

District I  
P O Box 1500 Hobbs, NM

District II  
P O Drawer 90 Artesia, NM 88221

District III  
1000 Rio Brazos Rd. Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department

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

*Benny S. Foster*  
**DEPUTY OIL & GAS INSPECTOR**

OIL CONSERVATION DIVISION

2040 South Pacheco Street  
Santa Fe, New Mexico 87505

JUN 23 1998

**PIT REMEDIATION AND CLOSURE REPORT**

*Approved*

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

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

**Facility or Well Name:** Breach A #682E

**Location:** Unit L Sec 10 T 26 N R 6 W County Rio Arriba

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

**Land Type:** BLM ☒ State ☐ Fee ☐ Other ☐

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

(Attach diagram) Reference: wellhead ☒ other ☐

Footage from reference: 80'

Direction from reference: 45 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)	<u>0</u>

(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 ☐ No ☐ (20 points)  
(0 points) 0

**RECEIVED**  
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**DIET. 3**

**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)	<u>0</u>

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

10/12/30  
10/12/30  
10/12/30  
10/12/30

Breach A #682E

Date Remediation Started: 10/1/97

Date Completed: 10/1/97

Remediation Method: Excavation ☒ Approx. Cubic Yard 264

(Check all appropriate sections)

Landfarmed ☒ Amount Landfarmed (cubic yds) 264

Other \_\_\_\_\_

Remediation Location: Onsite ☒ Offsite \_\_\_\_\_

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

Backfill Material Location: \_\_\_\_\_

## General Description of Remedial Action:

Excavated contaminated soil to pit size of 22' X 18' X 18' and landfarmed soil onsite within a bermed area at a depth of 6" to 12". Soil was aerated by plowing until soil met regulatory levels.\*\*\* Bedrock encountered at 33'. See attached risk analysis form and laboratory analysis.Ground Water Encountered: No ☒ Yes \_\_\_\_\_ Depth \_\_\_\_\_

## Final Pit Closure Sampling:

Sample Location Bottom of excavation.

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

Sample depth 18'Sample date 10/1/97 Sample time 11:45:00 AM

## Sample Results

Benzene (ppm) \*\*\* 10.0110Total BTEX (ppm) 482.7090

Field headspace (ppm) \_\_\_\_\_

TPH (ppm) 915.00 Method 8015AVertical Extent (ft) 33' 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, 1998SIGNATURE Denver BeardenPRINTED NAME Denver Bearden  
AND TITLE Administrator III

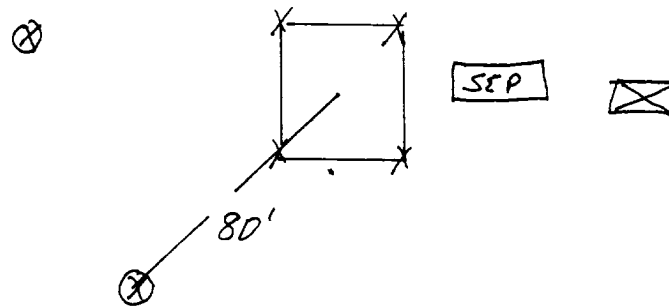
Breach A #682 E

10-1-97

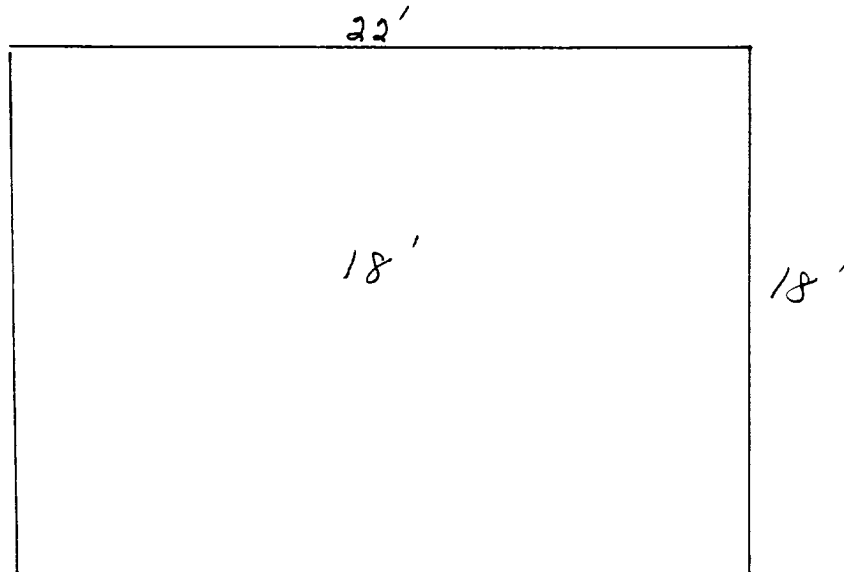
Caulkins 0:1

Sec. 10, 26N, 6W, L

Start of excavation:



End of excavation:



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: *8-Oct-97*  
COC No.: *5817*  
Sample No.: *16472*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #682E*  
Project Location: *9710011145; Bottom @ 18'*  
Sampled by: *GC* Date: *1-Oct-97* Time: *11:45*  
Analyzed by: *DC/HR* Date: *7-Oct-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>915</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>214</i>	<i>6.7</i>	<i>15%</i>

#### Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>94</i>	<i>86</i>	<i>(70-130)</i>	<i>9</i>	<i>20%</i>

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

Approved by: *[Signature]*  
Date: *10/8/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- FINDER, LUG, BLENDING INDUSTRY WITH THE ENVIRONMENT -

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: *9-Oct-97*  
COC No.: *5817*  
Sample No.: *16472*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #682E*

Project Location: *9710011145; Bottom @ 18'*

Sampled by: *GC* Date: *1-Oct-97* Time: *11:45*

Analyzed by: *DC* Date: *7-Oct-97*

Sample Matrix: *Soil*

#### Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>10011</i>	<i>ug/kg</i>	<i>2500</i>	<i>ug/kg</i>
<i>Toluene</i>	<i>159401</i>	<i>ug/kg</i>	<i>2500</i>	<i>ug/kg</i>
<i>Ethylbenzene</i>	<i>14328</i>	<i>ug/kg</i>	<i>2500</i>	<i>ug/kg</i>
<i>m,p-Xylene</i>	<i>247540</i>	<i>ug/kg</i>	<i>2500</i>	<i>ug/kg</i>
<i>o-Xylene</i>	<i>51429</i>	<i>ug/kg</i>	<i>2500</i>	<i>ug/kg</i>
	<i>TOTAL</i>	<i>482709</i>		<i>ug/kg</i>

ND - Not Detected at Limit of Quantitation

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

Approved by: *[Signature]*  
Date: *10/9/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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: *8-Oct-97*  
COC No.: *5817*  
Sample No.: *16473*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #682E*  
Project Location: *9710011330; Walls @ 14'*  
Sampled by: *GC* Date: *1-Oct-97* Time: *13:30*  
Analyzed by: *DC/HR* Date: *7-Oct-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>	ND	mg/kg	5	mg/kg

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>	ND	ppm	200	214	6.7	15%

#### Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	94	86	(70-130)	9	20%

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

Approved by: *[Signature]*

Date: *10/8/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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: *6-Oct-97*  
COC No.: *5817*  
Sample No.: *16473*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #682E*

Project Location: *9710011330; Walls @ 14'*

Sampled by: GC Date: *1-Oct-97* Time: *13:30*

Analyzed by: DC Date: *3-Oct-97*

Sample Matrix: *Soil*

#### Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/kg	2	ug/kg
<i>Toluene</i>	4	ug/kg	2	ug/kg
<i>Ethylbenzene</i>	3	ug/kg	2	ug/kg
<i>m,p-Xylene</i>	6	ug/kg	2	ug/kg
<i>o-Xylene</i>	23	ug/kg	2	ug/kg
	<i>TOTAL</i>	36		ug/kg

ND - Not Detected at Limit of Quantitation

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

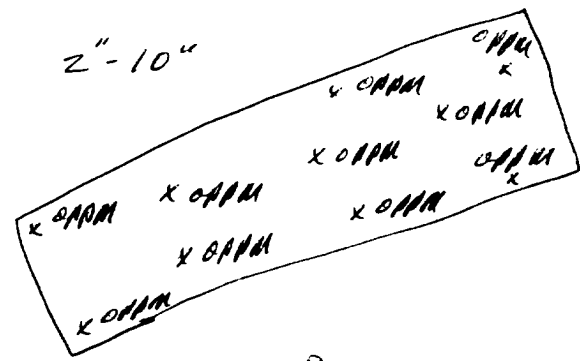
Approved by: *[Signature]*  
Date: *10/6/97*

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↑  
N

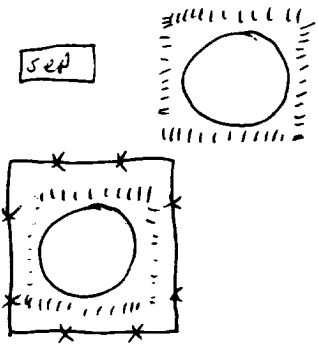
10-20-97 @ 1000  
Breach A # 682E  
Caulkins  
(L) 10-26N-6W  
RiO Arriba  
Sample # 9710201000  
Sand Arm fieldhead spall: OPPM



⊗  
WH

SEP

MH



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: *23-Oct-97*  
COC No.: *5678*  
Sample No.: *16638*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #682E Landfarm*

Project Location: *9710201000; Composite*

Sampled by: *RH* Date: *20-Oct-97* Time: *10:00*

Analyzed by: *DC/HR* Date: *21-Oct-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>88</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>222</i>	<i>10.4</i>	<i>15%</i>

#### Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>87</i>	<i>97</i>	<i>(70-130)</i>	<i>10</i>	<i>20%</i>

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

Approved by: *[Signature]*  
Date: *10/24/97*

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• THE HISTORY OF BUILDING INDUSTRIES WITH THE ENVIRONMENT •

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: *26-Nov-97*  
COC No.: *7099*  
Sample No.: *16949*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #682E*  
Project Location: *9711241230; 33' depth*  
Sampled by: *GC* Date: *24-Nov-97* Time: *12:30*  
Analyzed by: *DC/HR* Date: *25-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>528</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>194</i>	<i>2.8</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>92</i>	<i>(70-130)</i>	<i>3</i>	<i>20%</i>

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

Approved by: *[Signature]*  
Date: *11/26/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

*REINTEGRATING INDUSTRY WITH THE ENVIRONMENT*

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: *26-Nov-97*  
COC No.: *7099*  
Sample No.: *16949*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #682E*

Project Location: *9711241230; 33' depth*

Sampled by: *GC* Date: *24-Nov-97* Time: *12:30*

Analyzed by: *DC* Date: *24-Nov-97*

Sample Matrix: *Soil*

#### Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/kg	250	ug/kg
<i>Toluene</i>	11831	ug/kg	250	ug/kg
<i>Ethylbenzene</i>	3504	ug/kg	250	ug/kg
<i>m,p-Xylene</i>	42934	ug/kg	250	ug/kg
<i>o-Xylene</i>	9945	ug/kg	250	ug/kg
	<i>TOTAL</i>	68213	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: *11/26/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



Well Name:	Breech A #682E
Well Legals:	Unit L, Sec 10, T26N, R6W
Pit Type:	Separator
Horizontal Distance to Surface Water:	Greater than 1,000 ft
Groundwater Depth:	Greater than 100 ft

### **RISK ANALYSIS**

PNM requests closure of the Breech A #682E using a limited risk analysis of the site conditions.

1. PNM estimated groundwater to be at a depth of 220 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 264 cu. yds. from the former pit. Vertical extent was determined using a hollow stem drilling rig. Bedrock was encountered @ 33 ft. below ground surface.

Based upon the information provided above, PNM believes the Breech A #682E 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.