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 #13E

Location: Unit F Sec 20 T 31 N R 11 W County San Juan

Pit Type: Separator ☐ Dehydrator ☑ Other

Land Type: BLM ☑ State ☐ Fee ☐ Other

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

(Attach diagram) Reference: wellhead ☑ other

Footage from reference: 125'

Direction from reference: 45 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)	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 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) :			0

Grenier #13E

Date Remediation Started: 05/25/1999 **Date Completed:** 05/25/1999

Remediation Method: (Check all appropriate sections)
Excavation X Approx. Cubic Yard 190
Landfarmed X Amount Landfarmed (cubic yds) 140
Other 50 cu yds overburden

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

Backfill Material Location:

General Description of Remedial Action:

Excavated contaminated soil to a pit size of 38' X 27' X 5' 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 5'. 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 5'
Sample date 05/25/1999 Sample time 9:30:00 AM

Sample Results

Benzene (ppm) 8.4
Total BTEX (ppm) 537.4 ***
Field headspace (ppm)
TPH (ppm) 1900.00 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

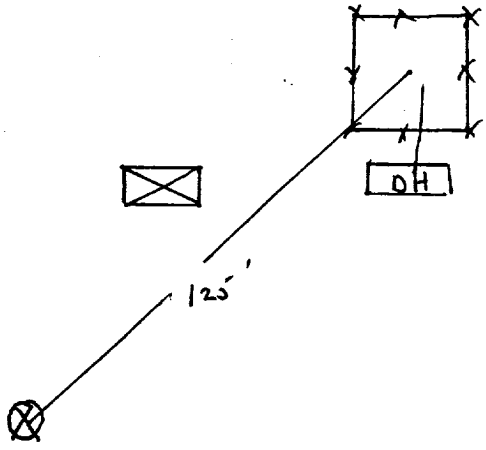
DATE **October 28, 1999**
SIGNATURE Maureen Gannon
PRINTED NAME AND TITLE **Maureen Gannon, Project Manager**

Grenier #13E
Burlington
Sec. 30, 31N, 11W, F

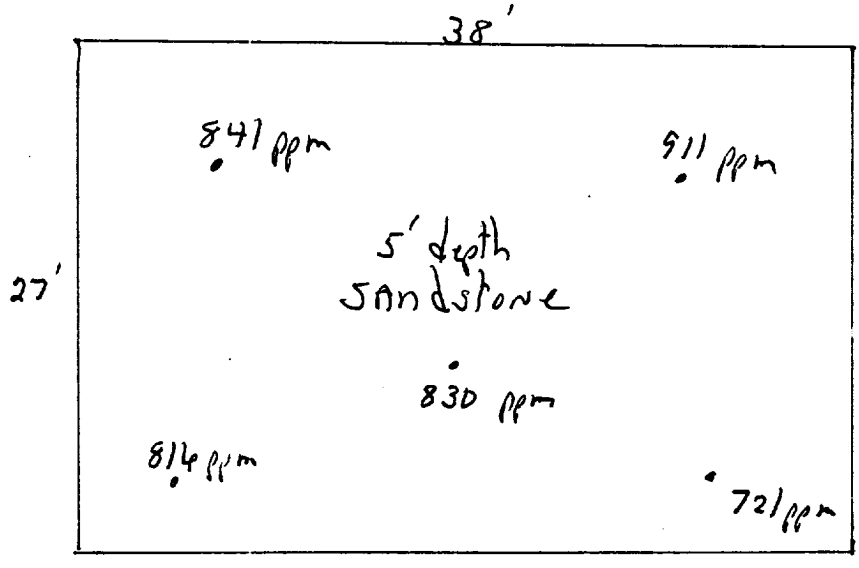
5/25/99

N

Site diagram:



End of excavation:



OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: *08-Jun-99*

CLIENT: PNM - Public Service Company of NM
Project: PNM Pit Remediation
Lab Order: 9905085

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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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

GARY

ANALYTICAL REPORT

Date: *08-Jun-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	Grenier #13E
Work Order:	9905085	**Client Sample ID:**	9905250930; Bottom @ 5ft. -5pt. composite
Lab ID:	9905085-03A **Matrix:** SOIL	**Collection Date:**	5/25/99 9:30:00 AM
Project:	PNM Pit Remediation	**COC Record:**	7599

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015B**				Analyst: **DC**
T/R Hydrocarbons: C10-C28	1900	25		mg/Kg	1	6/2/99
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DC**
Benzene	8400	2500		µg/Kg	2500	6/1/99
Toluene	140000	5000		µg/Kg	2500	6/1/99
Ethylbenzene	25000	2500		µg/Kg	2500	6/1/99
m,p-Xylene	310000	5000		µg/Kg	2500	6/1/99
o-Xylene	54000	2500		µg/Kg	2500	6/1/99

537400
537.4 ppm

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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ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *08-Jun-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	Grenier #13E
Work Order:	9905085	**Client Sample ID:**	9905250935; Walls @ 3ft.
Lab ID:	9905085-04A **Matrix:** SOIL	**Collection Date:**	5/25/99 9:35:00 AM
Project:	PNM Pit Remediation	**COC Record:**	7599

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015B**				Analyst: **DC**
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	6/2/99
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DM**
Benzene	ND	1		µg/Kg	1	5/27/99
Toluene	4.2	2		µg/Kg	1	5/27/99
Ethylbenzene	2.4	1		µg/Kg	1	5/27/99
m,p-Xylene	76	2		µg/Kg	1	5/27/99
o-Xylene	30	1		µg/Kg	1	5/27/99
	112.6					
	.1126 ppm					

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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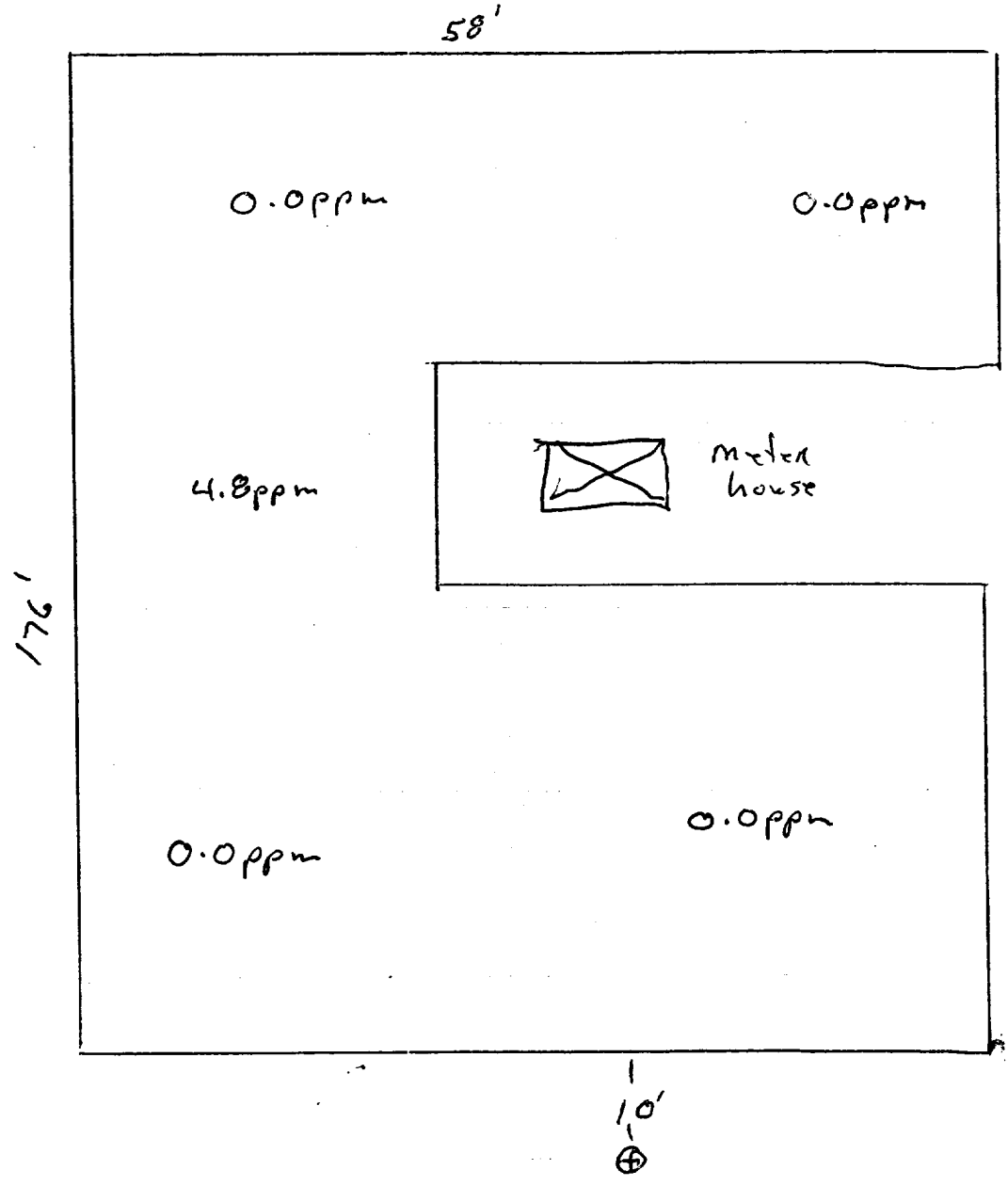
- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

Grenier #13E
Sec-20 T-31N R-11W UL-F
Burlington

Land farm Drawing

App 140 cu. yds



2" to 12" Depth
Headspace 3.7 ppm
sample # 9907120645

Not to Scale

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: *23-Jul-99*

CLIENT: PNM - Public Service Company of NM
Project: PNM Pit Remediation Landfarms
Lab Order: 9907027

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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- Technology Balanced with the Environment -

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ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *23-Jul-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	Grenier 13E LF
Work Order:	9907027	**Client Sample ID:**	9907120645; 5pt. Comp
Lab ID:	9907027-02A **Matrix:** SOIL	**Collection Date:**	7/12/99 6:45:00 AM
Project:	PNM Pit Remediation Landfarms	**COC Record:**	7484

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015B**				Analyst: **DC**
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	7/22/99

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

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PNM®

Environmental Services

Well Name:	Grenier #13E
Well Legals:	Unit F, Sec 20, T31N, R11W
Pit Type:	Dehydrator
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 Grenier #13E well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 254 feet based upon the elevation of the site and the elevation of the nearest "listed" or "named" wash. (Reference: Adobe Downs Ranch, NM series 7.5 minute topographic map.)

2. PNM excavated 190 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 5 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 their former pit on the Grenier #13E well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 1,000 pits.