

3R - 341

REPORTS

DATE:

1999

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

RECEIVED

April 5, 1999

APR 07 1999

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

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION



RE: 1999 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT

Dear Bill:

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 1st 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

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

Sincerely,



Maureen Gannon
Project Manager

Enclosure

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



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APR 07 1999

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Annual Groundwater Report

1999

Volume II

***Unlined Surface Impoundments
San Juan Basin***



Groundwater Site Summary Report

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

Quarter/Year: 2nd/98, 3rd/98, 4th/98 & 1st/99

Operator: Burlington Resources
Sec: 18 **Twn:** 28N **Rng:** 9W **Unit:** L
Canyon: Muñoz

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

Topo Map: previously submitted

Well Completion Diagram: previously submitted

Site Map with Analytical Results: Figure 1

Groundwater Contour Map: Figure 2a (April 1998), Figure 2b (August 1998), Figure 2c (November 1998) & Figure 2d (February 1999)

Hydrograph: Figure 3

Full suite-Groundwater Sampling Results: previously submitted

Analytical Results: attached

Site Hydrology:

The Reid 16 Drip site lies in a steep side drainage on the flanks of Muñoz Canyon, a tributary to the San Juan River located about 9 miles southeast of Bloomfield, New Mexico. The site lies at an elevation of about 5755 feet amsl, on the west side of a narrow, north-flowing drainage that empties into Muñoz Canyon about 1000 feet north-northeast of the site.

Subsurface materials beneath the site are composed primarily of sands, with minor amounts of silt or clay materials, as determined from the four monitoring wells installed (see Figure 1). Total depths of the wells are 30 to 43 feet, and no resistant bedrock units were encountered in the monitor well borings.

Depth to water has ranged from 30 to 35 feet beneath the site. Groundwater flows towards the north, parallel with the direction of the topographic gradient and of the flow in Muñoz Canyon and the side wash by the site. There are no appreciable seasonal changes in flow direction that are apparent, except for an anomalously high measurement in well MW-4 in November, 1998 (Figure 3c) which creates an apparent northwestward gradient. It is possible that a flood and recharge event caused the elevated water table in MW-4, but this is suspect because no other wells register similar trends (see hydrograph, Figure 3). More likely, the anomalous reading in MW-4 was an error in data collection.

The site hydrograph (Figure 3) shows that in general water levels do not fluctuate seasonally at the Reid 16 Drip site. There is, however, a slight upward trend of perhaps 1 foot or more throughout the period of record (April 1997 to February 1999). The anomalously high November 1998 groundwater elevation in well MW-4 is apparent in Figure 3, as is the lack of any similar response in adjacent wells.

Activities for Previous Year:

On April 28, August 26, and November 5, 1998 and again on February 11, 1999, PNM performed quarterly sampling of well MW-2 at the site. PNM measured water levels quarterly in all 4 wells. Groundwater samples were submitted for chemical analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8020. Sampling was performed in strict compliance with EPA protocol. In all instances, PNM delivered the samples to OnSite Technologies, Farmington, New Mexico.

Results:

Figure 1 presents a site map showing BTEX for each monitoring well since groundwater contamination was discovered. For two years, MW-1, -3 and -4 have consistently shown BTEX concentrations below WQCC

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

PNMGS Well Site: Reid 16 Dip (continued)

standards. BTEX concentrations in MW-2 have fluctuated although xylene levels have remained fairly constant, with most parameters over WQCC standards. After the additional source removal activities of January 1998 (approximately 1200 cubic yards of contaminated soil were remediated), BTEX levels began to drop. Monitor well MW-2 has shown BTEX concentrations below standards for two consecutive quarters.

Further Action:

PNM will continue to monitor groundwater elevations and conduct quarterly groundwater sampling at the Reid 16. Two more quarters of confirmatory data are needed to verify that the site has been remediated.

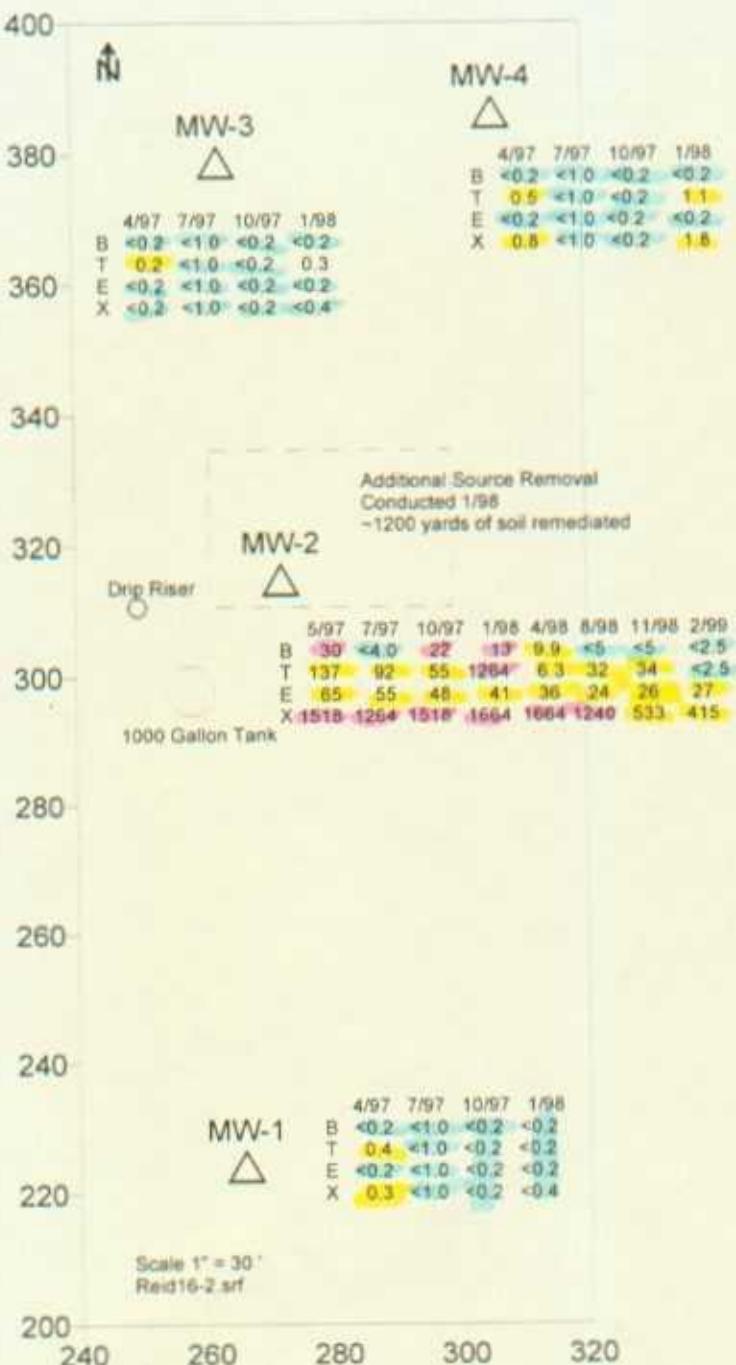
Public Service Company of New Mexico - Gas Services

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

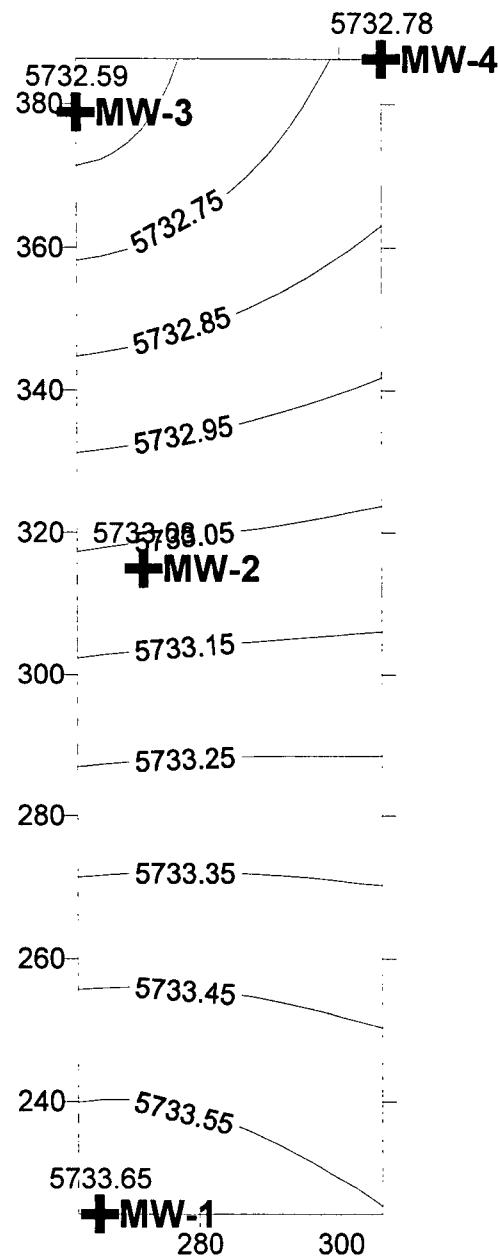
Contact: Maureen Gannon

Telephone: 505-241-2974

Figure 1. Reid 16 Drip Groundwater Site Map and Analytical Results
 (Concentrations in ppb)

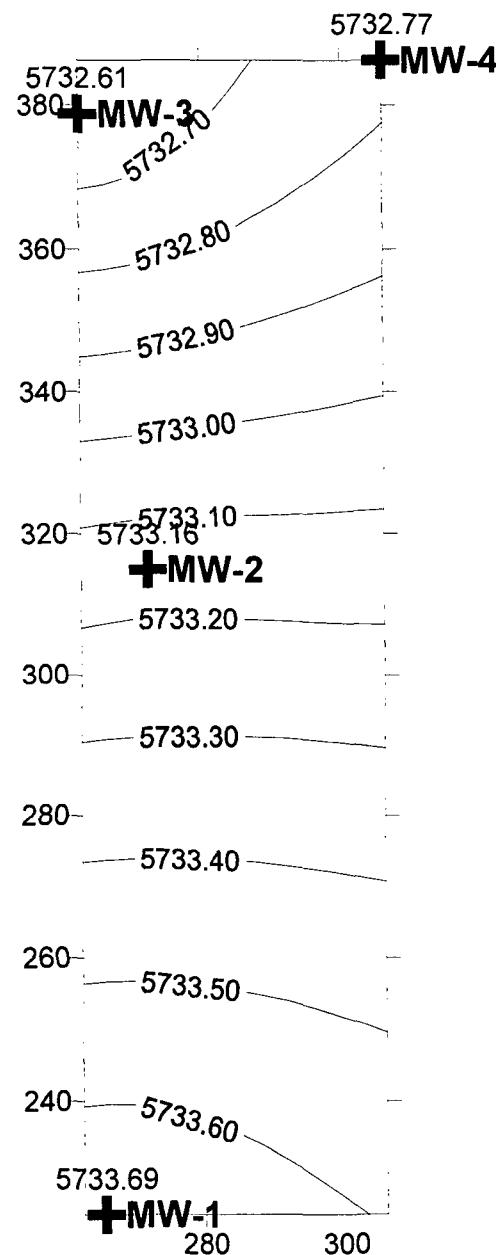


**Figure 2a. Reid 16 Drip Groundwater Contour Map
(April 28, 1998)**



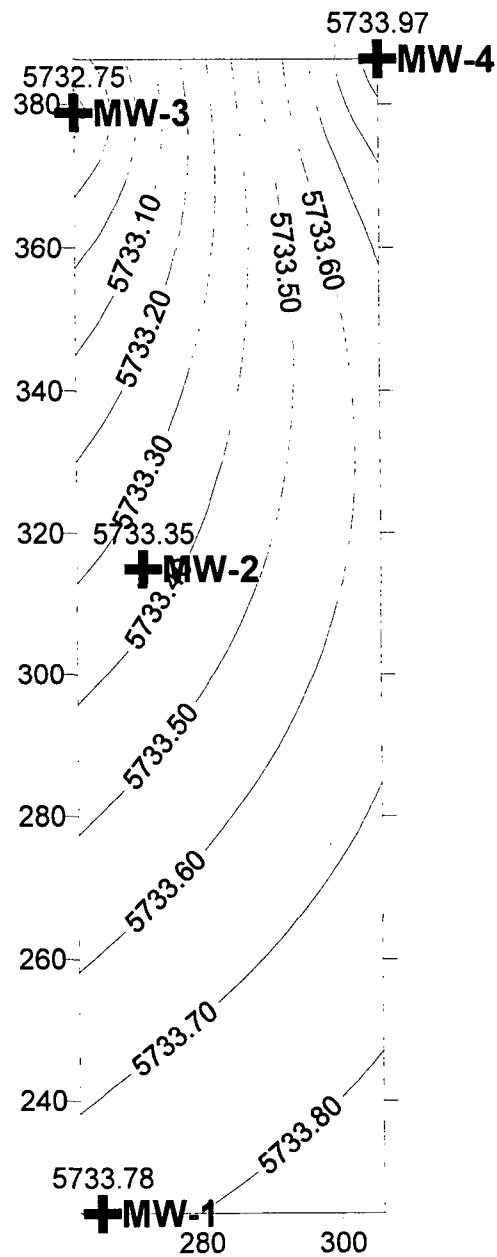
SCALE IN FEET
(X-axis = Easting,
Y-axis = Northing)

**Figure 2b. Reid 16 Drip Groundwater Contour Map
(August 26, 1998)**



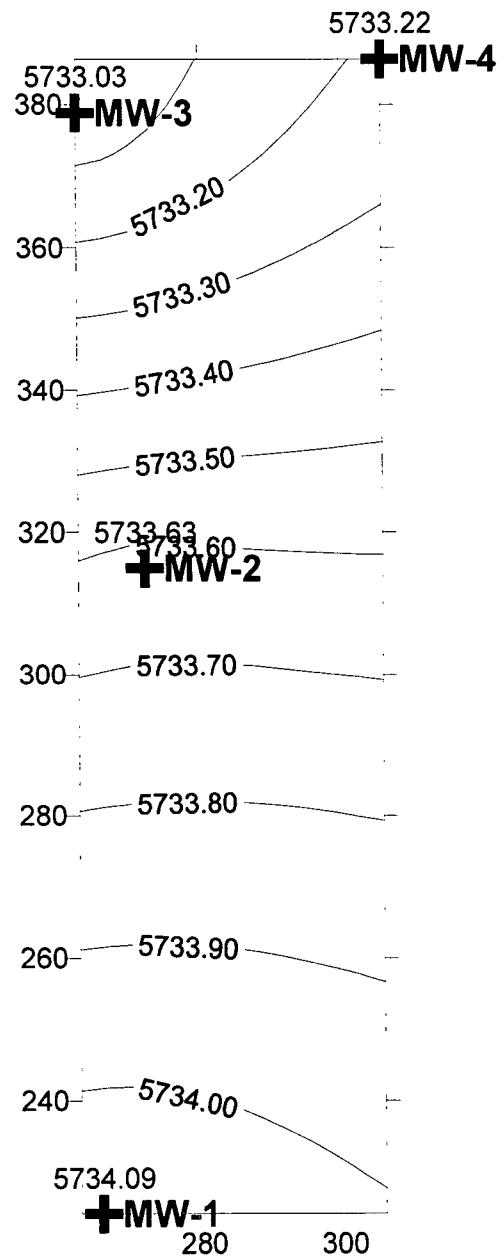
SCALE IN FEET
(X-axis = Easting,
Y-axis = Northing)

**Figure 2c. Reid 16 Drip Groundwater Contour Map
(November 5, 1998)**



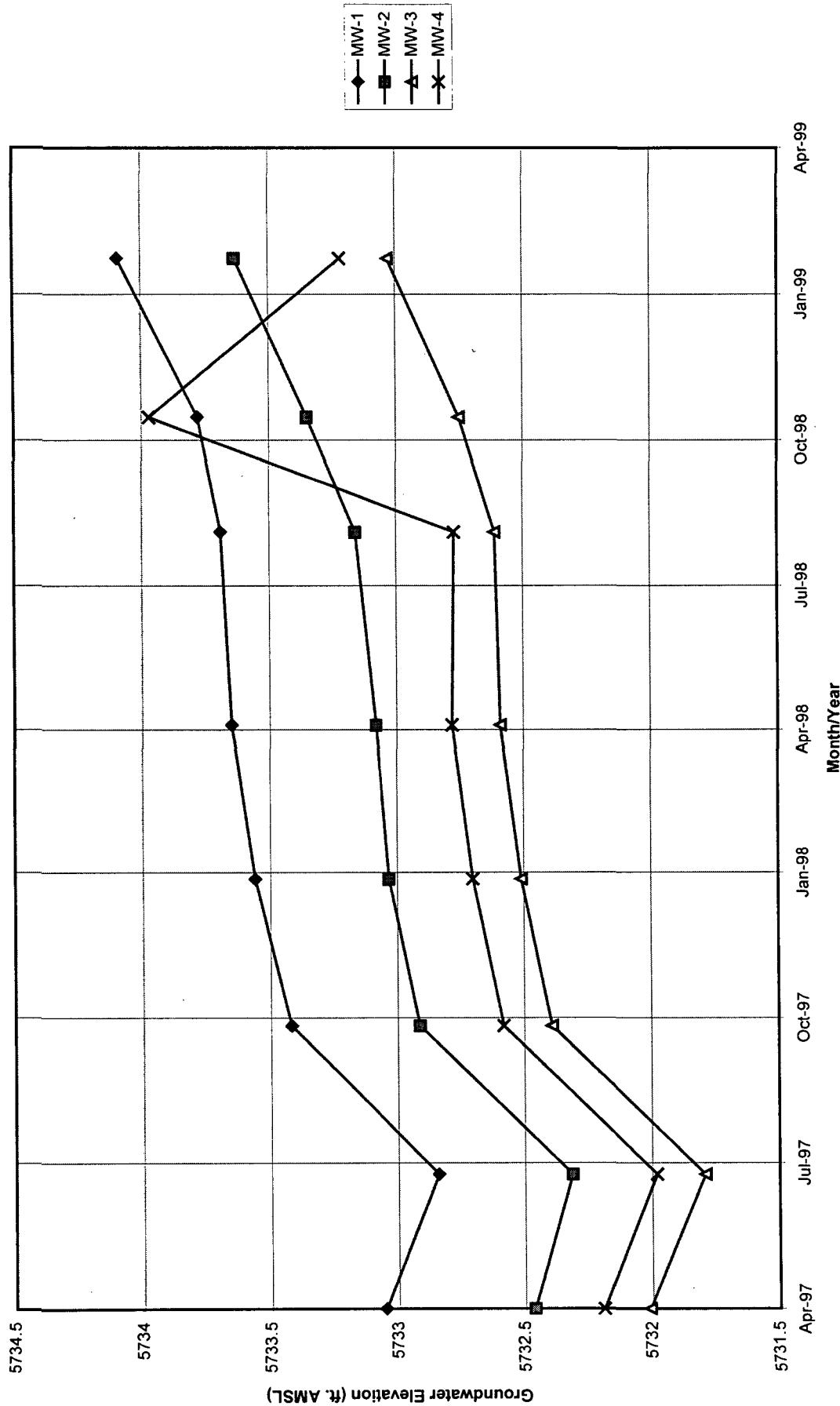
SCALE IN FEET
(X-axis = Easting,
Y-axis = Northing)

**Figure 2d. Reid 16 Drip Groundwater Contour Map
(February 11, 1999)**



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

**Figure 3. Reid 16 Drip Hydrograph
(Water Level vs. Time)**



ON SITE
TECHNOLOGIES, LTD.

OFF: (505) 325-5667

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 98

RE: Reid 16 Drip

Order No.: 9804052

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

ON SITE

OFF: (505) 325-5667

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

On Site Technologies, LTD.

Date: 11-May-98

CLIENT: PNM - Public Service Company of NM

Project: Reid 16 Drip

Lab Order: 9804052

CASE NARRATIVE

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

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

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

ON SITE

OFF: (505) 325-5667

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: 11-May-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Reid 16 Drip
Work Order:	9804052	Client Sample ID:	9804281100; MW-2
Lab ID:	9804052-01A	Collection Date:	4/28/98 11:00:00 AM
Project:	Reid 16 Drip	COC Record:	7247

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX						
Benzene	9.9	5		µg/L	10	5/7/98
Toluene	6.3	5		µg/L	10	5/7/98
Ethylbenzene	36	5		µg/L	10	5/7/98
m,p-Xylene	1800	10		µg/L	10	5/7/98
o-Xylene	220	5		µg/L	10	5/7/98

Qualifiers: 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
R - RPD outside accepted recovery limits
E - Value above quantitation range
Sur: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM

Work Order: 9804052

Project: Reid 16 Drip

Date: 11-May-98

QC SUMMARY REPORT
Method Blank

Sample ID: MB1	Batch ID: GC-1_980507	Test Code: SW8020A	Units: µg/L	Analysis Date	5/7/98	Prep Date:					
Client ID:		Run ID: GC-1_980507A		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

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

1 of 1

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9804052
Project: Reid 16 Drip

Sample ID:	9804054-01AMS	Batch ID:	GC-1_980507	Test Code:	SW8020A	Units: µg/L		Analysis Date	5/7/98		Prep Date:	
Client ID:	9804052	Run ID:	GC-1_980507A				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					S
Ethylbenzene	5411	50	4000	995.8	110.4%	78	107					S
m,p-Xylene	28750	100	8000	14760	174.9%	67	118					S
Methyl tert-Butyl Ether	3732	100	4000	18.23	92.9%	70	130					S
o-Xylene	9129	50	4000	3818	132.8%	78	107					S
Toluene	18610	50	4000	12990	140.7%	74	116					S
Sample ID:	9804054-01AMSD	Batch ID:	GC-1_980507	Test Code:	SW8020A	Units: µg/L		Analysis Date	5/7/98		Prep Date:	
Client ID:	9804052	Run ID:	GC-1_980507A				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					S
Ethylbenzene	5198	50	4000	995.8	105.1%	78	107					S
m,p-Xylene	27560	100	8000	14760	160.1%	67	118					S
Methyl tert-Butyl Ether	3664	100	4000	18.23	91.1%	70	130					S
o-Xylene	8811	50	4000	3818	124.8%	78	107					S
Toluene	17820	50	4000	12990	120.7%	74	116					S

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

R - RPD outside accepted recovery limits

Date: 11-May-98

QC SUMMARY REPORT
 Sample Matrix Spike

1 of 1

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9804052
Project: Reid 16 Drip

Date: 11-May-98

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_980507	Test Code: SW8020A	Units: µg/L	Analysis Date 5/7/98			Prep Date:				
Client ID:	Run ID: GC-1_980507A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result										
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

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9804052
Project: Reid 16 Drip

QC SUMMARY REPORT
Work Standard: 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:	Run ID:	Client ID:	Run ID:	Test Code:	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result		PQL	SPK value	SPK Ref Val							
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 5/7/98		Prep Date:		
Client ID:	Run ID:	Client ID:	Run ID:	Test Code:	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result		PQL	SPK value	SPK Ref Val							
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-Xylene	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

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: 9804052
Project: Reid 16 Drip

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		Prep Date:	
Client ID:		9804052		Run ID: GC-1_980507A				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 5/7/98		Prep Date:	
Client ID:		9804052		Run ID: GC-1_980507A				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
	- Analyte detected below quantitation limits

- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: PNM - Public Service Company of NM
Work Order: 9804052
Project: Reid 16 Drip

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: CCV5 QC0529/30	Batch ID: GC-1_980507	Test Code: SW020A	Units: µg/L		Analysis Date 5/7/98	Prep Date:					
Client ID:		Run ID: GC-1_980507A			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

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 11-May-98

CLIENT: PNM - Public Service Company of NM
Work Order: 9804052
Project: Reid 16 Drip
Test No: SW8020A

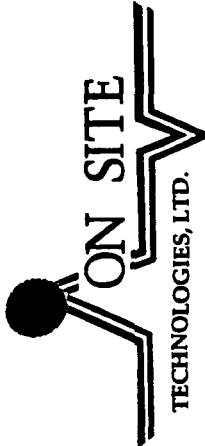
**QC SUMMARY REPORT
SURROGATE RECOVERIES**

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

* Surrogate recovery outside acceptance limits



CHAIN OF CUSTODY RECORD

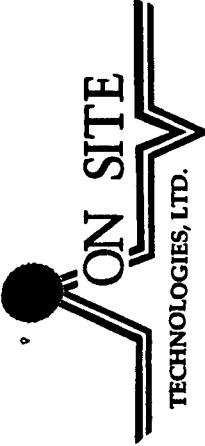
747

Page: 1 of 1

Date: 4/29/98
612 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Purchase Order No.:		Job No.		Name		Maureen Gannon		Title			
Name	Company	Dept.	324-3763	Company	PNM Gas Services	City, State, Zip	Albuquerque, NM 87158	Telephone No.	505-848-2974	Telefax No.	
Denver Bearden	PNM Gas Services	603 W. Elm Street		Mailing Address	Alverado Square, Mail Stop 0408						
Address	City, State, Zip	Farmington, NM 87401		City, State, Zip	Albuquerque, NM 87158						
Sampling Location:		ANALYSIS REQUESTED									
Sampler:		Number of Containers									
M-S.		9804281100 MW-2									
SAMPLE IDENTIFICATION		SAMPLE	DATE	TIME	MATRIX	PRES.	LAB ID				
9804281100 MW-2					H2O	H2O 2 X	980428-01A				
Relinquished by:		Date/Time		4/29/98 1345		Received by:		JG			Date/Time
Relinquished by:		Date/Time				Received by:					Date/Time
Relinquished by:		Date/Time				Received by:					Date/Time
Method of Shipment:		Rush		24-48 Hours		10 Working Days		Special Instructions:			
Authorized by:		Date		4/29/98							Results to be sent to both parties.
(Client Signature Must Accompany Request)											

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



CHAIN OF CUSTODY RECORD

Date: 4/29/93

Page: 1 of 1

612 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6236

Purchase Order No.:		Job No.		Name		Maureen Gannon		Title																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Name	Denver Bearden	Company	PNM Gas Services	Company	PNM Gas Services	Mailing Address	Alverado Square, Mail Stop 0408	City, State, Zip	Albuquerque, NM 87158																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Address	603 W. Elm Street	City, State, Zip	Farmington, NM 87401	Telephone No.	505-848-2974	Telephone No.	505-848-2974	Telefax No.	Telefax No.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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<tr><td>11</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>13</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>14</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>15</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>16</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>17</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>18</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>19</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>21</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>22</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>23</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>24</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>25</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>26</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>27</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>28</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>29</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>30</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>31</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>32</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>33</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>34</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>35</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>36</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>37</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>38</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>39</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>40</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>41</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>42</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>43</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>44</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>45</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>46</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>47</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>48</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>49</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>50</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>51</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>52</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>53</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>54</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>55</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>56</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>57</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>58</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>59</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>60</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>61</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>62</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>63</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>64</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>65</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>66</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>67</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>68</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>69</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>70</td><td></td><td></td><td></td><td></td><td></td></tr> 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<tr><td>115</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>116</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>117</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>118</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>119</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>120</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>121</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>122</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>123</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>124</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>125</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>126</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>127</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>128</td><td></td><td></td><td></td><td></td><td></td></tr> 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<tr><td>143</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>144</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>145</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>146</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>147</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>148</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>149</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>150</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>151</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>152</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>153</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>154</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>155</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>156</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>157</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>158</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>159</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>160</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>161</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>162</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>163</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>164</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>165</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>166</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>167</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>168</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>169</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>170</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>171</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>172</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>173</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>174</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>175</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>176</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>177</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>178</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>179</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>180</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>181</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>182</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>183</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>184</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>185</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>186</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>187</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>188</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>189</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>190</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>191</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>192</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>193</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>194</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>195</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>196</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>197</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>198</td><td></td><td></td><td></td><td></td><td></td></tr> 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OFF: (505) 325-5667

LAB: (505) 325-1556

August 31, 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 93

RE: Reid 16 Drip

Order No.: 9808052

Dear Maureen Gannon,

On Site Technologies, LTD. received 2 samples on 8/27/98 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,

A handwritten signature in black ink, appearing to read "David Cox".

David Cox



OFF: (505) 325-5667

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 31-Aug-98

CLIENT: PNM - Public Service Company of NM

Project: Reid 16 Drip

Lab Order: 9808052

CASE NARRATIVE

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

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

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

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BEYOND THE INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Aug-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Reid 16 Drip
Work Order:	9808052	Client Sample ID:	9808261450; MW-2
Lab ID:	9808052-01A	Matrix:	AQUEOUS
Project:	Reid 16 Drip	Collection Date:	8/26/98 2:50:00 PM
		COC Record:	7432

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX						
		SW8020A				Analyst: DC
Benzene	ND	5		µg/L	10	8/27/98
Toluene	32	5		µg/L	10	8/27/98
Ethylbenzene	24	5		µg/L	10	8/27/98
m,p-Xylene	1100	10		µg/L	10	8/27/98
o-Xylene	140	5		µg/L	10	8/27/98

Qualifiers: 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
R - RPD outside accepted recovery limits
E - Value above quantitation range
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



OFF: (505) 325-5667

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Aug-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Reid 16 Drip	MW-2 DUPLICATE
Work Order:	9808052	Client Sample ID:	9808261505; MW-5	
Lab ID:	9808052-02A	Matrix:	AQUEOUS	
Project:	Reid 16 Drip	Collection Date:	8/26/98 3:05:00 PM	
		COC Record:	7432	

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX						
			SW8020A			Analyst: DC
Benzene	ND	5		µg/L	10	8/27/98
Toluene	32	5		µg/L	10	8/27/98
Ethylbenzene	21	5		µg/L	10	8/27/98
m,p-Xylene	1000	10		µg/L	10	8/27/98
o-Xylene	120	5		µg/L	10	8/27/98

Qualifiers: PQL - Practical Quantitation Limit S - Spike Recovery outside accepted recovery limits
ND - Not Detected at Practical Quantitation Limit R - RPD outside accepted recovery limits
J - Analyte detected below Practical Quantitation Limit E - Value above quantitation range
B - Analyte detected in the associated Method Blank Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 31-Aug-98

CLIENT: PNM - Public Service Company of NM**Work Order:** 9808052**Project:** Reid 16 Drip**QC SUMMARY REPORT**

Method Blank

Sample ID: MB1	Batch ID: GC-1_980827	Test Code: SW8020A	Units: µg/L	Analysis Date 8/27/98				Prep Date:			
Client ID: 9808052	Run ID: GC-1_980827A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0346	ND	0.5	0.5							J
Ethybenzene	ND	ND	0.5	0.5							
m,p-Xylene	ND	ND	1	1							
o-Xylene	ND	ND	0.5	0.5							
Toluene	.0769										

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery 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

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9808052
Project: Reid 16 Drip

QC SUMMARY REPORT
Sample Matrix Spike

Date: 31-Aug-98

Sample ID: 9808046-02AMS		Batch ID: GC-1_980827		Test Code: SW8020A		Units: µg/L		Analysis Date 8/27/98		Prep Date:			
Client ID:		Run ID:	GC-1_980827A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	878.2	10	800	161.8	89.5%	56	128						
Ethylbenzene	784.7	10	800	16.73	96.0%	78	107						
m,p-Xylene	2573	20	1600	1184	86.8%	67	118						
o-Xylene	1058	10	800	325.4	91.6%	78	107						
Toluene	2438	10	800	1751	85.9%	74	116						
Sample ID: 9808046-02AMSD		Batch ID: GC-1_980827		Test Code: SW8020A		Units: µg/L		Analysis Date 8/27/98		Prep Date:			
Client ID:		Run ID:	GC-1_980827A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	858	10	800	161.8	87.0%	56	128	878.2	2.3%	12			
Ethylbenzene	764	10	800	16.73	93.4%	78	107	784.7	2.7%	11			
m,p-Xylene	2505	20	1600	1184	82.6%	67	118	2573	2.7%	10			
o-Xylene	1038	10	800	325.4	89.1%	78	107	1058	1.9%	14			
Toluene	2370	10	800	1751	77.4%	74	116	2438	2.8%	14			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

1 of 1

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9808052
Project: Reid 16 Drip

Date: 31-Aug-98

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_980827	Test Code: SW8020A	Units: µg/L	Analysis Date 8/27/98	Prep Date:
Client ID:	Run ID: GC-1_980827A			SeqNo: 5916	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Benzene	36.42	0.5	40	0.0346	91.0%
Ethylbenzene	38.22	0.5	40	0	95.5%
m,p-Xylene	71.74	1	80	0	89.7%
o-Xylene	36.96	0.5	40	0	92.4%
Toluene	36.36	0.5	40	0.0769	90.7%

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

R - RPD outside accepted recovery limits

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9808052
Project: Reid 16 Drip

Date: 31-Aug-98

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0606/07		Batch ID: GC-1_980827		Test Code: SW8020A		Units: µg/L		Analysis Date 8/27/98		Prep Date:	
Client ID:		9808052		Run ID: GC-1_980827A				SeqNo: 5914			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.68	0.5	20	0	98.4%	85	115				
Ethylbenzene	20.62	0.5	20	0	103.1%	85	115				
m,p-Xylene	38.57	1	40	0	96.4%	85	115				
o-Xylene	19.75	0.5	20	0	98.7%	85	115				
Toluene	19.58	0.5	20	0	97.9%	85	115				
1,4-Difluorobenzene	86.6	0	100	0	86.6%	70	130				
4-Bromochlorobenzene	88.17	0	100	0	88.2%	70	130				
Fluorobenzene	83.79	0	100	0	83.8%	70	130				

Sample ID: CCV2 QC0606/07		Batch ID: GC-1_980827		Test Code: SW8020A		Units: µg/L		Analysis Date 8/27/98		Prep Date:	
Client ID:		9808052		Run ID: GC-1_980827A				SeqNo: 5915			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.44	0.5	20	0	97.2%	85	115				
Ethylbenzene	20.35	0.5	20	0	101.7%	85	115				
m,p-Xylene	38.02	1	40	0	95.1%	85	115				
o-Xylene	19.62	0.5	20	0	98.1%	85	115				
Toluene	19.4	0.5	20	0	97.0%	85	115				
1,4-Difluorobenzene	86.61	0	100	0	86.6%	70	130				
4-Bromochlorobenzene	87	0	100	0	87.0%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
L - 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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On Site Technologies, LTD.

Date: 31-Aug-98

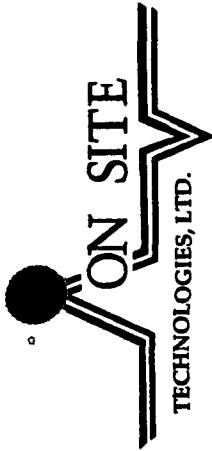
CLIENT: PNM - Public Service Company of NM
Work Order: 9808052
Project: Reid 16 Drip
Test No: SW8020A

QC SUMMARY REPORT
SURROGATE RECOVERIES
BTEX

Sample ID	14FBZ	4BCBZ	FLBZ
9808046-02A	85.4	75.6	82.1
9808046-02AMS	85.3	84.3	82.4
9808046-02AMSD	85.7	86.8	82.4
9808049-01A	85.4	88.3	82.9
9808052-01A	84.6	85.9	80.8
9808052-02A	84.9	84.6	81
9808053-01A	87.4	83.2	83.2
9808053-02A	86.2	74.8	83
9808054-01A	86.3	73.3	83.4
CCV1 QC0606/07	86.6	88.2	83.8
CCV2 QC0606/07	86.6	87	83.4
LCS WATER	86.2	87.1	83.4
MB1	87.2	86.1	84.3

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

* Surrogate recovery outside acceptance limits



CHAIN OF CUSTODY RECORD

TECHNOLOGIES LTD

6112 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 12/24/95 Page: 1 of 1

1

Page: _____ of _____

24/976



OFF: (505) 325-5667

LAB: (505) 325-1556

November 16, 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

44th QTR 1998

RE: Reid 16 Drip

Order No.: 9811027

Dear Maureen Gannon,

On Site Technologies, LTD. received 2 samples on 11/5/98 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,

A handwritten signature in black ink, appearing to read "David Cox".

David Cox



OFF: (505) 325-5667

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 16-Nov-98

CLIENT: PNM - Public Service Company of NM
Project: Reid 16 Drip
Lab Order: 9811027

CASE NARRATIVE

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

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

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

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BRIDGING INDUSTRY WITH THE ENVIRONMENT -



OFF: (505) 325-5667

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 16-Nov-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Reid 16 Drip
Work Order:	9811027	Client Sample ID:	9811050830; MW-2
Lab ID:	9811027-01A	Matrix:	AQUEOUS
Project:	Reid 16 Drip	Collection Date:	11/5/98 8:30:00 AM
		COC Record:	7518

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX			SW8020A			Analyst: DC
Benzene	ND	5		µg/L	5	11/12/98
Toluene	34	5		µg/L	5	11/12/98
Ethylbenzene	26	5		µg/L	5	11/12/98
m,p-Xylene	500	10		µg/L	5	11/12/98
o-Xylene	33	5		µg/L	5	11/12/98

Qualifiers: 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
R - RPD outside accepted recovery limits
E - Value above quantitation range
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



OFF: (505) 325-5667

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 16-Nov-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Reid 16 Drip	Duplicate
Work Order:	9811027	Client Sample ID:	9811050845; MW-5	o5
Lab ID:	9811027-02A	Matrix:	AQUEOUS	MW-2
Project:	Reid 16 Drip	Collection Date:	11/5/98 8:45:00 AM	
		COC Record:	7518	

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX			SW8020A			Analyst: DC
Benzene	ND	5		µg/L	5	11/12/98
Toluene	34	5		µg/L	5	11/12/98
Ethylbenzene	27	5		µg/L	5	11/12/98
m,p-Xylene	500	10		µg/L	5	11/12/98
o-Xylene	36	5		µg/L	5	11/12/98

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9811027
Project: Reid 16 Drip

Date: 16-Nov-98
QC SUMMARY REPORT
Method Blank

Sample ID: MB1	Batch ID: GC-1_981112	Test Code: SW8020A	Units: µg/l	Analysis Date 11/12/98	Prep Date:
Client ID: 9811027	Run ID: GC1_981112A			SeqNo: 8677	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Benzene	.0351	ND	1	1	
Ethylbenzene	ND	ND	1	1	
m,p-Xylene	ND	ND	2	2	
o-Xylene	ND	ND	1	1	
Toluene	.0976	1			J

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

R - RPD outside accepted recovery limits

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9811027
Project: Reid 16 Drip

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9811034-03AMSD Batch ID: GC-1_981112 Test Code: SW8020A Units: µg/L							Analysis Date 11/12/98 Prep Date:								
Client ID:	Run ID:	GC-1_981112A	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	SeqNo:	8678
Benzene		7926	50	2000	6234	84.6%	56	128							
Ethybenzene		2492	50	2000	674.8	90.9%	78	107							
m,p-Xylene		8658	100	4000	5220	86.0%	67	118							
o-Xylene		3141	50	2000	1306	91.7%	78	107							
Toluene		9893	50	2000	8242	82.5%	74	116							
Sample ID: 9811034-03AMSD Batch ID: GC-1_981112 Test Code: SW8020A Units: µg/L							Analysis Date 11/12/98 Prep Date:								
Client ID:	Run ID:	GC-1_981112A	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	SeqNo:	8679
Benzene		7793	50	2000	6234	77.9%	56	128							
Ethybenzene		2453	50	2000	674.8	88.9%	78	107							
m,p-Xylene		8527	100	4000	5220	82.7%	67	118							
o-Xylene		3108	50	2000	1306	90.1%	78	107							
Toluene		9744	50	2000	8242	75.1%	74	116							

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

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9811027
Project: Reid 16 Drip

Date: 16-Nov-98

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_981112	Test Code: SW8020A	Units: µg/L	Analysis Date 11/12/98			Prep Date:		
Client ID:	Run ID:	GC-1_981112A		SeqNo:	8676		%RPD	RPDLimit	Qual
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	
Benzene	38.85	1	40	0.0351	97.0%	56	128		
Ethybenzene	39.14	1	40	0	97.9%	78	107		
m,p-Xylene	77.2	2	80	0	96.5%	67	118		
o-Xylene	39.64	1	40	0	99.1%	78	107		
Toluene	39.09	1	40	0.0976	97.5%	74	116		

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

R - RPD outside accepted recovery limits

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9811027
Project: Reid 16 Drip

Date: 16-Nov-98

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0606/07		Batch ID: GC-1_981112		Test Code: SW8020A		Units: µg/L		Analysis Date 11/12/98		Prep Date:		
Client ID:		Run ID:		GC-1_98112A		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result	PQL	SPK value	SPK Ref Val							
Benzene		20.15	1	20	0	100.7%	85	115				
Ethylbenzene		20.45	1	20	0	102.3%	85	115				
m,p-Xylene		40.24	2	40	0	100.6%	85	115				
o-Xylene		20.8	1	20	0	104.0%	85	115				
Toluene		20.34	1	20	0	101.7%	85	115				
1,4-Difluorobenzene		89.84	0	100	0	89.8%	70	130				
4-Bromochlorobenzene		99.48	0	100	0	99.5%	70	130				
Fluorobenzene		89.17	0	100	0	89.2%	70	130				
Sample ID: CCV2 QC0606/07		Batch ID: GC-1_981112		Test Code: SW8020A		Units: µg/L		Analysis Date 11/12/98		Prep Date:		
Client ID:		Run ID:		GC-1_98112A		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result	PQL	SPK value	SPK Ref Val							
Benzene		19.61	1	20	0	98.0%	85	115				
Ethylbenzene		19.22	1	20	0	96.1%	85	115				
m,p-Xylene		39.46	2	40	0	98.6%	85	115				
o-Xylene		20.76	1	20	0	103.8%	85	115				
Toluene		19.92	1	20	0	99.6%	85	115				
1,4-Difluorobenzene		90.49	0	100	0	90.5%	70	130				
4-Bromochlorobenzene		100.6	0	100	0	100.6%	70	130				
Fluorobenzene		89.24	0	100	0	89.2%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: PNM - Public Service Company of NM

Work Order: 9811027

Project: Reid 16 Drip

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: CCV3 QC0606/07		Batch ID: GC-1_981112		Test Code: SW8020A		Units: µg/L		Analysis Date 11/12/98		Prep Date:		
Client ID:		Run ID:		GC-1_981112A		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result	PQL	SPK value	SPK Ref Val							
Benzene		36.92	1	40	0	92.3%	85	115				
Ethylbenzene		37.18	1	40	0	92.9%	85	115				
m,p-Xylene		73.32	2	80	0	91.7%	85	115				
o-Xylene		37.97	1	40	0	94.9%	85	115				
Toluene		37.26	1	40	0	93.2%	85	115				
1,4-Difluorobenzene		89.36	0	100	0	89.4%	70	130				
4-Bromochlorobenzene		100.1	0	100	0	100.1%	70	130				
Fluorobenzene		88.84	0	100	0	88.8%	70	130				
Sample ID: CCV4 QC0606/07		Batch ID: GC-1_981112		Test Code: SW8020A		Units: µg/L		Analysis Date 11/12/98		Prep Date:		
Client ID:		Run ID:		GC-1_981112A		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result	PQL	SPK value	SPK Ref Val							
Benzene		20.49	1	20	0	102.4%	85	115				
Ethylbenzene		20.65	1	20	0	103.3%	85	115				
m,p-Xylene		40.68	2	40	0	101.7%	85	115				
o-Xylene		21.04	1	20	0	105.2%	85	115				
Toluene		20.5	1	20	0	102.5%	85	115				
1,4-Difluorobenzene		89.48	0	100	0	89.5%	70	130				
4-Bromochlorobenzene		97.39	0	100	0	97.4%	70	130				
Fluorobenzene		88.98	0	100	0	89.0%	70	130				

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

CLIENT: PNM - Public Service Company of NM
Work Order: 9811027
Project: Reid 16 Drip

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV5 QC0606/07	Batch ID: GC-1_981112	Test Code: SW8020A	Units: µg/L				Analysis Date 11/12/98		Prep Date:		
Client ID:	Run ID: 9811027	GC-1_981112A					SeqNo: 8675				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.38	1	20	0	96.9%	85	115				
Ethylbenzene	19.66	1	20	0	98.3%	85	115				
m,p-Xylene	38.67	2	40	0	96.7%	85	115				
o-Xylene	20.02	1	20	0	100.1%	85	115				
Toluene	19.57	1	20	0	97.8%	85	115				
1,4-Difluorobenzene	89.93	0	100	0	89.9%	70	130				
4-Bromochlorobenzene	99.65	0	100	0	99.7%	70	130				
Fluorobenzene	88.87	0	100	0	88.9%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 16-Nov-98

CLIENT: PNM - Public Service Company of NM
Work Order: 9811027
Project: Reid 16 Drip
Test No: SW8020A

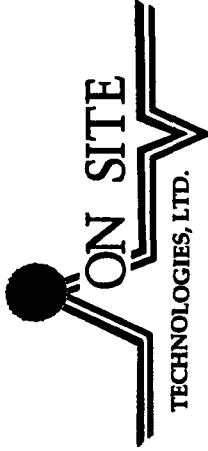
**QC SUMMARY REPORT
SURROGATE RECOVERIES**

BTEX

Sample ID	14FBZ	4BCBZ	FLBZ						
9811027-01A	83.9	93	84.4						
9811027-02A	84.5	93	84.8						
9811034-01A	89.8	99.7	89.2						
9811034-02A	89.4	99.8	89						
9811034-03A	87.6	99.5	87.7						
9811034-03AMS	86.8	98.9	86.9						
9811034-03AMSD	87.8	100	87.4						
9811034-04A	87.8	99.3	87.5						
9811034-05A	84.8	97.6	85						
9811034-06A	89.6	100	88.6						
9811036-01A	86.8	97.2	85.3						
9811036-02A	88.7	92.2	89						
9811036-03A	81.2	93.9	80.5						
9811036-04A	86.2	97.6	85.1						
CCV1 QC0606/07	89.8	99.5	89.2						
CCV2 QC0606/07	90.5	100	89.2						
CCV3 QC0606/07	89.4	100	88.8						
CCV4 QC0606/07	89.5	97.4	89						
CCV5 QC0606/07	89.9	99.6	88.9						
LCS WATER	89.8	99.6	88.7						
MB1	90.2	98.8	89.2						

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

* Surrogate recovery outside acceptance limits



CHAIN OF CUSTODY RECORD

708

Date: 11/15/98Page: 1 of 1612 E. Murphy Dr. • P.O. Box 26006 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Purchase Order No.:		Job No. <u>4 - 1505</u>		Name <u>Maureen Gannon</u>		Title	
Name	Denver Bearden	Company	PNM Gas Services	Company	PNM Gas Services	City, State, Zip	Alverado Square, Mail Stop 0408 Albuquerque, NM 87158
Address	603 W. Elm Street	Dept.	324-3763	Mailing Address	Alverado Square, Mail Stop 0408	Telephone No.	505-848-2974
City, State, Zip	Farmington, NM 87401	Telephone No.	505-848-2974	Telefax No.			
Sampling Location: <u>REDO DR. DRIP</u>		ANALYSIS REQUESTED					
Sampler: <u>Larry Trujillo</u>							
SAMPLE IDENTIFICATION		SAMPLE DATE	TIME	MATRIX	PRES.	LAB ID	
981105 0830	MUR-2	11/15/98	01:50	H2O	1/1	1	1
981105 0845	MUR-3	11/15/98	01:55	H2O	1/2	2	2
Method of Shipment:		Rush	24-48 Hours	10 Working Days	Special Instructions:	Results to be sent to both parties.	
Authorized by: <u>Jay J. Bearden</u> (Client Signature Must Accompany Request)		Date <u>11/15/98</u>	Date/Time <u>11/15/98 11:49</u>	Received by: <u>Jay J. Bearden</u>	Date/Time <u>11/15/98</u>	Date/Time <u>11/15/98</u>	Date/Time <u>11/15/98</u>
Relinquished by:		Date/Time	Date/Time	Received by:	Date/Time	Date/Time	Date/Time
Relinquished by:		Date/Time	Date/Time	Received by:	Date/Time	Date/Time	Date/Time
Relinquished by:							

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



OFF: (505) 325-5667

LAB: (505) 325-1556

February 23, 1999

RECEIVED

MAR 02 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

1st Quarter 1999

RE: Reid 16 Drip

Order No.: 9902064

Dear Maureen Gannon,

On Site Technologies, LTD. received 2 samples on 2/11/99 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 test results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "David Cox".

David Cox



OFF: (505) 325-5667

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 23-Feb-99

CLIENT: PNM - Public Service Company of NM
Project: Reid 16 Drip
Lab Order: 9902064

CASE NARRATIVE

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

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

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

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



OFF: (505) 325-5667

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Feb-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Reid 16 Drip
Work Order:	9902064	Client Sample ID:	9902110930; MW-2
Lab ID:	9902064-01A	Matrix:	AQUEOUS
Project:	Reid 16 Drip	Collection Date:	2/11/99 9:30:00 AM
		COC Record:	7532

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX			SW8021B			Analyst: HR
Benzene	ND	2.5		µg/L	5	2/16/99
Toluene	ND	2.5		µg/L	5	2/16/99
Ethylbenzene	27	2.5		µg/L	5	2/16/99
m,p-Xylene	380	5		µg/L	5	2/16/99
o-Xylene	35	2.5		µg/L	5	2/16/99

Qualifiers: 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
R - RPD outside accepted recovery limits
E - Value above quantitation range
Surf: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



OFF: (505) 325-5667

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Feb-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Reid 16 Drip	Duplicate
Work Order:	9902064	Client Sample ID:	9902111000; MW-5	o/s
Lab ID:	9902064-02A	Matrix:	AQUEOUS	Collection Date: 2/11/99 10:00:00 AM MW-2
Project:	Reid 16 Drip			COC Record: 7532

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX			SW8021B			Analyst: HR
Benzene	ND	2.5		µg/L	5	2/16/99
Toluene	ND	2.5		µg/L	5	2/16/99
Ethylbenzene	34	2.5		µg/L	5	2/16/99
m,p-Xylene	460	5		µg/L	5	2/16/99
o-Xylene	46	2.5		µg/L	5	2/16/99

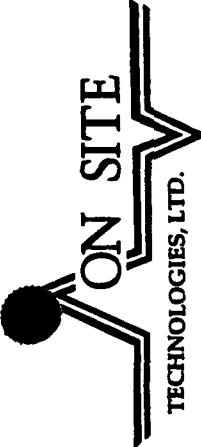
Qualifiers: PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



CHAIN OF CUSTODY RECORD

TECHNOLOGIES LTD

Date: 2
6112 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87489
AB: (505) 325-5667 • FAX: (505) 325-6256

STUDY RECORD Date: 2/11/99 Page: 1 of 1

Purchase Order No.:		Job No.:	Name		Maureen Gannon	Title
Name		Denver Bearden	Company		PNM Gas Services	
Company		PNM Gas Services	Dept.	324-3763	Mailing Address	Alverado Square, Mail Stop 0408
Address		603 W. Elm Street			City, State, Zip	Albuquerque, NM 87158
City, State, Zip		Farmington, NM 87401			Telephone No.	505-848-2974 Telefax No.
Sampling Location:		Reed 16 Dr. P	Number of Containers		ANALYSIS REQUESTED	
Sampler:		Mark Siklions	SAMPLE IDENTIFICATION		LAB ID	
			SAMPLE DATE	MATRIX TIME	1902010101A	
					1902010102A	
					1902010103A	
					1902010104A	
					1902010105A	
					1902010106A	
					1902010107A	
					1902010108A	
					1902010109A	
					1902010110A	
					1902010111A	
					1902010112A	
					1902010113A	
					1902010114A	
					1902010115A	
					1902010116A	
					1902010117A	
					1902010118A	
					1902010119A	
					1902010120A	
REPORT TO INVOICING		Sampling Location:	Number of Containers		ANALYSIS REQUESTED	
Relinquished by: Relinquished by: Relinquished by: Method of Shipment:		Received by: Received by: Received by: Rush	Date/Time 2/11/99 1700 Date/Time Date/Time	Date/Time 2/11/99 1700 Date/Time Date/Time	Date/Time 2/11/99 1700 Date/Time Date/Time	Date/Time 2/11/99 1700 Date/Time Date/Time
Authorized by: Signature		Date 2/11/99			Special Instructions: Results to be sent to both parties.	
					(Client Signature Must Accompany Request)	



OFF: (505) 325-5667

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

RE: Reid 16 Drip

Order No.: 9902064

Dear Maureen Gannon,

On Site Technologies, LTD. received 2 samples on 2/11/99 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,

A handwritten signature in black ink, appearing to read "D. Cox".

David Cox

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



OFF: (505) 325-5667

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 23-Feb-99

CLIENT: PNM - Public Service Company of NM
Project: Reid 16 Drip
Lab Order: 9902064

CASE NARRATIVE

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

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

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

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



OFF: (505) 325-5667

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Feb-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Reid 16 Drip
Work Order:	9902064	Client Sample ID:	9902110930; MW-2
Lab ID:	9902064-01A	Matrix:	AQUEOUS
Project:	Reid 16 Drip	Collection Date:	2/11/99 9:30:00 AM
		COC Record:	7532

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX	SW8021B					Analyst: HR
Benzene	ND	2.5		µg/L	5	2/16/99
Toluene	ND	2.5		µg/L	5	2/16/99
Ethylbenzene	27	2.5		µg/L	5	2/16/99
m,p-Xylene	380	5		µg/L	5	2/16/99
o-Xylene	35	2.5		µg/L	5	2/16/99

Qualifiers: 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
R - RPD outside accepted recovery limits
E - Value above quantitation range
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



OFF: (505) 325-5667

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Feb-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Reid 16 Drip
Work Order:	9902064	Client Sample ID:	9902111000; MW-5
Lab ID:	9902064-02A	Matrix:	AQUEOUS
Project:	Reid 16 Drip	Collection Date:	2/11/99 10:00:00 AM
		COC Record:	7532

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX			SW8021B			Analyst: HR
Benzene	ND	2.5		µg/L	5	2/16/99
Toluene	ND	2.5		µg/L	5	2/16/99
Ethylbenzene	34	2.5		µg/L	5	2/16/99
m,p-Xylene	460	5		µg/L	5	2/16/99
o-Xylene	46	2.5		µg/L	5	2/16/99

Qualifiers: 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
R - RPD outside accepted recovery limits
E - Value above quantitation range
Surr: - Surrogate

I of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9902064
Project: Reid 16 Drip

Date: 23-Feb-99

QC SUMMARY REPORT
Method Blank

Sample ID: MB1	Batch ID: GC-1_990216	Test Code: SW8021B	Units: µg/L	Analysis Date 2/16/99				Prep Date:			
Client ID:	Run ID: GC-1_990216A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0456	0.5									J
Ethybenzene	.0406	0.5									J
m,p-Xylene	.1017	1									J
Methyl tert-Butyl Ether	ND	1									J
o-Xylene	.0444	0.5									J
Toluene	.1013	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

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9902064
Project: Reid 16 Drip

QC SUMMARY REPORT
Sample Matrix Spike

Date: 23-Feb-99

Analysis Date 2/16/99							Prep Date:			
SeqNo: 11159										
Sample ID: 9902064-01AMS	Batch ID: GC-1_990216	Test Code: SW8021B	Units: µg/L	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Client ID: 9902110930; MW-	9902064	Run ID: GC-1_990216A	SPK Ref Val							
Analyte	Result	PQL	SPK value							
Benzene	208.4	2.5	200	18.29	95.1%	73	115			
Ethylbenzene	212.9	2.5	200	27.38	92.8%	74	117			
m,p-Xylene	738.5	5	400	382.3	89.0%	76	112			
Methyl tert-Butyl Ether	204	5	200	40.74	81.6%	62	122			
o-Xylene	219.6	2.5	200	34.65	92.5%	83	112			
Toluene	208.2	2.5	200	33.82	87.2%	71	120			
Analysis Date 2/16/99							Prep Date:			
SeqNo: 11160										
Sample ID: 9902064-01AMSD	Batch ID: GC-1_990216	Test Code: SW8021B	Units: µg/L	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Client ID: 9902110930; MW-	9902064	Run ID: GC-1_990216A	SPK Ref Val							
Analyte	Result	PQL	SPK value							
Benzene	205.4	2.5	200	18.29	93.5%	73	115	208.4	1.5%	8
Ethylbenzene	209	2.5	200	27.38	90.8%	74	117	212.9	1.9%	9
m,p-Xylene	725.4	5	400	382.3	85.8%	76	112	738.5	1.8%	9
Methyl tert-Butyl Ether	200	5	200	40.74	79.6%	62	122	204	2.0%	7
o-Xylene	216.4	2.5	200	34.65	90.9%	83	112	219.6	1.5%	9
Toluene	196.2	2.5	200	33.82	81.2%	71	120	208.2	5.9%	9

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spik Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
I - I

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9902064
Project: Reid 16 Drip

Date: 23-Feb-99

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_990216	Test Code: SW8021B	Units: µg/L	Analysis Date 2/16/99			Prep Date:				
Client ID:	Run ID: GC-1_990216A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result										
Benzene	40.2	0.5	40	0.0456	100.4%			84		110	
Ethylbenzene	40.73	0.5	40	0.0406	101.7%			86		113	
m,p-Xylene	78.45	1	80	0.1017	97.9%			81		114	
Methyl tert-Butyl Ether	41.75	1	40	0	104.4%			69		129	
o-Xylene	40.64	0.5	40	0.0444	101.5%			86		112	
Toluene	40.36	0.5	40	0.1013	100.6%			85		111	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM
Work Order: 9902064
Project: Reid 16 Drip

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID:	CCV1 QC0606/07	Batch ID:	GC-1_990216	Test Code:	SW8021B	Units:	µg/L	Analysis Date:	21/6/99	Prep Date:		
Client ID:	9902064	Run ID:	GC-1_990216A					SeqNo:	11154			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		20.53	0.5	20	0	102.6%	85	115				
Ethylbenzene		20.79	0.5	20	0	103.9%	85	115				
m,p-Xylene		39.96	1	40	0	99.9%	85	115				
Methyl tert-Butyl Ether		20.9	1	20	0	104.5%	85	115				
o-Xylene		20.73	0.5	20	0	103.6%	85	115				
Toluene		20.53	0.5	20	0	102.7%	85	115				
1,4-Difluorobenzene		93.7	0	100	0	93.7%	84	100				
4-Bromochlorobenzene		96.58	0	100	0	96.6%	87	105				
Fluorobenzene		93.28	0	100	0	93.3%	87	99				
Sample ID:	CCV2 QC0606/07	Batch ID:	GC-1_990216	Test Code:	SW8021B	Units:	µg/L	Analysis Date:	21/6/99	Prep Date:		
Client ID:	9902064	Run ID:	GC-1_990216A					SeqNo:	11155			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		20.81	0.5	20	0	104.0%	85	115				
Ethylbenzene		21.09	0.5	20	0	105.4%	85	115				
m,p-Xylene		40.47	1	40	0	101.2%	85	115				
Methyl tert-Butyl Ether		20.8	1	20	0	104.0%	85	115				
o-Xylene		21.01	0.5	20	0	105.0%	85	115				
Toluene		20.89	0.5	20	0	104.5%	85	115				
1,4-Difluorobenzene		93.54	0	100	0	93.5%	84	100				
4-Bromochlorobenzene		97.32	0	100	0	97.3%	87	105				
Fluorobenzene		93.55	0	100	0	93.6%	87	99				

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 2

Date: 23-Feb-99

CLIENT: PNM - Public Service Company of NM

190086

9902004

Reid 16 Drip

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 QC0606/07		Batch ID: GC-1_990216	Test Code: SW8021B	Units: µg/L	Analysis Date 2/16/99			Prep Date:		
Client ID:		9902064	Run ID: GC-1_990216A		SeqNo: 11156	%REC	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result	PQL	SPK value	SPK Ref Val	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.78	0.5	40	0	104.4%	85	115			
Ethylbenzene	40.52	0.5	40	0	101.3%	85	115			
m,p-Xylene	77.9	1	80	0	97.4%	85	115			
Methyl tert-Butyl Ether	40.67	1	40	0	101.7%	85	115			
o-Xylene	40.4	0.5	40	0	101.0%	85	115			
Toluene	40.32	0.5	40	0	100.8%	85	115			
1,4-Difluorobenzene	93.87	0	100	0	93.9%	84	100			
4-Bromochlorobenzene	97.43	0	100	0	97.4%	87	105			
Fluorobenzene	93.97	0	100	0	94.0%	87	99			

Qualifiers:	ND - Not Detected at the Reporting Limit
	I - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 23-Feb-99

CLIENT: PNM - Public Service Company of NM
Work Order: 9902064
Project: Reid 16 Drip
Test No: SW8021B

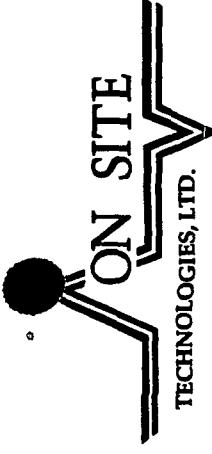
QC SUMMARY REPORT
SURROGATE RECOVERIES

BTEX

Sample ID	14FBZ	4BCBZ	FLBZ
9902048-01A	92.7	97.4	93.3
9902059-04A	91.4	96.4	92.1
9902059-05A	89.1	91.8	94
9902060-01A	94.1	96.5	94.6
9902060-02A	92.8	97	93
9902060-03A	94	97.3	94.7
9902063-01A	92.8	96.4	94.4
9902063-02A	95	95.7	94.1
9902064-01A	86.3	89.1	89.3
9902064-01AMS	86.3	88.9	87.9
9902064-01AMSD	86	88.4	88.3
9902064-02A	87.3	91.2	89.6
9902066-01A	93.8	96.5	94.9
9902066-02A	93.8	97.4	94.8
9902066-03A	93.1	96.2	93.6
9902066-04A	94.2	96.9	94.6
9902066-05A	93.7	96.3	94.9
9902066-06A	93.4	97	94.9
CCV1 QC0606/07	93.7	96.6	93.3
CCV2 QC0606/07	93.5	97.3	93.6
CCV3 QC0606/07	93.9	97.4	94
LCS WATER	93.5	97.8	93
MB1	94.3	96.5	94.2

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	84-100
4BCBZ	= 4-Bromochlorobenzene	87-105
FLBZ	= Fluorobenzene	87-99

* Surrogate recovery outside acceptance limits



CHAIN OF CUSTODY RECORD

Date: 2/11/99

702

Page: 1 of 1612 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Purchase Order No.:		Job No.:		Name:		Title:	
Name Company	Denver Bearden	Mailing Address	PNM Gas Services	Company	Alverado Square, Mail Stop 0408	Analyst	Maureen Gannon
Address City, State, Zip	603 W. Elm Street Farmington, NM 87401	City, State, Zip	Albuquerque, NM 87158	Telephone No.	505-848-2974	Telephone No.	Telefax No.
Sampling Location: Reed 16 Dr. P							
Sampler: Mark Siklans							
INVOICE SEND TO	Number of Containers	ANALYSIS REQUESTED					
		LAB ID					
SAMPLE IDENTIFICATION		SAMPLE DATE	MATRIX TIME	PRES.			
MW-2	9902110930			X			
MW-S	9902111000			X			
Method of Shipment: Rush Date <u>2/11/99</u>							
Authorized by: <u>J.D.</u> Date <u>2/11/99</u>							
(Client Signature Must Accompany Request)							
Results to be sent to both parties.							
Distribution: White - On Site Yellow - LAB Pink - Sampler Goldenrod - Client							