

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

*Risk  
bedrock  
defined  
plume*

Submit 1 copy to  
appropriate  
District Office  
and 1 copy to  
the Santa Fe Office

(Revised 3/9/94)

**PIT REMEDIATION AND CLOSURE REPORT**

Operator: Meridian Telephone: \_\_\_\_\_  
Address: 30-045-23521  
Facility Or: Johnston Federal #16, Meter 90828  
Well Name \_\_\_\_\_  
Location: Unit or Qtr/Qtr Sec D Sec 33 T 31 R 9 County San Juan  
Pit Type: Separator \_\_\_\_\_ Dehydrator \_\_\_\_\_ Other Drip  
Land Type: BLM X, State \_\_\_\_\_, Fee \_\_\_\_\_ Other \_\_\_\_\_

Pit Location: Pit dimensions: length 25', width 25', depth 5'  
(Attach diagram)

Reference: wellhead X, other \_\_\_\_\_

Footage from reference: 66'

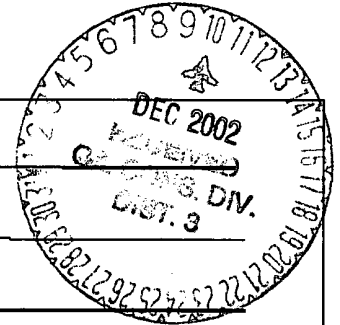
Direction from reference: 251 Degrees X East North \_\_\_\_\_  
of  
\_\_\_\_\_ West South \_\_\_\_\_

Depth To Ground Water	Less than 50 feet	(20 points)
(Vertical distance from	50 feet to 99 feet	(10 points)
contaminants to seasonal	Greater than 100 feet	( 0 points) <u>10</u>
high water elevation of		
ground water.)		

Wellhead Protection Area:	Yes (20 points)
(Less than 200 feet from a private	No ( 0 points) <u>0</u>
domestic water source, or; less than	
1000 feet from all other water sources.)	

Distance To Surface Water:	Less than 200 feet	(20 points)
(Horizontal distance to perennial	200 feet to 1000 feet	(10 points)
lakes, ponds, rivers, streams, creeks,	Greater than 1000 feet	( 0 points) <u>0</u>
irrigation canals and ditches.)		

RANKING SCORE (TOTAL POINTS): 10



Date Remediation Started: 10/03/94 Date completed: 10/03/94

Remediation Method: Excavation \_\_\_\_\_ Approx. cubic yards \_\_\_\_\_

(Check all appropriate sections.)

Landfarmed \_\_\_\_\_ Insitu Bioremediation \_\_\_\_\_

Other Backfill Pit Without Excavation

Remediation Location: Onsite N/A Offsite N/A  
(i.e. landfarmed onsite,  
name and location of  
offsite facility)

General Description of Remedial Action: Some line markers, hit sandstone at 5'. Soil dark gray with a smell

Ground Water Encountered: No X Yes \_\_\_\_\_ Depth \_\_\_\_\_

Final Pit:  
Closure Sampling:  
(if multiple samples,  
attach sample results  
and diagram of sample  
locations and depths)

Sample location Four walls and center of pit composite

Sample depth 5'

Sample Date \_\_\_\_\_ Sample time \_\_\_\_\_

Sample Results

Benzene(ppm) Not reported

Total BTEX(ppm) Not reported

Field headspace(ppm) Not reported

TPH Not reported

Ground Water Sample: Yes \_\_\_\_\_ No X (If yes, attach sample results)

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Date

1/8/03

Signature

Scott T. Pope

Printed Name  
and Title

Scott T. Pope  
Senior ENV. Scientist



## PIT CLOSURE REQUEST

Johnson Federal #16  
Meter/Line ID 90828

### SITE DETAILS

Legals - Twn: 31N  
NMOCD Hazard Ranking: 10  
Operator: Meridian

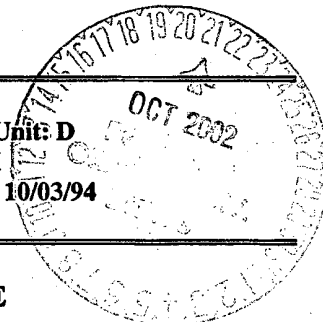
Rng: 9W

Sec: 33

Unit: D

Land Type: BLM

Pit Closure Date: 10/03/94



### RATIONALE FOR RISK-BASED CLOSURE

The pit noted above was assessed and ranked according to the criteria in the New Mexico Oil Conservation Division's (NMOCD) Unlined Surface Impoundment Closure Guidelines.

A test pit was excavated to 5 feet (ft) below ground surface (bgs) and a soil sample was collected for field headspace analysis and laboratory analysis for TPH. Groundwater was not encountered in the test pit. Sandstone was encountered at the base of the test pit and no soil was removed offsite. Headspace analysis indicated an organic vapor content of 463 ppm; laboratory analysis indicated a TPH concentration of 3,220 mg/kg, which is above recommended remediation levels for the Hazard Ranking Score of 10.

No soil was disposed of offsite. The pit was backfilled with site soil, topped with clean soil from the surrounding berms, and graded in a manner to direct surface runoff away from the pit area.

A Phase II boring was completed to 16 ft bgs. No groundwater was encountered in the soil boring. One laboratory samples was collected at 15-16 ft bgs. Headspace analysis indicated an organic vapor content of 1 ppm; laboratory analysis indicated a benzene concentration of <0.5 mg/kg, a total BTEX concentration of <3 mg/kg, and a TPH concentration of <20 mg/kg. TPH and BTEX concentrations at 16 ft bgs were below recommended remediation levels for the Hazard Ranking Score.

No Phase III activities were conducted.

El Paso Field Services requests closure of the above mentioned production pit location for the following reasons:

- The primary source, discharge to the pit, has been removed for over seven years.
- The test pit was backfilled and the former pit area graded to direct surface runoff away from the former pit.
- The clean soil from the berms placed on top of the excavation would limit the potential for direct contact with hazardous constituents by livestock or the public; i.e., current direct contact exposure pathways are unlikely to be completed.
- There are no water supply wells or other sources of fresh water extraction within 1,000 feet of the site.
- Groundwater was not encountered in the soil boring to 16 ft bgs; local geologic features indicate the depth to groundwater is at least 50 feet bgs.



## **PIT CLOSURE REQUEST**

---

- Benzene, total BTEX, and TPH concentrations in the soil sample collected at the base of the Phase 2 soil boring at 16 ft bgs were non-detect, indicating no significant constituent migration is occurring.
- Residual hydrocarbons, if any, in the soil will degrade by natural attenuation with minimal risk to the environment.
- Sandstone at 5 ft bgs makes deeper excavation at this site impractical.

## **ATTACHMENTS**

Field Pit Assessment Form  
Revised Field Pit Assessment Form  
Field Pit Remediation/Closure Form  
Phase 2 Soil Boring Log  
Laboratory Analytical Results

# FIELD PIT SITE ASSESSMENT FORM

## GENERAL

Meter: 90-828 Location: Johnston Federal #16  
 Operator #: 0128 Operator Name: Meridian P/L District: Aztec  
 Coordinates: Letter: D Section 33 Township: 31 Range: 9  
 Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Pit Type: Dehydrator \_\_\_\_\_ Location Drip: X Line Drip: \_\_\_\_\_ Other: \_\_\_\_\_  
 Site Assessment Date: 8/30/94 Area: 04 Run: 41

## SITE ASSESSMENT

### NMOCD Zone:

(From NMOCD  
Maps)

Inside

Outside

☐ (1)

☒ (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 Little Pump Canyon

(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: 20 POINTS

## REMARKS

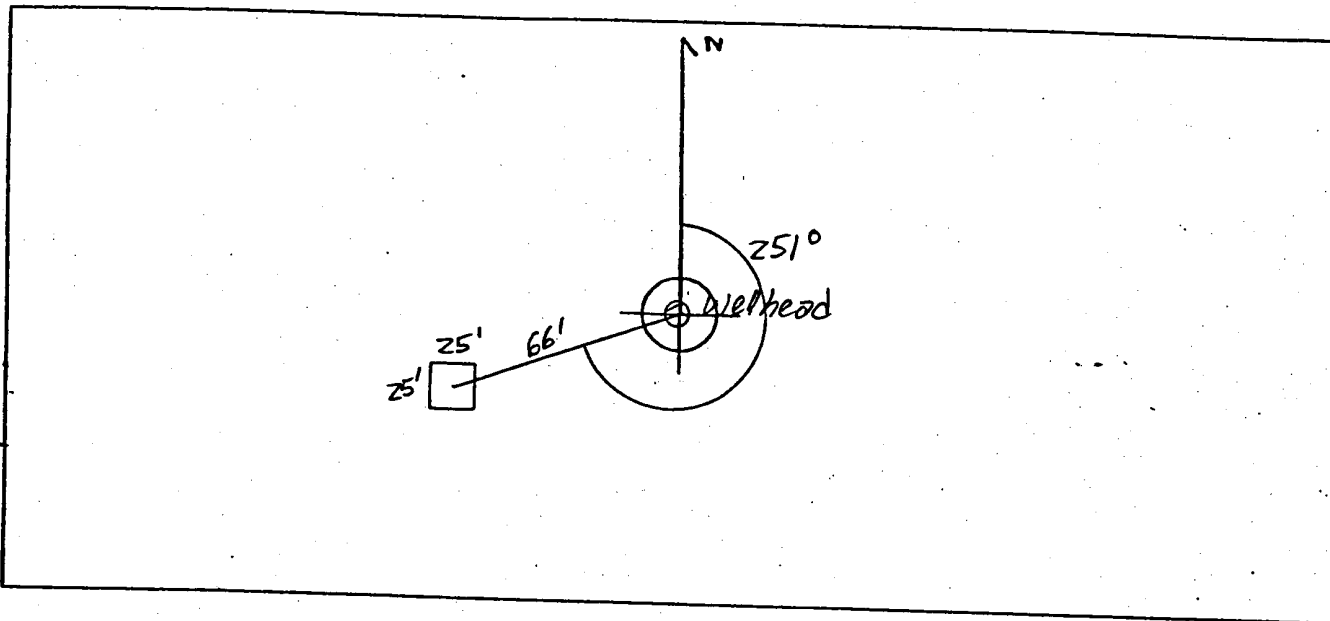
Remarks : Redline Book - Inside Vulnerable Zone Type - Outside  
Three pits, location drip pit is dry, will close one  
pit.

PUSH TAIL

## ORIGINAL PIT LOCATION

## ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 251° Footage from Wellhead 66'  
b) Length : 25' Width : 25' Depth : 5'



## REMARKS

Remarks :

Pictures @ 1250 (1-4, Roll 13)  
Dump Truck

Completed By:

Frank Kelly  
Signature

8/30/94  
Date

**REVISED**  
**FIELD PIT SITE ASSESSMENT FORM**

<b>GENERAL</b>	<p>Meter: <u>90828</u> Location: <u>Johnston Federal #16</u></p> <p>Operator #: _____ Operator Name: _____ P/L District: _____</p> <p>Coordinates: Letter: <u>D</u> Section <u>33</u> Township: <u>31</u> Range: <u>9</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Pit Type: Dehydrator _____ Location Drip: _____ Line Drip: _____ Other: _____</p> <p>Site Assessment Date: <u>4/13/98</u> Area: _____ Run: _____</p>
<b>SITE ASSESSMENT</b>	<p><b>NMOCD Zone:</b> (From NMOCD Maps)</p> <p style="margin-left: 150px;">Inside <input type="checkbox"/> (1) Outside <input checked="" type="checkbox"/> (2)</p> <p><b>Land Type:</b></p> <p style="margin-left: 150px;">BLM <input checked="" type="checkbox"/> (1) State <input type="checkbox"/> (2) Fee <input type="checkbox"/> (3) Indian _____</p> <p><b>Depth to Groundwater</b></p> <p>Less Than 50 Feet (20 points) <input type="checkbox"/> (1) 50 Ft to 99 Ft (10 points) <input checked="" type="checkbox"/> (2) Greater Than 100 Ft (0 points) <input 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?</p> <p style="text-align: center;"><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) 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 _____</p> <p>(Surface Water Body: Perennial Rivers, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)</p> <p>Distance to Nearest Ephemeral Stream <input type="checkbox"/> (1) &lt; 100' (Navajo Pits Only) <input type="checkbox"/> (2) &gt; 100'</p> <p><b>TOTAL HAZARD RANKING SCORE:</b> <u>10</u> <b>POINTS</b></p>
<b>REMARKS</b>	<p>Remarks: <u>Site has been re-assessed, due to initial assessment including washes as a Surface Water Body. Site is &lt;100' vertical from center of Little Pump Canyon</u></p>

# FIELD PIT REMEDIATION/CLOSURE FORM

<b>GENERAL</b>	<p>Meter: <u>90828</u> Location: <u>Johnston Federal #16</u></p> <p>Coordinates: Letter: <u>D</u> Section <u>33</u> Township: <u>31</u> Range: <u>9</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>10-3-94</u> Run: <u>04</u> <u>41</u></p>
<b>FIELD OBSERVATIONS</b>	<p>Sample Number(s): <u>KP 278</u></p> <p>Sample Depth: <u>5'</u> Feet</p> <p>Final PID Reading <u>463</u> PID Reading Depth <u>5'</u> Feet</p> <p>Groundwater Encountered <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Approximate Depth _____ Feet</p>
<b>CLOSURE</b>	<p>Remediation Method :</p> <p>Excavation <input type="checkbox"/> Approx. Cubic Yards _____</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>10-3-94</u> Pit Closed By: <u>B.EF</u></p>
<b>REMARKS</b>	<p>Remarks : <u>Some line marks Hit sand stone at 5'</u></p> <p><u>soil dark gray with a smell</u></p>
	<p>Signature of Specialist: <u>Kelly Padilla</u></p>





# RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

Monroe Road  
Johnston, New Mexico 87401  
(505) 326-2262 FAX (505) 326-2388

Borehole # BH-1  
Well # NA  
Page 1 of 1

Project Number 19643 Phase 1001.77  
Project Name EPFS PITS >10  
Project Location JOHNSTON FEDERAL #16 90828

Elevation \_\_\_\_\_  
Borehole Location LTR: D S:33 T:31 R:9  
GWL Depth NA  
Drilled By K. PADILLA  
Well Logged By H. BRADBURY  
Date Started 12/1/98  
Date Completed 12/1/98

Drilling Method 4 1/4 ID HSA  
Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	S/HS	
0				EXCAVATION SAMPLE COLLECTED AT 5'						BZ=Breathing Zone BH=Borehole S/HS=Sample/Headspace
5										
10	1	10-11	12	LT BR SANDSTONE, FINE SAND, LOW CEMENTATION, DRY			0	0	0	1400 hrs
15	2	15-16	12	LT BR SANDSTONE, FINE SAND, TR COARSE, LOW CEMENT, dry			0	0	10 1	1413 hrs.
20				TOB 16						
25										
30										
35										
40										

Comments:

HAB 84 (15-16') SENT TO LAB FOR TPH, BTEX GW NOT  
ENCOUNTERED BH GROUTED TO SURFACE

Geologist Signature

Holly Bradbury

**FIELD SERVICES LABORATORY  
ANALYTICAL REPORT  
PIT CLOSURE PROJECT**

**SAMPLE IDENTIFICATION**

	Field ID	Lab ID
SAMPLE NUMBER:	HAB84	980850
MTR CODE   SITE NAME:	90828	Johnston Federal #16
SAMPLE DATE   TIME (Hrs):	12/1/98	1413
PROJECT:	Phase II Drilling	
DATE OF TPH EXT.   ANAL.:	12/8/98	12/8/98
DATE OF BTEX EXT.   ANAL.:	12/7/98	12/8/98
TYPE   DESCRIPTION:	VG	SOIL

Field Remarks: 15-16'

**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 (MOD.8015)	<20	MG/KG				
HEADSPACE PID	1	PPM				
PERCENT SOLIDS	94.2	%				

-- TPH is by EPA Method 8015 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 94.7 % for this sample All QA/QC was acceptable.  
ative:

DF = Dilution Factor Used

Approved By: John Lucch

Date: 12/24/98

2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

PINNACLE  
LABORATORIES

# GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015 MODIFIED (DIRECT INJECT)  
CLIENT : EL PASO FIELD SERVICES  
PROJECT # : (none)  
PROJECT NAME : PHASE II DRILLING  
PINNACLE I.D.: 812034

SAMPLE		DATE		DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	980850	NON-AQ	12/1/98	12/8/98	12/8/98	1
PARAMETER		DET. LIMIT	UNITS	980850		
FUEL HYDROCARBONS, C6-C10		10	MG/KG	< 10		
FUEL HYDROCARBONS, C10-C22		5.0	MG/KG	< 5.0		
FUEL HYDROCARBONS, C22-C36		5.0	MG/KG	< 5.0		
CALCULATED SUM:						

SURROGATE:  
BIPHENYL (%)  
SURROGATE LIMITS ( 66 - 151 )  
82

CHEMIST NOTES:  
N/A



2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

# GAS CHROMATOGRAPHY RESULTS

## REAGENT BLANK

TEST	: EPA 8015 MODIFIED (DIRECT INJECT)	PINNACLE I.D.	: 812034
BLANK I.D.	: 120898	DATE EXTRACTED	: 12/8/98
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 12/9/98
PROJECT #	: (none)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: PHASE II DRILLING		

PARAMETER	UNITS	
FUEL HYDROCARBONS, C6-C10	MG/KG	< 10
FUEL HYDROCARBONS, C10-C22	MG/KG	< 5.0
FUEL HYDROCARBONS, C22-C36	MG/KG	< 5.0

### SURROGATE:

O-TERPHENYL (%)

98

SURROGATE LIMITS ( 80 - 151 )

### CHEMIST NOTES:

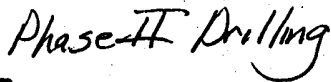
N/A



# BTEX SOIL SAMPLE WORKSHEET

File	:	980850	Date Printed	:	12/10/98
Soil Mass (g)	:	5.09	Multiplier (L/g)	:	0.00098
Extraction vol. (mL)	:	10	CAL FACTOR (Analytical):	:	200
Shot Volume (uL)	:	50	CAL FACTOR (Report):	:	0.19646

	DILUTION FACTOR:	1	Det. Limit
Benzene (ug/L) : <0.5	Benzene (mg/Kg):	#VALUE!	0.491
Toluene (ug/L) : <0.5	Toluene (mg/Kg):	#VALUE!	0.491
Ethylbenzene (ug/L) : <0.5	Ethylbenzene (mg/Kg):	#VALUE!	0.491
p & m-xylene (ug/L) : <1.0	p & m-xylene (mg/Kg):	#VALUE!	0.982
o-xylene (ug/L) : <0.5	o-xylene (mg/Kg):	#VALUE!	0.491
	Total xylenes (mg/Kg):	#VALUE!	1.473
	Total BTEX (mg/Kg):	#VALUE!	



12-29-98 Axel.  
12-29-98 Chem.  
12-29-98 Appr.

Page 1 of 1

White - Testing Laboratory    Canary - EPNG Lab    Pink - Field Sampler