

*Denny S. Frost*  
DEPUTY OIL & GAS INSPECTOR

JICARILLA APACHE TRIBE

ENVIRONMENTAL PROTECTION OFFICE

JUN 23 1998

P.O. BOX 507  
DULCE, NEW MEXICO 87528

SUBMIT 1 COPY TO  
NATURAL  
RESOURCE DEPT  
AND OIL GAS  
ADMINISTRATION

*Approved*  
**PIT REMEDIATION AND CLOSURE REPORT**

Operator: PNM Gas Services (*Amoco*) Telephone: 324-3764  
Address: 603 W. Elm Street Farmington, NM 87401  
Facility or Well Name: *Jicarilla Contract 147-7E*  
Location: Unit: *C* Sec. *8* T. *25* N R. *5* W County *Rio Arriba*  
Pit Type: Separator \_\_\_\_\_ Dehydrator *X* Other \_\_\_\_\_  
Land Type: *Jicarilla Apache*

Pit Location: Pit dimensions: length *40'* width *40'* depth *14'*  
(Attach diagram) Reference: wellhead *X* other \_\_\_\_\_  
Footage from reference: *105'*  
Direction from reference: *20* Degrees \_\_\_\_\_ East \_\_\_\_\_ North \_\_\_\_\_  
\_\_\_\_\_ 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) *e*

**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) *e*

**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) *e*  
Greater than 1,000 feet (0 points)

**Distance to Ephemeral Stream (dry wash):**

(Horizontal distance to all downgradient streams having a width of at least 10 feet)

Less than or equal to 100 feet (10 points)  
Greater than 100 feet (0 points) *e*

**Distance to Nearest Lake, Playa, or Watering Pond:**

(Horizontal distance to all downgradient lakes, playas, and livestock or wildlife water ponds)

Less than or equal to 100 feet (10 points)  
Greater than 100 feet (0 points) *e*

**RANKING SCORE (TOTAL POINTS):** *e*

Date Remediation Started: 9/22/97 Date Completed: 11/3/97

Remediation Method: Excavation X Approx. Cubic Yards 830

(Check all appropriate sections)

Landfarmed X Amount Landfarmed (cubic yds): 830

Other \_\_\_\_\_

Remediation Location: Onsite X Offsite \_\_\_\_\_

(i.e., landfarmed onsite, name and location of offsite facility)

General Description of Remedial Action:

Removed contaminated soil from all four side walls  
As to get a below 100 ppm head space reading.  
Bottom is rock

Ground Water Encountered: No X Yes \_\_\_\_\_ Depth \_\_\_\_\_

Final Pit Closure Sampling:

Sample Location North East South and West side walls

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

Sample depth 1.3'

Sample date 9/23/97 Sample time 1241

Sample Results

Soil: Benzene (ppm) N/D Water: Benzene (ppb) \_\_\_\_\_

Total BTEX (ppm) 0.008 Toluene (ppb) \_\_\_\_\_

Field headspace (ppm) 15.9 Ethylbenzene (ppb) \_\_\_\_\_

TPH N/D ppm Method 8015 Total Xylenes (ppb) \_\_\_\_\_

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

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

DATE 9/30/97

PRINTED NAME Ronald A. Dedrick

SIGNATURE Ronald A. Dedrick

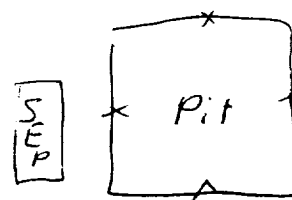
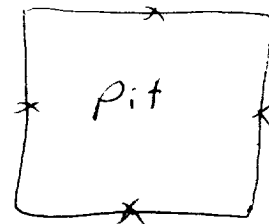
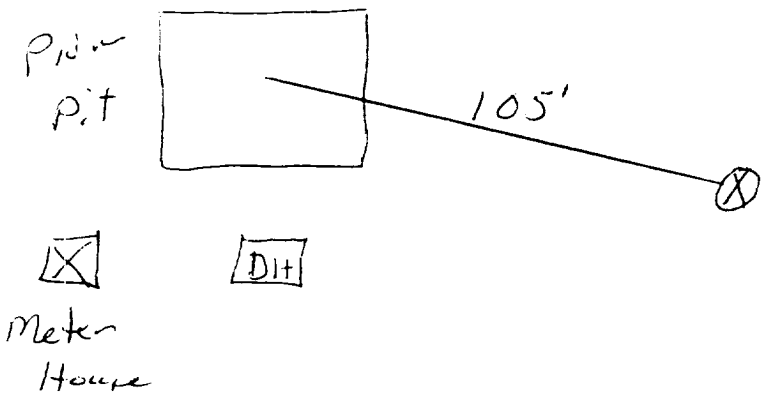
AND TITLE Environmental Technician II

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO \_\_\_\_\_ (REASON): Spray + close

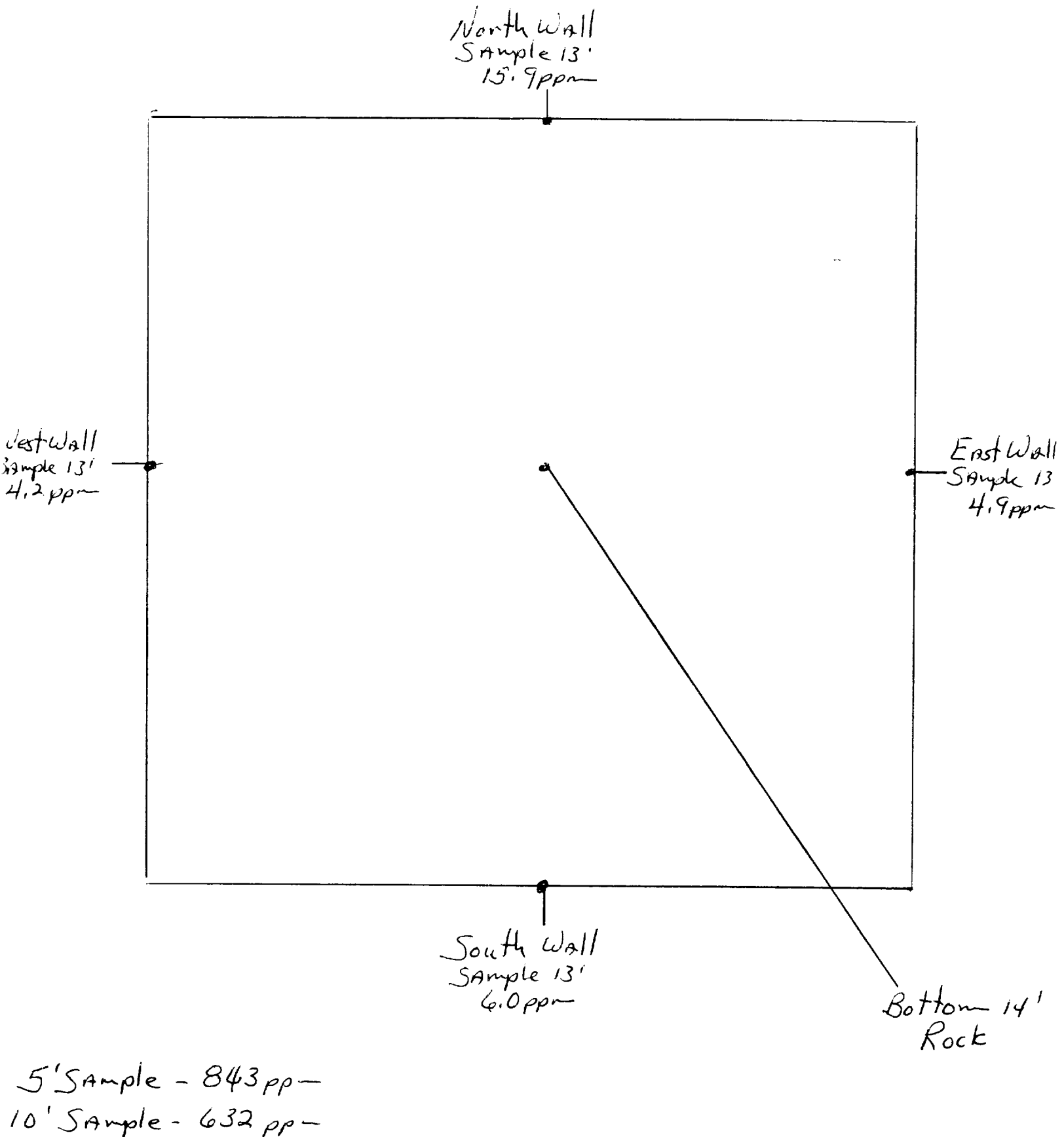
SIGNED: Kevin M. Mamm DATE: 9-30-97

JICARUUA Contract 141-1/E  
Sec. 8 T25N R5W Unit C  
Amoco



JICARILLA Contract 141-1E  
Sec. 8 T25N R5W Unit C  
Amoco

40'x40'x14'



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.: *5593*  
Sample No.: *16331*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Jicarilla Contract 147-7E*  
Project Location: *9709231241; 4pt. Composite*  
Sampled by: *TN* Date: *23-Sep-97* Time: *12:41*  
Analyzed by: *HR/DC* Date: *29-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> | ND                  | mg/kg           | 5                     | mg/kg           |

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> | ND           | ppm             | 200        | 182            | 9.4 | 15%       |

#### Matrix Spike

| Parameter                     | 1 - Percent Recovered | 2 - Percent Recovered | Limit    | RPD | RPD Limit |
|-------------------------------|-----------------------|-----------------------|----------|-----|-----------|
| <i>Diesel Range (C10-C28)</i> | 89                    | 98                    | (70-130) | 9   | 20%       |

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

Approved by:

Date:

*[Signature]*  
*9/30/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

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: *29-Sep-97*  
COC No.: *5593*  
Sample No.: *16331*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Jicarilla Contract 147-7E*

Project Location: *9709231241; 4pt. Composite*

Sampled by: *TN* Date: *23-Sep-97* Time: *12:41*

Analyzed by: *DC* Date: *28-Sep-97*

Sample Matrix: *Soil*

### Laboratory Analysis

| Parameter           | Results<br>as Received | Unit of<br>Measure | Limit of<br>Quantitation | Unit of<br>Measure |
|---------------------|------------------------|--------------------|--------------------------|--------------------|
| <i>Benzene</i>      | ND                     | ug/kg              | 1                        | ug/kg              |
| <i>Toluene</i>      | 2                      | ug/kg              | 1                        | ug/kg              |
| <i>Ethylbenzene</i> | ND                     | ug/kg              | 1                        | ug/kg              |
| <i>m,p-Xylene</i>   | 4                      | ug/kg              | 1                        | ug/kg              |
| <i>o-Xylene</i>     | 2                      | ug/kg              | 1                        | ug/kg              |
| <i>TOTAL</i>        | 8                      | ug/kg              |                          |                    |

ND - Not Detected at Limit of Quantitation

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

Approved by: *JAC*  
Date: *9/30/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

Environmental Consulting Industry with the Environment

JICARILLA APACHE TRIBE  
ENVIRONMENTAL  
PROTECTION OFFICE  
P.O. BOX 507  
DULCE, NEW MEXICO 87528

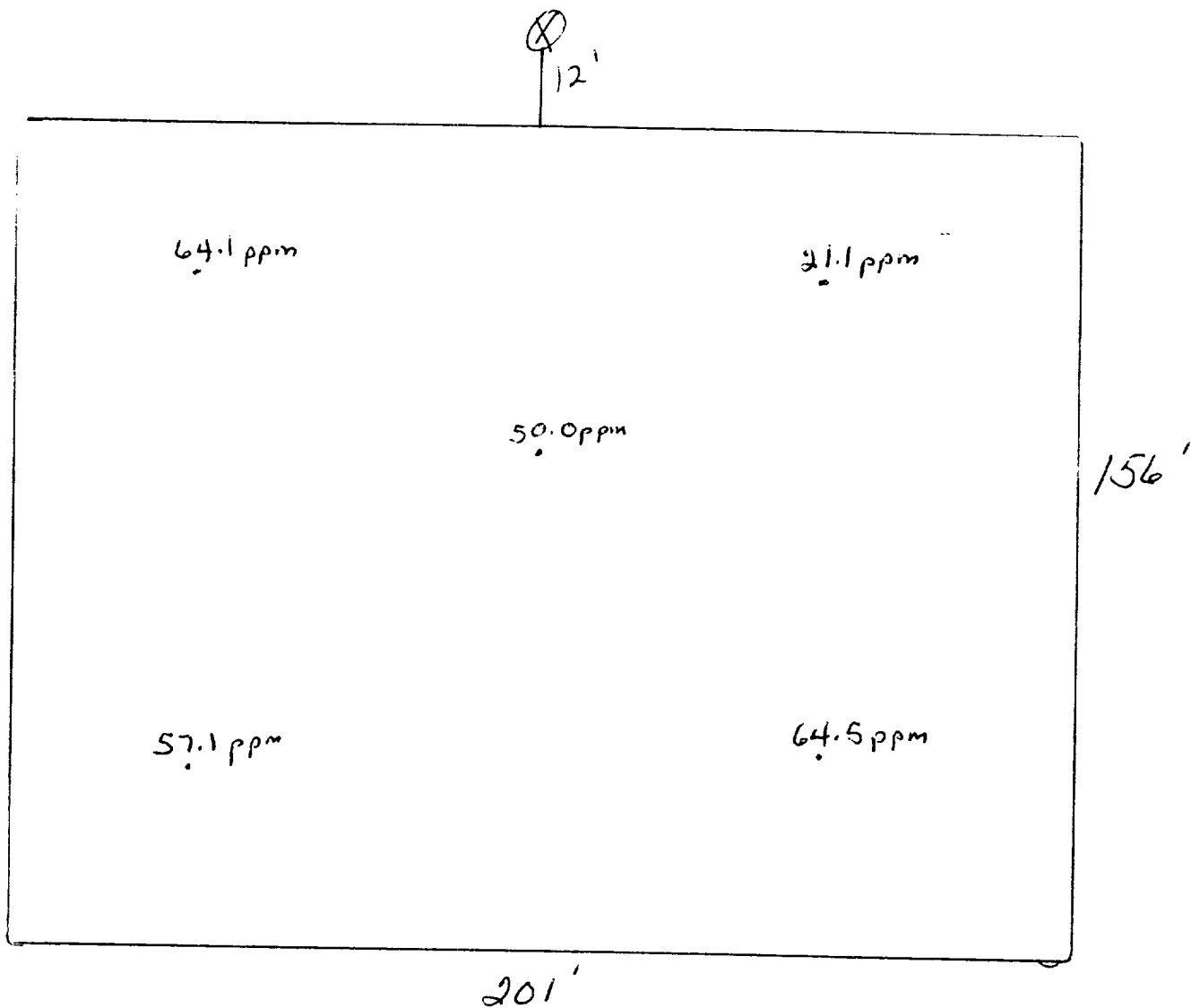
SUBMIT 1 COPY TO  
NATURAL  
RESOURCE DEPT  
AND OIL-GAS  
ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT

|  |  |
|--|--|
| Operator: PNM Gas Services (Amoco) Telephone: 324-3764   |  |
| Address: 603 W. Elm Street Farmington, NM 87401  |  |
| Facility or Well Name: Jicarilla Contract 147-7E   |  |
| Location: Unit: C Sec. 8 T. 25 N R. 5 W County Rio Arriba  |  |
| Land Type: Jicarilla Apache  |  |
| Date Remediation Started: 9/22/97 Date Completed: 10/17/97   |  |
| Remediation Method: Landfarmed X Approx. cubic yards 830   |  |
| Composted _____  |  |
| Other _____  |  |
| Depth to Ground Water: (pts.) 0  | Final Closure Sampling:<br>Sampling Date: 10/14/97 Time 1230<br>Sampling Results:<br>Field Headspace (ppm) 64.5<br>TPH (ppm) 96 Method 8015<br>Other _____ |
| Distance to an Ephemeral Stream: (pts.) 0  |  |
| Distance to Nearest Lake, Playa, or Watering Pond: (pts.) 0  |  |
| Wellhead Protection Area: (pts.) 0   |  |
| Distance to Surface Water: (pts.) 0  |  |
| Ranking Score (Total Points): 0  |  |
| I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF  |  |
| DATE 10/27/97 PRINTED NAME Roy Burnham   |  |
| SIGNATURE Roy Burnham AND TITLE Environmental Technician II  |  |
| AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE |  |
| APPROVED: YES X NO (REASON) use as Backfill  |  |
| SIGNED: Kevin M. Munn DATE: 10-28-97   |  |

JICAR IIIA Contract 141-1E  
Sec. 8 T25N R5W Unit C  
Amoco

Land farm





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: *20-Oct-97*  
COC No.: *5625*  
Sample No.: *16608*  
Job No.: *2-1000*

Project Name: ***PNM Gas Services - Jicarilla Contract 147-7E Landfarm***  
Project Location: ***9710161230; 5pt. Composite***  
Sampled by: *RB* Date: *16-Oct-97* Time: *12:30*  
Analyzed by: *DC/HR* Date: *17-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> | 96                  | mg/kg           | 5                     | mg/kg           |

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> | ND           | ppm             | 100        | 94             | 6.4 | 15%       |

#### Matrix Spike

| Parameter                     | 1- Percent Recovered | 2 - Percent Recovered | Limit    | RPD | RPD Limit |
|-------------------------------|----------------------|-----------------------|----------|-----|-----------|
| <i>Diesel Range (C10-C28)</i> | 93                   | 92                    | (70-130) | 1   | 20%       |

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

Approved by: *[Signature]*  
Date: *10/20/97*

P.O. BOX 2606 • FARMINGTON, NM 87499  
- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -