

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  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

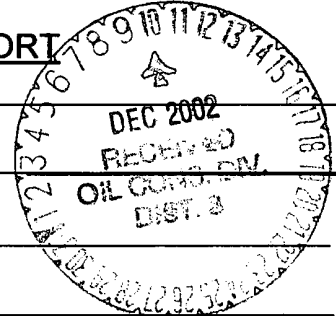
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Risk  
exceeds  
standards  
define  
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 30-845-05824 Telephone: \_\_\_\_\_

Address: \_\_\_\_\_

Facility Or: Ballard No.9, Meter 70791

Well Name \_\_\_\_\_

Location: Unit or Qtr/Qtr Sec O Sec 15 T 26 R 9 County San Juan

Pit Type: Separator \_\_\_\_\_ Dehydrator \_\_\_\_\_ Other Drip

Land Type: BLM X, State \_\_\_\_\_, Fee \_\_\_\_\_ Other \_\_\_\_\_

Pit Location: Pit dimensions: length 17', width 16', depth 2'

(Attach diagram)

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

Footage from reference: 44'

Direction from reference: 34 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>10</u>
irrigation canals and ditches.)		

RANKING SCORE (TOTAL POINTS): 30

Date Remediation Started: 08/15/94 Date completed: 08/15/94

Remediation Method: Excavation X Approx. cubic yards 50  
(Check all appropriate sections.) Landfarmed \_\_\_\_\_ Insitu Bioremediation \_\_\_\_\_  
Other \_\_\_\_\_

Remediation Location: Onsite \_\_\_\_\_ Offsite Envirotech  
(i.e. landfarmed onsite, name and location of offsite facility) \_\_\_\_\_

General Description of Remedial Action: Excavated pit to 12'; took PID sample; 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 08/15/94 Sample time 11:15

Sample Results

Benzene(ppm) <0.025

Total BTEX(ppm) <0.10

Field headspace(ppm) 9

TPH 524

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 1/8/93  
Signature Scott T. Pope

Printed Name Scott T. Pope  
and Title Senior Env. Scientist

Ballard No. 9  
Meter/Line ID 70791

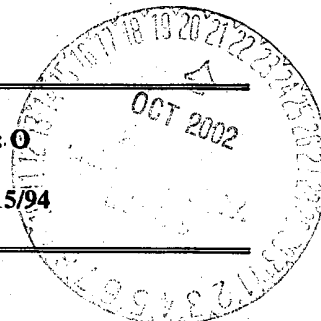
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**SITE DETAILS**

Legals - Twn: 26N  
NMOCD Hazard Ranking: 20  
Operator: Meridian

Rng:9

Sec:15      Unit: 0  
Land Type: BLM  
Pit Closure Date: 08/15/94



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**RATIONALE FOR RISK-BASED CLOSURE**

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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.

The pit was excavated to 12 feet (ft) below ground surface (bgs) and a soil sample was collected for field headspace analysis and laboratory analysis for BTEX and TPH. Groundwater was not encountered in the test pit. Headspace analysis indicated an organic vapor content of 9 ppm; laboratory analysis indicated a benzene concentration of <0.025 mg/kg, a total BTEX concentration of <0.10 mg/kg, and a TPH concentration of 524 mg/kg. The benzene and total BTEX concentrations were below the recommended remediation level for the Hazard Ranking Score. The TPH concentration exceeded its recommended remediation level for the Hazard Ranking Score of 20.

Approximately 50 cubic yards of soil were excavated and hauled to Envirotech, a commercial landfarm, for treatment and disposal. The pit was backfilled with clean soil and graded in a manner to direct surface runoff away from the pit area.

A Phase II boring was completed to 20 ft bgs. No groundwater was encountered in the soil boring. One laboratory sample was collected at 20 ft bgs. Headspace analysis indicated an organic vapor content of 0 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 720 mg/kg. Benzene and BTEX concentrations were below recommended remediation levels for the Hazard Ranking Score. The TPH concentration exceeded its recommended remediation level for the Hazard Ranking Score of 20.

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 impacted soil was disposed of offsite.
- The test pit was backfilled and the former pit area graded to direct surface runoff away from the former pit.
- Backfilling the pit with clean soil eliminated the potential for direct contact with hazardous constituents by livestock or the public; i.e., direct contact exposure pathways are incomplete.
- Groundwater was not encountered in the soil boring to 20 ft bgs.



## **PIT CLOSURE REQUEST**

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- There are no water supply wells or other sources of fresh water extraction within 1,000 feet of the site.

### **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

5

GENERAL

Meter: 70791 Location: Ballard No. 9  
 Operator #: 2999 Operator Name: Meridian P/L District: Ballard  
 Coordinates: Letter: O Section 15 Township: 26 Range: 9  
 Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Pit Type: Dehydrator \_\_\_\_\_ Location Drip: X Line Drip: \_\_\_\_\_ Other: \_\_\_\_\_  
 Site Assessment Date: 6-20-94 Area: 11 Run: 91

SITE ASSESSMENT

NMOCD Zone: (From NMOCD Maps) Inside ☒ (1) Outside ☐ (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 Reed Canyon Wash  
 (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

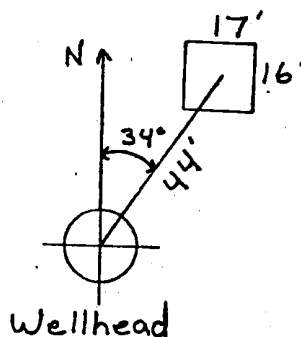
REMARKS

Remarks : one pit on location. Dry  
Inside v.z. on Redline & Topo Dry & Hard

## ORIGINAL PIT LOCATION

## ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 34 Footage from Wellhead 44  
b) Length : 17 Width : 16 Depth : 2



## REMARKS

Remarks :

Photos - 1300 hrs

Completed By:

[Signature]

Signature

6-20-94

Date



FIELD SERVICES LABORATORY  
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KD213	945935
MTR CODE   SITE NAME:	70791	N/A
SAMPLE DATE   TIME (Hrs):	8-15-94	1115
SAMPLED BY:	N/A	
DATE OF TPH EXT.   ANAL:	8-16-94	8-16-94
DATE OF BTEX EXT.   ANAL:	8/17/94	8/20/94
TYPE   DESCRIPTION:	VC	Fine Brown Sand/clay

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	< 0.025	MG/KG	1			
TOLUENE	< 0.025	MG/KG	1			
ETHYL BENZENE	< 0.025	MG/KG	1			
TOTAL XYLENES	< 0.025	MG/KG	1			
TOTAL BTEX	< 0.10	MG/KG				
TPH (418.1)	524	MG/KG			2.30	28
HEADSPACE PID	9	PPM				
PERCENT SOLIDS	90.4	%				

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

The Surrogate Recovery was at 85 % for this sample All QA/QC was acceptable.

Lab:

ATI results attached.

DF = Dilution Factor Used

Approved By:

AP

Date:

9/2/94



Analytical Technologies, Inc.

# GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)  
CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 408364  
PROJECT # : 24324  
PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
22	945934	NON-AQ	08/15/94	08/17/94	08/20/94	50
23	945935	NON-AQ	08/15/94	08/17/94	08/20/94	1
24	945936	NON-AQ	08/15/94	08/17/94	08/20/94	1

PARAMETER	UNITS	22	23	24
BENZENE	MG/KG	<1.3	<0.025	<0.025
TOLUENE	MG/KG	<1.3	<0.025	<0.025
ETHYLBENZENE	MG/KG	3.9	<0.025	<0.025
TOTAL XYLENES	MG/KG	96	<0.025	<0.025

## SURROGATE:

BROMOFLUOROBENZENE (%) NA\* 85 85

\*SURROGATE RECOVERY NOT OBTAINABLE DUE TO SAMPLE DILUTION



# FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 70791 Location: Ballard #9  
 Coordinates: Letter: 0 Section 15 Township: 26 Range: 9  
 Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Date Started : 8.15.94 Run: 11 91

FIELD OBSERVATIONS

Sample Number(s): KD 213  
 Sample Depth: 12' Feet  
 Final PID Reading 9 ppm PID Reading Depth 12' Feet  
 Yes No  
 Groundwater Encountered ☐ ☒ Approximate Depth \_\_\_\_\_ Feet

CLOSURE

Remediation Method :  
 Excavation ☒ Approx. Cubic Yards 50  
 Onsite Bioremediation ☐  
 Backfill Pit Without Excavation ☐  
 Soil Disposition:  
 Envirotech ☒ ☐ Tierra  
 Other Facility ☐ Name: \_\_\_\_\_  
 Pit Closure Date: 8.15.94 Pit Closed By: BEI

REMARKS

Remarks : Excavated pit to 12', Took PID sample, closed pit

Signature of Specialist: Kenny Deane

# CHAIN OF CUSTODY RECORD

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

PROJECT NUMBER		PROJECT NAME <b>Pit Closure Project # 24324</b>				TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	REQUESTED ANALYSIS						CONTACT LABORATORY P. O. NUMBER															
AMPLERS: (Signature) <i>[Signature]</i>		DATE: <i>8/15/94</i>						TPH EPA 418.1	BTEX EPA 8020																				
LAB ID	DATE	TIME	MATRIX	SAMPLE NUMBER										REMARKS															
2935	8/15/94	1115	soil	KD 213	1	VC	X	X					193																
2936	8/15/94	1235	soil	KD 214	1	VG	X	X					194																
2937	8/15/94	1610	soil	KD 215	1	VC	X	X					195																
<i>[Diagonal line across empty rows]</i>																													
RELINQUISHED BY: (Signature) <i>[Signature]</i>		DATE/TIME <i>30</i> <i>8/15/94 1745</i>		RECEIVED BY: (Signature) <i>[Signature]</i>		DATE/TIME <i>30</i> <i>8/16/94 1015</i>		RECEIVED BY: (Signature) _____																					
RELINQUISHED BY: (Signature) _____		DATE/TIME _____		RECEIVED BY: (Signature) _____		DATE/TIME _____		RECEIVED BY: (Signature) <i>[Signature]</i>																					
REQUESTED TURNAROUND TIME: <input type="checkbox"/> ROUTINE <input type="checkbox"/> RUSH		SAMPLE RECEIPT REMARKS						<b>RESULTS &amp; INVOICES TO:</b> <b>FIELD SERVICES LABORATORY</b> <b>EL PASO NATURAL GAS COMPANY</b> <b>P. O. BOX 4990</b> <b>FARMINGTON, NEW MEXICO 87499</b>  505-599-2144      FAX: 505-599-2261																					
CARRIER CO.		CHARGE CODE																											
BILL NO.:																													

# RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL  
4000 Monroe Road  
Farmington, New Mexico 87401  
(505) 326-2262 FAX (505) 326-2388

Borehole # BH-1  
Well # \_\_\_\_\_  
Page 1 of 1

Project Name EPNG Pits  
Project Number 14509 Phase 6000.77  
Project Location Ballard No 9 70791

Well Logged By Jeff W. Kindley  
Personnel On-Site G. Sudduth, D. Roberts, H. Kei  
Contractors On-Site \_\_\_\_\_  
Client Personnel On-Site \_\_\_\_\_

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

Elevation \_\_\_\_\_  
Borehole Location T26, R9, S15, Ø  
GWL Depth \_\_\_\_\_  
Logged By Jeff W. Kindley  
Drilled By G. Sudduth  
Date/Time Started 08/17/95 1012  
Date/Time Completed 08/17/95 1045

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: <u>USCS</u>	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	S	
0				Back Fill material to 12'						
5										
10										
15										
20	1	18-20'	19 20	clayey sand (25% clay) brown, medium dense, moist Boring terminated at 20'						% 1025
25										
30										
35										
40										

Comments:

Sample collected at 20' and analyzed for BTEX and TPH. All spouted to surface

Geologist Signature

So Phil Kindley



Natural Gas Company

Shadey  
Dillig

CHAIN OF CUSTODY RECORD

Page

of 1

PROJECT NUMBER		PROJECT NAME		DATE		SAMPLE NUMBER		TOTAL NUMBER OF CONTAINERS		SAMPLE TYPE		REQUESTED ANALYSIS				REMARKS					
LAB ID		DATE		TIME		MATRIX		DATE		TIME		EPA 418.1		BTEX		EPA 8020		PID HS # (ppm)		SEQ #	
14509	08/17/95	0918	Soil	7WK 19	17, 1995	1	V6	✓	✓	✓	18	17	Tibben Field No. 2 75605 pit located 37' North of Existing water Housing Unit (2) Brilland No. 9 70191 Koch Exploration Greer # 2 71209 18 to 20' Trip Blank Koch Exploration Greer # 1 70771 Koch Exploration Greer # 1 70771 Brilland # 1 70768 43 to 45								
147269	08/17/95	1025	Soil	7WK 20		1	V6	✓			0	18									
147270	08/17/95	1202	Soil	7WK 21		1	V6	✓			0	19									
147271	08/17/95	1341	Soil	7WK 22		1	B	✓			0										
147272	08/17/95	1341	Soil	7WK 23		1	V6	✓			12	20									
147273	08/17/95	1341	Soil	7WK 24		1	D	✓			12										
147274	08/17/95	1506	Soil	7WK 25		1	V6	✓			8	21									

RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)	
[Signature]		8/19/95 1715		Kelly Small		8/18/95 20		[Signature]	
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)	
[Signature]				[Signature]				[Signature]	

REQUESTED TURNAROUND TIME:		SAMPLE RECEIPT REMARKS		RESULTS & INVOICES TO:	
<input type="checkbox"/> ROUTINE	<input type="checkbox"/> RUSH			FIELD SERVICES LABORATORY EL PASO NATURAL GAS COMPANY P. O. BOX 4990 FARMINGTON, NEW MEXICO 87499	
CARRIER CO.		CHARGE CODE		505-599-2144	
BILL NO.:				FAX: 505-599-2261	



FIELD SERVICES LABORATORY  
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JWK20	947269
MTR CODE   SITE NAME:	70791	Ballard No. 9
SAMPLE DATE   TIME (Hrs):	08-17-95	
PROJECT:	Phase II Drilling	
DATE OF TPH EXT.   ANAL.:	8/21/95	8-21-95
DATE OF BTEX EXT.   ANAL.:	8/21/95	8/21/95
TYPE   DESCRIPTION:	VG	Light brown fine sand.

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	< .5	MG/KG		F		
TOLUENE	< .5	MG/KG				
ETHYL BENZENE	< .5	MG/KG				
TOTAL XYLENES	< 1.5	MG/KG				
TOTAL BTEX	< 3	MG/KG				
TPH (418.1)	720	MG/KG			2.07	28
HEADSPACE PID	0	PPM				
PERCENT SOLIDS	99.5	%				

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

The Surrogate Recovery was at 96% for this sample All QA/QC was acceptable.  
Narrative:

Benzene Taken from FID.

DF = Dilution Factor Used

# BTEX SOIL SAMPLE WORKSHEET

File	:	947269	Date Printed	:	8/24/95
Soil Mass (g)	:	4.97	Multiplier (L/g)	:	0.00101
Extraction vol. (mL)	:	20	DF (Analytical)	:	200
Shot Volume (uL)	:	100	DF (Report)	:	0.20121

				Det. Limit
Benzene (ug/L)	:	0.00	Benzene (mg/Kg):	0.000 0.503
Toluene (ug/L)	:	0.00	Toluene (mg/Kg):	0.000 0.503
Ethylbenzene (ug/L)	:	0.00	Ethylbenzene (mg/Kg):	0.000 0.503
p & m-xylene (ug/L)	:	0.00	p & m-xylene (mg/Kg):	0.000 1.006
o-xylene (ug/L)	:	0.00	o-xylene (mg/Kg):	0.000 0.503
			Total xylenes (mg/Kg):	0.000 1.509
			Total BTEX (mg/Kg):	0.000