

3R - 314

REPORTS

DATE:

Nov. 1, 1999

Public Service Company
of New Mexico
603 W. Elm - P.O. Box 4750
Farmington, NM 87499
505 950-1997
Fax 505 325-7365

November 1, 1999

Oil Conservation Division
Attention: Bill Olson
2040 South Pacheco
Santa Fe, NM 87505



Subject: OCD Closure Reports - 3rd Reporting Quarter, 1999

Dear Mr. Olson:

PNM Environmental Services is submitting closure reports to the Oil Conservation Division for the groundwater sites listed below:

1. Florance #32A
2. Jacques #2A
3. Linda #1A
4. Mangum #1E
5. McClanahan #22
6. McCoy Gas Com A #1
7. Reid #16 Drip

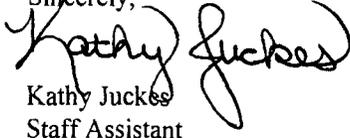
I have provided copies of the closures to Denny Foust for his information.

I have also enclosed copies of closures submitted to Denny Foust for his approval for the sites listed below:

- | | | | |
|----------------------------|---------------------------|-----------------------|-------------------------|
| 1. Angel Peak #23E | 20. Dusenberry #2A | 39. Grenier #12 | 58. Hanks #12E East |
| 2. Aztec SRC #8 Drip | 21. East #10M | 40. Grenier #13E | 59. Hanks #12Y |
| 3. C.M. Morris #3 | 22. East #12 | 41. Grenier #15 | 60. Hanks #17 |
| 4. Crouch Area Drip East | 23. East #15 | 42. Grenier #15E | 61. Hare #12 |
| 5. Crouch Area Drip West | 24. East #16 | 43. Grenier #2A | 62. Hare #13 |
| 6. Culpepper Martin #10A | 25. East #22 | 44. Grenier #3 | 63. Hare #15 |
| 7. Culpepper Martin #15A | 26. East #22A | 45. Grenier #4 Dehy | 64. Hare #16 |
| 8. Culpepper Martin #1A GC | 27. East #5 | 46. Grenier #4A Sep | 65. Hare #17 |
| 9. Culpepper Martin #1A RH | 28. East #8 | 47. Grenier #6A | 66. Hare #18 East |
| 10. Culpepper Martin #1E | 29. East #9A | 48. Grenier A #1A Sep | 67. Hare #22A |
| 11. Culpepper Martin #3A | 30. Eaton Federal #1 | 49. Grenier A #4 | 68. Holder A #1 |
| 12. Culpepper Martin #3M | 31. EH Pipken #5 | 50. Grenier A #4E | 69. Horton #1 |
| 13. Culpepper Martin #4A | 32. EH Pipken #5 Drip | 51. Grenier A #5 | 70. Horton #1A |
| 14. Culpepper Martin #4M | 33. Federal #1E | 52. Grenier A #6 | 71. Hubbard #1A |
| 15. Culpepper Martin #8A | 34. Florance #25 | 53. Grenier A #8 | 72. Jackson #2E |
| 16. Decker #4A Dehy | 35. Florance #27A | 54. Grenier B #3E | 73. Kutz Government #5J |
| 17. Decker A #3 Drip | 36. Fred Feasel G #1 | 55. Grenier B #4 | 74. Martinez #1 |
| 18. Decker A #3 Separator | 37. Fred Feasel G #1 Drip | 56. Gross #1 | |
| 19. Dusenberry #1A | 38. Fred Feasel G #1E | 57. Gross #1E | |

If you have any questions, please call me at 324-3764.

Sincerely,


Kathy Juckes
Staff Assistant

cc: Denny Foust

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

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

OIL CONSERVATION DIVISION

2040 South Pacheco Street
Santa Fe, New Mexico 87505

PIT REMEDIATION AND CLOSURE REPORT

Operator:	PNM Gas Services (Amoco)		Telephone:	324-3764			
Address:	603 W. Elm Street Farmington, NM 87401						
Facility or Well Name:	Florance #32A						
Location:	Unit	F	Sec	15	T 30N R 8W County San Juan		
Pit Type:	Separator	<input type="checkbox"/>	Dehydrator	<input type="checkbox"/>	Other One inactive pit.		
Land Type:	BLM	<input checked="" type="checkbox"/>	State	<input type="checkbox"/>	Fee <input type="checkbox"/> Other		
Pit Location:	Pit dimensions:	length	20'	width	20'	depth	4'
(Attach diagram)	Reference:	wellhead	<input checked="" type="checkbox"/>	other			
	Footage from reference:	75'					
	Direction from reference:	20	Degrees	<input checked="" type="checkbox"/> East	North	<input type="checkbox"/>	
				<input type="checkbox"/> West	of	South	<input checked="" type="checkbox"/>
Depth to Ground Water:		Less than 50 feet	(20 points)				
		50 feet to 99 feet	(10 points)				
(Vertical distance from contaminants to seasonal high water elevation of ground water)		Greater than 100 feet	(0 points)				20
Wellhead Protection Area:		Yes	(20 points)				
		No	(0 points)				0
(Less than 200 feet from a private domestic water source, or, less than 1,000 feet from all other water sources)							
Distance to Surface Water:		Less than 200 feet	(20 points)				
		200 feet to 1,000 feet	(10 points)				
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)		Greater than 1,000 feet	(0 points)				10
	RANKING SCORE (TOTAL POINTS):						30

Florance #32A

Date Remediation Started: 07/22/1996 Date Completed: 07/26/1996

Remediation Method: Excavation X Approx. Cubic Yard 133

(Check all appropriate sections) Landfarmed X Amount Landfarmed (cubic yds) 133

Other _____

Remediation 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 a pit size of 16' X 16' X 14' 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.

Conducted secondary source removal on 1/5/98; approximately 1400 cu yds of contaminated soil removed.

Ground Water Encountered: No Yes Depth 10' ***

Final Pit Closure Sampling:

Sample Location Five point composite; four side walls and center of pit bottom.

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

Sample depth 14'

Sample date 07/24/1996 Sample time 10:50:00 AM

Sample Results

Benzene (ppm) 2.631

Total BTEX (ppm) 307.6732

Field headspace (ppm) _____

TPH (ppm) 879.60 Method 8015A

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 **Maureen Gannon**
AND TITLE **Project Manager**

Groundwater Site Summary Report

Quarter/Year: 4th/98, 1st/99, 2nd/99 & 3rd/99

Operator: Amoco	Vulnerable Class: Original
Sec: 15 Twn: 30 Rng: 8 Unit: F	OCD Ranking: 30
Canyon: San Juan River	Lead Agency: NMOCD

Topo Map: Figure 1

Site Map with Analysis: Figure 2

Groundwater Contour Map: Figure 3a (April 1998), Figure 3b (August 1998), Figure 3c (November 1998), & Figure 3d (February 1999)

Groundwater Hydrograph: Figure 4

Full-Suite Groundwater Results: previously submitted

Analytical Results: See 1999 Annual Groundwater Report. Results for temporary monitor well, TMW-1, are attached.

Well Completion Log/Diagram: TMW-1 only

Site Hydrology:

Florance 32A site (Figure 1) lies on the alluvial floodplain of the San Juan River, about three miles upstream (northeast) of Archuleta, New Mexico. The river meanders over a broad flat alluvial plain spanning a width of about half a mile, contained within steep valley walls. The site lies at an elevation of about 5695 ft. amsl, and the river is perhaps ten feet lower in elevation. A steep canyon wall lies just southeast of the site, and the river is about 600 feet north.

The five monitor wells at the site (Figure 1) showed sand and gravel materials in the subsurface. Several borings also found a cobble layer at shallow depths (less than 20 feet). These materials are characteristic of the bedload of the modern river. Depth to water is from 6 to 8 feet at the site.

Groundwater flows southwest beneath the site, as shown in Figures 3a, 3b, 3c and 3d. The flow direction is parallel to the orientation of the river valley axis.

The hydrograph (Figure 4) shows water level shifts in tandem in all the wells, indicating no seasonal change in groundwater flow direction; this is corroborated by plots of groundwater levels during different time periods (Figures 3a through 3d). Well MW-2 shows an anomalous water table elevation after it was reinstalled in January, 1998; however, this most likely reflects the undeveloped state of the well, and not the true water table elevation. After the sampling event of January, 1998, the water levels in well MW-2 again began to track parallel with the other wells. The hydrograph also shows marked seasonal changes in water levels, typically with higher levels during spring runoff. Comparison with USGS stream gauging records (site 09355500 - San Juan River near Archuleta) shows a direct relationship between river stage and groundwater elevation, thus emphasizing the direct hydraulic connection between the river and the shallow alluvial aquifer at the site.

Activities for Previous Year:

Due to the presence of high BTEX concentrations in MW-2, PNM conducted additional source removal at the site on January 5, 1998. The secondary source removal action was prompted by elevated BTEX concentrations in the source well. Field crews removed approximately 2000 cubic yards in and around PNM's former pit. MW-2 was removed during the excavation. PNM re-installed MW-2 on January 29, 1998.

PNM conducted quarterly groundwater sampling at the Florance 32A on April 29, August 7 and November 4, 1998, and again on February 10, 1998. Water level data were collected from all wells during each sampling event. All sampling was performed in strict compliance with EPA protocol. PNM delivered the samples to OnSite Technologies, Farmington, New Mexico for chemical analyses of BTEX using EPA method 8021B.

Public Service Company of New Mexico - Gas Services

Environmental Services Division - Alvarado Square, MS-0408
Albuquerque, NM 87158

Contact: Maureen Gannon

Telephone: 505-241-2974

PNMGS Well Site: Florance 32A (continued)

On July 27, 1999, PNM installed a temporary monitor well southwest of our former pit between MW-3 and MW-5. This well was installed as requested to alleviate any concerns regarding potential impacts to the southwest of PNM's former dehydrator pit. Figure 2 shows the exact location of this well. On August 5, 1999, this well was sampled and analyzed for BTEX by method 8021B.

Results:

Figure 2 is a site map of the Florance 32A and includes groundwater analytical results. BTEX concentrations in the area of the former pit (well MW-2) have been below standards for four consecutive quarters. The additional source removal performed in January 1998 accelerated the reduction of benzene in this area.

All other wells on site have not shown detectable concentrations of BTEX compounds. BTEX concentrations in temporary monitor well, TMW-1, were below detection levels.

Future Actions:

Consistent with PNM's San Juan Basin Groundwater Management Plan, PNM requests closure of the Florance 32A. This request is based upon the analytical data collected over the last two years at the site. The secondary excavation of additional source materials was successful in achieving clean-up at the Florance 32A; the BTEX concentrations in the source well (MW-2) have been below standards for four consecutive quarters. Resampling of all monitor wells also shows that BTEX compounds are below detection limits in the other wells.

Upon approval of the groundwater closure report, PNM will plug and abandon the five groundwater monitoring wells at the site. The concrete pad and metal vault surrounding each well will be removed. The well casing will be cut to ground surface and each well will be plugged on the surface with cement containing 5% bentonite.

Public Service Company of New Mexico - Gas Services

Environmental Services Division - Alvarado Square, MS-0408
Albuquerque, NM 87158

Contact: Maureen Gannon

Telephone: 505-241-2974

Figure 3a.
Florance 32A Groundwater Contour Map
(April 29, 1998)

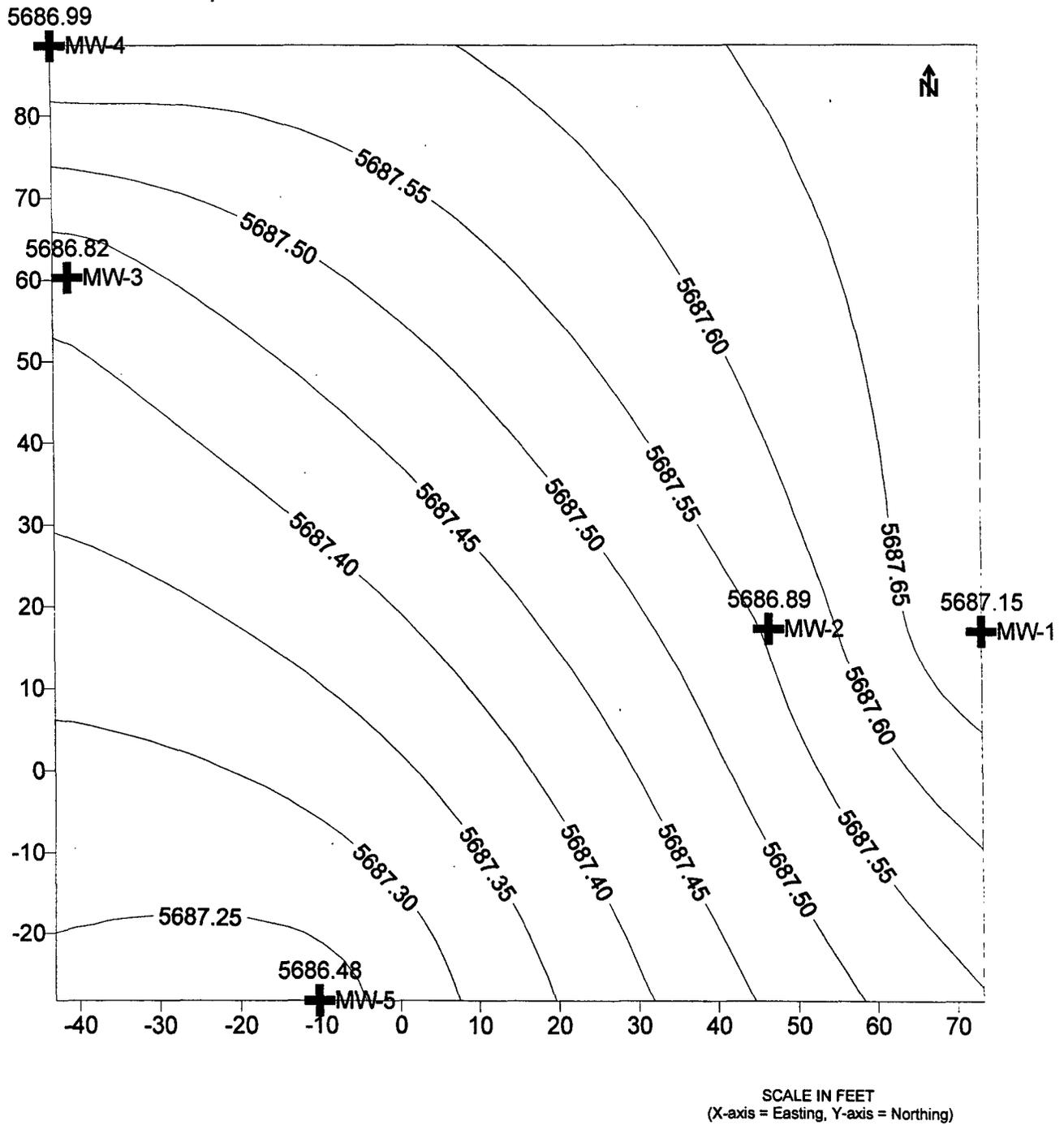


Figure 3b.
Florance 32A Groundwater Contour Map
(August 7, 1998)

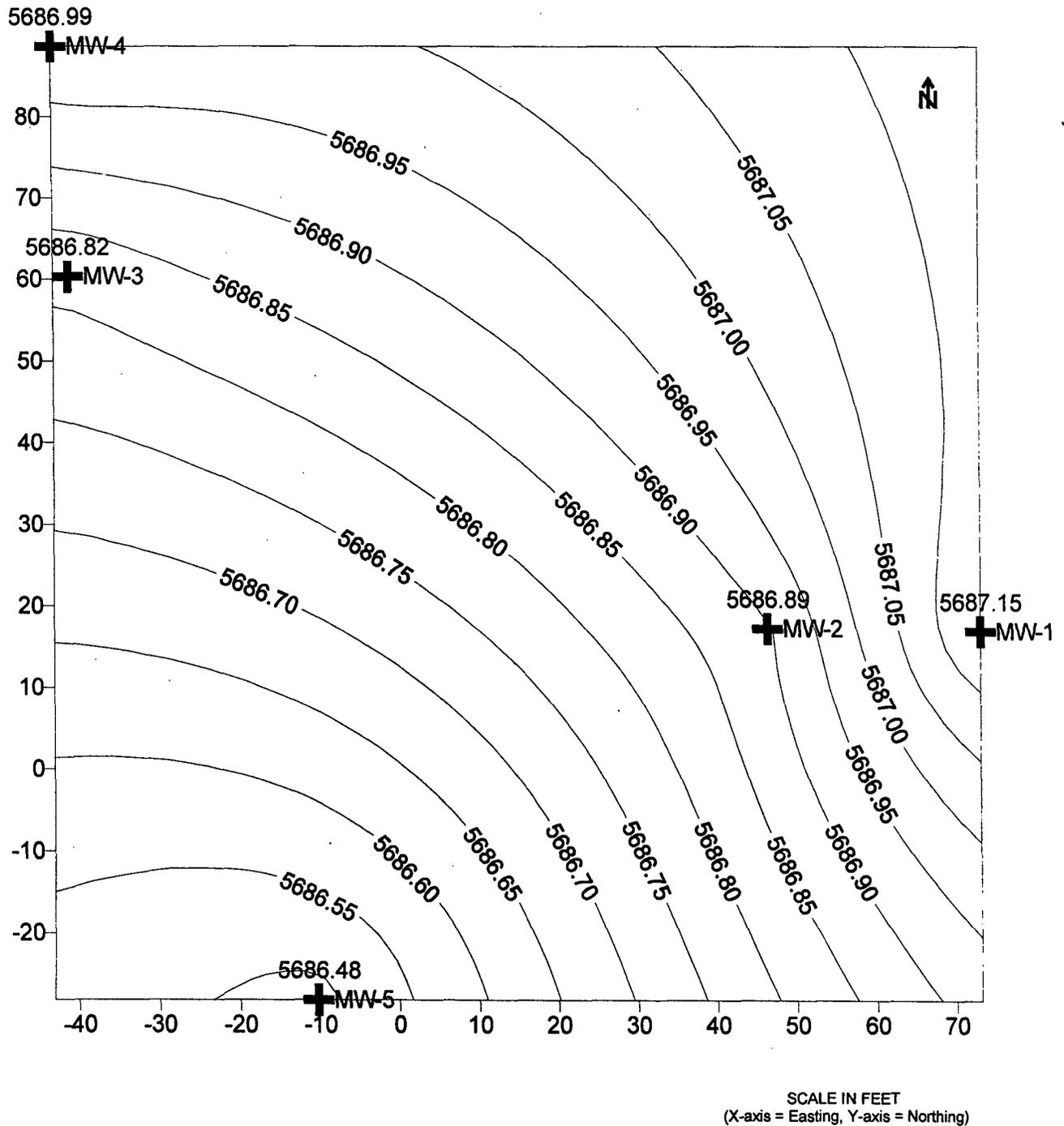


Figure 3c.
Florance 32A Groundwater Contour Map
(November 4, 1998)

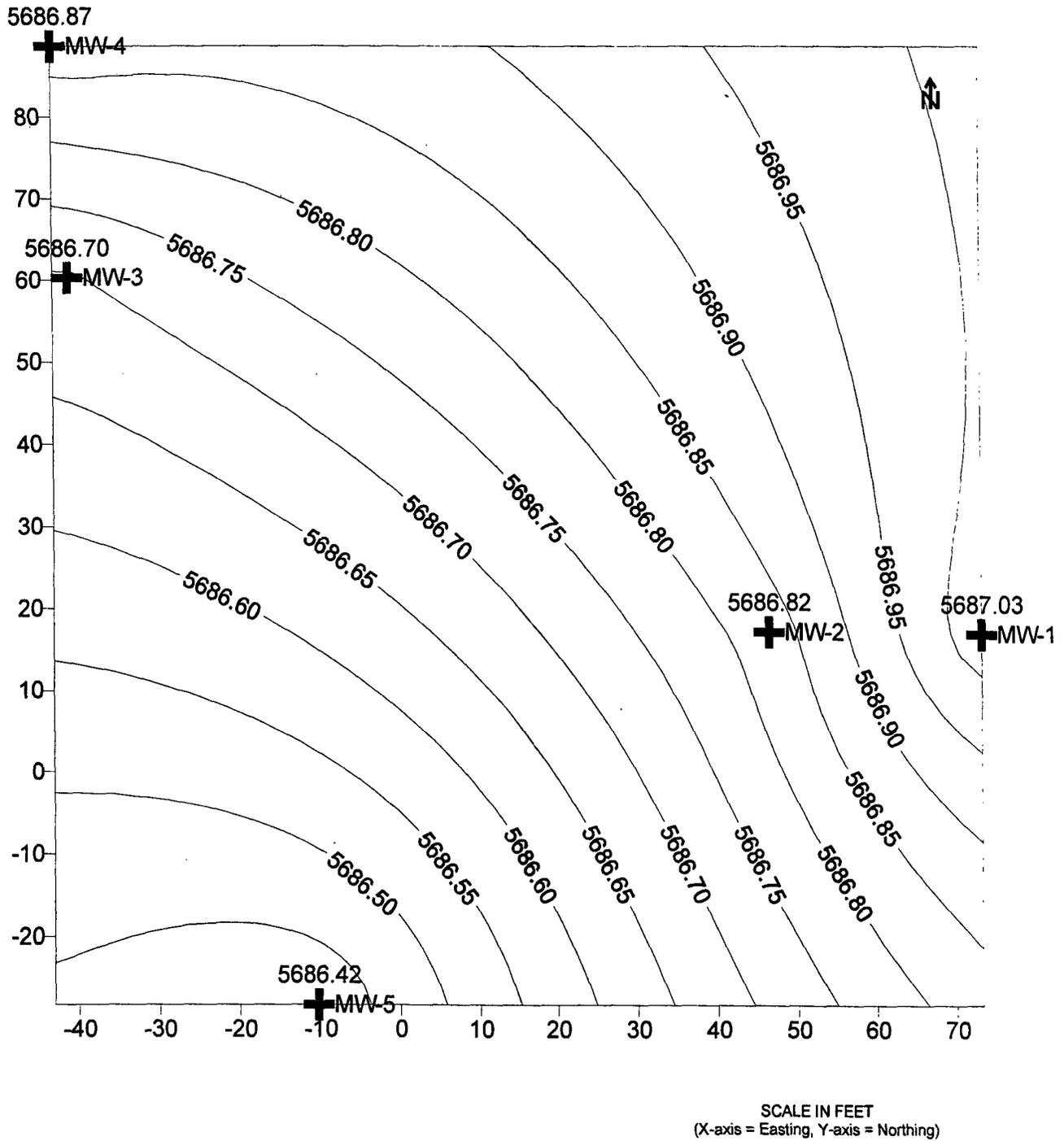
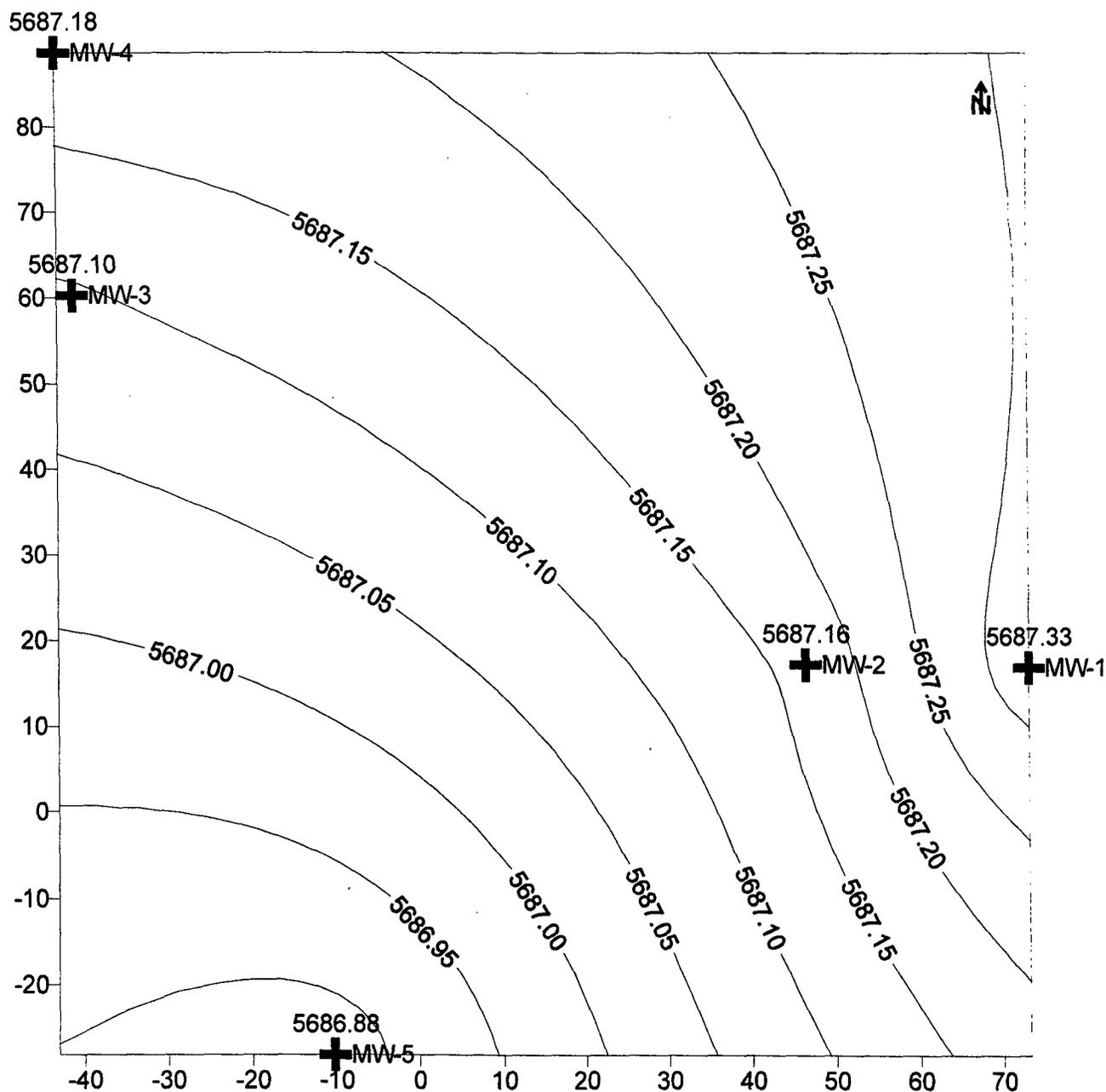
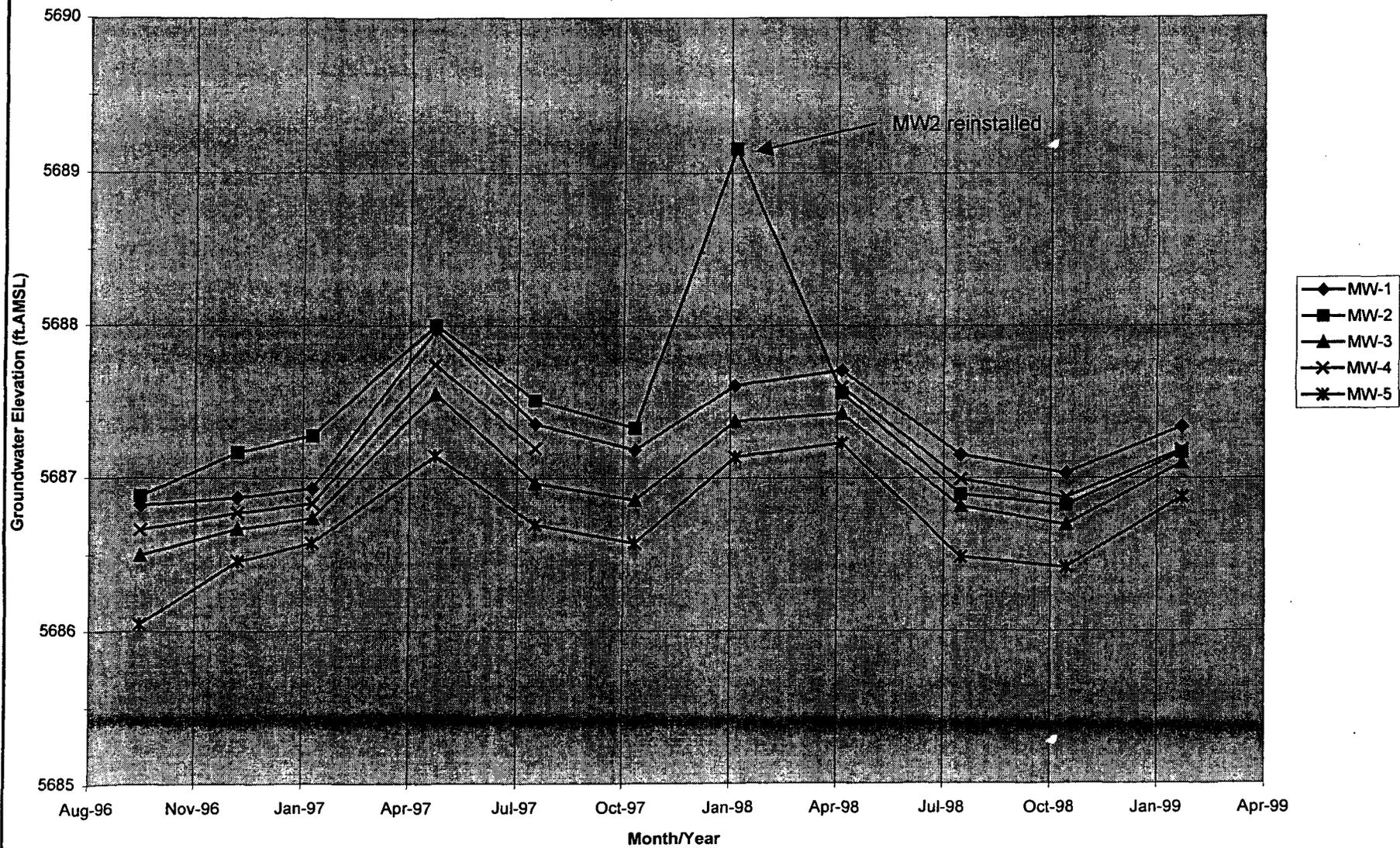


Figure 3d.
Florance 32A Groundwater Contour Map
(February 10, 1999)



SCALE IN FEET
(X-axis = Easting, Y-axis = Northing)

Figure 4. Florance 32A Hydrograph
(Water Level vs. Time)



Site Map

San Juan Hwy

E 1100'



20x30

D.H.

side w/ the fence

W.H.

75'

75'

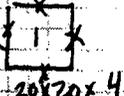


M.H.

58'

indication of
Equip. pad -
Equip. removed

→ stained soil



20x20x4



200 No Forest

gate (locked)

entrance

Assessor's Signature

Date:

10/22/95

OFF: (505) 325-5667



LAB: (505) 325-1556

Diesel Range Organics

Attn: *Denver Bearden*
 Company: *PNM Gas Services*
 Address: *603 W. Elm*
 City, State: *Farmington, NM 87401*

Date: *24-Jul-96*
 COC No.: *4740*
 Sample No. *11564*
 Job No. *2-1000*

Project Name: *PNM Gas Services - Florance 32A*
 Project Location: *9607221050; Pit Excavation Composite of Walls*
 Sampled by: *RH* Date: *22-Jul-96* Time: *10:50*
 Analyzed by: *HR* Date: *24-Jul-96*
 Sample Matrix: *Soil*

Laboratory Analysis

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Diesel Range Organics (C10 - C28)</i>	<i>879.6</i>	<i>mg/kg</i>	<i>5.0</i>	<i>mg/kg</i>

Quality Assurance Report

DRO QC No.: *0479-QC*

Calibration Check

<i>Parameter</i>	<i>Method Blank</i>	<i>Unit of Measure</i>	<i>True Value</i>	<i>Analyzed Value</i>	<i>% Diff</i>	<i>Limit</i>
<i>Diesel Range (C10 - C28)</i>	<i><5.0</i>	<i>ppm</i>	<i>2,000</i>	<i>1,798</i>	<i>10.1</i>	<i>15%</i>

Matrix Spike

<i>Parameter</i>	<i>1- Percent Recovered</i>	<i>2 - Percent Recovered</i>	<i>Limit</i>	<i>%RSD</i>	<i>Limit</i>
<i>Diesel Range (C10-C28)</i>	<i>98</i>	<i>100</i>	<i>(70-130)</i>	<i>2</i>	<i>20%</i>

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: *[Signature]*
 Date: *7/24/96*

OFF: (505) 325-5667



LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn: *Denver Bearden*
 Company: *PNM Gas Services*
 Address: *603 W. Elm*
 City, State: *Farmington, NM 87401*

Date: *24-Jul-96*
 COC No.: *4740*
 Sample No. *11564*
 Job No. *2-1000*

Project Name: *PNM Gas Services - Florance 32A*
 Project Location: *9607221050; Pit Excavation Composite of Walls*
 Sampled by: *RH* Date: *22-Jul-96* Time: *10:50*
 Analyzed by: *DC* Date: *23-Jul-96*
 Sample Matrix: *Soil*

Aromatic Volatile Organics

<i>Component</i>	<i>Result</i>	<i>Units of Measure</i>	<i>Detection Limit</i>	<i>Units of Measure</i>
<i>Benzene</i>	<i>2631.0</i>	<i>ug/kg</i>	<i>0.2</i>	<i>ug/kg</i>
<i>Toluene</i>	<i>43482.8</i>	<i>ug/kg</i>	<i>0.2</i>	<i>ug/kg</i>
<i>Ethylbenzene</i>	<i>21766.2</i>	<i>ug/kg</i>	<i>0.2</i>	<i>ug/kg</i>
<i>m,p-Xylene</i>	<i>186938.3</i>	<i>ug/kg</i>	<i>0.2</i>	<i>ug/kg</i>
<i>o-Xylene</i>	<i>52854.9</i>	<i>ug/kg</i>	<i>0.2</i>	<i>ug/kg</i>
	<i>TOTAL</i>	<i>307673.2</i>		<i>ug/kg</i>

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: *[Signature]*
 Date: *7/24/96*

OFF: (505) 325-5667



LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn: *Denver Bearden*
 Company: *PNM Gas Services*
 Address: *603 W. Elm*
 City, State: *Farmington, NM 87401*

Date: *23-Jul-96*
 COC No.: *4739*
 Sample No.: *11565*
 Job No.: *2-1000*

Project Name: *PNM Gas Services - Florance 32A*
 Project Location: *9607230915; Pit Excavation Ground Water Sample*
 Sampled by: *RH* Date: *23-Jul-96* Time: *9:15*
 Analyzed by: *HR* Date: *23-Jul-96*
 Sample Matrix: *Water*

Laboratory Analysis

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Benzene</i>	<i>797.5</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>7014.0</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>341.9</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>5158.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>1351.4</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
	<i>TOTAL</i>	<i>14663.1</i>		<i>ug/L</i>

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: *[Signature]*
 Date: *7/23/96*

Flarance # 32A

9-10-96

Amoco

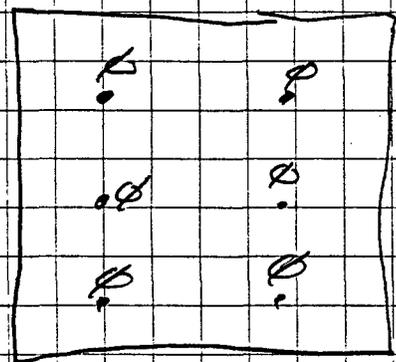
Sec. 15, 32N, 8W

Land Farm: On location

Composite sample # 9609101015

left comp.

Soil vapor head space PID reading: 2.1 ppm



⊗

2'-12" depth
~~holes~~ sand

OFF: (505) 325-5667



LAB: (505) 325-1556

Diesel Range Organics

Attn: *Denver Bearden*
 Company: *PNM Gas Services*
 Address: *603 W. Elm*
 City, State: *Farmington, NM 87401*

Date: *12-Sep-96*
 COC No.: *5005*
 Sample No. *12087*
 Job No. *2-1000*

Project Name: *PNM Gas Services - Florance #32A Landfarm*
 Project Location: *9609101015; 6pt. Composite, 2"-12" depth*
 Sampled by: *GC* Date: *10-Sep-96* Time: *10:15*
 Analyzed by: *DC/HR* Date: *12-Sep-96*
 Sample Matrix: *Soil*

Laboratory Analysis

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Diesel Range Organics (C10 - C28)</i>	<i><5.0</i>	<i>mg/kg</i>	<i>5.0</i>	<i>mg/kg</i>

Quality Assurance Report

DRO QC No.: 0489-QC

Calibration Check

<i>Parameter</i>	<i>Method Blank</i>	<i>Unit of Measure</i>	<i>True Value</i>	<i>Analyzed Value</i>	<i>% Diff</i>	<i>Limit</i>
<i>Diesel Range (C10 - C28)</i>	<i><5.0</i>	<i>ppm</i>	<i>100</i>	<i>104</i>	<i>4.2</i>	<i>15%</i>

Matrix Spike

<i>Parameter</i>	<i>1- Percent Recovered</i>	<i>2 - Percent Recovered</i>	<i>Limit</i>	<i>%RSD</i>	<i>Limit</i>
<i>Diesel Range (C10-C28)</i>	<i>98</i>	<i>114</i>	<i>(70-130)</i>	<i>11</i>	<i>20%</i>

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: *[Signature]*
 Date: *9/12/96*

OFF: (505) 325-5667



LAB: (505) 325-1556

August 19, 1999

RECEIVED
AUG 30 1999

Maureen Gannon
PNM - Public Service Company of NM
Alvarado Square Mail Stop 0408
Albuquerque, NM 87158
TEL: (505) 241-2974
FAX (505) 241-2340

RE: Florance 32A

Order No.: 9908014

Dear Maureen Gannon,

On Site Technologies, LTD. received 1 sample on 08/06/1999 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "David Cox", is written over a horizontal line.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 19-Aug-99

CLIENT: PNM - Public Service Company of NM

Project: Florance 32A

Lab Order: 9908014

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-Aug-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Florance 32A
Work Order:	9908014	Client Sample ID:	9908051745; TMW-1
Lab ID:	9908014-01A	Matrix:	AQUEOUS
Project:	Florance 32A	Collection Date:	08/05/1999 5:45:00 PM
		COC Record:	7822

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Benzene	ND	0.5		µg/L	1	08/12/1999
Toluene	ND	0.5		µg/L	1	08/12/1999
Ethylbenzene	ND	0.5		µg/L	1	08/12/1999
m,p-Xylene	ND	1		µg/L	1	08/12/1999
o-Xylene	ND	0.5		µg/L	1	08/12/1999

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

P.O. BOX 2606 • FARMINGTON, NM 87499

MONITORING WELL INSTALLATION RECORD

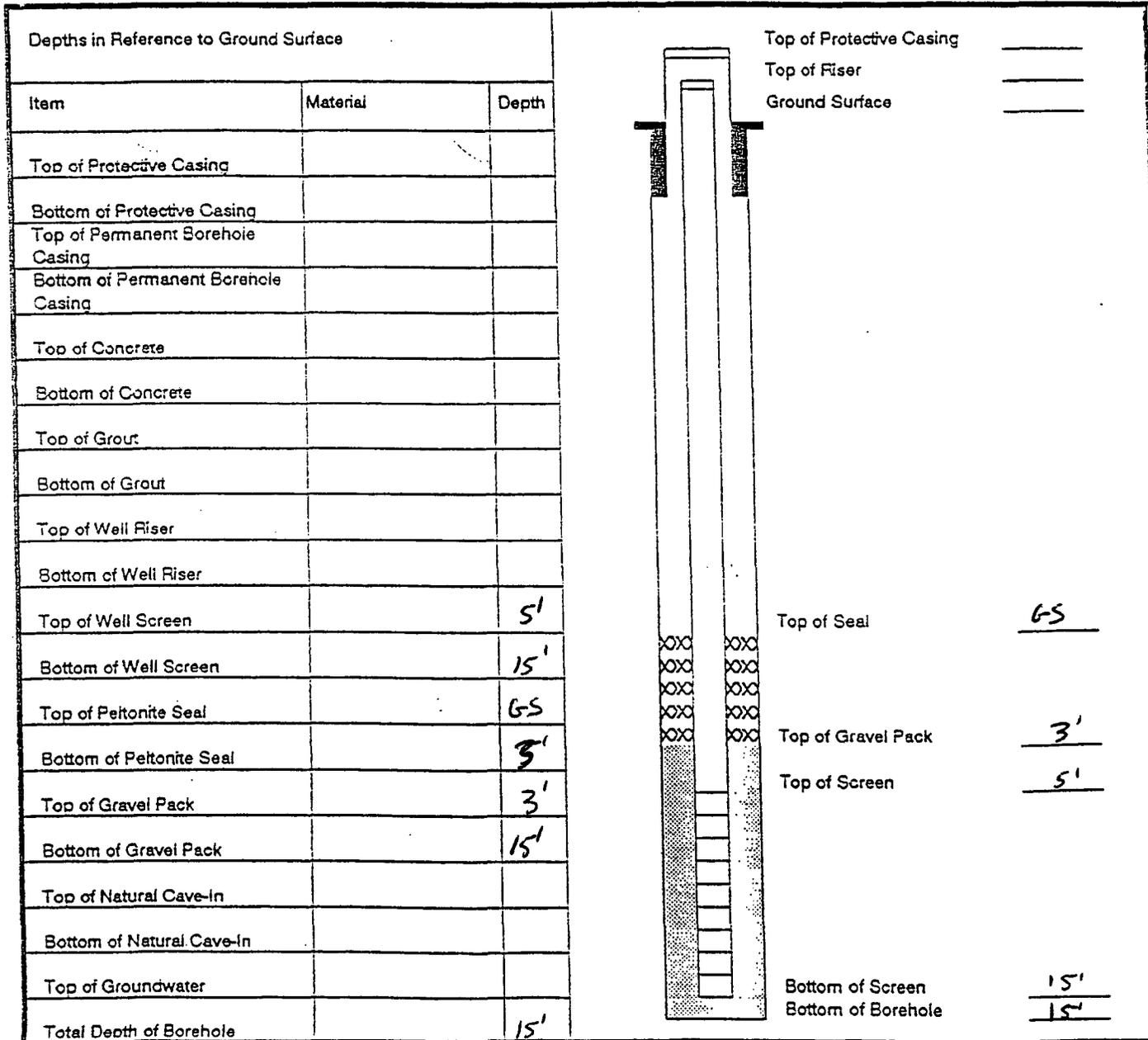
Philip Environmental Services Corp.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Borehole # 1
 Well # TEMP #1
 Page 2 of 2

Project Name PNM WELL INSTALLATION
 Project Number 21300 Phase 6001
 Project Location FLORENCE #32A AMOCO

On-Site Geologist C. CULLICOTT
 Personnel On-Site K. PADILLA, D. PADILLA
 Contractors On-Site _____
 Client Personnel On-Site GARY COOK

Elevation _____
 Well Location S 15, T30N, R8W, F
 GWL Depth 9.8' - TOC 2.6 = 7.2'
 Installed By K. PADILLA,
D. PADILLA
 Date/Time Started 7/27/99 11:30 am
 Date/Time Completed 9/27/99



Comments: _____

Geologist Signature Cathy Cullicott

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 328-2282 FAX (505) 328-2388

Borehole # 1
 Well # TEMP#1
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Project Name PNM WELL INSTALLATION
 Project Number 21300 Phase 6001
 Project Location FLORENCE #32A AMOCO

Well Logged By C. CULLICOTT
 Personnel On-Site K. PADILLA, D. PADILLA
 Contractors On-Site _____
 Client Personnel On-Site GARY COOK

Drilling Method _____
 Air Monitoring Method _____

Elevation _____
 Borehole Location SEC 15, T30N, R8W, F
 GWL Depth 8.8' FOC + 2.6' = 7.2'
 Logged By C. CULLICOTT
 Drilled By K. PADILLA & D. PADILLA
 Date/Time Started 7/27/99 11:30 AM
 Date/Time Completed 7/27/99

Depth (feet)	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
						BZ	BH	S	
0			SURFACE: SAND						
5			BROWN SILTY CLAY w/ sand & patchy HC STAIN. SANDIER						SS = \emptyset 4 blows
10			<u>@10' HIT COBBLES</u> WITH DEPTH IN SPLIT SPOON						
15			HIT WATER @ 10' COBBLES TO 15'						
20			TD 15'						
25									
30									
35									
40									

Comments: SUNNY, WARM,
~150' FROM SAN JUAN RIVER

Geologist Signature Cathy Cullcott