

El Paso
DIRECTOR

DEC 8 0 1997

Meter Number:70867

Location Name:STATE GAS COM I #1

Location:TN-29 RG-09

SC-02 UL-K

1 - State

NMOCD Zone:OUTSIDE

Hazard Ranking Score:00

Approval

RECEIVED
APR 14 1997

OIL CON. DIV.
D. ALB.

**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.

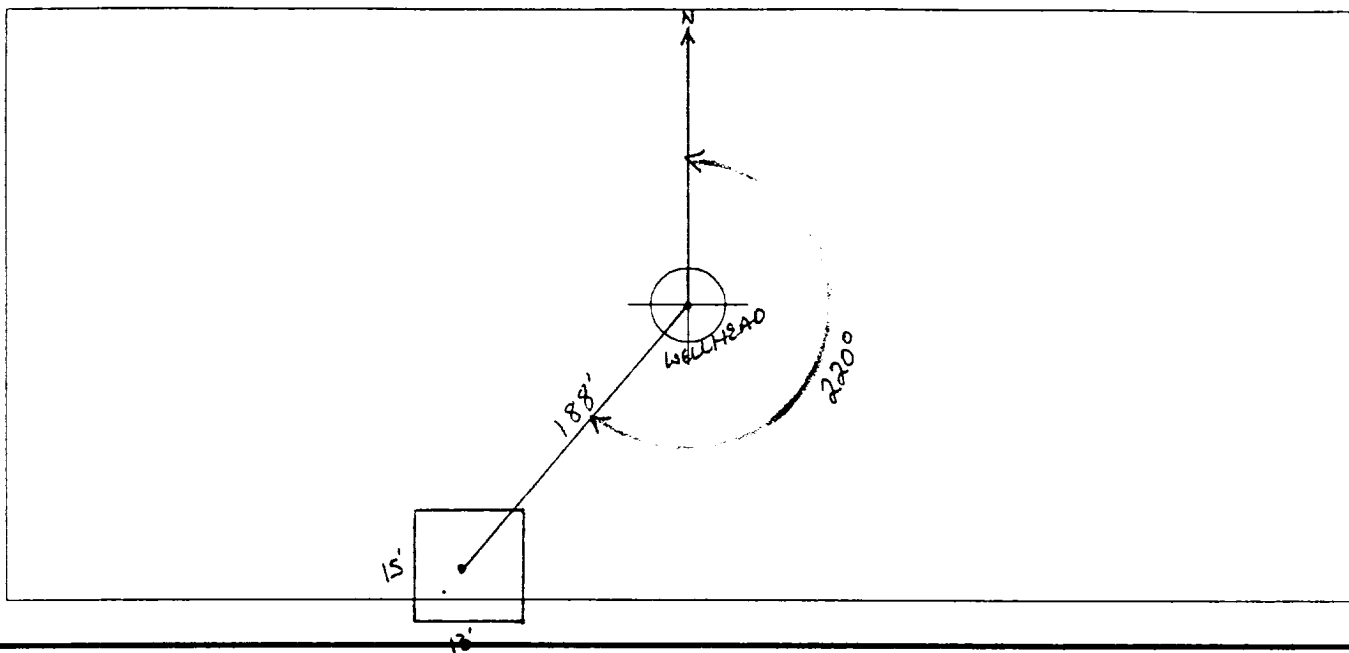
Based on the above information, it is highly unlikely that any source material will impact groundwater or ever find an exposure pathway to affect human health and therefore El Paso Field Services Company (EPFS) requests closure of this pit location.

FIELD PIT SITE ASSESSMENT FORM

GENERAL	<p>Meter: <u>70867</u> Location: <u>STATE GAS COM I #1</u></p> <p>Operator #: <u>0203</u> Operator Name: <u>AMOCO</u> P/L District: <u>BLOOMFIELD</u></p> <p>Coordinates: Letter: <u>5994</u> <u>XK</u> Section <u>2</u> Township: <u>29</u> Range: <u>9</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Pit Type: Dehydrator <u>X</u> Location Drip: _____ Line Drip: _____ Other: _____</p> <p>Site Assessment Date: <u>5.9.94</u> Area: <u>10</u> Run: <u>31</u></p>
	SITE ASSESSMENT
REMARKS	

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 220° Footage from Wellhead 188'
 b) Length : 15' Width : 13' Depth : 2'



Remarks :

TOOK PICTURES AT 1:41 P.M.

END DUMP

Completed By:

Robert Thompson
 Signature

5.9.94
 Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	<p>Meter: <u>70867</u> Location: <u>STATE GAS COM I # 1</u></p> <p>Coordinates: Letter: <u>K</u> Section <u>2</u> Township: <u>29</u> Range: <u>9</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>6-27-94</u> Area: <u>10</u> Run: <u>31</u></p>
FIELD OBSERVATIONS	<p>Sample Number(s): <u>MK 43</u></p> <p>Sample Depth: <u>7'</u> Feet</p> <p>Final PID Reading <u>347</u> PID Reading Depth <u>7'</u> Feet</p> <p style="text-align: center;">Yes No</p> <p>Groundwater Encountered <input type="checkbox"/> (1) <input checked="" type="checkbox"/> (2) Approximate Depth _____ Feet</p>
CLOSURE	<p>Remediation Method :</p> <p>Excavation <input type="checkbox"/> (1) Approx. Cubic Yards _____</p> <p>Onsite Bioremediation <input type="checkbox"/> (2)</p> <p>Backfill Pit Without Excavation <input checked="" type="checkbox"/> (3)</p> <p>Soil Disposition:</p> <p>Envirotech <input type="checkbox"/> (1) <input type="checkbox"/> (3) Tierra</p> <p>Other Facility <input type="checkbox"/> (2) Name: _____</p> <p>Pit Closure Date: <u>6-27-94</u> Pit Closed By: <u>BEI</u></p>
REMARKS	<p>Remarks : <u>EPNG lines marked soil light brown NO</u></p> <p><u>Hydrocarbon odor 7' Hit sandstone</u></p>
	<p>Signature of Specialist: <u>Morgan Killian</u></p>



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:

mk 43

945531

70867

N/A

6-27-94

1325

N/A

6-30-94

6/30/94

N/A

N/A

VG

fine brown sand

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)	897	MG/KG			2.17	28
HEADSPACE PID	347	PPM				
PERCENT SOLIDS	94.3	%				

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

Surrogate Recovery was at
arrative:

N/A

% for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

7/10/94

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

04/06/30 13:25

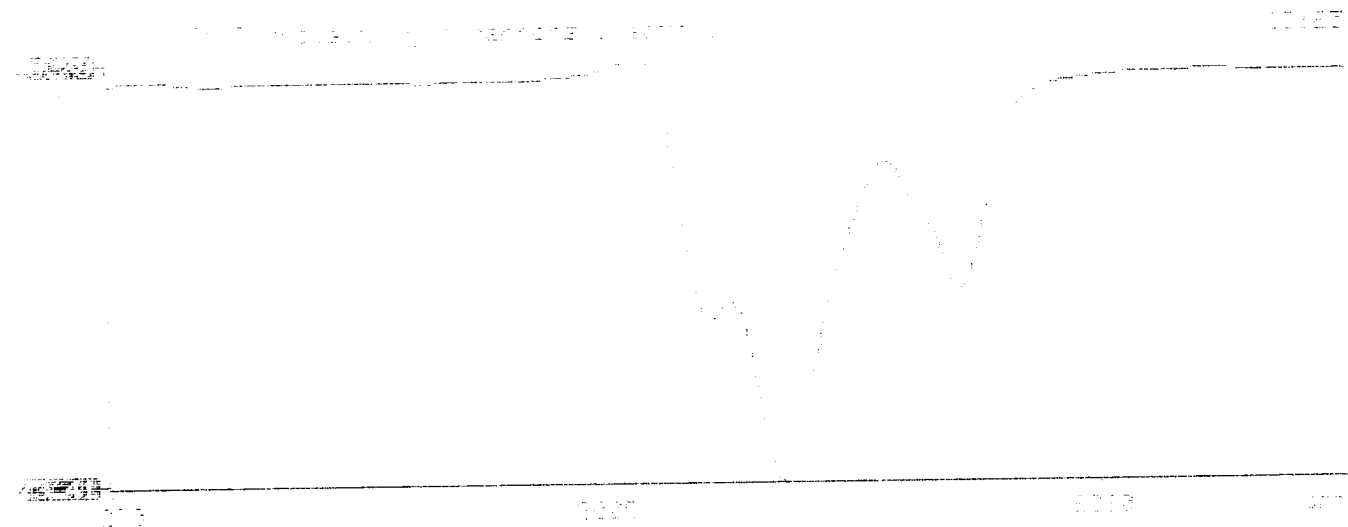
Sample Identification
 145831

Initial mass of sample, g
 1.70

Volume of sample after extraction, ml
 10.000

Extraction solvent, ml
 10.000

Extraction temperature, °C
 25.000



Denny S. Faust

DEPUTY OIL & GAS INSPECTOR

DEC 30 1997

Approved

Meter Number:90013

Location Name:STATE GAS COM I #1A

Location:TN-29 RG-09

SC-02 UL-P

1 - State

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**

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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:

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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: 90013 Location: STATE GAS COM I #1A
 Operator #: 0203 Operator Name: AMOCO P/L District: BLOOMFIELD
 Coordinates: Letter: P Section 2 Township: 29 Range: 9
 Or Latitude _____ Longitude _____
 Pit Type: Dehydrator _____ Location Drip: _____ Line Drip: _____ Other: _____
 Site Assessment Date: 5.9.94 Area: 10 Run: 31

SITE ASSESSMENT

NMOCD Zone:

(From NMOCD
Maps)

Inside

Outside

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

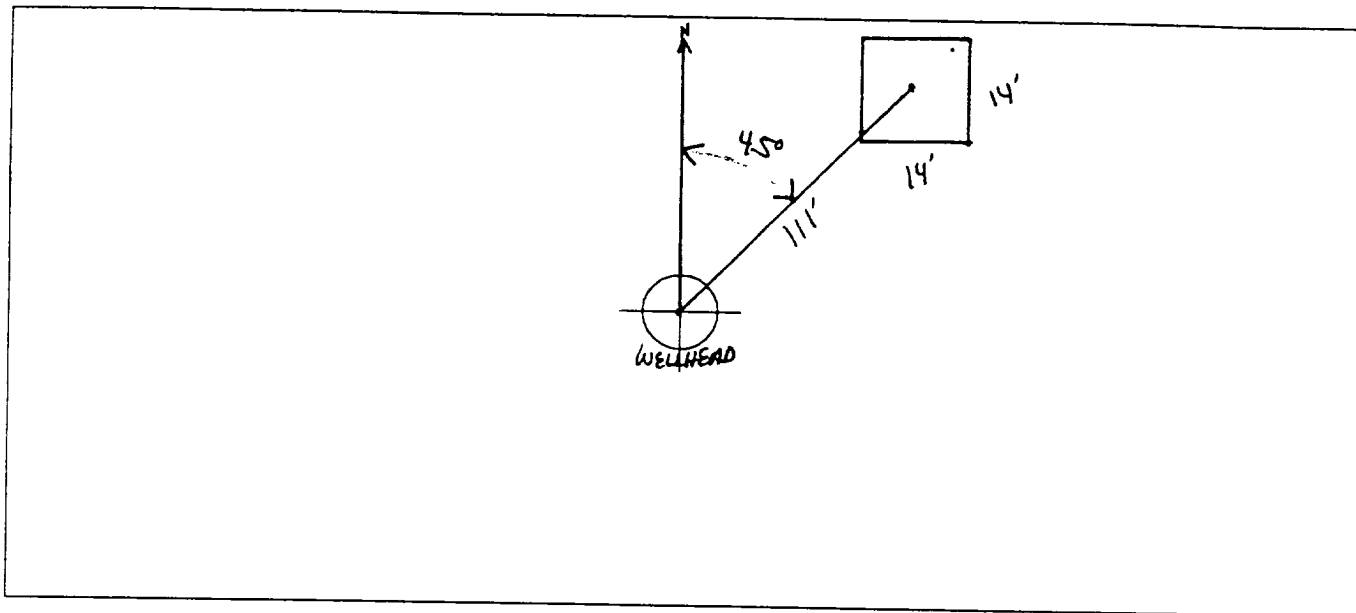
Remarks : TWO PITS ON LOCATION. WILL CLOSE ONE OF THEM. PIT IS DRY. LOCATION IS ON TOP OF MANZANARES MESA. REDLINE AND TOPO CONFIRMED LOCATION TO BE OUTSIDE THE V.Z.

PUSH IN

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 45° Footage from Wellhead 111'
b) Length : 14' Width : 14' Depth : 2'



REMARKS

Remarks :

TOOK PICTURES AT 2:09 P.M.

END DUMP

Completed By:

Robert Thompson

Signature

5.9.94

Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	<p>Meter: <u>90013</u> Location: <u>STATE GAS COM I #1A</u></p> <p>Coordinates: Letter: <u>P</u> Section <u>2</u> Township: <u>29</u> Range: <u>9</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>6-27-94</u> Area: <u>10</u> Run: <u>31</u></p>
FIELD OBSERVATIONS	<p>Sample Number(s): <u>MK 46</u> <u>MK 47</u> <u>MK 48</u></p> <p>Sample Depth: <u>7'</u> Feet</p> <p>Final PID Reading <u>124</u> PID Reading Depth <u>2'</u> Feet</p> <p style="text-align: center;">Yes No</p> <p>Groundwater Encountered <input type="checkbox"/> (1) <input checked="" type="checkbox"/> (2) Approximate Depth _____ Feet</p>
CLOSURE	<p>Remediation Method :</p> <p>Excavation <input type="checkbox"/> (1) Approx. Cubic Yards _____</p> <p>Onsite Bioremediation <input type="checkbox"/> (2)</p> <p>Backfill Pit Without Excavation <input checked="" type="checkbox"/> (3)</p> <p>Soil Disposition:</p> <p>Envirotech <input type="checkbox"/> (1) <input type="checkbox"/> (3) Tierra</p> <p>Other Facility <input type="checkbox"/> (2) Name: _____</p> <p>Pit Closure Date: <u>6-27-94</u> Pit Closed By: <u>BEI</u></p>
REMARKS	<p>Remarks : <u>EPN GLINES mark soil GRAY slight HYDROCARBON</u></p> <p><u>odor Hit Sand Stone 7'</u></p>
	<p>Signature of Specialist: <u>Morgan Killian</u></p>



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:

mk 46	945534
90013	N/A
6-27-94	1530
N/A	
6-30-94	6/30/94
N/A	N/A
VG	Brown clay / sand stone

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)	1470	MG/KG			2.07	28
HEADSPACE PID	124	PPM				
PERCENT SOLIDS	89.1	%				

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

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

DF = Dilution Factor Used

Approved By:

Date:

7/14/94

Perkin-Elmer Model 1600 FT-IR
Analysis Report

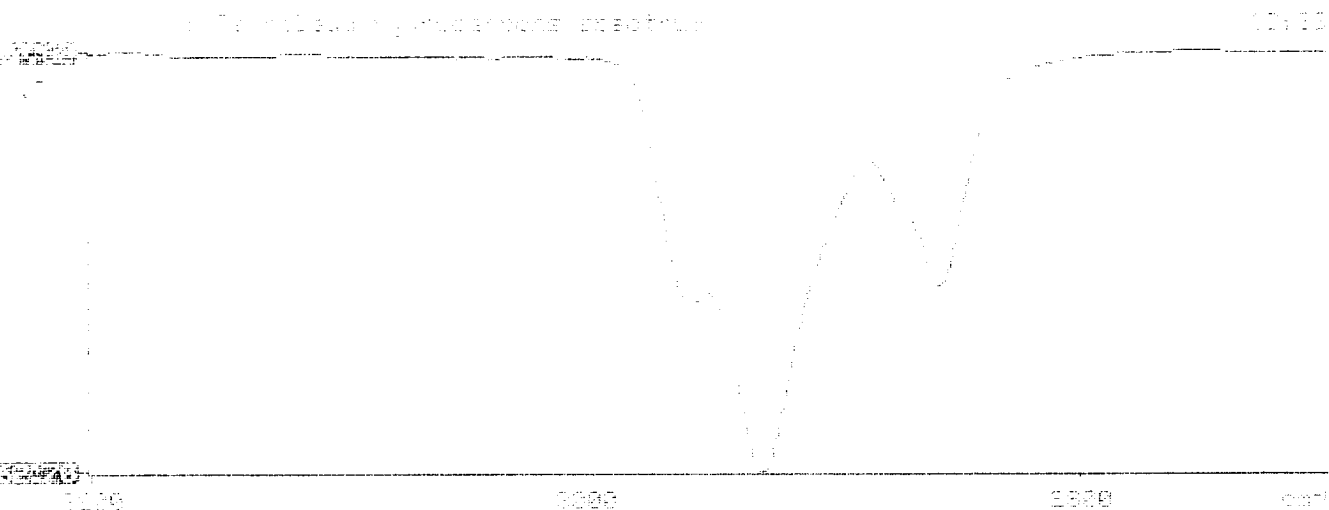
1/06/30 23:23

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Received 12 November 2003; accepted 12 November 2003

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