Denny R. Foust
DEPUTY OIL & GAS INSPECTOR
DEC 22 1997
Approved

Meter Number:93064
Location Name:MCKENZIE #1E
Location:TN-30 RG-12
SC-20 UL-D
4 - Fee
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

EPFS EL PASO FIELD SERVICES

GENERAL

Meter: 93064 Location: McKENZIE #1E

Operator #: _____ Operator Name: ~~DUGAN PROD.~~ P/L District: KUTZ

Coordinates: Letter: D Section 20 Township: 30 Range: 12

Or Latitude _____ Longitude _____

Pit Type: Dehydrator X Location Drip: ___ Line Drip: ___ Other: _____

Site Assessment Date: 1·16·95 Area: 02 Run: 63

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 : REDLINE & TOPO SHOW LOCATION OUTSIDE V.Z. 3 PITS ON LOCATION. DEHY PIT BELONGS TO EPNG. DEHY HAS NOT YET BEEN REMOVED. WILL CLOSE PIT.

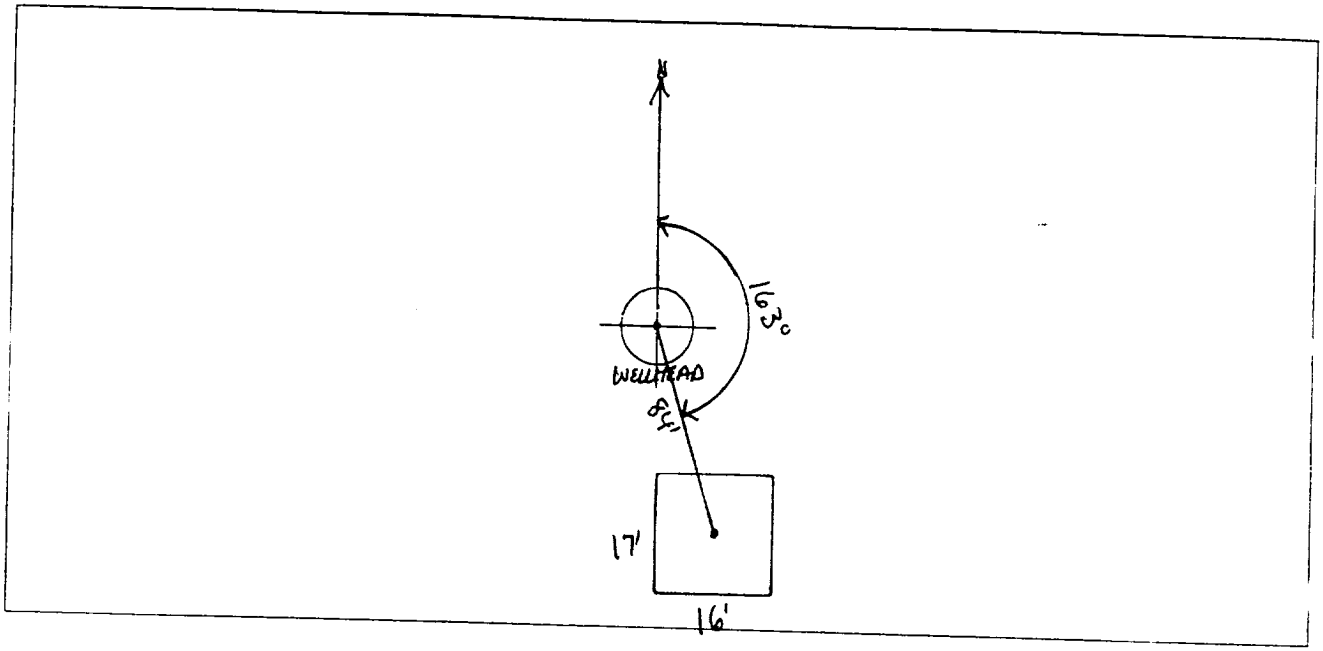
PUSH IN

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 163° Footage from Wellhead 84'

b) Length : 17' Width : 16' Depth : 2'



REMARKS

Remarks :

PHOTOS - 1548

Completed By:

Signature

1-16-95

Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 93064 Location: McKenzie #1E

Coordinates: Letter: D Section 20 Township: 30 Range: 12

Or Latitude _____ Longitude _____

Date Started : 2-7-95 Run: 02 63

FIELD OBSERVATIONS

Sample Number(s): NK 360 _____ _____ _____

Sample Depth: 5' Feet

Final PID Reading 544 PID Reading Depth 5 Feet

	Yes	No	
Groundwater Encountered	☐	☒	Approximate Depth _____ Feet

CLOSURE

Remediation Method :

Excavation ☐ Approx. Cubic Yards _____

Onsite Bioremediation ☐

Backfill Pit Without Excavation ☒

Soil Disposition:

Envirotech ☐ ☐ Tierra

Other Facility ☐ Name: _____

Pit Closure Date: 2-7-95 Pit Closed By: BEJ

REMARKS

Remarks : Arrived Dug Sample Hole pit Had about 2" of oil & water In pit Hit sand stone 5' Soil black and oil soaked Strong Hydrocarbon odor

Signature of Specialist: Morgan Killion

Natural Gas Company

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil Samples Outside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	MK 360	9416645
MTR CODE | SITE NAME:	93064	N/A
SAMPLE DATE | TIME (Hrs):	2-7-95	1030
SAMPLED BY:	N/A	
DATE OF TPH EXT. | ANAL.:	2-10-95	2-10-95
DATE OF BTEX EXT. | ANAL.:	N/A	N/A
TYPE | DESCRIPTION:	VG	Dark Brown sand and clay

REMARKS: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
TPH (418.1)	33,000	MG/KG		D1	0.50	28
HEADSPACE PID	544	PPM				
PERCENT SOLIDS	88.6	%				

-- TPH is by EPA Method 418.1 --

Narrative: _____

DF = Dilution Factor Used

Approved By: John Ford Date: 2-27-95

Test M[illegible]od for
Oil and Grease and Petroleum Hydrocarbons
in Water and Soil

Perkin-Elmer Model 1600 FT-IR
Analysis Report

95/02/10 11:15

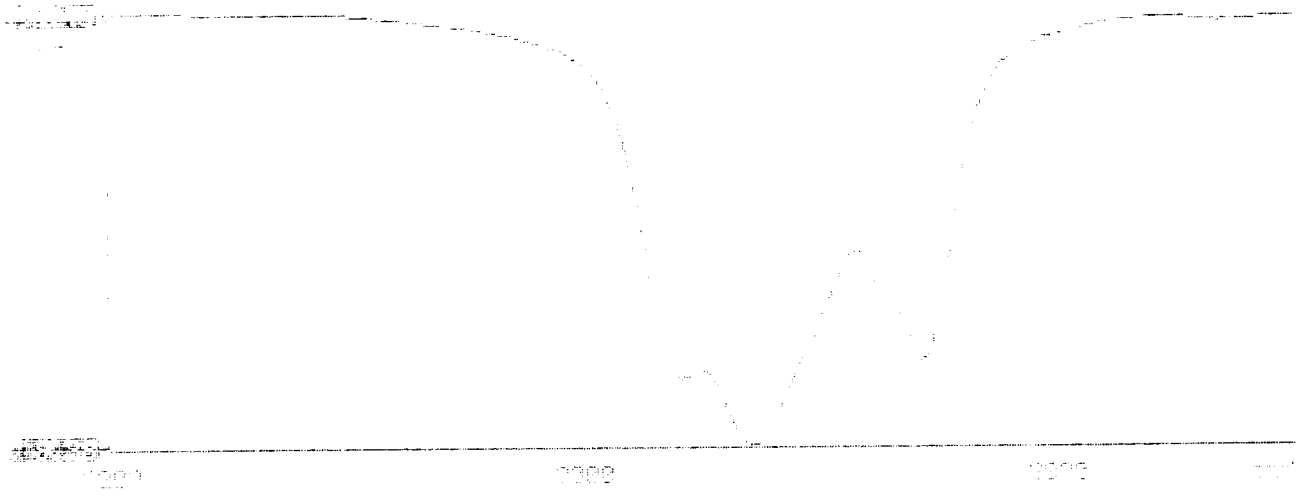
Sample Identification

[illegible] oil mass of sample, g

[illegible] of sample after extraction, ml

Petroleum hydrocarbons, ppm

[illegible] Reference spectrum 11:15



ILLEGIBLE