

3R - 190

# REPORTS

DATE:

1998



**Certified Mail: #Z 211 324 121**

March 31, 1999

Mr. William C. Olson  
New Mexico Oil Conservation Division  
2040 S. Pacheco  
Santa Fe, NM 87504

**RECEIVED**

**APR 05 1999**

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

**RE: 1998 Pit Project Annual Groundwater Report**

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual updates for the 49 remaining groundwater impacted locations that were identified during our pit closure project of 1994 / 1995.

Of the 49 reports, EPFS hereby requests closure of 18 of these locations. The 18 sites EPFS is requesting closure on are presented in 4 separate binders entitled "Final Closure Report for Groundwater Sites with Four Consecutive Quarters Below Standards".

The Jaquez Com. C #1 and Jaquez Com. E #1 site is included in a separate report which is entitled "Jaquez Com. C #1 and Jaquez Com. E #1 Annual Report for Soil and Groundwater Remediation".

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

Sincerely,

A handwritten signature in dark ink, appearing to read 'Scott T. Pope'.

Scott T. Pope P.G.  
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # Z 211 324 122**  
Mr. Bill Liesse, BLM - w / enclosures; **Certified Mail # Z 211 324 123**  
Ms. Charmaine Tso, Navajo EPA - w / enclosures; **Certified Mail # Z 211 324 120**

# EPFS GROUNDWATER PITS

## 1998 ANNUAL GROUNDWATER REPORT

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HAMNER #9  
Meter/Line ID - 97213

RECEIVED

APR 05 1999

### SITE DETAILS

Legals - Twn: 29N      Rng: 9W      Sec: 20  
NMOCD Hazard Ranking: 30  
Operator: AMOCO PRODUCTION COMPANY

Unit: A  
Land Type: FEDERAL

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

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### PREVIOUS ACTIVITIES

Site Assessment: May-94      Excavation: May-94 (70 cy)  
Monitor Well: Aug-95      Geoprobe: Oct-96

Soil Boring: Aug-95  
Quarterly Sampling Initiated: Nov-96

### 1998 ACTIVITIES

**Quarterly Groundwater Monitoring** - Quarterly groundwater samples were collected through 1998. Groundwater analytical data is presented in Table 1. A site map is presented as Figure 1.

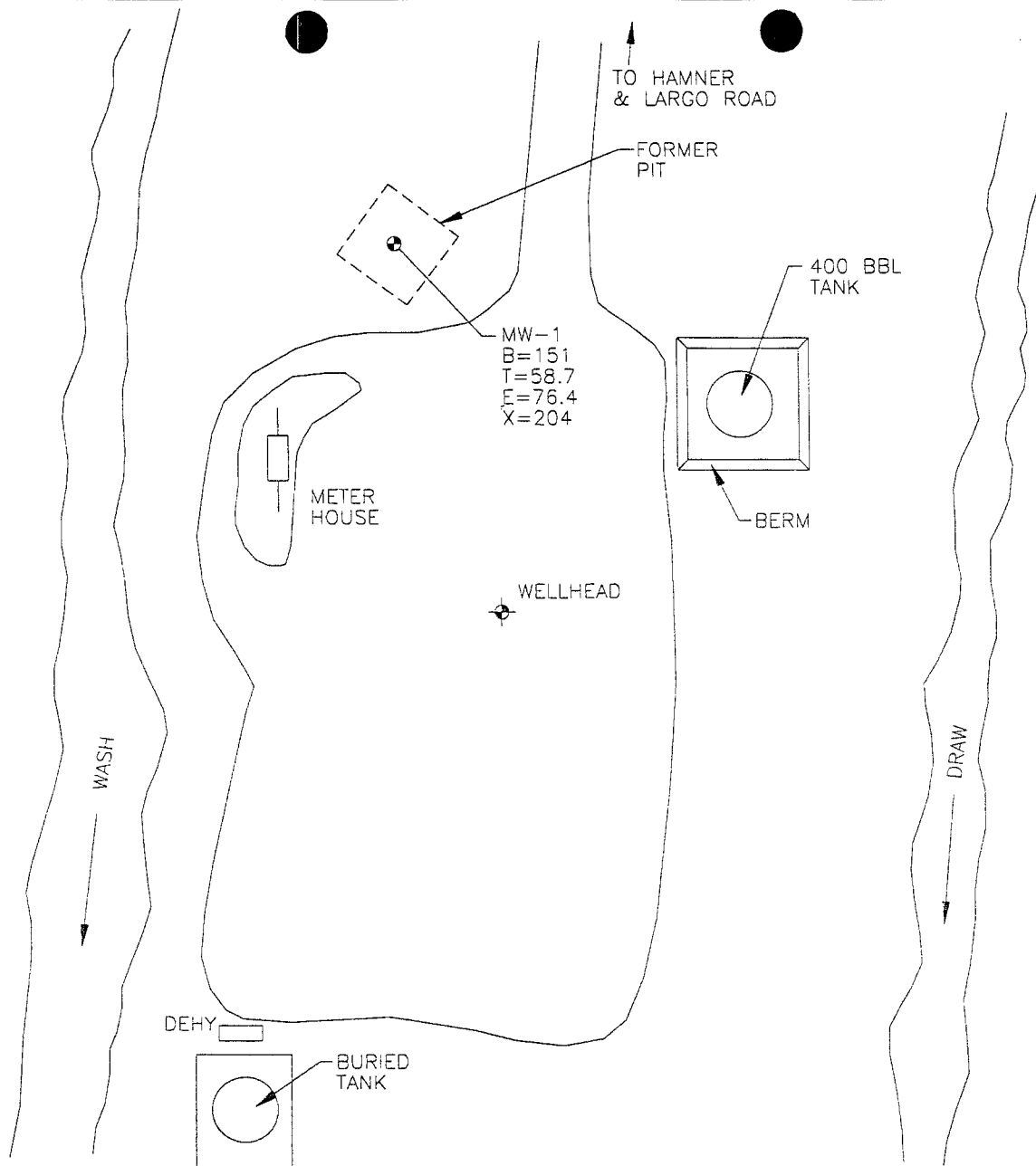
### CONCLUSIONS

Analytical results of groundwater samples collected from MW-1 show levels of benzene to be above New Mexico Groundwater Standards, for all four sampling events in 1998. Although benzene is still above the standards, natural attenuation has reduced benzene levels by more than 50 percent since monitoring began at this site.

Pertinent data from the 1997 groundwater report include the following: Based on groundwater levels collected from Geoprobe data, the groundwater flow trends to the south on this location. Two Geoprobe groundwater samples collected down-gradient of MW-1 show BTEX analysis below standards. One Geoprobe groundwater sample collected down-gradient of MW-1 show benzene and xylene above standards.

### RECOMMENDATIONS

- This site is a potential candidate for ORC nutrient injection.
- Quarterly sampling will continue at MW-1 until analytical results show hydrocarbon constituents are below New Mexico Groundwater Standards for four consecutive quarters.
- Following OCD approval for closure, MW-1 will be abandoned using OCD approved abandonment procedures.



# LEGEND

● MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER

B BENZENE (ug\L)  
T TOLUENE (ug\L)  
E ETHYL BENZENE (ug\L)  
X XYLENE (ug\L)

ug\L MICROGRAMS PER LITER

NOT TO SCALE



COL. 17520BI-002



TITLE:  
HAMNER #9  
METER 97213  
NOVEMBER 3, 1998

|         |       |
|---------|-------|
| OWN:    | DES.: |
| TMM     | CI    |
| CHKD:   | APPD: |
| CI      |       |
| DATE:   | REV.: |
| 2/26/99 | 0     |

PROJECT NO.: 17520  
EPFS GW PITS

FIGURE 1

EPFS Groundwater Pits  
1998 Annual Groundwater Report

TABLE 1

| Sample # | Meter/ Line # | Site Name | Sample Date | MW # | Project                | Benzene (PPB) | Toluene (PPB) | Ethyl Benzene (PPB) | Total Xylenes (PPB) | Total BTEX |
|----------|---------------|-----------|-------------|------|------------------------|---------------|---------------|---------------------|---------------------|------------|
| 980132   | 97213         | Hamner #9 | 02/03/98    | 1    | Sample 4 - 6th Quarter | = 245         | = 276.00      | = 109.0             | = 375               | = 1005     |
| 980358   | 97213         | Hamner #9 | 05/07/98    | 1    | Sample 4 - 7th Quarter | = 166         | = 6.02        | = 110.0             | = 202               | = 485      |
| 980543   | 97213         | Hamner #9 | 08/04/98    | 1    | Sample 4 - 8th Quarter | = 171         | = 74.40       | = 86.1              | = 209               | = 541      |
| 980769   | 97213         | Hamner #9 | 11/03/98    | 1    | Sample 4 - 9th Quarter | = 151         | = 58.70       | = 76.4              | = 204               | = 490.4    |

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**1998 GROUNDWATER  
ANALYTICAL**

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Well Number *AW-1*

Meter Code 97213

|                                     |             |
|-------------------------------------|-------------|
| <input type="checkbox"/>            | Development |
| <input checked="" type="checkbox"/> | Purging     |

Site Name HAMNER #9

## Development Criteria

- |                                     |                                        |
|-------------------------------------|----------------------------------------|
| <input checked="" type="checkbox"/> | 3 to 5 Casing Volumes of Water Removal |
| <input type="checkbox"/>            | Stabilization of Indicator Parameters  |
| <input type="checkbox"/>            | Other                                  |

## Water Volume Calculation

Initial Depth of Well (feet) 40.91  
Initial Depth to Water (feet) 32.48  
Height of Water Column in Well (feet) 8.43

Diameter (inches): Well 4 Gravel Pack

## Methods of Development

- |                          |             |                                     |                          |
|--------------------------|-------------|-------------------------------------|--------------------------|
| <input type="checkbox"/> | Pump        |                                     |                          |
| <input type="checkbox"/> | Centrifugal | <input checked="" type="checkbox"/> | Bottom Valve             |
| <input type="checkbox"/> | Submersible | <input type="checkbox"/>            | Double Check Valve       |
| <input type="checkbox"/> | Peristaltic | <input type="checkbox"/>            | Stainless-steel Kemmerer |

## Instruments

- |                                     |                     |
|-------------------------------------|---------------------|
| <input checked="" type="checkbox"/> | pH Meter            |
| <input type="checkbox"/>            | DO Monitor          |
| <input checked="" type="checkbox"/> | Conductivity Meter  |
| <input checked="" type="checkbox"/> | Temperature Meter   |
| <input checked="" type="checkbox"/> | Other <u>D.O.C.</u> |

## Water Disposal

KUTZ SEPARATOR

| Item            | Water Volume in Well |         | Gallons to be Removed |
|-----------------|----------------------|---------|-----------------------|
|                 | Cubic Feet           | Gallons |                       |
| Well Casing     |                      | 5.6     | 16.7                  |
| Gravel Pack     |                      |         |                       |
| Drilling Fluids |                      |         |                       |
| Total           |                      |         |                       |

## Water Removal Data

[illegible]

Comments THE WELL BAILED ONLY 6.0 GALLONS. THE WATER HAD A LIGHT HYDROGEN SULFIDE SMELL.

Developer's Signature Denio Bird

Date 2-3-98 Reviewer \_\_\_\_\_

Date 2/17/98



## FIELD SERVICES LABORATORY

## ANALYTICAL REPORT

## PIT CLOSURE PROJECT

## SAMPLE IDENTIFICATION

|                            |                      |           |
|----------------------------|----------------------|-----------|
|                            | Field ID             | Lab ID    |
| SAMPLE NUMBER:             | N/A                  | 980132    |
| MTR CODE   SITE NAME:      | 97213                | Hamner #9 |
| SAMPLE DATE   TIME (Hrs):  | 2/3/98               | 1228      |
| PROJECT:                   | Sample 4 6th Quarter |           |
| DATE OF BTEX EXT.   ANAL.: | 2/7/98               | 2/7/98    |
| TYPE   DESCRIPTION:        | MW-1                 | Water     |

Field Remarks: Surrogate recovery is low due to malfunction of surrogate injection syringe.

## RESULTS

| PARAMETER     | RESULT | UNITS | QUALIFIERS |   |  |  |
|---------------|--------|-------|------------|---|--|--|
|               |        |       | DF         | D |  |  |
| BENZENE       | 245    | PPB   | 2          | D |  |  |
| TOLUENE       | 276    | PPB   | 2          | D |  |  |
| ETHYL BENZENE | 109    | PPB   |            |   |  |  |
| TOTAL XYLENES | 375    | PPB   |            |   |  |  |
| TOTAL BTEX    | 1005   | PPB   |            |   |  |  |

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 40.0 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

The "D" qualifier indicates that the analyte calculated is based on a secondary dilution factor.

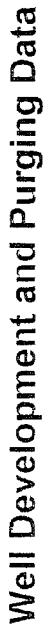
## Narrative:

Surrogate low due to injection malfunction.Approved By: John FawcettDate: 2/17/98

980132BTEXMW,2/10/98

## CHAIN OF CUSTODY RECORD

| Project No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Project Name |  | Date   |  | Sample Number |  | Type and No. of Sample Containers | Preservation Technique | Requested Analysis | Remarks |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--|--------|--|---------------|--|-----------------------------------|------------------------|--------------------|---------|
| MC # 97213                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Dennis Bical |  | 2-3-98 |  | 980133V       |  | 51                                | 4°C X                  | HAMNER #9          | nw-1    |
| <div style="display: flex; justify-content: space-between;"> <div> <p>Relinquished by: (Signature)</p> <p>Relinquished by: (Signature)</p> <p>Relinquished by: (Signature)</p> </div> <div> <p>Date/Time</p> <p>2-3-98 1738</p> <p>Date/Time</p> <p>Date/Time</p> </div> <div> <p>Received by: (Signature)</p> <p>Received by: (Signature)</p> <p>Received for Laboratory by: (Signature)</p> </div> <div> <p>Date/Time</p> <p>Date/Time</p> <p>Date/Time</p> </div> <div> <p>Relinquished by: (Signature)</p> <p>Relinquished by: (Signature)</p> <p>Relinquished by: (Signature)</p> </div> <div> <p>Date/Time</p> <p>Date/Time</p> <p>Date/Time</p> </div> <div> <p>Received by: (Signature)</p> <p>Received by: (Signature)</p> <p>Received by: (Signature)</p> </div> </div> |              |  |        |  |               |  |                                   |                        |                    |         |
| <p>Carrier Co: <span style="float: right;">Carrier Phone No.</span></p> <p>Air Bill No.:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |  |        |  |               |  |                                   |                        |                    |         |



|                                     |             |
|-------------------------------------|-------------|
| <input type="checkbox"/>            | Development |
| <input checked="" type="checkbox"/> | Purging     |

Well Number MW-1

Meter Code 97213

Site Name HANMER #9

## Development Criteria

- |                                     |                                        |
|-------------------------------------|----------------------------------------|
| <input checked="" type="checkbox"/> | 3 to 5 Casing Volumes of Water Removal |
| <input type="checkbox"/>            | Stabilization of Indicator Parameters  |
| <input type="checkbox"/>            | Other                                  |

## Water Volume Calculation

Initial Depth of Well (feet) 40.91

Initial Depth to Water (feet) 32.38

Height of Water Column in Well (feet) 81.53

4 Diameter (inches): Well Gravel Pack

## Methods of Development

- |                          |             |                                     |                          |
|--------------------------|-------------|-------------------------------------|--------------------------|
| <input type="checkbox"/> | Pump        | <input type="checkbox"/>            | Bailer                   |
| <input type="checkbox"/> | Centrifugal | <input checked="" type="checkbox"/> | Bottom Valve             |
| <input type="checkbox"/> | Submersible | <input type="checkbox"/>            | Double Check Valve       |
| <input type="checkbox"/> | Peristaltic | <input type="checkbox"/>            | Stainless-steel Kemmerer |

Other ☐

## Instruments

- ☒ pH Meter  
☐ DO Monitor  
☒ Conductivity Meter  
☒ Temperature Meter  
☒ Other D.O.C

## Water Disposal

KUTZ SEPARATOR

| Item            | Water Volume in Well |         | Gallons to be Removed |
|-----------------|----------------------|---------|-----------------------|
|                 | Cubic Feet           | Gallons |                       |
| Well Casing     |                      | 5.6     | 16.9                  |
| Gravel Pack     |                      |         |                       |
| Drilling Fluids |                      |         |                       |
| Total           |                      |         |                       |

## Water Removal Data

[illegible]

Comments THE WELL BAILED DRY @ 60 GALLONS. THE WATER HAD A LIGHT HYDROGEN SULFIDE SMELL.

Developer's Signature Dennis Bird

Date 5-7-98 Reviewer \_\_\_\_\_

John Leubke Date 5/12/98



## FIELD SERVICES LABORATORY

## ANALYTICAL REPORT

## PIT CLOSURE PROJECT

## SAMPLE IDENTIFICATION

|                            |                      |           |
|----------------------------|----------------------|-----------|
|                            | Field ID             | Lab ID    |
| SAMPLE NUMBER:             | N/A                  | 980358    |
| MTR CODE   SITE NAME:      | 97213                | Hamner #9 |
| SAMPLE DATE   TIME (Hrs):  | 5/7/98               | 1233      |
| PROJECT:                   | Sample 4 7th Quarter |           |
| DATE OF BTEX EXT.   ANAL.: | 5/8/98               | 5/8/98    |
| TYPE   DESCRIPTION:        | MW-1                 | Water     |

Field Remarks:

## RESULTS

| PARAMETER     | RESULT | UNITS | QUALIFIERS |   |  |  |
|---------------|--------|-------|------------|---|--|--|
|               |        |       | DF         | D |  |  |
| BENZENE       | 166    | PPB   | 2          | D |  |  |
| TOLUENE       | 6.02   | PPB   | 2          | D |  |  |
| ETHYL BENZENE | 110    | PPB   | 2          | D |  |  |
| TOTAL XYLENES | 202    | PPB   | 2          | D |  |  |
| TOTAL BTEX    | 485    | PPB   |            |   |  |  |

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 90.7 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

The "D" qualifier indicates that the analyte calculated is based on a secondary dilution factor.

Narrative:

Approved By:

Date:

5/12/98

980358BTEXMW,5/11/98

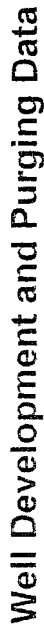
SAMPLE 4 71107R



A 2309

CHAIN OF CUSTODY RECORD

| Project No.                                                                       | Project Name | Requested Analysis                      |                                         |               | Remarks                  |  |  |  |
|-----------------------------------------------------------------------------------|--------------|-----------------------------------------|-----------------------------------------|---------------|--------------------------|--|--|--|
| Samplers: (Signature)                                                             |              | Type and No. of Sample Containers       | Preservation Technique                  |               |                          |  |  |  |
| Date                                                                              | Time         | Comp.                                   | GRAB                                    | Sample Number |                          |  |  |  |
| 5-7-98                                                                            | 13:33        |                                         | X                                       | 780358        |                          |  |  |  |
| <div>NOTE: A diagonal line is drawn across the remaining rows of the table.</div> |              |                                         |                                         |               |                          |  |  |  |
|                                                                                   |              |                                         |                                         |               |                          |  |  |  |
|                                                                                   |              |                                         |                                         |               |                          |  |  |  |
|                                                                                   |              |                                         |                                         |               |                          |  |  |  |
|                                                                                   |              |                                         |                                         |               |                          |  |  |  |
|                                                                                   |              |                                         |                                         |               |                          |  |  |  |
|                                                                                   |              |                                         |                                         |               |                          |  |  |  |
|                                                                                   |              |                                         |                                         |               |                          |  |  |  |
|                                                                                   |              |                                         |                                         |               |                          |  |  |  |
|                                                                                   |              |                                         |                                         |               |                          |  |  |  |
| Relinquished by: (Signature)                                                      |              | Date/Time                               | Received by: (Signature)                | Date/Time     | Received by: (Signature) |  |  |  |
| Donnie Bird                                                                       |              | 5-7-98 17:09                            |                                         |               |                          |  |  |  |
| Relinquished by: (Signature)                                                      |              | Date/Time                               | Received by: (Signature)                | Date/Time     | Received by: (Signature) |  |  |  |
|                                                                                   |              |                                         |                                         |               |                          |  |  |  |
| Relinquished by: (Signature)                                                      |              | Date/Time                               | Received for Laboratory by: (Signature) | Date/Time     | Remarks:                 |  |  |  |
|                                                                                   |              |                                         | Marla Mager                             | 5/18/98 0945  |                          |  |  |  |
| Carrier Co:                                                                       |              | Date Results Reported / by: (Signature) |                                         |               |                          |  |  |  |
| Air Bill No.:                                                                     |              |                                         |                                         |               |                          |  |  |  |



|                                     |             |
|-------------------------------------|-------------|
| <input type="checkbox"/>            | Development |
| <input checked="" type="checkbox"/> | Purging     |

Well Number MW-1

Meter Code 97213

Site Name HAMNER #9

## Development Criteria

- |                                     |                                        |
|-------------------------------------|----------------------------------------|
| <input checked="" type="checkbox"/> | 3 to 5 Casing Volumes of Water Removal |
| <input type="checkbox"/>            | Stabilization of Indicator Parameters  |
| <input type="checkbox"/>            | Other                                  |

## Methods of Development

- |                          |                  |                                     |                          |         |
|--------------------------|------------------|-------------------------------------|--------------------------|---------|
| <input type="checkbox"/> | Pump Centrifugal | <input checked="" type="checkbox"/> | Bottom Valve             | Battier |
| <input type="checkbox"/> | Submersible      | <input type="checkbox"/>            | Double Check Valve       |         |
| <input type="checkbox"/> | Peristaltic      | <input type="checkbox"/>            | Stainless-steel Kemmerer |         |

## Water Volume Calculation

Initial Depth of Well (feet) 40.91

Initial Depth to Water (feet) 32.54

Height of Water Column in Well (feet) 18.37

4 Diameter (inches): Well

| Item            | Water Volume in Well |         | Gallons to be Removed |
|-----------------|----------------------|---------|-----------------------|
|                 | Cubic Feet           | Gallons |                       |
| Well Casing     |                      | 55      | 16.6                  |
| Gravel Pack     |                      |         |                       |
| Drilling Fluids |                      |         |                       |
| Total           |                      |         |                       |

## Instruments

- |                                     |                    |
|-------------------------------------|--------------------|
| <input checked="" type="checkbox"/> | pH Meter           |
| <input type="checkbox"/>            | DO Monitor         |
| <input checked="" type="checkbox"/> | Conductivity Meter |
| <input checked="" type="checkbox"/> | Temperature Meter  |
| <input checked="" type="checkbox"/> | Other <u>DO C</u>  |

## Water Disposal

KOTZ SEPARATOR

## Water Removal Data

[illegible]

Comments THE WELL BAILED DRY @ 6.0 GALLONS. THE WATER HAD A LIGHT HYDROGEN SULFIDE SMELL

Developer's Signature *Dennis Bird*

Date 8-4-98 Reviewer \_\_\_\_\_

Date 8/12/98



# EL PASO FIELD SERVICES

## FIELD SERVICES LABORATORY

### ANALYTICAL REPORT

### PIT CLOSURE PROJECT

#### SAMPLE IDENTIFICATION

|                            | Field ID             | Lab ID    |
|----------------------------|----------------------|-----------|
| SAMPLE NUMBER:             | N/A                  | 980543    |
| MTR CODE   SITE NAME:      | 97213                | Hamner #9 |
| SAMPLE DATE   TIME (Hrs):  | 8/4/98               | 1433      |
| PROJECT:                   | Sample 4 8th Quarter |           |
| DATE OF BTEX EXT.   ANAL.: | 8/10/98              | 8/10/98   |
| TYPE   DESCRIPTION:        | MW-1                 | Water     |

Field Remarks: \_\_\_\_\_

#### RESULTS

| PARAMETER     | RESULT | UNITS | QUALIFIERS |   |  |  |
|---------------|--------|-------|------------|---|--|--|
|               |        |       | DF         | Q |  |  |
| BENZENE       | 171    | PPB   | 2          | D |  |  |
| TOLUENE       | 74.4   | PPB   | 2          | D |  |  |
| ETHYL BENZENE | 86.1   | PPB   | 2          | D |  |  |
| TOTAL XYLENES | 209    | PPB   | 2          | D |  |  |
| TOTAL BTEX    | 541    | PPB   |            |   |  |  |

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 93.9 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

The "D" qualifier indicates that the analyte calculated is based on a secondary dilution factor.

Narrative: \_\_\_\_\_

Approved By: \_\_\_\_\_

*John Lardner*

Date: \_\_\_\_\_

*5/12/98*

980543BTEXMW, 8/11/98

sample 4 871197A



National as Company

A 237

CHAIN OF CUSTODY RECORD

| Project No.                                                                                       | Project Name |                   | Date         |                                         | Sample Number |              | Type and No. of Sample Containers | Preservation Technique       | Requested Analysis | Remarks                                 |  |
|---------------------------------------------------------------------------------------------------|--------------|-------------------|--------------|-----------------------------------------|---------------|--------------|-----------------------------------|------------------------------|--------------------|-----------------------------------------|--|
|                                                                                                   | MC # 97213   |                   | Date: 8-4-98 |                                         |               |              |                                   |                              |                    |                                         |  |
| Samplers: (Signature) <i>Donna Bird</i>                                                           |              |                   |              |                                         |               |              |                                   |                              |                    |                                         |  |
|                                                                                                   | Date         | Time              | Comp.        | GRAB                                    |               |              |                                   |                              |                    |                                         |  |
|                                                                                                   | 8-4-98       | 1433              |              | X                                       | 980543        |              | 151 4°C X                         | BTLG                         |                    | HAMMER #9 MW-1                          |  |
| <div style="border: 1px solid black; width: 100%; height: 100%; transform: rotate(45deg);"></div> |              |                   |              |                                         |               |              |                                   |                              |                    |                                         |  |
| Relinquished by: (Signature)                                                                      |              | Date/Time         |              | Received by: (Signature)                |               | Date/Time    |                                   | Relinquished by: (Signature) |                    | Received by: (Signature)                |  |
| <i>Donna Bird</i>                                                                                 |              | 8-4-98 1716       |              |                                         |               |              |                                   |                              |                    |                                         |  |
| Relinquished by: (Signature)                                                                      |              | Date/Time         |              | Received by: (Signature)                |               | Date/Time    |                                   | Relinquished by: (Signature) |                    | Received by: (Signature)                |  |
|                                                                                                   |              |                   |              |                                         |               |              |                                   |                              |                    |                                         |  |
| Relinquished by: (Signature)                                                                      |              | Date/Time         |              | Received for Laboratory by: (Signature) |               | Date/Time    |                                   | Remarks:                     |                    | Date Results Reported / by: (Signature) |  |
|                                                                                                   |              |                   |              | <i>Mark Roper</i>                       |               | 8/10/98 0720 |                                   |                              |                    |                                         |  |
| Carrier Co.                                                                                       |              | Carrier Phone No. |              |                                         |               |              |                                   |                              |                    |                                         |  |
| Air Bill No.:                                                                                     |              |                   |              |                                         |               |              |                                   |                              |                    |                                         |  |



## Well Development and Purging Data

Well Number MW-1  
Meter Code 97213

|                                     |                                        |
|-------------------------------------|----------------------------------------|
| <input checked="" type="checkbox"/> | 3 to 5 Casing Volumes of Water Removal |
| <input type="checkbox"/>            | Stabilization of Indicator Parameters  |
| <input type="checkbox"/>            | Other                                  |

|                          |             |                                     |                          |
|--------------------------|-------------|-------------------------------------|--------------------------|
| <input type="checkbox"/> | Pump        | <input checked="" type="checkbox"/> | Bailer                   |
| <input type="checkbox"/> | Centrifugal | <input checked="" type="checkbox"/> | Bottom Valve             |
| <input type="checkbox"/> | Submersible | <input type="checkbox"/>            | Double Check Valve       |
| <input type="checkbox"/> | Peristaltic | <input type="checkbox"/>            | Stainless-steel Kemmerer |
| <input type="checkbox"/> | Other       |                                     |                          |

Initial Depth of Well (feet) 40.96  
Initial Depth to Water (feet) 32.63  
Height of Water Column in Well (feet) 8.29  
Diameter (inches): Well 4 Gravel Pack

☒ pH Meter  
☐ DO Monitor  
☒ Conductivity Meter  
☒ Temperature Meter  
☒ Other D.O. probe

## Water Disposal

KUTZ SEPARATOR

[illegible]

Comments THE WELL BAILED DRY @ 6.0 GALLONS. THE WATER HAD A LIGHT HYDROGEN SULFIDE SMOELL.

Developer's Signature Dennis Bird

Date 11-3-98

Reviewer

Date 11/9/90



## FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

### SAMPLE IDENTIFICATION

|                            | Field ID             | Lab ID    |
|----------------------------|----------------------|-----------|
| SAMPLE NUMBER:             | N/A                  | 980769    |
| MTR CODE   SITE NAME:      | 97213                | Hamner #9 |
| SAMPLE DATE   TIME (Hrs):  | 11/3/98              | 1410      |
| PROJECT:                   | Sample 4 9th Quarter |           |
| DATE OF BTEX EXT.   ANAL.: | 11/6/98              | 11/6/98   |
| TYPE   DESCRIPTION:        | MW-1                 | Water     |

Field Remarks: \_\_\_\_\_

### RESULTS

| PARAMETER     | RESULT | UNITS | QUALIFIERS |   |  |  |
|---------------|--------|-------|------------|---|--|--|
|               |        |       | DF         | Q |  |  |
| BENZENE       | 151    | PPB   |            |   |  |  |
| TOLUENE       | 58.7   | PPB   |            |   |  |  |
| ETHYL BENZENE | 76.4   | PPB   |            |   |  |  |
| TOTAL XYLENES | 204    | PPB   |            |   |  |  |
| TOTAL BTEX    | 490.4  | PPB   |            |   |  |  |

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 106.4 % for this sample All QA/QC was acceptable.  
DF = Dilution Factor Used

Narrative: \_\_\_\_\_

Approved By: \_\_\_\_\_

*John Larch*

Date: \_\_\_\_\_

11/9/98

980769BTEXMW, 11/6/98



**A 2403**

## CHAIN OF CUSTODY RECORD

[illegible]