

Denny S. Faust
DEPUTY OIL & GAS INSPECTOR

JICARILLA APACHE TRIBE

FEB 08 1999

ENVIRONMENTAL PROTECTION OFFICE

P.O. BOX 507
DULCE, NEW MEXICO 87528

RISK
BTEX

SUBMIT 1 COPY TO
NATURAL
RESOURCE DEPT
AND OIL GAS
ADMINISTRATION

Approved

PIT REMEDIATION AND CLOSURE REPORT

Operator: PNM Gas Services (CONOCO) Telephone: 324-3764
Address: 603 W. Elm Street Farmington, NM 87401
Facility or Well Name: Jicarilla K-15 E
Location: Unit: A Sec. 1 T. 25 N R. 5 W County Rio Arriba
Pit Type: Separator X Dehydrator Other
Land Type: Jicarilla Apache

Pit Location: Pit dimensions: length 20' width 20' depth 3'
(Attach diagram) Reference: wellhead X other
Footage from reference: 55'
Direction from reference: 15° Degrees East North
X West of South X

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) Ø

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) Ø

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) Ø

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) Ø

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) Ø

RANKING SCORE (TOTAL POINTS): Ø

Date Remediation Started: 10/27/98 Date Completed: 12/15/98 RAO
10/28/98

Remediation Method: Excavation X Approx. Cubic Yards 880

(Check all appropriate sections)

Landfarmed X Amount Landfarmed (cubic yds): 880

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
Bottom was rock and sampled 33'x24'x30'

Ground Water Encountered: No X Yes _____ Depth _____

Final Pit Closure Sampling:

Sample Location North, East, South & West walls

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

Sample depth Bottom 3 point composite

Sample date 10/28/98 Sample time 1330

Sample Results

Soil: Benzene (ppm) 1.2 ppm Water: Benzene (ppb) _____

Total BTEX (ppm) 105.3 ppm Toluene (ppb) _____

Field headspace (ppm) 1498 Ethylbenzene (ppb) _____

TPH 260 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 10/28/98 PRINTED NAME Gary Cook

SIGNATURE Mary Cook AND TITLE Environmental Technician

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

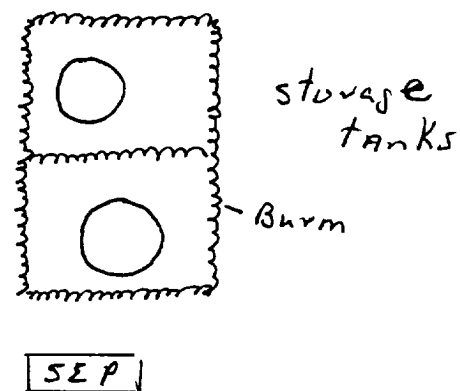
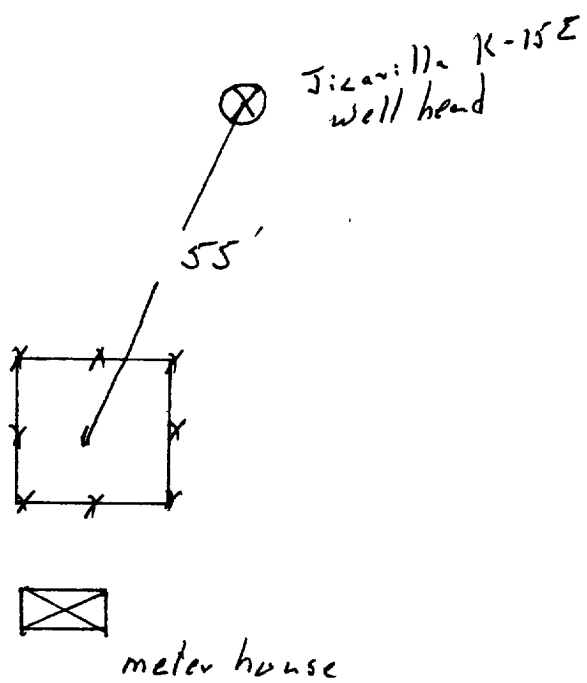
APPROVED: YES X NO _____ (REASON): R.A. Attached

SIGNED: Ken McNeill DATE: 11-30-98

Jicarilla K-15 E
CONOCO
Sec. 1, 25N, 5W, A

10/27/98

Site Drawing:



not to scale

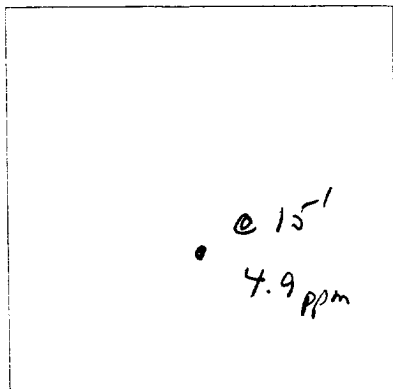
Jicavilla K-15 E

CONOCO

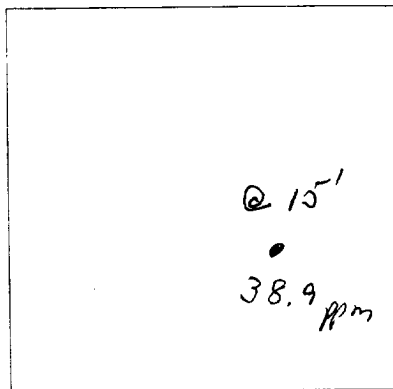
Sec. 1, 25 N, 5 W, A

10/28/98

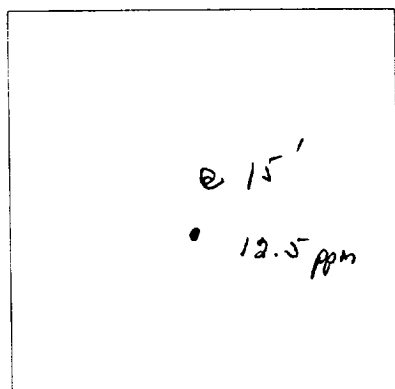
North Wall



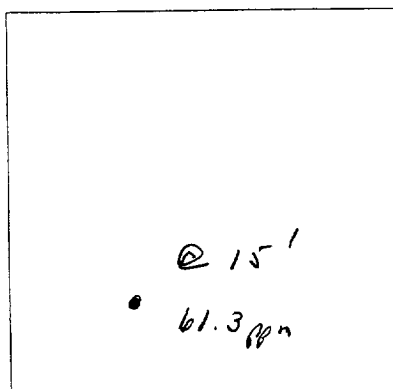
South Wall



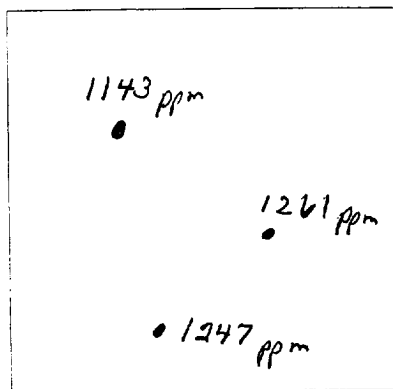
East Wall



West Wall



Bottom



@ 30' depth (hard rock)

3 pt. comp.

headspace reading = 1498 ppm

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 11-Nov-98

CLIENT: PNM - Public Service Company of NM

Project: Jicarilla K-15E

Lab Order: 9811001

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: 11-Nov-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla K-15E
Work Order:	9811001	Client Sample ID:	9810281330; Bottom @ 30ft.
Lab ID:	9811001-01A	Matrix:	SOIL
Project:	Jicarilla K-15E	Collection Date:	10/28/98 1:30:00 PM
		COC Record:	7411

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	260	25		mg/Kg	1	11/10/98
BTEX		SW8020A				Analyst: HR
Benzene	1200	200		µg/Kg	200	11/2/98
Toluene	29000	400		µg/Kg	200	11/2/98
Ethylbenzene	6100	200		µg/Kg	200	11/2/98
m,p-Xylene	57000	400		µg/Kg	200	11/2/98
o-Xylene	12000	200		µg/Kg	200	11/2/98

105,300
105.300 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

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 11-Nov-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla K-15E
Work Order:	9811001	Client Sample ID:	9810281340; Walls @ 15ft.
Lab ID:	9811001-02A	Matrix:	SOIL
Project:	Jicarilla K-15E	Collection Date:	10/28/98 1:40:00 PM
		COC Record:	7411

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	11/10/98

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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Environmental Services

Well Name:	Jicarilla K #15E
Well Legals:	Unit A, Sec 1, T25N, R5W
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 K #15E well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 196 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 880 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 30 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 K #15E 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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ENVIRONMENTAL
PROTECTION OFFICE
P.O. BOX 507
DULCE, NEW MEXICO 87528

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NATURAL
RESOURCE DEPT
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ADMINISTRATION

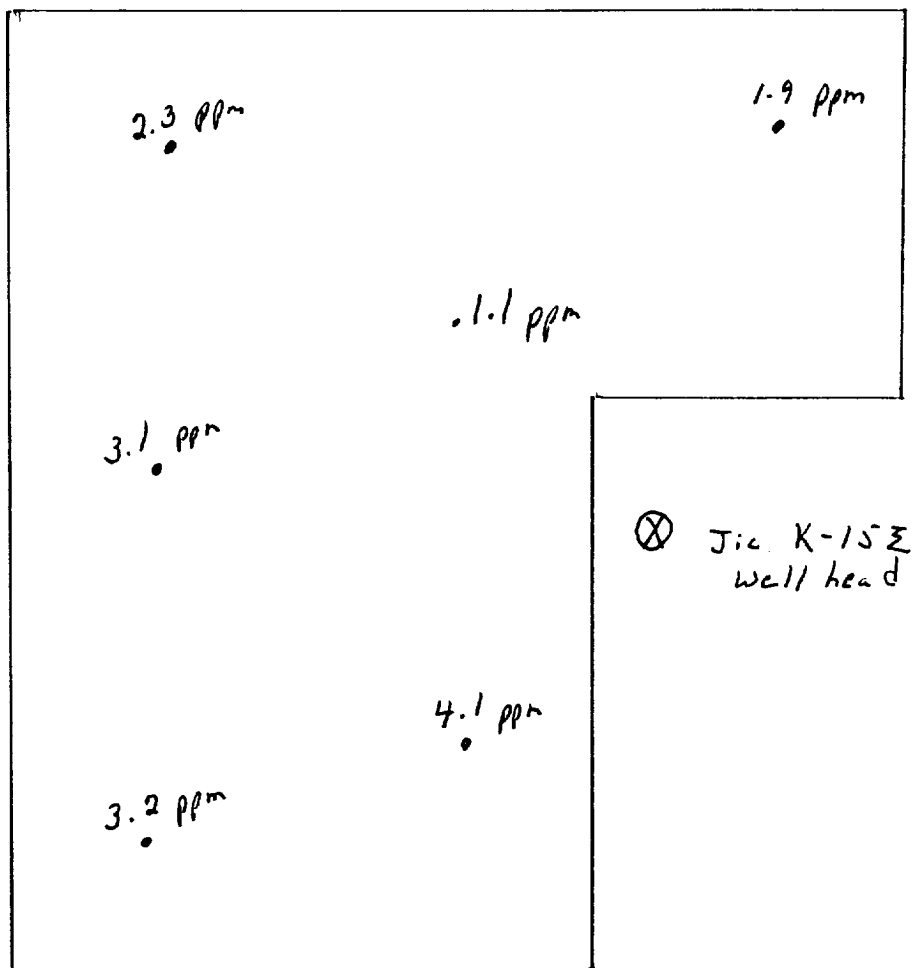
ON-SITE SOIL REMEDIATION REPORT

Operator: PNM Gas Services (<u>Correct</u>) Telephone: 324-3764	
Address: 603 W. Elm Street Farmington, NM 87401	
Facility or Well Name: <u>Jicarilla K-15E</u>	
Location: Unit: <u>A</u> Sec. <u>1</u> T. <u>25</u> N R. <u>5</u> W County <u>Rio Arriba</u>	
Land Type: <u>Jicarilla Apache</u>	
Date Remediation Started: <u>10-27-98</u> Date Completed: <u>10-28-98 12/15/98</u> RAD	
Remediation Method: Landfarmed <u>X</u> Approx. cubic yards <u>880 yds.</u>	
Composted <u> </u>	
Other <u> </u>	
Depth to Ground Water: (pts.) <u>0</u>	Final Closure Sampling: Sampling Date: <u>11/30/98</u> Time <u>1249</u> Sampling Results: Field Headspace (ppm) <u>13.2 ppm</u> TPH (ppm) <u>28</u> Method <u>TPH-8014</u> Other <u> </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>	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF	
DATE <u>12/10/98</u>	PRINTED NAME <u>Donald A. Daddick Gary Cook</u>
SIGNATURE <u>Mary Cook</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>Ken C. M...all</u> DATE: <u>12-15-98</u>	

Jicarilla K-15E
CONOCO
Sec. 1, 25N, 5W, A

10/28/98

Landfarmed: One location



2'-12" depth

Soil vapor head space = 13.2 ppm

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 04-Dec-98

CLIENT: PNM - Public Service Company of NM

Project: Jicarilla Pit Remediation Landfarms

Lab Order: 9812001

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-Dec-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla K-15E LF
Work Order:	9812001	Client Sample ID:	9811301249; 6pt. Composite
Lab ID:	9812001-07A	Matrix:	SOIL
Project:	Jicarilla Pit Remediation Landfarms	Collection Date:	11/30/98 12:49:00 PM
		COC Record:	7444

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	28	25		mg/Kg	1	12/3/98

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
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