

3R - 197

# REPORTS

DATE:

2002

**Certified Mail: #7001 1940 0002 1371 7676**

February 28, 2003

**RECEIVED**

**MAR 05 2003**

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

Mr. William C. Olson  
New Mexico Oil Conservation Division  
1220 St. Francis Dr.  
Santa Fe, NM 87504

**RE: 2002 Pit Project Annual Groundwater Report**

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual reports for the 30 remaining groundwater impacted sites that were identified during our pit closure project of 1994 / 1995.

EPFS has organized the 30 Annual Reports (Volumes 1, 2 and 3) by land type. Volume 1 contains Annual Reports for sites found on Federal land. Volume 2 contains Non Federal sites and Volume 3 contains sites on Navajo land. Of the 30 reports submitted, EPFS is requesting closure of three sites located on Navajo lands. Of the three Navajo sites submitted for closure OCD has closed the Charley Pah #4 and the John Charles #8. The Rementa et al #1 has not been closed by either agency and EPFS reiterates request for closure of this site. EPFS understands closure of groundwater sites on Navajo land falls under jurisdiction of the Navajo Nation Environmental Protection Agency and original documents have been submitted to them for review. Other Navajo sites are included in the report for your information.

Three additional sites were submitted for closure in 2002. EPFS recently has received closure on the W.D. Heath B-5. Closure approval is pending on the D Loop Line Drip and Hammond # 41A. All of these sites are included in the 2002 Annual Report.

If you have any questions concerning the enclosed reports, please call me at (505) 599-2124.

Sincerely,



Scott T. Pope P.G.  
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # 7001 1940 0002 1371 7669**  
Mr. Bill Lisse, BLM - w / enclosures (federal sites only), **Certified Mail # 7001 1940 0002 1371 7652**



**RECEIVED**

**MAR 05 2003**

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

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**El Paso Field Services**

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**San Juan Basin Pit Program  
Groundwater Sites Project**

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**2002 Annual Report  
Navajo Sites (Volume 3)**

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March 2003



**MWH**

10619 South Jordan Gateway, Suite 100  
Salt Lake City, Utah 84095

# EL PASO FIELD SERVICES ANNUAL GROUNDWATER REPORT

## NAVAJO SITES VOLUME III

### TABLE OF CONTENTS

#### Site Map

| METER or<br>LINE ID | SITE NAME                     | TOWNSHIP | RANGE | SECTION | UNIT |
|---------------------|-------------------------------|----------|-------|---------|------|
| 71816               | Jennepah #1                   | 28N      | 09W   | 36      | H    |
| 95608               | Gallegos Canyon Unit<br>#124E | 28N      | 12W   | 35      | N    |
| 93126               | John Charles #8               | 27N      | 09W   | 13      | B    |
| 75155               | Ramenta et al #1              | 27N      | 09W   | 13      | J    |
| 71531               | Charley Pah #4                | 27N      | 09W   | 12      | K    |



**MWH**

MONTGOMERY WATSON HARZA

This is a detailed topographic map of the Gila National Forest area in Arizona. The map shows the Gila River flowing through the region, with numerous tributaries. Key geographical features include the Gila Mountains, San Francisco Peaks, and the San Carlos Mountains. Towns such as Flagstaff, Sedona, and Winslow are marked. The map also shows the Gila National Forest boundary and various other land management areas. A scale bar indicates a distance of 1 mile, and a north arrow is present in the upper right corner.

3 mi Scale: 1 : 600,000 Detail: 8-4 Datum: WGS84

## ACRONYMS

|                 |                                             |
|-----------------|---------------------------------------------|
| B               | Benzene                                     |
| E               | Ethylbenzene                                |
| EPFS            | El Paso Field Services                      |
| ft              | foot/feet                                   |
| GWEL            | groundwater elevation                       |
| ID              | identifier                                  |
| MW              | Monitoring Well                             |
| PSH             | Phase Separated Hydrocarbons                |
| NMWQCC          | New Mexico Water Quality Control Commission |
| T               | Toluene                                     |
| TOC             | Top Of Casing                               |
| NE              | not established                             |
| NS              | not sampled                                 |
| ORC             | oxygen release compound                     |
| OCD             | Oil Conservation Division                   |
| ppb             | parts per billion                           |
| $\mu\text{g/L}$ | micrograms per liter                        |
| X               | Total Xylenes                               |

**EPFS GROUNDWATER SITES  
2002 ANNUAL GROUNDWATER REPORT**

**Jennepah #1  
Meter Code: 71816**

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**SITE DETAILS**

**LEGAL DESCRIPTION:** Twn: 28N Rng: 9W Sec: 36 Unit: H  
**NMOCD Haz Ranking:** 40 **Land Type:** Navajo **Operator:** Amoco Production

**PREVIOUS ACTIVITIES**

|                                       |                                    |                                      |
|---------------------------------------|------------------------------------|--------------------------------------|
| <b>Site Assessment:</b> May -94       | <b>Excavation:</b> Jun-94 (70 cy)  | <b>Soil Boring:</b> Feb-97           |
| <b>Monitor Well:</b> Feb-97           | <b>Geoprobe:</b> NA                | <b>Additional MWs:</b> May-99        |
| <b>Downgradient MWs:</b> May-99       | <b>Replace MW:</b> NA              | <b>Quarterly Initiated:</b> Jun-97   |
|                                       | <b>Re-</b>                         |                                      |
| <b>ORC Nutrient Injection:</b> Jun-98 | <b>Excavation:</b> Nov-95 (234 cy) | <b>PSH Removal Initiated:</b> Mar-01 |
| <b>Annual Initiated:</b> NA           | <b>Quarterly Resumed:</b> NA       |                                      |

**SUMMARY OF 2002 ACTIVITIES**

**MW-1:** Quarterly groundwater sampling and water level monitoring was performed.

**MW-2:** Quarterly water level monitoring was performed.

**MW-3:** Quarterly water level monitoring was performed.

**Site-Wide Activities:** No other activities were performed at this site during 2002.

**SUMMARY TABLES AND GRAPHS**

- Analytical data are summarized in Table 1 and presented graphically in Figure 5.
- Laboratory reports are presented in Attachment 1.
- Field documentation is presented in Attachment 2.

**SITE MAP**

Site maps are attached as Figures 1 through 4.

**GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS**

No subsurface activities were performed at this site during 2002.

**DISPOSITION OF GENERATED WASTES**

No wastes were generated at this site during 2002.

**ISOCONCENTRATION MAPS**

No isoconcentration maps were prepared for this site, however, the attached site maps present both potentiometric surface and analytical data collected during 2002.

**EPFS GROUNDWATER SITES  
2002 ANNUAL GROUNDWATER REPORT**

**Jennepah #1  
Meter Code: 71816**

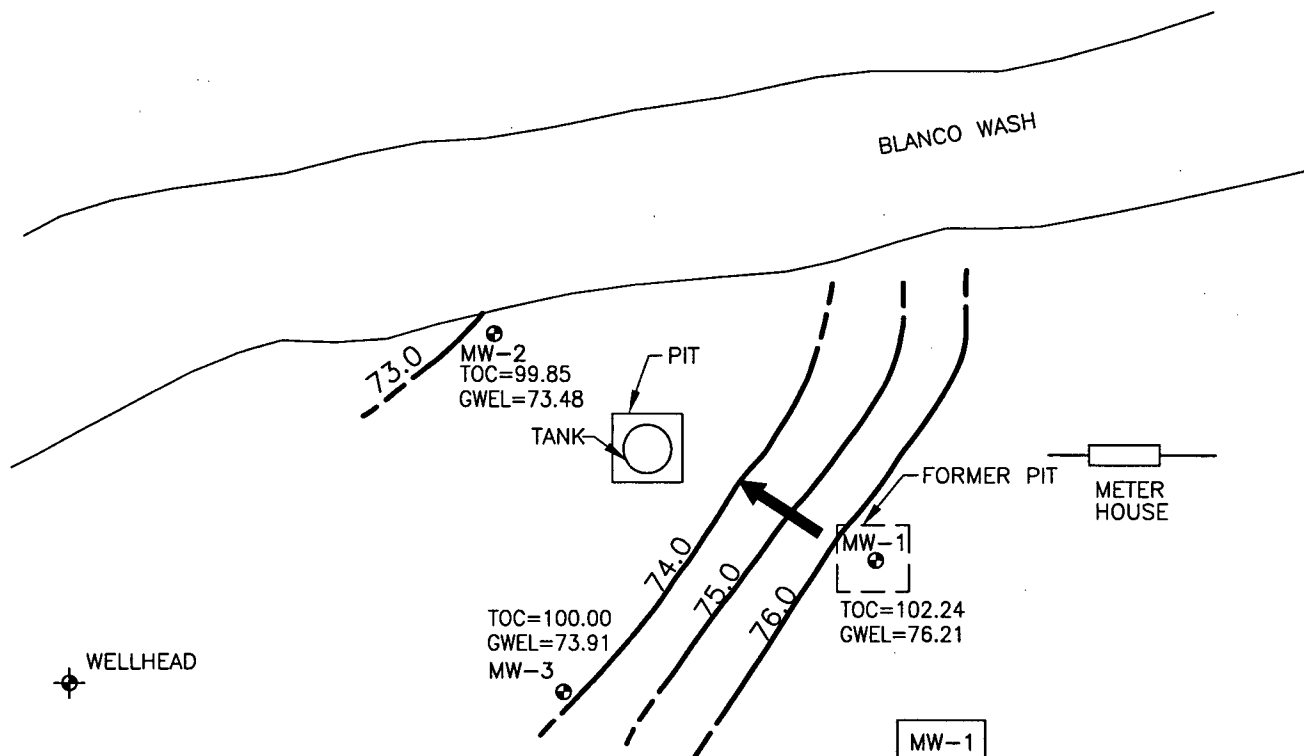
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**CONCLUSIONS**

- The groundwater flow direction at this site trends to the northwest.
- No free-phase hydrocarbons were detected during 2002.
- Benzene concentrations in MW-1 continue to exceed closure criteria ranging from  $< 2.5\mu\text{g/l}$  to  $32\mu\text{g/l}$  during 2002.
- Historical analytical results for BTEX in MW-2 and MW-3 have been below closure criteria, and, therefore, were not sampled during 2002.

**RECOMMENDATIONS**

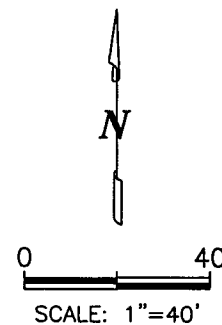
- EPFS will continue quarterly groundwater sampling and water level monitoring at MW-1 until the Navajo Nation EPA closure criteria are met.
- EPFS will continue quarterly water level monitoring at MW-2 and MW-3.
- Although samples collected at MW-2 and MW-3 have historically been non-detect, these monitoring wells will be sampled once during 2003 to ensure that conditions at the site have not changed since 2001.



| MW-1 |     |
|------|-----|
| B    | 2.5 |
| T    | 7.3 |
| E    | 13  |
| X    | 150 |

## LEGEND

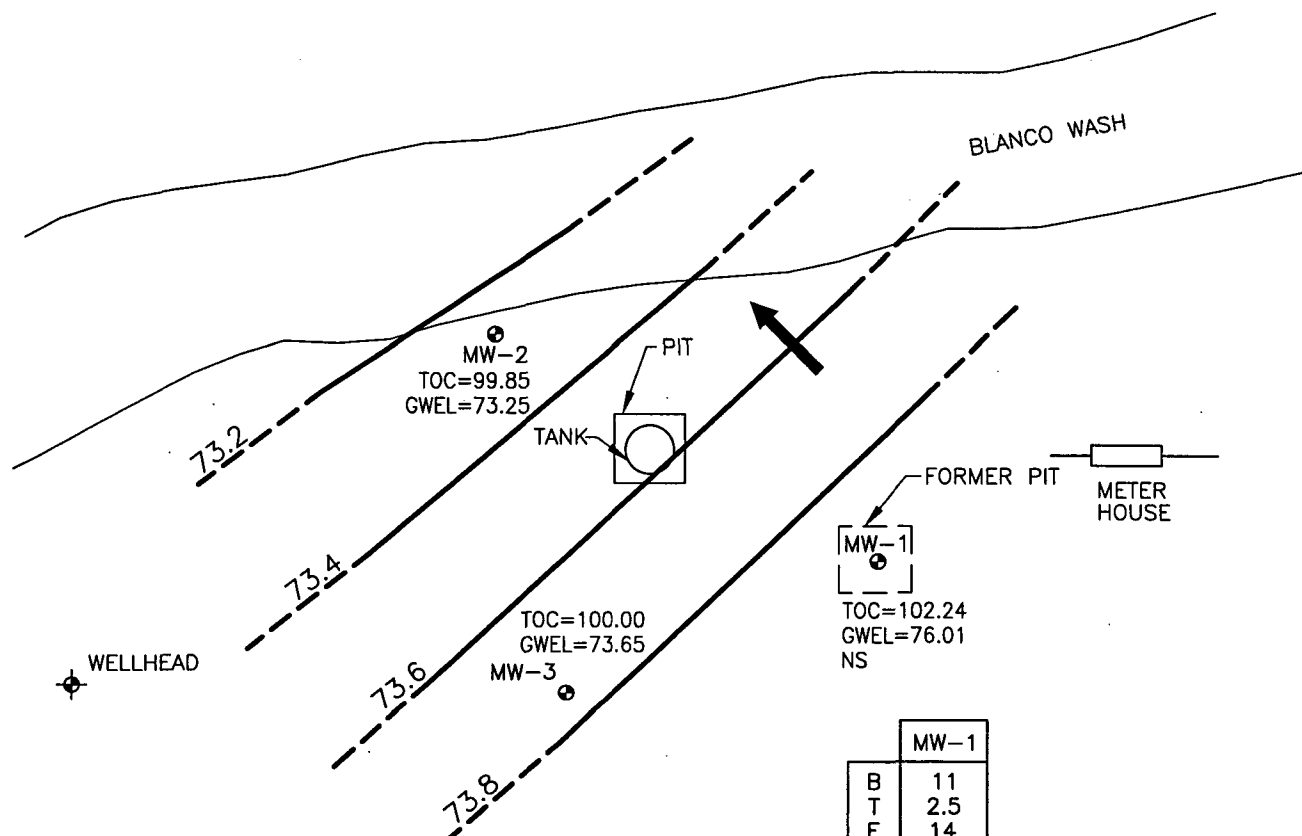
- MW-1 Approximate Monitoring Well Location and Number
- B Benzene ( $\mu\text{g/L}$ )
- T Toluene ( $\mu\text{g/L}$ )
- E Ethylbenzene ( $\mu\text{g/L}$ )
- X Total Xylenes ( $\mu\text{g/L}$ )
- NS Not Sampled
- GWEL Groundwater Elevation  
(FT Above Mean Sea Level Unless Noted Otherwise)
- TOC Top of Casing
- 75.6 Potentiometric Surface  
(Approximate & Assumed Where Dashed)
- Direction of Groundwater Flow  
(Estimated)



JENNAPAH #1, METER 71816  
MARCH, 2002

GROUNDWATER SITES  
EL PASO FIELD SERVICES

FIGURE 1



# LEGEND

- ⊕ MW-1 Approximate Monitoring Well Location and Number
- B Benzene ( $\mu\text{g/L}$ )
- T Toluene ( $\mu\text{g/L}$ )
- E Ethylbenzene ( $\mu\text{g/L}$ )
- X Total Xylenes ( $\mu\text{g/L}$ )
- NS Not Sampled
- GWEL Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
- TOC Top of Casing
- 75.6 Potentiometric Surface (Approximate & Assumed Where Dashed)
- Direction of Groundwater Flow (Estimated)

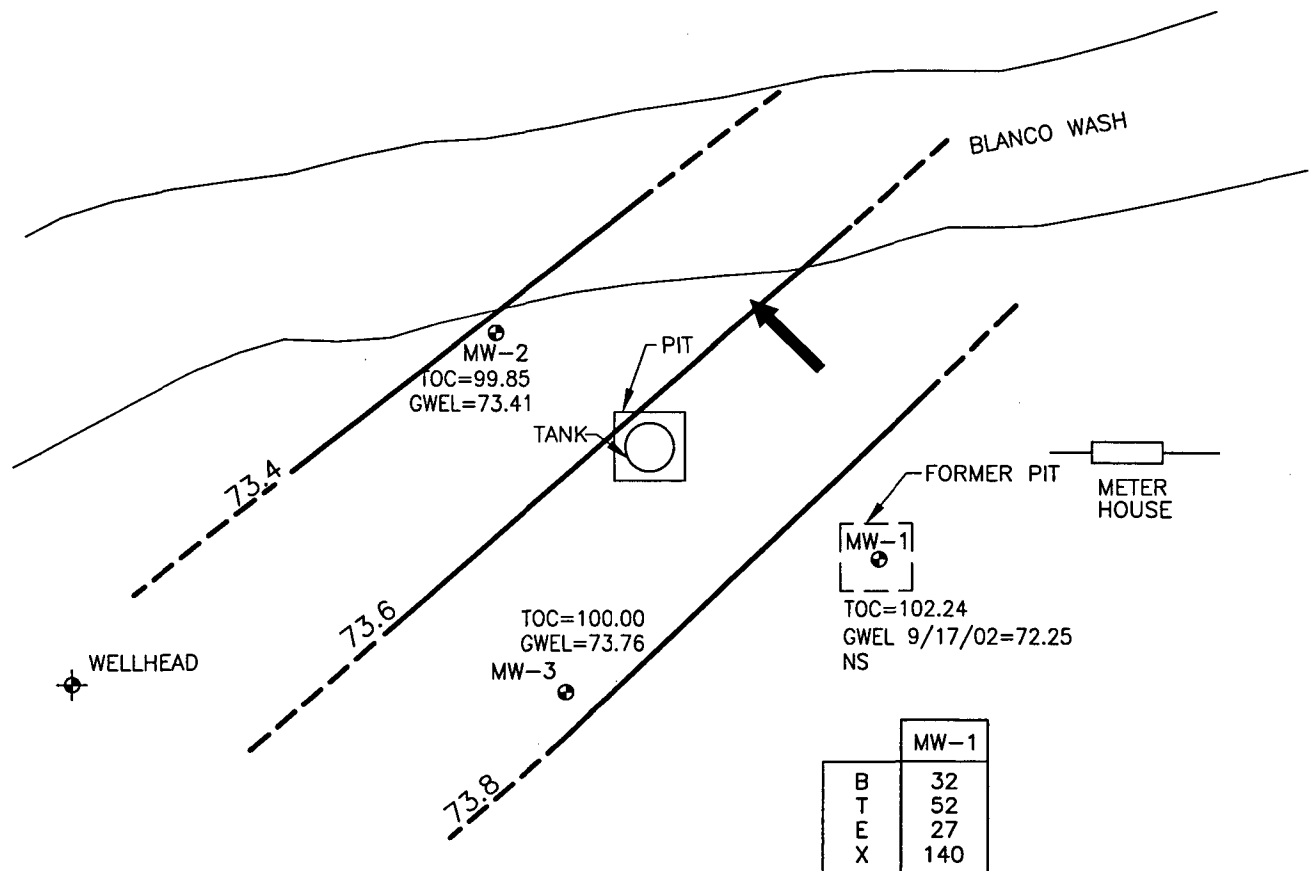


NOT TO SCALE

JENNAPAH #1, METER 71816  
JUNE, 2002

GROUNDWATER SITES  
EL PASO FIELD SERVICES

FIGURE 2



| MW-1 |     |
|------|-----|
| B    | 32  |
| T    | 52  |
| E    | 27  |
| X    | 140 |

### LEGEND

- MW-1 Approximate Monitoring Well Location and Number
- B Benzene ( $\mu\text{g/L}$ )
- T Toluene ( $\mu\text{g/L}$ )
- E Ethylbenzene ( $\mu\text{g/L}$ )
- X Total Xylenes ( $\mu\text{g/L}$ )
- NS Not Sampled
- GWEL Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
- TOC Top of Casing (Relative Scale)
- 75.6 Potentiometric Surface (Approximate & Assumed Where Dashed)
- Direction of Groundwater Flow (Estimated)

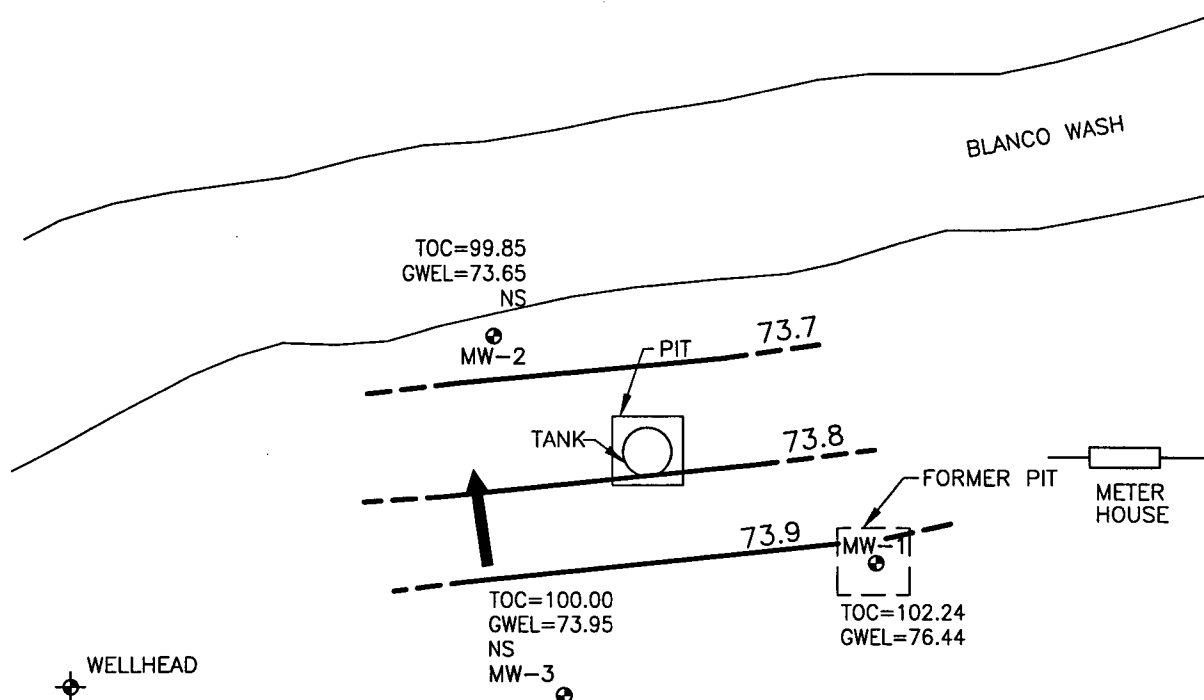


NOT TO SCALE

JENNAPAH #1, METER 71816  
SEPTEMBER, 2002

GROUNDWATER SITES  
EL PASO FIELD SERVICES

FIGURE 3



|   | MW-1 |
|---|------|
| B | 27.4 |
| T | 67.1 |
| E | 62.5 |
| X | 338  |

# LEGEND

- MW-1 Approximate Monitoring Well Location and Number
- B Benzene ( $\mu\text{g/L}$ )
- T Toluene ( $\mu\text{g/L}$ )
- E Ethylbenzene ( $\mu\text{g/L}$ )
- X Total Xylenes ( $\mu\text{g/L}$ )
- NS Not Sampled
- GWEL Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
- TOC Top of Casing (Relative Scale)
- 75.6 Potentiometric Surface (Approximate & Assumed Where Dashed)
- Direction of Groundwater Flow (Estimated)



NOT TO SCALE

JENNAPAH #1, METER 71816  
DECEMBER, 2002

GROUNDWATER SITES  
EL PASO FIELD SERVICES

FIGURE 4

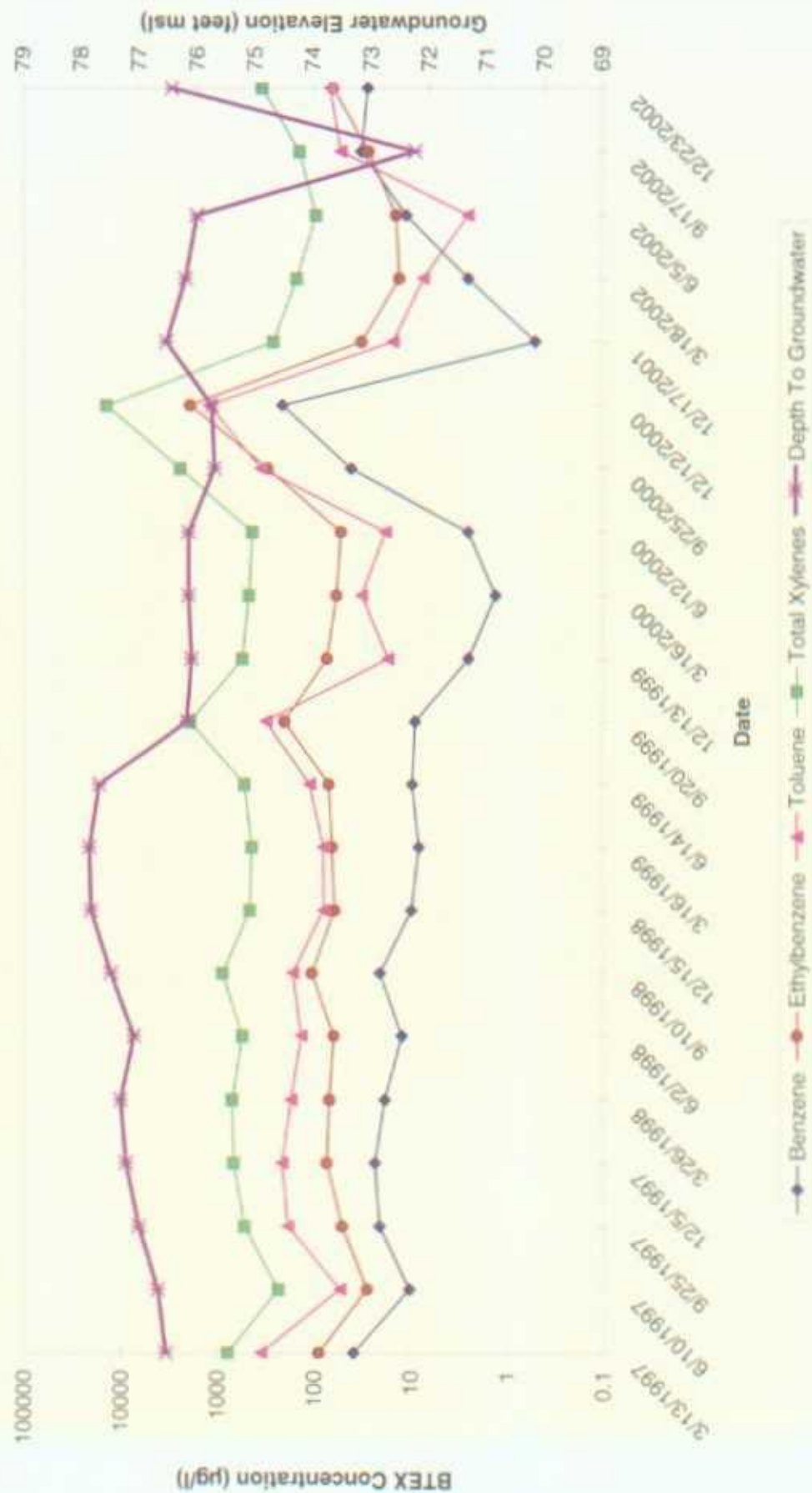
jennapah\_02.dwg

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER  
JENNEPAH #1 (METER #71816)  
(Page 1 of 1)

| Sample<br>Identification | Sample Date | MW<br>Identification | Benzene<br>(µg/l) | Toluene<br>(µg/l) | Ethylbenzene<br>(µg/l) | m,p-Xylene<br>(µg/l) | o-Xylene<br>(µg/l) | Total Xylenes<br>(µg/l) |
|--------------------------|-------------|----------------------|-------------------|-------------------|------------------------|----------------------|--------------------|-------------------------|
| JEN-0203-MW1             | 18-Mar-2002 | 1                    | <2.50             | 7.3               | 13                     | NA                   | NA                 | 150                     |
| JEN-0206-MW1             | 05-Jun-2002 | 1                    | 11                | <2.50             | 14                     | NA                   | NA                 | 94                      |
| 02-4944-1                | 17-Sep-2002 | 1                    | 32                | 52                | 27                     | 130                  | 10                 | 140                     |
| 02-6831-1                | 23-Dec-2002 | 1                    | 27.4              | 67.1              | 62.5                   | 128                  | 210                | 348                     |

Figure 5  
 BTEX Concentration and Groundwater Elevation vs. Time  
 Jennepah #1 (Meter #71816)  
 MW-1



**ATTACHMENT 1**  
**LABORATORY REPORTS**

**DATA VALIDATION WORKSHEET**  
(Page 1 of 2)

Analytical Method/Analytes: SW-846 8021B (BTEX) Sample Collection Date(s): 12/23-24/02

Laboratory: APCL MWH Job Number: EPC-SJRB  
(Groundwater)

Batch Identification: 02-06831 Matrix: Water

MS/MSD Parent(s)<sup>(a)</sup>: 02-06831-05 Field Replicate Parent(s): None

Validation Complete:

[Signature] 1-16-03  
(Date/Signature)

| Foot Notes | Site ID | Sample ID             | Lab. ID     | Hits (Y/N) | Quals.                  | Comments                                                                                                               |
|------------|---------|-----------------------|-------------|------------|-------------------------|------------------------------------------------------------------------------------------------------------------------|
| 1          | GW      | Jennepah MW-1         | 02-06831-01 | Y          | B<br>B<br>B<br>B<br>B   | Benzene @ 27.4 µg/l<br>Ethylbenzene @ 62.5 µg/l<br>Toluene @ 67.1 µg/l<br>o-Xylene @ 210 µg/l<br>m/p-Xylene @ 128 µg/l |
| 1          | GW      | Canada Mesa MW-2      | 02-06831-02 | Y          | B<br>B<br>UB<br>UB<br>B | Benzene @ 12.1 µg/l<br>Ethylbenzene @ 129 µg/l<br>Toluene @ 2.1 µg/l<br>o-Xylene @ 2.4 µg/l<br>m/p-Xylene @ 14 µg/l    |
| 1          | GW      | Canada Mesa MW-3      | 02-06831-03 | Y          | B<br>B<br>B<br>B<br>B   | Benzene @ 1,430 µg/l<br>Ethylbenzene @ 483 µg/l<br>Toluene @ 95 µg/l<br>o-Xylene @ 169 µg/l<br>m/p-Xylene @ 2,190 µg/l |
| 1          | GW      | Ohio "C" Govt #3 MW-5 | 02-06831-04 | Y          | B<br>B<br>UB<br>B<br>B  | Benzene @ 5.6 µg/l<br>Ethylbenzene @ 15.4 µg/l<br>Toluene @ 0.7 µg/l<br>o-Xylene @ 18.6 µg/l<br>m/p-Xylene @ 59 µg/l   |
| 1          | QC      | TB02101501            | 02-06831-05 | Y          |                         | Benzene @ 0.3T µg/l<br>Ethylbenzene @ 1.5 µg/l<br>Toluene @ 0.5 µg/l<br>o-Xylene @ 0.5 µg/l<br>m/p-Xylene @ 2.4 µg/l   |

**DATA VALIDATION WORKSHEET**  
(Page 2 of 2)

|                           |                     |                              |                        |
|---------------------------|---------------------|------------------------------|------------------------|
| <b>Analytical Method:</b> | SW-846 8021B (BTEX) | <b>MWH Job Number:</b>       | EPC-SJRB (Groundwater) |
| <b>Laboratory:</b>        | APCL                | <b>Batch Identification:</b> | 02-06831               |

| Validation Criteria                        |                |                  |                  |                       |                |  |  |  |
|--------------------------------------------|----------------|------------------|------------------|-----------------------|----------------|--|--|--|
| Sample ID                                  | Jennepah MW-1  | Canada Mesa MW-2 | Canada Mesa MW-3 | Ohio "C" Govt #3 MW-5 | TB 02101501    |  |  |  |
| Lab ID                                     | 02-06831-01    | 02-06831-02      | 02-06831-03      | 02-06831-04           | 02-06831-05    |  |  |  |
| Holding Time                               | A              | A                | A                | A                     | A              |  |  |  |
| Analyte List                               | A              | A                | A                | A                     | A              |  |  |  |
| Reporting Limits                           | A              | A                | A                | A                     | A              |  |  |  |
| Method Blank                               | A              | A                | A                | A                     | A              |  |  |  |
| Trip Blank                                 | A <sup>1</sup> | A <sup>1</sup>   | A <sup>1</sup>   | A <sup>1</sup>        | A <sup>1</sup> |  |  |  |
| Equipment Rinseate Blanks                  | N/A            | N/A              | N/A              | N/A                   | N/A            |  |  |  |
| Field Duplicate/Replicate                  | N/A            | N/A              | N/A              | N/A                   | N/A            |  |  |  |
| Initial Calibration                        | N              | N                | N                | N                     | N              |  |  |  |
| Initial Calibration Verification (ICV)     | N              | N                | N                | N                     | N              |  |  |  |
| Continuing Calibration Verification (CCV)  | A              | A                | A                | A                     | A              |  |  |  |
| Laboratory Control Sample (LCS)            | A              | A                | A                | A                     | A              |  |  |  |
| Laboratory Control Sample Duplicate (LCSD) | N              | N                | N                | N                     | N              |  |  |  |
| Matrix Spike/Matrix Spike Dup. (MS/MSD)    | N/A            | N/A              | N/A              | N/A                   | A              |  |  |  |
| Surrogate Spike Recovery                   | A              | A                | A                | A                     | A              |  |  |  |
| Retention Time Window                      | N              | N                | N                | N                     | N              |  |  |  |
| Injection Time(s)                          | N              | N                | N                | N                     | N              |  |  |  |
| Hardcopy vs. Chain-of-Custody              | A              | A                | A                | A                     | A              |  |  |  |
| EDD vs. Hardcopy                           | N              | N                | N                | N                     | N              |  |  |  |
| EDD vs. Chain of Custody                   | N              | N                | N                | N                     | N              |  |  |  |

(a) List QC batch identification if different than Batch ID

A indicates validation criteria were met

A/L indicates validation criteria met based upon Laboratory's QC Summary Form

X indicates validation criteria were not met

N indicates data review were not a project specific requirement

N/A indicates criteria are not applicable for the specified analytical method or sample

N/R indicates data not available for review

**NOTES:**

1) The following analytes were detected in the trip blank:

- a) Benzene @ 0.3T µg/L, qualify all sample concentrations less than or equal to 1.5 µg/L with a "UB" flag and all sample concentrations greater than 1.5 µg/l with a "B" flag.
- b) Ethylbenzene @ 1.5 µg/L, qualify all sample concentrations less than or equal to 7.5 µg/L with a "UB" flag and all sample concentrations greater than 7.5 µg/l with a "B" flag.
- c) Toluene @ 0.5 µg/L, qualify all sample concentrations less than or equal to 2.5 µg/L with a "UB" flag and all sample concentrations greater than 2.5 µg/l with a "B" flag.
- d) o-Xylene @ 0.5 µg/L, qualify all sample concentrations less than or equal to 2.5 µg/L with a "UB" flag and all sample concentrations greater than 2.5 µg/l with a "B" flag.
- e) m/p-Xylene @ 2.4 µg/L, qualify all sample concentrations less than or equal to 12 µg/L with a "UB" flag and all sample concentrations greater than 12 µg/l with a "B" flag.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Submitted to:

Montgomery Watson Harza

Attention: Brian Butters

10619 South Jordan Gateway

Salt Lake City UT 84095

Tel: (801) 617-3200 Fax: (801) 617-4200

# APCL Analytical Report

Service ID #: 801-026831

Collected by: Delbert Belcis

Collected on: 10/15-12/24/02

Received: 12/26/02

Extracted: N/A

Tested: 12/26-31/02

Reported: 01/03/03

Sample Description: Water

Project Description: 220013

San Juan River Basin

*Groundwater*

## Analysis of Water Samples

| Component Analyzed | Method | Unit | PQL | Jennepah Canada<br>Analysis Results |            |
|--------------------|--------|------|-----|-------------------------------------|------------|
|                    |        |      |     | MW-1                                | MW-2       |
|                    |        |      |     | 02-06831-1                          | 02-06831-2 |
| BTXE               |        |      |     |                                     |            |
| Dilution Factor    |        |      |     | 1                                   | 1          |
| BENZENE            | 8021B  | µg/L | 0.5 | 27.4                                | 12.1       |
| ETHYLBENZENE       | 8021B  | µg/L | 0.5 | 62.5                                | 129        |
| TOLUENE            | 8021B  | µg/L | 0.5 | 67.1                                | 2.1        |
| O-XYLENE           | 8021B  | µg/L | 0.5 | 210                                 | 2.4        |
| M,P-XYLENE         | 8021B  | µg/L | 1   | 128                                 | 14         |

| Component Analyzed | Method | Unit | PQL | Canada Mesa<br>Analysis Results |            | TB02101501 |
|--------------------|--------|------|-----|---------------------------------|------------|------------|
|                    |        |      |     | MW-3                            | MW-5       |            |
|                    |        |      |     | 02-06831-3                      | 02-06831-4 |            |
| BTXE               |        |      |     |                                 |            |            |
| Dilution Factor    |        |      |     | 5                               | 1          | 1          |
| BENZENE            | 8021B  | µg/L | 0.5 | 1,430                           | 5.6        | 0.3J       |
| ETHYLBENZENE       | 8021B  | µg/L | 0.5 | 483                             | 15.4       | 1.5        |
| TOLUENE            | 8021B  | µg/L | 0.5 | 95                              | 0.7        | 0.5        |
| O-XYLENE           | 8021B  | µg/L | 0.5 | 169                             | 18.6       | 0.5        |
| M,P-XYLENE         | 8021B  | µg/L | 1   | 2,190                           | 59         | 2.4        |

PQL: Practical Quantitation Limit.

MDL: Method Detection Limit.

CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit.

"-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

*[Signature]*  
Dominic Lau

Laboratory Director

Applied P & Ch Laboratory

# Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

## APCL QA/QC Report

### Submitted to:

Montgomery Watson Harza

Attention: Brian Butters

10619 South Jordan Gateway

Salt Lake City, UT 84095

Tel: (801)617-3200 Fax: (801)617-4200

Service ID #: 801-026831

Received: 12/26/02

Collected by: Delbert Belcis

Tested: 12/26-31/02

Collected on: 10/15-12/24/02

Reported: 01/09/03

Sample description:

Water

Project: San Juan River Basin /220013

### Analysis of Water

801-026831QC

| Component Name | Analysis<br>Batch # | CCV<br>(µg/L) | CCV<br>%Rec | M-Blank | Conc.<br>Unit | SP Level | LCS<br>%Rec | MS<br>%Rec | MSD<br>%Rec | MS/MSD<br>%RPD | Control Limit<br>%Rec | Limit<br>%Diff |
|----------------|---------------------|---------------|-------------|---------|---------------|----------|-------------|------------|-------------|----------------|-----------------------|----------------|
| BTXE           |                     |               |             |         |               |          |             |            |             |                |                       |                |
| Benzene        | 02G5133             | 100           | 97          | N.D.    | µg/L          | 18.0     | 86          | 80         | 80          | 1              | 68-130                | 31             |
| Toluene        | 02G5133             | 100           | 103         | N.D.    | µg/L          | 70.0     | 88          | 80         | 80          | 0              | 66-133                | 33             |
| Ethylbenzene   | 02G5133             | 100           | 105         | N.D.    | µg/L          | 18.0     | 95          | 78         | 78          | 0              | 65-134                | 35             |
| m/p-Xylene     | 02G5133             | 200           | 98          | N.D.    | µg/L          | 70.0     | 91          | 79         | 79          | 0              | 65-134                | 35             |
| o-Xylene       | 02G5133             | 100           | 99          | N.D.    | µg/L          | 25.0     | 89          | 79         | 80          | 1              | 65-134                | 35             |

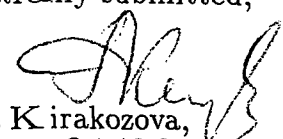
| Component Name | Analysis<br>Batch # | CCV<br>(µg/L) | CCV<br>%Rec | M-Blank | Conc.<br>Unit | SP Level | LCS<br>%Rec | MS<br>%Rec | MSD<br>%Rec | MS/MSD<br>%RPD | Control Limit<br>%Rec | Limit<br>%Diff |
|----------------|---------------------|---------------|-------------|---------|---------------|----------|-------------|------------|-------------|----------------|-----------------------|----------------|
| BTXE           |                     |               |             |         |               |          |             |            |             |                |                       |                |
| Benzene        | 02G5174             | 100           | 98          | N.D.    | µg/L          | 18.0     | 76          | 79         | 78          | 1              | 68-130                | 31             |
| Toluene        | 02G5174             | 100           | 105         | N.D.    | µg/L          | 70.0     | 77          | 79         | 80          | 1              | 66-133                | 33             |
| Ethylbenzene   | 02G5174             | 100           | 107         | N.D.    | µg/L          | 18.0     | 83          | 77         | 77          | 1              | 65-134                | 35             |
| m/p-Xylene     | 02G5174             | 200           | 100         | N.D.    | µg/L          | 70.0     | 79          | 79         | 78          | 1              | 65-134                | 35             |
| o-Xylene       | 02G5174             | 100           | 100         | N.D.    | µg/L          | 25.0     | 78          | 76         | 76          | 0              | 65-134                | 35             |

\*: LCS/LCSD is used.

Notation: ICV - Initial Calibration Verification  
CCV - Continuation Calibration Verification  
LCS - Lab Control Spike  
MS - Matrix Spike  
MSD - Matrix Spike Duplicate  
ICS - Interference Check Standard  
MD - Matrix Duplicate  
N.D. - Not detected or less than PQL

CCB - Continuation Calibration Blank  
M-blank - Method Blank  
SP Level - Spike Level  
%Rec - Recovery Percent  
%RPD - Relative Percent Differences  
%Diff - Control Limit for %RPD  
ICP-SD - ICP Serial Dilution  
N.A. - Not Applicable

Respectfully submitted,

  
Regina Kirakozova,  
Associate QA/QC Director  
Applied P & Ch Laboratory

## FORM-2A

Applied P &amp; Ch Laboratory

## Surrogate Recovery Summary for Method 8021B

Client Name: Montgomery Watson Harza

Contract No:

Lab Code: APCL

Case No:

SAS No:

SDG Number: 026831

Project ID: San Juan River Basin

Project No: 220013

Sample Matrix: Water

Batch No: 02G5133

| #  | Client<br>Sample No | Lab<br>Sample ID | S1<br>% # | TOT<br>OUT |
|----|---------------------|------------------|-----------|------------|
| 1  |                     | 02G5133-LCS-01   | 85        | 0          |
| 2  |                     | 02G5133-LSD-01   | 82        | 0          |
| 3  |                     | 02G5133-MB-02    | 87        | 0          |
| 4  | MW-1                | 02-6831-1        | 120       | 0          |
| 5  | MW-2                | 02-6831-2        | 105       | 0          |
| 6  | MW-5                | 02-6831-4        | 96        | 0          |
| 7  | TB02101501          | 02-6831-5        | 89        | 0          |
| 8  | TB02101501          | 02-6831-5MS      | 89        | 0          |
| 9  | TB02101501          | 02-6831-5MSD     | 88        | 0          |
| 10 |                     |                  |           |            |
| 11 |                     |                  |           |            |
| 12 |                     |                  |           |            |
| 13 |                     |                  |           |            |
| 14 |                     |                  |           |            |
| 15 |                     |                  |           |            |
| 16 |                     |                  |           |            |
| 17 |                     |                  |           |            |
| 18 |                     |                  |           |            |
| 19 |                     |                  |           |            |
| 20 |                     |                  |           |            |
| 21 |                     |                  |           |            |
| 22 |                     |                  |           |            |
| 23 |                     |                  |           |            |
| 24 |                     |                  |           |            |
| 25 |                     |                  |           |            |

QC Control Limit

S1 = 4-BROMO-FLUOROBENZENE (PID)

65-134

# Column to be used to flag recovery values:

\* - Values outside of contract required QC Limits

D - Surrogate diluted out

I - Matrix Interference

## FORM-2A

Applied P &amp; Ch Laboratory

## Surrogate Recovery Summary for Method 8021B

Client Name: Montgomery Watson Harza

Contract No:

Lab Code: APCL

Case No:

SAS No:

Service ID: 026831

Project ID: San Juan River Basin

Project No: 220013

Sample Matrix: Water

Batch No: 02G5174

| #  | Client<br>Sample No | Lab<br>Sample ID | S1<br>% # | TOT<br>OUT |
|----|---------------------|------------------|-----------|------------|
| 1  |                     | 02G5174-LCS-01   | 82        | 0          |
| 2  |                     | 02G5174-LSD-01   | 80        | 0          |
| 3  |                     | 02G5174-MB-02    | 85        | 0          |
| 4  | MW-3                | 02-6831-3        | 106       | 0          |
| 5  | 333-MW01-WG3        | 02-6870-1MS      | 82        | 0          |
| 6  | 333-MW01-WG3        | 02-6870-1MSD     | 83        | 0          |
| 7  |                     |                  |           |            |
| 8  |                     |                  |           |            |
| 9  |                     |                  |           |            |
| 10 |                     |                  |           |            |
| 11 |                     |                  |           |            |
| 12 |                     |                  |           |            |
| 13 |                     |                  |           |            |
| 14 |                     |                  |           |            |
| 15 |                     |                  |           |            |
| 16 |                     |                  |           |            |
| 17 |                     |                  |           |            |
| 18 |                     |                  |           |            |
| 19 |                     |                  |           |            |
| 20 |                     |                  |           |            |
| 21 |                     |                  |           |            |
| 22 |                     |                  |           |            |
| 23 |                     |                  |           |            |
| 24 |                     |                  |           |            |
| 25 |                     |                  |           |            |

QC Control Limit  
65-134

S1 = 4-BROMO-FLUOROBENZENE (PID)

# Column to be used to flag recovery values:

\* - Values outside of contract required QC Limits

D - Surrogate diluted out

I - Matrix Interference

# CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

LABORATORY APCL

Contract El Paso Corp., San Juan River Basin

Chain of Custody ID 021224 DB  
 Page 1 of 1  
 Air Bill No. 836381676760

MWH

Phone (801) 617-3200 FAX (801) 617-4200

MWH Contact Brian Butters

Project Sanduan River Basin

Project Number 220013

Date Due 21 Days

Sampler's Name Delbert Belas

(print clearly)

| Location ID          | Sample ID | Depth Interval (ft) | Date Collected | Time Collected | Matrix (a) | Sampling Technique (b) | ANALYSES REQUESTED |                     |                 |                                     |                      |                    |                     |                     |  |  |  |  |  |  |
|----------------------|-----------|---------------------|----------------|----------------|------------|------------------------|--------------------|---------------------|-----------------|-------------------------------------|----------------------|--------------------|---------------------|---------------------|--|--|--|--|--|--|
|                      |           |                     |                |                |            |                        | BTEX SW-846 8021B  | Alkalinity SM 2320B | TDS USEPA 160.1 | NM WQCC Metals SW-846 6010B & 7470A | Cations SW-846 6010B | Anions USEPA 300.0 | Nitrate USEPA 300.0 | Nitrite USEPA 300.0 |  |  |  |  |  |  |
| GW- Jeneredah        | MW-1      |                     | 12/23/02       | 1125           | W6         | B                      | ✓                  |                     |                 |                                     |                      |                    |                     |                     |  |  |  |  |  |  |
| GW- OHIC "C" BOU # 3 | MW-5      |                     | 12/23/02       | 1530           | W6         | B                      | ✓                  |                     |                 |                                     |                      |                    |                     |                     |  |  |  |  |  |  |
| GW- Canada Mesa      | MW-2      |                     | 12/24/02       | 1205           | W6         | B                      | ✓                  |                     |                 |                                     |                      |                    |                     |                     |  |  |  |  |  |  |
| GW- Canada Mesa      | MW-3      |                     | 12/24/02       | 1125           | W6         | B                      | ✓                  |                     |                 |                                     |                      |                    |                     |                     |  |  |  |  |  |  |
| 1802101501           |           |                     | 10/16/02       |                |            |                        | -                  |                     |                 |                                     |                      |                    |                     |                     |  |  |  |  |  |  |

021224 DB

(a) Matrix: AA - Air  
 SO - Soil  
 WS - Surface Water  
 WW - Ground Water

WG - Trip Blank/  
 Equipment Blanks  
 WW - Wastewater

(b) Sampling Technique: Composite=C  
 Grab=G  
 Hand Auger=HA

Submersible Pump=SP  
 Bladder Pump=BP  
 Bailor=B  
 Wellhead Faucet=WF  
 Hydropunch=HP

Location IDs: North Flare Pit=NF  
 South Flare Pit=SF  
 San Juan River Plant=SJ

Groundwater Sites=GW  
 Bist=BI  
 Jaquez=JA

| Relinquished by/Affiliation | Received by/Affiliation | Date     | Time |
|-----------------------------|-------------------------|----------|------|
| Delbert Belas / APCL        | Paul K                  | 02/24/02 | 1410 |
|                             |                         | 12/26/02 | 1300 |

## LABORATORY USE ONLY

### SAMPLES WERE:

1 Shipped or hand delivered

Notes:

2 Ambient or Chilled

Notes:

3 Temperature

4 Received Broken/Leaking (Improperly Sealed)

Notes:

5 Properly Preserved

Notes:

6 Received Within Holding Times

Notes:

COC Tape Was:

1 Present on Outer Package

Notes:

2 Unbroken on Outer Package

Notes:

3 Present on Sample

Notes:

4 Unbroken on Sample

Notes:

Discrepancies Between Sample Labels and COC Record?

Notes:

Y N

Notes:

Y N

# CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

LABORATORY APCL

Contract El Paso Corp., San Juan River Basin

MTHH

Phone (801) 617-3200 FAX (801) 617-4200

MTHH Contact Brian Burkens

Project San Juan River Basin

Project Number 220013

Date Due 21 days

Sampler's Name Abby Lowe  
(print clearly)

Chain of Custody ID 020917ALD1

Page 1 of 1

Air Bill No. 836557701511

| LABORATORY USE ONLY                                 |  | ANALYSES REQUESTED |  |  |  |  |  |  |  |  |  | LABORATORY USE ONLY                                 |  |
|-----------------------------------------------------|--|--------------------|--|--|--|--|--|--|--|--|--|-----------------------------------------------------|--|
| SAMPLES WERE:                                       |  |                    |  |  |  |  |  |  |  |  |  | SAMPLES WERE:                                       |  |
| 1 Shipped or hand delivered                         |  |                    |  |  |  |  |  |  |  |  |  | 1 Shipped or hand delivered                         |  |
| Notes:                                              |  |                    |  |  |  |  |  |  |  |  |  | Notes:                                              |  |
| 2 Ambient or Chilled                                |  |                    |  |  |  |  |  |  |  |  |  | 2 Ambient or Chilled                                |  |
| Notes:                                              |  |                    |  |  |  |  |  |  |  |  |  | Notes:                                              |  |
| 3 Temperature                                       |  |                    |  |  |  |  |  |  |  |  |  | 3 Temperature                                       |  |
| Notes:                                              |  |                    |  |  |  |  |  |  |  |  |  | Notes:                                              |  |
| 4 Received Broken/Leaking (Improperly Sealed)       |  |                    |  |  |  |  |  |  |  |  |  | 4 Received Broken/Leaking (Improperly Sealed)       |  |
| Notes:                                              |  |                    |  |  |  |  |  |  |  |  |  | Notes:                                              |  |
| 5 Properly Preserved                                |  |                    |  |  |  |  |  |  |  |  |  | 5 Properly Preserved                                |  |
| Notes:                                              |  |                    |  |  |  |  |  |  |  |  |  | Notes:                                              |  |
| 6 Received Within Stating Times                     |  |                    |  |  |  |  |  |  |  |  |  | 6 Received Within Stating Times                     |  |
| Notes:                                              |  |                    |  |  |  |  |  |  |  |  |  | Notes:                                              |  |
| COC Tape Was:                                       |  |                    |  |  |  |  |  |  |  |  |  | COC Tape Was:                                       |  |
| 1 Present on Outer Package                          |  |                    |  |  |  |  |  |  |  |  |  | 1 Present on Outer Package                          |  |
| Notes:                                              |  |                    |  |  |  |  |  |  |  |  |  | Notes:                                              |  |
| 2 Unbroken on Outer Package                         |  |                    |  |  |  |  |  |  |  |  |  | 2 Unbroken on Outer Package                         |  |
| Notes:                                              |  |                    |  |  |  |  |  |  |  |  |  | Notes:                                              |  |
| 3 Present on Sample                                 |  |                    |  |  |  |  |  |  |  |  |  | 3 Present on Sample                                 |  |
| Notes:                                              |  |                    |  |  |  |  |  |  |  |  |  | Notes:                                              |  |
| 4 Unbroken on Sample                                |  |                    |  |  |  |  |  |  |  |  |  | 4 Unbroken on Sample                                |  |
| Notes:                                              |  |                    |  |  |  |  |  |  |  |  |  | Notes:                                              |  |
| Discrepancies Between Sample Labels and COC Record? |  |                    |  |  |  |  |  |  |  |  |  | Discrepancies Between Sample Labels and COC Record? |  |
| Notes:                                              |  |                    |  |  |  |  |  |  |  |  |  | Notes:                                              |  |

| Date Collected | Time Collected | Matrix (s) | Sampling Technique (s) | BTX SW-646 80218 | Alkalinity SM 2320B | TDS USEPA 180.1 | NM WQC Metals SW-646 6010B & 7470A | Cations SW-646 6010B | Anions USEPA 300.0 | Nitrate USEPA 300.0 | Nitrite USEPA 300.0 |
|----------------|----------------|------------|------------------------|------------------|---------------------|-----------------|------------------------------------|----------------------|--------------------|---------------------|---------------------|
| 09/17/02       | 10:18          | WV-B       | ✓                      | ✓                |                     |                 |                                    |                      |                    |                     |                     |
| 09/17/02       | 11:28          | WV-B       | ✓                      | ✓                |                     |                 |                                    |                      |                    |                     |                     |
| 09/17/02       |                |            |                        |                  |                     |                 |                                    |                      |                    |                     |                     |
| 4944           |                |            |                        |                  |                     |                 |                                    |                      |                    |                     |                     |

| Relinquished by/Affiliation | Received by/Affiliation | Date     | Time  |
|-----------------------------|-------------------------|----------|-------|
| Abby Lowe / APCL            | APCL                    | 09/17/02 | 14:00 |
|                             |                         | 09/18/02 | 1000  |

| Method:            | AA - Air | SO - Soil | WS - Surface Water | WG - Ground Water | Sampling Technique: | Composite=C | Grab=G | Hand Auger=HA | Submersible Pump=SP | Bladder Pump=BP | Boiler=B | Wellhead Faucet=WF | Hydroponic=HP | Location ID: | North Flare P1=NF | South Flare P1=SF | San Juan River Plant=SJ |
|--------------------|----------|-----------|--------------------|-------------------|---------------------|-------------|--------|---------------|---------------------|-----------------|----------|--------------------|---------------|--------------|-------------------|-------------------|-------------------------|
| SO - Soil          |          |           |                    |                   |                     |             |        |               |                     |                 |          |                    |               |              |                   |                   |                         |
| WS - Surface Water |          |           |                    |                   |                     |             |        |               |                     |                 |          |                    |               |              |                   |                   |                         |
| WG - Ground Water  |          |           |                    |                   |                     |             |        |               |                     |                 |          |                    |               |              |                   |                   |                         |

## Applied P &amp; C Laboratory

13701 Magnolia Ave., Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

## Sample Receiving Checklist

APCL ServiceID: **4944**Client Name/Project: San Juan

## 1. Sample Arrival

Date/Time Received 9/18/02 1000 Date/Time Opened 9/18/02 1000 By (name): CRKCustody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☒ FedEx ☐ APCL Empl:

## 2. Chain-of-Custody (CoC)

|                                                         |                                                     |                                                        |                                                                         |
|---------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------|
| <input type="checkbox"/> With Samples?                  | <input type="checkbox"/> Faxed?                     | <input type="checkbox"/> Client has Copy?              | <input checked="" type="checkbox"/> Signed, dated? By: <u>Asky Lowe</u> |
| <input type="checkbox"/> Project ID?                    | <input checked="" type="checkbox"/> Analyses Clear? | <input type="checkbox"/> Hold Samples?                 | # on Hold _____ # Received <u>3</u>                                     |
| <input type="checkbox"/> CoC/Docs Zip-Locked under lid? | <input type="checkbox"/> Compos. #: _____           | <input checked="" type="checkbox"/> Samples OK?        |                                                                         |
| <input type="checkbox"/> Discrepancies?                 | <input type="checkbox"/> Client notified?           | <input type="checkbox"/> Response (attach docs): _____ |                                                                         |

## 3. Shipping Container/Cooler

Cooler Used? # of 1 Cooled by: ☒ Ice ☐ Blue Ice ☐ Dry Ice ☐ None  
Temp °C 4.6

(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).

Cooler Custody Seal? ☐ Absent ☒ Intact ☐ Tampered?

## 4. Sample Preservation

☐ pH <2 ☐ pH >12  
If Not, pH = \_\_\_\_\_ Preserved by: ☐ Client ☐ APCL ☐ Third Party

## 5. Holding-time Requirements

|                                               |                                           |                                                |                                                            |                                   |
|-----------------------------------------------|-------------------------------------------|------------------------------------------------|------------------------------------------------------------|-----------------------------------|
| <input type="checkbox"/> pH 24hr              | <input type="checkbox"/> BACT 6/24hr      | <input type="checkbox"/> Cr <sup>VI</sup> 24hr | <input type="checkbox"/> NO <sub>3</sub> <sup>-</sup> 48hr | <input type="checkbox"/> BOD 48hr |
| <input type="checkbox"/> Cl <sub>2</sub> ASAP | <input type="checkbox"/> Turbidity 48hr   | <input type="checkbox"/> DO ASAP               | <input type="checkbox"/> Fe(II) ASAP                       |                                   |
| <input type="checkbox"/> HT Expired?          | <input type="checkbox"/> Client notified? |                                                |                                                            |                                   |

## 6. Sample Container Condition

|                                             |                                           |                                         |                                     |
|---------------------------------------------|-------------------------------------------|-----------------------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> Intact? | <input type="checkbox"/> Broken?          | <input type="checkbox"/> Documented?    | Number: _____                       |
| Type: <input type="checkbox"/> plastic      | <input checked="" type="checkbox"/> glass | <input type="checkbox"/> Tube: brass/SS | <input type="checkbox"/> Tedlar Bag |
| <input type="checkbox"/> Quantity OK?       | <input type="checkbox"/> Leaking?         | <input type="checkbox"/> Anomaly?       |                                     |
| <input type="checkbox"/> Caps tight?        | <input type="checkbox"/> Air Bubbles?     | <input type="checkbox"/> Anomaly?       |                                     |
| Labels: <input type="checkbox"/> Unique ID? | <input type="checkbox"/> Date/Time        | <input type="checkbox"/> Preserved?     |                                     |

## 7. Turn Around Time

☒ RUSH TAT: 5 ☐ Std (7-10 days) ☐ Not Marked

## 8. Sample Matrix

|                                                             |                                    |                                 |                                    |                                  |                                   |                                                                   |
|-------------------------------------------------------------|------------------------------------|---------------------------------|------------------------------------|----------------------------------|-----------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> Drinking H <sub>2</sub> O          | <input type="checkbox"/> Other Liq | <input type="checkbox"/> Soil   | <input type="checkbox"/> Wipe      | <input type="checkbox"/> Polymer | <input type="checkbox"/> Air      | <input type="checkbox"/> Other: _____                             |
| <input checked="" type="checkbox"/> Ground H <sub>2</sub> O | <input type="checkbox"/> Sludge    | <input type="checkbox"/> Filter | <input type="checkbox"/> Oil/Petro | <input type="checkbox"/> Paint   | <input type="checkbox"/> W. Water | <input type="checkbox"/> Extract <input type="checkbox"/> Unknown |

## 9. Pre-Login Check List Completed &amp; OK?

☒ ALL OK? (if not, attach docs) ☐ Client Contact? (Name: \_\_\_\_\_) Date/Time: \_\_\_\_\_Received/Checked by: [Signature] Date: 18 Sep 2002 Time: 9:13 a.m.

\*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

Document ID: final-031001ampres.doc

Applied P & Ch Laboratory

13750 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

## Sample Login: Check List

02-04944 (0984\_ 966) (2721900\_ 966)

09/18/02

## Part 1: General Information

|                                                   |                      |                                                      |
|---------------------------------------------------|----------------------|------------------------------------------------------|
| <input type="checkbox"/> Company Information      | Name:                | Montgomery Watson Harza                              |
|                                                   | Address:             | 10619 South Jordan Gateway, Salt Lake City, UT 84095 |
| <input type="checkbox"/> Project Information      | Project Description: | San Juan River Basin                                 |
|                                                   |                      | Hill AFB                                             |
|                                                   | Project #:           | 220013                                               |
| <input type="checkbox"/> Billing Information      | P.O. #:              |                                                      |
|                                                   | Bill Address:        | 10619 South Jordan Gateway, Salt Lake City, UT 84095 |
|                                                   | Lab Project ID:      | 1999_0746                                            |
|                                                   | Client Database #:   | 04                                                   |
| <input type="checkbox"/> Receiving Information    | Who Received Sample? | Eric Wendland                                        |
|                                                   | Receiving Date/Time: | 09/18/02 1000                                        |
|                                                   | COC No.              |                                                      |
| <input type="checkbox"/> Shipping Information     | Shipping Company     | Express                                              |
|                                                   | Packing Information: | Cooler/Ice Chester                                   |
|                                                   | Cooler Temperature:  | 4.6 °C                                               |
| <input type="checkbox"/> Container Information    | Container Provider:  | Client                                               |
| <input type="checkbox"/> Sampling Information     | Sampling Person:     |                                                      |
|                                                   | Sampling Company:    | Client                                               |
| <input type="checkbox"/> Turn-Around-Time Option: |                      | Rush 5 working day(s)                                |
| <input type="checkbox"/> QC Option:               |                      | QC and Surro. Rep.                                   |
| <input type="checkbox"/> Disposal Option:         |                      | Not specify                                          |

## Part 2: Sample Information

| Seq. # | Sample ID (on COC) | Sample APCL Sub-ID | Sample ID  | Matrix | Cont. tainer | Preser- vative | Vol. ml | # of    | Condition | Collected | Composite | TAT   |                            |
|--------|--------------------|--------------------|------------|--------|--------------|----------------|---------|---------|-----------|-----------|-----------|-------|----------------------------|
|        |                    |                    |            |        |              |                | Am. g   | Replica | G, L, B   | mmddyy    | Hold ?    | Group | Days                       |
| 1      | MW-1 GW Ramona     | VOA                | 02-04944-2 | W      | V            | C              | 40      | 2       | G         | 091702    | N         | 0     | 7 <input type="checkbox"/> |
| 2      | MW-1 GW Jannepah   | VOA                | 02-04944-1 | W      | V            | C              | 40      | 2       | G         | 091702    | N         | 0     | 7 <input type="checkbox"/> |
| 3      | TB02091701         | VOA                | 02-04944-3 | W      | V            | C              | 40      | 2       | G         | 091702    | N         | 0     | 7 <input type="checkbox"/> |

## Part 3: Analysis Information

Test Items:

☒ 8021B

BTXE

| Seq. # | Client's Sample ID (as given on COC) | Sample Sub-ID | APCL Sample ID | Matrix | BTXE |                          |
|--------|--------------------------------------|---------------|----------------|--------|------|--------------------------|
| 1      | MW-1 GW Ramona                       | VOA           | 02-04944-2     | W      | X ~  | <input type="checkbox"/> |
| 2      | MW-1 GW Jannepah                     | VOA           | 02-04944-1     | W      | X ~  | <input type="checkbox"/> |
| 3      | TB02091701                           | VOA           | 02-04944-3     | W      | X ~  | <input type="checkbox"/> |

Login By En-Yu Paul KouCheck By 12Y

## DATA VALIDATION WORKSHEET

**Analytical Method/Analytes:** SW-846 8021B (BTEX) **Sample Collection Date(s):** 09/17/02

Laboratory: APCL

**MWH Job Number: EPC-SJRB**  
**(Ground Water)**

**Batch Identification:** 02-04944

**Matrix:** Water

**OC Identification<sup>(a)</sup>:**

Page: 1 of 2

### Validation Complete:

Train Letter 10-9-02

[illegible]

# DATA VALIDATION WORKSHEET

Analytical Method: SW-846 8021B (BTEX)

MWH Job Number:

EPC-SJRB  
(Ground Water)

Laboratory: APCL

Batch Identification: 02-04944

| Validation Criteria                        |                |                |  |  |  |  |  |  |
|--------------------------------------------|----------------|----------------|--|--|--|--|--|--|
| Sample ID                                  | Jennepah MW-1  | Ramenta MW-1   |  |  |  |  |  |  |
| Lab ID                                     | 02-04944-01    | 02-04944-02    |  |  |  |  |  |  |
| Hardcopy vs. Chain-of-Custody              | A              | A              |  |  |  |  |  |  |
| Holding Time                               | A              | A              |  |  |  |  |  |  |
| Analyte List                               | A              | A              |  |  |  |  |  |  |
| Reporting Limits                           | A              | A              |  |  |  |  |  |  |
| Method Blank                               | A              | A              |  |  |  |  |  |  |
| Trip Blank                                 | A <sup>1</sup> | A <sup>1</sup> |  |  |  |  |  |  |
| Equipment Rinseate Blanks                  | N/A            | N/A            |  |  |  |  |  |  |
| Field Duplicate/Replicate                  | N/A            | N/A            |  |  |  |  |  |  |
| Initial Calibration                        | N              | N              |  |  |  |  |  |  |
| Initial Calibration Verification (ICV)     | N              | N              |  |  |  |  |  |  |
| Continuing Calibration Verification (CCV)  | A              | A              |  |  |  |  |  |  |
| Laboratory Control Sample (LCS)            | A              | A              |  |  |  |  |  |  |
| Laboratory Control Sample Duplicate (LCSD) | N              | N              |  |  |  |  |  |  |
| Matrix Spike/Matrix Spike Dup. (MS/MSD)    | N/A            | N/A            |  |  |  |  |  |  |
| Surrogate Spike Recovery                   | A              | A              |  |  |  |  |  |  |
| Retention Time Window                      | N              | N              |  |  |  |  |  |  |
| Injection Time(s)                          | N              | N              |  |  |  |  |  |  |
| EDD vs. Hardcopy                           | N              | N              |  |  |  |  |  |  |
| EDD vs. Chain of Custody                   | N              | N              |  |  |  |  |  |  |

(a) List QC batch identification if different than Batch ID

A indicates validation criteria were met

A/L indicates validation criteria met based upon Laboratory's QC Summary Form

X indicates validation criteria were not met

N indicates data review were not a project specific requirement

N/A indicates criteria are not applicable for the specified analytical method or sample

N/R indicates data not available for review

## NOTES:

1) The following analytes were detected in the trip blank:

- Toluene @ 0.4T µg/L, qualify all sample concentrations less than or equal to 2.0 µg/L with a "UB" flag and all sample concentrations greater than 2.0 µg/L with a "B" flag.
- m/p-Xylene @ 0.8T µg/L, qualify all sample concentrations less than or equal to 4.0 µg/L with a "UB" flag and all sample concentrations greater than 4.0 µg/L with a "B" flag.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

# APCL Analytical Report

Submitted to:

Montgomery Watson Harza

Attention: Brian Buttars

10619 South Jordan Gateway

Salt Lake City UT 84095

Tel: (801)617-3200 Fax: (801)617-4200

Service ID #: 801-024944

Collected by: Asley Lowe

Collected on: 09/17/02

Sample Description: Water

Project Description: 220013

Received: 09/18/02

Extracted: N/A

Tested: 09/19-26/02

Reported: 09/25/02

Sán Juan River Basin

## Analysis of Water Samples

| Component Analyzed | Method | Unit | PQL | Analysis Result  |                 |            |
|--------------------|--------|------|-----|------------------|-----------------|------------|
|                    |        |      |     | MW-1 GW Jennepah | MW-1 GW Ramenta | TB02091701 |
|                    |        |      |     | 02-04944-1       | 02-04944-2      | 02-04944-3 |
| BTXE               |        |      |     |                  |                 |            |
| Dilution Factor    |        |      |     | 20               | 1               | 1          |
| BENZENE            | 8021B  | µg/L | 0.5 | 32               | 7.9             | <0.5       |
| ETHYLBENZENE       | 8021B  | µg/L | 0.5 | 27               | 5.4             | <0.5       |
| TOLUENE            | 8021B  | µg/L | 0.5 | 52               | 2.8             | 0.4J       |
| O-XYLENE           | 8021B  | µg/L | 0.5 | 10               | 2.5             | <0.5       |
| M,P-XYLENE         | 8021B  | µg/L | 1   | 130              | 13              | 0.8J       |

PQL: Practical Quantitation Limit.

MDL: Method Detection Limit.

CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit.

"-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,



Dominic Lau  
Laboratory Director  
Applied P & Ch Laboratory

# CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

Chain of Custody ID 020917ALDI  
 Page 1 of 1  
 Air Bill No. 836557901511

LABORATORY APCL  
 Contract El Paso Corp., San Juan River Basin

MWH

Phone (801) 617-3200 FAX (801) 617-4200  
 MWH Contact Brian Butlers  
 Project San Juan River Basin  
 Project Number 220013  
 Date Due 21 days  
 Sampler's Name Ashley Lowe (print/legally)

| Location ID        | Sample ID   | Depth Interval (ft) | Date Collected  | Time Collected | Matrix (a)  | Sampling Technique (b) | ANALYSES REQUESTED                     |  |  |  |  |  |
|--------------------|-------------|---------------------|-----------------|----------------|-------------|------------------------|----------------------------------------|--|--|--|--|--|
| <u>GW Ramenta</u>  | <u>MW-1</u> |                     | <u>09/17/02</u> | <u>10:18</u>   | <u>WG B</u> | <u>✓</u>               | BTEX SW-846 8021B                      |  |  |  |  |  |
| <u>GW Jinnepah</u> | <u>MW-1</u> |                     | <u>09/17/02</u> | <u>11:38</u>   | <u>WG B</u> | <u>✓</u>               | NM WQCC Metals<br>SW-846 6010B & 7470A |  |  |  |  |  |
| <u>TB02091701</u>  |             |                     | <u>9/17/02</u>  |                |             | <u>✓</u>               | TDS USEPA 160.1                        |  |  |  |  |  |
|                    |             |                     |                 |                |             |                        | Alkalinity SM 2320B                    |  |  |  |  |  |
|                    |             |                     |                 |                |             |                        | SW-846 6010B                           |  |  |  |  |  |
|                    |             |                     |                 |                |             |                        | Cations SW-846 6010B                   |  |  |  |  |  |
|                    |             |                     |                 |                |             |                        | Anions USEPA 300.0                     |  |  |  |  |  |
|                    |             |                     |                 |                |             |                        | Nitrate USEPA 300.0                    |  |  |  |  |  |
|                    |             |                     |                 |                |             |                        | Nitrite USEPA 300.0                    |  |  |  |  |  |

4944

(a) Matrix: AA - Air  
 SO - Soil  
 WS - Surface Water  
 WG - Ground Water  
 WQ - Trip Blank/  
 Equipment Blanks  
 WW - Wastewater  
 (b) Sampling Technique: Composite=C  
 Grab=G  
 Hand Auger=HA  
 Submersible Pump=SP  
 Bladder Pump=BP  
 Bailor=B  
 Wellhead Faucet=WF  
 Hydropunch=HP  
 Location IDs: North Flare Pit=NF  
 South Flare Pit=SF  
 Groundwater Sites=GW  
 Bisti=BI  
 Jaquez=JA  
 San Juan River Plant=SJ

| Relinquished by/Affiliation | Received by/Affiliation | Date            | Time         |
|-----------------------------|-------------------------|-----------------|--------------|
| <u>Ashley Lowe / ATESE</u>  | <u>APCL</u>             | <u>09/17/02</u> | <u>14:00</u> |
|                             |                         | <u>09/18/02</u> | <u>1000</u>  |
|                             |                         |                 |              |
|                             |                         |                 |              |

| LABORATORY USE ONLY                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SAMPLES WERE:</b><br>1 Shipped or hand delivered<br>Notes: <u>4.6</u><br>2 Ambient or Chilled<br>Notes:<br>3 Temperature<br>4 Received Broken/Leaking (Improperly Sealed)<br>Y <u>N</u><br>Notes:<br>5 Properly Preserved<br>Y <u>N</u><br>Notes:<br>6 Received Within Holding Times<br>Y <u>N</u><br>Notes: | <b>COC Tape Was:</b><br>1 Present on Outer Package<br>Y <u>N</u><br>2 Unbroken on Outer Package<br>Y <u>N</u><br>3 Present on Sample<br>Y <u>N</u><br>4 Unbroken on Sample<br>Y <u>N</u><br>Notes:<br>Discrepancies Between Sample Labels and COC Record?<br>Y <u>N</u><br>Notes: |

# Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

## APCL QA/QC Report

### Submitted to:

Montgomery Watson Harza  
Attention: Brian Buttars  
10619 South Jordan Gateway  
Salt Lake City, UT 84095  
Tel: (801)617-3200 Fax: (801)617-4200

Service ID #: 801-024944

Collected by: Asley Lowe

Collected on: 09/17/02

Sample description:

Water

Project: San Juan River Basin /220013

Received: 09/18/02

Tested: 09/19-26/02

Reported: 10/03/02

### Analysis of Water

801-024944QC

| Component Name | Analysis<br>Batch # | CCV<br>(µg/L) | CCV<br>%Rec | M-Blank | Conc.<br>Unit | SP Level | LCS<br>%Rec | MS<br>%Rec | MSD<br>%Rec | MS/MSD<br>%RPD | Control Limit<br>%Rec | %Diff |
|----------------|---------------------|---------------|-------------|---------|---------------|----------|-------------|------------|-------------|----------------|-----------------------|-------|
| <b>BTXE</b>    |                     |               |             |         |               |          |             |            |             |                |                       |       |
| Benzene        | 02G4009             | 100           | 93          | N.D.    | µg/L          | 18.0     | 95          | 86         | 90          | 5              | 68-130                | 31    |
| Toluene        | 02G4009             | 100           | 94          | N.D.    | µg/L          | 70.0     | 92          | 94         | 93          | 2              | 66-133                | 33    |
| Ethylbenzene   | 02G4009             | 100           | 96          | N.D.    | µg/L          | 18.0     | 95          | 94         | 91          | 3              | 65-134                | 35    |
| m/p-Xylene     | 02G4009             | 200           | 89          | N.D.    | µg/L          | 70.0     | 92          | 95         | 93          | 2              | 65-134                | 35    |
| o-Xylene       | 02G4009             | 100           | 90          | N.D.    | µg/L          | 25.0     | 92          | 98         | 95          | 2              | 65-134                | 35    |

**Notation:** ICV - Initial Calibration Verification  
CCV - Continuation Calibration Verification  
LCS - Lab Control Spike  
MS - Matrix Spike  
MSD - Matrix Spike Duplicate  
ICS - Interference Check Standard  
MD - Matrix Duplicate  
N.D. - Not detected or less than PQL

CCB - Continuation Calibration Blank  
M-blank - Method Blank  
SP Level - Spike Level  
%Rec - Recovery Percent  
%RPD - Relative Percent Differences  
%Diff - Control Limit for %RPD  
ICP-SD - ICP Serial Dilution  
N.A. - Not Applicable

Respectfully submitted,

  
Regina Kirakozova,  
Associate QA/QC Director  
Applied P & Ch Laboratory

## FORM-2A

Applied P &amp; Ch Laboratory

## Surrogate Recovery Summary for Method 8021B

Client Name: Montgomery Watson Harza

Contract No:

Lab Code: APCL

Case No:

SAS No:

SDG Number: 024944

Project ID: San Juan River Basin

Project No: 220013

Sample Matrix: Water

Batch No: 02G4009

| #  | Client<br>Sample No | Lab<br>Sample ID | S1<br>% # | TOT<br>OUT |
|----|---------------------|------------------|-----------|------------|
| 1  |                     | 02G4009-LCS-01   | 80        | 0          |
| 2  |                     | 02G4009-LSD-01   | 81        | 0          |
| 3  |                     | 02G4009-MB-02    | 85        | 0          |
| 4  | H5116               | 02-5024-7MS      | 86        | 0          |
| 5  | H5116               | 02-5024-7MSD     | 84        | 0          |
| 6  | MW-1 GW JENNEPAH    | 02-4944-1        | 90        | 0          |
| 7  | MW-1 GW RAMENTA     | 02-4944-2        | 99        | 0          |
| 8  | TB02091701          | 02-4944-3        | 88        | 0          |
| 9  |                     |                  |           |            |
| 10 |                     |                  |           |            |
| 11 |                     |                  |           |            |
| 12 |                     |                  |           |            |
| 13 |                     |                  |           |            |
| 14 |                     |                  |           |            |
| 15 |                     |                  |           |            |
| 16 |                     |                  |           |            |
| 17 |                     |                  |           |            |
| 18 |                     |                  |           |            |
| 19 |                     |                  |           |            |
| 20 |                     |                  |           |            |
| 21 |                     |                  |           |            |
| 22 |                     |                  |           |            |
| 23 |                     |                  |           |            |
| 24 |                     |                  |           |            |
| 25 |                     |                  |           |            |

S1 = 4-BROMO-FLUOROBENZENE (PID)

QC Control Limit  
65-134

# Column to be used to flag recovery values:

\* - Values outside of contract required QC Limits

D - Surrogate diluted out

I - Matrix Interference

# CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

LABORATORY APCL

Contract El Paso Corp., San Juan River Basin

MWH

Phone (801) 617-3200 FAX (801) 617-4200

MWH Contact Brian Butters

Project San Juan River Basin

Project Number 220013

Date Due 21 days

Sampler's Name Ashley Lowe  
(print clearly)

Chain of Custody ID 020917ALL  
Page 1 of 1  
Air Bill No. 836557901511

| Location ID | Sample ID | Depth Interval (ft) | Date Collected | Time Collected | Matrix (a) | Sampling Technique (b) | ANALYSES REQUESTED |                     |                 |                                     |                      |                    |                     |                     |  |  |  |
|-------------|-----------|---------------------|----------------|----------------|------------|------------------------|--------------------|---------------------|-----------------|-------------------------------------|----------------------|--------------------|---------------------|---------------------|--|--|--|
|             |           |                     |                |                |            |                        | BTEX SW-846 8021B  | Alkalinity SM 2320B | TDS USEPA 160.1 | NM WQCC Metals SW-846 6010B & 7470A | Cations SW-846 6010B | Anions USEPA 300.0 | Nitrate USEPA 300.0 | Nitrite USEPA 300.0 |  |  |  |
| GW Ramerita | MW-1      |                     | 09/17/02       | 10:18          | Wg         | B                      | ✓                  |                     |                 |                                     |                      |                    |                     |                     |  |  |  |
| GW Jannapah | MW-1      |                     | 09/17/02       | 11:38          | Wg         | B                      | ✓                  |                     |                 |                                     |                      |                    |                     |                     |  |  |  |
| TBO2091701  |           |                     | 9/17/02        |                |            |                        |                    |                     |                 |                                     |                      |                    |                     |                     |  |  |  |

4944

(a) Matrix: AA - Air  
SO - Soil  
WS - Surface Water  
WG - Ground Water

AA - Air  
WQ - Trip Blank/  
Equipment Blanks  
WW - Wastewater

(b) Sampling Technique:  
Composite=C  
Grab=G  
Hand Auger=HA

Submersible Pump=SP  
Bladder Pump=BP  
Bailer=B  
Wellhead Faucet=WF  
Hydropunch=HP

Location IDs:  
Groundwater Sites=GW  
Bist=B1  
Jaquez=JA

North Flare Pit=NF  
South Flare Pit=SF  
San Juan River Plant=SJ

Relinquished by/Affiliation

Received by/Affiliation

Date

Time

Ashley Lowe / APCL

[Signature]

09/17/02 14:00  
09/18/02 1000

LABORATORY USE ONLY

SAMPLES WERE:

Shipped or hand delivered  
Notes:

2 Ambient or Chilled  
Notes:

3 Temperature

4 Received Broken/Leaking  
(Improperly Sealed)

Notes:

5 Property Preserved  
Notes:

Notes:

6 Received Within  
Holding Times

Notes:

COC Tape Was:

1 Present on Outer Package  
Y N NA

2 Unbroken on Outer  
Package Y N NA

3 Present on Sample  
Y N NA

4 Unbroken on Sample  
Y N NA

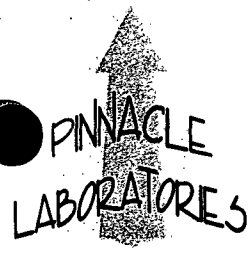
Notes:

Discrepancies Between  
Sample Labels and COC  
Record?  
Y N

Notes:

N

71816



2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

Pinnacle Lab ID number      **206034**  
June 17, 2002

AMEC EARTH & ENVIRONMENTAL  
2060 AFTON PLACE  
FARMINGTON, NM 87401

EL PASO FIELD SERVICES  
614 RIELLY STREET  
FARMINGTON, NM 87401

Project Name                      JENNAPAH #1  
Project Number                  1517000121

Attention:                      LISA WINN/SCOTT POPE

On 06/07/02 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze aqueous samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

H. Mitchell Rubenstein, Ph. D.  
General Manager

MR: jt

Enclosure



2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

CLIENT : AMEC EARTH & ENVIRONMENTAL  
PROJECT # : 1517000121  
PROJECT NAME : JENNAPAH #1

PINNACLE ID : 206034  
DATE RECEIVED : 06/07/02  
REPORT DATE : 06/17/02

| PINNACLE<br>ID # | CLIENT DESCRIPTION | MATRIX  | DATE<br>COLLECTED |
|------------------|--------------------|---------|-------------------|
| 206034 - 01      | JEN-0206-MW1       | AQUEOUS | 06/05/02          |



2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

# GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED  
CLIENT : AMEC EARTH & ENVIRONMENTAL  
PROJECT # : 1517000121  
PROJECT NAME : JENNAPAH #1

PINNACLE I.D.: 206034

| SAMPLE        |              | DATE       |          | DATE         | DATE     | DIL.   |
|---------------|--------------|------------|----------|--------------|----------|--------|
| ID. #         | CLIENT I.D.  | MATRIX     | SAMPLED  | EXTRACTED    | ANALYZED | FACTOR |
| 01            | JEN-0206-MW1 | AQUEOUS    | 06/05/02 | NA           | 06/10/02 | 5      |
| PARAMETER     |              | DET. LIMIT | UNITS    | JEN-0206-MW1 |          |        |
| BENZENE       |              | 0.5        | UG/L     | 11           |          |        |
| TOLUENE       |              | 0.5        | UG/L     | < 2.5        |          |        |
| ETHYLBENZENE  |              | 0.5        | UG/L     | 14           |          |        |
| TOTAL XYLENES |              | 1.0        | UG/L     | 94           |          |        |

## SURROGATE:

BROMOFLUOROBENZENE (%)

101

SURROGATE LIMITS ( 80 - 120 )

## CHEMIST NOTES:

N/A



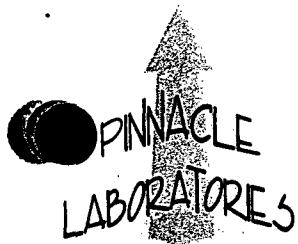
2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
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Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS  
REAGENT BLANK

|              |                              |                |            |
|--------------|------------------------------|----------------|------------|
| TEST         | : EPA 8021 MODIFIED          | PINNACLE I.D.  | : 206034   |
| BLANK I. D.  | : 060902                     | DATE EXTRACTED | : N/A      |
| CLIENT       | : AMEC EARTH & ENVIRONMENTAL | DATE ANALYZED  | : 06/09/02 |
| PROJECT #    | : 1517000121                 | SAMPLE MATRIX  | : AQUEOUS  |
| PROJECT NAME | : JENNAPAH #1                |                |            |

| PARAMETER     | UNITS |      |
|---------------|-------|------|
| BENZENE       | UG/L  | <0.5 |
| TOLUENE       | UG/L  | <0.5 |
| ETHYLBENZENE  | UG/L  | <0.5 |
| TOTAL XYLENES | UG/L  | <1.0 |

SURROGATE:  
BROMOFLUOROBENZENE (%) 99  
SURROGATE LIMITS: ( 80 - 120 )  
COMMENTS NOTES:  
N/A



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Albuquerque, New Mexico 87107  
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Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS  
REAGENT BLANK

|              |                              |                |            |
|--------------|------------------------------|----------------|------------|
| TEST         | : EPA 8021 MODIFIED          | PINNACLE I.D.  | : 206034   |
| BLANK I. D.  | : 061002                     | DATE EXTRACTED | : N/A      |
| CLIENT       | : AMEC EARTH & ENVIRONMENTAL | DATE ANALYZED  | : 06/10/02 |
| PROJECT #    | : 1517000121                 | SAMPLE MATRIX  | : AQUEOUS  |
| PROJECT NAME | : JENNAPAH #1                |                |            |

| PARAMETER     | UNITS |      |
|---------------|-------|------|
| BENZENE       | UG/L  | <0.5 |
| TOLUENE       | UG/L  | <0.5 |
| ETHYLBENZENE  | UG/L  | <0.5 |
| TOTAL XYLENES | UG/L  | <1.0 |

SURROGATE:  
BROMOFLUOROBENZENE (%)

95

SURROGATE LIMITS: ( 80 - 120 )

COMMENTS NOTES:

N

**PINNACLE  
LABORATORIES**

2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

**GAS CHROMATOGRAPHY QUALITY CONTROL  
LCS/LCSD**

|              |                              |                |            |
|--------------|------------------------------|----------------|------------|
| TEST         | : EPA 8021 MODIFIED          | PINNACLE I.D.  | : 206034   |
| BATCH #      | : 060902                     | DATE EXTRACTED | : N/A      |
| CLIENT       | : AMEC EARTH & ENVIRONMENTAL | DATE ANALYZED  | : 06/09/02 |
| PROJECT #    | : 1517000121                 | SAMPLE MATRIX  | : AQUEOUS  |
| PROJECT NAME | : JENNAPAH #1                | UNITS          | : UG/L     |

| PARAMETER     | SAMPLE<br>RESULT | CONC<br>SPIKE | SPIKED<br>SAMPLE | %<br>REC | DUP<br>SPIKE | DUP<br>% REC | RPD | REC<br>LIMITS | RPD<br>LIMITS |
|---------------|------------------|---------------|------------------|----------|--------------|--------------|-----|---------------|---------------|
| BENZENE       | <0.5             | 20.0          | 19.1             | 96       | 19.4         | 97           | 2   | ( 80 - 120 )  | 20            |
| TOLUENE       | <0.5             | 20.0          | 20.0             | 100      | 20.8         | 104          | 4   | ( 80 - 120 )  | 20            |
| ETHYLBENZENE  | <0.5             | 20.0          | 20.3             | 102      | 20.9         | 105          | 3   | ( 80 - 120 )  | 20            |
| TOTAL XYLENES | <1.0             | 60.0          | 62.9             | 105      | 64.6         | 108          | 3   | ( 80 - 120 )  | 20            |

CLIENT NOTES:  
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL  
LCS/LCSD

|              |                              |                |            |
|--------------|------------------------------|----------------|------------|
| TEST         | : EPA 8021 MODIFIED          | PINNACLE I.D.  | : 206034   |
| BATCH #      | : 061002                     | DATE EXTRACTED | : N/A      |
| CLIENT       | : AMEC EARTH & ENVIRONMENTAL | DATE ANALYZED  | : 06/10/02 |
| PROJECT #    | : 1517000121                 | SAMPLE MATRIX  | : AQUEOUS  |
| PROJECT NAME | : JENNAPAH #1                | UNITS          | : UG/L     |

| PARAMETER     | SAMPLE<br>RESULT | CONC<br>SPIKE | SPIKED<br>SAMPLE | %<br>REC | DUP<br>SPIKE | DUP<br>% REC | RPD | REC<br>LIMITS | RPD<br>LIMITS |
|---------------|------------------|---------------|------------------|----------|--------------|--------------|-----|---------------|---------------|
| BENZENE       | <0.5             | 20.0          | 19.1             | 96       | 18.9         | 95           | 1   | ( 80 - 120 )  | 20            |
| TOLUENE       | <0.5             | 20.0          | 20.0             | 100      | 19.8         | 99           | 1   | ( 80 - 120 )  | 20            |
| ETHYLBENZENE  | <0.5             | 20.0          | 20.3             | 102      | 20.1         | 101          | 1   | ( 80 - 120 )  | 20            |
| TOTAL XYLENES | <1.0             | 60.0          | 62.8             | 105      | 62.3         | 104          | 1   | ( 80 - 120 )  | 20            |

CLIENT NOTES:  
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE  
LABORATORIES

2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL  
MS/MSD

|              |                              |                |            |
|--------------|------------------------------|----------------|------------|
| TEST         | : EPA 8021 MODIFIED          | PINNACLE I.D.  | : 206034   |
| MSMSD #      | : 206037-01                  | DATE EXTRACTED | : N/A      |
| CLIENT       | : AMEC EARTH & ENVIRONMENTAL | DATE ANALYZED  | : 06/09/02 |
| PROJECT #    | : 1517000121                 | SAMPLE MATRIX  | : AQUEOUS  |
| PROJECT NAME | : JENNAPAH #1                | UNITS          | : UG/L     |

| PARAMETER     | SAMPLE<br>RESULT | CONC<br>SPIKE | SPIKED<br>SAMPLE | %<br>REC | DUP<br>SPIKE | DUP<br>% REC | RPD | REC<br>LIMITS | RPD<br>LIMITS |
|---------------|------------------|---------------|------------------|----------|--------------|--------------|-----|---------------|---------------|
| BENZENE       | <0.5             | 20.0          | 19.4             | 97       | 19.2         | 96           | 1   | ( 80 - 120 )  | 20            |
| TOLUENE       | <0.5             | 20.0          | 20.4             | 102      | 20.4         | 102          | 0   | ( 80 - 120 )  | 20            |
| ETHYLBENZENE  | <0.5             | 20.0          | 20.8             | 104      | 20.6         | 103          | 1   | ( 80 - 120 )  | 20            |
| TOTAL XYLENES | <1.0             | 60.0          | 64.3             | 107      | 64.2         | 107          | 0   | ( 80 - 120 )  | 20            |

COMMENTS NOTES:  
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

SHADED AREAS ARE FOR LAB USE ONLY.

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[illegible]

PINNACLE  
LABORATORIES

2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

Pinnacle Lab ID number      203067  
April 12, 2002

AMEC EARTH & ENVIRONMENTAL  
2060 AFTON PLACE  
FARMINGTON, NM 87401

EL PASO FIELD SERVICES  
614 RIELLY STREET  
FARMINGTON, NM 87401

Project Name                      JENNADAH #1  
Project Number                  1517000121

Attention:                      LISA WINN/SCOTT POPE

On 03/19/02 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.



H. Mitchell Rubenstein, Ph. D.  
General Manager

MR: jt

Enclosure



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Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

|              |                              |               |            |
|--------------|------------------------------|---------------|------------|
| CLIENT       | : AMEC EARTH & ENVIRONMENTAL | PINNACLE ID   | : 203067   |
| PROJECT #    | : 1517000121                 | DATE RECEIVED | : 03/19/02 |
| PROJECT NAME | : JENNADAH #1                | REPORT DATE   | : 04/12/02 |
| PINNACLE     |                              |               | DATE       |
| ID #         | CLIENT DESCRIPTION           | MATRIX        | COLLECTED  |
| 203067 - 01  | JEN-0203-MW1                 | AQUEOUS       | 03/18/02   |



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Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

### GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED  
CLIENT : AMEC EARTH & ENVIRONMENTAL  
PROJECT # : 1517000121  
PROJECT NAME : JENNADAH #1

PINNACLE I.D.: 203067

| SAMPLE | DATE         | DATE    | DATE     | DIL.      |          |        |
|--------|--------------|---------|----------|-----------|----------|--------|
| S. #   | CLIENT I.D.  | MATRIX  | SAMPLED  | EXTRACTED | ANALYZED | FACTOR |
| 1      | JEN-0203-MW1 | AQUEOUS | 03/18/02 | NA        | 03/21/02 | 5      |

| PARAMETER     | DET. LIMIT | UNITS | JEN-0203-MW1 |
|---------------|------------|-------|--------------|
| BENZENE       | 0.5        | UG/L  | < 2.5        |
| TOLUENE       | 0.5        | UG/L  | 7.3          |
| ETHYLBENZENE  | 0.5        | UG/L  | 13           |
| TOTAL XYLENES | 1.0        | UG/L  | 150          |

surrogate:  
BROMOFLUOROBENZENE (%) 104  
 surrogate LIMITS (80 - 120 )

CHEMIST NOTES:

W/A

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GAS CHROMATOGRAPHY RESULTS  
REAGENT BLANK

|              |                              |                |            |
|--------------|------------------------------|----------------|------------|
| TEST         | : EPA 8021 MODIFIED          | PINNACLE I.D.  | : 203067   |
| BLANK I. D.  | : 032102                     | DATE EXTRACTED | : N/A      |
| CLIENT       | : AMEC EARTH & ENVIRONMENTAL | DATE ANALYZED  | : 03/21/02 |
| PROJECT #    | : 1517000121                 | SAMPLE MATRIX  | : AQUEOUS  |
| PROJECT NAME | : JENNADAH #1                |                |            |

| PARAMETER     | UNITS |      |
|---------------|-------|------|
| BENZENE       | UG/L  | <0.5 |
| TOLUENE       | UG/L  | <0.5 |
| ETHYLBENZENE  | UG/L  | <0.5 |
| TOTAL XYLENES | UG/L  | <1.0 |

surrogate:  
BROMOFLUOROBENZENE (%) 92  
 surrogate LIMITS: ( 80 - 120 )  
 surrogate NOTES:  
 N/A



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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL  
LCS LCSD

|              |                              |                |   |          |
|--------------|------------------------------|----------------|---|----------|
| EST          | : EPA 8021 MODIFIED          | PINNACLE I.D.  | : | 203067   |
| CS LCSD #    | : 032102                     | DATE EXTRACTED | : | N/A      |
| CLIENT       | : AMEC EARTH & ENVIRONMENTAL | DATE ANALYZED  | : | 03/21/02 |
| PROJECT #    | : 1517000121                 | SAMPLE MATRIX  | : | AQUEOUS  |
| PROJECT NAME | : JENNADAH #1                | UNITS          | : | UG/L     |

| PARAMETER    | SAMPLE<br>RESULT | CONC<br>SPIKE | SPIKED<br>SAMPLE | %<br>REC | DUP<br>SPIKE | DUP<br>% REC | RPD | REC<br>LIMITS | RPD<br>LIMITS |
|--------------|------------------|---------------|------------------|----------|--------------|--------------|-----|---------------|---------------|
| ENZENE       | <0.5             | 20.0          | 18.0             | 90       | 18.4         | 92           | 2   | ( 80 - 120 )  | 20            |
| OLUENE       | <0.5             | 20.0          | 18.2             | 91       | 18.5         | 93           | 2   | ( 80 - 120 )  | 20            |
| THYLBENZENE  | <0.5             | 20.0          | 17.8             | 89       | 18.1         | 91           | 2   | ( 80 - 120 )  | 20            |
| OTAL XYLENES | <1.0             | 60.0          | 55.3             | 92       | 56.1         | 94           | 1   | ( 80 - 120 )  | 20            |

HEAVY METALS NOTES:

1A

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{PD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



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GAS CHROMATOGRAPHY QUALITY CONTROL  
MSMSD

|             |                              |                |            |
|-------------|------------------------------|----------------|------------|
| EST         | : EPA 8021 MODIFIED          | PINNACLE I.D.  | : 203067   |
| SMSD #      | : 203054-01                  | DATE EXTRACTED | : N/A      |
| LIENT       | : AMEC EARTH & ENVIRONMENTAL | DATE ANALYZED  | : 03/21/02 |
| ROJECT #    | : 1517000121                 | SAMPLE MATRIX  | : AQUEOUS  |
| ROJECT NAME | : JENNADAH #1                | UNITS          | : UG/L     |

| PARAMETER    | SAMPLE<br>RESULT | CONC<br>SPIKE | SPIKED<br>SAMPLE | %<br>REC | DUP<br>SPIKE | DUP<br>% REC | RPD | REC<br>LIMITS | RPD<br>LIMITS |
|--------------|------------------|---------------|------------------|----------|--------------|--------------|-----|---------------|---------------|
| ENZENE       | <0.5             | 20.0          | 18.3             | 92       | 18.2         | 91           | 1   | ( 80 - 120 )  | 20            |
| OLUENE       | <0.5             | 20.0          | 18.2             | 91       | 18.9         | 95           | 4   | ( 80 - 120 )  | 20            |
| THYLBENZENE  | <0.5             | 20.0          | 17.7             | 89       | 17.9         | 90           | 1   | ( 80 - 120 )  | 20            |
| DTAL XYLENES | <1.0             | 60.0          | 55.2             | 92       | 55.7         | 93           | 1   | ( 80 - 120 )  | 20            |

HAZARD NOTES:  
'A'

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

**PROJECT MANAGER:** Lisa Winn

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|                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| <b>PROJECT MANAGER:</b> Lisa Winn<br><b>COMPANY:</b> AMEC<br><b>ADDRESS:</b> 2060 AFTON place<br>Farmington N.M. 87401<br><b>PHONE:</b> (505) 322-7924<br><b>FAX:</b> (505)<br><b>BILL TO:</b> Scott Pope<br><b>COMPANY:</b> Elk Paso Field Services<br><b>ADDRESS:</b> 644 Reilly Ave<br>Farmington N.M. 87401 |  | <b>SAMPLE ID:</b> JEN-0203-MW-1<br><b>DATE:</b> 3-15-02<br><b>TIME:</b> 1422<br><b>MATRIX:</b> H <sub>2</sub> O<br><b>LAB ID:</b> |  | <b>ANALYSIS REQUEST</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                   |  | Petroleum Hydrocarbons (418.1) TRPH<br>(MOD.8015) Diesel/Direct Inject<br>(M8015) Gas/Purge & Trap<br>8021 (BTX)/8015 (Gasoline) MTBE<br>8021 (BTX) <input type="checkbox"/> MTBE <input type="checkbox"/> PCE<br>8021 (TCL)<br>8021 (EDX)<br>8021 (HALO)<br>8021 (CUST)<br>504.1 EDB <input type="checkbox"/> DBCP <input type="checkbox"/><br>8260 (TCL) Volatile Organics<br>8260 (Full) Volatile Organics<br>8260 (CUST) Volatile Organics<br>8260 (Landfill) Volatile Organics<br>Pesticides /PCB (608/8081/8082)<br>Herbicides (615/8151)<br>Base/Neutral/Acid Compounds GC/MS (625/8270)<br>Polynuclear Aromatics (610/8310/8270-SIMS)<br>General Chemistry:<br>Priority Pollutant Metals (13)<br>Target Analyte List Metals (23)<br>RCRA Metals (8)<br>RCRA Metals by TCLP (Method 1311)<br>Metals: |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                   |  | NUMBER OF CONTAINERS: 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |  |  |  |

|                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                                                                                                                                                                                                                                              |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>PROJECT INFORMATION</b><br>PROJ. NO.: 1517000121<br>PROJ. NAME: Ep 15 GW. project<br>P.O. NO.:<br>SHIPPED VIA: Greyhound<br><b>SAMPLE RECEIPT</b><br>NO. CONTAINERS: 2<br>CUSTODY SEALS: Y/N (NA)<br>RECEIVED INTACT: YES<br>BLUE (C)/ICE: 4.5.02 |  | <b>PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS</b><br>(RUSH) <input type="checkbox"/> 24hr <input type="checkbox"/> 48hr <input type="checkbox"/> 72hr <input type="checkbox"/> 1 WEEK (NORMAL) <input checked="" type="checkbox"/><br>CERTIFICATION REQUIRED: <input type="checkbox"/> NM <input type="checkbox"/> SDWA <input type="checkbox"/> OTHER<br>METHANOL PRESERVATION <input type="checkbox"/><br>COMMENTS: FIXED FEE <input type="checkbox"/><br><div style="text-align: center; font-size: 1.2em;">             JENNIFER #1<br/>             meter # (71816)           </div> |  | <b>RELINQUISHED BY:</b><br>Signature: [Signature]<br>Printed Name: [Name]<br>Date: [Date]<br>Company: AMEC<br>See reverse side (Rush/Normal)<br><b>RECEIVED BY:</b><br>Signature: [Signature]<br>Printed Name: [Name]<br>Date: [Date]<br>Company: Pinnacle Laboratories Inc. |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

PINNACLE  
LABORATORIES

2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

Pinnacle Lab ID number      **112084**  
January 07, 2002

AMEC EARTH & ENVIRONMENTAL  
2060 AFTON PLACE  
FARMINGTON, NM 87401

EL PASO FIELD SERVICES  
614 RIELLY STREET  
FARMINGTON, NM 87401

Project Name                      EPFW GW PROJ JENNEPAH  
Project Number                  1517000121

Attention:                      LISA WINN/SCOTT POPE

On 12/21/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze aqueous samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

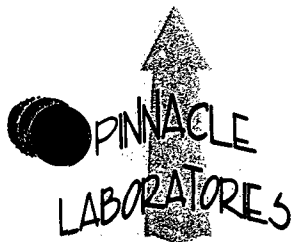
If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.



H. Mitchell Rubenstein, Ph. D.  
General Manager

MR: jt

Enclosure



2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
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|              |                              |               |            |
|--------------|------------------------------|---------------|------------|
| CLIENT       | : AMEC EARTH & ENVIRONMENTAL | PINNACLE ID   | : 112084   |
| PROJECT #    | : 1517000121                 | DATE RECEIVED | : 12/21/01 |
| PROJECT NAME | : EPFW GW PROJ JENNEPAH      | REPORT DATE   | : 01/07/02 |
| PINNACLE     |                              |               | DATE       |
| ID #         | CLIENT DESCRIPTION           | MATRIX        | COLLECTED  |
| 112084 - 01  | JEN-0112-MW1                 | AQUEOUS       | 12/17/01   |



2709-D Pan American Freeway NE  
Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

### GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED  
CLIENT : AMEC EARTH & ENVIRONMENTAL  
PROJECT # : 1517000121  
PROJECT NAME : EPFW GW PROJ JENNEPAH

PINNACLE I.D.: 112084

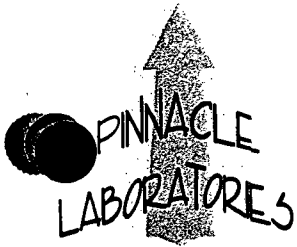
| SAMPLE | DATE         | DATE    | DATE     | DIL.      |          |        |
|--------|--------------|---------|----------|-----------|----------|--------|
| D. #   | CLIENT I.D.  | MATRIX  | SAMPLED  | EXTRACTED | ANALYZED | FACTOR |
| 01     | JEN-0112-MW1 | AQUEOUS | 12/17/01 | NA        | 12/27/01 | 1      |

| PARAMETER     | DET. LIMIT | UNITS | JEN-0112-MW1 |
|---------------|------------|-------|--------------|
| BENZENE       | 0.5        | UG/L  | < 0.5        |
| TOLUENE       | 0.5        | UG/L  | 15           |
| ETHYLBENZENE  | 0.5        | UG/L  | 32           |
| TOTAL XYLENES | 0.5        | UG/L  | 260          |

SURROGATE:  
BROMOFLUOROBENZENE (%)  
SURROGATE LIMITS ( 80 - 120 )

#### CHEMIST NOTES:

Surrogate out high due to matrix interference



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GAS CHROMATOGRAPHY RESULTS  
REAGENT BLANK

|              |                              |                |            |
|--------------|------------------------------|----------------|------------|
| TEST         | : EPA 8021 MODIFIED          | PINNACLE I.D.  | : 112084   |
| BLANK I. D.  | : 122701                     | DATE EXTRACTED | : N/A      |
| CLIENT       | : AMEC EARTH & ENVIRONMENTAL | DATE ANALYZED  | : 12/27/01 |
| PROJECT #    | : 1517000121                 | SAMPLE MATRIX  | : AQUEOUS  |
| PROJECT NAME | : EPFW GW PROJ JENNEPAH      |                |            |

| PARAMETER     | UNITS |      |
|---------------|-------|------|
| BENZENE       | UG/L  | <0.5 |
| TOLUENE       | UG/L  | <0.5 |
| ETHYLBENZENE  | UG/L  | <0.5 |
| TOTAL XYLENES | UG/L  | <0.5 |

SURROGATE:  
BROMOFLUOROBENZENE (%) 108  
SURROGATE LIMITS: ( 80 - 120 )  
COMMENTS NOTES:  
N/A



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Albuquerque, New Mexico 87107  
Phone (505) 344-3777  
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL  
MSMSD

EST : EPA 8021 MODIFIED  
MSMSD # : 122701  
CLIENT : AMEC EARTH & ENVIRONMENTAL  
PROJECT # : 1517000121  
PROJECT NAME : EPFW GW PROJ JENNEPAH  
PINNACLE I.D. : 112084  
DATE EXTRACTED : N/A  
DATE ANALYZED : 12/27/01  
SAMPLE MATRIX : AQUEOUS  
UNITS : UG/L

| PARAMETER     | SAMPLE<br>RESULT | CONC<br>SPIKE | SPIKED<br>SAMPLE | %<br>REC | DUP<br>SPIKE | DUP<br>% REC | RPD | REC<br>LIMITS | RPD<br>LIMITS |
|---------------|------------------|---------------|------------------|----------|--------------|--------------|-----|---------------|---------------|
| BENZENE       | <0.5             | 20.0          | 21.8             | 109      | 21.7         | 108          | 1   | ( 80 - 120 )  | 20            |
| TOLUENE       | <0.5             | 20.0          | 20.9             | 105      | 20.9         | 105          | 0   | ( 80 - 120 )  | 20            |
| ETHYLBENZENE  | <0.5             | 20.0          | 20.5             | 103      | 20.5         | 102          | 0   | ( 80 - 120 )  | 20            |
| TOTAL XYLENES | <0.5             | 60.0          | 64.2             | 107      | 63.6         | 106          | 1   | ( 80 - 120 )  | 20            |

CHEMIST NOTES:  
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\% \text{ RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



**ATTACHMENT 2**  
**FIELD DOCUMENTATION**

# WELL DEVELOPMENT AND SAMPLING LOG

Project No: 220013 Project Name: San Juan River Basin Client: MWH  
 Location: Jennepah Well No: MW-1 Development ☐ Sampling ☒  
 Project Manager Delbert Beckis Date 12/23/02 Start Time 10:00 Weather 32° cloudy, snow  
 Depth to Water 25.80 Depth to Product — Product Thickness — Measuring Point TOC  
 Water Column Height 8.38 Well Dia. 4" TD = 34.18

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐  
 Bottom Valve Bailer ☒ Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐  
 Criteria: 3 to 5 Casing Volumes of Water Removal ☒ Stabilization of Indicator Parameters ☐ Other or bail dry

| Gal/ft x ft of water | Water Volume In Well |        | Gal/oz to be removed |
|----------------------|----------------------|--------|----------------------|
|                      | Gallons              | Ounces |                      |
| <u>0.65 x 8.38</u>   | <u>5.44 x 3</u>      |        |                      |

| Time (military) | pH          | SC (umhos/cm) | Temp (°C)   | Eh-ORP (millivolts) | D.O. (mg/L) | Turbidity (NTU) | Vol Evac. (gal.) | Comments/Flow rate         |
|-----------------|-------------|---------------|-------------|---------------------|-------------|-----------------|------------------|----------------------------|
| <u>1011</u>     | <u>6.68</u> | <u>1790</u>   | <u>13.1</u> |                     |             |                 | <u>0.5</u>       | <u>cloudy, film on top</u> |
|                 | <u>6.78</u> | <u>1530</u>   | <u>11.2</u> |                     |             |                 | <u>1.0</u>       |                            |
|                 | <u>6.76</u> | <u>1510</u>   | <u>10.4</u> |                     |             |                 | <u>1.5</u>       |                            |
|                 | <u>6.80</u> | <u>1460</u>   | <u>10.8</u> |                     |             |                 | <u>2.0</u>       |                            |
|                 | <u>6.82</u> | <u>1500</u>   | <u>11.1</u> |                     |             |                 | <u>2.5</u>       |                            |
|                 | <u>6.88</u> | <u>1470</u>   | <u>11.5</u> |                     |             |                 | <u>3.0</u>       |                            |
|                 | <u>6.90</u> | <u>1450</u>   | <u>10.1</u> |                     |             |                 | <u>3.5</u>       |                            |
|                 | <u>6.92</u> | <u>1470</u>   | <u>10.4</u> |                     |             |                 | <u>4.0</u>       |                            |
|                 | <u>6.98</u> | <u>1480</u>   | <u>10.8</u> |                     |             |                 | <u>4.5</u>       |                            |
|                 | <u>6.95</u> | <u>1490</u>   | <u>10.7</u> |                     |             |                 | <u>5.0</u>       | <u>clear</u>               |
|                 | <u>7.0</u>  | <u>1450</u>   | <u>10.2</u> |                     |             |                 | <u>5.5</u>       |                            |
|                 | <u>6.95</u> | <u>1480</u>   | <u>11.8</u> |                     |             |                 | <u>6.0</u>       |                            |
|                 | <u>6.96</u> | <u>1450</u>   | <u>11.0</u> |                     |             |                 | <u>6.5</u>       |                            |
|                 | <u>6.96</u> | <u>1470</u>   | <u>11.2</u> |                     |             |                 | <u>7.0</u>       |                            |
|                 | <u>6.96</u> | <u>1450</u>   | <u>11.4</u> |                     |             |                 | <u>7.5</u>       |                            |
|                 | <u>7.0</u>  | <u>1450</u>   | <u>10.9</u> |                     |             |                 | <u>8.0</u>       |                            |

**Final:**  
 Time 11:25 pH 6.98 SC 1460 Temp 11.4 Eh-ORP — D.O. — Turbidity — Ferrous Iron — Vol Evac. 8.5 Comments/Flow rate Sample

COMMENTS: Observed by NNEPA Rep; Malvina Chah, Sr. Env. Tech.

**INSTRUMENTATION:** pH Meter ☒ Temperature Meter ☒  
 DO Monitor ☐ Other ☐  
 Conductivity Meter ☒

Water Disposal KUTZ PLANT  
 Sample ID Jennepah MW-1 Sample Time — BTEX ☒ VOCs ☐ Alkalinity ☐

TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Ammonia ☐ TKN ☐ NM WQCC Metals ☐

Total Phosphorus ☐ MS/MSD — BD — BD Name/Time — TB —

# Product Recovery and Well Observation Data

Project Name: San Juan River Basin  
 Project Manager: Delbert Bekis  
 Client Company: MWH  
 Site Name: Jennepah

Project No: 220013

Date: 12/23/02

| Well | Time  | Depth to Water (ft) | Depth to Product (ft) | Total Well Depth (ft) | Product Thickness (ft) | Volume Removed | Comments |
|------|-------|---------------------|-----------------------|-----------------------|------------------------|----------------|----------|
| MW-1 | 10:11 | 25.80               | —                     | 34.18                 | —                      | —              | Sample   |
|      |       |                     |                       |                       | —                      | —              |          |
| MW-2 | 1130  | 26.20               | —                     | 30.02                 | —                      | —              |          |
|      |       |                     |                       |                       |                        |                |          |
| MW-3 | 1135  | 26.05               | —                     | 30.150                | —                      | —              |          |
|      |       |                     |                       |                       |                        |                |          |
|      |       |                     |                       |                       |                        |                |          |
|      |       |                     |                       |                       |                        |                |          |
|      |       |                     |                       |                       |                        |                |          |
|      |       |                     |                       |                       |                        |                |          |

COMMENTS: Observed by Melvin Clark, Sr. Env. Tech of  
NN EPA.

MW-3 = replaced duct tape cover on well casing.

Signature: Delbert Bekis

Date: 12/24/02

Chain of Custody ID C21224 PB  
Page 1 of 1  
Air Bill No. 836381676760

LABORATORY APCL  
Contract El Paso Corp., San Jaun River Basin

# HAZARD

**Phone (801) 617-3200 FAX (801) 617-4200**

**MWH Contact**  
**Brian Butters**

Project San Juan River basin

| Project Number |  |
|----------------|--|
| E10067         |  |

Date Due

**Sampler's Name** Deibert Bekis  
(print clearly)

[illegible]



# WELL DEVELOPMENT AND SAMPLING LOG

Project No: 220013 Project Name: San Juan River Basin Client: MWH  
 Location: Jennepah Well No: MW-1 Development ☐ Sampling ☒  
 Project Manager Ashley Lowe Date 09/17/02 Start Time 10:51 Weather 74° Sunny  
 Depth to Water 29.992 Depth to Product NA Product Thickness NA Measuring Point TOC  
 Water Column Height 4.22 Well Dia. 4" TD = 34.210

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐  
 Bottom Valve Bailer ☒ Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐  
 Criteria: 3 to 5 Casing Volumes of Water Removal ☒ Stabilization of Indicator Parameters ☐ Other or bail dry

| Gal/ft x ft of water |      | Water Volume In Well |              | Gal/oz to be removed   |                |                    |                     |                          |
|----------------------|------|----------------------|--------------|------------------------|----------------|--------------------|---------------------|--------------------------|
|                      |      | Gallons              | Ounces       |                        |                |                    |                     |                          |
| 0.65 x 4.22          |      | 2.7 x 3              |              | 8.2 gal                |                |                    |                     |                          |
| Time<br>(military)   | pH   | SC<br>(umhos/cm)     | Temp<br>(°C) | Eh-ORP<br>(millivolts) | D.O.<br>(mg/L) | Turbidity<br>(NTU) | Vol Evac.<br>(gal.) | Comments/<br>Flow rate   |
| 11:04                | 6.25 | 1115                 | 17.9         |                        |                |                    | 0.5 gal             | cloudy, tan color        |
| 11:06                | 6.21 | 1076                 | 16.5         |                        |                |                    | 1.5                 | slight odor, film on top |
| 11:09                | 6.33 | 1036                 | 16.2         |                        |                |                    | 2.5                 |                          |
| 11:12                | 6.26 | 1032                 | 15.7         |                        |                |                    | 3.5                 |                          |
| 11:15                | 6.35 | 1009                 | 15.8         |                        |                |                    | 4.5                 | cloudier, same color     |
| 11:17                | 6.34 | 1006                 | 16.0         |                        |                |                    | 5.5                 |                          |
| 11:20                | 6.58 | 1022                 | 16.3         |                        |                |                    | 6.3                 |                          |
| 11:22                | 6.67 | 1019                 | 16.4         |                        |                |                    | 6.8                 |                          |
| 11:25                | 6.70 | 1029                 | 16.6         |                        |                |                    | 7.3                 | not stabilizing          |
| 11:27                | 6.72 | 1023                 | 17.2         |                        |                |                    | 7.8                 |                          |
| 11:29                | 6.79 | 998                  | 17.1         |                        |                |                    | 8.3                 |                          |
| 11:31                | 6.80 | 1026                 | 17.3         |                        |                |                    | 8.8                 |                          |
| 11:33                | 6.81 | 1017                 | 17.1         |                        |                |                    | 9.3                 |                          |
| 11:35                | 6.82 | 1016                 | 16.9         |                        |                |                    | 9.8                 |                          |
| 11:38                | 6.81 | 1018                 | 16.9         |                        |                |                    | 10.3                | sample                   |

Final:  
 Time 11:38 pH 6.81 SC 1018 Temp 16.9 Eh-ORP  D.O.  Turbidity  Ferrous Iron  Vol Evac. 10.3 Comments/Flow rate

COMMENTS: Observed by Melvina Claw, Navajo EPA

INSTRUMENTATION: pH Meter ☒ Temperature Meter ☒  
 DO Monitor ☐ Other ☐  
 Conductivity Meter ☒  
 Water Disposal Kutz Plant  
 Sample ID Jennepah MW-1 Sample Time 11:42 BTEX ☒ VOCs ☐ Alkalinity ☐  
 DS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Ammonia ☐ TKN ☐ NM WQCC Metals ☐  
 Total Phosphorus ☐  
 MS/MSD  BD  BD Name/Time  TB TB02091701

# Product Recovery and Well Observation Data

Project Name: San Juan River Basin  
 Project Manager: Ashley Lowe  
 Client Company: MWH  
 Site Name: Jennepah

Project No: 220013  
 Date: 09/17/02

| Well | Time  | Depth to Water (ft) | Depth to Product (ft) | Total Well Depth (ft) | Product Thickness (ft) | Volume Removed | Comments |
|------|-------|---------------------|-----------------------|-----------------------|------------------------|----------------|----------|
| MW-1 | 10:51 | 29.992              | —                     | 34.210                | —                      | —              |          |
| MW-2 | 11:52 | 26.412              | —                     | 30.02                 | —                      | —              |          |
| MW-3 | 11:55 | 26.235              | —                     | 30.150                | —                      | —              |          |
|      |       |                     |                       |                       |                        |                |          |
|      |       |                     |                       |                       |                        |                |          |
|      |       |                     |                       |                       |                        |                |          |
|      |       |                     |                       |                       |                        |                |          |
|      |       |                     |                       |                       |                        |                |          |
|      |       |                     |                       |                       |                        |                |          |
|      |       |                     |                       |                       |                        |                |          |

COMMENTS: Observed by Navajo EPA, Melvina Claw

MW-3: no cap-duct tape on top of well. Inserted new cap, but casing will not close w/it on. Replaced tape.

Signature: Ashley L Lowe Date: 09/17/02

## LABORATORY

APL

**Contract** El Paso Corp., San Juan River Basin

# MWH

**Phone (801) 617-3200 FAX (801) 617-4200**

**MVH Contact** Brian Butters

Project San Juan River Basin

**Project Number** 276013

Date Due 21 days

Sampler's Name Ashley Lowe  
(print/clearly)

## LABORATORY

APL

**Contract** El Paso Corp., San Juan River Basin

# MWH

**Phone (801) 617-3200 FAX (801) 617-4200**

**MVH Contact** Brian Butters

Project San Juan River Basin

**Project Number** 276013

Date Due 21 days

Sampler's Name Ashley Lowe  
(print/clearly)

Chain of Custody ID 020917ALD1  
Page 1 of 1  
Air Bill No. 836557901511

Chain of Custody ID 020917ALD1

Page 1 of 1

Air Bill No. 836557901511

**LABORATORY USE ONLY**

**SAMPLES WERE:**

**1 Shipped or hand delivered**  
**Notes:**

## 2 Ambient or Chilled

### 3 Temperature

**4 Received Broken/Leaking (Improperly Sealed)**

**Notes:**

**5 Properly Preserved**  
**Y** **N**

**Notes:**

**6 Received Within Holding Times**

**Notes:**

**COC Tape Was:**

**1 Present on Outer Package**  
Y N NA

| 2 Unbroken on Outer Package | Y | N | NA |
|-----------------------------|---|---|----|
|-----------------------------|---|---|----|

**3 Present on Sample**  
**Y N NA**

4 Unbroken on Sample  
Y N NA

**Notes:**

## Discrepancies Between Sample Labels and COC Record?

Y

**Z**

**FedEx** USA Airbill  
Express Tracking Number 836557901511

001 Please print and print hard

9/17/02 Sender's FedEx Account Number 220929116

Sender's Name Ashley Love Phone 505.566.9116

Company AEGE

Address 906 San Juan Blvd STE D

City Farmington State NM ZIP 87401

Original Billing Reference

Recipient's Name Eric Wendland Phone 909.590.1820

Company APCL

Address 13760 Magnolia Ave

City Chino State CA ZIP 91710

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or call 1.800.GoFedEx® 800.463.3339.

0200

Sender's Copy

4a Express Package Service

☒ FedEx Priority Overnight ☐ FedEx Standard Overnight  
Next business morning Next business afternoon

☐ FedEx 2Day ☐ FedEx Express Saver  
Second business day Third business day

4b Express Freight Service ☐ FedEx 1Day Freight\* ☐ FedEx 2Day Freight  
Next business day Second business day

5 Packaging ☐ FedEx Envelope\* ☐ FedEx Pak\*  
FedEx Envelope and FedEx Pak, FedEx Large Pak, and FedEx Small Pak

6 Special Handling ☐ SAMBAY Delivery ☐ HOLD Weekday  
HOLD Weekday at FedEx location HOLD Available for FedEx 1Day Overnight

7 Payment Bill to: ☐ Sender ☒ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

8 Release Signature ☐ Signature ☐ Signature ☐ Signature

9 Total Packages 1 Total Weight 5 lbs Total Declared Value \$100

10 Release Signature ☐ Signature ☐ Signature ☐ Signature

11 Total Packages 1 Total Weight 5 lbs Total Declared Value \$100

12 Release Signature ☐ Signature ☐ Signature ☐ Signature

13 Total Packages 1 Total Weight 5 lbs Total Declared Value \$100

14 Release Signature ☐ Signature ☐ Signature ☐ Signature

15 Total Packages 1 Total Weight 5 lbs Total Declared Value \$100

16 Release Signature ☐ Signature ☐ Signature ☐ Signature

17 Total Packages 1 Total Weight 5 lbs Total Declared Value \$100

18 Release Signature ☐ Signature ☐ Signature ☐ Signature

19 Total Packages 1 Total Weight 5 lbs Total Declared Value \$100

20 Release Signature ☐ Signature ☐ Signature ☐ Signature

21 Total Packages 1 Total Weight 5 lbs Total Declared Value \$100

22 Release Signature ☐ Signature ☐ Signature ☐ Signature

RETAIN THIS COPY FOR YOUR RECORDS

☐ Development  
☒ Purging

# WELL DEVELOPMENT AND PURGING DATA FORM

Well Number MW 1

Project Name EPFS GW project

Project Manager Lisa Winn

Project No. 1517000121

Client Company Elk Paso Field Services

Site Name JENNAPAH #1 (21816)

Site Address Rural SAN JUAN CO.

Page 1 of 1

## Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal  
☒ Stabilization of Indicator Parameters  
☐ Other \_\_\_\_\_

## Methods of Development

Pump  
☐ Centrifugal  
☐ Submersible  
☐ Peristaltic  
☐ Other \_\_\_\_\_

Boiler  
☒ Bottom Valve  
☐ Double Check Valve  
☐ Stainless-steel Kemmerer

## Water Volume Calculation

|                                       |                      |             |               |
|---------------------------------------|----------------------|-------------|---------------|
| Initial Depth of Well (feet)          | 34.27                |             |               |
| Initial Depth to Water (feet)         | 28.23                |             |               |
| Height of Water Column in Well (feet) | 8.04                 |             |               |
| Diameter (inches): Well               | 4"                   | Gravel Pack |               |
| Item                                  | Water Volume in Well |             | Gallons to be |
|                                       | Cubic Feet           | Gallons     | Removed       |
| Well Casing                           | 8.04                 | 5.24        | 15.72         |
| Gravel Pack                           |                      |             |               |
| Drilling Fluids                       |                      |             |               |
| Total                                 |                      |             | 15.72         |

## Instruments

☒ pH Meter YSI 63  
☒ DO Monitor YSI 95  
☒ Conductivity Meter YSI 63  
☒ Temperature Meter YSI 63  
☐ Other \_\_\_\_\_

## Water Disposal

Leute Separator Bloomfield NM.

## Water Removal Data

| Date   | Time | Development Method | Pump | Boiler | Removal Rate (gal/min) | Initial Depth (feet) | Ending Water Depth (feet) | Water Volume Removed (gallons) | Product Volume Removed (gallons) | Temperature (°C) | pH | Conductivity (mmhos/cm) | Dissolved Oxygen (mg/l) | Comments        |
|--------|------|--------------------|------|--------|------------------------|----------------------|---------------------------|--------------------------------|----------------------------------|------------------|----|-------------------------|-------------------------|-----------------|
| 6-5-02 | 1138 | X                  |      |        | 3.25                   |                      |                           | 15.5                           | 7.16                             | 1165             |    |                         |                         | C/O-02/10-00-CT |
|        | 1142 | X                  |      |        | 3.25                   |                      |                           | 14.2                           | 7.26                             | 1176             |    |                         |                         | odor, 5.6 sec   |
|        | 1147 | X                  |      |        | 3.25                   |                      |                           | 14.3                           | 7.28                             | 1214             |    |                         |                         | "               |
|        | 1154 | X                  |      |        | 3.25                   |                      |                           | 14.2                           | 7.32                             | 1236             |    |                         |                         | "               |
|        | 1200 | X                  |      |        |                        | 26.28                |                           | 14.4                           | 7.33                             | 1242             |    |                         |                         | 170 Change      |

Comments sampled for BTEX 1210

Developer Signature(s)

Chris Am

Date 6-5-02

Reviewer

John W. 6/10/02

**amec**

Project No.: 1517000121

Task: 2

Date: 6-5-02

[illegible]

Comments: \_\_\_\_\_

Signature: [Signature] Date: 6-5-02

Date: 6-5-02

PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS ARE FOR LAB USE ONLY

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

PL Accession #

PROJECT MANAGER: LISA WINN

ANALYSIS REQUEST

COMPANY: AMEC  
ADDRESS: 5060 AFTON PLACE  
EVANSTON, ILL. 60120

PHONE: (505) 323-2925  
FAX: (505) 326-5721

BILL TO: SCOTT POPE  
COMPANY: EL PASO FIELD SERVICES  
ADDRESS: 411 RAILROAD AVE  
EVANSTON, ILL. 60120

SAMPLE ID: 5E1-0206-MW1 6502/210 H2O

Petroleum Hydrocarbons (418.1) TRPH  
(MOD.8015) Diesel/Direct Inject  
(M8015) Gas/Purge & Trap  
8021 (BTEX)/8015 (Gasoline) MTBE  
8021 (BTEX) ☐ MTBE ☐ TMB ☐ PCE  
8021 (TCL)  
8021 (EDX)  
8021 (HALO)  
8021 (CUST)  
504.1 EDB ☐ / DBCP ☐  
8260 (TCL) Volatile Organics  
8260 (Full) Volatile Organics  
8260 (CUST) Volatile Organics  
8260 (Landfill) Volatile Organics  
Pesticides/PCB (608/8081/8082)  
Herbicides (615/8151)  
Base/Neutral/Acid Compounds GC/MS (625/8270)  
Polynuclear Aromatics (610/8310/8270-SIMS)  
General Chemistry:  
Priority Pollutant Metals (13)  
Target Analyte List Metals (23)  
RCRA Metals (8)  
RCRA Metals by TCLP (Method 1311)  
Metals:

NUMBER OF CONTAINERS

PROJECT INFORMATION

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

BEING QUISHED BY

BEING QUISHED BY

PROJ. NO.: 51700001

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒

Signature: [Signature] Time: 1/19/00

Signature: [Signature] Time: [Time]

PROJ. NAME: 51700001

CERTIFICATION REQUIRED ☐ NM ☐ SDWA ☐ OTHER

Printed Name: [Name] Date: 6-6-00

Printed Name: [Name] Date: [Date]

P.O. NO.:

METHANOL PRESERVATION ☐

Company: AMEC

Company: [Company]

SHIPPED VIA: FedEx

COMMENTS: FIXED FEE ☐

RECEIVED BY: [Signature] Time: [Time]

RECEIVED BY: [Signature] Time: [Time]

NO CONTAINERS

5E1-0206-MW1

See revised site (fract. materials)

Signature: [Signature] Time: [Time]

CUSTOMER SEALS

meter # (71816)

Printed Name: [Name] Date: [Date]

Printed Name: [Name] Date: [Date]

RECEIVED IN FACT

meter # (71816)

Signature: [Signature] Time: [Time]

Signature: [Signature] Time: [Time]

BLUE

meter # (71816)

Signature: [Signature] Time: [Time]

Signature: [Signature] Time: [Time]

# WELL DEVELOPMENT AND PURGING DATA FORM

Page 1 of 1

Project No. 15/2000/21

Site Address Rural San Juan CO

Serial No. (If applicable)

☒ pH Meter YST 63  
☒ DO Monitor YST 95

☐ Other

Water Disposal  
KUTZ SEPARATOR Bloomfield NM

[illegible]

L:\forms\MW D\lpml 2.doc 11/29/0

**amec**

Project No.: 1517000121

Task: 2

Date: 3-18-02

[illegible]

Comments: \_\_\_\_\_

Signature: Chris A. Wang Date: 3-18-02

Date: 3-18-02

PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS ARE FOR LAB USE ONLY

Pinnacle Laboratories

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 3-15-02 PAGE: 1 OF 1

PL Accession #

PROJECT MANAGER: Lisa Winn

COMPANY:

ADDRESS:

PHONE:

FAX:

BILL TO:

COMPANY:

ADDRESS:

SAMPLE ID

DATE

TIME

MAINT

LAB ID

JEN-6203-MV 1

3-15-02 1422 HaO

Petroleum Hydrocarbons (418.1) TRPH  
(MOD.8015) Diesel/Direct Inject

(M8015) Gas/Purge & Trap

8021 (BTX)/8015 (Gasoline) MTBE

8021 (BTX) ☐ MTBE ☐ TMB ☐ PCE

8021 (TCL)

8021 (EDX)

8021 (HALO)

8021 (CUST)

504.1 EDB ☐ / DBCP ☐

8260 (TCL) Volatile Organics

8260 (Full) Volatile Organics

8260 (CUST) Volatile Organics

8260 (Landfill) Volatile Organics

Pesticides /PCB (608/8081/8082)

Herbicides (615/8151)

Base/Neutral/Acid Compounds GC/MS (625/8270)

Polynuclear Aromatics (610/8310/8270-SIMS)

General Chemistry:

Priority Pollutant Metals (13)

Target Analyte List Metals (23)

RCRA Metals (8)

RCRA Metals by TCLP (Method 1311)

Metals:

NUMBER OF CONTAINERS

PROJECT INFORMATION

PROJ. NO. 1517000121

PROJ. NAME EPIFIS SW project

P.O. NO.:

SHIPPED VIA Greyhound

SAMPLE RECEIPT

NO. CONTAINERS

CUSTODY SEALS

RECEIVED INTACT

BLUE

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK

CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

JENNA DASH #1

meter # (71816)

RELINQUISHED BY

Signature: [Signature] Time: 1630

Printed Name: Chris Mac 3-18-02

Date: 3-18-02

Company: AMEC

RECEIVED BY

Signature: [Signature] Time: 1

Printed Name: [Name] Date: [Date]

Company: [Company]

RELINQUISHED BY

Signature: [Signature] Time: [Time]

Printed Name: [Name] Date: [Date]

Company: [Company]

RECEIVED BY (LAB)

Signature: [Signature] Time: [Time]

Printed Name: [Name] Date: [Date]

Company: Pinnacle Laboratories Inc.