## 3R - 331

### REPORTS

# DATE: 1998

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

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03 **1998** 

April 2, 1998

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

Cil 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 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, Mauruk

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 Juckes Ron Johnson (w/o analytical results) Mark Sikelianos

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### **Groundwater Site Summary Report**

Quarter/Year: 2<sup>nd</sup>/97, 3<sup>rd</sup>/97, 4<sup>th</sup>/97 & 1<sup>st</sup>/98

Operator: Burlington Resources Sec: 14 Twn: 28N Rng: 10W Unit: G Canyon: Armenta Copies: WFS(1) Operator (1) NMOCD District Office (1) NMOCD Santa Fe (1)

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

Topo Map: previously submitted
Well Completion Diagram: previously submitted
Site Map with Analytical Results: Figure 1
Groundwater Contour Map: Figure2 (June 1997), Figure 3 (September 1997), Figure 4 (December 1997) & Figure 5 (March 1998)
Hydrograph: Figure 6
Analytical Results: attached

### **Activities for Previous Year:**

PNM performed groundwater monitoring at the McClanahan 22 well site on June 19, September 5, December 12, 1997 and again on March 10, 1998. Water level measurements were taken in each of the four monitoring wells. PNM conducted groundwater sampling in each well for chemical analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX). All sampling was performed in strict compliance with EPA protocol. PNM delivered the samples to OnSite Technologies, Farmington, New Mexico, for analyses of BTEX using EPA Method 8020.

### **Results:**

Figure 1 provides a site map with BTEX results collected to date at the site. With the exception of MW-3, all wells contain BTEX concentrations below detection or WQCC standards. MW-3 exhibits elevated levels of xylenes.

Figure(s) 2, 3, 4 and 5 provide groundwater contour maps for June, September and December 1997 and January 1998, respectively. Groundwater beneath the site travels in a southwesterly direction. Figure 6 is a hydrograph of groundwater levels at the site. In general, water levels in the wells have risen over the 6 quarters of monitoring and all wells exhibit similar trends.

### **Further Action:**

PNM will continue to monitor groundwater gradient and perform quarterly groundwater sampling at the McClanahan 22 well site. We are also considering additional source removal at this site.

Public Service Company of New Mexico - Gas Services Environmental Services Division - Alvarado Square, MS-0408 Albuquerque, NM 87158

### **Contact: Maureen Gannon**

Telephone: 505-241-2974

PNMGS: 98gwrpt.doc

1-Apr-98



Figure 1. McClanahan 22 Site Map With Analytical Results (Concentrations in ppb)

Figure 2. McIanahan 22 Groundwater Contour Map (June 19, 1997)



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### Figure 3. McClanahan 22 Groundwater Contour Map (September 5, 1997











Figure 5. McClanahan 22 Groundwater Contour Map (March 10, 1998)





Groundwater Elevation ft., MSL





LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:                             | Denver B | earden       |                      | Date:           | 26-Jun-97 |
|-----------------------------------|----------|--------------|----------------------|-----------------|-----------|
| Company:                          | PNM Gas  | Services     |                      | COC No.:        | 5562      |
| Address:                          | 603 W. E | lm           |                      | Sample No.:     | 14999     |
| City, State: Farmington, NM 87401 |          |              | Job No.:             | 2-1000          |           |
| Project Nam                       | ne:      | PNM Gas Serv | ices - McClanahan 22 |                 |           |
| Project Loca                      | ation:   | 9706191330;  | MW-1                 |                 |           |
| Sampled by                        | :        | MG/MS        | Date:                | 19-Jun-97 Time: | 13:30     |
| Analyzed by                       | /:       | DC           | Date:                | 24-Jun-97       |           |
| Sample Mat                        | rix:     | Liquid       |                      |                 |           |

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

ND - Not Detected at Limit of Quantitation

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

Approved By: 6/26/97 Date:

### P.O. BOX 2606 • FARMINGTON, NM 87499 - TECHNOLOD, BLENDEND HER GETTE INTERTOR, II. M. 1982 -



LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:                             | Denver Be  | earden       |                       | Date:           | 26-Jun-97 |
|-----------------------------------|------------|--------------|-----------------------|-----------------|-----------|
| Company:                          | PNM Gas    | Services     |                       | COC No.:        | 5562      |
| Address:                          | 603 W. E.  | lm           |                       | Sample No.:     | 15000     |
| City, State: Farmington, NM 87401 |            |              |                       | Job No.:        | 2-1000    |
| Project Nam                       | ne:        | PNM Gas Serv | vices - McClanahan 22 |                 |           |
| Project Loca                      | ation:     | 9706191400;  | - MW-2                |                 |           |
| Sampled by                        | :          | MG/MS        | Date:                 | 19-Jun-97 Time: | 14:00     |
| Analyzed by                       | <i>ı</i> : | DC           | Date:                 | 24-Jun-97       |           |
| Sample Mat                        | rix:       | Liquid       |                       |                 |           |

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

ND - Not Detected at Limit of Quantitation

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

Approved By: shelf Date:

P.O. BOX 2606 • FARMINGTON, NM 87499 - TECHNARIA VE BEDRICHT HUMBTRY WATH THE VERY AND A SECOND



LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:        | Denver Be  | earden      |                       | Date:           | 26-Jun-97 |
|--------------|------------|-------------|-----------------------|-----------------|-----------|
| Company:     | PNM Gas    | Services    |                       | COC No.:        | 5562      |
| Address:     | 603 W. E.  | lm          |                       | Sample No.:     | 15001     |
| City, State: | Farmingto  | n, NM 87401 | Job No.:              | 2-1000          |           |
|              |            |             |                       |                 |           |
| Project Nam  | ne:        | PNM Gas Ser | vices - McClanahan 22 |                 |           |
| Project Loca | ation:     | 9706191430, | ; MW-3                |                 |           |
| Sampled by   | :          | MG/MS       | Date:                 | 19-Jun-97 Time: | 14:30     |
| Analyzed by  | <i>ı</i> : | DC          | Date:                 | 24-Jun-97       |           |
| Sample Mat   | rix:       | Liquid      |                       |                 |           |

| Parameter    | Results as<br>Received | Unit of<br>Neasure | Limit of<br>Quantitation | Unit of<br>Measure | 3-12-0 |
|--------------|------------------------|--------------------|--------------------------|--------------------|--------|
| Benzene      | 19                     | ug/L               | 4                        | ug/L               | 66.1   |
| Toluene      | 28                     | ug/L               | 4                        | ug/L               | 80.2   |
| Ethylbenzene | 582                    | ug/L               | 4                        | ug/L               | 347.5  |
| m,p-Xylene   | 2226                   | ug/L               | 4                        | ug/L               | 1392.4 |
| o-Xylene     | 312                    | ug/L               | 4                        | ug/L               | 236.7  |
| TOTAL        | 3168                   | ug/L               |                          |                    |        |

ND - Not Detected at Limit of Quantitation

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

Approved By: Date: 6/26/97

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE TURNING MEDICAL



LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:        | Denver B  | earden       |                       | Date:           | 26-Jun-97 |
|--------------|-----------|--------------|-----------------------|-----------------|-----------|
| Company:     | PNM Gas   | Services     |                       | COC No.:        | 5562      |
| Address:     | 603 W. E  | ilm          |                       | Sample No.:     | 15002     |
| City, State: | Farmingto | on, NM 87401 |                       | Job No.:        | 2-1000    |
| Project Nam  | ie:       | PNM Gas Serv | vices - McClanahan 22 |                 |           |
| Project Loca | ation:    | 9706191500;  | MW-4                  |                 |           |
| Sampled by   | :         | MG/MS        | Date:                 | 19-Jun-97 Time: | 15:00     |
| Analyzed by  | /:        | DC           | Date:                 | 24-Jun-97       |           |
| Sample Mat   | rix:      | Liquid       |                       |                 |           |

| Parameter    |       | Results as<br>Received | Unit of<br>Measure | Limit of<br>Quantitation | Unit of<br>Measure |
|--------------|-------|------------------------|--------------------|--------------------------|--------------------|
| Benzene      |       | ND                     | ug/L               | 0.2                      | ug/L               |
| Toluene      |       | ND                     | ug/L               | 0.2                      | ug/L               |
| Ethylbenzene |       | ND                     | ug/L               | 0.2                      | ug/L               |
| m,p-Xylene   |       | ND                     | ug/L               | 0 2                      | ug/L               |
| o-Xylene     |       | ND                     | ug/L               | 0.2                      | ug/L               |
|              | TOTAL | ND                     | ug/L               |                          |                    |

ND - Not Detected at Limit of Quantitation

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

Approved By: Date: ( 6/26/97

P.O. BOX 2606 • FARMINGTON, NM 87499 - TECHNOLU N. BLENDING LUDUSTRY WITH THE LINUT OF MALES



LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:                             | Denver B | earden       |                      | Date:           | 26-Jun-97 |
|-----------------------------------|----------|--------------|----------------------|-----------------|-----------|
| Company:                          | PNM Gas  | Services     |                      | COC No.:        | 5562      |
| Address:                          | 603 W. E | -Im          |                      | Sample No.:     | 15003     |
| City, State: Farmington, NM 87401 |          |              |                      | Job No.:        | 2-1000    |
| Project Nam                       | ne:      | PNM Gas Serv | ices - McClanahan 22 |                 |           |
| Project Loca                      | ation:   | 9706191530;  | MW-5                 |                 |           |
| Sampled by                        | :        | MG/MS        | Date:                | 19-Jun-97 Time: | 15:30     |
| Analyzed by                       | /:       | DC           | Date:                | 24-Jun-97       |           |
| Sample Mat                        | rix:     | Liquid       |                      |                 |           |

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

ND - Not Detected at Limit of Quantitation

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

Approved By: 6/26/97 Date:

P.O. BOX 2606 • FARMINGTON, NM 87499 - Technology Blending Industry with the Environment -



LAB: (505) 325-1556

### QUALITY ASSURANCE REPORT for EPA Method 8020

Date Analyzed: 24-Jun-97

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

Method Blank

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

Calibration Check

|              | Unit of | True  | Analyzed |        |       |
|--------------|---------|-------|----------|--------|-------|
| Parameter    | Measure | Value | Value    | % Diff | Limit |
| Benzene      | ррь     | 20.0  | 18.8     | 6      | 15%   |
| Toluene      | ррь     | 20.0  | 19.4     | 3      | 15%   |
| Ethylbenzene | ppb     | 20.0  | 21.2     | 6      | 15%   |
| m,p-Xylene   | ppb     | 40.0  | 38.4     | 4      | 15%   |
| o-Xylene     | ppb     | 20.0  | 21.9     | 10     | 15%   |

Matrix Spike

|              | 1- Percent | 2 - Percent |          |      |       |
|--------------|------------|-------------|----------|------|-------|
| Parameter    | Recovered  | Recovered   | Limit    | %RSD | Limit |
| Benzene      | 85         | 84          | (39-150) | 1    | 20%   |
| Toluene      | 85         | 91          | (46-148) | 5    | 20%   |
| Ethylbenzene | 74         | 83          | (32-160) | 4    | 20%   |
| m,p-Xylene   | 61         | 74          | (35-145) | 4    | 20%   |
| o-Xylene     | 78         | 86          | (35-145) | 5    | 20%   |

### Surrogate Recoveries

|                           | S1        | <i>S2</i> |                           | S1        | S2        |
|---------------------------|-----------|-----------|---------------------------|-----------|-----------|
|                           | Percent   | Percent   |                           | Percent   | Percent   |
| Laboratory Identification | Recovered | Recovered | Laboratory Identification | Recovered | Recovered |
| Limit Percent Recovered   | (70-130)  |           | Limit Percent Recovered   | (70-130)  |           |
| 14999-5562                | 96        |           | <u> </u>                  |           |           |
| 15000-5562                | 95        |           |                           |           |           |
| 15002-5562                | 95        |           |                           |           |           |
| 15003-5562                | 97        |           |                           |           |           |
| 15001-5562                | 96        |           |                           | JUP       | (De)      |
|                           |           |           |                           | 6/27/97   | 6/26/57   |

S1: Flourobenzene

### P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING (NOUSTON CATHERING BAND IN MARCE-



July 9, 1997

RECEIVED JUL 1 4 1997

Mr. David Cox ON SITE TECHNOLOGIES 612 East Murray Farmington, NM 87401

The following report contains analytical results for samples received at Southern Petroleum Laboratories (SPL) on June 20, 1997. The samples were assigned to Certificate of Analysis No(s).9706A10 and analyzed for the parameters specified on the chain of custody.

There were no analytical problems encountered with this group of samples and all quality control data was within acceptance limits.

If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis Number during any inquiries.

Again, SPL is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Southern Petroleum Laboratories

Ed Fry

Project Manager

8880 INTERCHANGE DR. HOUSTON, TX 77054 (713) 660-0901 500 AMBASSADOR CAFFERY PKWY. SCOTT, LA 70583-8544 (318) 237-4SPL 459 HUGHES DRIVE TRAVERSE CITY, MI 49684 (616) 947-5777 1511 E. ORANGETHORPE AVE. FULLERTON, CA 92631 (714) 447-6868





Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 97-06-A10

Approved for Release by:

Ed Fry, Project Manager

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.



8880 INTERCHANGE DR. HOUSTON, TX 77054 (713) 660-0901 500 AMBASSADOR CAFFERY PKWY. SCOTT, LA 70583-8544 (318) 237-4SPL 459 HUGHES DRIVE TRAVERSE CITY, MI 49684 (616) 947-5777 1511 E. ORANGETHORPE AVE. FULLERTON, CA 92631 (714) 447-6868 LABORATORIESCertificate of Analysis No. H9-9706A10-01

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

P.O.# 5562 07/09/97

| PROJECT: Reid 16 Drip            | PROJECT NO:    | PNM1002           |
|----------------------------------|----------------|-------------------|
| SITE: Farmington, NM             | MATRIX:        | WATER             |
| SAMPLED BY: On Site Technologies | DATE SAMPLED:  | 06/19/97 14:30:00 |
| SAMPLE ID: McClanahan 22 MW 3    | DATE RECEIVED: | 06/20/97          |

| AN                       | ALYTICAL DATA |              | <u> </u>     |       |
|--------------------------|---------------|--------------|--------------|-------|
| PARAMETER                | RESULTS       | PQL*         |              | UNITS |
| Naphthalene              | 19            | 1.0          |              | ug/L  |
| Acenaphthylene           | ND            | 1.0          |              | ug/L  |
| Acenaphthene             | ND            | 3.0          |              | ug/L  |
| Fluorene                 | ND            | 3.0          |              | ug/L  |
| Phenanthrene             | ND            | 1.0          |              | ug/L  |
| Anthracene               | ND            | 1.0          |              | ug/L  |
| Fluoranthene             | ND            | 1.0          |              | ug/L  |
| Pyrene                   | ND            | 1.0          |              | ug/L  |
| Chrysene                 | ND            | 1.0          |              | ug/L  |
| Benzo (a) anthracene     | ND            | 1.0          |              | ug/L  |
| Benzo (b) fluoranthene   | ND            | 1.0          |              | ug/L  |
| Benzo (k) fluoranthene   | ND            | 1.0          |              | ug/L  |
| Benzo (a) pyrene         | ND            | 1.0          |              | ug/L  |
| Dibenzo (a,h) anthracene | ND            | 1.0          |              | ug/L  |
| Benzo (g,h,i) perylene   | ND            | 1.0          |              | ug/L  |
| Indeno (1,2,3-cd) pyrene | ND            | 1.0          |              | ug/L  |
| 1-Methylnaphthalene      | 10            | 2.0          |              | ug/L  |
| 2-Methylnaphthalene      | 6             | 2.0          |              | ug/L  |
| SURROGATES               | AMOUNT        | 6<br>FOOVEDV | LOWER        | UPPER |
| 1 Elyeronanhthalone      | 5PIKED RI     | O «          | EV<br>TTWT.L |       |
| Dhenanthrene d-10        | 0.20  ug/L    | 0 «<br>1/7   | 50           | 150   |
| rnenanchitene d-10       | 0.20 49/1     | 11/          | 50           | 100   |

ANALYZED BY: KA DATE/TIME: 07/05/97 21:55:37 EXTRACTED BY: PC DATE/TIME: 06/23/97 08:00:00 METHOD: 8310 Polynuclear Aromatic Hydrocarbons NOTES: \* - Practical Quantitation Limit ND - Not Detected NA - Not Analyzed

• « - Recovery outside of control limits.

COMMENTS:

QUALITY ASSURANCE:These analyses are performed in accordancewith EPA guidelines for quality assurance.8880 INTERCHANGE DR.<br/>HOUSTON, TX 77054500 AMBASSADOR CAFFERY PKWY.<br/>SCOTT, LA 70583-8544459 HUGHES DRIVE1511(713) 660-0901(318) 237-4SPL(616) 947-5777(714)

1511 E. ORANGETHORPE AVE. FULLERTON, CA 92631 (714) 447-6868







ø

Units: ug/L

1970703051551 Batch Id:

PAGE

BLANK SPIKES

| S P I K E<br>C O M P O U N D S | Sample<br>Results | Spike<br>Added | Matrix | Spike    | Matrix<br>Dupli | Spike<br>cate | MS/MSD<br>Relative % | QC   | Limits(**)<br>(Advisory) |
|--------------------------------|-------------------|----------------|--------|----------|-----------------|---------------|----------------------|------|--------------------------|
|                                |                   |                | Result | Recovery | Result          | Recovery      | Difference           | RPD  |                          |
|                                | <2> <sup>.</sup>  | <3>            | <1>    | <4>      | <1>             | <5>           |                      | Max. | Recovery Range           |
| NAPHTHALENE .                  | ND                | 0.5            | 0.35   | 70.0     | 0.32            | 64.0          | 8.96                 | 30   | 33 - 122                 |
| ACENAPHTHYLENE                 | ND                | 0.5            | 0.0    | 0 *      | 0.07            | 14.0 *        | 200 *                | 30   | 42 - 138                 |
| ACENAPHTHENE                   | ND                | 0.5            | 0.32   | 64.0     | 0.29            | 58.0          | 9.84                 | 30   | 25 - 123                 |
| FLUORENE                       | ND                | 0.5            | 0.35   | 70.0     | 0.31            | 62.0          | 12.1                 | 30   | 19 - 142                 |
| PHENANTHRENE                   | ND                | 0.5            | 0.38   | 76.0     | 0.33            | 66.0          | 14.1                 | 30   | 40 - 121                 |
| ANTHRACENE                     | ND                | 0.5            | 0.18   | 36.0     | 0.20            | 40.0          | 10.5                 | 30   | 32 - 121                 |
| FLUORANTHENE                   | ND                | 0.5            | 0.39   | 78.0     | 0.34            | 68.0          | 13.7                 | 30   | 51 - 115                 |
| PYRENE                         | ND                | 0.5            | 0.39   | 78.0     | 0.35            | 70.0          | 10.8                 | 30   | 45 - 117                 |
| CHRYSENE                       | ND                | 0.5            | 0.51   | 102      | 0.45            | 90.0          | 12.5                 | 30   | 44 - 122                 |
| BENZO (A) ANTHRACENE           | ND                | 0.5            | 0.34   | 68.0     | 0.31            | 62.0          | 9.23                 | 30   | 57 - 118                 |
| BENZO (B) FLUORANTHENE         | ND                | 0.5            | 0.41   | 82.0     | 0.36            | 72.0          | 13.0                 | 30   | 62 - 121                 |
| BENZO (K) FLUORANTHENE         | ND                | 0.5            | 0.40   | 80.0     | 0.35            | 70.0          | 13.3                 | 30   | 63 - 117                 |
| BENZO (A) PYRENE               | ND                | 0.5            | 0.0    | 0 *      | 0.0             | 0 *           | 0                    | 30   | 42 - 120                 |
| DIBENZO (A,H) ANTHRACENE       | ND                | 0.5            | 0.38   | 76.0     | 0.33            | 66.0          | 14.1                 | 30   | 53 - 118                 |
| BENZO (G,H,I) PERYLENE         | ND                | 0.5            | 0.40   | 30.0     | 0.35            | 70.0          | 13.3                 | 30   | 51 - 116                 |
| INDENO (1,2,3-CD) PYRENE       | ND                | 0.5            | 0.42   | 84.0     | 0.36            | 72.0          | 15.4                 | 30   | 60 - 116                 |

### nalyst: KA

Sequence Date: 07/03/97 Method Blank File ID: Sample File ID: Blank Spike File ID: 970702B\006-0601 Matrix Spike File ID: Matrix Spike Duplicate File ID:

\* = Values Outside QC Range. \* = Data outside Method Specification limits. NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [( <1> - <2> ) / <3> ] x 100

Relative Percent Difference = | (<4> - <5> | / [(<4> + <5> ) x 0.5] x 100 (\*\*) = Source: SPL Temporary Limits

SAMPLES IN BATCH (SPL ID) :

9706958-04B 9706A10-01A



8880 INTERCHANGE DR. HOUSTON, TX 77054 (713) 660-0901

500 AMBASSADOR CAFFERY PKWY. SCOTT, LA 70583-8544 (318) 237-4SPL

459 HUGHES DRIVE TRAVERSE CITY, MI 49684 (616) 947-5777

1511 E. ORANGETHORPE AVE. FULLERTON, CA 92631 (714) 447-6868



•

### CHAIN OF CUSTODY

### AND

### SAMPLE RECEIPT CHECKLIST

|  |                    | npler Goldenrod – Client   | Pink - Sar       | Yellow –             | : White - On Site               | Distribution                             |   |
|--|--------------------|--|------------------|----------------------|---------------------------------|--|---|
| 1828 9291  |                    |  |                  |                      |                                 | y Request)                               | Clieft Signature Must Accompany         |
| 10 585 379 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |                    |  |                  | 19/97                | Date6/                          |  | huthorized by:                          |
| Special Instructions:                            | 10 Working Days    | 24-48 Hours  | Rush             |                      |                                 |  | Method of Shipment:                     |
| Date/Time  |                    | ed by:   | Receive          |                      | Date/Time                       |  | Relinquished by:                        |
| Date/Time /                                      |                    | ad by:   | Receive          |                      | Date/Time                       |  | Relinquished by:                        |
| Date/Time 4047 //00                              | LUUS               | De Principalita de la construcción de la construcci | 1 Receive        | 1nh2 152             | Date/Time &                     |  | Relinquished by:                        |
|  |                    |  |                  |                      |                                 |  |   |
|  |                    |  |                  |                      |                                 |  |   |
|  |                    |  |                  |                      |                                 |  |   |
|  |                    |  |                  |                      |                                 |  |   |
|  |                    |  |                  |                      |                                 |  |   |
|  |                    |  |                  |                      |                                 |  |   |
|  |                    |  |                  |                      |                                 |  |   |
| 15001-6435                                       |                    |  |                  | tho car              | 67 1430                         | MW3 6/19                                 | 1xc(1 ANAHAN 22 570615 1830             |
|  |                    | 'A'/ / /   |                  | MATRIX PRES          | TE TIME                         | DA                                       | ↓ SAMPLE IDENTIFICATION                 |
|  |                    | 41   |                  |                      | SAMPI F                         |  |   |
|  |                    | 1 8310   | Numbe<br>Contair |                      |                                 |  | Sampler: $M \in /M \leq$                |
|  |                    | / 0/ /   | r of<br>ners     |                      |                                 |  | Mechania Hani 22                        |
| CTED   | ANIAI VOIO DEDI IE |  |                  |                      |                                 |  | Sampling Location:                      |
| 16tax No. 505 325-6256                           | 10-2432 10         | elephone No 585 37   | R                |                      |                                 |  | City, State, Zip                        |
| 1 NM B7401                                       | t. MURPA           | Mailing Address $6/2$  | REPO             |                      | Dept.                           |  | Address                                 |
|  | SITE               | company OX   | DRT<br>TS TO     |                      | -                               |  | Name ACCOUNTS PEC                       |
| Title  | CoX                | lame カイマリリ   | 0                |                      | 1002-                           | NO. PNA                                  | <sup>1</sup> urchase Order No.: 552 Jot |
|  |                    |  |                  | m NM 87499<br>5-6256 | 06 • Farmingto<br>FAX: (505) 32 | ple • P. O. Box 26<br>: (505) 325-5667 • | TECHNOLOGIES, LTD. V 657 W. Ma<br>LAE   |
| Page of  |                    | -51/ PI  | 61               | Date:                |                                 |  | ONSITE                                  |
| 6435   | 4'IUeHIL           | RECORD   | ODY              | CUST                 |                                 | CH/                                      |   |

1

### SPL Houston Environmental Laboratory

### Sample Login Checklist

| Date: 4/20/97 | Time: 1100 |
|---------------|------------|
|---------------|------------|

SPL Sample ID:

9706AID

|    |                                       |                            | Yes       | <u>No</u> |
|----|---------------------------------------|----------------------------|-----------|-----------|
| 1  | Chain-of-Custody (COC) form is pre    | esent.                     |           |           |
| 2  | COC is properly completed.            |                            |           |           |
| 3  | If no, Non-Conformance Worksheet      | has been completed.        |           |           |
| 4  | Custody seals are present on the ship | oping container.           |           |           |
| 5  | If yes, custody seals are intact.     |                            | $\bigvee$ | <         |
|    | 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   | :                          | 4         | °<br>C    |
| 10 | Method of sample delivery to SPL:     | SPL Delivery               |           |           |
|    |                                       | Client Delivery            |           |           |
|    |                                       | FedEx Delivery (airbill #) |           |           |
|    |                                       | Other:UPS                  | 12 66E    | 1001100B  |
| 11 | Method of sample disposal:            | SPL Disposal               |           |           |
|    |                                       | HOLD                       |           |           |
|    |                                       | Return to Client           |           |           |

| Name: | allure Salas | Date: 6/30/97 |
|-------|--------------|---------------|
|       |              |               |

|  | CHAIN OF CUS   | 50               | / RECO           | RD                        | 562                                 |
|--|--|------------------|------------------|---------------------------|-------------------------------------|
| ON SITE  | Date.  | ė                | t b- b -         |                           |                                     |
| TECHNOLOGIES, LTD. 657 W. Maple • P. O<br>LAB: (505) 325       | . Box 2606 • Farmington NM 87499<br>5-5667 • FAX: (505) 325-6256 |                  |                  | 1                         | rage                                |
| Purchase Order No.: Job No.                                    |  |                  | Name             | Maureen Gannon            | Trite                               |
| Name Denver Bearden  |  | TR<br>DT S       | Company          | PNM Gas Services          |                                     |
| DO Company PNM Gas Services                                    | Dept. 324-3763   |                  | Mailing Address  | Alverado Square, Mail Sto | op 0408                             |
| MS Address 603 W. Elm Street                                   |  | ISEI<br>BE       | City, State, Zip | Albuquerque, NM 87158     |                                     |
| City, State, Zip Farmington, NM 87401                          |  | 9                | Telephone No.    | 505-848-2974              | elefax No.                          |
| Sampling Location:   |  |                  |                  | ANALYSIS REQUE            | ESTED                               |
| Mellanahan 22  |  | ers<br>ers       |                  |                           |                                     |
| Sampler.<br>Mark Skeliarer)/Meure                              | en Harron  | Number<br>Number | A<br>X           |                           |                                     |
| SAMPLE IDENTIFICATION  | SAMPLE MATRIX PRES.<br>DATE TIME MATRIX PRES.                    |                  | Br Br            |                           |                                     |
| 970619 1300 mul  | 6 10 10 10 10 10 10 10 10  | 53               | ×                |                           | 1923-6297                           |
| 9706191400 MWZ   |  | m                | N X X            | 1-5.                      | 152000                              |
| - 97001430 MW3   |  | 2                | ×<br>×           |                           | 1200 /                              |
| 9706191500 MW4   |  | В                | J<br>X<br>X      | A-5.                      | 1502                                |
| 9706191530 MWS   | 6 19 19 19 19 19 19 19 19 19 19 19 19 19                         | ÷ 2              | ×                |                           | 15202                               |
|  |  |                  |                  |                           |                                     |
|  |  |                  |                  |                           |                                     |
|  |  |                  |                  |                           |                                     |
|  |  |                  |                  |                           |                                     |
| Relinquished by: Munn  | Date/Time 0/14/4 7- 1502   | Recei            | ved by:          |                           | Date/Time 6//107 / 502              |
| Relinquished by:   | Date/Time  | Recei            | ved by:          |                           | Date/Time                           |
| Relinquished by:   | Date/Time  | Recei            | ved by:          |                           | Date/Time                           |
| Method of Shipment:  |  | Rush             | 24               | 48 Hours 10 Working Days  | Special Instructions:               |
| Authorized by:(Client Signature <u>Must</u> Accompany Request) | Date Date  |                  |                  |                           | Results to be sent to both parties. |
| Disi   | L stribution: White – On Site Yellow – LAB F                     | Pink – S         | ampler Goldenroc | I - Client                |                                     |

\* \*

### PIT ISSUES Groundwater Sites

- Florance 1: G. Cooke dug to 18' at the site. Reading in the bottom of the pit using a PID was 523
  pppm. Subsequent lab results based upon a 5-point composite sample (4 sidewalls and bottom)
  showed BTEX at 0.519 ppm (well below OCD guideline of 10 ppm for a site ranked a 40).
  Technician informed Analytical results (5 point composite with highest sidewall at 1105) showed
  BTEX at 0.519 ppm. G. Cooke informed M. Gannon that excavation depth was within 6 inches of
  groundwater. M. Gannon expressed concern to D. Bearden over not digging to groundwater and
  taking a sample to confirm that groundwater was not impacted. D. Bearden indicated that it was not
  necessary to do so since the pit was clean according to laboratory results. OCD has closed this site.
- 2. Lester 1: G. Cooke had contractor dig to 22' and stop; the bottom was still hot at 392 ppm BTEX and 3571 ppm TPH. He indicated that groundwater was approx. 187' bgs. However, there is an irrigation ditch that borders the location. It is believed that this ditch serves as a water source to the site. Vertical extent was conducted while M. Sikelianos was on site. A hollow stem auger was used; auger met refusal due to large cobbles at approx. 23' bgs. M. Sikelianos asked that the rig be moved to another location to attempt another borehole. D. Bearden said "no" and shut down operation. M. Gannon called B. Olson, OCD, to discuss site. He suggested we get a cable tool rig out there since cobbles are not considered impermeable. M. Gannon discussed this with D. Bearden. He stated that he was going to close the site based upon the fact that the rig encountered "bedrock." OCD has since closed the site.
- 3. McClanahan A2E: G. Cooke dug to 21' bgs and encountered saturated, moist soil. According to backhoe operator, D. Holden (conversation between M. Gannon and D. Holden), G. Cooke instructed D. Holden to "back off." G. Cooke then had D. Holden grab a sample at 20' in the bottom of the excavation. A soil sample was taken 379 ppm BTEX and 101 ppm TPH. G. Cooke then continued to 21' again and collected a "soil" sample off the bottom. Sample was in fact half soil/half water and laboratory analysis indicated that results were below guidelines for soil. M. Gannon called D. Cox at On Site Technologies to discuss the accuracy of the sample results. D. Cox indicated that sample was too saturated with groundwater to give an accurate measurement of BTEX in soil. M. Gannon confronted both G. Cooke and D. Bearden concerning the sampling methodology and the appearance of avoiding groundwater. Both G. Cooke and D. Bearden agreed that the approach at this site was incorrect and that it would not happen again. Site is now a listed groundwater site undergoing remediation.
- 4. Ruple 1X: This site was originally assessed by M. Sikelianos. M. Sikelianos gave the site a ranking of 50 due to its proximity to a residential area, depth to groundwater within 100', and a siphon (ditch) within 1000 horizontal feet. A soil boring was not taken initially due to the fact that the pit was backfilled with gravel. An aboveground tank was set and cease discharge had occurred at the site. According to R. Burnham, he and D. Bearden were on site during excavation of the pit. R. Burnham was taking PID readings which indicated that the pit was hot. D. Bearden asked R. Burnham to make a phone call. While R. Burnham was gone, D. Bearden had contractor backfill pit. When R. Burnham returned, D. Bearden indicated that pit was clean and did not require remediation. Analytical results indicate that pit is clean (TPH <25.00 and BTEX 0.0046 ppm).</p>
- 5. Lawson 3, Compass 1, Sategna 2E, Julendar 1: These sites have been removed from list of highly probable groundwater sites. According to new field lists, these sites do not require remediation. Tanks have been set in pits but pits have not yet been remediated.
- 6. **Howell 1**: Ranking reported on closure report does not fit actual site location and depth to groundwater. Landfarm results above guidelines if ranking had not been adjusted.



LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:        | Denver Be  | earden      |                        | Date:          | 16-Sep-97    |
|--------------|------------|-------------|------------------------|----------------|--------------|
| Company:     | PNM Gas    | Services    |                        | COC No.:       | <b>56</b> 53 |
| Address:     | 603 W. E.  | lm          |                        | Sample No.:    | 16076        |
| City, State: | Farmingto  | n, NM 87401 |                        | Job No.:       | 2-1000       |
| Project Nam  | ne:        | PNM Gas Se  | rvices - McClanahan 22 |                |              |
| Project Loca | ation:     | 9709051100  | 0; MW-1                |                |              |
| Sampled by   | :          | MG/MS       | Date:                  | 5-Sep-97 Time: | 11:00        |
| Analyzed by  | <i>/</i> : | DC          | Date:                  | 10-Sep-97      |              |
| Sample Mat   | rix:       | Liquid      |                        |                |              |

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

ND - Not Detected at Limit of Quantitation

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

Approved By: Date: 9/16/97

P.O. BOX 2606 • FARMINGTON, NM 87499



LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:        | Denver B   | Rearden      |                      | Date:          | 16-Sep-97 |
|--------------|------------|--------------|----------------------|----------------|-----------|
| Company:     | PNM Gas    | s Services   |                      | COC No.:       | 5653      |
| Address:     | 603 W. I   | Elm          |                      | Sample No.:    | 16077     |
| City, State: | Farmingt   | on, NM 87401 |                      | Job No.:       | 2-1000    |
| Project Nan  | ne:        | PNM Gas Serv | ices - McClanahan 22 |                |           |
| Project Loca | ation:     | 9709051130;  | MW-2                 |                |           |
| Sampled by   | <b>'</b> : | MG/MS        | Date:                | 5-Sep-97 Time: | 11:30     |
| Analyzed by  | y:         | DC           | Date:                | 10-Sep-97      |           |
| Sample Mat   | trix:      | Liquid       |                      |                |           |

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

ND - Not Detected at Limit of Quantitation

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



P.O. BOX 2606 • FARMINGTON, NM 87499



LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:        | Denver Be  | arden       | i.           |           |      |              | Date:    | 16-Sep-97 |
|--------------|------------|-------------|--------------|-----------|------|--------------|----------|-----------|
| Company:     | PNM Gas    | Services    |              |           |      | C            | OC No.:  | 5653      |
| Address:     | 603 W. El  | m           |              |           |      | Sam          | ple No.: | 16078     |
| City, State: | Farmington | n, NM 87401 |              |           |      | J            | lob No.: | 2-1000    |
|              |            |             |              |           |      |              |          |           |
| Project Nam  | ne:        | PNM Gas Se  | ervices - Ma | cClanahar | n 22 |              |          |           |
| Project Loca | ation:     | 970905120   | 0; MW-3      |           |      |              |          |           |
| Sampled by   | :          | MG/MS       |              | Date:     |      | 5-Sep-97 Tim | e:       | 12:00     |
| Analyzed by  | /:         | DC          |              | Date:     |      | 10-Sep-97    |          |           |
| Sample Mat   | rix:       | Liquid      |              |           |      |              |          |           |

| Parameter    |       | Results as<br>Received | Unit of<br>Measure | Limit of<br>Quantitation | Unit of<br>Measure |
|--------------|-------|------------------------|--------------------|--------------------------|--------------------|
| <br>Daaraara |       | 10                     |                    |                          |                    |
| Benzene      |       | 16                     | ug/L               |                          | ug/L               |
| Toluene      |       | 29                     | ug/L               | 2                        | ug/L               |
| Ethylbenzene |       | 402                    | ug/L               | 2                        | ug/L               |
| m,p-Xylene   |       | 1371                   | ug/L               | 2                        | ug/L               |
| o-Xylene     |       | 202                    | ug/L               | 2                        | ug/L               |
|              | TOTAL | 2020                   | ug/L               |                          |                    |

ND - Not Detected at Limit of Quantitation

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

Approved By: 9/16/97 Date:

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LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:<br>Company: | Denver Be<br>PNM Gas | arden<br>Services           |                              | Date:<br>COC No.: | 16-Sep-97<br><i>5653</i> |
|-------------------|----------------------|-----------------------------|------------------------------|-------------------|--------------------------|
| Address:          | 603 W. El            | m                           |                              | Sample No.:       | 16079                    |
| City, State:      | Farmingto            | n, NM 87401                 |                              | Job No.:          | 2-1000                   |
| Project Nam       | ie:                  | PNM Gas Serv<br>9709051230- | ices - McClanahan 22<br>MW-4 |                   |                          |
| Sampled by        | :                    | MG/MS                       | Date:                        | 5-Sep-97 Time:    | 12:30                    |
| Analyzed by       | <i>/</i> :           | DC                          | Date:                        | 10-Sep-97         |                          |
| Sample Mat        | rix:                 | Liquid                      |                              |                   |                          |

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

ND - Not Detected at Limit of Quantitation

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

Approved By: Date: T16/97

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LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:        | Denver Be | earden       |                       | Date:          | 16-Sep-97 |
|--------------|-----------|--------------|-----------------------|----------------|-----------|
| Company:     | PNM Gas   | Services     |                       | COC No.:       | 5653      |
| Address:     | 603 W. El | lm           |                       | Sample No.:    | 16080     |
| City, State: | Farmingto | n, NM 87401  |                       | Job No.:       | 2-1000    |
|              |           |              |                       |                |           |
| Project Nam  | ne:       | PNM Gas Serv | vices - McClanahan 22 |                |           |
| Project Loca | ation:    | 9709051300;  | MW-5                  |                |           |
| Sampled by   | :         | MG/MS        | Date:                 | 5-Sep-97 Time: | 13:00     |
| Analyzed by  | /:        | DC           | Date:                 | 10-Sep-97      |           |
| Sample Mat   | rix:      | Liquid       |                       |                |           |

|              |       | Results as | Unit of | Limit of     | Unit of |
|--------------|-------|------------|---------|--------------|---------|
| Parameter    |       | Received   | Measure | Quantitation | Measure |
| Benzene      |       | 12         | ug/L    | 2            | ug/L    |
| Toluene      |       | 28         | ug/L    | 2            | ug/L    |
| Ethylbenzene |       | 414        | ug/L    | 2            | ug/L    |
| m,p-Xylene   |       | 1402       | ug/L    | 2            | ug/L    |
| o-Xylene     |       | 207        | ug/L    | 2            | ug/L    |
|              | TOTAL | 2063       | ug/L    |              |         |

ND - Not Detected at Limit of Quantitation

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

Approved By: Date: 16/97

P.O. BOX 2606 • FARMINGTON, NM 87499

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LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:        | Denver Bea  | arden          |                     | Date:           | 30-Dec-97 |
|--------------|-------------|----------------|---------------------|-----------------|-----------|
| Company:     | PNM Gas S   | Services       |                     | COC No.:        | 7147      |
| Address:     | 603 W. Elr. | n              |                     | Sample No.:     | 17165     |
| City, State: | Farmington  | , NM 87401     |                     | Job No.:        | 2-1000    |
| Project Nam  | ne:         | PNM Gas Servie | ces - McClanahan 22 |                 |           |
| Project Loca | ation:      | 9712171300;    | MW-1                |                 |           |
| Sampled by   | :           | RD             | Date:               | 17-Dec-97 Time: | 13:00     |
| Analyzed by  | <b>/:</b>   | DC             | Date:               | 25-Dec-97       |           |
| Sample Mat   | rix:        | Liquid         |                     |                 |           |

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

ND - Not Detected at Limit of Quantitation

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

Approved By: Date: 130/97

### P.O. BOX 2606 • FARMINGTON, NM 87499

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LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:        | Denver Be          | arden         |                     | Date:           | 30-Dec-97 |
|--------------|--------------------|---------------|---------------------|-----------------|-----------|
| Company:     | : PNM Gas Services |               |                     | COC No.:        | 7147      |
| Address:     | 603 W. El          | 'n            |                     | Sample No.:     | 17166     |
| City, State: | Farmingto          | n, NM 87401   |                     | Job No.:        | 2-1000    |
| Project Nam  | ne:                | PNM Gas Servi | ces - McClanahan 22 |                 |           |
| Project Loca | ation:             | 9712171320;   | MW-2                |                 |           |
| Sampled by   | :                  | RD            | Date:               | 17-Dec-97 Time: | 13:20     |
| Analyzed by  | /:                 | DC            | Date:               | 25-Dec-97       |           |
| Sample Mat   | rix:               | Liquid        |                     |                 |           |

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

ND - Not Detected at Limit of Quantitation

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

Approved By: Date:

### P.O. BOX 2606 • FARMINGTON, NM 87499

The second second

Sample Matrix:



LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:        | Denver Bea | rden                |                  |              | Date:     | 30-Dec-97 |
|--------------|------------|---------------------|------------------|--------------|-----------|-----------|
| Company:     | PNM Gas S  | ervices             |                  |              | COC No.:  | 7147      |
| Address:     | 603 W. Elm | 7                   |                  | Sa           | mple No.: | 17167     |
| City, State: | Farmington | . NM 87401          |                  |              | Job No.:  | 2-1000    |
| Project Nom  |            | PNM Cas Sarviasa    | MaClamatan 22    |              |           |           |
| Project Nan  | ie:        | PIVIVI Gas Services | - Micciananan 22 |              |           |           |
| Project Loca | ation:     | 9712171342; MW      | /-3              |              |           |           |
| Sampled by   | :          | RD                  | Date:            | 17-Dec-97 Ti | me:       | 13:42     |
| Analyzed by  | /:         | DC                  | Date:            | 25-Dec-97    |           |           |

| Parameter    |       | Results as<br>Received | Unit of<br>Measure | Limit of<br>Quantitation | Unit of<br>Measure |
|--------------|-------|------------------------|--------------------|--------------------------|--------------------|
| Benzene      |       | 8                      | ug/L               | 2                        | ug/L               |
| Toluene      |       | 24                     | ug/L               | 2                        | ug/L               |
| Ethylbenzene |       | 536                    | ug/L               | 2                        | ug/L               |
| m,p-Xylene   |       | 1442                   | ug/L               | 2                        | ug/L               |
| o-Xylene     |       | 284                    | ug/L               | 2                        | ug/L               |
|              | TOTAL | 2293                   | ug/L               |                          |                    |

ND - Not Detected at Limit of Quantitation

Liquid

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

Approved By: 12/30/97 Date:

### P.O. BOX 2606 • FARMINGTON, NM 87499

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LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:        | Denver B  | earden       |                         | Date:           | 30-Dec-97 |
|--------------|-----------|--------------|-------------------------|-----------------|-----------|
| Company:     | PNM Gas   | Services     |                         | COC No.:        | 7147      |
| Address:     | 603 W. E  | -Im          |                         | Sample No.:     | 17168     |
| City, State: | Farmingto | on, NM 87401 |                         | Job No.:        | 2-1000    |
| Project Nam  | ne:       | PNM Gas Se   | ervices - McClanahan 22 |                 |           |
| Project Loca | ation:    | 971217140    | 1; MW-4                 |                 |           |
| Sampled by   | :         | RD           | Date:                   | 17-Dec-97 Time: | 14:01     |
| Analyzed by  | /:        | DC           | Date:                   | 25-Dec-97       |           |
| Sample Mat   | trix:     | Liquid       |                         |                 |           |

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

ND - Not Detected at Limit of Quantitation

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

Approved By: Date: 12 130/17-

P.O. BOX 2606 • FARMINGTON, NM 87499



LAB: (505) 325-1556

### ANALYTICAL REPORT

| Attn:        | Denver E   | Bearden       |                      | Date:           | 30-Dec-97 |
|--------------|------------|---------------|----------------------|-----------------|-----------|
| Company:     | PNM Ga     | s Services    |                      | COC No.:        | 7147      |
| Address:     | 603 W.     | Elm           |                      | Sample No.:     | 17169     |
| City, State: | Farming    | ton, NM 87401 |                      | Job No.:        | 2-1000    |
| Project Nan  | ne:        | PNM Gas Ser   | vices - McClanahan 2 | 2               |           |
| Project Loc  | ation:     | 9712171421,   | ; MW-5               |                 |           |
| Sampled by   | <i>י</i> : | RD            | Date:                | 17-Dec-97 Time: | 14:21     |
| Analyzed b   | y:         | DC            | Date:                | 25-Dec-97       |           |
| Sample Ma    | trix:      | Liquid        |                      |                 |           |

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

ND - Not Detected at Limit of Quantitation

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

Approved By: Date: Vac /30/97

### P.O. BOX 2606 • FARMINGTON, NM 87499 - Tachholi ogy Blending Industry with the Educe ments



LAB: (505) 325-1556

### QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 25-Dec-97

| Internal QC No.:           | 0559-STD   |
|----------------------------|------------|
| Surrogate QC No.:          | 0567-STD   |
| Reference Standard QC No.: | 0529/30-QC |

Method Blank

|   |        | Unit of |
|---|--------|---------|
| Parameter                               | Result | Measure |
| Average Amount of All Analytes In Blank | < 0.2  | ррb     |

### **Calibration Check**

|              | Unit of | True  | Analyzed |     |       |
|--------------|---------|-------|----------|-----|-------|
| Parameter    | Measure | Value | Value    | RPD | Limit |
| Benzene      | ppb     | 20.0  | 19.3     | 4   | 15%   |
| Toluene      | ppb     | 20.0  | 19.7     | 1   | 15%   |
| Ethylbenzene | ppb     | 20.0  | 19.9     | 1   | 15%   |
| m,p-Xylene   | ppb     | 40.0  | 38.2     | 5   | 15%   |
| o-Xylene     | ppb     | 20.0  | 19.6     | 2   | 15%   |

Matrix Spike

|              | 1- Percent | 2 - Percent |          |     |       |
|--------------|------------|-------------|----------|-----|-------|
| Parameter    | Recovered  | Recovered   | Limit    | RPD | Limit |
| Benzene      | 77         | 91          | (39-150) | 3   | 20%   |
| Toluene      | 94         | 97          | (46-148) | 3   | 20%   |
| Ethylbenzene | 87         | 93          | (32-160) | 3   | 20%   |
| m,p-Xylene   | 91         | 94          | (35-145) | 3   | 20%   |
| o-Xylene     | 92         | 95          | (35-145) | 3   | 20%   |

### Surrogate Recoveries

|                           | S1        | S2        |                           | S1        | \$2       |
|---------------------------|-----------|-----------|---------------------------|-----------|-----------|
|                           | Percent   | Percent   |                           | Percent   | Percent   |
| Laboratory Identification | Recovered | Recovered | Laboratory Identification | Recovered | Recovered |
| Limit Percent Recovered   | (70-130)  |           | Limit Percent Recovered   | (70-130)  |           |
| 17165-7147                | 94        |           |                           |           |           |
| 17166-7147                | 94        |           |                           |           |           |
| 17167-7147                | 93        |           |                           |           |           |
| 17168-7147                | 94        |           |                           |           |           |
| 17169-7147                | 94        |           |                           | -LIK,     | (m)       |
|                           |           |           |                           | 12/31/97- | 12/30/07  |

S1: Flourobenzene

### P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLEMMAN INCUSTING AND THE DATA SHE IN THE

|   | ON SI'     | C<br>LE                  | HAII                         | 07                         | БC                      | <b>D</b> ate:             | Da                 | <b>∀</b>                  | С<br>Ш<br>С | ORI    | 0          | Page:     |             |                      |                                 |
|---|------------|--------------------------|------------------------------|----------------------------|-------------------------|---------------------------|--------------------|---------------------------|-------------|--------|------------|-----------|-------------|----------------------|---------------------------------|
| TECHNOLO  | GIES, LTD. | 612 E. N                 | Murphy Dr. •<br>LAB: (505) ; | • P.O. Box 2<br>325-5667 • | 2606 • Fan<br>FAX: (505 | mington, NM<br>) 325-6256 | 87499              |                           |             |        |            |           |             |                      |                                 |
| Purchase Order  | No.:       |                          | Job No.                      |                            |                         |                           | 0.                 | Name                      |             | Maure  | en Ganno   | Lit       | le          |                      |                                 |
| n<br>Nam  | 0          | Denver Bearden           |                              |                            |                         |                           | 18<br>18<br>1      | Company                   |             | D MNG  | ias Servio | ces       |             |                      |                                 |
| C<br>C<br>S<br>C<br>S<br>IC<br>I<br>S<br>IC<br>I<br>S<br>IC | pany       | PNM Gas Services         |                              | Dept.                      | 324-3763                |                           | רד<br>1<br>רד      | Mailing A                 | ddress      | Alvera | do Squar   | e, Mail S | top 0408    |                      |                                 |
|   | ess        | 603 W. Elm Street        |                              |                            |                         |                           | าร <u>ส</u><br>151 | City, Stat                | e, Zip      | Albuqi | lerque, N  | M 87158   |             |                      |                                 |
| Dif.  | State, Zip | Farmington, NM 8740      | 1                            |                            |                         |                           | เย<br>โ            | Telephon                  | e No.       | 505-84 | 8-2974     | Te        | lefax No.   |                      |                                 |
| Sampling Locat  | ion:       |                          |                              |                            |                         |                           | s.                 |                           |             | A      | NALYSIS    | REQUES    | STED        |                      |                                 |
| m ci  | ненин      | ふな                       |                              |                            |                         |                           | er c               |                           | 6           |        |            | ert       |             |                      |                                 |
| Sampler:  |            |                          |                              |                            |                         |                           | dmu<br>britai      | <u> </u>                  |             |        |            |           |             |                      |                                 |
| 2   | SAMPI F II | DENTIFICATION            |                              | SAM                        | 4PLE                    | MATRIX PRE                | C<br>N             |                           |             |        |            |           |             |                      | I AR ID                         |
|   |            |                          |                              | DATE                       | TIME                    |                           | i                  | 2                         |             |        |            |           |             | $\backslash$         |                                 |
| 971217  | 1300       | IMU                      |                              | <u>tifi/;</u> ,            | 1300                    | HO H                      | 2                  | ×                         |             |        |            |           |             | गर्ध                 | 5-714                           |
| 971217  | 1320       | NWZ                      |                              | 6ki/                       | 1320                    | 14-0 K                    | <u>7</u>           | $\boldsymbol{\mathbf{x}}$ |             |        |            |           |             | <u>E</u>             | 1 - 92                          |
| 212126  | 1342       | $m \omega 3$             |                              | 13/12/2                    | 1342                    | H-0 H                     | r<br>5             | ×                         |             |        | -          | _         |             | 1<br>I<br>E<br>I     | · <del>/</del> · <del>/</del> · |
| 971217  | 1401       | 4 mla                    |                              | 13/2/42                    | 1407                    | H20 M                     | γ<br>5             | ×                         |             |        |            |           |             | <u>IH</u>            | 8-                              |
| 971217  | 1421       | NWS                      |                              | 13/0/21                    | 1241                    | H OCH                     | 7                  | ×                         |             |        |            |           |             | THE I                | 61- V                           |
|   |            |                          |                              |                            |                         |                           | _                  |                           |             |        |            |           |             | _                    |                                 |
|   |            |                          |                              |                            |                         |                           |                    |                           |             |        |            |           |             |                      |                                 |
|   |            |                          |                              |                            |                         |                           |                    |                           |             |        |            |           |             |                      |                                 |
|   |            |                          |                              |                            |                         |                           |                    |                           |             |        |            |           |             |                      |                                 |
|   |            | 5                        |                              |                            |                         |                           |                    |                           |             |        |            |           |             |                      |                                 |
| Relinquished by   | i k rul    | CNI) Mine                | <u>L</u>                     | Date/T                     | Time /2/                | 2018                      | 3 Receiv           | ed by:                    |             |        |            |           | Date        | Time <i> 1/</i>      | 19420453                        |
| Relinquished b)   |            |                          |                              | Date/T                     | Time                    |                           | Receiv             | ed by:                    |             |        |            |           | Date/       | Time                 |                                 |
| Relinquished b)   |            |                          |                              | Date/T                     | Time                    |                           | Receiv             | 'ed by:                   |             |        |            |           | Date/       | Time                 |                                 |
| Method of Ship  | ment:      |                          |                              |                            |                         |                           | Rush               |                           | 24-48 Ho    | ours   | 10 Worki   | ng Days   | Special Ins | structions           | ••                              |
| Authorized by   | r: Kerell  | ture Must Accompany Requ | est)                         | x<br>x                     | 118/4                   | 2                         |                    |                           |             |        |            |           | Rest        | ults to b<br>both pa | e sent<br>rties.                |
|   | 2          |                          |                              |                            |                         | A Linear LAD              |                    |                           |             |        |            |           |             |                      |                                 |

-----

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

··· ·· ·· · \_\_\_\_



TECHNOLOGIES, LTD.

LAB: (505) 325-1556

March 25, 1998

Maureen Gannon PNM - Public Service Company of NM Alvarado Square Mail Stop 0408 Albuquerque, NM 87158 TEL: (505) 241-2974 FAX (505) 241-2340

RE: McClanahan 22

Order No.: 9803034

Dear Maureen Gannon,

On Site Technologies, LTD. received 5 samples on 3/10/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests: BTEX (SW8020A)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox



### TECHNOLOGIES, LTD.

LAB: (505) 325-1556

Date: 25-Mar-98

| CLIENT:    | PNM - Public Service Company of NM |                |
|------------|------------------------------------|----------------|
| Project:   | McClanahan 22                      | CASE NARRATIVE |
| Lab Order: | 9803034                            |                |

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.



LAB: (505) 325-1556

### TECHNOLOGIES, LTD.

### ANALYTICAL REPORT

**Date:** 25-Mar-98

| Client:           | PNM - Public Ser | vice Company of N | JM     | Client Samp | ole Info: | McCl   | anahan 22     |
|-------------------|------------------|-------------------|--------|-------------|-----------|--------|---------------|
| Work Order:       | 9803034          |                   |        | Client San  | nple ID:  | 9803   | 101315; MW-1  |
| Lab ID:           | 9803034-01A      | Matrix: AQUEC     | DUS    | Collectio   | on Date:  | 3/10/9 | 98 1:15:00 PM |
| Project:          | McClanahan 22    |                   |        |             | COC#:     | 7186   |               |
| Parameter         |                  | Result            | Limit  | Qual Units  |           | DF     | Date Analyzed |
| BTEX              |                  | SV                | V8020A |             |           |        | Analyst: DC   |
| Benzene           |                  | ND                | 0.5    | µg/L        |           | 1      | 3/18/98       |
| Toluene           |                  | ND                | 0.5    | μg/L        |           | 1      | 3/18/98       |
| Ethylbenzene      |                  | ND                | 0.5    | µg/L        |           | 1      | 3/18/98       |
| m,p-Xylene        |                  | ND                | 1      | μg/L        |           | 1      | 3/18/98       |
| o-Xylene          |                  | ND                | 0.5    | μg/L        |           | 1      | 3/18/98       |
| Surr: Fluoroben:  | zene             | 92.9              | 70-130 | %REC        |           | 1      | 3/18/98       |
| Surr: 1,4-Difluor | obenzene         | 93.2              | 70-130 | %REC        |           | 1      | 3/18/98       |
| Surr: 4-Bromoch   | llorobenzene     | 90.6              | 70-130 | %REC        |           | 1      | 3/18/98       |

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

- S Spike Recovery outside accepted recovery limits
- R RPD outside accepted recovery limits

E - Value above quantitation range



### LAB: (505) 325-1556

### TECHNOLOGIES, LTD.

### ANALYTICAL REPORT

Date: 25-Mar-98

| Client:          | PNM - Public Ser | vice Company of I | NM     | Client Samp | le Info: McC | Clanahan 22    |
|------------------|------------------|-------------------|--------|-------------|--------------|----------------|
| Work Order:      | 9803034          |                   |        | Client Sam  | ple ID: 9803 | 3101330; MW-2  |
| Lab ID:          | 9803034-02A      | Matrix: AQUE      | OUS    | Collectio   | n Date: 3/10 | /98 1:30:00 PM |
| Project:         | McClanahan 22    |                   |        |             | COC#: 7180   | 5              |
| Parameter        |                  | Result            | Limit  | Qual Units  | DF           | Date Analyzed  |
| BTEX             |                  | SI                | W8020A |             |              | Analyst: DC    |
| Benzene          |                  | ND                | 0.5    | µg/L        | 1            | 3/18/98        |
| Toluene          |                  | ND                | 0.5    | µg/L        | 1            | 3/18/98        |
| Ethylbenzene     |                  | ND                | 0.5    | µg/L        | 1            | 3/18/98        |
| m,p-Xylene       |                  | ND                | 1      | µg/L        | 1            | 3/18/98        |
| o-Xylene         |                  | ND                | 0.5    | µg/L        | 1            | 3/18/98        |
| Surr: Fluorober  | nzene            | 92.6              | 70-130 | %REC        | 1            | 3/18/98        |
| Surr: 1,4-Difluc | probenzene       | 93.7              | 70-130 | %REC        | 1            | 3/18/98        |
| Surr: 4-Bromod   | chlorobenzene    | 89.5              | 70-130 | %REC        | 1            | 3/18/98        |

Qualifiers:

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B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

- S Spike Recovery outside accepted recovery limits
- R RPD outside accepted recovery limits
- E Value above quantitation range



TECHNOLOGIES, LTD.

### ANALYTICAL REPORT

**Date:** 25-Mar-98

LAB: (505) 325-1556

| Client:      | PNM - Public Ser | vice Company of N | IМ     | Client Sample                                   | Info: McC   | lanahan 22    |  |
|--------------|------------------|-------------------|--------|---|---|---------------|--|
| Work Order:  | 9803034          |                   |        | Client Samp                                     | le ID: 9803                                       | 101345; MW-3  |  |
| Lab ID:      | 9803034-03A      | Matrix: AQUEC     | DUS    | Collection                                      | Date: 3/10/                                       | 98 1:45:00 PM |  |
| Project:     | McClanahan 22    |                   |        | C   | <b>OC#:</b> 7186                                  |               |  |
| Parameter    |                  | Result            | Limit  | Qual Units                                      | DF  | Date Analyzed |  |
| BTEX         |                  | SW                | /8020A | ng da una an a | , <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u> ,,,, | Analyst: DC   |  |
| Benzene      |                  | ND                | 2.5    | μg/L  | 5   | 3/18/98       |  |
| Toluene      |                  | 87                | 2.5    | µg/L  | 5   | 3/18/98       |  |
| Ethylbenzene |                  | 580               | 2.5    | µg/L  | 5   | 3/18/98       |  |

| loiuene                    | 87   | 2.5    | µg/L | 5 | 3/10/90 |
|----------------------------|------|--------|------|---|---------|
| Ethylbenzene               | 580  | 2.5    | µg/L | 5 | 3/18/98 |
| m,p-Xylene                 | 1200 | 5      | µg/L | 5 | 3/18/98 |
| o-Xylene                   | 270  | 2.5    | µg/L | 5 | 3/18/98 |
| Surr: Fluorobenzene        | 95.6 | 70-130 | %REC | 5 | 3/18/98 |
| Surr: 1,4-Difluorobenzene  | 90.6 | 70-130 | %REC | 5 | 3/18/98 |
| Surr: 4-Bromochlorobenzene | 86.3 | 70-130 | %REC | 5 | 3/18/98 |

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

- S Spike Recovery outside accepted recovery limits
- R RPD outside accepted recovery limits
- E Value above quantitation range



TECHNOLOGIES, LTD.

LAB: (505) 325-1556

### ANALYTICAL REPORT

**Date:** 25-Mar-98

| Client:          | PNM - Public Ser | rvice Company of I | ١M     | <b>Client Sample</b> | Info: McC        | lanahan 22     |
|------------------|------------------|--------------------|--------|----------------------|------------------|----------------|
| Work Order:      | 9803034          |                    |        | Client Sampl         | e ID: 9803       | 101400; MW-4   |
| Lab ID:          | 9803034-04A      | Matrix: AQUE       | OUS    | Collection 1         | Date: 3/10/      | /98 2:00:00 PM |
| Project:         | McClanahan 22    |                    |        | C                    | <b>OC#:</b> 7186 |                |
| Parameter        |                  | Result             | Limit  | Qual Units           | DF               | Date Analyzed  |
| BTEX             |                  | SV                 | V8020A |                      |                  | Analyst: DC    |
| Benzene          |                  | ND                 | 0.5    | µg/L                 | 1                | 3/18/98        |
| Toluene          |                  | ND                 | 0.5    | µg/L                 | 1                | 3/18/98        |
| Ethylbenzene     |                  | ND                 | 0.5    | µg/L                 | 1                | 3/18/98        |
| m,p-Xylene       |                  | ND                 | 1      | µg/L                 | 1                | 3/18/98        |
| o-Xylene         |                  | ND                 | 0.5    | µg/L                 | 1                | 3/18/98        |
| Surr: Fluorober  | izene            | 92.9               | 70-130 | %REC                 | 1                | 3/18/98        |
| Surr: 1,4-Difluo | robenzene        | 93.6               | 70-130 | %REC                 | 1                | 3/18/98        |
| Surr: 4-Bromoc   | hlorobenzene     | 90.5               | 70-130 | %REC                 | 1                | 3/18/98        |



### Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

- S Spike Recovery outside accepted recovery limits
- R RPD outside accepted recovery limits

E - Value above quantitation range



TECHNOLOGIES, LTD.

### ANALYTICAL REPORT

Date: 25-Mar-98

| Client:          | PNM - Public Ser | rvice Company of I | NM     | Client Sample | Info: McC   | lanahan 22    |
|------------------|------------------|--------------------|--------|---------------|-------------|---------------|
| Work Order:      | 9803034          |                    |        | Client Samp   | le ID: 9803 | 101415; MW-5  |
| Lab ID:          | 9803034-05A      | Matrix: AQUE       | OUS    | Collection    | Date: 3/10/ | 98 2:15:00 PM |
| Project:         | McClanahan 22    |                    |        | (             | COC#: 7186  |               |
| Parameter        |                  | Result             | Limit  | Qual Units    | DF          | Date Analyzed |
| ЗТЕХ             |                  | SI                 | N8020A |               |             | Analyst: DC   |
| Benzene          |                  | ND                 | 0.5    | µg/L          | 1           | 3/18/98       |
| Toluene          |                  | ND                 | 0.5    | µg/L          | 1           | 3/18/98       |
| Ethylbenzene     |                  | ND                 | 0.5    | µg/L          | 1           | 3/18/98       |
| m,p-Xylene       |                  | ND                 | 1      | µg/L          | 1           | 3/18/98       |
| o-Xylene         |                  | ND                 | 0.5    | µg/L          | 1           | 3/18/98       |
| Surr: Fluorober  | nzene            | 93.1               | 70-130 | %REC          | 1           | 3/18/98       |
| Surr: 1,4-Difluc | probenzene       | 93.9               | 70-130 | %REC          | 1           | 3/18/98       |
| Surr 4-Bromor    | chiorobenzene    | 90.1               | 70-130 | %REC          | 1           | 3/18/98       |



ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

- S Spike Recovery outside accepted recovery limits
- R RPD outside accepted recovery limits
- E Value above quantitation range

| LID.                  |
|-----------------------|
| Un Site Lechnologies, |

CLIENT: PNM - Public Service Company of NM

Work Order:9803034Project:McClanahan 22

**Date:** 25-Mar-98

# QC SUMMARY REPORT

Method Blank

|                  |                       | Toot Cade   | CIAIDODOA   | I Inito      |      | $\Delta = 0.000$ |             |             | (       |          | 1        |   |
|------------------|-----------------------|-------------|-------------|--------------|------|------------------|-------------|-------------|---------|----------|----------|---|
| Datriple IU: MB1 | Batch 10. GC-1_300318 | I ESI CODE. | AUSUQUE     | 011115. Hg/L |      | Anarysis         | Date: 3/18/ | 30          | Prep Ua | ate:     |          |   |
| Client ID:       | 9803034               | Run ID:     | GC-1_980318 | ۷            |      | SeqNo:           | 67          |             |         |          |          |   |
| Analyte          | Result                | PQL         | SPK value   | SPK Ref Val  | %REC | LowLimit         | HighLimit   | RPD Ref Val | %RPD    | RPDLimit | Qual     |   |
| 3enzene          | .0822                 | 0.5         |             |              |      |                  |             |             |         |          | ٦        |   |
| Ethylbenzene     | .1129                 | 0.5         |             |              |      |                  |             |             |         |          | ٦        |   |
| n,p-Xylene       | .3057                 | -           |             |              |      |                  |             |             |         |          | <b>۔</b> |   |
|                  | .1097                 | 0.5         |             |              |      |                  |             |             |         |          | ۔        |   |
| oluene           | .1684                 | 0.5         |             |              |      |                  |             |             |         |          | Ŀ        |   |
|                  | -                     | 2           |             |              |      |                  |             |             |         |          |          | כ |

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

1 of 1

| On Site Technologi   | es, LTD.                          |            |             |             |        |          |             |             | ñ                    | ite: 25-Mar                 | -98               |
|--|-----------------------------------|------------|-------------|-------------|--------|----------|-------------|-------------|----------------------|-----------------------------|-------------------|
| CLIENT: PNM - P<br>Work Order: 9803034<br>Project: McClana | ublic Service Company o<br>han 22 | of NM      |             |             |        |          |             | QC SUN      | <b>MMAR</b><br>Sampl | <b>Y REPC</b><br>e Matrix S | <b>RT</b><br>pike |
| Sample ID: 9803032-04AMS                                   | Batch ID: GC-1_980318             | Test Code: | SW8020A     | Units: µg/L |        | Analysis | Date: 3/18/ | 98          | Prep Da              | ate:                        |                   |
| Client ID:   | 9803034                           | Run ID:    | GC-1_980318 | A           |        | SeqNo:   | 68          |             |                      |                             |                   |
| Analyte  | Result                            | PQL        | SPK value   | SPK Ref Val | %REC   | LowLimit | HighLimit   | RPD Ref Val | %RPD                 | RPULimit                    | Qual              |
| Benzene  | 940.2                             | 10         | 800         | 99.31       | 105.1% | 56       | 128         |             |                      |                             |                   |
| Ethylbenzene   | 923                               | 10         | 800         | 97.04       | 103.2% | 78       | 107         |             |                      |                             | ,                 |
| m,p-Xylene   | 2384                              | 20         | 1600        | 756.9       | 101.7% | 67       | 118         |             |                      |                             |                   |
| o-Xylene   | 956.3                             | 10         | 800         | 127.2       | 103.6% | 78       | 107         |             |                      |                             |                   |
| Toluene  | 935.7                             | 10         | 800         | 109         | 103.3% | 74       | 116         |             |                      |                             |                   |
| Sample ID: 9803032-04AMSD                                  | Batch ID: GC-1_980318             | Test Code: | SW8020A     | Units: µg/L |        | Analysis | Date: 3/18/ | 98          | Prep Da              | ate:                        |                   |
| Client ID:   | 9803034                           | Run ID:    | GC-1_980318 | ٨           |        | SeqNo:   | 69          |             |                      |                             |                   |
| Analyte  | Result                            | PQL        | SPK value   | SPK Ref Val | %REC   | LowLimit | HighLimit   | RPD Ref Val | %RPD                 | RPDLimit                    | Qual              |
| Benzene  | 904.3                             | 10         | 800         | 99.31       | 100.6% | 56       | 128         | 940.2       | 3.9%                 | 15                          |                   |
| Ethylbenzene   | 890.2                             | 10         | 800         | 97.04       | 99.1%  | 78       | 107         | 923         | 3.6%                 | 15                          |                   |
| m,p-Xylene   | 2301                              | 20         | 1600        | 756.9       | 96.5%  | 67       | 118         | 2384        | 3.6%                 | 15                          |                   |
| o-Xylene   | 925.2                             | 10         | 800         | 127.2       | 99.7%  | 78       | 107         | 956.3       | 3.3%                 | 15                          |                   |
| Toluene  | 903.1                             | 10         | 800         | 109         | 99.3%  | 74       | 116         | 935.7       | 3.6%                 | 15                          |                   |
|  |                                   |            |             |             |        |          |             |             |                      |                             |                   |
|  |                                   |            |             |             |        |          |             |             |                      |                             |                   |
|  |                                   |            |             |             |        |          |             |             |                      |                             |                   |
|  |                                   |            |             |             |        |          |             |             |                      |                             |                   |
|  |                                   |            |             |             |        |          |             |             |                      |                             |                   |

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B - Analyte detected in the associated Method Blank

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J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits

| On Site Tecl                       | hnologies, LTD.  |              |             |             |        |          |              |                      | Da              | te: 25-Mai           | -98                 |
|------------------------------------|--|--------------|-------------|-------------|--------|----------|--------------|----------------------|-----------------|----------------------|---------------------|
| CLIENT:<br>Work Order:<br>Project: | PNM - Public Service Company<br>9803034<br>McClanahan 22 | of NM        |             |             |        |          |              | QC SUN<br>Laboratory | MMAR<br>Control | Y REP(<br>Spike - ge | <b>JRT</b><br>meric |
| Sample ID: LCS W                   | ATER Batch ID: GC-1_980315                               | 3 Test Code: | SW8020A     | Units: µg/L |        | Analysis | Date: 3/18/9 | 98                   | Prep Da         | ite:                 |                     |
| Client ID:                         | 9803034  | Run ID:      | GC-1_98031£ | ßA          |        | SeqNo:   | 66           |                      |                 |                      |                     |
| Analyte                            | Result   | PQL          | SPK value   | SPK Ref Val | %REC   | LowLimit | HighLimit    | RPD Ref Val          | %RPD            | RPDLimit             | Qual                |
| Benzene                            | 42.86  | 0.5          | 40          | 0.0822      | 107.0% | 39       | 150          |                      |                 |                      |                     |
| Ethylbenzene                       | 43.87  | 0.5          | 40          | 0.1129      | 109.4% | 32       | 160          |                      |                 |                      |                     |
| m,p-Xylene                         | 83.96  | -            | 80          | 0.3057      | 104.6% | 35       | 145          |                      |                 |                      |                     |
| o-Xylene                           | 42.89  | 0.5          | 40          | 0.1097      | 107.0% | 35       | 145          |                      |                 |                      |                     |
| Toluene                            | 42.54  | 0.5          | 40          | 0.1684      | 105.9% | 46       | 148          |                      |                 |                      |                     |
|                                    |  |              |             |             |        |          |              |                      |                 |                      |                     |
|                                    |  |              |             |             |        |          |              |                      |                 |                      |                     |
|                                    |  |              |             |             |        |          |              |                      |                 |                      |                     |
|                                    |  |              |             |             |        |          |              |                      |                 |                      |                     |
|                                    |  |              |             |             |        |          |              |                      |                 |                      |                     |

Qualifiers: ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

1 of 1

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CLIENT: PNM - Public Service Company of NM

Work Order: 9803034

QC SUMMARY REPORT

**Date:** 25-Mar-98

| Project: McClanał         | 1an 22                |            |             |             |        |          | Continu     | ing Calibratio | n Verific | ation Star | dard |
|---------------------------|-----------------------|------------|-------------|-------------|--------|----------|-------------|----------------|-----------|------------|------|
| Sample ID: CCV1 QC0529/30 | Batch ID: GC-1_980318 | Test Code: | SW8020A     | Units: µg/L |        | Analysis | Date: 3/18/ | 86             | Prep Da   | ate:       |      |
| Client ID:                | 9803034               | Run ID:    | GC-1_980318 | ٩           |        | SeqNo:   | 63          |                |           |            |      |
| Analyte                   | Result                | PQL        | SPK value   | SPK Ref Val | %REC   | LowLimit | HighLimit   | RPD Ref Val    | %RPD      | RPDLimit   | Qual |
| 3enzene                   | 21.39                 | 0.5        | 20          | 0           | 106.9% | 85       | 115         |                |           |            |      |
| Ethylbenzene              | 22.04                 | 0.5        | 20          | 0           | 110.2% | 85       | 115         |                |           |            | I    |
| n,p-Xylene                | 41.93                 | ~          | 40          | 0           | 104.8% | 85       | 115         |                |           |            |      |
| -Xylene                   | 21.58                 | 0.5        | 20          | 0           | 107.9% | 85       | 115         |                |           |            |      |
| Toluene                   | 21.22                 | 0.5        | 20          | 0           | 106.1% | 85       | 115         |                |           |            |      |
| 1,4-Difluorobenzene       | 93.58                 | 0          | 100         | 0           | 93.6%  | 20       | 130         |                |           |            |      |
| 1-Bromochlorobenzene      | 90.62                 | 0          | 100         | 0           | 90.6%  | 20       | 130         |                |           |            |      |
| <sup>-</sup> luorobenzene | 92.53                 | 0          | 100         | 0           | 92.5%  | 70       | 130         |                |           |            |      |
| Sample ID: CCV2 QC0529/30 | Batch ID: GC-1_980318 | Test Code: | SW8020A     | Units: µg/L |        | Analysis | Date: 3/18/ | 98             | Prep Da   | ate:       |      |
| Client ID:                | 9803034               | Run ID:    | GC-1_980318 | ٩           |        | SeqNo:   | 64          |                |           |            |      |
| Analyte                   | Result                | PQL        | SPK value   | SPK Ref Val | %REC   | LowLimit | HighLimit   | RPD Ref Val    | %RPD      | RPDLimit   | Qual |
| 3enzene                   | 21.34                 | 0.5        | 20          | 0           | 106.7% | 85       | 115         |                |           |            |      |
| Ethylbenzene              | 21.91                 | 0.5        | 20          | 0           | 109.6% | 85       | 115         |                |           |            |      |
| n,p-Xylene                | 41.5                  |            | 40          | 0           | 103.8% | 85       | 115         |                |           |            |      |
|                           | 21.36                 | 0.5        | 20          | 0           | 106.8% | 85       | 115         |                |           |            |      |
| roluene                   | 21.11                 | 0.5        | 20          | 0           | 105.6% | 85       | 115         |                |           |            |      |
| , 4-Difluorobenzene       | 93.14                 | 0          | 100         | 0           | 93.1%  | 70       | 130         |                |           |            |      |
| -Bromochlorobenzene       | 90.04                 | 0          | 100         | 0           | 80.0%  | 70       | 130         |                |           |            |      |
| -luorobenzene             | 92.38                 | 0          | 100         | 0           | 92.4%  | 20       | 130         |                |           |            |      |
|                           |                       |            |             |             |        |          |             |                |           |            |      |

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 Qualifiers:
 ND - Not Detected at the Reporting Limit

 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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| e Company of NM |
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|                 |
| e Company       |

QC SUMMARY REPORT

Continuing Calibration Verification Standard

| Sample ID: CCV3 QC0529/30 | Batch ID: GC-1_980318 | Test Code: | SW8020A     | Units: µg/L |        | Analysis | : Date: 3/18/ | 98          | Prep Da | ate:     |      |
|---------------------------|-----------------------|------------|-------------|-------------|--------|----------|---------------|-------------|---------|----------|------|
| Client ID:                | 9803034               | Run ID:    | GC-1_980318 | A           |        | SeqNo:   | 65            |             |         |          |      |
| Analyte                   | Result                | PQL        | SPK value   | SPK Ref Val | %REC   | LowLimit | HighLimit     | RPD Ref Val | %RPD    | RPDLimit | Qual |
| Benzene                   | 20.7                  | 0.5        | 20          | 0           | 103.5% | 85       | 115           |             |         |          |      |
| Ethylbenzene              | 21.21                 | 0.5        | 20          | 0           | 106.1% | 85       | 115           |             |         |          |      |
| m,p-Xylene                | 40.18                 | -          | 40          | 0           | 100.4% | 85       | 115           |             |         |          |      |
| o-Xylene                  | 20.82                 | 0.5        | 20          | 0           | 104.1% | 85       | 115           |             |         |          |      |
| Toluene                   | 20.52                 | 0.5        | 20          | 0           | 102.6% | 85       | 115           |             |         |          |      |
| 1,4-Difluorobenzene       | 93.39                 | 0          | 100         | 0           | 93.4%  | 20       | 130           |             |         |          |      |
| 4-Bromochlorobenzene      | 88.96                 | 0          | 100         | 0           | 89.0%  | 20       | 130           |             |         |          |      |
| Fluorobenzene             | 92.26                 | 0          | 100         | 0           | 92.3%  | 20       | 130           |             |         |          |      |

Qualifiers: ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits

B - Analyte detected in the associated Mcthod Blank

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| TECHNOLO   | TECHNOLO |

# CHAIN OF CUSODY RECORD



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

| Purchase       | Order No :   | oN dol.                             |                  |               |                        |                     | Name          |            | Mauree   | n Gannon    | Title    |                   |                          |
|----------------|--|-------------------------------------|------------------|---------------|------------------------|---------------------|---------------|------------|----------|-------------|----------|-------------------|--------------------------|
|                | Name   | Denver Bearden                      |                  |               |                        | <br> <br> <br> <br> | Company       |            | PNM G    | as Service: | _        |                   |                          |
| D<br>NCE<br>ND | Company  | PNM Gas Services                    | Dept. 3          | 124-3763      |                        | 109<br>107<br>111   | Mailing A     | ddress     | Alverad  | lo Square,  | Mail Sto | p 0408            |                          |
|                | Address  | 603 W. Elm Street                   |                  |               |                        | าร3<br>38           | City, State   | e, Zip     | Albuqu   | erque, NM   | 87158    |                   |                          |
| 11             | City, State, Zip                                       | Farmington, NM 87401                |                  |               |                        | R                   | Telephon      | e No.      | 505-848  | -2974       | Telef    | ax No.            |                          |
| Sampling       | Location:  |                                     |                  | -             |                        | s.<br>Jo            |               |            | AN       | IALYSIS RI  | EQUEST   | Ð                 |                          |
|                | LANAL 22   | 7 × 1,41                            |                  |               |                        | er c                |               |            |          |             |          |                   |                          |
| Sampler:       |  |                                     |                  |               |                        | dmuV<br>IstnoC      |               |            |          |             |          |                   |                          |
|                | SAMPLE   | DENTIFICATION                       | SAMI<br>DATE     | PLE           | MATRIX PR              | )<br> <br>          |               |            |          |             |          |                   |                          |
| ,<br>,<br>,    |  |                                     |                  |               | -<br>-<br>-<br>-<br>-  |                     |               |            |          |             | +        | $\frac{1}{1}$     | -                        |
| 70.00          | 10/01/215  | 1-0010                              |                  | •             |                        |                     | /             |            | _        |             |          |                   | •                        |
| 1003           | 0501 01  | it to have                          | 11.14            |               | ) - ( )<br>- ( ) - ( ) |                     | /             |            |          | _           |          |                   |                          |
| 15. 3          | 101245   | 5-0-11                              | St. A.S.         | 1 14 1        | 17. C. 3               | <u>(</u> ]          | ·             |            |          |             |          |                   |                          |
| 7603           | 10 1460  | トーつ ご                               | 31./21/          | 0 57          | <u>ŕ</u> чС! М         |                     | 1             |            |          |             |          |                   |                          |
| 1803           | 10/415   | S-r-i-                              | 5 N/ 13          | 1.150         | 34 7 ( a 1             | · / / >             | <             |            |          |             |          |                   |                          |
|                |  |                                     |                  |               |                        |                     |               |            |          |             |          |                   |                          |
|                |  |                                     |                  |               |                        |                     |               |            |          |             |          |                   |                          |
|                |  |                                     |                  |               |                        |                     |               |            |          |             |          |                   |                          |
|                |  |                                     |                  |               | _                      |                     |               |            |          |             |          |                   |                          |
|                |  |                                     |                  |               |                        |                     |               |            |          |             |          |                   |                          |
|                |  |                                     |                  |               |                        |                     |               |            |          |             |          |                   |                          |
|                |  |                                     |                  |               | _                      |                     |               |            |          |             |          |                   |                          |
| Relinquish     | ed by: $\bigvee \bigcirc \neg \frown \bigtriangledown$ | L. L. De Darie &                    | Date/Ti          | <b>me ∭</b> √ | 45 104                 | Peceiv              | red by:       | -          |          |             |          | Date/Tim          |                          |
| Relinquish     | ed by:   |                                     | Date/Ti          | шe            |                        | Receiv              | red by:       |            |          |             |          | Date/Tim          | Ð                        |
| Relinquish     | ed by:   |                                     | Date/Ti          | шe            |                        | Receiv              | red by:       |            |          |             |          | Date/Tim          | Ð                        |
| Method of      | Shipment:  |                                     |                  |               |                        | Rush                |               | 24-48 Hou  | rrs 1    | 0 Working   | Days Spi | ecial Instruc     | tions:                   |
| Authorize      | ed by:   | ture <u>Must</u> Accompany Request) | e<br>E           | 12/           |                        |                     |               |            | <u> </u> |             |          | Results<br>to bot | to be sent<br>h parties. |
|                |  |                                     | Distribution: Wh | ite - On Site | Yellow - LAB           | Pink - Samp         | oler Goldenro | d - Client |          |             |          |                   |                          |