

George L. Frost
DEPUTY OIL & GAS INSPECTOR

FEB 08 1999

JICARILLA APACHE TRIBE

ENVIRONMENTAL PROTECTION OFFICE

P.O. BOX 507
DULCE, NEW MEXICO 87528

OK
RISK
BTE
SUBMIT 1 COPY TO
NATURAL
RESOURCE DEPT
AND OIL & GAS
ADMINISTRATION

Approved
PIT REMEDIATION AND CLOSURE REPORT

Operator: PNM Gas Services (*Forkenergy*) Telephone: 324-3764

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: *Jicarilla Apache Tribal 122-1*

Location: Unit: *D* Sec. *4* T. *25N* R. *4W* County *Rio Arriba*

Pit Type: Separator ☒ Dehydrator ☐ Other ☐

Land Type: *Jicarilla Apache*

Pit Location: Pit dimensions: length *18'* width *18'* depth *2'*

(Attach diagram) Reference: wellhead ☒ other ☐

Footage from reference: *100'*

Direction from reference: *45* 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)	<input type="checkbox"/>
50 feet to 99 feet	(10 points)	<input type="checkbox"/>
Greater than 100 feet	(0 points)	<input checked="" type="checkbox"/>

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)	<input type="checkbox"/>
No	(0 points)	<input checked="" type="checkbox"/>

Distance to Surface Water:

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

Less than 200 feet	(20 points)	<input type="checkbox"/>
200 feet to 1,000 feet	(10 points)	<input type="checkbox"/>
Greater than 1,000 feet	(0 points)	<input checked="" type="checkbox"/>

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)	<input type="checkbox"/>
Greater than 100 feet	(0 points)	<i>10</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)	<input type="checkbox"/>
Greater than 100 feet	(0 points)	<input checked="" type="checkbox"/>

RANKING SCORE (TOTAL POINTS): *10*

Date Remediation Started: 10/8/98 Date Completed: 1/6/99

Remediation Method: Excavation X Approx. Cubic Yards 376

(Check all appropriate sections)

Landfarmed X Amount Landfarmed (cubic yds): 376

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 reading. Pit bottom is sandstone. Final excavation: 25' x 14' x 29'.

Ground Water Encountered: No X Yes _____ Depth _____

Final Pit Closure Sampling:

Sample Location North, East, South, West side walls and Pit bottom

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

Sample depth 29'

Sample date 10/8/98

Sample time 0845
0846 ✓

Sample Results

Soil: Benzene (ppm) ND

Water: Benzene (ppb) _____

Total BTEX (ppm) 120.500

Toluene (ppb) _____

Field headspace (ppm) 945

Ethylbenzene (ppb) _____

TPH 2200 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 10/27/98

PRINTED NAME Roy Burnham

SIGNATURE Roy Burnham

AND TITLE Environmental Technician II

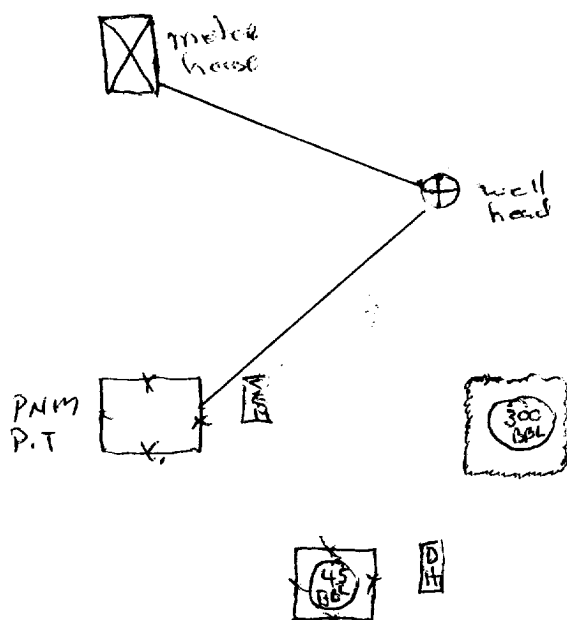
AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO _____ (REASON): R.A. Attached

SIGNED: Karl C Mamm DATE: 11-30-98

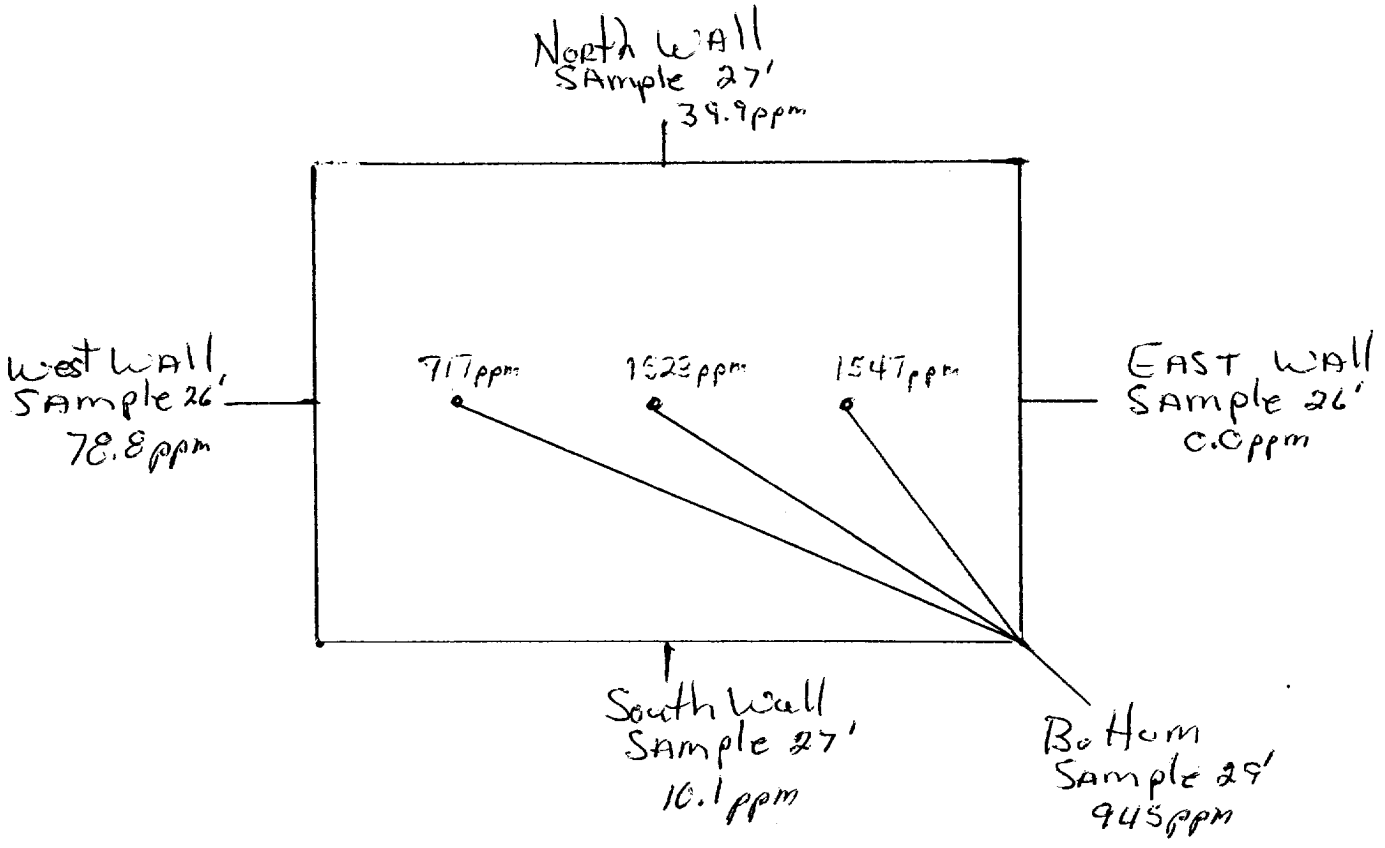
Jicarilla Apache Tribal 122-1
Sec-4 T-25N R-4W 4L(D)
Forceneray

SITE DRAWING



SICARILLA Apache Tribal 122-1
Sec-4 T-25N R-4W LL(D)
Foreenergy

EXCAVATION DRAWING



OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 23-Oct-98

CLIENT: PNM - Public Service Company of NM

Project: Jicarilla Pit Remediation

Lab Order: 9810032

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.



ANALYTICAL REPORT

Date: 23-Oct-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Apache Tribal 122-1
Work Order:	9810032	Client Sample ID:	9810090846; 3pt. Comp. Bottom
Lab ID:	9810032-04A	Matrix:	SOIL
Project:	Jicarilla Pit Remediation	Collection Date:	10/8/98 8:46:00 AM
		COC Record:	7394

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	2200	25		mg/Kg	1	10/20/98
BTEX		SW8020A				Analyst: HR
Benzene	ND	1000		µg/Kg	1000	10/16/98
Toluene	11000	2000		µg/Kg	1000	10/16/98
Ethylbenzene	4500	1000		µg/Kg	1000	10/16/98
m,p-Xylene	84000	2000		µg/Kg	1000	10/16/98
o-Xylene	21000	1000		µg/Kg	1000	10/16/98

120500
120.5 ppm

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

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Oct-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Apache Tribal 122-1
Work Order:	9810032	Client Sample ID:	9810090845; 4pt. Comp. Walls
Lab ID:	9810032-03A	Matrix:	SOIL
Project:	Jicarilla Pit Remediation	Collection Date:	10/8/98 8:45:00 AM
		COC Record:	7394

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	560	25		mg/Kg	1	10/14/98

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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Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



Environmental Services

Well Name:	Jicarilla Apache Tribal 122-1
Well Legals:	Unit D, Sec 4, T25N, 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 Apache Tribal 122-1 well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 153 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 376 cubic yards of soil from the former pit. Subsurface lateral contamination has been remediated (see attached map and analytical results for the side wall profiles). Source removal minimizes the possibility of surface water contamination.
4. Sandstone was encountered at 29 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 Apache Tribal 122-1 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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AND OIL GAS
ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT

Operator: PNM Gas Services (Forcenergy) Telephone: 324-3764
Address: 603 W. Elm Street Farmington, NM 87401
Facility or Well Name: JICARILLA Apache Tribal 122-1
Location: Unit: D Sec. 4 T. 25 N R. 4 W County Rio Arriba
Land Type: Jicarilla Apache

Date Remediation Started: 10/8/98 Date Completed: 12/7/98
Remediation Method: Landfirmed X Approx. cubic yards 376
Composted
Other

Depth to Ground Water: (pts.) 0
Distance to an Ephemeral Stream: (pts.) 16
Distance to Nearest Lake, Playa,
or Watering Pond: (pts.) 6
Wellhead Protection Area: (pts.) 0
Distance to Surface Water: (pts.) 0
Ranking Score (Total Points): 10

Final Closure Sampling:

Sampling Date: 11/24/98 Time 1103
Sampling Results:
Field Headspace (ppm) 46.5
TPH (ppm) 800 Method 8015
Other

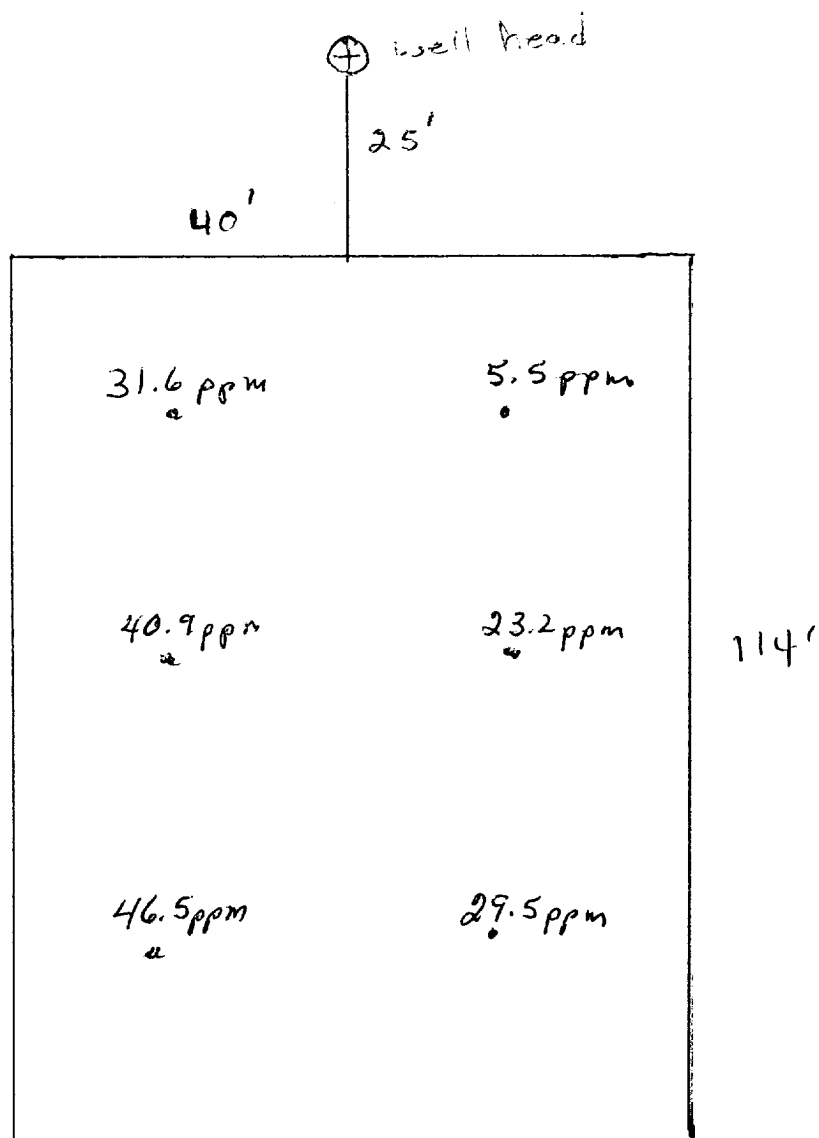
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 1/5/99 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) Don't use as backfill.
SIGNED: Karen L. Callado DATE: 01-06-99

Jicarilla Apache Tribal 122-1
Sec-4 T-25N R-4W UL(D)
Forcenergy



Not to Scale

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 08-Dec-98

CLIENT: PNM - Public Service Company of NM
Project: Jicarilla Pit Remediation Landfarms
Lab Order: 9811079

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

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All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 08-Dec-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Apache Tribal 122-1LF
Work Order:	9811079	Client Sample ID:	9811241103; 6pt Composite
Lab ID:	9811079-04A	Matrix:	SOIL
Project:	Jicarilla Pit Remediation Landfarms	Collection Date:	11/24/98 11:03:00 AM
		COC Record:	7443

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	800	25		mg/Kg	1	12/7/98

Qualifiers:

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ND - Not Detected at Practical Quantitation Limit
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