

District I
P.O. Box 198
District II
P.O. Drawer 66
District III
1000 Rio Brazos Rd, Aztec, NM 87412

Denny S. Faust
DEPUTY OIL & GAS INSPECTOR

JUN 23 1998

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

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: Breach D #240E

Location: Unit P Sec 15 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 18 width 18 depth 3

(Attach diagram) Reference: wellhead ☒ other ☐

Footage from reference: 107'

Direction from reference: 70 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)

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

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) 10

RANKING SCORE (TOTAL POINTS): 10

Breach D #240E

Date Remediation Started: 8/12/97

Date Completed: 8/12/97

Remediation Method:

Excavation

☒

Approx. Cubic Yard 450

(Check all appropriate sections)

Landfarmed

☒

Amount Landfarmed (cubic yds) 450

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 a pit size of 26' X 26' X 18' 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 32'. 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

8/12/97

Sample time

2:00:00 PM

Sample Results

Benzene (ppm)

0.4000

Total BTEX (ppm)

*** 347.4060

Field headspace (ppm)

TPH (ppm)

1699.00

Method

8015A

Vertical Extent (ft) 32'

Risk Assessment form attached

Yes

☒

No

Ground Water Sample:

Yes

No

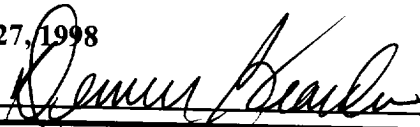
☒

(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

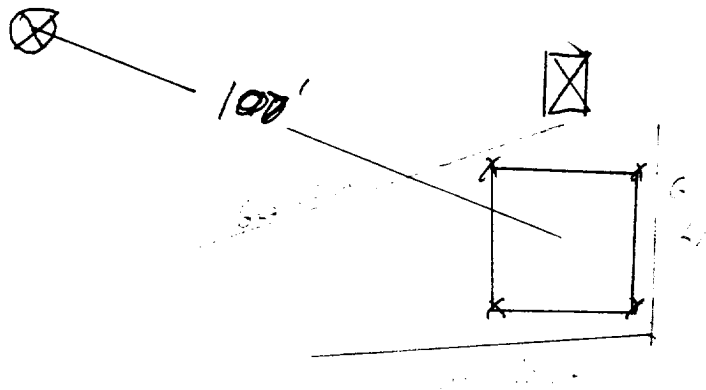
SIGNATURE

PRINTED NAME
AND TITLEDenver Bearden
Administrator III

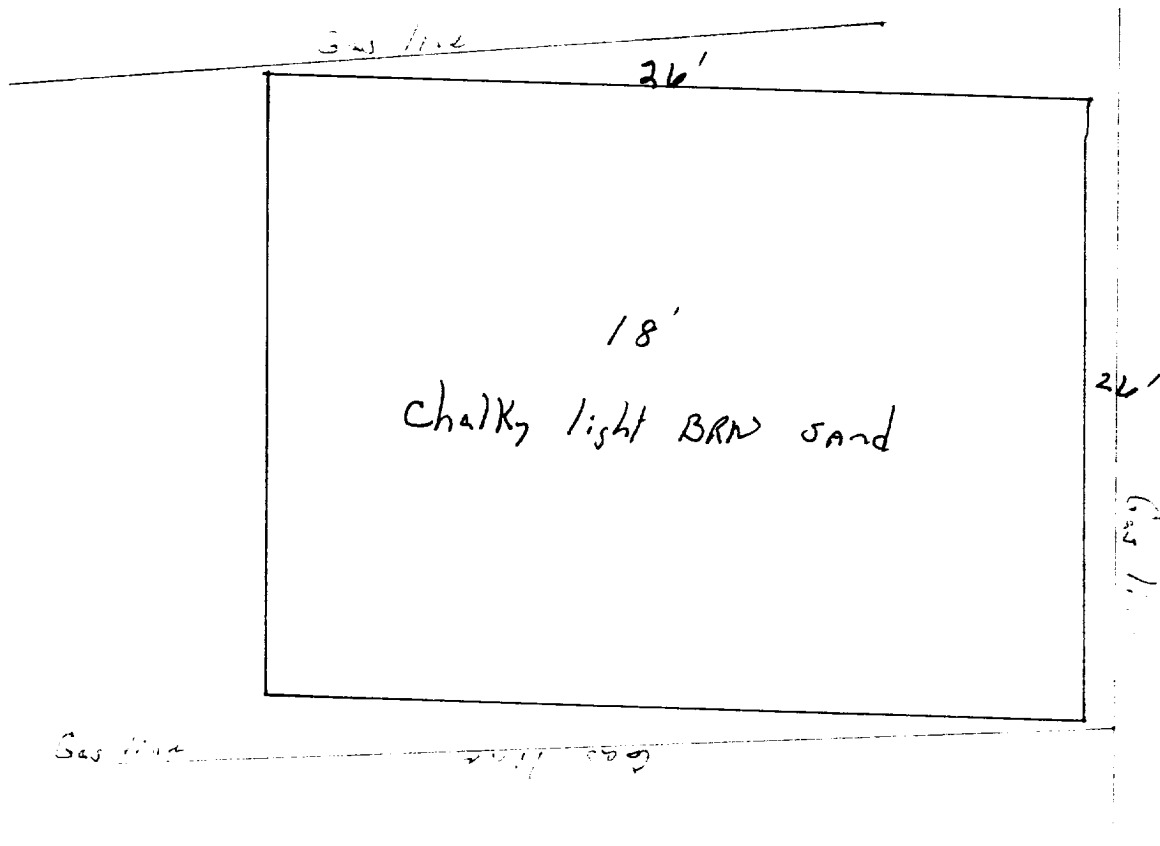
Breech O # 24DE
Caulkins D:1
Sec. 15, 26N, 6W, P

8/12/97

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: *21-Aug-97*
COC No.: *5967*
Sample No.: *15754*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech D #240E*
Project Location: *9708121400; Bottom @ 18'*
Sampled by: *GC* Date: *12-Aug-97* Time: *14:00*
Analyzed by: *HR/DC* Date: *20-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>	1699	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	201	0.6	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	85	89	(70-130)	4	20%

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

Approved by: *[Signature]*
Date: *8/21/97*

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: *22-Aug-97*
COC No.: *5967*
Sample No.: *15754*
Job No.: *2-1000*

Project Name: ***PNM Gas Services - Breech D #240E***
Project Location: ***9708121400; Bottom @ 18'***
Sampled by: GC
Analyzed by: DC
Sample Matrix: *Soil*

Date: *12-Aug-97* Time: *14:00*
Date: *21-Aug-97*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	400 (B)	ug/kg	1000	ug/kg
<i>Toluene</i>	89946	ug/kg	1000	ug/kg
<i>Ethylbenzene</i>	16129	ug/kg	1000	ug/kg
<i>m,p-Xylene</i>	193417	ug/kg	1000	ug/kg
<i>o-Xylene</i>	47914	ug/kg	1000	ug/kg
	<i>TOTAL</i>	347406	ug/kg	

ND - Not Detected at Limit of Quantitation

B - Parameter detected at concentration less than Limit of Quantitation

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

Approved by: *[Signature]*
Date: *8/22/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- INTEGRATING 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: *21-Aug-97*
COC No.: *5968*
Sample No.: *15755*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech D #240E*
Project Location: *9708121415; 4 Walls @ 16'*
Sampled by: *GC* Date: *12-Aug-97* Time: *14:15*
Analyzed by: *HR/DC* Date: *20-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>	206	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	201	0.6	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	85	89	(70-130)	4	20%

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

Approved by: *[Signature]*
Date: *8/21/97*

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: *22-Aug-97*
COC No.: *5968*
Sample No.: *15755*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech D #240E*
Project Location: *9708121415; 4 Walls @ 16'*
Sampled by: *GC* Date: *12-Aug-97* Time: *14:15*
Analyzed by: *DC* Date: *21-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	100	ug/kg
<i>Toluene</i>	351	ug/kg	100	ug/kg
<i>Ethylbenzene</i>	1051	ug/kg	100	ug/kg
<i>m,p-Xylene</i>	21763	ug/kg	100	ug/kg
<i>o-Xylene</i>	5154	ug/kg	100	ug/kg
	<i>TOTAL</i>	28319	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: *8/22/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

11
10

8-28-97 - @1025

Breach D #240E

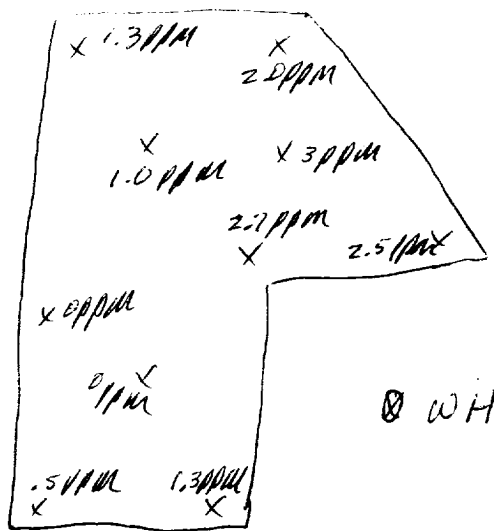
(A) 15-26N-6W

Caulkins

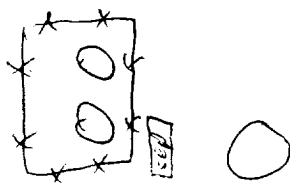
Rio Arriba

Sample # 4708281025

Landform field head space - 6 ppm



WH



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: *4-Sep-97*
COC No.: *5977*
Sample No.: *15994*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech D #240E Landfarm*
Project Location: *9708281025; Composite Sample*
Sampled by: *RH* Date: *28-Aug-97* Time: *10:25*
Analyzed by: *DC/HR* Date: *3-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>41</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>204</i>	<i>2.0</i>	<i>15%</i>

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>71</i>	<i>74</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: *9/4/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

• SERVING THE 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.: *5977*
Sample No.: *15994*
Job No.: *2-1000*

Project Name: ***PNM Gas Services - Breech D #240E Landfarm***

Project Location: ***9708281025; Composite Sample***

Sampled by: *RH* Date: *28-Aug-97* Time: *10:25*

Analyzed by: *HR* Date: *1-Sep-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	1	ug/kg
<i>Toluene</i>	2	ug/kg	1	ug/kg
<i>Ethylbenzene</i>	ND	ug/kg	1	ug/kg
<i>m,p-Xylene</i>	4	ug/kg	1	ug/kg
<i>o-Xylene</i>	2	ug/kg	1	ug/kg
	<i>TOTAL</i>	8		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*

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.: *7088*
Sample No.: *16875*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech D #240E*
Project Location: *9711131300; 32' depth*
Sampled by: *GC* Date: *13-Nov-97* Time: *13:00*
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: *Jac*
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.: *7088*
Sample No.: *16875*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech D #240E*
Project Location: *9711131300; 32' depth*
Sampled by: *GC*
Analyzed by: *DC*
Sample Matrix: *Soil*

Date: *13-Nov-97* Time: *13:00*
Date: *17-Nov-97*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/kg	1	ug/kg
<i>Toluene</i>	ND	ug/kg	1	ug/kg
<i>Ethylbenzene</i>	ND	ug/kg	1	ug/kg
<i>m,p-Xylene</i>	1	ug/kg	1	ug/kg
<i>o-Xylene</i>	ND	ug/kg	1	ug/kg
	<i>TOTAL</i>	1		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: *11/24/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT



Well Name:	Breech D #240E
Well Legals:	Unit P, Sec 15, 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 D #240E using a limited risk analysis of the site conditions.

1. PNM estimated groundwater to be at a depth of 200 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 450 cu. yds. from the former pit. Vertical extent was determined using a hollow stem drilling rig. Bedrock was encountered @ 32 ft. below ground surface.

Based upon the information provided above, PNM believes the Breech D #240E 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.