

District I  
1622 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  
1220 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

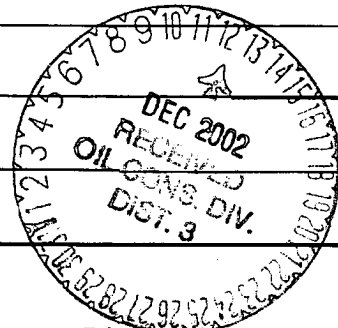
*Risk  
defined  
extent of  
plume*

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: RB Operating Company Telephone: 30-039-22498  
Address: \_\_\_\_\_  
Facility Or: No. 17-2 Federal, Meter 93622  
Well Name \_\_\_\_\_  
Location: Unit or Qtr/Qtr Sec G Sec 17 T 24 R 3 County Rio Arriba  
Pit Type: Separator \_\_\_\_\_ Dehydrator \_\_\_\_\_ Other Drip  
Land Type: BLM \_\_\_\_\_, State \_\_\_\_\_, Fee X Other \_\_\_\_\_



Pit Location: Pit dimensions: length 25', width 26', depth 3'  
(Attach diagram)

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

Footage from reference: 111'

Direction from reference: 98 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>20</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): 20

Date Remediation Started: 10/26/94 Date completed: 10/26/94

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. At 12' soil gray looking. Closed pit.

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 12'

Sample Date 10/26/94 Sample time 10:30

Sample Results

Benzene(ppm) Not reported

Total BTEX(ppm) Not reported

Field headspace(ppm) 127

TPH 20500

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

No. 17-2 Federal  
Meter/Line ID 93622

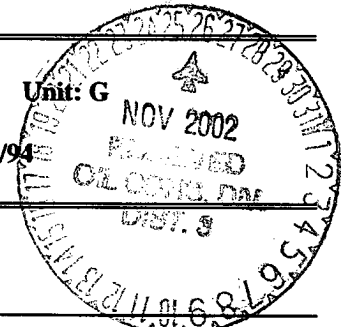
### SITE DETAILS

Legals - Twn: 24N  
NMOCD Hazard Ranking: 20  
Operator: RB Operating Company

Rng: 3W

Sec: 17  
Land Type: Fee  
Pit Closure Date: 10/26/94

Unit: G



### 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 12 feet (ft) below ground surface (bgs) where a soil sample was collected for field headspace analysis and laboratory analysis for TPH. Groundwater was not encountered in the test pit. Headspace analysis indicated an organic vapor content of 127 ppm; laboratory analysis indicated a TPH concentration of 20,500 mg/kg. The field headspace analysis and TPH measurement exceeded recommended remediation levels for the Hazard Ranking Score of 20.

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 refusal at 27 ft bgs. No groundwater was encountered in the soil boring. One laboratory sample was collected at 25-27 ft bgs. Headspace analysis indicated an organic vapor content of 2 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. The benzene, TPH and BTEX concentrations 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 eight 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.
- Groundwater was not encountered in the soil boring to 27 ft bgs.
- There are no water supply wells or other sources of fresh water extraction within 1,000 feet of the site.
- Benzene, total BTEX, and TPH concentrations in the soil sample collected at the base of the Phase II soil boring at 25 ft bgs were non-detect, indicating that no significant downward constituent migration is occurring.



## **PIT CLOSURE REQUEST**

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- Residual hydrocarbons in the soil will likely degrade by natural attenuation with minimal risk to the environment.

### **ATTACHMENTS**

Field Pit Assessment Form

Revised Field Pit Assessment Form

Field Pit Remediation/Closure Form

Phase II Soil Boring Log

Laboratory Analytical Results

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

GENERAL

Meter: 93622 Location: No 17-2 Federal  
Operator #: \_\_\_\_\_ Operator Name: \_\_\_\_\_ P/L District: \_\_\_\_\_  
Coordinates: Letter: G Section 17 Township: 24 Range: 3  
Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Pit Type: Dehydrator \_\_\_\_\_ Location Drip: \_\_\_\_\_ Line Drip: \_\_\_\_\_ Other: \_\_\_\_\_  
Site Assessment Date: 4/14/98 Area: \_\_\_\_\_ Run: \_\_\_\_\_

SITE ASSESSMENT

**NMOCD Zone:**  
(From NMOCD  
Maps)

Inside  
Outside

**Land Type:**

☐ (1)  
☒ (2)

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, 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 : Site has been re-assessed, due to initial assessment including washes as a Surface Water Body. Site is < 50' vertical from center of Canada Larga

# FIELD PIT SITE ASSESSMENT FORM

GENERAL

SK 10/28/94 - see notes on back

Meter: 93-622 Location: No. 17-Z Federal  
 Operator #: 0002 Operator Name: R. B. [unclear] P/L District: Ojito  
 Coordinates: Letter: G Section 17 Township: 24 Range: 3  
 Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Pit Type: Dehydrator \_\_\_\_\_ Location Drip: X Line Drip: \_\_\_\_\_ Other: \_\_\_\_\_  
 Site Assessment Date: 10/25/94 Area: 06 Run: 83

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 Cañada Larga

(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: 30 POINTS

REMARKS

Remarks : Redline Book: Inside, Vulnerable Zone Topo: Outside  
Two pits, location drip pit has liquid in it. Will close  
one pit.

PUSH IN



FIELD SERVICES LABORATORY  
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Outside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KP 337	946459
MTR CODE   SITE NAME:	93622	N/A
SAMPLE DATE   TIME (Hrs):	10-26-94	1030
SAMPLED BY:	N/A	
DATE OF TPH EXT.   ANAL.:	10-28-94	10-28-94
DATE OF BTEX EXT.   ANAL.:	N/A	N/A
TYPE   DESCRIPTION:	VG	Dark brown sand + clay

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
TPH (418.1)	20500	MG/KG			.25	28
HEADSPACE PID	127	PPM				
PERCENT SOLIDS	88.0	%				

-- TPH is by EPA Method 418.1 --

Narrative:

DF = Dilution Factor Used

Approved By:

Date:

11/3/94

# FIELD PIT REMEDIATION/CLOSURE FORM

<b>GENERAL</b>	<p>Meter: <u>10-26-94</u> <u>93622</u> Location: <u>No. 17-2 Federal</u></p> <p>Coordinates: Letter: <u>G</u> Section <u>17</u> Township: <u>24</u> Range: <u>3</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>10-26-94</u> Area: <u>08</u> Run: <u>83</u></p>
<b>FIELD OBSERVATIONS</b>	<p>Sample Number(s): <u>KF 337</u></p> <p>Sample Depth: <u>12'</u> Feet</p> <p>Final PID Reading <u>127</u> PID Reading Depth <u>12'</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>
<b>CLOSURE</b>	<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>10-26-94</u> Pit Closed By: <u>B.E.I</u></p>
<b>REMARKS</b>	<p>Remarks : <u>Some line markers At 12' soil gray looking</u></p> <p><u>Closed Pit</u></p>
<p>Signature of Specialist: <u>Kelly Padilla</u></p>	





Page \_\_\_\_\_ of \_\_\_\_\_

## CHAIN OF CUSTODY RECORD

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



CHAIN OF CODY RECORD 83-28 83-28 83-28

Page \_\_\_\_\_ of \_\_\_\_\_

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

FM-08-0565 A (Rev. 05-94)

[illegible]



FIELD SERVICES LABORATORY  
ANALYTICAL REPORT  
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC405	980531
MTR CODE   SITE NAME:	93622	No. 17-2 Federal
SAMPLE DATE   TIME (Hrs):	7/14/98	1527
PROJECT:	Phase II Drilling	
DATE OF TPH EXT.   ANAL.:	7/24/98	7/24/98
DATE OF BTEX EXT.   ANAL.:	7/22/98	7/27/98
TYPE   DESCRIPTION:	VG	SOIL

Field Remarks: 25-27

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	2	PPM				
PERCENT SOLIDS	91.0	%				

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

The Surrogate Recovery was at 90.8 % for this sample All QA/QC was acceptable.  
Narrative:

DF = Dilution Factor Used

Approved By:

*John L. Linder*

Date:

8/11/98

# RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road  
Albuquerque, New Mexico 87401  
326-2262 FAX (505) 326-2388

Borehole # BH- 1  
Well # N/A  
Page 1 of 1

Project Number 19643 Phase 1001.77  
Project Name EPFS PITS >10  
Project Location No 17-2 Federal

Elevation  
Borehole Location LTR: G S: 17 T: 24 R: 3  
GWL Depth N/A  
Drilled By K. PADILLA  
Well Logged By C. CHANCE  
Date Started 7/14/98  
Date Completed 7/14/98

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										BZ=Breathing Zone BH=Borehole S/HS=Sample/Headspace
5										
10				Excavation sample Collected @ 12'						
15	1	15-17	12	DK Gray sandy CLAY, tr F sand, soft, high plastic, dry			4	97	$\frac{584}{2180}$	-1506 hr
20	2	20-22	12	DK B- silty CLAY, soft high plastic, dry, tr Fe staining			5	82	$\frac{5}{2}$	-1515 hr
25	3	25-27	12	DK B- sandy CLAY, tr F sand, med stiff, h plastic, dry			0	22	$\frac{4}{2}$	-1527 hr
30				T0027'						
35										
40										

Comments: CMC 405 (25-27') sent to lab for BTEX, TPH. No GW encountered.  
BH grouted to surface.

Geologist Signature

Cory Chance

GAS CHROMATOGRAPHY RESULTS

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

AEN I.D.: 807368

SAMPLE		MATRIX	DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.		SAMPLED	EXTRACTED	ANALYZED	
01	980530	NON-AQ	7/14/98	7/24/98	7/24/98	1
02	980531	NON-AQ	7/14/98	7/24/98	7/24/98	1
PARAMETER		DET. LIMIT	UNITS	01	02	
FUEL HYDROCARBONS, C6-C10		10	MG/KG	< 10	< 10	
FUEL HYDROCARBONS, C10-C22		5.0	MG/KG	< 5.0	< 5.0	
FUEL HYDROCARBONS, C22-C36		5.0	MG/KG	< 5.0	< 5.0	
CALCULATED SUM:						

PROGATE:  
BIPHENYL (%)  
SURROGATE LIMITS

( 66 - 151 )

98

88

CHEMIST NOTES:  
N/A

**PLEASE FILL THIS FORM IN COMPLETELY.**

<b>PROJECT MANAGER:</b> John Lambdin <b>COMPANY:</b> El Paso Field Services <b>ADDRESS:</b> 770 W. NAVAJO FARMINGTON, NM 87401 <b>PHONE:</b> (505) - 599-3144 <b>FAX:</b> (505) - 599-2261 <b>BILL TO:</b> Above <b>COMPANY:</b> <b>ADDRESS:</b>		<b>SAMPLE ID</b> <b>DATE</b> <b>TIME</b> <b>MATRIX</b> <b>LAB ID</b> 980530     7/14/88     1255     Soil     1013 980531     7/14/88     1527     Soil     1014		<b>ANALYSIS REQUEST</b> Petroleum Hydrocarbons (418.1) TRPH <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> (MOD.8015) Diesel/Direct Inject <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> (M8015) Gas/Purge & Trap <input type="checkbox"/> 8021 (BTEX)/8015 (Gasoline) <input type="checkbox"/> 8021 (BTEX) □ MTBE □ TMB □ PCE <input type="checkbox"/> 8021 (TCL) <input type="checkbox"/> 8021 (EDX) <input type="checkbox"/> 8021 (HALO) <input type="checkbox"/> 8021 (CUST) <input type="checkbox"/> 504.1 EDB □ / DBCP □ <input type="checkbox"/> 8260 (TCL) Volatile Organics <input type="checkbox"/> 8260 (Full) Volatile Organics <input type="checkbox"/> 8260 (CUST) Volatile Organics <input type="checkbox"/> 8260 (Landfill) Volatile Organics <input type="checkbox"/> Pesticides /PCB (608/8081) <input type="checkbox"/> Herbicides (615/8151) <input type="checkbox"/> Base/Neutral/Acid Compounds GC/MS (625/8270) <input type="checkbox"/> Polynuclear Aromatics (610/8310) <input type="checkbox"/> General Chemistry: <input type="checkbox"/> Priority Pollutant Metals (13) <input type="checkbox"/> Target Analyte List Metals (23) <input type="checkbox"/> RCRA Metals (8) <input type="checkbox"/> RCRA Metals by TCLP (Method 1311) <input type="checkbox"/> Metals: <input type="checkbox"/> NUMBER OF CONTAINERS     2	
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<b>PROJECT INFORMATION</b> PROJ. NO.: PROJ. NAME: Phase II-Drilling P.O. NO.: SHIPPED VIA: Fed Ex <b>SAMPLE RECEIPT</b> NO. CONTAINERS: 2 CUSTOMER SEALS: Y (N) NO RECEIVED INTACT: YES BLUE DYE: 1300 sample	<b>PRIOR AUTHORIZATION IS REQUIRED FOR RUSH DELIVERY</b> (RUSH) <input type="checkbox"/> 124hr <input type="checkbox"/> 148hr <input type="checkbox"/> 172hr <input type="checkbox"/> 1 WEEK (NORMAL) <input checked="" type="checkbox"/> CERTIFICATION REQUIRED: <input type="checkbox"/> NM <input type="checkbox"/> SDWA <input type="checkbox"/> OTHER METHANOL PRESERVATION <input type="checkbox"/> COMMENTS: FIXED FEE <input type="checkbox"/>	<b>RECEIVED BY (LAB)</b> Signature: Mark Hopper Printed Name: Mark Hopper Company: 7/22/88 Time: 1250 Date: 7/22/88 <b>RECEIVED BY (LAB)</b> Signature: Mark Hopper Printed Name: Mark Hopper Company: 7/22/88 Time: 1250 Date: 7/22/88
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# BTEX SOIL SAMPLE WORKSHEET

File	:	980531	Date Printed	:	7/29/98
Soil Mass (g)	:	5.02	Multiplier (L/g)	:	0.00100
Extraction vol. (mL)	:	10	CAL FACTOR (Analytical):	:	200
Shot Volume (uL)	:	50	CAL FACTOR (Report):	:	0.19920

		DILUTION FACTOR:	1	Det. Limit
Benzene (ug/L)	:	<0.5	Benzene (mg/Kg): #VALUE!	0.498
Toluene (ug/L)	:	<0.5	Toluene (mg/Kg): #VALUE!	0.498
Ethylbenzene (ug/L)	:	<0.5	Ethylbenzene (mg/Kg): #VALUE!	0.498
p & m-xylene (ug/L)	:	<1.0	p & m-xylene (mg/Kg): #VALUE!	0.996
o-xylene (ug/L)	:	<0.5	o-xylene (mg/Kg): #VALUE!	0.498
			Total xylenes (mg/Kg): #VALUE!	1.494
			Total BTEX (mg/Kg): #VALUE!	