District I
P.O. Box 1980, Hobbs, NM

District II
P.O. Drawer DD, Artesia, NM 88221

District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco Street
Santa Fe, New Mexico 87505

Risk bedrock

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

RECEIVED
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OIL CON. DIV.
DIST. 3

PIT REMEDIATION AND CLOSURE REPORT

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

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Grenier A #4E

Location: Unit F Sec 26 T 30 N R 10 W County San Juan

Pit Type: Separator ☐ Dehydrator ☑ Other

Land Type: BLM ☑ State ☐ Fee ☐ Other

Pit Location: (Attach diagram)

Pit dimensions: length 12 ' width 12 ' depth 2 '

Reference: wellhead ☑ other

Footage from reference: 75'

Direction from reference: 75 Degrees ☑ East North ☑ of ☐ West South ☐

Depth to Ground Water: (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)	Yes No	(20 points) (0 points)	0
Distance to Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet 200 feet to 1,000 feet Greater than 1,000 feet	(20 points) (10 points) (0 points)	0
RANKING SCORE (TOTAL POINTS) :			10

Grenier A #4E

Date Remediation Started: 07/07/1999 **Date Completed:** 07/07/1999

Remediation Method: (Check all appropriate sections)

Excavation X Approx. Cubic Yard 75

Landfarmed X Amount Landfarmed (cubic yds) 60

Other 15 cu yds overburden

Remediation Location: (i.e., landfarmed onsite, name and location of offsite facility)

Onsite _____ Offsite _____

Backfill Material Location: _____

General Description of Remedial Action:

Excavated contaminated soil to a pit size of 13' X 15.5' X 10' and landfarmed soil onsite within a bermed area at a depth of 6" to 12". Soil was aerated by disking/plowing until soil met regulatory levels.

*** Sandstone encountered at 10'. See attached risk analysis form.

Ground Water Encountered: No ☑ Yes ☐ Depth _____

Final Pit Closure Sampling: (if multiple samples, attach sample result and diagram of sample locations and depths.)

Sample Location 5 pt. composite - bottom.

Sample depth 10'

Sample date 07/07/1999 Sample time 1:15:00 PM

Sample Results

Benzene (ppm) < 0.5

Total BTEX (ppm) 129.8 ***

Field headspace (ppm) _____

TPH (ppm) 1100.00 *** Method 8015B

Vertical Extent (ft) _____ Risk Analysis form attached Yes ☑ No ☐

Ground Water Sample: Yes ☐ No ☑ (If yes, see attached Groundwater Site Summary Report)

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

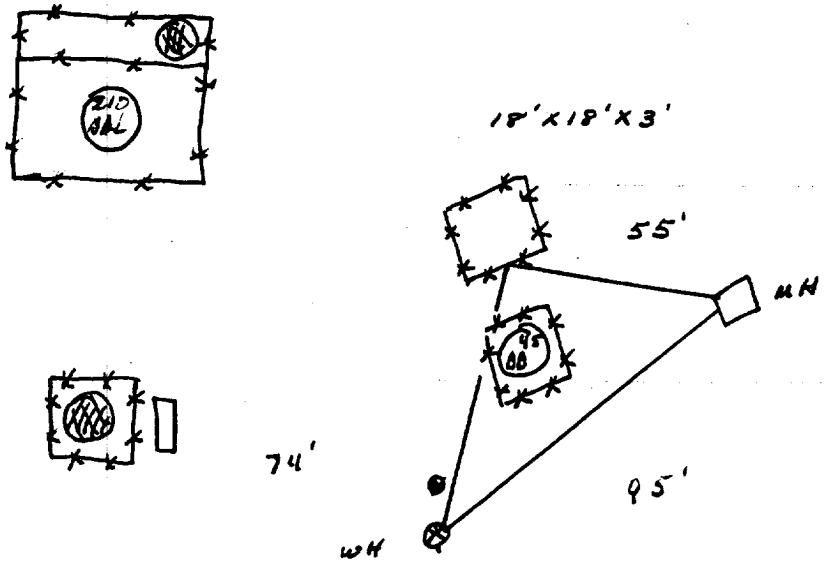
DATE **October 28, 1999**

SIGNATURE Maureen Gannon (by Kathy Luckas)

PRINTED NAME AND TITLE **Maureen Gannon** **Project Manager**

Grenier "A4E
(F) 26-30N-10W
Burlington
7-7-99 @ 1200

N

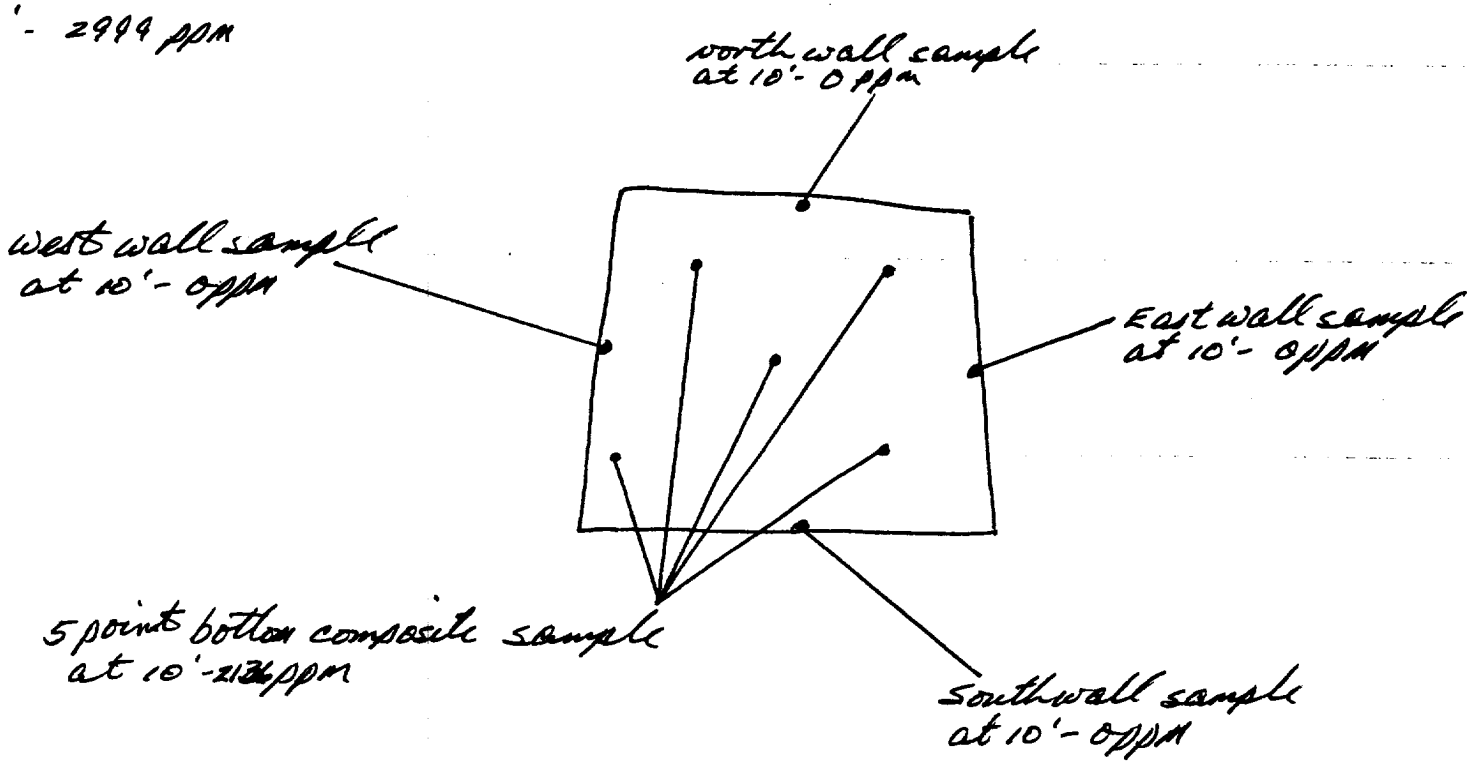


Excavation Sampling

13'(N+S) x 15.5'(E+W) x 10'(D)

PID Readings

5' - 1460 ppm
10' - 2999 ppm



Field headspace: 0 (walls)

not to scale

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: *22-Jul-99*

CLIENT: PNM - Public Service Company of NM
Project: PNM Pit Remediation
Lab Order: 9907014

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.

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OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *22-Jul-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	Grenier A4E
Work Order:	9907014	**Client Sample ID:**	9907071315; 5pt Bottom Comp
Lab ID:	9907014-05A **Matrix:** SOIL	**Collection Date:**	7/7/99 1:15:00 PM
Project:	PNM Pit Remediation	**COC Record:**	7645

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015B**				Analyst: **DC**
T/R Hydrocarbons: C10-C28	1100	25		mg/Kg	1	7/20/99
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DC**
Benzene	ND	500		µg/Kg	500	7/12/99
Toluene	4300	1000		µg/Kg	500	7/12/99
Ethylbenzene	4500	500		µg/Kg	500	7/12/99
m,p-Xylene	98000	1000		µg/Kg	500	7/12/99
o-Xylene	23000	500		µg/Kg	500	7/12/99

129800
129.80ppm

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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OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *22-Jul-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	Grenier A4E
Work Order:	9907014	**Client Sample ID:**	9907071320; 4 Wall Comp
Lab ID:	9907014-06A **Matrix:** SOIL	**Collection Date:**	7/7/99 1:20:00 PM
Project:	PNM Pit Remediation	**COC Record:**	7645

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015B**				Analyst: **DC**
T/R Hydrocarbons: C10-C28	66	25		mg/Kg	1	7/20/99

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

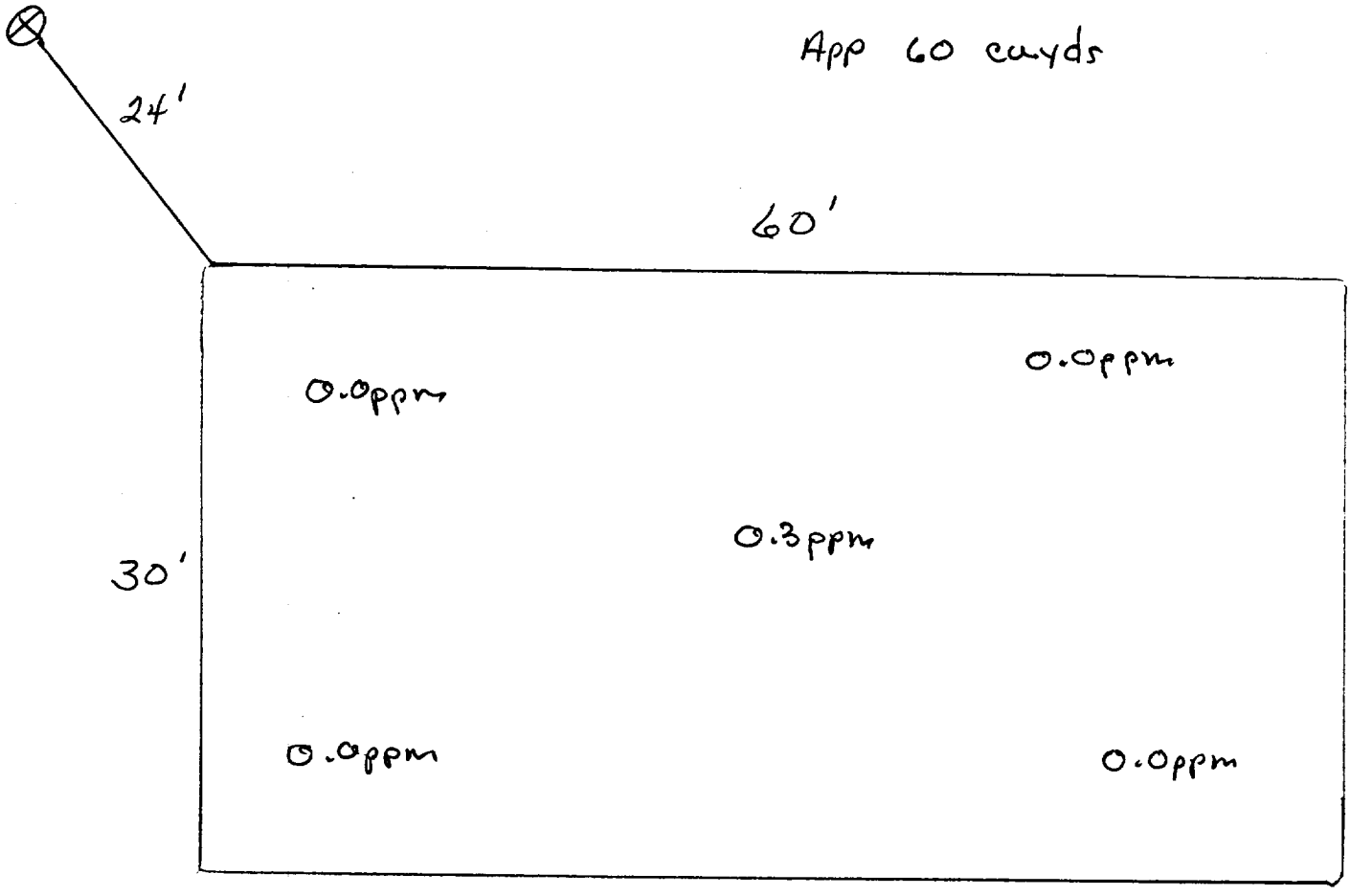
E - Value above quantitation range

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

Grenier #1 TC
Sec. 26 T30N R10W Unit F
Burlington

Landfarm Drawing



2" to 12" Depth
Headspace 9.8ppm
sample# 990714/425

Not to scale

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

On Site Technologies, LTD. **Date:** *30-Jul-99*

CLIENT: PNM - Public Service Company of NM
Project: PNM Pit Remediation Landfarms
Lab Order: 9907036

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.

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OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *30-Jul-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	Grenier A-4E LF
Work Order:	9907036	**Client Sample ID:**	9907141425; 5pt Comp
Lab ID:	9907036-05A **Matrix:** SOIL	**Collection Date:**	7/14/99 2:25:00 PM
Project:	PNM Pit Remediation Landfarms	**COC Record:**	7491

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015B**				Analyst: **DC**
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	7/29/99

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

P.O. BOX 2606 • FARMINGTON, NM 87499

PNM®

Environmental Services

Well Name:	Grenier A #4E
Well Legals:	Sec 26, T30N, R10W, Unit F
Pit Type:	Dehydrator
Horizontal Distance to Surface Water:	Greater than 1,000 feet
Groundwater Depth:	50 feet to 99 feet

RISK ANALYSIS

PNM requests closure of their former pit on the Grenier A #4E well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 52 feet based upon the elevation of the site and the elevation of the nearest "listed" or "named" wash. (Reference: Turley, NM series 7.5 minute topographic map.)

2. PNM excavated 75 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.

3. Sandstone was encountered at 10 feet below ground surface. Bedrock/sandstone provides a barrier between remaining contamination and groundwater. Vertical migration through bedrock or sandstone to groundwater is unlikely.

4. PNM excavated and performed remediation to the maximum depth and horizontal extent practicable.

PNM believes that their former pit on the Grenier A #4E well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 1,000 pits.