

3R - 343

REPORTS

DATE:

April 28, 1997

Public Service Company
of New Mexico
603 W. Elm - P.O. Box 4750
Farmington, NM 87499
505 950-1997
505 325-7365

April 28, 1997

Oil Conservation Division
Attention: Bill Olsen
2040 South Pacheco
Santa Fe, NM 87505

RECEIVED

MAY - 1 1997

Environmental Bureau
Oil Conservation Division



Subject: OCD Closure Reports
1st Reporting Quarter, 1997

Dear Mr. Olsen:

PNM Gas Services is submitting closure reports to the Oil Conservation Division for the sites listed below. These sites were remediated between January 1, 1995 and March 31, 1997. Our office is also submitting two groundwater sites, the Florance #124 and the Templeton #1E, for closure.

If you have any questions, please call Kathy Tyger at (505) 324-3764.

Calloway #1A
Crandell #2
Day Federal A #2
Federal A #1
Federal A #1E
Federal A #2
Federal A #3
Federal A #3E
Federal Gas Com #2
Florance #41A
Florance AA #14A
Florance H #37A
Florance P #39A
Giomi GC C #1 Drip
Hampton #4
Howell #1
Jacques #1
Jacquez #1A
JF Day C #2
JF Day D #1E
Kutz Deep Gas Com D #1
Kutz J Federal #1 Drip
Langendorf #1-34

Lester #1
Main Line Drip South of Marie #1
Marie #1
McClanahan #14 Drip
McClanahan #14E
McClanahan A #1
McClanahan A #3
McDaniel C #1E
Mexico Federal K #1
Miller Gas Com #1 Drip
Newman C #1E
Olmer A #2E Drip
Olmer A #6
Omler #2
Omler #5
Omler A #1E
Omler A #2E
Omler A #7E
Phillips #1
Pierce #1A
Pierce #2A
Scott Federal #3 Drip
State Com #1X

Sincerely,

A handwritten signature in dark ink, appearing to read "Denver Bearden". The signature is fluid and cursive, with a prominent loop at the end.

Denver Bearden
Administrator III

cc: Denny Foust
BLM - Farmington
Williams Field Services

District I
P O Box 1980, Hobbs, NM

District II
P O Drawer DD, Artesia, NM 88221

District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco Street
Santa Fe, New Mexico 87505

SUBMIT 1 COPY TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE

OK

PIT REMEDIATION AND CLOSURE REPORT

Operator: PNM Gas Services (Chateau) Telephone: 324-3764

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Templeton #1E

Location: Unit: 890 FNL, 1820 FEL Sec. 27 T. 31 N R. 13 W County San Juan

Pit Type: Separator ☐ Dehydrator ☐ Other No equipment on location.

Land Type: BLM ☐ State ☐ Fee ☒ Other No

Pit Location: Pit dimensions: length 12 width 12 depth 3

(Attach diagram) Reference: wellhead ☒ other

Footage from reference: 94'

Direction from reference: 30 Degrees ☒ East North ☒
of
☐ West South ☐

Depth to Ground Water:	Less than 50 feet	(20 points)	<u>20</u>
	50 feet to 99 feet	(10 points)	
	Greater than 100 feet	(0 points)	

(Vertical distance from contaminants to
seasonal high water elevation of ground
water)

Wellhead Protection Area:	Yes	(20 points)	<u>0</u>
	No	(0 points)	

(Less than 200 feet from a private
domestic water source, or; less than 1,000
feet from all other water sources)

Distance to Surface Water:	Less than 200 feet	(20 points)	<u>10</u>
	200 feet to 1,000 feet	(10 points)	
	Greater than 1,000 feet	(0 points)	

(Horizontal distance to perennial lakes,
ponds, rivers, streams, creeks, irrigation
canals and ditches)

RANKING SCORE (TOTAL POINTS): 30

Date Remediation Started:

3/13/96

Date Completed:

5/15/96

Remediation Method:

Excavation

X

Approx. Cubic Yard

1258

(Check all appropriate sections)

Landfarmed

X

Amount Landfarmed (cubic yds)

786

Other

Remediation Location:

Onsite

X

Offsite

(i.e., landfarmed onsite, name and location of offsite facility)

Backfill Material Location:

General Description of Remedial Action:

Excavated contaminated soil to a pit size of 114'X50'X6' and landfarmed soil onsite within a bermed area at a depth of 6" to 12". Soil was aerated by disking/plowing until soil met regulatory levels.

Ground Water Encountered:

No

Yes

☒

Depth

5'

Final Pit Closure Sampling:

Sample Location

5 pt. composite-4 side walls and center of pit bottom

(if multiple samples, attach sample result and diagram of sample locations and depths.)

Sample depth

5'

Sample date

3/14/96

Sample time

10:00:00 AM

Sample Results

Benzene (ppm)

< 0.0002

Total BTEX (ppm)

0.0475

Field headspace (ppm)

TPH

< 25.00

Method

8020

Vertical Extent (ft)

Risk Assessment form attached

Yes

No

☒

Ground Water Sample:

Yes

☒

No

☐

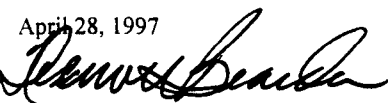
(If yes, see attached Groundwater Site Summary Report)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF

DATE

April 28, 1997

SIGNATURE

PRINTED NAME
AND TITLEDenver Bearden
Administrator III

N
↑

3-13-96

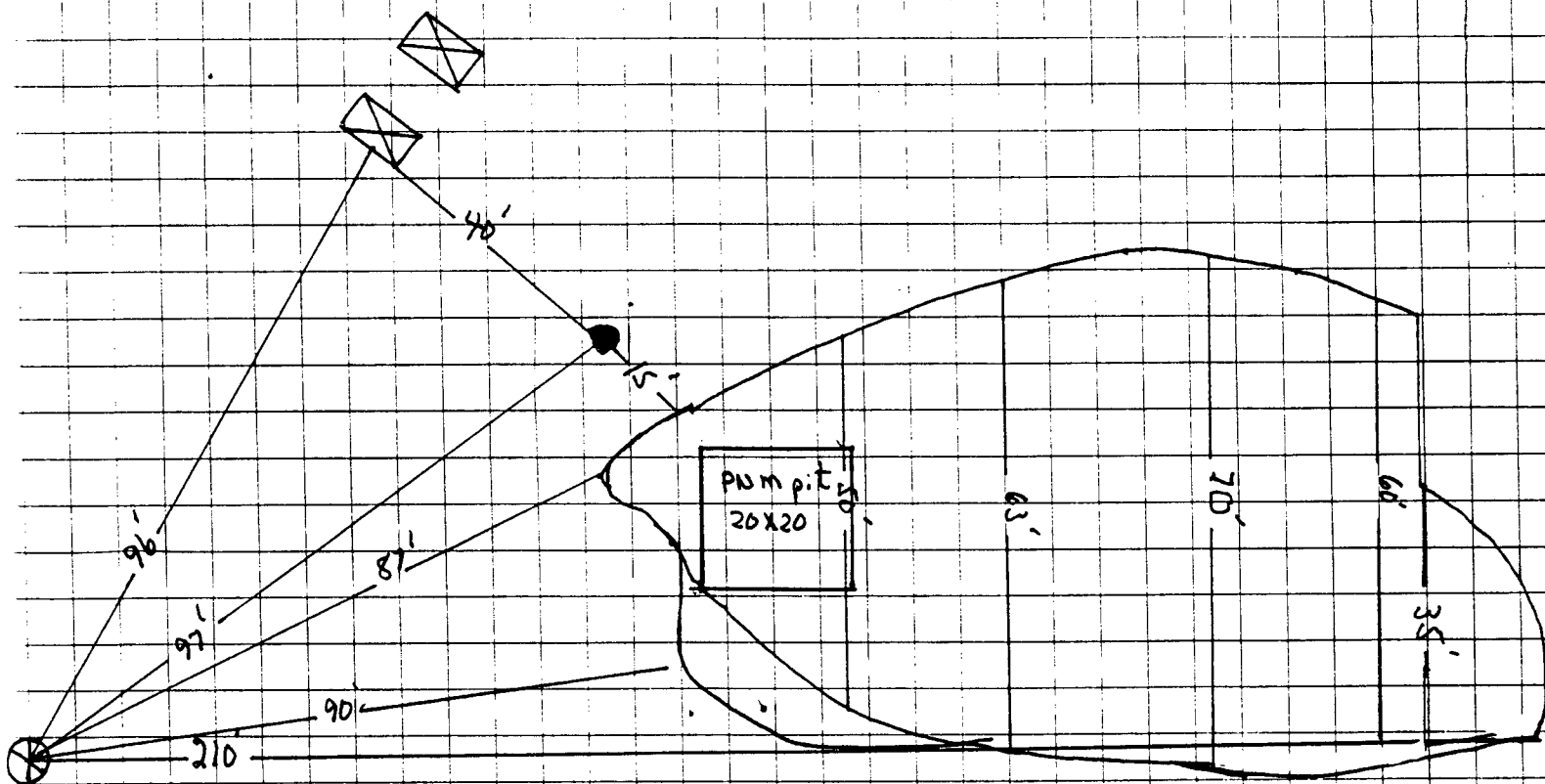
Templeton 1-E

Snyder Oil

Sec. 27, T31N, R13W

810' FNL & 1820 FEL

San Juan County



OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *15-Mar-96*
COC No.: *4604*
Sample No. *10405*
Job No. *2-1000*

Project Name: *PNM Gas Services - Templeton 1-E*
Project Location: *9603141000; 5pt. Composite*
Sampled by: *GC*
Analyzed by: *HR*
Type of Sample: *Soil*

Date: *14-Mar-96* Time: *10:00*
Date: *15-Mar-96*

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
<i>10405-4604</i>	<i>PNM Gas Services - Templeton 1-E</i> <i>9603141000; 5pt. Composite</i>	<i>< 25 mg/kg</i>

Quality Assurance Report

Laboratory Identification	Analyzed Value	Acceptable Range	Units of Measure
<i>Laboratory Fortified Blank Soil - QCBS2</i>	<i>< 25</i>	<i>< 25</i>	<i>mg/kg</i>
<i>Laboratory Fortified Spike Soil - QCSS1</i>	<i>926</i>	<i>828 - 1024</i>	<i>mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *[Signature]*

Date: *3/15/96*

P. O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-8786



LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *15-Mar-96*
COC No.: *4604*
Sample No.: *10405*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1-E*
Project Location: *9603141000; 5pt. Composite*
Sampled by: *GC* Date: *14-Mar-96* Time: *10:00*
Analyzed by: *HR* Date: *15-Mar-96*
Type of Sample: *Soil*

Aromatic Volatile Organics

Component	Result	Units of Measure	Detection Limit	Units of Measure
Benzene	<0.2	ug/kg	0.2	ug/kg
Toluene	12.8	ug/kg	0.2	ug/kg
Ethylbenzene	2.5	ug/kg	0.2	ug/kg
m,p-Xylene	26.4	ug/kg	0.2	ug/kg
o-Xylene	5.9	ug/kg	0.2	ug/kg
	TOTAL	47.5	ug/kg	

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

Approved by: *[Signature]*
Date: *3/15/96*

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

Templeton # 1-E

4-24-96

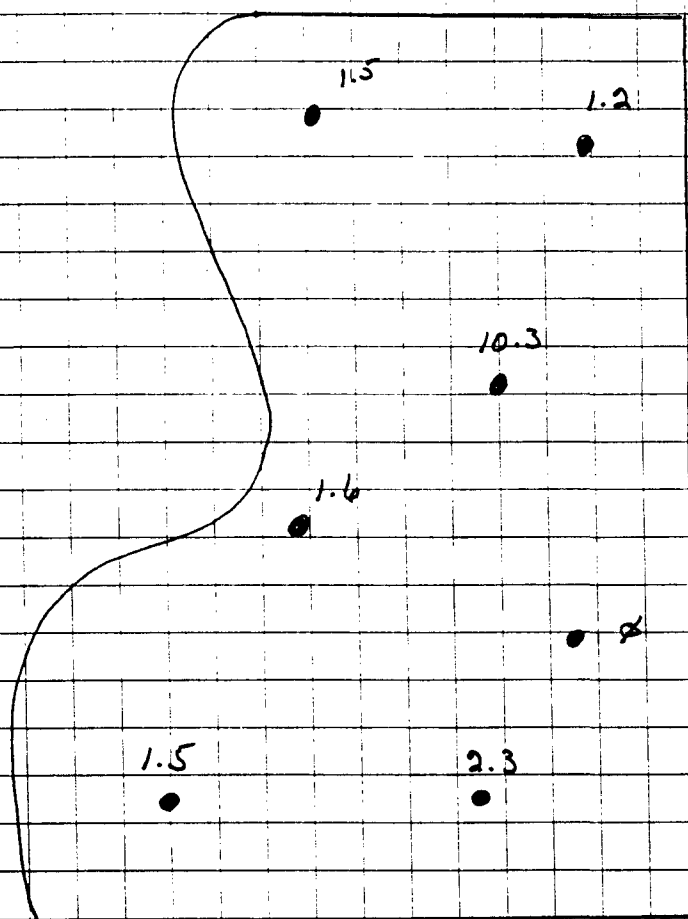
Snyder

Sec. 27, T31N, R13W

Land Farm on-location 786 yds.

Composite sample # 9604241145 7 pt.

Soil vapor head-space reading = 38 ppm PID.



sample depths
between 2' + 12''

OFF: (505) 325-8786

ON SITE

TECHNOLOGIES, LTD.

LAB: (505) 325-5667

Diesel Range Organics EPA 8015-Modified

Attn: *Denver Bearden*
 Company: *PNM Gas Services*
 Address: *603 W. Elm*
 City, State: *Farmington, NM 87401*

Date: *26-Apr-96*
 COC No.: *4614*
 Sample No. *10716*
 Job No. *2-1000*

Project Name: *PNM Gas Services - Templeton 1E Land Farm*
 Project Location: *9604241145; 6pt. Composite, 2"-12" deep*
 Sampled by: GC Date: *24-Apr-96* Time: *11:45*
 Analyzed by: DC Date: *26-Apr-96*
 Sample Matrix: *Soil*

Laboratory Analysis

Analyte	Result	Unit of Measure	Detection Limit	Unit of Measure
<i>Diesel Range Organics (C10 - C28)</i>	<i>52.1</i>	<i>mg/kg</i>	<i>5.0</i>	<i>mg/kg</i>

Quality Assurance ReportDRO QC No.: *0446-STD***Calibration Check**

Analyte	Method Blank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
<i>Diesel Range (C10 - C28)</i>	<i><5.0</i>	<i>ppm</i>	<i>2,000</i>	<i>1,961</i>	<i>1.9</i>	<i>15%</i>

Matrix Spike

Analyte	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
<i>Diesel Range (C10-C28)</i>	<i>101</i>	<i>103</i>	<i>(70-130)</i>	<i>1</i>	<i>20%</i>

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas ChromatographyApproved by: *De 4*Date: *4/26/96*

P. O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

Groundwater Site Summary Report

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

Quarter/Year: 4/96 & 1/97

Operator: Snyder
Sec: 27 Twn: 31 Rng: 13 Unit: B
Canyon: La Plata

Vulnerable Class: Original
OCD Ranking: 30
Lead Agency: NMOCD

Topo Map: previously submitted
Well Completion Diagram: previously submitted
Site Map with Analysis: Figure 1
Groundwater Contour Map: Figure 2 (December 1996)
Groundwater Contour Map: Figure 3 (March 1997)
Hydrograph: Figure 4
Analytical Results: attached

Activities for Previous Two Quarters (Oct. - Dec. 1996 & Jan. - Mar. 1997):

On December 11, 1996 and again on March 3, 1997, PNM performed water level measurements and quarterly sampling of groundwater in all monitoring wells at the Templeton 1E. Samples were collected in each well for chemical analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA method 8020. In all instances, PNM adhered to EPA protocol when collecting and transporting the samples. Groundwater samples were delivered to OnSite Technologies, Farmington, New Mexico.

Results:

Figure 1 provides a map showing BTEX analytical data for each monitoring well since groundwater contamination was discovered at the site. For the previous four consecutive quarters, BTEX concentrations have been non-detectable or below Water Quality Control Commission (WQCC) standards.

Figures 2 and 3 provide groundwater contour maps of the site for the fourth quarter 1996 and the first quarter 1997, respectively. The groundwater flows in a southeastern direction beneath the site. Figure 4 presents a groundwater hydrograph of the site since monitoring began. Water levels have risen over the last two quarters due to increased precipitation in the region.

Further Action:

Consistent with PNM's San Juan Basin Groundwater Management Plan, we request closure of the Templeton 1E. This request is based upon the analytical data collected over the last year at the site. BTEX concentrations have been consistently below WQCC standards for four consecutive quarters.

Upon completion of monitoring and remedial actions, PNM will plug and abandon the five groundwater monitoring wells at the Templeton 1E. The concrete pad and the 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 with cement containing 5% bentonite.

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. Templeton 1E Site Map With Analytical Results
(Concentrations in ppb)

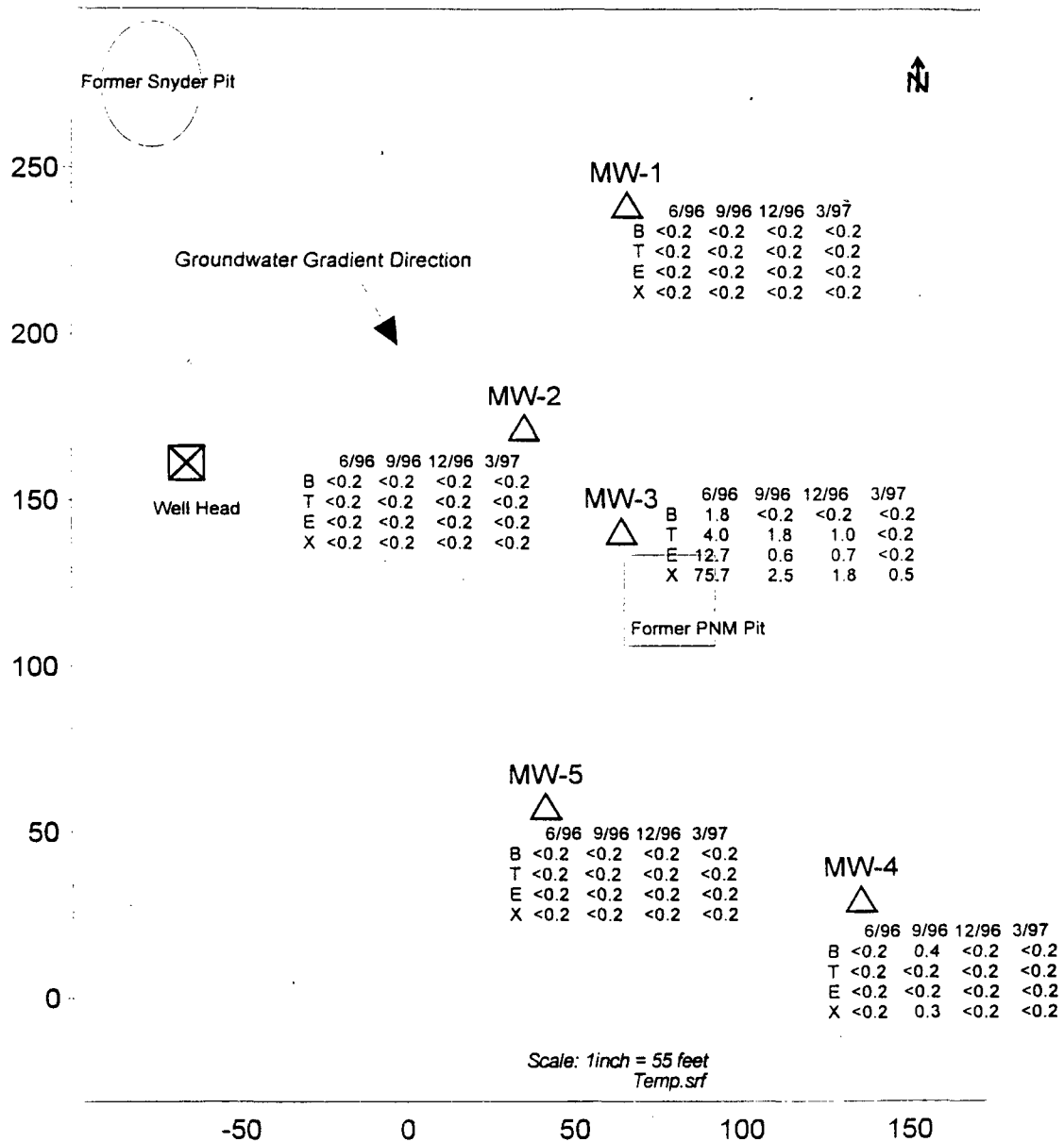


Figure 2. Templeton 1E Groundwater Contour Map (December 1996)

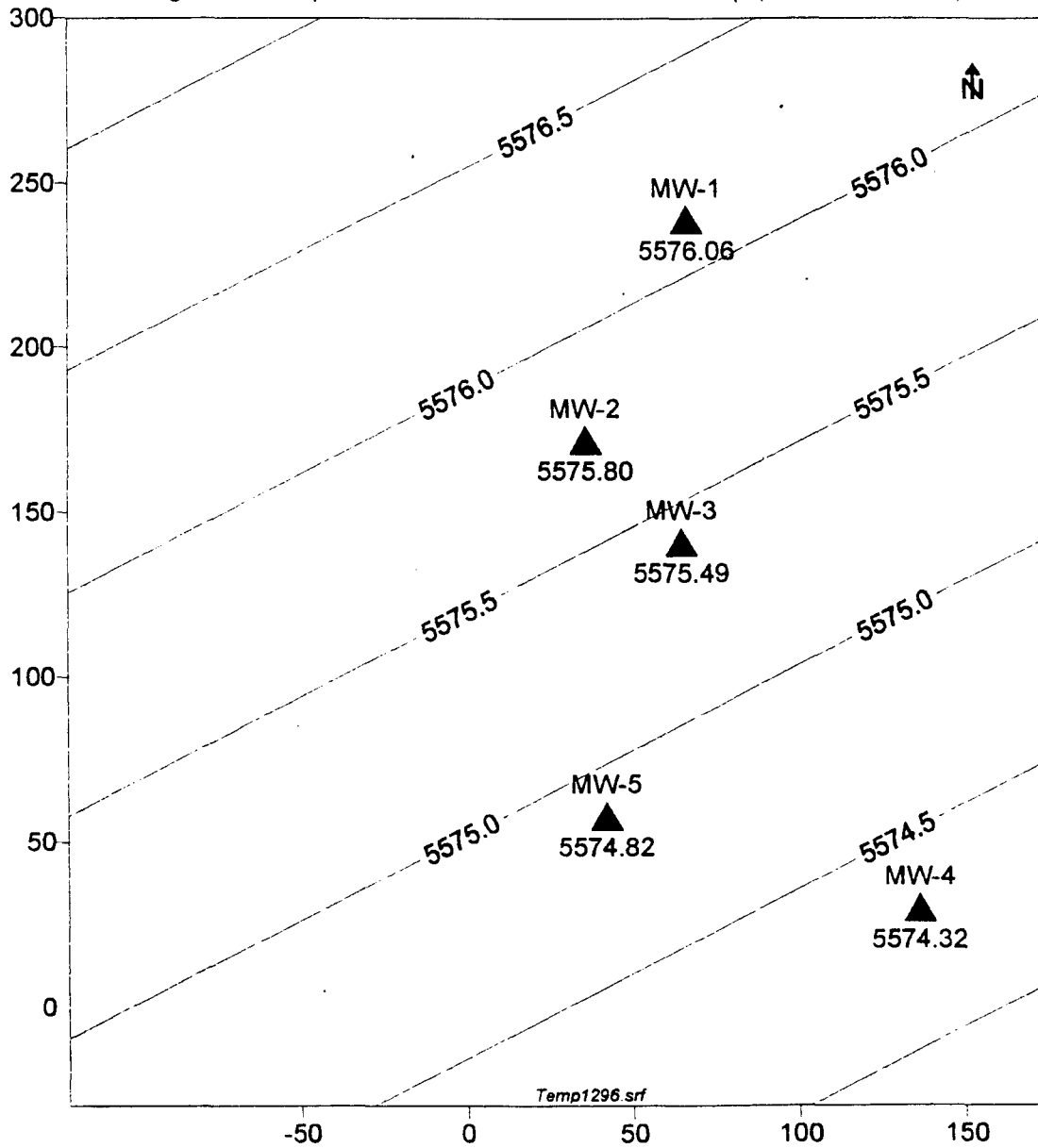


Figure 3. Templeton 1E Groundwater Contour Map (March 1997)

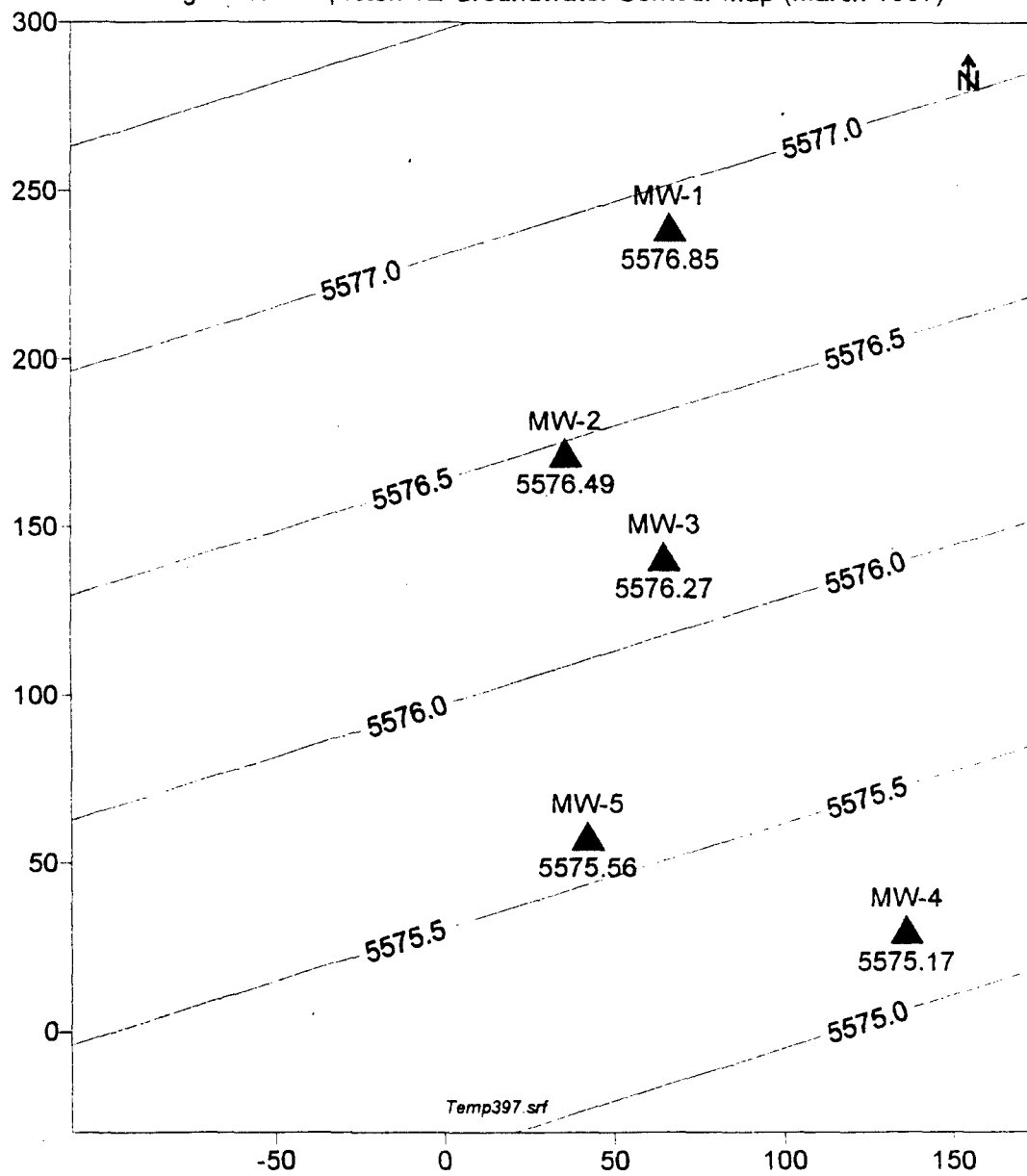
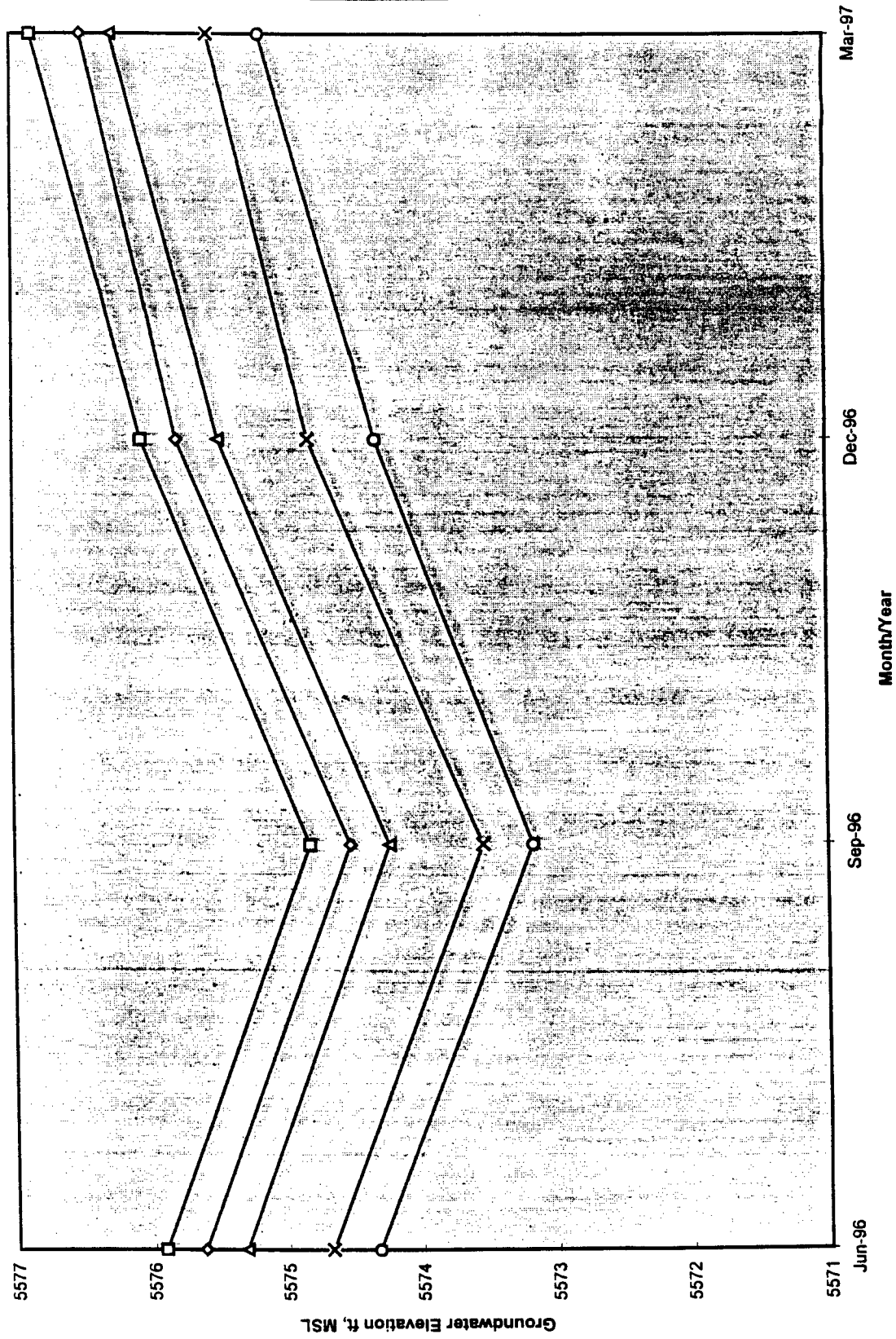


Figure 4. Templeton 1E Hydrograph
(Time vs. Water Level)



OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *16-Dec-96*
COC No.: *5707*
Sample No.: *13144*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1E*

Project Location: *9612111000: MW-1*

Sampled by: *MS/RD*

Date: *11-Dec-96* Time: *10:00*

Analyzed by: *DC*

Date: *16-Dec-96*

Sample Matrix: *Water*

Laboratory Analysis

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Benzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i><0.2</i>	<i>ug/L</i>		

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

Approved by: *DAG*

Date: *12/16/96*

OFF: (505) 325-5667

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TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *16-Dec-96*
COC No.: *5707*
Sample No.: *13145*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1E*
Project Location: *9612111030; MW-2*
Sampled by: *MS/RD*
Analyzed by: *DC*
Sample Matrix: *Water*

Date: *11-Dec-96* Time: *10:30*
Date: *16-Dec-96*

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
<i>Benzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i><0.2</i>	<i>ug/L</i>		

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

Approved by: *DC*
Date: *12/16/96*

OFF: (505) 325-5667

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TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *16-Dec-96*
COC No.: *5707*
Sample No.: *13146*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1E*
Project Location: *9612111045; MW-3*
Sampled by: *MS/RD*
Analyzed by: *DC*
Sample Matrix: *Water*

Date: *11-Dec-96* Time: *10:45*
Date: *16-Dec-96*

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
<i>Benzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>1.0</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>0.7</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>1.6</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>		<i>3.3</i>		<i>ug/L</i>

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

Approved by: *JAG*

Date: *12/16/96*

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *16-Dec-96*
COC No.: *5707*
Sample No.: *13147*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1E*
Project Location: *9612111100; MW-4*
Sampled by: *MS/RD*
Analyzed by: *DC*
Sample Matrix: *Water*

Date: *11-Dec-96* Time: *11:00*
Date: *16-Dec-96*

Laboratory Analysis

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Benzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i><0.2</i>	<i>ug/L</i>		

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

Approved by: *[Signature]*
Date: *12/16/96*

OFF: (505) 325-5667

ON-SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *16-Dec-96*
COC No.: *5707*
Sample No.: *13148*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1E*
Project Location: *9612111115; MW-5*
Sampled by: *MS/RD*
Analyzed by: *DC*
Sample Matrix: *Water*

Date: *11-Dec-96* Time: *11:15*
Date: *16-Dec-96*

Laboratory Analysis

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Benzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i><0.2</i>	<i>ug/L</i>		

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

Approved by: *[Signature]*
Date: *12/16/96*

OFF: (505) 325-5667



LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *16-Dec-96*
COC No.: *5707*
Sample No.: *13149*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1E*
Project Location: *9612111130; MW-6*
Sampled by: *MS/RD*
Analyzed by: *DC*
Sample Matrix: *Water*

Date: *11-Dec-96* Time: *11:30*
Date: *16-Dec-96*

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
<i>Benzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>		<i><0.2</i>		<i>ug/L</i>

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

Approved by: *[Signature]*
Date: *12/16/96*

OFF: (505) 325-5667

ON SITE

TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 16-Dec-96

Internal QC No.: 0515-QC

Surrogate QC No.: 0516-QC

Reference Standard QC No.: 0417-QC

Method Blank

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

Calibration Check

Parameter	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20.0	19.4	3	15%
Toluene	ppb	20.0	20.0	0	15%
Ethylbenzene	ppb	20.0	20.3	2	15%
m,p-Xylene	ppb	40.0	39.9	0	15%
o-Xylene	ppb	20.0	19.9	0	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	92	97	(39-150)	4	20%
Toluene	97	101	(46-148)	2	20%
Ethylbenzene	100	102	(32-160)	2	20%
m,p-Xylene	97	100	(35-145)	2	20%
o-Xylene	98	100	(35-145)	2	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limit Percent Recovered	(70-130)	
13144-5707	95	
13145-5707	94	
13146-5707	93	
13147-5707	94	
13148-5707	94	
13149-5707	94	

S1: Fluorobenzene



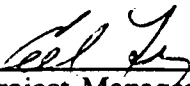
HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

RECEIVED JAN 2 1997

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 96-12-773

Approved for Release by:



Ed Fry, Project Manager

12/30/96
Date:

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

The attached analytical data package may not be reproduced except in full without the express written approval of this laboratory.



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

Certificate of Analysis No. H9-9612773-01

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

P.O.#
5707
12/30/96

PROJECT: ON Site Tech
SITE: Templeton IE
SAMPLED BY: On Site Tech
SAMPLE ID: Templeton IE MW-3

PROJECT NO: PNM1002
MATRIX: WATER
DATE SAMPLED: 12/11/96 10:45:00
DATE RECEIVED: 12/13/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	ND	0.09	ug/L
Acenaphthylene	ND	0.05	ug/L
Acenaphthene	ND	0.1	ug/L
Fluorene	ND	0.2	ug/L
Phenanthrene	ND	0.2	ug/L
Anthracene	ND	0.1	ug/L
Fluoranthene	ND	0.1	ug/L
Pyrene	ND	0.1	ug/L
Chrysene	ND	0.08	ug/L
Benzo (a) anthracene	ND	0.08	ug/L
Benzo (b) fluoranthene	ND	0.06	ug/L
Benzo (k) fluoranthene	ND	0.07	ug/L
Benzo (a) pyrene	ND	0.03	ug/L
Dibenzo (a,h) anthracene	ND	0.07	ug/L
Benzo (g,h,i) perylene	ND	0.1	ug/L
Indeno (1,2,3-cd) pyrene	ND	0.08	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	2 ug/L	120	50	150
Coronene	0.25 ug/L	38 CI	50	150

ANALYZED BY: KA DATE/TIME: 12/18/96 15:35:37
EXTRACTED BY: JN DATE/TIME: 12/17/96 08:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
 NA - Not Analyzed
 CI - Coeluting Interference.

COMMENTS:

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

QUALITY CONTROL
DOCUMENTATION



Matrix: Aqueous
Units: ug/L

Batch Id: 1961219015920

B L A N K S P I K E S

S P I K E C O M P O U N D S	Sample Results	Spike Added	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(**) (Advisory)	
			Result	Recovery	Result	Recovery		RPD	Recovery Range
			<1>	<4>	<1>	<5>		Max.	
NAPHTHALENE	ND	0.50	0.43	86.0	0.55	110	24.5	30	1 - 122
ACENAPHTHYLENE	ND	0.50	0.45	90.0	0.48	96.0	6.45	30	1 - 124
ACENAPHTHENE	ND	0.5	0.44	88.0	0.51	102	14.7	30	1 - 124
FLUORENE	ND	0.5	0.48	96.0	0.56	112	15.4	30	1 - 142
PHENANTHRENE	ND	0.5	0.47	94.0	0.52	104	10.1	30	1 - 153
ANTHRACENE	ND	0.5	0.49	98.0	0.54	108	9.71	30	1 - 126
FLUORANTHENE	ND	0.5	0.49	98.0	0.54	108	9.71	30	14 - 123
PYRENE	ND	0.5	0.50	100	0.54	108	7.69	30	1 - 140
CHRYSENE	ND	0.50	0.50	100	0.55	110	9.52	30	1 - 199
BENZO (A) ANTHRACENE	ND	0.50	0.50	100	0.55	110	9.52	30	12 - 135
BENZO (B) FLUORANTHENE	ND	0.50	0.50	100	0.55	110	9.52	30	6 - 150
BENZO (K) FLUORANTHENE	ND	0.50	0.50	100	0.55	110	9.52	30	1 - 159
BENZO (A) PYRENE	ND	0.50	0.59	118	0.62	124	4.96	30	1 - 128
DIBENZO (A,H) ANTHRACENE	ND	0.50	0.47	94.0	0.52	104	10.1	30	1 - 110
BENZO (G,H,I) PERYLENE	ND	0.5	0.49	98.0	0.54	108	9.71	30	1 - 116
INDENO (1,2,3-CD) PYRENE	ND	0.50	0.48	96.0	0.54	108	11.8	30	1 - 116

Analyst: KA

Sequence Date: 12/18/96

Method Blank File ID:

Sample File ID:

Blank Spike File ID: 961218A\004-0101

Matrix Spike File ID:

Matrix Spike Duplicate File ID:

* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = $[(<1> - <2>) / <3>] \times 100$

Relative Percent Difference = $|(<4> - <5>)| / [(<4> + <5>) \times 0.5] \times 100$

(**) = Source: SPL Temporary Limits

SAMPLES IN BATCH(SPL ID):

9612720-06B 9612720-08B 9612736-04C 9612773-01A
9612720-05B 9612720-07B 9612720-09B 9612720-10B
9612720-11B 9612736-01C 9612736-02C 9612736-03C
9612881-01A 9612720-01B 9612720-02B 9612720-03B
9612720-04B

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST

CHAIN OF CUSTODY RECORD

1411

62333

ON SITE

612 E. MURRAY
4524 MURRAY • P.O. Box 2606 • Farmington NM 87409

LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 12/12/96

Page 1 of 1

Purchase Order No.: 5707 Job No. PAM-1002

Name: ACCOUNTS PAYABLE
Company: ON SITE TECH
Address: P.O. Box 2606
City, State, Zip: FARMINGTON, NM 87401

Name: DAVID COX
Company: ON SITE TECH
Mailing Address: 612 E MURRAY
City, State, Zip: FARMINGTON, NM 87401
Telephone No.:
Telefax No.:

Shipping Location:

TEMPLETON IE

ANALYSIS REQUESTED

Sampler: MS

SAMPLE IDENTIFICATION

SAMPLE DATE TIME MATRIX PRES.

Number of Containers

PAH 8310

LAB ID

TEMPLETON IE ANAL-3
9612111045

12/11/96 1045 H20 4% 1

13146-5707

Obtained by: [Signature]

Obtained by:

Obtained by:

Method of Shipment: 17606 58501996 8600

Date/Time: 12/11/96 1500

Date/Time

Date/Time

Received by: [Signature]

Received by:

Received by:

Rush

24-48 Hours

10 Working Days

Special Instructions:

Date/Time: 12/10/96 1000

Date/Time

Date/Time

Authorized by: Date:

(Client Signature Must Accompany Request)

Distribution: White - On Site

Yellow - LAB

Pink - Sampler

Goldendrod - Client

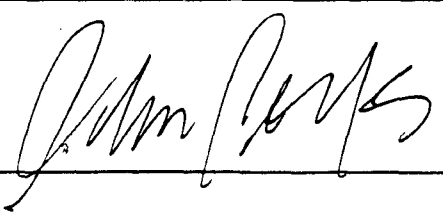
SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 12/13/96	Time: 1610
-------------------	---------------

SPL Sample ID: 94-12-773

		Yes	No
1	Chain-of-Custody (COC) form is present.	✓	
2	COC is properly completed.	✓	
3	If no, Non-Conformance Worksheet has been completed.		
4	Custody seals are present on the shipping container.	✓	
5	If yes, custody seals are intact.	✓	
6	All samples are tagged or labeled.	✓	
7	If no, Non-Conformance Worksheet has been completed.		
8	Sample containers arrived intact	✓	
9	Temperature of samples upon arrival:	6° C	
10	Method of sample delivery to SPL:	SPL Delivery	
		Client Delivery	
		FedEx Delivery (airbill #)	
		Other: UPS	12 44558501 999586
11	Method of sample disposal:	SPL Disposal	✓
		HOLD	
		Return to Client	

Name: 	Date: 12/13/96
--	-------------------

CHAIN OF CUSTODY RECORD

5707

Date: 12/11/16

Page

TECHNOLOGIES, LTD.
657 W. Maple • P. O. Box 2646 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

[illegible]

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

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

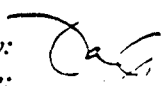
Date: *7-Mar-97*
COC No.: *5743*
Sample No.: *13779*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1E*
Project Location: *9703031200; MW-1*
Sampled by: *MS*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *3-Mar-97* Time: *12:00*
Date: *6-Mar-97*

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
<i>Benzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i><0.2</i>	<i>ug/L</i>		

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

Approved By: 

Date: *3-7-97*

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *7-Mar-97*
COC No.: *5743*
Sample No.: *13780*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1E*
Project Location: *9703031230; MW-2*
Sampled by: *MS*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *3-Mar-97* Time: *12:30*
Date: *6-Mar-97*

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Benzene	<0.2	ug/L	0.2	ug/L
Toluene	<0.2	ug/L	0.2	ug/L
Ethylbenzene	<0.2	ug/L	0.2	ug/L
m,p-Xylene	<0.2	ug/L	0.2	ug/L
o-Xylene	<0.2	ug/L	0.2	ug/L
TOTAL	<0.2	ug/L		

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

Approved By: *[Signature]*

Date: *3/7/97*

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *7-Mar-97*
COC No.: *5743*
Sample No.: *13781*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1E*
Project Location: *9703031300; MW-3*
Sampled by: *MS*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *3-Mar-97* Time: *13:00*
Date: *6-Mar-97*

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Benzene	<0.2	ug/L	0.2	ug/L
Toluene	<0.2	ug/L	0.2	ug/L
Ethylbenzene	<0.2	ug/L	0.2	ug/L
m,p-Xylene	0.5	ug/L	0.2	ug/L
o-Xylene	<0.2	ug/L	0.2	ug/L
TOTAL	0.5	ug/L		

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

Approved By: 

Date: *3/10/97*

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1536

ANALYTICAL REPORT

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *7-Mar-97*
COC No.: *5743*
Sample No.: *13782*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1E*
Project Location: *9703031330; MW-4*
Sampled by: *MS*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *3-Mar-97* Time: *13:30*
Date: *6-Mar-97*

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Benzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i><0.2</i>	<i>ug/L</i>		

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

Approved By: *TAC*
Date: *3-2-97*

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *7-Mar-97*
COC No.: *5743*
Sample No.: *13783*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1E*
Project Location: *9703031400; MW-5*
Sampled by: *MS*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *3-Mar-97* Time: *14:00*
Date: *6-Mar-97*

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
<i>Benzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i><0.2</i>	<i>ug/L</i>		

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

Approved By: *Tagg*

Date: *3/7/97*

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: *Denver Bearden*
Company: *PNM Gas Services*
Address: *603 W. Elm*
City, State: *Farmington, NM 87401*

Date: *7-Mar-97*
COC No.: *5743*
Sample No.: *13784*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Templeton 1E*
Project Location: *9703031430; MW-6*
Sampled by: *MS*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *3-Mar-97* Time: *14:30*
Date: *6-Mar-97*

<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Benzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>0.4</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i><0.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>0.4</i>	<i>ug/L</i>		

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

Approved By: *[Signature]*

Date: *3/10/97*

OFF: (505) 325-5667



LAB: (505) 325-1536

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 6-Mar-97

Internal QC No.: 0527-STD

Surrogate QC No.: 0528-STD

Reference Standard QC No.: 0417-QC

Method Blank

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

Calibration Check

Parameter	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20.0	18.9	5	15%
Toluene	ppb	20.0	21.0	5	15%
Ethylbenzene	ppb	20.0	20.6	3	15%
m,p-Xylene	ppb	40.0	39.6	1	15%
o-Xylene	ppb	20.0	20.4	2	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	91	90	(39-150)	1	20%
Toluene	97	95	(46-148)	1	20%
Ethylbenzene	100	98	(32-160)	1	20%
m,p-Xylene	96	94	(35-145)	1	20%
o-Xylene	98	97	(35-145)	1	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered	Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limit Percent Recovered	(70-130)		Limit Percent Recovered	(70-130)	
13779-5741	96				
13780-5743	96				
13781-5743	95				
13782-5743	96				
13783-5743	96				
13784-5743	95				

S1: Fluorobenzene

CC



CHAIN OF CUSTODY RECORD

5743

Date: 3/3/97

Page 1 of 1

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

Purchase Order No.:		Job No.	
Name	Denver Bearden		
Company	PNM Gas Services		
Address	603 W. Elm Street		
City, State, Zip	Farmington, NM 87401		
Name		Maureen Gannon	Title
Company		PNM Gas Services	
Mailing Address		Alverado Square, Mail Stop 0408	
City, State, Zip		Albuquerque, NM 87158	
Telephone No.		505-848-2974	Telefax No.

Sampling Location: Ten pletion 1E

Sampler: Mark S. Keweenaw

SAMPLE IDENTIFICATION		SAMPLE		MATRIX	PRES.	Number of Containers	RESULTS TO REPORT	Name	Maureen Gannon	Title
		DATE	TIME							
9703031200	MW-1	3/3/97		H ₂ O	Ice	2	X	X		
9703031230	MW-2					2	X	X		
9703031300	MW-3					2	X	X		
9703031330	MW-4					2	X	X		
9703031400	MW-5					2	X	X		
9703031430	MW-6					2	X	X		

Relinquished by:	3/3/97 1430	Received by:	Heidi Reese	Date/Time	3/3/97 1427
Relinquished by:		Received by:		Date/Time	
Relinquished by:		Received by:		Date/Time	
Method of Shipment:		Rush	24-48 Hours	10 Working Days	Special Instructions:
Authorized by:					Results to be sent to both parties.