3R - 3/3

REPORTS

DATE: 1999

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

RECEIVED

April 5, 1999

Hydrogeologist

2040 So. Pacheco

Santa Fe, New Mexico 87505

APR 0 7 1999

Mr. William Olson Oil Conservation Division

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 Miles Federal 1E Drip

Florance 124 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 0 7 1999

ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION

Annual Control of the Land of

Volume II

Unlined Surface Impoundments
San Juan Basin



PNMGS Well Site: Dogie Compressor Station North

Groundwater Site Summary Report

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

Copies: WFS(1)
Operator (1)

NMOCD District Office (1) NMOCD Santa Fe (1)

Vulnerable Class: Original

OCD Ranking: 40

Lead Agency: NMOCD

Operator: Williams Field Services Sec: 4 Twn: 25N Rng: 6W NW1/4

Canyon: Largo

Topo Map: previously submitted

Well Completion Diagram: previously submitted

Site Map with Analysis: Figure 1

Groundwater Contour Map: Figure 2a (May 1998), Figure 2b (August 1998), Figure 2c (December 1998) and

Figure 2d (February 1999)

Hydrograph: Figure 3

Full suite-Groundwater Sampling Results: previously submitted

Analytical Results: attached

Site Hydrology:

The Dogie East site lies in Largo Canyon, about 20 miles northeast of Lybrook, New Mexico, in Rio Arriba County. It is about 40 miles to the confluence of Largo Canyon with the San Juan River. Largo Canyon flows northwest, and has a broad alluvium-filled channel, about one-quarter mile wide at the site.

Materials beneath the site are sands and clays. Groundwater is very shallow, and has ranged from 5 to 7 feet below land surface at the site. Hydrographs show seasonal fluctuations of about 1 foot.

Groundwater flow direction is west-northwest, parallel to the wash in Largo Canyon(Figure 2a, 2c & 2d). Variation towards the west has also been observed (Figure 2b).

Activities for Previous Year:

On May 20, August 11, December 9, 1998 and on February 10, 1999, PNM performed quarterly sampling of groundwater monitoring wells at the site. PNM measured water levels and conducted groundwater sampling in each well for chemical analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX). Sampling was performed in strict compliance with EPA protocol.

In all instances, PNM delivered the samples to OnSite Technologies, Farmington, New Mexico. The samples were analyzed using EPA Method 8020 for BTEX.

On March 10, 1999, PNM performed soil borings in the area around the former north pit (see figure 1). Split-spoon soil samples were collected above the saturated zone to the north, northeast and northwest of Williams' large separator. Concentrations in this area appear to be fluctuating and there is some concern of an ongoing source.

Results:

Figure 1 presents a site map showing BTEX for each monitoring well since groundwater contamination was discovered. MW-1, -3, -4, and-5 show BTEX levels below laboratory detection limits for at least four consecutive quarters. In MW-2, the source well, benzene concentrations have fluctuated for the past three quarters between 17 and 37 ppb. All other BTEX parameters are below WQCC standards.

Further Action:

PNM will continue to monitor the groundwater gradient and perform quarterly groundwater monitoring at the Dogie Compressor Station North pit location. Analytical data from soil borings taken on March 10, 1999 will be evaluated to help assess if recontamination of the original excavation has occurred. We will also determine if natural attenuation is taking place and whether additional remediation is warranted.

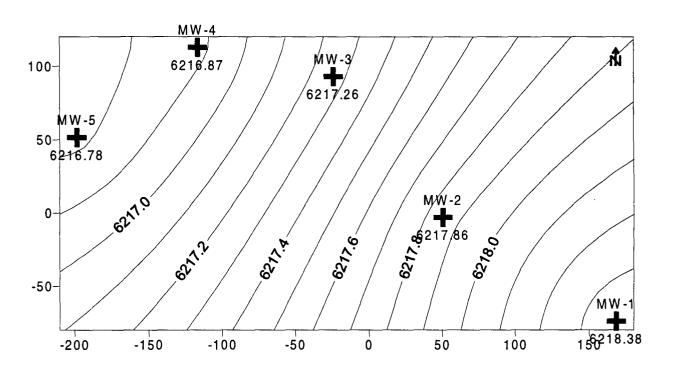
Public Service Company of New Mexico - Gas Services

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

Contact: Maureen Gannon Telephone: 505-241-2974

PNMGS: 99GWRPT 01-Apr-99

Figure 2a. DogieCompressor Station North Pit Groundwater Contour Map (May 20, 1998)



Surfer/DogieN/DogN52098.srf

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

Figure 1.

Dogie Compressor Station North Pit
Site Map & Analytical Results (Concentrations in ppb)

LARGO WASH

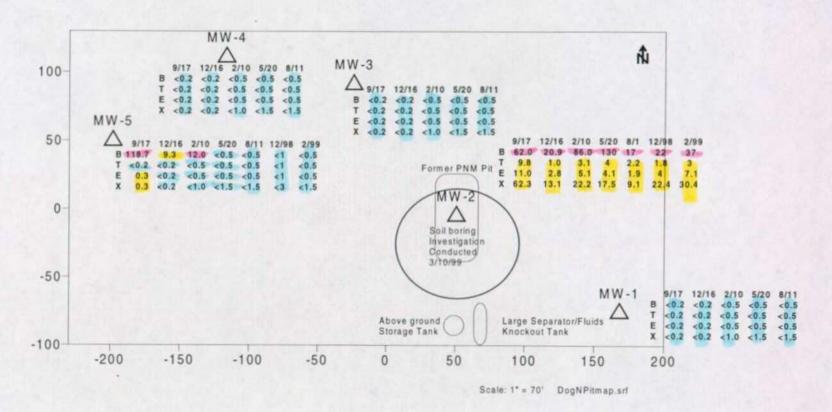
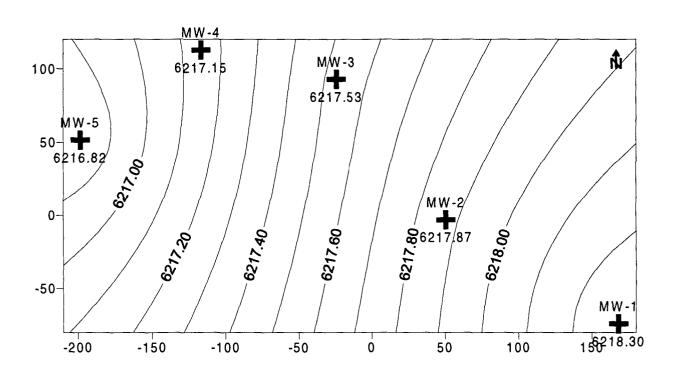


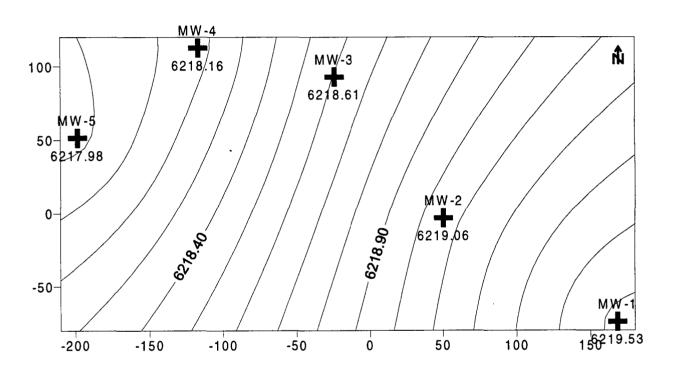
Figure 2b.
DogieCompressor Station North Pit
Groundwater Contour Map
(August 11, 1998)



Surfer/DogieN/DogN52098.srf

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

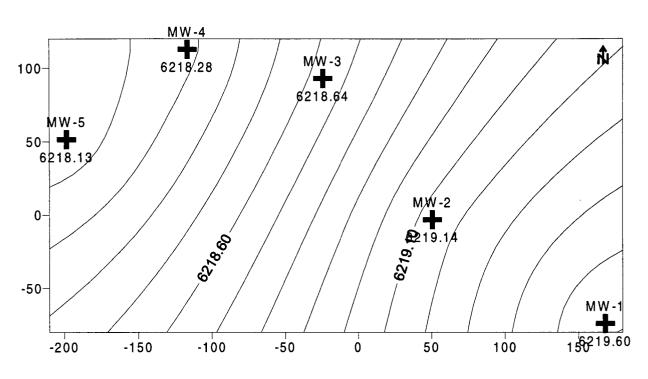
Figure 2c.
DogieCompressor Station North Pit
Groundwater Contour Map
(December 9, 1998)



Surfer/DogieN/DogN12998.srf

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

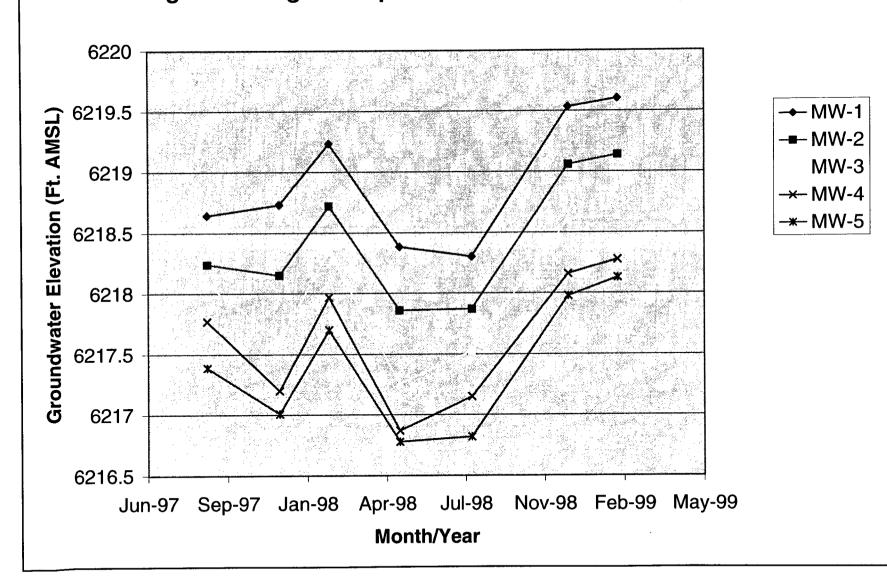
Figure 2d.
DogieCompressor Station North Pit
Groundwater Contour Map
(February 10, 1999)



Surfer/DogieN/DogN21099.srf

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

Figure 3. Dogie Compressor Station North Pit Hydrograph





LAB: (505) 325-1556

February 23, 1999

Received Mar oz 1999

Maureen Gannon
PNM - Public Service Company of NM
Alvarado Square Mail Stop 0408

15T Qtr 1999

Albuquerque, NM 87158 TEL: (505) 241-2974 FAX (505) 241-2340

RE: Dogie North Pit

Order No.: 9902058

Dear Maureen Gannon,

On Site Technologies, LTD. received 3 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,

David Cox

ON SITE
TECHNOLOGIES, LTD.

OFF: (505) 325-5667

LAB: (505) 325-1556

On Site Technologies, LTD.

CLIENT:

PNM - Public Service Company of NM

Project:

Dogie North Pit

Lab Order:

9902058

CASE NARRATIVE

Date: 23-Feb-99

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

Date: 23-Feb-99

ANALYTICAL REPORT

Client:

PNM - Public Service Company of NM

Matrix: AQUEOUS

Work Order:

Lab ID:

Project:

9902058

9902036

Dogie North Pit

9902058-01A

[

Client Sample Info: Dogie North Pit

Client Sample ID: 9902100817; MW-2

Collection Date: 2/10/99 8:17:00 AM

COC Record: 7475

Parameter	Result	PQL	Qual Units	DF	Date Analyzed
BTEX	SV		Analyst: HR		
Benzene	37	0.5	μg/L	1	2/15/99
Toluene	3	0.5	μg/L	1	2/15/99
Ethylbenzene	7.1	0.5	µg/L	1	2/15/99
m,p-Xylene	26	1	μg/L	1	2/15/99
o-Xylene	4.4	0.5	μg/L	1	2/15/99

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

TECHNOLOGIES, LTD.

OFF: (505) 325-5667

LAB: (505) 325-1556

Date: 23-Feb-99

ANALYTICAL REPORT

Client:

PNM - Public Service Company of NM

Work Order:

9902058

Lab ID: Project: 9902058-02A

Dogie North Pit

Matrix: AQUEOUS

Client Sample ID: 9902100846; MW-5

Client Sample Info: Dogie North Pit

Collection Date: 2/10/99 8:46:00 AM

COC Record: 7475

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
BTEX	SV		Analyst: HR		
Benzene	ND	0.5	μg/L	1	2/15/99
Toluene	ND	0.5	μg/L	1	2/15/99
Ethylbenzene	ND	0.5	µg/L	1	2/15/99
m,p-Xylene	ND	1	μg/L	1	2/15/99
o-Xylene	ND	0.5	μg/L	1	2/15/99

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 -



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Feb-99

Client:

PNM - Public Service Company of NM

Work Order:

9902058

Lab ID:

9902058-03A

Project: Dogie North Pit

Matrix: AQUEOUS

Collection Date: 2/10/99 9:11:00 AM COC Record: 7475

Client Sample Info: Dogie North Pit

Client Sample ID: 9902100911; MW-6

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
BTEX	sv	-	Analyst: HR		
Benzene	38	0.5	μg/L	1	2/15/99
Toluene	3.1	0.5	µg/L	1	2/15/99
Ethylbenzene	6.6	0.5	μg/L	1	2/15/99
m,p-Xylene	27	1	μg/L	1	2/15/99
o-Xylene	4.4	0.5	μg/L	1	2/15/99

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 -

Date: 23-Feb-99

CLIENT:

PNM - Public Service Company of NM

Work Order:

9902058

Project:

Dogie North Pit

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_990215	Test Code	: SW8021B	Units: µg/L		Analysis	s Date 2/15	/99	Prep Da	ate:	
Client ID:	9902058	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	Qual
Benzene	.0508	0.5									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

CLIENT:

PNM - Public Service Company of NM

Work Order:

9902058

Project:

Dogie North Pit

Date: 23-Feb-99

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9902056-01AMS	Batch ID: GC-1_990215	Test Code:	SW8021B	Units: µg/L		Analysis	Date 2/15	/99	Prep Da	ate:	
Client ID:	9902058	Run ID:	GC-1_990215	A		SeqNo:	1105	7			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
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				Ε
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				
Sample ID: 9902056-01AMSD	Batch ID: GC-1_990215	Test Code:	SW8021B	Units: µg/L		Analysis	Date 2/15	/99	Prep Da	ate:	-
Client ID:	9902058	Run ID:	GC-1_990215	A		SeqNo:	11058	3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	7270	50	4000	3380	97.2%	73	115	7278	0.1%	8	
Ethylbenzene	5053	50	4000	1074	99.5%	74	117	5030	0.5%	9	
m,p-Xylene	21500	100	8000	14630	85.8%	76	112	21430	0.3%	9	Ε
Methyl tert-Butyl Ether	4699	100	4000	0	117.5%	62	122	4639	1.3%	7	
o-Xylene	7768	50	4000	3930	95.9%	83	112	7734	0.4%	9	
Toluene	9096	50	4000	5290	95.1%	71	120	9077	0.2%	9	

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Date: 23-Feb-99

CLIENT:

PNM - Public Service Company of NM

Work Order:

9902058

Project:

Dogie North Pit

\sim	CITIBAN	# A TO X 7	DEDC	
UU	SUMIN	MARY	KEPC	KI

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_990215	Test Code:	SW8021B	Units: µg/L		Analysis	Date 2/15	/99	Prep Da	ite:	
Client ID:	9902058	Run ID:	GC-1_990215	5A		SegNo:	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				

CLIENT:

PNM - Public Service Company of NM

Work Order:

9902058

Project:

Dogie North Pit

Date: 23-Feb-99

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0606/07	Batch ID: GC-1_990215	Test Code:	SW8021B	Units: µg/L		Analysis	Date 2/15	99	Prep Da	ate:	
Client ID:	9902058	Run ID:	GC-1_990215	A		SeqNo:	11052	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	Date 2/15	/99	Prep Da	ate:	
Client ID:	9902058	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				

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:

9902058

Project:

Dogie North Pit

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	/99	Prep Da	ate:	
Client ID:	9902058	Run ID:	GC-1_990215	A .		SeqNo:	1105	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				
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				

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

Date: 23-Feb-99

CLIENT:

PNM - Public Service Company of NM

Work Order:

9902058

Project:

Dogie North Pit

Test No:

SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

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	
9902059-04A	90.1	97.5	88.9	
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	

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	90-102
BCBZ	= 4-Bromochlorobenzene	93-102
FLBZ	= Fluorobenzene	84-103



CHAIN OF CUSTODY RECORD

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

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LAB: (505) 325-1556

December 15, 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 atr 1998

RE: Dogie Comp Station, North Pit

Order No.: 9812020

Dear Maureen Gannon,

On Site Technologies, LTD. received 2 samples on 12/10/98 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.

CLIENT:

PNM - Public Service Company of NM

Project:

Dogie Comp Station, North Pit

Lab Order:

9812020

CASE NARRATIVE

Date: 15-Dec-98

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.



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 15-Dec-98

Client:

PNM - Public Service Company of NM

Work Order:

9812020

9812020-01A

Matrix: AQUEOUS

Lab ID: Project:

Dogie Comp Station, North Pit

Client Sample Info: Dogie Comp. Station, North Pit

Client Sample ID: 9812091552; MW-2

Collection Date: 12/9/98 3:52:00 PM

COC Record: 7525

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
ВТЕХ	SV	V8020A			Analyst: HR
Benzene	22	1	μg/L	1	12/10/98
Toluene	1.8	1	μg/L	1	12/10/98
Ethylbenzene	4	1	μg/L	1	12/10/98
m,p-Xylene	19	2	μg/L	1	12/10/98
o-Xylene	3.4	1	μg/L	1	12/10/98

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 -

ON SITE
TECHNOLOGIES, LTD.

OFF: (505) 325-5667

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 15-Dec-98

Client:

PNM - Public Service Company of NM

Work Order:

9812020

9812020-02A

Matrix: AQUEOUS

Lab ID: Project:

Dogie Comp Station, North Pit

Client Sample Info: Dogie Comp. Station, North Pit

Client Sample ID: 9812091556; MW-5

Collection Date: 12/9/98 3:56:00 PM

COC Record: 7525

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
BTEX	sv	V8020A			Analyst: HR
Benzene	ND	1	μg/L	1	12/10/98
Toluene	ND	1	μg/L	1	12/10/98
Ethylbenzene	ND	1	μg/L	1	12/10/98
m,p-Xylene	ND	2	μg/L	1	12/10/98
o-Xylene	ND	1	μg/L	1	12/10/98

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 -

Date: 15-Dec-98

CLIENT:

PNM - Public Service Company of NM

Work Order:

9812020

Project:

Dogie Comp Station, North Pit

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_981210	Test Code	: SW8020A	Units: µg/L		Analysis	s Date 12/1	0/98	Prep Da	te:	
Client ID:	9812020	Run ID:	GC-1_981210	A		SeqNo:	9432				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0828	1									J
Ethylbenzene	.1496	1									J
m,p-Xylene	.2857	2									J
o-Xylene	.1375	1									J
Toluene	.1456	1									J

Date: 15-Dec-98

CLIENT:

PNM - Public Service Company of NM

Work Order:

9812020

Project:

Dogie Comp Station, North Pit

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9812007-01AMS	Batch ID: GC-1_981210	Test Code:	SW8020A	Units: µg/L		Analysis	Date 12/10			ate:	
Client ID:	9812020	Run ID:	GC-1_981210	Α		SeqNo:	9437				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	177.9	5	200	0	89.0%	56	128				
Ethylbenzene	524.3	5	200	343.4	90.4%	78	107				
m,p-Xylene	880	10	400	522.1	89.5%	67	118				
o-Xylene	258.5	5	200	75.14	91.7%	78	107				
Toluene	218.9	5	200	0	109.5%	74	116				
Sample ID: 9812007-01AMSD	Batch ID: GC-1_981210	Test Code:	SW8020A	Units: µg/L	7	Analysis	Date 12/1	0/98	Prep Da	ate:	
Client ID:	9812020	Run ID:	GC-1_981210	Α		SeqNo:	9439				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	177.8	5	200	0	88.9%	56	128	177.9	0.1%	12	
Ethylbenzene	523.6	5	200	343.4	90.1%	78	107	524.3	0.1%	11	
m,p-Xylene	880.5	10	400	522.1	89.6%	67	118	880	0.1%	10	
o-Xylene	255.6	5	200	75.14	90.2%	78	107	258.5	1.1%	14	
Toluene	219.3	5	200	0	109.7%	74	116	218.9	0.2%	14	
Sample ID: 9812021-02AMS	Batch ID: GC-1_981210	Test Code:	SW8020A	Units: µg/L		Analysis	Date 12/1	0/98	Prep Da	ate:	
Client ID:	9812020	Run ID:	GC-1_981210	A		SeqNo:	9438				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	1963	50	2000	110.6	92.6%	56	128				
Ethylbenzene	2410	50	2000	573.1	91.8%	78	107				
m,p-Xylene	7339	100	4000	3782	88.9%	67	118				
o-Xylene	2537	50	2000	675.1	93.1%	78	107				
Toluene	2267	50	2000	374.8	94.6%	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

R - RPD outside accepted recovery limits

CLIENT:

PNM - Public Service Company of NM

Work Order:

9812020

Project:

Dogie Comp Station, North Pit

QC SUMMARY REPORT

Sample Matrix Spike Duplicate

Sample ID: 9812021-02AMSD	Batch ID: GC-1_981210	Test Code	. •			Analysis	Date 12/10	0/98	Prep Date:		
Client ID:	9812020	Run ID:	GC-1_981210	A		SeqNo:	9440				
Analyte	Result	PQL	SPK value		%REC	LowLimit	•		%RPD	RPDLimit	Qual
Benzene	1984	50	2000	110.6	93.7%	56	128	1963	1.1%	12	
Ethylbenzene	2434	50	2000	573.1	93.1%	78	107	2410	1.0%	11	1
m,p-Xylene	7417	100	4000	3782 .	90.9%	67	118	7339	1.1%	10	•
o-Xylene	2574	50	2000	675.1	95.0%	78	107	2537	1.5%	14	
Toluene	2292	50	2000	374.8	95.9%	74	116	2267	1.1%	14	

Date: 15-Dec-98

CLIENT:

PNM - Public Service Company of NM

Work Order:

9812020

Project:

Dogie Comp Station, North Pit

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_981210	Test Code	: SW8020A	Units: µg/L		Analysis	Date 12/1	0/98	Prep Da	ate:	
Client ID:	9812020	Run ID:	GC-1_981210)A		SeqNo:	9436				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	37.64	1	40	0.0828	93.9%	56	128				
Ethylbenzene	37.95	1	40	0.1496	94.5%	78	107				
n,p-Xylene	74.54	2	80	0.2857	92.8%	67	118				
o-Xylene	38.56	1	40	0.1375	96.0%	78	107				
Toluene	37.79	1	40	0.1456	94.1%	74	116				

Date: 15-Dec-98

CLIENT:

PNM - Public Service Company of NM

Work Order:

9812020

Project:

Dogie Comp Station, North Pit

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0606/07	Batch ID: GC-1_981210	Test Code	: SW8020A	Units: µg/L		Analysis	Date 12/10	0/98	Prep Da	ate:	
Client ID:	9812020	Run ID:	GC-1_981210	A		SeqNo:	9433				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	19.57	1	20	0	97.9%	85	115				
Ethylbenzene	19.86	1	20	0	99.3%	85	115				
m,p-Xylene	38.68	2	40	0	96.7%	85	115				
o-Xylene	20.19	1	20	0	100.9%	85	115				
Toluene	19.7	1	20	0	98.5%	85	115				
1,4-Difluorobenzene	90.06	0	100	0	90.1%	70	130				
4-Bromochlorobenzene	96.84	0	100	0	96.8%	70	130				
Fluorobenzene	88.7	0	100	0	88.7%	70	130				
Sample ID: CCV2 QC0606/07	Batch ID: GC-1_981210	Test Code	SW8020A	Units: µg/L		Analysis	Date 12/10	0/98	Prep Da	ite:	
Client ID:	9812020	Run ID:	GC-1_981210	A		SeqNo:	9434				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	19.58	1	20	0	97.9%	85	115				
Ethylbenzene	19.78	1	20	0	98.9%	85	115				
m,p-Xylene	38.52	2	40	0	96.3%	85	115				
o-Xylene	20.04	1	20	0	100.2%	85	115				
Toluene	19.63	1	20	0	98.2%	85	115				
1,4-Difluorobenzene	90.13	0	100	0	90.1%	70	130				
	05.07	0	100	0	96.0%	70	130				
4-Bromochlorobenzene	95.97	U	100	U	30.076	70	100				

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:

9812020

Project:

Dogie Comp Station, North Pit

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 QC0606/07	Batch ID: GC-1_981210	Test Code:	SW8020A	Units: µg/L		Analysis	Date 12/1	0/98	Prep Da	ate:	
Client ID:	9812020	Run ID:	GC-1_981210	Α		SeqNo:	9435				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.69	1	40	0	96.7%	85	115				
Ethylbenzene	39.06	1	40	0	97.6%	85	115				
m,p-Xylene	76.76	2	80	0 ,	95.9%	85	115				
o-Xylene	39.63	1	40	0	99.1%	85	115				
Toluene	39.05	1	40	0	97.6%	85	115				
1,4-Difluorobenzene	90.34	0	100	0	90.3%	70	130				
4-Bromochlorobenzene	97.62	0	100	0	97.6%	70	130				
Fluorobenzene	89.28	0	100	0	89.3%	70	130				

Date: 15-Dec-98

CLIENT:

PNM - Public Service Company of NM

Work Order:

9812020

Project:

Dogie Comp Station, North Pit

Test No:

SW8020A

QC SUMMARY REPORT SURROGATE RECOVERIES

BTEX

Sample ID	14FBZ	4BCBZ	FLBZ	
9812007-01A	87.6	92.4	90.6	
9812007-01AMS	83.9	92.9	84.5	
9812007-01AMSD	83.9	93.2	84.8	
9812008-01A	89.7	96.8	88.6	
9812008-02A	90.9	97	90.1	
9812008-03A	89.2	95.3	88.2	
9812009-01A	88	97	88	
9812009-02A	93.9	89.8	87.4	
9812020-01A	90.2	97.4	89.2	
9812020-02A	90.2	95.7	.185 *	
9812021-02AMS	89.8	96.7	89.2	
9812021-02AMSD	90.2	96.6	89.1	
9812021-03A	93.4	98	93.3	
9812021-04A	89.2	97.2	88.7	
9812021-05A	89.9	96.2	89	
9812022-01A	89.4	95.6	88	
9812023-01A	89.2	97	88.6	
CCV1 QC0606/07	90.1	96.8	88.7	
CCV2 QC0606/07	90.1	96	89	
CCV3 QC0606/07	90.3	97.6	89.3	
LCS WATER	89.7	96.8	88.7	
MB1	90.4	95.9	89.1	

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

^{*} Surrogate recovery outside acceptance limits



CHAIN OF CUSTODY RECORD

7 5

Page: _____ of ____

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

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LAB: (505) 325-1556

August 20, 1998

Maureen Gannon
PNM - Public Service Company of NM
Alvarado Square Mail Stop 0408
Albuquerque NM 87158

3rd Qtr 98

Albuquerque, NM 87158

TEL: (505) 241-2974 FAX (505) 241-2340

RE: Dogie North Pit

Order No.: 9808024

Dear Maureen Gannon,

On Site Technologies, LTD. received 6 samples on 8/12/98 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.

CLIENT:

PNM - Public Service Company of NM

Project:

Dogie North Pit

Lab Order:

9808024

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.

OFF: (505) 325-5667

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 20-Aug-98

Client:

Lab ID:

Project:

PNM - Public Service Company of NM

Work Order:

9808024

9808024-01A

Dogie North Pit

Matrix: AQUEOUS

Client Sample Info: Dogie North Pit

Client Sample ID: 9808111730; MW-1

Collection Date: 8/11/98 5:30:00 PM

COC Record: 7288

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
втех	SV	V8020A			Analyst: DC
Benzene	ND	0.5	μg/L	1	8/17/98
Toluene	ND	0.5	μg/L	1	8/17/98
Ethylbenzene	ND	0.5	μg/L	1	8/17/98
m,p-Xylene	ND	1	μg/L	1	8/17/98
o-Xylene *	ND	0.5	μg/L	1	8/17/98

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 I of I

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 20-Aug-98

Client:

PNM - Public Service Company of NM

Work Order:

9808024

Lab ID:

Project:

9808024-02A

Dogie North Pit

Matrix: AQUEOUS

Client Sample Info: Dogie North Pit

Client Sample ID: 9808111800; MW-2

Collection Date: 8/11/98 6:00:00 PM

COC Record: 7288

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
BTEX	SV	/8020A			Analyst: DC
Benzene	17	0.5	μg/L	1	8/17/98
Toluene	2.2	0.5	μg/L	1	8/17/98
Ethylbenzene	1.9	0.5	μg/L	1	8/17/98
m,p-Xylene	7.3	1	µg/L	1	8/17/98
o-Xylene	1.8	0.5	µg/L	1	8/17/98

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: 20-Aug-98

Client:

PNM - Public Service Company of NM

Work Order:

Lab ID:

Project:

9808024

9808024-03A Dogie North Pit Matrix: AQUEOUS

Client Sample Info: Dogie North Pit

Client Sample ID: 9808111830; MW-6

Collection Date: 8/11/98 6:30:00 PM

COC Record: 7288

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
BTEX	SV	V8020A			Analyst: DC
Benzene	18	0.5	µg/L	1	8/17/98
Toluene	2.5	0.5	μg/L	1	8/17/98
Ethylbenzene	1.9	0.5	μg/L	1	8/17/98
m,p-Xylene	7.4	1	μg/L	1	8/17/98
o-Xylene	1.8	0.5	μg/L	1	8/17/98

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 -

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

Date: 20-Aug-98

ANALYTICAL REPORT

THAIR THE TREE OF

Client: Work Order:

OFF: (505) 325-5667

PNM - Public Service Company of NM

Lab ID:

ork Order: 9808024

9808024-04A

Matrix: AQUEOUS

Project:

Dogie North Pit

Client Sample Info: Dogie North Pit

Client Sample ID: 9808111900; MW-3

Collection Date: 8/11/98 7:00:00 PM

COC Record: 7288

Parameter ·	Result	PQL Q	ual Units	DF	Date Analyzed
BTEX	SV	V8020A			Analyst: DC
Benzene	ND	0.5	μg/L	1	8/17/98
Toluene	ND	0.5	μg/L	1	8/17/98
Ethylbenzene	ND	0.5	μg/L	1	8/17/98
m,p-Xylene	ND	1	μg/L	1	8/17/98
o-Xylene	ND	0.5	μg/L	1	8/17/98

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



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 20-Aug-98

Client:

PNM - Public Service Company of NM

Work Order: Lab ID:

Project:

9808024

9808024-05A

Dogie North Pit

Matrix: AQUEOUS

Client Sample Info: Dogie North Pit

Client Sample ID: 9808111930; MW-4

Collection Date: 8/11/98 7:30:00 PM

COC Record: 7288

Parameter	Result	PQL (Qual Units	DF	Date Analyzed
BTEX	SV	V8020A			Analyst: DC
Benzene	DN	0.5	μg/L	1	8/17/98
Toluene	ND	0.5	μg/L	1	8/17/98
Ethylbenzene	ND	0.5	μg/L	1	8/17/98
m,p-Xylene	ND	1	μg/L	1	8/17/98
o-Xylene	ND	0.5	μg/L	1	8/17/98

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

ON SITE
TECHNOLOGIES, LTD.

OFF: (505) 325-5667

LAB: (505) 325-1556

Date: 20-Aug-98

ANALYTICAL REPORT

PNM - Public Service Company of NM

Work Order:

Client:

9808024

Lab ID:

9808024-06A

Matrix: AQUEOUS

Project: Dogie North Pit

Client Sample Info: Dogie North Pit

Client Sample ID: 9808112000; MW-5

Collection Date: 8/11/98 8:00:00 PM

COC Record: 7288

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
BTEX ·	SV	V8020A			Analyst: DC
Benzene	ND	0.5	μg/L	1	8/17/98
Toluene	ND	0.5	μg/L	1	8/17/98
Ethylbenzene	ND	0.5	μg/L	1	8/17/98
m,p-Xylene	ND	1	μg/L	1	8/17/98
o-Xylene	ND	0.5	μg/L	1	8/17/98

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

Date: 20-Aug-98

CLIENT:

PNM - Public Service Company of NM

Work Order:

9808024

Project:

Dogie North Pit

\mathbf{OC}	SUMN	MARY	REP	ORT
\mathbf{v}				

Method Blank

Sample ID: MB1	Batch ID: GC-1_980817	Test Code	: SW8020A	Units: µg/L		Analysis	Date 8/17	98	Prep Da	ate:	
Client ID:	9808024	Run ID:	GC-1_980817	Ά		SeqNo:	5534				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0317	0.5									J
Ethylbenzene	ND	0.5									
n,p-Xylene	ND	1									
Methyl tert-Butyl Ether	ND	1									
-Xylene	ND	0.5									
Foluene	.075	0.5									J

CLIENT:

PNM - Public Service Company of NM

Work Order:

9808024

Project:

Dogie North Pit

Date: 20-Aug-98

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9808023-04AMS	Batch ID: GC-1_980817	Test Code:	SW8020A	Units: µg/L		Analysis	Date 8/17	/98	Prep D	ate:	
Client ID:	9808024	Run ID:	GC-1_980817	Α		SeqNo:	5535				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	2451	0.5	2000	659.5 ,	89.6%	56	128				
Ethylbenzene	1900	0.5	2000	76.6	91.2%	78	107				
n,p-Xylene	4119	1	4000	672.4	86.2%	67	118				
Methyl tert-Butyl Ether	1881	1	2000	39.05	92.1%	70	130				
o-Xylene	1940	0.5	2000	145	89.7%	78	107				
Toluene	3668	0.5	2000	1814	92.7%	74	116				
Sample ID: 9808023-04AMSD	Batch ID: GC-1_980817	Test Code:	SW8020A	Units: µg/L		Analysis	Date 8/17	/98	Prep Da	ate:	
Client ID:	9808024	Run ID:	GC-1_980817	Ά		SeqNo:	5536				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	2302	0.5	2000	659.5	82.1%	56	128	2451	6.3%	12	
Ethylbenzene	1782	0.5	2000	76.6	85.3%	78	107	1900	6.5%	11	
m,p-Xylene	3867	1	4000	672.4	79.9%	67	118	4119	6.3%	10	
Methyl tert-Butyl Ether	1792	1	2000	39.05	87.7%	70	130	1881	4.8%	15	
o-Xylene	1838	0.5	2000	145	84.6%	78	107	1940	5.4%	14	
- Foluene	3430	0.5	2000	1814	80.8%	74	116	3668	6.7%	14	

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

Date: 20-Aug-98

CLIENT:

PNM - Public Service Company of NM

Work Order:

9808024

Project:

Dogie North Pit

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_980817	Test Code	: SW8020A	Units: µg/L		Analysis	Date 8/17	/98	Prep Da	ite:	
Client ID:	9808024	Run ID:	GC-1_980817	'A		SeqNo:	5533				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Quai
Benzene	37.02	0.5	40	0.0317	92.5%	56	128				
Ethylbenzene	37.94	0.5	40	0	94.8%	78	107				
m,p-Xylene	71.68	1	80	0	89.6%	67	118				
Methyl tert-Butyl Ether	42.6	1	40	0	106.5%	70	130				
o-Xylene	37.04	0.5	40	0	92.6%	78	107				
Toluene	36.46	0.5	40	0.075	91.0%	74	116				

CLIENT:

PNM - Public Service Company of NM

Work Order:

9808024

Project:

Dogie North Pit

Date: 20-Aug-98

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0606/07	Batch ID: GC-1_980817	Test Code:	SW8020A	Units: µg/L		Analysis	Date 8/17	/98	Prep Da	ate:		
Client ID:	9808024	Run ID:	GC-1_980817	'A		SeqNo:	5530					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	20.51	0.5	20	0	102.6%	85	115					
Ethylbenzene	20.55	0.5	20	0	102.8%	85	115					
m,p-Xylene	39.03	1	40	0	97.6%	85	115					
Methyl tert-Butyl Ether	23.05	1	20	0	115.2%	85	115				S	
o-Xylene	20.29	0.5	20	0	101.5%	85	115					
Toluene	20.17	0.5	20	0	100.8%	85	115					
1,4-Difluorobenzene	86.45	0	100	0	86.5%	70	130					
4-Bromochlorobenzene	92.22	0	100	0	92.2%	70	130					
Fluorobenzene	83.4	0	100	0	83.4%	70	130					
Sample ID: CCV2 QC0606/07	Batch ID: GC-1_980817	Test Code:	SW8020A	Units: µg/L		Analysis	Date 8/17/	98	Prep Da	ate:		
Client ID:	9808024	Run ID:	GC-1_980817	'A		SeqNo:	5531					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	18.51	0.5	20	0	92.6%	85	115					
Ethylbenzene	19.8	0.5	20	0	99.0%	85	115					
m,p-Xylene	36.02	1	40	0	90.0%	85	115					4
Methyl tert-Butyl Ether	20.23	1	20	0	101.1%	85	115					•
o-Xylene	20.54	0.5	20	0	102.7%	85	115					
Toluene	18.44	0.5	20	0	92.2%	85	115					
1,4-Difluorobenzene	85.77	0	100	0	85.8%	70	130					
4.0 Harahamana	85.5	0	100	0	85.5%	70	130					
4-Bromochlorobenzene	65.5	U	100	· ·	05.570		100					

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:

9808024

Project:

Dogie North Pit

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 QC0606/07	Batch ID: GC-1_980817	Test Code:	SW8020A	Units: µg/L		Analysis	Date 8/17	98	Prep Da	ite:	
Client ID:	9808024	Run ID:	GC-1_980817	'A		SeqNo:	5532				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	37.36	0.5	40	0	93.4%	85	115				
Ethylbenzene	38	0.5	40	0	95.0%	85	115				
m,p-Xylene	72.35	1	80	0	90.4%	85	115				
Methyl tert-Butyl Ether	38.12	1	40	0	95.3%	85	115				
o-Xylene	37.64	0.5	40	0	94.1%	85	115				
Toluene	37.58	0.5	40	0	93.9%	85	115				
1,4-Difluorobenzene	85.32	0	100	0	85.3%	70	130				
4-Bromochlorobenzene	84.5	0	100	0	84.5%	70	130				
Fluorobenzene	81.92	0	100	0	81.9%	70	130				

Date: 20-Aug-98

BTEX

CLIENT:

PNM - Public Service Company of NM

Work Order:

9808024

Project:

Dogie North Pit

Test No:

SW8020A

QC SUMMARY REPORT SURROGATE RECOVERIES

Sample ID	14FBZ	4BCBZ	FLBZ	
9808008-01A	95	74.3	96.4	i
9808012-06A	85.8	86.7	82.5	
9808012-07A	78.2	52.7 *	75	
9808016-01A	79.3	72.4	76.7	
9808016-02A	80.5	84.3	77.6	
9808023-01A	86	90.2	83.2	
9808023-02A	83.6	75.5	80.2	
9808023-03A	82.7	76.6	79.6	
9808023-04A	84.6	82.5	81.4	
9808023-04AMS	83.1	79.9	80	
9808023-04AMSD	83.3	81.5	80.2	
9808023-05A	84.5	84	81	
9808024-01A	86.9	84.2	82.6	
9808024-02A	83.7	86.2	80.8	
9808024-03A	83.3	81	80.4	
9808024-04A	86.5	80.9	82.9	
9808024-05A	86.6	81.7	82.3	
9808024-06A .	87	81	82.9	
9808025-01A	84.8	78.2	80.9	
9808025-02A	83	82.9	80	
CCV1 QC0606/07	86.4	92.2	83.4	
CCV2 QC0606/07	85.8	85.5	81.7	
CCV3 QC0606/07	85.3	84.5	81.9	
LCS WATER	86.4	93.2	82.6	
MB1	87.6	91.4	83.9	

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



CHAIN OF CUSTODY RECORD

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age:		of	

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

Purchase	Order No.:		Job No.		A *** ***			_2	Name			Maur	een G	annon	T	itle			٠.
ш	Name	Denver Bearden					,		Compa	any		PNM	Gas S	ervice	s				
무무	Company	PNM Gas Services		Dept.	324-376	3		REPORT SULTS 1	Mailing	Addre	ess	Alver	ado S	quare,	Mail S	Stop 0	408		
SEND INVOICE TO	Address	603 W. Elm Street						REPOR ESULTS	City, S	tate, Z	ip	Albu	querq	ue, NM	87158	3			
· · · <u>Z</u>	City, State, Zip	Farmington, NM 874	401			14. 1		. 2	Teleph	one No	0.	505-848-2974 Telefax No.							
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Authorize	ed by:			ì	h: /	13											Result	s to be th par	
	(Client Signa	ature <u>Must</u> Accompany Red			hite - On Site	, , , , , , , , , , , , , , , , , , ,)	de Cold	enrod - Cil		··.	į					pai	



LAB: (505) 325-1556

May 29, 1998

Maureen Gannon PNM - Public Service Company of NM Alvarado Square Mail Stop 0408

2 nd Qtr. 98

Albuquerque, NM 87158 TEL: (505) 241-2974 FAX (505) 241-2340

RE: Dogie C.S. North

Order No.: 9805063

Dear Maureen Gannon,

On Site Technologies, LTD. received 6 samples on 5/20/98 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.

CLIENT:

PNM - Public Service Company of NM

Project:

Dogie C.S. North

Lab Order:

9805063

CASE NARRATIVE

Date: 29-May-98

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.



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 29-May-98

Client:

PNM - Public Service Company of NM

Work Order:

9805063

Lab ID:

9805063-01A

Matrix: AQUEOUS

Project:

Dogie C.S. North

Client Sample Info: Dogie C.S. North

Client Sample ID: 9805200747; MW-1

Collection Date: 5/20/98 7:47:00 AM

COC Record: 7255

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
BTEX	SV	V8020A		Analyst: HR	
Benzene	ND	0.5	μg/L	1	5/28/98
Toluene	ND	0.5	μg/L	1	5/28/98
Ethylbenzene	ND	0.5	μg/L	1	5/28/98
m,p-Xylene	ND	1	μg/L	1	5/28/98
o-Xylene	ND	0.5	μg/L	1	5/28/98

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

l of l

P.O. BOX 2606 • FARMINGTON, NM 87499



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 29-May-98

Client:

PNM - Public Service Company of NM

Work Order: 9805063

Lab ID:

9805063-02A

Matrix: AQUEOUS

Project:

Dogie C.S. North

Client Sample Info: Dogie C.S. North

Client Sample ID: 9805200814; MW-2

Collection Date: 5/20/98 8:14:00 AM

COC Record: 7255

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
ВТЕХ	SV	V8020A			Analyst: HR
Benzene	130	0.5	μg/L	1	5/28/98
Toluene	4	0.5	μg/L	1	5/28/98
Ethylbenzene	4.1	0.5	μg/L	1	5/28/98
m,p-Xylene	16	1	μg/L	1	5/28/98
o-Xylene	1.5	0.5	μg/L	1	5/28/98

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



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 29-May-98

Client:

Lab ID:

Project:

PNM - Public Service Company of NM

Work Order:

9805063

9805063-03A

Matrix: AQUEOUS

Dogie C.S. North

Client Sample Info: Dogie C.S. North

Client Sample ID: 9805200836; MW-3

Collection Date: 5/20/98 8:36:00 AM

COC Record: 7255

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
ВТЕХ	SV	V8020A			Analyst: HR
Benzene	ND	0.5	μg/L	1	5/28/98
Toluene	ND	0.5	μg/L	1	5/28/98
Ethylbenzene	ND	0.5	µg/L	1	5/28/98
m,p-Xylene	ND	1	μg/L	1	5/28/98
o-Xylene	ND	0.5	μg/L	1	5/28/98

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: 29-May-98

Client: Work Order: PNM - Public Service Company of NM

9805063

9805063-04A

Matrix: AQUEOUS

Lab ID: Project:

Dogie C.S. North

Client Sample Info: Dogie C.S. North

Client Sample ID: 9805200856; MW-4

Collection Date: 5/20/98 8:56:00 AM

COC Record: 7255

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
BTEX	SW			Analyst: HR	
Benzene	ND	0.5	μg/L	1	5/28/98
Toluene	ND	0.5	μg/L	1	5/28/98
Ethylbenzene	ND	0.5	μg/L	1	5/28/98
m,p-Xylene	ND	1	μg/L	1	5/28/98
o-Xylene	ND	0.5	μg/L	1	5/28/98

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



LAB: (505) 325-1556

ANALYTICAL REPORT

5/28/98

5/28/98

5/28/98

Date: 29-May-98

Client:

Lab ID:

Project:

PNM - Public Service Company of NM

Work Order:

Ethylbenzene

m,p-Xylene

o-Xylene

9805063

9805063-05A

Matrix: AQUEOUS

ND

ND

ND

Dogie C.S. North

μg/L

µg/L

µg/L

Client Sample Info: Dogie C.S. North

Client Sample ID: 9805200927; MW-5 **Collection Date:** 5/20/98 9:27:00 AM

COC Record: 7255

Parameter Result **PQL** Qual Units DF Date Analyzed **BTEX** SW8020A Analyst: HR Benzene ND 0.5 μg/L 5/28/98 Toluene ND 0.5 μg/L 5/28/98

0.5

0.5

1

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



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 29-May-98

Client:

PNM - Public Service Company of NM

Work Order:

9805063

9805063-06A

Matrix: AQUEOUS

Client Sample Info: Dogie C.S. North

Client Sample ID: 9805200945; MW-6

Collection Date: 5/20/98 9:45:00 AM

Lab ID: **Project:**

Dogie C.S. North

COC Record: 7255

Parameter	Result	PQL	Qual Units	DF	Date Analyzed
BTEX	SV	V8020A			Analyst: HR
Benzene	110	0.5	μg/L	1	5/28/98
Toluene	3.2	0.5	μg/L	1	5/28/98
Ethylbenzene	3.5	0.5	μg/L	1	5/28/98
m,p-Xylene	13	1	μg/L	1	5/28/98
o-Xylene	1.2	0.5	μg/L	1	5/28/98

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

Date: 29-May-98

CLIENT:

PNM - Public Service Company of NM

Work Order:

9805063

Project:

Dogie C.S. North

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	mple ID: MB1 Batch ID: GC-1_980528		: SW8020A	Units: µg/L		Analysis	Date 5/28	98	Prep Date:			
Client ID:	9805063	Run ID:	GC-1_980528	A		SeqNo:	2503					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	.0626	0.5									J	
Ethylbenzene	ND	0.5										
n,p-Xylene	.1027	1									J	
o-Xylene	ND	0.5			•							
Toluene	.1758	0.5									J	

CLIENT:

PNM - Public Service Company of NM

Work Order:

9805063

Project:

Dogie C.S. North

Date: 29-May-98

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9805064-02AMS	Batch ID: GC-1_980528	Test Code	: SW8020A	Units: µg/L		Analysis	Date 5/28	/98	Prep Da	ate:	
Client ID:	9805063	Run ID:	GC-1_980528	A		SeqNo:	2504				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	165.2	12	100	58.04	107.2%	56	128				
Ethylbenzene	119.5	12	100	11.2	108.3%	78	107				S
m,p-Xylene	239.5	25	200	28.63	105.5%	67	118				
o-Xylene	109.9	12	100	0.8835	109.0%	78	107	•			S
Toluene	122.2	12	100	14.79	107.4%		116				
Sample ID: 9805064-02AMSD	Batch ID: GC-1_980528	Test Code:	: SW8020A	Units: µg/L	Analysis Date 5/28/98				Prep Date:		
Client ID:	9805063	Run ID:	GC-1_980528	A		SeqNo:	2505				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	161	12	100	58.04	103.0%	56	128	165.2	2.6%	12	
Ethylbenzene	117.7	12	100	11.2	106.5%	78	107	119.5	1.5%	11	
m,p-Xylene	235.8	25	200	28.63	103.6%	67	118	239.5	1.6%	10	
o-Xylene	109.6	12	100	0.8835	108.7%(107	109.9	0.3%	14	S
	119	12	100	14.79	104.2%	HX 74	116	122.2			

Date: 29-May-98

CLIENT:

PNM - Public Service Company of NM

Work Order:

9805063

Project:

Dogie C.S. North

Laboratory Control Spike - generic

Sample ID: LCS	Batch ID: GC-1_980528	Test Code:	SW8020A	Units: µg/L		Analysis	Prep Date:				
Client ID:	9805063	Run ID:	GC-1_980528	BA		SeqNo:	2502				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	43.02	0.5	40	0.0626	107.4%	56	128				
Ethylbenzene	43.08	0.5	40	0	107.7% 62	≥ 78	107				s
m,p-Xylene	82.61	1	80	0.1027	103.1%	67	118				
o-Xylene	42.73	0.5	40	0	106.8%	78	107				
Toluene	42.63	0.5	40	0.1758	106.1%	74	116				

Date: 29-May-98

CLIENT:

PNM - Public Service Company of NM

Work Order:

9805063

Project:

Dogie C.S. North

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0529/30	Batch ID: GC-1_980528	Test Code:	SW8020A	Units: µg/L		Analysis	Prep Date:					
Client ID:	9805063	Run ID:	GC-1_980528	SA .		SeqNo:	2499					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	21.8	0.5	20	0	109.0%	85	115					
Ethylbenzene	21.96	0.5	20	0	109.8%	85	115					
m,p-Xylene	41.88	1	40	0	104.7%	85	115					
o-Xylene	21.65	0.5	20	0	108.2%	85	115					
Toluene	21.72	0.5	20	0	108.6%	85	115					
1,4-Difluorobenzene	91.91	0	100	0	91.9%	70	130					
4-Bromochlorobenzene	88.8	0	100	0	88.8%	70	130					
Fluorobenzene	91.37	0	100	0	91.4%	70	130					
Sample ID: CCV2 QC0529/30	Batch ID: GC-1_980528	Test Code:	SW8020A	Units: µg/L		Analysis	Date 5/28/	/98	Prep Date:			
Client ID:	9805063	Run ID:	GC-1_980528	BA .		SeqNo:	2500					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	20.8	0.5	20	0	104.0%	85	115					
Ethylbenzene	21.06	0.5	20	0	105.3%	85	115					
m,p-Xylene	40.16	1	40	0	100.4%	85	115					
o-Xylene	20.86	0.5	20	0	104.3%	85	115					
Toluene	20.88	0.5	20	0	104.4%	85	115					
1,4-Difluorobenzene	92.07	0	100	0	92.1%	70	130					
4 D Llorohommono	85.01	0	100	0	85.0%	70	130					
4-Bromochlorobenzene	00.01	•		_								

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:

9805063

Project:

Dogie C.S. North

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 QC0529/30	Batch ID: GC-1_980528	Test Code: SW8020A		Units: µg/L		Analysis	Date 5/28	/98	Prep Date:				
Client ID:	9805063	Run ID:	GC-1_980528	BA		SeqNo:	2501						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Benzene	20.97	0.5	20	0	104.8%	85	115						
Ethylbenzene	21.12	0.5	20	0	105.6%	85	115						
m,p-Xylene	40.36	1	40	0	100.9%	85	115						
o-Xylene	21.39	0.5	20	0	107.0%	85	115						
Toluene	21.22	0.5	20	. 0	106.1%	85	115						
1,4-Difluorobenzene	91.69	0	100	0	91.7%	70	130						
4-Bromochlorobenzene	73.95	0	100	0	74.0%	70	130						
Fluorobenzene	90.82	0	100	0	90.8%	70	130						



CHAIN OF CUSTODY RECORD Date: 5/20/98

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

Purchase	Purchase Order No.: Job No.)		Maur	een G	annon	Т	Title				
111	Name	Denver Bearden						RT S TO												
SEND INVOICE TO	Company	PNM Gas Services		Dept.	324-376	3		ב מו	Mailin	g Add	ress	Alverado Square, Mail Stop 0408								
SEN TO SEN	Address	603 W. Elm Street								State, 2	Zip	Albu	querqu	ue, NM	8715	3				
" ≥	City, State, Zip	Farmington, NM 87	401		·	· · · · · · · · · · · · · · · · · · ·		RESU	Teleph	Telephone No. 505-848-2974 Telefax No.							· <u>-</u> . · · · ·			
Sampling Location:																				
Dogie C.S. North								of ers		<i>1</i> 0			ANALY	YSIS R	EQUE	STED		, ,		
Sampler:	ye C.J. /	vorin						ai pe	ļ	B										
R	Dedrick							Number of Containers		(V)	/ /						/ /	/ /		
	SAMPLE I	DENTIFICATION		SAM DATE	IPLE TIME	MATRIX	PRES.		K. K.									LAI	B ID	
9805	200747	P1W-1		5/2/9	0747	Hac	HC	2	X	Í .								9805043	AIO	
7805	1200814	1710-2	Hot-	72972	0814	1420	HCI	2	X										AGO-	
9805	200836	miu-3		5/20/98		Hac	HCI	2	メ										~O30	
7805	200856	mw-4		5/20/98	0856	420	1/61	2	X										ALCO	
7805	200927	mw-5		70498	0927	Hac	IKC	વ	く										-05B	
9805	200945	mw-6	Hot	5/20/18.	0745	420	1401	a	ス									V	C/6/A	
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			0				 -										<u> </u>			
Relinquish	ned by:	COA Die		Date/	ime 5/,2	478	606	Receiv	ed by:	No	بركلد	R	26.54	i	<u> </u>	D	ate/Tin	105/20/0	18 160	
Relinquished by: Date/Time						Receiv	ed by:					,		D	ate/Tin					
Relinquished by: Date/Time					Receiv	ed by:							D	ate/Tin	10					
Method of	Shipment:							Rush		24	-48 Ho	urs	10 W	orking	Days	Specia	Instru	ctions:		
Authorized by: Parall Declaration Date 5/20/98 (Client Signature Must Accompany Request)													I		s to be ser th parties.	ıt				



CHAIN OF CUSTODY RECORD

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

Purchase	Order No.:		Job No.		• '			_ 2	Name			Maui	reen G	annon	П	tie				1	
ш	Name Denver Bearden			·			15	REPORT ESULTS T	Compa	any	<u></u>	PNM	Gas S	Service	8					1	
물물이	Company PNM Gas Services		Dept.	324-376	3		걸입	Mailing	Add	ress	Alve	rado S	quare,	, Mail S	Stop 0	108			7		
SEND INVOICE TO	Address	603 W. Elm Street					. **	E S	City, S	tate, i	Zip	Albu	Albuquerque, NM 87158								
City, State, Zip Farmington, NM 87401								Telephone No.			505-848-2974 Telefax N					No.			1		
Sampling Location:								- 0				:	ANAL	YSIS R	EQUE	STED					
Do	ve C.S.	North						er o		10	7	7	7	7	7	7	7	7	/-	Ņ	
Sampler:	Dedrick		•					Number of Containers		[3°]		/ /		/ /	/ /	/ . /	/ /	20 July 4	Dat		
	SAMPLE	IDENTIFICATION		DATE ,	MPLE TIME	MATRIX	PRES	1	5							<u>/</u>		<u></u>	AB ID	1	
9805	200747	PIW-1		Joufa	-	Mou	140	入	X									1 1.13	C . Au]	
	200814	mw-2	Ho+	129/18	2214	1420	ijel		X										-r_ + \$\$]	
9805	200836	11110-3		3/20/18	. 0834	HOU	HU	고	X									1	f _1.]	
7805	200856	17 1W-4		3/24/18	UE 56	H20	1:11	.>	X										. 13:	1	
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9805	200945	n1W-6	Hot	Pople	0945	4,0	#0	⊃.	<u> </u>									,	11.]	
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Method of Shipment:														Days	Special Instructions:				1		
Authorize		ature Must Accompany Rec	Date	5/	20/9	క	·, .			4						I		s to be s th partie			
				Distribution: W	hite - On Site	Yellow -	IAR F	ink - Samp	ler Golde	enrod - C	liont		-L		I					J	