

State A #62M

Date Remediation Started: 9/22/97

Date Completed: 9/23/97

Remediation Method: Excavation

x

Approx. Cubic Yard 267

(Check all appropriate sections)

Landfarmed

x

Amount Landfarmed (cubic yds) 267

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 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 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

9/22/97

Sample time

2:30:00 PM

Sample Results

Benzene (ppm)

11.1900

Total BTEX (ppm)

*** 194.2920

Field headspace (ppm)

TPH (ppm)

456.00

Method

8015A

Vertical 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

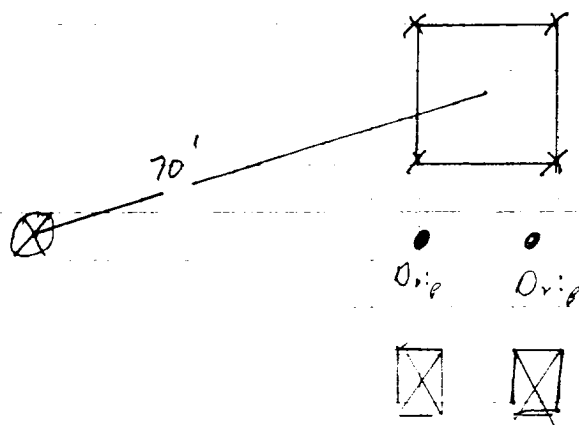
SIGNATURE

PRINT NAME
AND TITLEDenver Bearden
Administrator III

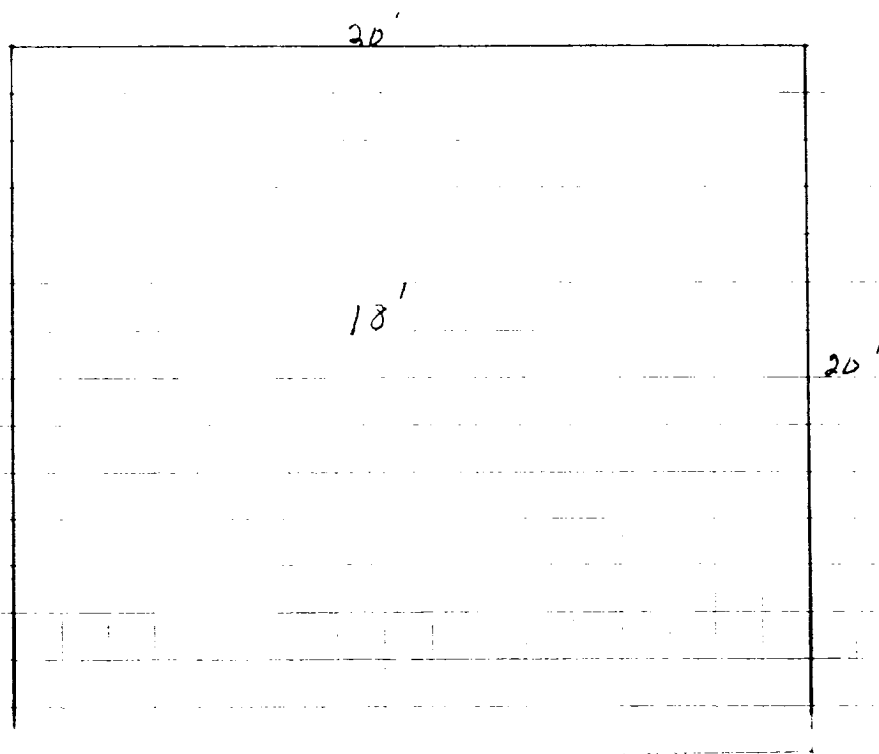
State A # 62m
Caulkins, C. J.
Sec. 2, 26W, 6N, D

9/22/97

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: *30-Sep-97*
COC No.: *5699*
Sample No.: *16283*
Job No.: *2-1000*

Project Name: ***PNM Gas Services - State A #62M***Project Location: ***9709221430; Bottom @ 18'***Sampled by: GC Date: *22-Sep-97* Time: *14:30*Analyzed by: HR/DC Date: *30-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>456</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>205</i>	<i>2.4</i>	<i>15%</i>

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>86</i>	<i>82</i>	<i>(70-130)</i>	<i>5</i>	<i>20%</i>

Approved by: *[Signature]*Date: *9/30/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

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ANALYTICAL REPORT

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

Date: *29-Sep-97*
COC No.: *5699*
Sample No.: *16283*
Job No.: *2-1000*

Project Name: *PNM Gas Services - State A #62M*
Project Location: *9709221430; Bottom @ 18'*
Sampled by: *GC* Date: *22-Sep-97* Time: *14:30*
Analyzed by: *DC* Date: *26-Sep-97*
Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	11190	ug/kg	1000	ug/kg
<i>Toluene</i>	96512	ug/kg	1000	ug/kg
<i>Ethylbenzene</i>	5409	ug/kg	1000	ug/kg
<i>m,p-Xylene</i>	67541	ug/kg	1000	ug/kg
<i>o-Xylene</i>	13641	ug/kg	1000	ug/kg
	<i>TOTAL</i>	194292		ug/kg

ND - Not Detected at Limit of Quantitation

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

Denver Bearden

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: *30-Sep-97*
COC No.: *5804*
Sample No.: *16284*
Job No.: *2-1000*

Project Name: *PNM Gas Services - State A #62M*
Project Location: *9709231030; Walls @ 15'*
Sampled by: *GC* Date: *23-Sep-97* Time: *10:30*
Analyzed by: *HR/DC* Date: *30-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>100</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>205</i>	<i>2.4</i>	<i>15%</i>

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>86</i>	<i>82</i>	<i>(70-130)</i>	<i>5</i>	<i>20%</i>

Method: *10211* Date: *9/30/97*

Approved by: *[Signature]*
Date: *9/30/97*

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ANALYTICAL REPORT

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

Date: *29-Sep-97*
COC No.: *5804*
Sample No.: *6284*
Job No.: *2-1000*

Project Name: *PNM Gas Services - State A #62M*

Project Location: *9709231030; Walls @ 15'*

Sampled by: GC Date: *23-Sep-97* Time: *10:30*

Analyzed by: DC Date: *26-Sep-97*

Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	285	ug kg	50	ug kg
<i>Toluene</i>	1249	ug kg	50	ug kg
<i>Ethylbenzene</i>	230	ug kg	50	ug kg
<i>m,p-Xylene</i>	2999	ug kg	50	ug kg
<i>o-Xylene</i>	782	ug kg	50	ug kg
	<i>TOTAL</i>	5545	ug kg	

ND - Not Detected at Limit of Quantitation

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

Denver Bearden
Date: *9/29/97*

↑
N

10-6-97 @ 1100

State A # 62M

Caulkins

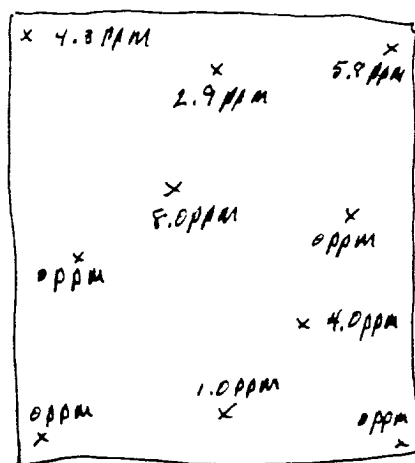
(D) 2-26N-6W

R.O. Arriba

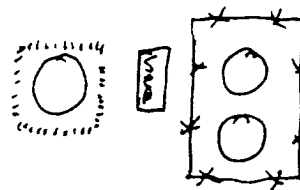
Sample # 9710061100

Landfarm field head space: 7.5 ppm

2" - 12"



⊗ WH



OFF: (505) 325-5667



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ANALYTICAL REPORT

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

Date: *8-Oct-97*
COC No.: *5663*
Sample No.: *16518*
Job No.: *2-1000*

Project Name: *PNM Gas Services - State A #62M Landfarm*
Project Location: *9710061100; Composite*
Sampled by: *RH* Date: *6-Oct-97* Time: *11:00*
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>72</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 - 8260 Method for Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry

Approved by: *[Signature]*
Date: *10/8/97*

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: *26-Nov-97*
 COC No.: *7094*
 Sample No.: *16892*
 Job No.: *2-1000*

Project Name: *PNM Gas Services - State A #62M*
 Project Location: *9711181030; 30' depth*
 Sampled by: *GC* Date: *18-Nov-97* Time: *10:30*
 Analyzed by: *DC/HR* Date: *25-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>	<i>16</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>194</i>	<i>2.8</i>	<i>15%</i>

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>89</i>	<i>92</i>	<i>(70-130)</i>	<i>3</i>	<i>20%</i>

Approved by: *CAF*Date: *11/26/97*

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: *26-Nov-97*
COC No.: *7094*
Sample No.: *16892*
Job No.: *2-1000*

Project Name: *PNM Gas Services - State A #62M*

Project Location: *9711181030; 30' depth*

Sampled by: GC Date: *18-Nov-97* Time: *10:30*

Analyzed by: DC Date: *23-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	2	ug kg
<i>Toluene</i>	14	ug kg	2	ug kg
<i>Ethylbenzene</i>	17	ug kg	2	ug kg
<i>m,p-Xylene</i>	143	ug kg	2	ug kg
<i>o-Xylene</i>	74	ug kg	2	ug kg
	<i>TOTAL</i>	247		ug kg

ND - Not Detected at Limit of Quantitation

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



Well Name:	State A #62M
Well Legals:	Unit D, Sec 2, 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 State A #62M using a limited risk analysis of the site conditions.

1. PNM estimated groundwater to be at a depth of 235 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 267 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 State A #62M 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.