3R - 314

GENERAL CORRESPONDENCE

YEAR(S):

2000 - 1996

Olson, William
From: Olson, William
Sent: Monday, March 06, 2000 8:13 AM
To: 'Gannon, Maureen'
Subject: RE: Request for Extension on Annual Groundwater Report

The below requested extension is approved.

From: Gannon, Maureen [SMTP:MGannon@pnm.com]
Sent: Saturday, March 04, 2000 3:31 PM
To: Olson, William
Cc: Sikelianos, Mark; 'Ingrid Deklau'; Johnson, Ronald
Subject: Request for Extension on Annual Groundwater Report

As a follow-up to our phone conversation on Thursday, March 2, 2000, PNM herein requests an extension of the date for submittal of our San Juan Basin Annual Groundwater Report. The report is normally due on April 1st of each year. However, since PNM's environmental obligations associated with the purchase and sale of our former gas assets in the San Juan Basin will terminate on June 30, 2000 (with the exception of retained liabilities), we would like to file our annual report by July 15, 2000 so that the data and information contained in the annual report is current through the June 30th date.

Please let me know if this extension is acceptable to you. You may email me or call me at (505) 241-2974. Thank you for your time and consideration of this matter.

Maureen Gannon
Environmental Services
241-2974

Public Service Company
of New Mexico
Alvarado Square MS 0408
Albuquerque, NM 87158

SEP 1 4 1999

September 13, 1999

Mr. William Olson
Hydrogeologist
Oil Conservation Division
2040 So. Pacheco
Santa Fe, New Mexico 87505

RE: WELL INSTALLATION PLANS FOR SAN JUAN BASIN GROUNDWATER SITES

Dear Bill:

PNM herein submits monitoring well installation plans for several groundwater sites that we are managing in the San Juan Basin. You requested these plans in an August 16, 1999 letter entitled, "Final San Juan Basin Pit Closure Reports," that was sent to Ms. Kathy Juckes, PNM-Farmington. The subject groundwater sites are the Dogie Compressor Station North Pit, Florance #32A, Jacques #2A, Mangum #1E, McClanahan #22, Dogie Compressor Station East Pit, Honolulu Loop Line Drip, Ice Canyon Drip, Jicarilla Contract 147-6, and Randelman #1.

The well installation plan for each of the above-referenced sites consists of a map depicting the existing monitoring well configuration at the site with associated historical BTEX data. Any proposed new well location is denoted by a large "X" on the map. In some instances, the proposed wells have already been installed and sampled, and the analytical results for BTEX are reported next to these locations on the attached maps. PNM will prepare formal reports on all of the subject sites requiring new well installations in either individual groundwater/pit closure reports or the Annual Groundwater Report to be submitted to the OCD in 2000.

PNM would like to bring the Randleman 1 well site and the Honolulu Loop Line Drip to your attention. The Randleman 1 site is operated by Burlington Resources and poses many unique problems, including:

- an increase in benzene concentrations in PNM's source and downgradient wells after cessation of discharge, and primary and secondary remediation of PNM's former pit (see figure 10);
- elevated chloride levels groundwater monitoring wells on site (see attachment to figure 10); and
- potential impacts to underlying groundwater from Burlington's operations and their former pit (Approximately one year after remediation, Burlington's pit excavation and on site landfarm remain open).

The Honolulu Loop Line Drip is operated by Williams and has also experienced its own set of problems, including, most recently, a significant increase in benzene in MW-5 and MW-12 (see figure 7 and attachment to figure 7). As you may recall, PNM conducted extensive secondary removal of contaminated soils in the area and south of Williams pipeline in December of 1998 after the appearance of free product and high dissolved-phase BTEX contaminants. At both the Randleman 1 and the Honolulu Loop Line Drip, PNM agrees that the installation of additional wells is necessary to fully define the extent of the dissolved-phase contaminant plumes. However, such action, on the part of PNM, assumes that all responsibility at the site is ours. In contrast, we believe that the ongoing problems may be the responsibility of the producer or are at least shared with them. Therefore, before agreeing to install additional wells at these particular locations, PNM is considering several options at either site and will be contacting you in the very near future to inform you of our proposed strategies.

Please review the attached site maps and accept them as our groundwater monitoring well installation plans. All well installations and sampling events will be conducted in accordance with PNM's Groundwater Management Plan for Unlined Surface Impoundments, March 1996. If you need additional information or have any questions, you may call me at (505) 241-2974. Thank you for your time and consideration concerning this matter.

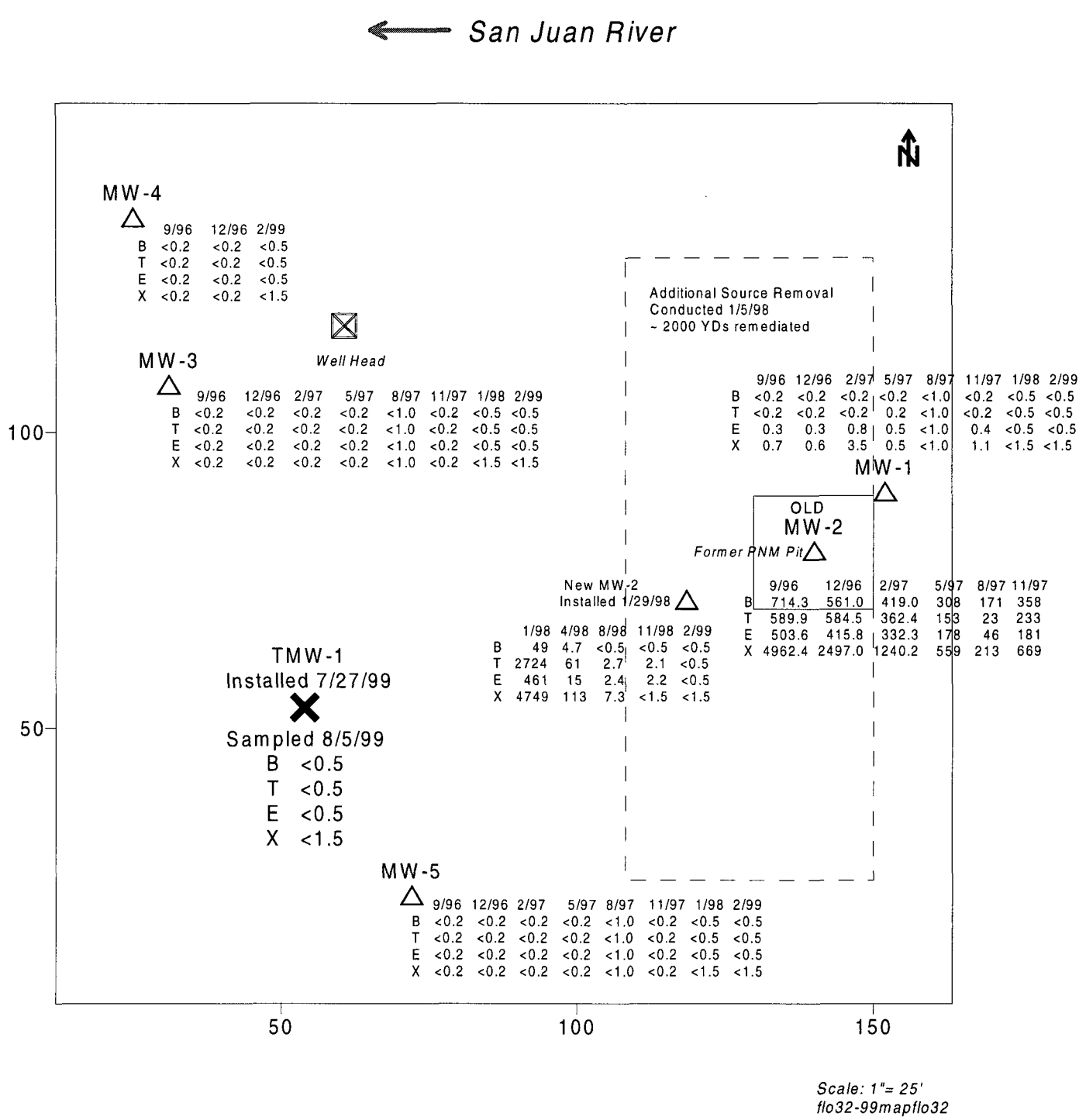
Sincerely,
PNM Environmental Services

Maureen Gannon
Project Manager

Attachments

cc: Ingrid Deklau, WFS
Denny Foust, OCD-Aztec Office
Kathy Juckes, PNM Farmington File
Keith Manwell, Jicarilla Environmental Protection Office
Mark Sikelianos, PNM

Figure 2.
Florance 32A: Site Map With Analytical Results
(Concentrations in ppb)



Scale: 1"= 25'
flo32-99mapflo32

Olson, William

From: Olson, William
Sent: Tuesday, August 31, 1999 8:07 AM
To: 'MGannon@pnm.com'
Subject: RE: Request for Extension
Importance: High

The below requested extension is approved.

From: MGannon@pnm.com[SMTP:MGannon@pnm.com]
Sent: Monday, August 30, 1999 4:30 PM
To: Olson, William
Cc: MSikeli@pnm.com
Subject: Request for Extension

As discussed with you last week during the OCC hearing on the Hampton 4M site, PNM requests an extension to complete our plans documenting additional ground water monitoring well installations at several sites we are currently managing in the San Juan Basin. Your letter of August 16, 1999 asks that a plan be submitted by Tuesday, August 31, 1999. We request an additional two weeks from this date to finish the plans and submit them to your office. We will have the plans to you by Tuesday, September 14, 1999.

We appreciate your patience in this matter. If you have any questions or concerns, please call me at (505) 241-2974.

Maureen Gannon
Environmental Services
241-2974

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

May 28, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z-274-520-668

Ms. Maureen Gannon
Public Service Company of New Mexico
Alvarado Square, MS-0408
Albuquerque, New Mexico 87401

RE: 1999 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT

Dear Ms. Gannon:

The New Mexico Oil Conservation Division (OCD) has reviewed Public Service Company of New Mexico's (PNM) April 5, 1999 "1999 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT". This document contains the results of PNM's 1998 monitoring and remediation of contaminated ground water related to the closure of unlined oil and gas production pits in the San Juan Basin.

The OCD has the following comments and requirements regarding the above referenced document:

A. On July 14, 1999, the OCD required that PNM install additional ground water monitoring wells at 7 sites to determine the extent of ground water contamination that was in excess of New Mexico Water Quality Control Commission (WQCC) ground water standards. According to the above referenced documents additional wells were installed at 2 of the sites. However, the documents do not contain any information on the installation of additional monitoring wells for the sites listed below. The OCD requires that PNM submit a plan to address this deficiency for these sites. The plan shall be submitted to the OCD Santa Fe Office by July 28, 1999 with a copy provided to the OCD Aztec District Office.

1.	Dogie Compressor Station North Pit	Unit D, Sec. 04, T25N, R06W
2.	Florance #32A	Unit F, Sec. 15, T30N, R08W
3.	Jacques #2A	Unit D, Sec. 25, T30N, R09W
4.	Mangum #1E	Unit F, Sec. 33, T29N, R11W
5.	McClanahan #22	Unit G, Sec. 14, T28N, R10W

B. The closure reports for the sites listed below show that the extent of ground water contamination in excess of New Mexico WQCC ground water standards has not been completely defined. Therefore, the OCD requires that PNM submit a plan for the installation of additional monitor wells to determine the extent of ground water contamination at these sites. The plan shall be submitted to the OCD Santa Fe Office by July 28, 1999 with a copy provided to the OCD Aztec District Office.

1.	Dogie Compressor Station East Pit	Unit D, Sec. 04, T25N, R06W
2.	Honolulu Line Drip	Unit B, Sec. 15, T26N, R04W
3.	Ice Canyon Drip	Unit H, Sec. 13, T26N, R07W
4.	Jicarilla Contract 147-6	Unit C, Sec. 06, T25N, R05W
5.	Randalman #1	Unit K, Sec. 13, T31N, R11W

C. Several of the reports state that certain contaminants such as chloride, sulfate and total dissolved solids are not enforceable standards under State of New Mexico regulations. For your information, all of the WQCC standards as contained in 20 NMAC 6.2.3101 are enforceable standards.

If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Denny Foust, OCD Aztec District Office
Bill Liess, BLM Farmington District Office
Kurt Sandoval, Jicarilla Apache Environmental Protection Office

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

PNM Gas Services

April 29, 1999

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

Subject: OCD Closure Reports – 1st 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. McClanahan A #2E
4. Mangum #1E

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. Delo #2
2. Leonard Johnston #1
3. Leonard Johnson #2
4. McCroden #1
5. McCroden #3
6. McCroden #3A
7. McCroden A #1 Drip
8. McCroden A #3 Line Drip
9. McCroden B #1
10. McCroden B #1 Drip
11. McCroden B #3
12. Navajo Indian B #6M
13. Patterson A Com #1
14. Patterson A Com #1E
15. Richardson #1
16. Richardson #1A
17. Richardson #9
18. Starr #1
19. Starr #1 Drip
20. Starr #4A
21. State Com AJ #34E

The following Jicarilla Apache Locations were submitted to Denny Foust, also (copies enclosed):

1. Axi Apache J #19
2. Axi Apache N #1
3. Axi Apache N #10
4. Axi Apache N #12A
5. Axi Apache N #13
6. Axi Apache N #14
7. Axi Apache O #10 Drip
8. Axi Apache O #5 Drip
9. Jicarilla 103 #6M Drip
10. Jicarilla A #10
11. Jicarilla B #12 Drip
12. Jicarilla B #13 Drip
13. Jicarilla Contract 147 #6 Drip
14. Jicarilla G #6 Drip
15. Jicarilla G #6M
16. Jicarilla J #14
17. Jicarilla J #22
18. Jicarilla K #12
19. Jicarilla K #17
20. Jicarilla K #5
21. Jicarilla K #6 Drip
22. K-Well Main Line Separator

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

Sincerely,

Kathy Juckes

Kathy Juckes
Staff Assistant

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

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 ☐ Dehydrator ☐ Other One inactive pit.

Land Type: BLM ☑ State ☐ Fee ☐ Other

Pit Location: Pit dimensions: length 20 ' width 20 ' depth 4 '

(Attach diagram) Reference: wellhead ☑ other

Footage from reference: 75'

Direction from reference: 20 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 50 feet to 99 feet Greater than 100 feet	(20 points) (10 points) (0 points)	20
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)	0
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)	10
	RANKING SCORE (TOTAL POINTS) :		30

PNMGS Well Site: Florance 32A

Groundwater Site Summary Report

Copies: WFS (1)
Operator (1)
NMOCD District Office (1)
NMOCD Santa Fe (1)

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

Operator: Amoco
Sec: 15 **Twn:** 30 **Rng:** 8 **Unit:** F
Canyon: San Juan River

Vulnerable Class: Original
OCD Ranking: 30
Lead Agency: NMOCD

Topo Map: Figure 1
Well Completion Diagram: previously submitted
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

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. 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 8020.

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 32 (continued)**

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. Apparently the additional source removal performed in January, 1998 appears to have accelerated the reduction of benzene in this area. The secondary source removal action was prompted by elevated BTEX concentrations in the source well.

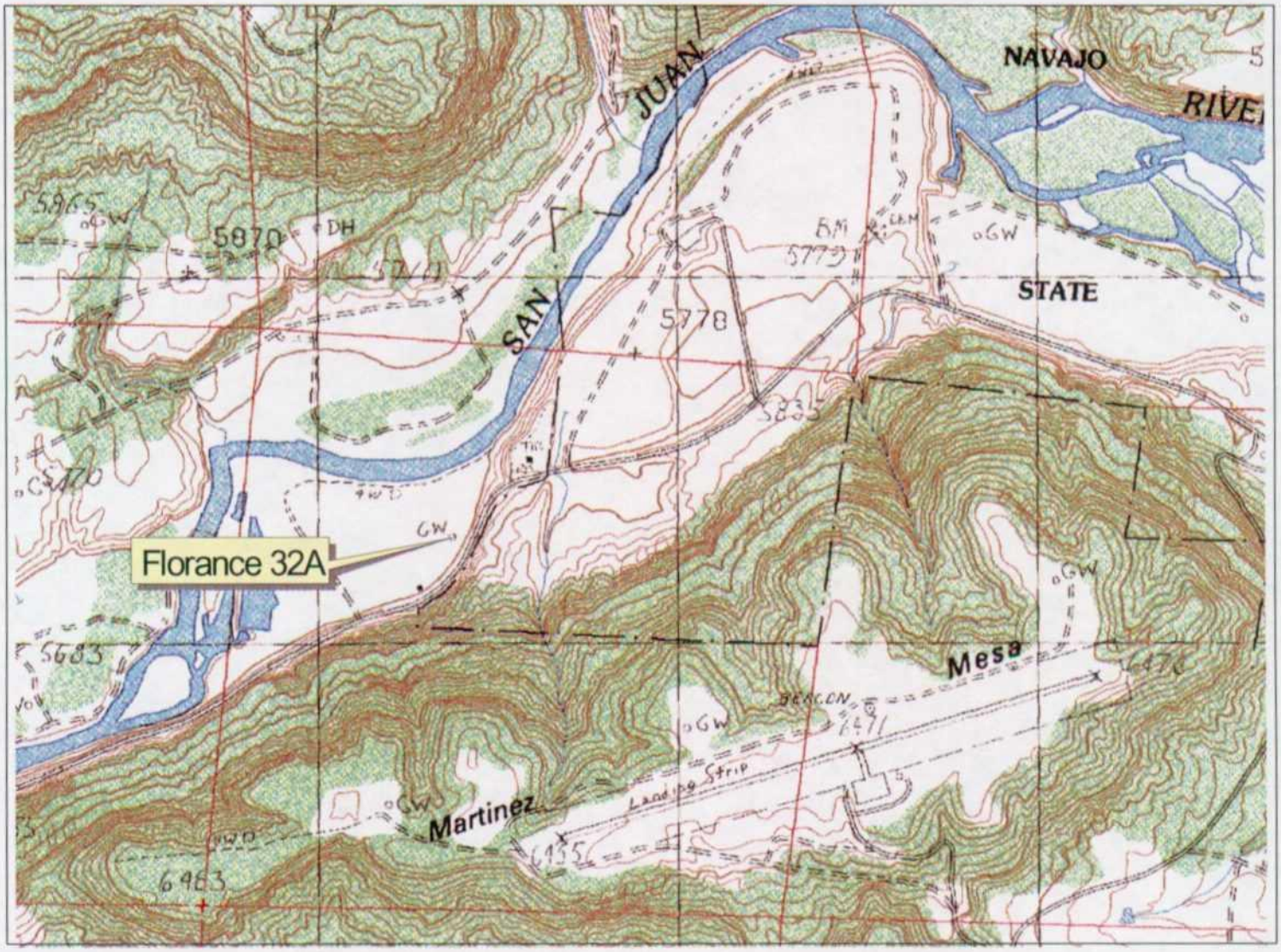
Other wells have not shown detectable concentrations of BTEX compounds, except for MW-1 (the upgradient well). Concentrations in well MW-1 have also been below standards during every sampling event.

Future Actions:

Consistent with PNM's San Juan Basin Groundwater Management Plan, PNM requests closure of the Florance 32A with the submittal of the 1st Quarter 1999 Pit Closures Report. This request is based upon the analytical data collected over the last two years at the site. The secondary excavation of additional source materials appears to have been 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 o the surface with cement containing 5% bentonite.

Figure 1.
Florance 32A Groundwater Site
Twn. 30N Rng. 8W Sec. 15 Unit F

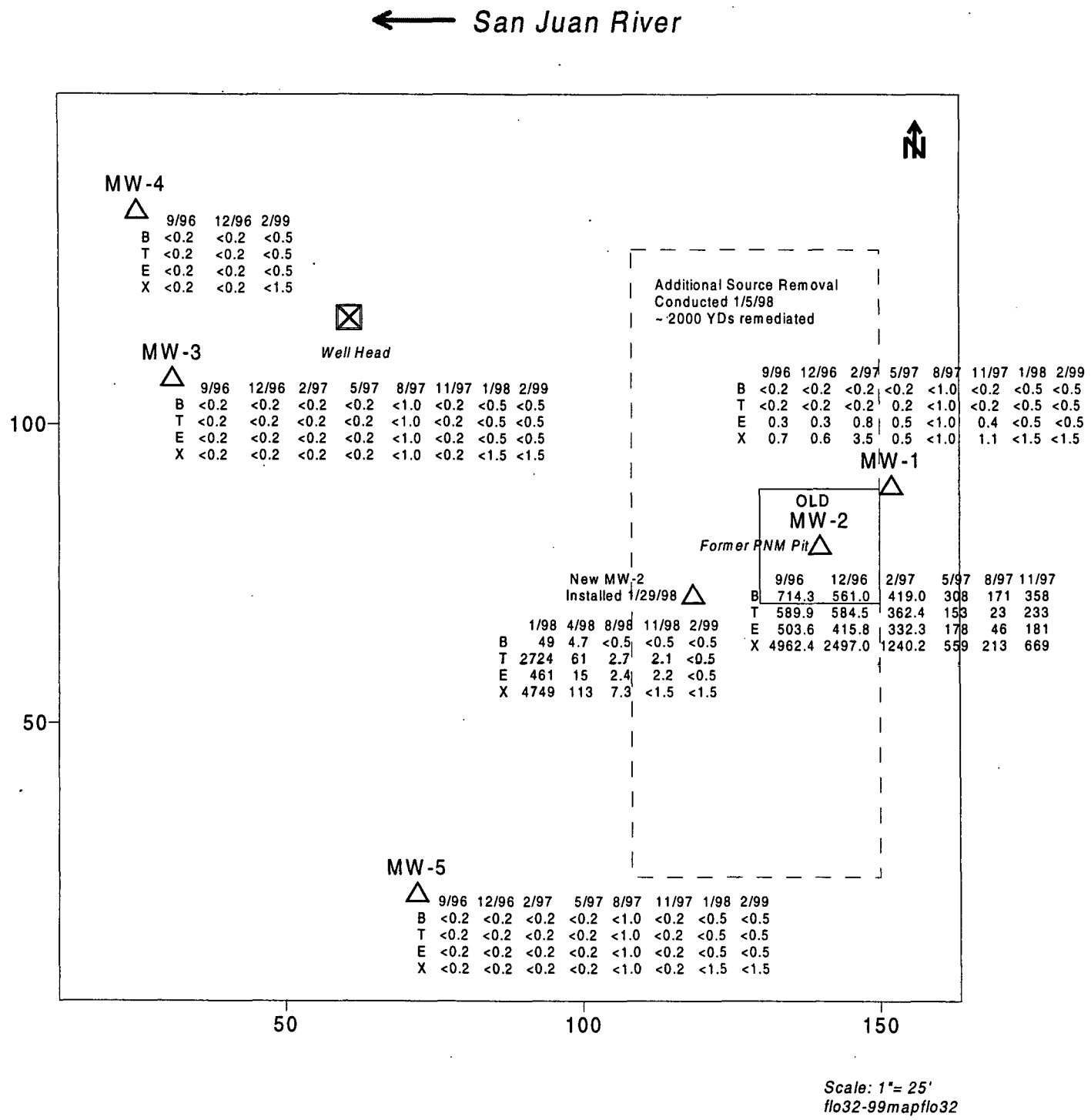


Archuleta, NM Quadrangle

0 1000 2000 3000 4000 5000 Feet

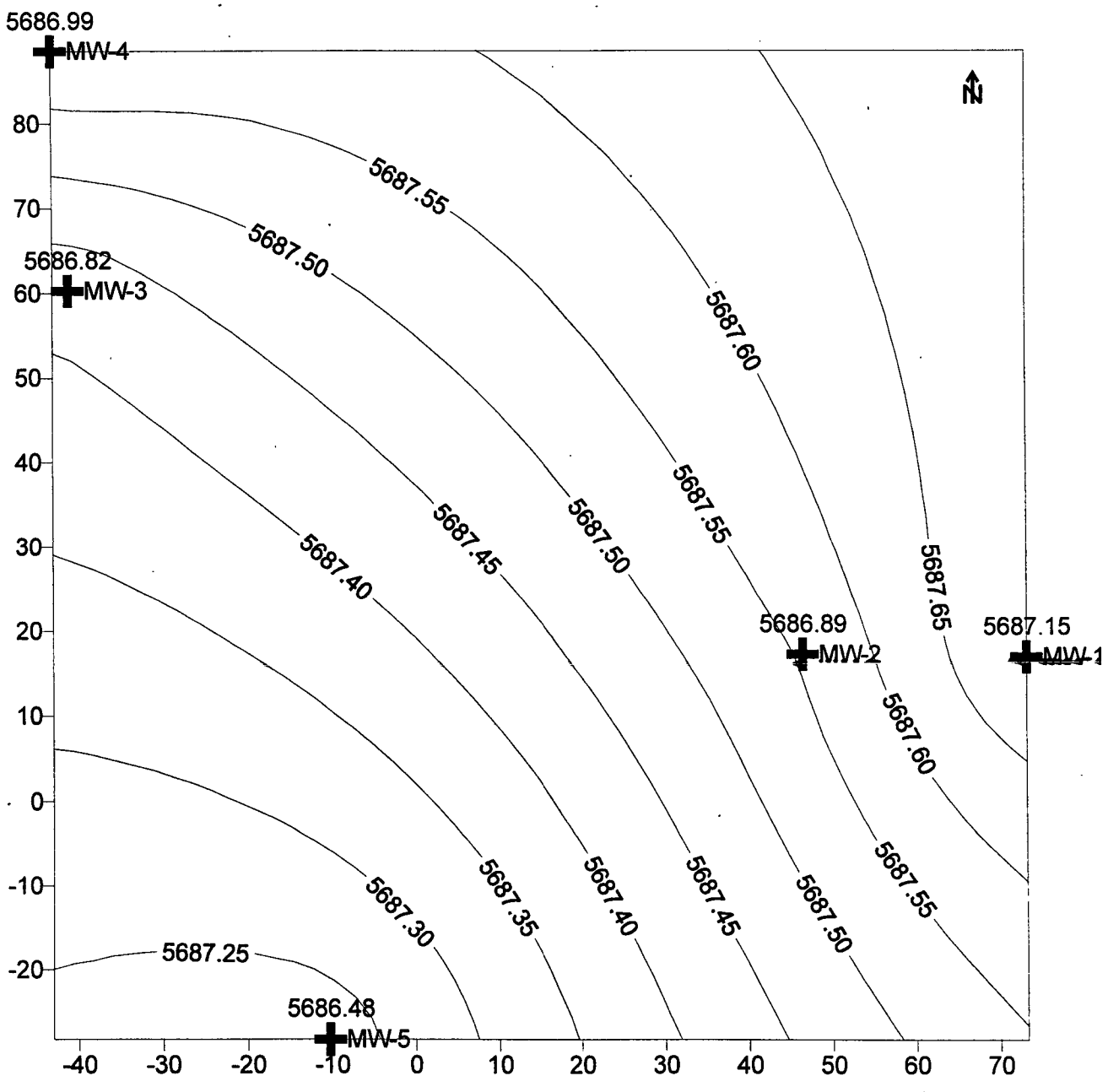
N
W E
S

Figure 2.
Florance 32A: Site Map With Analytical Results
(Concentrations in ppb)



Scale: 1"= 25'
flo32-99mapflo32

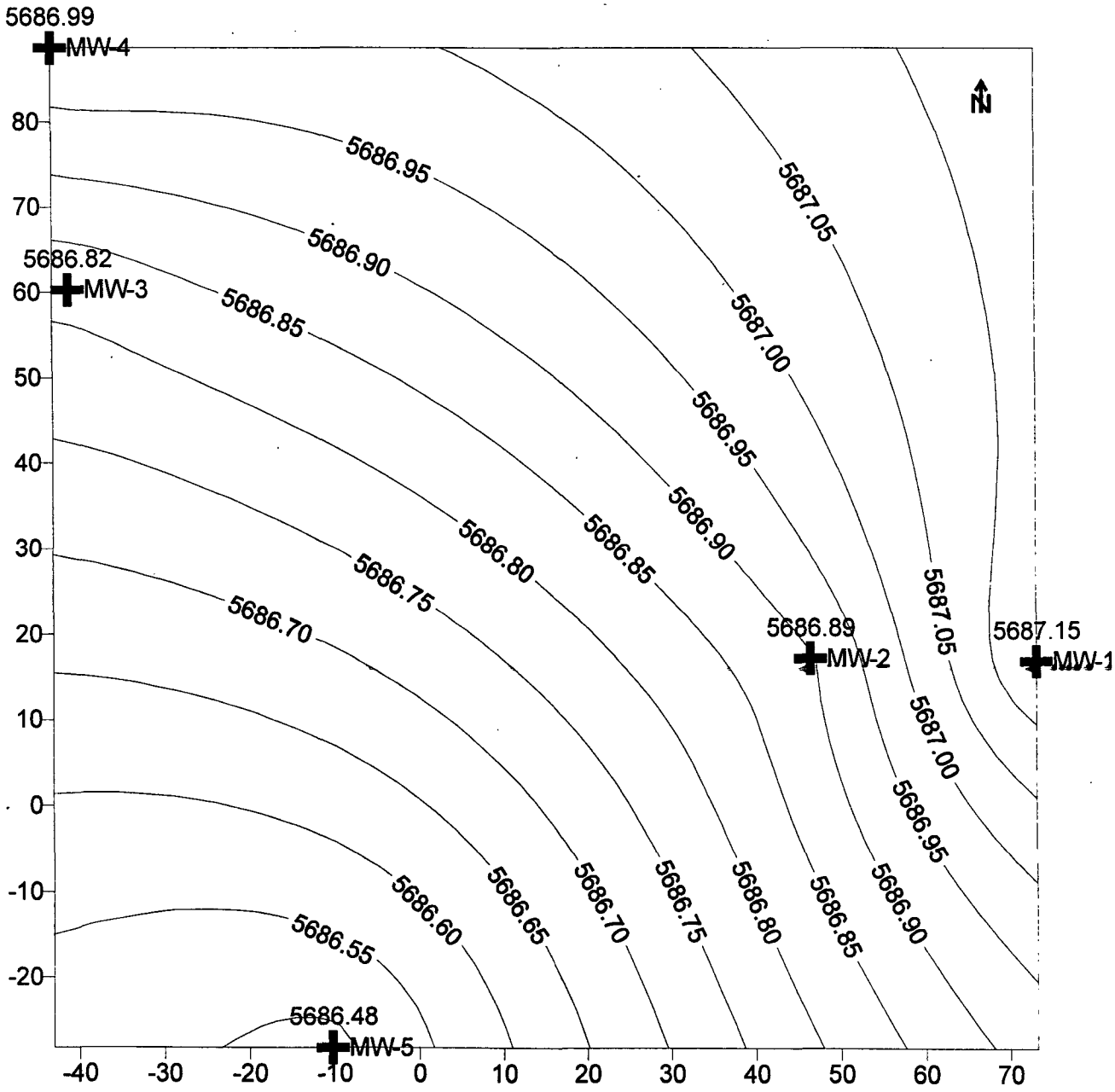
Figure 3a.
Florance 32A Groundwater Contour Map
(April 29, 1998)



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

Flo32A - apr98

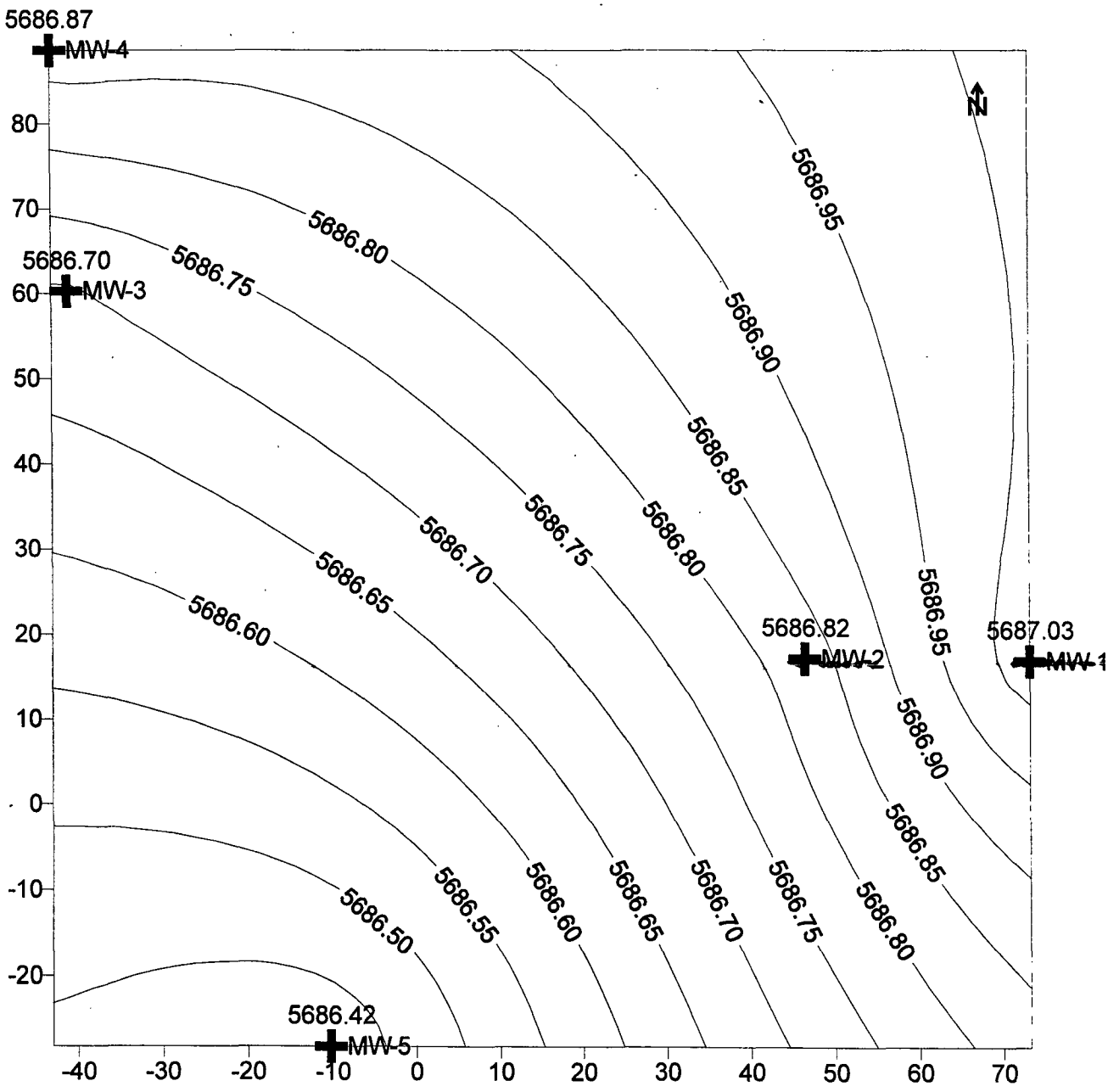
Figure 3b.
Florance 32A Groundwater Contour Map
(August 7, 1998)



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

Flo32A - aug98

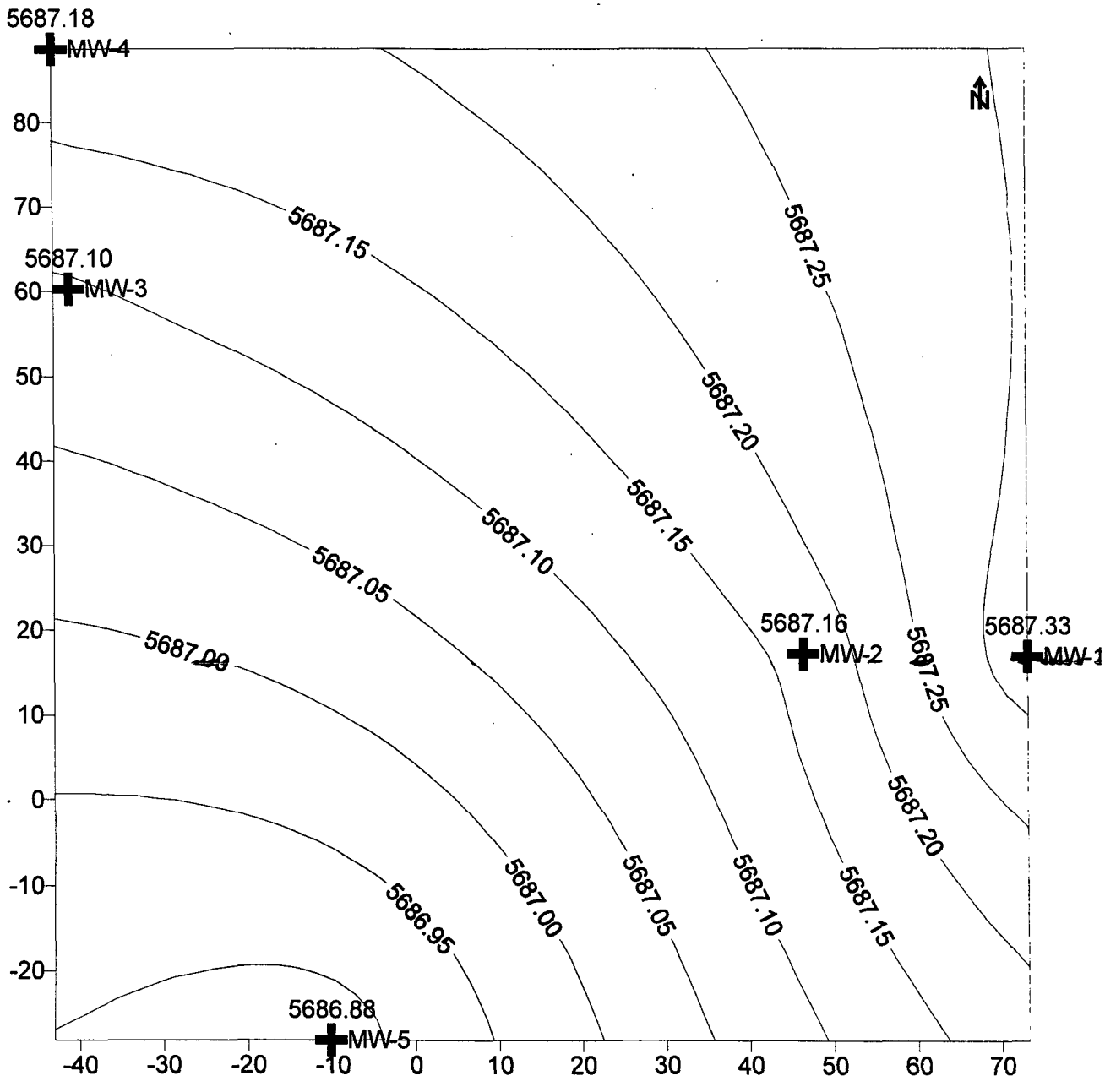
Figure 3c.
Florance 32A Groundwater Contour Map
(November 4, 1998)



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

Flo32A - nov98

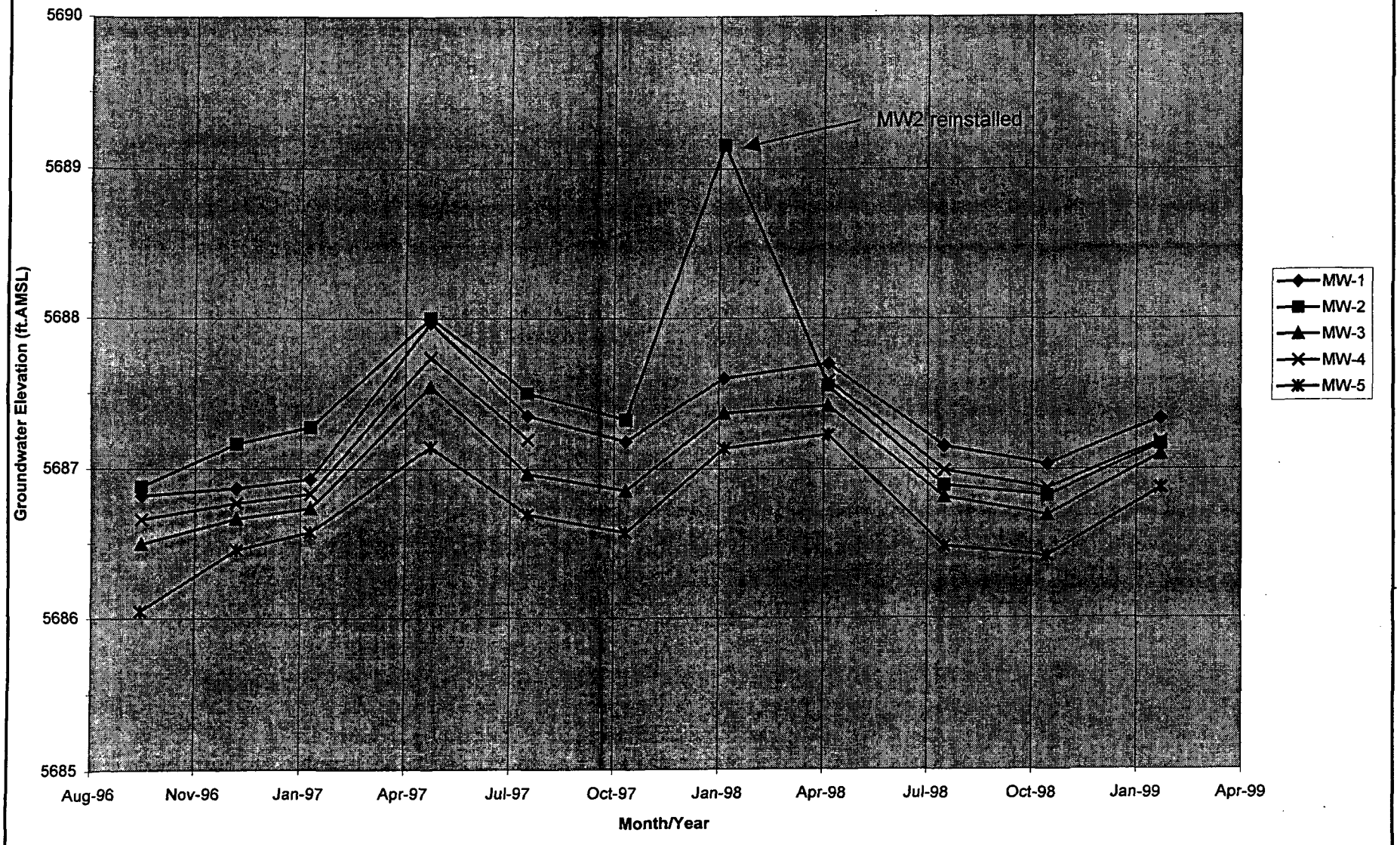
Figure 3d.
Florance 32A Groundwater Contour Map
(February 10, 1999)



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

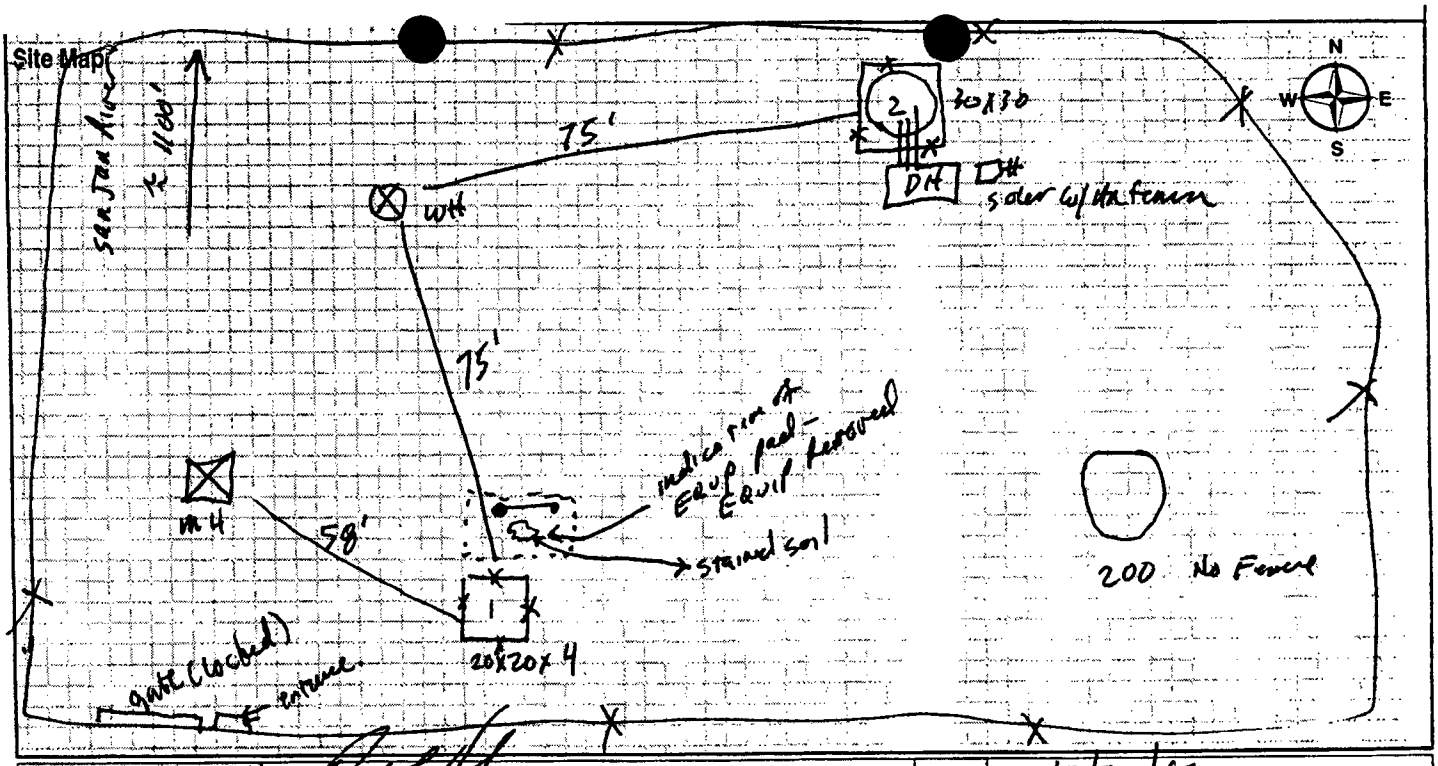
Flo32A - feb99

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



flo32a - FLO32a-2.xls

Site Map



Assessor's Signature		Date:	10/22/95

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

Diesel Range Organics

Attn:	*Denver Bearden*	Date:	24-Jul-96
Company:	*PNM Gas Services*	*COC No.:*	*4740*
Address:	*603 W. Elm*	*Sample No.*	*11564*
City, State:	*Farmington, NM 87401*	*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

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

Quality Assurance Report

DRO QC No.: *0479-QC*

Calibration Check

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

Matrix Spike

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

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

Approved by:

Date: 7/24/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn:	*Denver Bearden*	Date:	24-Jul-96
Company:	*PNM Gas Services*	*COC No.:*	*4740*
Address:	*603 W. Elm*	*Sample No.*	*11564*
City, State:	*Farmington, NM 87401*	*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

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

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

Approved by: DaG

Date: 7/24/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn:	*Denver Bearden*	*Date:*	23-Jul-96
Company:	*PNM Gas Services*	*COC No.:*	*4739*
Address:	*603 W. Elm*	*Sample No.:*	*11565*
City, State:	*Farmington, NM 87401*	*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

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

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

Approved by: JaC

Date: 7/23/96

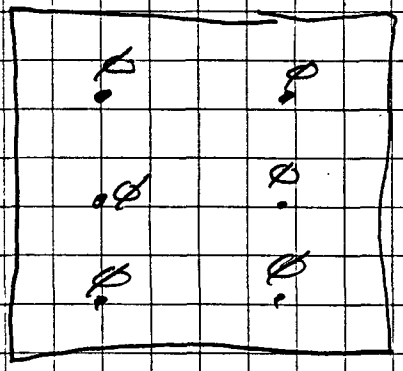
Florance #32A
Amoco
Sec. 15, 30N, 8W

9-10-96

Land Farm: On location

Composite sample # 9609101015 6pt. comp.

Soil vapor head space PID reading: 2.1 ppm



⊗ 2"-12" depth sand

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

Diesel Range Organics

Attn:	*Denver Bearden*	Date:	12-Sep-96
Company:	*PNM Gas Services*	*COC No.:*	*5005*
Address:	*603 W. Elm*	*Sample No.*	*12087*
City, State:	*Farmington, NM 87401*	*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

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

Quality Assurance Report

DRO QC No.: *0489-QC*

Calibration Check

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

Matrix Spike

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

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

Approved by:

Date: 9/12/96

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

May 28, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z-274-520-668

Ms. Maureen Gannon
Public Service Company of New Mexico
Alvarado Square, MS-0408
Albuquerque, New Mexico 87401

RE: 1999 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT

Dear Ms. Gannon:

The New Mexico Oil Conservation Division (OCD) has reviewed Public Service Company of New Mexico's (PNM) April 5, 1999 "1999 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT". This document contains the results of PNM's 1998 monitoring and remediation of contaminated ground water related to the closure of unlined oil and gas production pits in the San Juan Basin.

The OCD has the following comments and requirements regarding the above referenced document:

A. On July 14, 1999, the OCD required that PNM install additional ground water monitoring wells at 7 sites to determine the extent of ground water contamination that was in excess of New Mexico Water Quality Control Commission (WQCC) ground water standards. According to the above referenced documents additional wells were installed at 2 of the sites. However, the documents do not contain any information on the installation of additional monitoring wells for the sites listed below. The OCD requires that PNM submit a plan to address this deficiency for these sites. The plan shall be submitted to the OCD Santa Fe Office by July 28, 1999 with a copy provided to the OCD Aztec District Office.

1.	Dogie Compressor Station North Pit	Unit D, Sec. 04, T25N, R06W
2.	Florance #32A	Unit F, Sec. 15, T30N, R08W
3.	Jacques #2A	Unit D, Sec. 25, T30N, R09W
4.	Mangum #1E	Unit F, Sec. 33, T29N, R11W
5.	McClanahan #22	Unit G, Sec. 14, T28N, R10W

B. The closure reports for the sites listed below show that the extent of ground water contamination in excess of New Mexico WQCC ground water standards has not been completely defined. Therefore, the OCD requires that PNM submit a plan for the installation of additional monitor wells to determine the extent of ground water contamination at these sites. The plan shall be submitted to the OCD Santa Fe Office by July 28, 1999 with a copy provided to the OCD Aztec District Office.

1.	Dogie Compressor Station East Pit	Unit D, Sec. 04, T25N, R06W
2.	Honolulu Line Drip	Unit B, Sec. 15, T26N, R04W
3.	Ice Canyon Drip	Unit H, Sec. 13, T26N, R07W
4.	Jicarilla Contract 147-6	Unit C, Sec. 06, T25N, R05W
5.	Randalman #1	Unit K, Sec. 13, T31N, R11W

C. Several of the reports state that certain contaminants such as chloride, sulfate and total dissolved solids are not enforceable standards under State of New Mexico regulations. For your information, all of the WQCC standards as contained in 20 NMAC 6.2.3101 are enforceable standards.

If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Denny Foust, OCD Aztec District Office
Bill Liess, BLM Farmington District Office
Kurt Sandoval, Jicarilla Apache Environmental Protection Office

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

July 14, 1998

CERTIFIED MAIL
RETURN RECEIPT NO. Z-235-437-312

Ms. Maureen Gannon
Public Service Co. of New Mexico - Gas Services
Alvarado Square, MS-0408
Albuquerque, New Mexico 87401

RE: SAN JUAN BASIN ANNUAL GROUNDWATER REPORT

Dear Ms. Gannon:

The New Mexico Oil Conservation Division (OCD) has reviewed Public Service Company of New Mexico's (PNM) April 2, 1998 "1998 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT". This document contains the results of PNM's 1997 monitoring and remediation of contaminated ground water related to the closure of unlined oil and gas production pits in the San Juan Basin.

Below is the OCD's review of this document:

A. The closure reports for the sites listed below shows that the extent of ground water contamination in excess of New Mexico Water Quality Control Commission (WQCC) ground water standards has not been completely defined. Therefore, the OCD requires that PNM install additional ground water monitoring wells to monitor and determine the extent of ground water contamination pursuant to their previously approved ground water investigation plan.

1.	Dogie Compressor Station North	Unit D, Sec. 04, T25N, R06W
2.	Florance #32A	Unit F, Sec. 15, T30N, R08W
3.	Jacques #2A	Unit D, Sec. 25, T30N, R09W
4.	Mangum #1E	Unit F, Sec. 33, T29N, R11W
5.	McClanahan #22	Unit G, Sec. 14, T28N, R10W
6.	Miles Federal #1E Drip	Unit N, Sec. 05, T26N, R07W
7.	Zachry #18E	Unit O, Sec. 11, T28N, R10W

B. A review of the ground water quality data for the sites listed below shows that either metals or chlorides and total dissolved solids are present in ground water in excess of WQCC standards at the sites. The OCD requires that PNM determine the extent of these ground water contaminants pursuant to their previously approved ground water investigation plan.

1.	Miles Federal #1E Drip	Unit N, Sec. 05, T26N, R07W
2.	Randleman #1	Unit K, Sec. 13, T31N, R11W

If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Denny Foust, OCD Aztec District Office
Bill Liess, BLM Farmington District Office

Public Service Company
of New Mexico
Alvarado Square MS. 0408
Albuquerque, NM 87158

AUG 6 1996

August 2, 1996

Mr. William Olson
Hydrogeologist
Oil Conservation Division
2040 So. Pacheco
Santa Fe, New Mexico 87505

RE: NOTIFICATION OF GROUNDWATER CONTAMINATION AT THE FLORENCE 32A WELL SITE

Dear Bill:

Pursuant to New Mexico Water Quality Control Commission (WQCC) Regulations, section 1-203, PNM hereby provides written notification of groundwater contamination at the Florence 32A well site, located section 15, township 30 North, range 8 West, unit letter F. A topographic map showing the location of the site is provided as an attachment. The operator is Amoco Oil Company. This letter follows verbal notification provided to you on Wednesday, August 31, 1996 (M. Gannon, PNM to B. Olson. OCD, 8/31/96).

On August 23, 1996, field personnel collected a sample from groundwater in an excavation approximately 8 feet below ground surface. The groundwater sample was delivered to OnSite Technologies, Ltd., in Farmington, New Mexico, for laboratory analysis. A hardcopy of the analytical results are attached. Analytical results are provided below:

Component	Units	WQCC Stds.	Pit Excavation Water Sample
Benzene	ppb	10	**797.5**
Toluene	ppb	750	**7014.0**
Ethylbenzene	ppb	750	341.9
Xylenes	ppb	620	**6509.6**

Boldtype indicates a WQCC exceedance.

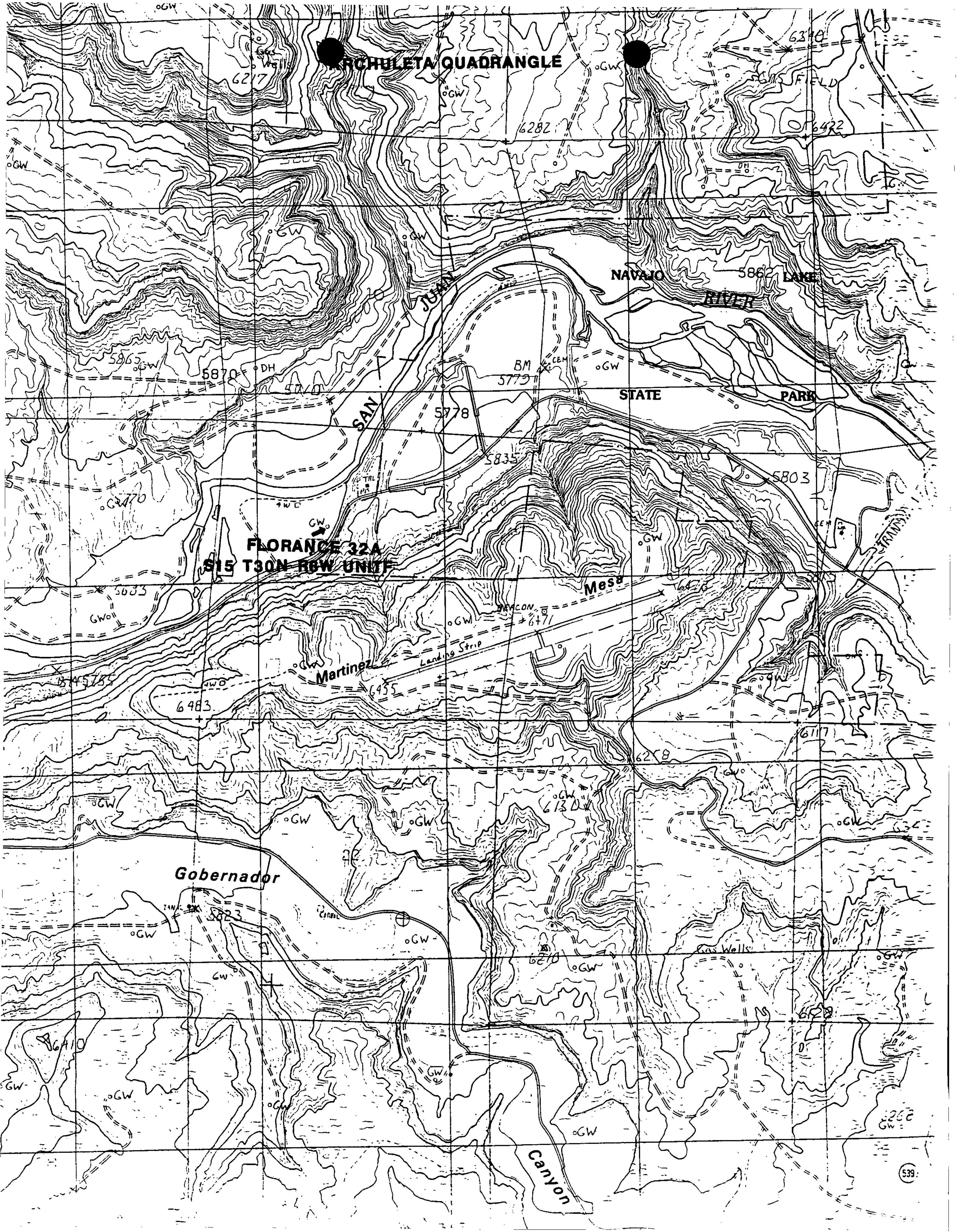
This letter serves as written notification of groundwater impact at the Florence 44. PNM will conduct future activities at the site pursuant to PNM's Groundwater Management Plan. If you have any questions, please call me at 241-2974. Thank you.

Sincerely,
PNM
Maureen Gannon

Maureen Gannon
Project Manager

MDG/FLOR32A.LTR
Attachment

cc: Colin Adams, PNM
Denver Bearden, PNMGS
Denny Foust, OCD-Aztec Office
Leigh Gooding, WFS
Toni Ristau, PNM
Buddy Shaw, Amoco



ARCHULETA QUADRANGLE
NAVAJO
LAKE
RIVER
SAN
JUAN
STATE
PARK
FLORANCE 32A
S15 T30N R8W UNIT F
Mesa
Martinez
Landing Strip
BEACON
Gobernador
Canyon
Gas Wells
GAS FIELD

Groundwater
S15 T30N R08W
Open Amoco

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

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

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

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

Approved by:
Date: 7/23/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 23-Jul-96

Internal QC No.: 0444-STD
Surrogate QC No.: 0445-STD
Reference Standard QC No.: 0355-STD

Method Blank

Parameter	Result	Unit of Measure
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Parameter	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20.0	19.7	2	15%
Toluene	ppb	20.0	20.0	0	15%
Ethylbenzene	ppb	20.0	20.1	1	15%
m,p-Xylene	ppb	40.0	39.7	1	15%
o-Xylene	ppb	20.0	19.8	1	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	107	107	(39-150)	0	20%
Toluene	96	98	(46-148)	1	20%
Ethylbenzene	100	101	(32-160)	1	20%
m,p-Xylene	86	87	(35-145)	1	20%
o-Xylene	91	93	(35-145)	1	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limit Percent Recovered	(70-130)	
11565-4739	100	

S1: Flourobenzene

ON SITE TECHNOLOGIES, LTD.

P.O. Box 2606 Farmington, NM 87499 (505) 325-5667

Facsimile Cover Sheet

Attn: MAUREEN GANNON
Company: PNM GAS SERVICES
Phone:
Fax: 505- 848-~~33~~2340

From: DAVID COY
Company: On Site Technologies, LTD.
Laboratory Phone: (505) 325-5667
Laboratory Fax: (505) 325-6256

Date: 7/31/96

Pages Including Cover Sheet: 3

Comments:

MAUREEN,

I AM SHOWING THAT YOU PICKED UP THESE RESULTS FROM THE LAB ON A DAY BEFORE I MADE PHOTO COPIES THEREFORE I'M FAXING YOU DENVER'S COPIES AND WILL SEND NEW ORIGINALS IN MAIL Thank You

Dc