

District I  
P O Box 1980  
District II  
P O Box 1980  
District III  
P O Box 1980

1000 Rio Brazos Rd. Aztec, NM 87413  
JUN 23 1998

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco Street  
Santa Fe, New Mexico 87505

SUBMIT 1 COPY TO  
APPROPRIATE  
DISTRICT OFFICE  
AND 1 COPY TO  
SANTA FE OFFICE

**PIT REMEDIATION AND CLOSURE REPORT**

**Operator:** PNM Gas Services (Caulkins) **Telephone:** 324-3764

**Address:** 603 W. Elm Street Farmington, NM 87401

**Facility or Well Name:** Breech E #68 E

**Location:** Unit L Sec 4 T 26 N R 6 W County Rio Arriba

**Pit Type:** Separator ☒ Dehydrator ☐ Other ☐

**Land Type:** BLM ☒ State ☐ Fee ☐ Other ☐ No ☐

**Pit Location:** Pit dimensions: length 20 width 20 depth 3

(Attach diagram) Reference: wellhead ☒ other ☐

Footage from reference: 121'

Direction from reference: 20 Degrees ☒ East ☐ North ☐  
of ☐ West ☒ South ☐

**Depth to Ground Water:** Less than 50 feet (20 points)  
50 feet to 99 feet (10 points)  
Greater than 100 feet (0 points) 0

(Vertical distance from contaminants to  
seasonal high water elevation of ground  
water)

**Wellhead Protection Area:**

(Less than 200 feet from a private  
domestic water source, or, less than 1,000  
feet from all other water sources)

Yes (20 points)  
No (0 points) 0

**Distance to Surface Water:**

(Horizontal distance to perennial lakes,  
ponds, rivers, streams, creeks, irrigation  
canals and ditches)

Less than 200 feet (20 points)  
200 feet to 1,000 feet (10 points)  
Greater than 1,000 feet (0 points) 0

**RANKING SCORE (TOTAL POINTS):** 0

RECEIVED  
FEB 3 1998  
OIL CON. DIV.  
DIST. 3

Breach E #68 E

Date Remediation Started: 7/18/97

Date Completed: 7/18/97

Remediation Method:

Excavation

X

Approx. Cubic Yard

194

(Check all appropriate sections)

Landfarmed

X

Amount Landfarmed (cubic yds)

194.2

Other

Remediation Location:

Onsite

X

Offsite

(i.e., landfarmed onsite, name and location of offsite facility)

Backfill Material Location:

General Description of Remedial Action:

Excavated contaminated soil to a pit size of 19' X 23' X 12' and landfarmed soil onsite within a bermed area at a depth of 6" to 12". Soil was aerated by disking/plowing until soil met regulatory levels.

\*\*\* Bedrock encountered at 22'. See attached risk analysis form and laboratory analysis.

Ground Water Encountered:

No

✓

Yes

Depth

Final Pit Closure Sampling:

Sample Location

5 pt. composite; 4 side walls and center of pit bottom.

(if multiple samples, attach sample result and diagram of sample locations and depths.)

Sample depth

12'

Sample date

7/18/97

Sample time

2:20:00 PM

Sample Results

Benzene (ppm)

0.4700

Total BTEX (ppm)

\*\*\* 112.9330

Field headspace (ppm)

TPH (ppm)

549.00

Method

8015A

Vertical Extent (ft)

22

Risk Assessment form attached

Yes

✓

No

Ground Water Sample:

Yes

No

✓

(If yes, see attached Groundwater Site Summary Report)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF

DATE January 27, 1998

SIGNATURE

*Denver Bearden*

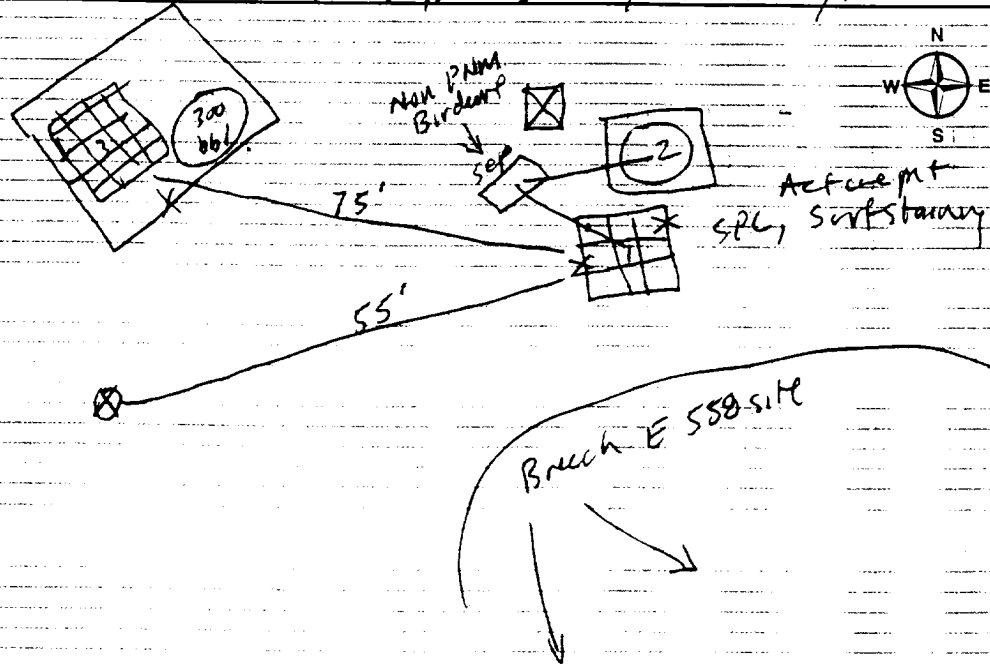
PRINTED NAME  
AND TITLE

Denver Bearden  
Administrator III

General Comments:

Meter Card Card "GCNM", possibly Pit 1 is not PNM Pit,  
Stack Road Shown on map - seen, looks Dry.

Site Map:



Assessor's Signature:

*[Handwritten Signature]*

Date:

12/19/95

OFF: (505) 325-5667



LAB: (505) 325-1556

## ANALYTICAL REPORT

Attn: *Denver Bearden*  
Company: *PNM Gas Services*  
Address: *603 W. Elm*  
City, State: *Farmington, NM 87401*

Date: *24-Jul-97*  
COC No.: *5193*  
Sample No.: *15389*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech E #68E*  
Project Location: *9707181420; Pit Excavation Composite Sample*  
Sampled by: *RH* Date: *18-Jul-97* Time: *14:20*  
Analyzed by: *DC* Date: *23-Jul-97*  
Sample Matrix: *Soil*

### Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Diesel Range Organics (C10 - C28)</i>	<i>549</i>	<i>mg/kg</i>	<i>5</i>	<i>mg/kg</i>

ND - Not Detected at Limit of Quantitation

### Quality Assurance Report

DRO QC No.: 0548-STD

#### Continuing Calibration Verification

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	RPD	RPD Limit
<i>Diesel Range (C10 - C28)</i>	<i>ND</i>	<i>ppm</i>	<i>200</i>	<i>197</i>	<i>1.6</i>	<i>15%</i>

#### Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>89</i>	<i>87</i>	<i>(70-130)</i>	<i>2</i>	<i>20%</i>

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: *[Signature]*  
Date: *7/24/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

### ANALYTICAL REPORT

Attn: *Denver Bearden*  
Company: *PNM Gas Services*  
Address: *603 W. Elm*  
City, State: *Farmington, NM 87401*

Date: *25-Jul-97*  
COC No.: *5193*  
Sample No.: *15389*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech E #68E*  
Project Location: *9707181420; Pit Excavation Composite Sample*  
Sampled by: *RH* Date: *18-Jul-97* Time: *14:20*  
Analyzed by: *DC* Date: *23-Jul-97*  
Sample Matrix: *Soil*

#### Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	470	ug/kg	50	ug/kg
<i>Toluene</i>	12552	ug/kg	500	ug/kg
<i>Ethylbenzene</i>	4140	ug/kg	50	ug/kg
<i>m,p-Xylene</i>	77788	ug/kg	500	ug/kg
<i>o-Xylene</i>	17983	ug/kg	500	ug/kg
	<i>TOTAL</i>	112933	ug/kg	

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved by: *[Signature]*  
Date: *7/28/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

11  
N

8-14-97 - @1045

Breesh F. #68E  
Coulkins

(L) 4-26N-6W

Land farm Field head space - 1.5 ppm.  
Sample # 9708141045

WH

⊗

0.1 ppm x  
x  
0.1 ppm x  
0.1 ppm x  
x 0.1 ppm  
x 1.5 ppm  
0.1 ppm  
2.2 ppm x  
x 0.1 ppm  
x 0.1 ppm

2" - 10"

OFF: (505) 325-5667



LAB: (505) 325-1556

## ANALYTICAL REPORT

Attn: *Denver Bearden*  
Company: *PNM Gas Services*  
Address: *603 W. Elm*  
City, State: *Farmington, NM 87401*

Date: *19-Aug-97*  
COC No.: *5201*  
Sample No.: *15801*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech E #68E Landfarm*  
Project Location: *9708141045; Composite Sample*  
Sampled by: *RH* Date: *14-Aug-97* Time: *10:45*  
Analyzed by: *HR/DC* Date: *18-Aug-97*  
Sample Matrix: *Soil*

### Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Diesel Range Organics (C10 - C28)</i>	<i>12</i>	<i>mg/kg</i>	<i>5</i>	<i>mg/kg</i>

ND - Not Detected at Limit of Quantitation

### Quality Assurance Report

DRO QC No.: 0548-STD

#### Continuing Calibration Verification

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	RPD	RPD Limit
<i>Diesel Range (C10 - C28)</i>	<i>ND</i>	<i>ppm</i>	<i>200</i>	<i>183</i>	<i>8.9</i>	<i>15%</i>

#### Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>83</i>	<i>82</i>	<i>(70-130)</i>	<i>1</i>	<i>20%</i>

Method - *SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

Approved by: *[Signature]*  
Date: *8/19/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

### ANALYTICAL REPORT

Attn: *Denver Bearden*  
Company: *PNM Gas Services*  
Address: *603 W. Elm*  
City, State: *Farmington, NM 87401*

Date: *24-Nov-97*  
COC No.: *5831*  
Sample No.: *16827*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech E #68E*  
Project Location: *9711111320; 20'-22' depth*  
Sampled by: GC Date: *11-Nov-97* Time: *13:20*  
Analyzed by: DC/HR Date: *18-Nov-97*  
Sample Matrix: *Soil*

#### Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Diesel Range Organics (C10 - C28)</i>	<i>245</i>	<i>mg/kg</i>	<i>5</i>	<i>mg/kg</i>

ND - Not Detected at Limit of Quantitation

#### Quality Assurance Report

DRO QC No.: 0555-STD

#### Continuing Calibration Verification

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	RPD	RPD Limit
<i>Diesel Range (C10 - C28)</i>	<i>ND</i>	<i>ppm</i>	<i>200</i>	<i>201</i>	<i>0.7</i>	<i>15%</i>

#### Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>110</i>	<i>113</i>	<i>(70-130)</i>	<i>2</i>	<i>20%</i>

Method - *SW-846 EPA Method 8015A mod - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

Approved by: *[Signature]*  
Date: *11/24/97*

P.O. BOX 2606 • FARMINGTON, NM 87499



OFF: (505) 325-5667



LAB: (505) 325-1556

## ANALYTICAL REPORT

Attn: *Denver Bearden*  
Company: *PNM Gas Services*  
Address: *603 W. Elm*  
City, State: *Farmington, NM 87401*

Date: *17-Nov-97*  
COC No.: *5831*  
Sample No.: *16827*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech E #68E*

Project Location: *9711111320; 20'-22' depth*

Sampled by: GC Date: *11-Nov-97* Time: *13:20*

Analyzed by: DC Date: *14-Nov-97*

Sample Matrix: *Soil*

### Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	1950	ug/kg	500	ug/kg
<i>Toluene</i>	41068	ug/kg	500	ug/kg
<i>Ethylbenzene</i>	4320	ug/kg	500	ug/kg
<i>m,p-Xylene</i>	51260	ug/kg	500	ug/kg
<i>o-Xylene</i>	9407	ug/kg	500	ug/kg
	<i>TOTAL</i>	108006	ug/kg	

ND - Not Detected at Limit of Quantitation

**Method** - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved by: *[Signature]*  
Date: *11/17/97*

P.O. BOX 2606 • FARMINGTON, NM 87499



Well Name:	Breech E #68E
Well Legals:	Unit L, Sec 4, T26N, R6W
Pit Type:	Drip
Horizontal Distance to Surface Water:	Greater than 1,000 ft
Groundwater Depth:	Greater than 100 ft

### **RISK ANALYSIS**

PNM requests closure of the Breech E #68E using a limited risk analysis of the site conditions.

1. PNM estimated groundwater to be at a depth of 180 ft. based upon elevation of site to the Largo Wash. (Reference: topographic map.)
2. This site is not located within 200 ft. of a domestic water well and is not within 1,000 ft. of any other water source.
3. Distance from the site to surface water is greater than 1,000 ft.
4. PNM excavated 194 cu. yds. from the former pit. Vertical extent was determined using a hollow stem drilling rig. Bedrock was encountered @ 22 ft. below ground surface.

Based upon the information provided above, PNM believes the Breech E #68E poses minimal risk to the environment. Subsurface lateral migration is limited based upon PNM's past experience in excavating 800 pits. Source removal minimizes the possibility of surface water contamination. Bedrock/sandstone provides a barrier between remaining contamination and groundwater. Vertical migration through bedrock or sandstone to groundwater is highly unlikely.