

*Denny E. Faust*  
DEPUTY OIL & GAS INSPECTOR  
EN

JUN 23 1998

## 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

# PIT REMEDIATION AND CLOSURE REPORT

Operator: PNM Gas Services ( Ameco ) Telephone: 324-3764

**Address:** 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Tigerville A-1 #1

**Location:** Unit: L Sec. 18 T. 24 N R. 5 W County Rio Arriba


**Pit Type:**      Separator    ☒      Dehydrator      Other \_\_\_\_\_

**Land Type:** Jicarilla Apache

**Pit Location:** Pit dimensions: length 3.5 width 3.3 depth 8

(Attach diagram) Reference: wellhead ☒ other ☐

Footage from reference: 1/4/4'

Direction from reference: 45 Degrees      East  North       
West of 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)	

**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)   

**Distance to Surface Water:**


(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)

**OIL CON. DIV.**  
**DIST. 3**

Less than 200 feet	(20 points)	
200 feet to 1,000 feet	(10 points)	
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)	

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)	

**RANKING SCORE (TOTAL POINTS) :**

1000

RECEIVED  
JUN 1 1964  
LIBRARY OF CONGRESS

Date Remediation Started: 9/10/97 Date Completed: 11/20/97

Remediation Method: Excavation X Approx. Cubic Yards 691

(Check all appropriate sections)

Landfarmed X Amount Landfarmed (cubic yds): 691

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 17'

Sample date 9/11/97 Sample time 0851

Sample Results

Soil: Benzene (ppm) ND Water: Benzene (ppb) \_\_\_\_\_

Total BTEX (ppm) 0.003 Toluene (ppb) \_\_\_\_\_

Field headspace (ppm) 81.6 Ethylbenzene (ppb) \_\_\_\_\_

TPH 13 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 9/16/97 PRINTED NAME Ronald A. Dedrick

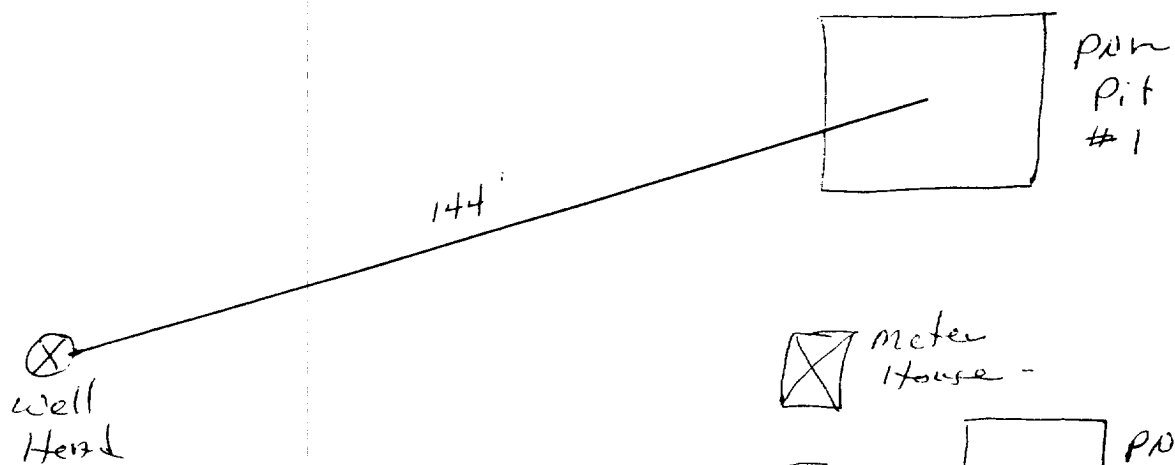
SIGNATURE Ronald A. Dedrick AND TITLE Environmental Technician II

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): \_\_\_\_\_

SIGNED: Ken Mammill DATE: 9-30-97

Jicarilla A-1 #1  
Sec 18 T24N R5W Unit L  
Amoco

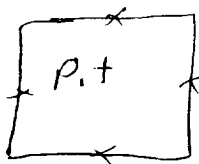
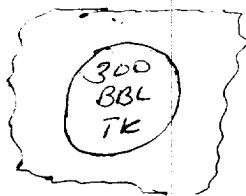


meter house -

S  
P



Power  
Pit  
#2



Sep

Jicarilla A-1 #1  
Sec. 18 T26N R5W Unit L  
Amoco

37'x28'x18'

North Wall  
Sample 16'  
15.6ppm

West Wall  
Sample 16'  
5.7ppm

East Wall  
Sample 16'  
81.6ppm

South Wall  
Sample 17'  
11.9ppm

Bottom 18'  
Rock

5' Sample - 380ppm  
0' Sample - 243ppm  
5' Sample - 162ppm

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: *18-Sep-97*  
COC No.: *5587*  
Sample No.: *16162*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Jicarilla A-1 #1*  
Project Location: *9709110851; 4pt. Composite*  
Sampled by: *PA* Date: *11-Sep-97* Time: *8:51*  
Analyzed by: *DC/HR* Date: *17-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>	<i>13</i>	<i>mg/kg</i>	<i>5</i>	<i>mg/kg</i>

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>	<i>ND</i>	<i>ppm</i>	<i>200</i>	<i>177</i>	<i>12.5</i>	<i>15%</i>

### *Matrix Spike*

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>87</i>	<i>88</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: *[Signature]*  
Date: *9/16/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

### ANALYTICAL REPORT

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Address: *603 W. Elm*  
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Project Location: *9709110851; 4pt. Composite*  
Sampled by: *PA* Date: *11-Sep-97* Time: *8:51*  
Analyzed by: *DC* Date: *12-Sep-97*  
Sample Matrix: *Soil*

#### Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/kg	2	ug/kg
<i>Toluene</i>	ND	ug/kg	2	ug/kg
<i>Ethylbenzene</i>	ND	ug/kg	2	ug/kg
<i>m,p-Xylene</i>	3	ug/kg	2	ug/kg
<i>o-Xylene</i>	ND	ug/kg	2	ug/kg
	<i>TOTAL</i>	3		ug/kg

ND - Not Detected at Limit of Quantitation

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

Approved by: *[Signature]*  
Date: *9/17/97*

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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 17-1 #1  
Location: Unit: L Sec. 18 T. 26 N R. 5 W County Rio Arriba  
Land Type: Jicarilla Apache

Date Remediation Started: 9/10/97 Date Completed: 11/13/97  
Remediation Method: Landfarmed ☒ Approx. cubic yards 491  
Composted ☐  
Other ☐

Depth to Ground Water: (pts.) 2  
Distance to an Ephemeral Stream: (pts.) 2  
Distance to Nearest Lake, Playa,  
or Watering Pond: (pts.) 2  
Wellhead Protection Area: (pts.) 2  
Distance to Surface Water: (pts.) 2  
Ranking Score (Total Points): 2

Final Closure Sampling:

Sampling Date: 11/12/97 Time 1307  
Sampling Results:  
Field Headspace (ppm) 50.7  
TPH (ppm) 77 Method ECIS  
Other

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

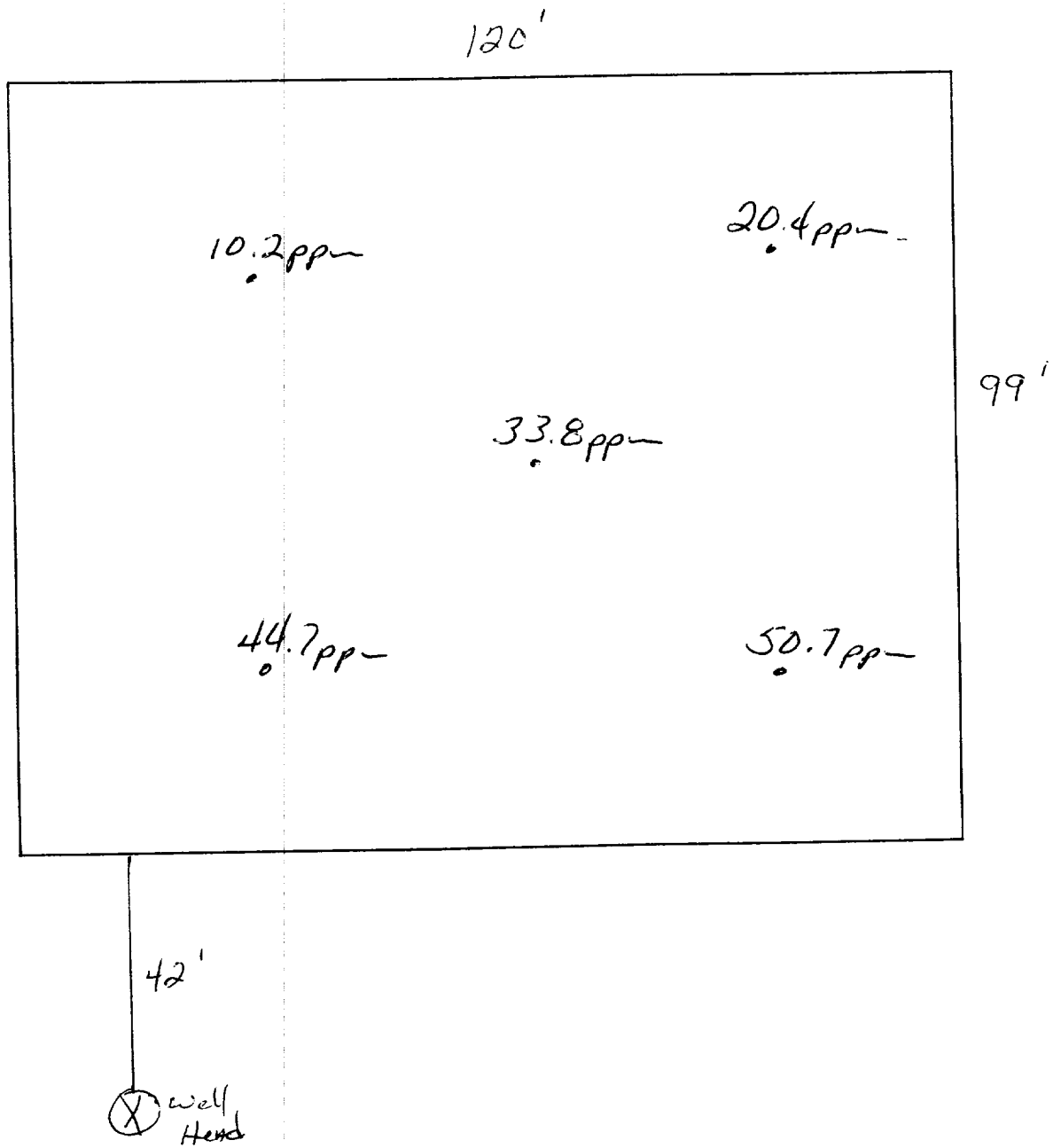
DATE 11/16/97 PRINTED NAME Ronald A. Dedrick  
SIGNATURE Ronald A. Dedrick AND TITLE Environmental Technician II

AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION APPROVED IN ACCORDANCE TO THE  
JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE

APPROVED: YES ☒ NO ☐ (REASON) use as Backfill  
SIGNED: Kerr C. Mamm DATE: 11-17-97

Ticamilla A-1 #1  
Sec 18 T26N R5W Unit L  
Moco

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: *13-Nov-97*  
COC No.: *5637*  
Sample No.: *16864*  
Job No.: *2-1000*

Project Name: *PNM Gas Services - Jicarilla A-1 #1 Landfarm*  
Project Location: *9711121307; 5pt. Composite*  
Sampled by: *RB* Date: *12-Nov-97* Time: *13:07*  
Analyzed by: *DC/HR* Date: *13-Nov-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>	<i>77</i>	<i>mg/kg</i>	<i>5</i>	<i>mg/kg</i>

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>	<i>ND</i>	<i>ppm</i>	<i>200</i>	<i>204</i>	<i>1.9</i>	<i>15%</i>

#### Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>91</i>	<i>90</i>	<i>(70-130)</i>	<i>1</i>	<i>20%</i>

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

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Date: *11/13/97*

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