

Dennis E. Frost
DEPUTY OIL & GAS INSPECTOR

JICARILLA APACHE TRIBE

ENVIRONMENTAL PROTECTION OFFICE

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

FEB 08 1993

P.O. BOX 507
DULCE, NEW MEXICO 87528

*Risk
BTEX*

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 Apache Tribal 151-8E

Location: Unit: B Sec. 3 T. 26N R. 5W County Rio Arriba

Pit Type: Separator Dehydrator X Other

Land Type: Jicarilla Apache

Pit Location: Pit dimensions: length 20' width 20' depth 3'

(Attach diagram) Reference: wellhead X other

Footage from reference: 75'

Direction from reference: 15° 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)
50 feet to 99 feet (10 points)
Greater than 100 feet (0 points) 0

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) 0

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) 0

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) 0

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) 0

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started:

5/28/98

Date Completed:

9/23/98

Remediation Method:

Excavation

X

Approx. Cubic Yards

1,300

(Check all appropriate sections)

Landfarmed

X

Amount Landfarmed (cubic yds):

630

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 100 ppm head space reading. Bottom of pit was solid rock 3PT composite of rock. EXCAVATION size 45'x27'x14'

Ground Water Encountered:

No

X

Yes _____

Depth _____

Final Pit Closure Sampling:

Sample Location

North, East, South, west side walls AND bottom of pit

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

Sample depth

14'

Sample date

6/1/98

Sample time

1506

Sample Results

Soil: Benzene (ppm)

0.62

Water: Benzene (ppb) _____

Total BTEX (ppm)

107.12

Toluene (ppb) _____

Field headspace (ppm)

1447

Ethylbenzene (ppb) _____

TPH

470~~ADRR~~ 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

6/2/98

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:

Kent M. Murrell

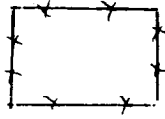
DATE:

7-28-98

Jicarilla Apache Tribal IS-3
Sec-3 T26A RSW unit B

300
BBL

Site Drawing



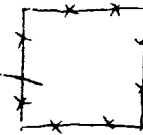
well head



75'

75'

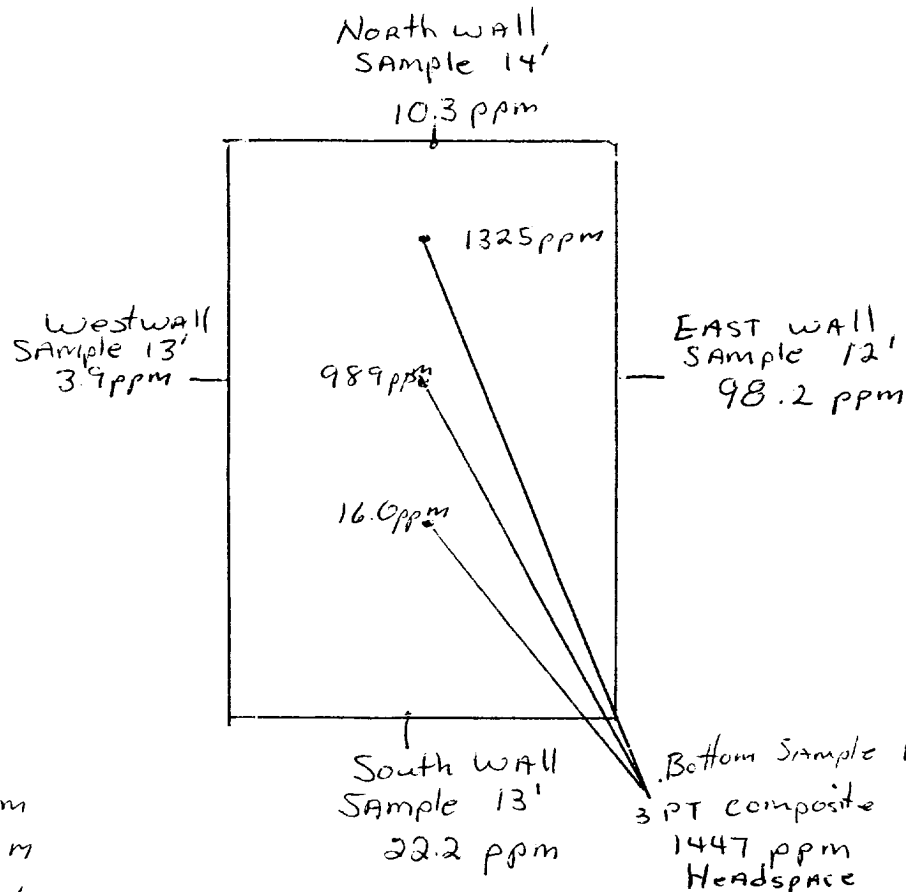
PH



meter
House

Jicarilla Apache Tribal ISI-EE
Sec-3 T26N R5W Unit B
Amoco

45'x27'x14'



PID Readings

5' Sample 1836 ppm

10' Sample 1412 ppm

14' Rock 1325/989/16.0 ppm

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 04-Jun-98

CLIENT: PNM - Public Service Company of NM

Project: Jicarilla

Lab Order: 9806005

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:** 04-Jun-98

Client: PNM - Public Service Company of NM
Work Order: 9806005
Lab ID: 9806005-02A **Matrix:** SOIL
Project: Jicarilla

Client Sample Info: Jic. Apache Tribal 151-8E
Client Sample ID: 9806011506; 3pt. Comp.
Collection Date: 6/1/98 3:06:00 PM
COC Record: 7156

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS						
		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	470	25		mg/Kg	1	6/3/98
BTEX						
		SW8020A				Analyst: DC
Benzene	620	250		µg/Kg	250	6/3/98
Toluene	26000	500		µg/Kg	250	6/3/98
Ethylbenzene	5500	250		µg/Kg	250	6/3/98
m,p-Xylene	63000	500		µg/Kg	250	6/3/98
o-Xylene	12000	250		µg/Kg	250	6/3/98

107,120
 107.12 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

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- FARMINGTON BLANKS - QUALITY CONTROL DATA - 10/1/98

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 04-Jun-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jic. Apache Tribal 151-8E
Work Order:	9806005	Client Sample ID:	9806011505; 4pt. Comp.
Lab ID:	9806005-01A	Matrix:	SOIL
Project:	Jicarilla	Collection Date:	6/1/98 3:05:00 PM
		COC Record:	7156

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

Qualifiers:

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Well Name:	Jicarilla Apache Tribal 151-8E
Well Legals:	Unit B, Sec 3, 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 151-8E well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 236 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 OGD Order No. R-7940-C. 7810
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 630 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 14 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 151-8E 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
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AND OIL GAS
ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT #1

Operator: PNM Gas Services (Amoco) Telephone: 324-3764
Address: 603 W. Elm Street Farmington, NM 87401
Facility or Well Name: Jicarilla Apache Tribal 151-86
Location: Unit: B Sec. 3 T. 26 N R. 5 W County Rio Arriba
Land Type: Jicarilla Apache

Date Remediation Started: 5/28/98 Date Completed: 7/14/98
Remediation Method: Landfirmed X Approx. cubic yards 315
Composted
Other

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

Final Closure Sampling:

Sampling Date: 7/7/98 Time 0902
Sampling Results:
Field Headspace (ppm) 34.6
TPH (ppm) 35 Method 8015
Other

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

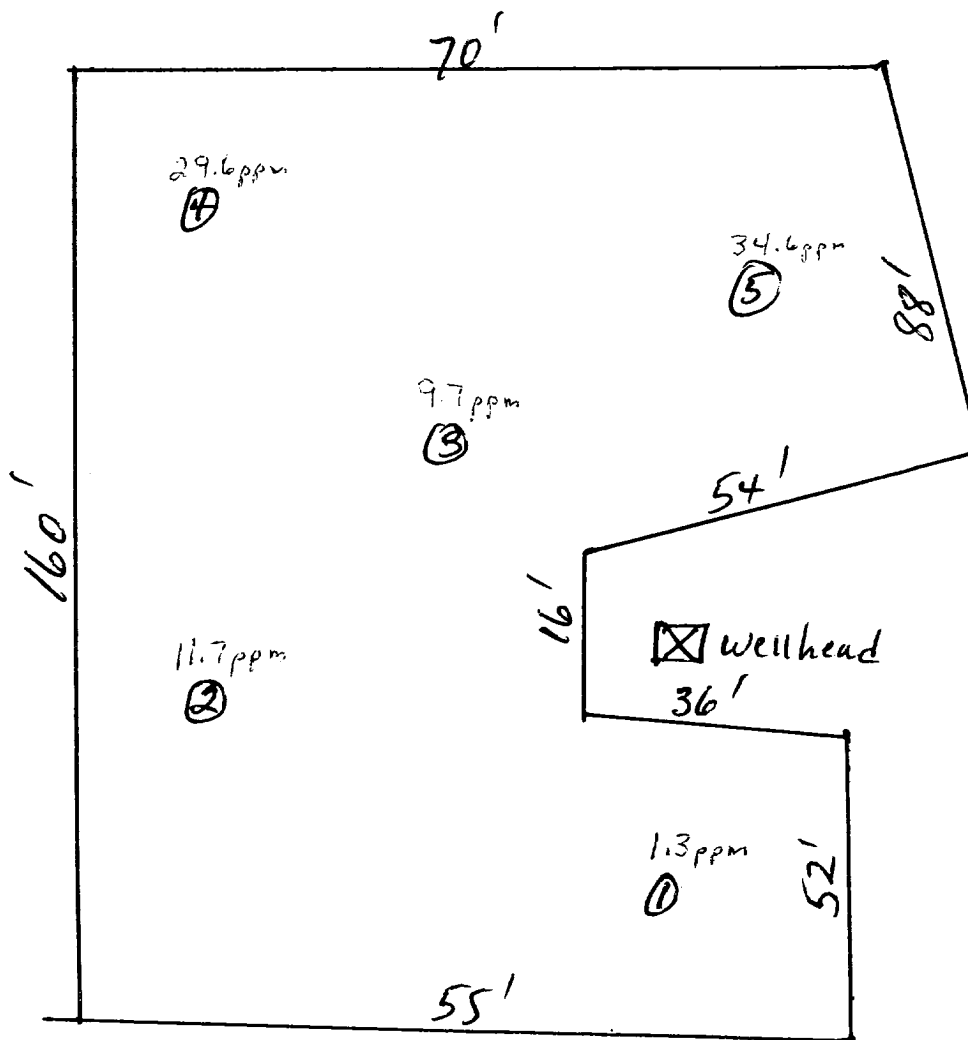
DATE 7/10/98 PRINTED NAME Roy Burnham
SIGNATURE Roy Burnham AND TITLE Environmental Technician II

AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION APPROVED IN ACCORDANCE TO THE
JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE

APPROVED: YES X NO (REASON) use as Backfill
SIGNED: Ken C Mammel DATE: 8-18-98

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JILAR IIIA APACHE TRIBAL 151-8E
AMOLD
UNIT B SEC 3 T26N R5W
LAND FARM #1



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: 9807018

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 151-8E LF #1
Work Order:	9807018	Client Sample ID:	9807070902; 5pt. Comp
Lab ID:	9807018-05A	Matrix:	SOIL
Project:	Landfarms	Collection Date:	7/7/98 9:02:00 AM
		COC Record:	7261

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: DC
T/R Hydrocarbons: C10-C28	35	25		mg/Kg	1	7/14/98

Qualifiers:

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- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- Surr: - Surrogate

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ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT #2

Operator: PNM Gas Services (Amoco) Telephone: 324-3764
Address: 603 W. Elm Street Farmington, NM 87401
Facility or Well Name: Jicarilla Apache Tribal 151-8E
Location: Unit: B Sec. 3 T. 26 N R. 5 W County Rio Arriba
Land Type: Jicarilla Apache

Date Remediation Started: 5/28/98 Date Completed: 9/3/98
Remediation Method: Landfarmed ☒ Approx. cubic yards 315
Composted ☐
Other ☐

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

Final Closure Sampling:
Sampling Date: 8/31/98 Time 0915
Sampling Results:
Field Headspace (ppm) 77.7
TPH (ppm) 34 Method 8015
Other

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

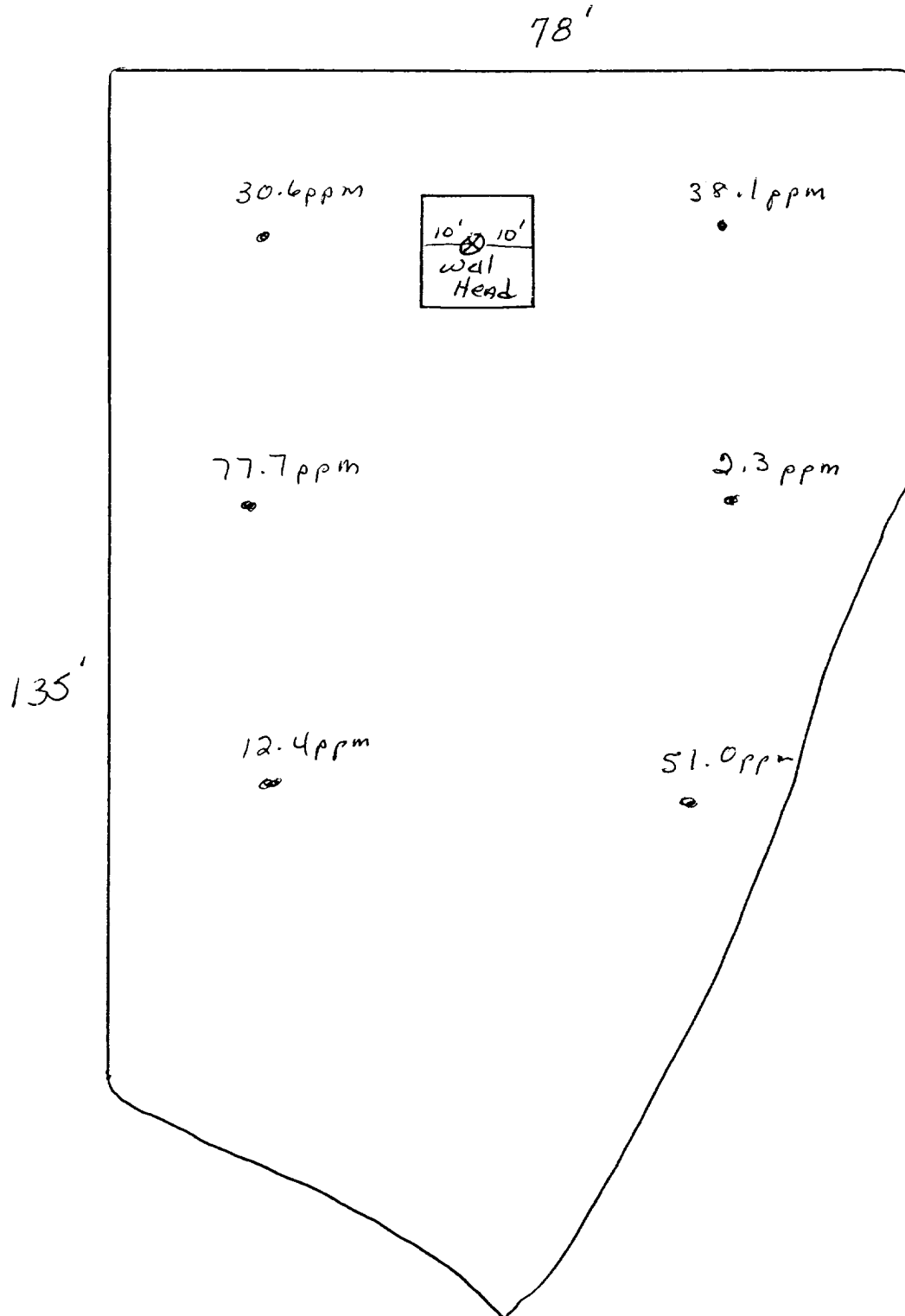
DATE 9/14/98 PRINTED NAME Roy Burnham
SIGNATURE Roy Burnham AND TITLE Environmental Technician II

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) use as Rockfall
SIGNED: Kent M... DATE: 9-23-98

Ticarilla Apache Tribal 151-8E
Sec. 3 T26N R5W Unit B
Amoco

Land farm #2



OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 10-Sep-98

CLIENT: PNM - Public Service Company of NM

Project: Jicarilla Landfarms

Lab Order: 9808064

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-Sep-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jic. Apache Tribal 151-8E #2 LF
Work Order:	9808064	Client Sample ID:	9808310915; 6pt. Comp
Lab ID:	9808064-07A	Matrix:	SOIL
Project:	Jicarilla Landfarms	Collection Date:	8/31/98 9:15:00 AM
		COC Record:	7435

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	34	25		mg/Kg	1	9/3/98

Qualifiers:

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