

3R - 342

REPORTS

DATE:

April 29, 1998

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

April 29, 1998

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

Subject: OCD Closure Reports
1st Reporting Quarter, 1998

RECEIVED

MAY 01 1998

Environmental Bureau
Oil Conservation Division



Dear Mr. Olson:

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

1. Breech B #217 Drip
2. Breech D #640
3. Breech F #545
4. Mangum #5E
5. Sammons #2E

In addition, PNM Environmental Services is filing closure for the following groundwater locations:

1. Sammons #2
 2. Cozzens B #1
- } filed in case files

If you have any questions, please me at (505) 324-3764.

Sincerely,

A handwritten signature in cursive script that reads "Kathy Juckes". The signature is written in black ink and is positioned above the printed name and title.

Kathy Juckes
Staff Assistant

cc: Denny Foust
BLM - Farmington
Williams Field Services

District I
P O. Box 1980, Hobbs, NM

District II
P O. Drawer DD, Artesia, NM 88221

District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco Street
Santa Fe, New Mexico 87505

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

PIT REMEDIATION AND CLOSURE REPORT

Operator: PNM Gas Services (Burlington) Telephone: 324-3764

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Sammons #2

Location: Unit G Sec 32 T 30 N R 12 W County San Juan

Pit Type: Separator ☒ Dehydrator ☐ Other ☐

Land Type: BLM ☐ State ☐ Fee ☒ Other ☐ Private ☐

Pit Location: Pit dimensions: length 15 ' width 15 ' depth 3 '

(Attach diagram) Reference: wellhead ☒ other ☐

Footage from reference: 80'

Direction from reference: 70 Degrees ☐ East ☒ North ☒
of ☒ West ☐ South ☐

Depth to Ground Water:

(Vertical distance from contaminants to
seasonal high water elevation of ground
water)

Less than 50 feet	(20 points)	
50 feet to 99 feet	(10 points)	
Greater than 100 feet	(0 points)	<u>20</u>

Wellhead Protection Area:

(Less than 200 feet from a private
domestic water source, or, less than 1,000
feet from all other water sources)

Yes	(20 points)	
No	(0 points)	<u>0</u>

Distance to Surface Water:

(Horizontal distance to perennial lakes,
ponds, rivers, streams, creeks, irrigation
canals and ditches)

Less than 200 feet	(20 points)	
200 feet to 1,000 feet	(10 points)	
Greater than 1,000 feet	(0 points)	<u>20</u>

RANKING SCORE (TOTAL POINTS) : 40

Sammons #2

Date Remediation Started: 3/31/97 Date Completed: 4/15/97

Remediation Method: Excavation X Approx. Cubic Yard 2644

(Check all appropriate sections)

Landfarmed X Amount Landfarmed (cubic yds) 1520

Other _____

Remediation Location: Onsite X Offsite Hauled 780 cu yds to Tierra Environmental.
(i.e., landfarmed onsite, name and location of offsite facility)

Backfill Material Location: _____

General Description of Remedial Action:

Excavated contaminated soil to a pit size of 170' X 70' X 6' and landfarmed 2644 cu. yds. onsite. Soil was aerated by disking/plowing until soil met regulatory levels. Transported 780 cu. yds. to Tierra Environmental.

*** Groundwater encountered at 6'. Lab analysis showed results below WQCC standards. See attached laboratory analysis.

Ground Water Encountered: No ☐ Yes ☒ Depth _____

Final Pit Closure Sampling:

Sample Location Not Taken***

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

Sample depth _____

Sample date _____ Sample time _____

Sample Results

Benzene (ppm) _____

Total BTEX (ppm) _____

Field headspace (ppm) _____

TPH (ppm) _____ Method _____

Vertical Extent (ft) _____ Risk Analysis form attached Yes ☐ No ☐

Ground Water Sample: Yes ☒ No ☐ (If yes, see attached Groundwater Site Summary Report)

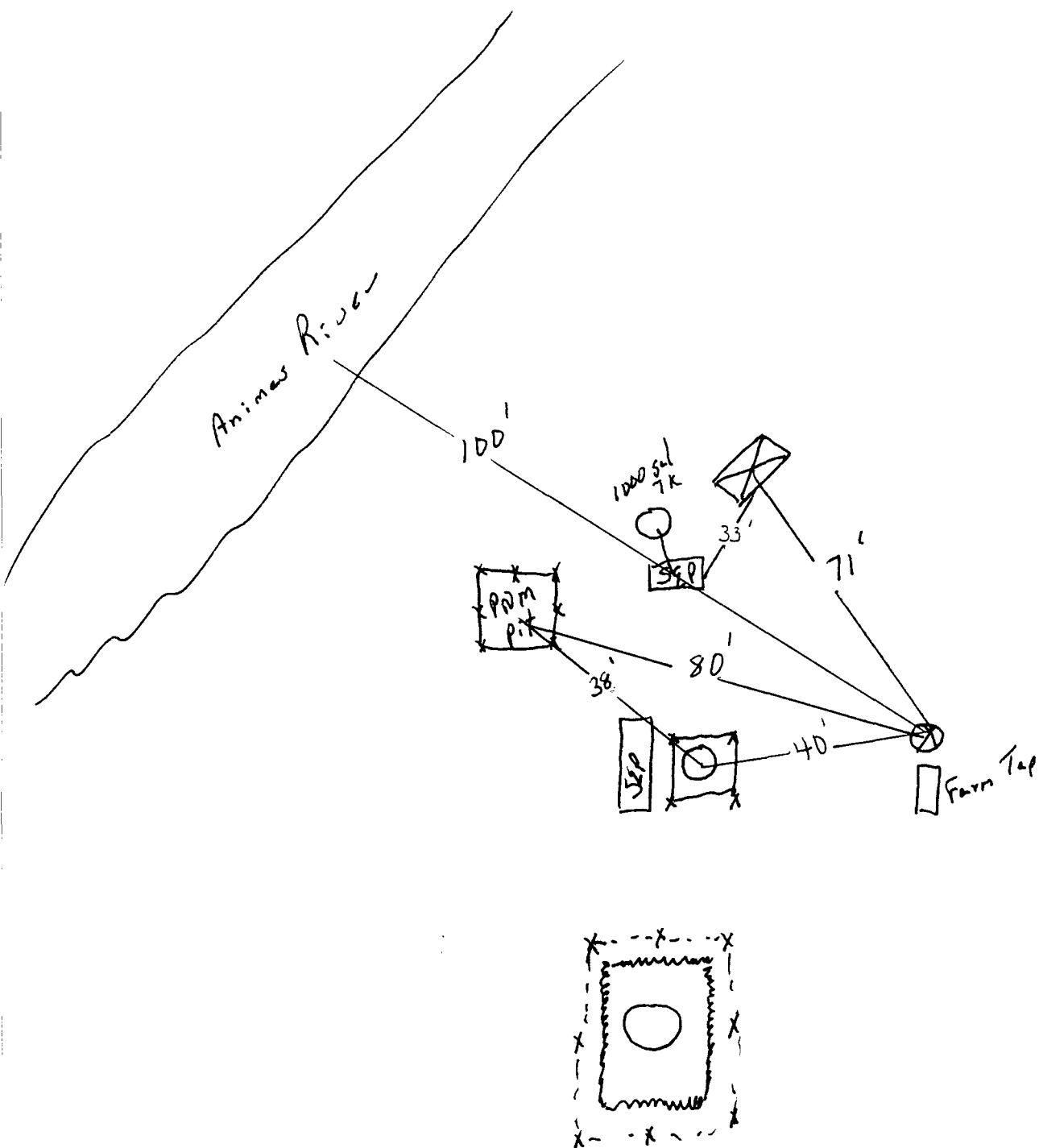
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF

DATE April 29, 1998

SIGNATURE Maureen Gannon

PRINTED NAME **Maureen Gannon**
AND TITLE **Project Manager**

Kathy Gannon



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-Apr-97*
COC No.: *5140*
Sample No.: *14072*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammon #2*
Project Location: *9704020715; Pit Excavation Groundwater Sample*
Sampled by: *RH* Date: *2-Apr-97* Time: *7:15*
Analyzed by: *DC* Date: *2-Apr-97*
Sample Matrix: *Liquid*

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
<i>Benzene</i>	89	ug/L	0.2	ug/L
<i>Toluene</i>	415	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	192	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	1260	ug/L	0.2	ug/L
<i>o-Xylene</i>	113	ug/L	0.2	ug/L
<i>TOTAL</i>	2069	ug/L		

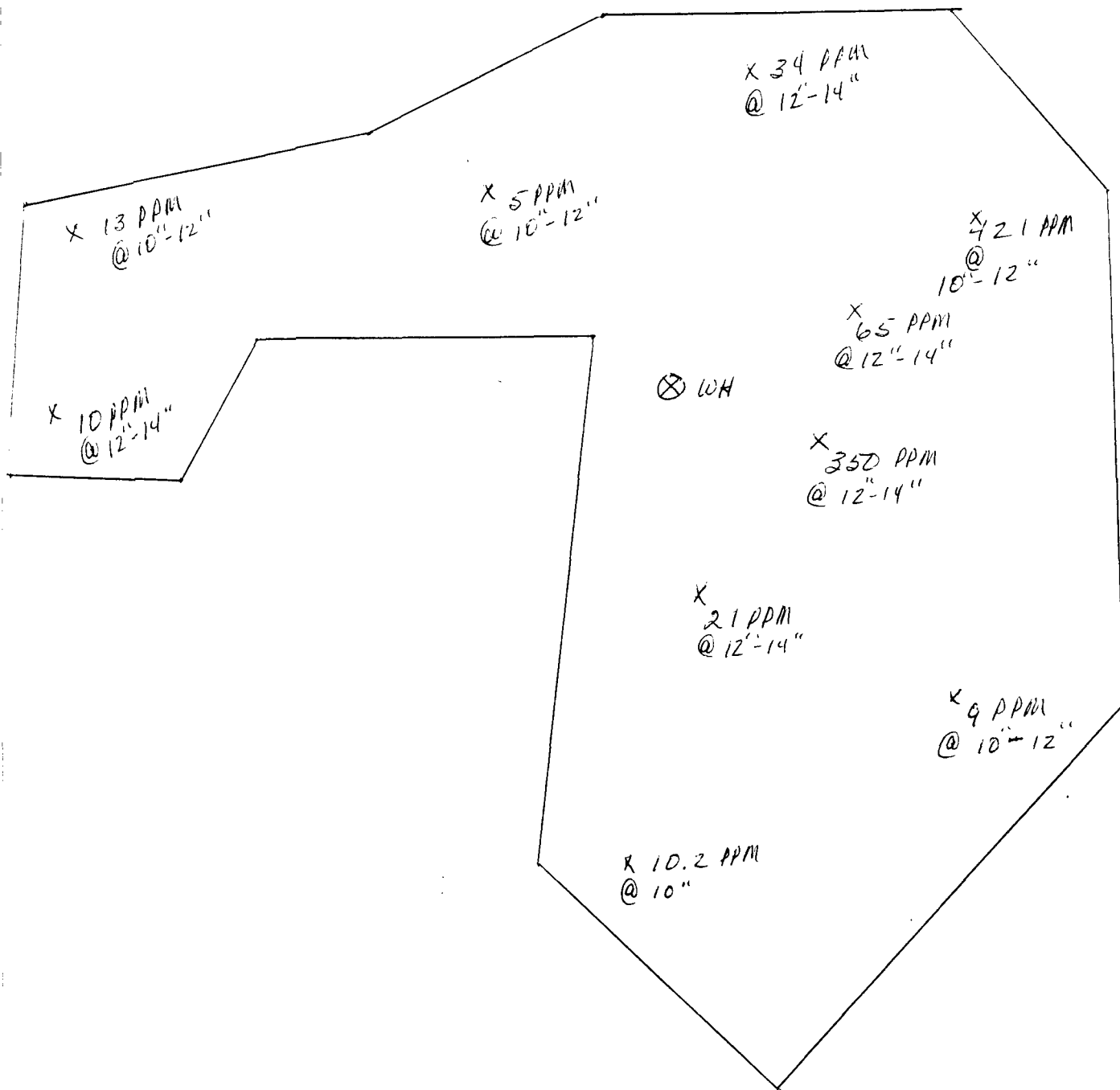
Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved By: *[Signature]*
Date: *4/2/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

↑
N



SAMMON #2
6-16-97

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: *19-Jun-97*
COC No.: *5151*
Sample No.: *14954*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammon #2 Landfarm*
Project Location: *9706160820; 10pt. Composite*
Sampled by: *RH* Date: *16-Jun-97* Time: *8:20*
Analyzed by: *HR* Date: *18-Jun-97*
Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/kg	1	ug/kg
<i>Toluene</i>	33	ug/kg	1	ug/kg
<i>Ethylbenzene</i>	19	ug/kg	1	ug/kg
<i>m,p-Xylene</i>	79	ug/kg	1	ug/kg
<i>o-Xylene</i>	72	ug/kg	1	ug/kg
	<i>TOTAL</i>	202		ug/kg

ND - Not Detected at Limit of Quantitation

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

Approved by: *[Signature]*
Date: *6/19/97*

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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: *20-Jun-97*
 COC No.: *5151*
 Sample No.: *14954*
 Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammon #2 Landfarm*
 Project Location: *9706160820; 10pt. Composite*
 Sampled by: *RH* Date: *16-Jun-97* Time: *8:20*
 Analyzed by: *DC/HR* Date: *19-Jun-97*
 Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Diesel Range Organics (C10 - C28)</i>	<i>7</i>	<i>mg/kg</i>	<i>5</i>	<i>mg/kg</i>

ND - Not Detected at Limit of Quantitation

Quality Assurance Report

DRO QC No.: 0548-STD

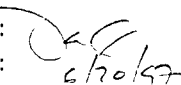
Continuing Calibration Verification

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	RPD	RPD Limit
<i>Diesel Range (C10 - C28)</i>	<i>ND</i>	<i>ppm</i>	<i>200</i>	<i>195</i>	<i>2.5</i>	<i>15%</i>

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Diesel Range (C10-C28)</i>	<i>88</i>	<i>95</i>	<i>(70-130)</i>	<i>9</i>	<i>20%</i>

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

Approved by: Date: *6/20/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

PNMGS Well Site: Sammons 2

Groundwater Site Summary Report

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

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

Operator: Burlington Resources
Sec: 32 **Twn:** 30N **Rng:** 12W **Unit:** G
Canyon: Animas River

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 (June 1997), Figure 4 (September 1997), Figure 5 (December 1997) & Figure 6 (March 1998)

Hydrograph: Figure 7

Full suite-Groundwater Sampling Results: Table 1

Analytical Results: attached

Activities for Previous Year:

PNM installed five groundwater monitoring wells at the Sammons 2 well site on May 15, 1997. Figure 1 provides a typical groundwater monitoring well diagram for each well installation. On June 25, September 26 and December 23, 1997 and again on March 4, 1998, PNM performed quarterly sampling of groundwater monitoring wells at the site. PNM measured water levels and conducted groundwater sampling in each well for chemical analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX). In addition, on September 17, 1997, MW-1 and MW-2 were sampled for Water Quality Control Commission (WQCC) dissolved metals and major cations/anions. Sampling was performed in strict compliance with EPA protocol.

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

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

Results:

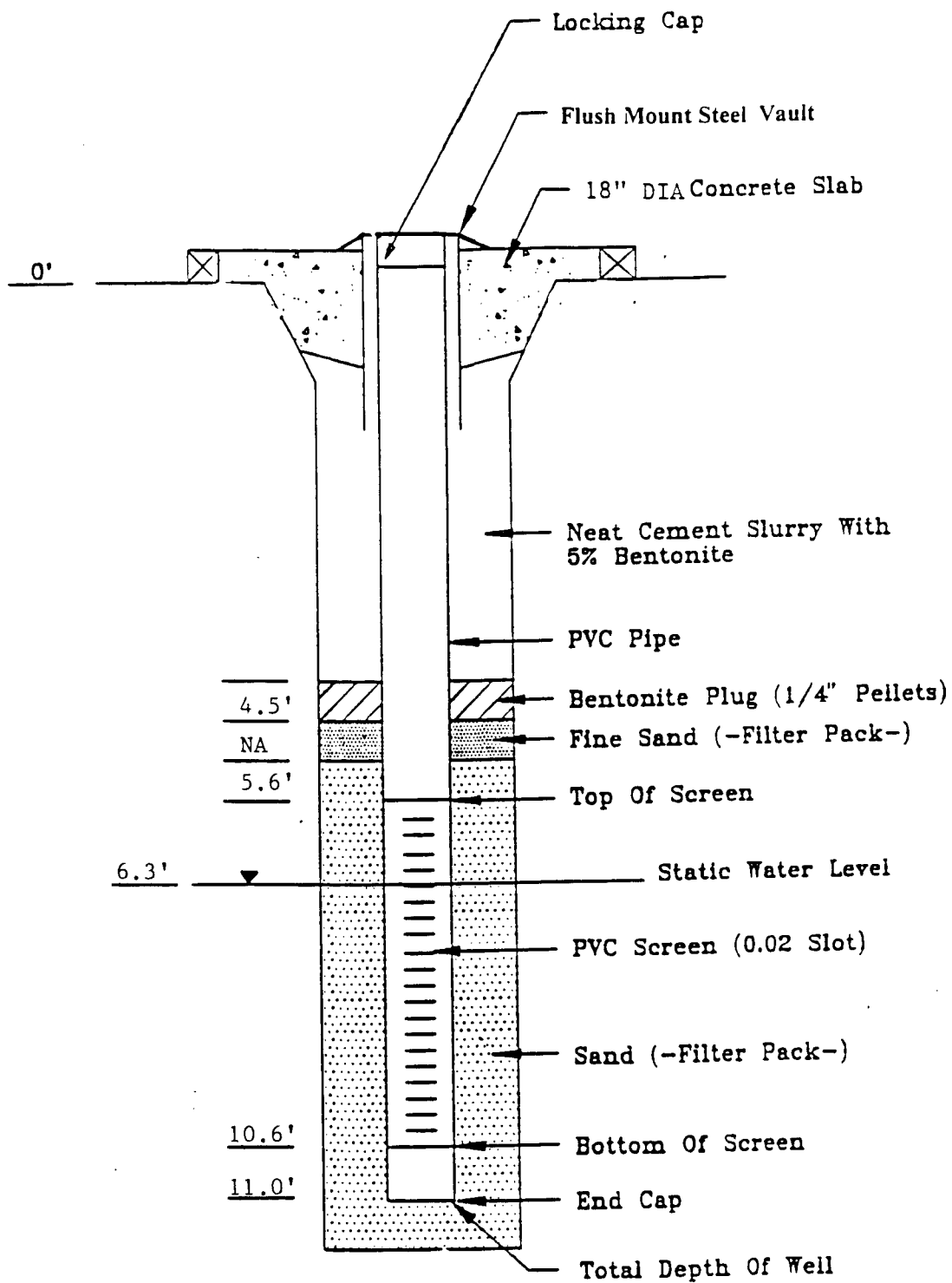
Figure 2 presents a site map showing BTEX for each monitoring well since groundwater contamination was discovered. Table 1 provides a summary of the full suite of analytical results collected during the June 25, 1997 sampling event. Since monitoring began four quarters ago, all five wells have shown BTEX concentrations below WQCC standards. Water quality analysis of MW-1 and -2 revealed elevated sulfate concentrations at the site. Metals in either well were below WQCC standards.

Figure(s) 3, 4, 5 and 6 provide groundwater contour maps for the months of June, September and December 1997 and March 1998, respectively. In June and September, the groundwater flow was southwesterly in direction beneath the site. In December and March, the groundwater direction shifted to the west. Figure 7 shows the historical groundwater elevations at the site. The groundwater gradient and elevations are strongly influenced by the Animas River which runs along the northern border of the site. With the exception of September 1997, groundwater levels, in general, have risen over the last four quarters. The drop in elevation in MW-3, -4, and -5 in September is probably due to a decrease in the water level of the Animas River during that time.

Further Action:

Consistent with PNM's San Juan Basin Groundwater Management Plan, PNM requests closure of the Sammons 2 former pit. BTEX concentrations in all wells surrounding our former pit have been consistently below WQCC standards for four calendar quarters.

Upon completion of monitoring and remedial actions, PNM will plug and abandon the monitoring wells at the site. The concrete pad and metal vault surrounding the well will be removed. The well casing will be cut to ground surface with cement containing 5% bentonite.



CLIENT: PNM

DATE:

REV. NO.: 0

AUTHOR: M.D.G.

DRAWN BY: M.P.

CK'D BY: M.D.G.

FILE:

DWG

Sammons 2

Figure 1
Well Completion Diagram

Figure 2. Sammons 2 e Map & Analytical Results
(Concentrations in ppb)
← Animas River

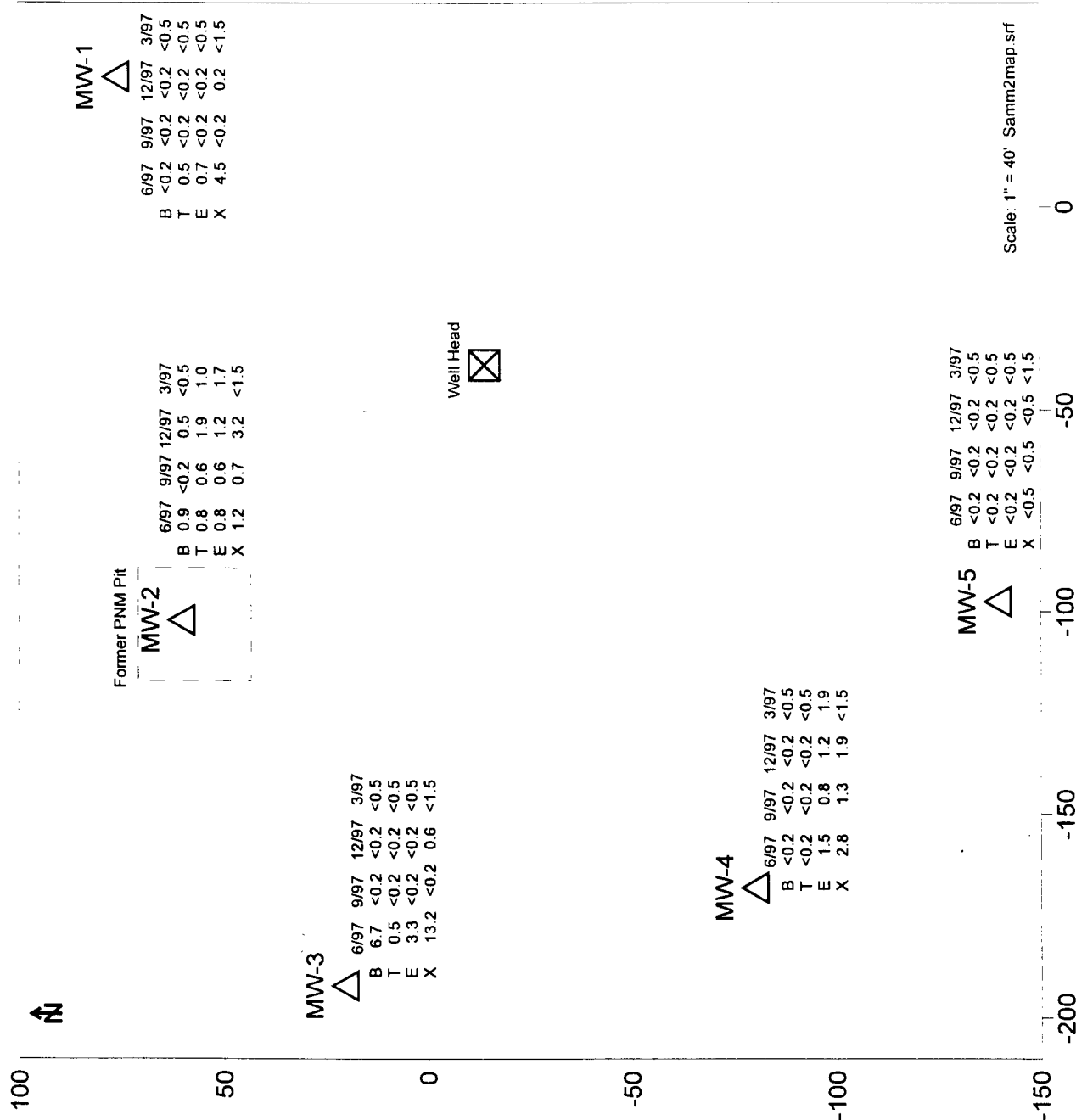


Figure 3. Sammons 2 Site Groundwater Map (June 25, 1997)

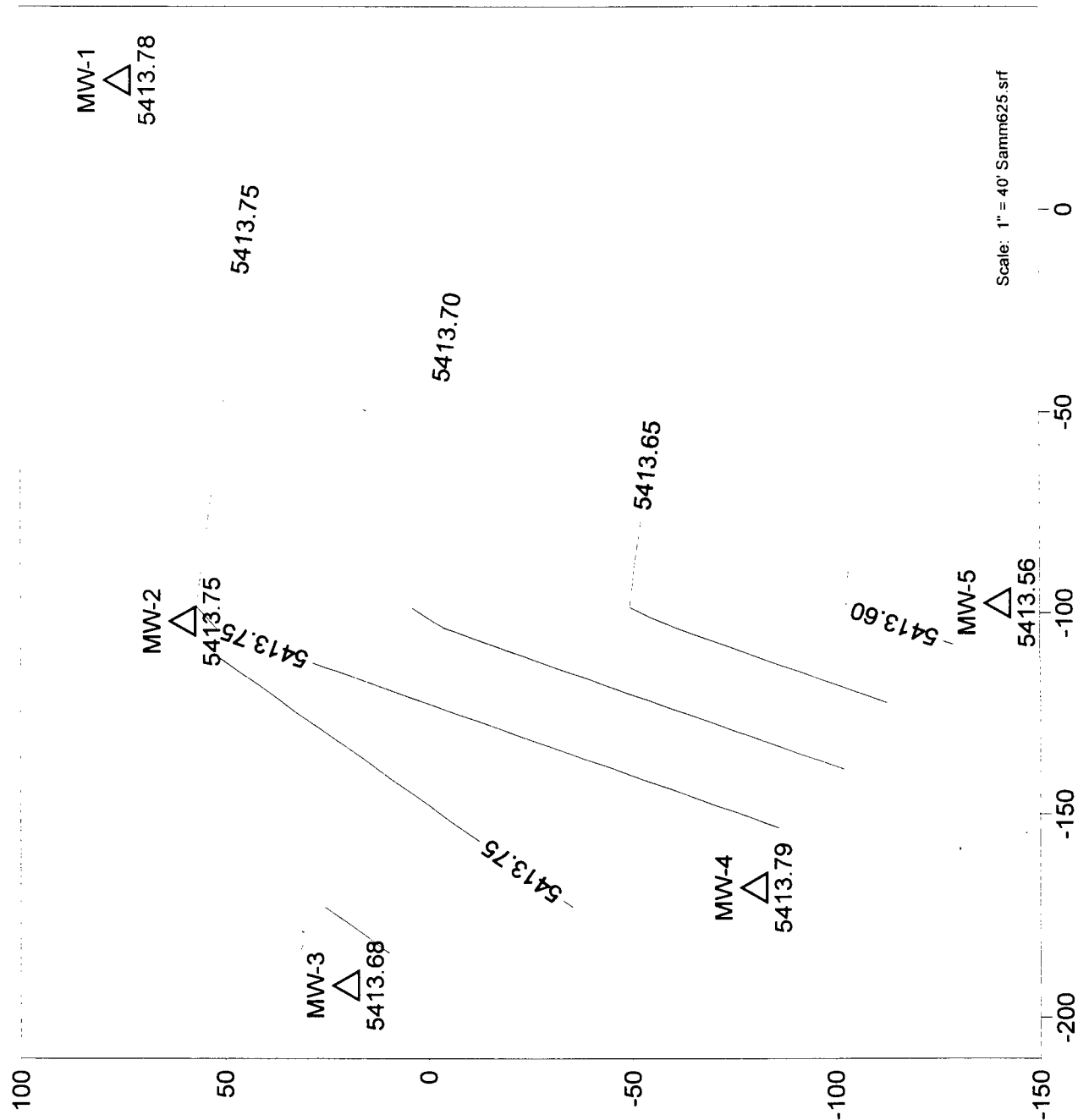


Figure 4. Sammons 2 Site Groundwater Map (September 26, 1997)

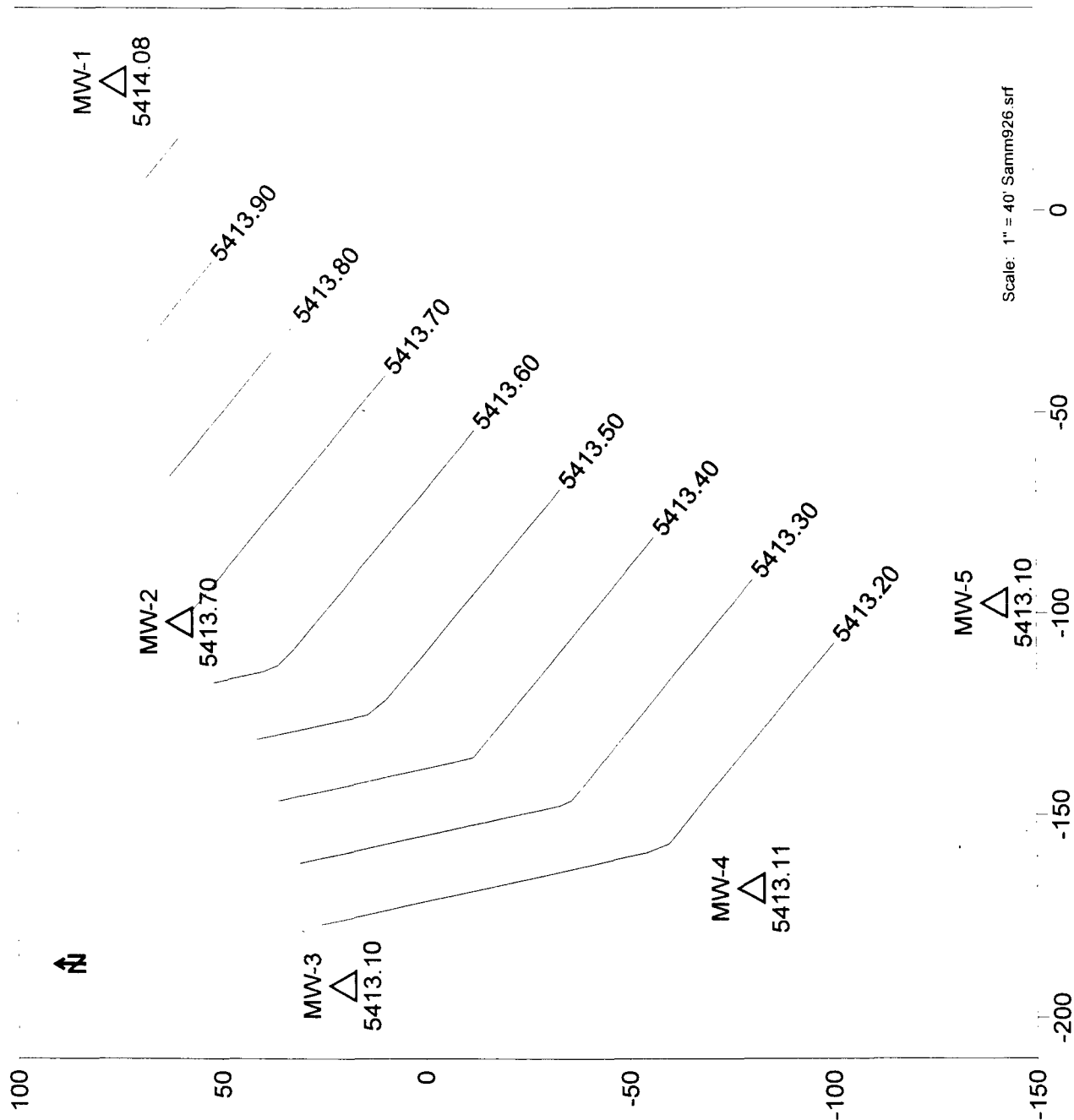


Figure 5. Sammons 2 Site Groundwater Map (December 23, 1997)

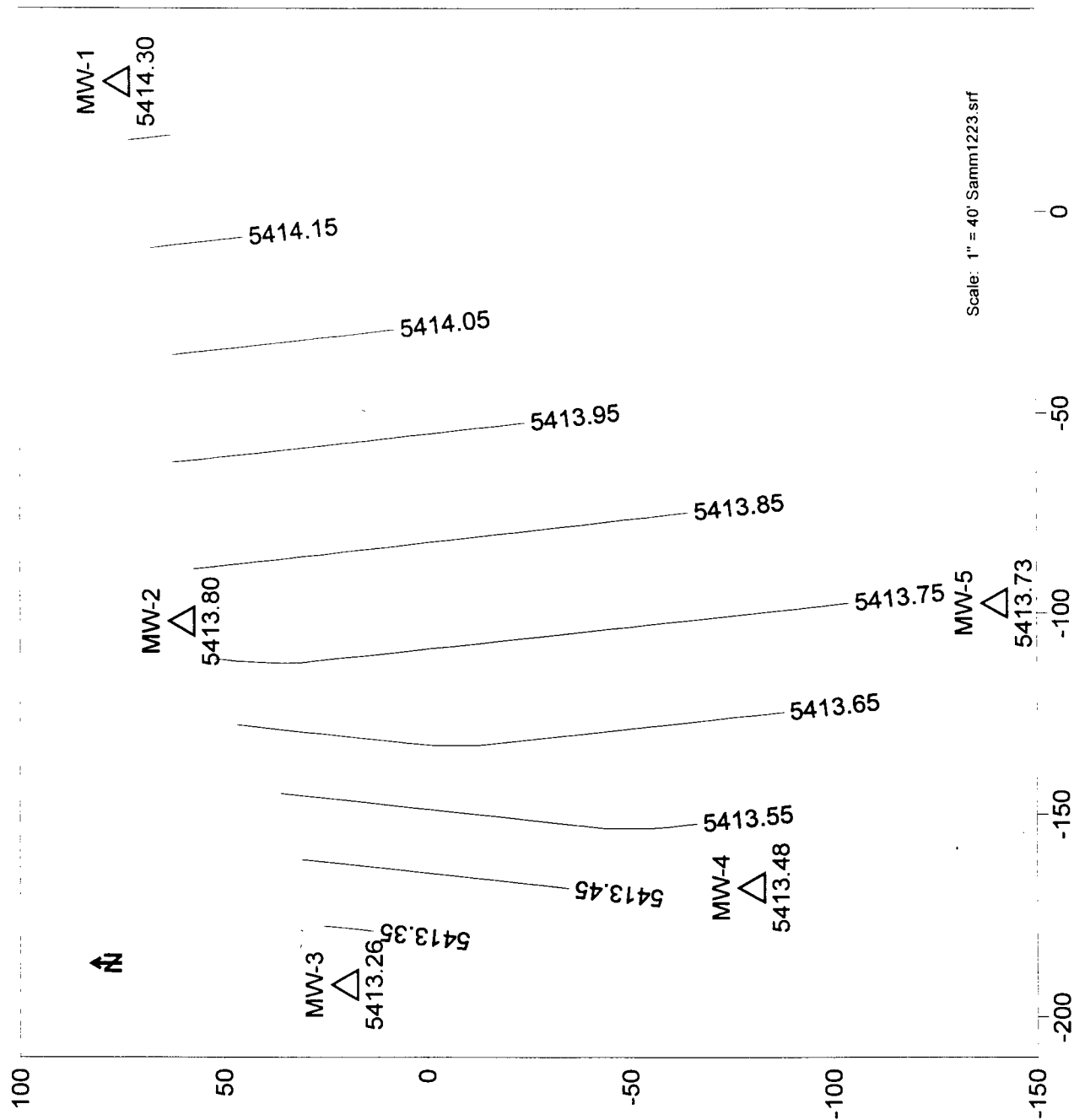


Figure 6. Sammons 2 Site Groundwater Map (March 4, 1998)

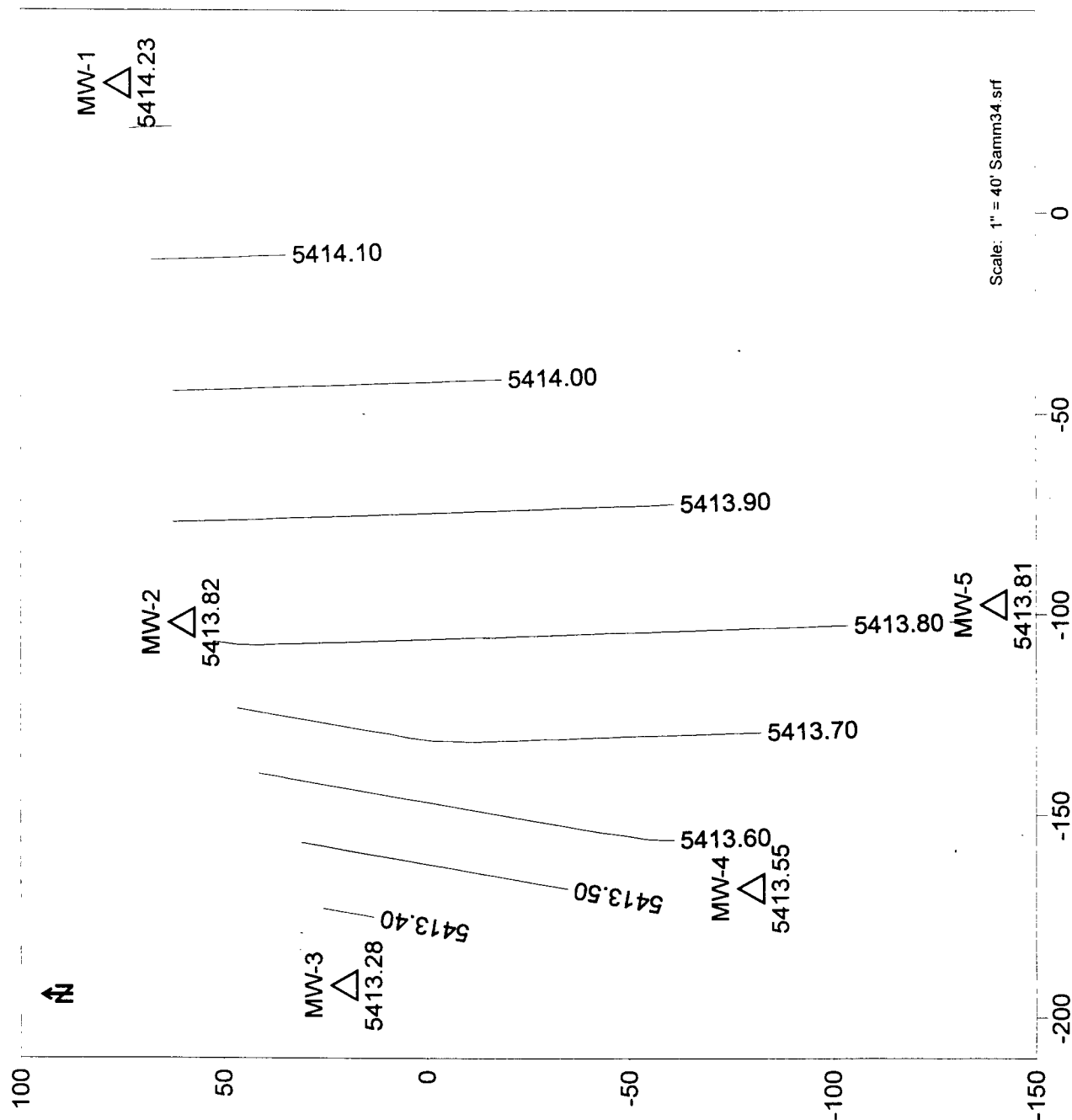


Figure 7. Sammon 2 Hydrograph

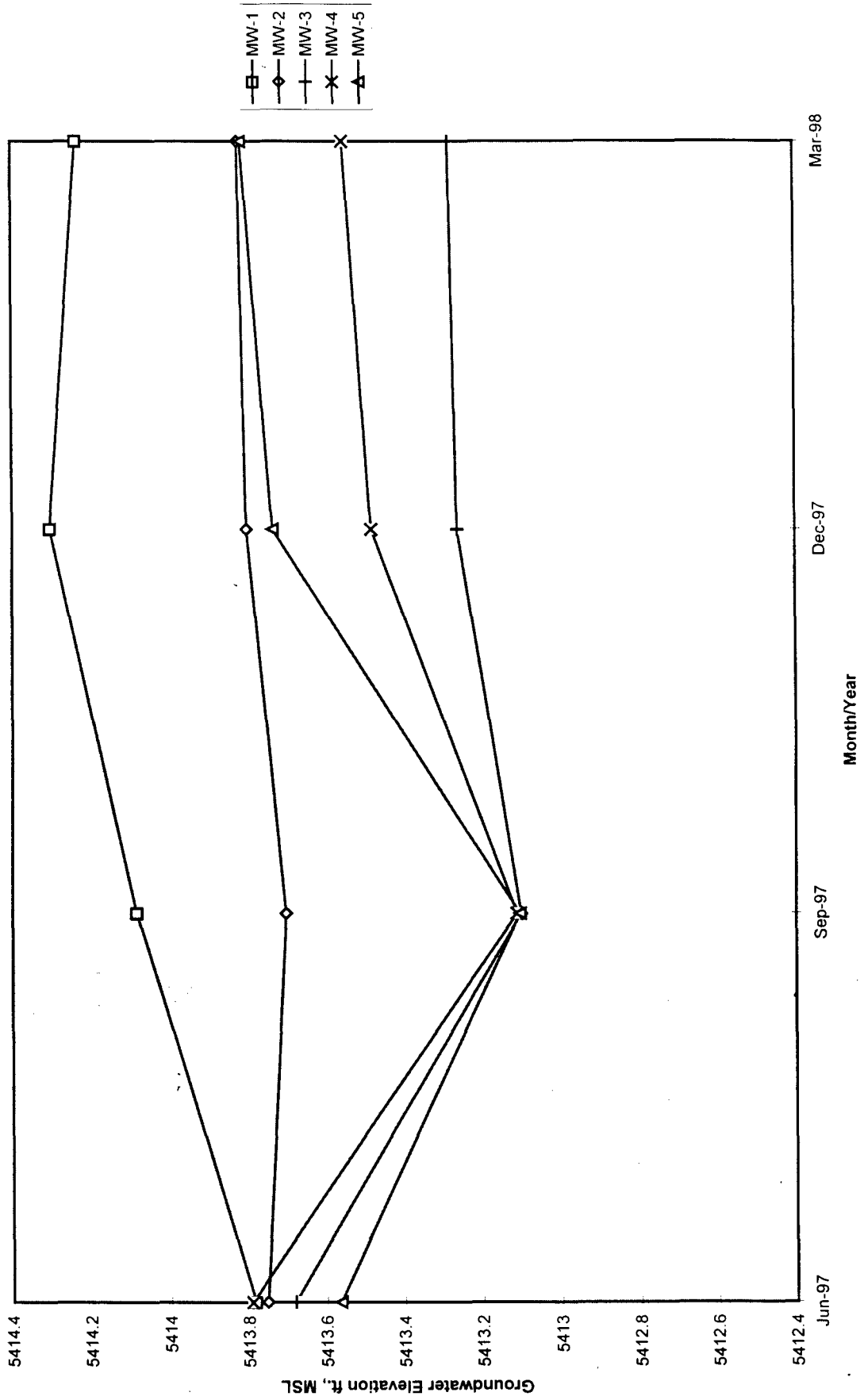


Table 1. SAMMONS 2 GROUNDWATER SAMPLING RESULTS, mg/l (6/25/97)

Constituent	WQCC Stds.	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6 (MW- 3 duplicate)
B	0.01	<0.0002	0.0009	0.0067	<0.0002	<0.0002	0.0066
T	0.75	0.0005	0.0008	0.0005	<0.0002	<0.0002	0.0005
E	0.75	0.0007	0.0008	0.0033	0.0015	<0.0002	0.0030
X	0.62	0.0045	0.0012	0.0132	0.0028	0.0002	0.0120
PAHs	0.03	NA	NA	NA	NA	NA	NA
Metals							
As	0.1	<0.030	<0.030	NA	NA	NA	NA
Ba	1	0.120	0.154	NA	NA	NA	NA
Cd	0.01	<0.004	<0.004	NA	NA	NA	NA
Cr	0.05	<0.010	<0.010	NA	NA	NA	NA
Pb	0.05	<0.040	<0.040	NA	NA	NA	NA
Se	0.05	<0.006	<0.006	NA	NA	NA	NA
Ag	0.05	<0.006	<0.006	NA	NA	NA	NA
Hg	0.002	<0.0001	<0.0001	NA	NA	NA	NA
Cations/Anions							
Na	NA	812	365	NA	NA	NA	NA
Ca	NA	440	450	NA	NA	NA	NA
Mg	NA	125	46.2	NA	NA	NA	NA
K	NA	10.9	15.1	NA	NA	NA	NA
Cl	NA	303	94.5	NA	NA	NA	NA
SO4	NA	2681	1558	NA	NA	NA	NA
CO3	NA	<1	<1	NA	NA	NA	NA
HCO3	NA	751	823	NA	NA	NA	NA
OH	NA	<1	<1	NA	NA	NA	NA
Cation/Anion Balance							
Difference Cation- Anion	NA	8.83	6.07	NA	NA	NA	NA
Total Cation-Anion	NA	144.51	91.11	NA	NA	NA	NA
% Difference	NA	6.1	6.7	NA	NA	NA	NA
TDS, calc	NA	5123	3352	NA	NA	NA	NA
TDS, meas	NA	5164	3246	NA	NA	NA	NA
Hardness as CaCO3	NA	1613	1314	NA	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

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

24 July 1997

Denver Bearden
PNM Gas Services
603 W. Elm Street
Farmington, NM 87401

Reference:

Project Name: Sammons 2
Project Loc.: MW-1, MW-2, MW-3, MW-4, MW-5, MW-6
On Site ID: COC Record No. 5567

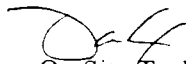
Dear Denver,

Enclosed please find the analytical results for your project referenced above. This includes the parameters sub-contracted to Mountain States Analytical for dissolved metals.

We trust you will find all in order and should you have any questions regarding these results please contact me at any time, (505) 325-2432.

Thank you once again for your consideration.

Sincerely,



On Site Technologies, Ltd.
David Cox
Laboratory Manager

cc: Maureen Gannon, PNM Gas Services

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: *13-Jul-97*
COC No.: *5567*
Sample No.: *15120*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammons 2*

Project Location: *9706251600; MW-1*

Sampled by: *MS/MG/BK*

Date: *25-Jun-97* Time: *16:00*

Analyzed by: *DC*

Date: *7-Jul-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>	0.5	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	0.7	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	4.1	ug/L	0.2	ug/L
<i>o-Xylene</i>	0.4	ug/L	0.2	ug/L
<i>TOTAL</i>	5.7	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *DCG*

Date: *7/14/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1356

ANALYTICAL REPORT

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

Date: *13-Jul-97*
COC No.: *5567*
Sample No.: *15121*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammons 2*
Project Location: *9706251630; MW-2*
Sampled by: *MS/MG/BK*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *25-Jun-97* Time: *16:30*
Date: *7-Jul-97*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>0.9</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>0.8</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>0.8</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>0.9</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>0.3</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>3.7</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: *7/14/97*

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: *13-Jul-97*
COC No.: *5567*
Sample No.: *15122*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammons 2*
Project Location: *9706251700; MW-3*
Sampled by: *MS/MG/BK* Date: *25-Jun-97* Time: *17:00*
Analyzed by: *DC* Date: *7-Jul-97*
Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>6.7</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>0.5</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>3.3</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>12.8</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>0.4</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>23.7</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: *7/14/97*

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: *13-Jul-97*
COC No.: *5567*
Sample No.: *15123*
Job No.: *2-1000*

Project Name: ***PNM Gas Services - Sammons 2***

Project Location: ***9706251730; MW-4***

Sampled by: *MS/MG/BK*

Date: *25-Jun-97* Time: *17:30*

Analyzed by: *DC*

Date: *7-Jul-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>	1.5	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	2.1	ug/L	0.2	ug/L
<i>o-Xylene</i>	0.7	ug/L	0.2	ug/L
<i>TOTAL</i>	4.3	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: *7/14/97*

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: *13-Jul-97*
COC No.: *5567*
Sample No.: *15124*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammons 2*

Project Location: *9706251800; MW-5*

Sampled by: *MS/MG/BK*

Date: *25-Jun-97* Time: *18:00*

Analyzed by: *DC*

Date: *7-Jul-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>	0.2	ug/L	0.2	ug/L
<i>o-Xylene</i>	ND	ug/L	0.2	ug/L
<i>TOTAL</i>	0.2	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: *7/14/97*

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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: *13-Jul-97*
COC No.: *5567*
Sample No.: *15125*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammons 2*

Project Location: *9706251830; MW-6*

Sampled by: *MS/MG/BK*

Date: *25-Jun-97* Time: *18:30*

Analyzed by: *DC*

Date: *7-Jul-97*

Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	6.6	ug/L	0.2	ug/L
<i>Toluene</i>	0.5	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	3.0	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	11.6	ug/L	0.2	ug/L
<i>o-Xylene</i>	0.4	ug/L	0.2	ug/L
<i>TOTAL</i>	22.0	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *Jack*
Date: *7/14/97*

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OFF: (505) 325-5667

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TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 7-Jul-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	% Diff	Limit
Benzene	ppb	20.0	19.8	1	15%
Toluene	ppb	20.0	20.2	1	15%
Ethylbenzene	ppb	20.0	20.4	2	15%
m,p-Xylene	ppb	40.0	39.5	1	15%
o-Xylene	ppb	20.0	20.3	2	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	102	91	(39-150)	5	20%
Toluene	91	84	(46-148)	4	20%
Ethylbenzene	100	92	(32-160)	5	20%
m,p-Xylene	99	91	(35-145)	5	20%
o-Xylene	100	94	(35-145)	5	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)	
15120-5567	93				
15121-5567	92				
15122-5567	92				
15123-5567	91				
15124-5567	92				
15125-5567	93				

S1: Fluorobenzene

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- TRUTH IN POLLUTION INDUSTRIES, INC. -

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: *21-Jul-97*
 COC No.: *5567*
 Sample ID.: *15120*
 Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammons 2*

Project Location: *9706251600; MW-1*

Sampled by: *MS/MG/BK*

Date: *25-Jun-97* Time: *16:00*

Analyzed by: *HR*

Date: *7-Jul-97*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Results as Received	Unit of Measure
<i>Cations</i>				
<i>Sodium Na</i>	812	mg/L	35.32	me/L
<i>Calcium Ca</i>	440	mg/L	21.96	me/L
<i>Magnesium Mg</i>	125	mg/L	10.29	me/L
<i>Potassium K</i>	10.9	mg/L	0.28	me/L
<i>Anions</i>				
<i>Chloride Cl</i>	303	mg/L	8.55	me/L
<i>Sulfate SO4</i>	2681	mg/L	55.82	me/L
<i>Carbonate CO3 as CaCO3</i>	< 1	mg/L	< 0.01	me/L
<i>Bicarbonate HCO3 as CaCO3</i>	751	mg/L	12.31	me/L
<i>Hydroxide OH as CaCO3</i>	< 1	mg/L	< 0.01	me/L
<i>Total Dissolved Solids</i>			<i>Cation-Anion Balance</i> 8.83 <i>Difference Cation-Anion, me/L</i> 144.51 <i>Total Cation-Anion, me/L</i> 6.1 % <i>Difference Cation-Anion</i> <i>Comments</i>	
<i>Calculated, Sum of Cation/Anion</i>	5123	mg/L		
<i>Total Dissolved Solids</i>				
<i>Dried @ 180 C</i>	5164	mg/L		
<i>pH</i>	7.23			
<i>Conductivity @ 25 C</i>	5730	uS/cm		
<i>Total Hardness as CaCO3</i>	1613	mg/L		

Approved by: *[Signature]*

Date: *7/21/97*

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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: *21-Jul-97*
 COC No.: *5567*
 Sample ID.: *15121*
 Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammons 2*Project Location: *9706251630; MW-2*Sampled by: *MS/MG/BK*Date: *25-Jun-97* Time: *16:30*Analyzed by: *HR*Date: *7-Jul-97*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Results as Received	Unit of Measure
<i>Cations</i>				
<i>Sodium Na</i>	365	mg/L	15.88	me/L
<i>Calcium Ca</i>	450	mg/L	22.46	me/L
<i>Magnesium Mg</i>	46.2	mg/L	3.80	me/L
<i>Potassium K</i>	15.1	mg/L	0.39	me/L
<i>Anions</i>				
<i>Chloride Cl</i>	94.5	mg/L	2.67	me/L
<i>Sulfate SO4</i>	1558	mg/L	32.44	me/L
<i>Carbonate CO3 as CaCO3</i>	< 1	mg/L	< 0.01	me/L
<i>Bicarbonate HCO3 as CaCO3</i>	823	mg/L	13.49	me/L
<i>Hydroxide OH as CaCO3</i>	< 1	mg/L	< 0.01	me/L
<i>Total Dissolved Solids</i>				
<i>Calculated, Sum of Cation/Anion</i>	3352	mg/L	<i>Cation-Anion Balance</i> 6.07 <i>Difference Cation-Anion, me/L</i> 91.11 <i>Total Cation-Anion, me/L</i> 6.7 % <i>Difference Cation-Anion</i> <i>Comments</i>	
<i>Total Dissolved Solids</i>				
<i>Dried @ 180 C</i>	3246	mg/L		
<i>pH</i>	7.12			
<i>Conductivity @ 25 C</i>	3650	uS/cm		
<i>Total Hardness as CaCO3</i>	1314	mg/L		

Approved by: *[Signature]*Date: *7/21/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

QUALITY ASSURANCE REPORT*Cation Anion Balance*

Date: 7-Jul-97

Quality Control Sample

Parameter	Laboratory Identification	True Value	Analyzed Value	Unit of Measure	% Diff	Limit % Diff
Sodium, Na	0451-QC	2.32	2.36	mg/L	2	10
Calcium, Ca	0465-QC	2.18	2.16	mg/L	-1	10
Magnesium, Mg	0465-QC	2.86	3.00	mg/L	5	10
Potassium, K	0451-QC	1.33	1.30	mg/L	-2	10
Chloride, Cl	0437-QC	150	147	mg/L	-2	10
Sulfate, SO ₄	0541-QC	78	79	mg/L	2	10
Alkalinity	0541-QC	159	167	mg/L	5	10
pH	0541-QC	9.13	9.13		0	10
Conductivity	0541-QC	740	733	uS/cm	-1	15
Total Dissolved Solids, 180C	0541-QC	642	620	uS/cm	-3	15

Matrix Spike

Parameter	Laboratory Identification	Analyzed Value	Matrix Spike	Spike Value	Unit of Measure	Spike Recovery
Sodium, Na	15121-5567	1.46	0.50	2.02	mg/L	103%
Calcium, Ca	15120-5567	0.88	0.50	1.48	mg/L	107%
Magnesium, Mg	15121-5567	0.92	0.50	1.50	mg/L	106%
Potassium, K	15121-5567	0.76	0.50	1.30	mg/L	103%

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

OK
7/21/97



Mountain States Analytical, Inc.

July 16, 1997

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

Reference:

Project: Sammons 2
MSAI Group: 16924

Dear Mr. Cox:

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

15120-5567 Dissolved

15121-5567 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

RECEIVED JUL 2 1 1997



Mountain States Analytical, Inc.

The Quality Solution

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

Attn: Mr. David Cox
Project: Sammons 2

Sample ID: 15120-5567 Dissolved 9706251600 ml-1
Matrix: Waste Water

MSAI Sample: 65259
MSAI Group: 16924
Date Reported: 07/16/97
Discard Date: 08/15/97
Date Submitted: 07/01/97
Date Sampled: 06/25/97
Collected by:
Purchase Order: 5567
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	Completed		
0392M Mercury Prep CVAA, w/ww, 7470 Method: SW-846 7470	Complete		
1 Prep for HAA, w/ww, 7062/7742 Method: SW-846 7062/7742	Complete		
1451 Selenium by HAA, w/ww, 7742 Method: SW-846 7742	ND	mg/l	0.006
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	0.120	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.

On Site Technologies, Ltd.

The Quality Solution

Page 2

Sample ID: 15120-5567 Dissolved 9206257600 ^(DL) ml-1MSAI Sample: 65259
MSAI Group: 16924

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

Respectfully Submitted,
Reviewed and Approved by:Rolf E. Larsen
Project Manager

RECEIVED JUL 21 1997



Mountain States Analytical, Inc.

The Quality Solution

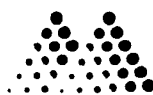
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401

Attn: Mr. David Cox
Project: Sammons 2

Sample ID: 15121-5567 Dissolved 9706251630 Mul-2
Matrix: Waste Water

MSAI Sample: 65260
MSAI Group: 16924
Date Reported: 07/16/97
Discard Date: 08/15/97
Date Submitted: 07/01/97
Date Sampled: 06/25/97
Collected by:
Purchase Order: 5567
Project No.:

Test Analysis	Results as Received	Units	Method Detection Limit
0259B Mercury by CVAA, w/ww, 7470 Method: SW-846 7470	0.0001	mg/l	0.0001
0392I Flame/ICP Prep, w/ww, 3005A Method: SW-846 3005A	Completed		
0392M Mercury Prep CVAA, w/ww, 7470 Method: SW-846 7470	Complete		
Prep for HAA, w/ww, 7062/7742 Method: SW-846 7062/7742	Complete		
1451 Selenium by HAA, w/ww, 7742 Method: SW-846 7742	ND	mg/l	0.006
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	0.154	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.

On Site Technologies, Ltd.

The Quality Solution

Page 2

Sample ID: 15121-5567 Dissolved 9706251630 MW-2

MSAI Sample: 65260
MSAI Group: 16924

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

Respectfully Submitted,
Reviewed and Approved by:

Rolf E. Larsen
Project Manager

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

07/14/97
13:37:48
Group: 1692-

Analysis Batch Number: 02598-07/14/97-1692-1

Identification: 02598-Mercury by CVAA, w/w, 7470

Sequence: 02598-1

Number of Samples: 11

Batch Data-Date: 07/14/97 16:25:59

BLANK#	ANALYST	CONC FOUND #	CONC LIMIT
PBW1-359	Mer	0.0100	0.1000

					QC LIMITS	
SAMPLE#	ANALYST	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	LOWER UPPER
16955-65345	Mer	1.0000	0.0400	1.0600	102.0	80.0 120.0

					QC LIMITS			
SAMPLE#	ANALYST	CONC ADDED	CONC SAMPLE	RESULT 2	% REC #	LOWER UPPER	RPD #	LIMIT
16955-65345	Mer	1.0000	0.0400	1.0500	101.0	80.0 120.0	1.0	20.0

DUPLICATE						
SAMPLE#	ANALYST	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
16955-65345	Mercury	0.0400	0.0500	22.2(11)	20.0	1.00

					QC LIMITS	
SAMPLE#	ANALYST	CONC FOUND	CONC KNOWN	% REC #	LOWER UPPER	
LCSW-359	Mercury	2.3500	2.5000	94.0	80.0 120.0	

QC LIMITS					
CCV #	ANALYST	TRUE VALUE	BATCH READ	% REC #	LOWER UPPER
CCV--2	Mercury	3.0000	3.1000	103.3	90.0 110.0
CCV--3	Mercury	5.0000	4.8300	96.6	80.0 120.0
CCV--4	Mercury	5.0000	4.7600	95.2	80.0 120.0
CCV--4	Mercury	5.0000	4.7200	94.4	80.0 120.0

CCB#	ANALYST	CONC FOUND #	CONC LIMIT
ICB-	Mer	-0.0500	0.1000
CCB-	Mer	-0.0100	0.1000
CCB-	Mer	0.0500	0.1000
CCB-	Mer	-0.0400	0.1000

Result Footnotes

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

Groups & Samples

16921-65239	16921-65240	16923-65258	16924-65259	16924-65260	16938-65303	16938-65304	16938-65305
16938-65306	16955-65345						

Analysis Batch Number: 10PWA-07110/97-001-13

Identification: 10PWA-Metals by 10P

Sequence: DATC191

Number of Samples: 7

Batch Data-Date/Time: 07/14/97 17:43:04

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
PBW-348	Silver	0.0007	0.0060
	Barium	ND	0.0030
	Beryllium	ND	0.0002
	Calcium	0.0297	0.4000
	Cadmium	ND	0.0040
	Chromium	ND	0.0100
	Copper	ND	0.0100
	Iron	0.0041	0.2000
	Magnesium	0.0124	0.0500
	Molybdenum	0.0127	0.0300
	Nickel	ND	0.0300
	Lead	ND	0.0400
	Selenium	ND	0.0700
	Zinc	0.0040	0.0300

SPIKE							QC LIMITS	
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #		LOWER	UPPER
16939-65307	Silver	0.0500	-0.0028	0.0481	101.8		80.0	120.0
	Barium	2.0000	0.0384	1.9142	93.8		80.0	120.0
	Beryllium	0.0500	0.0000	0.0495	99.0		80.0	120.0
	Calcium	2.0000	86.3924	86.4119	1.0(2a)		80.0	120.0
	Cadmium	0.0500	-0.0020	0.0448	93.6		80.0	120.0
	Chromium	0.2000	-0.0027	0.1976	100.2		80.0	120.0
	Copper	0.2500	-0.0036	0.2394	97.2		80.0	120.0
	Iron	1.0000	0.0672	1.0533	98.6		80.0	120.0
	Magnesium	2.0000	61.7820	62.3159	26.7(2a)		80.0	120.0
	Molybdenum	0.5000	0.0188	0.5086	98.0		80.0	120.0
	Nickel	0.5000	0.0083	0.4915	96.6		80.0	120.0
	Lead	0.5000	0.0026	0.4837	96.2		80.0	120.0
	Selenium	2.0000	-0.0434	1.9466	99.5		80.0	120.0
	Zinc	0.5000	0.0100	0.5190	101.8		80.0	120.0

MSD							QC LIMITS		
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #		LOWER	UPPER	RPD # LIMIT
16939-65307	Silver	0.0500	-0.0028	0.0503	106.2		80.0	120.0	4.2 20.0
	Barium	2.0000	0.0384	1.9193	94.0		80.0	120.0	0.2 20.0
	Beryllium	0.0500	0.0000	0.0498	99.6		80.0	120.0	0.6 20.0
	Calcium	2.0000	86.3924	88.5230	106.5		80.0	120.0	196.3(1a) 20.0
	Cadmium	0.0500	-0.0020	0.0455	95.0		80.0	120.0	1.5 20.0
	Chromium	0.2000	-0.0027	0.1971	99.9		80.0	120.0	0.3 20.0
	Copper	0.2500	-0.0036	0.2378	96.6		80.0	120.0	0.6 20.0
	Iron	1.0000	0.0672	1.1618	109.5		80.0	120.0	10.5 20.0
	Magnesium	2.0000	61.7820	63.4749	84.6		80.0	120.0	104.0(1a) 20.0
	Molybdenum	0.5000	0.0188	0.5141	99.1		80.0	120.0	1.1 20.0
	Nickel	0.5000	0.0083	0.4784	94.0		80.0	120.0	2.7 20.0
	Lead	0.5000	0.0026	0.4859	96.7		80.0	120.0	0.5 20.0
	Selenium	2.0000	-0.0434	1.9902	101.7		80.0	120.0	2.2 20.0
	Zinc	0.5000	0.0100	0.5143	100.9		80.0	120.0	0.9 20.0

Analysis Batch Number : 16939-65307-10-97-61-43

Identification : 16939-Metals by ICP

Sequence : DATC191

Number of Samples : 17

Batch Data-Date/Time : 07-17-97 17:48:04

DUPLICATE

SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
16939-65307	Silver	0.0029	0.0000	200.0(11)	20.0	1.00
	Barium	0.0384	0.0372	3.2	20.0	1.00
	Beryllium	0.0000	0.0000	0.0	20.0	1.00
	Calcium	86.3924	85.0027	1.6	20.0	1.00
	Cadmium	0.0020	0.0000	200.0(11)	20.0	1.00
	Chromium	0.0027	0.0000	200.0(11)	20.0	1.00
	Copper	0.0036	0.0000	200.0(11)	20.0	1.00
	Iron	0.0672	0.0000	200.0(11)	20.0	1.00
	Magnesium	61.7820	61.0093	1.3	20.0	1.00
	Manganese	0.0188	0.0250	28.3(11)	20.0	1.00
	Nickel	0.0083	0.0090	8.1	20.0	1.00
	Lead	0.0026	0.0041	44.8(11)	20.0	1.00
	Selenium	0.0434	0.0000	200.0(11)	20.0	1.00
	Zinc	0.0100	0.0146	37.4(11)	20.0	1.00

CONTROL

SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	QC LIMITS	
LCSW-348	Silver	0.0546	0.0500	109.2	80.0	120.0
	Barium	1.9191	2.0000	96.0	80.0	120.0
	Beryllium	0.0500	0.0500	100.0	80.0	120.0
	Calcium	2.0202	2.0000	101.0	80.0	120.0
	Cadmium	0.0466	0.0500	93.2	80.0	120.0
	Chromium	0.1980	0.2000	99.0	80.0	120.0
	Copper	0.2438	0.2500	97.5	80.0	120.0
	Iron	0.9976	1.0000	99.8	80.0	120.0
	Magnesium	2.0176	2.0000	100.9	80.0	120.0
	Manganese	0.5003	0.5000	100.1	80.0	120.0
	Nickel	0.4950	0.5000	99.0	80.0	120.0
	Lead	0.4853	0.5000	97.1	80.0	120.0
	Selenium	1.9582	2.0000	97.9	80.0	120.0
	Zinc	0.5049	0.5000	101.0	80.0	120.0

QC LIMITS

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER	UPPER
ICV-	Silver	0.4000	0.3802	95.0	90.0	110.0
	Barium	4.0000	3.6894	92.2	90.0	110.0
	Beryllium	0.4000	0.3891	97.3	90.0	110.0
	Calcium	40.0000	39.2943	98.2	90.0	110.0
	Cadmium	4.0000	3.8005	95.0	90.0	110.0
	Chromium	4.0000	3.8931	97.3	90.0	110.0
	Copper	4.0000	3.7408	93.5	90.0	110.0
	Iron	4.0000	3.9100	97.8	90.0	110.0
	Magnesium	20.0000	19.6684	98.3	90.0	110.0
	Manganese	20.0000	19.5090	97.5	90.0	110.0
	Nickel	8.0000	7.6585	95.7	90.0	110.0
	Lead	20.0000	18.8092	94.0	90.0	110.0
	Selenium	1.6000	1.5154	94.7	90.0	110.0
	Zinc	4.0000	3.8687	96.7	90.0	110.0
CCV1--2	Silver	0.4000	0.3767	94.2	90.0	110.0

Analysis Batch Number: 10044-17 10 97- 61 45
 Identification: 10044-Metals by ICP
 Number of Samples: 17
 Batch Data-Date: 7/14/97 17:48:04

Sequence : DATC191

		QC LIMITS				
CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER	UPPER
CCV1--2	Barium	4.0000	3.6922	92.3	90.0	110.0
	Beryllium	0.4000	0.3881	97.0	90.0	110.0
	Calcium	40.0000	38.8853	97.2	90.0	110.0
	Cadmium	4.0000	3.7802	94.5	90.0	110.0
	Chromium	4.0000	3.8600	96.5	90.0	110.0
	Copper	4.0000	3.7528	93.8	90.0	110.0
	Iron	4.0000	3.8906	97.3	90.0	110.0
	Magnesium	20.0000	19.6898	98.4	90.0	110.0
	Molybdenum	20.0000	19.3015	96.5	90.0	110.0
	Nickel	8.0000	7.5882	94.9	90.0	110.0
	Lead	20.0000	18.7379	93.7	90.0	110.0
	Selenium	1.6000	1.5432	96.4	90.0	110.0
	Zinc	4.0000	3.8584	96.5	90.0	110.0
CCV2--3	Silver	0.4000	0.3840	96.0	90.0	110.0
	Barium	4.0000	3.8026	95.1	90.0	110.0
	Beryllium	0.4000	0.3999	100.0	90.0	110.0
	Calcium	40.0000	39.5944	99.0	90.0	110.0
	Cadmium	4.0000	3.8616	96.5	90.0	110.0
	Chromium	4.0000	3.9356	98.4	90.0	110.0
	Copper	4.0000	3.8680	96.7	90.0	110.0
	Iron	4.0000	3.9457	98.6	90.0	110.0
	Magnesium	20.0000	20.1030	100.5	90.0	110.0
	Molybdenum	20.0000	19.7958	99.0	90.0	110.0
	Nickel	8.0000	7.7643	97.1	90.0	110.0
	Lead	20.0000	19.0176	95.1	90.0	110.0
	Selenium	1.6000	1.5716	98.2	90.0	110.0
	Zinc	4.0000	3.9206	98.0	90.0	110.0
CCV3--4	Silver	0.4000	0.3785	94.6	90.0	110.0
	Barium	4.0000	3.6341	90.9	90.0	110.0
	Beryllium	0.4000	0.3901	97.5	90.0	110.0
	Calcium	40.0000	39.7141	99.3	90.0	110.0
	Cadmium	4.0000	3.8432	96.1	90.0	110.0
	Chromium	4.0000	3.9153	97.9	90.0	110.0
	Copper	4.0000	3.6893	92.2	90.0	110.0
	Iron	4.0000	3.9736	99.3	90.0	110.0
	Magnesium	20.0000	19.6759	98.4	90.0	110.0
	Molybdenum	20.0000	19.6636	98.3	90.0	110.0
	Nickel	8.0000	7.7123	96.4	90.0	110.0
	Lead	20.0000	18.9438	94.7	90.0	110.0
	Selenium	1.6000	1.4722	92.0	90.0	110.0
	Zinc	4.0000	3.9217	98.0	90.0	110.0

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Silver	ND	0.0060
	Barium	0.0003	0.0030
	Beryllium	ND	0.0002
	Calcium	0.0062	0.4000
	Cadmium	ND	0.0040
	Chromium	ND	0.0100

Analysis Batch Number: 16849-64971

Identification: 16849-Meth Lab 10F

Sequence: DATC191

Number of Samples: 7

Batch Data-Date/Time: 07/14/97 17:49:04

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

(2a) - Recovery: 100% (100% recovery sample conc. 100% spike added).

(1a) - RPD has no spikes due to insignificant spikes.

(11) - Both Durations are less than the MDL.

Groups: 16849-64971

16849-64971 16849-64972 16849-64973 16923-65238 16924-65259 16924-65260 16939-65307

Analysis Batch Number: 16939-65307

Identification: 16939-65307

Sequence: DATA97

Number of Samples: 3

Batch Data-Date: 07/14/97

BLANK#	ANALYST	CONC FOUND #	CONC LIMIT
PBW-348	A	1.000	0.0300
	P	1.000	0.1000
	S	1.000	0.2000

							QC LIMITS	
SAMPLE#	ANALYST	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #		LOWER	UPPER
16939-65307	A	2.0000	-0.0040	1.9531	97.9		80.0	120.0
	P	10.0000	4.6917	14.5836	98.9		80.0	120.0
	S	3.0000	66.1699	66.8673	23.2(2a)		80.0	120.0

							QC LIMITS			
SAMPLE#	ANALYST	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #		LOWER	UPPER	RPD #	LIMIT
16939-65307	A	2.0000	-0.0040	1.9688	98.5		80.0	120.0	0.7	20.0
	P	10.0000	4.6917	15.0645	103.7		80.0	120.0	4.7	20.0
	S	3.0000	66.1699	69.3435	105.8		80.0	120.0	128.1(2a)	20.0

							QC LIMITS	
SAMPLE#	ANALYST	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION		
16939-65307	A	-0.0040	0.0126	386.0(11)	20.0	1.00		
	P	4.6917	4.6337	1.2	20.0	1.00		
	S	66.1699	64.6447	2.3	20.0	1.00		

							QC LIMITS	
SAMPLE#	ANALYST	CONC FOUND	CONC KNOWN	% REC #	LOWER	UPPER		
LCSW-348	A	1.8896	2.0000	94.5	80.0	120.0		
	P	9.9704	10.0000	99.7	80.0	120.0		
	S	3.5928	3.0000	113.1	80.0	120.0		

							QC LIMITS	
DCV #	ANALYST	TRUE VALUE	BATCH READ	% REC #	LOWER	UPPER		
DCV-	A	1.6000	1.5334	95.8	90.0	110.0		
	P	40.0000	40.8083	102.0	90.0	110.0		
	S	40.0000	41.7806	104.5	90.0	110.0		
DCV1--2	A	1.6000	1.5356	96.0	90.0	110.0		
	P	40.0000	40.2876	100.7	90.0	110.0		
	S	40.0000	41.0704	102.7	90.0	110.0		
DCV2--3	A	1.6000	1.5225	95.2	90.0	110.0		
	P	40.0000	40.7369	101.8	90.0	110.0		
	S	40.0000	40.8427	102.1	90.0	110.0		
DCV3--4	A	1.6000	1.4989	93.7	90.0	110.0		
	P	40.0000	39.9136	99.8	90.0	110.0		
	S	40.0000	40.4596	101.1	90.0	110.0		
DCV4--5	A	1.6000	1.6039	100.2	90.0	110.0		
	P	40.0000	39.9675	99.9	90.0	110.0		
	S	40.0000	40.6287	101.6	90.0	110.0		
DCV5--6	A	1.6000	1.5909	99.4	90.0	110.0		
	P	40.0000	39.9105	99.8	90.0	110.0		
	S	40.0000	41.5958	104.0	90.0	110.0		

Analysis Batch: 1692191
 Identified: 1692191
 Number of Samples: 2
 Batch Data-Date: 7/14/97

Sequence : DATF191

CCB#	ANAL	CONC LIMIT
ICB-	ANAL	0.0300
	ANAL	0.1000
	ANAL	0.2000
CCB1-	ANAL	0.0300
	ANAL	0.1000
	ANAL	0.2000
CCB2-	ANAL	0.0300
	ANAL	0.1000
	ANAL	0.2000
CCB3-	ANAL	0.0300
	ANAL	0.1000
	ANAL	0.2000
CCB4-	ANAL	0.0300
	ANAL	0.1000
	ANAL	0.2000
CCB5-	ANAL	0.0300
	ANAL	0.1000
	ANAL	0.2000

Result Footnotes

Recovery is insufficient because sample conc. is 24x spike added.

(1) - Both Duplicate values are above the MDL.

Groups & Sub

16849-64971 1692191 1692191 1692191 16924-65259 16924-65260 16939-65307

CHAIN OF CUSTODY RECORD

6603

ON SITE

Date: 6/20/97

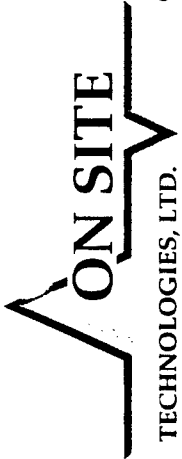
Page 1 of 1

TECHNOLOGIES, LTD. 657 W. Maple • P. O. Box 2046 • Farmington NM 87499
LAB: (505) 325-5067 • FAX: (505) 325-6256

Purchase Order No.: 5567		Job No.		
Name: ACCOUNTS REC.		Title:		
Company: ON SITE	Dept:	Company: ON SITE TECH		
Address:		Mailing Address:		
City, State, Zip:		City, State, Zip:		
Telephone No: 255 325 2432		Telefax No: 325-6256		
Sampling Location: SAMMERS 2				
Sampler: REG/MS				
SEND INVOICE TO	SAMPLE IDENTIFICATION	SAMPLE		PRES.
		DATE	TIME	
	9706251600 MWL-1	6/20/97	1600	1
	9706251630 MWL-2	6/20/97	1630	1
ANALYSIS REQUESTED				
Number of Containers				
RESULTS TO				
Name: DAVID CUY				
Company: ON SITE TECH				
Mailing Address:				
City, State, Zip:				
Telephone No: 255 325 2432				
Telefax No: 325-6256				
Date/Time: 6/20/97 1440				
Date/Time:				
Date/Time:				
Special Instructions: NOT FILTERED				
10 Working Days				
24-48 Hours				
Rush				
Received by: [Signature]				
Received by:				
Received by:				
Date/Time:				
Date/Time:				
Date/Time:				
Method of Shipment:				
Authorized by: (Client Signature Must Accompany Request)				

CHAIN OF CUS JDY RECORD

567



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

Date: 6/26/97

Page 1 of 1

Purchase Order No.:		Job No.	
Name		Denver Bearden	
Company		PNM Gas Services	
Address		603 W. Elm Street	
City, State, Zip		Farmington, NM 87401	
SEND INVOICE TO		Name: Maureen Gannon	
		Company: PNM Gas Services	
		Mailing Address: Alverado Square, Mail Stop 0408	
		City, State, Zip: Albuquerque, NM 87158	
		Telephone No.: 505-848-2974	
		Telefax No.:	
Sampling Location:		ANALYSIS REQUESTED	
Sampler: M.S. MG. B.K.			
SAMPLER IDENTIFICATION		LAB ID	
SAMPLE DATE		DATE	
SAMPLE TIME		PRES.	
MATRIX		CONTAINERS	
9706251600 MW-1		3	
9706251630 MW-2		3	
9706251700 MW-3		2	
9706251730 MW-4		2	
9706251800 MW-5		2	
9706251830 MW-6		2	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Method of Shipment:		Rush	
Authorized by:		Date: 6/26/97	
		Date/Time: 6/26/97 1800	
		Date/Time:	
		Date/Time:	
		Special Instructions:	
		Results to be sent to both parties.	

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: *1-Oct-97*
COC No.: *5840*
Sample No.: *16355*
Job No.: *2-1000*

Project Name: ***PNM Gas Services - Sammon 2***

Project Location: ***9709261200; MW-1***

Sampled by: *MS/MG* Date: *26-Sep-97* Time: *12:00*

Analyzed by: *DC* Date: *29-Sep-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: *10/1/97*

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: *1-Oct-97*
COC No.: *5840*
Sample No.: *16356*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammon 2*
Project Location: *9709261230; MW-2*
Sampled by: *MS/MG*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *26-Sep-97* Time: *12:30*
Date: *29-Sep-97*

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>	0.6	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	0.6	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	0.2	ug/L	0.2	ug/L
<i>o-Xylene</i>	0.5	ug/L	0.2	ug/L
<i>TOTAL</i>	1.9	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: *10/1/97*

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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: *1-Oct-97*
COC No.: *5840*
Sample No.: *16357*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammon 2*
Project Location: *9709261300; MW-3*
Sampled by: *MS/MG* Date: *26-Sep-97* Time: *13:00*
Analyzed by: *DC* Date: *29-Sep-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: *10/1/97*

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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: *1-Oct-97*
COC No.: *5840*
Sample No.: *16358*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammon 2*
Project Location: *9709261330; MW-4*
Sampled by: *MS/MG* Date: *26-Sep-97* Time: *13:30*
Analyzed by: *DC* Date: *29-Sep-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>	0.8	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	1.0	ug/L	0.2	ug/L
<i>o-Xylene</i>	0.3	ug/L	0.2	ug/L
<i>TOTAL</i>	2.0	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: *10/1/97*

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: *1-Oct-97*
COC No.: *5840*
Sample No.: *16359*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammon 2*
Project Location: *9709261400; MW-5*
Sampled by: *MS/MG* Date: *26-Sep-97* Time: *14:00*
Analyzed by: *DC* Date: *29-Sep-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: *Dale*
Date: *10/1/97*

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: *1-Oct-97*
COC No.: *5840*
Sample No.: *16360*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammon 2*

Project Location: *9709261430; MW-6*

Sampled by: *MS/MG*

Date: *26-Sep-97* Time: *14:30*

Analyzed by: *DC*

Date: *29-Sep-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>	0.9	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	1.1	ug/L	0.2	ug/L
<i>o-Xylene</i>	0.3	ug/L	0.2	ug/L
<i>TOTAL</i>	2.3	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: *10/1/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

QUALITY ASSURANCE REPORT
for EPA Method 8020

Date Analyzed: 29-Sep-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	18.9	6	15%
Toluene	ppb	20.0	19.8	1	15%
Ethylbenzene	ppb	20.0	19.6	2	15%
m,p-Xylene	ppb	40.0	38.3	4	15%
o-Xylene	ppb	20.0	19.6	2	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	Limit
Benzene	89	88	(39-150)	1	20%
Toluene	94	93	(46-148)	1	20%
Ethylbenzene	93	92	(32-160)	1	20%
m,p-Xylene	92	91	(35-145)	1	20%
o-Xylene	93	93	(35-145)	1	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)	
16355-5840	96				
16356-5840	96				
16357-5840	96				
16358-5840	96				
16359-5840	96			WY	(m)
16360-5840	95			10/10/97	10/11/97

S1: Fluorobenzene



CHAIN OF CUSTODY RECORD

840

Date: 9/26/97

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	
Company		PNM Gas Services	
Address		Alverado Square, Mail Stop 0408	
City, State, Zip		Albuquerque, NM 87158	
Telephone No.		505-848-2974	
Telefax No.			
SEND INVOICE TO		RESULTS TO	
Name		Company	
Company		PNM Gas Services	
Address		Alverado Square, Mail Stop 0408	
City, State, Zip		Albuquerque, NM 87158	
Telephone No.		505-848-2974	
Telefax No.			
Sampling Location:		ANALYSIS REQUESTED	
Sammons 2			
Sampler:		Number of Containers	
M.S.			
M.G.			
SAMPLE IDENTIFICATION		LAB ID	
9709261200 MW-1		16355-5840	
9709261230 MW-2		16356-	
9709261300 MW-3		16357-	
9709261330 MW-4		16358-	
9709261400 MW-5		16359-	
9709261430 MW-6		16360-	
Samples Fizz			
When HCL & water added			
Unable to get sample			
w/o bubbles			
Relinquished by:		Date/Time	
Relinquished by:		Date/Time	
Relinquished by:		Date/Time	
Method of Shipment:		Special Instructions:	
Authorized by:		Results to be sent to both parties.	

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1356

ANALYTICAL REPORT

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

Date: *6-Jan-98*
COC No.: *7168*
Sample No.: *17235*
Job No.: *2-1000*

Project Name: ***PNM Gas Services - Sammons 2***

Project Location: ***9712231300; MW-1***

Sampled by: *MS/RD/MG*

Date: *23-Dec-97* Time: *13:00*

Analyzed by: *DC*

Date: *5-Jan-98*

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>	0.2	ug/L	0.2	ug/L
<i>o-Xylene</i>	ND	ug/L	0.2	ug/L
<i>TOTAL</i>	0.2	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*

Date: *1/6/98*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1550

ANALYTICAL REPORT

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

Date: *6-Jan-98*
COC No.: *7168*
Sample No.: *17236*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammons 2*

Project Location: *9712231330; MW-2*

Sampled by: *MS/RD/MG*

Date: *23-Dec-97* Time: *13:30*

Analyzed by: *DC*

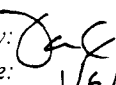
Date: *5-Jan-98*

Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	0.5	ug/L	0.2	ug/L
<i>Toluene</i>	1.9	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	1.2	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	2.3	ug/L	0.2	ug/L
<i>o-Xylene</i>	0.9	ug/L	0.2	ug/L
<i>TOTAL</i>	6.7	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: 

Date: *1/6/98*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1551

ANALYTICAL REPORT

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

Date: *6-Jan-98*
COC No.: *7168*
Sample No.: *17237*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammons 2*
Project Location: *9712231400; MW-3*
Sampled by: *MS/RD/MG* Date: *23-Dec-97* Time: *14:00*
Analyzed by: *DC* Date: *5-Jan-98*
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>	0.2	ug/L	0.2	ug/L
<i>o-Xylene</i>	0.4	ug/L	0.2	ug/L
<i>TOTAL</i>	0.6	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: *1/6/98*

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: *6-Jan-98*
COC No.: *7168*
Sample No.: *17238*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammons 2*
Project Location: *9712231430; MW-4*
Sampled by: *MS/RD/MG* Date: *23-Dec-97* Time: *14:30*
Analyzed by: *DC* Date: *5-Jan-98*
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>	1.2	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	1.5	ug/L	0.2	ug/L
<i>o-Xylene</i>	0.4	ug/L	0.2	ug/L
<i>TOTAL</i>	3.1	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: *1/6/98*

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: *6-Jan-98*
COC No.: *7168*
Sample No.: *17239*
Job No.: *2-1000*

Project Name: ***PNM Gas Services - Sammons 2***Project Location: ***9712231500; MW-5***Sampled by: *MS/RD/MG*Date: *23-Dec-97* Time: *15:00*Analyzed by: *DC*Date: *5-Jan-98*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: *1/6/98*

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: *6-Jan-98*
COC No.: *7168*
Sample No.: *17240*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Sammons 2*

Project Location: *9712231530; MW-6*

Sampled by: *MS/RD/MG*

Date: *23-Dec-97* Time: *15:30*

Analyzed by: *DC*

Date: *5-Jan-98*

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>	0.2	ug/L	0.2	ug/L
<i>o-Xylene</i>	0.4	ug/L	0.2	ug/L
<i>TOTAL</i>	0.7	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: *1/6/98*

P.O. BOX 2606 • FARMINGTON, NM 87499

QUALITY ASSURANCE REPORT

for EPA Method 8200

Date Analyzed: 5-Jan-98

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	20.2	1	15%
Toluene	ppb	20.0	21.1	5	15%
Ethylbenzene	ppb	20.0	21.3	6	15%
m,p-Xylene	ppb	40.0	41.1	3	15%
o-Xylene	ppb	20.0	21.1	5	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	RPD	Limit
Benzene	93	84	(39-150)	5	20%
Toluene	96	90	(46-148)	5	20%
Ethylbenzene	98	92	(32-160)	5	20%
m,p-Xylene	94	88	(35-145)	6	20%
o-Xylene	96	91	(35-145)	5	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)	
17235-7168	96				
17236-7168	95				
17237-7168	95				
17238-7168	98				
17239-7168	96			212	(12)
17240-7168	96			1/6/98	1/6/98

S1: Fluorobenzene

ON SITE

OFF: (505) 325-5007

LAB: (505) 325-1550

TECHNOLOGIES, LTD.

March 18, 1998

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

RE: Sammons 2

Order No.: 9803013

Dear Maureen Gannon,

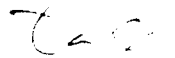
On Site Technologies, LTD. received 6 samples on 3/4/98 for the analyses presented in the following report.

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

ON SITE

OFF: 505-323-5667

LAB: 505-323-1756

TECHNOLOGIES, LTD.

Date: 18-Mar-98

CLIENT: PNM - Public Service Company of NM
Project: Sammons 2
Lab Order: 9803013

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.

ON SITE

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:	Sammons 2
Work Order:	9803013	Client Sample ID:	9803040945; MW-1
Lab ID:	9803013-01A	Matrix:	AQUEOUS
Project:	Sammons 2	Collection Date:	3 4 98 9:45:00 AM
		COC#:	7141

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		SW8021A		Analyst: DC		
Benzene	ND	0.5		µg/L	1	3/9/98
Toluene	ND	0.5		µg/L	1	3/9/98
Ethylbenzene	ND	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	94.1	70-130		%REC	1	3/9/98
Surr: 1,4-Difluorobenzene	94.9	70-130		%REC	1	3/9/98
Surr: 4-Bromochlorobenzene	92.2	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

ON SITE

OPE-505 125-5007

LAB-505 125-155

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 18-Mar-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Sammons 2
Work Order:	9803013	Client Sample ID:	9803041000: MW-2
Lab ID:	9803013-02A	Matrix:	AQUEOUS
Project:	Sammons 2	Collection Date:	3 4 98 10:00:00 AM
		COC#:	7141

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		SW8021A		Analyst: DC		
Benzene	ND	0.5		µg/L	1	3/9/98
Toluene	1	0.5		µg/L	1	3/9/98
Ethylbenzene	1.7	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	93.8	70-130		%REC	1	3/9/98
Surr: 1,4-Difluorobenzene	94.6	70-130		%REC	1	3/9/98
Surr: 4-Bromochlorobenzene	91.6	70-130		%REC	1	3/9/98

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

P.O. BOX 2606 • FARMINGTON, NM 87499

ON SITE

OIL 505 325-5807

LAB: 5.5. 05-135

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 18-Mar-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Sammons 2
Work Order:	9803013	Client Sample ID:	9803041015: MW-3
Lab ID:	9803013-03A	Matrix:	AQUEOUS
Project:	Sammons 2	Collection Date:	3 4 98 10:15:00 AM
		COC#:	7141

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID						Analyst: DC
SW8021A						
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	92.3	70-130		%REC	1	3/6/98
Surr: 1,4-Difluorobenzene	93.7	70-130		%REC	1	3/6/98
Surr: 4-Bromochlorobenzene	93.0	70-130		%REC	1	3/6/98

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

ON SITE

OPL 503 025-5007

LAB 151 025-1550

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 18-Mar-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Sammons 2
Work Order:	9803013	Client Sample ID:	9803041030; MW-4
Lab ID:	9803013-04A	Matrix:	AQUEOUS
Project:	Sammons 2	Collection Date:	3-4-98 10:30:00 AM
		COC#:	7141

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	1.9	0.5		µg/L	1	3/6/98
m,p-Xylene	ND	1		µg/L	1	3/6/98
o-Xylene	0.6	0.5		µg/L	1	3/6/98
Surr: Fluorobenzene	91.1	70-130		%REC	1	3/6/98
Surr: 1,4-Difluorobenzene	92.1	70-130		%REC	1	3/6/98
Surr: 4-Bromochlorobenzene	92.2	70-130		%REC	1	3/6/98

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

ON SITE

OFF: 505-825-5867

LAB: 505-825-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 18-Mar-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Sammons 2
Work Order:	9803013	Client Sample ID:	9803041045: MW-5
Lab ID:	9803013-05A	Matrix:	AQUEOUS
Project:	Sammons 2	Collection Date:	3-4-98 10:45:00 AM
		COC#:	7141

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	93.8	70-130		%REC	1	3/6/98
Surr: 4-Bromochlorobenzene	93.6	70-130		%REC	1	3/6/98

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

ON SITE

OFF: (505) 325-5667

LAB: (505) 325-1356

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 18-Mar-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Sammons 2
Work Order:	9803013	Client Sample ID:	9803041100: MW-6
Lab ID:	9803013-06A	Matrix:	AQUEOUS
Project:	Sammons 2	Collection Date:	3-4-98 11:00:00 AM
		COC#:	7141

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	92.2	70-130		%REC	1	3/6/98
Surr: 1,4-Difluorobenzene	93.9	70-130		%REC	1	3/6/98
Surr: 4-Bromochlorobenzene	92.4	70-130		%REC	1	3/6/98

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

On Site Technologies, LTD.

Date: 18-Mar-98

CLIENT: PNM Gas Services
 Work Order: 9803013
 Project: Sammons 2

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:	9803013	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: 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: 9803013
Project: Sammons 2

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: 9803013		Run ID: GC-1_980306A		PQL		SPK value		SeqNo: 815			
Analyte	Result	PQL		SPK value		SPK Ref Val		%REC		LowLimit HighLimit RPD Ref Val	
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: 9803013		Run ID: GC-1_980306A		PQL		SPK value		SeqNo: 817			
Analyte	Result	PQL		SPK value		SPK Ref Val		%REC		LowLimit HighLimit RPD Ref Val	
Benzene	502.5	5		400		93.74		102.2%		57 128	
Ethylbenzene	440.2	5		400		18.72		105.4%		78 107	
m,p-Xylene	836.4	10		800		33.49		100.4%		67 118	
o-Xylene	405.9	5		400		2.226		100.9%		78 107	
Toluene	426.3	5		400		15.73		102.6%		74 116	

Sample ID: 9803009-01AMS		Batch ID: GC-1_980306		Test Code: SW8021A		Units: µg/L		Analysis Date: 3/6/98		Prep Date:	
Client ID: 9803013		Run ID: GC-1_980306A		PQL		SPK value		SeqNo: 816			
Analyte	Result	PQL		SPK value		SPK Ref Val		%REC		LowLimit HighLimit RPD Ref Val	
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: 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

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate

CLIENT: PNM Gas Services

Work Order: 9803013

Project: Sammons 2

Sample ID: 9803009-01AMSD Batch ID: GC-1 980306 Test Code: SW8021A Units: µg/L Analysis Date: 3/6/98

Client ID:	9803013	Run ID:	GC-1_980306A	SeqNo:	818
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Prep Date:

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	

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	

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	

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	

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	

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	

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	

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	

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	

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	

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	

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

B3 - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 18-Mar-98

CLIENT: PNM Gas Services
Work Order: 9803013
Project: Sammons 2

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:	9803013	Batch ID:	GC-1_980306A	Run ID:	GC-1_980306A			SeqNo:	813	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPD Limit	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: 9803013
Project: Sammons 2

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:		9803013	Run ID: GC-1_980306A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	21.8			0.5	20	0	109.0%	85	115				
Ethylbenzene	22.42			0.5	20	0	112.1%	85	115				
m,p-Xylene	42.28			1	40	0	105.7%	85	115				
o-Xylene	21.58			0.5	20	0	107.9%	85	115				
Toluene	21.56			0.5	20	0	107.8%	85	115				
1,4-Difluorobenzene	92.77			0	100	0	92.8%	70	130				
4-Bromochlorobenzene	92.72			0	100	0	92.7%	70	130				
Fluorobenzene	91.51			0	100	0	91.5%	70	130				

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:		9803013	Run ID: GC-1_980306A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	21.29			0.5	20	0	106.5%	85	115				
Ethylbenzene	21.93			0.5	20	0	109.7%	85	115				
m,p-Xylene	41.51			1	40	0	103.8%	85	115				
o-Xylene	21.33			0.5	20	0	106.6%	85	115				
Toluene	21.11			0.5	20	0	105.5%	85	115				
1,4-Difluorobenzene	92.68			0	100	0	92.7%	70	130				
4-Bromochlorobenzene	92.7			0	100	0	92.7%	70	130				
Fluorobenzene	91.54			0	100	0	91.5%	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

H - Analyte detected in the associated Method Blank

CLIENT: PNM Gas Services
Work Order: 9803013
Project: Sammons 2

QC SUMMARY REPORT

Continuing Calibration Verification Standard

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:		9803013	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				
1,1,4-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:		9803013		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: 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: 9803013
 Project: Sammons 2

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:	9803013	Run ID: GC-1_980309A		SeqNo: 838	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val RPD Limit Qual
Benzene	.0562	0.5			
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:	9803013	Run ID: GC-1_980309A		SeqNo: 839	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val RPD Limit 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 S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

On Site Technologies, LTD.

Date: 18-Mar-98

CLIENT: PNM Gas Services
 Work Order: 9803013
 Project: Sammons 2

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9803014-04AMS		Batch ID: GC-1_980309	Test Code: SW8021A	Units: µg/L	Analysis Date: 3/9/98		Prep Date:
Client ID: 9803013		Run ID: GC-1_980309A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 840
Analyte	Result						
Benzene	432.7	5	5	400	15.69	104.3%	57 128
Ethylbenzene	482.7	5	5	400	80.82	100.5%	78 107
m,p-Xylene	2404	10	10	800	1553	106.3%	67 118
o-Xylene	411.3	5	5	400	8.054	100.8%	78 107
Toluene	423.8	5	5	400	26.23	99.4%	74 116

Sample ID: 9803014-04AMSD		Batch ID: GC-1_980309	Test Code: SW8021A	Units: µg/L	Analysis Date: 3/9/98		Prep Date:
Client ID: 9803013		Run ID: GC-1_980309A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 841
Analyte	Result						
Benzene	420.4	5	5	400	15.69	101.2%	57 128
Ethylbenzene	471.9	5	5	400	80.82	97.8%	78 107
m,p-Xylene	2344	10	10	800	1553	98.9%	67 118
o-Xylene	403.7	5	5	400	8.054	98.9%	78 107
Toluene	414.7	5	5	400	26.23	97.1%	74 116

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: 9803013
Project: Sammons 2

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:		9803013		Run ID: GC-1_980309A				SeqNo: 837			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.38	0.5	40	0.0562	100.8%	84	114				
Ethylbenzene	41.14	0.5	40	0	102.9%	86	118				
m,p-Xylene	78.63	1	80	0	98.3%	50	150				
o-Xylene	40.18	0.5	40	0	100.4%	49	147				
Toluene	40.03	0.5	40	0.1089	99.8%	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: 9803013
Project: Sammons 2

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		Prep Date:	
Client ID:		9803013		Run ID:		GC-1_980309A		SeqNo: 833			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.07	0.5	20	0	105.4%	85	115				
Ethylbenzene	21.08	0.5	20	0	105.4%	85	115				
m,p-Xylene	40.25	1	40	0	100.6%	85	115				
o-Xylene	20.89	0.5	20	0	104.4%	85	115				
Toluene	20.92	0.5	20	0	104.6%	85	115				
1,4-Difluorobenzene	95.09	0	100	0	95.1%	70	130				
4-Bromochlorobenzene	91.46	0	100	0	91.5%	70	130				
Fluorobenzene	93.8	0	100	0	93.8%	70	130				

Sample ID: CCV2 QC0529/30	Batch ID: GC-1_980309	Test Code: SW8021A	Units: µg/L	Analysis Date: 3/9/98		Prep Date:					
Client ID:	9803013	Run ID:	GC-1_980309A	SeqNo:	834						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	1 PD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.36	0.5	20	0	101.8%	85	115				
Ethylbenzene	20.99	0.5	20	0	105.0%	85	115				
m,p-Xylene	39.6	1	40	0	99.0%	85	115				
o-Xylene	20.27	0.5	20	0	101.4%	85	115				
Toluene	20.26	0.5	20	0	101.3%	85	115				
1,4-Difluorobenzene	94.88	0	100	0	94.9%	70	130				
4-Bromochlorobenzene	91.16	0	100	0	91.2%	70	130				
Fluorobenzene	94.06	0	100	0	94.1%	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

CLIENT: PNM Gas Services

Work Order: 9803013

Project: Sammons 2

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: 9803013	Run ID: GC-1_980309A	PQL	SPK value	SeqNo: 835	
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
Benzene	22	0.5	20	85	115
Ethylbenzene	22.52	0.5	20	85	115
m,p-Xylene	42.59	1	40	85	115
o-Xylene	21.97	0.5	20	85	115
Toluene	21.92	0.5	20	85	115
1,4-Difluorobenzene	94.09	0	100	70	130
4-Bromochlorobenzene	90.22	0	100	70	130
Fluorobenzene	93.51	0	100	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: 9803013	Run ID: GC-1_980309A	PQL	SPK value	SeqNo: 836	
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
Benzene	20.83	0.5	20	85	115
Ethylbenzene	21.37	0.5	20	85	115
m,p-Xylene	40.52	1	40	85	115
o-Xylene	20.89	0.5	20	85	115
Toluene	20.71	0.5	20	85	115
1,4-Difluorobenzene	94.24	0	100	70	130
4-Bromochlorobenzene	91.05	0	100	70	130
Fluorobenzene	93.28	0	100	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 on the associated Method Blank

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