

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

April 2, 1998

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

APR 03 1998
Oil Conservation Division



RE: 1998 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT

Dear Bill:

PNM is pleased to submit the 1998 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.

Cozzens B1
Dogie Compressor Station East Pit
Dogie Compressor Station North Pit
Florance 32A
Florance Z 40 M
Florance 44
Florance 47X
Florance 124
Hampton 4M
Honolulu Loop Line Drip
Ice Canyon Drip
Jacques 2A
Mangum 1E
McClanahan 22
McClanahan A2E
McCoy Gas Com A1
Miles Federal 1E
Miles Federal 1E Drip
Randleman 1
Reid 16 Drip
Sammons 2
Turner 1A
Turner 3
Zachry 18E

PNM 1998 Groundwater Report

PNM plans to request closure of two of the above sites, the Cozzens B1 and the Sammons 2, in our April 30, 1998 filing of the San Juan Pit Closure Reports to the OCD Santa Fe office. If you have any questions regarding the contents of the report, please contact me at (505) 241-2974.

Sincerely,



Maureen Gannon
Project Manager

Attachment

cc: Ingrid Deklau, WFS
Denny Foust, OCD-Aztec Office
Bill VonDrehle, WFS

PNM 1998 Groundwater Report

bcc: Colin Adams (w/o analytical results)
Kathy Jukes
Ron Johnson (w/o analytical results)
Mark Sikelianos

Groundwater Site Summary Report

Quarter/Year: 2nd/97, 3rd/97, 4th/97 and 1st/98

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

Operator: Burlington Resources
Sec: 13 **Twn:** 30N **Rng:** 11W **Unit:** D
Canyon: Hampton Arroyo

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

PNM has prepared and submitted to the OCD a site summary report detailing the activities, results and further actions at the Hampton 4M under separate cover. The report is titled, "Hampton 4M Free Product and Groundwater Contamination," and dated March 31, 1998.

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

Hampton 4M

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: 23-Jan-98
COC No.: 7086
Sample No.: 17304
Job No.: 2-1000

Project Name: *PNM Gas Services - Hampton 4M*
Project Location: *9801121030; MW-1*
Sampled by: *MS/MG/RD/RB*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: 12-Jan-98 Time: 10:30
Date: 21-Jan-98

| Parameter | Results as Received | Unit of Measure | Limit of Quantitation | Unit of Measure |
|---------------------|---------------------|-----------------|-----------------------|-----------------|
| <i>Benzene</i> | 4.3 | ug/L | 0.2 | ug/L |
| <i>Toluene</i> | 3.3 | ug/L | 0.2 | ug/L |
| <i>Ethylbenzene</i> | 0.2 | ug/L | 0.2 | ug/L |
| <i>m,p-Xylene</i> | 0.7 | ug/L | 0.2 | ug/L |
| <i>o-Xylene</i> | 0.3 | ug/L | 0.2 | ug/L |
| TOTAL | 8.8 | 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: 1/23/98

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: *23-Jan-98*
COC No.: *7086*
Sample No.: *17305*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Hampton 4M*Project Location: *9801121100; MW-3*Sampled by: *MS/MG/RD/RB*Date: *12-Jan-98* Time: *11:00*Analyzed by: *DC*Date: *21-Jan-98*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: *1/23/98*

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: *23-Jan-98*
COC No.: *7086*
Sample No.: *17306*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Hampton 4M*
Project Location: *9801121130; MW-4*
Sampled by: *MS/MG/RD/RB*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *12-Jan-98* Time: *11:30*
Date: *21-Jan-98*

| Parameter | Results as Received | Unit of Measure | Limit of Quantitation | Unit of Measure |
|---------------------|---------------------|-----------------|-----------------------|-----------------|
| <i>Benzene</i> | <i>1251</i> | <i>ug/L</i> | <i>2</i> | <i>ug/L</i> |
| <i>Toluene</i> | <i>6</i> | <i>ug/L</i> | <i>2</i> | <i>ug/L</i> |
| <i>Ethylbenzene</i> | <i>81</i> | <i>ug/L</i> | <i>2</i> | <i>ug/L</i> |
| <i>m,p-Xylene</i> | <i>24</i> | <i>ug/L</i> | <i>2</i> | <i>ug/L</i> |
| <i>o-Xylene</i> | <i>ND</i> | <i>ug/L</i> | <i>2</i> | <i>ug/L</i> |
| <i>TOTAL</i> | <i>1361</i> | <i>ug/L</i> | | |

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Approved By: *[Signature]*
Date: *1/23/98*

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ANALYTICAL REPORT

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

Date: *23-Jan-98*
COC No.: *7086*
Sample No.: *17307*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Hampton 4M*
Project Location: *9801121200; MW-5*
Sampled by: *MS/MG/RD/RB*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *12-Jan-98* Time: *12:00*
Date: *21-Jan-98*

| Parameter | Results as Received | Unit of Measure | Limit of Quantitation | Unit of Measure |
|---------------------|---------------------|-----------------|-----------------------|-----------------|
| <i>Benzene</i> | <i>7521</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>Toluene</i> | <i>11213</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>Ethylbenzene</i> | <i>779</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>m,p-Xylene</i> | <i>6762</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>o-Xylene</i> | <i>1674</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>TOTAL</i> | <i>27950</i> | <i>ug/L</i> | | |

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ANALYTICAL REPORT

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

Date: *23-Jan-98*
COC No.: *7086*
Sample No.: *17308*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Hampton 4M*
Project Location: *9801121230; MW-7*
Sampled by: *MS/MG/RD/RB*
Analyzed by: *DC*
Sample Matrix: *Liquid*

Date: *12-Jan-98* Time: *12:30*
Date: *21-Jan-98*

| Parameter | Results as Received | Unit of Measure | Limit of Quantitation | Unit of Measure |
|---------------------|---------------------|-----------------|-----------------------|-----------------|
| <i>Benzene</i> | <i>780</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>Toluene</i> | <i>246</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>Ethylbenzene</i> | <i>258</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>m,p-Xylene</i> | <i>3204</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>o-Xylene</i> | <i>738</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>TOTAL</i> | <i>5227</i> | <i>ug/L</i> | | |

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Approved By: *[Signature]*
Date: *1/23/98*

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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: *23-Jan-98*
COC No.: *7086*
Sample No.: *17309*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Hampton 4M*
Project Location: *9801121300; MW-8*
Sampled by: *MS/MG/RD/RB* Date: *12-Jan-98* Time: *13:00*
Analyzed by: *DC* Date: *21-Jan-98*
Sample Matrix: *Liquid*

| Parameter | Results as Received | Unit of Measure | Limit of Quantitation | Unit of Measure |
|---------------------|---------------------|-----------------|-----------------------|-----------------|
| <i>Benzene</i> | <i>6410</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>Toluene</i> | <i>17301</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>Ethylbenzene</i> | <i>693</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>m,p-Xylene</i> | <i>7612</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>o-Xylene</i> | <i>1785</i> | <i>ug/L</i> | <i>20</i> | <i>ug/L</i> |
| <i>TOTAL</i> | <i>33801</i> | <i>ug/L</i> | | |

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Approved By: *[Signature]*
Date: *1/23/98*

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OFF: (505) 325-5667

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ANALYTICAL REPORT

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

Date: *23-Jan-98*
COC No.: *7086*
Sample No.: *17310*
Job No.: *2-1000*

Project Name: *PNM Gas Services - Hampton 4M*
Project Location: *9801121330; MW-9*
Sampled by: *MS/MG/RD/RB* Date: *12-Jan-98* Time: *13:30*
Analyzed by: *DC* Date: *21-Jan-98*
Sample Matrix: *Liquid*

| Parameter | Results as Received | Unit of Measure | Limit of Quantitation | Unit of Measure |
|---------------------|---------------------|-----------------|-----------------------|-----------------|
| <i>Benzene</i> | <i>1252</i> | <i>ug/L</i> | <i>2</i> | <i>ug/L</i> |
| <i>Toluene</i> | <i>7</i> | <i>ug/L</i> | <i>2</i> | <i>ug/L</i> |
| <i>Ethylbenzene</i> | <i>80</i> | <i>ug/L</i> | <i>2</i> | <i>ug/L</i> |
| <i>m,p-Xylene</i> | <i>23</i> | <i>ug/L</i> | <i>2</i> | <i>ug/L</i> |
| <i>o-Xylene</i> | <i>ND</i> | <i>ug/L</i> | <i>2</i> | <i>ug/L</i> |
| <i>TOTAL</i> | <i>1362</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: *1/23/98*

OFF: (505) 325-5667



LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 21-Jan-98

Internal QC No.: 0559-STD

Surrogate QC No.: 0567-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 | 30.0 | 30.6 | 2 | 15% |
| Toluene | ppb | 30.0 | 30.8 | 3 | 15% |
| Ethylbenzene | ppb | 30.0 | 31.4 | 5 | 15% |
| m,p-Xylene | ppb | 60.0 | 59.7 | 0 | 15% |
| o-Xylene | ppb | 30.0 | 31.1 | 4 | 15% |

Matrix Spike

| Parameter | 1 - Percent Recovered | 2 - Percent Recovered | Limit | RPD | Limit |
|--------------|-----------------------|-----------------------|----------|-----|-------|
| Benzene | 102 | 92 | (39-150) | 2 | 20% |
| Toluene | 108 | 105 | (46-148) | 2 | 20% |
| Ethylbenzene | 108 | 105 | (32-160) | 3 | 20% |
| m,p-Xylene | 104 | 102 | (35-145) | 3 | 20% |
| o-Xylene | 110 | 107 | (35-145) | 2 | 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) | |
| 17304-7086 | 101 | | 17310-7086 | 100 | |
| 17305-7086 | 102 | | | | |
| 17306-7086 | 100 | | | | |
| 17307-7086 | 100 | | | | |
| 17308-7086 | 101 | | | | |
| 17309-7086 | 101 | | | | |

S1: Fluorobenzene

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