

Denny E. Foust
DEPUTY OIL & GAS INSPECTOR

DEC 02 1997

Approved

Meter Number: 70348
Location Name: HALE #1
Location: TN-31 RG-08
SC-27 UL-A
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.

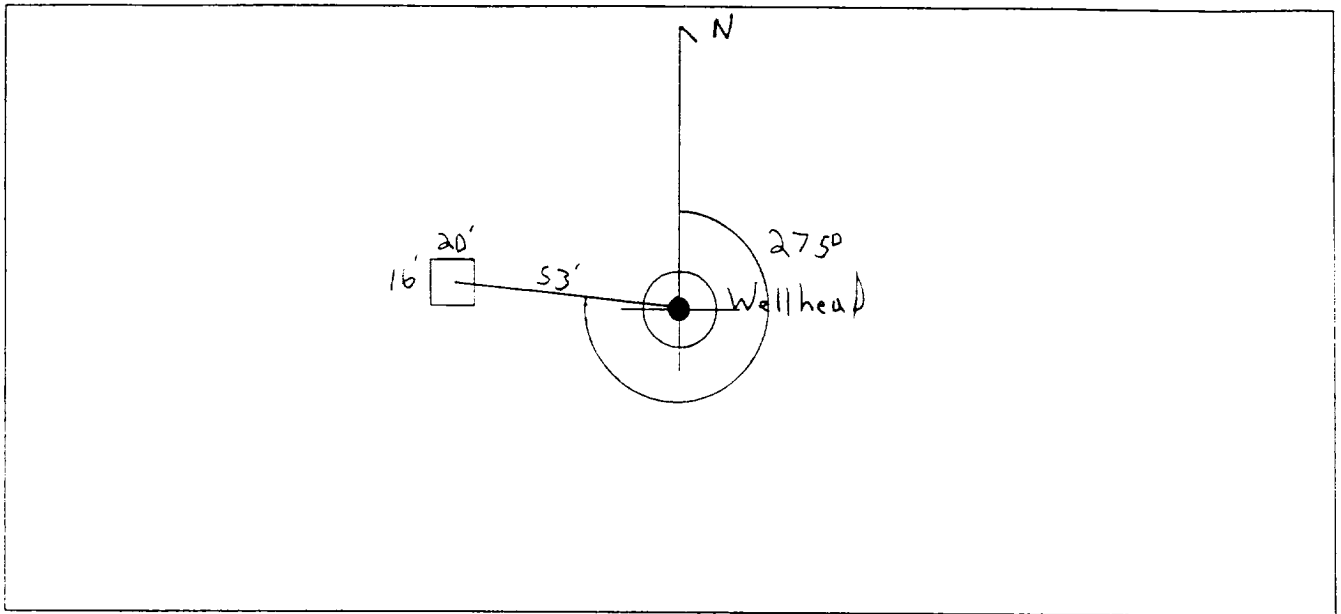
FIELD PIT SITE ASSESSMENT FORM

GENERAL	Meter: <u>70348</u> Location: <u>HALE #1</u> Operator #: <u>8367</u> Operator Name: <u>Southland Royalties P/L</u> District: <u>Bloomfield</u> Coordinates: Letter: <u>A</u> Section <u>27</u> Township: <u>21</u> Range: <u>8</u> Or Latitude _____ Longitude _____ Pit Type: Dehydrator _____ Location Drip: ☒ Line Drip: _____ Other: _____ Site Assessment Date: <u>1/17/95</u> Area: <u>10</u> Run: <u>63</u>
	SITE ASSESSMENT
REMARKS	

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 275° Footage from Wellhead 53'
b) Length : 20' Width : 16' Depth : 3'

ORIGINAL PIT LOCATION



Remarks :

Pictures @ 0959 hr 6-9 roll 1

REMARKS

Completed By:

Cory Chase
Signature

1/17/95
Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	Meter: <u>70348</u> Location: <u>Hole #1</u> Coordinates: Letter: <u>A</u> Section <u>27</u> Township: <u>31</u> Range: <u>8</u> Or Latitude _____ Longitude _____ Date Started : <u>2-13-95</u> Run: <u>10</u> <u>63</u>
FIELD OBSERVATION	Sample Number(s): <u>MK 385</u> Sample Depth: <u>2'</u> Feet Final PID Reading <u>512</u> PID Reading Depth <u>2'</u> 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: <u>2-13-95</u> Pit Closed By: <u>BEI</u>
REMARKS	Remarks : <u>Arrived Dug sample Hole Soil Brown strong</u> <u>Hydrocarbon odor Hit sandstone 2'</u>
	Signature of Specialist: <u>Morgan Hillman</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:

MK 385

70348

2-13-95

N/A

2/17/95

N/A

VG

426678

N/A

1450

2/17/95

N/A

20000 gms) w/ 100cc

REMARKS:

TPH done at AT1

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
TPH (418.1)	400	MG/KG				
HEADSPACE PID	512	PPM				
PERCENT SOLIDS	89.9	%				

-- TPH is by EPA Method 418.1 --

Narrative:

AT1 Results attached

DF = Dilution Factor Used

Approved By:

Date:

3-20-95



Analytical **Technologies**, Inc.

2709-D Pan American Freeway NE Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. 502381



February 23, 1995

El Paso Natural Gas Co.
P. O. Box 4990
Farmington, NM 87499

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

On 02/17/95, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA Method 8020 analyses were added on February 21, 1995 for samples 946659, 946660, 946661, 946662, 946663, 946664, 946666, 946667, 946668, 946669, 946680, 946682 per John Lambdin.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Letitia Krakowski, Ph.D.
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

CLIENT : EL PASO NATURAL GAS CO. ATI I.D. : 502381
PROJECT # : 24324 DATE RECEIVED : 02/17/95
PROJECT NAME : PIT CLOSURE DATE ANALYZED : 02/17/95

PARAMETER	UNITS	21	22	23	24
PETROLEUM HYDROCARBONS, IR	MG/KG	400	42	3900	29000

94/6678