

District I
P O Box 1980, Hobbs, NM

District II
P O Drawer 110, Artesia, NM 87021

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

Denny S. Fort
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 #682

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: 50'

Direction from reference: 70 Degrees ☐ East ☐ North ☐
☒ West of 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:

Yes	(20 points)	
No	(0 points)	<u>0</u>

(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)	<u>0</u>

(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 A #682

Date Remediation Started: 8/14/97 Date Completed: 8/14/97Remediation Method: Excavation X Approx. Cubic Yard 352

(Check all appropriate sections)

Landfarmed X Amount Landfarmed (cubic yds) 352

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 23' X 23' 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 38'. 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 8/14/97 Sample time 11:20:00 AM

Sample Results

Benzene (ppm) *** 28.5220Total BTEX (ppm) 1027.2060

Field headspace (ppm) _____

TPH (ppm) 882.00 Method 8015AVertical Extent (ft) 38' 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 **Denver Bearden**
AND TITLE **Administrator III**

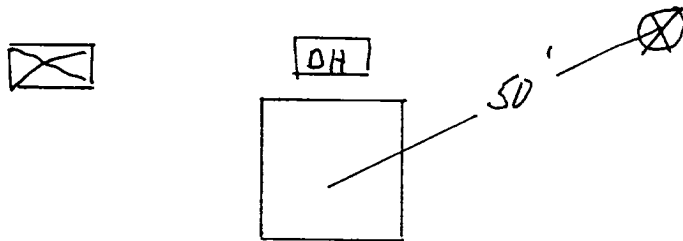
Breach A# 682

8-14-97

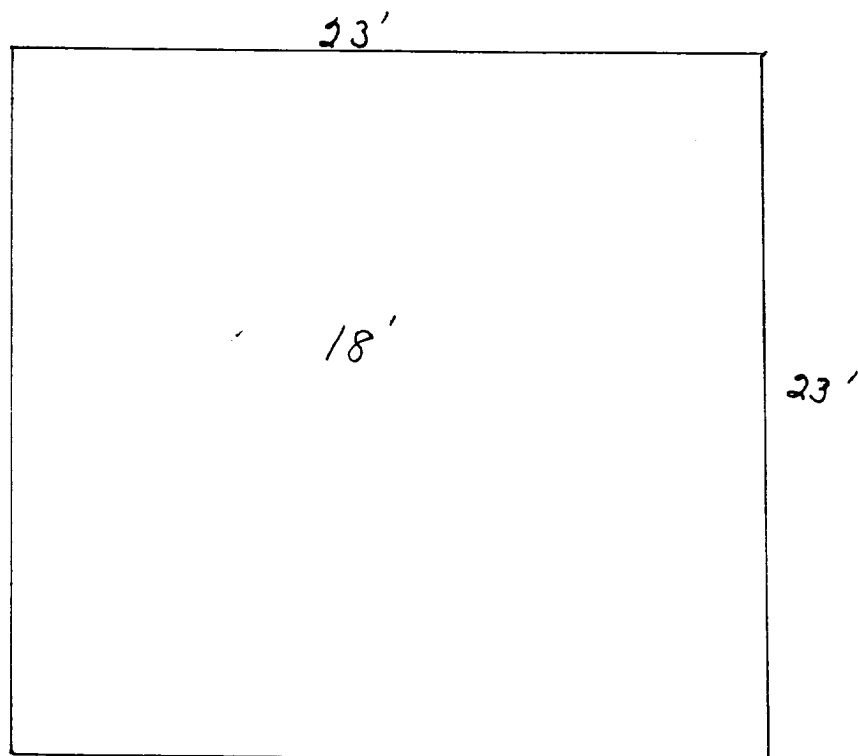
Caulkins Oil

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: *22-Aug-97*
COC No.: *5964*
Sample No.: *15809*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #682*
Project Location: *9708141120; Bottom @ 18'*
Sampled by: *GC* Date: *14-Aug-97* Time: *11:20*
Analyzed by: *HR/DC* Date: *21-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>	882	mg/kg	10	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: *8/22/97*

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: *22-Aug-97*
COC No.: *5964*
Sample No.: *15809*
Job No.: *2-1000*

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

Project Location: *9708141120; Bottom @ 18'*

Sampled by: *GC* Date: *14-Aug-97* Time: *11:20*

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>	<i>28522</i>	<i>ug/kg</i>	<i>5000</i>	<i>ug/kg</i>
<i>Toluene</i>	<i>399147</i>	<i>ug/kg</i>	<i>5000</i>	<i>ug/kg</i>
<i>Ethylbenzene</i>	<i>48462</i>	<i>ug/kg</i>	<i>5000</i>	<i>ug/kg</i>
<i>m,p-Xylene</i>	<i>462391</i>	<i>ug/kg</i>	<i>5000</i>	<i>ug/kg</i>
<i>o-Xylene</i>	<i>88684</i>	<i>ug/kg</i>	<i>5000</i>	<i>ug/kg</i>
	<i>TOTAL</i>	<i>1027206</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: *8/22/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

TECHNICAL SERVING 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.: *5964*
Sample No.: *15808*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #682*
Project Location: *9708141115; Walls @ 15'*
Sampled by: *GC* Date: *14-Aug-97* Time: *11:15*
Analyzed by: *HR/DC* Date: *21-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>	ND	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: *8/22/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

Printed on Recycled Paper with 10% Recycled Content

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.: *5964*
Sample No.: *15808*
Job No.: *2-1000*

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

Project Location: *9708141115; Walls @ 15'*

Sampled by: GC Date: *14-Aug-97* Time: *11:15*

Analyzed by: HR Date: *20-Aug-97*

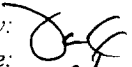
Sample Matrix: *Soil*

Laboratory Analysis

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

ND - Not Detected at Limit of Quantitation

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

Approved by: 
Date: *8/21/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

↑
N

9-8-97- @1145

Breach A 682 (on Breach A 136 (A)-1026N-6W)

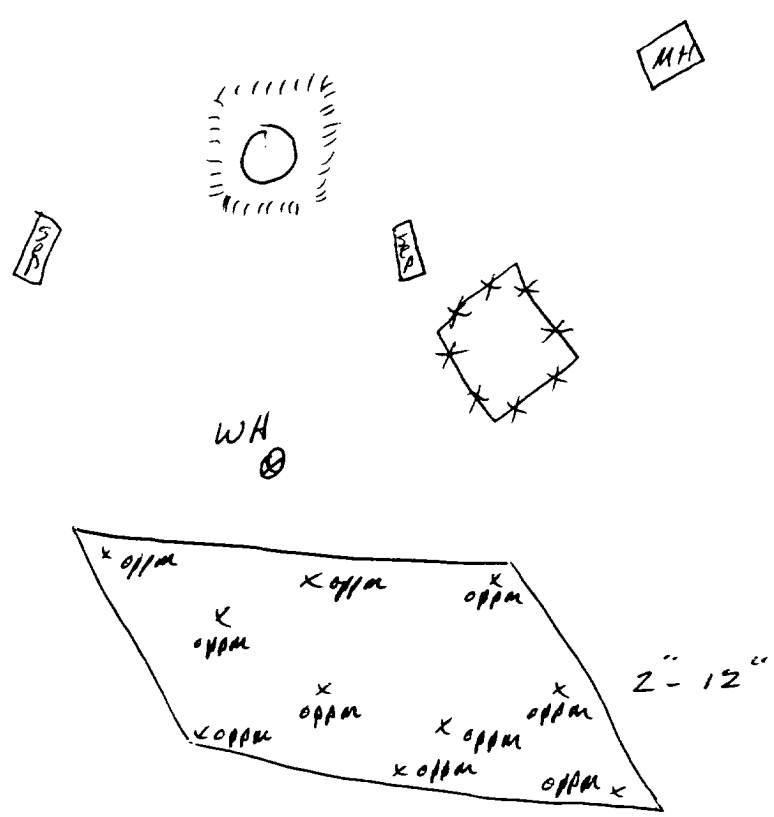
Caulkins

(K) 10-26N-6W

Rio Arriba

Sample # 4208081145

Land form field head space - 9.8 ppm



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.: *5668*
Sample No.: *16102*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #682 Landfarm*
Project Location: *9709081145; Composite*
Sampled by: *RH* Date: *8-Sep-97* Time: *11:45*
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>8</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: *[Signature]*
Date: *9/15/97*

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: *9-Dec-97*
COC No.: *7100*
Sample No.: *16972*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #682*
Project Location: *9711250930; 38' depth*
Sampled by: *GC* Date: *25-Nov-97* Time: *9:30*
Analyzed by: *DC/HR* Date: *4-Dec-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>1100</i>	<i>mg/kg</i>	<i>10</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>3.3</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>95</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: *12/9/97*

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: *5-Dec-97*
COC No.: *7100*
Sample No.: *16972*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #682*
Project Location: *9711250930; 38' depth*
Sampled by: *GC* Date: *25-Nov-97* Time: *9:30*
Analyzed by: *DC* Date: *4-Dec-97*
Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>1172</i>	<i>ug/kg</i>	<i>1000</i>	<i>ug/kg</i>
<i>Toluene</i>	<i>75027</i>	<i>ug/kg</i>	<i>1000</i>	<i>ug/kg</i>
<i>Ethylbenzene</i>	<i>16889</i>	<i>ug/kg</i>	<i>1000</i>	<i>ug/kg</i>
<i>m,p-Xylene</i>	<i>186297</i>	<i>ug/kg</i>	<i>1000</i>	<i>ug/kg</i>
<i>o-Xylene</i>	<i>38861</i>	<i>ug/kg</i>	<i>1000</i>	<i>ug/kg</i>
<i>TOTAL</i>		<i>318246</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: *12/5/97*

P.O. BOX 2606 • FARMINGTON, NM 87499



Well Name:

Breech A #682

Well Legals:

Unit L, Sec 10, T26N, R6W

Pit Type:

Dehydrator

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 #682 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 352 cu. yds. from the former pit. Vertical extent was determined using a hollow stem drilling rig. Bedrock was encountered @ 38 ft. below ground surface.

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