

*Denny*  
DEPUTY CHIEF

DEC 8 0 1997

*Approved*

Meter Number: 95266

Location Name: GALLEGOS CANYON UNIT 165E

Location: TN-28 RG-12

SC-29 UL-P

3 - Navajo

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.

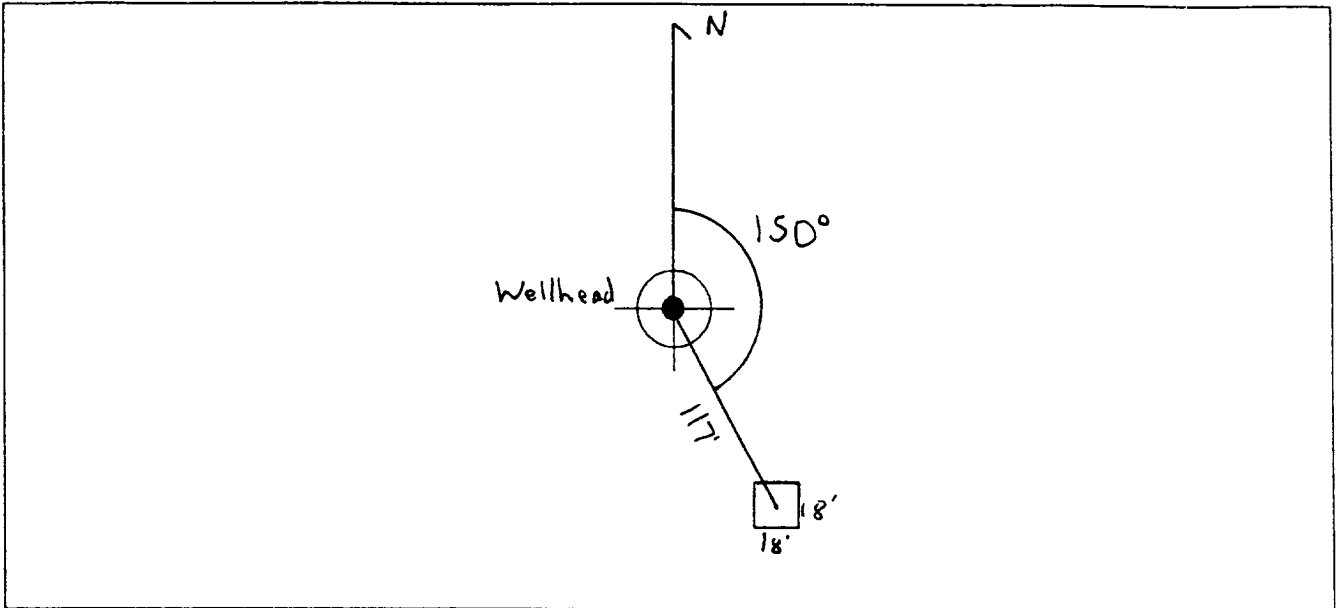
**FIELD PIT SITE ASSESSMENT FORM**

<b>GENERAL</b>	<p>Meter: <u>95266</u> Location: <u>Gallegos Canyon Unit 165E</u></p> <p>Operator #: <u>0203</u> Operator Name: <u>Amoco</u> P/L District: <u>Angel Peak</u></p> <p>Coordinates: Letter: <u>P</u> Section <u>29</u> Township: <u>28</u> Range: <u>12</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Pit Type: Dehydrator <input checked="" type="checkbox"/> Location Drip: _____ Line Drip: _____ Other: _____</p> <p>Site Assessment Date: <u>1/20/95</u> Area: <u>01</u> Run: <u>82</u></p>
<b>SITE ASSESSMENT</b>	<p><b>NMOCD Zone:</b> (From NMOCD Maps)</p> <p style="margin-left: 100px;">Inside <input type="checkbox"/> (1)</p> <p style="margin-left: 100px;">Outside <input checked="" type="checkbox"/> (2)</p> <p style="margin-left: 100px;"><b>Land Type:</b></p> <p style="margin-left: 150px;">BLM <input type="checkbox"/> (1)</p> <p style="margin-left: 150px;">State <input type="checkbox"/> (2)</p> <p style="margin-left: 150px;">Fee <input type="checkbox"/> (3)</p> <p style="margin-left: 150px;">Indian <u>Navajo</u></p> <p><b>Depth to Groundwater</b></p> <p>Less Than 50 Feet (20 points) <input type="checkbox"/> (1)</p> <p>50 Ft to 99 Ft (10 points) <input type="checkbox"/> (2)</p> <p>Greater Than 100 Ft (0 points) <input checked="" type="checkbox"/> (3)</p> <p><b>Wellhead Protection Area :</b></p> <p>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><b>Horizontal Distance to Surface Water Body</b></p> <p>Less Than 200 Ft (20 points) <input type="checkbox"/> (1)</p> <p>200 Ft to 1000 Ft (10 points) <input type="checkbox"/> (2)</p> <p>Greater Than 1000 Ft (0 points) <input checked="" type="checkbox"/> (3)</p> <p>Name of Surface Water Body _____</p> <p>(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) &lt; 100' (Navajo Pits Only)</p> <p style="margin-left: 100px;"><input type="checkbox"/> (2) &gt; 100'</p> <p><b>TOTAL HAZARD RANKING SCORE:</b> <u>0</u> POINTS</p>
<b>REMARKS</b>	<p>Remarks : <u>Redline Book: Outside</u> <u>Vulnerable Zone Type: Outside</u></p> <p><u>2 pits. Close.</u></p> <p style="text-align: right; margin-top: 20px;"><u>PUSH-IN</u></p>

### ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 150° Footage from Wellhead 117'  
 b) Length : 18' Width : 18' Depth : 4'

ORIGINAL PIT LOCATION



REMARKS

Remarks :

Pictures @ 1303 hr 5-8 roll)

To get to pit turn left off of 3002 (driving West) with Amoco Compressor on Right. Go straight ~400-500 yds & bear left. Take next right.

Completed By:

Cory Chene  
 Signature

1/20/95  
 Date

# FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	<p>Meter: <u>95266</u> Location: <u>Gallegos Canyon Unit 165 E</u></p> <p>Coordinates: Letter: <u>P</u> Section: <u>29</u> Township: <u>28</u> Range: <u>12</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>11/6/95</u> Run: <u>01</u> <u>82</u></p>
FIELD OBSERVATIONS	<p>Sample Number(s): <u>JK127</u></p> <p>Sample Depth: <u>8'</u> Feet</p> <p>Final PID Reading <u>1.9</u> PID Reading Depth <u>8'</u> Feet</p> <p>Yes No</p> <p>Groundwater Encountered <input type="checkbox"/> <input checked="" type="checkbox"/> Approximate Depth _____ Feet</p>
CLOSURE	<p>Remediation Method :</p> <p>Excavation <input type="checkbox"/> Approx. Cubic Yards <u>0 LT 11/8/95</u></p> <p>Onsite Bioremediation <input type="checkbox"/></p> <p>Backfill Pit Without Excavation <input checked="" type="checkbox"/></p> <p>Soil Disposition:</p> <p>Envirotech <input type="checkbox"/> Tierra <input type="checkbox"/></p> <p>Other Facility <input type="checkbox"/> Name: _____</p> <p>Pit Closure Date: <u>11/6/95</u> Pit Closed By: <u>Philip</u></p>
REMARKS	<p>Remarks : <u>This Pit was a Push In,</u></p> <p><u>Fence size 21x21=441</u> <u>No wet</u></p> <p><u>More than 100' From Ephemeral Stream</u></p> <p><u>EPNL not on site</u></p> <p>Signature of Specialist: <u>James R. Kuehly</u></p>



**FIELD SERVICES LABORATORY  
ANALYTICAL REPORT**

**PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone**

**SAMPLE IDENTIFICATION**

	Field ID	Lab ID
SAMPLE NUMBER:	JK127	947752
MTR CODE   SITE NAME:	95266	Gallegos Canyon Unit 165E
SAMPLE DATE   TIME (Hrs):	11-06-95	1700
PROJECT:	Phase I Navajo	
DATE OF TPH EXT.   ANAL.:	11-7-95	
DATE OF BTEX EXT.   ANAL.:	11/7/95	11/7/95
TYPE   DESCRIPTION:	VG	LIGHT BROWN COARSE SAND

Field Remarks: No well readings

**RESULTS**

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	< 0.5	MG/KG				
TOLUENE	< 0.5	MG/KG				
ETHYL BENZENE	< 0.5	MG/KG				
TOTAL XYLENES	< 1.5	MG/KG				
TOTAL BTEX	< 3	MG/KG				
TPH (418.1)	139	MG/KG			2.11	28
HEADSPACE PID	1.9	PPM				
PERCENT SOLIDS	93.5	%				

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

The Surrogate Recovery was at 109% for this sample All QA/QC was acceptable.  
Narrative:

DF = Dilution Factor Used

Approved By: [Signature]

Date: 11-9-95

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

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95/11/07 15:09

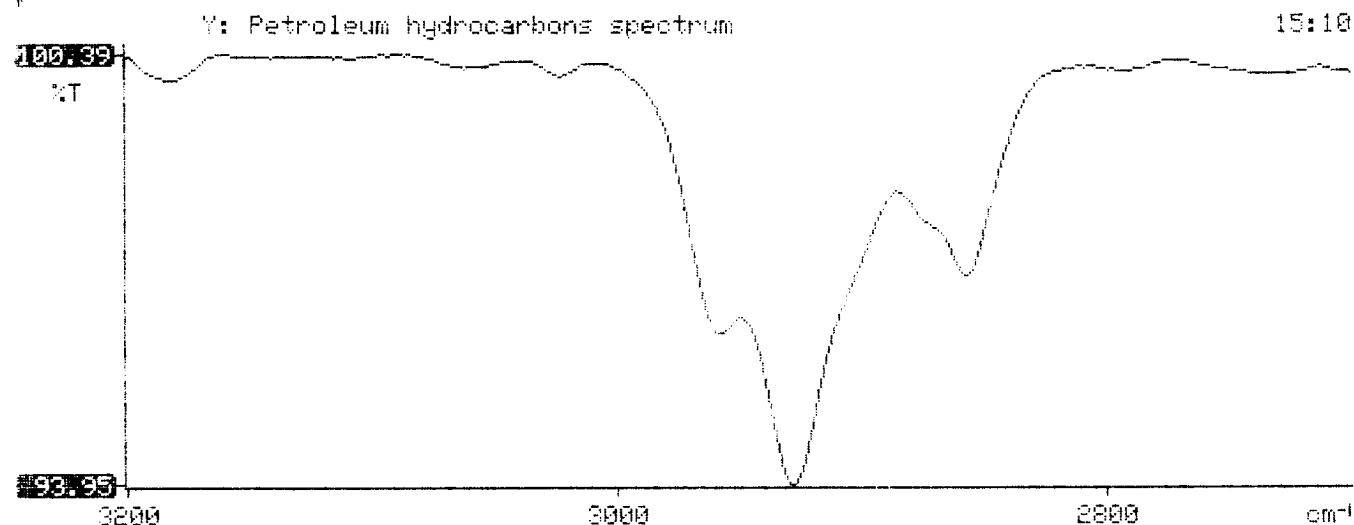
Sample identification  
947752

Initial mass of sample, g  
2.110

Volume of sample after extraction, ml  
28.000

Petroleum hydrocarbons, ppm  
138.781

Net absorbance of hydrocarbons (2930 cm<sup>-1</sup>)  
0.028



# BTEX SOIL SAMPLE WORKSHEET

File	:	947752	Date Printed	:	11/8/95
Soil Mass (g)	:	4.96	Multiplier (L/g)	:	0.00101
Extraction vol. (mL)	:	10	CAL FACTOR (Analytical):	:	200
Shot Volume (uL)	:	50	CAL FACTOR (Report):	:	0.20161

		DILUTION FACTOR:	1	Det. Limit
Benzene (ug/L)	:	0.12	Benzene (mg/Kg):	0.024 0.504
Toluene (ug/L)	:	0.55	Toluene (mg/Kg):	0.111 0.504
Ethylbenzene (ug/L)	:	0.21	Ethylbenzene (mg/Kg):	0.042 0.504
p & m-xylene (ug/L)	:	1.44	p & m-xylene (mg/Kg):	0.290 1.008
o-xylene (ug/L)	:	0.65	o-xylene (mg/Kg):	0.131 0.504
			Total xylenes (mg/Kg):	0.421 1.512
			Total BTEX (mg/Kg):	0.599

# EL PASO NATURAL GAS

## EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM000\110795-0.005  
 Method : C:\LABQUEST\METHODS\0-110295.MET  
 Sample ID : 947752,4.96G,50U  
 Acquired : Nov 07, 1995 17:12:56  
 Printed : Nov 07, 1995 17:43:20  
 User : MARLON

### Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	8.433	61223	0.1255
TOLUENE	13.063	296375	0.5496
ETHYLBENZENE	17.333	95783	0.2142
M, P-XYLENES	17.713	789947	1.4442
O-XYLENE	18.883	295705	0.6500
BFB	19.907	57463635	108.7149

