

District I  
P O Box 1980 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

**PIT REMEDIATION AND CLOSURE REPORT**

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

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: McClanahan #21

Location: Unit: A Sec. 13 T. 28 N R. 10 W County San Juan

Pit Type: Separator    Dehydrator    Other no PNM equipment left at site

Land Type: BLM ☒ State    Fee    Other   

Pit Location: Pit dimensions: length 18 width 18 depth 4

(Attach diagram) Reference: wellhead ☒ other   

Footage from reference: 105'

Direction from reference: 85 Degrees ☐ East ☒ North ☒ South ☐ West

Depth to Ground Water: Less than 50 feet (20 points)  
50 feet to 99 feet (10 points)  
Greater than 100 feet ( 0 points) 10

(Vertical distance from contaminants to seasonal high water elevation of ground water)

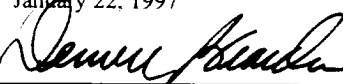
Wellhead Protection Area: Yes (20 points)  
No ( 0 points) 0

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

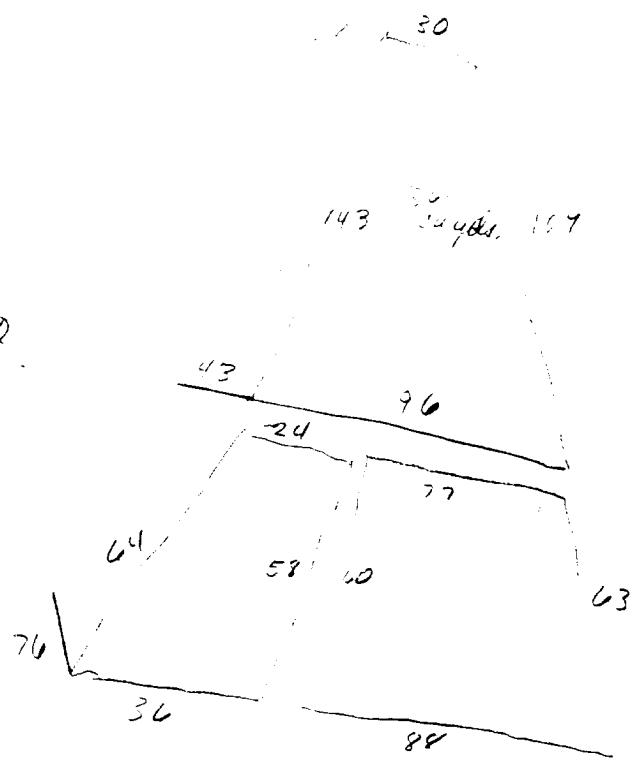
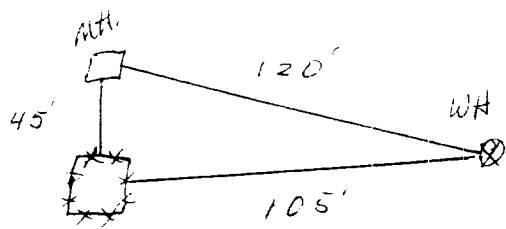
Distance to Surface Water: Less than 200 feet (20 points)  
200 feet to 1,000 feet (10 points)  
Greater than 1,000 feet ( 0 points) 0

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

RANKING SCORE (TOTAL POINTS): 10

<b>Date Remediation Started:</b>		<u>8/21/96</u>		<b>Date Completed:</b>		<u>8/21/96</u>	
<b>Remediation Method:</b>  (Check all appropriate sections)	Excavation	<u>X</u>	Approx. Cubic Yard		<u>34</u>		
	Landfarmed	<u>X</u>	Amount Landfarmed (cubic yds)		<u>34</u>		
	Other	<u></u>					
<b>Remediation Location:</b>		Onsite	<u>X</u>	Offsite	<u></u>		
<small>(i.e., landfarmed onsite, name and location of offsite facility)</small>							
<b>Backfill Material Location:</b> <u></u>							
<b>General Description of Remedial Action:</b>							
Excavated contaminated soil to pit size of 10'x13'x7' and landfarmed soil onsite within a bermed area at a depth of 6" to 12". Soil was aerated by plowing/disking until soil met regulatory levels.							
<u>**Total BTEX above regulatory level; Further excavation impossible due to bedrock.</u>							
<u></u>							
<u></u>							
<u></u>							
<b>Ground Water Encountered:</b>		No	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	Depth	<u></u>
<b>Final Pit Closure Sampling:</b>		Sample Location <u>5 pt composite-4 side walls and center of pit bottom</u>					
<small>(if multiple samples, attach sample result and diagram of sample locations and depths.)</small>		Sample depth <u>7'</u>					
		Sample date <u>8/21/96</u>			Sample time <u>9:45:00 AM</u>		
		Sample Results					
		Benzene (ppm)		<u>0.9769</u>			
		Total BTEX (ppm)		<u>** 78.5599</u>			
		Field headspace (ppm)		<u></u>			
		TPH		<u>96.5</u>	Method		<u>8015A</u>
Vertical Extent (ft) <u></u>		Risk Assessment form attached		Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
<b>Ground Water Sample:</b>		Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	(If yes, attach sample results)	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF							
DATE		<u>January 22, 1997</u>		PRINTED NAME		<u>Denver Bearden</u>	
SIGNATURE				AND TITLE		<u>Administrator III</u>	

N  
↑



OFF: (505) 325-5667



LAB: (505) 325-1556

***Diesel Range Organics***

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

Date: *23-Aug-96*  
COC No.: *4947*  
Sample No. *11875*  
Job No. *2-1000*

Project Name: ***PNM Gas Services - McClanahan #21***  
Project Location: ***9608210945; Pit Excavation Composite Sample***  
Sampled by: *RH* Date: *21-Aug-96* Time: *9:45*  
Analyzed by: *DC/HR* Date: *23-Aug-96*  
Sample Matrix: *Soil*

***Laboratory Analysis***

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Diesel Range Organics (C10 - C28)</i>	<i>96.5</i>	<i>mg/kg</i>	<i>5.0</i>	<i>mg/kg</i>

***Quality Assurance Report***

*DRO QC No.: 0489-QC*

***Calibration Check***

<i>Parameter</i>	<i>Method Blank</i>	<i>Unit of Measure</i>	<i>True Value</i>	<i>Analyzed Value</i>	<i>% Diff</i>	<i>Limit</i>
<i>Diesel Range (C10 - C28)</i>	<i>&lt;5.0</i>	<i>ppm</i>	<i>100</i>	<i>112</i>	<i>12.0</i>	<i>15%</i>

***Matrix Spike***

<i>Parameter</i>	<i>1 - Percent Recovered</i>	<i>2 - Percent Recovered</i>	<i>Limit</i>	<i>%RSD</i>	<i>Limit</i>
<i>Diesel Range (C10-C28)</i>	<i>112</i>	<i>114</i>	<i>(70-130)</i>	<i>1</i>	<i>20%</i>

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

Approved by: *[Signature]*  
Date: *8/23/96*

**P.O. BOX 2606 • FARMINGTON, NM 87499**

**- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -**

OFF: (505) 325-5667



LAB: (505) 325-1556

### AROMATIC VOLATILE ORGANICS

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

Date: *23-Aug-96*  
COC No.: *4947*  
Sample No. *11875*  
Job No. *2-1000*

Project Name: *PNM Gas Services - McClanahan #21*  
Project Location: *9608210945; Pit Excavation Composite Sample*  
Sampled by: *RH* Date: *21-Aug-96* Time: *9:45*  
Analyzed by: *HR* Date: *23-Aug-96*  
Sample Matrix: *Soil*

#### Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
<i>Benzene</i>	<i>976.9</i>	<i>ug/kg</i>	<i>0.2</i>	<i>ug/kg</i>
<i>Toluene</i>	<i>15120.4</i>	<i>ug/kg</i>	<i>0.2</i>	<i>ug/kg</i>
<i>Ethylbenzene</i>	<i>7026.6</i>	<i>ug/kg</i>	<i>0.2</i>	<i>ug/kg</i>
<i>m,p-Xylene</i>	<i>44951.7</i>	<i>ug/kg</i>	<i>0.2</i>	<i>ug/kg</i>
<i>o-Xylene</i>	<i>10484.3</i>	<i>ug/kg</i>	<i>0.2</i>	<i>ug/kg</i>
	<i>TOTAL</i>	<i>78559.9</i>		<i>ug/kg</i>

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

Approved by: *Jack*  
Date: *8/23/96*

McClanahan # 21

9-12-96

Meridian 0:1

Sec. 13, 18N, 10W

Land Farm: On location

Composite sample # 9609121310 6pt.

Soil Vapor PID reading = 17.1 ppm



Ø	3.8	4.1
2.3	4.1	5.3

2'-12" depth  
sand

OFF: (505) 325-5667



LAB: (505) 325-1556

***Diesel Range Organics***

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

Date: 16-Sep-96  
COC No.: 5037  
Sample No. 12140  
Job No. 2-1000

Project Name: ***PNM Gas Services - McClanahan #21 Landfarm***  
Project Location: ***9609121330; 6pt. Composite, 2"-12" depth***  
Sampled by: GC Date: 12-Sep-96 Time: 13:30  
Analyzed by: HR Date: 14-Sep-96  
Sample Matrix: *Soil*

***Laboratory Analysis***

<b><i>Parameter</i></b>	<b><i>Result</i></b>	<b><i>Unit of Measure</i></b>	<b><i>Detection Limit</i></b>	<b><i>Unit of Measure</i></b>
<b><i>Diesel Range Organics (C10 - C28)</i></b>	363.1	mg/kg	5.0	mg/kg

***Quality Assurance Report***

DRO QC No.: 0489-QC

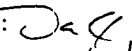
***Calibration Check***

<b><i>Parameter</i></b>	<b><i>Method Blank</i></b>	<b><i>Unit of Measure</i></b>	<b><i>True Value</i></b>	<b><i>Analyzed Value</i></b>	<b><i>% Diff</i></b>	<b><i>Limit</i></b>
<b><i>Diesel Range (C10 - C28)</i></b>	< 5.0	ppm	100	104	3.8	15%

***Matrix Spike***

<b><i>Parameter</i></b>	<b><i>1- Percent Recovered</i></b>	<b><i>2 - Percent Recovered</i></b>	<b><i>Limit</i></b>	<b><i>%RSD</i></b>	<b><i>Limit</i></b>
<b><i>Diesel Range (C10-C28)</i></b>	82	96	(70-130)	11	20%

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

Approved by:   
Date: 9/16/96

Well Name:	McClanahan #21
Well Legals:	Unit A, Sec 13, T28N, R10W
Pit Type	No PNM Equipment
Horizontal Distance to Surface Water:	200ft to 1000ft
Groundwater Depth:	Greater than 100 ft

## **RISK ANALYSIS**

PNM requests closure of the McClanahan #21 using a limited risk analysis of the site conditions.

1. PNM determined groundwater to be at a depth of 202 ft. to San Juan River and 55 ft. Munoz Canyon. (Reference: topographic map).
2. This site is not located within 200 ft. of a domestic water well and is not within 1000 ft. of any other water source.
3. Distance from the site to surface water is greater than 1,000 ft.
4. PNM excavated 245 cu. yds. from the former pit. Bedrock was encountered in the bottom of the pit at 9 ft.

Based upon the information provided above, PNM believes the Cain #9 poses minimal risk to the environment. Subsurface lateral migration is limited based upon PNM's past experience in excavating 400 pits. Source removal minimizes the possibility of surface water contamination. Bedrock provides an impermeable layer between remaining contamination and groundwater. With groundwater at 202 ft. in depth to San Juan River and 55 ft. to Munoz Canyon, vertical migration through bedrock to groundwater is highly unlikely.