

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

*Pick
to check*

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DIST. 3

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APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: <u>PNM Gas Services (Greystone)</u>		Telephone: <u>324-3764</u>	
Address: <u>603 W. Elm Street Farmington, NM 87401</u>			
Facility or Well Name: <u>Gross #1</u>			
Location:	Unit <u>N</u>	Sec <u>7</u>	T <u>31 N</u> R <u>12 W</u> County <u>San Juan</u>
Pit Type:	Separator <input type="checkbox"/>	Dehydrator <input type="checkbox"/>	Other <u>No equipment</u>
Land Type:	BLM <input type="checkbox"/>	State <input type="checkbox"/>	Fee <input checked="" type="checkbox"/> Other <u> </u>
Pit Location: Pit dimensions: length <u>11</u> ' width <u>11</u> ' depth <u>3</u> '			
(Attach diagram)	Reference: wellhead <input checked="" type="checkbox"/> other <u> </u>		
Footage from reference: <u>126</u> '			
Direction from reference: <u>84</u> Degrees <input checked="" type="checkbox"/> East <input type="checkbox"/> West of North <input checked="" type="checkbox"/> South <u> </u>			
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) <u>0</u>
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) <u>0</u>
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) <u>0</u>
RANKING SCORE (TOTAL POINTS) :			<u>0</u>

Gross #1

Date Remediation Started: 05/19/1999

Date Completed: 05/20/1999

Remediation Method: Excavation ☒

Approx. Cubic Yard 1160

(Check all appropriate sections)

Landfarmed ☒

Amount Landfarmed (cubic yds) 860

Other 300 cu yds overburden

Remediation Location:

Onsite

☒

Offsite

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

Backfill Material Location:

General Description of Remedial Action:

Excavated contaminated soil to a pit size of 31' X 50.5' X 20' 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 was encountered at 20'. See attached risk analysis form.

Ground Water Encountered:

No

☒

Yes

☐

Depth

Final Pit Closure Sampling:

Sample Location

5 pt. composite - bottom.

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

Sample depth

20'

Sample date

05/20/1999

Sample time

9:50:00 AM

Sample Results

Benzene (ppm)

0.77

Total BTEX (ppm)

51.67 ***

Field headspace (ppm)

TPH (ppm)

760.00

Method

8015B

Vertical Extent (ft)

Risk Analysis form attached Yes

☒

No

Ground Water Sample:

Yes

☐

No

☒

(If yes, see attached Groundwater Site Summary Report)

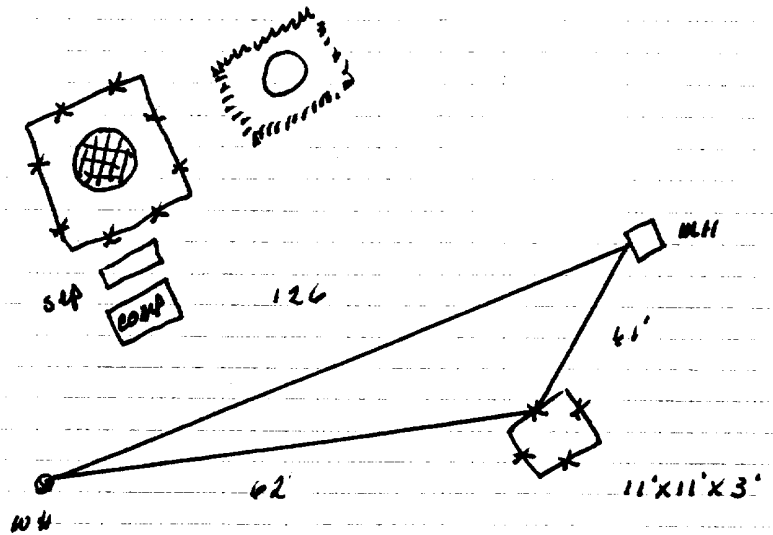
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF

DATE October 28, 1999

SIGNATURE

PRINTED NAME Maureen Gannon
AND TITLE Project Manager

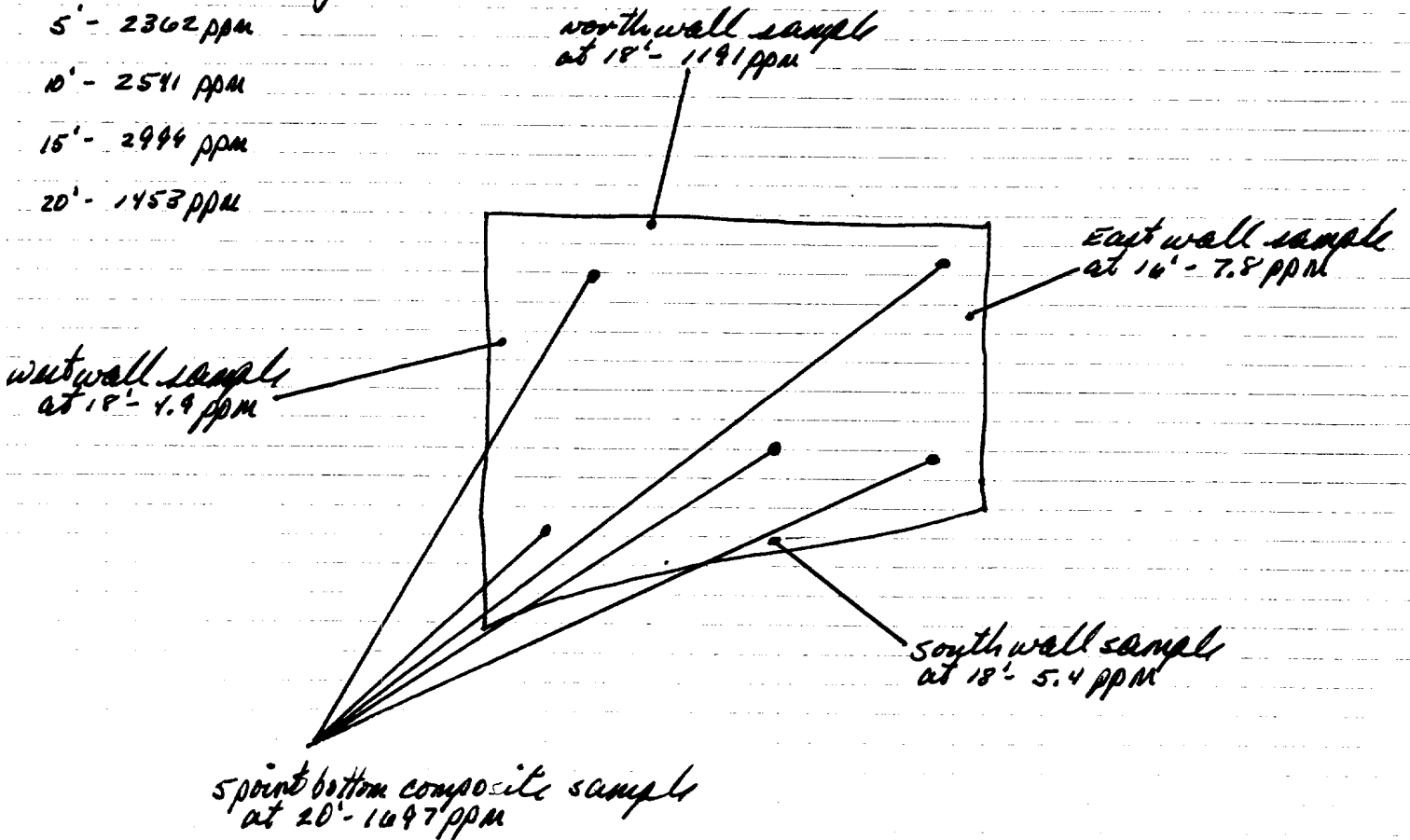
Groes²
 (N) 7-31N-12W
 Greystone
 5-14-94 @ 0855



Excavation Sampling PID Reading

5' - 2362 ppm
 10' - 2541 ppm
 15' - 2944 ppm
 20' - 1453 ppm

31' (W+S) x 50.5' (E+W) x 20' (D)
 Field headspace: 110 ppm (walls)



not to scale

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 02-Jun-99

CLIENT: PNM - Public Service Company of NM

Project: Gross #1, Duke #1, Starr #1M

Lab Order: 9905074

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.

May

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 02-Jun-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Gross #1
Work Order:	9905074	Client Sample ID:	9905200950; 5pt. Comp. Bottom
Lab ID:	9905074-01A	Matrix:	SOIL
Project:	Gross #1, Duke #1, Starr #1M	Collection Date:	5/20/99 9:50:00 AM
		COC Record:	7627

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS						
		SW8015B				Analyst: DC
T/R Hydrocarbons: C10-C28	760	25		mg/Kg	1	5/27/99
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Benzene	770	200		µg/Kg	200	5/21/99
Toluene	4800	400		µg/Kg	200	5/21/99
Ethylbenzene	3300	200		µg/Kg	200	5/21/99
m,p-Xylene	38000	400		µg/Kg	200	5/21/99
o-Xylene	4800	200		µg/Kg	200	5/21/99

51670
51.67 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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OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 02-Jun-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Gross #1
Work Order:	9905074	Client Sample ID:	9905201000; 4 Wall Comp.
Lab ID:	9905074-02A	Matrix:	SOIL
Project:	Gross #1, Duke #1, Starr #1M	Collection Date:	5/20/99 10:00:00 AM
		COC Record:	7627

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015B				Analyst: DC
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	5/28/99

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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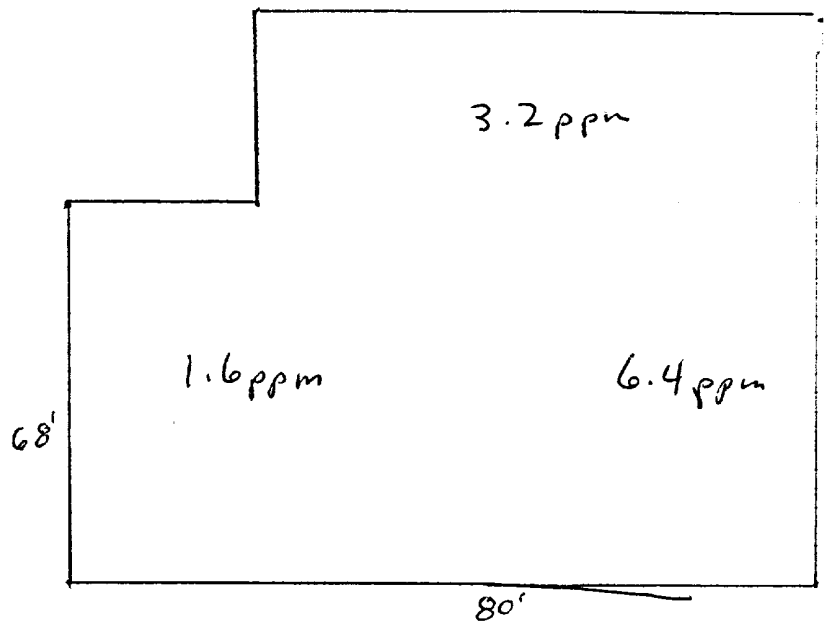
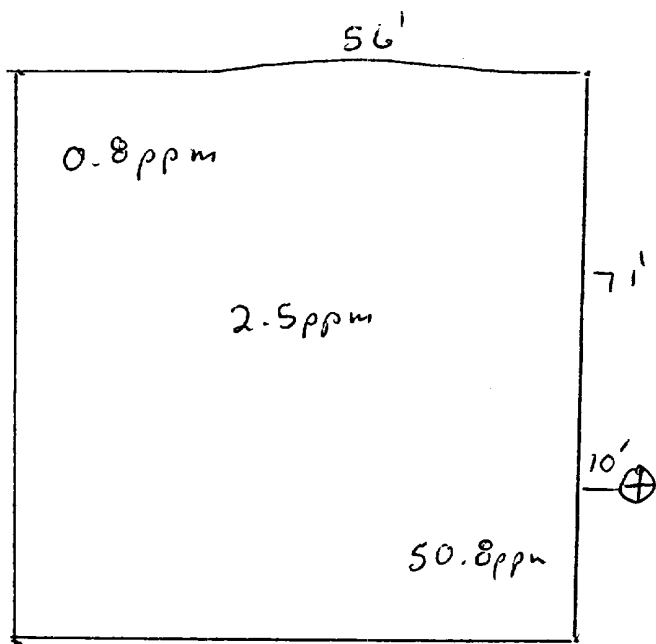
- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

(910) 1

Sec. 7 - T-31N R-12W 46. N
Gray stone

LAND Farm Drawing #1

App Cu yds



2" to 12" Depth
Headspace 19.2 ppm
Sample # 9907011210

Not to Scale

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 19-Jul-99

CLIENT: PNM - Public Service Company of NM

Project: PNM Pit Remediation Landfarms

Lab Order: 9907006

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: 19-Jul-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Gross #1 LF
Work Order:	9907006	Client Sample ID:	9907011210; 6pt. Composite
Lab ID:	9907006-03A	Matrix:	SOIL
Project:	PNM Pit Remediation Landfarms	Collection Date:	7/1/99 12:10:00 PM
		COC Record:	7726

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015B				Analyst: DC
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	7/15/99

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

1 of 1

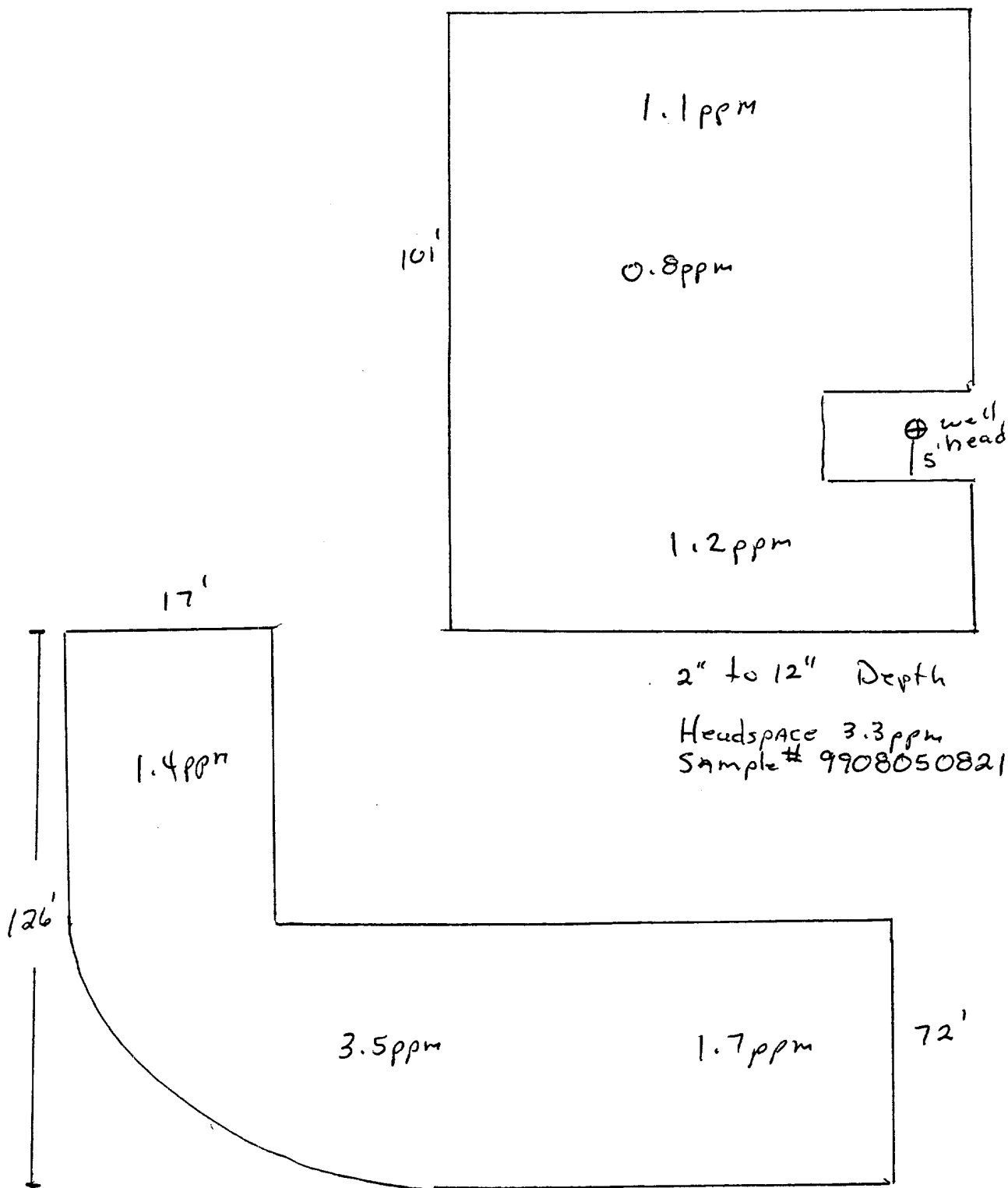
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Gross #1
Sec-7 T-31N R-12W ULN
Greystone

Landfarm Drawing #2

App Cu yds

54'



Not to Scale

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 11-Aug-99

CLIENT: PNM - Public Service Company of NM

Project: PNM Pit Remediation Landfarms

Lab Order: 9908009

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-Aug-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Gross #1 LF #2
Work Order:	9908009	Client Sample ID:	9908050821; 6pt Composite
Lab ID:	9908009-02A	Matrix:	SOIL
Project:	PNM Pit Remediation Landfarms	Collection Date:	08/05/1999 8:21:00 AM
		COC Record:	7803

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015B				Analyst: DC
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	08/06/1999

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

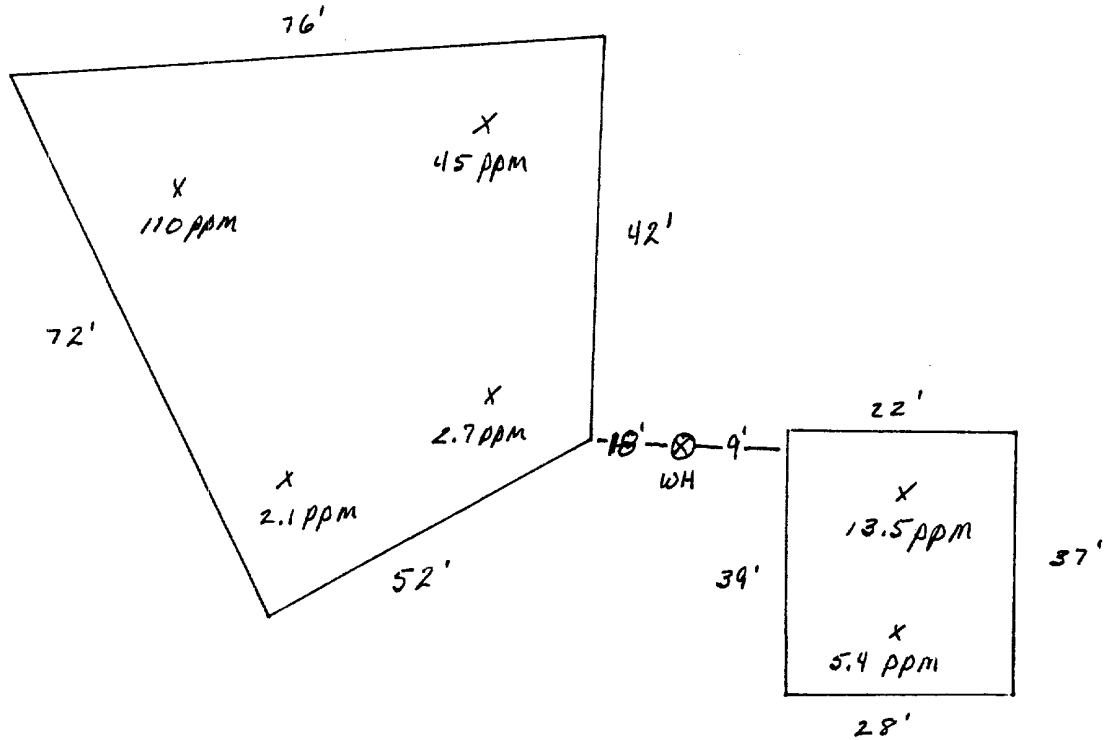
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Gross #1

Sec. 7 T-31N R-12W

Greystone (Chateau)

Landfarm #3 Drawing



Head Space - 27.9 ppm

Sample # - 9408121230

not to scale

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 17-Aug-99

CLIENT: PNM - Public Service Company of NM
Project: PNM Pit Remediation Landfarms
Lab Order: 9908034

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: 17-Aug-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Gross #1 LF #3
Work Order:	9908034	Client Sample ID:	9908121230; 6pt Comp
Lab ID:	9908034-05A	Matrix:	SOIL
Project:	PNM Pit Remediation Landfarms	Collection Date:	08/12/1999 12:30:00 PM
		COC Record:	7653

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015B				Analyst: DC
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	08/13/1999

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



Environmental Services

Well Name:	Gross #1
Well Legals:	Unit N, Sec 7, T31N, R12W
Pit Type:	No Equipment
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 Gross #1 well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 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 1160 cubic yards of soil from the former pit. Source removal minimizes the possibility of surface water contamination.
3. Sandstone was encountered at 20 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 Gross #1 well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 1,000 pits.