

District I
P.O. Box 1980, Hobbs, NM

NEW MEXICO OIL & GAS INSPECTOR
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

PIT REMEDIATION AND CLOSURE REPORT

Approved

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

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Kaufmann #1

Location: Unit H Sec 33 T 31 N R 13 W County San Juan

Pit Type: Separator ☐ Dehydrator ☒ Other

Land Type: BLM ☐ State ☐ Fee ☒ Other No

Pit Location: Pit dimensions: length 20 ' width 20 ' depth 3 '

(Attach diagram) Reference: wellhead ☒ other

Footage from reference: 318'

Direction from reference: 20 Degrees ☒ East ☐ West of North ☒ South ☐

Depth to Ground Water:

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

Less than 50 feet (20 points)
50 feet to 99 feet (10 points)
Greater than 100 feet (0 points) 20

Wellhead Protection Area:

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

Yes (20 points)
No (0 points) 0

Distance to Surface Water:

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

Less than 200 feet (20 points)
200 feet to 1,000 feet (10 points)
Greater than 1,000 feet (0 points) 20

RANKING SCORE (TOTAL POINTS): 40

Kaufmann #1

Date Remediation Started: 2/29/96

Date Completed: 3/12/96

Remediation Method:

Excavation

X

Approx. Cubic Yard 899

(Check all appropriate sections)

Landfarmed

X

Amount Landfarmed (cubic yds)

Other

Remediation Location:

Onsite

Offsite

Langendorf #1E Sec. 34, T31N,
R13W

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

Backfill Material Location:

General Description of Remedial Action:

Excavated contaminated soil to pit sizes of 40' X 48' X 7' & 144' X 5' X 6' and landfarmed soil offsite at Langendorf #1E within a bermed area at a depth of 6" to 12". Soil was aerated by plowing/disking until soil met regulatory levels.

Ground Water Encountered:

No

Yes

Depth

4'

Final Pit Closure Sampling:

Sample Location

**

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

Sample depth

Sample date

**

Sample time

Sample Results

Benzene (ppm)

**

Total BTEX (ppm)

**

Field headspace (ppm)

TPH (ppm)

**

Method

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 October 27, 1997

SIGNATURE

PRINTED NAME
AND TITLEDenver Bearden
Administrator III

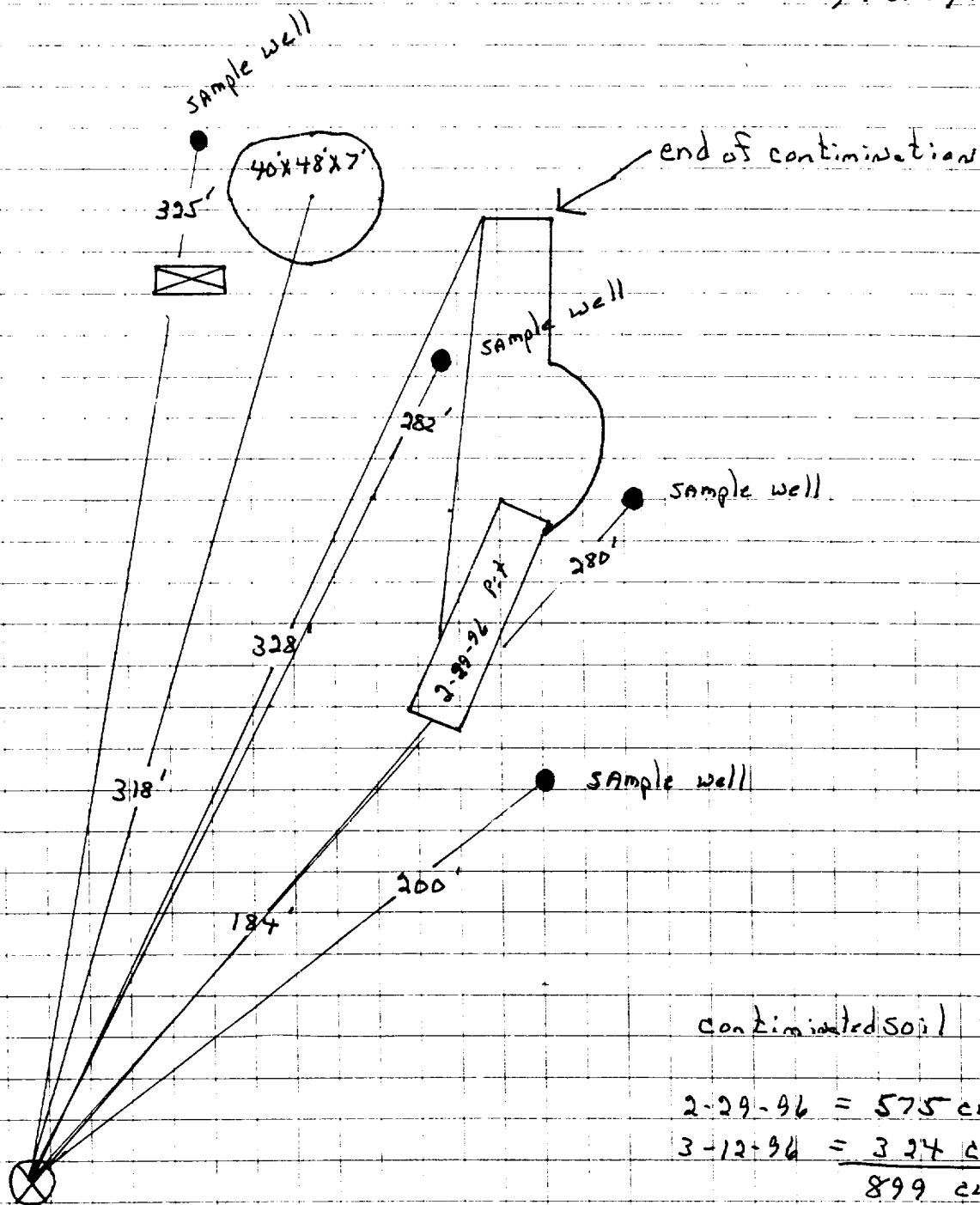
N
↑

3-12-96

Kaufman #1

Snyder Oil

Sec. 33, T31N, R13W, Unit H



contaminated soil removed

2-29-96 = 575 cubic yards

3-12-96 = 324 cubic yards

899 cubic yards

Kaufman # 1
Snyder Oil
Sec. 33, T31N, R13W

4-25-96

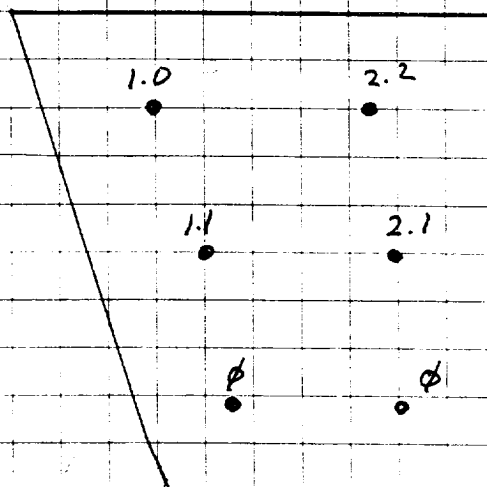
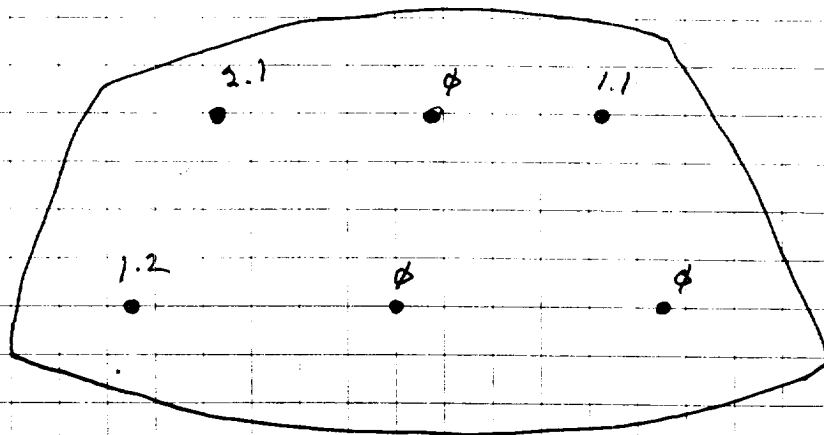
Land Farm : Langendorf # 1 E
Sec. 34, T31N, R13W

900 yds.

Composite sample # 9604250900 12 pt.

Soil vapor head-space = 46.3 ppm

2 Farms same location



Sample depths 2" - 12"

OFF: (505) 325-8786



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: *30-Apr-96*
COC No.: *4630*
Sample No. *10742*
Job No. *2-1000*

Project Name: ***PNM Gas Services - Kaufman #1 (Langendorf #1-E) Land Farm***
Project Location: ***9604250900; 12pt. Composite, 2"-12" deep***
Sampled by: GC Date: *25-Apr-96* Time: *9:00*
Analyzed by: DC Date: *30-Apr-96*
Sample Matrix: *Soil*

Laboratory Analysis

<i>Analyte</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Detection Limit</i>	<i>Unit of Measure</i>
<i>Diesel Range Organics (C10 - C28)</i>	<i>78.5</i>	<i>mg/kg</i>	<i>5.0</i>	<i>mg/kg</i>

Quality Assurance Report

DRO QC No.: *0446-STD*

Calibration Check

<i>Analyte</i>	<i>Method Blank</i>	<i>Unit of Measure</i>	<i>True Value</i>	<i>Analyzed Value</i>	<i>% Diff</i>	<i>Limit</i>
<i>Diesel Range (C10 - C28)</i>	<i><5.0</i>	<i>ppm</i>	<i>2,000</i>	<i>1,913</i>	<i>4.3</i>	<i>15%</i>

Matrix Spike

<i>Analyte</i>	<i>1 - Percent Recovered</i>	<i>2 - Percent Recovered</i>	<i>Limit</i>	<i>%RSD</i>	<i>Limit</i>
<i>Diesel Range (C10-C28)</i>	<i>82</i>	<i>77</i>	<i>(70-130)</i>	<i>4</i>	<i>20%</i>

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: *JaG*
Date: *4/30/96*

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: 2nd 1997 & 3rd 1997

Operator: Synder
Sec: 33 Twn: 31 Rng: 13 Unit: H
Canyon: La Plata River

Vulnerable Class: Original
OCD Ranking: 40
Lead Agency: NMOCD

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

Activities for Previous Two Quarters (Apr. -June 1997 & July - Sept. 1997):

PNM performed groundwater monitoring at the Kaufmann 1 well site on May 29, 1997 and again on August 28, 1997. Water level measurements were taken in each of the four monitoring wells. PNM conducted groundwater sampling in all wells for chemical analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8020. Sampling was performed in strict compliance with EPA protocol. PNM hand-delivered samples to OnSite Technologies, Farmington, New Mexico.

Results for Previous Quarters (Apr. -June 1997 & July - Sept. 1997):

Figure 1 presents the Kaufmann 1 site map with BTEX analytical results to date. Results for the past two quarters indicate that BTEX concentrations in groundwater are at non-detectable or below Water Quality Control Commission (WQCC) standards.

Figures 2 and 3 provide groundwater contour maps for May 1996 and August 1997, respectively. For both quarters, groundwater flow is in a southeasterly direction beneath the site. The flow direction has shown minimal change over the course of monitoring at the site. Figure 4 presents the groundwater hydrograph (water level versus time) for the site. Water levels in all wells fell during the third quarter of this year and are consistent with water levels measured during the same period last year.

Future Actions:

Consistent with PNM's San Juan Basin Groundwater Management Plan, we request closure of the Kaufmann 1. This request is based upon the analytical data collected over the last year at the site (see figure 1). BTEX concentrations in all groundwater monitoring wells have been consistently below WQCC standards for four consecutive quarters.

Upon completion of monitoring and remedial actions, PNM will plug and abandon the four groundwater monitoring wells at the Kaufmann 1. 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.

Figure 1. Kaufmann 1 Site Map with Analytical Results
(Concentrations in ppb)

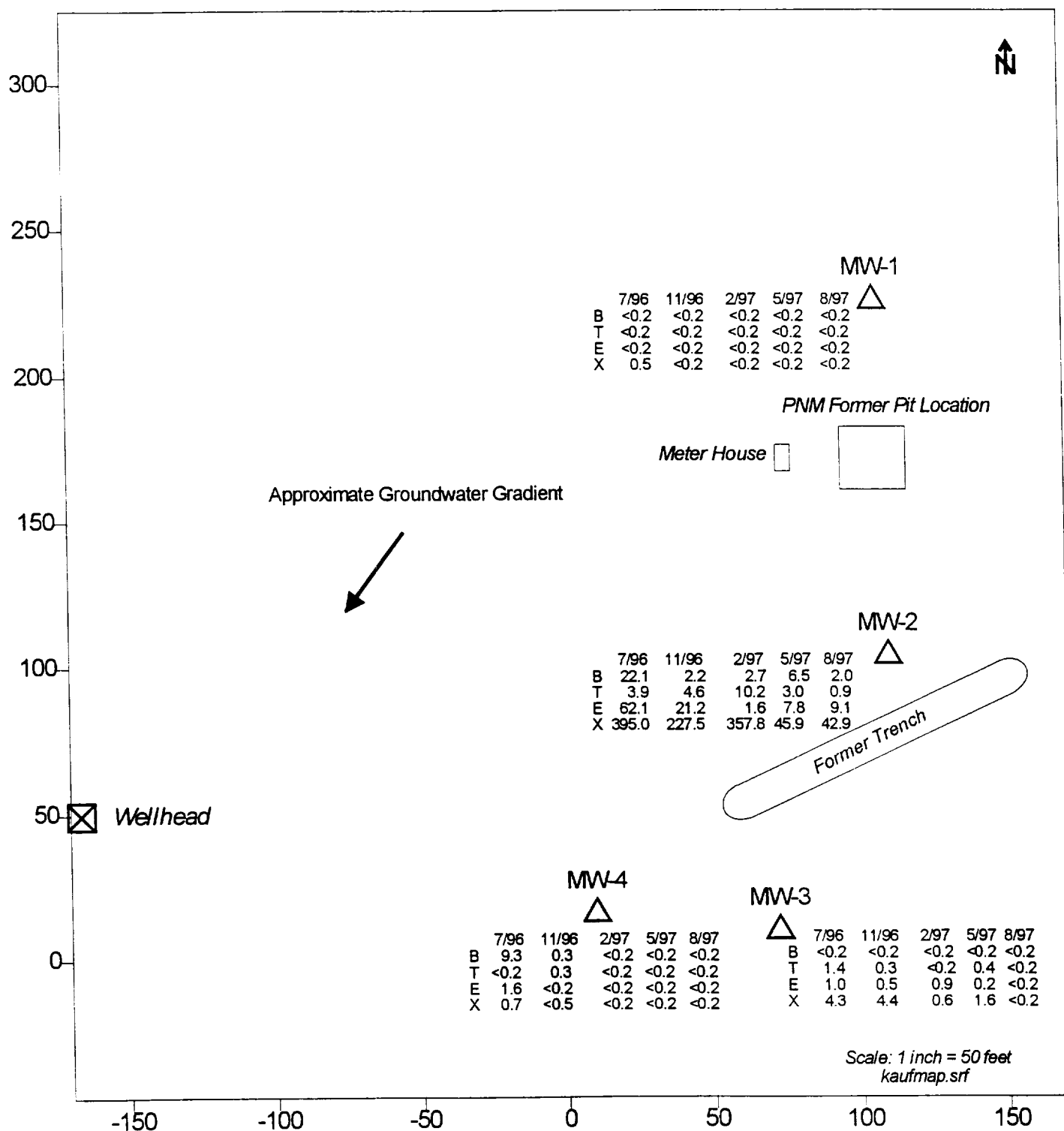


Figure 2. Kaufmann 1 Groundwater Contour Map (May 1997)

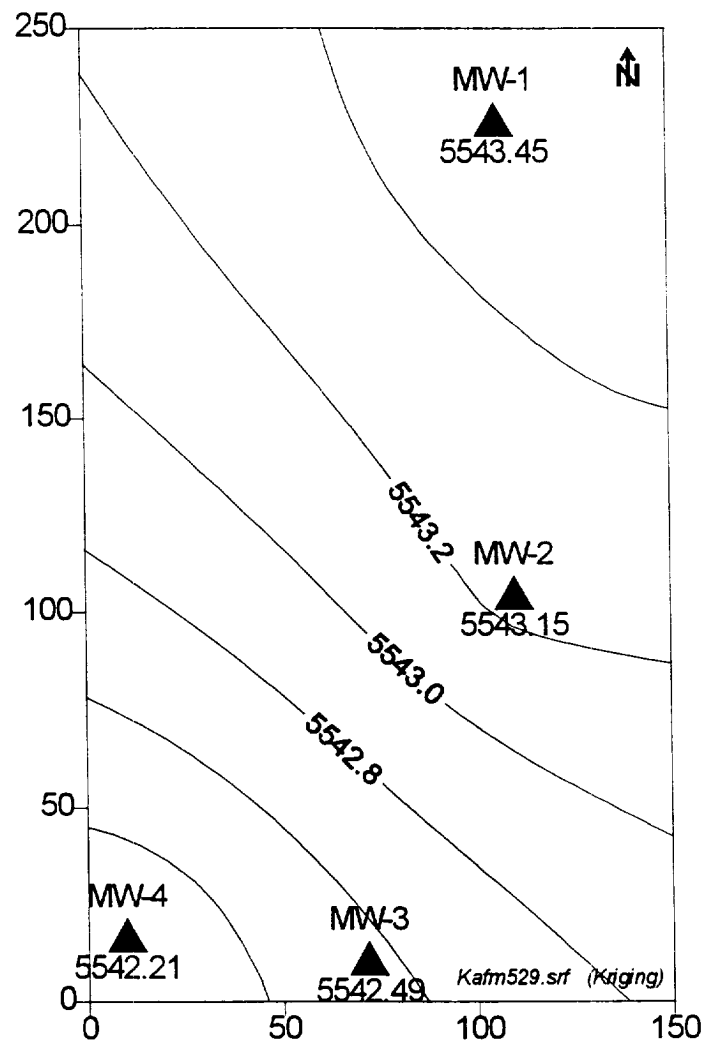


Figure 3. Kaufmann 1 Groundwater Contour Map (August 1997)

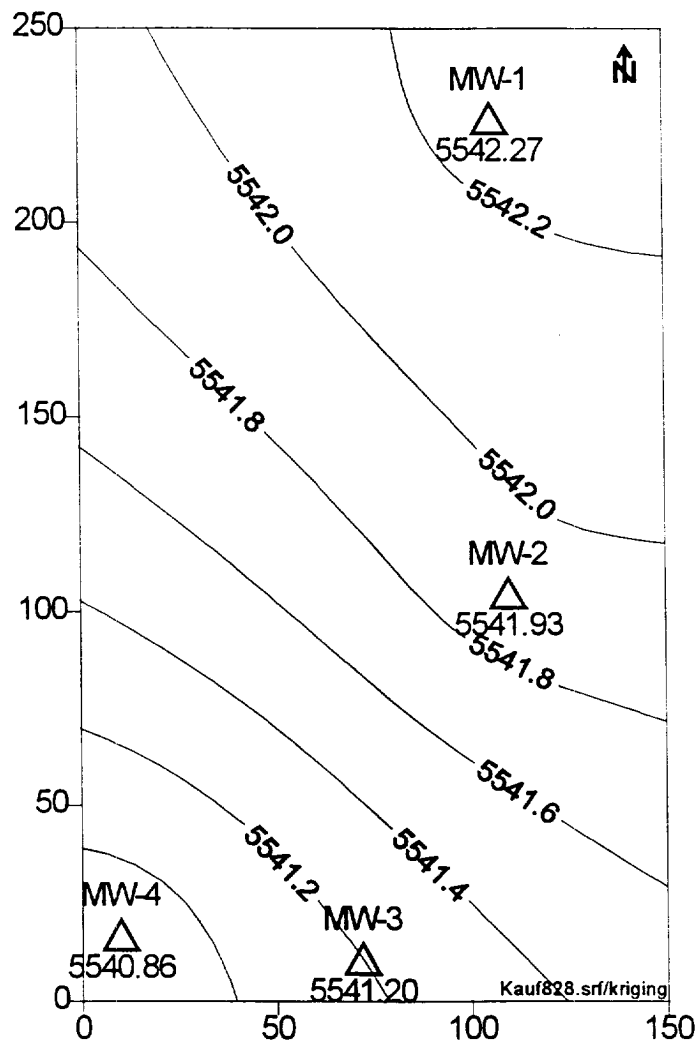
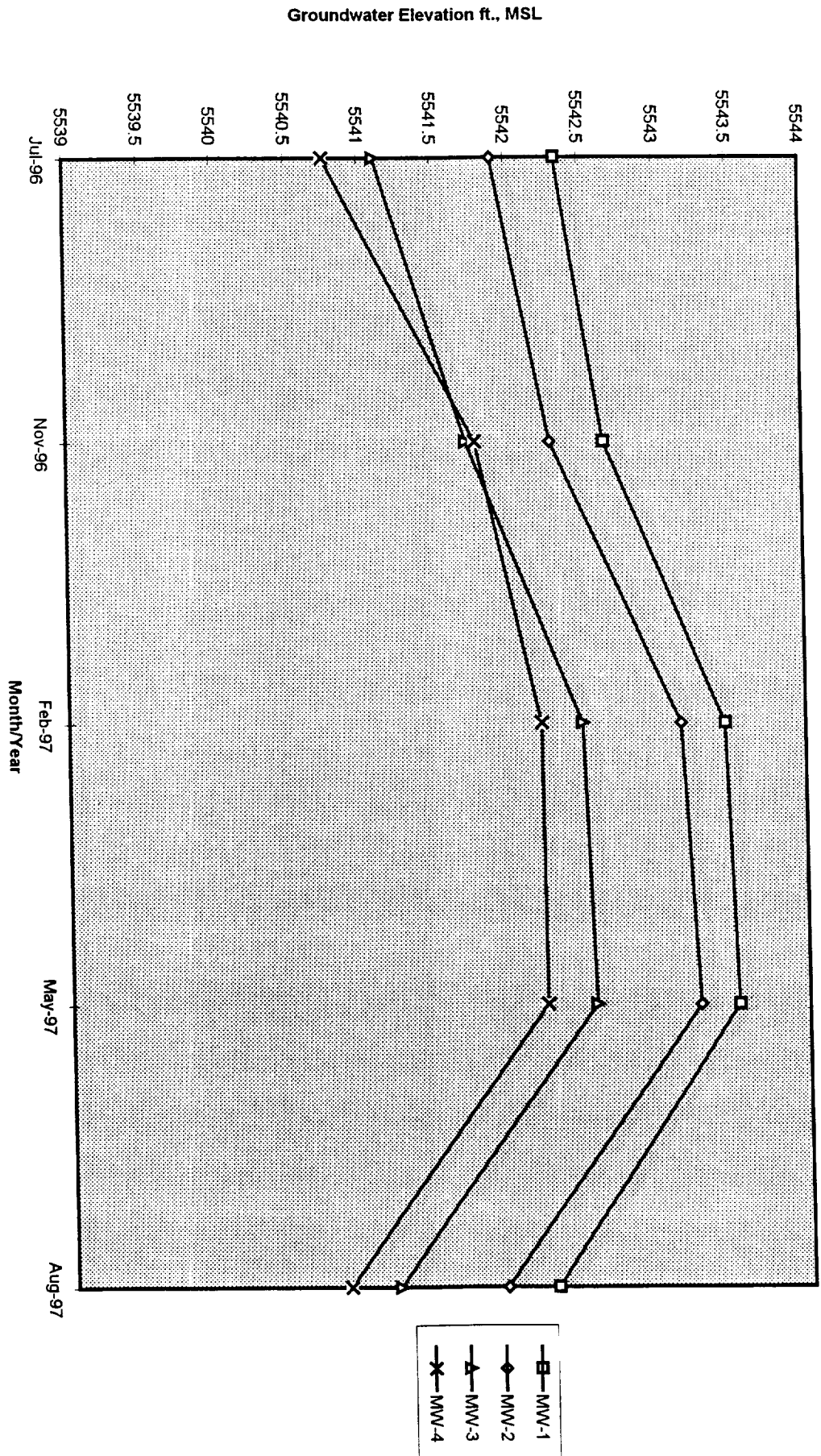


Figure 4. Kaufmann 1 Hydrograph
(Water Level vs. Time)



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: *5-Sep-97*
COC No.: *5682*
Sample No.: *16005*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Kaufmann #1*
Project Location: *9708281100; MW-1*
Sampled by: *MG/MS* Date: *28-Aug-97* Time: *11:00*
Analyzed by: *DC* Date: *3-Sep-97*
Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/L	0.2	ug/L
<i>Toluene</i>	ND	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	ND	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	ND	ug/L	0.2	ug/L
<i>o-Xylene</i>	ND	ug/L	0.2	ug/L
<i>TOTAL</i>	ND	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *9/5/97*

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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: *5-Sep-97*
COC No.: *5682*
Sample No.: *16006*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Kaufmann #1*
Project Location: *9708281130; MW-2*
Sampled by: *MG/MS* Date: *28-Aug-97* Time: *11:30*
Analyzed by: *DC* Date: *3-Sep-97*
Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>2.0</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>0.9</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>9.1</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>35.8</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>7.1</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>54.8</i>	<i>ug/L</i>		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *9/5/97*

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LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *5-Sep-97*
COC No.: *5682*
Sample No.: *16008*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Kaufmann #1*
Project Location: *9708281230; MW-3*
Sampled by: *MG/MS* Date: *28-Aug-97* Time: *12:30*
Analyzed by: *DC* Date: *3-Sep-97*
Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/L	0.2	ug/L
<i>Toluene</i>	ND	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	ND	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	ND	ug/L	0.2	ug/L
<i>o-Xylene</i>	ND	ug/L	0.2	ug/L
<i>TOTAL</i>	ND	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *9/5/97*

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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: *5-Sep-97*
COC No.: *5682*
Sample No.: *16009*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Kaufmann #1*

Project Location: *9708281300; MW-4*

Sampled by: *MG/MS*

Date: *28-Aug-97* Time: *13:00*

Analyzed by: *DC*

Date: *3-Sep-97*

Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/L	0.2	ug/L
<i>Toluene</i>	ND	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	ND	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	ND	ug/L	0.2	ug/L
<i>o-Xylene</i>	ND	ug/L	0.2	ug/L
<i>TOTAL</i>	ND	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *DC*
Date: *9/5/97*

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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: *5-Sep-97*
COC No.: *5682*
Sample No.: *16010*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Kaufmann #1*
Project Location: *9708281330; MW-5 Duplicate of MW-4*
Sampled by: *MG/MS* Date: *28-Aug-97* Time: *13:30*
Analyzed by: *DC* Date: *3-Sep-97*
Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/L	0.2	ug/L
<i>Toluene</i>	ND	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	ND	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	ND	ug/L	0.2	ug/L
<i>o-Xylene</i>	ND	ug/L	0.2	ug/L
<i>TOTAL</i>	ND	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *9/5/97*

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QUALITY ASSURANCE REPORT
for EPA Method 8020

Date Analyzed: 3-Sep-97

Internal QC No.: 0527-STD

Surrogate QC No.: 0528-STD

Reference Standard QC No.: 0529/30-QC

Method Blank

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

Calibration Check

Parameter	Unit of Measure	True Value	Analyzed Value	RPD	Limit
Benzene	ppb	20.0	19.4	3	15%
Toluene	ppb	20.0	20.3	1	15%
Ethylbenzene	ppb	20.0	20.4	2	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	RPD	Limit
Benzene	93	88	(39-150)	5	20%
Toluene	97	92	(46-148)	5	20%
Ethylbenzene	97	93	(32-160)	4	20%
m,p-Xylene	94	90	(35-145)	5	20%
o-Xylene	96	92	(35-145)	4	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)	
16005-5682	97				
16006-5682	94				
16008-5682	96				
16009-5682	97				
16010-5682	96				
				HLK 9/5/97	(DC) 9/5/97

S1: Fluorobenzene



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

CHAIN OF CUSTODY RECORD

5682

Date: 8/28/97

Page 1 of 1

Purchase Order No.:		Job No.	
Name: Denver Bearden		Name: Maureen Gannon	
Company: PNM Gas Services		Company: PNM Gas Services	
Address: 603 W. Elm Street		Mailing Address: Alverado Square, Mail Stop 0408	
City, State, Zip: Farmington, NM 87401		City, State, Zip: Albuquerque, NM 87158	
Sampling Location: Kaufman #1		Telephone No.: 505-848-2974	
Sampler: MS. MG.		Telefax No.:	
SEND INVOICE TO		RESULTS TO	
SAMPLE IDENTIFICATION		ANALYSIS REQUESTED	
DATE	TIME	MATRIX	PRES.
9708281100		H ₂ O	HCL
9708281130			
9708281200			
9708281230			
9708281300			
9708281330			
Number of Containers		LAB ID	
2		1605-5682	
2		1606-	
2		(60) 8/28/97 1607-	
2		1608-	
2		1609-	
2		1610-	
Date/Time		Received by:	
9/28/97 1555		DGL	
Date/Time		Received by:	
Date/Time		Received by:	
Method of Shipment:		10 Working Days	
Authorized by:		24-48 Hours	
Date: <u>8/28/97</u>		Special Instructions:	
		Results to be sent to both parties.	

Distribution: White - On Site Yellow - LAB 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: *10-Jun-97*
COC No.: *5561*
Sample No.: *14784*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Kaufmann 1*
Project Location: *9705291030; MW-1*
Sampled by: *MG/MS*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *29-May-97* Time: *10:30*
Date: *3-Jun-97*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/L	0.2	ug/L
<i>Toluene</i>	ND	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	ND	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	ND	ug/L	0.2	ug/L
<i>o-Xylene</i>	ND	ug/L	0.2	ug/L
<i>TOTAL</i>	ND	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *6/11/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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: *10-Jun-97*
COC No.: *5561*
Sample No.: *14785*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Kaufmann 1*
Project Location: *9705291100; MW-2*
Sampled by: *MG/MS*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *29-May-97* Time: *11:00*
Date: *3-Jun-97*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>6.5</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>3.0</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>7.8</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>40.2</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>5.7</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>63.2</i>	<i>ug/L</i>		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *6/11/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT

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: *11-Jun-97*
COC No.: *5561*
Sample No.: *14786*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Kaufmann 1*
Project Location: *9705291130; MW-3*
Sampled by: *MG/MS*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *29-May-97* Time: *11:30*
Date: *4-Jun-97*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/L	0.2	ug/L
<i>Toluene</i>	0.4	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	0.2	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	1.2	ug/L	0.2	ug/L
<i>o-Xylene</i>	0.4	ug/L	0.2	ug/L
<i>TOTAL</i>	2.3	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *6/11/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

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: 10-Jun-97
COC No.: 5561
Sample No.: 14787
Job No.: 2-1000

Project Name: *PNM Gas Services - Kaufmann 1*

Project Location: *9705291200; MW-4*

Sampled by: *MG/MS*

Date: 29-May-97 Time: 12:00

Analyzed by: *DC*

Date: 3-Jun-97

Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/L	0.2	ug/L
<i>Toluene</i>	ND	ug/L	0.2	ug/L
<i>Ethylbenzene</i>	ND	ug/L	0.2	ug/L
<i>m,p-Xylene</i>	ND	ug/L	0.2	ug/L
<i>o-Xylene</i>	ND	ug/L	0.2	ug/L
<i>TOTAL</i>	ND	ug/L		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*

Date: *6/11/97*

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LAB: (505) 325-1556

ANALYTICAL REPORT

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

Date: *10-Jun-97*
COC No.: *5561*
Sample No.: *14788*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Kaufmann 1*
Project Location: *9705291230; MW-5 Duplicate of MW-2*
Sampled by: *MG/MS* Date: *29-May-97* Time: *12:30*
Analyzed by: *DC* Date: *3-Jun-97*
Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>5.6</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Toluene</i>	<i>2.7</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>6.5</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>32.3</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>4.6</i>	<i>ug/L</i>	<i>0.2</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>51.8</i>	<i>ug/L</i>		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*
Date: *6/11/97*

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TECHNOLOGIES, LTD. PHONE: (505) 325-5667 FAX: (505) 325-1556

OFF: (505) 325-5667



LAB: (505) 325-1556

QUALITY ASSURANCE REPORT
for EPA Method 8020

Date Analyzed: 3-Jun-97

Internal QC No.: 0527-STD

Surrogate QC No.: 0528-STD

Reference Standard QC No.: 0529/30-QC

Method Blank

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

Calibration Check

Parameter	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20.0	21.2	6	15%
Toluene	ppb	20.0	21.9	10	15%
Ethylbenzene	ppb	20.0	22.3	11	15%
m,p-Xylene	ppb	40.0	42.5	6	15%
o-Xylene	ppb	20.0	22.0	10	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	92	92	(39-150)	0	20%
Toluene	96	96	(46-148)	0	20%
Ethylbenzene	96	97	(32-160)	0	20%
m,p-Xylene	91	92	(35-145)	0	20%
o-Xylene	97	98	(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)	
14784-5561	96				
14785-5561	94				
14786-5561	96				
14788-5561	93				
				74%	(12%)
				6/11/97	6/11/97

S1: Fluorobenzene

ON SITE
TECHNOLOGIES, LTD.

QUALITY ASSURANCE REPORT

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

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

<i>Parameter</i>	<i>Unit of Measure</i>	<i>True Value</i>	<i>Analyzed Value</i>	<i>% Diff</i>	<i>Limit</i>
<i>Benzene</i>	ppb	20.0	21.4	7	15%
<i>Toluene</i>	ppb	20.0	22.2	11	15%
<i>Ethylbenzene</i>	ppb	20.0	22.7	14	15%
<i>m,p-Xylene</i>	ppb	40.0	43.2	8	15%
<i>o-Xylene</i>	ppb	20.0	22.5	12	15%

<i>Parameter</i>	<i>1 - Percent Recovered</i>	<i>2 - Percent Recovered</i>	<i>Limit</i>	<i>%RSD</i>	<i>Limit</i>
<i>Benzene</i>	90	81	(39-150)	3	20%
<i>Toluene</i>	99	94	(46-148)	3	20%
<i>Ethylbenzene</i>	100	96	(32-160)	3	20%
<i>m,p-Xylene</i>	95	91	(35-145)	3	20%
<i>o-Xylene</i>	98	94	(35-145)	3	20%

	S1 Percent Recovered	S2 Percent Recovered		S1 Percent Recovered	S2 Percent Recovered
Laboratory Identification			Laboratory Identification		
Limit Percent Recovered	(70-130)		Limit Percent Recovered	(70-130)	
14786-5561	98				
				JLR	(12)
				6/11/97	6/11/97

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