

DEPUTY OIL & GAS INSPECTOR

FEB 08 1999

**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 ( *WFS* ) **Telephone:** 324-3764

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

Facility or Well Name: Ax: Apache m-8 Dr: p

Location: Unit: A Sec. 14 T. 25 N R. 4 W County Rio Arriba

**Pit Type:**      Separator                      Dehydrator                      Other      Or: *o*

**Land Type:** Jicarilla Apache

Pit Location: Pit dimensions: length 20' width 20' depth 3'

(Attach diagram)      Reference:      wellhead       $\chi$       other

Footage from reference: 225'

Direction from reference: 25<sup>o</sup> Degrees N East of North N  
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)	<u>0</u>

**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) 6  
No (0 points)

**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)

**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)	6

## 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) 12

**RANKING SCORE (TOTAL POINTS):** 12

Date Remediation Started: 11/16/98 Date Completed: 12/28/98 R4D  
11/17/98  
Remediation Method: Excavation X Approx. Cubic Yards 810  
Landfarmed X Amount Landfarmed (cubic yds): 810  
(Check all appropriate sections)  
Other \_\_\_\_\_

Remediation Location: Onsite \_\_\_\_\_ Offsite Axi Apache m-8  
(i.e., landfarmed onsite, name sand legal  
and location of offsite facility)

**General Description of Remedial Action:**

Remove contaminated soil from all 4 side walls and  
Bottom to a below 100 ppm head space reading

Excavated pit 27' x 27' x 30'

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

**Final Pit Closure Sampling:**

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

Sample Location Northwell, Eastwell, Southwell, West well  
Bottom 3 point composite

Sample depth 30'

Sample date 11/17/98 Sample time 1300

**Sample Results**

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

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

Field headspace (ppm) 13.2 ppm Ethylbenzene (ppb) \_\_\_\_\_

TPH ND ppm Method TPH-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 12/14/98

PRINTED NAME Gary Cook

SIGNATURE Gary Cook

AND TITLE Environmental Technician III

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

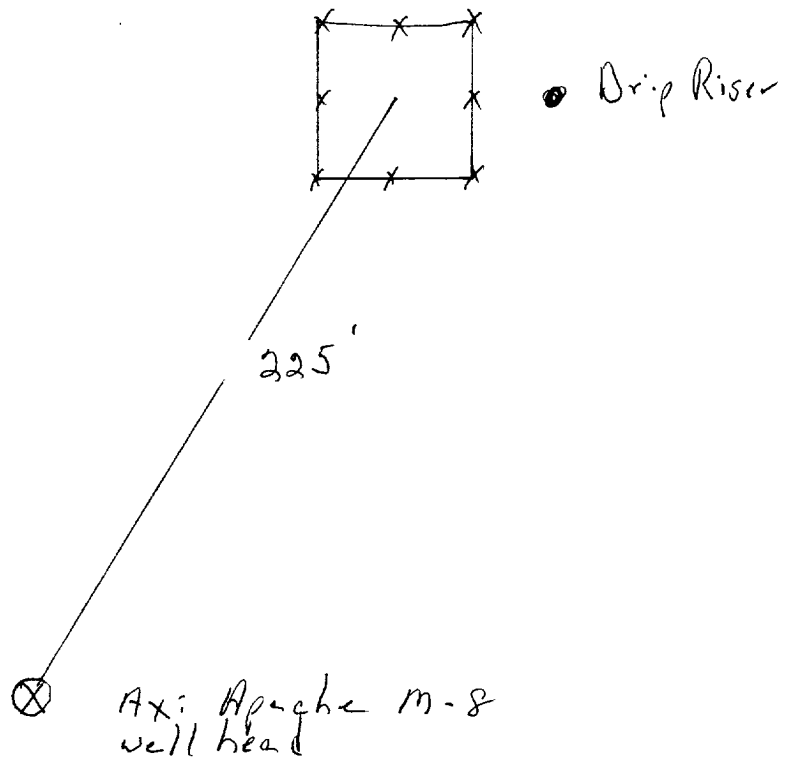
APPROVED: YES X NO \_\_\_\_\_ (REASON): \_\_\_\_\_

SIGNED: Ker C Mamm DATE: 12-15-98

Axi Apache m-8 Drip  
WFS  
Sec. 14, 25N, 4W, A

11/16/98

Site drawing:



not to scale

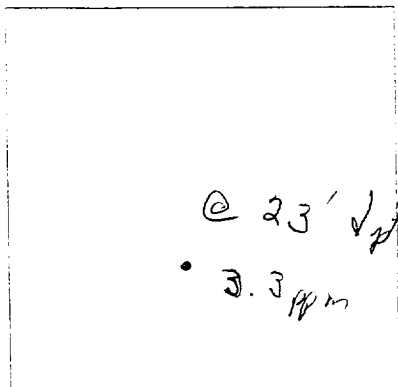
Axi Apache M-8 Drip

WFS

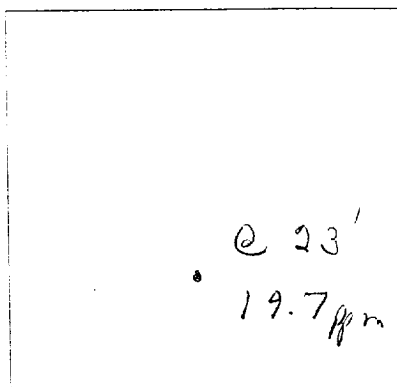
Sec. 14, 25N, 4W, 1A

11/17/98

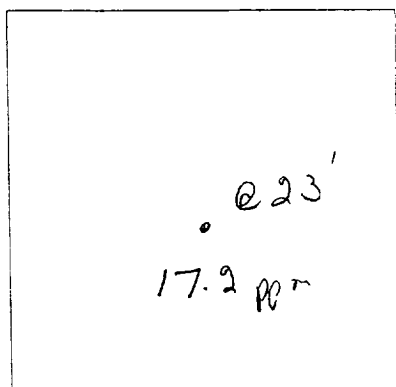
## North Wall



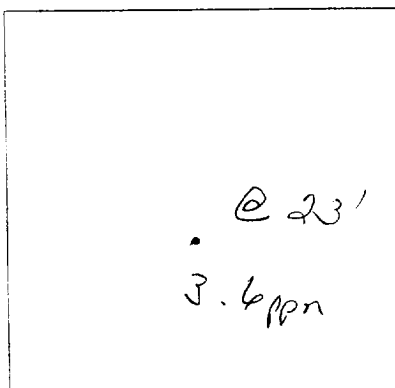
## South Wall



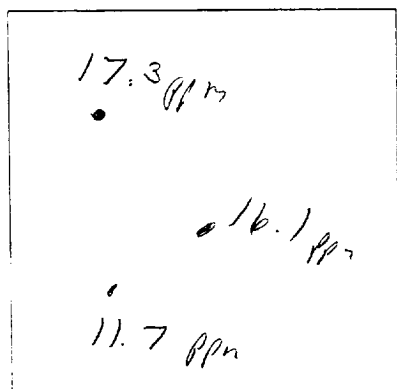
## East Wall



## West Wall



## Bottom



@ 30' depth  
clean sand

3 pt. Corp.

headspace reading = 13.2 ppm

OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 03-Dec-98

---

**CLIENT:** PNM - Public Service Company of NM

**Project:** Jicarilla Pit Remediation

**Lab Order:** 9811067

---

## **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: 03-Dec-98

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Axi Apache M-8 Drip
<b>Work Order:</b>	9811067	<b>Client Sample ID:</b>	9811171300; Bottom @ 30ft.
<b>Lab ID:</b>	9811067-01A	<b>Matrix:</b>	SOIL
<b>Project:</b>	Jicarilla Pit Remediation	<b>Collection Date:</b>	11/17/98 1:00:00 PM
		<b>COC Record:</b>	7429

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015</b>				Analyst: HR
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	12/1/98

**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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 03-Dec-98

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Axi Apache M-8 Drip
<b>Work Order:</b>	9811067	<b>Client Sample ID:</b>	9811171305; Walls @ 23ft.
<b>Lab ID:</b>	9811067-02A	<b>Matrix:</b>	SOIL
<b>Project:</b>	Jicarilla Pit Remediation	<b>Collection Date:</b>	11/17/98 1:05:00 PM
		<b>COC Record:</b>	7429

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015</b>				Analyst: HR
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	12/1/98

**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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING 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

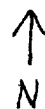
ON-SITE SOIL REMEDIATION REPORT

<b>Operator:</b> PNM Gas Services ( <u>WFS</u> ) <b>Telephone:</b> <u>324-3764</u>	
<b>Address:</b> <u>603 W. Elm Street Farmington, NM 87401</u>	
<b>Facility or Well Name:</b> <u>Ax: Apache M-8 Drip Land Farm #1</u>	
<b>Location:</b> Unit: <u>A</u> Sec. <u>14</u> T. <u>25 N</u> R. <u>4 W</u> County <u>Rio Arriba</u>	
<b>Land Type:</b> <u>Jicarilla Apache</u>	
<b>Date Remediation Started:</b> <u>11-14-98</u> <b>Date Completed:</b> <u>11-17-98</u>	
<b>Remediation Method:</b> Landfarmed <u>X</u> Approx. cubic yards <u>810</u> Composted <u>    </u> Other <u>    </u>	
<b>Depth to Ground Water:</b> (pts.) <u>0</u> <b>Distance to an Ephemeral Stream:</b> (pts.) <u>0</u> <b>Distance to Nearest Lake, Playa, or Watering Pond:</b> (pts.) <u>0</u> <b>Wellhead Protection Area:</b> (pts.) <u>0</u> <b>Distance to Surface Water:</b> (pts.) <u>0</u> <b>Ranking Score (Total Points):</b> <u>0</u>	<b>Final Closure Sampling:</b> <b>Sampling Date:</b> <u>12-10-98</u> <b>Time</b> <u>0735</u> <b>Sampling Results:</b> <b>Field Headspace</b> (ppm) <u>71.3 ppm</u> <b>TPH</b> (ppm) <u>890</u> <b>Method</b> <u>TPH 8015</u> <b>Other</b> <u>    </u>
<p>I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF</p> <p><b>DATE</b> <u>12/22/98</u> <b>PRINTED NAME</b> <u>Gary Cook</u> <b>SIGNATURE</b> <u><i>Gary Cook</i></u> <b>AND TITLE</b> <u>Environmental Technician III</u></p> <p>AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE</p> <p><b>APPROVED:</b> YES <u>X</u> NO <u>    </u> (REASON) <u>NO BACKFILL</u> <b>SIGNED:</b> <u><i>K. C. M...</i></u> <b>DATE:</b> <u>12-28-98</u></p>	

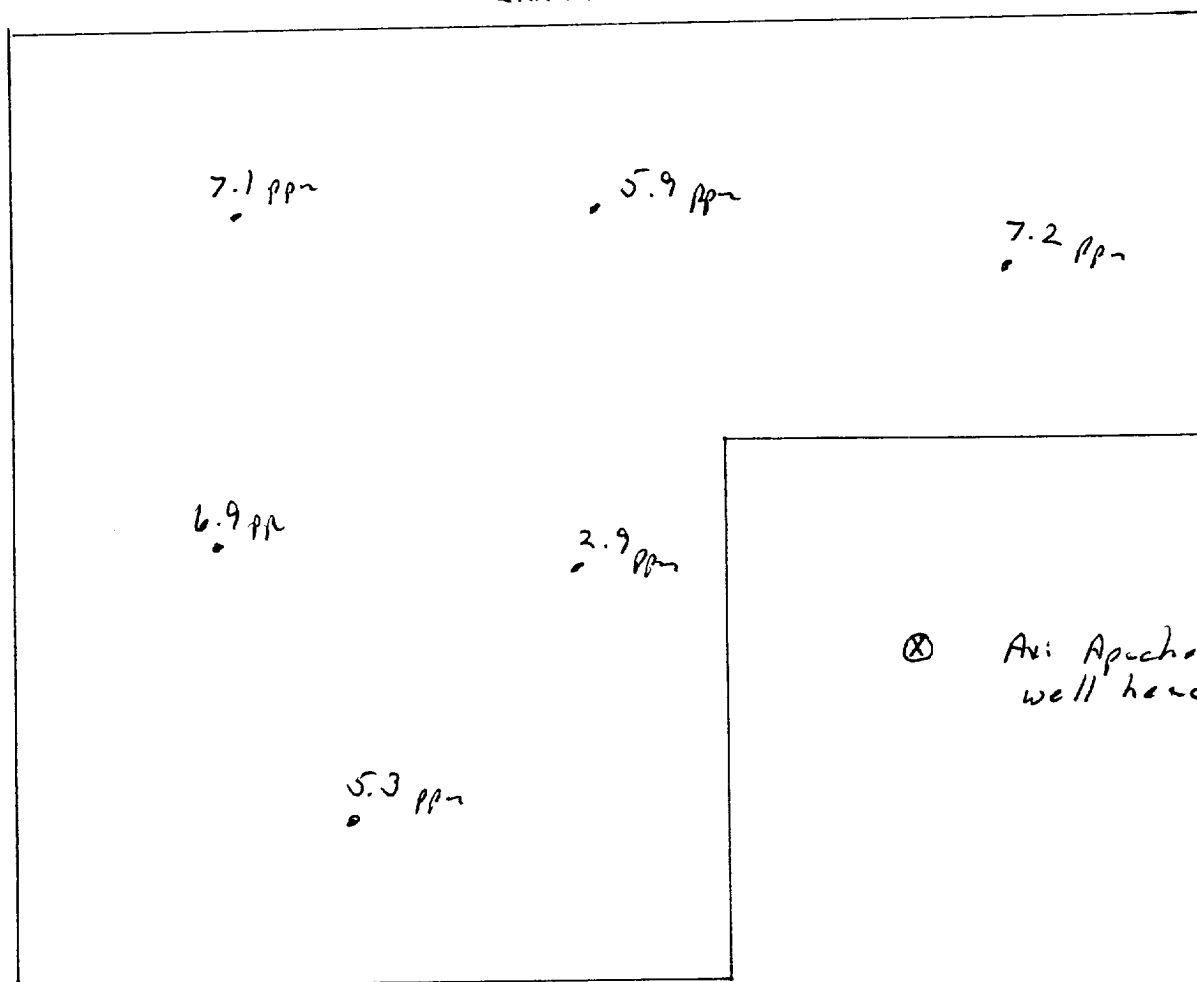
Axi Apache M-8 Drip  
WFS  
Sec. 14, 25N, 4W, A

11/17/98

Land Farm: Axi Apache M-8  
Sec. 14, 25N, 4W, A



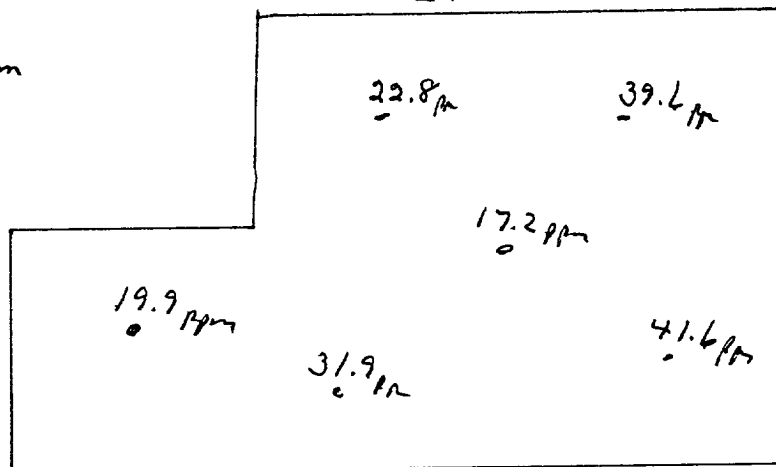
Land farm # 2



⊗ Axi Apache M-8  
well head

2"-12" depth  
soil vapor head space = 7.9 ppm

Land Farm # 1



soil vapor head space = 66.1 ppm 2"-12" depth

OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 21-Dec-98

---

**CLIENT:** PNM - Public Service Company of NM

**Project:** Jicarilla Pit Remediation

**Lab Order:** 9812026

## **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: 21-Dec-98

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Axi Apache M-8 Drip LF #1
<b>Work Order:</b>	9812026	<b>Client Sample ID:</b>	9812100735; 6pt. Composite
<b>Lab ID:</b>	9812026-03A	<b>Matrix:</b>	SOIL
<b>Project:</b>	Jicarilla Pit Remediation	<b>Collection Date:</b>	12/10/98 7:35:00 AM
		<b>COC Record:</b>	7447

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015</b>				Analyst: HR
T/R Hydrocarbons: C10-C28	890	25		mg/Kg	1	12/18/98

backfilled pit from borrow pit

**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
- Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING 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

<b>Operator:</b> PNM Gas Services ( <u>WFS</u> ) <b>Telephone:</b> <u>324-3764</u>																			
<b>Address:</b> <u>603 W. Elm Street Farmington, NM 87401</u>																			
<b>Facility or Well Name:</b> <u>Ax: Apache m-8 Drip Landfarm #2</u>																			
<b>Location:</b>	<b>Unit:</b> <u>A</u> <b>Sec.</b> <u>14</u> <b>T.</b> <u>25</u> <b>N</b> <b>R.</b> <u>4</u> <b>W</b> <b>County</b> <u>Rio Arriba</u>																		
<b>Land Type:</b> <u>Jicarilla Apache</u>																			
<b>Date Remediation Started:</b> <u>11-16-98</u> <b>Date Completed:</b> <u>11/17/98</u>																			
<b>Remediation Method:</b> Landfarmed <u>X</u> <b>Approx. cubic yards</b> <u>600</u> Composted <u>    </u> Other <u>    </u>																			
<table><tr><td>Depth to Ground Water:</td><td>(pts.)</td><td><u>0</u></td></tr><tr><td>Distance to an Ephemeral Stream:</td><td>(pts.)</td><td><u>0</u></td></tr><tr><td>Distance to Nearest Lake, Playa, or Watering Pond:</td><td>(pts.)</td><td><u>0</u></td></tr><tr><td>Wellhead Protection Area:</td><td>(pts.)</td><td><u>0</u></td></tr><tr><td>Distance to Surface Water:</td><td>(pts.)</td><td><u>12</u></td></tr><tr><td><b>Ranking Score (Total Points):</b></td><td></td><td><u>0</u></td></tr></table>	Depth to Ground Water:	(pts.)	<u>0</u>	Distance to an Ephemeral Stream:	(pts.)	<u>0</u>	Distance to Nearest Lake, Playa, or Watering Pond:	(pts.)	<u>0</u>	Wellhead Protection Area:	(pts.)	<u>0</u>	Distance to Surface Water:	(pts.)	<u>12</u>	<b>Ranking Score (Total Points):</b>		<u>0</u>	<b>Final Closure Sampling:</b> <b>Sampling Date:</b> <u>12-10-98</u> <b>Time</b> <u>0725</u> <b>Sampling Results:</b> Field Headspace (ppm) <u>13.8 ppm</u> TPH (ppm) <u>ND</u> <b>Method</b> <u>TPH-8215</u> Other <u>    </u>
Depth to Ground Water:	(pts.)	<u>0</u>																	
Distance to an Ephemeral Stream:	(pts.)	<u>0</u>																	
Distance to Nearest Lake, Playa, or Watering Pond:	(pts.)	<u>0</u>																	
Wellhead Protection Area:	(pts.)	<u>0</u>																	
Distance to Surface Water:	(pts.)	<u>12</u>																	
<b>Ranking Score (Total Points):</b>		<u>0</u>																	
<p>I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF</p> <table><tr><td><b>DATE</b></td><td><u>12-22-98</u></td><td><b>PRINTED NAME</b></td><td><u>Gary Cook</u></td></tr><tr><td><b>SIGNATURE</b></td><td><u>Gary Cook</u></td><td><b>AND TITLE</b></td><td><u>Environmental Technician III</u></td></tr></table>		<b>DATE</b>	<u>12-22-98</u>	<b>PRINTED NAME</b>	<u>Gary Cook</u>	<b>SIGNATURE</b>	<u>Gary Cook</u>	<b>AND TITLE</b>	<u>Environmental Technician III</u>										
<b>DATE</b>	<u>12-22-98</u>	<b>PRINTED NAME</b>	<u>Gary Cook</u>																
<b>SIGNATURE</b>	<u>Gary Cook</u>	<b>AND TITLE</b>	<u>Environmental Technician III</u>																
<p>AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE</p> <table><tr><td><b>APPROVED:</b></td><td><b>YES</b> <u>X</u> <b>NO</b> <u>    </u></td><td><b>(REASON)</b></td><td><u>use as Backfill</u></td></tr><tr><td><b>SIGNED:</b></td><td><u>Ken C. M...ll</u></td><td><b>DATE:</b></td><td><u>12-28-98</u></td></tr></table>		<b>APPROVED:</b>	<b>YES</b> <u>X</u> <b>NO</b> <u>    </u>	<b>(REASON)</b>	<u>use as Backfill</u>	<b>SIGNED:</b>	<u>Ken C. M...ll</u>	<b>DATE:</b>	<u>12-28-98</u>										
<b>APPROVED:</b>	<b>YES</b> <u>X</u> <b>NO</b> <u>    </u>	<b>(REASON)</b>	<u>use as Backfill</u>																
<b>SIGNED:</b>	<u>Ken C. M...ll</u>	<b>DATE:</b>	<u>12-28-98</u>																

OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 21-Dec-98

---

**CLIENT:** PNM - Public Service Company of NM

**Project:** Jicarilla Pit Remediation

**Lab Order:** 9812026

## **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: 21-Dec-98

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Axi Apache M-8 Drip LF #2
<b>Work Order:</b>	9812026	<b>Client Sample ID:</b>	9812100725; 6pt. Composite
<b>Lab ID:</b>	9812026-02A	<b>Matrix:</b>	SOIL
<b>Project:</b>	Jicarilla Pit Remediation	<b>Collection Date:</b>	12/10/98 7:25:00 AM
		<b>COC Record:</b>	7447

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015</b>				Analyst: HR
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	12/18/98

**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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -