3R - 324

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: **Jacques 2A**

Groundwater Site Summary Report

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

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

Operator: Amoco
Sec: 25 **Twn:** 30N **Rng:** 9W **Unit:** D
Canyon: Pump

Vulnerable Class: Original
OCD Ranking: 20
Lead Agency: NMOCD

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

Activities for Previous Year:

Quarterly sampling took place on May 8, July 30 and October 8, 1997 and again on January 29, 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. PNM also sampled MW-2 for polyaromatic hydrocarbons (PAHs) because the well had a strong hydrocarbon odor and contained groundwater with a visible sheen. 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 BTEX in MW-2, PNM conducted additional source removal at the Jacques 2A in December of 1997. Approximately 5000 cubic yards of soil was removed and remediated. MW-2 was removed during the excavation and reinstalled in January of 1998.

Results:

Figure 1 presents a site map showing benzene, toluene, ethylbenzene and xylenes (BTEX) 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 May 8, 1997. MW-1 (upgradient), MW-3 (downgradient) and MW-4 (cross-gradient) have shown "non-detect" for BTEX over four consecutive quarters. From May through October of 1997, the BTEX concentration in MW-2, the source well, has remained elevated and fairly constant. After PNM conducted the second source removal in December of 1997, the January 29, 1998 sampling event demonstrated that the BTEX concentration had decreased by one order of magnitude in the source well. From the water quality analysis of MW-1 and-2, sulfate levels in each well are approximately 1400 mg/l above standard. Metals in both wells are below the WQCC standards. A PAH analysis was not run on MW-2 due to an error in shipping.

Figures 2, 3 and 4 provide groundwater contour maps for May, July and October 1997 and January 1998, respectively. With the exception of July 1997, groundwater beneath the site travels in a southwesterly direction. In July, the gradient shifted more towards the west- possibly due to increased precipitation during the summer months.

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**

Future Actions:

The recent excavation of additional source appears to be successful at expediting clean up at the Jacques 2A. PNM will continue to monitor the groundwater gradient and perform quarterly sampling. If groundwater in any of the four wells exhibits a visible sheen with a strong hydrocarbon odor, PNM will collect a sample for PAHs' analysis.

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. Jacques 2A Site Map & Analytical Results (Concentrations in ppb)

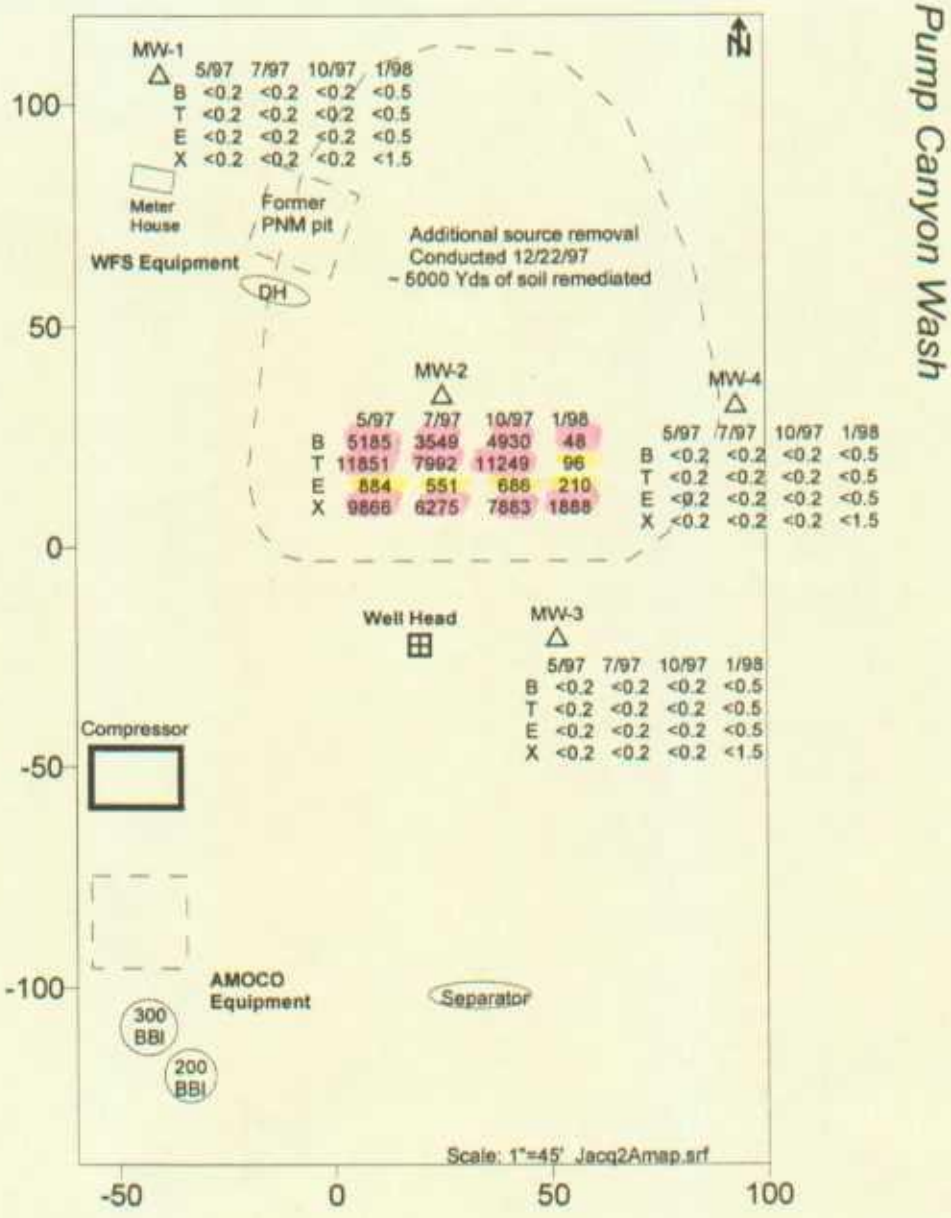

Figure 2. Jacques 2A Groundwater Contour Map (May 5, 1997)

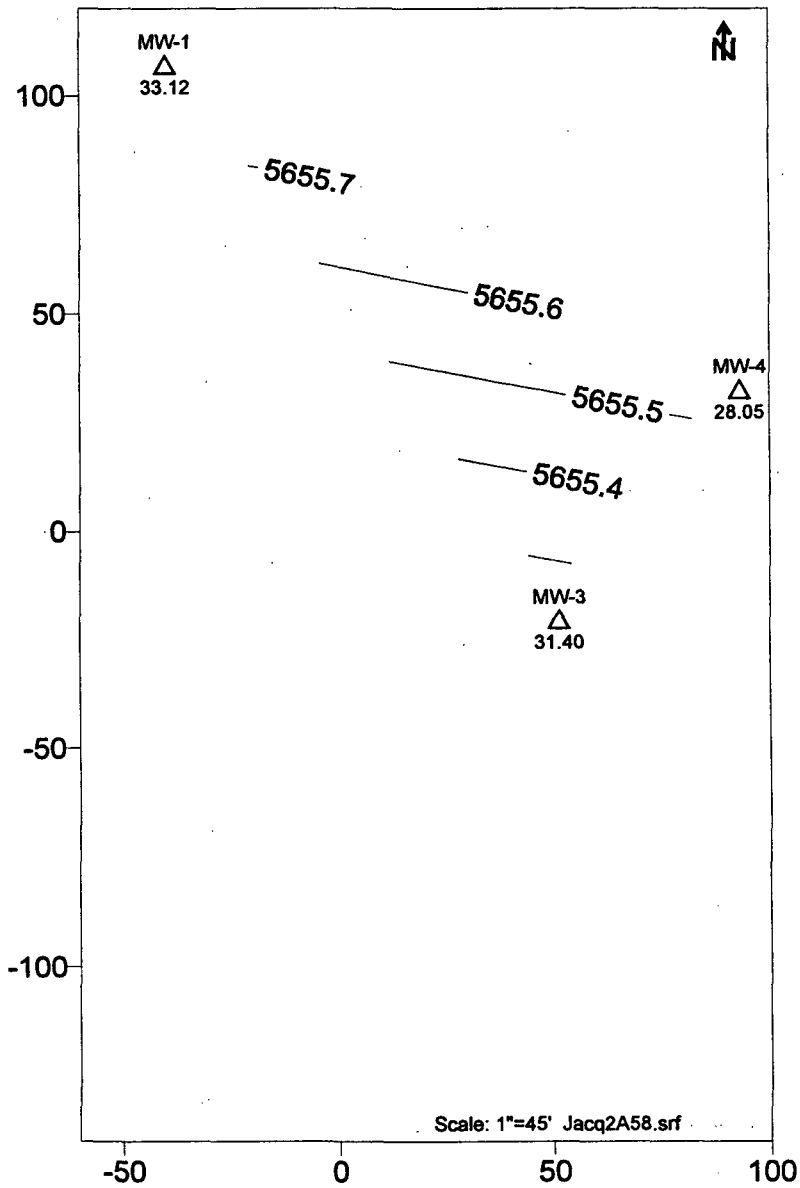

Figure 3. Jacques 2A Groundwater Contour Map (July 30, 1997)

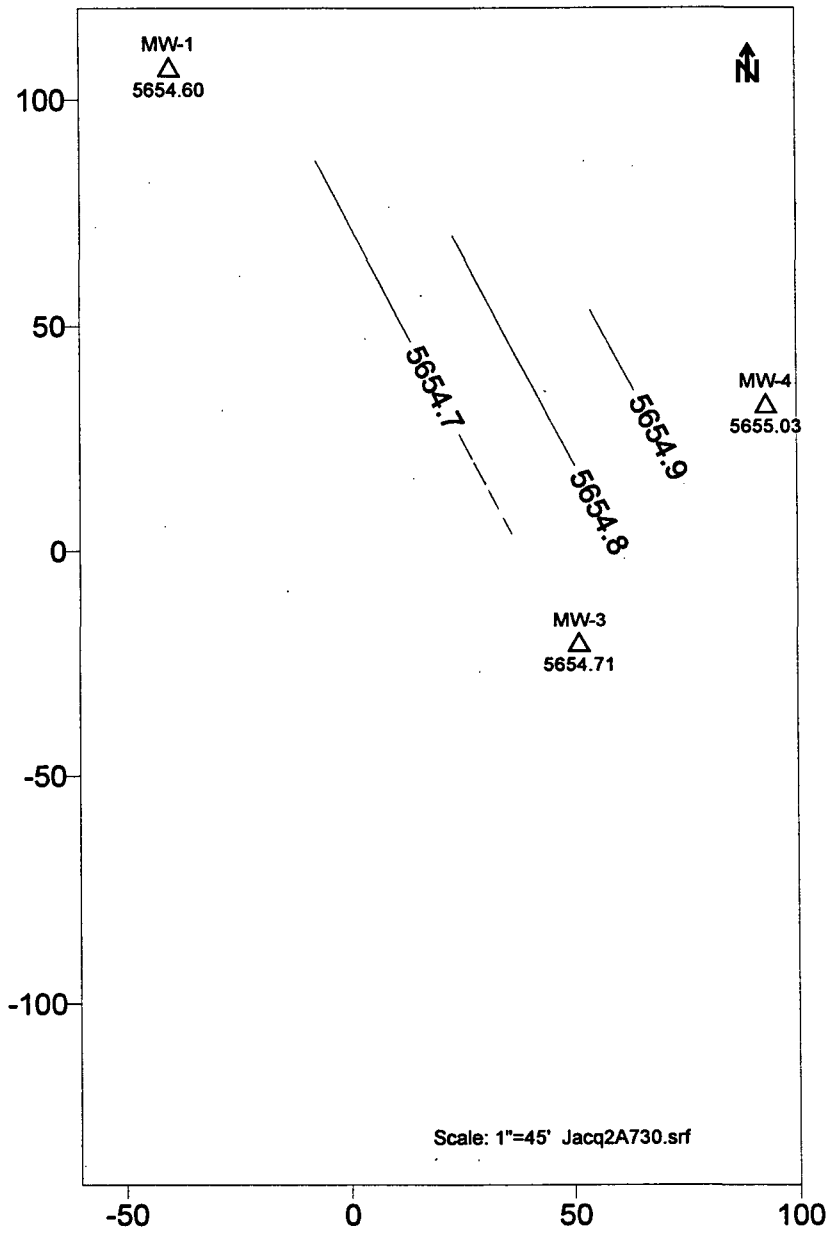

Figure 4. Jacques 2A Groundwater Contour Map (October 8, 1997)

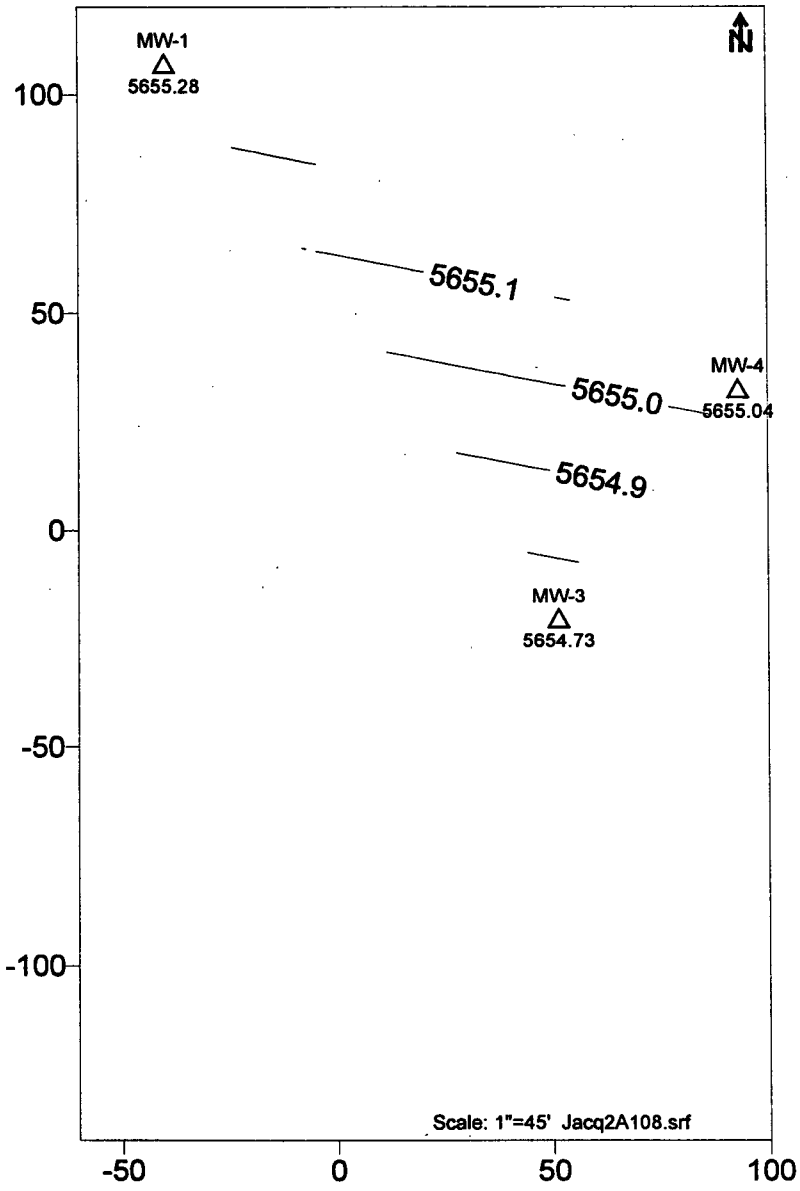

Figure 5. Jacques 2A Groundwater Contour Map (January 29, 1998)

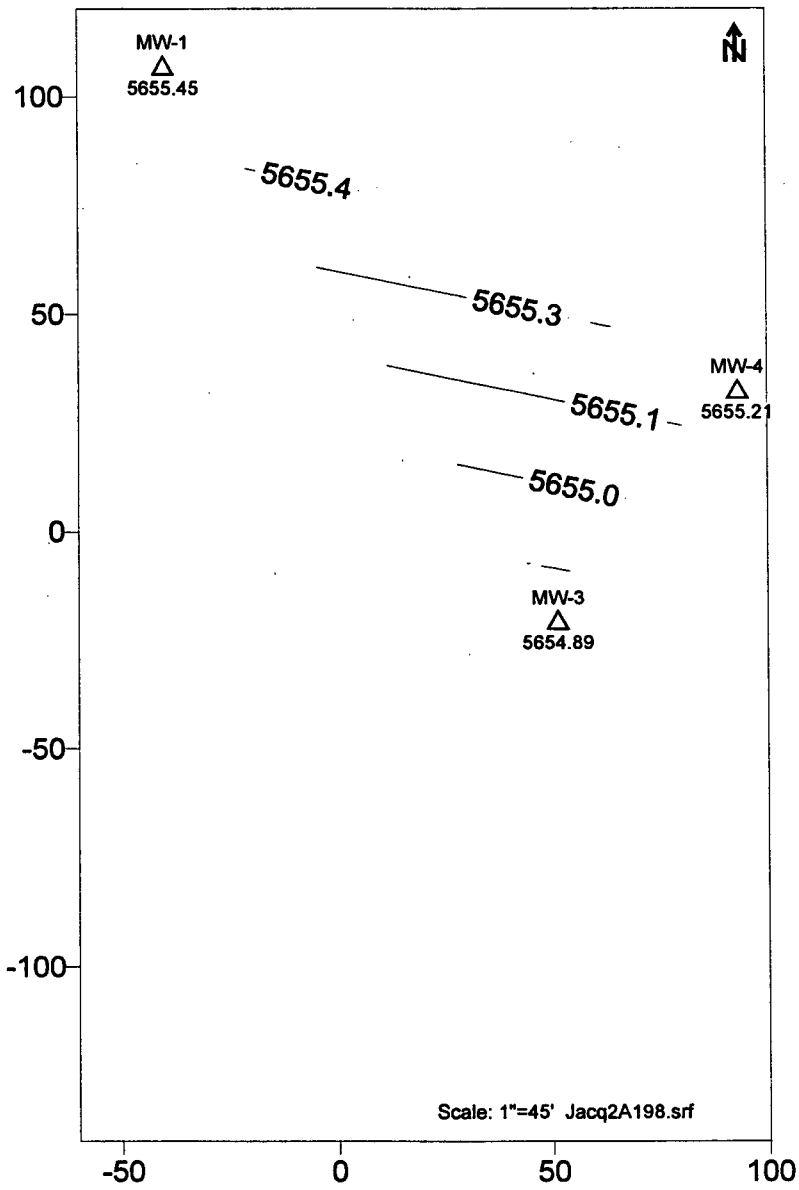

Figure 6. Jacques 2A Hydrograph
(Water Level vs. Time)

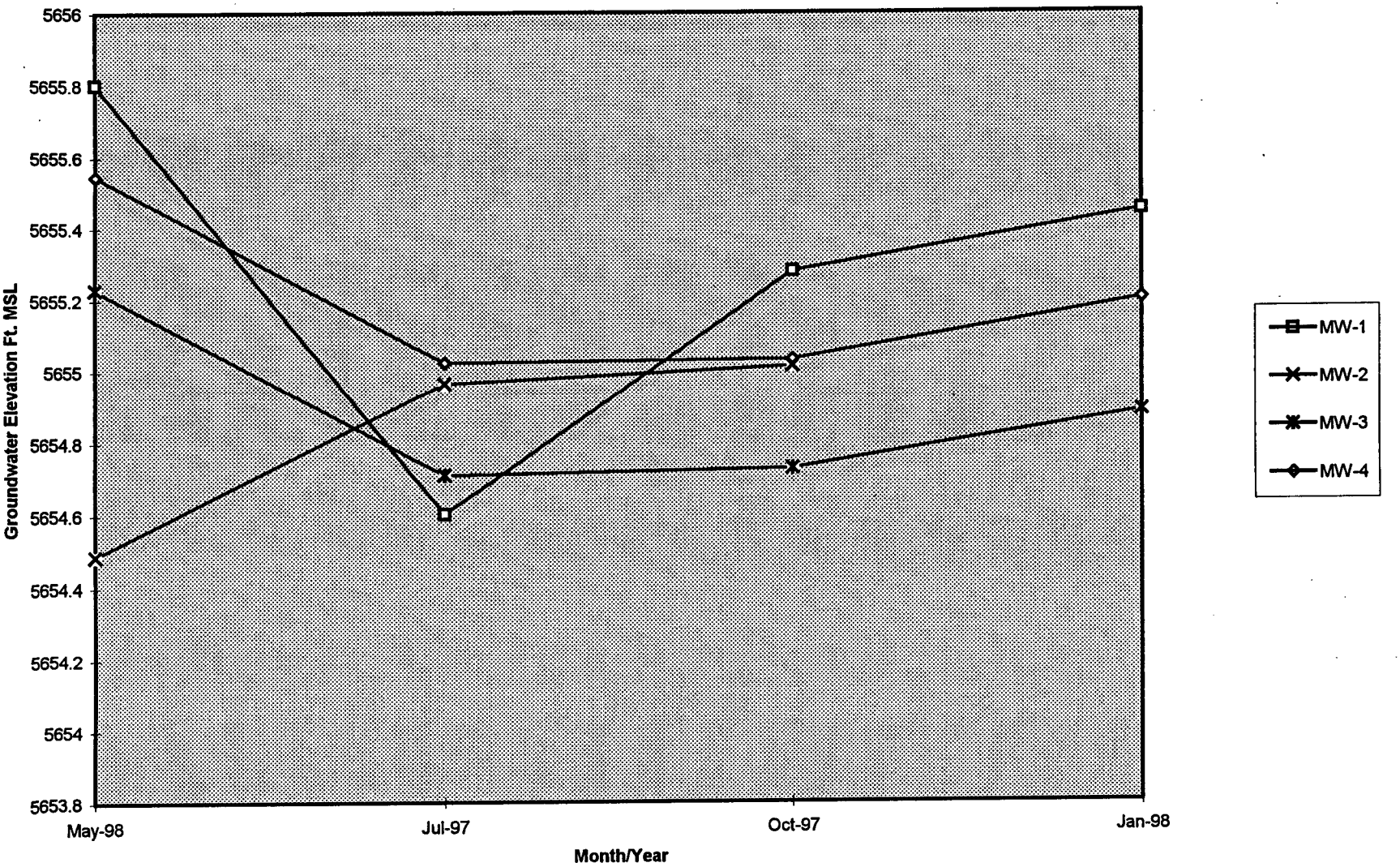

Table 1. JACQUEZ 2A GROUNDWATER SAMPLING RESULTS, mg/l (5/8/97)

Constituent	WQCC Stds.	MW-1	MW-2	MW-3	MW-4	MW-5 (MW-3 duplicate)
B	0.01	<0.0002	5.1850	<0.0002	<0.0002	<0.0002
T	0.75	<0.0002	11.8510	<0.0002	<0.0002	<0.0002
E	0.75	<0.0002	0.8840	<0.0002	<0.0002	<0.0002
X	0.62	<0.0002	9.8660	<0.0002	<0.0002	<0.0002
PAHs	0.03	NA	NA	NA	NA	NA
Metals						
As	0.1	<0.030	<0.030	NA	NA	NA
Ba	1	0.025	0.021	NA	NA	NA
Cd	0.01	<0.004	<0.004	NA	NA	NA
Cr	0.05	<0.010	<0.010	NA	NA	NA
Pb	0.05	<0.040	<0.040	NA	NA	NA
Se	0.05	<0.003	<0.003	NA	NA	NA
Ag	0.05	<0.006	<0.006	NA	NA	NA
Hg	0.002	<0.0001	0.0003	NA	NA	NA
Cations/Anions						
Na	NA	283	538	NA	NA	NA
Ca	NA	566	534	NA	NA	NA
Mg	NA	42.5	52.0	NA	NA	NA
K	NA	3.1	2.7	NA	NA	NA
Cl	NA	17	103	NA	NA	NA
SO4	NA	1888	2146	NA	NA	NA
CO3	NA	<1	<1	NA	NA	NA
HCO3	NA	164	609	NA	NA	NA
OH	NA	<1	<1	NA	NA	NA
Cation/Anion Balance						
Difference Cation-Anion	NA	1.67	3.18	NA	NA	NA
Total Cation-Anion	NA	86.60	111.97	NA	NA	NA
% Difference	NA	1.9	2.8	NA	NA	NA
TDS, calc	NA	2963	3985	NA	NA	NA
TDS, meas	NA	2992	3800	NA	NA	NA
Hardness as CaCO3	NA	1588	1548	NA	NA	NA

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

s:\gaspits\jactb.doc

Resample PAHs in MW-2

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

12 June 1997

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

Reference:

Project Name: *Jacquez 2A*
Project Loc.: *970508; MW-1, MW-2, MW-3, MW-4, MW-5*
On Site ID: *COC Record No.5554*

Dear Denver,

Enclosed please find the analytical results for your project referenced above. Please note that the PAH EPA 8310 analysis for MW-2 was not performed due to a shipping error. Attached you will find a Sample Protocol Nonconformance Worksheet from Southern Petroleum Laboratory (SPL) stating sample condition upon receipt. UPS did not deliver via next day service and subsequently by the time the samples arrived at SPL all ice had been spent. On Site Technologies will cover all costs incurred for the re-analysis of PAH EPA 8310 for MW-2..

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

Thank you once again for your consideration.

Sincerely,

David Cox
Laboratory Manager

cc: Maureen Gannon, PNM Gas Services

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	20-May-97
Company:	*PNM Gas Services*	COC No.:	*5554*
Address:	*603 W. Elm*	Sample No.:	*14505*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9705081030; MW-1***				
Sampled by:	MG/MS	Date:	8-May-97	Time:	10:30
Analyzed by:	DC	Date:	16-May-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: 5/20/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	19-May-97
Company:	*PNM Gas Services*	*COC No.:*	*5554*
Address:	*603 W. Elm*	*Sample ID:*	*14505*
City, State:	*Farmington, NM 87401*	*Job No.:*	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9705081030; MW-1***				
Sampled by:	MS/MG	Date:	8-May-97	Time:	10:30
Analyzed by:	HR	Date:	15-May-97		

Laboratory Analysis

Parameter		*Result*	*Unit of Measure*		*Result*	*Unit of Measure*	
Cations							
Sodium	*Na*	283	mg/L		12.31	me/L	
Calcium	*Ca*	566	mg/L		28.24	me/L	
Magnesium	*Mg*	42.5	mg/L		3.50	me/L	
Potassium	*K*	3.1	mg/L		0.08	me/L	
Anions							
Chloride	*Cl*	17	mg/L		0.47	me/L	
Sulfate	*SO4*	1888	mg/L		39.31	me/L	
Carbonate	*CO3 as CaCO3*	<1	mg/L		<0.01	me/L	
Bicarbonate	*HCO3 as CaCO3*	164	mg/L		2.69	me/L	
Hydroxide	*OH as CaCO3*	<1	mg/L		<0.01	me/L	
Total Dissolved Solids Calculated, Sum of Cation/Anion		2963	mg/L				
Total Dissolved Solids Dried @ 180 C		2992	mg/L				
pH		7.21					
Conductivity @ 25 C		2980	uS/cm				
Total Hardness as CaCO3		1588	mg/L				

Cation-Anion Balance

1.67 *Difference Cation-Anion, me/L*

86.60 *Total Cation-Anion, me/L*

1.9 *% Difference Cation-Anion*

Comments

Approved by: KC

Date: 5-27-97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	20-May-97
Company:	*PNM Gas Services*	COC No.:	*5554*
Address:	*603 W. Elm*	Sample No.:	*14506*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9705081100; MW-2***				
Sampled by:	MG/MS	Date:	8-May-97	Time:	11:00
Analyzed by:	DC	Date:	16-May-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	5185	ug/L	20	ug/L
Toluene	11851	ug/L	20	ug/L
Ethylbenzene	884	ug/L	20	ug/L
m,p-Xylene	8408	ug/L	20	ug/L
o-Xylene	1458	ug/L	20	ug/L
TOTAL	27787	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By:
Date: 5/20/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	19-May-97
Company:	*PNM Gas Services*	*COC No.:*	*5554*
Address:	*603 W. Elm*	*Sample ID:*	*14506*
City, State:	*Farmington, NM 87401*	*Job No.:*	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9705081100; MW-2***				
Sampled by:	MS/MG	Date:	8-Nov-96	Time:	11:00
Analyzed by:	HR	Date:	15-May-97		

Laboratory Analysis

Parameter		*Result*	*Unit of Measure*		*Result*	*Unit of Measure*	
Cations							
Sodium	*Na*	538	mg/L		23.40	me/L	
Calcium	*Ca*	534	mg/L		26.65	me/L	
Magnesium	*Mg*	52.0	mg/L		4.28	me/L	
Potassium	*K*	2.7	mg/L		0.07	me/L	
Anions							
Chloride	*Cl*	103	mg/L		2.92	me/L	
Sulfate	*SO4*	2146	mg/L		44.68	me/L	
Carbonate	*CO3 as CaCO3*	<1	mg/L		<0.01	me/L	
Bicarbonate	*HCO3 as CaCO3*	609	mg/L		9.98	me/L	
Hydroxide	*OH as CaCO3*	<1	mg/L		<0.01	me/L	

Total Dissolved Solids Calculated, Sum of Cation/Anion	3985	mg/L	
Total Dissolved Solids Dried @ 180 C	3800	mg/L	
pH	7.30		
Conductivity @ 25 C	4050	uS/cm	
Total Hardness as CaCO3	1548	mg/L	

Cation-Anion Balance

3.18 *Difference Cation-Anion, me/L*

111.97 *Total Cation-Anion, me/L*

2.8 *% Difference Cation-Anion*

Comments

Approved by:

Date: 5-23-97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	20-May-97
Company:	*PNM Gas Services*	COC No.:	*5554*
Address:	*603 W. Elm*	Sample No.:	*14507*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9705081130; MW-3***				
Sampled by:	MG/MS	Date:	8-May-97	Time:	11:30
Analyzed by:	DC	Date:	16-May-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: 5/20/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	20-May-97
Company:	*PNM Gas Services*	COC No.:	*5554*
Address:	*603 W. Elm*	Sample No.:	*14508*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9705081200; MW-4***				
Sampled by:	MG/MS	Date:	8-May-97	Time:	12:00
Analyzed by:	DC	Date:	16-May-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: 5/20/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	20-May-97
Company:	*PNM Gas Services*	COC No.:	*5554*
Address:	*603 W. Elm*	Sample No.:	*14509*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9705081230; MW-5***				
Sampled by:	MG/MS	Date:	8-May-97	Time:	12:30
Analyzed by:	DC	Date:	16-May-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: 5/20/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 16-May-97

Internal QC No.: 0527-STD
Surrogate QC No.: 0528-STD
Reference Standard QC No.: 0529/30-QC

Method Blank

Parameter	*Result*	*Unit of Measure*
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Parameter	*Unit of Measure*	*True Value*	*Analyzed Value*	*% Diff*	*Limit*
Benzene	ppb	20.0	18.3	9	15%
Toluene	ppb	20.0	19.0	5	15%
Ethylbenzene	ppb	20.0	19.3	4	15%
m,p-Xylene	ppb	40.0	37.1	7	15%
o-Xylene	ppb	20.0	19.3	4	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*%RSD*	*Limit*
Benzene	90	87	(39-150)	2	20%
Toluene	93	90	(46-148)	2	20%
Ethylbenzene	92	89	(32-160)	2	20%
m,p-Xylene	90	87	(35-145)	2	20%
o-Xylene	93	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)	
14505-5554	95				
14506-5554	94				
14507-5554	95				
14508-5554	95				
14509-5554	95				(RE)
					5/20/97

S1: *Flourobenzene*

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

Cation/Anion Balance

Date: 15-May-97

Quality Control Sample

Parameter	Laboratory Identification	True Value	Analyzed Value	Unit of Measure	% Diff	Limit % Diff
Sodium, Na	0540-QC	2.32	2.16	mg/L	-7	10
Calcium, Ca	0462-QC	2.18	2.17	mg/L	0	10
Magnesium, Mg	0462-QC	1.14	1.20	mg/L	5	10
Potassium, K	0540-QC	1.47	1.53	mg/L	4	10
Chloride, Cl	0540-QC	66	67	mg/L	2	10
Sulfate, SO4	0540-QC	78	77	mg/L	0	10
Alkalinity	0540-QC	159	156	mg/L	-2	10
pH	0540-QC	9.13	9.31		2	10
Conductivity	0540-QC	740	735	uS/cm	-1	15
Total Dissolved Solids, 180C	0540-QC	642	628	uS/cm	-2	15

Matrix Spike

Parameter	Laboratory Identification	Analyzed Value	Matrix Spike	Spike Value	Unit of Measure	Spike Recovery
Sodium, Na	14649-6345	0.72	0.50	1.34	mg/L	110%
Calcium, Ca	14506-5554	1.34	0.50	1.90	mg/L	103%
Magnesium, Mg	14614-6362	1.42	0.50	1.90	mg/L	99%
Potassium, K	14505-5554	1.55	0.50	2.22	mg/L	108%

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

(12) 1
5-22 97

Mountain States Analytical

June 4, 1997

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

Reference:
Project: Jacques 2A
Project No.: PNM1002/21000
MSAI Group: 16362

Dear Mr. Cox:

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

14505-5554 9705081030 MW1 14506-5554 9705081100 MW2

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
The Quality Solution

RECEIVED JUN 10 '97

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

Attn: Mr. David Cox
Project: Jacques 2A

MSAI Sample: 63111
MSAI Group: 16362
Date Reported: 06/04/97
Discard Date: 07/04/97
Date Submitted: 05/15/97
Date Sampled: 05/08/97
Collected by: MG
Purchase Order: 5554
Project No.: PNM1002/21000

Sample ID: 14505-5554 9705081030 MW1
Matrix: Water

Test	Analysis	Results as Received	Units	Method Detection Limit
0249D	Cadmium by ICP, w/ww Diss, 6010A Method: SW-846 6010A	ND	mg/l	0.004
0251F	Chromium by ICP, w/ww Diss, 6010A Method: SW-846 6010A	ND	mg/l	0.010
0255F	Lead by ICP, w/ww Diss, 6010A Method: SW-846 6010A	ND	mg/l	0.040
0259F	Mercury by CVAA, w/ww Diss, 245.1 Method: SW-846 245.1	ND	mg/l	0.0001
0266D	Silver by ICP, w/ww Diss, 6010A Method: SW-846 6010A	ND	mg/l	0.006
0392I	Flame/ICP Prep, w/ww, 3005A Method: SW-846 3005A	Complete		
0392M	Mercury Prep CVAA, w/ww, 7470 Method: SW-846 7470	Complete		
0401	Prep for HAA, w/ww, 7062/7742 Method: SW-846 7062/7742	Complete		
1045I	Arsenic by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.030
1450	Selenium by HAA, w/ww Diss, 7742 Method: SW-846 7742	ND	mg/l	0.003
2541B	Barium by ICP, w/ww Diss, 6010A Method: SW-846 6010A	0.025	mg/l	0.003

Mountain States Analytical
The Quality Solution

On Site Technologies, Ltd.

MSAI Sample: 63111
MSAI Group: 16362

Sample ID: 14505-5554 9705081030 MW1

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

Respectfully Submitted,
Reviewed and Approved by:

Rolf E. Larsen
Project Manager

Analytical Report

RECEIVED JUN 10 '97

Mountain States Analytical
The Quality Solution

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

Attn: Mr. David Cox
Project: Jacques 2A

Sample ID: 14506-5554 9705081100 MW2
Matrix: Water

MSAI Sample: 63112
MSAI Group: 16362
Date Reported: 06/04/97
Discard Date: 07/04/97
Date Submitted: 05/15/97
Date Sampled: 05/08/97
Collected by: MG
Purchase Order: 5554
Project No.: PNM1002/21000

Test	Analysis	Results as Received	Units	Method Detection Limit
0249D	Cadmium by ICP, w/ww Diss, 6010A Method: SW-846 6010A	ND	mg/l	0.004
0251F	Chromium by ICP, w/ww Diss, 6010A Method: SW-846 6010A	ND	mg/l	0.010
0255F	Lead by ICP, w/ww Diss, 6010A Method: SW-846 6010A	ND	mg/l	0.040
0259F	Mercury by CVAA, w/ww Diss, 245.1 Method: SW-846 245.1	0.0003	mg/l	0.0001
0266D	Silver by ICP, w/ww Diss, 6010A Method: SW-846 6010A	ND	mg/l	0.006
0392I	Flame/ICP Prep, w/ww, 3005A Method: SW-846 3005A	Complete		
0392M	Mercury Prep CVAA, w/ww, 7470 Method: SW-846 7470	Complete		
0401	Prep for HAA, w/ww, 7062/7742 Method: SW-846 7062/7742	Complete		
1045I	Arsenic by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.030
1450	Selenium by HAA, w/ww Diss, 7742 Method: SW-846 7742	ND	mg/l	0.003
2541B	Barium by ICP, w/ww Diss, 6010A Method: SW-846 6010A	0.021	mg/l	0.003

Mountain States Analytical
The Quality Solution

On Site Technologies, Ltd.

MSAI Sample: 63112
MSAI Group: 16362

Sample ID: 14506-5554 9705081100 MW2

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

Respectfully Submitted,
Reviewed and Approved by:

Rolf E. Larsen
Project Manager

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

06/04/97
11:32:07
Group: 16362

Analysis Batch Number: 0259B-05/19/97-132 -1
Method Identification : 0259B-Mercury by CVAA, w/ww, 7470 Sequence : 0259B-1
Number of Samples : 16
Batch Data-Date/Time : 05/21/97 / 11:04:33

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
PBW1-151	Mercury	-0.0200	0.1000
PBW2-151-2	Mercury	-0.0500	0.1000

SPIKE

						QC LIMITS	
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	LOWER	UPPER
16246-62680	Mercury	1.0000	0.0300	0.8700	84.0	80.0	120.0

MSD

						QC LIMITS			
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	LOWER	UPPER	RPD #	LIMIT
16246-62680	Mercury	1.0000	0.0300	1.0500	102.0	80.0	120.0	19.4	20.0

DUPLICATE

SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
16246-62680	Mercury	0.0300	-0.0300	0.0	20.0	1.00

CONTROL

				QC LIMITS	
SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	LOWER UPPER
LCSW-151	Mercury	2.5900	2.5000	103.6	80.0 120.0
LCSWD-151-2	Mercury	2.4500	2.5000	98.0	80.0 120.0

					QC LIMITS	
CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER	UPPER
ICV-	Mercury	3.0000	3.0200	100.7	90.0	110.0
CCV--2	Mercury	5.0000	5.0200	100.4	80.0	120.0
CCV--3	Mercury	5.0000	5.0400	100.8	80.0	120.0
CCV--4	Mercury	5.0000	4.9100	98.2	80.0	120.0
CCV--5	Mercury	5.0000	5.2800	105.6	80.0	120.0

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

Groups & Samples

16180-62375 16180-62376 16212-62507 16246-62680 16247-62686 16248-62694 16249-62695 16283-62809
16283-62810 16283-62812 16283-62817 16284-62826 16284-62827 16350-63029 16362-63111 16362-63112

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

06/04/97
11:32:11
Group: 16362

Analysis Batch Number: 1450 -05/28/97-001 -1
Batch Identification : 1450 -Selenium by HAA, w/ww Diss, 7742 Sequence : 1450 -1
Number of Samples : 3
Batch Data-Date/Time : 05/28/97 / 09:05:00

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
PBW1-176	Selenium	0.0014	0.0050

SPIKE

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
16362-63259	Selenium	0.2000	0.0070	0.2194	106.2	75.0	125.0

MSD

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	QC LIMITS LOWER	QC LIMITS UPPER	RPD #	LIMIT
16362-63259	Selenium	0.2000	0.0070	0.2647	128.8(7a)	75.0	125.0	19.2	20.0

DUPLICATE

SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
16362-63259	Selenium	0.0070	0.0080	13.3	20.0	1.00

CONTROL

SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
	Selenium	0.0385	0.0400	96.3	75.0	125.0

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
[redacted]	Selenium	0.0500	0.0509	101.8	80.0	120.0
[redacted]2	Selenium	0.0500	0.0467	93.4	80.0	120.0
CCV--3	Selenium	0.0500	0.0455	91.0	80.0	120.0

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Selenium	0.0013	0.0050
CCB-	Selenium	0.0016	0.0050
CCB-	Selenium	0.0019	0.0050

---------- Result Footnotes ----------
(7a) - MSD recovery for Result #2 is outside of QC Lower & Upper Limits

Groups & Samples

16362-63111 16362-63112 16362-63259

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

06/04/97
11:32:18
Group: 16362

Analysis Batch Number: ICPWA-06/04/97-010 -1
Method Identification : ICPWA-Metals by ICP
Number of Samples : 34
Batch Data-Date/Time : 06/04/97 / 10:10:22

Sequence : DATA155

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
PBW1-172	Silver	0.0031	0.0060
	Arsenic	0.0093	0.0300
	Boron	ND	0.0400
	Barium	ND	0.0030
	Calcium	0.0231	0.4000
	Cadmium	ND	0.0040
	Chromium	0.0031	0.0100
	Magnesium	0.0070	0.0500
	Sodium	ND	0.2000
	Lead	ND	0.0400
PBW2-172-2	Silver	0.0015	0.0060
	Arsenic	0.0041	0.0300
	Boron	0.0034	0.0400
	Barium	ND	0.0030
	Calcium	0.0090	0.4000
	Cadmium	ND	0.0040
	Chromium	ND	0.0100
	Magnesium	ND	0.0500
	Sodium	ND	0.2000
	Lead	0.0156	0.0400

SPIKE

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
16379-63174	Silver	0.0500	0.0043	0.0575	106.4	80.0	120.0
	Arsenic	2.0000	-0.0081	2.0504	102.9	80.0	120.0
	Boron	0.5000	1.1692	1.6023	86.6	80.0	120.0
	Barium	2.0000	0.0227	0.0986	3.8(A)	80.0	120.0
	Calcium	2.0000	372.8358	369.3543	-174.1(2a)	80.0	120.0
	Cadmium	0.0500	0.0003	0.0486	96.6	80.0	120.0
	Chromium	0.2000	0.0041	0.1872	91.6	80.0	120.0
	Magnesium	2.0000	525.5930	509.6571	-796.8(2a)	80.0	120.0
	Sodium	3.0000	2449.2053	2380.4855	******(2a)	80.0	120.0
	Lead	0.5000	0.0061	0.4536	89.5	80.0	120.0

MSD

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	QC LIMITS LOWER	QC LIMITS UPPER	RPD #	LIMIT
16379-63174	Silver	0.0500	0.0043	0.0574	106.2	80.0	120.0	0.2	20.0
	Arsenic	2.0000	-0.0081	2.0900	104.9	80.0	120.0	1.9	20.0
	Boron	0.5000	1.1692	1.6248	91.1	80.0	120.0	5.1	20.0
	Barium	2.0000	0.0227	0.0920	3.5(A)	80.0	120.0	8.2	20.0
	Calcium	2.0000	372.8358	381.2712	421.8(2a)	80.0	120.0	481.1(1a)	20.0
	Cadmium	0.0500	0.0003	0.0512	101.8	80.0	120.0	5.2	20.0
	Chromium	0.2000	0.0041	0.1982	97.1	80.0	120.0	5.8	20.0
	Magnesium	2.0000	525.5930	521.9823	-180.5(2a)	80.0	120.0	126.1(1a)	20.0
	Sodium	3.0000	2449.2053	2379.6828	******(2a)	80.0	120.0	1.2	20.0
	Lead	0.5000	0.0061	0.4220	83.2	80.0	120.0	7.3	20.0

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

06/04/97
11:32:20
Group: 16362

Analysis Batch Number: ICPWA-06/04/97-010 -1
Identification : ICPWA-Metals by ICP
Number of Samples : 34
Batch Data-Date/Time : 06/04/97 / 10:10:22

Sequence : DATA155

DUPLICATE

SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
16379-63174	Silver	0.0043	0.0031	32.4(11)	20.0	1.00
	Arsenic	-0.0081	0.0167	576.7(11)	20.0	1.00
	Boron	1.1692	1.1654	0.3	20.0	1.00
	Barium	0.0227	0.0219	3.6	20.0	1.00
	Calcium	372.8358	365.8557	1.9	20.0	1.00
	Cadmium	0.0003	0.0023	153.8(11)	20.0	1.00
	Chromium	0.0041	0.0019	73.3(11)	20.0	1.00
	Magnesium	525.5930	513.0200	2.4	20.0	1.00
	Sodium	2449.2053	2422.0209	1.1	20.0	1.00
	Lead	0.0061	0.0111	58.1(11)	20.0	1.00
16379-63174-2	Sodium	2373.0564	2653.6709	11.2	20.0	10.00

CONTROL

SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
LCSW-172	Silver	0.0496	0.0500	99.2	80.0	120.0
	Arsenic	1.9071	2.0000	95.4	80.0	120.0
	Boron	0.4764	0.5000	95.3	80.0	120.0
	Barium	1.8499	2.0000	92.5	80.0	120.0
	Calcium	1.9492	2.0000	97.5	80.0	120.0
	Cadmium	0.0483	0.0500	96.6	80.0	120.0
	Chromium	0.1977	0.2000	98.9	80.0	120.0
	Magnesium	1.8356	2.0000	91.8	80.0	120.0
	Sodium	3.2860	3.0000	109.5	80.0	120.0
	Lead	0.4771	0.5000	95.4	80.0	120.0

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
ICV-	Silver	0.4000	0.3936	98.4	90.0	110.0
	Arsenic	1.6000	1.5642	97.8	90.0	110.0
	Boron	0.8000	0.7963	99.5	90.0	110.0
	Barium	4.0000	3.9007	97.5	90.0	110.0
	Calcium	40.0000	38.4325	96.1	90.0	110.0
	Cadmium	4.0000	3.8574	96.4	90.0	110.0
	Chromium	4.0000	3.9836	99.6	90.0	110.0
	Magnesium	20.0000	19.1981	96.0	90.0	110.0
	Sodium	40.0000	38.9328	97.3	90.0	110.0
	Lead	20.0000	19.6516	98.3	90.0	110.0
CCV1--2	Silver	0.4000	0.3959	99.0	90.0	110.0
	Arsenic	1.6000	1.5726	98.3	90.0	110.0
	Boron	0.8000	0.7976	99.7	90.0	110.0
	Barium	4.0000	3.9283	98.2	90.0	110.0
	Calcium	40.0000	38.8021	97.0	90.0	110.0
	Cadmium	4.0000	3.9008	97.5	90.0	110.0
	Chromium	4.0000	4.0050	100.1	90.0	110.0
	Magnesium	20.0000	19.2864	96.4	90.0	110.0
	Sodium	40.0000	39.0890	97.7	90.0	110.0
	Lead	20.0000	19.8069	99.0	90.0	110.0
CCV2--3	Silver	0.4000	0.3929	98.2	90.0	110.0
	Arsenic	1.6000	1.5612	97.6	90.0	110.0

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

06/04/97
11:32:22
Group: 16362

Analysis Batch Number: ICPWA-06/04/97-010 -1
Method Identification : ICPWA-Metals by ICP
Number of Samples : 34
Batch Data-Date/Time : 06/04/97 / 10:10:22

Sequence : DATA155

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
CCV2--3	Boron	0.8000	0.7987	99.8	90.0	110.0
	Barium	4.0000	3.8693	96.7	90.0	110.0
	Calcium	40.0000	38.4174	96.0	90.0	110.0
	Cadmium	4.0000	3.8665	96.7	90.0	110.0
	Chromium	4.0000	3.9698	99.2	90.0	110.0
	Magnesium	20.0000	19.0204	95.1	90.0	110.0
	Sodium	40.0000	37.9609	94.9	90.0	110.0
	Lead	20.0000	19.6322	98.2	90.0	110.0
CCV3--4	Silver	0.4000	0.3751	93.8	90.0	110.0
	Arsenic	1.6000	1.4873	93.0	90.0	110.0
	Boron	0.8000	0.7459	93.2	90.0	110.0
	Barium	4.0000	3.6301	90.8	90.0	110.0
	Calcium	40.0000	37.2032	93.0	90.0	110.0
	Cadmium	4.0000	3.7262	93.2	90.0	110.0
	Chromium	4.0000	3.8222	95.6	90.0	110.0
	Magnesium	20.0000	18.0705	90.4	90.0	110.0
	Sodium	40.0000	35.5630	88.9(M)	90.0	110.0
	Lead	20.0000	19.0277	95.1	90.0	110.0
CCV3--5	Silver	0.4000	0.3751	93.8	90.0	110.0
	Arsenic	1.6000	1.4873	93.0	90.0	110.0
	Boron	0.8000	0.7459	93.2	90.0	110.0
	Barium	4.0000	3.6301	90.8	90.0	110.0
	Calcium	40.0000	37.2032	93.0	90.0	110.0
	Cadmium	4.0000	3.7262	93.2	90.0	110.0
	Chromium	4.0000	3.8222	95.6	90.0	110.0
	Magnesium	20.0000	18.0705	90.4	90.0	110.0
	Sodium	40.0000	39.2487	98.1	90.0	110.0
	Lead	20.0000	19.0277	95.1	90.0	110.0
CCV4--6	Silver	0.4000	0.3755	93.9	90.0	110.0
	Arsenic	1.6000	1.4931	93.3	90.0	110.0
	Boron	0.8000	0.7439	93.0	90.0	110.0
	Barium	4.0000	3.6666	91.7	90.0	110.0
	Calcium	40.0000	37.3471	93.4	90.0	110.0
	Cadmium	4.0000	3.7277	93.2	90.0	110.0
	Chromium	4.0000	3.8558	96.4	90.0	110.0
	Magnesium	20.0000	18.1414	90.7	90.0	110.0
	Sodium	40.0000	39.6601	99.2	90.0	110.0
	Lead	20.0000	19.0458	95.2	90.0	110.0
CCV7--7	Silver	0.4000	0.4016	100.4	90.0	110.0
	Arsenic	1.6000	1.5893	99.3	90.0	110.0
	Boron	0.8000	0.8190	102.4	90.0	110.0
	Barium	4.0000	4.0126	100.3	90.0	110.0
	Calcium	40.0000	40.3518	100.9	90.0	110.0
	Cadmium	4.0000	3.9793	99.5	90.0	110.0
	Chromium	4.0000	4.1116	102.8	90.0	110.0
	Magnesium	20.0000	19.9190	99.6	90.0	110.0
	Sodium	40.0000	39.5234	98.8	90.0	110.0
	Lead	20.0000	20.3749	101.9	90.0	110.0
CCV8--8	Silver	0.4000	0.3776	94.4	90.0	110.0

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

06/04/97
11:32:24
Group: 16362

Analysis Batch Number: ICPWA-06/04/97-010 -1
Identification : ICPWA-Metals by ICP
Number of Samples : 34
Batch Data-Date/Time : 06/04/97 / 10:10:22

Sequence : DATA155

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
CCV8--8	Arsenic	1.6000	1.4867	92.9	90.0	110.0
	Boron	0.8000	0.7807	97.6	90.0	110.0
	Barium	4.0000	3.8212	95.5	90.0	110.0
	Calcium	40.0000	38.1503	95.4	90.0	110.0
	Cadmium	4.0000	3.8163	95.4	90.0	110.0
	Chromium	4.0000	3.9336	98.3	90.0	110.0
	Magnesium	20.0000	19.1754	95.9	90.0	110.0
	Sodium	40.0000	37.7172	94.3	90.0	110.0
	Lead	20.0000	19.3754	96.9	90.0	110.0
CCV9--9	Silver	0.4000	0.3956	98.9	90.0	110.0
	Arsenic	1.6000	1.5575	97.3	90.0	110.0
	Boron	0.8000	0.7991	99.9	90.0	110.0
	Barium	4.0000	3.9816	99.5	90.0	110.0
	Calcium	40.0000	39.1123	97.8	90.0	110.0
	Cadmium	4.0000	3.8747	96.9	90.0	110.0
	Chromium	4.0000	4.0053	100.1	90.0	110.0
	Magnesium	20.0000	19.8042	99.0	90.0	110.0
	Sodium	40.0000	40.1569	100.4	90.0	110.0
	Lead	20.0000	19.8797	99.4	90.0	110.0
[redacted]--10	Silver	0.4000	0.4016	100.4	90.0	110.0
	Arsenic	1.6000	1.5811	98.8	90.0	110.0
	Boron	0.8000	0.8323	104.0	90.0	110.0
	Barium	4.0000	4.1542	103.9	90.0	110.0
	Calcium	40.0000	39.9211	99.8	90.0	110.0
	Cadmium	4.0000	4.0093	100.2	90.0	110.0
	Chromium	4.0000	4.1443	103.6	90.0	110.0
	Magnesium	20.0000	20.8083	104.0	90.0	110.0
	Sodium	40.0000	41.5727	103.9	90.0	110.0
	Lead	20.0000	20.4201	102.1	90.0	110.0

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Silver	ND	0.0060
	Arsenic	0.0021	0.0300
	Boron	0.0004	0.0400
	Barium	0.0042(M)	0.0030
	Calcium	0.0042	0.4000
	Cadmium	ND	0.0040
	Chromium	0.0007	0.0100
	Magnesium	0.0039	0.0500
	Sodium	0.0119	0.2000
	Lead	0.0049	0.0400
ICB-	Silver	ND	0.0060
	Arsenic	0.0072	0.0300
	Boron	0.0014	0.0400
	Barium	0.0029	0.0030
	Calcium	0.0063	0.4000
	Cadmium	ND	0.0040
	Chromium	0.0034	0.0100
	Magnesium	0.0086	0.0500

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

06/04/97
11:32:25
Group: 16362

Analysis Batch Number: ICPWA-06/04/97-010 -1
Batch Identification : ICPWA-Metals by ICP
Sequence : DATA155
Number of Samples : 34
Batch Data-Date/Time : 06/04/97 / 10:10:22

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Sodium	0.0569	0.2000
	Lead	0.0074	0.0400
CCB1-	Silver	0.0037	0.0060
	Arsenic	0.0092	0.0300
	Boron	ND	0.0400
	Barium	0.0002	0.0030
	Calcium	0.0085	0.4000
	Cadmium	ND	0.0040
	Chromium	0.0015	0.0100
	Magnesium	0.0112	0.0500
	Sodium	ND	0.2000
	Lead	ND	0.0400
CCB2-	Silver	0.0032	0.0060
	Arsenic	0.0085	0.0300
	Boron	0.0010	0.0400
	Barium	ND	0.0030
	Calcium	0.0058	0.4000
	Cadmium	0.0002	0.0040
	Chromium	0.0005	0.0100
	Magnesium	ND	0.0500
	Sodium	ND	0.2000
	Lead	0.0183	0.0400
CCB-	Silver	0.0037	0.0060
	Arsenic	0.0100	0.0300
	Boron	ND	0.0400
	Barium	ND	0.0030
	Calcium	0.0388	0.4000
	Cadmium	0.0022	0.0040
	Chromium	0.0048	0.0100
	Magnesium	0.0359	0.0500
	Sodium	ND	0.2000
	Lead	0.0169	0.0400
CCB4-	Silver	ND	0.0060
	Arsenic	0.0034	0.0300
	Boron	0.0003	0.0400
	Barium	0.0019	0.0030
	Calcium	0.0128	0.4000
	Cadmium	0.0013	0.0040
	Chromium	0.0027	0.0100
	Magnesium	0.0111	0.0500
	Sodium	0.1395	0.2000
	Lead	0.0134	0.0400
CCB7-	Silver	0.0038	0.0060
	Arsenic	0.0254	0.0300
	Boron	ND	0.0400
	Barium	0.0010	0.0030
	Calcium	0.0052	0.4000
	Cadmium	ND	0.0040
	Chromium	0.0028	0.0100
	Magnesium	0.0144	0.0500

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

06/04/97
11:32:27
Group: 16362

Analysis Batch Number: ICPWA-06/04/97-010 -1
Identification : ICPWA-Metals by ICP
Sequence : DATA155
Number of Samples : 34
Batch Data-Date/Time : 06/04/97 / 10:10:22

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
CCB7-	Sodium	ND	0.2000
	Lead	0.0098	0.0400
CCB7-	Silver	0.0005	0.0060
	Arsenic	0.0151	0.0300
	Boron	ND	0.0400
	Barium	ND	0.0030
	Calcium	0.0040	0.4000
	Cadmium	ND	0.0040
	Chromium	0.0010	0.0100
	Magnesium	0.0060	0.0500
	Sodium	ND	0.2000
	Lead	ND	0.0400
CCB8-	Silver	ND	0.0060
	Arsenic	0.0133	0.0300
	Boron	ND	0.0400
	Barium	ND	0.0030
	Calcium	0.0063	0.4000
	Cadmium	0.0010	0.0040
	Chromium	0.0014	0.0100
	Magnesium	0.0249	0.0500
	Sodium	0.0660	0.2000
	Lead	ND	0.0400
CCB9-	Silver	ND	0.0060
	Arsenic	0.0114	0.0300
	Boron	ND	0.0400
	Barium	ND	0.0030
	Calcium	0.0124	0.4000
	Cadmium	0.0030	0.0040
	Chromium	0.0002	0.0100
	Magnesium	0.0190	0.0500
	Sodium	ND	0.2000
	Lead	ND	0.0400
CCB10-	Silver	0.0012	0.0060
	Arsenic	0.0080	0.0300
	Boron	0.0013	0.0400
	Barium	0.0004	0.0030
	Calcium	0.0328	0.4000
	Cadmium	0.0014	0.0040
	Chromium	0.0065	0.0100
	Magnesium	0.0369	0.0500
	Sodium	ND	0.2000
	Lead	ND	0.0400

---------- Result Footnotes ----------
(A) - Matrix Interference inherent to the sample
( ) - Recovery is insignificant because sample conc. is >4x spike added.
( ) - RPD has no significance due to insignificant spikes.
(11) - Both Duplicate results are less than the MDL.
(M) - QC Sample Was Reanalyzed (as per method requirements)

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

06/04/97
11:32:29
Group: 16362

Analysis Batch Number: ICPWA-06/04/97-010 -1
Identification : ICPWA-Metals by ICP
Sequence : DATA155
Number of Samples : 34
Batch Data-Date/Time : 06/04/97 / 10:10:22

Groups & Samples

16362-63111	16362-63112	16373-63141	16379-63174	16379-63175	16379-63176	16379-63177	16379-63178
16379-63179	16379-63180	16380-63181	16380-63182	16380-63183	16380-63184	16380-63185	16385-63199
16385-63200	16385-63201	16385-63202	16385-63203				

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

05/28/97
09:06:49
Group: 16362

Analysis Batch Number: 02598-05/19/97-132 -1
Test Identification : 02598-Mercury by CVAA, w/ww, 7470 Sequence : 02598-1
Number of Samples : 16
Batch Data-Date/Time : 05/21/97 / 11:04:33

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
PBW1-151	Mercury	-0.0200	0.1000
PBW2-151-2	Mercury	-0.0500	0.1000

SPIKE

						QC LIMITS	
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	LOWER	UPPER
16246-62680	Mercury	1.0000	0.0300	0.8700	84.0	80.0	120.0

MSD

						QC LIMITS			
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	LOWER	UPPER	RPD #	LIMIT
16246-62680	Mercury	1.0000	0.0300	1.0500	102.0	80.0	120.0	19.4	20.0

DUPLICATE

SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
16246-62680	Mercury	0.0300	-0.0300	0.0	20.0	1.00

CONTROL

					QC LIMITS	
SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	LOWER	UPPER
LCSW-151	Mercury	2.5900	2.5000	103.6	80.0	120.0
LCSWD-151-2	Mercury	2.4500	2.5000	98.0	80.0	120.0

					QC LIMITS	
CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER	UPPER
ICV-	Mercury	3.0000	3.0200	100.7	90.0	110.0
CCV--2	Mercury	5.0000	5.0200	100.4	80.0	120.0
CCV--3	Mercury	5.0000	5.0400	100.8	80.0	120.0
CCV--4	Mercury	5.0000	4.9100	98.2	80.0	120.0
CCV--5	Mercury	5.0000	5.2800	105.6	80.0	120.0

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

Groups & Samples

16180-62375 16180-62376 16212-62507 16246-62680 16247-62686 16248-62694 16249-62695 16283-62809
16283-62810 16283-62812 16283-62817 16284-62826 16284-62827 16350-63029 16362-63111 16362-63112

3-152

ON SITE TECHNOLOGIES, LTD.

CHAIN OF CUSTODY RECORD

3365

Date: 5/14/97

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.: 5554 | Job No. PNM1002 / 2-1000

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: JACQUES 2A

Sampler: MG/MS

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	WQCC METALS (DISSOLVED)	LAB ID
970508 1030 MW 1	5/8/97	1030	H2O	COOL	1	✓	1:1505-5554
970508 1100 MW 2	5/8/97	1100	"	"	1	✓	1:1506-5554

Relinquished by:	Date/Time 5/14/97 1700	Received by:	Date/Time 05/15/97 @ 10:00
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time WET ICE - JF 4°C

Method of Shipment:

Authorized by: _____ Date 5/14/97
(Client Signature Must Accompany Request)

Rush | 24-48 Hours | 10 Working Days

Special Instructions: SAMPLES HAVE NOT BEEN FILTERED (DC)

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

RECEIVED JUN 0 9 1997

Sample Protocol Nonconformance Worksheet

Prepared by: S. West	Date/Time:
Client: On Site Analytical	SPL W/O #:
Submitted to: EF	Samples Logged In? ☐ YES ☒ NO

Matrix: ☐ SOIL ☒ WATER ☐ AIR ☐ OTHER

Samples Affected: ☒ ALL ☐ Partial (See description)

Description of non-conformance: Sample Were in login at 9:00am 5/13/97 @ ambient temperature

Condition		Information		Container	
☒	Temp > 6C	☐	No collected date	☐	Damaged containers
☐	Expired Hold Time	☐	No COC	☐	Improper containers
☐	Headspace	☐	Samples not labeled	☐	Non-SPL containers
☐	Unpreserved	☐	Sample v COC ID disagreement	☐	Insufficent containers
☐	Improperly preserved	☐	Container v. COC disagreement	☐	Sample not on COC
☐	Insufficient Sample	☐	Method not specified or not listed	☐	Sample not received

Client Name Contacted:	Date / Time:
Phone:	Action: ☐ Complete Login ☐ HOLD

Client Instructions: Dave - Use on the COC' you requested

Comments:

Project Manager Signature

Date / Time

COPIES TO: ☐ File ☐ Project Manager ☐ Area Supervisor ☐ QA

rev. 3/95.jpa

CHAIN OF CUSTODY RECORD

6356

ON SITE TECHNOLOGIES, LTD.

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

Date: _____ Page _____ of _____

Purchase Order No.:	Job No.

SEND INVOICE TO

Name	
Company	Dept.
Address	
City, State, Zip	

REPORT RESULTS TO

Name DAVE COX	Title
Company ON SITE TECH.	
Mailing Address 612 E. MURRAY DR.	
City, State, Zip FARMINGTON, NM 87401	
Telephone No. 505-325-5667	Telefax No. 505-325-6256

Sampling Location: FLORANCE 4D / JACQUES 2A

Sampler:

Number of Containers

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	PAH	LAB ID
FLORANCE 4D, 14501-5553	5/8/97	13:30			1	
JACQUES 2A, 14506-5554	"	11:00			1	

* SAMPLES RECEIVED BY SPL, HOUSTON ON MONDAY 5/12/97 @ AMBIENT TEMP
SAMPLES SHIPPED 5/8/97 VIA UPS NEXT DAY AIR FOR 5/9/97 DELIVERY
DID NOT MAKE IT DUE TO FOUL WEATHER SITTING IN KENTUCKY WAREHOUSE
FRIDAY. UPS RESPONSIBLE FOR ALL COSTS INCURRED. (D)
5/13/97

Relinquished by: Heidi Rees	Date/Time 5/8/97 17:20	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:
			10074934-1

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

CHAIN OF CUSTODY RECORD

6356

ON SITE TECHNOLOGIES, LTD.

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

Date: _____ Page _____ of _____

Purchase Order No.:	Job No.		
SEND INVOICE TO: Name		REPORT RESULTS TO: Name DAVE COX	Title
Company	Dept.	Company ON SITE TECH.	
Address		Mailing Address 612 E. MURRAY DR.	
City, State, Zip		City, State, Zip FARMINGTON, NM 87401	
		Telephone No. 505-325-5667	Telefax No. 505-325-6256

Sampling Location: FLORANCE 4D / JACQUES 2A

Sampler:

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	ANALYSIS REQUESTED: PAH	LAB ID
FLORANCE 4D, 14501-5553	5/8/97	13:30				↓	
JACQUES 2A, 14506-5554	"	11:00				↓	

Relinquished by: Heidi Rees	Date/Time 5/8/97 17:20	Received by: S. West	Date/Time 5/12/97 0900
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

Distribution: White On Site Yellow LAB Pink Sampler Goldenrod Client

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	5-Aug-97
Company:	*PNM Gas Services*	COC No.:	*5645*
Address:	*603 W. Elm*	Sample No.:	*15510*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9707301330; MW-1***				
Sampled by:	MG/MS	Date:	30-Jul-97	Time:	13:30
Analyzed by:	DC	Date:	1-Aug-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	1.0	ug/L
Toluene	ND	ug/L	1.0	ug/L
Ethylbenzene	ND	ug/L	1.0	ug/L
m,p-Xylene	ND	ug/L	1.0	ug/L
o-Xylene	ND	ug/L	1.0	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: 8/5/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	5-Aug-97
Company:	*PNM Gas Services*	COC No.:	*5645*
Address:	*603 W. Elm*	Sample No.:	*15511*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9707301400; MW-2***				
Sampled by:	MG/MS	Date:	30-Jul-97	Time:	14:00
Analyzed by:	DC	Date:	1-Aug-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	3549	ug/L	20	ug/L
Toluene	7992	ug/L	20	ug/L
Ethylbenzene	551	ug/L	20	ug/L
m,p-Xylene	5246	ug/L	20	ug/L
o-Xylene	1029	ug/L	20	ug/L
TOTAL	18368	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By:
Date: 8/5/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	5-Aug-97
Company:	*PNM Gas Services*	COC No.:	*5645*
Address:	*603 W. Elm*	Sample No.:	*15512*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9707301430; MW-3***				
Sampled by:	MG/MS	Date:	30-Jul-97	Time:	14:30
Analyzed by:	DC	Date:	1-Aug-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	1.0	ug/L
Toluene	ND	ug/L	1.0	ug/L
Ethylbenzene	ND	ug/L	1.0	ug/L
m,p-Xylene	ND	ug/L	1.0	ug/L
o-Xylene	ND	ug/L	1.0	ug/L
TOTAL	ND	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By:
Date: 8/5/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	5-Aug-97
Company:	*PNM Gas Services*	COC No.:	*5645*
Address:	*603 W. Elm*	Sample No.:	*15513*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9707301500; MW-4***				
Sampled by:	MG/MS	Date:	30-Jul-97	Time:	15:00
Analyzed by:	DC	Date:	1-Aug-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	1.0	ug/L
Toluene	ND	ug/L	1.0	ug/L
Ethylbenzene	ND	ug/L	1.0	ug/L
m,p-Xylene	ND	ug/L	1.0	ug/L
o-Xylene	ND	ug/L	1.0	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: 8/5/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	5-Aug-97
Company:	*PNM Gas Services*	COC No.:	*5645*
Address:	*603 W. Elm*	Sample No.:	*15514*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9707301530; MW-5***				
Sampled by:	MG/MS	Date:	30-Jul-97	Time:	15:30
Analyzed by:	DC	Date:	1-Aug-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	1.0	ug/L
Toluene	ND	ug/L	1.0	ug/L
Ethylbenzene	ND	ug/L	1.0	ug/L
m,p-Xylene	ND	ug/L	1.0	ug/L
o-Xylene	ND	ug/L	1.0	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: 8/5/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 1-Aug-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	<1.0	ppb

Calibration Check

Parameter	*Unit of Measure*	*True Value*	*Analyzed Value*	*RPD*	*Limit*
Benzene	ppb	20.0	19.2	4	15%
Toluene	ppb	20.0	20.4	2	15%
Ethylbenzene	ppb	20.0	20.2	1	15%
m,p-Xylene	ppb	40.0	38.7	3	15%
o-Xylene	ppb	20.0	20.5	3	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*RPD*	*Limit*
Benzene	89	88	(39-150)	1	20%
Toluene	95	95	(46-148)	1	20%
Ethylbenzene	95	94	(32-160)	1	20%
m,p-Xylene	89	87	(35-145)	1	20%
o-Xylene	93	93	(35-145)	0	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)	
15510-5645	95				
15511-5645	94				
15512-5645	95				
15513-5645	95				
15514-5645	95				
				8/5/97	8/5/97

S1: *Flourobenzene*

CHAIN OF CUSTODY RECORD

5645

ON SITE TECHNOLOGIES, LTD.

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

Date: 7-30-97

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: JACQUES 2A

Sampler: M Skilliard / M Gannon

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX 8020	LAB ID
	9707301330 MW1			H2O	HCl	2	X	15510-5245
*	9707301400 MW2					2	X	15511
	9707301430 MW3					2	X	15512
	9707301500 MW4					2	X	15513
	9707301530 MW5			H2O	HCl	2	X	15514

Relinquished by: Maureen Gannon	Date/Time 7-30-97 1620	Received by:	Date/Time 7/30/97 1620
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(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

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	22-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5847*
Address:	*603 W. Elm*	Sample No.:	*16534*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9710081200; MW-1***				
Sampled by:	MS/MG	Date:	8-Oct-97	Time:	12:00
Analyzed by:	DC	Date:	20-Oct-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: 10/22/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	22-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5847*
Address:	*603 W. Elm*	Sample No.:	*16535*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9710081230; MW-2***				
Sampled by:	MS/MG	Date:	8-Oct-97	Time:	12:30
Analyzed by:	DC	Date:	20-Oct-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	4930	ug/L	20	ug/L
Toluene	11249	ug/L	20	ug/L
Ethylbenzene	686	ug/L	20	ug/L
m,p-Xylene	6588	ug/L	20	ug/L
o-Xylene	1295	ug/L	20	ug/L
TOTAL	24749	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By:

Date: 10/22/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	22-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5847*
Address:	*603 W. Elm*	Sample No.:	*16536*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9710081300; MW-3***				
Sampled by:	MS/MG	Date:	8-Oct-97	Time:	13:00
Analyzed by:	DC	Date:	20-Oct-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: 10/22/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	22-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5847*
Address:	*603 W. Elm*	Sample No.:	*16537*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9710081330; MW-4***				
Sampled by:	MS/MG	Date:	8-Oct-97	Time:	13:30
Analyzed by:	DC	Date:	20-Oct-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: DeF

Date: 10/22/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	22-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5847*
Address:	*603 W. Elm*	Sample No.:	*16538*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9710081400; MW-5***				
Sampled by:	MS/MG	Date:	8-Oct-97	Time:	14:00
Analyzed by:	DC	Date:	20-Oct-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: 10/22/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 20-Oct-97

Internal QC No.: 0527-STD
Surrogate QC No.: 0528-STD
Reference Standard QC No.: 0529/30-QC

Method Blank

Parameter	*Result*	*Unit of Measure*
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Parameter	*Unit of Measure*	*True Value*	*Analyzed Value*	*RPD*	*Limit*
Benzene	ppb	20.0	18.5	8	15%
Toluene	ppb	20.0	19.2	4	15%
Ethylbenzene	ppb	20.0	19.2	4	15%
m,p-Xylene	ppb	40.0	37.2	7	15%
o-Xylene	ppb	20.0	19.1	5	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*RPD*	*Limit*
Benzene	91	90	(39-150)	0	20%
Toluene	94	93	(46-148)	1	20%
Ethylbenzene	95	93	(32-160)	2	20%
m,p-Xylene	92	91	(35-145)	1	20%
o-Xylene	94	94	(35-145)	0	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)	
16534-5847	96				
16535-5847	94				
16536-5847	96				
16537-5847	96				
16538-5847	96				
				10/22/97	10/22/97

S1: *Flourobenzene*

CHAIN OF CUSTODY RECORD

5847

ON SITE TECHNOLOGIES, LTD.

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

Date: 10/8/97

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: Jacques 2A

Sampler: Mark S. Kelland
Maureen Gannon

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX 8020	LAB ID
9710081200 MW-1			H2O	HCl	2	X	16534-5847
* 9710081230 MW-2			"	"	2	X	16535-
9710081300 MW-3			"	"	2	X	16536-
9710081330 MW-4			"	"	2	X	16537-
9710081400 MW-5			"	"	2	X	16538-

Relinquished by:	Date/Time 10-8-97 1500	Received by:	Date/Time 10/8/97 1500
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date 10/8/97
(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

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	3-Feb-98
Company:	*PNM Gas Services*	COC No.:	*7170*
Address:	*603 W. Elm*	Sample No.:	*17437*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9801291100; MW-1***				
Sampled by:	MS/RD	Date:	29-Jan-98	Time:	11:00
Analyzed by:	DC	Date:	30-Jan-98		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.5	ug/L
Toluene	ND	ug/L	0.5	ug/L
Ethylbenzene	ND	ug/L	0.5	ug/L
m,p-Xylene	ND	ug/L	1.0	ug/L
o-Xylene	ND	ug/L	0.5	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: 2/3/98

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	3-Feb-98
Company:	*PNM Gas Services*	COC No.:	*7170*
Address:	*603 W. Elm*	Sample No.:	*17438*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9801291120; MW-2***				
Sampled by:	MS/RD	Date:	29-Jan-98	Time:	11:20
Analyzed by:	DC	Date:	31-Jan-98		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	48	ug/L	5	ug/L
Toluene	96	ug/L	5	ug/L
Ethylbenzene	210	ug/L	5	ug/L
m,p-Xylene	1717	ug/L	10	ug/L
o-Xylene	171	ug/L	5	ug/L
TOTAL	2242	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By:
Date: 2/3/98

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	3-Feb-98
Company:	*PNM Gas Services*	COC No.:	*7170*
Address:	*603 W. Elm*	Sample No.:	*17439*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9801291140; MW-3***				
Sampled by:	MS/RD	Date:	29-Jan-98	Time:	11:40
Analyzed by:	DC	Date:	30-Jan-98		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.5	ug/L
Toluene	ND	ug/L	0.5	ug/L
Ethylbenzene	ND	ug/L	0.5	ug/L
m,p-Xylene	ND	ug/L	1.0	ug/L
o-Xylene	ND	ug/L	0.5	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: 2/3/98

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	3-Feb-98
Company:	*PNM Gas Services*	COC No.:	*7170*
Address:	*603 W. Elm*	Sample No.:	*17440*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9801291200; MW-4***				
Sampled by:	MS/RD	Date:	29-Jan-98	Time:	12:00
Analyzed by:	DC	Date:	30-Jan-98		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.5	ug/L
Toluene	ND	ug/L	0.5	ug/L
Ethylbenzene	ND	ug/L	0.5	ug/L
m,p-Xylene	ND	ug/L	1.0	ug/L
o-Xylene	ND	ug/L	0.5	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: 2/3/98

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	3-Feb-98
Company:	*PNM Gas Services*	COC No.:	*7170*
Address:	*603 W. Elm*	Sample No.:	*17441*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Jacques 2A***				
Project Location:	***9801291220; MW-5***				
Sampled by:	MS/RD	Date:	29-Jan-98	Time:	12:20
Analyzed by:	DC	Date:	31-Jan-98		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	86	ug/L	5	ug/L
Toluene	121	ug/L	5	ug/L
Ethylbenzene	266	ug/L	5	ug/L
m,p-Xylene	2231	ug/L	10	ug/L
o-Xylene	218	ug/L	5	ug/L
TOTAL	2921	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By:

Date: 2/3/98

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 30-Jan-98

Internal QC No.: 0559-STD
Surrogate QC No.: 0567-STD
Reference Standard QC No.: 0529/30-QC

Method Blank

Parameter	*Result*	*Unit of Measure*
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Parameter	*Unit of Measure*	*True Value*	*Analyzed Value*	*RPD*	*Limit*
Benzene	ppb	20.0	21.7	8	15%
Toluene	ppb	20.0	21.9	9	15%
Ethylbenzene	ppb	20.0	22.9	13	15%
m,p-Xylene	ppb	40.0	42.8	7	15%
o-Xylene	ppb	20.0	22.1	10	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*RPD*	*Limit*
Benzene	108	95	(39-150)	12	20%
Toluene	106	97	(46-148)	9	20%
Ethylbenzene	110	100	(32-160)	9	20%
m,p-Xylene	103	94	(35-145)	8	20%
o-Xylene	108	99	(35-145)	8	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)	
17437-7170	100				
17439-7170	100				
17440-7170	100				
				JK	(JK)
				2/3/98	2/3/98

S1: *Flourobenzene*

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 31-Jan-98

Internal QC No.: 0559-STD
Surrogate QC No.: 0567-STD
Reference Standard QC No.: 0529/30-QC

Method Blank

Parameter	*Result*	*Unit of Measure*
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Parameter	*Unit of Measure*	*True Value*	*Analyzed Value*	*RPD*	*Limit*
Benzene	ppb	20.0	22.1	10	15%
Toluene	ppb	20.0	22.3	11	15%
Ethylbenzene	ppb	20.0	23.1	14	15%
m,p-Xylene	ppb	40.0	43.3	8	15%
o-Xylene	ppb	20.0	22.3	11	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*RPD*	*Limit*
Benzene	100	94	(39-150)	3	20%
Toluene	105	100	(46-148)	4	20%
Ethylbenzene	104	100	(32-160)	3	20%
m,p-Xylene	100	97	(35-145)	3	20%
o-Xylene	105	103	(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)	
17438-7170	99				
17441-7170	101				
				2/3/98	2/3/98

S1: Flourobenzene

CHAIN OF CUSTODY RECORD

Date: 1/29/98

Page: 1 of 1

ON SITE TECHNOLOGIES, LTD.
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: Jacques 2A

Sampler: M.S. R.D.

SAMPLE IDENTIFICATION		SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	ANALYSIS REQUESTED: BTEX 8020	LAB ID
9801291100	MW-1	1/29/98		H2O	HCl	2	X	17437-7710
9801291120	MW-2	↓		↓	↓	2	X	17438-
9801291140	MW-3					2	X	17439-
9801291200	MW-4					2	X	17440-
9801291220	MW-5					2	X	17441- ✓

Relinquished by:	Date/Time 1/29/98 1620	Received by:	Date/Time 1/29/98 1620
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment: Hand Del, Hand

Authorized by: _____ Date 1/29/98

(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