

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

**PIT REMEDIATION AND CLOSURE REPORT**

<b>Operator:</b> <u>PNM Gas Services ( Williams )</u>		<b>Telephone:</b> <u>324-3764</u>	
<b>Address:</b> <u>603 W. Elm Street Farmington, NM 87401</u>			
<b>Facility or Well Name:</b> <u>Southern Union #1M Drip</u>			
<b>Location:</b>	Unit <u>I</u>	Sec <u>19</u>	T <u>31 N</u> R <u>12 W</u> County <u>San Juan</u>
<b>Pit Type:</b>	Separator <input type="checkbox"/>	Dehydrator <input type="checkbox"/>	Other <u>Drip</u>
<b>Land Type:</b>	BLM <input type="checkbox"/>	State <input type="checkbox"/>	Fee <input checked="" type="checkbox"/> Other <u>                    </u>
<b>Pit Location:</b>	Pit dimensions: length <u>18</u> ' width <u>18</u> ' depth <u>3</u> '		
(Attach diagram)	Reference: wellhead <input type="checkbox"/> other <u>Drip blow down riser.</u>		
	Footage from reference: <u>12'</u>		
	Direction from reference: <u>10</u> Degrees <input checked="" type="checkbox"/> East <input type="checkbox"/> West of North <input checked="" type="checkbox"/> South <input type="checkbox"/>		
<b>Depth to Ground Water:</b> <small>(Vertical distance from contaminants to seasonal high water elevation of ground water)</small>		Less than 50 feet 50 feet to 99 feet Greater than 100 feet	(20 points) (10 points) ( 0 points) <u>0</u>
<b>Wellhead Protection Area:</b> <small>(Less than 200 feet from a private domestic water source, or, less than 1,000 feet from all other water sources)</small>		Yes No	(20 points) ( 0 points) <u>0</u>
<b>Distance to Surface Water:</b> <small>(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)</small>		Less than 200 feet 200 feet to 1,000 feet Greater than 1,000 feet	(20 points) (10 points) ( 0 points) <u>0</u>
<b>RANKING SCORE (TOTAL POINTS):</b>			<u>0</u>

**RECEIVED**  
JAN 31 2000  
OIL CON. DIV.  
DIST. 3

Southern Union #1M Drip

Date Remediation Started: 05/26/1999

Date Completed: 05/26/1999

Remediation Method: Excavation ☒

Approx. Cubic Yard 104

(Check all appropriate sections)

Landfarmed ☒

Amount Landfarmed (cubic yds) 84

Other 20 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 19.5' X 16' X 9' 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 9'. 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

9'

Sample date

05/26/1999

Sample time

11:05:00 AM

Sample Results

Benzene (ppm)

1.8

Total BTEX (ppm)

105.2 \*\*\*

Field headspace (ppm)

TPH (ppm)

75.00

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

*Maureen Gannon*

PRINTED NAME Maureen Gannon  
AND TITLE Project Manager

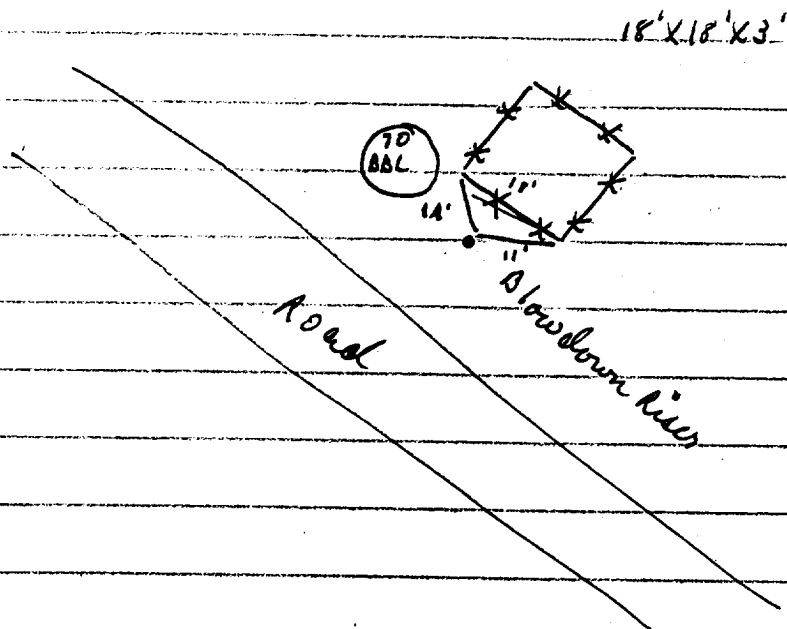
Southern Union #1M Drip

(I) 19-31N-12W

WFS

5-26-99 at 1006

↑  
N



Excavation Sampling

19.5'(N+S) x 16'(E+W) x 9'(D)

PID readings

5' - 2184 ppm

4' - 1134 ppm

west wall sample  
at 4' - 76 ppm

north wall sample  
at 4' - 0 ppm

East wall sample  
at 4' - 0 ppm

5 point composite sample of sandstone bottom  
at 4' - 2321

south wall sample  
at 4' - 45 ppm

not to scale

OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 08-Jun-99

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**CLIENT:** PNM - Public Service Company of NM  
**Project:** Southern Union #1M & #1M Drip  
**Lab Order:** 9905095

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## **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



Ray

LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 08-Jun-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Southern Union #1M Drip
<b>Work Order:</b>	9905095	<b>Client Sample ID:</b>	9905261105; 5pt. Bottom Comp
<b>Lab ID:</b>	9905095-03A	<b>Matrix:</b>	SOIL
<b>Project:</b>	Southern Union #1M & #1M Drip	<b>Collection Date:</b>	5/26/99 11:05:00 AM
		<b>COC Record:</b>	7628

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015B</b>				<b>Analyst: DC</b>
T/R Hydrocarbons: C10-C28	75	25		mg/Kg	1	6/3/99
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>				<b>Analyst: DC</b>
Benzene	1800	1000		µg/Kg	1000	6/1/99
Toluene	29000	2000		µg/Kg	1000	6/1/99
Ethylbenzene	3400	1000		µg/Kg	1000	6/1/99
m,p-Xylene	59000	2000		µg/Kg	1000	6/1/99
o-Xylene	12000	1000		µg/Kg	1000	6/1/99

105200  
105.200 ppm

<b>Qualifiers:</b>	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: 08-Jun-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Southern Union #1M Drip
<b>Work Order:</b>	9905095	<b>Client Sample ID:</b>	9905261110; 4pt. Wall Comp
<b>Lab ID:</b>	9905095-04A	<b>Matrix:</b>	SOIL
<b>Project:</b>	Southern Union #1M & #1M Drip	<b>Collection Date:</b>	5/26/99 11:10:00 AM
		<b>COC Record:</b>	7628

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015B</b>				<b>Analyst: DC</b>
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	6/3/99

<b>Qualifiers:</b>	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

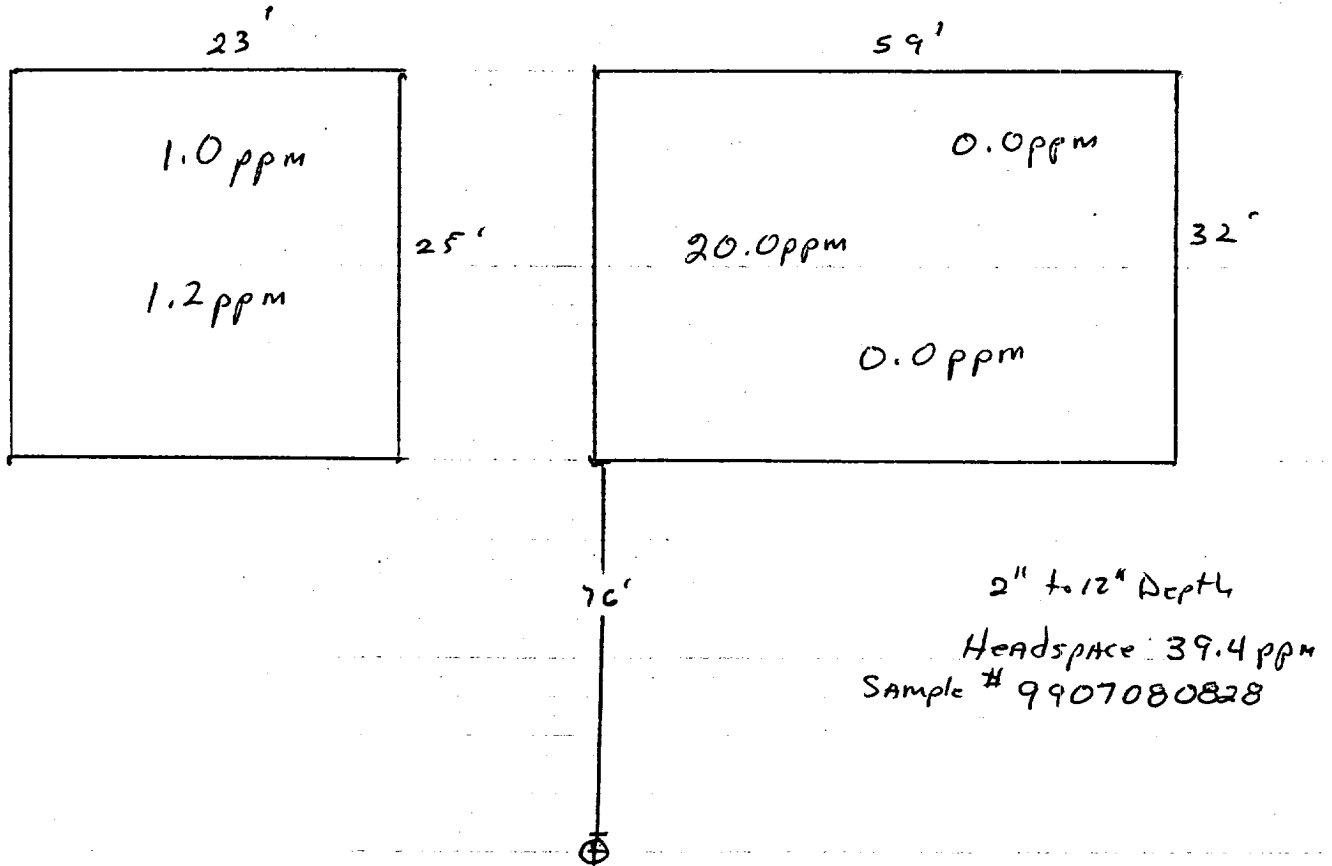
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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

Southern Union 1M DRIP  
Sec-19 T-31N R-12W U4-I  
WFS

Land farm Deacwing on Southern Union  
Sec-19 T-31N R-12W U4-I  
App Cu. yds - 84



Not to Scale

OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date: 22-Jul-99**

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**CLIENT:** PNM - Public Service Company of NM

**Project:** PNM Pit Remediation Landfarms

**Lab Order:** 9907018

## **CASE NARRATIVE**

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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



Roy

LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 22-Jul-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Southern Union 1M Drip LF
<b>Work Order:</b>	9907018	<b>Client Sample ID:</b>	9907080828; 5pt Comp
<b>Lab ID:</b>	9907018-02A	<b>Matrix:</b>	SOIL
<b>Project:</b>	PNM Pit Remediation Landfarms	<b>Collection Date:</b>	7/8/99 8:28:00 AM
		<b>COC Record:</b>	7732

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

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



## **Environmental Services**

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Well Name:	Southern Union #1M Drip
Well Legals:	Unit I, Sec 19, T31N, R12W
Pit Type:	No Equipment
Horizontal Distance to Surface Water:	Greater than 1,000 feet
Groundwater Depth:	Greater than 100 feet

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### **RISK ANALYSIS**

PNM requests closure of their former pit on the Southern Union #1M Drip well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 142 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 104 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 9 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 Southern Union #1M Drip well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 1,000 pits.