAL.:	6/16/94	6/16/94
DATE OF BTEX EXT. | ANAL.:	N/A	N/A
TYPE | DESCRIPTION:	VG	Dark Brown 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)	3440	MG/KG			2.30	28
HEADSPACE PID	217	PPM				
PERCENT SOLIDS	87.6	%				

– 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

Date: 7/14/94