

District I
Box 1580, Lordsburg, NM

District II
Box 100, Lordsburg, NM 88420

District III
100 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

Denny G. Foust
DEPUTY OIL & GAS INSPECTOR

OIL CONSERVATION DIVISION

2040 South Pacheco Street
Santa Fe, New Mexico 87505

JUL 18 1997

PIT REMEDIATION AND CLOSURE REPORT

Approved

Operator: PNM Gas Services (Burlington Resources) Telephone: 324-3764

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Calloway #1A

Location: Unit: C Sec. 22 T. 31 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 20 width 20 depth 3

(Attach diagram) Reference: wellhead ✓ other

Footage from reference: 85'

Direction from reference: 85 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) 0

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) 0

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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) 0

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: 2/23/94 Date Completed: 2/28/94

Remediation Method: Excavation X Approx. Cubic Yard 486
 Landfarmed X Amount Landfarmed (cubic yds) 486
 (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 a pit size of 25'X21'X25' 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.

*** Vertical extent at 31' provided BTEX at 1.887 ppm and TPH at 6.7 ppm. Bedrock was encountered @ 31'. See attached risk analysis form and lab analysis

Ground Water Encountered: No ✓ Yes _____ Depth _____

Final Pit Closure Sampling:

Sample Location Borehole #2.

(if multiple samples, attach sample result and diagram of sample locations and depths.)

Sample depth 25'

Sample date 5/6/96 Sample time 11:00:00 AM

Sample Results

Benzene (ppm) 11.7347

Total BTEX (ppm) *** 196.4114

Field headspace (ppm) _____

TPH 2049.70 Method 8015A

Vertical Extent (ft) 31' 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 April 28, 1997

SIGNATURE

Denver Bearden

PRINTED NAME AND TITLE

Denver Bearden
Administrator III



Well Name:	Calloway #1A
Well Legals:	Unit C, Sec 22, T31N, R11W
Pit Type:	Dehydrator
Horizontal Distance to Surface Water:	Greater than 1,000 ft
Groundwater Depth:	Greater than 100 ft

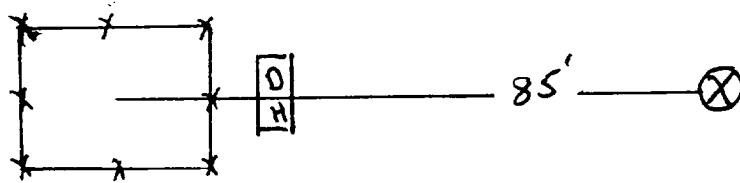
RISK ANALYSIS

PNM requests closure of the Calloway #1A using a limited risk analysis of the site conditions.

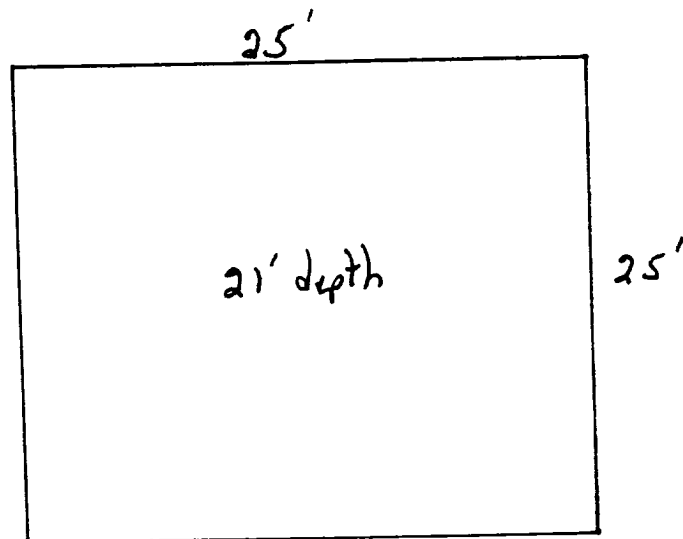
1. PNM estimated groundwater to be at a depth of 160 ft. based upon elevation of site to the Animas River. (Reference: topographic map.)
2. This site is not located within 200 ft. of a domestic water well and is not within 1,000 ft. of any other water source.
3. Distance from the site to surface water is greater than 1,000 ft.
4. PNM excavated 486 cu. yds. from the former pit. Vertical extent was determined using a hollow stem drilling rig. Bedrock was encountered at 31 ft. below ground surface.

Based upon the information provided above, PNM believes the Calloway #1A 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. Vertical migration through bedrock to groundwater is highly unlikely.

Calloway # 1A
Meridian
Sec. 22, 31 N, 11 W, C



Remediated pit: 25' x 25' x 21'



486 cu. yds

OFF: (505) 325-8786



LAB: (505) 325-5667

TPH - Gasoline / Diesel Range Organics

Attn: *Bill Vorkink*
 Company: *On Site Technologies, Ltd. c/o PNM*
 Address: *612 E. Murray Drive*
 City, State: *Farmington, NM 87401*

Date: *8-May-96*
 COC No.: *4074*
 Sample No. *10820*
 Job No. *4-1000*

Project Name: **PNM Gas Services - Calloway #1A**
 Project Location: **Borehole #2 @ 25'**
 Sampled by: *ML* Date: *6-May-96* Time: *11:00*
 Analyzed by: *DC* Date: *8-May-96*
 Sample Matrix: *Soil*

Laboratory Analysis

Analyte	Result	Unit of Measure	Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	1904.5	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	145.3	mg/kg	5.0	mg/kg
	TOTAL	2049.7		mg/kg

Quality Assurance Report

GRO QC No.: *0461-STD*
 DRO QC No.: *0475-STD*

Calibration Check

Analyte	Method Blank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Gasoline Range (C5 - C9)	< 50	ppb	900	873	3.0	15%
Diesel Range (C10 - C28)	< 5.0	ppm	2,000	2,120	6.0	15%

Matrix Spike

Analyte	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Gasoline Range (C5-C9)	79	78	(70-130)	2	20%
Diesel Range (C10-C28)	96	98	(70-130)	2	20%

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

Approved by: *[Signature]*Date: *5/8/96*

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OFF: (505) 325-8786



LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn: *Michael K. Lane*
Company: *On Site Technologies, Ltd. c/o PNM*
Address: *612 E. Murray Drive*
City, State: *Farmington, NM 87401*

Date: *7-May-96*
COC No.: *4074*
Sample No. *10820*
Job No. *4-1000*

Project Name: ***PNM Gas Services - Calloway #1A***

Project Location: ***Borehole #2 @ 25'***

Sampled by: *ML* Date: *6-May-96* Time: *11:00*

Analyzed by: *DC* Date: *7-May-96*

Sample Matrix: *Soil*

Aromatic Volatile Organics

<i>Component</i>	<i>Result</i>	<i>Units of Measure</i>	<i>Detection Limit</i>	<i>Units of Measure</i>
<i>Benzene</i>	11734.7	ug/kg	0.2	ug/kg
<i>Toluene</i>	74052.7	ug/kg	0.2	ug/kg
<i>Ethylbenzene</i>	10634.0	ug/kg	0.2	ug/kg
<i>m,p-Xylene</i>	84514.5	ug/kg	0.2	ug/kg
<i>o-Xylene</i>	15475.5	ug/kg	0.2	ug/kg
	<i>TOTAL</i>	196411.4		ug/kg

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

Approved by: *[Signature]*

Date: *5/7/96*

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Santa Ana Royalty Co (owned)

N

2 West of South

Callaway 1A

Excavation Trent-In situ
On-site Technology

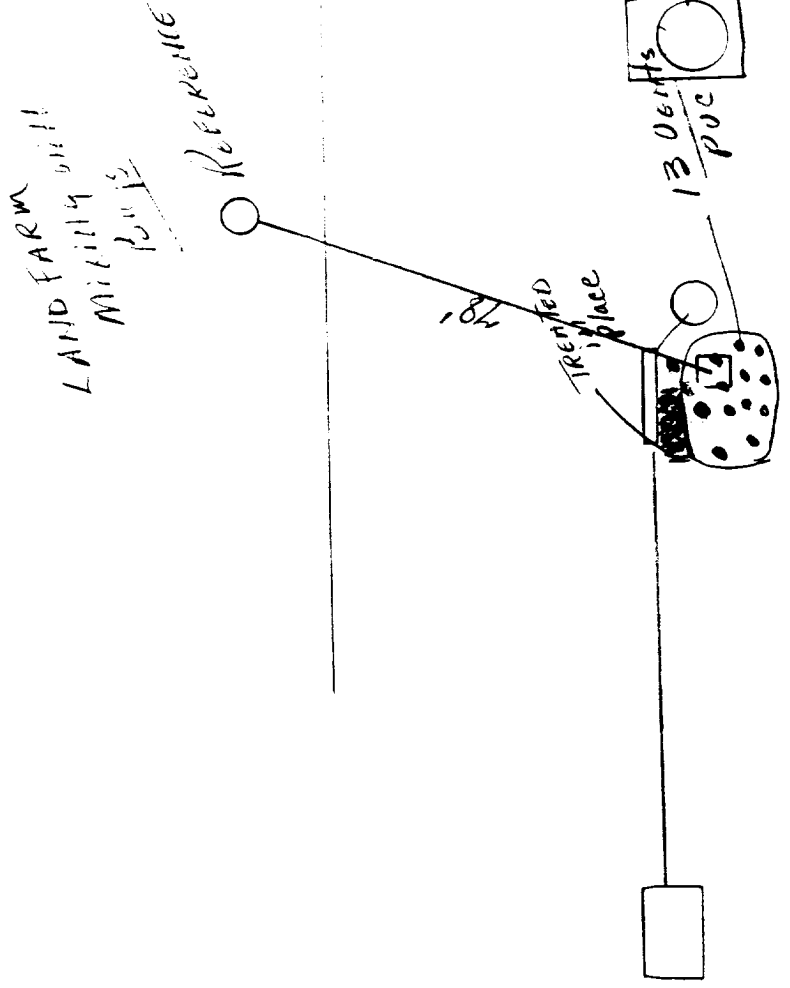
1020' FNL
1850' FNL

Unit 22
SEC 22
T 31N
R 11W

Fee
LEV - 4699

(1)

SAN JUAN COUNTY



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-Apr-97*
COC No.: *5153*
Sample No.: *14077*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Calloway #1A Landfarm*

Project Location: *9704020810*

Sampled by: *GC*

Date: *2-Apr-97* Time: *8:10*

Analyzed by: *DC*

Date: *3-Apr-97*

Sample Matrix: *Soil*

Laboratory Analysis

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

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>< 5.0</i>	<i>ppm</i>	<i>100</i>	<i>105</i>	<i>5.2</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>97</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: *4/4/97*

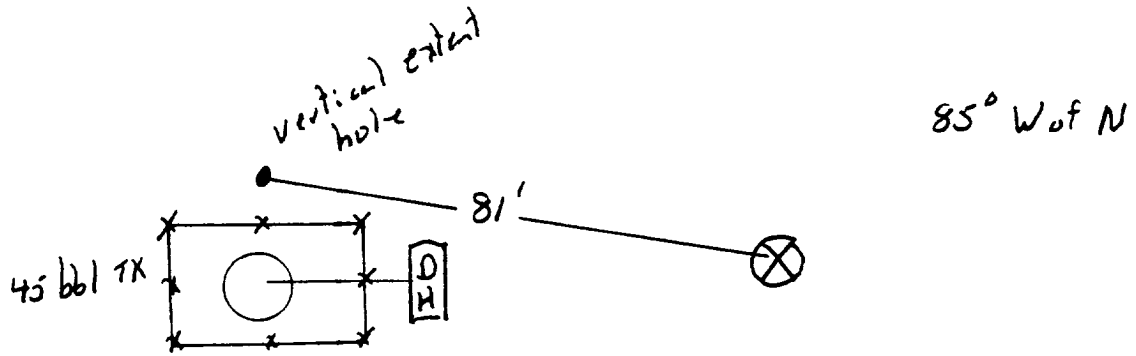
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Vertical Extent Drilling

Calloway #1A
Burlington Resources
Sec. 22, 31N, 11W, C

4-2-97



Hit continuation at 17'.
very hard sandstone at 31'.

soil sample # 9704020810

Depth to ground water

160' Animas River

X 1020

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-Apr-97*
COC No.: *5154*
Sample No.: *14078*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Calloway #1A*
Project Location: *9704020915; Vertical Extent, 30'*
Sampled by: *GC* Date: *2-Apr-97* Time: *9:15*
Analyzed by: *DC* Date: *3-Apr-97*
Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
<i>Diesel Range Organics (C10 - C28)</i>	<i>6.7</i>	<i>mg/kg</i>	<i>5.0</i>	<i>mg/kg</i>

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>< 5.0</i>	<i>ppm</i>	<i>100</i>	<i>105</i>	<i>5.2</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>97</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: *4/7/97*

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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: *4-Apr-97*
COC No.: *5154*
Sample No.: *14078*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Calloway #1A*
Project Location: *9704020915; Vertical Extent, 30'*
Sampled by: *GC* Date: *2-Apr-97* Time: *9:15*
Analyzed by: *DC* Date: *3-Apr-97*
Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Result	Units of Measure	Detection Limit	Units of Measure
<i>Benzene</i>	91	ug/kg	0.2	ug/kg
<i>Toluene</i>	393	ug/kg	0.2	ug/kg
<i>Ethylbenzene</i>	134	ug/kg	0.2	ug/kg
<i>m,p-Xylene</i>	1063	ug/kg	0.2	ug/kg
<i>o-Xylene</i>	205	ug/kg	0.2	ug/kg
	<i>TOTAL</i>	1887	ug/kg	

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

Approved by:

Date:

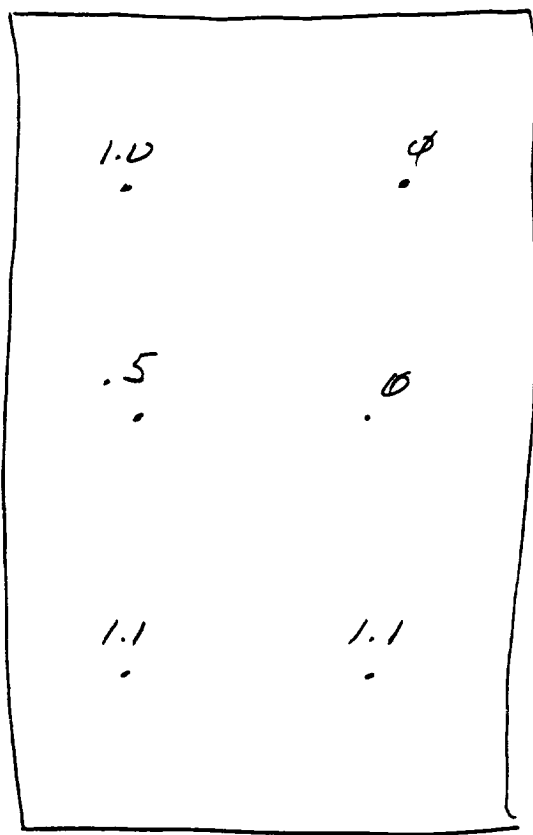
[Signature]
4/7/97

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

Calloway # 1A
Meridian
Sec. 22, 31N, 11W, C

Soil vapor headspace = 13.3 ppm
9704020810



2" - 12" depth

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