

Date Remediation Started: 6/8/98 Date Completed: 7/28/98

Remediation Method: Excavation X Approx. Cubic Yards 187

(Check all appropriate sections)

Landfarmed X Amount Landfarmed (cubic yds): 187

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 head space Reading. Pit bottom
was solid sandstone Rock. 3 point composite ^{GB} sample
of Pit bottom Excavation size 21'x20'x12'

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 North, East, South, west side walls
and Pit bottom

Sample depth 12'

Sample date 6/9/98 Sample time 0826

Sample Results

Soil: Benzene (ppm) 2.000 Water: Benzene (ppb) _____

Total BTEX (ppm) 209.500 Toluene (ppb) _____

Field headspace (ppm) 827 Ethylbenzene (ppb) _____

TPH 290 ~~ND~~ RB 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 6/27/98

PRINTED NAME Roy Burnham

SIGNATURE Roy Burnham

AND TITLE Environmental Technician II

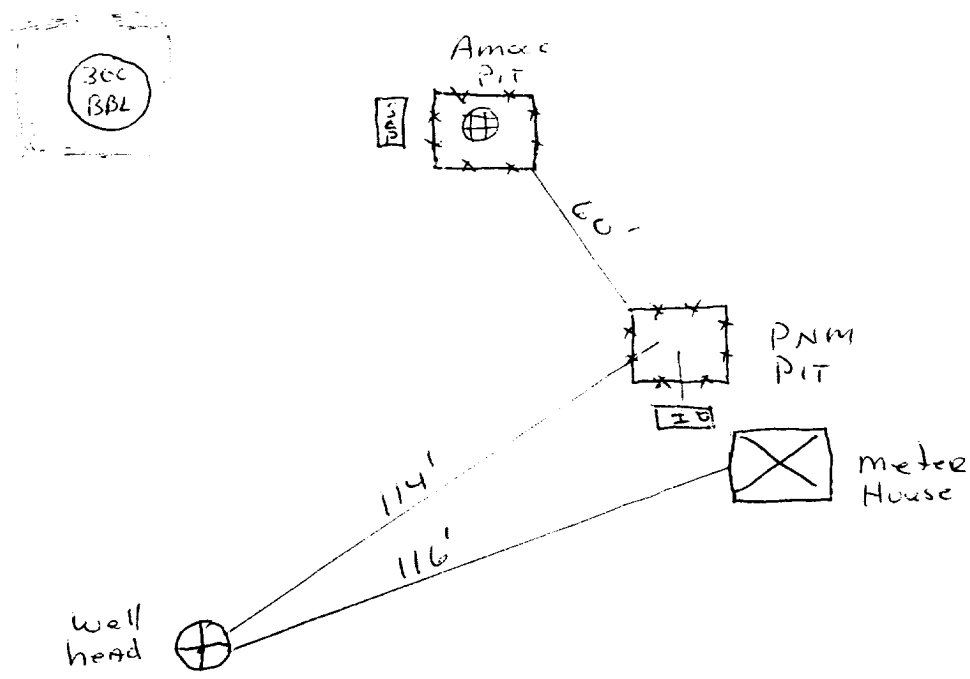
AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO _____ (REASON): RA Attached

SIGNED: Kenneth M. M...ll DATE: 7-28-98

Jicarilla Apache Tribal 151-7E
Sec-4 T-26N R-5W UNIT D

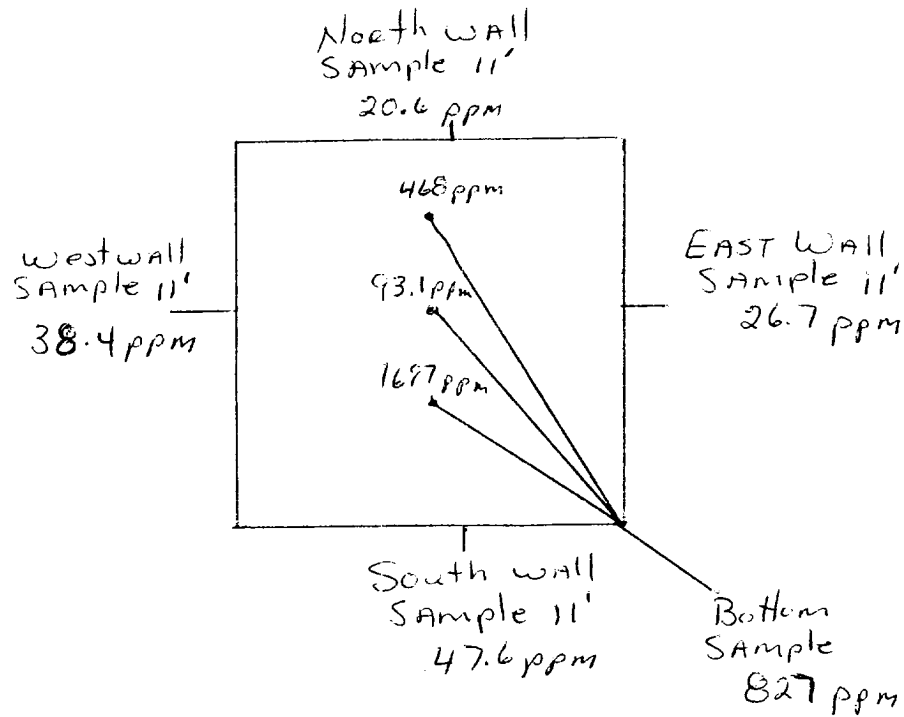
Site Drawing



Jicarilla Apache Tribal 151-7E
Sec-4 T-26N R-5W unit D
Amoco

21' x 20' x 12'

EXCAVATION DRAWING



5' sample	1008 ppm
10' sample	342 ppm
12' sample	468/93.1/1697 ppm

ON SITE

OFF: (505) 325-5667

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

On Site Technologies, LTD.

Date: 17-Jun-98

CLIENT: PNM - Public Service Company of NM
Project: Jicarilla Pit Remediation
Lab Order: 9806037

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

ON SITE

TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Apache Tribal 151-7E
Work Order:	9806037	Client Sample ID:	9806090826: 3pt. Comp. Bottom
Lab ID:	9806037-04A	Matrix:	SOIL
Project:	Jicarilla Pit Remediation	Collection Date:	6/9/98 8:26:00 AM
		COC Record:	7161

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	290	25		mg/Kg	1	6/16/98
BTEX		SW8020A				Analyst: DC
Benzene	2000	1000		µg/Kg	1000	6/13/98
Toluene	52000	2000		µg/Kg	1000	6/13/98
Ethylbenzene	7500	1000		µg/Kg	1000	6/13/98
m,p-Xylene	120000	2000		µg/Kg	1000	6/13/98
o-Xylene	28000	1000		µg/Kg	1000	6/13/98

209,500

209.5 ppb

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

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Apache Tribal 151-7E
Work Order:	9806037	Client Sample ID:	9806090825; 4pt. Comp. Walls
Lab ID:	9806037-03A	Matrix:	SOIL
Project:	Jicarilla Pit Remediation	Collection Date:	6/9/98 8:25:00 AM
		COC Record:	7161

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	6/11/98

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:	Jicarilla Apache Tribal 151-7E
Well Legals:	Unit D, Sec 4, T26N, R5W
Pit Type:	Dehydrator
Horizontal Distance to Surface Water:	Greater than 1,000 ft
Groundwater Depth:	Greater than 100 ft

RISK ANALYSIS

PNM requests closure of their former pit on the Jicarilla Apache Tribal 151-7E well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 114 feet based upon the elevation of the site and the elevation of the nearest "named" wash (Cereza Canyon).
(Reference: Vigas Canyon series 7.5 minute topographic map.)
2. The site is located outside of the "vulnerable area" as defined under ^{R10} OGD Order No. R-7940-C.
3. The site is not located within 200 feet of a domestic water well and is not within 1,000 feet of any other water source.
4. PNM excavated 187 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.
5. Bedrock was encountered at 12 feet below ground surface. Bedrock/sandstone provides a barrier between remaining contamination and groundwater. Vertical migration through bedrock or sandstone to groundwater is unlikely.
6. PNM excavated and performed remediation to the maximum depth and horizontal extent practicable.

PNM believes their former pit on the Jicarilla Apache Tribal 151-7E 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: PNM Gas Services (<u>Amoco</u>) Telephone: <u>324-3764</u>	
Address: <u>603 W. Elm Street Farmington, NM 87401</u>	
Facility or Well Name: <u>Jicarilla Apache Tribal 151-7E</u>	
Location: Unit or Qtr/Qtr Sec: <u>D</u> Sec. <u>4</u> T. <u>26</u> N R. <u>5</u> W County <u></u>	
Land Type: <u></u>	
Date Remediation Started: <u>6/9/98</u> Date Completed: <u>7/14/98</u>	
Remediation Method: Landfarmed <u>X</u> Approx. cubic yards <u>187</u> Composted <u></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>2</u> Wellhead Protection Area: (pts.) <u>4</u> Distance to Surface Water: (pts.) <u>0</u> Ranking Score (Total Points): <u>7</u>	Final Closure Sampling: Sampling Date: <u>7/1/98</u> Time <u>0945</u> Sampling Results: Field Headspace (ppm) <u>25.3</u> TPH (ppm) <u>ND</u> Method <u>8015</u> Other <u></u>
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF	
DATE <u>7/14/98</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 <u>X</u> NO <u></u> (REASON) <u>use as Backfill</u>	
SIGNED: <u>Kec Marshall</u> DATE: <u>7-28-98</u>	

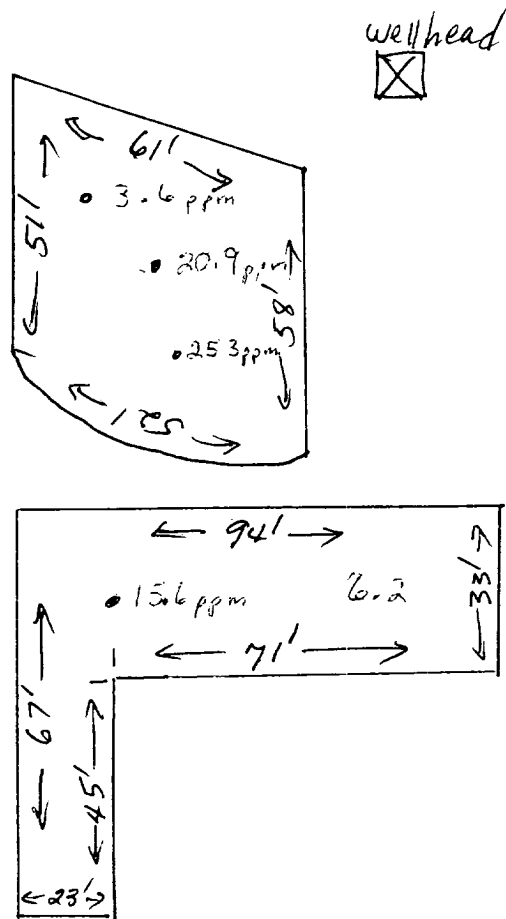
16

JICARILLA APACHE TRIBAL 151-7E

AMOCO

UNIT D SEC 4 T26N R5W

LAND FARM DRAWING

↑
N

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 14-Jul-98

CLIENT: PNM - Public Service Company of NM
Project: Landfarms
Lab Order: 9807019

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: 14-Jul-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jic. Apache Tribal 151-7E LF
Work Order:	9807019	Client Sample ID:	9807070945: 5pt. Comp.
Lab ID:	9807019-01A	Matrix:	SOIL
Project:	Landfarms	Collection Date:	7/7/98 9:45:00 AM
		COC Record:	7262

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: DC
T/R Hydrocarbons: C10-C28	ND	50		mg/Kg	1	7/14/98

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