3R - 332

REPORTS

DATE:
1998

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

April 2, 1998

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

RE: 1998 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT

Dear Bill:

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

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

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

Sincerely,

Maureen Gannon
Project Manager

Attachment

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

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

PNMGS Well Site: McCoy Gas Com A1

Groundwater Site Summary Report

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

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

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

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

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

Activities for Previous Year:

PNM installed four groundwater monitoring wells at the McCoy Gas Com A1 well site on August 5, 1997. All well installations were conducted pursuant to the PNM San Juan Basin Groundwater Management Plan. Figure 1 presents a typical monitoring well diagram for the site.

Quarterly sampling took place on September 11, and December 2, 1997 and again on March 4, 1998. Water level measurements were taken in the four monitoring wells. PNM conducted groundwater sampling in each well for chemical analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX). In addition, MW-1 and MW-2 were sampled for major cations/anions and Water Quality Control Commission (WQCC) dissolved metals. MW-2 exhibited a strong hydrocarbon odor and contained groundwater with a visible sheen; therefore, this well was sampled for polyaromatic hydocarbons (PAHs). All sampling was performed in strict compliance with EPA protocol.

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

- benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8020
- major cations/anions using various EPA methods
- WQCC metals- filtered (As, Ba, Cd, Cr, Pb, Se, Ag, and Hg using inductively coupled plasma (ICP) for heavy metals and atomic absorption spectroscopy (AAS) for Hg and Se).
- PAHs using EPA Method 8310

Due to high concentrations of xylenes in MW-3 and -4, PNM conducted additional source removal at the McCoy Gas Com A1 in March 1998. Field crews removed approximately 1800 cubic yards in and around the former PNM pit. At that time, MW-2, -3 and -4 were removed.

Results:

Figure 2 presents a site map showing BTEX concentrations for each monitoring well since groundwater contamination was discovered. Table 1 provides a summary of the full suite of analytical results from groundwater samples collected on September 11, 1997. MW-1, the upgradient well, has shown "non-detect" for BTEX over the last three quarters. Benzene concentrations in MW-2, -3 and -4 are decreasing over time. Toluene and ethylbenzene concentrations are below WQCC standards in all wells. Xylene concentrations in MW-3 and -4 are above standard. From the water quality analysis of MW-1 and-2, the chloride concentration in MW-1 is somewhat elevated. Metals in MW-1 and MW-2 are below the WQCC standards. The PAHs concentration in MW-2 was 0.013 mg/l- well below the WQCC standard of 0.03 mg/l.

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**

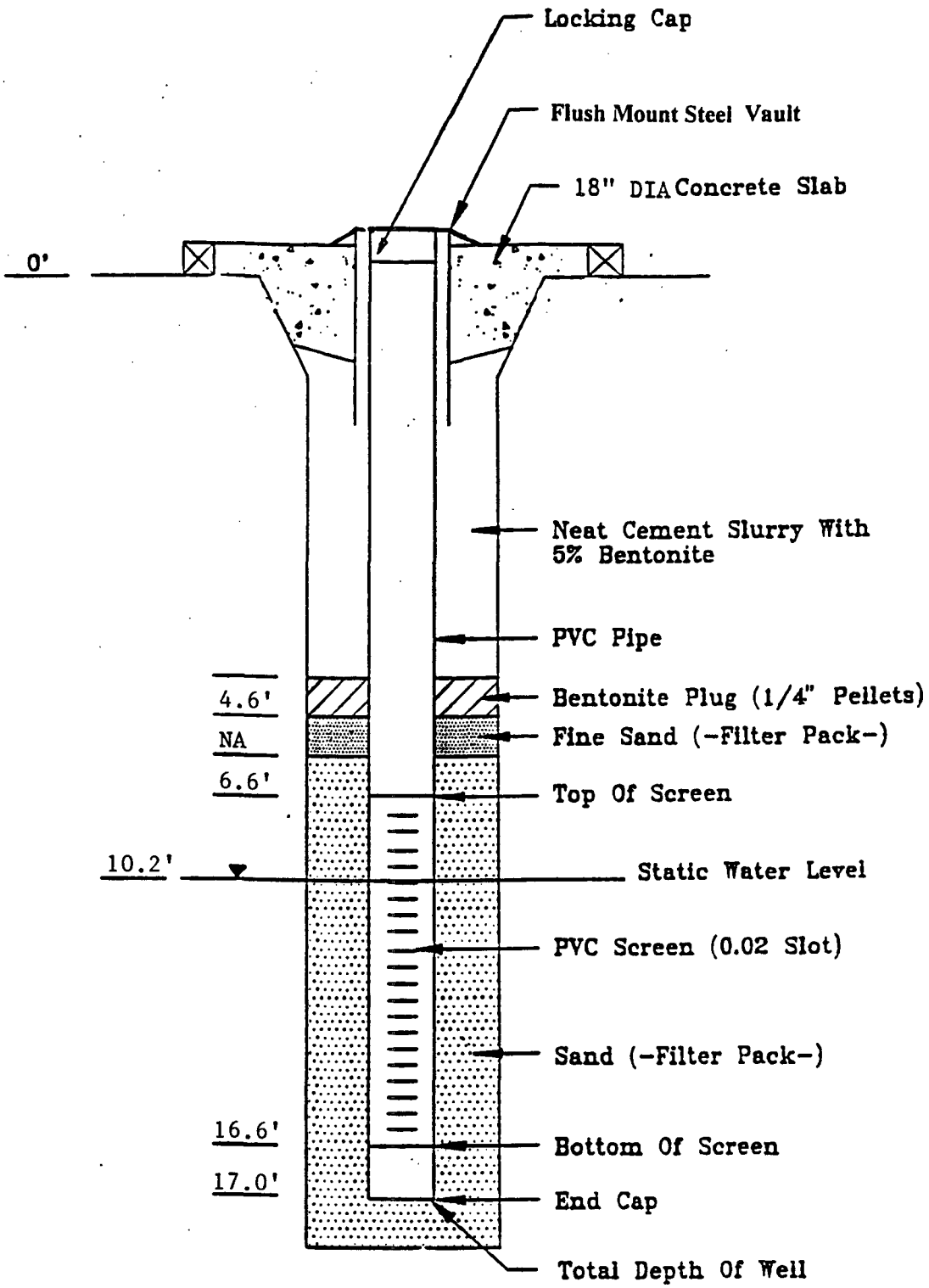
Figures 3, 4 and 5 provide groundwater contour maps for September and December 1997, and March 1998, respectively. In September, groundwater beneath the site traveled in a northwesterly direction beneath the site. By December, the flow had shifted to the southwest. The contour map for March 1998 also shows the flow direction to be to the southwest. The change in gradient direction is attributable to the seasonal fluctuations of the Animas River that borders the site to the north and northwest.

Future Actions:

During the next quarter, PNM plans to re-install the monitoring wells removed during the recent excavation and continue groundwater monitoring at the site.

Public Service Company of New Mexico - Gas Services
Environmental Services Division - Alvarado Square, MS-0408
Albuquerque, NM 87158

Contact: Maureen Gannon **Telephone: 505-241-2974**



PNM Gas Services	CLIENT: PNM	McCoy Gas Com A1
	DATE: / REV. NO.: 0	Figure 1
	AUTHOR: M.D.G. / DRAWN BY: M.P.	Well Completion Diagram
	CK'D BY: M.D.G. / FILE: .DWG	

Figure 2. McCoy Gas Com A1 Site Map & Analytical results (ppb)

Well	Date	B	T	E	X
MW-1	9/11/97	<0.2	<0.2	<0.2	<0.2
MW-1	12/2/97	<0.2	<0.2	<0.2	0.2
MW-1	3/4/98	<0.2	<0.2	<0.2	0.2
MW-2	9/11/97	474	13	12	27
MW-2	12/2/97	167	10.6	24.7	25.5
MW-2	3/4/98	70	12.0	31.0	22.1
MW-3	9/11/97	30	8	11	2548
MW-3	12/2/97	28	15	13	3814
MW-3	3/4/98	21	11	10	2400
MW-4	9/11/97	82	49	243	6012
MW-4	12/2/97	22	30	106	2488
MW-4	3/4/98	16	26	81	1600

Figure 3. McCoy Gas Com A1 Groundwater Contour Map (September 11, 1997)

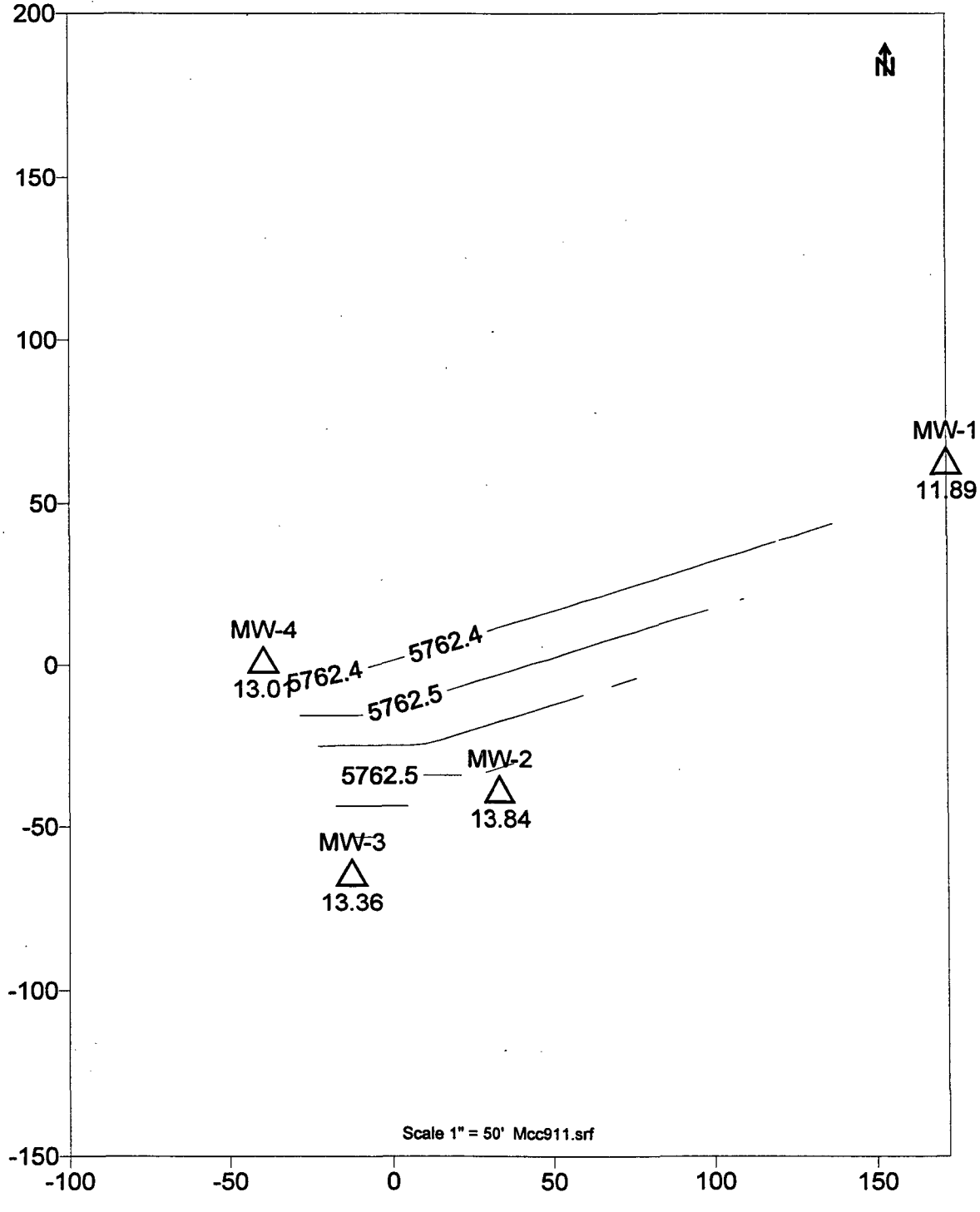


Figure 4. McCoy Gas Com A1 Groundwater Contour Map (December 2, 1997)

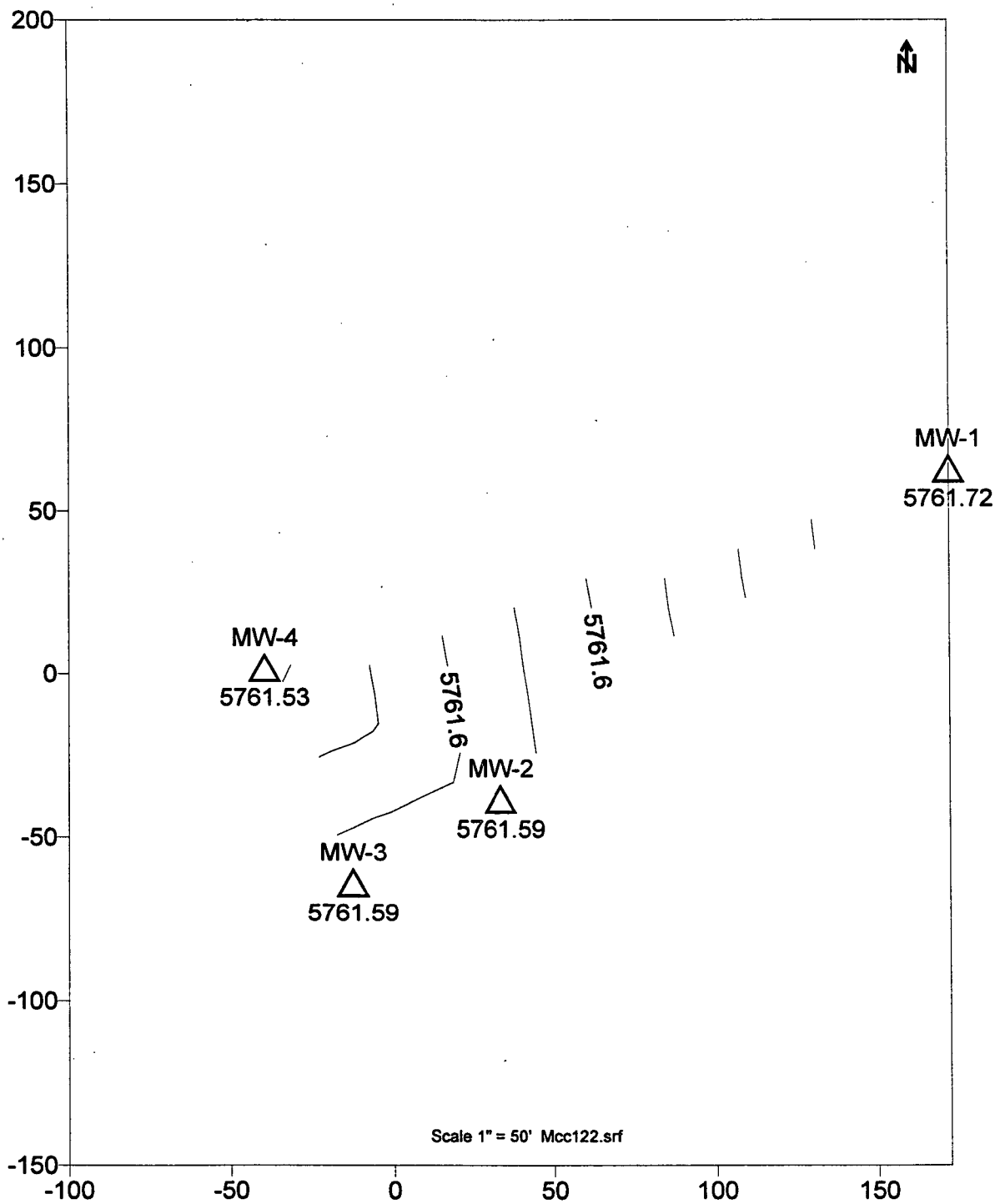


Figure 5. McCoy Gas Com A1 Groundwater Contour Map (March 4, 1998)

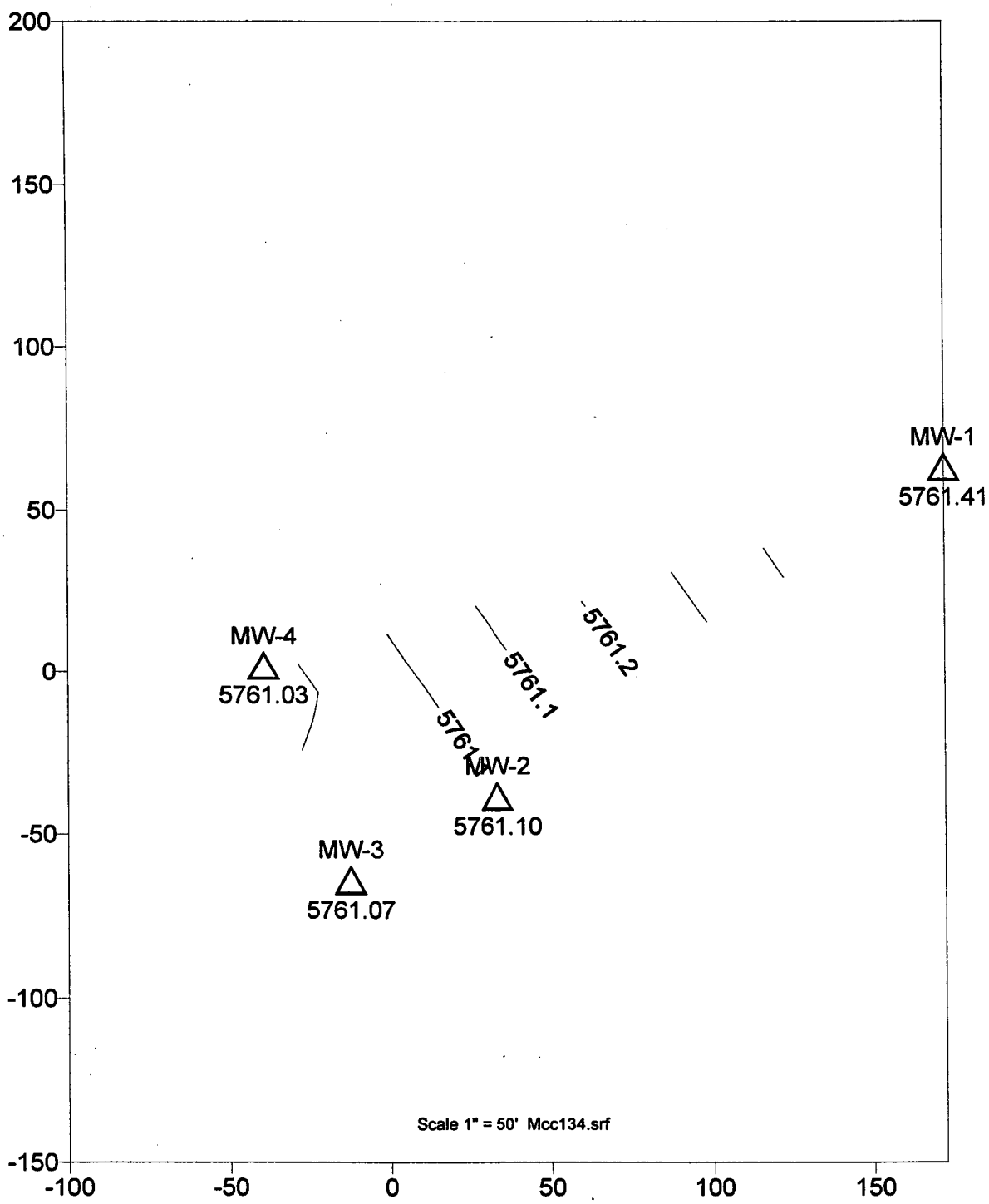


Figure 6. McCoy Gas Com A1 Hydrograph
(Water Level vs. Time)

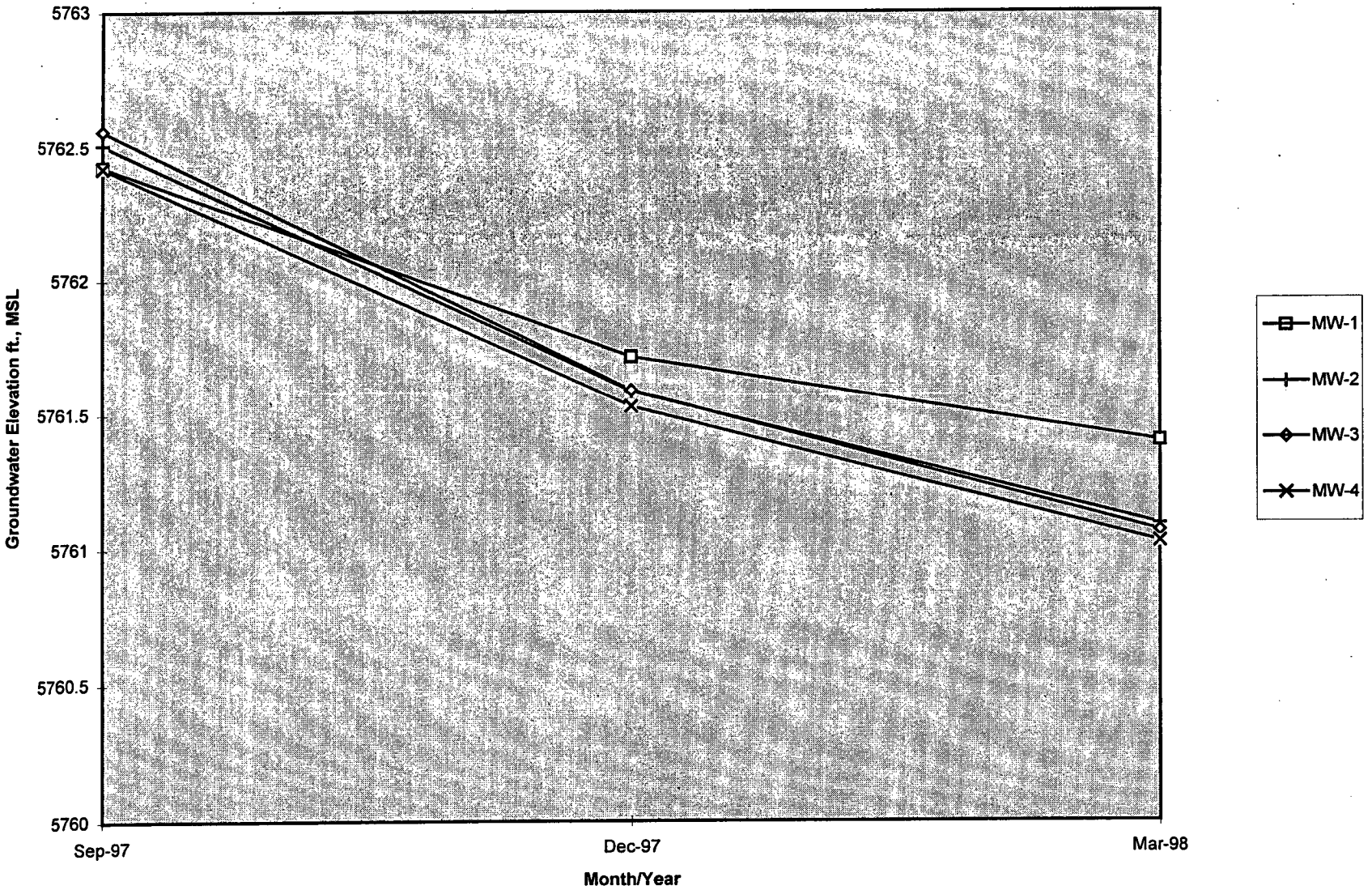


Table 1. MCCOY GAS COM A1 GROUNDWATER SAMPLING RESULTS, mg/l (9/11/97)

Constituent	WQCC Stds.	MW-1	MW-2	MW-3	MW-4	MW-5 (MW-2 duplicate)
B	0.01	<0.0002	0.4740	0.0300	0.0820	0.4420
T	0.75	<0.0002	0.0130	0.0080	0.0490	0.0120
E	0.75	<0.0002	0.0120	0.0110	0.2430	0.0110
X	0.62	<0.0002	0.0270	2.5480	6.0120	0.0240
PAHs	0.03	.013	NA	NA	NA	NA
Metals						
As	0.1	<0.15	<0.15	NA	NA	NA
Ba	1	0.40	0.11	NA	NA	NA
Cd	0.01	<0.020	<0.020	NA	NA	NA
Cr	0.05	<0.050	<0.050	NA	NA	NA
Pb	0.05	<0.20	<0.20	NA	NA	NA
Se	0.05	<0.01	<0.01	NA	NA	NA
Ag	0.05	<0.030	<0.030	NA	NA	NA
Hg	0.002	<0.0005	<0.0005	NA	NA	NA
Cations/Anions						
Na	NA	466	81	NA	NA	NA
Ca	NA	211	180	NA	NA	NA
Mg	NA	24.4	52.4	NA	NA	NA
K	NA	3.99	7.6	NA	NA	NA
Cl	NA	944	110	NA	NA	NA
SO4	NA	275	121	NA	NA	NA
CO3	NA	<1	<1	NA	NA	NA
HCO3	NA	368	863	NA	NA	NA
OH	NA	<1	<1	NA	NA	NA
Cation/Anion Balance						
Difference Cation-Anion	NA	5.47	2.76	NA	NA	NA
Total Cation-Anion	NA	71.29	36.77	NA	NA	NA
% Difference	NA	7.7	7.5	NA	NA	NA
TDS, calc	NA	2292	1415	NA	NA	NA
TDS, meas	NA	2294	1408	NA	NA	NA
Hardness as CaCO3	NA	627	665	NA	NA	NA

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

s:\gaspro\mccoyb.doc

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	26-Sep-97
Company:	*PNM Gas Services*	COC No.:	*5798*
Address:	*603 W. Elm*	Sample No.:	*16149*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - McCoy Gas Com A1***				
Project Location:	***9709111000; MW-1***				
Sampled by:	MG/MS	Date:	11-Sep-97	Time:	10:00
Analyzed by:	DC	Date:	17-Sep-97		
Sample Matrix:	*Liquid*				

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

ND - Not Detected at Limit of Quantitation

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

Approved By:
Date: 9/26/97

ON SITE
TECHNOLOGIES, LTD.
OFF: (505) 325-5667 LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	10-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5798*
Address:	*603 W. Elm*	Sample ID.:	*16149*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - McCoy Gas Com A1***				
Project Location:	***9709111000; MW-1***				
Sampled by:	MS/MG	Date:	11-Sep-97	Time:	10:00
Analyzed by:	HR	Date:	25-Sep-97		

Laboratory Analysis

Parameter		Results as Received	Unit of Measure		Results as Received	Unit of Measure	
Cations							
Sodium	*Na*	466	mg/L		20.27	me/L	
Calcium	*Ca*	211	mg/L		10.53	me/L	
Magnesium	*Mg*	24.4	mg/L		2.01	me/L	
Potassium	*K*	3.99	mg/L		0.10	me/L	
Anions							
Chloride	*Cl*	944	mg/L		26.63	me/L	
Sulfate	*SO4*	275	mg/L		5.73	me/L	
Carbonate	*CO3 as CaCO3*	< 1	mg/L		< 0.01	me/L	
Bicarbonate	*HCO3 as CaCO3*	368	mg/L		6.03	me/L	
Hydroxide	*OH as CaCO3*	< 1	mg/L		< 0.01	me/L	

Total Dissolved Solids Calculated, Sum of Cation/Anion	2292	mg/L	
Total Dissolved Solids Dried @ 180 C	2294	mg/L	
pH	7.22		
Conductivity @ 25 C	3740	uS/cm	
Total Hardness as CaCO3	627	mg/L	

Cation-Anion Balance

5.47 *Difference Cation-Anion, me/L*

71.29 *Total Cation-Anion, me/L*

7.7 *% Difference Cation-Anion*

Comments

Approved by: [signature]
Date: 10/15/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	29-Sep-97
Company:	*PNM Gas Services*	COC No.:	*5798*
Address:	*603 W. Elm*	Sample No.:	*16150*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - McCoy Gas Com A1***				
Project Location:	***9709111030; MW-2***				
Sampled by:	MG/MS	Date:	11-Sep-97	Time:	10:30
Analyzed by:	DC	Date:	18-Sep-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	474	ug/L	2	ug/L
Toluene	13	ug/L	2	ug/L
Ethylbenzene	12	ug/L	2	ug/L
m,p-Xylene	16	ug/L	2	ug/L
o-Xylene	11	ug/L	2	ug/L
TOTAL	526	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: 9/29/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	10-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5798*
Address:	*603 W. Elm*	Sample ID.:	*16150*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - McCoy Gas Com A1***				
Project Location:	***9709111030; MW-2***				
Sampled by:	MS/MG	Date:	11-Sep-97	Time:	10:30
Analyzed by:	HR	Date:	25-Sep-97		

Laboratory Analysis

Parameter		Results as Received	Unit of Measure		Results as Received	Unit of Measure	
Cations							
Sodium	*Na*	81	mg/L		3.51	me/L	
Calcium	*Ca*	180	mg/L		8.98	me/L	
Magnesium	*Mg*	52.4	mg/L		4.31	me/L	
Potassium	*K*	7.6	mg/L		0.19	me/L	
Anions							
Chloride	*Cl*	110	mg/L		3.10	me/L	
Sulfate	*SO4*	121	mg/L		2.52	me/L	
Carbonate	*CO3 as CaCO3*	< 1	mg/L		< 0.01	me/L	
Bicarbonate	*HCO3 as CaCO3*	863	mg/L		14.14	me/L	
Hydroxide	*OH as CaCO3*	< 1	mg/L		< 0.01	me/L	
Total Dissolved Solids Calculated, Sum of Cation/Anion		1415	mg/L				
Total Dissolved Solids Dried @ 180 C		1408	mg/L				
pH		7.13					
Conductivity @ 25 C		1831	uS/cm				
Total Hardness as CaCO3		665	mg/L				

Cation-Anion Balance

2.76 *Difference Cation-Anion, me L*

36.77 *Total Cation-Anion, me L*

7.5 *% Difference Cation-Anion*

Comments

Approved by:

Date: 10/15/97

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	29-Sep-97
Company:	*PNM Gas Services*	COC No.:	*5798*
Address:	*603 W. Elm*	Sample No.:	*16151*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - McCoy Gas Com A1***				
Project Location:	***9709111100; MW-3***				
Sampled by:	MG/MS	Date:	11-Sep-97	Time:	11:00
Analyzed by:	DC	Date:	18-Sep-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	30	ug/L	2	ug/L
Toluene	8	ug/L	2	ug/L
Ethylbenzene	11	ug/L	2	ug/L
m,p-Xylene	2535	ug/L	2	ug/L
o-Xylene	13	ug/L	2	ug/L
TOTAL	2597	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: 9/29/97

ON SITE

OFF: (505) 325-5667 LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	29-Sep-97
Company:	*PNM Gas Services*	COC No.:	*5798*
Address:	*603 W. Elm*	Sample No.:	*16152*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - McCoy Gas Com A1***				
Project Location:	***9709111130; MW-4***				
Sampled by:	MG/MS	Date:	11-Sep-97	Time:	11:30
Analyzed by:	DC	Date:	18-Sep-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	82	ug/L	5	ug/L
Toluene	49	ug/L	5	ug/L
Ethylbenzene	243	ug/L	5	ug/L
m,p-Xylene	5987	ug/L	10	ug/L
o-Xylene	25	ug/L	5	ug/L
TOTAL	6386	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By:
Date: 9/29/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	26-Sep-97
Company:	*PNM Gas Services*	COC No.:	*5798*
Address:	*603 W. Elm*	Sample No.:	*16153*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - McCoy Gas Com A1***				
Project Location:	***9709111200; MW-5***				
Sampled by:	MG/MS	Date:	11-Sep-97	Time:	12:00
Analyzed by:	DC	Date:	17-Sep-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	442	ug/L	2	ug/L
Toluene	12	ug/L	2	ug/L
Ethylbenzene	11	ug/L	2	ug/L
m,p-Xylene	17	ug/L	2	ug/L
o-Xylene	7	ug/L	2	ug/L
TOTAL	490	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By:
Date: 9/26/97

ON SITE

OFF: (505) 325-5667 LAB: (505) 325-1556

TECHNOLOGIES, LTD.

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 17-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	19.7	1	15%
Toluene	ppb	20.0	20.5	2	15%
Ethylbenzene	ppb	20.0	20.4	2	15%
m,p-Xylene	ppb	40.0	39.7	1	15%
o-Xylene	ppb	20.0	20.6	3	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*RPD*	*Limit*
Benzene	95	93	(39-150)	1	20%
Toluene	100	99	(46-148)	1	20%
Ethylbenzene	99	98	(32-160)	1	20%
m,p-Xylene	95	94	(35-145)	1	20%
o-Xylene	99	97	(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)	
16149-5798	96				
16153-5798	96				
				10/15/97	9/26/97

S1: *Flourobenzene*

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 18-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	19.4	3	15%
Toluene	ppb	20.0	20.1	0	15%
Ethylbenzene	ppb	20.0	20.2	1	15%
m,p-Xylene	ppb	40.0	39.1	2	15%
o-Xylene	ppb	20.0	20.1	0	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*RPD*	*Limit*
Benzene	91	89	(39-150)	2	20%
Toluene	97	95	(46-148)	2	20%
Ethylbenzene	95	93	(32-160)	2	20%
m,p-Xylene	90	84	(35-145)	1	20%
o-Xylene	92	90	(35-145)	2	20%

Surrogate Recoveries

Laboratory Identification	*S1 Percent Recovered*	*S2 Percent Recovered*	*Laboratory Identification*	*S1 Percent Recovered*	*S2 Percent Recovered*
Limit Percent Recovered	(70-130)		*Limit Percent Recovered*	(70-130)	
16150-5798	95				
16151-5798	94				
16152-5798	95				
				HK	DC
				10/15/97	9/29/97

S1: *Flourobenzene*

ON SITE

OFF: (505) 325-5667 LAB: (505) 325-1556

TECHNOLOGIES, LTD.

QUALITY ASSURANCE REPORT

Cation Anion Balance

Date: 25-Sep-97

Quality Control Sample

Parameter	*Laboratory Identification*	*True Value*	*Analyzed Value*	*Unit of Measure*	*% Diff*	*Limit % Diff*
Sodium, Na	0541-QC	2.32	2.22	mg/L	-4	10
Calcium, Ca	0465-QC	2.18	2.03	mg/L	-7	10
Magnesium, Mg	0465-QC	1.14	1.22	mg/L	7	10
Potassium, K	0541-QC	1.33	1.30	mg/L	-2	10
Chloride, Cl	0437-QC	200	199	mg/L	-1	10
Sulfate, SO4	0538-QC	78	81	mg/L	4	10
Alkalinity	0538-QC	159	169	mg/L	6	10
pH	0538-QC	9.13	9.29		2	10
Conductivity	0538-QC	740	735	uS/cm	-1	15
Total Dissolved Solids, 180C	0538-QC	642	630	uS/cm	-2	15

Matrix Spike

Parameter	*Laboratory Identification*	*Analyzed Value*	*Matrix Spike*	*Spike Value*	*Unit of Measure*	*Spike Recovery*
Sodium, Na	16203-6477	0.84	0.50	1.38	mg/L	103%
Calcium, Ca	16208-6478	1.28	0.50	1.75	mg/L	98%
Magnesium, Mg	16208-6478	1.95	0.50	2.45	mg/L	100%
Potassium, K	16203-6477	0.88	0.50	1.36	mg/L	99%

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, SO4	LF-Blank	< 1	mg/L
Conductivity	LF-Blank	< 2	uS/cm

10/15/97

Mountain States Analytical, Inc.

October 3, 1997

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

Reference:
Project: McCoy Gas Com A1
MSAI Group: 17907

Dear Mr. Cox:

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

16150-5798 Dissolved 16149-5798 Dissolved

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

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

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

We look forward to working with you on future projects.

With Regards,

Rolf E. Larsen
Project Manager

Mountain States Analytical. Inc.
The Quality Solution

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

Attn: Mr. David Cox
Project: McCoy Gas Com A1

MSAI Sample: 68442
MSAI Group: 17907
Date Reported: 10/03/97
Discard Date: 11/02/97
Date Submitted: 09/17/97
Date Sampled: 09/11/97
Collected by: DC
Purchase Order: 5798
Project No.:

Sample ID: 16150-5798 Dissolved 9709111030; MW-2
Matrix: Waste Water

Test	Analysis	Results as Received	Units	Limit of Quantitation
0259B	Mercury by CVAA, w/ww, 7470 Method: SW-846 7470	ND	mg/l	0.0005
0392I	Flame/ICP Prep, w/ww, 3005A Method: SW-846 3005A	Complete		
0392M	Mercury Prep CVAA, w/ww, 7470 Method: SW-846 7470	Complete		
[illegible]1	Prep for HAA, w/ww, 7062/7742 Method: SW-846 7062/7742	Complete	mg/l	
1451	Selenium by HAA, w/ww, 7742 Method: SW-846 7742	ND	mg/l	0.01
7245	Arsenic by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.15
7246	Barium by ICP, w/ww, 6010A Method: SW-846 6010A	0.40	mg/l	0.02
7249	Cadmium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.020
7251	Chromium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.050
7255	Lead by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.20
7266	Silver by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.030
0939	Sample Filtering, ww, MSAI Method: IN HOUSE MSAI	Complete		

Mountain States Analytical, Inc.
The Quality Solution

On Site Technologies, Ltd.

MSAI Sample: 68442
MSAI Group: 17907

Sample ID: 16150-5798 Dissolved

ND - Not detected at the limit of quantitation

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

Respectfully Submitted,
Reviewed and Approved by:

Rolf E. Larsen
Project Manager

Mountain States Analytical, Inc.

The Quality Solution

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

Attn: Mr. David Cox
Project: McCoy Gas Com A1

MSAI Sample: 68443
MSAI Group: 17907
Date Reported: 10-03-97
Discard Date: 11/02/97
Date Submitted: 09-17-97
Date Sampled: 09 11 97
Collected by: DC
Purchase Order: 5798
Project No.:

Sample ID: 16149-5798 Dissolved 9209111000; MW-1
Matrix: Waste Water

Test	Analysis	Results as Received	Units	Limit of Quantitation
0259B	Mercury by CVAA, w/ww, 7470 Method: SW-846 7470	ND	mg/l	0.0005
0392I	Flame/ICP Prep, w/ww, 3005A Method: SW-846 3005A	Complete		
0392M	Mercury Prep CVAA, w/ww, 7470 Method: SW-846 7470	Complete		
[illegible]	Prep for HAA, w/ww, 7062/7742 Method: SW-846 7062/7742	Complete	mg/	
1451	Selenium by HAA, w/ww, 7742 Method: SW-846 7742	ND	mg/	0.0[illegible]
7245	Arsenic by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/	0.[illegible]5
7246	Barium by ICP, w/ww, 6010A Method: SW-846 6010A	0.11	mg/l	0.02
7249	Cadmium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.020
7251	Chromium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.050
7255	Lead by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.20
7266	Silver by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.030
0939	Sample Filtering, ww, MSAI Method: IN HOUSE MSAI	Complete		

Mountain States Analytical, Inc.
The Quality Solution

On Site Technologies, Ltd.

MSAI Sample: 68443
MSAI Group: 17907

Sample ID: 16149-5798 Dissolved

ND - Not detected at the limit of quantitation

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

Respectfully Submitted,
Reviewed and Approved by:

Rolf E. Larsen
Project Manager

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

10/03/97
15:10:35
Group: 17937

Analysis Batch Number: 0259B-09/25/97-107 -2
Batch Identification : 0259B-Mercury by CVAA, w/ww, 7470 Sequence : 0259B-1
Number of Samples : 27
Batch Data-Date/Time : 09/30/97 / 10:22:24

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
17873-68371	Mercury	0.0300	0.1000
PBW2-663-2	Mercury	0.0500	0.1000
PBW1-661-3	Mercury	0.1200(Q3)	0.1000

SPIKE

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
17873-68369	Mercury	2.0000	0.0700	1.9300	93.0	80.0	120.0
17816-68144-2	Mercury	25.0000	0.1000	25.2000	100.4	80.0	120.0
17816-68144-3	Mercury	25.0000	0.1000	20.8000	82.8	80.0	120.0

MSD

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	QC LIMITS LOWER	QC LIMITS UPPER	RPD #	LIMIT
17873-68369	Mercury	2.0000	0.0700	1.9400	93.5	80.0	120.0	0.5	20.0
17816-68144-2	Mercury	25.0000	0.1000	25.1000	100.0	80.0	120.0	0.4	20.0

DUPLICATE

SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
17873-68369	Mercury	0.0700	0.0700	0.0	20.0	1.00
17816-68144-2	Mercury	0.1000	0.1200	18.2	20.0	1.00

LCS

SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
17873-68372	Mercury	2.0800	2.5000	83.2	80.0	120.0
LCSW-661-2	Mercury	2.0300	2.5000	81.2	80.0	120.0

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
ICV-	Mercury	3.0000	3.2400	108.0	90.0	110.0
CCV--2	Mercury	5.0000	5.0500	101.0	80.0	120.0
CCV--3	Mercury	5.0000	5.0200	100.4	80.0	120.0
CCV--4	Mercury	5.0000	4.9500	99.0	80.0	120.0
CCV--5	Mercury	5.0000	4.9100	98.2	80.0	120.0
CCV--6	Mercury	5.0000	4.8200	96.4	80.0	120.0
CCV--7	Mercury	5.0000	4.8200	96.4	80.0	120.0
CCV--8	Mercury	5.0000	4.7800	95.6	80.0	120.0

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Mercury	0.0400	0.1000
CCB-	Mercury	0.0400	0.1000
CCB-	Mercury	0.0800	0.1000
CCB-	Mercury	0.0600	0.1000
CCB-	Mercury	0.0700	0.1000
CCB-	Mercury	0.1000	0.1000
CCB-	Mercury	0.0900	0.1000
CCB-	Mercury	0.1000	0.1000

---------- Result Footnotes ----------
(Q3) - The regulatory limit is >20x the blank concentration.

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

10/03/97
15:10:38
Group: 1790[illegible]

Analysis Batch Number: 0259B-09/25/97-107 -2
Test Identification : 0259B-Mercury by CVAA, w/ww, 7470 Sequence : 0259B-1
Number of Samples : 27
Batch Data-Date/Time : 09/30/97 / 10:22:24

Groups & Samples

17797-68094	17809-68116	17816-68142	17816-68144	17837-68250	17838-68251	17838-68252	17859-68316
17873-68367	17873-68368	17873-68369	17873-68371	17873-68372	17889-68413	17907-68442	17907-68443
17912-68462	17913-68464	17940-68560	17942-68562	17943-68563	17944-68564	17945-68565	17946-68566
17947-68567	17948-68568	17949-68569	17950-68570	17951-68571			

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

10/03/97
15:10:53
Group: 17917

Analysis Batch Number: 1451 -10/01/97-001 -1
Batch Identification : 1451 -Selenium by HAA, w/ww, 7742 Sequence : DAAB274
Number of Samples : 14
Batch Data-Date/Time : 10/02/97 / 06:39:39

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
PBW1-671	Selenium	0.0004	0.0050
PBW1-665-2	Selenium	ND	0.0050

SPIKE

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
18004-68720	Selenium	0.0800	0.4858	0.5933	134.4(2a)	75.0	125.0
17961-68594-2	Selenium	0.0800	-0.0030	0.0743	96.6	75.0	125.0

MSD

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	QC LIMITS LOWER	QC LIMITS UPPER	RPD #	LIMIT
18004-68720	Selenium	0.0800	0.4858	0.5892	129.2(2a)	75.0	125.0	0.7	20.0
17961-68594-2	Selenium	0.0800	-0.0030	0.0632	82.8	75.0	125.0	16.1	20.0

DUPLICATE

SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
18004-68720	Selenium	0.4858	0.5305	8.8	20.0	10.00
17961-68594-2	Selenium	-0.0030	0.0000	200.0(11)	20.0	2.00

CONTROL

SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
[illegible]671	Selenium	0.0354	0.0400	88.5	75.0	125.0
LCSW-665-2	Selenium	0.0348	0.0400	87.0	75.0	125.0

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
ICV-	Selenium	0.0500	0.0470	94.0	90.0	110.0
CCV1--2	Selenium	0.0500	0.0476	95.2	80.0	120.0
CCV2--3	Selenium	0.0500	0.0432	86.4	80.0	120.0
CCV3--4	Selenium	0.0500	0.0450	90.0	80.0	120.0
CCV4--5	Selenium	0.0500	0.0456	91.2	80.0	120.0
CCV5--6	Selenium	0.0500	0.0497	99.4	80.0	120.0

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Selenium	0.0006	0.0050
CCB1-	Selenium	ND	0.0050
CCB2-	Selenium	ND	0.0050
CCB3-	Selenium	0.0004	0.0050
CCB4-	Selenium	ND	0.0050
CCB5-	Selenium	0.0002	0.0050

---------- Result Footnotes ----------
(2a) - Recovery is insignificant because sample conc. is >4x spike added.
(11) - Both Duplicate results are less than the MDL.

---------- Batch Notes ----------
[illegible]ples associated with digestion batch W-665, including 17907-68442, 17907-68443, 17960-68593, 17961-68594, and [illegible]61-68595 had acceptable quality control results.

Samples associated digestion batch W-671, including 18004-68720, 18004-68721, 18004-68722, 18004-68723, 18004-68726, 18004-18728, and 18004-68729 had selenium values in excess of the linear ragne of the technique.

These samples were analyzed at dilutions ranging from 1:2 to 1:10. The parent sample matrix spike, matrix spike duplicate, serial dilution and post digestion spike required a dilution of 1:10. Quality control results were slightly out of limits, including serial dilution and post digestion spikes.

The serial dilution was recovered at 111.9%. Acceptance limits are 90 to 110%. The post digestion spike was recovered at 115.5%. Acceptance limits are 85 to 115%.

In MSAI's judgement no matrix effect exists and the quality control anomalies are due to high sample values and dilutions.

jdb

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

10/03/97
15:10:45
Group: 17907

Analysis Batch Number: 1451 -10/01/97-001 -1
Test Identification : 1451 -Selenium by HAA, w/ww, 7742 Sequence : DAAB274
Number of Samples : 14
Batch Data-Date/Time : 10/02/97 / 06:39:39

Groups & Samples

17271-66336	17615-67531	17907-68442	17907-68443	17960-68593	17961-68594	17961-68595	18004-68720
18004-68721	18004-68722	18004-68723	18004-68726	18004-68728	18004-68729		

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

10/03/97
15:10:51
Group: 1790

Analysis Batch Number: ICPWA-09/30/97-118 -1
Method Identification : ICPWA-*Metals by ICP
Number of Samples : 17
Batch Data-Date/Time : 09/30/97 / 13:15:40

Sequence : DATA273

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
17873-68371	Silver	0.0005	0.0060
	Arsenic	0.0048	0.0300
	Barium	0.0001	0.0030
	Calcium	0.0305	0.4000
	Cadmium	0.0001	0.0040
	Chromium	ND	0.0100
	Iron	ND	0.2000
	Potassium	0.0459	0.1000
	Magnesium	ND	0.0500
	Molybdenum	ND	0.0300
	Sodium	0.0284	0.2000
	Nickel	ND	0.0300
	Lead	ND	0.0400
	Antimony	0.0090	0.1000
	Selenium	ND	0.0700
17873-68371-2	Silver	0.0005	0.0060
	Arsenic	0.0048	0.0300
	Barium	0.0001	0.0030
	Calcium	0.0305	0.4000
	Cadmium	0.0001	0.0040
	Chromium	ND	0.0100
	Iron	ND	0.2000
	Potassium	0.0459	0.1000
	Magnesium	ND	0.0500
	Molybdenum	ND	0.0300
	Sodium	0.0284	0.2000
	Nickel	ND	0.0300
	Lead	ND	0.0400
	Antimony	0.0090	0.1000
	Selenium	ND	0.0700
PBW2-653-3	Silver	ND	0.0060
	Arsenic	ND	0.0300
	Barium	0.0007	0.0030
	Calcium	0.0319	0.4000
	Cadmium	ND	0.0040
	Chromium	ND	0.0100
	Iron	0.0232	0.2000
	Potassium	ND	0.1000
	Magnesium	ND	0.0500
	Molybdenum	0.0102	0.0300
	Sodium	0.0770	0.2000
	Nickel	ND	0.0300
	Lead	ND	0.0400
	Antimony	0.0112	0.1000
	Selenium	0.0176	0.0700

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
17873-68367	Silver	0.0500	0.0017	0.0521	100.8	80.0	120.0
	Arsenic	2.0000	0.0089	2.0135	100.2	80.0	120.0

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

10/03/97
15:10:55
Group: 17917

Analysis Batch Number: ICPWA-09/30/97-118 -1
Method Identification : ICPWA-*Metals by ICP
Number of Samples : 17
Batch Data-Date/Time : 09/30/97 / 13:15:40

Sequence : DATA273

SPIKE

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
17873-68367	Barium	2.0000	0.1248	2.0553	96.5	80.0	120.0
	Calcium	2.0000	121.0747	125.0031	196.4(2a)	80.0	120.0
	Cadmium	0.0500	-0.0011	0.0481	98.4	80.0	120.0
	Chromium	0.2000	0.0038	0.2011	98.6	80.0	120.0
	Iron	1.0000	0.7962	1.5954	79.9(B)	80.0	120.0
	Potassium	10.0000	30.2554	40.8598	106.0	80.0	120.0
	Magnesium	2.0000	61.8850	64.8451	148.0(2a)	80.0	120.0
	Molybdenum	0.5000	0.0141	0.5240	102.0	80.0	120.0
	Sodium	3.0000	24.4664	28.1341	122.3(2a)	80.0	120.0
	Nickel	0.5000	0.0080	0.4974	97.9	80.0	120.0
	Lead	0.5000	0.0023	0.4776	95.1	80.0	120.0
	Antimony	0.5000	0.0517	0.5399	97.6	80.0	120.0
	Selenium	2.0000	-0.0132	2.0388	102.6	80.0	120.0

MSD

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	QC LIMITS LOWER	QC LIMITS UPPER	RPD #	LIMIT
17873-68367	Silver	0.0500	0.0017	0.0482	93.0	80.0	120.0	7.8	20.0
	Arsenic	2.0000	0.0089	1.9954	99.3	80.0	120.0	0.9	20.0
	Barium	2.0000	0.1248	2.0108	94.3	80.0	120.0	2.2	20.0
	Calcium	2.0000	121.0747	122.0898	50.8(2a)	80.0	120.0	2.4(2a)	20.0
	Cadmium	0.0500	-0.0011	0.0482	98.6	80.0	120.0	0.2	20.0
	Chromium	0.2000	0.0038	0.1997	97.9	80.0	120.0	0.7	20.0
	Iron	1.0000	0.7962	2.3672	157.1(B)	80.0	120.0	39.0(B)	20.0
	Potassium	10.0000	30.2554	39.4739	92.2	80.0	120.0	3.5	20.0
	Magnesium	2.0000	61.8850	62.9909	55.3(2a)	80.0	120.0	2.9(2a)	20.0
	Molybdenum	0.5000	0.0141	0.4953	96.2	80.0	120.0	5.6	20.0
	Sodium	3.0000	24.4664	27.0086	84.7	80.0	120.0	4.1(2a)	20.0
	Nickel	0.5000	0.0080	0.4850	95.4	80.0	120.0	2.5	20.0
	Lead	0.5000	0.0023	0.5114	101.8	80.0	120.0	6.8	20.0
	Antimony	0.5000	0.0517	0.6089	111.4	80.0	120.0	12.0	20.0
	Selenium	2.0000	-0.0132	1.9676	99.0	80.0	120.0	3.6	20.0

DUPLICATE

SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
17873-68373	Silver	0.0017	0.0000	200.0(11)	20.0	1.00
	Arsenic	0.0089	0.0136	41.8(11)	20.0	1.00
	Barium	0.1248	0.1255	0.6	20.0	1.00
	Calcium	121.0747	121.5251	0.4	20.0	1.00
	Cadmium	-0.0011	0.0000	200.0(11)	20.0	1.00
	Chromium	0.0038	0.0000	200.0(11)	20.0	1.00
	Iron	0.7962	0.6656	17.9	20.0	1.00
	Potassium	30.2554	30.4789	0.7	20.0	1.00
	Magnesium	61.8850	62.2999	0.7	20.0	1.00
	Molybdenum	0.0141	0.0029	131.8(11)	20.0	1.00
	Sodium	24.4664	24.6815	0.9	20.0	1.00
	Nickel	0.0080	0.0070	13.3	20.0	1.00
	Lead	0.0023	0.0000	200.0(11)	20.0	1.00
	Antimony	0.0517	0.0820	45.3(11)	20.0	1.00
	Selenium	-0.0132	0.0000	200.0(11)	20.0	1.00

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

10/03/97
15:10:55
Group: 1790

Analysis Batch Number: ICPWA-09/30/97-118 -1
Identification : ICPWA-*Metals by ICP
Number of Samples : 17
Batch Data-Date/Time : 09/30/97 / 13:15:40

Sequence : DATA273

CONTROL SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
17873-68372	Silver	0.0497	0.0500	99.4	80.0	120.0
	Arsenic	1.9664	2.0000	98.3	80.0	120.0
	Barium	1.9262	2.0000	96.3	80.0	120.0
	Calcium	2.0828	2.0000	104.1	80.0	120.0
	Cadmium	0.0497	0.0500	99.4	80.0	120.0
	Chromium	0.2019	0.2000	100.9	80.0	120.0
	Iron	1.1320	1.0000	113.2	80.0	120.0
	Potassium	9.7817	10.0000	97.8	80.0	120.0
	Magnesium	1.9966	2.0000	99.8	80.0	120.0
	Molybdenum	0.4942	0.5000	98.8	80.0	120.0
	Sodium	3.3291	3.0000	111.0	80.0	120.0
	Nickel	0.5092	0.5000	101.8	80.0	120.0
	Lead	0.4854	0.5000	97.1	80.0	120.0
	Antimony	0.5052	0.5000	101.0	80.0	120.0
	Selenium	1.9367	2.0000	96.8	80.0	120.0
17873-68372-2	Silver	0.0497	0.0500	99.4	80.0	120.0
	Arsenic	1.9664	2.0000	98.3	80.0	120.0
	Barium	1.9262	2.0000	96.3	80.0	120.0
	Calcium	2.0828	2.0000	104.1	80.0	120.0
	Cadmium	0.0497	0.0500	99.4	80.0	120.0
	Chromium	0.2019	0.2000	100.9	80.0	120.0
	Iron	1.1320	1.0000	113.2	80.0	120.0
	Potassium	9.7817	10.0000	97.8	80.0	120.0
	Magnesium	1.9966	2.0000	99.8	80.0	120.0
	Molybdenum	0.4942	0.5000	98.8	80.0	120.0
	Sodium	3.3291	3.0000	111.0	80.0	120.0
	Nickel	0.5092	0.5000	101.8	80.0	120.0
	Lead	0.4854	0.5000	97.1	80.0	120.0
	Antimony	0.5052	0.5000	101.0	80.0	120.0
	Selenium	1.9367	2.0000	96.8	80.0	120.0

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
ICV-	Silver	0.4000	0.4084	102.1	90.0	110.0
	Arsenic	1.6000	1.5920	99.5	90.0	110.0
	Barium	4.0000	3.8792	97.0	90.0	110.0
	Calcium	40.0000	40.1790	100.4	90.0	110.0
	Cadmium	4.0000	3.9010	97.5	90.0	110.0
	Chromium	4.0000	4.0676	101.7	90.0	110.0
	Iron	4.0000	3.9906	99.8	90.0	110.0
	Potassium	40.0000	40.4391	101.1	90.0	110.0
	Magnesium	20.0000	19.9911	100.0	90.0	110.0
	Molybdenum	20.0000	20.1293	100.6	90.0	110.0
	Sodium	40.0000	40.7115	101.8	90.0	110.0
	Nickel	8.0000	7.9225	99.0	90.0	110.0
	Lead	20.0000	19.8517	99.3	90.0	110.0
	Antimony	4.0000	3.9728	99.3	90.0	110.0
	Selenium	1.6000	1.6066	100.4	90.0	110.0
CCV1--2	Silver	0.4000	0.3946	98.6	90.0	110.0

Mountain States Analytical, I
Daily QC Batching Data
Data Released for Reporting

Analysis Batch Number: ICPWA-09/30/97-118 -1
Test Identification : ICPWA-*Metals by ICP
Number of Samples : 17
Batch Data-Date/Time : 09/30/97 / 13:15:40

Sequence : DATA273

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
CCV1--2	Arsenic	1.6000	1.5505	96.9	90.0	110.0
	Barium	4.0000	3.7382	93.5	90.0	110.0
	Calcium	40.0000	39.5678	98.9	90.0	110.0
	Cadmium	4.0000	3.8471	96.2	90.0	110.0
	Chromium	4.0000	3.9923	99.8	90.0	110.0
	Iron	4.0000	3.9404	98.5	90.0	110.0
	Potassium	40.0000	39.1423	97.9	90.0	110.0
	Magnesium	20.0000	19.5563	97.8	90.0	110.0
	Molybdenum	20.0000	19.6449	98.2	90.0	110.0
	Sodium	40.0000	38.7826	97.0	90.0	110.0
	Nickel	8.0000	7.7884	97.4	90.0	110.0
	Lead	20.0000	19.6067	98.0	90.0	110.0
	Antimony	4.0000	3.9268	98.2	90.0	110.0
	Selenium	1.6000	1.5653	97.8	90.0	110.0
CCV2--3	Silver	0.4000	0.3960	99.0	90.0	110.0
	Arsenic	1.6000	1.6100	100.6	90.0	110.0
	Barium	4.0000	3.6530	91.3	90.0	110.0
	Calcium	40.0000	40.9800	102.5	90.0	110.0
	Cadmium	4.0000	4.0089	100.2	90.0	110.0
	Chromium	4.0000	4.0845	102.1	90.0	110.0
	Iron	4.0000	4.0777	101.9	90.0	110.0
	Potassium	40.0000	38.4013	96.0	90.0	110.0
	Magnesium	20.0000	19.6420	98.2	90.0	110.0
	Molybdenum	20.0000	20.1056	100.5	90.0	110.0
	Sodium	40.0000	37.3168	93.3	90.0	110.0
	Nickel	8.0000	8.0271	100.3	90.0	110.0
	Lead	20.0000	20.3417	101.7	90.0	110.0
	Antimony	4.0000	4.1182	103.0	90.0	110.0
	Selenium	1.6000	1.6101	100.6	90.0	110.0
CCV3--4	Silver	0.4000	0.4214	105.4	90.0	110.0
	Arsenic	1.6000	1.6813	105.1	90.0	110.0
	Barium	4.0000	3.9070	97.7	90.0	110.0
	Calcium	40.0000	42.8451	107.1	90.0	110.0
	Cadmium	4.0000	4.1982	105.0	90.0	110.0
	Chromium	4.0000	4.2918	107.3	90.0	110.0
	Iron	4.0000	4.2739	106.8	90.0	110.0
	Potassium	40.0000	40.5605	101.4	90.0	110.0
	Magnesium	20.0000	20.6703	103.4	90.0	110.0
	Molybdenum	20.0000	21.1934	106.0	90.0	110.0
	Sodium	40.0000	40.2441	100.6	90.0	110.0
	Nickel	8.0000	8.4069	105.1	90.0	110.0
	Lead	20.0000	21.3092	106.5	90.0	110.0
	Antimony	4.0000	4.1204	103.0	90.0	110.0
	Selenium	1.6000	1.7315	108.2	90.0	110.0
CCV4--5	Silver	0.4000	0.3969	99.2	90.0	110.0
	Arsenic	1.6000	1.5485	96.8	90.0	110.0
	Barium	4.0000	3.8385	96.0	90.0	110.0
	Calcium	40.0000	38.6554	96.6	90.0	110.0
	Cadmium	4.0000	3.6884	92.2	90.0	110.0

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

Analysis Batch Number: ICPWA-09/30/97-118 -1
Identification : ICPWA-*Metals by ICP
Number of Samples : 17
Batch Data-Date/Time : 09/30/97 / 13:15:40

Sequence : DATA273

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
CCV4--5	Chromium	4.0000	3.9031	97.6	90.0	110.0
	Iron	4.0000	3.8788	97.0	90.0	110.0
	Potassium	40.0000	39.4294	98.6	90.0	110.0
	Magnesium	20.0000	19.4591	97.3	90.0	110.0
	Molybdenum	20.0000	19.2036	96.0	90.0	110.0
	Sodium	40.0000	39.9941	100.0	90.0	110.0
	Nickel	8.0000	7.5063	93.8	90.0	110.0
	Lead	20.0000	19.0487	95.2	90.0	110.0
	Antimony	4.0000	3.8296	95.7	90.0	110.0
	Selenium	1.6000	1.4715	92.0	90.0	110.0
CCV5--6	Silver	0.4000	0.3967	99.2	90.0	110.0
	Arsenic	1.6000	1.5921	99.5	90.0	110.0
	Barium	4.0000	3.6781	92.0	90.0	110.0
	Calcium	40.0000	40.2719	100.7	90.0	110.0
	Cadmium	4.0000	3.8603	96.5	90.0	110.0
	Chromium	4.0000	4.0058	100.1	90.0	110.0
	Iron	4.0000	3.9896	99.7	90.0	110.0
	Potassium	40.0000	38.1655	95.4	90.0	110.0
	Magnesium	20.0000	19.6288	98.1	90.0	110.0
	Molybdenum	20.0000	19.5825	97.9	90.0	110.0
	Sodium	40.0000	37.4663	93.7	90.0	110.0
	Nickel	8.0000	7.8215	97.8	90.0	110.0
	Lead	20.0000	19.[illegible]93	99.9	90.0	110.0
	Antimony	4.0000	3.9636	99.1	90.0	110.0
	Selenium	1.6000	1.5106	94.4	90.0	110.0
CCV6--7	Silver	0.4000	0.4014	100.3	90.0	110.0
	Arsenic	1.6000	1.5786	98.7	90.0	110.0
	Barium	4.0000	3.8061	95.2	90.0	110.0
	Calcium	40.0000	39.8883	99.7	90.0	110.0
	Cadmium	4.0000	3.8145	95.4	90.0	110.0
	Chromium	4.0000	4.0193	100.5	90.0	110.0
	Iron	4.0000	4.0182	100.5	90.0	110.0
	Potassium	40.0000	39.1967	98.0	90.0	110.0
	Magnesium	20.0000	19.7641	98.8	90.0	110.0
	Molybdenum	20.0000	19.6012	98.0	90.0	110.0
	Sodium	40.0000	39.3966	98.5	90.0	110.0
	Nickel	8.0000	7.7887	97.4	90.0	110.0
	Lead	20.0000	19.8417	99.2	90.0	110.0
	Antimony	4.0000	4.0360	100.9	90.0	110.0
	Selenium	1.6000	1.5065	94.2	90.0	110.0

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Silver	ND	0.0060
	Arsenic	ND	0.0300
	Barium	0.0009	0.0030
	Calcium	0.0254	0.4000
	Cadmium	0.0005	0.0040
	Chromium	0.0040	0.0100
	Iron	ND	0.2000

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

10/03/97
15:11:32
Group: 17907

Analysis Batch Number: ICPWA-09/30/97-118 -1
Identification : ICPWA-*Metals by ICP
Number of Samples : 17
Batch Data-Date/Time : 09/30/97 / 13:15:40

Sequence : DATA273

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Potassium	0.0651	0.1000
	Magnesium	0.0146	0.0500
	Molybdenum	0.0061	0.0300
	Sodium	0.0178	0.2000
	Nickel	0.0132	0.0300
	Lead	ND	0.0400
	Antimony	0.0543	0.1000
	Selenium	0.0084	0.0700
CCB1-	Silver	0.0017	0.0060
	Arsenic	ND	0.0300
	Barium	0.0011	0.0030
	Calcium	0.0254	0.4000
	Cadmium	0.0008	0.0040
	Chromium	0.0045	0.0100
	Iron	ND	0.2000
	Potassium	0.0715	0.1000
	Magnesium	0.0110	0.0500
	Molybdenum	0.0108	0.0300
	Sodium	ND	0.2000
	Nickel	0.0037	0.0300
	Lead	ND	0.0400
	Antimony	0.0427	0.1000
	Selenium	ND	0.0700
CCB2-	Silver	0.0040	0.0060
	Arsenic	0.0207	0.0300
	Barium	0.0011	0.0030
	Calcium	0.0272	0.4000
	Cadmium	0.0002	0.0040
	Chromium	0.0034	0.0100
	Iron	0.0178	0.2000
	Potassium	0.0460	0.1000
	Magnesium	0.0244	0.0500
	Molybdenum	0.0047	0.0300
	Sodium	ND	0.2000
	Nickel	0.0102	0.0300
	Lead	0.0091	0.0400
	Antimony	0.0533	0.1000
	Selenium	0.0295	0.0700
CCB3-	Silver	0.0047	0.0060
	Arsenic	0.0141	0.0300
	Barium	0.0006	0.0030
	Calcium	0.0277	0.4000
	Cadmium	0.0018	0.0040
	Chromium	0.0029	0.0100
	Iron	0.0381	0.2000
	Potassium	ND	0.1000
	Magnesium	0.0174	0.0500
	Molybdenum	0.0086	0.0300
	Sodium	ND	0.2000
	Nickel	0.0068	0.0300

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

10/03/97
15:11:05
Group: 17937

[redacted]ysis Batch Number: ICPWA-09/30/97-118 -1
[redacted] Identification : ICPWA-*Metals by ICP
Number of Samples : 17
Batch Data-Date/Time : 09/30/97 / 13:15:40

Sequence : DATA273

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
CCB3-	Lead	ND	0.0400
	Antimony	0.0301	0.1000
	Selenium	0.0483	0.0700
CCB4-	Silver	ND	0.0060
	Arsenic	0.0073	0.0300
	Barium	0.0008	0.0030
	Calcium	0.0253	0.4000
	Cadmium	0.0023	0.0040
	Chromium	0.0003	0.0100
	Iron	0.0100	0.2000
	Potassium	ND	0.1000
	Magnesium	0.0051	0.0500
	Molybdenum	0.0048	0.0300
	Sodium	0.0534	0.2000
	Nickel	0.0102	0.0300
	Lead	0.0125	0.0400
	Antimony	ND	0.1000
	Selenium	ND	0.0700
CCB5-	Silver	ND	0.0060
	Arsenic	0.0082	0.0300
[redacted]	Barium	0.0001	0.0030
	Calcium	0.0206	0.4000
	Cadmium	ND	0.0040
	Chromium	ND	0.0100
	Iron	0.0219	0.2000
	Potassium	ND	0.1000
	Magnesium	0.0068	0.0500
	Molybdenum	0.0042	0.0300
	Sodium	ND	0.2000
	Nickel	0.0067	0.0300
	Lead	0.0279	0.0400
	Antimony	0.0248	0.1000
	Selenium	ND	0.0700
CCB6-	Silver	0.0013	0.0060
	Arsenic	0.0035	0.0300
	Barium	0.0013	0.0030
	Calcium	0.0236	0.4000
	Cadmium	0.0021	0.0040
	Chromium	0.0042	0.0100
	Iron	0.0298	0.2000
	Potassium	ND	0.1000
	Magnesium	ND	0.0500
	Molybdenum	ND	0.0300
	Sodium	ND	0.2000
	Nickel	0.0021	0.0300
[redacted]	Lead	0.0136	0.0400
	Antimony	0.0799	0.1000
	Selenium	ND	0.0700

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

10/03/97
15:11:07
Group: 17907

Analysis Batch Number: ICPWA-09/30/97-118 -1
Test Identification : ICPWA-*Metals by ICP Sequence : DATA273
Number of Samples : 17
Batch Data-Date/Time : 09/30/97 / 13:15:40

---------- Result Footnotes ----------
(2a) - Recovery is insignificant because sample conc. is >4x spike added.
(B) - Nonhomogeneous sample
(11) - Both Duplicate results are less than the MDL.

---------- Batch Notes ----------
Serial dilutions for calcium, magnesium, and sodium were recovered within acceptance limits of +/- 10%. A post digestion spike for iron was recovered within acceptance limits of +/- 15%.

Groups & Samples

17873-68367	17873-68368	17873-68369	17873-68371	17873-68372	17873-68373	17897-68426	17897-68427
17900-68432	17900-68433	17904-68439	17905-68440	17907-68442	17907-68443	17912-68462	17913-68464
17917-68478	17921-68492	17921-68493	17936-68547				

ON SITE TECHNOLOGIES, LTD.

CHAIN OF CUSTODY RECORD

6469

Date: 9/15/97

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.: 5798 | Job No.

SEND INVOICE TO
Name: ACCOUNTS REC.
Company: ON SITE | Dept.
Address:
City, State, Zip:

REPORT RESULTS TO
Name: DAVID COX | Title:
Company: ON SITE TECH
Mailing Address:
City, State, Zip:
Telephone No.: 505 325-2432 | Telefax No.: 325-6256

Sampling Location: McCOY GAS COM A 1

Sampler: MG

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	WQCC METALS	LAB ID
9709111030 ; MW-2	9/11/97	1030	WAW	COOL	1	✓	16150-5798
9709111000 ; MW-1	9/11/97	1000	↓	↓	1	✓	16149 - ↓

Relinquished by:	Date/Time 9/15/97 1700	Received by: MISHI Nichole Davis	Date/Time 09/17/97 1730
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date 9/15/97
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

Distribution: White On Site Yellow LAB Pink Sampler Goldenrod Client

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

September 30, 1997

RECEIVED OCT 0 2 1997

Mr David Cox
On Site Technologies
612 East Murray
Farmington, NM 87401

The following report contains analytical results for samples received at Southern Petroleum Laboratories (SPL) on September 16, 1997. The samples were assigned to Certificate of Analysis No.(s)9709756 and analyzed for all parameters as listed on the chain of custody.

There were no analytical problems encountered with this group of samples and all quality control data was within acceptance limits.

If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis No. during any inquiries.

Again, SPL is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Southern Petroleum Laboratories

Neaundra Wyatt
Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 97-09-756

Approved for Release by:

Néaundra Wyatt, Client Services Representative Date: Sept. 30, 97

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9709756-01

On Site Technologies
612 East Murray
Farmington, NM 87401
ATTN: David Cox

09/30/97

PROJECT: McCoy Gas Com Al
SITE:
SAMPLED BY: ON Site
SAMPLE ID: McCoy Gas Com Al; MW-2

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 09/11/97 10:30:00
DATE RECEIVED: 09/16/97

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	13	2.0	ug/L
Acenaphthylene	ND	2.0	ug/L
Acenaphthene	ND	6.0	ug/L
Fluorene	ND	6.0	ug/L
Phenanthrene	ND	2.0	ug/L
Anthracene	ND	2.0	ug/L
Fluoranthene	ND	2.0	ug/L
Pyrene	ND	2.0	ug/L
Chrysene	ND	2.0	ug/L
Benzo (a) anthracene	ND	2.0	ug/L
Benzo (b) fluoranthene	ND	2.0	ug/L
Benzo (k) fluoranthene	ND	2.0	ug/L
Benzo (a) pyrene	ND	2.0	ug/L
Dibenzo (a,h) anthracene	ND	2.0	ug/L
Benzo (g,h,i) perylene	ND	2.0	ug/L
Indeno (1,2,3-cd) pyrene	ND	2.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1-Fluoronaphthalene	0.20 ug/L	D	50	150
Phenanthrene d-10	0.20 ug/L	D	50	150

ANALYZED BY: KA DATE/TIME: 09/20/97 08:05:11
EXTRACTED BY: PC DATE/TIME: 09/18/97 08:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
D - Diluted, control limits not applicable.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

QUALITY CONTROL

DOCUMENTATION

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
Method 8310 ***

Matrix: Aqueous
Units: ug/L

Batch Id: 2970918105000

BLANK SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(**) (Advisory) RPD Max.	QC Limits(**) (Advisory) Recovery Range
NAPHTHALENE	ND	0.5	0.32	64.0	0.35	70.0	8.96	30	33 - 122
ACENAPHTHYLENE	ND	0.5	0.26	52.0	0.34	68.0	26.7	30	42 - 139
ACENAPHTHENE	ND	0.5	0.33	66.0	0.36	72.0	8.70	30	25 - 123
FLUORENE	ND	0.5	0.31	62.0	0.36	72.0	14.9	30	19 - 142
PHENANTHRENE	ND	0.5	0.33	66.0	0.37	74.0	11.4	30	40 - 121
ANTHRACENE	ND	0.5	0.29	58.0	0.33	66.0	12.9	30	32 - 121
FLUORANTHENE	ND	0.5	0.34	68.0	0.38	76.0	11.1	30	51 - 118
PYRENE	ND	0.5	0.34	68.0	0.37	74.0	8.45	30	45 - 117
CHRYSENE	ND	0.5	0.35	70.0	0.39	78.0	10.8	30	44 - 122
BENZO (A) ANTHRACENE	ND	0.5	0.34	68.0	0.38	76.0	11.1	30	57 - 118
BENZO (B) FLUORANTHENE	ND	0.5	0.36	72.0	0.41	82.0	13.0	30	62 - 121
BENZO (K) FLUORANTHENE	ND	0.5	0.36	72.0	0.40	80.0	10.5	30	63 - 117
BENZO (A) PYRENE	ND	0.5	0.33	66.0	0.41	82.0	21.6	30	42 - 121
DIBENZO (A,H) ANTHRACENE	ND	0.5	0.35	70.0	0.39	78.0	10.8	30	53 - 116
BENZO (G,H,I) PERYLENE	ND	0.5	0.36	72.0	0.40	80.0	10.5	30	51 - 116
INDENO (1,2,3-CD) PYRENE	ND	0.5	0.37	74.0	0.41	82.0	10.3	30	60 - 116

Analyst: KA
Sequence Date: 09/18/97
Method Blank File ID:
Sample File ID:
Blank Spike File ID: 970918B\014-1401
Matrix Spike File ID:
Matrix Spike Duplicate File ID:

* = Values Outside QC Range. « = Data outside Method Specification limits.
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
Relative Percent Difference = [(<4> - <5>) / ((<4> + <5>) x 0.5)] x 100
(**) = Source: SPL Temporary Limits

SAMPLES IN BATCH(SPL ID):

9709865-03A 9709865-04A 9709865-01A 9709682-01A
9709708-01C 9709781-04D 9709781-07D 9709847-07F
9709847-08F 9709803-01A 9709756-01A 9709725-02B
9709725-03B 9709725-04B 9709725-05B 9709725-06B
9709865-02A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9709756 sac 9/22

CHAIN OF CUSTODY RECORD

Date: 9/15/97

Page 1 of 1

ON SITE TECHNOLOGIES, LTD.

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

Purchase Order No.: 5798 | Job No.

SEND INVOICE TO
Name: ACCOUNTS REC.
Company: ON SITE TECH | Dept.
Address:
City, State, Zip:

REPORT RESULTS TO
Name: DAVID COX | Title:
Company: ON SITE TECH
Mailing Address:
City, State, Zip:
Telephone No.: 505-325-2432 | Telefax No.: 325-6256

Sampling Location: McCOY GAS COM A1

Sampler: MG

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	ANALYSIS REQUESTED: PAH 8310	LAB ID
McCOY GAS COM A1 ; MW-2 9709111030	9/11/97	1030	WW	4°C	1	✓	16150-6468

Relinquished by:	Date/Time 9/15/97 1700	Received by:	Date/Time 9/16/97 1030
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment: UPS: 1Z66E5850110003726

Authorized by: _____ Date 9/15/97
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:
			6°C

Distribution: White – On Site Yellow – L… Pink – Sampler Goldenrod – Client

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
9-16-97	1030

SPL Sample ID:
9709754

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		6° C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)		
		Other: UPS	1Z 66E585 01 1000 3721	
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
[signature]	9/16/97

CHAIN OF CUSTODY RECORD

5798

ON SITE TECHNOLOGIES, LTD.

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

Date: 9/11/97

Page 1 of 1

Purchase Order No.: | Job No.

SEND INVOICE TO

Name: Denver Bearden
Company: PNM Gas Services | Dept. 324-3763
Address: 603 W. Elm Street
City, State, Zip: Farmington, NM 87401

REPORT RESULTS TO

Name: Maureen Gannon | Title
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: McCoy Gas Com A 1

Sampler: M Gannon / M Kelly

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX 8020	PAHs	METALS, VOCs, ORGS	CATIONS/ANIONS	LAB ID
	MW 1 9709111600	9-11-97		H2O	BLK-HCl	4	X		X	X	16145-5798
*	MW 2 9709111030				BLK-HCl	5	X	X	X	X	16150-
	MW 3 9709111100				BLK HCl	2	X				16151-
*	MW 4 9709111130				BLK HCl	2	X				16152-
	MW 5 9709111200	9-11-97		H2O	BLK HCl	2	X				16153-

Relinquished by: Maureen Gannon | Date/Time 1430 9-11-97 | Received by: | Date/Time
Relinquished by: | Date/Time | Received by: | Date/Time
Relinquished by: | Date/Time | Received by: | Date/Time 9/11/97 1450

Method of Shipment:

Authorized by: Maureen Gannon (Client Signature Must Accompany Request) Date 9-11-97

Rush	24-48 Hours	10 Working Days	Special Instructions:
			Results to be sent to both parties.

Distribution: White – On Site Yellow – L Pink – Sampler Goldenrod – Client

* "Hot" Samples

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	8-Dec-97
Company:	*PNM Gas Services*	COC No.:	*7108*
Address:	*603 W. Elm*	Sample No.:	*17030*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - McCoy Gas Com A-1***				
Project Location:	***9712021230; MW-1***				
Sampled by:	MG/MS	Date:	2-Dec-97	Time:	12:30
Analyzed by:	DC	Date:	5-Dec-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.2	ug/L
Toluene	ND	ug/L	0.2	ug/L
Ethylbenzene	ND	ug/L	0.2	ug/L
m,p-Xylene	0.2	ug/L	0.2	ug/L
o-Xylene	ND	ug/L	0.2	ug/L
TOTAL	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:
Date: 12/9/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	9-Dec-97
Company:	*PNM Gas Services*	COC No.:	*7108*
Address:	*603 W. Elm*	Sample No.:	*17031*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - McCoy Gas Com A-1***				
Project Location:	***9712021300; MW-2***				
Sampled by:	MS/MG	Date:	2-Dec-97	Time:	13:00
Analyzed by:	DC	Date:	8-Dec-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	167	ug/L	1	ug/L
Toluene	10.6	ug/L	0.2	ug/L
Ethylbenzene	24.7	ug/L	0.2	ug/L
m,p-Xylene	23.7	ug/L	0.2	ug/L
o-Xylene	1.8	ug/L	0.2	ug/L
TOTAL	227.8	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By:
Date: 12/9/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	9-Dec-97
Company:	*PNM Gas Services*	COC No.:	*7108*
Address:	*603 W. Elm*	Sample No.:	*17032*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - McCoy Gas Com A-1***				
Project Location:	***9712021330; MW-3***				
Sampled by:	MS/MG	Date:	2-Dec-97	Time:	13:30
Analyzed by:	DC	Date:	8-Dec-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	28	ug/L	2	ug/L
Toluene	15	ug/L	2	ug/L
Ethylbenzene	13	ug/L	2	ug/L
m,p-Xylene	3809	ug/L	4	ug/L
o-Xylene	5	ug/L	2	ug/L
TOTAL	3870	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: DaG

Date: 12/9/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	9-Dec-97
Company:	*PNM Gas Services*	COC No.:	*7108*
Address:	*603 W. Elm*	Sample No.:	*17033*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - McCoy Gas Com A-1***				
Project Location:	***9712021400; MW-4***				
Sampled by:	MS/MG	Date:	2-Dec-97	Time:	14:00
Analyzed by:	DC	Date:	8-Dec-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	22	ug/L	4	ug/L
Toluene	30	ug/L	4	ug/L
Ethylbenzene	106	ug/L	4	ug/L
m,p-Xylene	2476	ug/L	4	ug/L
o-Xylene	12	ug/L	4	ug/L
TOTAL	2645	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By:

Date: 12/9/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	9-Dec-97
Company:	*PNM Gas Services*	COC No.:	*7108*
Address:	*603 W. Elm*	Sample No.:	*17034*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - McCoy Gas Com A-1***				
Project Location:	***9712021430; MW-5***				
Sampled by:	MS/MG	Date:	2-Dec-97	Time:	14:30
Analyzed by:	DC	Date:	8-Dec-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	24	ug/L	4	ug/L
Toluene	55	ug/L	4	ug/L
Ethylbenzene	125	ug/L	4	ug/L
m,p-Xylene	2753	ug/L	4	ug/L
o-Xylene	10	ug/L	4	ug/L
TOTAL	2967	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By:
Date: 12/9/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 5-Dec-97

Internal QC No.: 0559-STD
Surrogate QC No.: 0556-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	20.3	2	15%
Toluene	ppb	20.0	20.9	4	15%
Ethylbenzene	ppb	20.0	21.0	5	15%
m,p-Xylene	ppb	40.0	40.4	1	15%
o-Xylene	ppb	20.0	20.7	4	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*RPD*	*Limit*
Benzene	92	83	(39-150)	1	20%
Toluene	88	79	(46-148)	2	20%
Ethylbenzene	91	88	(32-160)	2	20%
m,p-Xylene	91	86	(35-145)	2	20%
o-Xylene	90	88	(35-145)	2	20%

Surrogate Recoveries

Laboratory Identification	*S1 Percent Recovered*	*S2 Percent Recovered*	*Laboratory Identification*	*S1 Percent Recovered*	*S2 Percent Recovered*
Limit Percent Recovered	(70-130)		*Limit Percent Recovered*	(70-130)	
17030-7108	94				
				12/11/97	12/9/97

S1: *Flourobenzene*

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 8-Dec-97

Internal QC No.: 0559-STD
Surrogate QC No.: 0556-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	20.4	2	15%
Toluene	ppb	20.0	20.9	4	15%
Ethylbenzene	ppb	20.0	21.0	5	15%
m,p-Xylene	ppb	40.0	40.7	2	15%
o-Xylene	ppb	20.0	20.8	4	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*RPD*	*Limit*
Benzene	95	83	(39-150)	12	20%
Toluene	99	87	(46-148)	12	20%
Ethylbenzene	93	84	(32-160)	9	20%
m,p-Xylene	103	84	(35-145)	6	20%
o-Xylene	94	84	(35-145)	11	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)	
17031-7108	84				
17032-7108	93				
17033-7108	96				
17034-7108	95				
				JDR 12/11/97	RC 12/9/97

S1: *Flourobenzene*

ON SITE TECHNOLOGIES, LTD.

CHAIN OF CUSTODY RECORD

7108

Date: 12/3/97

Page: 1 of 1

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

Purchase Order No.: | Job No.

SEND INVOICE TO

Name	Denver Bearden	
Company	PNM Gas Services	Dept. 324-3763
Address	603 W. Elm Street	
City, State, Zip	Farmington, NM 87401	

REPORT RESULTS TO

Name	Maureen Gannon	Title
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: McCoy Gas com A-1

Sampler: M.S. M.G.

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX 8020	LAB ID
9712021230 MW-1	12/2/97		H_2O	HCL	2	X	17030-7108
9712021300 MW-2	↓				2	X	17031
9712021330 MW-3					2	X	17032
9712021400 MW-4					2	X	17033
9712021430 MW-5					2	X	17034

ANALYSIS REQUESTED

Relinquished by:	Date/Time 12/3/97 1330	Received by:	Date/Time 12/3/97 1330
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date 12/3/97
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:
			Results to be sent to both parties.

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

ON SITE

OFF: (505) 325-5667 LAB: (505) 325-1556

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: McCoy Gas Com 1A Order No.: 9803014

Dear Maureen Gannon,

On Site Technologies, LTD. received 5 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
TECHNOLOGIES, LTD.
OFF: (505) 325-5667
LAB: (505) 325-1556

Date: *18-Mar-98*

CLIENT: PNM - Public Service Company of NM
Project: McCoy Gas Com 1A
Lab Order: 9803014

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.

P.O. BOX 2606 • FARMINGTON, NM 87499

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:**	McCoy Gas Com 1A
Work Order:	9803014	**Client Sample ID:**	9803041248; MW-1
Lab ID:	9803014-01A **Matrix:** AQUEOUS	**Collection Date:**	3/4/98 12:48:00 PM
Project:	McCoy Gas Com 1A	**COC#:**	7142

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	93.8	70-130		%REC	1	3/9/98
Surr: 1,4-Difluorobenzene	94.2	70-130		%REC	1	3/9/98
Surr: 4-Bromochlorobenzene	91.8	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

P.O. BOX 2606 • FARMINGTON, NM 87499

ON SITE
TECHNOLOGIES, LTD.
OFF: (505) 325-5667 LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *18-Mar-98*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McCoy Gas Com 1A
Work Order:	9803014	**Client Sample ID:**	9803041300; MW-2
Lab ID:	9803014-02A **Matrix:** AQUEOUS	**Collection Date:**	3/4/98 1:00:00 PM
Project:	McCoy Gas Com 1A	**COC#:**	7142

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		**SW8021A**				Analyst: **DC**
Benzene	70	0.5		µg/L	1	3/9/98
Toluene	12	0.5		µg/L	1	3/9/98
Ethylbenzene	31	0.5		µg/L	1	3/9/98
m,p-Xylene	20	1		µg/L	1	3/9/98
o-Xylene	2.1	0.5		µg/L	1	3/9/98
Surr: Fluorobenzene	85.5	70-130		%REC	1	3/9/98
Surr: 1,4-Difluorobenzene	84.9	70-130		%REC	1	3/9/98
Surr: 4-Bromochlorobenzene	87.1	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

P.O. BOX 2606 • FARMINGTON, NM 87499

ON SITE
TECHNOLOGIES, LTD.
OFF: (505) 325-5667
LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *18-Mar-98*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McCoy Gas Com 1A
Work Order:	9803014	**Client Sample ID:**	9803041313; MW-3
Lab ID:	9803014-03A **Matrix:** AQUEOUS	**Collection Date:**	3/4/98 1:13:00 PM
Project:	McCoy Gas Com 1A	**COC#:**	7142

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		**SW8021A**				Analyst: **DC**
Benzene	21	5		µg/L	10	3/9/98
Toluene	11	5		µg/L	10	3/9/98
Ethylbenzene	9.6	5		µg/L	10	3/9/98
m,p-Xylene	2400	10		µg/L	10	3/9/98
o-Xylene	ND	5		µg/L	10	3/9/98
Surr: Fluorobenzene	96.3	70-130		%REC	10	3/9/98
Surr: 1,4-Difluorobenzene	95.3	70-130		%REC	10	3/9/98
Surr: 4-Bromochlorobenzene	92.0	70-130		%REC	10	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

P.O. BOX 2606 • FARMINGTON, NM 87499

ON SITE
TECHNOLOGIES, LTD.
OFF: (505) 325-5667 LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *18-Mar-98*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McCoy Gas Com 1A
Work Order:	9803014	**Client Sample ID:**	9803041326; MW-4
Lab ID:	9803014-04A **Matrix:** AQUEOUS	**Collection Date:**	3/4/98 1:26:00 PM
Project:	McCoy Gas Com 1A	**COC#:**	7142

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		**SW8021A**				Analyst: **DC**
Benzene	16	5		µg/L	10	3/9/98
Toluene	26	5		µg/L	10	3/9/98
Ethylbenzene	81	5		µg/L	10	3/9/98
m,p-Xylene	1600	10		µg/L	10	3/9/98
o-Xylene	8	5		µg/L	10	3/9/98
Surr: Fluorobenzene	94.8	70-130		%REC	10	3/9/98
Surr: 1,4-Difluorobenzene	93.4	70-130		%REC	10	3/9/98
Surr: 4-Bromochlorobenzene	89.0	70-130		%REC	10	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

P.O. BOX 2606 • FARMINGTON, NM 87499

ON SITE
TECHNOLOGIES, LTD.
OFF: (505) 325-5667 LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *18-Mar-98*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McCoy Gas Com 1A
Work Order:	9803014	**Client Sample ID:**	9803041340; MW-5
Lab ID:	9803014-05A **Matrix:** AQUEOUS	**Collection Date:**	3/4/98 1:40:00 PM
Project:	McCoy Gas Com 1A	**COC#:**	7142

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		**SW8021A**				Analyst: **DC**
Benzene	21	5		µg/L	10	3/9/98
Toluene	11	5		µg/L	10	3/9/98
Ethylbenzene	8.8	5		µg/L	10	3/9/98
m,p-Xylene	2300	10		µg/L	10	3/9/98
o-Xylene	8	5		µg/L	10	3/9/98
Surr: Fluorobenzene	96.0	70-130		%REC	10	3/9/98
Surr: 1,4-Difluorobenzene	95.2	70-130		%REC	10	3/9/98
Surr: 4-Bromochlorobenzene	91.8	70-130		%REC	10	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

P.O. BOX 2606 • FARMINGTON, NM 87499

On Site Technologies, LTD.

Date: *18-Mar-98*

CLIENT: PNM Gas Services
Work Order: 9803014
Project: McCoy Gas Com 1A

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: **9803014** Run ID: **GC-1_980309A** SeqNo: **838**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0562	0.5									J
Ethylbenzene	ND	0.5									
m,p-Xylene	ND	1									
o-Xylene	ND	0.5									
Toluene	.1089	0.5									J

Sample ID: **MB3** Batch ID: **GC-1_980309** Test Code: **SW8021A** Units: **µg/L** Analysis Date **3/9/98** Prep Date:
Client ID: **9803014** Run ID: **GC-1_980309A** SeqNo: **839**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0606	0.5									J
Ethylbenzene	ND	0.5									
m,p-Xylene	.085	1									J
o-Xylene	ND	0.5									
Toluene	.1332	0.5									J

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

On Site Technologies, LTD.

Date: *18-Mar-98*

CLIENT: PNM Gas Services
Work Order: 9803014
Project: McCoy Gas Com 1A

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: **9803041326; MW-** **9803014** Run ID: **GC-1_980309A** SeqNo: **840**

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

Sample ID: **9803014-04AMSD** Batch ID: **GC-1_980309** Test Code: **SW8021A** Units: **µg/L** Analysis Date **3/9/98** Prep Date:
Client ID: **9803041326; MW-** **9803014** Run ID: **GC-1_980309A** SeqNo: **841**

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

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

On Site Technologies, LTD.

Date: *18-Mar-98*

CLIENT: PNM Gas Services
Work Order: 9803014
Project: McCoy Gas Com 1A

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: **9803014** 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:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *18-Mar-98*

CLIENT: PNM Gas Services
Work Order: 9803014
Project: McCoy Gas Com 1A

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: **9803014** 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: **9803014** Run ID: **GC-1_980309A** SeqNo: **834**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD 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: 9803014
Project: McCoy Gas Com 1A

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: **9803014** Run ID: **GC-1_980309A** SeqNo: **835**

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

Sample ID: **CCV4 QC0529/30** Batch ID: **GC-1_980309** Test Code: **SW8021A** Units: **µg/L** Analysis Date **3/9/98** Prep Date:
Client ID: **9803014** Run ID: **GC-1_980309A** SeqNo: **836**

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

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte dc ected 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.

CHAIN OF CUSTODY RECORD

Date: [illegible] Page: 1 of 1

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

Purchase Order No.:		Job No.	
SEND INVOICE TO — Name	Denver Bearden		
Company	PNM Gas Services	Dept.	324-3763
Address	603 W. Elm Street		
City, State, Zip	Farmington, NM 87401		

REPORT RESULTS TO — Name	Maureen Gannon	Title	
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: McCoy Gas Com 1A

Sampler: [illegible]

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	ANALYSIS REQUESTED	LAB ID
980304 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	✓	[illegible]
980304 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]		✓	[illegible]
980304 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]		✓	[illegible]
980304 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]		✓	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		✓	[illegible]

Relinquished by: [signature]	Date/Time [illegible]	Received by: [signature]	Date/Time [illegible]
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time
Method of Shipment:	Rush	24-48 Hours	10 Working Days

Special Instructions:

Results to be sent to both parties.

Authorized by: [signature] Date [illegible]
(Client Signature Must Accompany Request)

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