Risk
bedrock

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

OIL CONSERVATION DIVISION

2040 South Pacheco Street
Santa Fe, New Mexico 87505

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

RECEIVED
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OIL CON. DIV.
DIST. 3

# 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:** Holder A #1

**Location:** Unit F Sec 6 T 30 N R 12 W County San Juan

**Pit Type:** Separator ☐ Dehydrator ☑ Other

**Land Type:** BLM ☐ State ☐ Fee ☑ Other

**Pit Location:** (Attach diagram)

Pit dimensions: length 16 ' width 16 ' depth 3 '

Reference: wellhead ☑ other

Footage from reference: 75'

Direction from reference: 67 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<br>50 feet to 99 feet<br>Greater than 100 feet | (20 points)<br>(10 points)<br>( 0 points) | 10 |
| **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<br>No | (20 points)<br>( 0 points) | 0 |
| **Distance to Surface Water:** (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches) | Less than 200 feet<br>200 feet to 1,000 feet<br>Greater than 1,000 feet | (20 points)<br>(10 points)<br>( 0 points) | 0 |
| | **RANKING SCORE (TOTAL POINTS) :** | | 10 |

Holder A #1

**Date Remediation Started:** 06/15/1999 **Date Completed:** 06/15/1999

**Remediation Method:** (Check all appropriate sections)

Excavation X Approx. Cubic Yard 55

Landfarmed X Amount Landfarmed (cubic yds) 55

Other

**Remediation Location:** (i.e., landfarmed onsite, name and location of offsite facility)

Onsite X Offsite

**Backfill Material Location:**

**General Description of Remedial Action:**

Excavated contaminated soil to a pit size of 16' X 15.5' X 6' and landfarmed soil onsite within a bermed area at a depth of 6" to 12". Soil was aerated by disking/plowing until soil met regulatory levels.

*** Sandstone encountered at 6'. See attached risk analysis form.

**Ground Water Encountered:** No ☑ Yes ☐ Depth

**Final Pit Closure Sampling:** (if multiple samples, attach sample result and diagram of sample locations and depths.)

Sample Location 5 pt. composite - bottom.

Sample depth 6'

Sample date 06/15/1999 Sample time 10:25:00 AM

Sample Results

Benzene (ppm) 3.9

Total BTEX (ppm) 59.2 ***

Field headspace (ppm)

TPH (ppm) 200.00 Method 8015B

Vertical Extent (ft) Risk Analysis form attached Yes ☑ No ☐

**Ground Water Sample:** Yes ☐ No ☑ (If yes, see attached Groundwater Site Summary Report)

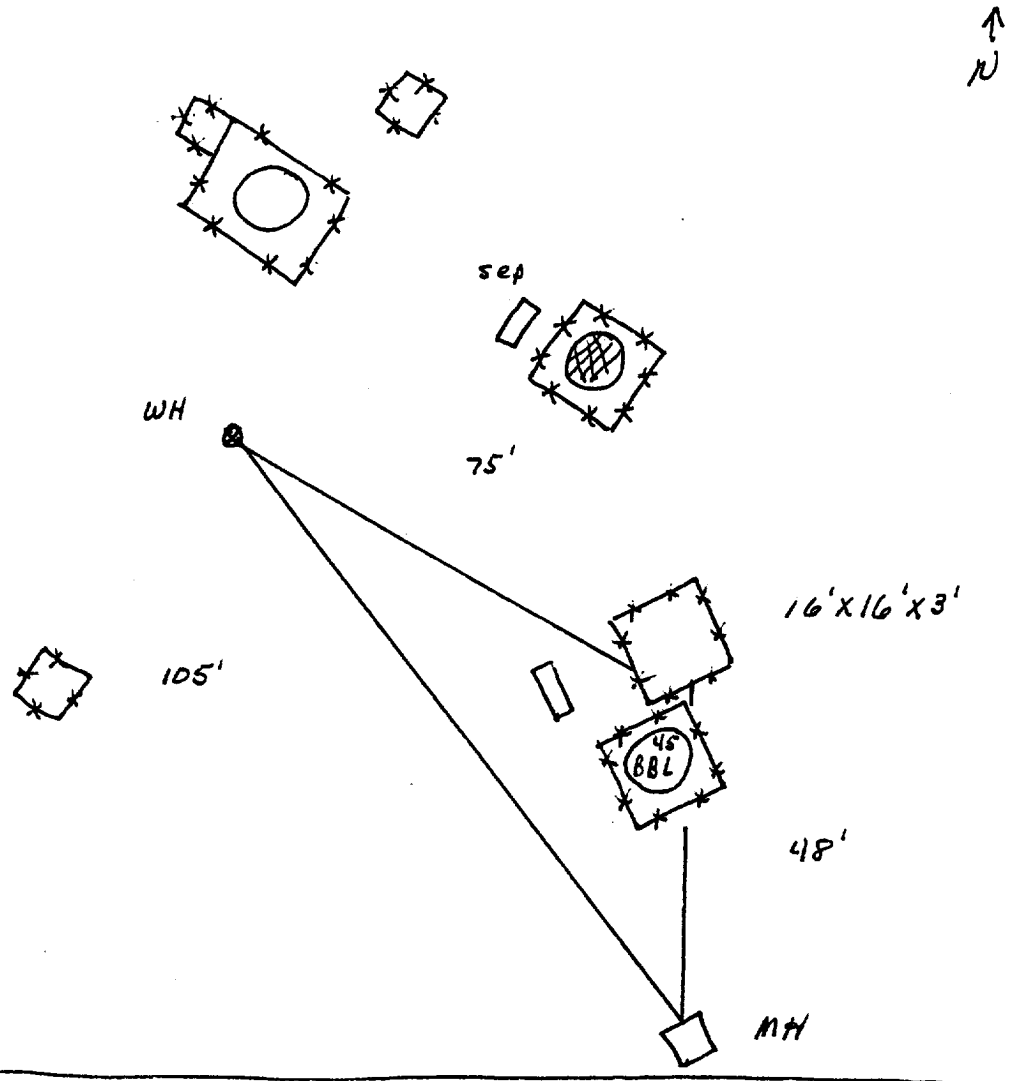
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF

DATE **October 28, 1999**

SIGNATURE Maureen Gannon

PRINTED NAME AND TITLE **Maureen Gannon, Project Manager**

Holder A #1
(F) 6-30N-12W
Burlington
6-15-94 @ 0820

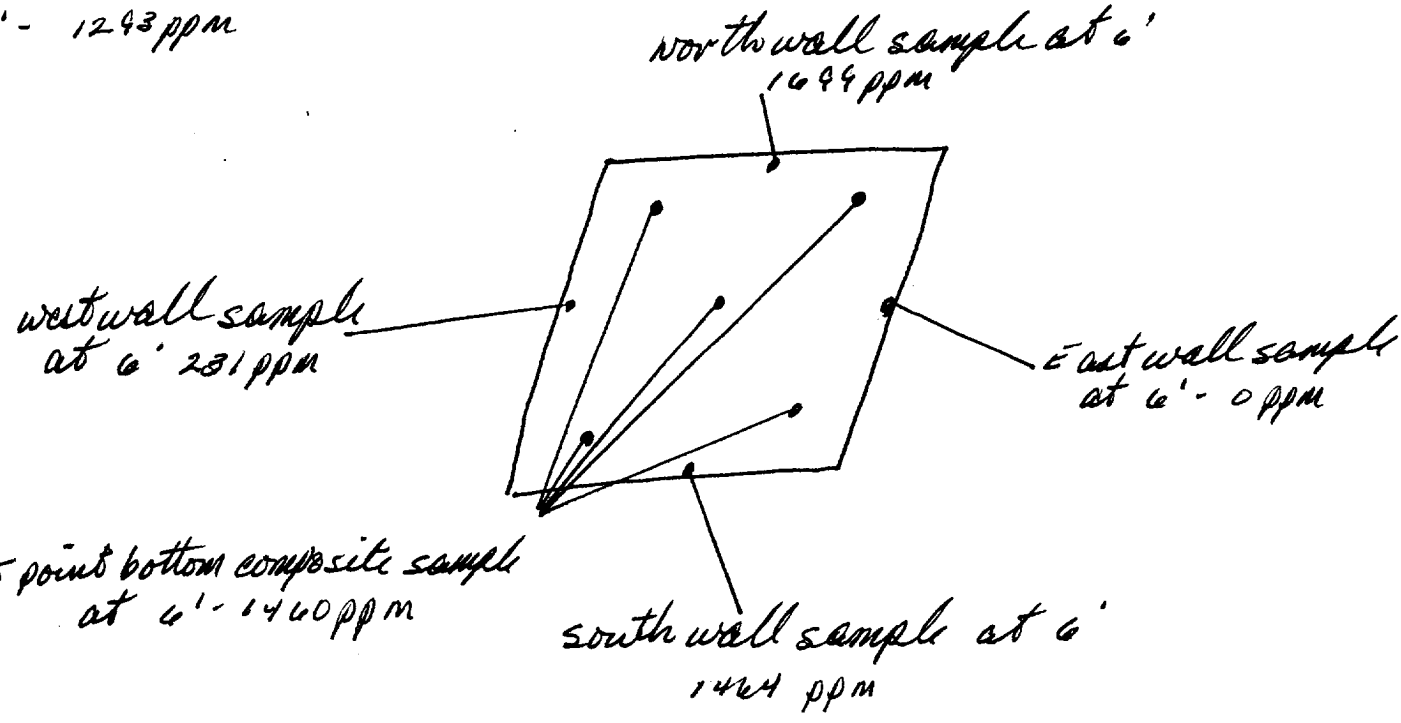



Excavation Sampling

16'(N+S) x 15.5'(E+W) x 6'D
Field Headspace: 1987 ppm (walls)

PID Readings

5' - 389 ppm
6' - 1243 ppm




not to Scale

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

**On Site Technologies, LTD.** **Date:** *30-Jun-99*

**CLIENT:** PNM - Public Service Company of NM
**Project:** PNM Pit Remediation
**Lab Order:** 9906054

# CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.



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RH

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LAB: (505) 325-1556

# ANALYTICAL REPORT

**Date:** *30-Jun-99*

| | | | |
|---|---|---|---|
| **Client:** | PNM - Public Service Company of NM | **Client Sample Info:** | Holder A#1 |
| **Work Order:** | 9906054 | **Client Sample ID:** | 9906151025; 5pt. Bottom Comp |
| **Lab ID:** | 9906054-03A **Matrix:** SOIL | **Collection Date:** | 6/15/99 10:25:00 AM |
| **Project:** | PNM Pit Remediation | **COC Record:** | 7639 |

| Parameter | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **DIESEL RANGE ORGANICS** | | **SW8015B** | | | | Analyst: **DC** |
| T/R Hydrocarbons: C10-C28 | 200 | 25 | | mg/Kg | 1 | 6/28/99 |
| **AROMATIC VOLATILES BY GC/PID** | | **SW8021B** | | | | Analyst: **DC** |
| Benzene | 3900 | 500 | | µg/Kg | 500 | 6/23/99 |
| Toluene | 22000 | 1000 | | µg/Kg | 500 | 6/23/99 |
| Ethylbenzene | 3000 | 500 | | µg/Kg | 500 | 6/23/99 |
| m,p-Xylene | 25000 | 1000 | | µg/Kg | 500 | 6/23/99 |
| o-Xylene | 5300 | 500 | | µg/Kg | 500 | 6/23/99 |

59200
59.20ppm

**Qualifiers:**

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate



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# ANALYTICAL REPORT

**Date:** *30-Jun-99*

| | | | |
|---|---|---|---|
| **Client:** | PNM - Public Service Company of NM | **Client Sample Info:** | Holder A#1 |
| **Work Order:** | 9906054 | **Client Sample ID:** | 9906151030; 4pt. Wall Comp |
| **Lab ID:** | 9906054-04A **Matrix:** SOIL | **Collection Date:** | 6/15/99 10:30:00 AM |
| **Project:** | PNM Pit Remediation | **COC Record:** | 7639 |

| Parameter | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **DIESEL RANGE ORGANICS** | | **SW8015B** | | | | Analyst: **DC** |
| T/R Hydrocarbons: C10-C28 | 36 | 25 | | mg/Kg | 1 | 6/28/99 |
| **AROMATIC VOLATILES BY GC/PID** | | **SW8021B** | | | | Analyst: **DC** |
| Benzene | 3.8 | 1 | | µg/Kg | 1 | 6/23/99 |
| Toluene | 16 | 2 | | µg/Kg | 1 | 6/23/99 |
| Ethylbenzene | 10 | 1 | | µg/Kg | 1 | 6/23/99 |
| m,p-Xylene | 320 | 2 | | µg/Kg | 1 | 6/23/99 |
| o-Xylene | 120 | 1 | | µg/Kg | 1 | 6/23/99 |

469.8
.4698 ppm

**Qualifiers:**

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B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

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E - Value above quantitation range

Surr: - Surrogate



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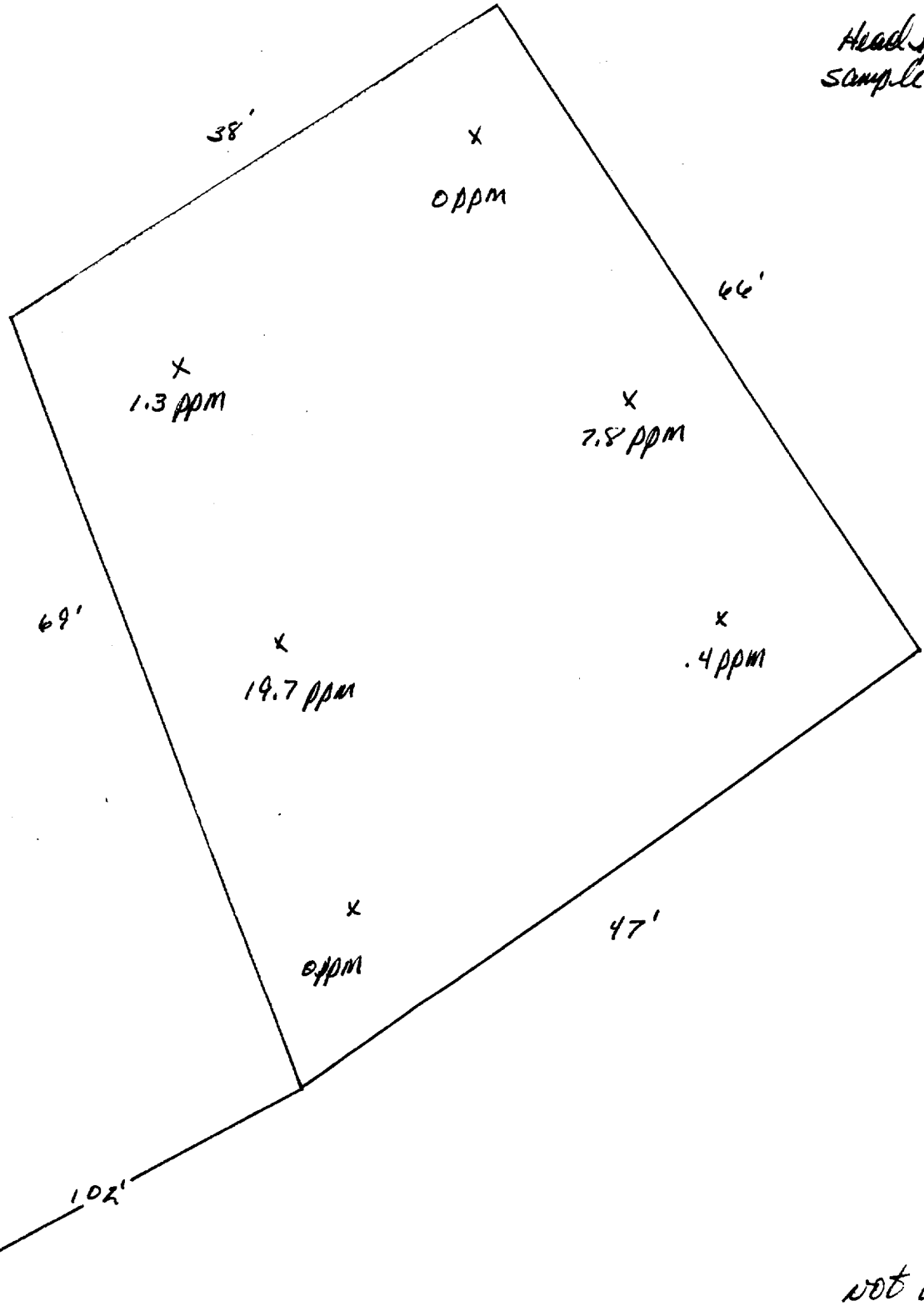
Holder A 1 LF

N

Land Farm Drawing
Approx 55 cu yds

Head Space - 7.3 ppm
Sample # - 4908/338




2" to 12"

not to scale

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TECHNOLOGIES, LTD.

LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** *20-Aug-99*

**CLIENT:** PNM - Public Service Company of NM
**Project:** PNM Pit Remediation Landfarms
**Lab Order:** 9908037

## CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.



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LAB: (505) 325-1556

# ANALYTICAL REPORT

**Date:** *20-Aug-99*

| | | | |
|---|---|---|---|
| **Client:** | PNM - Public Service Company of NM | **Client Sample Info:** | Holder A1 LF |
| **Work Order:** | 9908037 | **Client Sample ID:** | 9908131338; 6pt. Composite |
| **Lab ID:** | 9908037-05A **Matrix:** SOIL | **Collection Date:** | 08/13/1999 1:38:00 PM |
| **Project:** | PNM Pit Remediation Landfarms | **COC Record:** | 7654 |

| Parameter | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **DIESEL RANGE ORGANICS** | | **SW8015B** | | | | Analyst: **DC** |
| T/R Hydrocarbons: C10-C28 | ND | 25 | | mg/Kg | 1 | 08/17/1999 |

**Qualifiers:**

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate



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PNM®

**Environmental Services**

| | |
|---|---|
| Well Name: | Holder A #1 |
| Well Legals: | Sec 6, T30N, R12W, Unit F |
| Pit Type: | Dehydrator |
| Horizontal Distance to Surface Water: | Greater than 1,000 feet |
| Groundwater Depth: | 50 feet to 99 feet |

## RISK ANALYSIS

PNM requests closure of their former pit on the Holder A #1 well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 75 feet based upon the elevation of the site and the elevation of the nearest "listed" or "named" wash. (Reference: Farmington North, NM series 7.5 minute topographic map.)

2. PNM excavated 55 cubic yards of soil from the former pit. Subsurface lateral contamination has been remediated (see attached map and analytical results for the side wall profiles). Source removal minimizes the possibility of surface water contamination.

3. Sandstone was encountered at 6 feet below ground surface. Bedrock/sandstone provides a barrier between remaining contamination and groundwater. Vertical migration through bedrock or sandstone to groundwater is unlikely.

4. PNM excavated and performed remediation to the maximum depth and horizontal extent practicable.

PNM believes that their former pit on the Holder A #1 well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 1,000 pits.