

District III
1000 Rio Brazos Rd Aztec, NM 87410

Denny E. Frost
DEPUTY OIL & GAS INSPECTOR

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

JUN 23 1998

PIT REMEDIATION AND CLOSURE REPORT

Operator: <u>PNM Gas Services (Caulkins)</u>		Telephone: <u>324-3764</u>	
Address: <u>603 W. Elm Street Farmington, NM 87401</u>			
Facility or Well Name: <u>Breech A #175E</u>			
Location:	Unit <u>B</u>	Sec <u>8</u>	T <u>26 N</u> R <u>6 W</u> County <u>Rio Arriba</u>
Pit Type:	Separator <input type="checkbox"/>	Dehydrator <input type="checkbox"/>	Other <input type="checkbox"/> Drip <input type="checkbox"/>
Land Type:	BLM <input checked="" type="checkbox"/>	State <input type="checkbox"/>	Fee <input type="checkbox"/> Other <input type="checkbox"/>

Pit Location:	Pit dimensions:	length <u>20</u>	width <u>20</u>	depth <u>3</u>
(Attach diagram)	Reference:	wellhead <input checked="" type="checkbox"/>	other <input type="checkbox"/>	
	Footage from reference:	<u>75'</u>		
	Direction from reference:	<u>20</u> Degrees	<input checked="" type="checkbox"/> East	North <input type="checkbox"/>
			<input type="checkbox"/> West	South <input checked="" type="checkbox"/>

Depth to Ground Water: <small>(Vertical distance from contaminants to seasonal high water elevation of ground water)</small>	Less than 50 feet	(20 points)	
	50 feet to 99 feet	(10 points)	
	Greater than 100 feet	(0 points)	0

Wellhead Protection Area: <small>(Less than 200 feet from a private domestic water source, or, less than 1,000 feet from all other water sources)</small>	Yes	(20 points)	
	No	(0 points)	
		(0 points)	0

Distance to Surface Water: <small>(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)</small>	Less than 200 feet	(20 points)	
	200 feet to 1,000 feet	(10 points)	
	Greater than 1,000 feet	(0 points)	0

RANKING SCORE (TOTAL POINTS):	0
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Breach A #175E

Date Remediation Started: 10/6/97

Date Completed: 10/6/97

Remediation Method: Excavation ☒ Approx. Cubic Yard 320

(Check all appropriate sections)

Landfarmed ☒ Amount Landfarmed (cubic yds) 320

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 24' 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 24'. 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 10/6/97 Sample time 1:30:00 PM

Sample Results

Benzene (ppm) 2.4610

Total BTEX (ppm) *** 167.8050

Field headspace (ppm)

TPH (ppm) 149.00 Method 8015A

Vertical Extent (ft) 24' 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

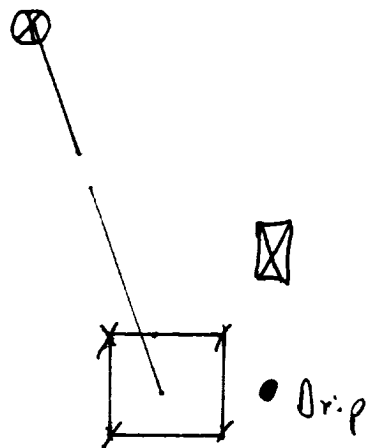
Breach A #175E

10-6-97

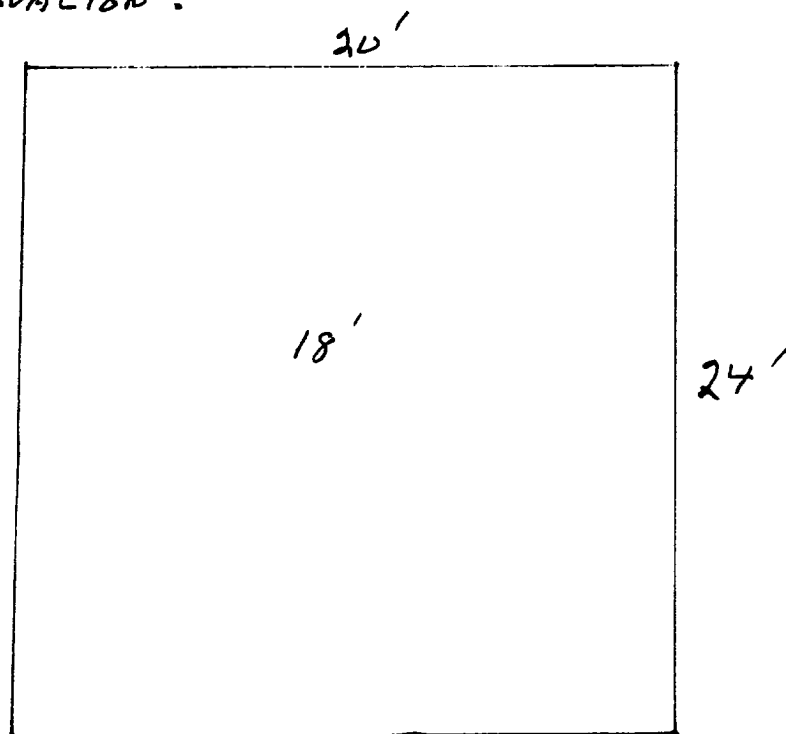
Caulkins 0:1

Sec. 8, 26N, 6W, B

Start:



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: *17-Oct-97*
COC No.: *5821*
Sample No.: *16511*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #175E*

Project Location: *9710061330; Bottom @ 18'*

Sampled by: *GC* Date: *6-Oct-97* Time: *13:30*

Analyzed by: *DC/HR* Date: *14-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>149</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>185</i>	<i>8.0</i>	<i>15%</i>

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>87</i>	<i>87</i>	<i>(70-130)</i>	<i>0</i>	<i>20%</i>

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

Approved by:

Date:

[Signature]
10/12/97

P.O. BOX 2606 • FARMINGTON, NM 87499

- ESPECIALLY FOR 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: 17-Oct-97
COC No.: 5821
Sample No.: 16511
Job No.: 2-1000

Project Name: *PNM Gas Services - Breech A #175E*

Project Location: *9710061330; Bottom @ 18'*

Sampled by: GC Date: 6-Oct-97 Time: 13:30

Analyzed by: DC Date: 14-Oct-97

Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	2461	ug/kg	1000	ug/kg
<i>Toluene</i>	54915	ug/kg	1000	ug/kg
<i>Ethylbenzene</i>	6555	ug/kg	1000	ug/kg
<i>m,p-Xylene</i>	86941	ug/kg	1000	ug/kg
<i>o-Xylene</i>	16933	ug/kg	1000	ug/kg
<i>TOTAL</i>		167805	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: *10/17/97*

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: *17-Oct-97*
COC No.: *5821*
Sample No.: *16512*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #175E*
Project Location: *9710061400; Walls @ 15'*

Sampled by: *GC* Date: *6-Oct-97* Time: *14:00*
Analyzed by: *DC/HR* Date: *14-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	185	8.0	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	87	87	(70-130)	0	20%

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

Approved by: *[Signature]*
Date: *10/17/97*

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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: *17-Oct-97*
COC No.: *5821*
Sample No.: *16512*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #175E*

Project Location: *9710061400; Walls @ 15'*

Sampled by: *GC* Date: *6-Oct-97* Time: *14:00*

Analyzed by: *HR* Date: *10-Oct-97*

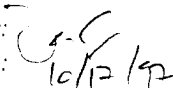
Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/kg	1	ug/kg
<i>Toluene</i>	6	ug/kg	5	ug/kg
<i>Ethylbenzene</i>	2	ug/kg	1	ug/kg
<i>m,p-Xylene</i>	8	ug/kg	1	ug/kg
<i>o-Xylene</i>	8	ug/kg	1	ug/kg
	<i>TOTAL</i>	25		ug/kg

ND - Not Detected at Limit of Quantitation

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

Approved by: 
Date: *10/12/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

↑
N

11-3-97 @ 1030

Breach A #175E

Caulkins

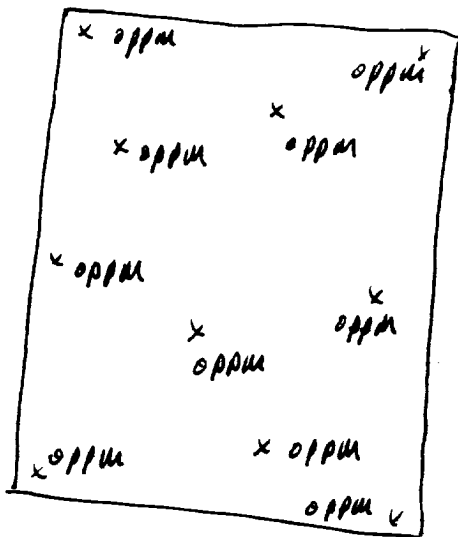
(B) 8-26N-6W

Rio Arriba

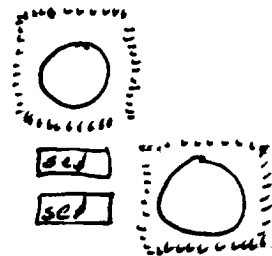
Sample # 9711031030

Landform Field Head space: 0 ppm

2" - 12"



WH
⊗



AH

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-Nov-97*
COC No.: *5985*
Sample No.: *16753*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #175E Landfarm*
Project Location: *9711031030; Composite*
Sampled by: *RH* Date: *3-Nov-97* Time: *10:30*
Analyzed by: *DC/HR* Date: *3-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>	22	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	6.5	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	95	94	(70-130)	1	20%

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

Approved by: *[Signature]*
Date: *11/5/97*

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: *9-Dec-97*
 COC No.: *7101*
 Sample No.: *16973*
 Job No.: *2-1000*

Project Name: ***PNM Gas Services - Breech A #175E***Project Location: ***9711251100; 24' depth***Sampled by: GC Date: *25-Nov-97* Time: *11:00*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>	97	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	194	3.3	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	94	95	(70-130)	2	20%

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

- TECHNOLOGY BLENDING INDUSTRIES, INC. THE FARMINGTON PL

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-Dec-97*
COC No.: *7101*
Sample No.: *16973*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Breech A #175E*
Project Location: *9711251100; 24' depth*

Sampled by: *GC* Date: *25-Nov-97* Time: *11:00*
Analyzed by: *DC* Date: *1-Dec-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	200	ug/kg
<i>Toluene</i>	3546	ug/kg	200	ug/kg
<i>Ethylbenzene</i>	1415	ug/kg	200	ug/kg
<i>m,p-Xylene</i>	23640	ug/kg	200	ug/kg
<i>o-Xylene</i>	5490	ug/kg	200	ug/kg
	<i>TOTAL</i>	34091	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: *12/4/97*

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- INTEGRAL TO BLENDING INDUSTRY WITH THE ENVIRONMENT -



Well Name:	Breech A #175E
Well Legals:	Unit B, Sec 8, 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 A #175E 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 320 cu. yds. from the former pit. Vertical extent was determined using a hollow stem drilling rig. Bedrock was encountered @ 24 ft. below ground surface.

Based upon the information provided above, PNM believes the Breech A #175E 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.