

3R - 333

# REPORTS

DATE:

Nov 1 - Aug. 1, 1996

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

November 1, 1996

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



**RE: SAN JUAN BASIN 3RD QUARTER 1996 GROUNDWATER REPORT**

Dear Bill:

PNM Gas Services, PNMGS, (formerly Gas Company of New Mexico) is pleased to submit the 3rd Quarter 1996 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 is provided below.

Abrams Gas/Com L1  
Cozzens B1  
Cozzens B1E  
Florance 32A  
Florance 44  
Florance 124  
Honolulu Loop-Line Drip  
Kaufmann 1  
McCoy A1A  
Templeton 1E  
Zachry 18E

**RECEIVED**

NOV 04 1996

Environmental Bureau  
Oil Conservation Division

PNM hereby requests two modifications of our Groundwater Management Program Unlined Surface Impoundment Closures submitted to OCD in March of 1996:

- PNM wishes to file annual groundwater progress reports to the OCD instead of quarterly reporting. Concerning sites with problematic or unusual activities, we will prepare individual reports to the OCD between annual reports as necessary. We will also file closure reports on groundwater sites as remediation is completed.
- PNM also asks for an exemption from notifying the OCD 48 hours in advance of any major sampling event or related activity at a groundwater site. We invite OCD to participate in our sampling events at any time. Please feel free to call Denver Bearden or me to schedule a time in the field with us.

If you have any questions regarding the contents of this report or the proposed modifications, please contact me at (505) 241-2974.

Sincerely,  
PNM Environmental Services Department

A handwritten signature in cursive script, appearing to read 'Maureen Gannon'.

Maureen Gannon  
Project Manager

Attachment

cc: Denver Bearden, PNMGS  
Denny Foust, OCD-Aztec Office  
Leigh Gooding, WFS

bcc: Colin Adams (w/o analytical results)  
Ron Johnson (w/o analytical results)  
Toni Ristau (w/o analytical results)  
Mark Sikelianos (w/o analytical results)

PNMGS Well Site: **McCoy AIA**

## **Groundwater Site Summary Report**

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

Quarter: 3 Year: 96

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Operator: Amoco  
Sec: 18 Twn: 31 Rng: 10 Unit: F  
Canyon: Animas River

Vulnerable Class: Original  
OCD Ranking: 40  
Lead Agency: NMOCD

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Topo Map: previously submitted  
Groundwater Contour Map: Figure 1  
Water Level Elevations Figure 2  
Site Map with Analysis: Figure 3  
Well Completion Diagram: previously submitted  
Analytical Results: attached

### **Activities for Quarter:**

PNM performed quarterly groundwater sampling at the McCoy AIA well site on August 20, 1996. Water level measurements were taken in each of the five monitoring wells. PNM conducted groundwater sampling of each well for chemical analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8020. Sampling was performed in strict compliance with EPA protocol. PNM hand-delivered samples to OnSite Technologies, Farmington, New Mexico.

### **Conclusions and Recommendations:**

Figure 1 is the groundwater contour map of the site for the third quarter of 1996. Groundwater flows in a southwestern direction beneath the site. The gradient has changed since the initial round of water level measurements were taken in March of this year. At that time, groundwater traveled in a northwesterly direction. The change in gradient direction may be attributed to the seasonal fluctuations of the river that borders three-fourths of the property. Figure 2 is the third quarter groundwater elevation for each well.

Figure 3 provides the BTEX concentrations in each monitoring well at the site. BTEX concentrations were below detection levels in all wells except for MW-5. The benzene concentration in MW-5 was determined to be 0.2 ppb which is below the WQCC standard of 10 ppb.

### **Future Actions:**

PNM will continue to monitor the groundwater gradient and perform quarterly sampling for BTEX at the site.

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### **Public Service Company of New Mexico - Gas Services**

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

**Contact: Maureen Gannon**

**Telephone: 505-241-2974**

Figure 1. McCoy A1A Groundwater Contour Map (August 1996)

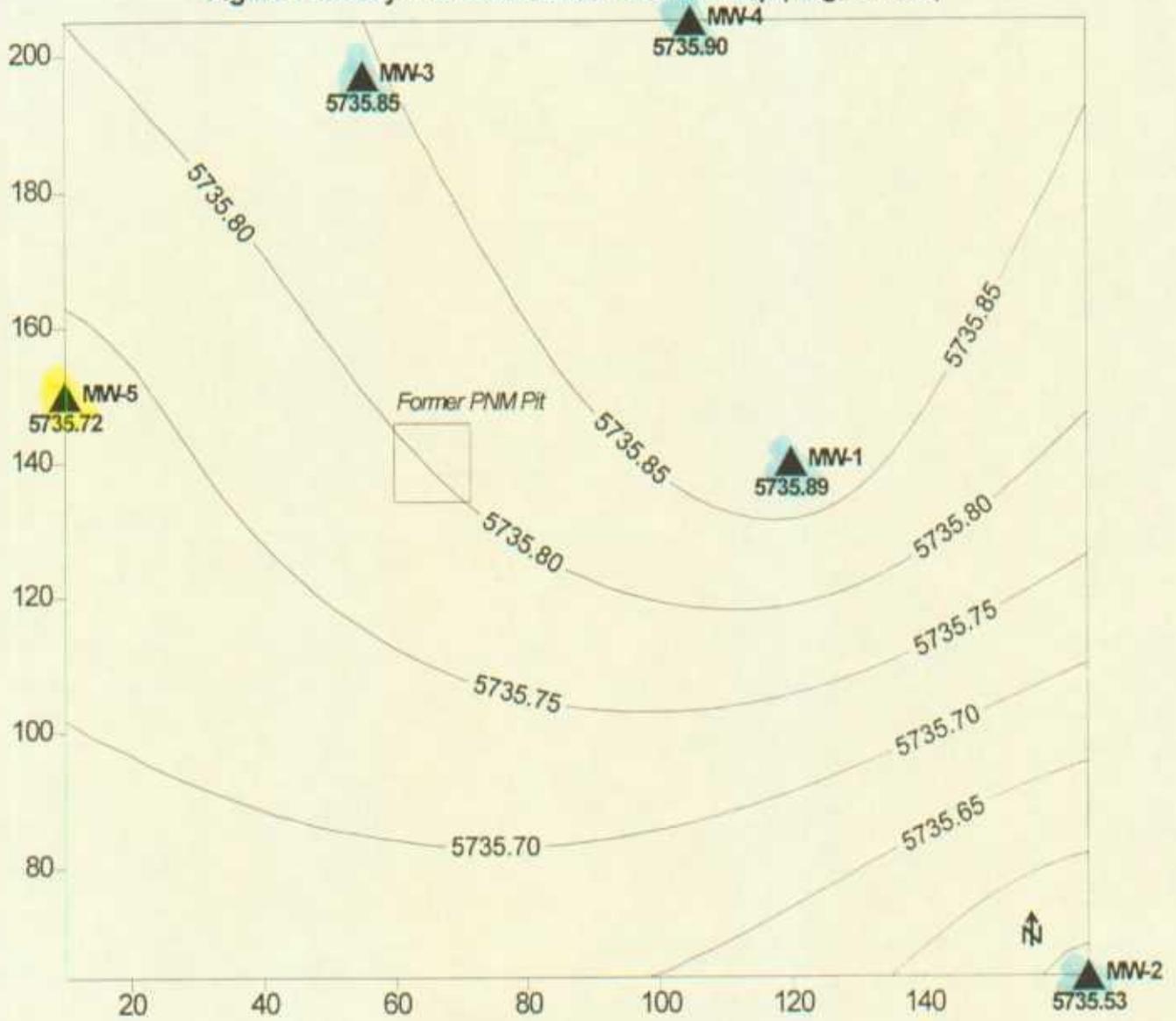
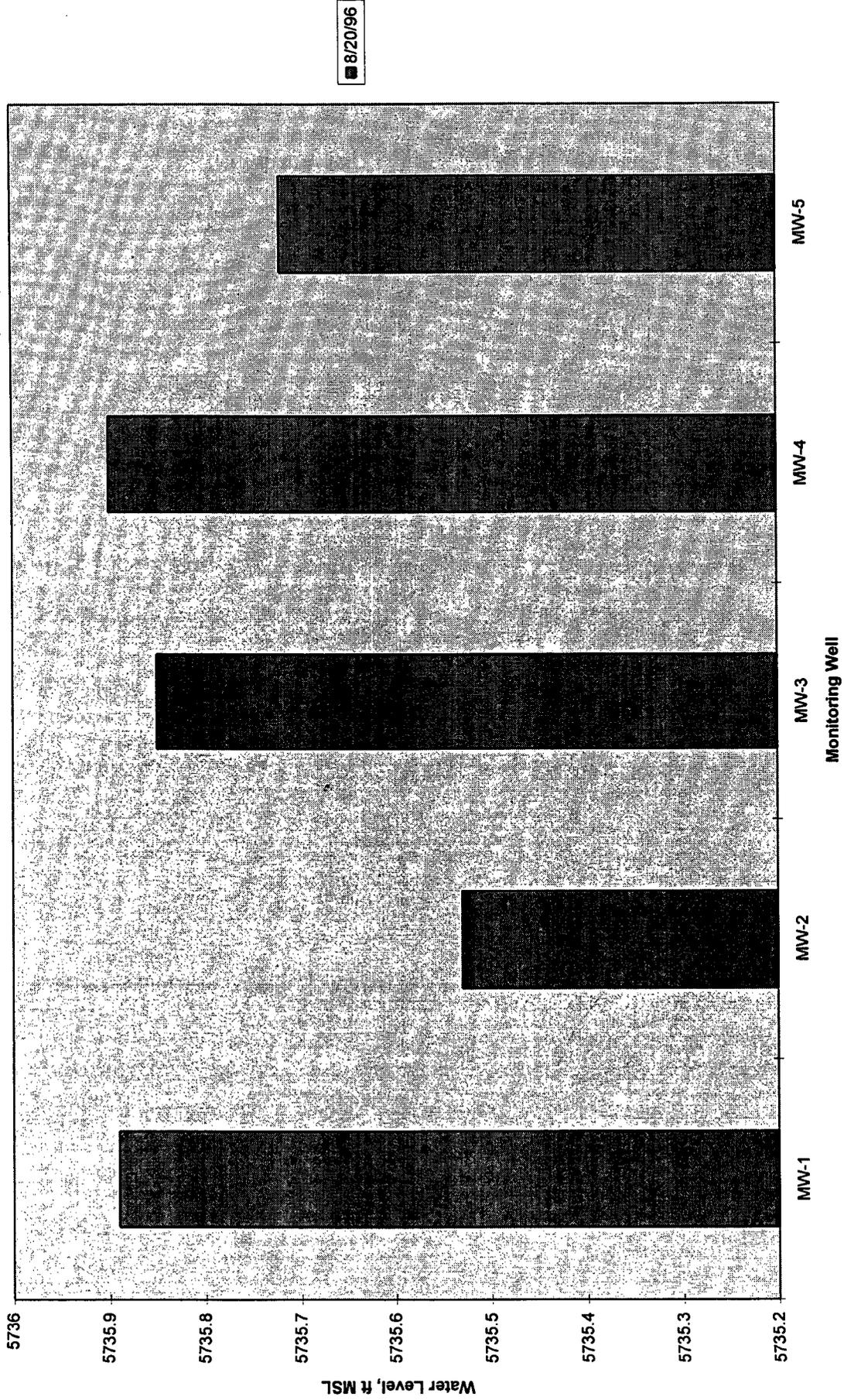
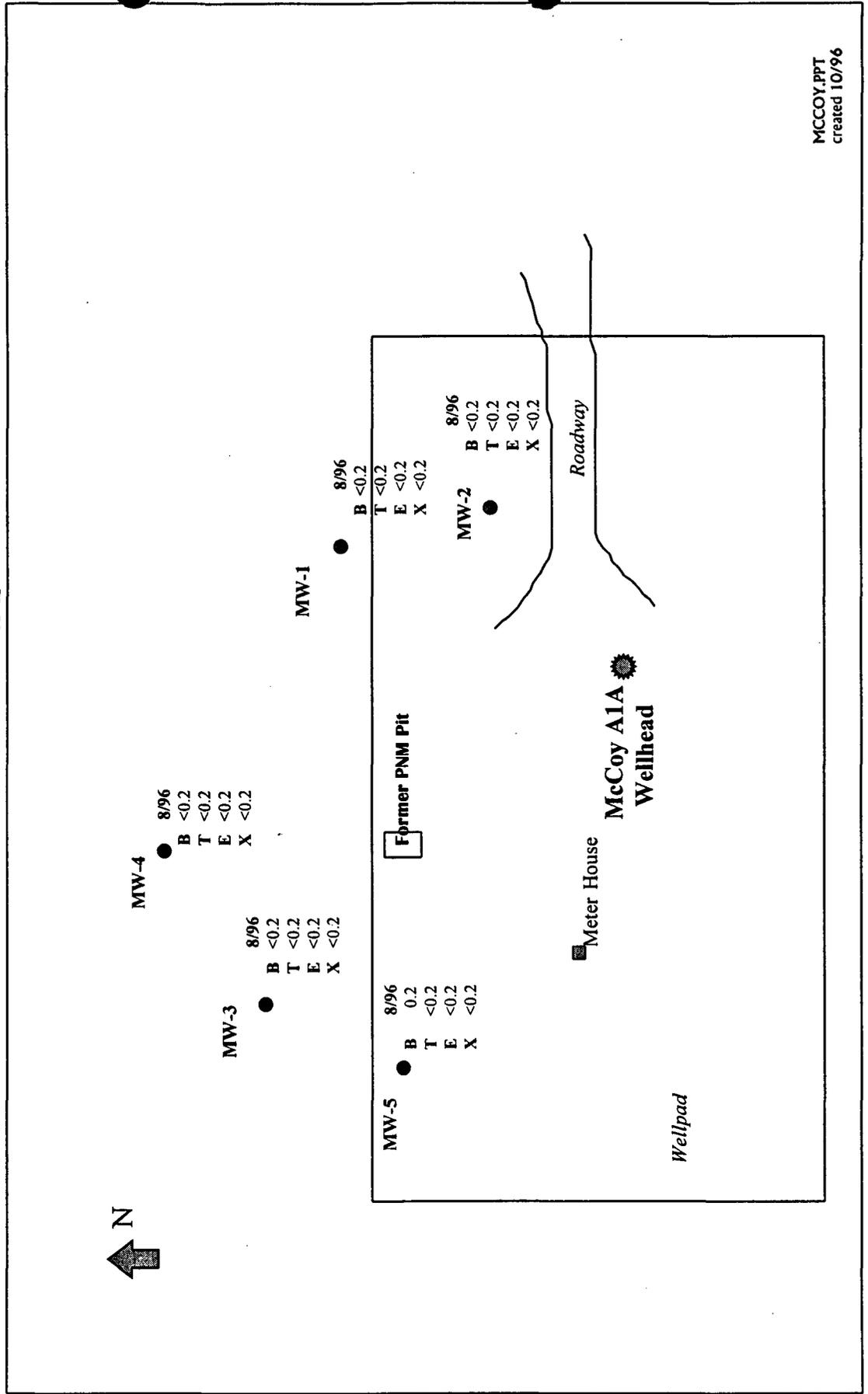


Figure 2. Third Quarter Groundwater Level Elevations  
McCoy A1A Well Site



**Figure 3. McCoy AIA  
Well Locations & Analytical Results  
(Concentrations in ppb)**



OFF: (505) 325-5667



LAB: (505) 325-1556

**AROMATIC VOLATILE ORGANICS**

Attn: *Maureen Gannon*  
 Company: *PNM Gas Services*  
 Address: *Alevardo Square, Mail Stop 0408*  
 City, State: *Albuquerque, NM 87158*

Date: *22-Aug-96*  
 COC No.: *4993*  
 Sample No. *11850*  
 Job No. *2-1000*

Project Name: ***PNM Gas Services - McCoy A1A Well Site***

Project Location: ***9608201400; MW-1***

Sampled by: *MG* Date: *20-Aug-96* Time: *14:00*

Analyzed by: *DC* Date: *21-Aug-96*

Sample Matrix: *Water*

**Laboratory Analysis**

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Benzene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
	<i>TOTAL</i>	<i>&lt;0.2</i>		<i>ug/L</i>

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

Approved by: *[Signature]*  
 Date: *8/22/96*

OFF: (505) 325-5667



LAB: (505) 325-1556

### AROMATIC VOLATILE ORGANICS

Attn: *Maureen Gannon*  
 Company: *PNM Gas Services*  
 Address: *Alevarado Square, Mail Stop 0408*  
 City, State: *Albuquerque, NM 87158*

Date: *22-Aug-96*  
 COC No.: *4993*  
 Sample No. *11851*  
 Job No. *2-1000*

Project Name: *PNM Gas Services - McCoy A1A Well Site*  
 Project Location: *9608201430; MW-2*  
 Sampled by: *MG* Date: *20-Aug-96* Time: *14:30*  
 Analyzed by: *DC* Date: *21-Aug-96*  
 Sample Matrix: *Water*

#### Laboratory Analysis

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Benzene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
	<i>TOTAL</i>	<i>&lt;0.2</i>		<i>ug/L</i>

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

Approved by: *DC*  
 Date: *8/22/96*

OFF: (505) 325-5667



LAB: (505) 325-1556

**AROMATIC VOLATILE ORGANICS**

Attn: *Maureen Gannon*  
 Company: *PNM Gas Services*  
 Address: *Alevarado Square, Mail Stop 0408*  
 City, State: *Albuquerque, NM 87158*

Date: *22-Aug-96*  
 COC No.: *4993*  
 Sample No. *11852*  
 Job No. *2-1000*

Project Name: *PNM Gas Services - McCoy A1A Well Site*  
 Project Location: *9608201500; MW-3*  
 Sampled by: *MG* Date: *20-Aug-96* Time: *15:00*  
 Analyzed by: *DC* Date: *21-Aug-96*  
 Sample Matrix: *Water*

**Laboratory Analysis**

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Benzene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
	<i>TOTAL</i>	<i>&lt;0.2</i>		<i>ug/L</i>

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

Approved by: *Jag*  
 Date: *8/22/96*

OFF: (505) 325-5667



LAB: (505) 325-1556

**AROMATIC VOLATILE ORGANICS**

Attn: *Maureen Gannon*  
 Company: *PNM Gas Services*  
 Address: *Alevarado Square, Mail Stop 0408*  
 City, State: *Albuquerque, NM 87158*

Date: *22-Aug-96*  
 COC No.: *4993*  
 Sample No. *11853*  
 Job No. *2-1000*

Project Name: *PNM Gas Services - McCoy A1A Well Site*  
 Project Location: *9608201530; MW-4*  
 Sampled by: *MG* Date: *20-Aug-96* Time: *15:30*  
 Analyzed by: *DC* Date: *21-Aug-96*  
 Sample Matrix: *Water*

**Laboratory Analysis**

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Benzene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
	<i>TOTAL</i>	<i>&lt;0.2</i>		<i>ug/L</i>

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

Approved by: *JG*  
 Date: *8/22/96*

OFF: (505) 325-5667



LAB: (505) 325-1556

**AROMATIC VOLATILE ORGANICS**

Attn: *Maureen Gannon*  
 Company: *PNM Gas Services*  
 Address: *Alevarado Square, Mail Stop 0408*  
 City, State: *Albuquerque, NM 87158*

Date: *22-Aug-96*  
 COC No.: *4993*  
 Sample No. *11854*  
 Job No. *2-1000*

Project Name: *PNM Gas Services - McCoy A1A Well Site*  
 Project Location: *9608201600; MW-5*  
 Sampled by: *MG* Date: *20-Aug-96* Time: *16:00*  
 Analyzed by: *DC* Date: *21-Aug-96*  
 Sample Matrix: *Water*

*Laboratory Analysis*

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Benzene</i>	<i>0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>0.2</i>	<i>ug/L</i>		

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

Approved by: *DAG*  
 Date: *8/22/96*

OFF: (505) 325-5667



LAB: (505) 325-1556

**AROMATIC VOLATILE ORGANICS**

Attn: *Maureen Gannon*  
 Company: *PNM Gas Services*  
 Address: *Alevarado Square, Mail Stop 0408*  
 City, State: *Albuquerque, NM 87158*

Date: *22-Aug-96*  
 COC No.: *4993*  
 Sample No. *11855*  
 Job No. *2-1000*

Project Name: *PNM Gas Services - McCoy A1A Well Site*  
 Project Location: *9608201545; MW-6 Dup MW-4*  
 Sampled by: *MG* Date: *20-Aug-96* Time: *15:45*  
 Analyzed by: *DC* Date: *21-Aug-96*  
 Sample Matrix: *Water*

*Laboratory Analysis*

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Benzene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>&lt;0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
	<i>TOTAL</i>	<i>&lt;0.2</i>		<i>ug/L</i>

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

Approved by: *JCY*  
 Date: *8/22/96*



**QUALITY ASSURANCE REPORT**  
for EPA Method 8020

Date Analyzed: 21-Aug-96

Internal QC No.: 0486-QC  
Surrogate QC No.: 0488-QC  
Reference Standard QC No.: 0417-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	20.0	0	15%
Toluene	ppb	20.0	22.4	12	15%
Ethylbenzene	ppb	20.0	21.5	7	15%
m,p-Xylene	ppb	40.0	42.3	6	15%
o-Xylene	ppb	20.0	21.5	7	15%

**Matrix Spike**

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	93	92	(39-150)	1	20%
Toluene	99	98	(46-148)	1	20%
Ethylbenzene	102	101	(32-160)	1	20%
m,p-Xylene	99	99	(35-145)	1	20%
o-Xylene	100	99	(35-145)	1	20%

**Surrogate Recoveries**

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limit Percent Recovered	(70-130)	
11850-4993	100	
11851-4993	100	
11852-4993	100	
11853-4993	100	
11854-4993	100	
11855-4993	100	

S1: Fluorobenzene



August 28, 1996

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

Reference:

Project: Liquid Waste Sample  
Project No.: PNM1002  
MSAI Group: 13232

Dear Mr. Cox:

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

9608201530 MW4

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.

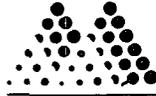
Thank you for selecting Mountain States Analytical, Inc. to serve as your analytical laboratory on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

With Regards,

A handwritten signature in cursive script, reading "Rolf E. Larsen".

Rolf E. Larsen  
Project Manager



## Mountain States Analytical

The Quality Solution

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

Attn: Mr. David Cox  
Project: Liquid Waste Sample

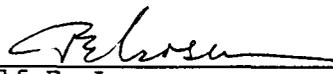
Sample ID: 9608201530 MW4  
Matrix: Liquid Waste

MSAI Sample: 51998  
MSAI Group: 13232  
Date Reported: 08/28/96  
Discard Date: 09/27/96  
Date Submitted: 08/22/96  
Date Sampled: 08/20/96  
Collected by: MG  
Purchase Order: 4993  
Project No.: PNM1002

Test Analysis	Results as Received	Units	Limit of Quantitation
0246D Barium by ICP, w/ww, Dissolved Method: SW-846 6010A	0.06	mg/l	0.02
0255F Lead by ICP, Dissolved Method: SW-846 6010A	ND	mg/l	0.15
0392I Flame/ICP Prep for Metals, Waters Method: SW-846 3005A	Complete		
0939 Sample Filtering Method: MSAI IN-HOUSE	Complete		

ND - Not detected at the limit of quantitation

Respectfully Submitted,  
Reviewed and Approved by:

  
Rolf E. Larsen  
Project Manager

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

08/28/96  
 11:26:08  
 Group: 13232

Analysis Batch Number: ICPWA-08/28/96-010 -1  
 Test Identification : ICPWA-Metals by ICP  
 Number of Samples : 10  
 Batch Data-Date/Time : 08/28/96 / 11:03:04

Sequence : DATA240

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
PBW1-576	Aluminum	0.0100	0.2000
	Barium	ND	0.2000
	Chromium	0.0022	0.0100
	Lead	0.0005	0.0500
	Sodium	0.0586	1.0000
PBW2-576-2	Aluminum	0.0003	0.2000
	Barium	ND	0.2000
	Chromium	ND	0.0100
	Lead	0.0029	0.0500
	Sodium	0.0266	1.0000

SPIKE

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	QC LIMITS	
						LOWER	UPPER
13278-52119	Aluminum	4.0000	0.1620	4.1650	100.1	80.0	120.0
	Barium	4.0000	0.0411	3.9200	97.0	80.0	120.0
	Chromium	0.4000	0.0012	0.4073	101.5	80.0	120.0
	Lead	1.0000	0.0013	0.9848	98.4	80.0	120.0
	Sodium	6.0000	2.8044	9.1681	106.1	80.0	120.0

MSD

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	QC LIMITS		RPD #	LIMIT
						LOWER	UPPER		
13278-52119	Aluminum	4.0000	0.1620	4.1796	100.4	80.0	120.0	0.3	20.0
	Barium	4.0000	0.0411	3.9354	97.4	80.0	120.0	0.4	20.0
	Chromium	0.4000	0.0012	0.4069	101.4	80.0	120.0	0.1	20.0
	Lead	1.0000	0.0013	1.0136	101.2	80.0	120.0	2.8	20.0
	Sodium	6.0000	2.8044	9.3442	109.0	80.0	120.0	2.7	20.0

DUPLICATE

SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
13278-52119	Aluminum	0.1620	0.1696	4.6	20.0	1.00
	Barium	0.0411	0.0417	1.4	20.0	1.00
	Chromium	0.0012	0.0012	0.0	20.0	1.00
	Lead	0.0013	0.0000	200.0(11)	20.0	1.00
	Sodium	2.8044	2.9268	4.3	20.0	1.00

CONTROL

SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	QC LIMITS	
					LOWER	UPPER
LCSW-576	Aluminum	3.9221	4.0000	98.1	80.0	120.0
	Barium	3.9210	4.0000	98.0	80.0	120.0
	Chromium	0.4145	0.4000	103.6	80.0	120.0
	Lead	1.0257	1.0000	102.6	80.0	120.0
	Sodium	6.0390	6.0000	100.6	80.0	120.0

CCV #

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS	
					LOWER	UPPER
ICV-	Aluminum	20.0000	19.7409	98.7	90.0	110.0
	Barium	4.0000	3.8543	96.4	90.0	110.0
	Chromium	4.0000	4.0100	100.3	90.0	110.0
	Lead	20.0000	19.5249	97.6	90.0	110.0
	Sodium	40.0000	39.8984	99.7	90.0	110.0

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

08/28/96  
 11:26:10  
 Group: 13232

Analysis Batch Number: ICPWA-08/28/96-010 -1  
 Test Identification : ICPWA-Metals by ICP  
 Number of Samples : 10  
 Batch Data-Date/Time : 08/28/96 / 11:03:04

Sequence : DATA240

QC LIMITS

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER	UPPER
CCV1--2	Aluminum	20.0000	19.4024	97.0	90.0	110.0
	Barium	4.0000	3.8037	95.1	90.0	110.0
	Chromium	4.0000	3.9905	99.8	90.0	110.0
	Lead	20.0000	19.3786	96.9	90.0	110.0
	Sodium	40.0000	39.0755	97.7	90.0	110.0
CCV1--3	Aluminum	20.0000	19.5472	97.7	90.0	110.0
	Barium	4.0000	3.8258	95.6	90.0	110.0
	Chromium	4.0000	3.9456	98.6	90.0	110.0
	Lead	20.0000	19.1931	96.0	90.0	110.0
	Sodium	40.0000	39.7773	99.4	90.0	110.0
CCV2--4	Aluminum	20.0000	19.4820	97.4	90.0	110.0
	Barium	4.0000	3.8091	95.2	90.0	110.0
	Chromium	4.0000	3.9602	99.0	90.0	110.0
	Lead	20.0000	19.2109	96.1	90.0	110.0
	Sodium	40.0000	39.9110	99.8	90.0	110.0
CCV3--5	Aluminum	20.0000	18.7547	93.8	90.0	110.0
	Barium	4.0000	3.6493	91.2	90.0	110.0
	Chromium	4.0000	3.7452	93.6	90.0	110.0
	Lead	20.0000	18.3461	91.7	90.0	110.0
	Sodium	40.0000	38.9311	97.3	90.0	110.0
CCV4--6	Aluminum	20.0000	18.9155	94.6	90.0	110.0
	Barium	4.0000	3.6512	91.3	90.0	110.0
	Chromium	4.0000	3.8429	96.1	90.0	110.0
	Lead	20.0000	18.8450	94.2	90.0	110.0
	Sodium	40.0000	39.0337	97.6	90.0	110.0

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Aluminum	0.0022	0.2000
	Barium	ND	0.2000
	Chromium	ND	0.0100
	Lead	ND	0.0500
	Sodium	ND	1.0000
CCB1-	Aluminum	ND	0.2000
	Barium	ND	0.2000
	Chromium	ND	0.0100
	Lead	ND	0.0500
	Sodium	ND	1.0000
CCB1-	Aluminum	0.0129	0.2000
	Barium	ND	0.2000
	Chromium	ND	0.0100
	Lead	ND	0.0500
	Sodium	ND	1.0000
CCB2-	Aluminum	0.0119	0.2000
	Barium	ND	0.2000
	Chromium	ND	0.0100
	Lead	ND	0.0500
	Sodium	0.0165	1.0000
CCB3-	Aluminum	0.0003	0.2000
	Barium	ND	0.2000

Analysis Batch Number: ICPWA-08/28/96-010 -1  
 Test Identification : ICPWA-Metals by ICP  
 Number of Samples : 10  
 Batch Data-Date/Time : 08/28/96 / 11:03:04

Sequence : DATA240

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
CCB3-	Chromium	0.0025	0.0100
	Lead	0.0209	0.0500
	Sodium	0.1237	1.0000
CCB4-	Aluminum	ND	0.2000
	Barium	ND	0.2000
	Chromium	ND	0.0100
	Lead	ND	0.0500
	Sodium	0.0191	1.0000

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

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

Groups & Samples

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13227-51980	13232-51998	13242-52065	13278-52119	13278-52120	13278-52121	13278-52122	13278-52123
13278-52124	13281-52129						

# CHAIN OF CUSTODY RECORD



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

Date: 8/21/96

Purchase Order No.: 4993		Job No. PNM1002	
Name ACCOUNTS PAYABLE		Dept.	
Company ON SITE			
Address P.O. BOX 2606			
City, State, Zip FARMINGTON, NM 87499			
Sampling Location: MCCOY AIA WELL SITE			
Sampler: MS			
SEND INVOICE TO		RESULTS TO	
Name DAVID COX		Title	
Company ON SITE TECH			
Mailing Address 612 E MUMFORD DRIVE			
City, State, Zip FARMINGTON, NM 87401			
Telephone No. 505 325 2432		Telex No. 505 325 6256	
ANALYSIS REQUESTED			
Number of Containers		LAB ID	
1		11853-4993	
DISCLOSED (Revised)			
SAMPLE IDENTIFICATION		SAMPLE MATRIX PRES.	
9608201530 MW4		8/20/96 1530 H2O —	
Date/Time		Date/Time	
8/21/96 1500		8/21/96 1500	
Relinquished by: [Signature]		Received by: P. MASON	
Date/Time		Date/Time	
8/21/96 1500		8/21/96 0940	
Relinquished by:		Received by:	
Date/Time		Date/Time	
8/21/96 1500		8/21/96 1500	
Method of Shipment:		Rush	
Authorized by: [Signature]		Special Instructions:	
Date 8/21/96 1500		10 Working Days	
		24-48 Hours	
		Special Instructions:	

