

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 ( Burlington ) **Telephone:** 324-3764

**Address:** 603 W. Elm Street Farmington, NM 87401

**Facility or Well Name:** Manqum #4

**Location:** Unit     K     Sec   28   T  29 N  R  11 W  County San Juan

**Pit Type:** Separator Dehydrator ☒ Other ☐ No ☐

**Land Type:** BLM ✓ State        Fee        Other        No       

**Pit Location:** Pit dimensions: length 15 ' width 15 ' depth 4 '

(Attach diagram)      Reference:      wellhead      ☒      other

Footage from reference: 78'

Direction from reference: 63 Degrees ✓ East North ✓  
 of  
 -- West South

**Depth to Ground Water:**

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

Less than 50 feet	(20 points)	
50 feet to 99 feet	(10 points)	
Greater than 100 feet	( 0 points)	20

**Wellhead Protection Area:**

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

Yes (20 points)  
No ( 0 points)

**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)	20

**RANKING SCORE (TOTAL POINTS):** 40

RECEIVED  
JUL 31 1997  
OIL CON. DIV.  
DIST. 3

Mangum #4

Date Remediation Started: 5/28/97

Date Completed: 5/28/97

Remediation Method:

Excavation ☒

Approx. Cubic Yard 217

(Check all appropriate sections)

Landfarmed ☒

Amount Landfarmed (cubic yds) 217

Other

Remediation Location:

Onsite

Offsite

Tierra Environmental

(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 19' x 14' x 22' and transported soil to an offsite commercial landfarm.

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

22'

Sample date

5/28/97

Sample time

11:25:00 AM

Sample Results

Benzene (ppm)

0.1600

Total BTEX (ppm)

8.5070

Field headspace (ppm)

TPH

54.00

Method

8015A

Vertical Extent (ft)

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 July 28, 1997

SIGNATURE

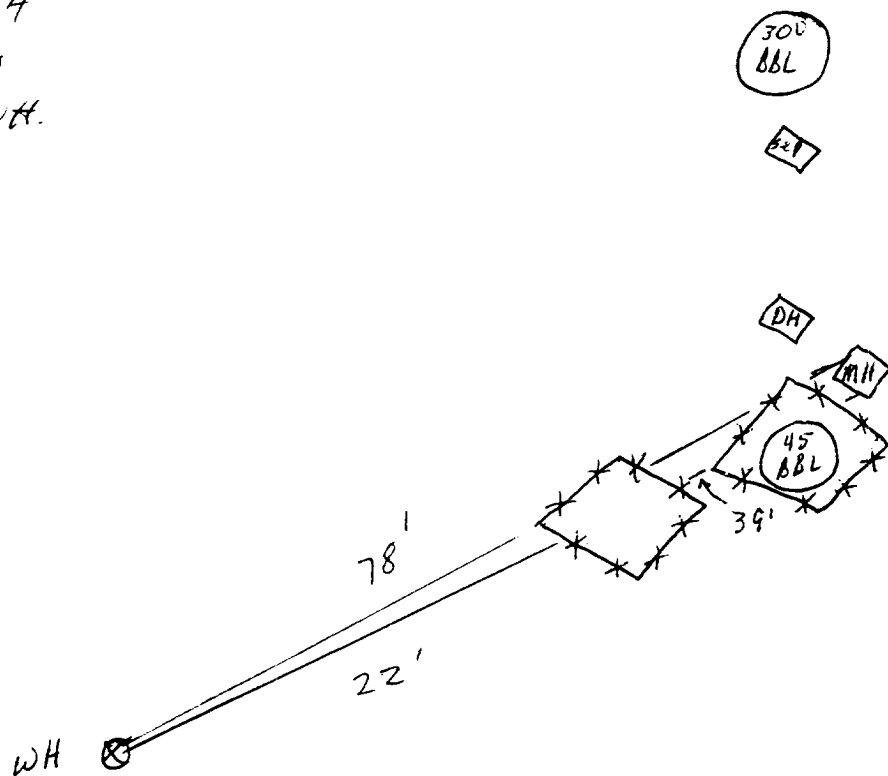


PRINTED NAME  
AND TITLE

Denver Bearden  
Administrator III

Mangum #4

43° E of N  
22' from 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-Jun-97*  
COC No.: *5148*  
Sample No.: *14726*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Mangum #4*  
Project Location: *9705281125; Bottom Composite Sample*  
Sampled by: *RH* Date: *28-May-97* Time: *11:25*  
Analyzed by: *DC* Date: *2-Jun-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>54</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.: 0519-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>100</i>	<i>101</i>	<i>1.4</i>	<i>15%</i>

#### Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>98</i>	<i>83</i>	<i>(70-130)</i>	<i>15</i>	<i>20%</i>

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

Approved by: *[Signature]*  
Date: *6/4/97*

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: *3-Jun-97*  
COC No.: *5148*  
Sample No.: *14726*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Mangum #4*  
Project Location: *9705281125; Bottom Composite Sample*  
Sampled by: *RH* Date: *28-May-97* Time: *11:25*  
Analyzed by: *DC* Date: *29-May-97*  
Sample Matrix: *Soil*

#### Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>160</i>	<i>ug/kg</i>	<i>50</i>	<i>ug/kg</i>
<i>Toluene</i>	<i>1029</i>	<i>ug/kg</i>	<i>50</i>	<i>ug/kg</i>
<i>Ethylbenzene</i>	<i>971</i>	<i>ug/kg</i>	<i>50</i>	<i>ug/kg</i>
<i>m,p-Xylene</i>	<i>5070</i>	<i>ug/kg</i>	<i>50</i>	<i>ug/kg</i>
<i>o-Xylene</i>	<i>1277</i>	<i>ug/kg</i>	<i>50</i>	<i>ug/kg</i>
<i>TOTAL</i>	<i>8507</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: *6/3/97*

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### ANALYTICAL REPORT

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

Date: *4-Jun-97*  
COC No.: *5148*  
Sample No.: *14725*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Mangum #4*  
Project Location: *9705281120; Wall Composite Sample*  
Sampled by: *RH* Date: *28-May-97* Time: *11:20*  
Analyzed by: *DC* Date: *2-Jun-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>28</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.: 0519-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>100</i>	<i>101</i>	<i>1.4</i>	<i>15%</i>

#### Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>98</i>	<i>83</i>	<i>(70-130)</i>	<i>15</i>	<i>20%</i>

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

Approved by: *[Signature]*

Date: *6/4/97*

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### ANALYTICAL REPORT

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

Date: *2-Jun-97*  
COC No.: *5148*  
Sample No.: *14725*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Mangum #4*  
Project Location: *9705281120; Wall Composite Sample*  
Sampled by: *RH* Date: *28-May-97* Time: *11:20*  
Analyzed by: *DC* Date: *28-May-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	1.0	ug/kg
<i>Toluene</i>	8.8	ug/kg	1.0	ug/kg
<i>Ethylbenzene</i>	16.3	ug/kg	1.0	ug/kg
<i>m,p-Xylene</i>	145.9	ug/kg	1.0	ug/kg
<i>o-Xylene</i>	33.1	ug/kg	1.0	ug/kg
	<i>TOTAL</i>	204.1		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: *6/2/97*

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -