District I P.O. Box 1980, Hobbs, NM

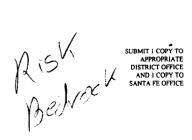
District II P.O. Drawer DD, Artesia, NM 88221

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



# PIT REMEDIATION AND CLOSURE REPORT

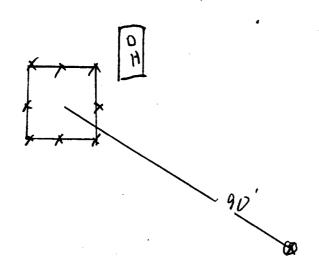
| Operator:   | PNM Gas                            | Services (Burling  | ton             | ) Telephoi   | ne: 324-376   | 4           |   |             |
|---|------------------------------------|--------------------|-----------------|--|---------------|-------------|---|-------------|
| Address:  | 603 W. Elm Str                     | eet Farmington, N  | IM 87401        |  |               |             |   | _           |
| Facility or We  | ell Name: Thor                     | npson #9A          |                 |  |               |             |   |             |
| Location:   | Unit                               | <u> </u> Se        | ec <u>28</u>    | T 31 N   | R 12 W        | County      | San Juan                                  | _           |
| Pit Type:   | Separator                          | De                 | ehydrator 📝     |  | other -       |             |   |             |
| Land Type:  | BLM 🔽                              | State              | Fee             |  | Other         |             |   |             |
| Pit Location:   | Pit dim                            | ensions: leng      | gth _20 '       | widtl  | 1 _ 20 '      | depth       | 3 '                                       |             |
| (Attach diagrar   | n) Refere                          | nce: wellhe        | ad <u>V</u>     | othe   | r             |             | · · · · · · · · · · · · · · · · · · ·     | <del></del> |
|   | Footage                            | e from reference:  | 90'             |  |               |             |   | _           |
|   | Direction                          | on from reference: | 60 De           | grees .  | East          | North       | <u>~</u>                                  |             |
|   |                                    |                    |                 |  | <b>⊻</b> West | of<br>South |   |             |
| Depth to Grou  (Vertical distance from a seasonal high water elev | contaminants to                    |                    | 5               | Less than 50 feet<br>50 feet to 99 feet<br>ter than 100 feet |               |             | (20 points)<br>(10 points)<br>( 0 points) | 0           |
| Wellhead Pro  (Less than 200 feet from domestic water source, c   | n a private<br>or; less than 1,000 |                    | EVED<br>1 200 D | Yes<br>No  |               |             | (20 points)<br>( 0 points)                | 0           |
| feet from all other water   |                                    | OIIT (2(0)         | T. 3            | )  |               |             |   |             |
| Distance to St  | urface Water:                      | Bh. arriva         |                 | Less than 200 fe<br>et to 1,000 fe<br>ter than 1,000 fe      | et            |             | (20 points)<br>(10 points)<br>( 0 points) | 0           |
| ponds, rivers, streams, c<br>canals and ditches                   |                                    |                    | RA              | NKING SCO  | RE (TOTA      | L POINTS)   | :   | 0           |

| ompson #9A  Date Remediation Started:   | 06/07/1999                                   | Date Completed: 06/07/1999                                |
|---|--|---|
| Remediation Method:   | Excavation X                                 | Approx. Cubic Yard 18                                     |
| Check all opropriate  | Landfarmed X                                 | Amount Landfarmed (cubic yds) 18                          |
| ections)  | Other  |   |
| Remediation Location: i.e., landfarmed onsite, name and ocation of offsite facility)          | Onsite X                                     | Offsite   |
| Backfill Material Location:   |  |   |
| General Description of Ren  | nedial Action:                               |   |
|   | I to a pit size of 10' X 10' X 5' and landfa | rmed soil onsite within a bermed area at a depth of 6" to |
|   |  | NS.   |
| Sandstone encountered   | at 5'. See attached risk analysis form.      |   |
|   |  |   |
| Ground Water Encountere   | d: No Y                                      | Depth   |
|   | · · · · · · · · · · · · · · · · · · ·        | <del></del>   |
| Final Pit Closure<br>Sampling:  | Sample Location 5 pt composite               | bottom  |
| (if multiple samples, attach<br>sample result and diagram of<br>sample locations and depths.) | Sample depth 5'                              |   |
| sample locations and depuis.)   | Sample date                                  | Sample time 11:40:00 AM                                   |
|   | Sample Results                               | •   |
|   | Benzene (ppm)                                | 7   |
| •   | Total BTEX (ppm)                             | 184.1 ***   |
|   | Field headspace (ppm)                        |   |
|   | TPH (ppm)210.00                              | 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 THA<br>KNOWLEDGE AND MY  |  | RUE AND COMPLETE TO THE BEST OF MY                        |
| DATE January 24, 20 SIGNATURE   | 000<br>1444 MA 4 2 2 4                       | PRINTED NAME Maureen Gannon AND TITLE Project Manager     |

Thompson # 9A Burlington Sec. 28, 3/N, 12W. I

6-7-99 1\1

Site diagram:



End of execution:
19.8 ppm
10'
Sandstone
39.1 ppm

27.6 ppm



LAB: (505) 325-1556

# On Site Technologies, LTD.

**CLIENT:** 

PNM - Public Service Company of NM

**Project:** 

PNM Pit Remediation

Lab Order:

9906017

**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.





LAB: (505) 325-1556

### **ANALYTICAL REPORT**

Date: 17-Jun-99

Client:

PNM - Public Service Company of NM

Work Order:

OFF: (505) 325-5667

9906017

Lab ID:

9906017-09A

Matrix: SOIL

Project:

PNM Pit Remediation

Client Sample Info: Thompson #9A

Client Sample ID: 9906071140, Batton @ 51

Collection Date: 6/7/99 11:40:00 AM

COC Record: 7605

| Parameter                    | Result  | PQL         | Qual | Units | DF  | Date Analyzed |  |
|------------------------------|---------|-------------|------|-------|-----|---------------|--|
| DIESEL RANGE ORGANICS        | SW8015B |             |      |       | -   | Analyst: DC   |  |
| T/R Hydrocarbons: C10-C28    | 210     | 25          |      | mg/Kg | 1   | 6/16/99       |  |
| AROMATIC VOLATILES BY GC/PID | SV      | V8021B      |      |       |     | Analyst: DC   |  |
| Benzene                      | 7000    | 500         |      | μg/Kg | 500 | 6/10/99       |  |
| Toluene                      | 69000   | 1000        |      | μg/Kg | 500 | 6/10/99       |  |
| Ethylbenzene                 | 7100    | 500         |      | μg/Kg | 500 | 6/10/99       |  |
| m,p-Xylene                   | 84000   | 1000        |      | μg/Kg | 500 | 6/10/99       |  |
| o-Xylene                     | 17000   | 500         |      | μg/Kg | 500 | 6/10/99       |  |
| _                            | 184100  | )           |      |       |     |               |  |
|                              | 184.1 6 | n<br>O<br>O |      |       |     |               |  |

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

1 of 1

OFF: (505) 325-5667

LAB: (505) 325-1556

#### ANALYTICAL REPORT

Date: 17-Jun-99

Client:

PNM - Public Service Company of NM

Work Order:

9906017

9906017-10A

Matrix: SOIL

Client Sample Info: Thompson #9A

Client Sample ID: 9906071145, いからと 2 1

Collection Date: 6/7/99 11:45:00 AM

Lab ID: **Project:** 

PNM Pit Remediation

COC Record: 7605

| Parameter                 | Result  | PQL | Qual Units | DF | Date Analyzed |
|---------------------------|---------|-----|------------|----|---------------|
| DIESEL RANGE ORGANICS     | SW8015B |     |            |    | Analyst: DC   |
| T/R Hydrocarbons: C10-C28 | ND      | 25  | mg/Kg      | 1  | 6/14/99       |

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

1 of 1

| Thompson    | # 9A  |      |
|-------------|-------|------|
| Sec-28 T-31 | R-12W | ul-I |
| Burlington  |       |      |

Landfarm DRAWing

App 18 cuyds

| 0.0ppm | 0.0ppn |             |
|--------|--------|-------------|
| 0.     | Oppm   | 39'         |
| 0.0pp- | o.oppr |             |
| 21     | •      | D well head |

Not to Scale

2" to12" Depth -

Headspace 0.6ppm SAmple# 9907130803

LAB: (505) 325-1556

## On Site Technologies, LTD.

CLIENT:

PNM - Public Service Company of NM

Project:

PNM Pit Remediation Landfarms

Lab Order:

9907030

**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.

OFF: (505) 325-5667



LAB: (505) 325-1556

#### ANALYTICAL REPORT

Date: 28-Jul-99

Client:

PNM - Public Service Company of NM

Work Order:

9907030

9907030-06A

Matrix: SOIL

Lab ID: **Project:** 

PNM Pit Remediation Landfarms

Client Sample Info: Thompson 9A LF

Client Sample ID: 9907130803; 5pt. Comp

Collection Date: 7/13/99 8:03:00 AM

COC Record: 7489

| Parameter                 | Result  | PQL | Qual Units | DF | Date Analyzed |
|---------------------------|---------|-----|------------|----|---------------|
| DIESEL RANGE ORGANICS     | SW8015B |     |            |    | Analyst: DC   |
| T/R Hydrocarbons: C10-C28 | ND      | 25  | mg/Kg      | 1  | 7/26/99       |

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

1 of 1



Well Name:

Well Legals:

Pit Type:

Horizontal Distance to Surface Water:

Groundwater Depth:

Thompson #9A
Unit I, Sec 28, T31N, R12W
Dehydrator
Greater than 1,000 feet
Greater than 100 feet

### **RISK ANALYSIS**

PNM requests closure of their former pit on the Thompson #9A well site using a limited risk analysis based on the following conditions:

- 1. Groundwater is estimated to be at a depth of 234 feet based upon the elevation of the site and the elevation of the nearest "listed" or "named" wash. (Reference: Flora Vista, NM series 7.5 minute topographic map.)
- 2. PNM excavated 18 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 5 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 Thompson #9A well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 1,000 pits.