

District I
P.O. Box 1500, Hobbs, NM

District II
P.O. Drawer DD, 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

OIL CONSERVATION DIVISION

2040 South Pacheco Street
Santa Fe, New Mexico 87505

Denny E. Furr
DEPUTY OIL & GAS INSPECTOR

JUN 23 1998

PIT REMEDIATION AND CLOSURE REPORT

Approval

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

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Breech C #241

Location: Unit D Sec 14 T 26 N R 6 W County Rio Arriba

Pit Type: Separator ☐ Dehydrator ☐ Other Drip

Land Type: BLM ☒ State ☐ Fee ☐ Other

Pit Location: Pit dimensions: length 15 width 15 depth 3

(Attach diagram) Reference: wellhead ☒ other

Footage from reference: 75'

Direction from reference: 10 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: Yes (20 points)
No (0 points) 0

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

Distance to Surface Water: Less than 200 feet (20 points)
200 feet to 1,000 feet (10 points)
Greater than 1,000 feet (0 points) 0

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

RANKING SCORE (TOTAL POINTS): 0

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

Breach C #241

Date Remediation Started: 8/22/97

Date Completed: 8/22/97

Remediation Method: Excavation X Approx. Cubic Yard 267

(Check all appropriate sections)

Landfarmed X Amount Landfarmed (cubic yds) 267

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 pit size of 20' X 20' 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 36'. See attached risk analysis and lab analysis form.

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

8/22/97

Sample time

11:30:00 AM

Sample Results

Benzene (ppm) < 1.0000Total BTEX (ppm) *** 86.5340

Field headspace (ppm) _____

TPH (ppm)

48.00

Method

8015AVertical Extent (ft) 36'

Risk Assessment form attached

Yes



No



Ground Water Sample:

Yes



No

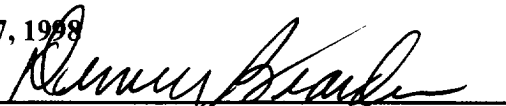


(If yes, see attached Groundwater Site Summary Report)

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

PRINTED NAME
AND TITLE**Denver Bearden**
Administrator III

8/22/97

excavation:

20'

18'

G.W. Table line

G.W. line

20

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: *29-Aug-97*
COC No.: *5954*
Sample No.: *15895*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech C #241*
Project Location: *9708221130; Bottom @ 18'*
Sampled by: *GC* Date: *22-Aug-97* Time: *11:30*
Analyzed by: *HR/DC* Date: *27-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>	48	mg/kg	5	mg/kg

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>	ND	ppm	200	198	1.0	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	85	84	(70-130)	2	20%

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

Approved by: *[Signature]*
Date: *8/29/97*

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: *2-Sep-97*
COC No.: *5954*
Sample No.: *15895*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech C #241*
Project Location: *9708221130; Bottom @ 18'*
Sampled by: *GC* Date: *22-Aug-97* Time: *11:30*
Analyzed by: *DC* Date: *28-Aug-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	1000	ug/kg
<i>Toluene</i>	26944	ug/kg	1000	ug/kg
<i>Ethylbenzene</i>	6053	ug/kg	1000	ug/kg
<i>m,p-Xylene</i>	42508	ug/kg	1000	ug/kg
<i>o-Xylene</i>	11030	ug/kg	1000	ug/kg
	<i>TOTAL</i>	86534	ug/kg	

ND - Not Detected at Limit of Quantitation

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

Approved by: *Das*
Date: *9/2/97*

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- *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: *29-Aug-97*
COC No.: *5954*
Sample No.: *15896*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech C #241*
Project Location: *9708221330; Walls @ 16'*
Sampled by: *GC* Date: *22-Aug-97* Time: *13:30*
Analyzed by: *HR/DC* Date: *27-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>14</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>198</i>	<i>1.0</i>	<i>15%</i>

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>85</i>	<i>84</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: *8/29/97*

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- 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: *2-Sep-97*
COC No.: *5954*
Sample No.: *15896*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech C #241*
Project Location: *9708221330; Walls @ 16'*
Sampled by: *GC*
Analyzed by: *DC*
Sample Matrix: *Soil*

Date: *22-Aug-97* Time: *13:30*
Date: *27-Aug-97*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/kg	25	ug/kg
<i>Toluene</i>	629	ug/kg	25	ug/kg
<i>Ethylbenzene</i>	86	ug/kg	25	ug/kg
<i>m,p-Xylene</i>	504	ug/kg	25	ug/kg
<i>o-Xylene</i>	91	ug/kg	25	ug/kg
	<i>TOTAL</i>	1310		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: *9/2/97*

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

↑
N

9-8-97-@1100

Breach C #241

(D) 14-26N-6W

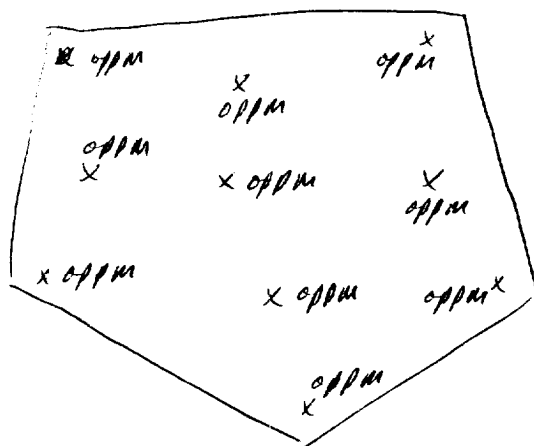
Caulkins

Rio Arriba

Sample # 9709081100

Landform field head space - 3.2 ppm

2" - 12"



⊙ WH

43
282



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: *15-Sep-97*
COC No.: *5667*
Sample No.: *16099*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech C #241 Landfarm*
Project Location: *9709081100; Composite*
Sampled by: *RH* Date: *8-Sep-97* Time: *11:00*
Analyzed by: *DC/HR* Date: *10-Sep-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>18</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>189</i>	<i>5.7</i>	<i>15%</i>

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>87</i>	<i>92</i>	<i>(70-130)</i>	<i>5</i>	<i>20%</i>

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

Approved by:

Date:

[Signature]
9/15/97

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- 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: *24-Nov-97*
COC No.: *7089*
Sample No.: *16876*
Job No.: *2-1000*

Project Name: ***PNM Gas Services - Breech C #241***
Project Location: ***9711131415; 36' depth***
Sampled by: *GC* Date: *13-Nov-97* Time: *14:15*
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>	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	201	0.7	15%

Matrix Spike

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

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
- 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: *24-Nov-97*
COC No.: *7089*
Sample No.: *16876*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech C #241*
Project Location: *9711131415; 36' depth*
Sampled by: *GC* Date: *13-Nov-97* Time: *14:15*
Analyzed by: *DC* Date: *17-Nov-97*
Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>2</i>	<i>ug/kg</i>	<i>2</i>	<i>ug/kg</i>
<i>Toluene</i>	<i>12</i>	<i>ug/kg</i>	<i>2</i>	<i>ug/kg</i>
<i>Ethylbenzene</i>	<i>19</i>	<i>ug/kg</i>	<i>2</i>	<i>ug/kg</i>
<i>m,p-Xylene</i>	<i>18</i>	<i>ug/kg</i>	<i>2</i>	<i>ug/kg</i>
<i>o-Xylene</i>	<i>27</i>	<i>ug/kg</i>	<i>2</i>	<i>ug/kg</i>
<i>TOTAL</i>	<i>78</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: *11/24/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



Well Name:	Breech C #241
Well Legals:	Unit D, Sec 14, 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 C #241 using a limited risk analysis of the site conditions.

1. PNM estimated groundwater to be at a depth of 300 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 267 cu. yds. from the former pit. Vertical extent was determined using a hollow stem drilling rig. Bedrock was encountered @ 36 ft. below ground surface.

Based upon the information provided above, PNM believes the Breech C #241 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.