# 3R - <u>315</u>

# REPORTS

# DATE: 1999

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

April 5, 1999

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

# RECEIVED

APR 071999

ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION



### RE: 1999 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT

Dear Bill:

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PNM is pleased to submit the 1999 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.

Blanco Wash Drip	Mangum 1E
Davis 1	McClanahan 22
Dogie East Pit	McClanahan A 2E
Dogie North Pit	McCoy Gas Com A1
Florance 124	Miles Federal 1E Drip
Florance 32A	O' Shea 1M
Florance 40	Patterson A Com A1
Florance 44	Pritchard 2
Florance M 47X	Randleman 1
Hampton 4M	Reid 16 Drip
Honolulu Drip	Turner 1A
Ice Canyon Drip	Wilmerding 1M
Jacques 2A	Zachry 18E
Jicarilla Contract 147-6	
Linda 1A	

Consistent with PNM's San Juan Basin Groundwater Management Plan, PNM will request closure of four of the above sites, the Florance 32A, Jacques 2A, Mangum 1E and the McClanahan A2E, with the submittal of the 1<sup>st</sup> Quarter 1999 Pit Closures Report. This request is based upon the analytical data collected over the last two years at each of the sites. BTEX concentrations have been consistently below WQCC standards for four consecutive quarters.

Upon approval of the groundwater closure report, PNM will plug and abandon all of the groundwater monitoring wells at each of the locations. The concrete pad and metal vault surrounding each well will be removed. The well casing will be cut to ground surface and each well will be plugged to the surface

Bill Olson 04/05/99 Page 2

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with cement containing 5% bentonite. If you have any questions regarding the contents of the report, please contact me at (505) 241-2974.

Sincerely,

Maunia

Maureen Gannon Project Manager

Enclosure

cc: Colin Adams, Esq. Ingrid Deklau, WFS Denny Foust, OCD-Aztec Office Ron Johnson Mark Sikelianos Bill VonDrehle, WFS



### Groundwater Site Summary Report

Quarter/Year: 2<sup>nd</sup>/98, 3<sup>rd</sup>/98, 4<sup>th</sup>/98 and 1<sup>st</sup>/99

**Operator:** Amoco Sec: 21 Twn: 30N Rng: 08W Unit: G Canyon: Gubernador Vulnerable Class: Original OCD Ranking: 20 Lead Agency: NMOCD

Topo Map: previously submitted Well Completion Diagram: previously submitted Site Map with Groundwater Analysis: Figure 1 Groundwater Contour Map: Figures 2a (April 1998), Figure 2b (August 1998), Figure 2c (December 1998), & Figure 2d (February, 1999) Bedrock Contour Map: Figure 3 Hydrograph: Figure 4 Full Suite- Groundwater Sampling: previously submitted Analytical Results: attached

### Site Hydrology:

The Florance Z40 M site lies on the flank of Gobernador Canyon, a tributary of the San Juan River, about two miles east of Archuleta, New Mexico. Alluvium in Gobernador Canyon covers the valley floor, which is perhaps half a mile wide near the site. Steep sandstone cliffs enclose the canyon. The Florance Z 40M site lies on the northern edge of the canyon, abutting steep sandstone cliffs. Surface topography drops to the south towards the valley floor, which is a relatively large distance away (about one-quarter mile or more). The site lies at an elevation of about 6220 ft. amsl.

The monitor wells and excavations at the site (see Figure 1) show sands with relatively large amounts of clays and/or silts in the subsurface. A hard sandstone bedrock unit was also encountered, at depths of 35 to 52 feet below land surface. This hard sandstone bedrock was found in all borings at the site, and is quite distinct from the alluvial materials found at shallower depths.

Groundwater was encountered from 40 to 61 feet below land surface at the site. Groundwater flows southward beneath the site, as shown in Figures 2a, 2b, 2c and 2d. The flow direction is parallel to the regional topographic elevation drop, which is southward towards the valley floor of Gobernador Canyon.

Figure 3 shows available information on the depth and elevation of the bedrock-alluvium contact. Based on the available data, it would appear that a bowl or depression in the bedrock surface exists, and is centered around well MW-2 and then empties westward. The water table drops from north to south, and intersects the bedrock-alluvium contact just south of well MW-2. Bedrock is fairly shallow (36 feet) to the south (in wells MW-3 and MW-4), and the water table lies within the bedrock material, and not within alluvium. The change in hydraulic conductivity between bedrock and alluvium would tend to hinder any southward movement of contaminants. In effect, the central part of the site (near well MW-2) thus serves as a collector system for contaminants on the water table, which may help to explain the large thickness of free product observed (more than 2 feet) in well MW-2.

The hydrograph (Figure 4) shows water level shifts in tandem in all the wells, indicating no seasonal change in groundwater flow direction; this is corroborated by plots of groundwater levels during different time periods (Figures 2a through 2d).

### Activities for Previous Year:

PNM conducted quarterly groundwater sampling at the Florance Z 40M on April 28, August 7 and December 15, 1998, and again on February 9, 1999. Data on the depth to water and depth to free product were collected

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

### Contact: Maureen Gannon

PNMGS: 99GWRPT

**Telephone: 505-241-2974** 







### PNMGS Well Site: Florance 40 M (continued)



The operator (Amoco) installed a monitor well upgradient (north) of PNM's well MW-1. This monitor well was inspected during the quarterly sampling events, but was not sampled.

PNM prepared a site summary report to the OCD detailing the activities, results and further actions at the Florance Z 40 M under separate cover. The report was titled, "Florance Z 40 M Site - Free Product and Groundwater Contamination," and was submitted to the OCD on April 3, 1998. No specific actions have stemmed from the report, which stated that free product is not the property or responsibility of PNM.

### **Results:**

Figure 1 is a site map of the Florance Z 40M and includes groundwater analytical results. BTEX concentrations in the well upgradient of PNM's former pit (well MW-1) have been above standards since the well was installed in mid-1997. The newly installed operator monitoring well, located north (upgradient) of well MW-1, contained free product and/or sheen on the water table. Downgradient well MW-3 exhibited free product (about 0.5 feet thick) on the water table. It would appear that free product upgradient of PNM's former pit is migrating across and accumulating in the southern part of the site (near wells MW-2 and MW-3), in and around the bedrock bowl or depression shown in Figure 3.

### **Future Actions:**

PNM is considering a proposal to install several additional monitor wells at the site, with the aim of characterizing downgradient contamination beneath the site. However, evidence of upgradient contamination sources would prohibit PNM from taking any effective remedial action, so the ultimate goal of any characterization activity is somewhat unclear. In addition, there is an unresolved issue of whether PNM is the owner or responsible party for free phase product at any site (i.e., by contract requirements, dehydrator limitations, etc.) or specifically at the Florance Z40M site (i.e., due to the location of PNM's former dehydrator pit near a bedrock depression and downgradient of other sources. PNM will continue to perform quarterly monitoring, as we continue to seek resolution of these issues in conjunction with the operator and with OCD.

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

### **Contact: Maureen Gannon**

PNMGS: 99GWRPT

Telephone: 505-241-2974



Figure 1. Florance Z 40 Site Map and Analytical Results (concentrations in ppb)





Figure 2a. Florance Z40M Groundwater Contour Map (April 28, 1998)



SCALE IN FEET (X-axis = Easting, Y-axis = Northing)

s:/498f40.srf

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Figure 2b. Florance Z40M Groundwater Contour Map (August 7, 1998)



SCALE IN FEET (X-axis = Easting, Y-axis = Northing)

s:/898f40.srf



SCALE IN FEET (X-axis = Easting, Y-axis = Northing)

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Figure 2c. Florance Z40M Groundwater Contour Map (December 12, 1998)



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SCALE IN FEET (X-axis = Easting, Y-axis = Northing)

s:/299f40.srf







s:/fl40-99.XLS



LAB: (505) 325-1556

May 11, 1998

Maureen Gannon PNM - Public Service Company of NM Alvarado Square Mail Stop 0408 Albuquerque, NM 87158 TEL: (505) 241-2974 FAX (505) 241-2340

2nd Quarter 93

RE: Florance 40

Order No.: 9804054

Dear Maureen Gannon,

On Site Technologies, LTD. received 1 sample on 4/29/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests: BTEX (SW8020A)

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



LAB: (505) 325-1556

On Site Technologies, LTD.

**Date:** 11-May-98

CLIENT:	PNM - Public Service Company of NM	
Project:	Florance 40	CASE NARRATIVE
Lab Order:	9804054	

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

ON SITE TECHNOLOGIES, LTD.

OFF: (505) 325-5667

LAB: (505) 325-1556

### ANALYTICAL REPORT

Date: 11-May-98

Client:	PNM - Public Se	ervice Company of N	M	Client San	nple Info: Flo	Florance 40			
Work Order:	9804054			Client Sa	mple ID: 98	0428	14281400; MW-1		
Lab ID:	9804054-01A	Matrix: AQUEC	OUS	Collect	ion Date: 4/2	4/28/98 2:00:00 PM			
Project:	Florance 40			C Record: 72	7249				
Parameter		Result	PQL	Qual Units	DF		Date Analyzed		
BTEX		sv	V8020A				Analyst: DC		
Benzene		4000	50	µg/L	10	0	5/7/98		
Toluene		13000	50	µg/L	10	0	5/7/98		
Ethylbenzene		1000	50	µg/L	10	0	5/7/98		
m,p-Xylene		15000	100	µg/L	10	0	5/7/98		
o-Xylene		3800	50	µg/L	10	0	5/7/98		



PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

1 of 1

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

9804054

Florance 40

Work Order:

**Project:** 

CLIENT: PNM - Public Service Company (	of NM
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# QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_980507	Test Code	: SW8020A	Units: µg/L		Analysis	s Date 5/7/9	8	Prep Da	ate:	
Client ID:	9804054	Run ID:	GC-1_98050	7A		SeqNo:	1678				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0604	0.5									J
Ethylbenzene	.0824	0.5									J
m,p-Xylene	.2996	1									J
Methyl tert-Butyl Ether	.0751	1									J
o-Xylene	.1208	0.5									J
Toluene	.173	0.5									J

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Date: 11-May-98

9804054

PNM - Public Service Company of NM

**CLIENT:** 

Work Order:

Date: 11-May-98

Sample Matrix Spike

QC SUMMARY REPORT

Project: Florance	40								Sampl	le Matrix S	Spike
Sample ID: 9804054-01AMS	Batch ID: GC-1_980507	Test Code	: SW8020A	Units: µg/L		Analysis	s Date 5/7/9	98	Prep D	ate:	<u> </u>
Client ID: 9804281400; MW-	9804054	Run ID:	GC-1_980507	Ά		SeqNo:	1679				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	8323	50	4000	3999	108.1%	56	128				
Ethylbenzene	5411	50	4000	995.8	110.4%	78	107				S / J
m,p-Xylene	28750	100	8000	14760	174.9%	67	118				S. pit
Methyl tert-Butyl Ether	3732	100	4000	18.23	92.9%	70	130				10:15 16
o-Xylene	9129	50	4000	3818	132.8%	78	107				shitt
Toluene	18610	50	4000	12990	140.7%	74	116				s in fibr
Sample ID: 9804054-01AMSD	Batch ID: GC-1_980507	Test Code	: SW8020A	Units: µg/L		Analysis	Date 5/7/9	8	Prep Da	ate:	JE 311110
Client ID: 9804281400; MW-	9804054	Run ID:	GC-1_980507	'A		SeqNo:	1680				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	7975	50	4000	3999	99.4%	56	128	8323	4.3%	12	
Ethylbenzene	5198	50	4000	995.8	105.1%	78	107	5411	4.0%	11	العلمين ا
m,p-Xylene	27560	100	8000	14760	160.1%	67	118	28750	4.2%	10	s / FIr'
Methyl tert-Butyl Ether	3664	100	4000	18.23	91.1%	70	130	3732	1.9%	15	cerics la
o-Xylene	8811	50	4000	3818	124.8%	78	107	9129	3.5%	14	s all'
Toluene	17820	50	4000	12990	120.7%	74	116	18610	4.4%	14	s when the

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

CLIENT: PNM - Public Service Company of NM

Work Order: 9804054

**Project:** Florance 40

Sample ID: LCS WATER	Batch ID: GC-1_980507	Test Code	: SW8020A	Units: µg/L	Analysis Date 5/7/98				Prep Date:			
Client ID:	9804054	Run ID:	GC-1_980507	Ά		SeqNo:	1677					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	42.28	0.5	40	0.0604	105.6%	- 56	128					
Ethylbenzene	42.69	0.5	40	0.0824	106.5%	78	107					
m,p-Xylene	82.27	1	80	0.2996	102.5%	67	118					
Methyl tert-Butyl Ether	38.02	1	40	0.0751	94.9%	70	130					
o-Xylene	42.5	0.5	40	0.1208	105.9%	78	107					
Toluene	42.21	0.5	40	0.173	105.1%	74	116					

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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I of I

Date: 11-May-98

QC SUMMARY REPORT

Laboratory Control Spike - generic

**Project:** 

CLIENT:	PNM - Public Service Company of NM
Work Order:	9804054

Florance 40

# QC SUMMARY REPORT

Date: 11-May-98

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0529/30	Batch ID: GC-1_980507	Test Code:	SW8020A	Units: µg/L		Analysis Date 5/7/98			Prep Date:			
Client ID:	9804054	Run ID:	GC-1_980507	A		SeqNo:	1672					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	21.26	0.5	20	0	106.3%	85	115					
Ethylbenzene	21.65	0.5	20	0	108.3%	85	115					
m,p-Xylene	41.55	1	40	0	103.9%	85	115					
Methyl tert-Butyl Ether	19.41	1	20	0	97.0%	85	115					
o-Xylene	21.46	0.5	20	0	107.3%	85	115					
Toluene	21.37	0.5	20	0	106.8%	85	115					
1,4-Difluorobenzene	92.8	0	100	0	92.8%	70	130					
4-Bromochlorobenzene	89.27	0	100	0	89.3%	70	130					
Fluorobenzene	92.92	0	100	0	92.9%	70	130					
Sample ID: CCV2 QC0529/30	Batch ID: GC-1_980507	Test Code:	SW8020A	Units: µg/L		Analysis	Date 5/7/9	8	Prep Da	ite:	·	
Client ID:	9804054	Run ID:	GC-1_980507	A		SeqNo:	1673					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	20.82	0.5	20	0	104.1%	85	115					
Ethylbenzene	21.2	0.5	20	0	106.0%	85	115					
m,p-Xylene	40.61	1	40	0	101.5%	85	115					
Methyl tert-Butyl Ether	18.49	1	20	0	92.4%	85	115					
o-Xvlene	21.2	0.5	20	0	106.0%	85	115					
Toluene	20.97	0.5	20	0	104.9%	85	115					
1,4-Difluorobenzene	92.53	0	100	0	92.5%	70	130					
4-Bromochlorobenzene	90.18	0	100	0	90.2%	70	130					
Fluorobenzene	92.97	0	100	0	93.0%	70	130					

### Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

1 of 3

### CLIENT: PNM - Public Service Company of NM

Work Order: 9804054

**Project:** Florance 40

# QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 QC0529/30	Batch ID: GC-1_980507	Test Code:	SW8020A	Units: µg/L	Analysis Date 5/7/98			8	Prep Date:		
Client ID:	9804054	Run ID:	GC-1_980507	Ά		SeqNo:	1674				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.24	0.5	20	0	106.2%	85	115				
Ethylbenzene	21.5	0.5	20	0	107.5%	85	115				
m,p-Xylene	41.01	1	40	0	102.5%	85	115				
Methyl tert-Butyl Ether	17.96	1	20	0	89.8%	85	115				
o-Xylene	22.72	0.5	20	0	113.6%	85	115				
Toluene	21.47	0.5	20	0	107.3%	85	115				
1,4-Difluorobenzene	92.47	0	100	0	92.5%	70	130				
4-Bromochlorobenzene	88.18	0	100	0	88.2%	70	130				
Fluorobenzene	92.84	0	100	0	92.8%	70	130				
Sample ID: CCV4 QC0529/30	Batch ID: GC-1_980507	Test Code:	SW8020A	Units: µg/L		Analysis	Date 5/7/9	8	Prep D	ate:	
Client ID:	9804054	Run ID:	GC-1_980507	Ά		SeqNo:	1675				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.82	0.5	20	0	104.1%	85	115				
Ethylbenzene	21.86	0.5	20	0	109.3%	85	115				
m,p-Xylene	41.02	1	40	0	102.6%	85	115				
Methyl tert-Butyl Ether	18.32	1	20	0	91.6%	85	115				
o-Xylene	21.68	0.5	20	0	108.4%	85	115				(
Toluene	21.03	0.5	20	0	105.1%	85	115				
1,4-Difluorobenzene	92.66	0	100	0	92.7%	70	130				
4-Bromochlorobenzene	88.98	0	100	0	89.0%	70	130				
Fluorobenzene	92.65	0	100	0	92.6%	70	130				

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

### CLIENT: PNM - Public Service Company of NM

Work Order: 9804054

**Project:** Florance 40

# QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV5 QC0529/30	Batch ID: GC-1_980507	Test Code:	SW8020A	Units: µg/L		Analysis Date 5/7/98			Prep Date:		
Client ID:	9804054	Run ID:	GC-1_980507	Ά		SeqNo:	1676				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.54	0.5	20	0	102.7%	85	115				
Ethylbenzene	20.93	0.5	20	· 0	104.6%	85	115				
m,p-Xylene	40.5	1	40	0	101.2%	85	115				
Methyl tert-Butyl Ether	17.55	1	20	0	87.8%	85	115				
o-Xylene	20.6	0.5	20	0	103.0%	85	115				
Toluene	21.34	0.5	20	0	106.7%	85	115				
1,4-Difluorobenzene	91.93	0	100	0	91.9%	70	130				
4-Bromochlorobenzene	88.69	0	100	0	88.7%	70	130				
Fluorobenzene	92.03	0	100	0	92.0%	70	130				

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits



**Date:** 11-May-98

# QC SUMMARY REPORT SURROGATE RECOVERIES

CLIENT:PNM - Public Service Company of NMWork Order:9804054Project:Florance 40Test No:SW8020A

# BTEX

Sample ID	14FBZ	4BCBZ	FLBZ	
9804051-01A	89.6	85	90.3	
9804051-02A	89.5	. 84.7	89.6	· · · · ·
9804052-01A	90.3	88	91.7	
9804053-01A	78	80	80.4	
9804054-01A	91.5	89.1	92.8	
9804054-01AMS	91.5	91.3	93.3	
9804054-01AMSD	90	89.2	91.1	
9804055-01A	81.8	77.1	87.9	
9804055-02A	85.9	83.4	88.5	
9804056-01A	85.8	85.3	86.6	
9804057-01A	93.4	88.7	93.7	
9804057-02A	90.2	88.6	91.3	
9804057-03A	91.2	88.6	91.7	
9805003-01A	93.1	88.8	93.5	
9805003-02A	90.7	88.8	91.6	
CCV1 QC0529/30	92.8	89.3	92.9	
CCV2 QC0529/30	92.5	90.2	93	
CCV3 QC0529/30	92.5	88.2	92.8	
CCV4 QC0529/30	92.7	89	92.6	
CCV5 QC0529/30	91.9	88.7	92	
LCS WATER	92.5	. 89.2	92.5	
MB1	93.1	86.4	93.6	

Acronym		Surrogate	QC Limits
14FBZ	=	1,4-Difluorobenzene	70-130
4BCBZ	=	4-Bromochlorobenzene	70-130
FLBZ	=	Fluorobenzene	70-130
* Sur	rogate	recovery outside acceptance	e limits

1

TECH	NOLOGIES, LTD.	E C	HAIN Murphy Dr. • 1 LAB: (505) 33	<b>10</b> P.O. Box : 25-5667	<b>F C</b> 2606 • Fa FAX: (50	D mmington, 05) 325-62	NM 8	<b>OP</b> 7499	<b>Y</b> 29/4	<b>RE</b> 18		OR	D	P	'age: _		of	<b>4</b> 7	ſ
Purchase	Order No.:		Job No.					0	Name	)		Maur	een G	annor	Т	ītle			
<u> </u>	Name D	I Denver Bearden							Comp	any		PNM	Gas S	ervice	L ;s			<u> </u>	
	Company P	NM Gas Services		Dept.	324-376	3		E SI	Mailin	g Addı	ress	Alver	ado S	quare	, Mail :	Stop (	408		-
	Address 6	03 W. Elm Street							City, State, Zip Albug				querqu	ie, NN	8715	8	••••		
°″ ≧	City, State, Zip F	armington, NM 874	101			· ··· -			Telephone No. 505-848-2974 Telefax No.							<u></u>	h		
Sampling	Location:								<u> </u>		<u></u>				l.				
	Florance	40						5 2					ANALY	ISIS F	EQUE	STED			•
Sampler:	M-5.			<u>.</u>				Number (		4- <i>2</i> /	Τ	7 /	7 /	7		Τ,	Γ,		
	SAMPLE IDEN	NTIFICATION		SAN DATE	IPLE TIME	MATRIX	PRES		1	6/							. /	LAB ID	
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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.					0	Name			Maur	een G	annon	<u>г</u>	itle			
	Name	Denver Bearden			· · ·			i⊭ Ľ	Comp	any		PNM	Gas S	ervice					······································
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″ Z	City, State, Zip	Farmington, NM 87	401		· · · · · · · · · · · · · · · · · · ·		· •	<sup></sup> "	Teleph	ione No.		505-8	48-29	74	न	elefax I	No.		
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L			Di	Istribution: V	vhite - On Site	• Yellow •	LAB F	hink • Sam	pler Gold	lenrod - Clie	ent								



LAB: (505) 325-1556

August 18, 1998

Maureen Gannon PNM - Public Service Company of NM Alvarado Square Mail Stop 0408 Albuquerque, NM 87158 TEL: (505) 241-2974 FAX (505) 241-2340

3rd Quarter 98

RE: Florance 40

Order No.: 9808014

Dear Maureen Gannon,

On Site Technologies, LTD. received 1 sample on 8/7/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests: BTEX (SW8020A)

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

P.O. BOX 2606 • FARMINGTON, NM 87499



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 18-Aug-98

CLIENT:	PNM - Public Service Company of NM	
Project:	Florance 40	<b>CASE NARRATIVE</b>
Lab Order:	9808014	

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



LAB: (505) 325-1556

### ANALYTICAL REPORT

Date: 18-Aug-98

/W-1
AM

Parameter	Result	PQL	Qual Units	DF	Date Analyzed
втех	SI	N8020A			Analyst: DC
Benzene	3600	50	µg/L	100	8/15/98
Toluene	11000	50	µg/L	100	8/15/98
Ethylbenzene	970	50	µg/L	100	8/15/98
m,p-Xylene	12000	100	µg/L	100	8/15/98
o-Xylene	3400	50	µg/L	100	8/15/98



PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

l of l

- R RPD outside accepted recovery limits
- E Value above quantitation range

Surr: - Surrogate

### P.O. BOX 2606 • FARMINGTON, NM 87499

9808014

Florance 40

PNM - Public Service Company of NM

**CLIENT:** 

**Project:** 

Work Order:

# **QC SUMMARY REPORT**

Method Blank

Qual

J

J .1

J J.

1 of 1

Date: 18-Aug-98

Sample ID: MB1	Batch ID: GC-1_980815	Test Code:	SW8020A	Units: µg/L		Analysis	Date 8/15/	98	Prep Da	ite:
Client ID:	9808014	Run ID:	GC-1_980815	A		SeqNo:	5509			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit
Benzene	.0541	0.5								
Ethylbenzene	.0909	0.5								
m,p-Xylene	.2062	1								
Methyl tert-Butyl Ether	ND	1								
o-Xylene	.1945	0.5								
Toluene	.1879	0.5								

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



9808014

Florance 40

PNM - Public Service Company of NM

**CLIENT:** 

**Project:** 

Work Order:

Sample ID: 9808014-01AMS	Batch ID: GC-1_980815	Test Code:	SW8020A	Units: µg/L		Analysis	5 Date 8/15/	98	Prep Da	ate:	
Client ID: 9808070900; MW-	9808014	Run ID:	GC-1_980815	A		SeqNo:	5510				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	7147	50	4000	3566	89.5%	56	128				
Ethylbenzene	4629	50	4000	970.6	91.5%	78	107				
m,p-Xylene	19620	100	8000	12540	88.5%	67	118				
Methyl tert-Butyl Ether	3512	100	4000	15.95	87.4%	70	130				
o-Xylene	6971	50	4000	3355	90.4%	78	107				
Toluene	14820	50	4000	11270	88.9%	74	116				
Sample ID: 9808014-01AMSD	Batch ID: GC-1_980815	Test Code:	SW8020A	Units: µg/L		Analysis	Date 8/15/	98	Prep Da	ate:	
Client ID: 9808070900; MW-	9808014	Run ID:	GC-1_980815	A		SeqNo:	5511				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	6980	50	4000	3566	85.4%	56	128	7147	2.4%	12	
Ethylbenzene	4502	50	4000	970.6	88.3%	78	107	4629	2.8%	11	
•				40540	00.00/	67	110	10620	0.6%	40	
m,p-Xylene	19120	100	8000	12540	02.2%	07	110	19020	∠.0%	10	
m,p-Xylene Methyl tert-Butyl Ether	19120 3530	100 100	8000 4000	12540 15.95	82.2% 87.8%	70	130	3512	2.6% 0.5%	10	
m,p-Xylene Methyl tert-Butyl Ether o-Xylene	19120 3530 6840	100 100 50	8000 4000 4000	12540 15.95 3355	82.2% 87.8% 87.1%	70 78	130 107	3512 6971	2.6% 0.5% 1.9%	10 15 14	

Qualifiers:

1

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Date: 18-Aug-98

Sample Matrix Spike

**QC SUMMARY REPORT** 

CLIENT: PNM - Public Service Company of NM

Work Order: 9808014

Project: Florance 40

Date: 18-Aug-98

# **QC SUMMARY REPORT**

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_980815	Test Code:	Test Code: SW8020A			Analysis	s Date 8/15/	/98	Prep Da	ate:	
Client ID:	9808014	Run ID:	GC-1_980815	A		SeqNo:					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.72	0.5	40	0.0541	96.7%	56	128				
Ethylbenzene	38.44	0.5	40	0.0909	95.9%	78	107				
m,p-Xylene	73.37	1	80	0.2062	91.5%	67	118				
Methyl tert-Butyl Ether	45.59	1	40	0	114.0%	70	130				
o-Xylene	38.61	0.5	40	0.1945	96.0%	78	107				
Toluene	38.26	0.5	40	0.1879	95.2%	74	1 <b>1</b> 6				

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT:	PNM - Public Service Company of NM
Work Order:	9808014

**Project:** Florance 40

### Date: 18-Aug-98

# **QC SUMMARY REPORT**

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0606/07	Batch ID: GC-1_980815	Test Code	: SW8020A	Units: µg/L		Analysis	s Date 8/15	/98	Prep D	ate:	
Client ID:	9808014	Run ID:	GC-1_980815	A		SeqNo:	5505				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.31	0.5	20	0	101.5%	85	115				
Ethylbenzene	20.3	0.5	20	0	101.5%	85	115				
m,p-Xylene	38.57	1	40	0	96.4%	85	115				
Methyl tert-Butyl Ether	23.28	1	20	0	116.4%	85	115				S
o-Xylene	20.24	0.5	20	0	101.2%	85	115				
Toluene	20.32	0.5	20	0	101.6%	85	115				
1,4-Difluorobenzene	86.44	0	100	0	86.4%	70	130				
4-Bromochlorobenzene	94.3	0	100	0	94.3%	70	130				
Fluorobenzene	82.86	0	100	0	82.9%	70	130				
Sample ID: CCV2 QC0606/07	Batch ID: GC-1_980815	Test Code	: SW8020A	Units: µg/L		Analysis	Date 8/15	/98	Prep Da	ate:	
Client ID:	9808014	Run ID:	GC-1_980815	A		SeqNo:	5506				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.94	0.5	20	0	99.7%	85	115				
Ethylbenzene	20.15	0.5	20	0	100.8%	85	115				
m,p-Xylene	38.21	1	40	0	95.5%	85	115				
Methyl tert-Butyl Ether	21.47	1	20	0	107.4%	85	115				
o-Xylene	20.07	0.5	20	0	100.3%	85	115				
Toluene	20.18	0.5	20	0	100.9%	85	115				
1,4-Difluorobenzene	86.16	0	100	0	86.2%	70	130				
4-Bromochlorobenzene	88.01	0	100	0	88.0%	70	130				
Fluorobenzene	82.37	0	100	0	82.4%	70	130				

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

### CLIENT: PNM - Public Service Company of NM

Work Order: 9808014

**Project:** Florance 40

# QC SUMMARY REPORT

Continuing Calibration Verification Standard

.

Sample ID: CCV3 QC0606/07	Batch ID: GC-1_980815	Test Code:	SW8020A	Units: µg/L		Analysis	Date 8/15	/98	Prep Da	ate:	
Client ID:	9808014	Run ID:	GC-1_980815	5A		SeqNo:	5507				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Panzana	20 5	- 05	40		06.2%		115				
Benzene	38.5	0.5	40	Ű	90.2%	05	115				
Ethylbenzene	38.74	0.5	40	0	96.9%	85	115				
m,p-Xylene	73.86	1	80	0 .	92.3%	85	115				
Methyl tert-Butyl Ether	36.95	1	40	0	92.4%	85	115				
o-Xylene	38.49	0.5	40	0	96.2%	85	115				
Toluene	38.67	0.5	40	0	96.7%	85	115				
1,4-Difluorobenzene	85.82	0	100	0	85.8%	70	130				
4-Bromochlorobenzene	82.98	0	100	0	83.0%	70	130				
Fluorobenzene	82.15	0	100	0	82.2%	70	130				

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

2 of 2



Date: 18-Aug-98

# QC SUMMARY REPORT SURROGATE RECOVERIES

CLIENT:PNM - Public Service Company of NMWork Order:9808014Project:Florance 40Test No:SW8020A

### BTEX

Sample ID	14FBZ	4BCBZ	FLBZ					
9808008-02A	87.3	95.1	83.7				· · · · · · · · · · · · · · · · · · ·	
9808008-03A	87.9	91	84			1		
9808008-04A	85.4	74.5	83.7		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·
9808008-05A	85.7	88.8	83.3		; ,			
9808008-06A	82.6	76	87.6					1 -
9808008-07A	89.5	85.7	83.3			1		1
9808008-08A	86.1	85.4	83.2			1		
9808008-09A	87.1	85.6	83.3					-
9808008-10A	87	83.9	83					1
9808008-11A	87.3	85.3	83.6		•		*	1
9808008-12A	86.5	94	83.8					
9808013-01A	83.3	77.3	79.8		,		1	i
9808013-02A	83.8	78.9	80.7		1	:		
9808014-01A	85	77.8	82				!	
9808014-01AMS	84.6	79.4	81.8					İ
9808014-01AMSD	84.6	80.6	81.7					
9808015-01A	87	87.1	83.3		1			
9808015-02A	87.1	89.3	83.4		1		1 1	1
9808015-03A	87.2	87.4	83.6		1		]	
9808015-04A	87.3	86.8	83.4		1	r	· • • • • • • • • • • • • • • • • • • •	
CCV1 QC0606/07	86.4	94.3	82.9	<u> </u>	,			
CCV2 QC0606/07	86.2	88	82.4					;
CCV3 QC0606/07	85.8	83	82.2					!
LCS WATER	86.1	94.3	82.7		1			
MB1	87.1	93.2	83.6					
the state of the s								

Acronym	Surrogate	QC Limits
4FBZ	= 1,4-Difluorobenzene	70-130
BCBZ	= 4-Bromochlorobenzene	70-130
LBZ	= Fluorobenzene	70-130
* Suri	rogate recovery outside acceptance	e limits

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		<b>V</b>	LAB: (505) (	325-5667	• FAX: (50	5) 325-62	256	(499											-
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LAB: (505) 325-1556

December 23, 1998

Maureen Gannon PNM - Public Service Company of NM Alvarado Square Mail Stop 0408 Albuquerque, NM 87158 TEL: (505) 241-2974 FAX (505) 241-2340

4th Quarter 1998

RE: Florance 40

Order No.: 9812040

Dear Maureen Gannon,

On Site Technologies, LTD. received 1 sample on 12/15/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests: BTEX (SW8021B)

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



P.O. BOX 2606 • FARMINGTON, NM 87499



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 23-Dec-98

CLIENT:	PNM - Public Service Company of NM	
Project:	Florance 40	<b>CASE NARRATIVE</b>
Lab Order:	9812040	

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

m,p-Xylene

o-Xylene

![](_page_37_Picture_1.jpeg)

LAB: (505) 325-1556

### **ANALYTICAL REPORT**

Date: 23-Dec-98

Client: Work Order:	PNM - Public Se 9812040	ervice Company of N	NM	Clier Cli	nt Sample In ent Sample	<b>ifo:</b> Florance <b>ID:</b> 9812151	Florance 40 9812151230 MW-1			
Lab ID:	9812040-01A	OUS	Collection Date: 12/15/98 12:30:00 PM							
Project:	et: Florance 40				COC Reco	ord: 7528				
Parameter		Result	PQL	Qual	Units	DF	Date Analyzed			
BTEX		SV	V8021B				Analyst: HR			
Benzene		3800	100		µg/L	100	12/22/98			
Toluene		7200	100		µg/L	100	12/22/98			
Ethylbenzene		670	100		ua/L	100	12/22/98			

200

100

µg/L

µg/L

100

100

12/22/98

12/22/98

14000

3900

![](_page_37_Picture_6.jpeg)

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits E - Value above quantitation range

Surr: - Surrogate

1 of 1

### P.O. BOX 2606 • FARMINGTON, NM 87499

### **CLIENT:** PNM - Public Service Company of NM **QC SUMMARY REPORT** Work Order: 9812040 Method Blank **Project:** Florance 40 Sample ID: MB1 Analysis Date 12/22/98 Prep Date: Batch ID: GC-1\_981222 Test Code: SW8021B Units: µg/L Client ID: 9740 Run ID: GC-1\_981222A SeqNo: 9812040 LowLimit HighLimit RPD Ref Val %RPD RPDLimit Analyte POL SPK value SPK Ref Val Qual Result %REC . ... Benzene .1373 1 Ethylbenzene .211 1 .1 .5428 m.p-Xylene 2 .1 Methyl tert-Butyl Ether ND 1 o-Xylene .244 1

Qualifiers:

Toluene

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

.2765

1

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

.1

Date: 23-Dec-98

![](_page_38_Picture_11.jpeg)

**Project:** 

Florance 40

CLIENT:	PNM - Public Service Company of NM
Work Order:	9812040

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9812035-01AMS	Batch ID: GC-1_981222	Test Code:	SW8021B	Units: µg/L		Analysis	Date 12/2	2/98	Prep Da	ate:	
Client ID:	9812040	Run ID:	GC-1_981222	A		SeqNo:	9741				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	187.6	5	200	0.6055	93.5%	56	128				
Ethylbenzene	195.6	5	200	2.26	96.7%	78	107				
m,p-Xylene	389.8	10	400	4.374	96.4%	67	118				
Methyl tert-Butyl Ether	184.1	5	200	0	92.0%	70	130				
o-Xylene	209.5	5	200	1.841	103.9%	78	107				
Toluene	197.4	5	200	2.739	97.3%	74	116				
Sample ID: 9812035-01AMSD	Batch ID: GC-1_981222	Test Code:	SW8021B	Units: µg/L		Analysis	Date 12/2	2/98	Prep Da	ate:	
Sample ID: 9812035-01AMSD Client ID:	Batch ID: GC-1_981222 9812040	Test Code: Run ID:	SW8021B GC-1_981222	Units: µg/L A		Analysis SeqNo:	Date 12/2: 9742	2/98	Prep Da	ate:	
Sample ID: <b>9812035-01AMSD</b> Client ID: Analyte	Batch ID: GC-1_981222 9812040 Result	Test Code: Run ID: PQL	SW8021B GC-1_981222 SPK value	Units: µ <b>g/L</b> A SPK Ref Val	%REC	Analysis SeqNo: LowLimit	Date <b>12/2</b> <b>9742</b> HighLimit	2 <b>/98</b> RPD Ref Val	Prep Da %RPD	ate: RPDLimit	Qual
Sample ID: <b>9812035-01AMSD</b> Client ID: Analyte Benzene	Batch ID: GC-1_981222 9812040 Result 190.9	Test Code: Run ID: PQL 5	SW8021B GC-1_981222 SPK value 200	Units: µg/L A SPK Ref Val 0.6055	%REC 	Analysis SeqNo: LowLimit 56	Date <b>12/2:</b> 9742 HighLimit 128	2/98 RPD Ref Val 187.6	Prep Da %RPD  1.7%	RPDLimit	Qual
Sample ID: <b>9812035-01AMSD</b> Client ID: Analyte Benzene Ethylbenzene	Batch ID: GC-1_981222 9812040 Result 190.9 198.8	Test Code: Run ID: PQL 5 5	SW8021B GC-1_981222 SPK value 200 200	Units: µg/L A SPK Ref Val 0.6055 2.26	%REC 95.1% 98.2%	Analysis SeqNo: LowLimit 56 78	Date <b>12/2</b> <b>9742</b> HighLimit 128 107	2/98 RPD Ref Val 187.6 195.6	Prep Da %RPD 	ate: RPDLimit 12 11	Qual
Sample ID: 9812035-01AMSD Client ID: Analyte Benzene Ethylbenzene m,p-Xylene	Batch ID: GC-1_981222 9812040 Result 190.9 198.8 386.4	Test Code: Run ID: PQL 5 5 10	SW8021B GC-1_981222 SPK value 200 200 400	Units: µg/L A SPK Ref Val 0.6055 2.26 4.374	%REC 95.1% 98.2% 95.5%	Analysis SeqNo: LowLimit 56 78 67	Date <b>12/2:</b> 9742 HighLimit 128 107 118	2/98 RPD Ref Val 187.6 195.6 389.8	Prep Da %RPD  1.7% 1.6% 0.9%	ate: RPDLimit 12 11 10	Qual
Sample ID: 9812035-01AMSD Client ID: Analyte Benzene Ethylbenzene m,p-Xylene Methyl tert-Butyl Ether	Batch ID: GC-1_981222 9812040 Result 190.9 198.8 386.4 181.1	Test Code: Run ID: PQL 5 5 10 5	SW8021B GC-1_981222 SPK value 200 200 400 200	Units: µg/L A SPK Ref Val 0.6055 2.26 4.374 0	%REC 95.1% 98.2% 95.5% 90.6%	Analysis SeqNo: LowLimit 56 78 67 70	Date <b>12/2</b> <b>9742</b> HighLimit 128 107 118 130	2/98 RPD Ref Val 187.6 195.6 389.8 184.1	Prep Da %RPD - 1.7% 1.6% 0.9% 1.6%	RPDLimit 12 11 10 15	Qual
Sample ID: 9812035-01AMSD Client ID: Analyte Benzene Ethylbenzene m,p-Xylene Methyl tert-Butyl Ether p-Xylene	Batch ID: GC-1_981222 9812040 Result 190.9 198.8 386.4 181.1 195.6	Test Code: Run ID: PQL 5 5 10 5 5 5	SW8021B GC-1_981222 SPK value 200 200 400 200 200 200	Units: µg/L A SPK Ref Val 0.6055 2.26 4.374 0 1.841	%REC 95.1% 98.2% 95.5% 90.6% 96.9%	Analysis SeqNo: LowLimit 56 78 67 70 78	Date 12/2: 9742 HighLimit 128 107 118 130 107	2/98 RPD Ref Val 187.6 195.6 389.8 184.1 209.5	Prep Da %RPD - 1.7% 1.6% 0.9% 1.6% 6.9%	ate: RPDLimit 12 11 10 15 14	Qual

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

1 of 1

![](_page_39_Picture_12.jpeg)

CLIENT:	PNM -	Public	Service	Company	of NM
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# QC SUMMARY REPORT

Date: 23-Dec-98

Laboratory Control Spike - generic

Work Order: 9812040 **Project:** 

Florance 40

Sample ID: LCS WATER	Batch ID: GC-1_981222	Test Code:	SW8021B	Units: µg/L		Analysis	a Date 12/2	2/98	Prep Date:		
Client ID:	9812040	Run ID:	GC-1_981222	A		SeqNo:	9739				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	37.57	1	40	0.1373	93.6%	56	128				
Ethylbenzene	39.37	1	40	0.211	97.9%	78	107				
m,p-Xylene	76.89	2	80	0.5428	95.4%	67	118				
Methyl tert-Butyl Ether	37.32	1	40	0	93.3%	70	130				
o-Xylene	39.78	1	40	0.244	98.9%	78	107				
Toluene	38.65	1	40	0.2765	95.9%	74	116				

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

CLIENT:	PNM - Public Service Company of NM
Work Order:	9812040

**Project:** Florance 40

# **Date:** 23-Dec-98

# QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0606/07	Batch ID: GC-1_981222	Test Code	SW8021B	Units: µg/L		Analysis	s Date 12/2	2/98	Prep Da	ate:	
Client ID:	9812040	Run ID:	GC-1_981222	2A		SeqNo:	9736				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.72	1	20	0	98.6%	85	115				
Ethylbenzene	20.66	1	20	0	103.3%	85	115				
m,p-Xylene	40.12	2	40	0	100.3%	85	115				
Methyl tert-Butyl Ether	19.5	1	20	0	97.5%	85	115				
o-Xylene	20.92	1	20	0	104.6%	85	115				
Toluene	20.31	1	20	0	101.5%	85	115				
1,4-Difluorobenzene	88.17	0	100	0	88.2%	70	130				
4-Bromochlorobenzene	101.7	0	100	0	101.7%	70	130				
Fluorobenzene	85.26	0	100	0	85.3%	70	130				
Sample ID: CCV2 QC0606/07	Batch ID: GC-1_981222	Test Code:	SW8021B	Units: µg/L		Analysis	s Date 12/2	2/98	Prep Da	ate:	
Client ID:	9812040	Run ID:	GC-1_981222	A		SeqNo:	9737				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.12	1	20	0	100.6%	85	115				
Ethylbenzene	21.04	1	20	0	105.2%	85	115				
m,p-Xylene	40.62	2	40	0	101.5%	85	115				
Methyl tert-Butyl Ether	19.26	1	20	0	96.3%	85	115				
o-Xylene	21.19	1	20	0	106.0%	85	115				
Toluene	20.66	1	20	0	103.3%	85	115				
1,4-Difluorobenzene	88.39	0	100	0	88.4%	70	130				
4-Bromochlorobenzene	102.6	0	100	0	102.6%	70	130				
Fluorobenzene	84.99	0	100	0	85.0%	70	130				

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

### CLIENT: PNM - Public Service Company of NM

Work Order:9812040Project:Florance 40

# QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 QC0606/07	Batch ID: GC-1_981222	Test Code:	SW8021B	Units: µg/L		Analysis	Date 12/22	2/98	Prep Da	ate:	
Client ID:	9812040	Run ID:	GC-1_981222	A		SeqNo:	9738				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.02	- 1	40	0	97.6%	85	115		·		
Ethylbenzene	40.7	1	40	0	101.8%	85	115				
m,p-Xylene	79.27	2	80	0	99.1%	85	115				
Methyl tert-Butyl Ether	38.29	1	40	0	95.7%	85	115				
o-Xylene	41.02	1	40	0	102.6%	85	115				
Toluene	40.08	1	40	0	100.2%	85	115				
1,4-Difluorobenzene	88.08	0	100	0	88.1%	70	130				
4-Bromochlorobenzene	100.8	0	100	0	100.9%	70	130				
Fluorobenzene	85.21	0	100	0	85.2%	70	130				

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

PNM - Public Service Company of NM

CLIENT:

# QC SUMMARY REPORT

Work Order:	9812040			SUPPOCATE P	FCOVERIES
Project:	Florance 40			SURROGATER	ECOVERED
Test No:	SW8021B				BTEX
Sample ID	14FBZ	4BCBZ	FLBZ		
9812028-01A	81.9	94	80.5		
9812029-01A	88.1	101	85.6		
9812031-01A	89.4	101	86.9		
9812031-03A	89.4	100	88.4		
9812032-01A	88.4	99.2	84.6		
9812035-01AMS	88.8	102	85.7		
9812035-01AMSD	87.2	100	84	· · · · · · · · · · · · · · · · · · ·	
9812035-02A	84.9	96.8	85.8		
9812035-03A	83.5	94.1	86.6	1	
9812036-01A	88.6	103	85.2	i i i i i i i i i i i i i i i i i i i	
9812037-13A	87.8	102	85.2	· · · · · · · · · · · · · · · · · · ·	
9812037-18A	100	101	90.5		
9812037-24A	93.3	101	87.6		
9812037-26A	86.1	99.4	88.6		1
9812040-01A	88.7	103	85.8	1	· · · · · · · · · · · · · · · · · · ·
9812041-01A	87.3	102	84.3		
9812041-02A	87.7	102	85.2	1	····· · · · · · · · · · · · · · · · ·
9812041-03A	87.2	101	84.6		· · · · · · · · · · · · · · · · · · ·
9812044-01A	88.4	102	85.1	······································	· · · · · · · · · · · · · · · · · · ·
CCV1 QC0606/07	88.2	102	85.3	· · · · · · · · · · · · · · · · · · ·	
CCV2 QC0606/07	88.4	. 102	. 85		
CCV3 QC0606/07	88.1	101	85.2		· · · · · · · · · · · · · · · · · · ·
LCS WATER	88.1	101	85.1		
MB1	88.7	98.5	85.4		

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70~130

### \* Surrogate recovery outside acceptance limits

1

![](_page_44_Picture_0.jpeg)

![](_page_44_Picture_1.jpeg)

![](_page_44_Picture_2.jpeg)

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

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LAB ID
1312040-DIA
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lesults to be sent to both parties.

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

February 23, 1999

Maureen Gannon PNM - Public Service Company of NM Alvarado Square Mail Stop 0408 Albuquerque, NM 87158 TEL: (505) 241-2974 FAX (505) 241-2340

1 St Quarter 1999 Received March 02 99

RE: Florance 40

Order No.: 9902056

Dear Maureen Gannon,

On Site Technologies, LTD. received 2 samples on 2/10/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests: BTEX (SW8021B)

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,

Xanq

David Cox

P.O. BOX 2606 • FARMINGTON, NM 87499

![](_page_46_Picture_1.jpeg)

LAB: (505) 325-1556

## On Site Technologies, LTD.

Date: 23-Feb-99

CLIENT:	PNM - Public Service Company of NM	
Project:	Florance 40	CASE NARRATIVE
Lab Order:	9902056	

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

o-Xylene

![](_page_47_Picture_1.jpeg)

LAB: (505) 325-1556

### ANALYTICAL REPORT

Date: 23-Feb-99

Client: Work Order:	PNM - Public Se 9902056	ervice Company of M	NM	Clien Clie	t Sample I ent Sample	<b>ifo:</b> Florance <b>ID:</b> 9902091	Florance 40 9902091303; MW-1		
Lab ID:	9902056-01A	Matrix: AQUE	С	ollection D	1:03:00 PM				
Project:	Florance 40			ord: 7472					
Parameter		Result	PQL	Qual	Units	DF	Date Analyzed		
BTEX		SV	N8021B				Analyst: <b>HR</b>		
Benzene		3400	50		µg/L	100	2/15/99		
Toluene		5300	50		µg/L	100	2/15/99		
Ethylbenzene		1100	50		µg/L	100	2/15/99		
m,p-Xylene		15000	100		µg/L	100	2/15/99		

50

µg/L

100

2/15/99

3900

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits E - Value above quantitation range

hod Blank Surr - Su

Surr: - Surrogate

1 of 1

### P.O. BOX 2606 • FARMINGTON, NM 87499

![](_page_48_Picture_1.jpeg)

LAB: (505) 325-1556

### **ANALYTICAL REPORT**

Date: 23-Feb-99

Client: Work Order: Lab ID: Project:	PNM - Public Se 9902056 9902056-02A Florance 40	ervice Company of I Matrix: AQUE	NM OUS	Client Sample Info: Florance 40 Client Sample ID: 9902091335; MW-5 Collection Date: 2/9/99 1:35:00 PM COC Record: 7472					
Parameter		Result	PQL	Qual Units	DF	Date Analy	zed		
BTEX		SI	N8021B			Analy	vst: HR		
Benzene		3500	50	µg/L	100	2/15/99			
Toluene		5100	50	µg/L	100	2/15/99			
Ethylbenzene		1000	50	µg/L	100	2/15/99			
m,p-Xylene		14000	100	µg/L	100	2/15/99			
o-Xylene		3700	50	µg/L	100	2/15/99			

![](_page_48_Picture_6.jpeg)

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits E - Value above quantitation range

Surr: - Surrogate

### P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

PNM - Public Service Company of NM

QC SUMMARY REPORT

Work Order:9902056Project:Florance 40

**CLIENT:** 

Sample ID: MB1	Batch ID: GC-1_990215	Test Code:	SW8021B	Units: µg/L		Analysi	s Date 2/15	/99	Prep Da	ate:	•
Client ID:	9902056	Run ID:	GC-1_990215	5A		SeqNo:	1105	6			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Quat
Benzene	.0508	0.5	. a sa saba a	•							J
Ethylbenzene	.0611	0.5									J
m,p-Xylene	.1669	1									J
Methyl tert-Butyl Ether	ND	1									
o-Xylene	.1145	0.5									J
Toluene	.1432	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

1 of 1

![](_page_49_Picture_10.jpeg)

Method Blank

CLIENT: PNM - Public Service Company of NM	
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Work Order: 9902056

**Project:** Florance 40

Sample ID: 9902056-01AMS	Batch ID: GC-1_990215	Test Code:	SW8021B	Units: µg/L		Analysis	Date 2/15/	99	Prep Dr	ite:	
Client ID: 9902091303; MW-	9902056	Run ID:	GC-1_990215	A		SeqNo:	11057	,			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	7278	50	4000	3380	97.4%	73	115				
Ethylbenzene	5030	50	4000	1074	98.9%	74	117				
m,p-Xylene	21430	100	8000	14630	84.9%	76	112				Е
Methyl tert-Butyl Ether	4639	100	4000	0	116.0%	62	122				
o-Xylene	7734	50	4000	3930	95.1%	83	112				
Toluene	9077	50	4000	5290	94.7%	71	120				
											the second second second second second second second second second second second second second second second se
Sample ID: 9902056-01AMSD	Batch ID: GC-1_990215	Test Code:	SW8021B	Units: µg/L		Analysis	Date 2/15/	99	Prep Da	ite:	
Sample ID: 9902056-01AMSD Client ID: 9902091303; MW-	Batch ID: GC-1_990215 9902056	Test Code: Run ID:	SW8021B GC-1_990215	Units: µg/L A		Analysis SeqNo:	Date 2/15/ 11058	' <b>99</b>	Prep Da	ate:	
Sample ID: 9902056-01AMSD Client ID: 9902091303; MW- Analyte	Batch ID: <b>GC-1_990215</b> <b>9902056</b> Result	Test Code: Run ID: PQL	SW8021B GC-1_990215 SPK value	Units: µg/L A SPK Ref Val	%REC	Analysis SeqNo: LowLimit	Date 2/15, 11058 HighLimit	' <b>99</b> I RPD Ref Val	Prep Da	ate: RPDLimit	Qual
Sample ID: 9902056-01AMSD Client ID: 9902091303; MW- Analyte Benzene	Batch ID: GC-1_990215 9902056 Result 7270	Test Code: Run ID: PQL 50	SW8021B GC-1_990215 SPK value 4000	Units: µg/L A SPK Ref Val 3380	%REC 97.2%	Analysis SeqNo: LowLimit 73	Date 2/15, 11058 HighLimit 115	' <b>99</b> } RPD Ref Val 7278	Prep D; %RPD 0.1%	ate: RPDLimit 8	Qual .
Sample ID: 9902056-01AMSD Client ID: 9902091303; MW- Analyte Benzene Ethylbenzene	Batch ID: GC-1_990215 9902056 Result 7270 5053	Test Code: Run ID: PQL 50 50	SW8021B GC-1_990215 SPK value 4000 4000	Units: <b>µg/L</b> <b>A</b> SPK Ref Val 3380 1074	%REC 97.2% 99.5%	Analysis SeqNo: LowLimit 73 74	Date 2/15, 11058 HighLimit 115 117	' <b>99</b> } RPD Ref Val 7278 5030	Prep D; %RPD 0.1% 0.5%	ate: RPDLimit 8 9	Qual .
Sample ID: 9902056-01AMSD Client ID: 9902091303; MW- Analyte Benzene Ethylbenzene m,p-Xylene	Batch ID: GC-1_990215 9902056 Result 7270 5053 21500	Test Code: Run ID: PQL 50 50 100	SW8021B GC-1_990215 SPK value 4000 4000 8000	Units: <b>µg/L</b> <b>A</b> SPK Ref Val 3380 1074 14630	%REC 97.2% 99.5% 85.8%	Analysis SeqNo: LowLimit 73 74 76	Date 2/15, 11058 HighLimit 115 117 112	<b>'99</b> RPD Ref Val 7278 5030 21430	Prep D; %RPD 0.1% 0.5% 0.3%	ate: RPDLimit 8 9 9	Qual E
Sample ID: 9902056-01AMSD Client ID: 9902091303; MW- Analyte Benzene Ethylbenzene m,p-Xylene Methyl tert-Butyl Ether	Batch ID: GC-1_990215 9902056 Result 7270 5053 21500 4699	Test Code: Run ID: PQL 50 50 100 100	: SW8021B GC-1_990215 SPK value 4000 4000 8000 4000	Units: µg/L A SPK Ref Val 3380 1074 14630 0	%REC 97.2% 99.5% 85.8% 117.5%	Analysis SeqNo: LowLimit 73 74 76 62	Date 2/15, 11058 HighLimit 115 117 112 122	' <b>99</b> 3 RPD Ref Val 7278 5030 21430 4639	Prep D; %RPD 0.1% 0.5% 0.3% 1.3%	ate: RPDLimit 8 9 9 9 7	Qual
Sample ID: 9902056-01AMSD Client ID: 9902091303; MW- Analyte Benzene Ethylbenzene m,p-Xylene Methyl tert-Butyl Ether o-Xylene	Batch ID: GC-1_990215 9902056 Result 7270 5053 21500 4699 7768	Test Code: Run ID: PQL 50 50 100 100 50	SW8021B GC-1_990215 SPK value 4000 4000 8000 4000 4000 4000	Units: <b>µg/L</b> <b>SPK Ref Val</b> 3380 1074 14630 0 3930	%REC 97.2% 99.5% 85.8% 117.5% 95.9%	Analysis SeqNo: LowLimit 73 74 76 62 83	Date 2/15, 11058 HighLimit 115 117 112 122 112	'99 RPD Ref Val 7278 5030 21430 4639 7734	Prep D; %RPD 0.1% 0.5% 0.3% 1.3% 0.4%	ate: RPDLimit 8 9 9 7 9	Qual

QC SUMMARY REPORT

Date: 23-Feb-99

Sample Matrix Spike

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

1 of 1

9902056

CLIENT: PNM - Public Service Company of NM

Work Order:

**Project:** Florance 40

Sample ID: LCS WATER	Batch ID: GC-1_990215	Test Code	SW8021B	Units: µg/L		Analysis	s Date 2/15	99	Prep Da	ate:	
Client ID:	9902056	Run ID:	GC-1_990215	5A		SeqNo:	1105	5			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.15	0.5	40	0.0508	105.3%	84	110				
Ethylbenzene	42.43	0.5	40	0.0611	105.9%	86	113				
m,p-Xylene	80.09	1	80	0.1669	99.9%	81	114				
Methyl tert-Butyl Ether	47.84	1	40	0	119.6%	69	129				
o-Xylene	41.43	0.5	40	0.1145	103.3%	86	112				
Toluene	41.62	0.5	40	0.1432	103.7%	85	111				

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits R - R

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

**Date:** 23-Feb-99

QC SUMMARY REPORT

Laboratory Control Spike - generic

![](_page_51_Picture_13.jpeg)

CLIENT:	PNM - Public Service Co	mpany of NM
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Work Order: 9902056

**Project:** Florance 40

# **QC SUMMARY REPORT**

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0606/07	Batch ID: GC-1_990215	Test Code: SW8021B		Units: µg/L		Analysis	Prep Date:				
Client ID:	9902056	Run ID:	GC-1_990215	5A		SeqNo:	1105	2			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.76	0.5	20	0	103.8%	85	115	-			
Ethylbenzene	21.41	0.5	20	0	107.0%	85	115				
m,p-Xylene	40.37	1	40	0	100.9%	85	115				
Methyl tert-Butyl Ether	24.16	1	20	0	120.8%	85	115				S
o-Xylene	20.94	0.5	20	0	104.7%	85	115				
Toluene	20.93	0.5	20	0	104.6%	85	115				
1,4-Difluorobenzene	95.93	0	100	0	95.9%	90	102				
4-Bromochlorobenzene	99.7	0	100	0	99.7%	93	102				
Fluorobenzene	94.14	0	100	0	94.1%	84	103				
Sample ID: CCV2 QC0606/07	Batch ID: GC-1_990215	Test Code:	SW8021B	Units: µg/L		Analysis	5 Date 2/15	/99	Prep Da	ate:	
Client ID:	9902056	Run ID:	GC-1_990215	5A		SeqNo:	1105	3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.22	0.5	20	0	106.1%	85	115				· · · ·
Ethylbenzene	21.3	0.5	20	0	106.5%	85	115				
m,p-Xylene	39.92	1	40	0	99.8%	85	115				
Methyl tert-Butyl Ether	23.56	1	20	0	117.8%	85	115				S
o-Xylene	20.78	0.5	20	0	103.9%	85	115				
Toluene	20.9	0.5	20	0	104.5%	85	115				
1,4-Difluorobenzene	97.32	0	100	0	97.3%	90	102				
4-Bromochlorobenzene	101.3	0	100	0	101.3%	93	102				

84

103

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Fluorobenzene

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

94.4%

1 of 2

J - Analyte detected below quantitation limits

94.39

0

100

R - RPD outside accepted recovery limits

0

Date: 23-Feb-99

### CLIENT: PNM - Public Service Company of NM

**Work Order:** 9902056

**Project:** Florance 40

# QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 QC0606/07	Batch ID: GC-1_990215	Test Code: SW8021B		Units: µg/L		Analysis	Date 2/15	Prep Da			
Client ID:	9902056	Run ID:	GC-1_990215	5A		SeqNo:	11054	4			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.22	0.5	40	0	103.1%	85	115				
Ethylbenzene	42.21	0.5	40	. 0	105.5%	85	115				1
m,p-Xylene	79.36	1	80	0	99.2%	85	115				
Methyl tert-Butyl Ether	46.41	1	40	0	116.0%	85	115				S
o-Xylene	41.5	0.5	40	0	103.7%	85	115				
Toluene	41.73	0.5	40	0	104.3%	85	115				
1,4-Difluorobenzene	96.22	0	100	0	96.2%	90	102				
4-Bromochlorobenzene	99.94	0	100	0	99.9%	93	102				
Fluorobenzene	93.9	0	100	0	93.9%	84	103				

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

2 of 2

PNM - Public Service Company of NM

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**CLIENT:** 

Date: 23-Feb-99

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# QC SUMMARY REPORT IES

Work Order:	9902056			SURROGATE RECOVERIES
Project:	Florance 40			
Test No:	SW8021B			BTEX
Sample ID	14FBZ	4BCBZ	FLBZ	
9902048-02A	97.4	101	95	
9902051-01A	94.6	99.2	92.4	
9902053-01A	92.8	99.9	90.6	
9902055-01A	94	101	91.9	
9902055-02A	93.9	101	92.3	
9902055-03A	94.6	100	92.2	
9902056-01A	95.9	99.7	94.3	
9902056-01AMS	95.2	100	93.3	
9902056-01AMSD	95	101	93.3	
9902056-02A	95.7	99.5	94.7	
9902057-01A	94.5	97.8	95.6	
9902057-02A	93.5	97.3	94.7	
9902058-01A	92.2	98.2	90.7	
9902058-02A	97	101	95.3	
9902058-03A	, 94.6	101	93.3	· · · · · · · · · · · · · · · · · · ·
9902059-01A	96.9	100	94.2	
9902059-02A	96	98.6	92.7	
9902059-03A	95.2	98.4	94.1	1
9902059-04A	90.1	97.5	88.9	i in a start a start a start a start a start a start a start a start a start a start a start a start a start a
9902059-06A	94.7	100	92.9	· · · · · · · · · · · · · · · · · · ·
CCV1 QC0606/07	95.9	• 99.7	94.1	
CCV2 QC0606/07	97.3	. 101	. 94.4	
CCV3 QC0606/07	96.2	99.9	93.9	
LCS WATER	96.8	100	94.1	
MB1	97.1	97.3	94.2	

90-102
93-102
34-103

\* Surrogate recovery outside acceptance limits

![](_page_55_Picture_0.jpeg)

![](_page_55_Picture_1.jpeg)

![](_page_55_Picture_2.jpeg)

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

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City, State, Zip Farmington, NM 87401					<u> </u>				Telephone No. 505			505-	505-848-2974 Telefax			elefax	No.	
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