

3R - 326

REPORTS

DATE:

Oct. 28, 1997

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

October 28, 1997



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

RECEIVED

OCT 30 1997

Subject: OCD Closure Reports
3rd Reporting Quarter, 1997

Environmental Bureau
Oil Conservation Division

Dear Mr. Olson:

PNM Gas Services is submitting closure reports to the Oil Conservation Division for the sites listed below. These sites were remediated between July 1, 1997 and September 30, 1997. Our office is also submitting one groundwater site, the Kaufmann #1 for closure.

- | | | |
|------------------------|--------------------------|------------------------|
| 1. Breech #228 | 24. Breech C #244E | 47. Breech E #54 |
| 2. Breech #258 | 25. Breech C #244E Drip | 48. Breech E #85 |
| 3. Breech #854 | 26. Breech C #247 | 49. Breech E #87 |
| 4. Breech A #129 | 27. Breech C #248 | 50. Breech E #89E Drip |
| 5. Breech A #131 | 28. Breech C #299 | 51. Breech E #99 |
| 6. Breech A #132 | 29. Breech C #301 | 52. Breech F #40 |
| 7. Breech A #132E | 30. Breech C #323D | 53. Reuter #297 |
| 8. Breech A #136E | 31. Breech C #323E Drip | 54. Reuter #321 |
| 9. Breech A #173 | 32. Breech C #328 | 55. Reuter D #343 |
| 10. Breech A #175 | 33. Breech C #389 | 56. Scott C #1 |
| 11. Breech A #179 | 34. Breech C #389E | 57. State A #113 |
| 12. Breech A #181 | 35. Breech C #744 | 58. State A #268E Drip |
| 13. Breech A #183 | 36. Breech D #140 | 59. State Com C #235R |
| 14. Breech A #625E | 37. Breech D #140 Drip | |
| 15. Breech A #675 | 38. Breech D #185 | |
| 16. Breech A #682 Drip | 39. Breech D #212 | |
| 17. Breech A #729 | 40. Breech D #237 | |
| 18. Breech B #172 | 41. Breech D #239 | |
| 19. Breech B #196 | 42. Breech D #240 E Drip | |
| 20. Breech C #141 | 43. Breech D #342 | |
| 21. Breech C #189 | 44. Breech D #345 | |
| 22. Breech C #216 | 45. Breech D #685E | |
| 23. Breech C #244 | 46. Breech E #117 | |

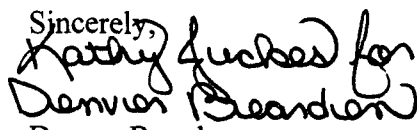
Page 2 of 2
October 28, 1997

In addition PNM Gas Services is filing closure for the following Jicarilla Apache Locations:

- | | | |
|-------------------------------|-------------------------------------|---------------------------|
| 1. 12-11-01 Drip | 27. Jicarilla Apache 102 #22 | 52. Jicarilla G #10 |
| 2. 12-11-02 Drip | 28. Jicarilla Apache 102 #23 | 53. Jicarilla G #10 Drip |
| 3. 12-11-03 Drip | 29. Jicarilla Apache 102 #23 Drip | 54. Jicarilla G #10M |
| 4. 12-11-04 Drip | 30. Jicarilla Apache 102 #25 | 55. Jicarilla G #10M Drip |
| 5. 12-11-05 Drip | 31. Jicarilla Apache 102 #26 | 56. Jicarilla G #11 |
| 6. 12-11-06 Drip | 32. Jicarilla Apache 102 #29A | 57. Jicarilla G #11 Drip |
| 7. Axi Apache K #6 | 33. Jicarilla Apache 102 #3 | 58. Jicarilla G #12 |
| 8. Axi Apache K #6 Drip | 34. Jicarilla Apache 102 #30A | 59. Jicarilla G #12 Drip |
| 9. Axi Apache K #6A | 35. Jicarilla Apache 102 #4 | 60. Jicarilla G #1A |
| 10. Axi Apache K-1 #1 | 36. Jicarilla Apache 102 #4A | 61. Jicarilla G #1E |
| 11. Axi Apache K-1 #2 | 37. Jicarilla Apache 102 #5 | 62. Jicarilla G #1E Drip |
| 12. Axi Apache K-1A Drip | 38. Jicarilla Apache 102 #5A | 63. Jicarilla G #2R |
| 13. Huron #1 | 39. Jicarilla Apache 102 #6 | 64. Jicarilla G #3 |
| 14. Huron #2E | 40. Jicarilla Apache 102 #6 Drip | 65. Jicarilla G #4A Drip |
| 15. Huron #3 | 41. Jicarilla Apache Tribal #151-2 | 66. Jicarilla G #4E |
| 16. Huron #4 | 42. Jicarilla Apache Tribal #151-3E | 67. Jicarilla G #5M |
| 17. Huron #4E MM | 43. Jicarilla Apache Tribal #151-4E | 68. Jicarilla G #5M Drip |
| 18. Jicarilla 101 #8 Drip | 44. Jicarilla Apache Tribal #151-5E | 69. Jicarilla G #7 |
| 19. Jicarilla 103 #12 | 45. Jicarilla Apache Tribal #151-6 | 70. Jicarilla G #7R Drip |
| 20. Jicarilla 103 #9 | 46. Jicarilla Apache Tribal #151-8 | 71. Jicarilla G #9 |
| 21. Jicarilla Apache 102 #15 | 47. Jicarilla C #1A | 72. Jicarilla G #9 Drip |
| 22. Jicarilla Apache 102 #15A | 48. Jicarilla C #3 | 73. Jicarilla G #9A |
| 23. Jicarilla Apache 102 #18 | 49. Jicarilla C #4 | 74. Jicarilla G #9A Drip |
| 24. Jicarilla Apache 102 #19 | 50. Jicarilla C #5 | 75. Jicarilla G #9E |
| 25. Jicarilla Apache 102 #2 | 51. Jicarilla E #9 | 76. Jicarilla G #9E Drip |
| 26. Jicarilla Apache 102 #21 | | |

We have noted the change in sampling procedures which you outlined in your letter dated October 14, 1997. We initiated changes in our procedures effective on the date your letter was received.

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

Sincerely,

Denver Bearden
Administrator III

cc: Denny Foust
BLM - Farmington
Williams Field Services

Kaufmann #1

Date Remediation Started: 2/29/96

Date Completed: 3/12/96

Remediation Method:

Excavation ☒

Approx. Cubic Yard 899

(Check all appropriate sections)

Landfarmed ☒

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)

** - Soil samples not taken.
See groundwater report.

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

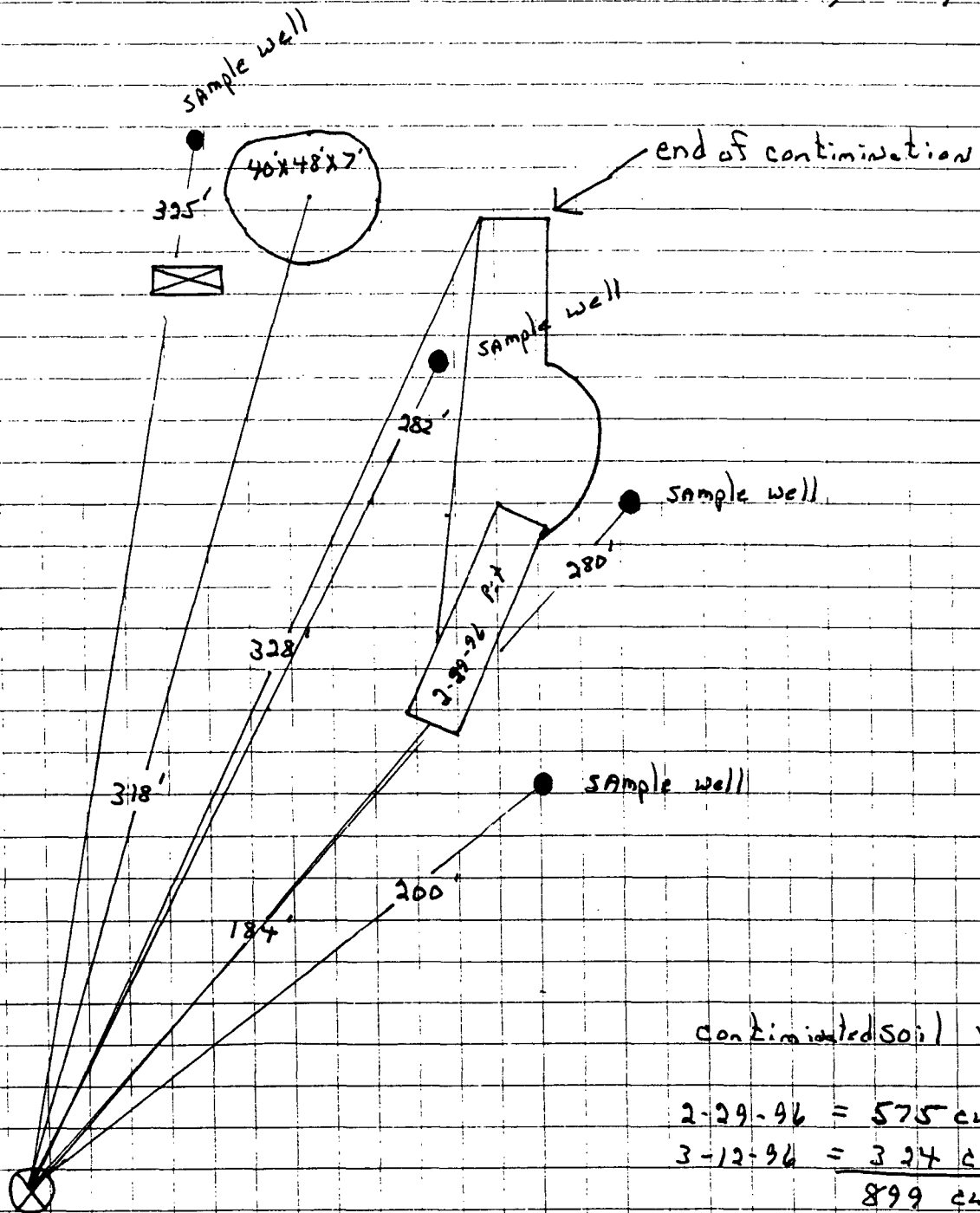
N
↑

3-12-96

Kaufman #1

Snyder Oil

Sec. 33, T31N, R13W, Unit H



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

4-25-96

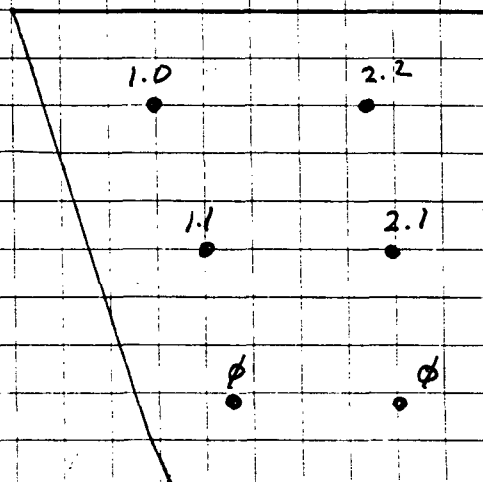
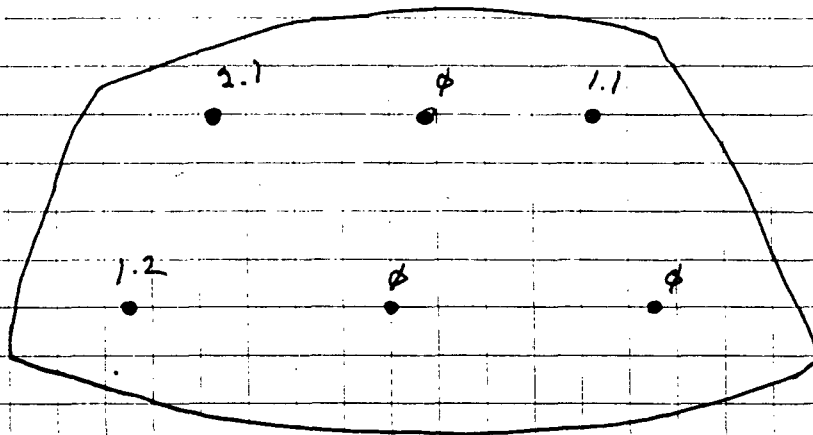
Land Farm : Langendorf #1E
Sec. 34, T31N, R13W

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)

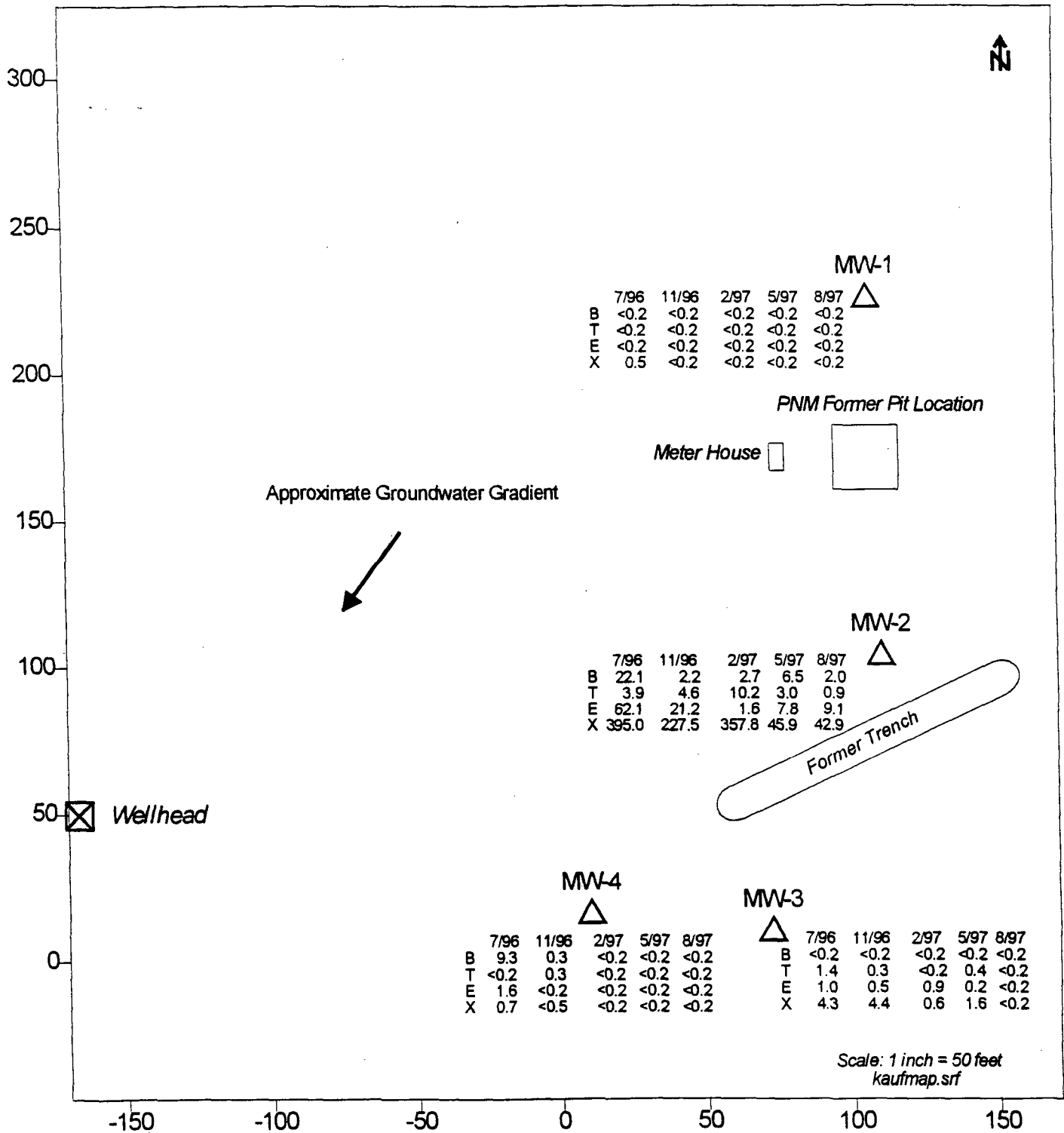


Figure 2. Kaufmann 1 Groundwater Contour Map (May 1997)

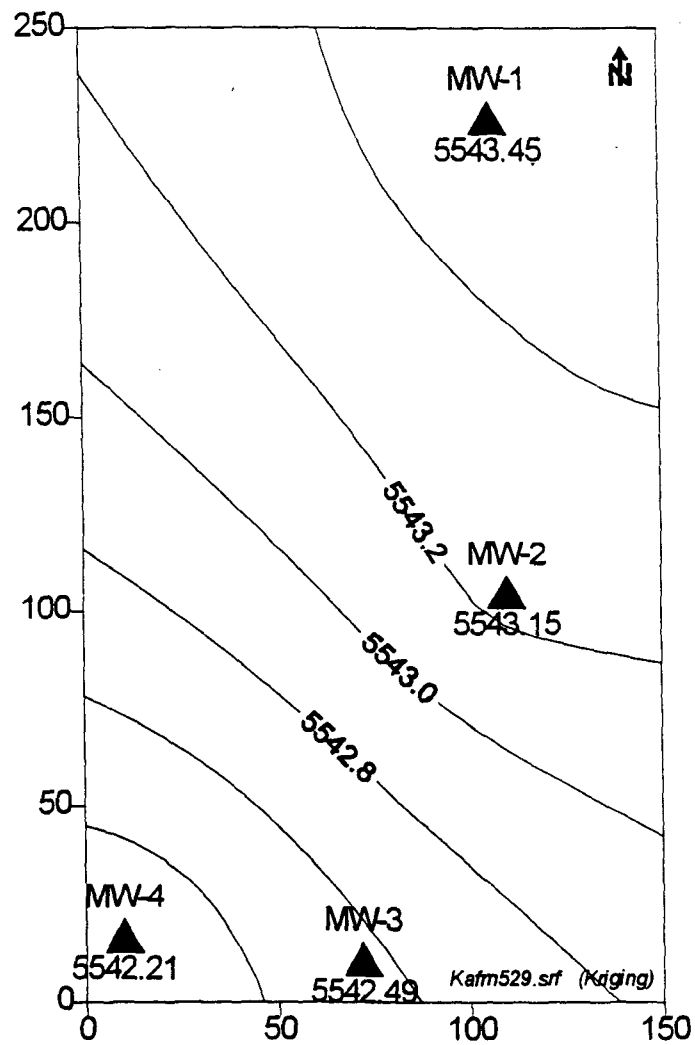


Figure 3. Kaufmann 1 Groundwater Contour Map (August 1997)

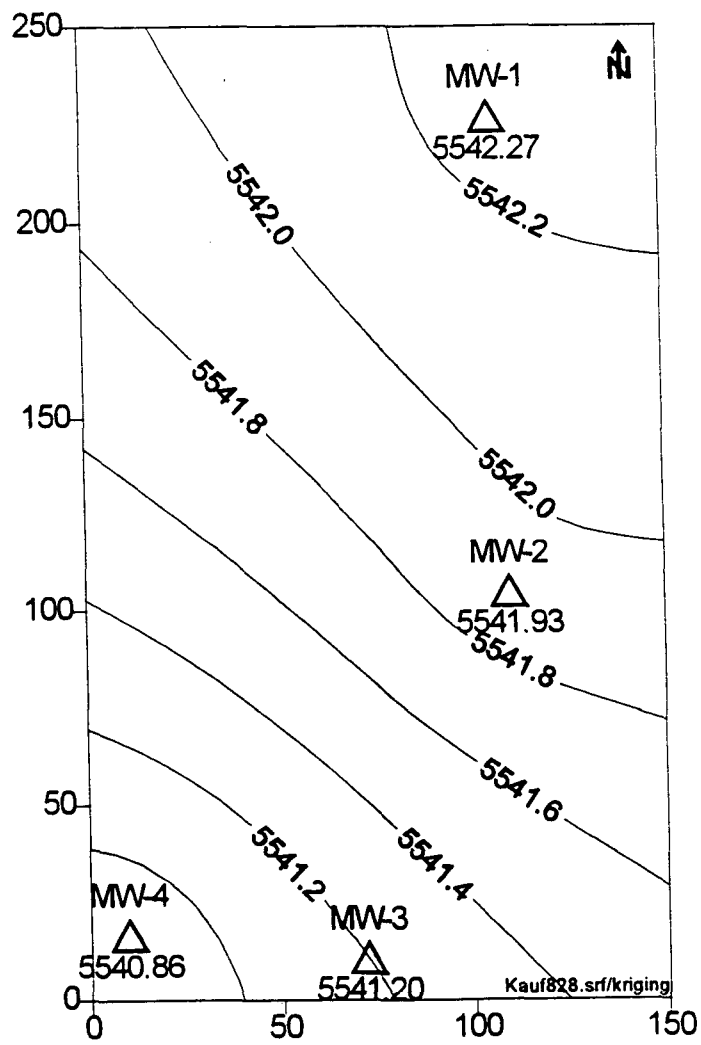
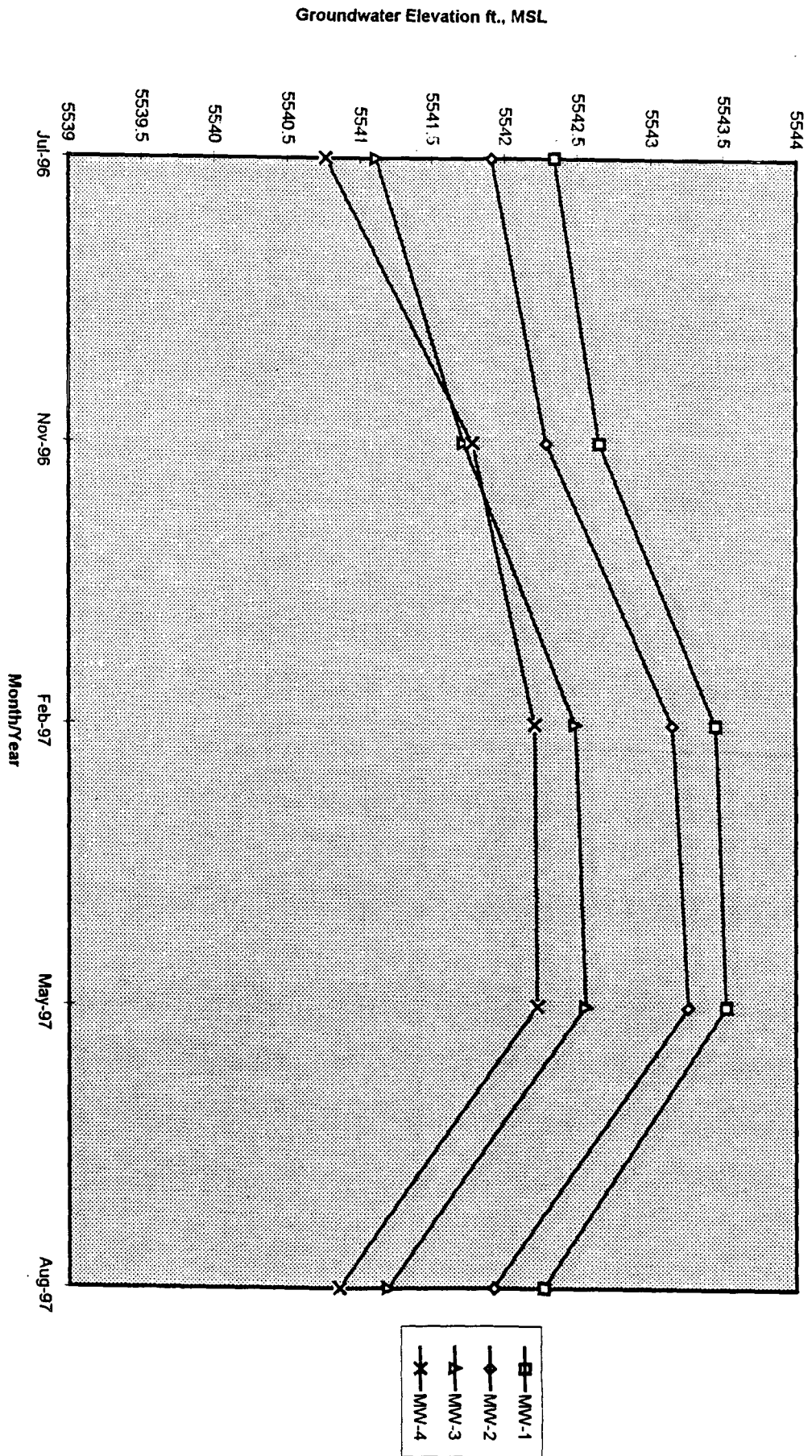


Figure 4. Kaufmann 1 Hydrograph
(Water Level vs. Time)



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*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

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*

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: *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*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

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*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *28-Aug-97* Time: *13:00*
Date: *3-Sep-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: *9/5/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1536

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*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INTEGRATED WITH THE QUALITY SYSTEM -

CHAIN OF CUSTODY RECORD

5682

Date: 8/28/97

Page 1 of 1

TECHNOLOGIES, LTD.

[illegible]

Distribution: White - On Site	Yellow - AB	Pink - Sampler	Goldenrod - Client
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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: *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* Date: *29-May-97* Time: *10:30*
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>	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*

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

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>	<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* Date: *29-May-97* Time: *11:30*
Analyzed by: *DC* Date: *4-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>	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
TOTAL	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

- 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.: *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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- 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.: *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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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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				
				411	(12)
				6/11/97	6/11/97

S1: Fluorobenzene

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

for EPA Method 8020

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

<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%

Matrix Spike

<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%

Surrogate Recoveries

	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				
				2/R	(m)
				6/11/97	6/11/97

S1: Flourobenezene

