

District I  
P.O. Box 190  
*Sammy E. Faust*  
DEPUTY OIL & GAS INSPECTOR  
P.O. Drawer 60, Aztec, NM 88021

District III  
1000 Rio Brazos Rd, Aztec, NM 87003  
SEP 03 1999

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco Street  
Santa Fe, New Mexico 87505

02  
12/28/99  
13  
APPROPRIATE  
DISTRICT OFFICE  
AND 1 COPY TO  
SANTA FE OFFICE

RECEIVED  
JUL 30 1999

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: Hillstrom #1A

Location: Unit E Sec 35 T 32N R 12W 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: 90'

Direction from reference: 70 Degrees ☒ East North ☒  
West of 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) 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 (20 points)  
No (0 points) 0

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) 0

RANKING SCORE (TOTAL POINTS): 0

Hillstrom #1A

Date Remediation Started: 04/14/1999 Date Completed: 04/14/1999Remediation Method: Excavation X Approx. Cubic Yard 259

(Check all appropriate sections)

Landfarmed X Amount Landfarmed (cubic yds) 169Other 90 cu yds overburdenRemediation Location: Onsite X Offsite \_\_\_\_\_

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

Backfill Material Location: \_\_\_\_\_

## General Description of Remedial Action:

Excavated contaminated soil to pit size of 28' X 25' X 10' and landfarmed soil onsite within a bermed area at a depth of 6" to 12". Soil was aerated by plowing until soil met regulatory levels.\*\*\* Sandstone encountered at 10'. See attached risk analysis form and lab analysis.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 10'Sample date 04/14/1999 Sample time 3:10:00 PM

## Sample Results

Benzene (ppm) 9.600Total BTEX (ppm) 190.600 \*\*\*

Field headspace (ppm) \_\_\_\_\_

TPH (ppm) 150.00 Method 8015BVertical 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 July 27, 1999

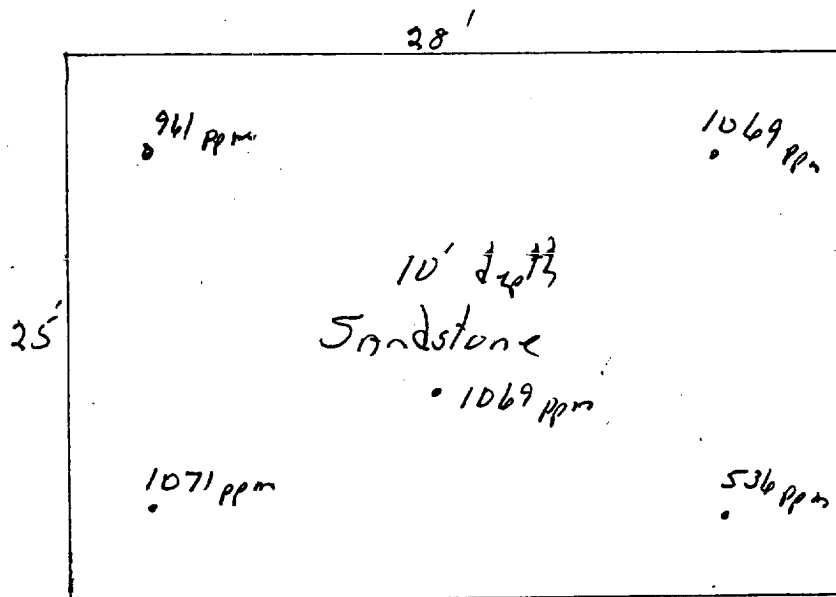
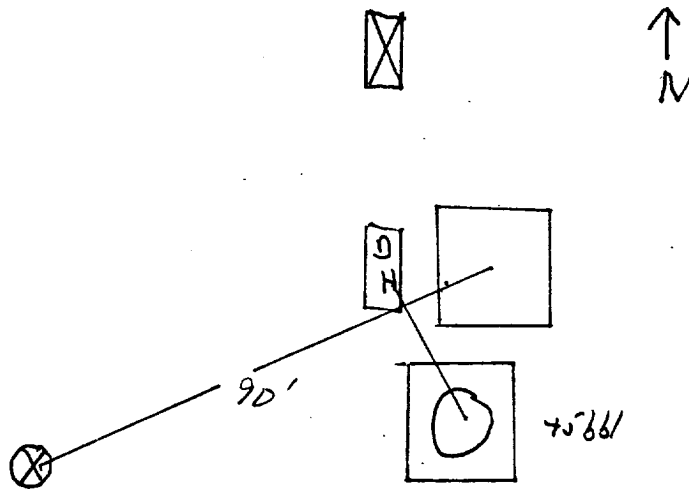
SIGNATURE

Maureen GannonPRINTED NAME Maureen Gannon  
AND TITLE Project Manager

Hillstrom #1A  
Burlington  
Sec. 35, 32N, 12W, 0

4/14/99

Site diagram:



OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 23-Apr-99

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

**Project:** Hillstrom #1A

**Lab Order:** 9904021

**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



LAB: (505) 325-1556

**ANALYTICAL REPORT**

Date: 23-Apr-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Hillstrom #1A
<b>Work Order:</b>	9904021	<b>Client Sample ID:</b>	9904141510; Bottom
<b>Lab ID:</b>	9904021-01A	<b>Matrix:</b>	SOIL
<b>Project:</b>	Hillstrom #1A	<b>Collection Date:</b>	4/14/99 3:10:00 PM
		<b>COC Record:</b>	7561

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015</b>				Analyst: HR
T/R Hydrocarbons: C10-C28	150	25		mg/Kg	1	4/19/99
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>				Analyst: HR
Benzene	9600	2500		µg/Kg	2500	4/15/99
Toluene	68000	5000		µg/Kg	2500	4/15/99
Ethylbenzene	10000	2500		µg/Kg	2500	4/15/99
m,p-Xylene	83000	5000		µg/Kg	2500	4/15/99
o-Xylene	20000	2500		µg/Kg	2500	4/15/99

190600  
190.6 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

1 of 1

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- TECHNICAL SERVICES PROVIDED WITH THE GREATEST CARE -

OFF: (505) 325-5667



LAB: (505) 325-1556

# ANALYTICAL REPORT

Date: 23-Apr-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Hillstrom #1A
<b>Work Order:</b>	9904021	<b>Client Sample ID:</b>	9904141515; Walls
<b>Lab ID:</b>	9904021-02A	<b>Matrix:</b>	SOIL
<b>Project:</b>	Hillstrom #1A	<b>Collection Date:</b>	4/14/99 3:15:00 PM
		<b>COC Record:</b>	7561

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015</b>				Analyst: HR
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	4/19/99
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>				Analyst: HR
Benzene	ND	1		µg/Kg	1	4/15/99
Toluene	ND	2		µg/Kg	1	4/15/99
Ethylbenzene	1.5	1		µg/Kg	1	4/15/99
m,p-Xylene	16	2		µg/Kg	1	4/15/99
o-Xylene	8.9	1		µg/Kg	1	4/15/99
	<u>26.4</u>					

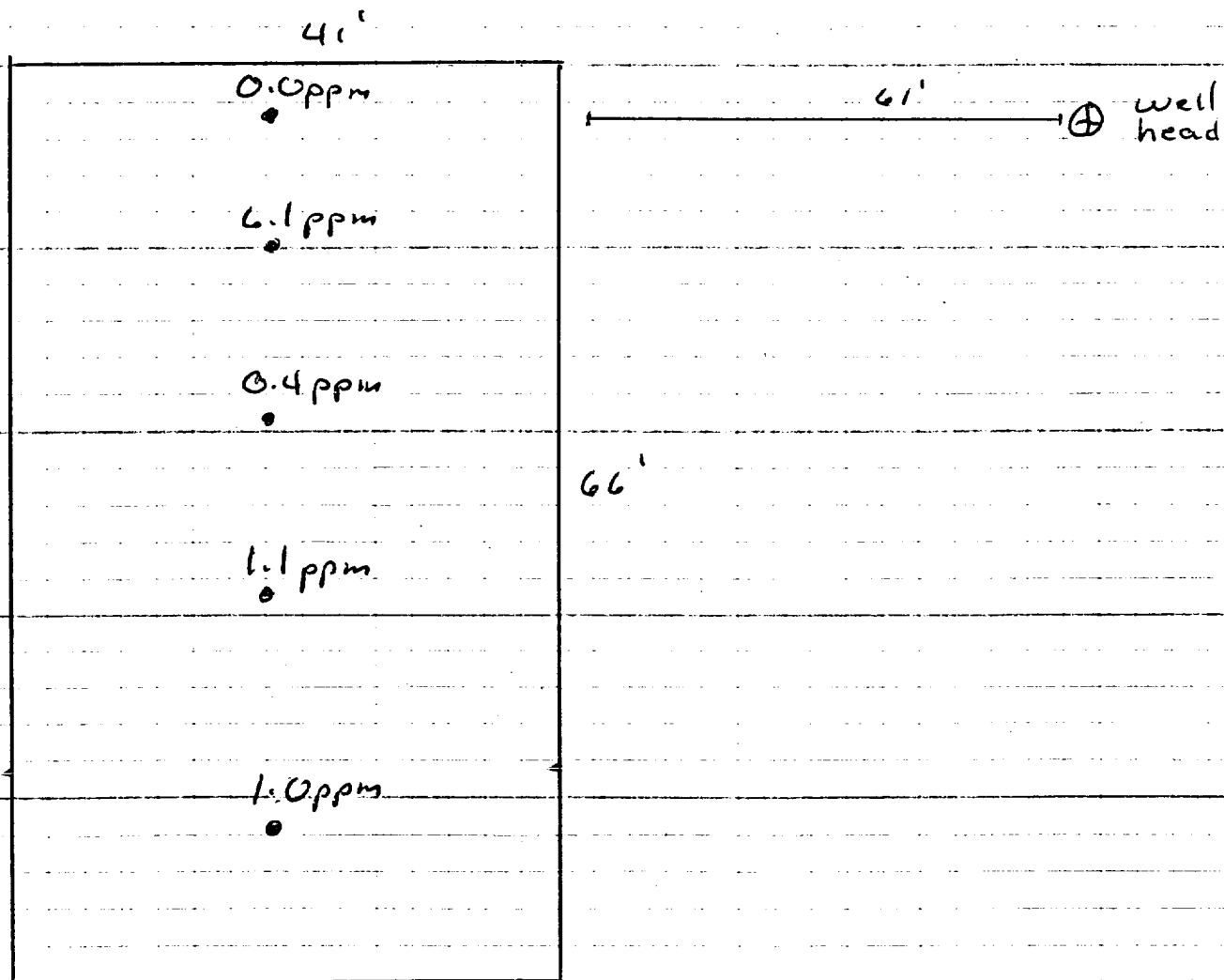
<b>Qualifiers:</b>	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

Hillstrom 1A  
Sec. 35 T-32N R-12W 4L D  
Burlington

LANDFARM DRAWING on location App 169 cu yd



2" to 12" depth  
Headspace 2.5 ppm  
Sample #9905260930

Not to Scale

OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 02-Jun-99

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**CLIENT:** PNM - Public Service Company of NM  
**Project:** PNM Pit Remediation Landfarms  
**Lab Order:** 9905088

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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.



Roy

OFF: (505) 325-5667



LAB: (505) 325-1556

**ANALYTICAL REPORT****Date:** 02-Jun-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	Hillstrom 1A LF
<b>Work Order:</b>	9905088	<b>Client Sample ID:</b>	9905260930; 5pt. Comp
<b>Lab ID:</b>	9905088-01A	<b>Matrix:</b>	SOIL
<b>Project:</b>	PNM Pit Remediation Landfarms	<b>Collection Date:</b>	5/26/99 9:30:00 AM
		<b>COC Record:</b>	7712

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	5/27/99

**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 -



## Environmental Services

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Well Name:	Hillstrom #1A
Well Legals:	Unit E, Sec 35, T32N, R12W
Pit Type:	Dehydrator
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 Hillstrom #1A well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 211 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 259 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 their former pit on the Hillstrom #1A well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 1,000 pits.