

3R - 335

REPORTS

DATE:

1998

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

April 2, 1998

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

RECEIVED
APR 03 1998
Oil Conservation Bureau
Oil Conservation Division



RE: 1998 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT

Dear Bill:

PNM is pleased to submit the 1998 Annual Groundwater Report on Unlined Surface Impoundments in the San Juan Basin. Pursuant to PNM's Groundwater Management Program for Unlined Surface Impoundment Closures, the report details the ongoing investigation/remedial activities at unlined surface impoundments having groundwater contamination as identified by PNM. A list of groundwater sites reported in this document is provided below.

Cozzens B1
Dogie Compressor Station East Pit
Dogie Compressor Station North Pit
Florance 32A
Florance Z 40 M
Florance 44
Florance 47X
Florance 124
Hampton 4M
Honolulu Loop Line Drip
Ice Canyon Drip
Jacques 2A
Mangum 1E
McClanahan 22
McClanahan A2E
McCoy Gas Com A1
Miles Federal 1E
Miles Federal 1E Drip
Randleman 1
Reid 16 Drip
Sammons 2
Turner 1A
Turner 3
Zachry 18E

PNM 1998 Groundwater Report

PNM plans to request closure of two of the above sites, the Cozzens B1 and the Sammons 2, in our April 30, 1998 filing of the San Juan Pit Closure Reports to the OCD Santa Fe office. If you have any questions regarding the contents of the report, please contact me at (505) 241-2974.

Sincerely,



Maureen Gannon
Project Manager

Attachment

cc: Ingrid Deklau, WFS
Denny Foust, OCD-Aztec Office
Bill VonDrehle, WFS

PNM 1998 Groundwater Report

bcc: Colin Adams (w/o analytical results)
Kathy Juckes
Ron Johnson (w/o analytical results)
Mark Sikelianos

Groundwater Site Summary Report

Quarter/Year: 2nd/97, 3rd/97, 4th/97 & 1st/98

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

Operator: Dreyfus
Sec: 5 Twn: 26N Rng: 7W Unit: N
Canyon: Largo

Vulnerable Class: Original
OCD Ranking: 60
Lead Agency: NMOCD

Topo Map: previously submitted
Well Completion Diagram: Figure 1
Site Map with Analytical Results: Figure 2
Groundwater Contour Map: Figure 3 (September 1997), Figure 4 (December 1997) & Figure 5 (February 1998)
Hydrograph: Figure 6
Full Suite-Groundwater Sampling Results: Table 1
Analytical Results: attached

Activities for Previous Year:

PNM installed four groundwater monitoring wells at the Miles Federal 1E well site on July 6, 1997. All well installations were conducted pursuant to the PNM San Juan Basin Groundwater Management Plan. Figure 1 presents a typical monitoring well diagram for the site.

PNM performed groundwater monitoring at the site on September 29 and December 16, 1997 and again on February 10, 1998. Water level measurements were taken in each of the four monitoring wells. PNM conducted groundwater sampling in each well for chemical analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX). In addition, MW-1 from the Miles Federal 1E Drip (upgradient of the site) and MW-2 were sampled for major cations/anions and Water Quality Control Commission (WQCC) dissolved metals. All sampling was performed in strict compliance with EPA protocol.

PNM delivered the samples to OnSite Technologies, Farmington, New Mexico. The samples were analyzed using the following methods:

- benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8020
- major cations/anions using various EPA methods
- WQCC metals- filtered (As, Ba, Cd, Cr, Pb, Se, Ag, and Hg using inductively coupled plasma (ICP) for heavy metals and atomic absorption spectroscopy (AAS) for Hg and Se).

Results:

Figure 2 presents the site map with analytical results to date. MW-1, -3 and -4 have shown BTEX concentrations to be non-detectable or below WQCC standards since monitoring began. MW-2, the source well, has exhibited a significant downward trend in BTEX concentration and is now below WQCC standards. From a water quality standpoint, MW-1 (from the Miles Federal 1E Drip) and MW-2 show elevated levels of sulfates at the site. Lead is above WQCC standards in MW-2. All other metals are below WQCC standards.

Figure(s) 3, 4 and 5 provide groundwater contour maps for September and December 1997 and February 1998, respectively. Groundwater flow is in a northwesterly direction beneath the site. Figure 6 is the hydrograph for the site. Between September and December 1997, water levels decreased in MW-1 and MW-4 while levels in MW-2 and MW-3 increased. All wells exhibited increases in water levels between December 1997 and February 1998.

Future Actions:

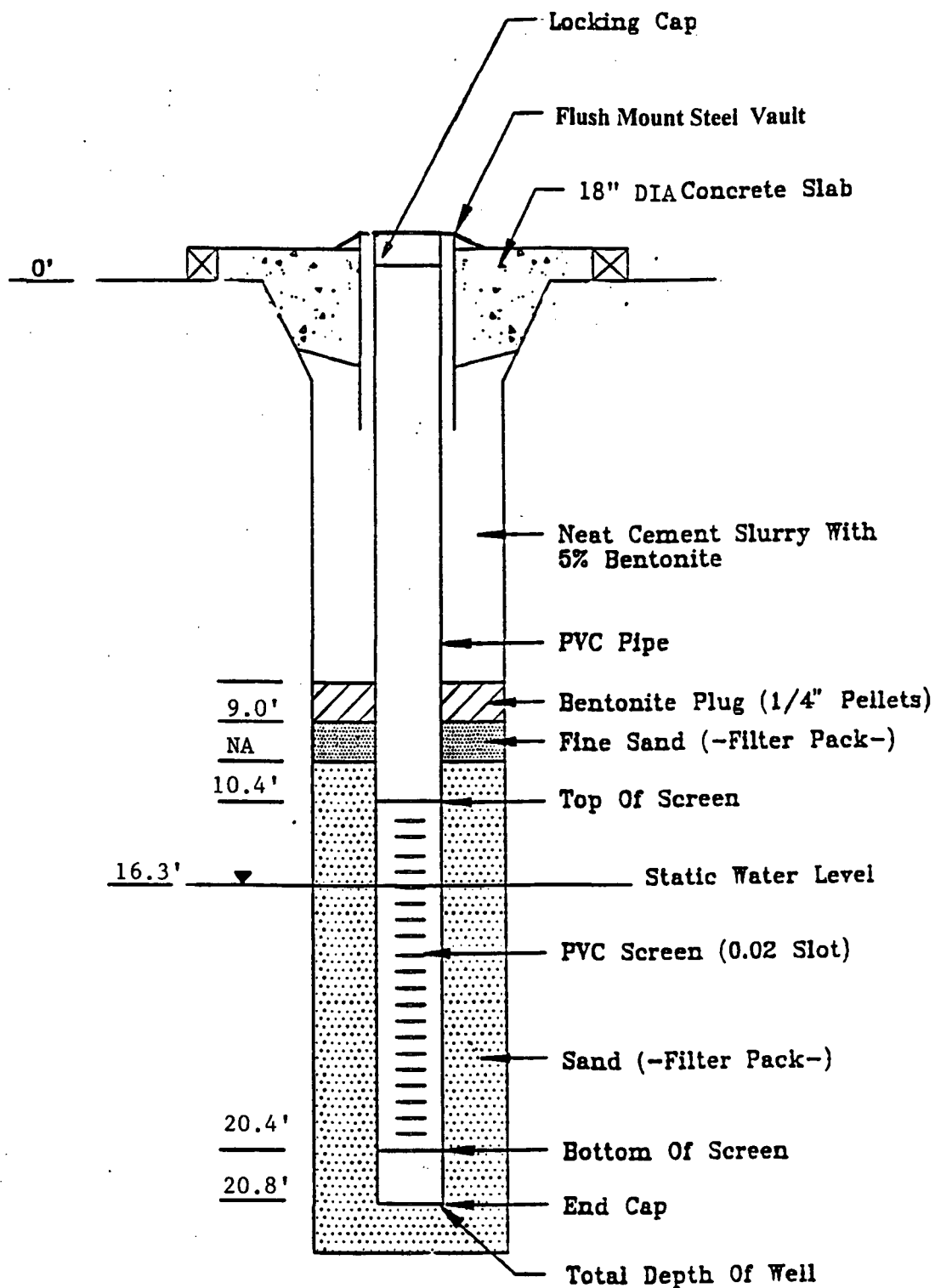
PNM will continue to monitor groundwater gradient and perform quarterly sampling at the Miles Federal 1E well site. A second sample for lead analysis will be taken in MW-2 to verify the lead analysis from September 2, 1997.

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



CLIENT: PNM	
DATE:	REV. NO.: 0
AUTHOR: M.D.G.	DRAWN BY: M.P.
CK'D BY: M.D.G.	FILE: DWG

Miles Federal 1E
Figure 1
Well Completion Diagram

Figure 2. Miles Federal 1E Site Map and Analytical Results
(Concentrations in ppb)

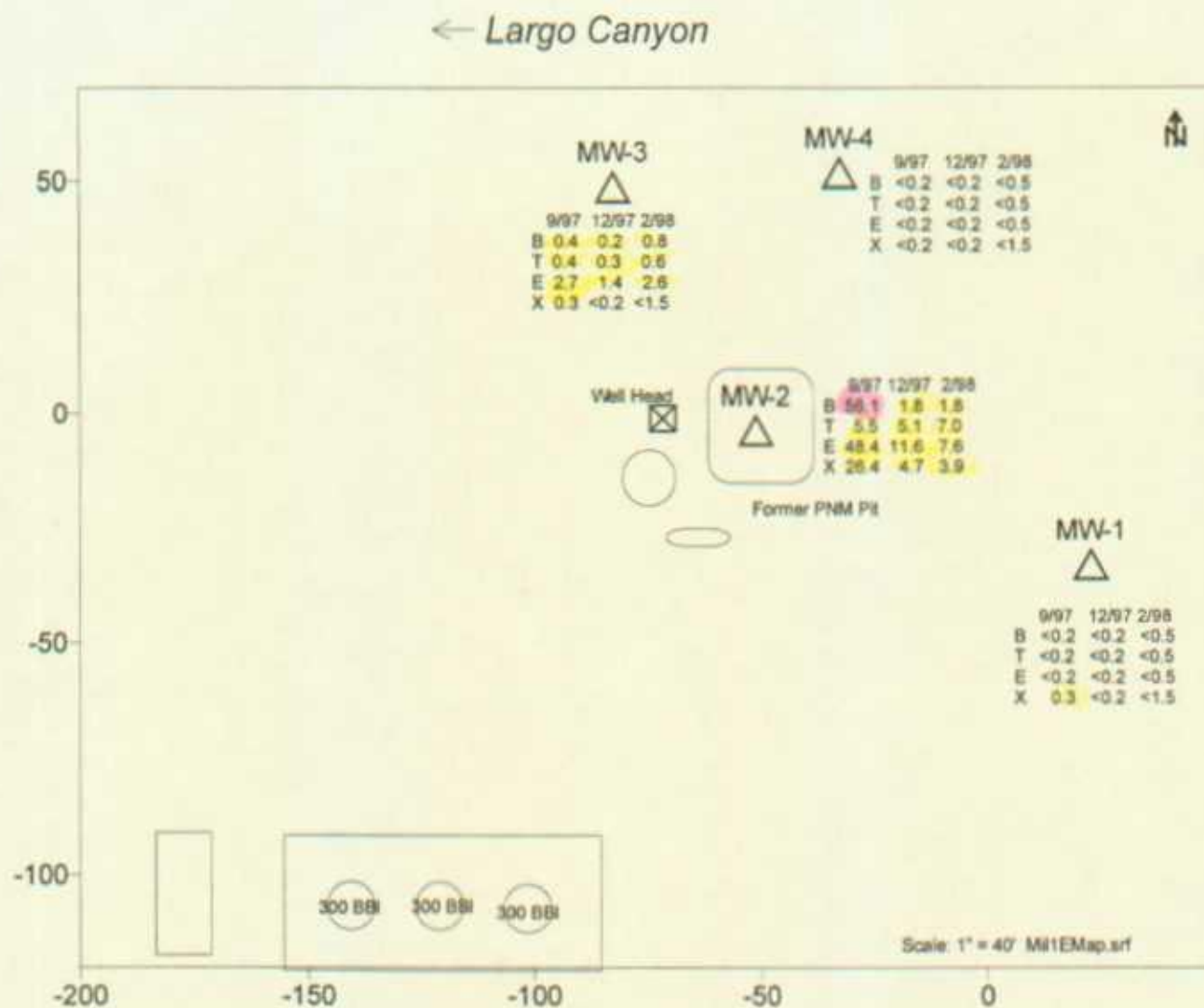


Figure 3. Miles Federal 1E Groundwater Contour Map (September 29, 1997)

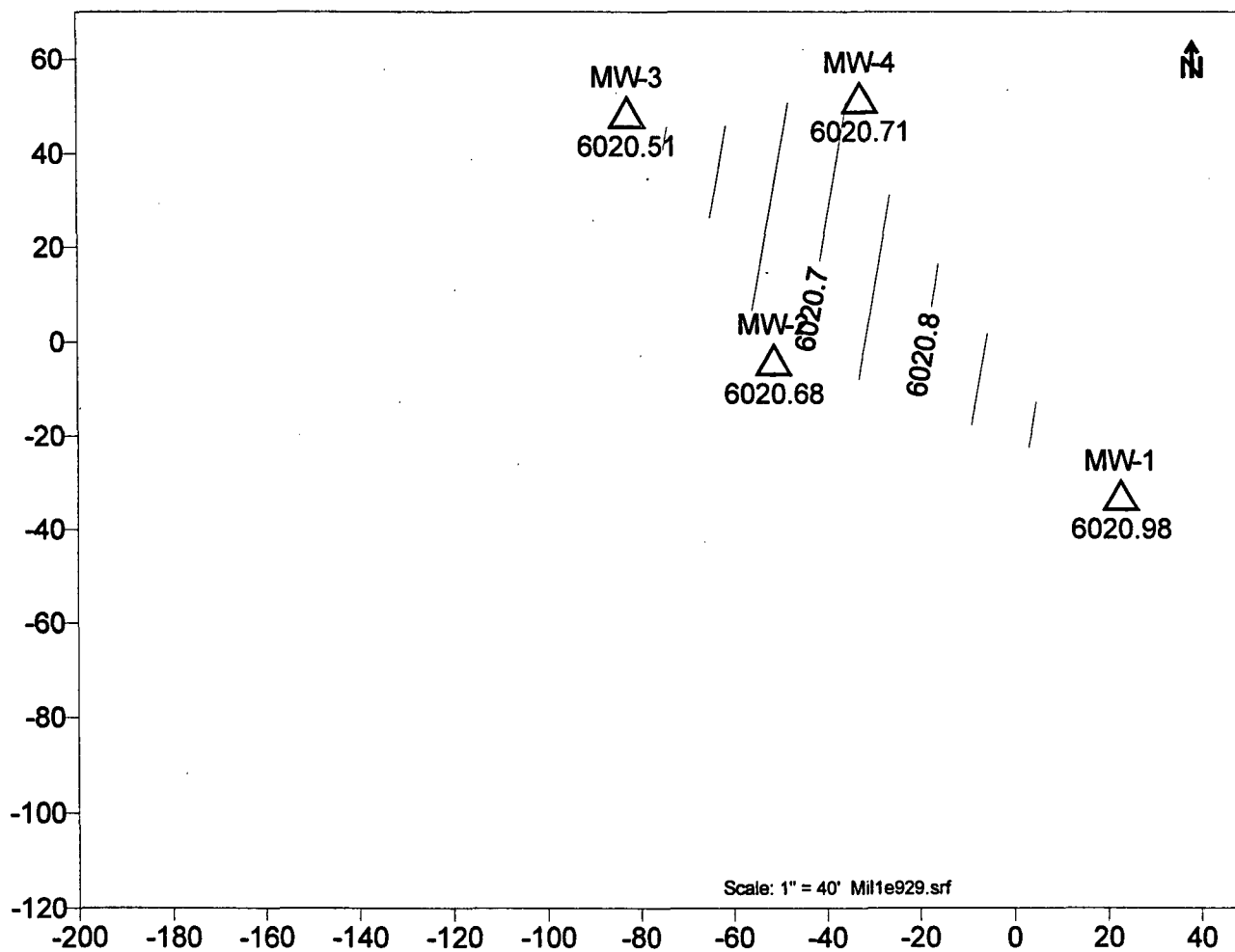


Figure 4. Miles Federal 1E Groundwater Contour Map (December 16, 1997)

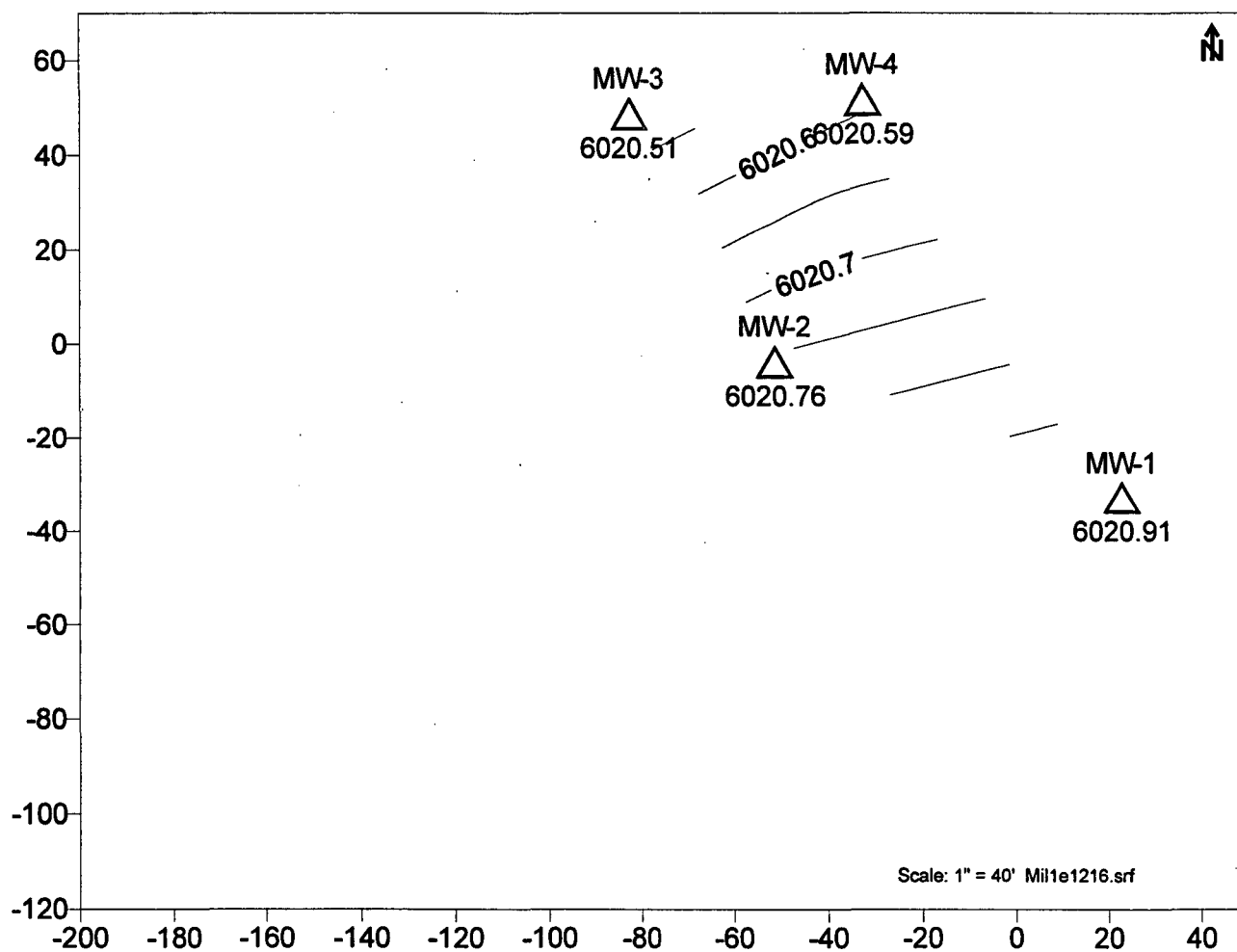


Figure 5. Miles Federal 1E Groundwater Contour Map (February 10, 1998)

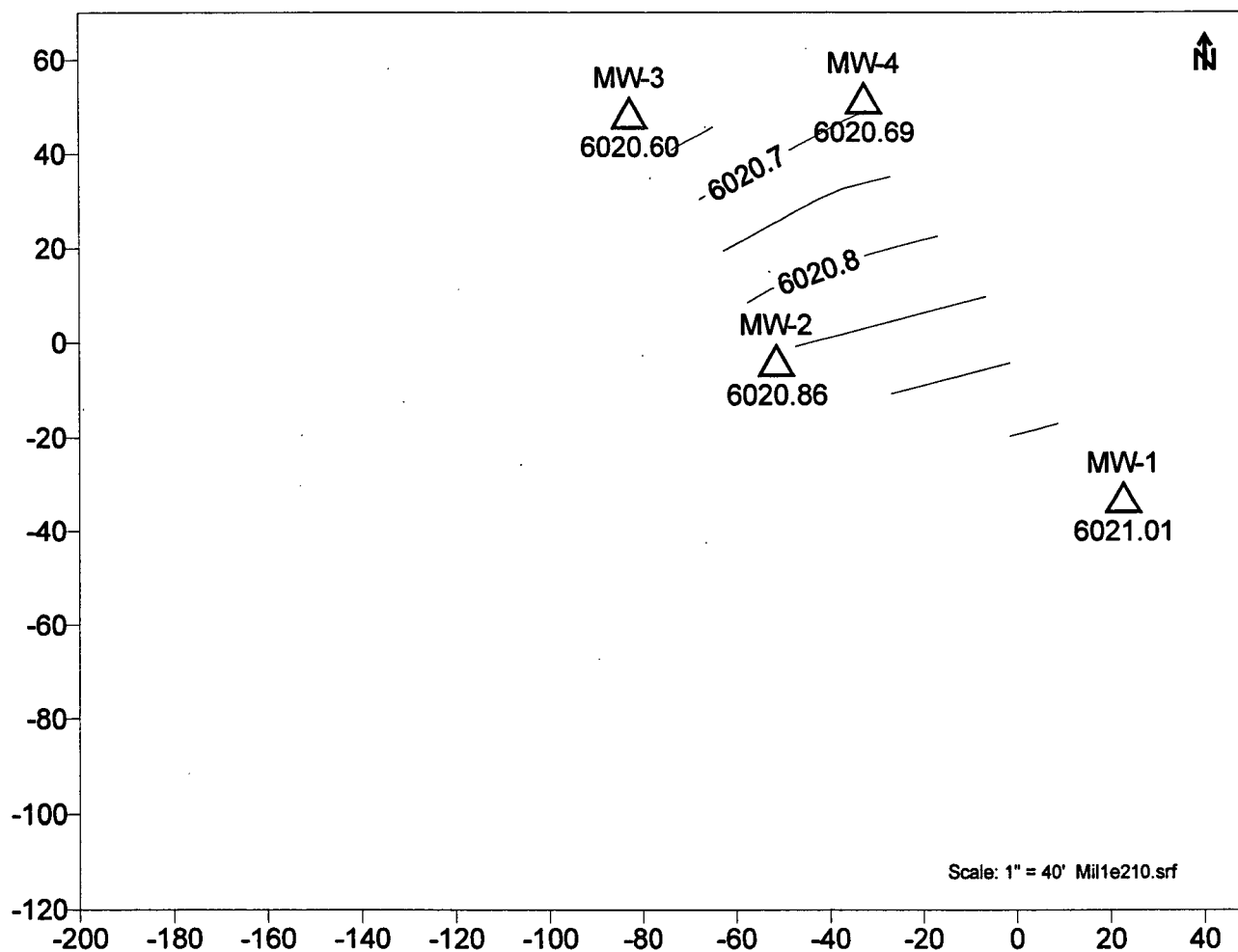


Figure 6. Miles Federal 1E Hydrograph

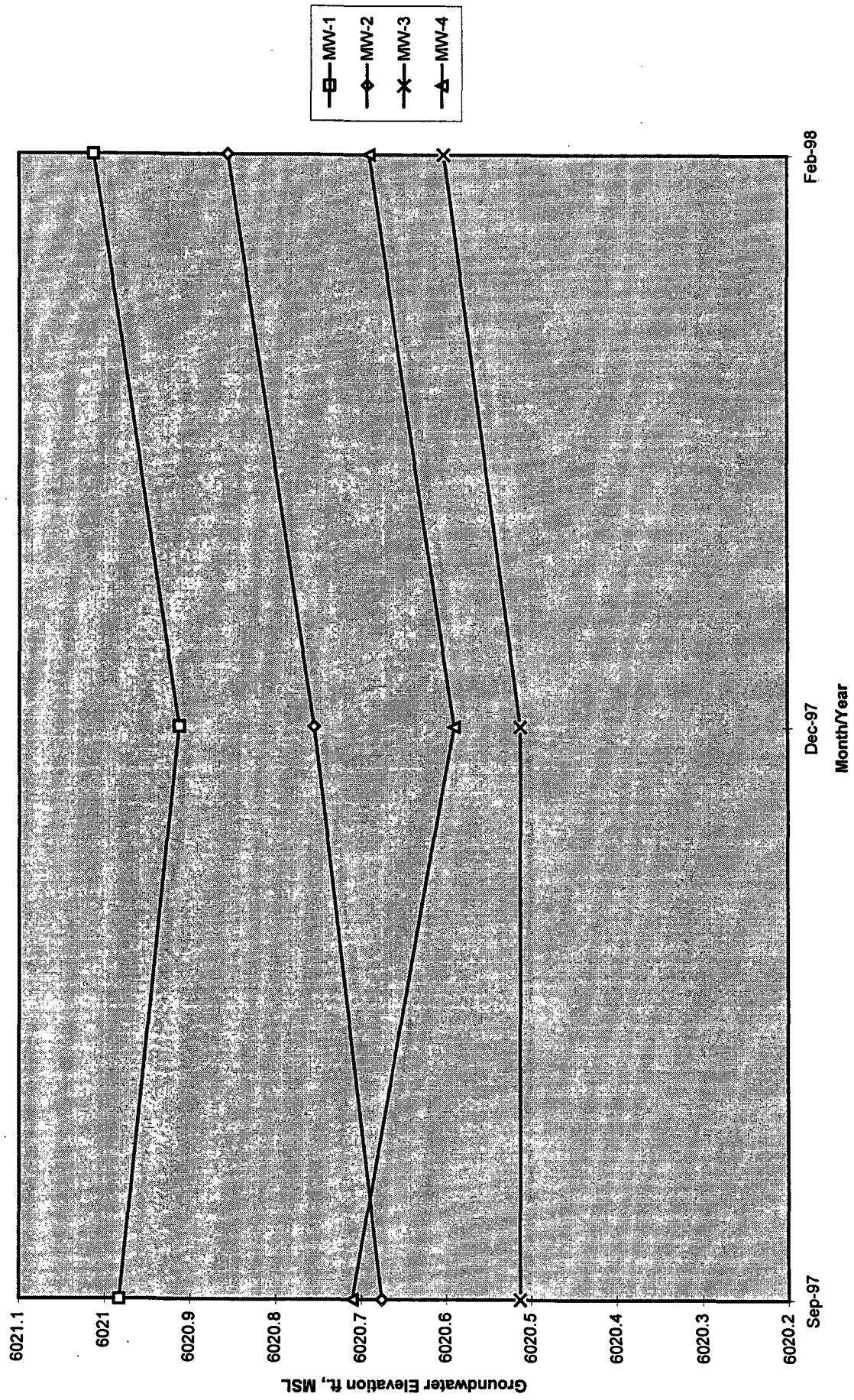


Table 1. MILES FEDERAL 1E GROUNDWATER SAMPLING RESULTS, mg/l (9/29/97)

Constituent	WQCC Stds.	Upgradient (MW-1 Miles Fed 1E Drip)	MW-1	MW-2	MW-3	MW-4	MW-5 (MW- 2 duplicate)
B	0.01	<0.0002	<0.0002	0.0561	.0004	<0.0002	.0587
T	0.75	<0.0002	<0.0002	0.0055	.0004	<0.0002	.0063
E	0.75	<0.0002	0.0003	0.0484	.0027	<0.0002	.0494
X	0.62	<0.0002	<0.0002	0.0264	.0003	<0.0002	.0266
PAHs	0.03	NA	NA	NA	NA	NA	NA
Metals							
As	0.1	<0.030	NA	<0.030	NA	NA	NA
Ba	1	0.617	NA	0.129	NA	NA	NA
Cd	0.01	0.019	NA	<0.004	NA	NA	NA
Cr	0.05	0.015	NA	<0.010	NA	NA	NA
Pb	0.05	0.048	NA	0.134	NA	NA	NA
Se	0.05	0.002	NA	0.004	NA	NA	NA
Ag	0.05	<0.006	NA	<0.006	NA	NA	NA
Hg	0.002	<0.0001	NA	<0.0001	NA	NA	NA
Cations/Anions							
Na	NA	938	NA	842	NA	NA	NA
Ca	NA	48	NA	381	NA	NA	NA
Mg	NA	10.9	NA	63.2	NA	NA	NA
K	NA	2.68	NA	14.1	NA	NA	NA
Cl	NA	17.4	NA	172	NA	NA	NA
SO4	NA	1920	NA	2214	NA	NA	NA
CO3	NA	<1	NA	<1	NA	NA	NA
HCO3	NA	580	NA	1216	NA	NA	NA
OH	NA	<1	NA	<1	NA	NA	NA
Cation/Anion Balance							
Difference Cation- Anion	NA	5.83	NA	9.68	NA	NA	NA
Total Cation-Anion	NA	94.11	NA	132.07	NA	NA	NA
% Difference	NA	6.2	NA	7.3	NA	NA	NA
TDS, calc	NA	3517	NA	4902	NA	NA	NA
TDS, meas	NA	3355	NA	4518	NA	NA	NA
Hardness as CaCO3	NA	164	NA	1212	NA	NA	NA

NA: Not Applicable
 BDL: Below Detection Limit
 NS: Not Sampled
 **: Out of Acceptable Range, % Diff. +/-5
 P: Free Product

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *2-Oct-97*
COC No.: *5845*
Sample No.: *16432*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E*

Project Location: *9709291030; MW-1*

Sampled by: *MS* Date: *29-Sep-97* Time: *10:30*

Analyzed by: *DC* Date: *1-Oct-97*

Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/L	0.2	ug/L
<i>Toluene</i>	ND	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	ND	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	0.3	ug/L	0.2	ug/L
<i>o-Xylene</i>	ND	ug/L	0.2	ug/L
<i>TOTAL</i>	0.3	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *10/2/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *2-Oct-97*
COC No.: *5845*
Sample No.: *16433*
Job No.: *2-1000*

Project Name: ***PNM Gas Services - Miles Federal 1E***
Project Location: ***9709291100; MW-2***
Sampled by: *MS* Date: *29-Sep-97* Time: *11:00*
Analyzed by: *DC* Date: *1-Oct-97*
Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	56.1	ug/L	0.2	ug/L
<i>Toluene</i>	5.5	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	48.4	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	25.4	ug/L	0.2	ug/L
<i>o-Xylene</i>	1.0	ug/L	0.2	ug/L
<i>TOTAL</i>	136.4	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *DC*
Date: *10/2/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *14-Oct-97*
 COC No.: *5845*
 Sample ID.: *16433*
 Job No.: *2-1000*

Project Name: ***PNM Gas Services - Miles Federal 1E***Project Location: ***9709291100; MW-2***Sampled by: MS Date: *29-Sep-97* Time: *11:00*Analyzed by: HR Date: *10-Oct-97***Laboratory Analysis**

Parameter	Results as Received	Unit of Measure	Results as Received	Unit of Measure
Cations				
Sodium <i>Na</i>	842	mg/L	36.62	me/L
Calcium <i>Ca</i>	381	mg/L	19.01	me/L
Magnesium <i>Mg</i>	63.2	mg/L	5.20	me/L
Potassium <i>K</i>	14.1	mg/L	0.36	me/L
Anions				
Chloride <i>Cl</i>	172	mg/L	4.85	me/L
Sulfate <i>SO4</i>	2214	mg/L	46.09	me/L
Carbonate <i>CO3 as CaCO3</i>	< 1	mg/L	< 0.01	me/L
Bicarbonate <i>HCO3 as CaCO3</i>	1216	mg/L	19.93	me/L
Hydroxide <i>OH as CaCO3</i>	< 1	mg/L	< 0.01	me/L
Total Dissolved Solids				
Calculated, Sum of Cation/Anion	4902	mg/L	Cation-Anion Balance 9.68 Difference Cation-Anion, me/L 132.07 Total Cation-Anion, me/L 7.3 % Difference Cation-Anion Comments	
Total Dissolved Solids				
Dried @ 180 C	4518	mg/L		
pH	6.80			
Conductivity @ 25 C	5110	uS/cm		
Total Hardness as CaCO3	1212	mg/L		

Approved by: *JAC*
 Date: *10/15/97*

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *2-Oct-97*
COC No.: *5845*
Sample No.: *16434*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E*

Project Location: *9709291130; MW-3*

Sampled by: *MS* Date: *29-Sep-97* Time: *11:30*

Analyzed by: *DC* Date: *1-Oct-97*

Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>0.4</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>0.4</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>2.7</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>0.3</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>ND</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>3.8</i>	<i>ug/L</i>		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *10/2/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *2-Oct-97*
COC No.: *5845*
Sample No.: *16435*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E*

Project Location: *9709291200; MW-4*

Sampled by: *MS* Date: *29-Sep-97* Time: *12:00*

Analyzed by: *DC* Date: *1-Oct-97*

Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/L	0.2	ug/L
<i>Toluene</i>	ND	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	ND	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	ND	ug/L	0.2	ug/L
<i>o-Xylene</i>	ND	ug/L	0.2	ug/L
<i>TOTAL</i>	ND	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *10/2/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *2-Oct-97*
COC No.: *5845*
Sample No.: *16436*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E*

Project Location: *9709291230; MW-5*

Sampled by: *MS* Date: *29-Sep-97* Time: *12:30*

Analyzed by: *DC* Date: *1-Oct-97*

Sample Matrix: *Liquid*

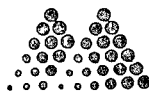
Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>58.7</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>6.3</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>49.4</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>25.6</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>1.0</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>140.9</i>	<i>ug/L</i>		

ND - Not Detected at Limit of Quantitation

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

Approved By: *DC*
Date: *10/2/97*

P.O. BOX 2606 • FARMINGTON, NM 87499



Mountain States Analytical, Inc.

The Quality Solution

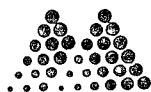
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401

Attn: Mr. David Cox
Project: Miles Federal IE/Drip-

Sample ID: 16433-5845 (Dissolved)
Matrix: Waste Water

MSAI Sample: 69113
MSAI Group: 18095
Date Reported: 10/23/97
Discard Date: 11/22/97
Date Submitted: 10/01/97
Date Sampled: 09/29/97
Collected by: DC
Purchase Order: 5845
Project No.:

Test Analysis	Results as Received	Units	Method Detection Limit
0259B Mercury by CVAA, w/ww, 7470 Method: SW-846 7470	ND	mg/l	0.0001
0392I Flame/ICP Prep, w/ww, 3005A Method: SW-846 3005A	W 0		
0392M Mercury Prep CVAA, w/ww, 7470 Method: SW-846 7470	W 719		
001 Prep for HAA, w/ww, 7062/7742 Method: SW-846 7062/7742	W 0		
1451 Selenium by HAA, w/ww, 7742 Method: SW-846 7742	0.004	mg/l	0.002
7245 Arsenic by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.030
7246 Barium by ICP, w/ww, 6010A Method: SW-846 6010A	0.129	mg/l	0.003
7249 Cadmium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.004
7251 Chromium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.010
7255 Lead by ICP, w/ww, 6010A Method: SW-846 6010A	0.134	mg/l	0.040
7266 Silver by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.006



Mountain States Analytical, Inc.

The Quality Solution

Page 2

On Site Technologies, Ltd.

MSAI Sample: 69113

MSAI Group: 18095

Sample ID: 16433-5845 (Dissolved)

Test	Analysis	Results as Received	Units	Method Detection Limit
0939	Sample Filtering, ww, MSAI Method: IN HOUSE MSAI	Complete		

This report consists of the following items: A cover letter, a signed analytical report for each sample specified on the cover letter, and if applicable, an inorganic quality control summary. Organic sample reports contain footnotes which describe any quality control anomalies which may have occurred.

Respectfully Submitted,
Reviewed and Approved by:


Rolf E. Larsen
Project Manager

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *30-Dec-97*
COC No.: *5634*
Sample No.: *17105*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E*
Project Location: *9712161259; MW-1*
Sampled by: *RD* Date: *16-Dec-97* Time: *12:59*
Analyzed by: *DC* Date: *24-Dec-97*
Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/L	0.2	ug/L
<i>Toluene</i>	ND	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	ND	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	ND	ug/L	0.2	ug/L
<i>o-Xylene</i>	ND	ug/L	0.2	ug/L
<i>TOTAL</i>	ND	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *CAF*
Date: *12/30/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *30-Dec-97*
COC No.: *5634*
Sample No.: *17106*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E*
Project Location: *9712161321; MW-2*
Sampled by: *RD* Date: *16-Dec-97* Time: *13:21*
Analyzed by: *DC* Date: *24-Dec-97*
Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>1.8</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>5.1</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>11.6</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>2.8</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>1.9</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>23.3</i>	<i>ug/L</i>		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *12/30/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *30-Dec-97*
COC No.: *5634*
Sample No.: *17107*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E*
Project Location: *9712161339; MW-3*
Sampled by: *RD* Date: *16-Dec-97* Time: *13:39*
Analyzed by: *DC* Date: *24-Dec-97*
Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>0.3</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>1.4</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>ND</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>ND</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>1.9</i>	<i>ug/L</i>		

ND - Not Detected at Limit of Quantitation

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

Approved By: *JaC*
Date: *12/30/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TREATING THE BLENDING INDUSTRY WITH THE BEST ANALYTICAL SERVICES

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *30-Dec-97*
COC No.: *5634*
Sample No.: *17108*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E*
Project Location: *9712161356; MW-4*
Sampled by: *RD* Date: *16-Dec-97* Time: *13:56*
Analyzed by: *DC* Date: *24-Dec-97*
Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/L	0.2	ug/L
<i>Toluene</i>	ND	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	ND	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	ND	ug/L	0.2	ug/L
<i>o-Xylene</i>	ND	ug/L	0.2	ug/L
<i>TOTAL</i>	ND	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *12/30/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

TECHNICAL SERVICES DIVISION

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *30-Dec-97*
COC No.: *5634*
Sample No.: *17109*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E*
Project Location: *9712161416; MW-5*
Sampled by: *RD* Date: *16-Dec-97* Time: *14:16*
Analyzed by: *DC* Date: *24-Dec-97*
Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>0.3</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>1.6</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>ND</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>ND</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>2.1</i>	<i>ug/L</i>		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *12/30/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

TECHNICAL SERVICES FOR THE BLENDING INDUSTRY WITH THE FOLLOWING:

OFF: (505) 325-5667



LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 24-Dec-97

Internal QC No.: 0559-STD

Surrogate QC No.: 0567-STD

Reference Standard QC No.: 0529/30-QC

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	RPD	Limit
Benzene	ppb	20.0	18.2	9	15%
Toluene	ppb	20.0	19.1	4	15%
Ethylbenzene	ppb	20.0	19.2	4	15%
m,p-Xylene	ppb	40.0	36.9	8	15%
o-Xylene	ppb	20.0	19.0	5	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	Limit
Benzene	101	88	(39-150)	6	20%
Toluene	100	94	(46-148)	6	20%
Ethylbenzene	100	93	(32-160)	6	20%
m,p-Xylene	97	90	(35-145)	6	20%
o-Xylene	99	93	(35-145)	6	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered	Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limit Percent Recovered	(70-130)		Limit Percent Recovered	(70-130)	
17105-5634	94				
17106-5634	93				
17107-5634	93				
17108-5634	94				
17109-5634	94				

S1: Fluorobenzene

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



CHAIN OF CUSTODY RECORD

34

Page 1 of 1

Date: 12/16/97

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Purchase Order No.:		Job No.	
Name: Denver Bearden		Name: Maureen Gannon	
Company: PNM Gas Services		Company: PNM Gas Services	
Address: 603 W. Elm Street		Mailing Address: Alverado Square, Mail Stop 0408	
City, State, Zip: Farmington, NM 87401		City, State, Zip: Albuquerque, NM 87158	
Telephone No.:		Telephone No.:	
Telefax No.:		Telefax No.:	
Sampling Location:		ANALYSIS REQUESTED	
Miles Fed. IE			
Sample: R. Redrick			
SAMPLE IDENTIFICATION		LAB ID	
DATE	SAMPLE TIME	MATRIX	PRES.
12/16/97	1254	H ₂ O	HCL
12/16/97	1321	H ₂ O	HCL
12/16/97	1339	H ₂ O	HCL
12/16/97	1356	H ₂ O	HCL
12/16/97	1416	H ₂ O	HCL
9712161254 MW1		17105-5634	
9712161321 MW2		17106-	
9712161339 MW3		17107-	
9712161356 MW4		17108-	
9712161416 MW5		17109-	
Relinquished by: R. Redrick		Date/Time: 12/16/97 1652	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Method of Shipment:		Special Instructions:	
Authorized by: R. Redrick		Results to be sent to both parties.	

Distribution: White - On Site Yellow - LAB Pink - Sampler Goldenrod - Client



OFF: (505) 325-5667

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

February 24, 1998

Maureen Gannon
PNM Gas Services
Alevardo Square, Mail Stop 0408
Albuquerque, NM 87401
TEL: (505) 241-2974
FAX (505) 241-2340

RE: Miles Federal 1E

Order No.: 9802004

Dear Maureen Gannon,

On Site Technologies, LTD. received 5 samples on 2/11/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

Aromatic Volatiles by GC-PID (SW8021A)

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,

David Cox



OFF: (505) 325-5667

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 24-Feb-98

Client:	PNM Gas Services	Client Sample Info:	Miles Federal 1E
Work Order:	9802004	Client Sample ID:	9802101408; MW-1
Lab ID:	9802004-01A	Matrix:	AQUEOUS
Project:	Miles Federal 1E	Collection Date:	2/10/98 2:08:00 PM
		COC#:	7140

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		SW8021A		Analyst: DC		
Benzene	ND	0.5		µg/L	1	2/18/98
Toluene	ND	0.5		µg/L	1	2/18/98
Ethylbenzene	ND	0.5		µg/L	1	2/18/98
m,p-Xylene	ND	1		µg/L	1	2/18/98
o-Xylene	ND	0.5		µg/L	1	2/18/98
Surr: Fluorobenzene	99.7	70-130		%REC	1	2/18/98
Surr: 1,4-Difluorobenzene	101.2	70-130		%REC	1	2/18/98
Surr: 4-Bromochlorobenzene	98.2	70-130		%REC	1	2/18/98

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

1 of 1

ON SITE

OFF: (505) 325-5667

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 24-Feb-98

Client:	PNM Gas Services	Client Sample Info:	Miles Federal 1E
Work Order:	9802004	Client Sample ID:	9802101426; MW-2
Lab ID:	9802004-02A	Matrix:	AQUEOUS
Project:	Miles Federal 1E	Collection Date:	2/10/98 2:26:00 PM
		COC#:	7140

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		SW8021A		Analyst: DC		
Benzene	1.8	0.5		µg/L	1	2/18/98
Toluene	7.0	0.5		µg/L	1	2/18/98
Ethylbenzene	7.6	0.5		µg/L	1	2/18/98
m,p-Xylene	3.9	1		µg/L	1	2/18/98
o-Xylene	ND	0.5		µg/L	1	2/18/98
Surr: Fluorobenzene	97.1	70-130		%REC	1	2/18/98
Surr: 1,4-Difluorobenzene	98.9	70-130		%REC	1	2/18/98
Surr: 4-Bromochlorobenzene	97.6	70-130		%REC	1	2/18/98

Qualifiers:

ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank	E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level	

1 of 1

ON SITE

OFF: (505) 325-5667

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 24-Feb-98

Client:	PNM Gas Services	Client Sample Info:	Miles Federal 1E
Work Order:	9802004	Client Sample ID:	9802101444; MW-3
Lab ID:	9802004-03A	Matrix:	AQUEOUS
Project:	Miles Federal 1E	Collection Date:	2/10/98 2:44:00 PM
		COC#:	7140

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		SW8021A		Analyst: DC		
Benzene	0.8	0.5		µg/L	1	2/19/98
Toluene	0.6	0.5		µg/L	1	2/19/98
Ethylbenzene	2.6	0.5		µg/L	1	2/19/98
m,p-Xylene	ND	1		µg/L	1	2/19/98
o-Xylene	ND	0.5		µg/L	1	2/19/98
Surr: Fluorobenzene	99.6	70-130		%REC	1	2/19/98
Surr: 1,4-Difluorobenzene	101.2	70-130		%REC	1	2/19/98
Surr: 4-Bromochlorobenzene	94.9	70-130		%REC	1	2/19/98

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

1 of 1

OFF: (505) 325-5667

ON SITE

TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 24-Feb-98

Client:	PNM Gas Services	Client Sample Info:	Miles Federal 1E
Work Order:	9802004	Client Sample ID:	9802101458; MW-4
Lab ID:	9802004-04A	Matrix:	AQUEOUS
Project:	Miles Federal 1E	Collection Date:	2/10/98 2:58:00 PM
		COC#:	7140

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		SW8021A		Analyst: DC		
Benzene	ND	0.5		µg/L	1	2/18/98
Toluene	ND	0.5		µg/L	1	2/18/98
Ethylbenzene	ND	0.5		µg/L	1	2/18/98
m,p-Xylene	ND	1		µg/L	1	2/18/98
o-Xylene	0.6	0.5		µg/L	1	2/18/98
Surr: Fluorobenzene	99.5	70-130		%REC	1	2/18/98
Surr: 1,4-Difluorobenzene	101.5	70-130		%REC	1	2/18/98
Surr: 4-Bromochlorobenzene	98.2	70-130		%REC	1	2/18/98

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



OFF: (505) 325-5667

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 24-Feb-98

Client:	PNM Gas Services	Client Sample Info:	Miles Federal 1E
Work Order:	9802004	Client Sample ID:	9802101515; MW-5
Lab ID:	9802004-05A	Matrix:	AQUEOUS
Project:	Miles Federal 1E	Collection Date:	2/10/98 3:15:00 PM
		COC#:	7140

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		SW8021A		Analyst: DC		
Benzene	1.8	0.5		µg/L	1	2/18/98
Toluene	7.2	0.5		µg/L	1	2/18/98
Ethylbenzene	7.4	0.5		µg/L	1	2/18/98
m,p-Xylene	4.0	1		µg/L	1	2/18/98
o-Xylene	ND	0.5		µg/L	1	2/18/98
Surr: Fluorobenzene	96.9	70-130		%REC	1	2/18/98
Surr: 1,4-Difluorobenzene	99.5	70-130		%REC	1	2/18/98
Surr: 4-Bromochlorobenzene	97.8	70-130		%REC	1	2/18/98

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

On Site Technologies, LTD.

Date: 24-Feb-98

CLIENT: PNM Gas Services
Work Order: 9802004
Project: Miles Federal IE

QC SUMMARY REPORT

Method Blank

Sample ID: MB1 W	Batch ID: GC-1_980218	Test Code: SW8021A	Units: µg/L	Analysis Date: 2/18/98	Prep Date:
Client ID:	9802004	Run ID: GC-1_980218A		SeqNo: 257	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.1623	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
o-Xylene	ND	0.5			
Toluene	.0581	0.5			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 24-Feb-98

CLIENT: PNM Gas Services
Work Order: 9802004
Project: Miles Federal 1E

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0529/30		Batch ID: GC-1_980218		Test Code: SW8021A		Units: µg/L		Analysis Date: 2/18/98		Prep Date:	
Client ID: 9802004		Run ID: GC-1_980218A		PQL		SPK value		SeqNo: 258			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.28	0.5	20	0	106.4%	85	115				
Ethylbenzene	22.72	0.5	20	0	113.6%	85	115				
m,p-Xylene	42.78	1	40	0	107.0%	85	115				
o-Xylene	22.12	0.5	20	0	110.6%	85	115				
Toluene	21.7	0.5	20	0	108.5%	85	115				
1,4-Difluorobenzene	105.5	0	100	0	105.5%	70	130				
4-Bromochlorobenzene	95.89	0	100	0	95.9%	70	130				
Fluorobenzene	99.12	0	100	0	99.1%	70	130				

Sample ID: CCV2 QC0529/30		Batch ID: GC-1_980218		Test Code: SW8021A		Units: µg/L		Analysis Date: 2/18/98		Prep Date:	
Client ID: 9802004		Run ID: GC-1_9802 8A		PQL		SPK value		SeqNo: 267			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.01	0.5	20	0	105.0%	85	115				
Ethylbenzene	22.35	0.5	20	0	111.7%	85	115				
m,p-Xylene	42	1	40	0	105.0%	85	115				
o-Xylene	21.71	0.5	20	0	108.5%	85	115				
Toluene	21.42	0.5	20	0	107.1%	85	115				
1,4-Difluorobenzene	100.8	0	100	0	100.8%	70	130				
4-Bromochlorobenzene	97.87	0	100	0	97.9%	70	130				
Fluorobenzene	99.21	0	100	0	99.2%	70	130				

Qualifiers: NID - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: PNM Gas Services
Work Order: 9802004
Project: Miles Federal 1E

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 QC0529/30		Batch ID: GC-1_980218		Test Code: SW8021A		Units: µg/L		Analysis Date: 2/18/98		Prep Date:			
Client ID: 9802004		Run ID: GC-1_980218A		PQL		SPK value		SeqNo: 279					
Analyte	Result			PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.04			0.5	20	0	105.2%	85	115				
Ethylbenzene	22.47			0.5	20	0	112.4%	85	115				
m,p-Xylene	42.3			1	40	0	105.8%	85	115				
o-Xylene	22.07			0.5	20	0	110.3%	85	115				
Toluene	21.51			0.5	20	0	107.5%	85	115				
1,4-Difluorobenzene	100.6			0	100	0	100.6%	70	130				
4-Bromochlorobenzene	95.78			0	100	0	95.8%	70	130				
Fluorobenzene	99.07			0	100	0	99.1%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 24-Feb-98

CLIENT: PNM Gas Services
Work Order: 9802004
Project: Miles Federal IE

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_980218	Test Code: SW8021A	Units: µg/L	Analysis Date: 2/18/98		Prep Date:
Client ID: 9802004		Run ID: GC-1_980218A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 259
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Benzene	41.54	0.5	40	0.1623	103.4%	84	114
Ethylbenzene	44.37	0.5	40	0	110.9%	86	118
m,p-Xylene	84.33	1	80	0	105.4%	50	150
o-Xylene	43.43	0.5	40	0	108.6%	49	147
Toluene	42.69	0.5	40	0.0581	106.6%	87	120

Qualifiers: ND - Not Detected at the Reporting Limit
 I - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
 I of I

On Site Technologies, LTD.

Date: 24-Feb-98

CLIENT: PNM Gas Services
Work Order: 9802004
Project: Miles Federal IE

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9802002-03AMS		Batch ID: GC-1_980218		Test Code: SW8021A		Units: µg/L		Analysis Date: 2/18/98		Prep Date:	
Client ID: 9802004		Run ID: GC-1_980218A		SeqNo: 276							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	3055	10	800	2193	107.8%	57	128				
Ethylbenzene	915	10	800	73.53	105.2%	78	107				
m,p-Xylene	2035	20	1600	425.1	100.6%	67	118				
o-Xylene	898.6	10	800	38.59	107.5%	78	107				
Toluene	856	10	800	3.18	106.6%	74	116				

CS ✓
 (R) 1/14/98
 S

Sample ID: 9802002-03AMSD		Batch ID: GC-1_980218		Test Code: SW8021A		Units: µg/L		Analysis Date: 2/18/98		Prep Date:	
Client ID: 9802004		Run ID: GC-1_980218A		SeqNo: 277							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2927	10	800	2193	91.8%	57	128	3055	4.3%	12	
Ethylbenzene	899	10	800	73.53	103.2%	78	107	915	1.8%	11	
m,p-Xylene	1984	20	1600	425.1	97.4%	67	118	2035	2.5%	10	
o-Xylene	842.4	10	800	38.59	100.5%	78	107	898.6	6.5%	14	
Toluene	808	10	800	3.18	100.6%	74	116	856	5.8%	14	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 25-Feb-98

CLIENT: PNM Gas Services
Work Order: 9802004
Project: Miles Federal IE

QC SUMMARY REPORT

Method Blank

Sample ID: MB1 W	Batch ID: GC-1_980219	Test Code: SW8021A	Units: µg/L	Analysis Date: 2/19/98				Prep Date:			
Client ID:	9802004	Run ID: GC-1_980219A		SeqNo: 280							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.1628										J
Ethylbenzene	ND										
m,p-Xylene	ND										
o-Xylene	ND										J
Toluene	.0594										

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 25-Feb-98

CLIENT: PNM Gas Services
Work Order: 9802004
Project: Miles Federal IE

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9802009-04AMS		Batch ID: GC-1_980219		Test Code: SW8021A		Units: µg/L		Analysis Date: 2/19/98		Prep Date:	
Client ID: 9802004		Run ID: GC-1_980219A		SeqNo: 297							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	251.8	2.5	200	44.9	103.5%	57	128				✓ S✓
Ethylbenzene	391	2.5	200	176.4	107.3%	78	107				
m,p-Xylene	420	5	400	4.002	104.0%	67	118				
o-Xylene	221.7	2.5	200	3.372	109.2%	78	107				(W) S✓
Toluene	216.8	2.5	200	5.65	105.6%	74	116				

Sample ID: 9802009-04AMSD		Batch ID: GC-1_980219		Test Code: SW8021A		Units: µg/L		Analysis Date: 2/19/98		Prep Date:	
Client ID: 9802004		Run ID: GC-1_980219A		SeqNo: 298							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	240.2	2.5	200	44.9	97.6%	57	128	251.8	4.7%	12	
Ethylbenzene	368.8	2.5	200	176.4	96.2%	78	107	391	5.8%	11	
m,p-Xylene	396.8	5	400	4.002	98.2%	67	118	420	5.7%	10	
o-Xylene	210.4	2.5	200	3.372	103.5%	78	107	221.7	5.2%	14	
Toluene	206.8	2.5	200	5.65	100.6%	74	116	216.8	4.7%	14	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 25-Feb-98

CLIENT: PNM Gas Services
Work Order: 9802004
Project: Miles Federal IE

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_980219	Test Code: SW8021A	Units: µg/L	Analysis Date: 2/19/98		Prep Date:				
Client ID:		9802004	Run ID: GC-1_980219A		SeqNo: 282						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.94	0.5	40	0.1628	104.4%	84	114				
Ethylbenzene	44.9	0.5	40	0	112.2%	86	118				
m,p-Xylene	85.5	1	80	0	106.9%	50	150				
o-Xylene	44.06	0.5	40	0	110.1%	49	147				
Toluene	43.16	0.5	40	0.0594	107.8%	87	120				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 25-Feb-98

CLIENT: PNM Gas Services
Work Order: 9802004
Project: Miles Federal IE

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0529/30		Batch ID: GC-1_980219		Test Code: SW8021A		Units: µg/L		Analysis Date: 2/19/98		Prep Date:	
Client ID: 9802004		Run ID: GC-1_980219A		PQL		SPK value		SeqNo: 281			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.6	0.5	20	0	103.0%	85	115				
Ethylbenzene	22.11	0.5	20	0	110.6%	85	115				
m,p-Xylene	41.68	1	40	0	104.2%	85	115				
o-Xylene	21.6	0.5	20	0	108.0%	85	115				
Toluene	21.04	0.5	20	0	105.2%	85	115				
1,4-Difluorobenzene	101.1	0	100	0	101.1%	70	130				
4-Bromochlorobenzene	95.58	0	100	0	95.6%	70	130				
Fluorobenzene	99.14	0	100	0	99.1%	70	130				

Sample ID: CCV2 QC0529/30		Batch ID: GC-1_980219		Test Code: SW8021A		Units: µg/L		Analysis Date: 2/19/98		Prep Date:	
Client ID: 9802004		Run ID: GC-1_980219A		PQL		SPK value		SeqNo: 292			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.71	0.5	20	0	103.5%	85	115				
Ethylbenzene	22.06	0.5	20	0	110.3%	85	115				
m,p-Xylene	41.51	1	40	0	103.8%	85	115				
o-Xylene	21.67	0.5	20	0	108.4%	85	115				
Toluene	21.09	0.5	20	0	105.5%	85	115				
1,4-Difluorobenzene	101.4	0	100	0	101.4%	70	130				
4-Bromochlorobenzene	98.06	0	100	0	98.1%	70	130				
Fluorobenzene	99.28	0	100	0	99.3%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: PNM Gas Services
Work Order: 9802004
Project: Miles Federal IE

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV3 QC0529/30		Batch ID: GC-1_980219		Test Code: SW8021A		Units: µg/L		Analysis Date: 2/19/98		Prep Date:	
Client ID: 9802004		Run ID: GC-1_980219A		SeqNo: 301							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.94	0.5	20	0	104.7%	85	115				
Ethylbenzene	22.56	0.5	20	0	112.8%	85	115				
m,p-Xylene	42.19	1	40	0	105.5%	85	115				
o-Xylene	22.05	0.5	20	0	110.3%	85	115				
Toluene	21.48	0.5	20	0	107.4%	85	115				
1,4-Difluorobenzene	101.3	0	100	0	101.3%	70	130				
4-Bromochlorobenzene	96.31	0	100	0	96.3%	70	130				
Fluorobenzene	98.88	0	100	0	98.9%	70	130				

Sample ID: CCV4 QC0529/30		Batch ID: GC-1_980219		Test Code: SW8021A		Units: µg/L		Analysis Date: 2/19/98		Prep Date:	
Client ID: 9802004		Run ID: GC-1_980219A		SeqNo: 304							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.16	0.5	20	0	100.8%	85	115				
Ethylbenzene	20.93	0.5	20	0	104.7%	85	115				
m,p-Xylene	39.5	1	40	0	98.7%	85	115				
o-Xylene	21.14	0.5	20	0	105.7%	85	115				
Toluene	20.81	0.5	20	0	104.1%	85	115				
1,4-Difluorobenzene	101.1	0	100	0	101.1%	70	130				
4-Bromochlorobenzene	96.32	0	100	0	96.3%	70	130				
Fluorobenzene	98.63	0	100	0	98.6%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

612 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

[illegible]

Distribution:	White - On Site	Yellow - LAB	Pink - Sampler	Goldenrod - Client
---------------	-----------------	--------------	----------------	--------------------