

OK  
9/5/04  
4/14/03

District I

Box 1980, Hobbs, NM

District II

P.O. Drawer DD, Artesia, NM 88221

District III

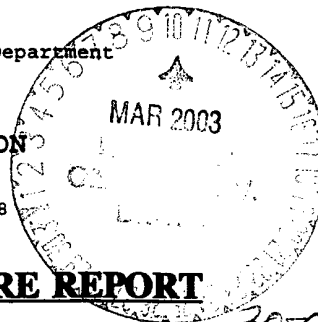
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department

**OIL CONSERVATION DIVISION**

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

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



**PIT REMEDIATION AND CLOSURE REPORT**

30-045-24105

Operator PNM Gas Services Telephone: (505) 324-3764  
Address: 603 West Elm Farmington, NM 87401  
Facility or Well Name: Zachry #18E  
Location: Unit or Qtr/Qtr Sec 0 Sec 11 T 28N R 10W County San Juan  
Pit Type: Separator      Dehydrator X Other abandoned, dehy removed  
Land Type: BLM X State      Fee      Other     

Pit Location: Pit dimensions: length 20 width 20 depth 3  
Attach diagram) Reference: wellhead X , other       
Footage from reference: 80  
Direction from reference 80° Degrees X East of North       
West of South X

Depth to Ground Water: 35' Less than 50 feet (20 points)  
(Vertical distance from contaminants 50 feet to 99 feet (10 points)  
to seasonal high water elevation of ground water 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) 0

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): 20

Date Remediation Started: 8-26-96 Date Completed: \_\_\_\_\_  
Remediation Method: Excavation X Approx. cubic yards 362.66  
(Check all appropriate sections) Landfarmed X Insitu Bioremediation \_\_\_\_\_  
Other \_\_\_\_\_

Remediation Location: Onsite X Offsite \_\_\_\_\_  
(i.e., landfarmed onsite, name and location of offsite facility) \_\_\_\_\_

General Description of Remedial Action: \_\_\_\_\_

Ground Water Encountered: No \_\_\_\_\_ Yes X Depth ~10'

Final Pit

Sample location Pit walls and bottom/water sample

Closure Sampling:

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

Sample depth \_\_\_\_\_

Sample date \_\_\_\_\_

Sample time \_\_\_\_\_

Sample Results

Benzene (ppm) \_\_\_\_\_

Total BTEX (ppm) \_\_\_\_\_

Field headspace (ppm) \_\_\_\_\_

TPH \_\_\_\_\_

Ground Water Sample: Yes X No \_\_\_\_\_ (If yes, attach sample result)

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

DATE 8-28-96

SIGNATURE

Ray Heston

PRINTED NAME Ray Heston  
AND TITLE PNM Environmental Tech II

\\3078\PTF

@ 0815  
8-27-46  
@1015

9792  
27 = 362.6

| Excavation Work Sheet         |                                                                                                                                                                                                                                                                                                                                                                            |                              |             |                |         |           |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------|----------------|---------|-----------|
| Well Name                     | Operator                                                                                                                                                                                                                                                                                                                                                                   | S                            | T           | R              | UI      |           |
| Zachry # 18E                  | Meredith                                                                                                                                                                                                                                                                                                                                                                   | 11                           | 28N         | 10W            | 0       |           |
| Pit Dimensions at Start       |                                                                                                                                                                                                                                                                                                                                                                            | Excavation Dimensions at End |             |                |         |           |
| 20 X 20 X 3                   |                                                                                                                                                                                                                                                                                                                                                                            | 34'(E+W) X 24'(S+T) X 12'    |             |                |         |           |
| Excavated Cu. Yds.            | Overburden Cu. Yds.                                                                                                                                                                                                                                                                                                                                                        |                              |             | Spoil Cu. Yds. |         |           |
| 362.66                        | 0                                                                                                                                                                                                                                                                                                                                                                          |                              |             | 362.66         |         |           |
| PIT PID READINGS              |                                                                                                                                                                                                                                                                                                                                                                            |                              |             |                |         |           |
| Feet                          | Center                                                                                                                                                                                                                                                                                                                                                                     | N. Wall                      | S. Wall     | E. Wall        | W. Wall | Soil Type |
| 3'                            | 891                                                                                                                                                                                                                                                                                                                                                                        |                              |             |                |         | Sand      |
| 6'                            | 1142                                                                                                                                                                                                                                                                                                                                                                       |                              |             |                |         | Sand      |
| 9'                            | 1451                                                                                                                                                                                                                                                                                                                                                                       | 763                          | 1288        | 891            | 1046    | Sand      |
| 12'                           | 1510                                                                                                                                                                                                                                                                                                                                                                       | 500                          | 695         | 780            | 735     | Sand      |
| 15' 13'                       | 1451                                                                                                                                                                                                                                                                                                                                                                       |                              |             |                |         | Sand      |
| 18'                           |                                                                                                                                                                                                                                                                                                                                                                            |                              |             |                |         |           |
| 21'                           |                                                                                                                                                                                                                                                                                                                                                                            |                              |             |                |         |           |
| Composite Sample # 9608271015 |                                                                                                                                                                                                                                                                                                                                                                            |                              |             |                |         |           |
| Location                      | Depth                                                                                                                                                                                                                                                                                                                                                                      |                              | PID Reading |                |         |           |
| North Wall                    | 12'                                                                                                                                                                                                                                                                                                                                                                        |                              | 489         |                |         |           |
| South Wall                    | 12'                                                                                                                                                                                                                                                                                                                                                                        |                              | 586         |                |         |           |
| East Wall                     | 12'                                                                                                                                                                                                                                                                                                                                                                        |                              | 691         |                |         |           |
| West Wall                     | 12'                                                                                                                                                                                                                                                                                                                                                                        |                              | 846         |                |         |           |
| Pit Bottom                    | 12'                                                                                                                                                                                                                                                                                                                                                                        |                              | 570         |                |         |           |
| Land Farm Location:           | On location                                                                                                                                                                                                                                                                                                                                                                |                              |             |                |         |           |
| Back Fill Location:           | wash .5 miles east/south of Hock #4                                                                                                                                                                                                                                                                                                                                        |                              |             |                |         |           |
| Comments:                     | Tuesday morning @ 0819, standing water in excavation approximately 1'-2' deep X 20X20. Water flow appears to be from NE to SW - as we cleaned out the bottom of the excavation the flow continued to be from NE to S. we were inhibited from digging NE, +W due to buried pipelines. Excavating further south caused the banks along the pipelines to become very unstable |                              |             |                |         |           |

B14/Gr;  
B14/Gr.  
B14/Gr  
B14/Gr  
B14/Gr

excavation approximately 1'-2' deep X 20X20. Water flow appears to be from NE to SW - as we cleaned out the bottom of the excavation the flow continued to be from NE to S. we were inhibited from digging NE, +W due to buried pipelines. Excavating further south caused the banks along the pipelines to become very unstable

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: *29-Aug-96*  
 COC No.: *4952*  
 Sample No. *11907*  
 Job No. *2-1000*

Project Name: *PNM Gas Services - Zachry #18E*  
 Project Location: *9608271015; Pit Excavation Composite Sample*  
 Sampled by: *RH* Date: *27-Aug-96* Time: *10:15*  
 Analyzed by: *DC/HR* Date: *29-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>20.4</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>108</i>            | <i>7.9</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>108</i>                  | <i>103</i>                   | <i>(70-130)</i> | <i>4</i>    | <i>20%</i>   |

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

Approved by: *Jack*  
 Date: *8/29/96*

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: *29-Aug-96*  
COC No.: *4952*  
Sample No. *11907*  
Job No. *2-1000*

Project Name: *PNM Gas Services - Zachry #18E*  
Project Location: *9608271015; Pit Excavation Composite Sample*  
Sampled by: *RH* Date: *27-Aug-96* Time: *10:15*  
Analyzed by: *DC* Date: *27-Aug-96*  
Sample Matrix: *Soil*

#### Laboratory Analysis

| Parameter           | Result         | Unit of Measure | Detection Limit | Unit of Measure |
|---------------------|----------------|-----------------|-----------------|-----------------|
| <i>Benzene</i>      | <i>326.0</i>   | <i>ug/kg</i>    | <i>0.2</i>      | <i>ug/kg</i>    |
| <i>Toluene</i>      | <i>7354.6</i>  | <i>ug/kg</i>    | <i>0.2</i>      | <i>ug/kg</i>    |
| <i>Ethylbenzene</i> | <i>1305.8</i>  | <i>ug/kg</i>    | <i>0.2</i>      | <i>ug/kg</i>    |
| <i>m,p-Xylene</i>   | <i>16158.1</i> | <i>ug/kg</i>    | <i>0.2</i>      | <i>ug/kg</i>    |
| <i>o-Xylene</i>     | <i>3103.8</i>  | <i>ug/kg</i>    | <i>0.2</i>      | <i>ug/kg</i>    |
|                     | <i>TOTAL</i>   | <i>28248.3</i>  |                 | <i>ug/kg</i>    |

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

Approved by: *[Signature]*  
Date: *8/29/96*

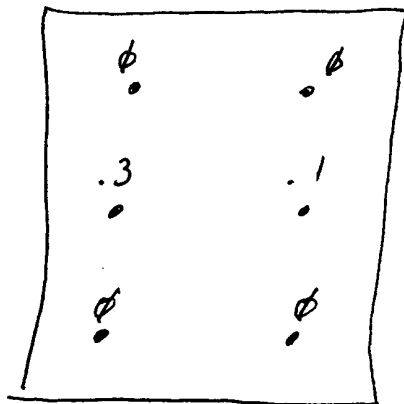
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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

Zachry 18-E  
Meridian Oil  
Sec. 11, 28N, 10W

9-26-96

Land Farmed : On location JPS  
composite sample # 96092<sup>6</sup>1100 bpt.  
Soil Vapor Head space = 14.8 ppm PID reading



2"-12" depth



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: *28-Sep-96*  
 COC No.: *5054*  
 Sample No. *12343*  
 Job No. *2-1000*

Project Name: *PNM Gas Services - Zachry #18E Landfarm*  
 Project Location: *9609261100; 6pt. Composite, 2"-12" depth*  
 Sampled by: *GC* Date: *26-Sep-96* Time: *11:00*  
 Analyzed by: *HR* Date: *28-Sep-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>&lt;5.0</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>96</i>             | <i>4.4</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>99</i>                    | <i>100</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: *DaG*  
 Date: *9/28/96*

P.O. BOX 2606 • FARMINGTON, NM 87499

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