

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

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

*Risk
back*

PIT REMEDIATION AND CLOSURE REPORT

Operator: PNM Gas Services (Greystone) Telephone: 324-3764

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Starr #1M

Location: Unit C Sec 13 T 31 N R 13 W County San Juan

Pit Type: Separator ☐ Dehydrator ☒ Other

Land Type: BLM ☐ State ☐ Fee ☒ Other

Pit Location: Pit dimensions: length 16' width 16' depth 4'

(Attach diagram) Reference: wellhead ☒ other

Footage from reference: 63'

Direction from reference: 4 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	(20 points)	
50 feet to 99 feet	(10 points)	
Greater than 100 feet	(0 points)	<u>10</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	(20 points)	
No	(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	(20 points)	
200 feet to 1,000 feet	(10 points)	
Greater than 1,000 feet	(0 points)	<u>0</u>

RANKING SCORE (TOTAL POINTS): 10

Starr #1M

Date Remediation Started: 05/20/1999

Date Completed: 05/20/1999

Remediation Method: Excavation ☒

Approx. Cubic Yard 46

(Check all appropriate sections)

Landfarmed ☒

Amount Landfarmed (cubic yds) 46

Other _____

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 13' X 16' X 6' 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 6'. 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 6'

Sample date 05/20/1999

Sample time 3:00:00 PM

Sample Results

Benzene (ppm) 6.3

Total BTEX (ppm) 163.8 ***

Field headspace (ppm) _____

TPH (ppm) 390.00

Method 8015B

Vertical Extent (ft) _____

Risk Analysis form attached Yes ☒ No ☐

Ground Water Sample:

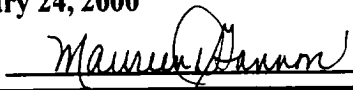
Yes ☐No ☒

(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 January 24, 2000

SIGNATURE



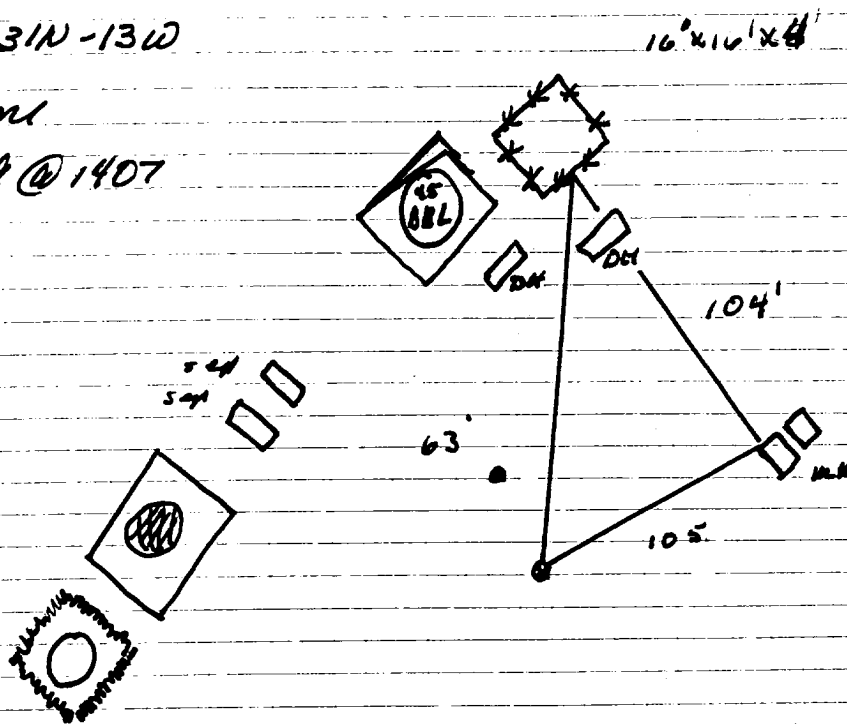
PRINTED NAME Maureen Gannon
AND TITLE Project Manager

Start #1M

(F) 13-31N-13W

Greystone

5-20-99 @ 1407



Excavation Sampling

13' (N+S) x 16' (E+W) x 6' (D)

AID Readings

5' - 2326 ppm

6' - 2713 ppm

west wall sample
at 6' - 0 ppm

north wall sample
at 6' - 30 ppm

East wall sample
at 6' - 310 ppm

South wall sample
at 6' - 12.8 ppm

5 point composite sample of sandstone bottom
at 6' - 2628 ppm

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.

Ray

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 02-Jun-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Starr #1M
Work Order:	9905074	Client Sample ID:	9905201500; 5pt. Comp. Bottom
Lab ID:	9905074-05A	Matrix:	SOIL
Project:	Gross #1, Duke #1, Starr #1M	Collection Date:	5/20/99 3:00:00 PM
		COC Record:	7627

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015B				Analyst: DC
T/R Hydrocarbons: C10-C28	390	25		mg/Kg	1	5/28/99
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DM
Benzene	6300	2500		µg/Kg	2500	5/21/99
Toluene	32000	5000		µg/Kg	2500	5/21/99
Ethylbenzene	9500	2500		µg/Kg	2500	5/21/99
m,p-Xylene	100000	5000		µg/Kg	2500	5/21/99
o-Xylene	16000	2500		µg/Kg	2500	5/21/99

163800
163.8 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 -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 02-Jun-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Starr #1M
Work Order:	9905074	Client Sample ID:	9905201505; 4 Wall Comp.
Lab ID:	9905074-06A	Matrix:	SOIL
Project:	Gross #1, Duke #1, Starr #1M	Collection Date:	5/20/99 3:05:00 PM
		COC Record:	7627

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015B				Analyst: DC
T/R Hydrocarbons: C10-C28	730	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

1 of 1

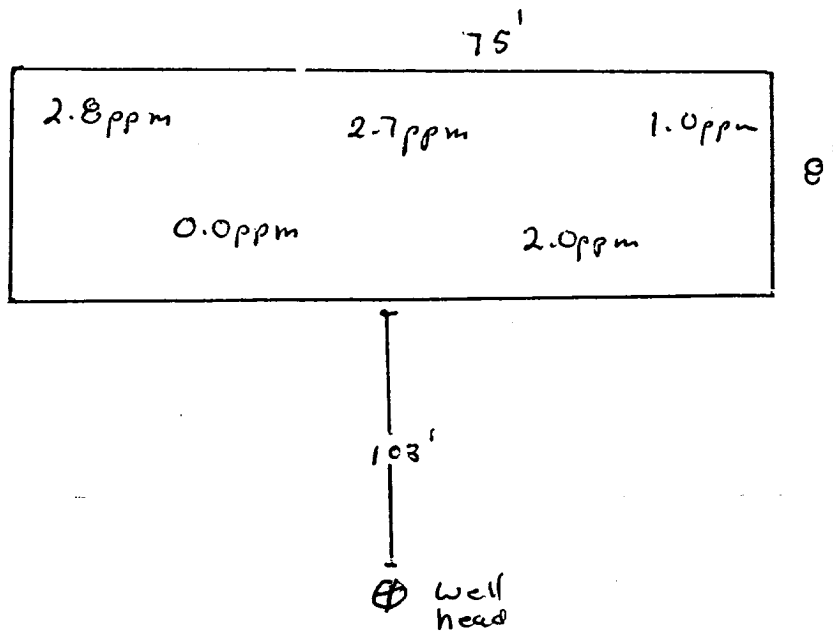
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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

STARR 1M
Sec-13 T-31N R13W
Graystone

LAND FARM DRAWING

App 46 cu yds



2" to 12" Depth
Headspace 38.3 ppm
Sample # 990701/226

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:	Starr 1M LF
Work Order:	9907006	Client Sample ID:	9907011226; 5pt. Composite
Lab ID:	9907006-04A	Matrix:	SOIL
Project:	PNM Pit Remediation Landfarms	Collection Date:	7/1/99 12:26:00 PM
		COC Record:	7726

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015B				Analyst: DC
T/R Hydrocarbons: C10-C28	180	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

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Environmental Services

Well Name:	Starr #1M
Well Legals:	Unit C, Sec 13, T31N, R13W
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 Starr #1M well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 77 feet based upon the elevation of the site and the elevation of the nearest "listed" or "named" wash. (Reference: La Plata, NM series 7.5 minute topographic map.)
2. PNM excavated 46 cubic yards of soil from the former pit. Source removal minimizes the possibility of surface water contamination.
3. Sandstone was encountered at 6 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 Starr #1M well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 1,000 pits.

