

## ENGINE OIL & GAS INDICATOR

FEB 08 1999

### 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

<b>Operator:</b>	PNM Gas Services ( <u>Conoco</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>Axi Apache O-5</u>		
<b>Location:</b>	Unit: <u>B</u>	Sec. <u>9</u>	T. <u>25N</u> R. <u>4W</u> County <u>Rio Arriba</u>
<b>Pit Type:</b>	Separator <u>X</u>	Dehydrator <u>    </u>	Other <u>    </u>
<b>Land Type:</b>	<u>Jicarilla Apache</u>		

<b>Pit Location:</b>	Pit dimensions:	length <u>20'</u>	width <u>20'</u>	depth <u>3'</u>
(Attach diagram)	Reference:	wellhead <u>X</u>	other <u>    </u>	
	Footage from reference:	<u>70'</u>		
	Direction from reference:	<u>20</u> Degrees <u>X</u> East <u>    </u> North <u>X</u>	of West South <u>    </u>	

<b>Depth to Ground Water:</b>		Less than 50 feet	(20 points)	
(Vertical distance from contaminants to seasonal high water elevation of ground water)		50 feet to 99 feet	(10 points)	<u>0</u>
		Greater than 100 feet	(0 points)	<u>0</u>

<b>Wellhead Protection Area:</b>		Yes	(20 points)	
(Less than 200 feet from a private domestic water source, or; less than 1,000 feet from all other water sources)		No	(0 points)	<u>0</u>

<b>Distance to Surface Water:</b>		Less than 200 feet	(20 points)	
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)		200 feet to 1,000 feet	(10 points)	<u>0</u>
		Greater than 1,000 feet	(0 points)	<u>0</u>

<b>Distance to Ephemeral Stream (dry wash):</b>		Less than or equal to 100 feet	(10 points)	
(Horizontal distance to all downgradient streams having a width of at least 10 feet)		Greater than 100 feet	(0 points)	<u>0</u>

<b>Distance to Nearest Lake, Playa, or Watering Pond:</b>		Less than or equal to 100 feet	(10 points)	
(Horizontal distance to all downgradient lakes, playas and livestock or wildlife water ponds)		Greater than 100 feet	(0 points)	<u>0</u>

<b>RANKING SCORE (TOTAL POINTS):</b>	<u>0</u>
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Date Remediation Started:

11/3/98

Date Completed:

12/21/98

Remediation Method:

Excavation

X

Approx. Cubic Yards

85

(Check all appropriate sections)

Landfarmed

X

Amount Landfarmed (cubic yds):

85

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 100ppm headspace readings. Pit bottom is sandstone. 3 Pt composite at bottom. Final excavation: 25' x 23' x 4'.

Ground Water Encountered:

No

X

Yes

Depth \_\_\_\_\_

## Final Pit Closure Sampling:

Sample Location

North, East, South, West side wall and Pit bottom.

Sample depth

4'

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

Sample date

11/3/98

Sample time

1133

## Sample Results

Soil: Benzene (ppm)

ND

Water: Benzene (ppb)

Total BTEX (ppm)

122.0

Toluene (ppb)

Field headspace (ppm)

1656

Ethylbenzene (ppb)

TPH

570

ppm

Method

EGIS

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

X12/15/98

PRINTED NAME

Roy Burnham

SIGNATURE

Roy Burnham

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):

R.A. Attached

SIGNED:

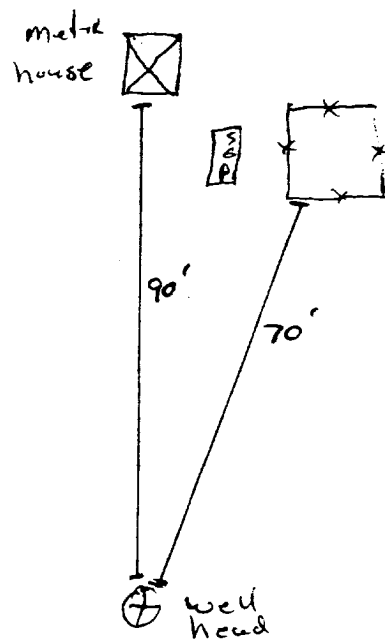
Ken McManis

DATE:

12-15-98

AXI Apache O-5  
Sec-9 T-25N R-4W ul B  
Conoco

### Site Drawing



Not to scale

At Apache 0-5  
Sec-9 T-25N R-4W 4L-B  
Conoco

# EXCAVATION DRAWING

North wall  
Sample 3'  
4.9ppm

25'x23'x4'

West wall  
Sample 3'  
4.0ppm

EAST wall  
Sample 3'  
2.1ppm

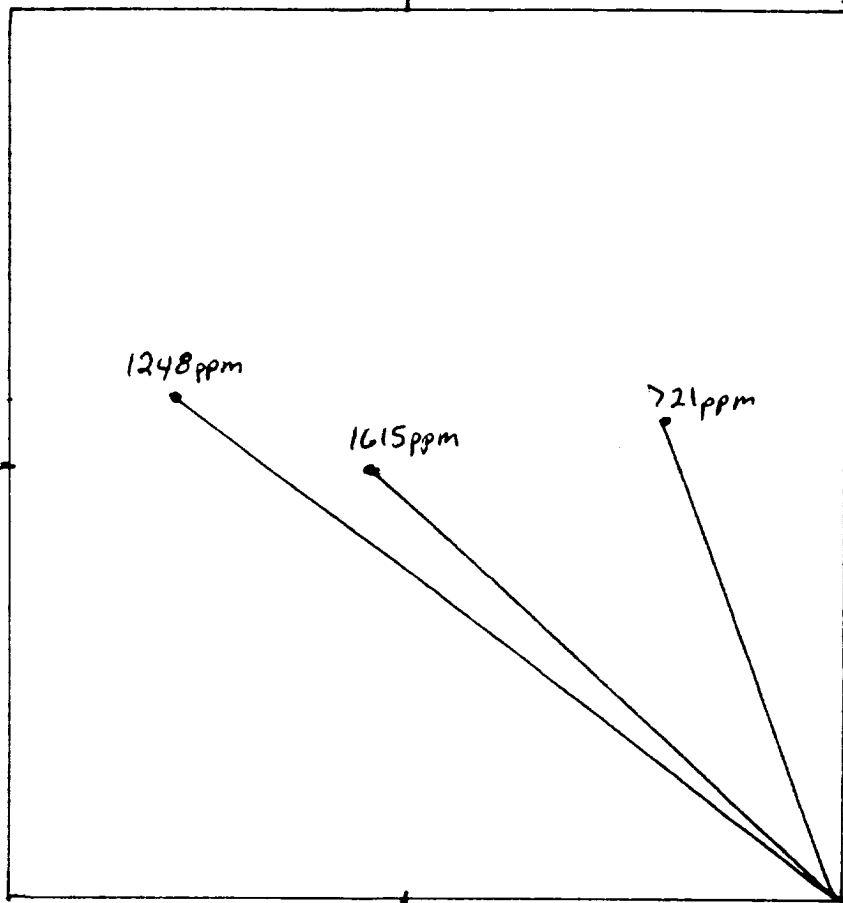
South wall  
Sample 3'  
6.0ppm

Bottom  
Sample 4'  
1656ppm

1248ppm

1615ppm

721ppm



OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 16-Nov-98

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

**Project:** Jicarilla Pit Remediation

**Lab Order:** 9811030

## **CASE NARRATIVE**

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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: 16-Nov-98

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Axi Apache O-5
<b>Work Order:</b>	9811030	<b>Client Sample ID:</b>	9811031133; 3pt Comp Bottom
<b>Lab ID:</b>	9811030-04A	<b>Matrix:</b>	SOIL
<b>Project:</b>	Jicarilla Pit Remediation	<b>Collection Date:</b>	11/3/98 11:33:00 AM
		<b>COC Record:</b>	7361

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015</b>				<b>Analyst: DC</b>
T/R Hydrocarbons: C10-C28	570	25		mg/Kg	1	11/15/98
<b>TEX</b>		<b>SW8020A</b>				<b>Analyst: HR</b>
Benzene	ND	1000		µg/Kg	1000	11/9/98
Toluene	14000	2000		µg/Kg	1000	11/9/98
Ethylbenzene	12000	1000		µg/Kg	1000	11/9/98
m,p-Xylene	79000	2000		µg/Kg	1000	11/9/98
o-Xylene	17000	1000		µg/Kg	1000	11/9/98

122000  
122.000 ppm

<b>Qualifiers:</b>	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr - Surrogate

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1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 16-Nov-98

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Axi Apache O-5
<b>Work Order:</b>	9811030	<b>Client Sample ID:</b>	9811031132; 4pt Comp Walls
<b>Lab ID:</b>	9811030-03A	<b>Matrix:</b>	SOIL
<b>Project:</b>	Jicarilla Pit Remediation	<b>Collection Date:</b>	11/3/98 11:32:00 AM
		<b>COC Record:</b>	7361

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015</b>				<b>Analyst: HR</b>
T/R Hydrocarbons: C10-C28	48	25		mg/Kg	1	11/14/98

**Qualifiers:**

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surrogate - Surrogate

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## ***Environmental Services***

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Well Name:	Axi Apache O #5
Well Legals:	Unit B, Sec 9, T25N, R4W
Pit Type:	Separator
Horizontal Distance to Surface Water:	Greater than 1,000 feet
Groundwater Depth:	Greater than 100 feet

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### **RISK ANALYSIS**

PNM requests closure of their former pit on the Jicarilla O #5 well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 308 feet based upon the elevation of the site and the elevation of the nearest "listed" or "named" wash. (Reference: Lapis Point, NM series 7.5 minute topographic map.)
2. The site is located outside of the "vulnerable area" as defined under OCC Order No. R-7940-C.
3. PNM excavated 85 cubic yards of soil from the former pit. Subsurface lateral contamination has been remediated (see attached analytical results). Source removal minimizes the possibility of surface water contamination.
4. Sandstone was encountered at 4 feet below ground surface. Bedrock/sandstone provides a barrier between remaining contamination and groundwater. Vertical migration through bedrock or sandstone to groundwater is unlikely.
5. PNM excavated and performed remediation to the maximum depth and horizontal extent practicable.

PNM believes their former pit on the Axi Apache O #5 well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 800 pits.



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ENVIRONMENTAL  
PROTECTION OFFICE  
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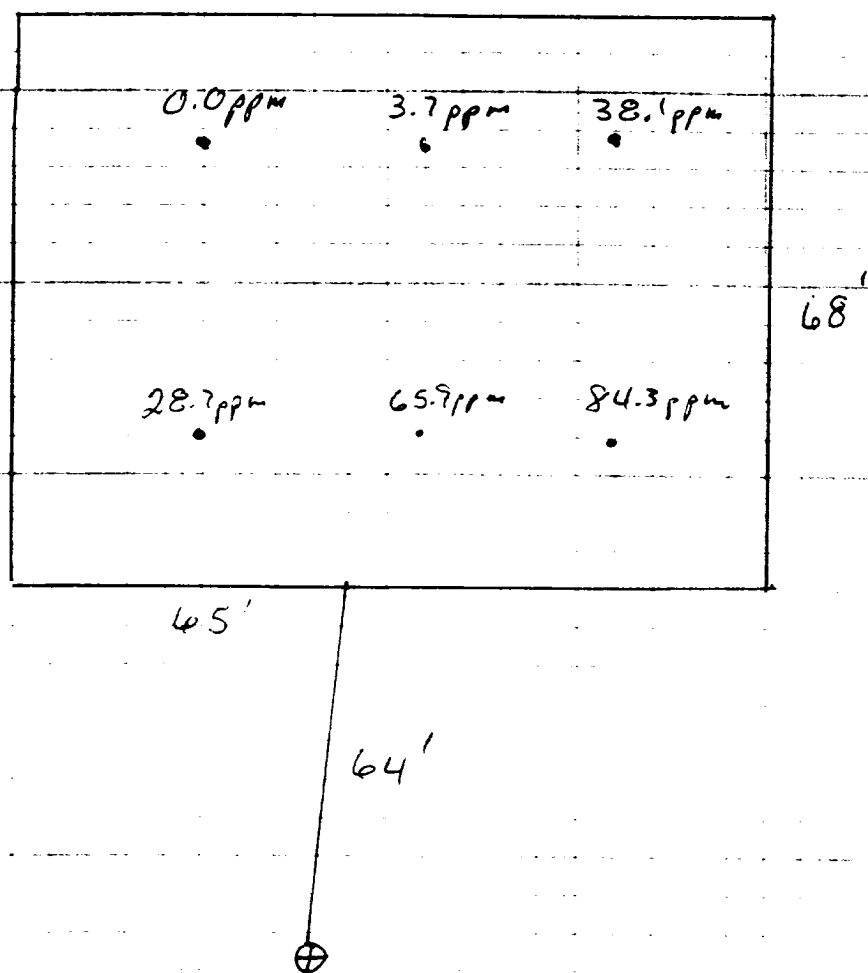
SUBMIT 1 COPY TO  
NATURAL  
RESOURCE DEPT  
AND OIL GAS  
ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>PNM Gas Services (Conoco)</u> Telephone: <u>324-3764</u>																			
Address: <u>603 W. Elm Street Farmington, NM 87401</u>																			
Facility or Well Name: <u>Ar. Apache O-5</u>																			
Location: Unit: <u>B</u> Sec. <u>9</u> T. <u>25 N</u> R. <u>4 W</u> County <u>Rio Arriba</u>																			
Land Type: <u>Jicarilla Apache</u>																			
Date Remediation Started: <u>11/3/98</u> Date Completed: <u>12/11/98</u>																			
Remediation Method: Landfarmed <input checked="" type="checkbox"/> Approx. cubic yards <u>85</u> Composted <input type="checkbox"/> Other <input type="checkbox"/>																			
<table border="0"><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>0</u></td></tr><tr><td>Ranking Score (Total Points):</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>0</u>	Ranking Score (Total Points):		<u>0</u>	<p>Final Closure Sampling:</p> <p>Sampling Date: <u>12/9/98</u> Time <u>0948</u></p> <p>Sampling Results:</p> <p>Field Headspace (ppm) <u>84.3</u></p> <p>TPH (ppm) <u>43</u> Method <u>8015</u></p> <p>Other _____</p>
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>0</u>																	
Ranking Score (Total Points):		<u>0</u>																	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF																			
DATE <u>12/16/98</u> PRINTED NAME <u>Roy Burnham</u>																			
SIGNATURE <u>Roy Burnham</u> AND TITLE <u>Environmental Technician II</u>																			
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE																			
APPROVED: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> (REASON) _____																			
SIGNED: <u>K. C. M...</u> DATE: <u>12-21-98</u>																			

Ati Apache 0-5  
Sec- 9 T-25N R-4W 4L B  
Conoco

# LAND FARM DRAWING



Not to Scale

OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 15-Dec-98

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**CLIENT:** PNM - Public Service Company of NM  
**Project:** Jicarilla Pit Remediation  
**Lab Order:** 9812017

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**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.

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LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 15-Dec-98

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Axi Apache O-5 LF
<b>Work Order:</b>	9812017	<b>Client Sample ID:</b>	9812090948 6pt Composite
<b>Lab ID:</b>	9812017-04A	<b>Matrix:</b>	SOIL
<b>Project:</b>	Jicarilla Pit Remediation	<b>Collection Date:</b>	12/9/98 9:48:00 AM
		<b>COC Record:</b>	7449

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015</b>				<b>Analyst: HR</b>
T/R Hydrocarbons: C10-C28	43	25		mg/Kg	1	12/11/98

**Qualifiers:**

PQL - Practical Quantitation Limit  
ND - Not Detected at Practical Quantitation Limit  
J - Analyte detected below Practical Quantitation Limit  
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S - Spike Recovery outside accepted recovery limits  
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