

Denny E. Faust
DEPUTY OIL & GAS INSPECTOR

FEB 08 1999

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE

P.O. BOX 507
DULCE, NEW MEXICO 87528

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

Approved
PIT REMEDIATION AND CLOSURE REPORT

Operator:	PNM Gas Services (<i>Taurus</i>)		Telephone:	324-3764	
Address:	603 W. Elm Street Farmington, NM 87401				
Facility or Well Name:	<i>Jicarilla 107-1</i>				
Location:	Unit:	<i>I</i>	Sec.	<i>27</i>	T. <i>26 N</i> R. <i>4 W</i> County <i>Rio Arriba</i>
Pit Type:	Separator	<i>X</i>	Dehydrator		Other
Land Type:	<i>Jicarilla Apache</i>				
Pit Location:	Pit dimensions:	length	<i>20'</i>	width	<i>20'</i> depth <i>3'</i>
(Attach diagram)	Reference:	wellhead	<i>X</i>	other	
	Footage from reference:	<i>141'</i>			
	Direction from reference:	<i>60</i> Degrees	East	North	
		<i>X</i> West	of	South	<i>X</i>
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)	<i>0</i>
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)	<i>0</i>
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)	<i>0</i>
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)	<i>0</i>
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)	<i>0</i>
RANKING SCORE (TOTAL POINTS):					<i>0</i>

Date Remediation Started:

11/2/98

Date Completed:

12/15/98 RAD
11/2/98

Remediation Method:

Excavation

X

Approx. Cubic Yards

62

(Check all appropriate sections)

Landfarmed

X

Amount Landfarmed (cubic yds):

62

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 4 side walls to get a below 100 ppm headspace reading.Back at 5' bottomExcavated pit 16' x 21' x 5'

Ground Water Encountered:

No

X

Yes _____

Depth _____

Final Pit Closure Sampling:

Sample Location

North wall, East wall, South wall, West wall
Bottom 3 point composite

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

Sample depth

5'

Sample date

11/2/98

Sample time

1140

Sample Results

Soil: Benzene (ppm)

1.30 ppm

Water: Benzene (ppb)

Total BTEX (ppm)

177.2 ppm

Toluene (ppb)

Field headspace (ppm)

1954

Ethylbenzene (ppb)

TPH 410 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

11/2/98

PRINTED NAME

Gary Cook

SIGNATURE

Mary 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):

P.A. Attached

SIGNED:

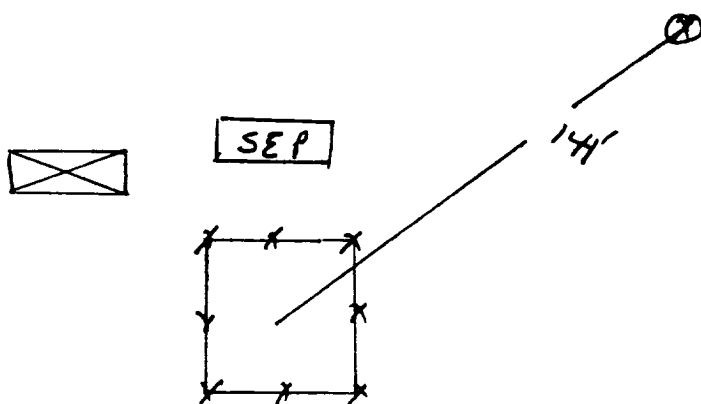
Kee C Mandle

DATE:

12-15-98

Jicavilla 107-1
Taurus
Sec. 27, 26 N, 4 W, I

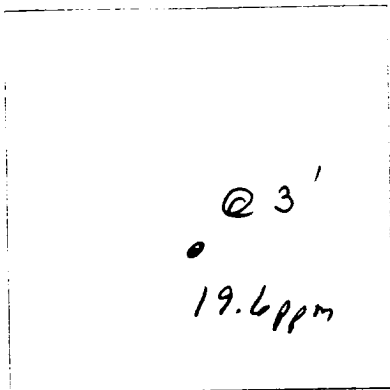
11/2/98



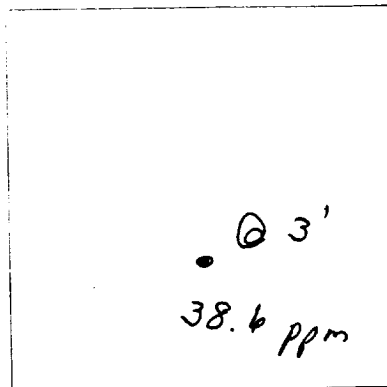
not to scale

Jicarilla 107#1

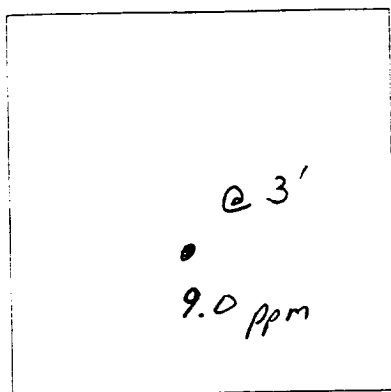
North Wall



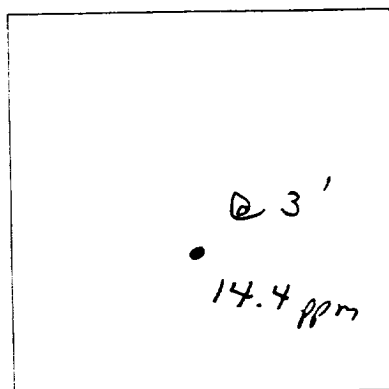
South Wall



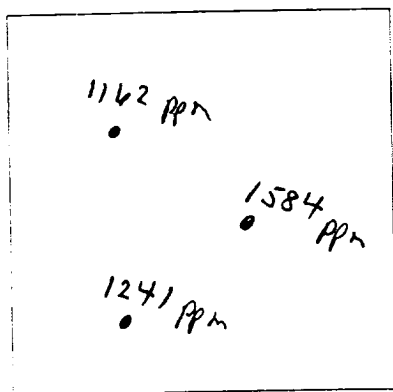
East Wall



West Wall



Bottom



@ 5' depth
Rock

3 pt. comp.
headspace reading = 18.1 ppm

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 16-Nov-98

CLIENT: PNM - Public Service Company of NM
Project: Jicarilla 107-1
Lab Order: 9811022

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: 16-Nov-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 107-1
Work Order:	9811022	Client Sample ID:	9811021140; Bottom @ 5 ft
Lab ID:	9811022-01A	Matrix:	SOIL
Project:	Jicarilla 107-1	Collection Date:	11/2/98 11:40:00 AM
		COC Record:	7417

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	410	25		mg/Kg	1	11/14/98
BTEX		SW8020A				Analyst: HR
Benzene	1200	1000		µg/Kg	1000	11/7/98
Toluene	23000	2000		µg/Kg	1000	11/7/98
Ethylbenzene	17000	1000		µg/Kg	1000	11/7/98
m,p-Xylene	110000	2000		µg/Kg	1000	11/7/98
o-Xylene	26000	1000		µg/Kg	1000	11/7/98

177,200
177.200 ppm

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	Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 16-Nov-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 107-1
Work Order:	9811022	Client Sample ID:	9811021145; Walls @ 3 ft
Lab ID:	9811022-02A	Matrix:	SOIL
Project:	Jicarilla 107-1	Collection Date:	11/2/98 11:45:00 AM
		COC Record:	7417

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	ND	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
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Environmental Services

Well Name:	Jicarilla 107 #1
Well Legals:	Unit J, Sec 27, T26N, R4W
Pit Type:	Separator
Horizontal Distance to Surface Water:	Greater than 1,000 feet
Groundwater Depth:	Greater than 100 feet

RISK ANALYSIS

PNM requests closure of their former pit on the Jicarilla 107 #1 well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 428 feet based upon the elevation of the site and the elevation of the nearest "listed" or "named" wash. (Reference: Schmitz Ranch, 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 62 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. Rock 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.
5. PNM excavated and performed remediation to the maximum depth and horizontal extent practicable.

PNM believes their former pit on the Jicarilla 107 #1 well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 800 pits.

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

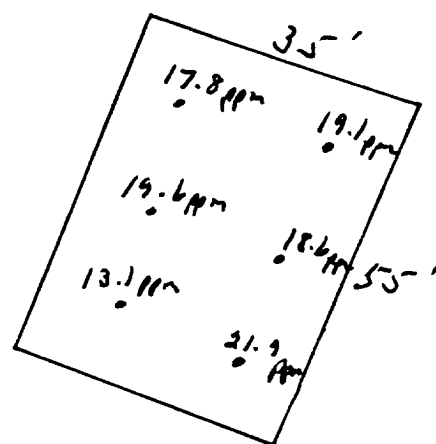
Operator: <u>PNM Gas Services (Tenneco)</u> Telephone: <u>324-3764</u>																			
Address: <u>603 W. Elm Street Farmington, NM 87401</u>																			
Facility or Well Name: <u>Jicarilla 107-1</u>																			
Location: Unit: <u>I</u> Sec. <u>27</u> T. <u>26</u> N R. <u>4</u> W County <u>Rio Arriba</u>																			
Land Type: <u>Jicarilla Apache</u>																			
Date Remediation Started: <u>11/2/98</u> Date Completed: <u>11/2/98</u>																			
Remediation Method: Landfilled <u>X</u> Approx. cubic yards <u>62 yards</u> Composted <u> </u> Other <u> </u>																			
<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 style="text-align: center;">Final Closure Sampling:</p> <p>Sampling Date: <u>12/1/98</u> Time <u>0940</u></p> <p>Sampling Results:</p> <p>Field Headspace (ppm) <u>47.9 ppm</u></p> <p>TPH (ppm) <u>370</u> Method <u>TPH-8010</u></p> <p>Other <u> </u></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>																	
<p>I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF</p> <p>DATE <u>12/14/98</u> PRINTED NAME <u>Reynold A. Dedrick Gary Cook</u></p> <p>SIGNATURE <u><i>Gary Cook</i></u> AND TITLE <u>Environmental Technician II</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>APPROVED: YES <u>X</u> NO <u> </u> (REASON) <u>No Backfill</u></p> <p>SIGNED: <u><i>Kerr C. Marshall</i></u> DATE: <u>12-15-98</u></p>																			

Jicavilla 107-1
Taurus
Sec. 27, 26N, 4W, I

11/2/98

↑
N

Land farmed: On location.
(62 yards)



2"-12" depth

Soil vapor head space = 47.9 ppm

Not to scale

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 10-Dec-98

CLIENT: PNM - Public Service Company of NM

Project: Jicarilla Pit Remediation

Lab Order: 9812004

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: 10-Dec-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 107-1 LF
Work Order:	9812004	Client Sample ID:	9812010940; 6pt Composite
Lab ID:	9812004-04A	Matrix:	SOIL
Project:	Jicarilla Pit Remediation	Collection Date:	12/1/98 9:40:00 AM
		COC Record:	7446

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	370	25		mg/Kg	1	12/9/98

pit will be backfilled from borrow pit near
Jic. Landfarm #6

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

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