

Kenneth S. Faust
District I
P.O. Box 1980, Hobbs, NM
DEPUTY OIL & GAS INSPECTOR
District II
P.O. Drawer DD, Artesia, NM 88221
JUN 23 1998
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

Approved
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 F #13			
Location:	Unit E	Sec 33	T 27N R 6W County Rio Arriba
Pit Type:	Separator <input checked="" type="checkbox"/>	Dehydrator <input type="checkbox"/>	Other
Land Type:	BLM <input checked="" type="checkbox"/>	State <input type="checkbox"/>	Fee <input type="checkbox"/> Other
Pit Location:	Pit dimensions: length 20 width 20 depth 3		
(Attach diagram)	Reference: wellhead <input checked="" type="checkbox"/>	other	
	Footage from reference: 70'		
	Direction from reference: 80 Degrees	<input checked="" type="checkbox"/> East	North <input type="checkbox"/>
		<input type="checkbox"/> West	South <input checked="" type="checkbox"/>
Depth to Ground Water:		Less than 50 feet (20 points)	
		50 feet to 99 feet (10 points)	
(Vertical distance from contaminants to seasonal high water elevation of ground water)		Greater than 100 feet (0 points)	0
Wellhead Protection Area:		Yes (20 points)	
(Less than 200 feet from a private domestic water source, or, less than 1,000 feet from all other water sources)		No (0 points)	0
Distance to Surface Water:		Less than 200 feet (20 points)	
		200 feet to 1,000 feet (10 points)	
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)		Greater than 1,000 feet (0 points)	0
RANKING SCORE (TOTAL POINTS):			0

Date Remediation Started: 10/2/97 Date Completed: 10/2/97

Remediation Method: Excavation X Approx. Cubic Yard 280
 Landfarmed X Amount Landfarmed (cubic yds) 280
 (Check all appropriate sections) 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 21' 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 30'. 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 10/2/97 Sample time 10:00:00 AM

Sample Results

Benzene (ppm) < 0.5000Total BTEX (ppm) *** 175 2940

Field headspace (ppm) _____


TPH (ppm) 144.00 Method 8015AVertical Extent (ft) 30' 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

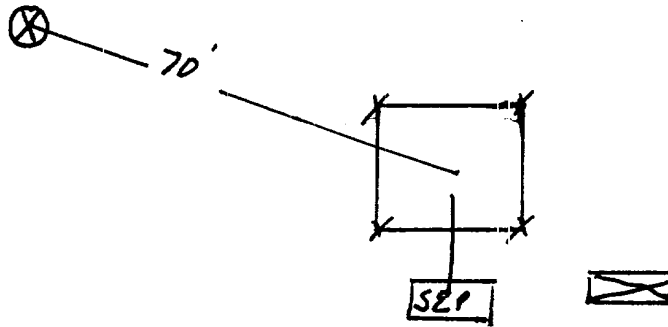
Breach F#13

10-2-97

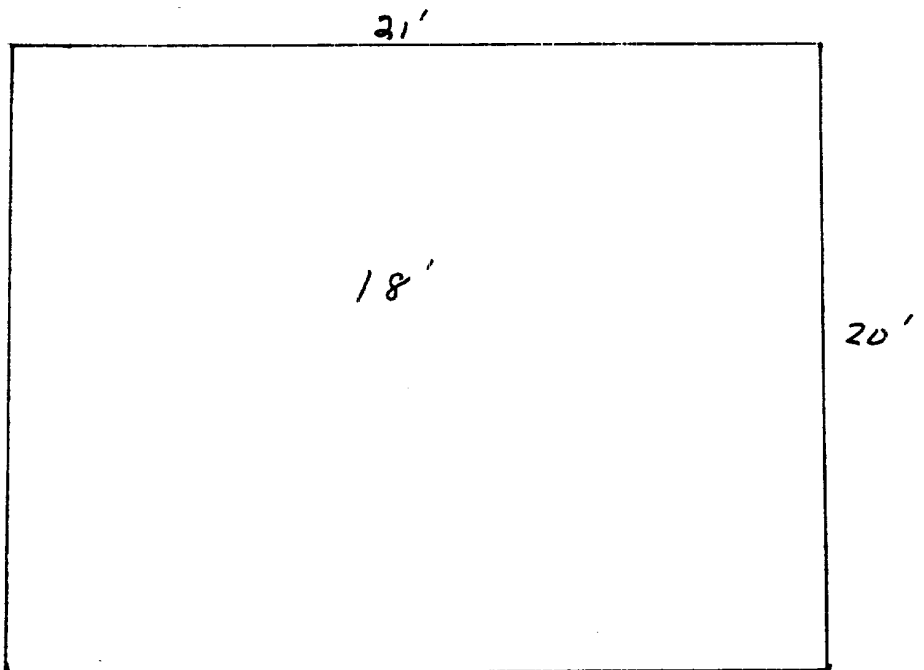
Can/Kins Oil

Sec. 33, 27N, 6W, E

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.: *5818*
Sample No.: *16502*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech F #13*
Project Location: *9710021000; Bottom @ 18'*
Sampled by: *GC* Date: *2-Oct-97* Time: *10:00*
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>144</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

- 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.: *5818*
Sample No.: *16502*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech F #13*
Project Location: *9710021000; Bottom @ 18'*
Sampled by: *GC* Date: *2-Oct-97* Time: *10:00*
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	500	ug/kg
<i>Toluene</i>	23783	ug/kg	500	ug/kg
<i>Ethylbenzene</i>	14548	ug/kg	500	ug/kg
<i>m,p-Xylene</i>	112771	ug/kg	500	ug/kg
<i>o-Xylene</i>	24193	ug/kg	500	ug/kg
	<i>TOTAL</i>	175294	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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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.: *5818*
Sample No.: *16503*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech F #13*
Project Location: *9710021030; Walls @ 15'*
Sampled by: *GC*
Analyzed by: *DC/HR*
Sample Matrix: *Soil*

Date: *2-Oct-97* Time: *10:30*
Date: *7-Oct-97*

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*

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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.: *5818*
Sample No.: *16503*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech F #13*
Project Location: *9710021030; Walls @ 15'*
Sampled by: *GC* Date: *2-Oct-97* Time: *10:30*
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>	ND	ug/kg	2	ug/kg
<i>Ethylbenzene</i>	ND	ug/kg	2	ug/kg
<i>m,p-Xylene</i>	ND	ug/kg	2	ug/kg
<i>o-Xylene</i>	ND	ug/kg	2	ug/kg
	<i>TOTAL</i>	ND	ug/kg	

ND - Not Detected at Limit of Quantitation

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

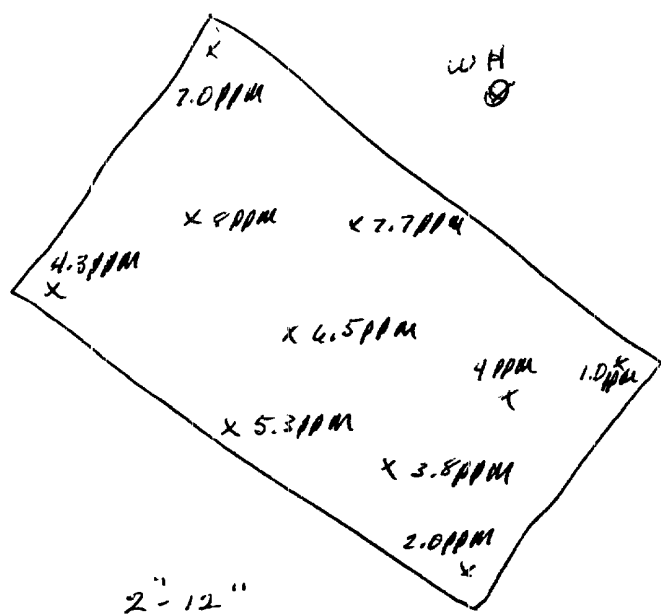
Approved by: *[Signature]*
Date: *10/6/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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N

10-20-97 @ 1100
Breach F #13
Caulkins
(E) 33-26N-6W
Rio Arriba
Sample # 9710201100
sand from field head space: 6.7 ppm



1000
valve
O
5cm
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.: *16641*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech F #13 Landfarm*
Project Location: *9710201100; Composite*
Sampled by: *RH* Date: *20-Oct-97* Time: *11:00*
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>13</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*

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.: *5835*
Sample No.: *16868*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech F #13*
Project Location: *9711121330; 31' depth*
Sampled by: *GC*
Analyzed by: *DC/HR*
Sample Matrix: *Soil*

Date: *12-Nov-97* Time: *13:30*
Date: *18-Nov-97*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Diesel Range Organics (C10 - C28)</i>	<i>178</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

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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ANALYTICAL REPORT

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

Date: *24-Nov-97*
COC No.: *5835*
Sample No.: *16868*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech F #13*

Project Location: *9711121330; 31' depth*

Sampled by: *GC* Date: *12-Nov-97* Time: *13:30*

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>	ND	ug/kg	100	ug/kg
<i>Toluene</i>	2173	ug/kg	100	ug/kg
<i>Ethylbenzene</i>	1056	ug/kg	100	ug/kg
<i>m,p-Xylene</i>	10543	ug/kg	100	ug/kg
<i>o-Xylene</i>	3310	ug/kg	100	ug/kg
	<i>TOTAL</i>	17080		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 F #13
Well Legals:	Unit E, Sec 33, T27N, 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 F #13 using a limited risk analysis of the site conditions.

1. PNM estimated groundwater to be at a depth of 190 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 280 cu. yds. from the former pit. Vertical extent was determined using a hollow stem drilling rig. Bedrock was encountered @ 30 ft. below ground surface.

Based upon the information provided above, PNM believes the Breech F #13 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.