

3R - 336

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
Regional 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 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 (March 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 Drip 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 March 2, 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 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 Miles Federal 1E Drip site map with analytical results to date. MW-1 and MW-4 have shown BTEX concentrations to be non-detectable or below WQCC standards since monitoring began. MW-2, the source well, contains benzene above standard but is showing a downward trend. The benzene concentration in MW-3 has actually increased since the first quarter of monitoring. From a water quality standpoint, MW-1 shows an elevated level of sulfate. All metals are below WQCC standards in MW-1 and MW-2.

Figure(s) 3, 4 and 5 provide groundwater contour maps for September and December 1997 and March 1998, respectively. Groundwater flow is in a northeast direction beneath the site which is inconsistent with the groundwater gradient at the Miles Federal 1E which is located adjacent to the drip. All the wells at this site are in a straight line and not sufficiently spaced to give an accurate gradient direction. Figure 6 is the hydrograph for the site. Between September and December 1997, water levels decreased in MW-2 and MW-4 and increased in MW-1 and MW-3 showed increases. All wells exhibited increases in water levels between December 1997 and February 1998. This data is consistent with the Miles Federal 1E well site.

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: Miles Federal 1E Drip

Future Actions:

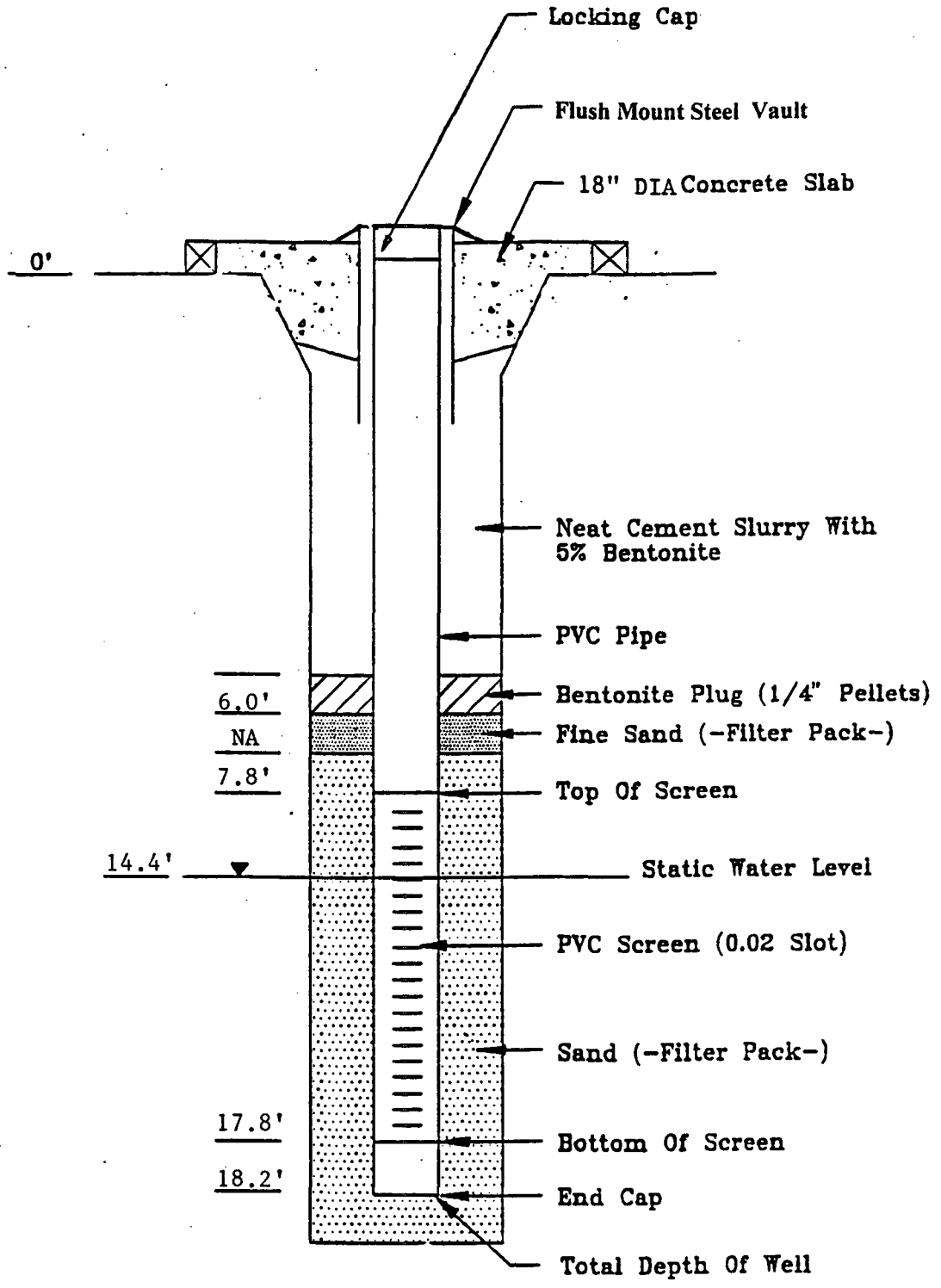
PNM will continue to monitor groundwater gradient and perform quarterly sampling at the Miles Federal 1E Drip. In addition, we will evaluate the need for additional source removal to expedite clean-up of groundwater contamination. During additional excavation, we will consider installing a new monitoring well to help better define groundwater gradient.

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 Drip
 Figure 1
 Well Completion Diagram

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

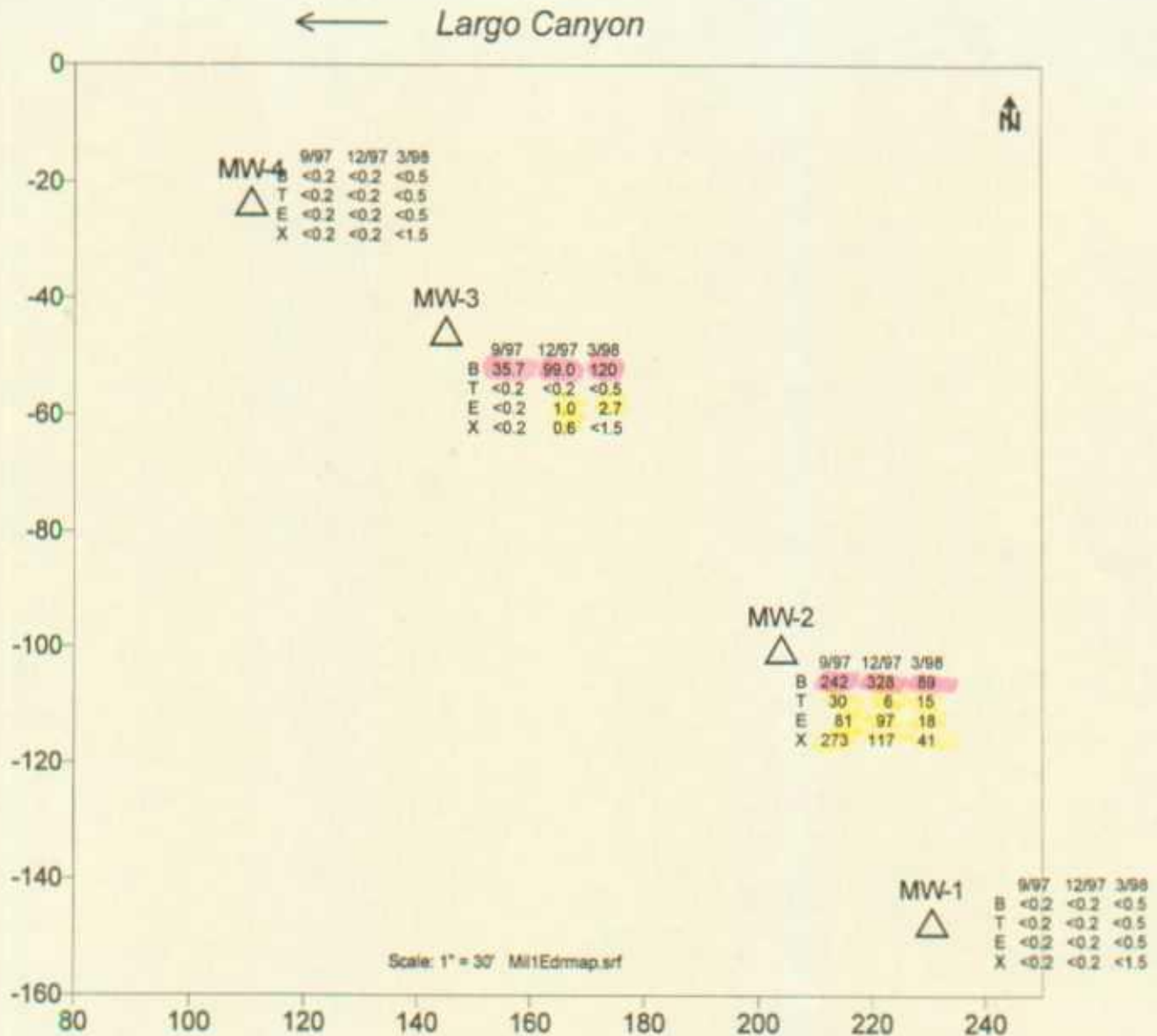


Figure 3. Miles Federal 1E Drip Groundwater Contour Map (September 29, 1997)

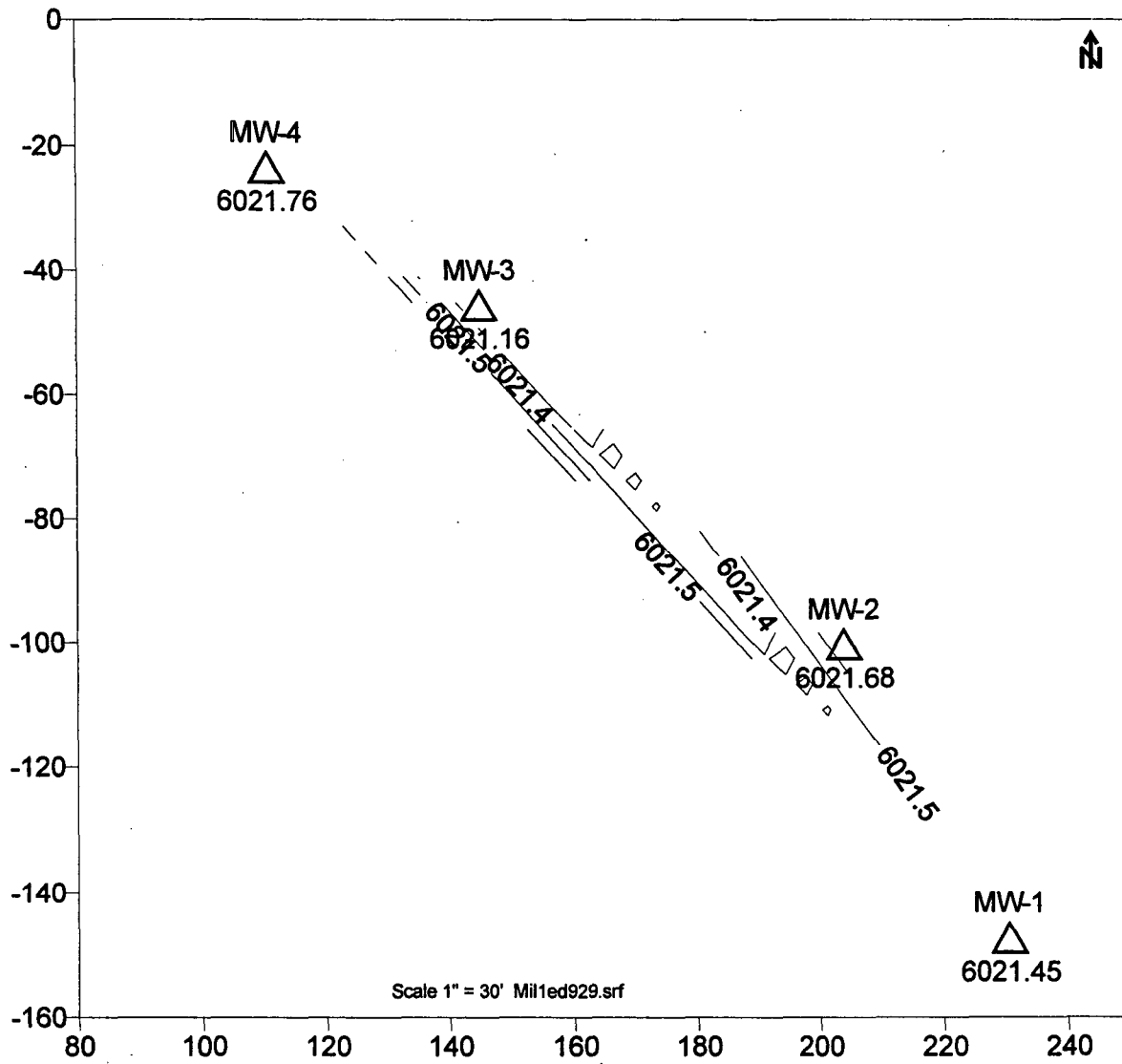


Figure 4. Miles Federal 1E Drip Groundwater Contour Map (December 16, 1997)

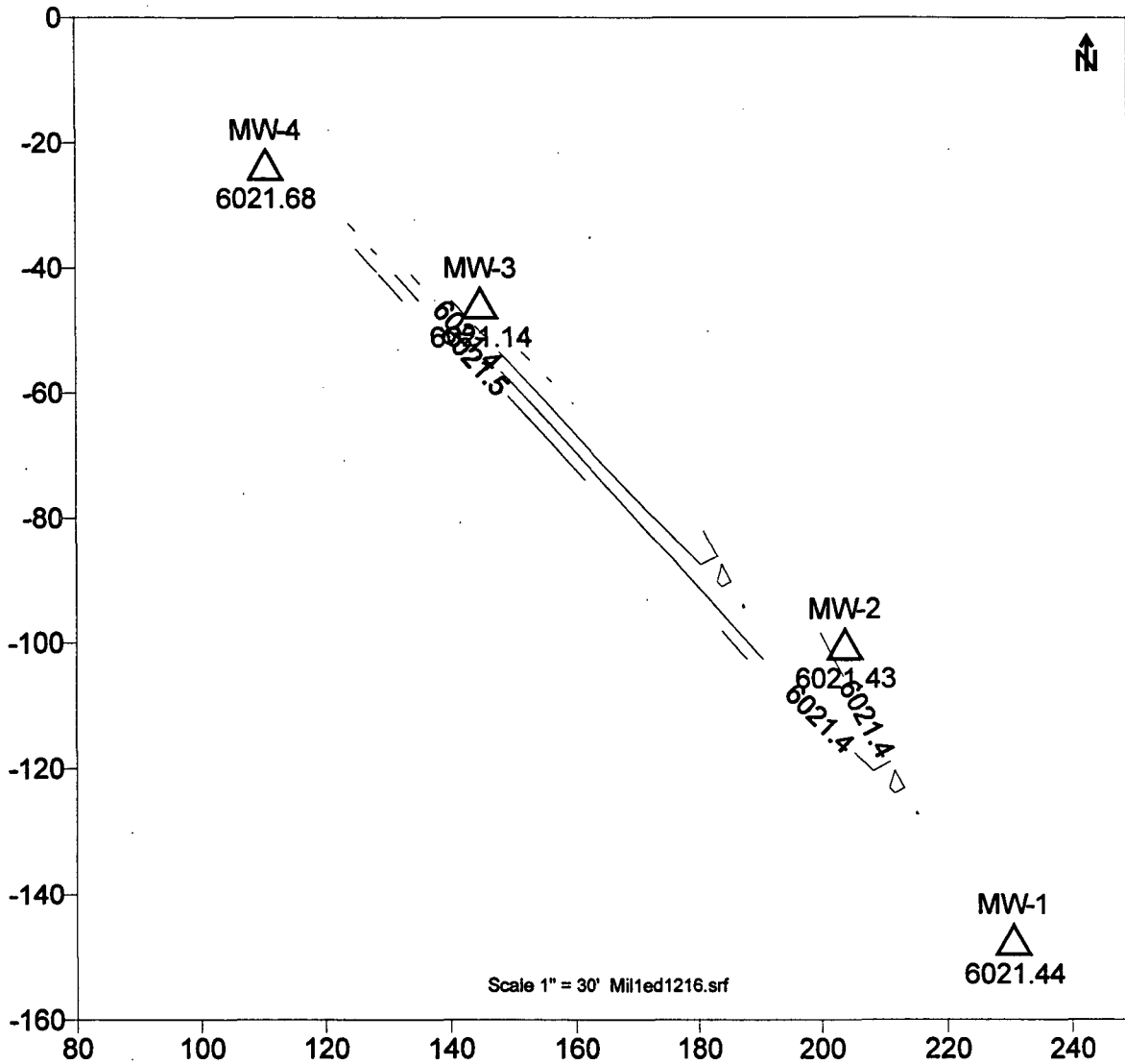


Figure 5. Miles Federal 1E Drip Groundwater Contour Map (March 2, 1998)

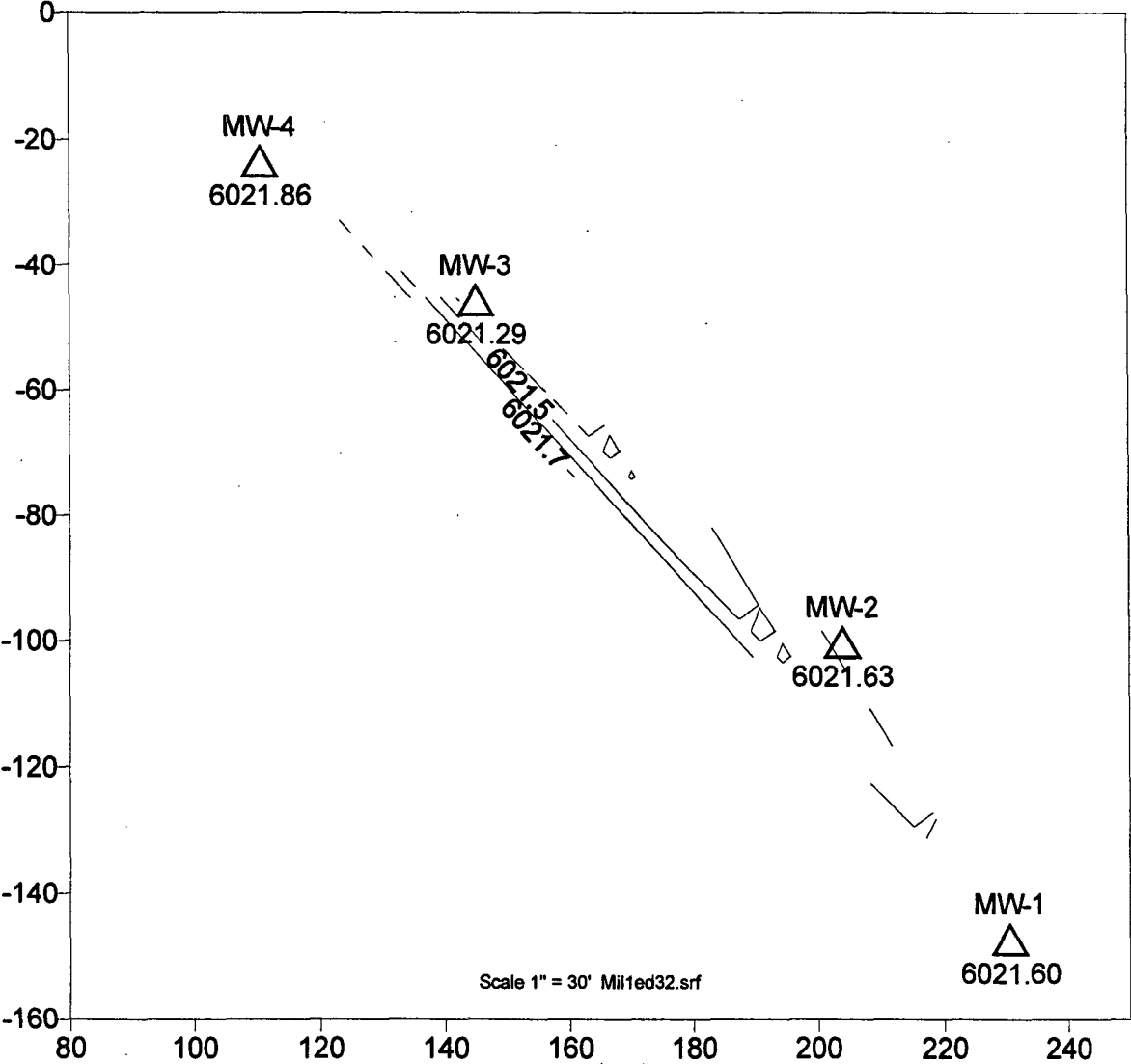


Figure 6. Miles Federal 1E Drip Hydrograph

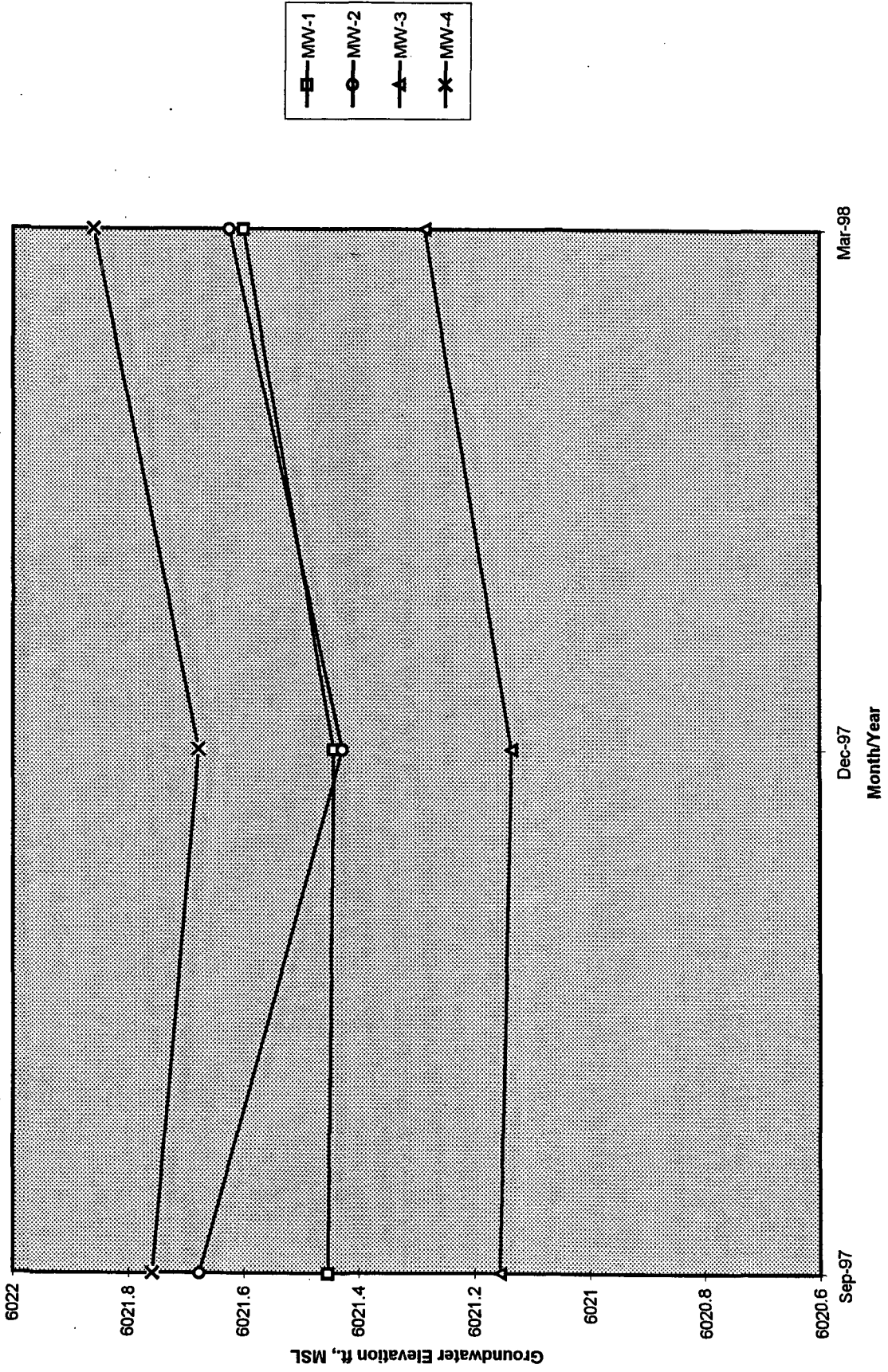


Table 1. MILES FEDERAL 1E DRIP GROUNDWATER SAMPLING RESULTS,
mg/l (9/29/97)

Constituent	WQCC Stds.	MW-1	MW-2	MW-3	MW-4
B	0.01	<0.0002	0.2420	0.0357	<0.0002
T	0.75	<0.0002	0.0300	<0.0002	<0.0002
E	0.75	0.0003	0.0810	<0.0002	<0.0002
X	0.62	<0.0002	0.2730	<0.0002	<0.0002
PAHs	0.03	NA	NA	NA	NA
<i>Metals</i>					
As	0.1	<0.030	<0.030	NA	NA
Ba	1	0.617	0.282	NA	NA
Cd	0.01	0.019	<0.004	NA	NA
Cr	0.05	0.015	<0.010	NA	NA
Pb	0.05	0.048	<0.040	NA	NA
Se	0.05	0.002	0.016	NA	NA
Ag	0.05	<0.006	<0.006	NA	NA
Hg	0.002	0.0001	<0.0001	NA	NA
<i>Cations/Anions</i>					
Na	NA	938	644	NA	NA
Ca	NA	48	196	NA	NA
Mg	NA	10.9	33.2	NA	NA
K	NA	2.68	15.8	NA	NA
Cl	NA	17.4	76.7	NA	NA
SO4	NA	1920	632	NA	NA
CO3	NA	<1	<1	NA	NA
HCO3	NA	580	1642	NA	NA
OH	NA	<1	<1	NA	NA
<i>Cation/Anion Balance</i>					
Difference Cation-Anion	NA	5.83	1.30	NA	NA
Total Cation-Anion	NA	94.11	83.16	NA	NA
% Difference	NA	6.2	1.6	NA	NA
TDS, calc	NA	3517	3240	NA	NA
TDS, meas	NA	3355	2696	NA	NA
Hardness as CaCO3	NA	164	626	NA	NA

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

Miles Federal 1E Drip

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.: *16437*
 Job No.: *2-1000*

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

Project Location: *9709291300; MW-1*

Sampled by: *MS* Date: *29-Sep-97* Time: *13:00*

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: *Jac*
 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.: *16437*
 Job No.: *2-1000*

Project Name: ***PNM Gas Services - Miles Federal 1E Drip***
 Project Location: ***9709291300; MW-1***

Sampled by: *MS* Date: *29-Sep-97* Time: *13:00*
 Analyzed by: *HR* Date: *10-Oct-97*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Results as Received	Unit of Measure
<u>Cations</u>				
Sodium <i>Na</i>	938	mg/L	40.80	me/L
Calcium <i>Ca</i>	48	mg/L	2.38	me/L
Magnesium <i>Mg</i>	10.9	mg/L	0.89	me/L
Potassium <i>K</i>	2.68	mg/L	0.07	me/L
<u>Anions</u>				
Chloride <i>Cl</i>	17.4	mg/L	0.49	me/L
Sulfate <i>SO4</i>	1920	mg/L	39.97	me/L
Carbonate <i>CO3 as CaCO3</i>	< 1	mg/L	< 0.01	me/L
Bicarbonate <i>HCO3 as CaCO3</i>	580	mg/L	9.51	me/L
Hydroxide <i>OH as CaCO3</i>	< 1	mg/L	< 0.01	me/L
Total Dissolved Solids Calculated, Sum of Cation/Anion	3517	mg/L	<u>Cation-Anion Balance</u> <hr/> 5.83 Difference Cation-Anion, me/L <hr/> 94.11 Total Cation-Anion, me/L <hr/> 6.2 % Difference Cation-Anion <hr/> Comments	
Total Dissolved Solids Dried @ 180 C	3355	mg/L		
pH	7.83			
Conductivity @ 25 C	4530	uS/cm		
Total Hardness as CaCO3	164	mg/L		

Approved by: *[Signature]*
 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.: *16438*
 Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E Drip*
 Project Location: *9709291330; MW-2*
 Sampled by: *MS* Date: *29-Sep-97* Time: *13:30*
 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>242</i>	<i>ug/L</i>	<i>1</i>	<i>ug/L</i>
<i>Toluene</i>	<i>30</i>	<i>ug/L</i>	<i>1</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>81</i>	<i>ug/L</i>	<i>1</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>258</i>	<i>ug/L</i>	<i>1</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>15</i>	<i>ug/L</i>	<i>1</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>626</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: *10/2/97*

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: *14-Oct-97*
 COC No.: *5845*
 Sample ID.: *16438*
 Job No.: *2-1000*

Project Name: ***PNM Gas Services - Miles Federal 1E Drip***
 Project Location: ***9709291330; MW-2***

Sampled by: MS Date: *29-Sep-97* Time: *13:30*
 Analyzed by: HR Date: *10-Oct-97*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Results as Received	Unit of Measure
<i>Cations</i>				
Sodium Na	644	mg/L	28.01	me/L
Calcium Ca	196	mg/L	9.78	me/L
Magnesium Mg	33.2	mg/L	2.73	me/L
Potassium K	15.8	mg/L	0.40	me/L
<i>Anions</i>				
Chloride Cl	76.7	mg/L	2.16	me/L
Sulfate SO4	632	mg/L	13.16	me/L
Carbonate CO3 as CaCO3	< 1	mg/L	< 0.01	me/L
Bicarbonate HCO3 as CaCO3	1642	mg/L	26.91	me/L
Hydroxide OH as CaCO3	< 1	mg/L	< 0.01	me/L
<i>Total Dissolved Solids</i>				
Calculated, Sum of Cation/Anion	3240	mg/L	<u>Cation-Anion Balance</u> 1.30 Difference Cation-Anion, me/L 83.16 Total Cation-Anion, me/L 1.6 % Difference Cation-Anion	
Total Dissolved Solids Dried @ 180 C	2696	mg/L		
pH	7.03			
Conductivity @ 25 C	3700	uS/cm		
Total Hardness as CaCO3	626	mg/L	<u>Comments</u>	

Approved by: *[Signature]*
 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.: *16439*
 Job No.: *2-1000*

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

Project Location: ***9709291400; MW-3***

Sampled by: *MS* Date: *29-Sep-97* Time: *14:00*

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>	<i>35.7</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>ND</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>ND</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>35.7</i>	<i>ug/L</i>		

ND - Not Detected at Limit of Quantitation

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

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

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.: *16440*
 Job No.: *2-1000*

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

Project Location: *9709291430; MW-4*

Sampled by: *MS* Date: *29-Sep-97* Time: *14:30*

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>	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



QUALITY ASSURANCE REPORT
for EPA Method 8020

Date Analyzed: 1-Oct-97

Internal QC No.: 0527-STD
Surrogate QC No.: 0528-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	19.3	4	15%
Toluene	ppb	20.0	20.0	0	15%
Ethylbenzene	ppb	20.0	20.0	0	15%
m,p-Xylene	ppb	40.0	38.5	4	15%
o-Xylene	ppb	20.0	20.0	0	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	Limit
Benzene	96	93	(39-150)	1	20%
Toluene	101	99	(46-148)	2	20%
Ethylbenzene	99	96	(32-160)	2	20%
m,p-Xylene	101	98	(35-145)	2	20%
o-Xylene	98	96	(35-145)	2	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)	
16432-5845	95		16437-5845	95	
16433-5845	92		16438-5845	90	
16434-5845	95		16439-5845	95	
16435-5845	95		16440-5845	95	
16436-5845	91			JK 10/15/97	(12) 10/2/97

S1: Fluorobenzene

**QUALITY ASSURANCE REPORT**

Cation/Anion Balance

Date: 10-Oct-97

Quality Control Sample

Parameter	Laboratory Identification	True Value	Analyzed Value	Unit of Measure	% Diff	Limit % Diff
Sodium, Na	0541-QC	2.32	2.24	mg/L	-3	10
Calcium, Ca	0465-QC	2.18	2.07	mg/L	-5	10
Magnesium, Mg	0465-QC	1.14	1.22	mg/L	7	10
Potassium, K	0541-QC	1.33	1.36	mg/L	2	10
Chloride, Cl	0437-QC	200	207	mg/L	4	10
Sulfate, SO ₄	0560-QC	96	96	mg/L	-1	10
Alkalinity	0560-QC	163	175	mg/L	7	10
pH	0560-qc	9.14	9.28		1	10
Conductivity	0560-qc	900	885	uS/cm	-2	15
Total Dissolved Solids, 180C	0560-QC	732	732	uS/cm	0	15

Matrix Spike

Parameter	Laboratory Identification	Analyzed Value	Matrix Spike	Spike Value	Unit of Measure	Spike Recovery
Sodium, Na	16304-6500	1.31	0.50	1.82	mg/L	101%
Calcium, Ca	16308-6500	0.68	0.50	1.26	mg/L	107%
Magnesium, Mg	16399-6496	0.96	0.50	1.43	mg/L	98%
Potassium, K	16306-6500	1.20	0.50	1.95	mg/L	115%

Method Blank

Parameter	Laboratory Identification	Analyzed Value	Unit of Measure
Sodium, Na	LF-Blank	<0.2	mg/L
Calcium, Ca	LF-Blank	<0.05	mg/L
Magnesium, Mg	LF-Blank	<0.05	mg/L
Potassium, K	LF-Blank	<0.05	mg/L
Chloride, Cl	LF-Blank	<3 X DL	mg/L
Sulfate, SO ₄	LF-Blank	<1	mg/L
Conductivity	LF-Blank	<2	uS/cm

(pc) H12
10/15/97 10/15/97



RECEIVED NOV 23 1997

October 23, 1997

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

Reference:

Project: Miles Federal IE/Drip
MSAI Group: 18095

Dear Mr. Cox:

Enclosed are the analytical results for your project referenced above. The following samples are included in the report.

16433-5845 (Dissolved)
16438-5845 (Dissolved)

16437-5845 (Dissolved)

All holding times were met for the tests performed on these samples.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

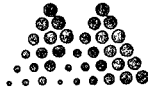
Thank you for selecting Mountain States Analytical, Inc. to serve as your analytical laboratory on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

With Regards,



Rolf E. Larsen
Project Manager



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: 16437-5845 (Dissolved)
Matrix: Waste Water

MSAI Sample: 69114
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		
0401 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	0.002	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	0.617	mg/l	0.003
7249 Cadmium by ICP, w/ww, 6010A Method: SW-846 6010A	0.019	mg/l	0.004
7251 Chromium by ICP, w/ww, 6010A Method: SW-846 6010A	0.015	mg/l	0.010
7255 Lead by ICP, w/ww, 6010A Method: SW-846 6010A	0.048	mg/l	0.040
7266 Silver by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.006



Mountain States Analytical, Inc.

On Site Technologies, Ltd.

The Quality Solution

Sample ID: 16437-5845 (Dissolved)

MSAI Sample: 69114

MSAI Group: 18095

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



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: 16438-5845 (Dissolved)
Matrix: Waste Water

MSAI Sample: 69115
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		
01 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	0.016	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	0.282	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	ND	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: 69115

MSAI Group: 18095

Sample ID: 16438-5845 (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

Mountain States Analytical, Inc.
 Daily QC Batching Data
 Data Released for Reporting

10/23/97
 13:51:09
 Group: 18095

Analysis Batch Number: 0259B-10/13/97-107 -1

Identification : 0259B-Mercury by CVAA, w/ww, 7470

Sequence : 0259B-1

Number of Samples : 40

Batch Data-Date/Time : 10/14/97 / 06:53:12

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
18079-69020	Mercury	-0.0200	0.1000
18093-69111-2	Mercury	-0.0500	0.1000
PBW1-718-3	Mercury	-0.0600	0.1000
PBW2-719-4	Mercury	-0.0300	0.1000

						QC LIMITS		
SPIKE	SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	LOWER	UPPER
	18079-69012	Mercury	2.0000	0.0200	2.0700	102.5	80.0	120.0
	18093-69103-2	Mercury	2.0000	-0.0200	2.1200	107.0	80.0	120.0

						QC LIMITS				
MSD	SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	LOWER	UPPER	RPD #	LIMIT
	18079-69013	Mercury	2.0000	0.0200	2.0800	103.0	80.0	120.0	0.5	20.0
	18093-69104-2	Mercury	2.0000	-0.0200	2.0800	105.0	80.0	120.0	1.9	20.0

DUPLICATE						
SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
18079-69029	Mercury	0.0200	-0.0600	400.0(11)	20.0	1.00
18093-69102-2	Mercury	-0.0200	0.0000	200.0(11)	20.0	1.00

						QC LIMITS	
SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	LOWER	UPPER	
18079-69021	Mercury	2.5400	2.5000	101.6	80.0	120.0	
18093-69112-2	Mercury	2.3200	2.5000	92.8	80.0	120.0	

						QC LIMITS	
CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER	UPPER	
ICV-	Mercury	3.0000	3.0100	100.3	90.0	110.0	
CCV--2	Mercury	5.0000	5.1000	102.0	80.0	120.0	
CCV--3	Mercury	5.0000	5.1000	102.0	80.0	120.0	
CCV--4	Mercury	5.0000	5.0900	101.8	80.0	120.0	
CCV--5	Mercury	5.0000	5.1300	102.6	80.0	120.0	
CCV--6	Mercury	5.0000	5.0700	101.4	80.0	120.0	
CCV--7	Mercury	5.0000	5.1200	102.4	80.0	120.0	
CCV--8	Mercury	5.0000	5.1200	102.4	80.0	120.0	

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Mercury	0.0100	0.1000
CCB-	Mercury	0.0200	0.1000
CCB-	Mercury	-0.0100	0.1000
CCB-	Mercury	0.0200	0.1000
CCB-	Mercury	0.0200	0.1000
CCB-	Mercury	ND	0.1000
CCB-	Mercury	0.0400	0.1000
CCB-	Mercury	0.0500	0.1000

----- Result Footnotes -----

(11) - Both Duplicate results are less than the MDL.

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/23/97
13:51:11
Group: 18095

Analysis Batch Number: 0259B-10/13/97-107 -1

Identification : 0259B-Mercury by CVAA, w/ww, 7470

Sequence : 0259B-1

Number of Samples : 40

Batch Data-Date/Time : 10/14/97 / 06:53:12

Groups & Samples

18060-68941	18060-68942	18060-68943	18079-69008	18079-69009	18079-69010	18079-69011	18079-69012
18079-69013	18079-69014	18079-69015	18079-69016	18079-69017	18079-69018	18079-69020	18079-69021
18079-69029	18083-69039	18083-69040	18083-69041	18083-69042	18083-69043	18083-69044	18083-69045
18083-69046	18093-69102	18093-69103	18093-69104	18093-69105	18093-69106	18093-69110	18093-69111
18093-69112	18095-69113	18095-69114	18095-69115	18103-69137	18103-69138	18103-69139	18103-69140
18103-69141	18103-69142	18103-69196	18124-69197	18124-69198	18124-69199	18124-69200	18124-69201
18125-69210							

Mountain States Analytical, Inc.
 Daily QC Batching Data
 Data Released for Reporting

10/23/97
 13:51:15
 Group: 18095

Analysis Batch Number: 1451 -10/20/97-001 -1

Identification : 1451 -Selenium by HAA, w/ww, 7742

Sequence : DAAA293

Number of Samples : 3

Batch Data-Date/Time : 10/21/97 / 07:18:29

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
PBW1-711	Selenium	ND	0.0050

						QC LIMITS	
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	LOWER	UPPER
18095-69113	Selenium	0.0800	0.0038	0.1077	129.9(R1)	75.0	125.0

						QC LIMITS			
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	LOWER	UPPER	RPD #	LIMIT
18095-69113	Selenium	0.0800	0.0038	0.1234	149.5(R1)	75.0	125.0	13.6	20.0

DUPLICATE						
SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
18095-69113	Selenium	0.0038	0.0153	120.4(3a)	20.0	2.00

					QC LIMITS	
SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	LOWER	UPPER
LCSW-711	Selenium	0.0496	0.0400	124.0	75.0	125.0

QC LIMITS						
CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER	UPPER
	Selenium	0.0500	0.0537	107.4	80.0	120.0
CCV1--2	Selenium	0.0500	0.0577	115.4	80.0	120.0
CCV2--3	Selenium	0.0500	0.0562	112.4	80.0	120.0

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Selenium	ND	0.0050
CCB1-	Selenium	0.0036	0.0050
CCB2-	Selenium	0.0030	0.0050

----- Result Footnotes -----

(R1) - Concentration is within 3 std. dev. of mean recovery.

(3a) - Duplicate results are <5x the quantitation limit

Groups & Samples

 18095-69113 18095-69114 18095-69115

Mountain States Analytical, Inc.
 Daily QC Batching Data
 Data Released for Reporting

10/23/97
 13:51:19
 Group: 18095

Analysis Batch Number: ICPWA-10/16/97-001 -1
 Identification : ICPWA-*Metals by ICP
 Number of Samples : 8
 Batch Data-Date/Time : 10/17/97 / 08:50:57

Sequence : DATD289

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
PBW1-710	Silver	0.0011	0.0060
	Arsenic	0.0038	0.0300
	Barium	0.0009	0.0030
	Cadmium	ND	0.0040
	Chromium	ND	0.0100
	Lead	0.0105	0.0400

SPIKE						QC LIMITS	
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	LOWER	UPPER
18125-69210	Silver	0.0500	0.0009	0.0504	99.0	80.0	120.0
	Arsenic	2.0000	0.0105	2.0141	100.2	80.0	120.0
	Barium	2.0000	0.0015	1.9802	98.9	80.0	120.0
	Cadmium	0.0500	-0.0018	0.0502	104.0	80.0	120.0
	Chromium	0.2000	0.0012	0.2014	100.1	80.0	120.0
	Lead	0.5000	0.0077	0.4711	92.7	80.0	120.0

MSD						QC LIMITS			
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	LOWER	UPPER	RPD #	LIMIT
18125-69210	Silver	0.0500	0.0009	0.0517	101.6	80.0	120.0	2.5	20.0
	Arsenic	2.0000	0.0105	1.9937	99.2	80.0	120.0	1.0	20.0
	Barium	2.0000	0.0015	1.9691	98.4	80.0	120.0	0.6	20.0
	Cadmium	0.0500	-0.0018	0.0470	97.6	80.0	120.0	6.6	20.0
	Chromium	0.2000	0.0012	0.1985	98.6	80.0	120.0	1.5	20.0
	Lead	0.5000	0.0077	0.4836	95.2	80.0	120.0	2.6	20.0

DUPLICATE						
SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
18125-69210	Silver	0.0009	0.0023	87.5(11)	20.0	1.00
	Arsenic	0.0105	0.0005	181.8(11)	20.0	1.00
	Barium	0.0015	0.0016	6.5	20.0	1.00
	Cadmium	-0.0018	0.0002	250.0(11)	20.0	1.00
	Chromium	0.0012	0.0000	200.0(11)	20.0	1.00
	Lead	0.0077	0.0137	56.1(11)	20.0	1.00

CONTROL					QC LIMITS	
SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	LOWER	UPPER
LCSW-710	Silver	0.0503	0.0500	100.6	80.0	120.0
	Arsenic	2.0405	2.0000	102.0	80.0	120.0
	Barium	2.0228	2.0000	101.1	80.0	120.0
	Cadmium	0.0503	0.0500	100.6	80.0	120.0
	Chromium	0.1997	0.2000	99.9	80.0	120.0
	Lead	0.4703	0.5000	94.1	80.0	120.0

CCV #					
ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER	UPPER
ICP	Silver	0.4000	0.3916	97.9	90.0 110.0
	Arsenic	1.6000	1.6075	100.5	90.0 110.0
	Barium	4.0000	3.8155	95.4	90.0 110.0
	Cadmium	4.0000	3.8549	96.4	90.0 110.0
	Chromium	4.0000	3.9172	97.9	90.0 110.0

Mountain States Analytical, Inc.
 Daily QC Batching Data
 Data Released for Reporting

10/23/97
 13:51:22
 Group: 18095

Analysis Batch Number: ICPWA-10/16/97-001 -1
 Identification : ICPWA-*Metals by ICP
 Number of Samples : 8
 Batch Data-Date/Time : 10/17/97 / 08:50:57

Sequence : DATD289

QC LIMITS

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER	UPPER
ICV-	Lead	20.0000	18.5296	92.6	90.0	110.0
CCV1--2	Silver	0.4000	0.3851	96.3	90.0	110.0
	Arsenic	1.6000	1.5619	97.6	90.0	110.0
	Barium	4.0000	3.7500	93.8	90.0	110.0
	Cadmium	4.0000	3.7950	94.9	90.0	110.0
	Chromium	4.0000	3.8509	96.3	90.0	110.0
	Lead	20.0000	18.2428	91.2	90.0	110.0
CCV2--3	Silver	0.4000	0.3888	97.2	90.0	110.0
	Arsenic	1.6000	1.5764	98.5	90.0	110.0
	Barium	4.0000	3.8371	95.9	90.0	110.0
	Cadmium	4.0000	3.7907	94.8	90.0	110.0
	Chromium	4.0000	3.8726	96.8	90.0	110.0
	Lead	20.0000	18.2789	91.4	90.0	110.0
CCV3--4	Silver	0.4000	0.3917	97.9	90.0	110.0
	Arsenic	1.6000	1.5823	98.9	90.0	110.0
	Barium	4.0000	3.8432	96.1	90.0	110.0
	Cadmium	4.0000	3.7990	95.0	90.0	110.0
	Chromium	4.0000	3.8886	97.2	90.0	110.0
	Lead	20.0000	18.3103	91.6	90.0	110.0

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Silver	0.0012	0.0060
	Arsenic	0.0043	0.0300
	Barium	0.0016	0.0030
	Cadmium	ND	0.0040
	Chromium	0.0001	0.0100
	Lead	0.0161	0.0400
CCB1-	Silver	ND	0.0060
	Arsenic	0.0096	0.0300
	Barium	0.0012	0.0030
	Cadmium	ND	0.0040
	Chromium	ND	0.0100
	Lead	0.0093	0.0400
CCB2-	Silver	0.0009	0.0060
	Arsenic	0.0075	0.0300
	Barium	0.0018	0.0030
	Cadmium	ND	0.0040
	Chromium	ND	0.0100
	Lead	0.0089	0.0400
CCB2-	Silver	0.0005	0.0060
	Arsenic	0.0023	0.0300
	Barium	0.0013	0.0030
	Cadmium	0.0003	0.0040
	Chromium	ND	0.0100
	Lead	0.0021	0.0400
	Silver	0.0007	0.0060
	Arsenic	ND	0.0300
	Barium	0.0012	0.0030
	Cadmium	ND	0.0040

Analysis Batch Number: ICPWA-10/16/97-001 -1
Identification : ICPWA-*Metals by ICP
Number of Samples : 8
Batch Data-Date/Time : 10/17/97 / 08:50:57

Sequence : DATD289

<u>CCB#</u>	<u>ANALYTE</u>	<u>CONC FOUND #</u>	<u>CONC LIMIT</u>
CCB3-	Chromium	ND	0.0100
	Lead	0.0038	0.0400

----- Result Footnotes -----
(11) - Both Duplicate results are less than the MDL.

Groups & Samples

18085-69052 18085-69053 18095-69113 18095-69114 18095-69115 18096-69116 18096-69117 18125-69210

CHAIN OF CUSTODY RECORD

6507

ON SITE

TECHNOLOGIES, LTD.

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

Date: 9/29/97

Page 1 of 1

Purchase Order No.: <u>5845</u>		Job No.																							
Name: <u>ACCOUNTS REC.</u>		Title																							
Company: <u>ON SITE TECH</u>		Company: <u>ON SITE TECH</u>																							
Address		Mailing Address																							
City, State, Zip		City, State, Zip																							
Telephone No. <u>505-325-2432</u>		Telefax No. <u>325-6256</u>																							
REPORT RESULTS TO		ANALYSIS REQUESTED																							
Number of Containers		LAB ID																							
MILES FEDERAL IE		16433-5845																							
MILES FEDERAL IE DRIP		16437-																							
Sampler: <u>MS</u>		16438-																							
<table border="1"> <thead> <tr> <th rowspan="2">SAMPLE IDENTIFICATION</th> <th colspan="2">SAMPLE TIME</th> <th rowspan="2">MATRIX</th> <th rowspan="2">PRES.</th> </tr> <tr> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>970929 1100 MILES FED IE MW-2</td> <td>9/29/97</td> <td>1100</td> <td>WM</td> <td>COOL</td> </tr> <tr> <td>970929 1300 MILES FED IE DRIP MW-1</td> <td></td> <td>1300</td> <td></td> <td></td> </tr> <tr> <td>970929 1330 MILES FED IE DRIP MW-2</td> <td></td> <td>1330</td> <td></td> <td></td> </tr> </tbody> </table>		SAMPLE IDENTIFICATION	SAMPLE TIME		MATRIX	PRES.	DATE	TIME	970929 1100 MILES FED IE MW-2	9/29/97	1100	WM	COOL	970929 1300 MILES FED IE DRIP MW-1		1300			970929 1330 MILES FED IE DRIP MW-2		1330			<p>1991 10°C used</p> <p>WACC MARKERS DISCOVERED</p>	
SAMPLE IDENTIFICATION	SAMPLE TIME		MATRIX	PRES.																					
	DATE	TIME																							
970929 1100 MILES FED IE MW-2	9/29/97	1100	WM	COOL																					
970929 1300 MILES FED IE DRIP MW-1		1300																							
970929 1330 MILES FED IE DRIP MW-2		1330																							
Relinquished by: <u>[Signature]</u>		Date/Time <u>10/10/97 1210</u>																							
Relinquished by:		Date/Time																							
Relinquished by:		Date/Time																							
Method of Shipment:		10 Working Days																							
Authorized by: <u>[Signature]</u>		Special Instructions: <u>NOT YET FILTERED</u>																							

Distribution: White On Site Yellow LAB Pink Sampler Coloured Client

CHAIN OF CUSTODY RECORD

3845

ON SITE

Date: 9/29/97

Page 1 of 1

TECHNOLOGIES, LTD. 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	
Dept: 324-3763		Telephone No.: 505-848-2974	
Title:		Title:	
Sampling Location: Miles Federal IE & IE Dr.p		ANALYSIS REQUESTED	
Sampler: Mark Sikelianos		RESULTS TO	
SEND INVOICE TO		REPORT	
SAMPLE IDENTIFICATION		Number of Containers	
9709291030 Miles IE MW-1	DATE: 9/29/97	2	BTEX Metals Anions WACC D-Solvents PCBs
9709291100 Miles IE MW-2		4	
9709291130 Miles IE MW-3		2	
9709291200 Miles IE MW-4		2	
9709291230 Miles IE MW-5		2	
9709291300 Miles IE Dr.p MW-1		4	
9709291330 Miles IE Dr.p MW-2		4	
9709291400 Miles IE Dr.p MW-3		2	
9709291430 Miles IE Dr.p MW-4		2	
MATRIX PRES.		LAB ID	
H2O Hcl		16432 - SK45	
		16433 -	
		16434 -	
		16435 -	
		16436 -	
		16437 -	
		16438 -	
		16439 -	
		16440 -	
Date/Time: 9/29/97 1510		Date/Time: 9/29/97 1510	
Relinquished by: <i>[Signature]</i>		Received by: <i>[Signature]</i>	
Date/Time:		Date/Time:	
Relinquished by:		Received by:	
Date/Time:		Date/Time:	
Relinquished by:		Received by:	
Date/Time:		Date/Time:	
Method of Shipment:		Rush	
Authorized by: <i>[Signature]</i>		24-48 Hours	
Date: 9/29/97		10 Working Days	
(Client Signature Must Accompany Request)		Special Instructions:	
		Results to be sent to both parties.	

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.: *5635*
 Sample No.: *17110*
 Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E Drip*
 Project Location: *9712161432; MW-1*
 Sampled by: *RD* Date: *16-Dec-97* Time: *14:32*
 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

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.: *5635*
 Sample No.: *17111*
 Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E Drip*
 Project Location: *9712161455; MW-2*
 Sampled by: *RD* Date: *16-Dec-97* Time: *14:55*
 Analyzed by: *DC* Date: *25-Dec-97*
 Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>328</i>	<i>ug/L</i>	<i>1</i>	<i>ug/L</i>
<i>Toluene</i>	<i>6</i>	<i>ug/L</i>	<i>1</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>97</i>	<i>ug/L</i>	<i>1</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>110</i>	<i>ug/L</i>	<i>1</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>7</i>	<i>ug/L</i>	<i>1</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>548</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: *Jag*
 Date: *12/30/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- THE QUALITY OF OUR SERVICES IS GUARANTEED WITH THE EASE OF OUR SERVICE -

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.: *5635*
 Sample No.: *17112*
 Job No.: *2-1000*

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

Project Location: *9712161517; MW-3*

Sampled by: *RD* Date: *16-Dec-97* Time: *15:17*

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>99.0</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>ND</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>1.0</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>0.6</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>100.5</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.: *5635*
 Sample No.: *17113*
 Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E Drip*
 Project Location: *9712161533; MW-4*
 Sampled by: *RD* Date: *16-Dec-97* Time: *15:33*
 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

STATE OF NEW MEXICO DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

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.: *5635*
 Sample No.: *17114*
 Job No.: *2-1000*

Project Name: *PNM Gas Services - Miles Federal 1E Drip*
 Project Location: *9712161553; MW-5*
 Sampled by: *RD* Date: *16-Dec-97* Time: *15:53*
 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>91.0</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>ND</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>0.9</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>0.6</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>92.5</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

TELEPHONE: (505) 325-5667 FAX: (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)	
17110-5635	94				
17112-5635	93				
17113-5635	94				
17114-5635	93				
				AK	DC
				12/30/97	12/30/97

S1: Fluorobenzene



QUALITY ASSURANCE REPORT
for EPA Method 8020

Date Analyzed: 25-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	19.3	4	15%
Toluene	ppb	20.0	19.7	1	15%
Ethylbenzene	ppb	20.0	19.9	1	15%
m,p-Xylene	ppb	40.0	38.2	5	15%
o-Xylene	ppb	20.0	19.6	2	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	Limit
Benzene	77	91	(39-150)	3	20%
Toluene	94	97	(46-148)	3	20%
Ethylbenzene	87	93	(32-160)	3	20%
m,p-Xylene	91	94	(35-145)	3	20%
o-Xylene	92	95	(35-145)	3	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)	
17111-5635	90				

S1: Flourobenezene



CHAIN OF CUSTODY RECORD

635

Date: 12/16/97 Page 1 of 1

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

Purchase Order No.:		Job No.		Name: Maureen Gannon		Title	
SEND INVOICE TO		Name: Denver Bearden		Company: PNM Gas Services			
		Company: PNM Gas Services		Mailing Address: Alverado Square, Mail Stop 0408			
		Address: 603 W. Elm Street		City, State, Zip: Albuquerque, NM 87158			
		City, State, Zip: Farmington, NM 87401		Telephone No.: 505-848-2974		Telefax No.	
Sampling Location:				ANALYSIS REQUESTED			
<i>Miles Fed IE Drip</i>							
Sampler: <i>R. Redrick</i>							
REPORT TO RESULTS TO		Number of Containers					
				<i>BTEX-EG20</i>			
SAMPLE IDENTIFICATION	SAMPLE TIME		MATRIX	PRES.	LAB ID	Date/Time	Date/Time
	DATE	TIME					
9712161432	MW1	12/16/97	1432	H ₂ O HCl		12/16/97	1652
9712161455	MW2	12/16/97	1455	H ₂ O HCl		12/16/97	1652
9712161517	MW3	12/16/97	1517	H ₂ O HCl		12/16/97	1652
9712161533	MW4	12/16/97	1533	H ₂ O HCl		12/16/97	1652
9712161553	MW5	12/16/97	1553	H ₂ O HCl		12/16/97	1652
Relinquished by: <i>Ronald A Redrick</i>		Date/Time: 12/16/97 1652		Received by: <i>JGC</i>		Date/Time: 12/16/97 1652	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Method of Shipment:		Rush		24-48 Hours		10 Working Days	
Authorized by: <i>Ronald A Redrick</i>		Date: 12/16/97		Special Instructions:		Results to be sent to both parties.	
(Client Signature Must Accompany Request)							

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

OFF: (505) 325-5667

The logo for On Site Technologies, LTD. features a stylized mountain peak or triangle shape above the words "ON SITE" in a large, serif font. Below "ON SITE" is the word "TECHNOLOGIES, LTD." in a smaller, sans-serif font.

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

March 17, 1998

Maureen Gannon
PNM - Public Service Company of New Mexico
Alvarado Square Mail Stop 0408
Albuquerque, NM 87401
TEL: (505) 241-2974
FAX (505) 241-2340

RE: Miles Federal 1E Drip

Order No.: 9803005

Dear Maureen Gannon,

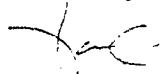
On Site Technologies, LTD. received 5 samples on 3/2/98 for the analyses presented in the following report.

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,

A handwritten signature in black ink, appearing to read "David Cox".

David Cox



OFF: (505) 325-5667

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

Date: 17-Mar-98

CLIENT: PNM - Public Service Company of New Me
Project: Miles Federal 1E Drip
Lab Order: 9803005

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.

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LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 18-Mar-98

Client: PNM - Public Service Company of NM	Client Sample Info: Miles Federal 1E Drip
Work Order: 9803005	Client Sample ID: 9803021245; MW-1
Lab ID: 9803005-01A Matrix: AQUEOUS	Collection Date: 3/2/98 12:45:00 PM
Project: Miles Federal 1E Drip	COC#: 7177

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		SW8021A				Analyst: DC
Benzene	ND	0.5		µg/L	1	3/6/98
Toluene	ND	0.5		µg/L	1	3/6/98
Ethylbenzene	ND	0.5		µg/L	1	3/6/98
m,p-Xylene	ND	1		µg/L	1	3/6/98
o-Xylene	ND	0.5		µg/L	1	3/6/98
Surr: Fluorobenzene	92.1	70-130		%REC	1	3/6/98
Surr: 1,4-Difluorobenzene	93.5	70-130		%REC	1	3/6/98
Surr: 4-Bromochlorobenzene	91.4	70-130		%REC	1	3/6/98

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



OFF: (505) 325-5667

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 18-Mar-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Miles Federal 1E Drip
Work Order:	9803005	Client Sample ID:	9803021300; MW-2
Lab ID:	9803005-02A	Matrix:	AQUEOUS
Project:	Miles Federal 1E Drip	Collection Date:	3/2/98 1:00:00 PM
		COC#:	7177

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		SW8021A				Analyst: DC
Benzene	89	0.5		µg/L	1	3/9/98
Toluene	15	0.5		µg/L	1	3/9/98
Ethylbenzene	18	0.5		µg/L	1	3/9/98
m,p-Xylene	40	1		µg/L	1	3/9/98
o-Xylene	1	0.5		µg/L	1	3/9/98
Surr: Fluorobenzene	82.5	70-130		%REC	1	3/9/98
Surr: 1,4-Difluorobenzene	81.9	70-130		%REC	1	3/9/98
Surr: 4-Bromochlorobenzene	88.9	70-130		%REC	1	3/9/98

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

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LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 18-Mar-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Miles Federal 1E Drip
Work Order:	9803005	Client Sample ID:	9803021315; MW-3
Lab ID:	9803005-03A	Matrix:	AQUEOUS
Project:	Miles Federal 1E Drip	Collection Date:	3/2/98 1:15:00 PM
		COC#:	7177

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		SW8021A				Analyst: DC
Benzene	120	0.5		µg/L	1	3/9/98
Toluene	ND	0.5		µg/L	1	3/9/98
Ethylbenzene	2.7	0.5		µg/L	1	3/9/98
m,p-Xylene	1	1		µg/L	1	3/9/98
o-Xylene	ND	0.5		µg/L	1	3/9/98
Surr: Fluorobenzene	92.3	70-130		%REC	1	3/9/98
Surr: 1,4-Difluorobenzene	92.1	70-130		%REC	1	3/9/98
Surr: 4-Bromochlorobenzene	93.3	70-130		%REC	1	3/9/98

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

1 of 1



OFF: (505) 325-5667

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 18-Mar-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Miles Federal 1E Drip
Work Order:	9803005	Client Sample ID:	9803021330; MW-4
Lab ID:	9803005-04A	Matrix:	AQUEOUS
Project:	Miles Federal 1E Drip	Collection Date:	3/2/98 1:30:00 PM
		COC#:	7177

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		SW8021A				Analyst: DC
Benzene	ND	0.5		µg/L	1	3/6/98
Toluene	ND	0.5		µg/L	1	3/6/98
Ethylbenzene	ND	0.5		µg/L	1	3/6/98
m,p-Xylene	ND	1		µg/L	1	3/6/98
o-Xylene	ND	0.5		µg/L	1	3/6/98
Surr: Fluorobenzene	92.6	70-130		%REC	1	3/6/98
Surr: 1,4-Difluorobenzene	94.2	70-130		%REC	1	3/6/98
Surr: 4-Bromochlorobenzene	91.9	70-130		%REC	1	3/6/98

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	

ON SITE

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LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 18-Mar-98

Client: PNM - Public Service Company of NM	Client Sample Info: Miles Federal 1E Drip
Work Order: 9803005	Client Sample ID: 9803021345; MW-5
Lab ID: 9803005-05A Matrix: AQUEOUS	Collection Date: 3/2/98 1:45:00 PM
Project: Miles Federal 1E Drip	COC#: 7177

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		SW8021A				Analyst: DC
Benzene	96	0.5		µg/L	1	3/9/98
Toluene	ND	0.5		µg/L	1	3/9/98
Ethylbenzene	2	0.5		µg/L	1	3/9/98
m,p-Xylene	ND	1		µg/L	1	3/9/98
o-Xylene	ND	0.5		µg/L	1	3/9/98
Surr: Fluorobenzene	92.8	70-130		%REC	1	3/9/98
Surr: 1,4-Difluorobenzene	92.7	70-130		%REC	1	3/9/98
Surr: 4-Bromochlorobenzene	92.6	70-130		%REC	1	3/9/98

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: 18-Mar-98

CLIENT: PNM Gas Services
Work Order: 9803005
Project: Miles Federal 1E Drip
QC SUMMARY REPORT
 Method Blank

Sample ID: MB1	Batch ID: GC-1_980306	Test Code: SW8021A	Units: µg/L	Analysis Date: 3/6/98	Prep Date:						
Client ID:	9803005	Run ID: GC-1_980306A		SeqNo: 814							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.1423	0.5									J
Ethylbenzene	.106	0.5									J
m,p-Xylene	.2252	1									J
o-Xylene	.1162	0.5									J
Toluene	.0859	0.5									J

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyt : 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: 18-Mar-98

CLIENT: PNM Gas Services
Work Order: 9803005
Project: Miles Federal IE Drip

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9803005-02AMS	Batch ID: GC-1_980306	Test Code: SW8021A	Units: µg/L	Analysis Date: 3/6/98	Prep Date:						
Client ID: 9803021300; MW-	Run ID: 9803005	Run ID: GC-1_980306A		SeqNo: 815							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	502.3	5	400	93.74	102.1%	57	128				
Ethylbenzene	443.2	5	400	18.72	106.1%	78	107				
m,p-Xylene	840.9	10	800	33.49	100.9%	67	118				
o-Xylene	413.6	5	400	2.226	102.9%	78	107				
Toluene	425.6	5	400	15.73	102.5%	74	116				

Sample ID: 9803005-02AMSD	Batch ID: GC-1_980306	Test Code: SW8021A	Units: µg/L	Analysis Date: 3/6/98	Prep Date:						
Client ID: 9803021300; MW-	Run ID: 9803005	Run ID: GC-1_980306A		SeqNo: 817							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	502.5	5	400	93.74	102.2%	57	128	502.3	0.0%	12	
Ethylbenzene	440.2	5	400	18.72	105.4%	78	107	443.2	0.7%	11	
m,p-Xylene	836.4	10	800	33.49	100.4%	67	118	840.9	0.5%	10	
o-Xylene	405.9	5	400	2.226	100.9%	78	107	413.6	1.9%	14	
Toluene	426.3	5	400	15.73	102.6%	74	116	425.6	0.2%	14	

Sample ID: 9803009-01AMS	Batch ID: GC-1_980306	Test Code: SW8021A	Units: µg/L	Analysis Date: 3/6/98	Prep Date:						
Client ID:	Run ID: 9803005	Run ID: GC-1_980306A		SeqNo: 816							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	379.9	2.5	200	179.2	100.3%	57	128				
Ethylbenzene	267.8	2.5	200	72.66	97.5%	78	107				
m,p-Xylene	546.3	5	400	165.5	95.2%	67	118				
o-Xylene	258.3	2.5	200	61.17	98.6%	78	107				
Toluene	321	2.5	200	126.7	97.2%	74	116				

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

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

CLIENT: PNM Gas Services
Work Order: 9803005
Project: Miles Federal IE Drip

Sample ID: 9803009-01AMSD Batch ID: GC-1_980306 Test Code: SW8021A Units: µg/L Analysis Date: 3/6/98 Prep Date:

Client ID: 9803005 Run ID: GC-1_980306A SeqNo: 818

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	366.3	2.5	200	179.2	93.5%	57	128	379.9	3.6%	12	
Ethylbenzene	258.5	2.5	200	72.66	92.9%	78	107	267.8	3.5%	11	
m,p-Xylene	527.6	5	400	165.5	90.5%	67	118	546.3	3.5%	10	
o-Xylene	250.3	2.5	200	61.17	94.5%	78	107	258.3	3.2%	14	
Toluene	310.1	2.5	200	126.7	91.7%	74	116	321	3.5%	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: 18-Mar-98

CLIENT: PNM Gas Services
Work Order: 9803005
Project: Miles Federal IE Drip

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER Batch ID: GC-1_980306 Test Code: SW8021A Units: µg/L Analysis Date: 3/6/98 Prep Date:

Client ID: 9803005 Run ID: GC-1_980306A SeqNo: 813

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.64	0.5	40	0.1423	101.3%	84	114				
Ethylbenzene	41.55	0.5	40	0.106	103.6%	86	118				
m,p-Xylene	79.12	1	80	0.2252	98.6%	50	150				
o-Xylene	40.5	0.5	40	0.1162	101.0%	49	147				
Toluene	40.3	0.5	40	0.0859	100.5%	87	120				

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

On Site Technologies, LTD.

Date: 18-Mar-98

CLIENT: PNM Gas Services
Work Order: 9803005
Project: Miles Federal IE Drip

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID:	CCV1 QC0529/30	Batch ID:	GC-1_980306	Test Code:	SW8021A	Units:	µg/L	Analysis Date:	3/6/98	Prep Date:			
Client ID:	9803005	Run ID:	GC-1_980306A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result	21.8	0.5	20	0	109.0%	85	115					
Benzene	22.42	0.5	20	0	112.1%	85	115						
Ethylbenzene	42.28	1	40	0	105.7%	85	115						
m,p-Xylene	21.58	0.5	20	0	107.9%	85	115						
o-Xylene	21.56	0.5	20	0	107.8%	85	115						
Toluene	92.77	0	100	0	92.8%	70	130						
1,4-Difluorobenzene	92.72	0	100	0	92.7%	70	130						
4-Bromochlorobenzene	91.51	0	100	0	91.5%	70	130						
Fluorobenzene													

Sample ID:	CCV2 QC0529/30	Batch ID:	GC-1_980306	Test Code:	SW8021A	Units:	µg/L	Analysis Date:	3/6/98	Prep Date:			
Client ID:	9803005	Run ID:	GC-1_980306A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result	21.29	0.5	20	0	106.5%	85	115					
Benzene	21.93	0.5	20	0	109.7%	85	115						
Ethylbenzene	41.51	1	40	0	103.8%	85	115						
m,p-Xylene	21.33	0.5	20	0	106.6%	85	115						
o-Xylene	21.11	0.5	20	0	105.5%	85	115						
Toluene	92.68	0	100	0	92.7%	70	130						
1,4-Difluorobenzene	92.7	0	100	0	92.7%	70	130						
4-Bromochlorobenzene	91.54	0	100	0	91.5%	70	130						
Fluorobenzene													

Qualifiers: ^ID - 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

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

CLIENT: PNM Gas Services
Work Order: 9803005
Project: Miles Federal IE Drip

Sample ID: **CCV3 QC0529/30** Batch ID: **GC-1_980306** Test Code: **SW8021A** Units: **µg/L** Analysis Date: **3/6/98** Prep Date:

Client ID: **9803005** Run ID: **GC-1_980306A** SeqNo: **811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.02	0.5	20	0	105.1%	85	115				
Ethylbenzene	21.46	0.5	20	0	107.3%	85	115				
m,p-Xylene	40.59	1	40	0	101.5%	85	115				
o-Xylene	20.8	0.5	20	0	104.0%	85	115				
Toluene	20.73	0.5	20	0	103.7%	85	115				
1,4-Difluorobenzene	93.17	0	100	0	93.2%	70	130				
4-Bromochlorobenzene	91.77	0	100	0	91.8%	70	130				
Fluorobenzene	92.09	0	100	0	92.1%	70	130				

Sample ID: **CCV4 QC0529/30** Batch ID: **GC-1_980306** Test Code: **SW8021A** Units: **µg/L** Analysis Date: **3/6/98** Prep Date:

Client ID: **9803005** Run ID: **GC-1_980306A** SeqNo: **812**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.55	0.5	20	0	102.8%	85	115				
Ethylbenzene	21.26	0.5	20	0	106.3%	85	115				
m,p-Xylene	39.7	1	40	0	99.2%	85	115				
o-Xylene	20.47	0.5	20	0	102.3%	85	115				
Toluene	20.47	0.5	20	0	102.4%	85	115				
1,4-Difluorobenzene	93.03	0	100	0	93.0%	70	130				
4-Bromochlorobenzene	91.11	0	100	0	91.1%	70	130				
Fluorobenzene	91.82	0	100	0	91.8%	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: 18-Mar-98

CLIENT: PNM Gas Services
Work Order: 9803005
Project: Miles Federal IE Drip
QC SUMMARY REPORT
Method Blank

Sample ID: MB2	Batch ID: GC-1_980309	Test Code: SW8021A	Units: µg/L	Analysis Date: 3/9/98	Prep Date:						
Client ID:	9803005	Run ID: GC-1_980309A		SeqNo: 838							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0562		0.5								J
Ethylbenzene	ND		0.5								
m,p-Xylene	ND		1								
o-Xylene	ND		0.5								
Toluene	.1089		0.5								J

Sample ID: MB3	Batch ID: GC-1_980309	Test Code: SW8021A	Units: µg/L	Analysis Date: 3/9/98	Prep Date:						
Client ID:	9803005	Run ID: GC-1_980309A		SeqNo: 839							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0606		0.5								J
Ethylbenzene	ND		0.5								
m,p-Xylene	.085		1								J
o-Xylene	ND		0.5								
Toluene	.1332		0.5								J

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: 18-Mar-98

CLIENT: PNM Gas Services
Work Order: 9803005
Project: Miles Federal IE Drip

QC SUMMARY REPORT

Sample Matrix Spike

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	Analysis Date: 3/19/98	
												SeqNo:	840
Benzene	432.7	5	400	15.69	104.3%	57	128						
Ethylbenzene	482.7	5	400	80.82	100.5%	78	107						
m,p-Xylene	2404	10	800	1553	106.3%	67	118						
o-Xylene	411.3	5	400	8.054	100.8%	78	107						
Toluene	423.8	5	400	26.23	99.4%	74	116						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	Analysis Date: 3/19/98	
												SeqNo:	841
Benzene	420.4	5	400	15.69	101.2%	57	128	432.7	2.9%	12			
Ethylbenzene	471.9	5	400	80.82	97.8%	78	107	482.7	2.3%	11			
m,p-Xylene	2344	10	800	1553	98.9%	67	118	2404	2.5%	10			
o-Xylene	403.7	5	400	8.054	98.9%	78	107	411.3	1.8%	14			
Toluene	414.7	5	400	26.23	97.1%	74	116	423.8	2.2%	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: 18-Mar-98

CLIENT: PNM Gas Services
 Work Order: 9803005
 Project: Miles Federal IE Drip

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_980309	Test Code: SW8021A	Units: µg/L	Analysis Date: 3/9/98	Prep Date:						
Client ID: 9803005	Run ID: GC-1_980309A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result	0.5	40	0.0562	100.8%	84	114				
Benzene	40.38	0.5	40	0	102.9%	86	118				
Ethylbenzene	41.14	0.5	40	0	98.3%	50	150				
m,p-Xylene	78.63	1	80	0	100.4%	49	147				
o-Xylene	40.18	0.5	40	0	99.8%	87	120				
Toluene	40.03	0.5	40	0.1089							

SeqNo: 837

Qualifiers: I.D - 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: 18-Mar-98

CLIENT: PNM Gas Services
Work Order: 9803005
Project: Miles Federal IE Drip

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID:	CCV1 QC0529/30	Batch ID:	GC-1_980309	Test Code:	SW8021A	Units:	µg/L	Analysis Date:	3/9/98	SeqNo:	833	Prep Date:	
Client ID:	9803005	Run ID:	GC-1_980309A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result	21.07	0.5	20	0	105.4%	85	115					
Benzene	21.08	0.5	20	0	105.4%	85	115						
Ethylbenzene	40.25	1	40	0	100.6%	85	115						
m,p-Xylene	20.89	0.5	20	0	104.4%	85	115						
o-Xylene	20.92	0.5	20	0	104.6%	85	115						
Toluene	95.09	0	100	0	95.1%	70	130						
1,4-Difluorobenzene	91.46	0	100	0	91.5%	70	130						
4-Bromochlorobenzene	93.8	0	100	0	93.8%	70	130						
Fluorobenzene													

Sample ID:	CCV2 QC0529/30	Batch ID:	GC-1_980309	Test Code:	SW8021A	Units:	µg/L	Analysis Date:	3/9/98	SeqNo:	834	Prep Date:	
Client ID:	9803005	Run ID:	GC-1_980309A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result	20.36	0.5	20	0	101.8%	85	115					
Benzene	20.99	0.5	20	0	105.0%	85	115						
Ethylbenzene	39.6	1	40	0	99.0%	85	115						
m,p-Xylene	20.27	0.5	20	0	101.4%	85	115						
o-Xylene	20.26	0.5	20	0	101.3%	85	115						
Toluene	94.88	0	100	0	94.9%	70	130						
1,4-Difluorobenzene	91.16	0	100	0	91.2%	70	130						
4-Bromochlorobenzene	94.06	0	100	0	94.1%	70	130						
Fluorobenzene													

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: 9803005
Project: Miles Federal 1E Drip

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: **CCV3 QC0529/30** Batch ID: **GC-1_980309** Test Code: **SW8021A** Units: **µg/L** Analysis Date: **3/9/98** Prep Date:

Client ID: **9803005** Run ID: **GC-1_980309A** SeqNo: **835**

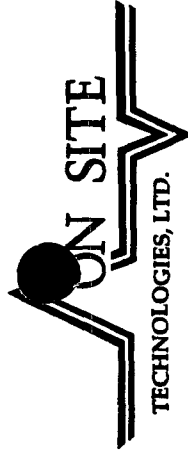
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22	0.5	20	0	110.0%	85	115				
Ethylbenzene	22.52	0.5	20	0	112.6%	85	115				
m,p-Xylene	42.59	1	40	0	106.5%	85	115				
o-Xylene	21.97	0.5	20	0	109.8%	85	115				
Toluene	21.92	0.5	20	0	109.6%	85	115				
1,4-Difluorobenzene	94.09	0	100	0	94.1%	70	130				
4-Bromochlorobenzene	90.22	0	100	0	90.2%	70	130				
Fluorobenzene	93.51	0	100	0	93.5%	70	130				

Sample ID: **CCV4 QC0529/30** Batch ID: **GC-1_980309** Test Code: **SW8021A** Units: **µg/L** Analysis Date: **3/9/98** Prep Date:

Client ID: **9803005** Run ID: **GC-1_980309A** SeqNo: **836**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.83	0.5	20	0	104.2%	85	115				
Ethylbenzene	21.37	0.5	20	0	106.8%	85	115				
m,p-Xylene	40.52	1	40	0	101.3%	85	115				
o-Xylene	20.89	0.5	20	0	104.5%	85	115				
Toluene	20.71	0.5	20	0	103.6%	85	115				
1,4-Difluorobenzene	94.24	0	100	0	94.2%	70	130				
4-Bromochlorobenzene	91.05	0	100	0	91.1%	70	130				
Fluorobenzene	93.28	0	100	0	93.3%	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



CHAIN OF CUSTODY RECORD

Page: 1 of 1

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

Purchase Order No.:		Job No.	
Name: Denver Bearden		Title: 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	
Sampling Location: M.L. Federal IE Dr P		Telephone No.: 505-848-2974	
Sampler: M.S. R.D. R.B.		Telefax No.:	
SEND INVOICE TO		RESULTS TO	
Name: Denver Bearden		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.:		Telefax No.:	
Sampling Location: M.L. Federal IE Dr P		Telephone No.: 505-848-2974	
Sampler: M.S. R.D. R.B.		Telefax No.:	
Number of Containers		ANALYSIS REQUESTED	
Date		Date/Time	
Sample Time		Date/Time	
Matrix Pres.		Date/Time	
Sample ID		Date/Time	
9803021345 MW-1		3/12/98 12:30	
9803021300 MW-2		3/12/98 12:30	
9803021315 MW-3		3/12/98 12:30	
9803021320 MW-4		3/12/98 12:30	
9803021345 MW-5		3/12/98 12:30	
Relinquished by:		Received by:	
Date/Time		Date/Time	
Relinquished by:		Received by:	
Date/Time		Date/Time	
Relinquished by:		Received by:	
Date/Time		Date/Time	
Method of Shipment: Hand delivered		Rush	
Authorized by: [Signature]		10 Working Days	
Date: 3/12/98		Special Instructions:	
(Client Signature Must Accompany Request)		Results to be sent to both parties.	