

Approved
DEC 8 6 1997

Meter Number: 75723
Location Name: LUCERNE FEDERAL #1
Location: TN-28 RG-11
SC-17 UL-D
2 - Federal
NMOCD Zone: OUTSIDE
Hazard Ranking Score: 00

RECEIVED
APR 14 1997
OIL CON. DIV.
DIST. 8

**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.

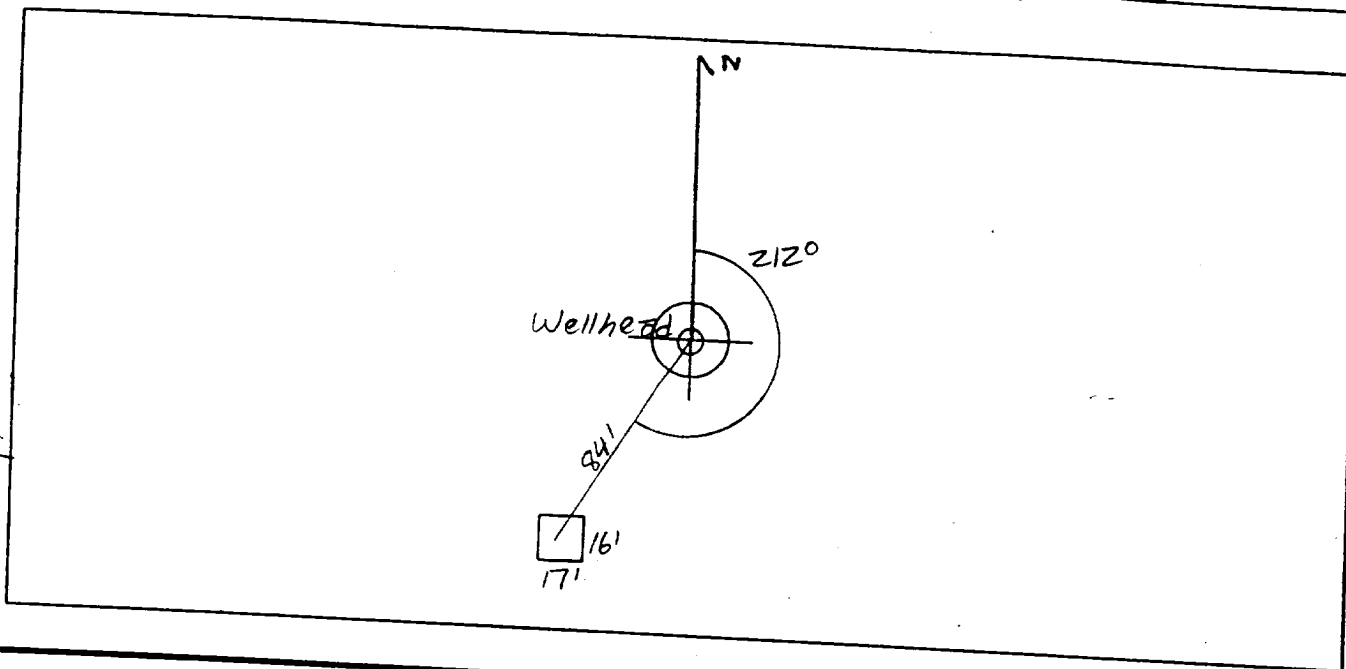
FIELD PIT SITE ASSESSMENT FORM

GENERAL	<p>Meter: <u>75-723</u> Location: <u>Lucerne Federal #1</u></p> <p>Operator #: <u>0343</u> Operator Name: <u>Roddy Production</u> P/L District: <u>Angel Peak</u></p> <p>Coordinates: Letter: <u>D</u> Section: <u>17</u> Township: <u>28</u> Range: <u>11</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Pit Type: Dehydrator _____ Location Drip: <u>X</u> Line Drip: _____ Other: _____</p> <p>Site Assessment Date: <u>9/12/94</u> Area: <u>01</u> Run: <u>43</u></p>
SITE ASSESSMENT	<p>NMOCD Zone: (From NMOCD Maps)</p> <p style="margin-left: 150px;">Inside <input type="checkbox"/> (1) Outside <input checked="" type="checkbox"/> (2)</p> <p style="margin-left: 350px;">Land Type: BLM <input checked="" type="checkbox"/> (1) State <input type="checkbox"/> (2) Fee <input type="checkbox"/> (3) Indian _____</p> <p>Depth to Groundwater</p> <p>Less Than 50 Feet (20 points) <input type="checkbox"/> (1) 50 Ft to 99 Ft (10 points) <input type="checkbox"/> (2) Greater Than 100 Ft (0 points) <input checked="" type="checkbox"/> (3)</p> <p>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? <input type="checkbox"/> (1) YES (20 points) <input checked="" type="checkbox"/> (2) NO (0 points)</p> <p>Horizontal Distance to Surface Water Body</p> <p>Less Than 200 Ft (20 points) <input type="checkbox"/> (1) 200 Ft to 1000 Ft (10 points) <input type="checkbox"/> (2) Greater Than 1000 Ft (0 points) <input checked="" type="checkbox"/> (3)</p> <p>Name of Surface Water Body <u>San Juan River</u> (Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)</p> <p>Distance to Nearest Ephemeral Stream <input type="checkbox"/> (1) < 100' (Navajo Pits Only) <input type="checkbox"/> (2) > 100'</p> <p>TOTAL HAZARD RANKING SCORE: <u>0</u> POINTS</p>
REMARKS	<p>Remarks : <u>Redline Book - Outside Vulnerable Zone Tap - Outside</u> <u>Three pits, location drip pit is dry. Will close one pit.</u></p> <p style="text-align: right;"><u>PUSH T 11</u></p>

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 212° Footage from Wellhead 84'
 b) Length : 17' Width : 16' Depth : 3'

ORIGINAL PIT LOCATION



REMARKS

Remarks :

Pictures @ 1620 (14-17, Roll 112)
 Dump Truck

Completed By:

Mark Kelly
 Signature

9/12/94
 Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	Meter: <u>75723</u> Location: <u>Lucerne Federal #1</u> Coordinates: Letter: <u>D</u> Section <u>17</u> Township: <u>28</u> Range: <u>11</u> Or Latitude _____ Longitude _____ Date Started : <u>10-6-94</u> Run: <u>01</u> <u>43</u>
FIELD OBSERVATIONS	Sample Number(s): <u>KP 300</u> Sample Depth: <u>5'</u> Feet Final PID Reading <u>106</u> PID Reading Depth <u>5'</u> Feet <div style="text-align: center;">Yes No</div> Groundwater Encountered <input type="checkbox"/> <input type="checkbox"/> Approximate Depth _____ Feet
CLOSURE	Remediation Method : <div style="display: flex; justify-content: space-between;"> <div> Excavation Onsite Bioremediation Backfill Pit Without Excavation </div> <div style="text-align: right;"> <input type="checkbox"/> Approx. Cubic Yards _____ <input type="checkbox"/> <input checked="" type="checkbox"/> </div> </div> Soil Disposition: <div style="display: flex; justify-content: space-between;"> <div> Envirotech <input type="checkbox"/> Other Facility <input type="checkbox"/> </div> <div> <input type="checkbox"/> Tierra Name: _____ </div> </div> Pit Closure Date: <u>10-6-94</u> Pit Closed By: <u>B.E.I</u>
REMARKS	Remarks : <u>Some Line markers. At 5' Hit SAND Stone.</u> _____ _____
Signature of Specialist: <u>Kelly Padilla</u>	



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Outside the GWV Zone

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:

N/A

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
TPH (418.1)	416cc	MG/KG			26	28
HEADSPACE PID	106 106 KDK 10/13/94	PPM				
PERCENT SOLIDS	83.9	%				

-- TPH is by EPA Method 418.1 --

Narrative:

DF = Dilution Factor Used

Approved By:

Date:

10-13-94

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

24/10/10 14:48

Sample Identification
243354

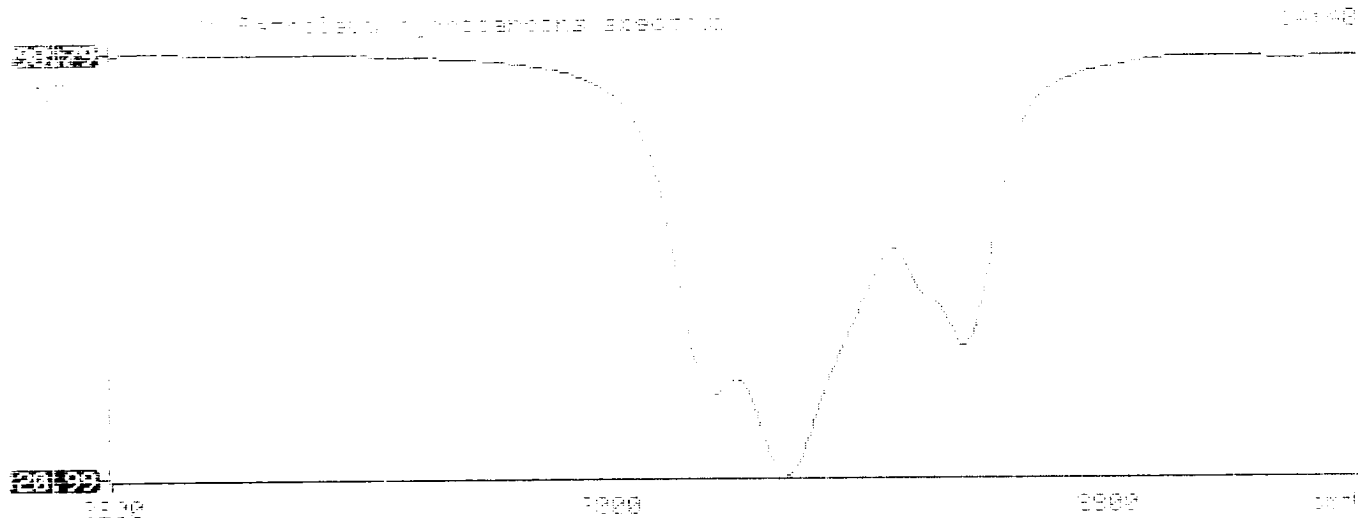
Initial mass of sample, g
0.10

Volume of sample after extraction, ml
15.100

Integration: hydrocarbons, ppm

1572.100

Integration of hydrocarbons (C170 cm-1):
0.5



ILLEGIBLE