Denny & Fount
DEPUTY OIL & GAS INSPECTOR JICARILLA APACHE TRIBE

FEB 0 8 1999 ENVIRONMENTAL PROTECTION OFFICE

SUBMIT 1 COPY TO NATURAL RESOURCE DEPT AND OIL GAS ADMINISTRATION

P.O. BOX 507 **DULCE, NEW MEXICO 87528**

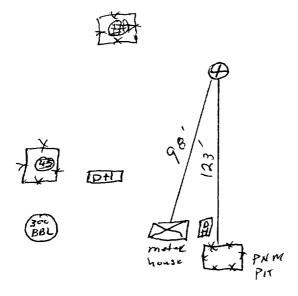
PIT REMEDIATION AND CLOSURE REPORT

Operator: PNM Gas Services (Amoco) Telephone: 324-3764							
Address: 603 W. Elm Street Farmington, NM 87401							
Facility or Well Name	: JICARILLA	B-1E					
Location: Unit:	Sec. 22	t. <u>24 n</u> R. <u>5 w</u>	County Rio Arriba	-			
Pit Type: Sepa	rator Dehydrator	X Other					
Land Type:	lla Apache	_	Page 1				
Pit Location:	Pit dimensions: length	<i>೩೦′</i> width <u>೩೦′</u>	depth 4				
(Attach diagram)	Reference: wellhead	χ other					
	Footage from reference:	23′					
	Direction from reference: Duc		North				
		West	of South <u>X</u>	-			
Depth to Ground Wat (Vertical distance from contaminants to seasonal high water elevation of ground water)		Less than 50 feet 50 feet to 99 feet Greater than 100 feet	(20 points) (10 points) (0 points)	10			
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or, less than 1,000 feet from all other water sources) (20 points) (0 points)							
Distance to Surface (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches	DIST. 3	Less than 200 feet 200 feet to 1,000 feet Greater than 1,000 feet	(20 points) (10 points) (0 points)	0			
Distance to Epheme (Horizontal distance to all downgrad streams having a width of at least 10 feet)	-	Less than or equal to 100 feet Greater than 100 feet	(10 points) (0 points)	<u>ø</u>			
Pond: (Horizontal distance to all downgrad		Less than or equal to 100 feet Greater than 100 feet	(10 points) (0 points)	<u>Æ</u>			
lakes, playas, and livestock or wildlift water ponds)	15						

Date Remediation Started:	: <u>4/18</u> /98	Date Completed:	9/9/98			
Remediation Method:	Excavation X	Approx. Cubic Yards	404			
(Check all appropriate	Landfarmed X	Amount Landfarmed (cubic)	yds): <u>404</u>			
sections)	Other					
Remediation Location: (i.e., landfarmed onsite, name and location of offsite facility)	OnsiteX	Offsite				
Removed Con as to get a was sandston	ntaminated Soil below 100ppm he	ead space reading				
Ground Water Encountered: No X Yes Depth						
Final Pit Closure Sampling:	Sample Location North,	EAST, SOUTH, WEST	7 side walls			
(if multiple samples, attach sample result and diagram of sample locations and depths.)	Sample depth Sample date Sample Results	·	402			
	enzene (ppm) ND	Water: Benzene (pp	b)			
Т	otal BTEX (ppm	Toluene (pp	b)			
Fi	ield headspace (ppm) 1264	Ethylbenzene				
Т	PH 1700 ppm Method	8015 Total Xylenes	5 (ppb)			
Ground Water Sample:	: Yes No _	(If yes, attach sa	mple results)			
KNOWLEDGE AND MY BE	9/98 PRINT	TED NAME Roy Burnham				
SIGNATURE 17 04 E	AND	TITLE Environmental Te	echnician II			
AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.						
APPROVED: YES	NO (REASON	1): R.A. Attached	<u>Q</u>			
SIGNED: Kerre	Mambe DATE	E: 8-18-98				

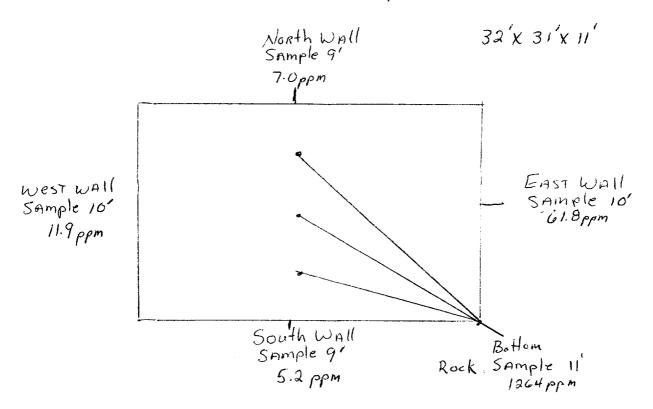
JICARILLA B-1E Bec.22 TZGN R-5W UNITL AMOCO

SITE DRAWING



SICARIlla B-IE SEC-22 T-26H REW Amoco

Excavation DRAWING



5' SAMPle - 1404 ppm 10' SAMPle - 923 ppm Rock II' SAMPle - 538 ppm 11', SAMPle - 1103 ppm 11' SAMPle - 984 ppm

LAB: (505) 325-1556

On Site Technologies, LTD.

CLIENT:

PNM - Public Service Company of NM

Project:

Jicarilla Pit Remediation

Lab Order:

9806106

CASE NARRATIVE

Date: 06-Jul-98

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.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 06-Jul-98

Client:

Lab ID:

Project:

PNM - Public Service Company of NM

Work Order:

9806106

Jicarilla Pit Remediation

9806106-02A

Matrix: SOIL

Client Sample Info: Jicarilla B-1E

Client Sample ID: 9806221402; 3pt. Comp. Bottom

Collection Date: 6/22/98 2:02:00 PM

COC Record: 5642

Parameter	Result	PQL	Qual Units	DF	Date Analyzed
DIESEL RANGE ORGANICS	sv	V8015			Analyst: HR
T/R Hydrocarbons: C10-C28	1700	25	mg/Kg	1	7/2/98
BTEX	SW8020A			Analyst: HR	
Benzene	ND	250	μg/Kg	250	7/1/98
Toluene	13000	500	μg/Kg	250	7/1/98
Ethylbenzene	6100	250	μg/Kg	250	7/1/98
m,p-Xylene	76000	500	μg/Kg	250	7/1/98
o-Xylene	19000	250	μg/Kg	250	7/1/98

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

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 06-Jul-98

Client:

Lab ID:

Project:

PNM - Public Service Company of NM

Work Order:

9806106

9806106-01A

Matrix: SOIL

T: . .

Jicarilla Pit Remediation

Client Sample Info: Jicarilla B-1E

Client Sample ID: 9806221401; 4pt. Comp. Walls

Collection Date: 6/22/98 2:01:00 PM

COC Record: 5642

Parameter	Result	PQL	Qual (J nits	DF	Date Analyzed
DIESEL RANGE ORGANICS T/R Hydrocarbons: C10-C28	SV 66	V8015		mg/Kg	1	Analyst: HR 6/29/98

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

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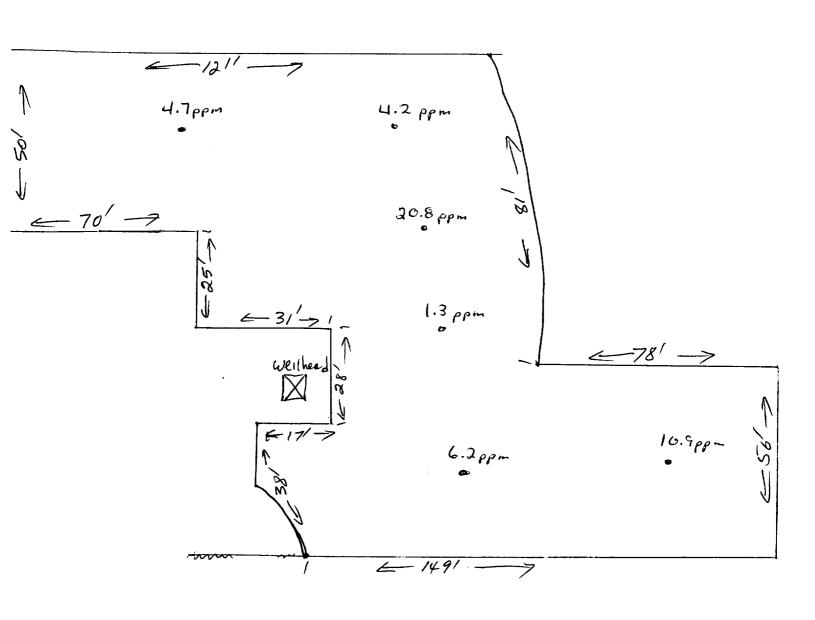
JICARILLA APACHE TRIBE ENVIRONMENTAL PROTECTION OFFICE P.O. BOX 507 DULCE, NEW MEXICO 87528

SUBMIT 1 COPY TO NATURAL RESOURCE DEPT AND OIL GAS ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT

Operator: PNM Gas Services (Amoco) Telephone: 324-3764						
Address: 603 W. Elm Street Farmington, NM 87401						
Facility or Well Name: SICARILLA B-16						
Location: Unit: L Sec. 22 T. 26 N R. 5 W County Rio Arriba						
Land Type: Jicarilla Apache						
Date Remediation Started: $4/22/9E$ Date Completed: $8/18/9E$						
Remediation Method: Landfarmed X Approx. cubic yards 404						
CompostedOther						
Depth to Ground Water: (pts.) 10 Final Closure Sampling:						
Distance to an Ephemeral Stream: (pts.) Ø Sampling Date: 8//3/98 Time 1209						
Distance to Nearest Lake, Playa, (pts.) 6 or Watering Pond: Sampling Results:						
Wellhead Protection Area: (pts.) 5 Field Headspace (ppm) 20.8						
Distance to Surface Water: (pts.) 6 TPH (ppm) N/D Method 8015						
Ranking Score (Total Points):						
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF						
DATE 8/29/98 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 NO (REASON) We as Backfull						
SIGNED: Lea Man DATE: 9-98						

JICARILLA BIE AMOCO UNIT L SEC 22 T26N R5W LANDFARM DRAWING



OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

CLIENT:

PNM - Public Service Company of NM

Project: .

PNM Pit Remediation

Lab Order:

9808030

CASE NARRATIVE

Date: 20-Aug-98

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: 20-Aug-98

Client:

PNM - Public Service Company of NM

Work Order:

9808030

,,,,

9808030-03A

Matrix: SOIL

Lab ID: Project:

PNM Pit Remediation

Client Sample Info: Jicarilla B-1E LF

Client Sample ID: 9808131209; 6pt. Comp.

Collection Date: 8/13/98 12:09:00 PM

COC Record: 7332

Parameter	Result	PQL	Qual Units	DF	Date Analyzed
DIESEL RANGE ORGANICS	SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	ND	25	mg/Kg	1	8/18/98

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



Well Name:

Well Legals:

Pit Type:

Horizontal Distance to Surface Water:

Groundwater Depth:

Jicarilla B #1E Unit I, Sec 22, T26N, R5W Dehydrator Greater than 1,000 feet 50 feet to 99 feet

RISK ANALYSIS

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

- 1. Groundwater is estimated to be at a depth of 78 feet based upon the elevation of the site and the elevation of the nearest "listed" or "named" wash (Tapacito Canyon). (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.
- PNM excavated 404 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. Bedrock was encountered at 11 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 B #1E well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 800 pits.