3R - 242

# REPORTS

# DATE:
1997

EL PASO ENERGY

**Certified Mail: #Z 295 387 297; #Z 295 387 296**



February 27, 1998

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

**Re: 1997 Groundwater Annual Report**

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual updates for 57 groundwater impacted locations that were identified during our pit closure project of 1994/1995.

Of the 57 reports, EPFS hereby requests your approval for closure of 11 of these locations. The 11 reports for which EPFS requests closure, are in 2 separate binders entitled "Request for Closure".

After you have had an opportunity to review these updates, EPFS would like to schedule a meeting with you to discuss issues related to closure criteria for some of the more complex locations that are currently being addressed.

If you have any questions regarding this information, please call me at 505/599-2141. I will contact you within the next quarter to schedule a meeting.

Sincerely,

Sandra D. Miller
Environmental Manager

xc: Mr. Bill Liesse, BLM w/o enclosures
Mr. Denny Foust, NMOCD - Aztec w/enclosures; **Certified Mail #Z 295 387 298; #Z 295 387 299**
Ms. Charmaine Tso, Navajo EPA w/enclosures; **Certified Mail #Z 295 387 292**

# SAN JUAN BASIN PIT CLOSURES
## San Juan Basin, New Mexico

# El Paso Field Services Pit Project Groundwater Report
## Annual Report

**March 1998**

**Prepared For**

**El Paso Field Services**
**Farmington, New Mexico**

**Project 17520**

PHILIP ENVIRONMENTAL

## TRUNK 2B DRIP X-1
**Meter/Line ID - LD153**

### SITE DETAILS

**Legals - Twn:** 27N **Rng:** 11W **Sec:** 1 **Unit:** J
**NMOCD Hazard Ranking:** 40 **Land Type:** FEDERAL
**Operator:** EL PASO FIELD SERVICES

### PREVIOUS ACTIVITIES

**Site Assessment:** Oct-94 **Excavation:** Nov-94 (310 cy) **Geoprobe:** Nov-96
**Soil Boring:** Mar-97 **Monitor Well:** Mar-97

### 1997 ACTIVITIES

**Monitor Well Installation** - One groundwater monitor well was installed in the center of the former pit.

**Quarterly Groundwater Monitoring** - Quarterly groundwater monitoring was initiated on 6/4/97. Groundwater analytical data are presented in Table 1.

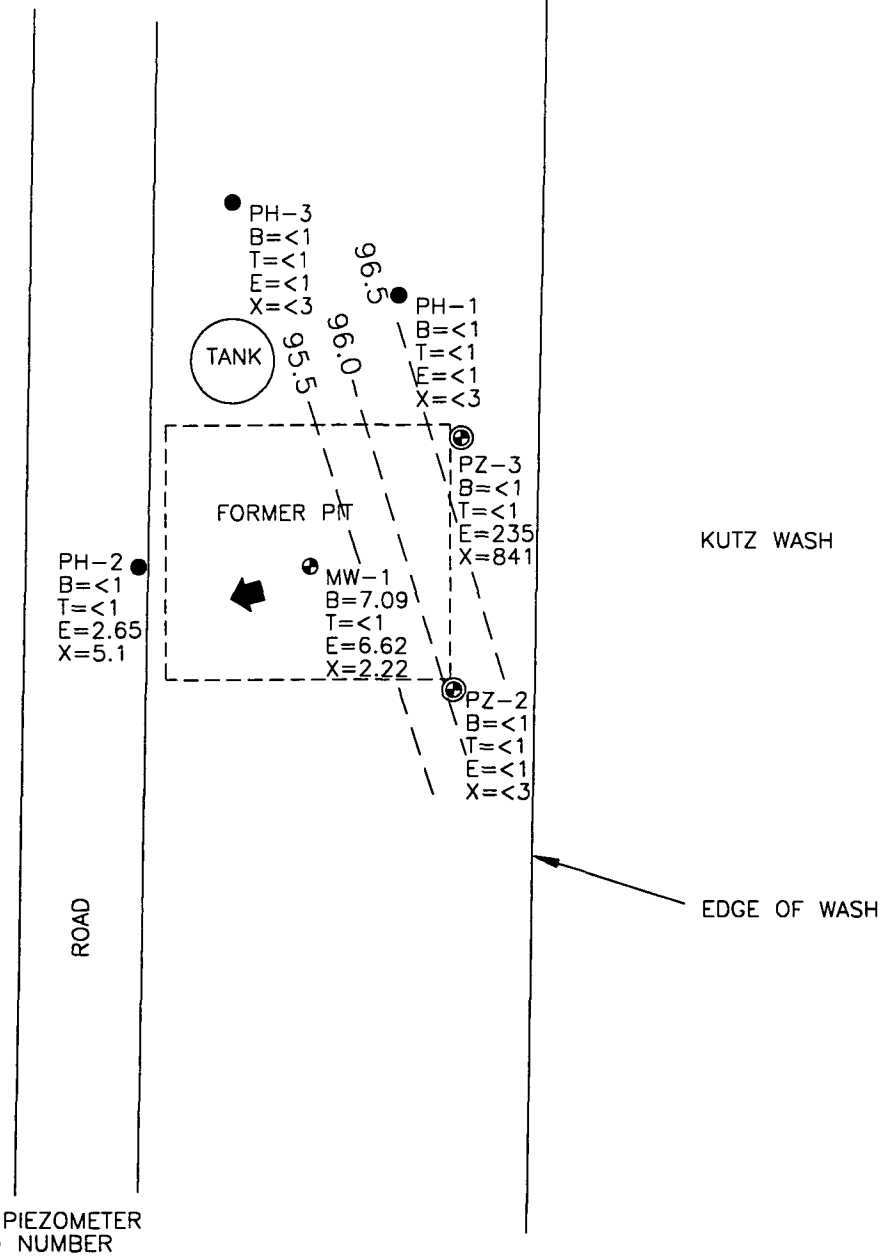
### CONCLUSIONS

Quarterly groundwater samples from MW-1 have been below standards since sampling was initiated. Geoprobe samples collected up and downgradient of MW-1 were below standards, with the exception of xylene collected from PZ3 which was reported at 841 ppb.

BTEX concentrations have decreased since quarterly sampling was initiated. Based on groundwater analytical data, impact to groundwater has been minimal at this site.

### RECOMMENDATIONS

- Quarterly sampling will continue at MW-1 until 4 consecutive clean quarters are achieved.
- Following OCD approval for closure, MW-1 will be abandoned following OCD approved abandonment procedures.




LEGEND

| | |
|---|---|
| ⊕ PZ-1 | APPROXIMATE PIEZOMETER LOCATION AND NUMBER |
| ● PH-1 | APPROXIMATE PROBEHOLE LOCATION AND NUMBER |
| ⊕ 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 |
| ⬅ | APPROXIMATE GROUNDWATER GRADIENT |

0 30
FEET

N

PHILIP SERVICES CORP

TITLE:
TRUNK 2B DRIP X-1
LD153

| DWN: | DES.: | PROJECT NO.: 17520 |
|---|---|---|
| TMM | CC | EPFS GW PITS |
| CHKD: CC | APPD: | |
| DATE: 1/13/98 | REV.: 0 | FIGURE 1 |

COL. 17520X-002

# TABLE 1

| Sample # | Meter/ Line # | Site Name | Sample Date | MW # | Project | Benzene (PPB) | Toluene (PPB) | Ethyl Benzene (PPB) | Total Xylenes (PPB) | Total BTEX |
|---|---|---|---|---|---|---|---|---|---|---|
| 970205 | LD153 | Trunk 2B Drip X-1 | 3/10/97 | 1 | Phase II Drilling - Initial | = 12.1 | < 1 | = 30.2 | = 27.1 | = 70 |
| 970525 | LD153 | Trunk 2B Drip X-1 | 6/4/97 | 1 | Sample 4 - 1st Qtr | = 9.82 | < 1 | = 10.8 | = 3 | = 21 |
| 971043 | LD153 | Trunk 2B Drip X-1 | 9/22/97 | 1 | Sample 4 - 2nd Qtr | = 7.55 | < 1 | = 8.8 | = 4.14 | = 20 |
| 971298 | LD153 | Trunk 2B Drip X-1 | 12/12/97 | 1 | Sample 4 - 3rd Qtr | = 7.09 | < 1 | = 6.62 | = 2.22 | = 16 |

## RECORD OF SUBSURFACE EXPLORATION

Borehole # BH- 2
Well # 1
Page 1 of 2

PHILIP ENVIRONMENTAL SERVICES INC.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPFS GW PITS
Project Number 17520 Phase 6001.77
Project Location TRUNK 2B DRIP X-1-L0153

Elevation
Borehole Location T27-R11-S1-Ltr J
GWL Depth 16' BGS (PZ1)
Logged By D CESARK
Drilled By M DONOHUE
Date/Time Started 3/4/97 - 0830
Date/Time Completed " - 0900

Well Logged By D CESARK
Personnel On-Site D CHARLEY, J LONG
Contractors On-Site
Client Personnel On-Site

Drilling Method 4 1/4" ID HSA
Air Monitoring Method PID, CGI

| Depth (Feet) | Sample Number | Sample Interval | Sample Type & Recovery (inches) | Sample Description Classification System: USCS | USCS Symbol | Depth Lithology Change (feet) | Air Monitoring Units: PPM BZ | BH | S | Drilling Conditions & Blow Counts |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | BACKFILL TO 10' | | | | | | |
| 5 | | | | GWC 6' BGS | | | | | | |
| 10 | | | | | | | | | | |
| 15 | | | | TD = 16' | | | | | | |
| 20 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 30 | | | | | | | | | | |
| 35 | | | | | | | | | | |
| 40 | | | | | | | | | | |

Comments: PZ1 LOCATED IN CTR. OF FORMER PIT. MEASURED DEPTH TO GW (6' BGS) PULLED PZ1 INSTALLED MW-1 @ FORMER PZ1 LOCN. TD = 16' - PLEASE REFER TO MW COMPLETION DIAGRAM. NO SAMPLE COLLECTED.

Geologist Signature

# MONITORING WELL INSTALLATION RECORD

Borehole # 2
Well # 1
Page 1 of 1


**Philip Environmental Services, Inc.**
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388


Project Name EPFS GW PITS
Project Number 17520 Phase 6002.77
Site Location TRUNK 2B DRIP X-1 — LD153

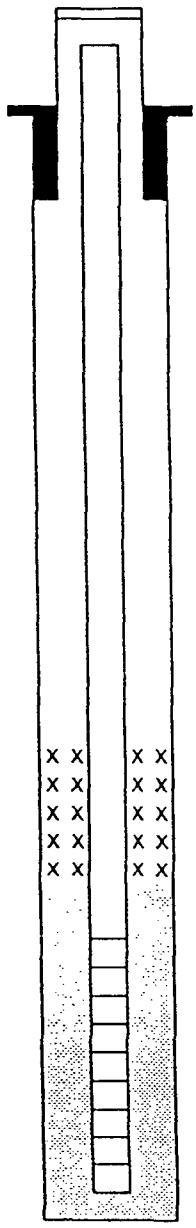
Elevation CTR OF PIT (PZ1) T27N-R12W-
Well Location TRUNK 2B DRIP X-1 LD153 S1-L7
GWL Depth -10' BGS
Installed By M DONOHUE

Date/Time Started 3/4/97 - 0900
Date/Time Completed " - 1000

On-Site Geologist D CESARK
Personnel On-Site D CHARLEY, J LONG
Contractors On-Site
Client Personnel On-Site

Depths in Reference to Ground Surface

| Item | Material | Depth (feet) |
|---|---|---|
| Top of Protective Casing | | |
| Bottom of Protective Casing | | |
| Top of Permanent Borehole Casing | | N/A |
| Bottom of Permanent Borehole Casing | | N/A |
| Top of Concrete | | |
| Bottom of Concrete | | |
| Top of Grout | | |
| Bottom of Grout | | |
| Top of Well Riser | SCH 40 PVC | +3' |
| Bottom of Well Riser | " | -3' |
| Top of Well Screen | .010 SLOT | -3' |
| Bottom of Well Screen | " | -13' |
| Top of Peltonite Seal | ENVIROPLUG | -1' |
| Bottom of Peltonite Seal | " | -2' |
| Top of Gravel Pack | 10-20 SAND | -2' |
| Bottom of Gravel Pack | " | -15' |
| Top of Natural Cave-In | | -15' |
| Bottom of Natural Cave-In | | -16' |
| Top of Groundwater | | -6' |
| Total Depth of Borehole | | -16' |



Top of Protective Casing
Top of Riser +3'
Ground Surface -0-
Top of Seal -1'
Top of Gravel Pack -2'
Top of Screen -3'
Bottom of Screen -13'
Bottom of Borehole -16'

Comments: _____

N/A

# GEOPROBE

## Site Activities

*10-Mar-97*

**Meter/Line #:** LD153

**Location/Line #:** Trunk 2B Drip X-1

**MW#:**

**Depth to GW:**

**Depth to Product:**

**Product Thickness:**

**Date:** 11/21/96

**Activity:** Geoprobe

**Sample Type:** Geoprobe/Piezometer

**Sample Depth:** 6-9

**Refusal Depth:**

**Comments:** Install 3 piezos and 3 probeholes. PZ1 in center of pit.

# SITE ACTIVITIES

*21-Feb-97*

**Meter/Line #:** LD153

**Location/Line #:** Trunk 2B Drip X-1

**MW#:**

**Depth to GW:**

**Depth to Product:**

**Product Thickness:**

**Date:** 11/21/96

**Activity:** Geoprobe

**Comments:** Install 3 piezos and 3 probeholes. PZ1 in center of pit.

# PIEZOMETER INSTALLATION RECORD

Borehole # PZ - 1
Well #
Page 1 of 1

**Philip Environmental Services, Inc.**
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPFS PITS
Project Number 16297 Phase 6004
Site Location Trunk 2B Drip X-1

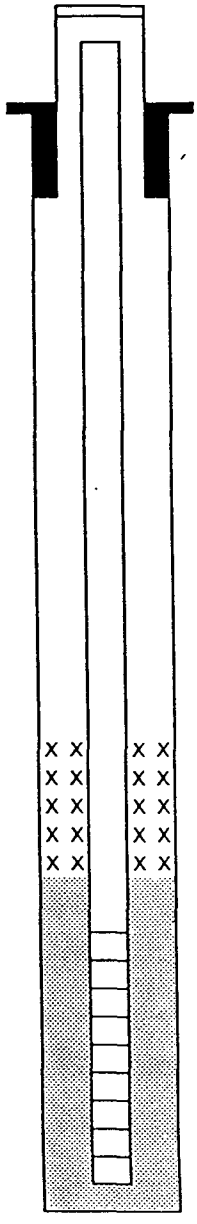
Elevation
Well Location Center of Pit
GWL Depth 8.07 BGS
Installed By K PADILLA

Date/Time Started 11/21/96
Date/Time Completed 11/21/96

On-Site Geologist CM CHANCE
Personnel On-Site ~~D CHARLEY~~ F. Rivera
Contractors On-Site
Client Personnel On-Site

Depths in Reference to Ground Surface

| Item | Material | Depth (feet) |
|---|---|---|
| Top of Protective Casing | | |
| Bottom of Protective Casing | | |
| Top of Permanent Borehole Casing | | N/A |
| Bottom of Permanent Borehole Casing | | N/A |
| Top of Concrete | | |
| Bottom of Concrete | | |
| Top of Grout | | |
| Bottom of Grout | | |
| Top of Well Riser | | |
| Bottom of Well Riser | | |
| Top of Well Screen | | |
| Bottom of Well Screen | | |
| Top of Peltonite Seal | | |
| Bottom of Peltonite Seal | | |
| Top of Gravel Pack | | |
| Bottom of Gravel Pack | | |
| Top of Natural Cave-In | | |
| Bottom of Natural Cave-In | | |
| Top of Groundwater | | |
| Total Depth of Borehole | | |



Top of Protective Casing NA
Top of Riser
Ground Surface
Top of Seal
Top of Gravel Pack
Top of Screen 4.35'
Bottom of Screen 9.35'
Bottom of Borehole

Comments: 5' screen 5' riser

Geologist Signature

MWINSTAL.wk1

# PIEZOMETER INSTALLATION RECORD

Borehole # PZ-2
Well #
Page 1 of 1

**Philip Environmental Services, Inc.**
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPFS PITS
Project Number 16297 Phase 6004
Site Location Trunk 2B Drip X-1

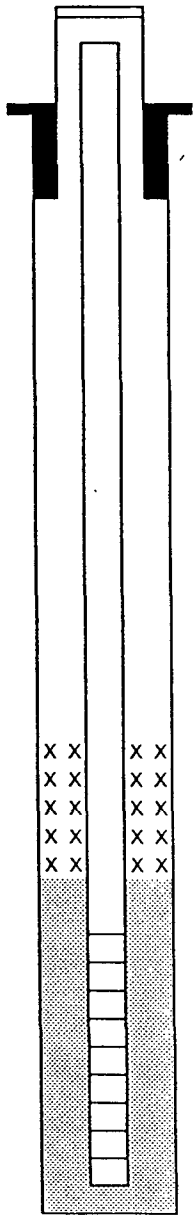
Elevation
Well Location SE of Pit
GWL Depth 3-9 BGS
Installed By K PADILLA

Date/Time Started 11/21/96
Date/Time Completed 11/21/96

On-Site Geologist CM CHANCE
Personnel On-Site ~~D CHARLEY~~ F. Rivera
Contractors On-Site
Client Personnel On-Site

Depths in Reference to Ground Surface

| Item | Material | Depth (feet) |
|---|---|---|
| Top of Protective Casing | | |
| Bottom of Protective Casing | | |
| Top of Permanent Borehole Casing | | N/A |
| Bottom of Permanent Borehole Casing | | N/A |
| Top of Concrete | | |
| Bottom of Concrete | | |
| Top of Grout | | |
| Bottom of Grout | | |
| Top of Well Riser | | |
| Bottom of Well Riser | | |
| Top of Well Screen | | |
| Bottom of Well Screen | | |
| Top of Peltonite Seal | | |
| Bottom of Peltonite Seal | | |
| Top of Gravel Pack | | |
| Bottom of Gravel Pack | | |
| Top of Natural Cave-In | | |
| Bottom of Natural Cave-In | | |
| Top of Groundwater | | |
| Total Depth of Borehole | | |



Top of Protective Casing NA
Top of Riser
Ground Surface
Top of Seal
Top of Gravel Pack
Top of Screen 2.25
Bottom of Screen 7.75
Bottom of Borehole

Comments: 5' screen 3' riser

Geologist Signature

# PIEZOMETER INSTALLATION RECORD

Borehole # PZ-3
Well #
Page 1 of 1

**Philip Environmental Services, Inc.**
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPFS PITS
Project Number 16297 Phase 6004
Site Location Trunk 2B Dip X-1

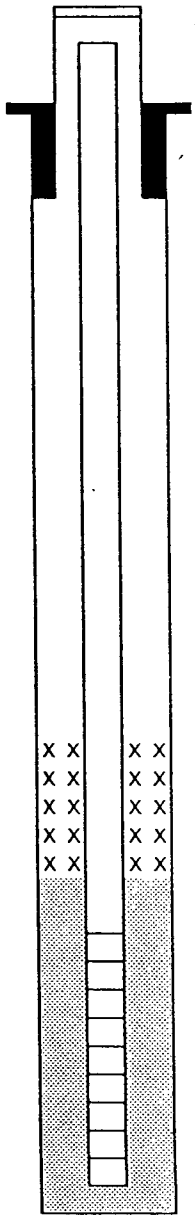
Elevation
Well Location NE of Pit
GWL Depth 4.22 BGS
Installed By K PADILLA

Date/Time Started 11/21/96
Date/Time Completed 11/21/96

On-Site Geologist CM CHANCE
Personnel On-Site ~~D CHARLEY~~ F. Rivera
Contractors On-Site
Client Personnel On-Site

Depths in Reference to Ground Surface

| Item | Material | Depth (feet) |
|---|---|---|
| Top of Protective Casing | | |
| Bottom of Protective Casing | | |
| Top of Permanent Borehole Casing | | N/A |
| Bottom of Permanent Borehole Casing | | N/A |
| Top of Concrete | | |
| Bottom of Concrete | | |
| Top of Grout | | |
| Bottom of Grout | | |
| Top of Well Riser | | |
| Bottom of Well Riser | | |
| Top of Well Screen | | |
| Bottom of Well Screen | | |
| Top of Peltonite Seal | | |
| Bottom of Peltonite Seal | | |
| Top of Gravel Pack | | |
| Bottom of Gravel Pack | | |
| Top of Natural Cave-In | | |
| Bottom of Natural Cave-In | | |
| Top of Groundwater | | |
| Total Depth of Borehole | | |



Top of Protective Casing NA
Top of Riser
Ground Surface
Top of Seal
Top of Gravel Pack
Top of Screen 4.55
Bottom of Screen 5.55
Bottom of Borehole

Comments: 5' screen

Geologist Signature

MWINSTAL.wk1

El Paso Natural Gas Company

A 2334

# CHAIN OF CUSTODY RECORD

| Project No. | Project Name |
|---|---|
| 16297 | EFFS GW PITS |

Samplers: (Signature) Cory Chavez

Date: 11/21/96

| | Date | Time | Comp. | GRAB | Sample Number | Type and No. of Sample Containers | Preservation Technique | Requested Analysis: BTEX | Requested Analysis: PAH | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| | 11/21/96 | - | | - | TRIP BLANK | 1 | HCL/4°C | X | | TRIP BLANK |
| 948026 | | 0900 | | ✓ | CMC263 | 2 | | X | | PH1 Lat 3B-39 LD146 |
| 948027 | | 0945 | | ✓ | CMC264 | 2 | | X | | PH2 |
| 948028 | | 1155 | | ✓ | CMC265 | 2 | | X | | PH3 |
| 948029 | | 1400 | | | CMC266 | 3 ~~CMC~~ | | X | X | PZ1 TRK 2B Drip X-1 LD153 |
| | | | | | | | | | | → STRONG Prod. odor. Potential Free Prod |
| 948030 | | 1425 | | | CMC267 | 2 | | X | | PZ2 (slight odor, reacted w/ HCL) (@ |
| 948031 | | 1435 | | | CMC268 | 2 | | X | | PZ3 (strong odor, reacted w/ HCL) |
| 948032 | ↓ | 1510 | | | CMC269 | 2 | ↓ | X | | PH1 |

CMC 11/21/96

| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Relinquished by: (Signature) | Date/Time | Received by: (Signature) |
|---|---|---|---|---|---|
| Cory Chavez | 11/21/96 1700 | | | | |
| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Relinquished by: (Signature) | Date/Time | Received by: (Signature) |
| Morgan Killion | 11-22-96 1355 | | | 11-22-96 1355 | Marla Arrente |
| Relinquished by: (Signature) | Date/Time | Received for Laboratory by: (Signature) | Date/Time | Remarks: | |
| | | | | | |

| Carrier Co: | Carrier Phone No. | Date Results Reported / by: (Signature) |
|---|---|---|
| Air Bill No.: | | |

san juan repro Form 71-55 A

# EL PASO FIELD SERVICES

## FIELD SERVICES LABORATORY
## ANALYTICAL REPORT
## PIT CLOSURE PROJECT

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | CMC266 | 948029 |
| MTR CODE \| SITE NAME: | LD153 | Trunk 2B Drip X-1 |
| SAMPLE DATE \| TIME (Hrs): | 11/21/96 | 1400 |
| PROJECT: | Geoprobe | |
| DATE OF BTEX EXT. \| ANAL.: | 11/29/96 | 11/29/96 |
| TYPE \| DESCRIPTION: | PZ1 | Water |

Field Remarks: STRONG Prod. Odor. Potential Free Product

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|---|---|---|---|---|---|---|
| | | | DF | Q | | |
| BENZENE | 12.4 | PPB | | | | |
| TOLUENE | <1 | PPB | | | | |
| ETHYL BENZENE | 68.5 | PPB | | | | |
| TOTAL XYLENES | 120 | PPB | | | | |
| TOTAL BTEX | 201 | PPB | | | | |

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 93.7 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: John Fowler Date: 12/4/96

# EL PASO FIELD SERVICES

## FIELD SERVICES LABORATORY
## ANALYTICAL REPORT
## PIT CLOSURE PROJECT

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | CMC267 | 948030 |
| MTR CODE \| SITE NAME: | LD153 | Trunk 2B Drip X-1 |
| SAMPLE DATE \| TIME (Hrs): | 11/21/96 | 1425 |
| PROJECT: | Geoprobe | |
| DATE OF BTEX EXT. \| ANAL.: | 11/29/96 | 11/29/96 |
| TYPE \| DESCRIPTION: | PZ2 | Water |

Field Remarks: Slight odor. REACTED with HCl

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|---|---|---|---|---|---|---|
| | | | DF | Q | | |
| BENZENE | <1 | PPB | | | | |
| TOLUENE | <1 | PPB | | | | |
| ETHYL BENZENE | <1 | PPB | | | | |
| TOTAL XYLENES | <3 | PPB | | | | |
| TOTAL BTEX | <6 | 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

Narrative:

Approved By: John Loftin Date: 12/4/96

# EL PASO FIELD SERVICES

## FIELD SERVICES LABORATORY
## ANALYTICAL REPORT
## PIT CLOSURE PROJECT

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | CMC268 | 948031 |
| MTR CODE \| SITE NAME: | LD153 | Trunk 2B Drip X-1 |
| SAMPLE DATE \| TIME (Hrs): | 11/21/96 | 1435 |
| PROJECT: | Geoprobe | |
| DATE OF BTEX EXT. \| ANAL.: | 11/29/96 | 11/29/96 |
| TYPE \| DESCRIPTION: | PZ3 | Water |

Field Remarks: Strong odor. Reacted with HCl.

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|---|---|---|---|---|---|---|
| | | | DF | Q | | |
| BENZENE | <1 | PPB | 2 | D | | |
| TOLUENE | <1 | PPB | 2 | D | | |
| ETHYL BENZENE | 235 | PPB | 2 | D | | |
| TOTAL XYLENES | 841 | PPB | 2 | D | | |
| TOTAL BTEX | 1100 | PPB | | | | |

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 92.0 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: John Laych Date: 12/4/96

# EL PASO FIELD SERVICES

## FIELD SERVICES LABORATORY
## ANALYTICAL REPORT
## PIT CLOSURE PROJECT

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | CMC269 | 948032 |
| MTR CODE \| SITE NAME: | LD153 | Trunk 2B Drip X-1 |
| SAMPLE DATE \| TIME (Hrs): | 11/21/96 | 1510 |
| PROJECT: | Geoprobe | |
| DATE OF BTEX EXT. \| ANAL.: | 11/29/96 | 11/29/96 |
| TYPE \| DESCRIPTION: | PH1 | Water |

Field Remarks: _____

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|---|---|---|---|---|---|---|
| | | | DF | Q | | |
| BENZENE | <1 | PPB | | | | |
| TOLUENE | <1 | PPB | | | | |
| ETHYL BENZENE | <1 | PPB | | | | |
| TOTAL XYLENES | <3 | PPB | | | | |
| TOTAL BTEX | <6 | PPB | | | | |

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 91.4 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: John Hall

Date: 12/4/96

# EL PASO FIELD SERVICES

## FIELD SERVICES LABORATORY
## ANALYTICAL REPORT
## PIT CLOSURE PROJECT

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | CMC270 | 948033 |
| MTR CODE \| SITE NAME: | LD153 | Trunk 2B Drip X-1 |
| SAMPLE DATE \| TIME (Hrs): | 11/22/96 | 900 |
| PROJECT: | Geoprobe | |
| DATE OF BTEX EXT. \| ANAL.: | 11/29/96 | 11/29/96 |
| TYPE \| DESCRIPTION: | PH2 | Water |

Field Remarks: _____

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|---|---|---|---|---|---|---|
| | | | DF | Q | | |
| BENZENE | <1 | PPB | | | | |
| TOLUENE | <1 | PPB | | | | |
| ETHYL BENZENE | 2.65 | PPB | | | | |
| TOTAL XYLENES | 5.10 | PPB | | | | |
| TOTAL BTEX | 7.75 | PPB | | | | |

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 92.0 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: John Parker Date: 12/3/96

948033.XLS,12/3/96

# EL PASO FIELD SERVICES

## FIELD SERVICES LABORATORY
## ANALYTICAL REPORT
## PIT CLOSURE PROJECT

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | CMC271 | 948034 |
| MTR CODE \| SITE NAME: | LD153 | Trunk 2B Drip X-1 |
| SAMPLE DATE \| TIME (Hrs): | 11/22/96 | 930 |
| PROJECT: | Geoprobe | |
| DATE OF BTEX EXT. \| ANAL.: | 11/29/96 | 11/29/96 |
| TYPE \| DESCRIPTION: | PH3 | Water |

Field Remarks: _____

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|---|---|---|---|---|---|---|
| | | | DF | Q | | |
| BENZENE | <1 | PPB | | | | |
| TOLUENE | <1 | PPB | | | | |
| ETHYL BENZENE | <1 | PPB | | | | |
| TOTAL XYLENES | <3 | PPB | | | | |
| TOTAL BTEX | <6 | PPB | | | | |

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 91.9 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John Laub Date: 12/3/96

# 1997 GROUNDWATER ANALYTICAL

# Chain of Custody Record

PHILIP ENVIRONMENTAL

4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

COC Serial No. C 3059

Project Name EPFS GW PITS

Project Number 17520 Phase . Task 6003 . 77

Samplers J. Long

Laboratory Name ENV

Location Farmington NM

| EPFS LAB ID | Sample Number (and depth) | Date | Time | Matrix | Total Number of Bottles | Type of Analysis and Bottle: BTEX | Comments |
|---|---|---|---|---|---|---|---|
| 970201 | JAL TRIPBLANK | 3-10-97 | 1115 | WATER | 1 | X | |
| 970202 | JAL 14046.01 | 3-10-97 | 1245 | WATER | 2 | X | ONE VOA TOO COLD Headspace present (Both Air) |
| 970203 | JAL 08506-01 | 3-10-97 | 1610 | WATER | 2 | X | ONE VOA TOO COLD Headspace Present |
| 970204 | JAL TRIPBLANK | 3-11-97 | 1000 | WATER | 1 | X | |
| 970205 | JAL-10153-01 | 3-11-97 | 1045 | WATER | 2 | X | |
| 970206 | JAL-95210.01 | 3-11-97 | 1325 | WATER | 2 | X | |
| 970207 | JAL 75220.01 | 3-11-97 | 1550 | WATER | 2 | X | |
| 970208 | JAL TRIPBLANK | 3-12-97 | 1150 | WATER | 1 | X | Air Bubble |
| 970209 | JAL 7167601 | 3-12-97 | 1155 | WATER | 2 | X | |
| 970210 | JAL TRIPBLANK | 3-13-97 | 1000 | WATER | 1 | X | |
| 970211 | JAL 7816.01 | 3-13-97 | 1010 | WATER | 2 | X | |

**Relinquished by:**

| Signature | Date | Time |
|---|---|---|
| | 3-13-97 | 1430 |
| | | |
| | | |

**Received By:**

| Signature | Date | Time |
|---|---|---|
| John Walden | 3/13/97 | 1435 |
| | | |
| | | |

**Samples Iced:** ☒ Yes ☐ No

**Preservatives (ONLY for Water Samples)**

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☒ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid ($HNO_3$)
- ☐ TPH (418.1) ..... Sulfuric acid ($H_2SO_4$)
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Carrier: Hand Delivered JS

Airbill No.

**Shipping and Lab Notes:**

Rec'd - Cool and IN-TACT JH

PF 176 4/95

# PHILIP ENVIRONMENTAL Water Sampling Data

Location No. MW01

Serial No. WSD-

Group List Number

Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other _____ Date 3-11-97

Project Name EPFS GW, PITS Project No. 17520

Project Manager Cort Chance Phase.Task No. 6003.77

Site Name TRUNK 2B and PX1 L0153

## Sampling Specifications

Requested Sampling Depth Interval (feet) TOP 3'

Requested Wait Following Development/Purging (hours) —

## Initial Measurements

Time Elapsed From Final Development/Purging (min ~~hours~~) 9

Initial Water Depth (feet) 9.04

Nonaqueous Liquids Present (Describe)

## Water Quality/Water Collection

DO = Dissolved Oxygen; Cond. = Conductivity

| Date | Time | Sampler Initials | Water Quality Readings: Temp. (°C) | pH | DO (mg/L) | Cond. (µmhos/cm) | Water Collection Data: Volume Removed (gallons) | Removal Rate (gal/min) | Pump Intake Depth (feet) | Bail | Final Water Depth (feet) | Notes (Explain in Comments Below) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| See well Development and Purging data sheet | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Container Type: G = Clear Glass; A = Amber Glass; P = Plastic; V = VOA Vial (Glass); O = Other (Specify)

Preservatives: H = HCl; N = $HNO_3$; S = $H_2SO_4$; A = NaOH; O = Other (Specify); — = None

## Sample Containers

| Analytical Parameter List | Container: Number | Type | Volume (mL) | Field Filtered: Yes | No | Preserved | Cooled During Collection: Yes | No | Comments |
|---|---|---|---|---|---|---|---|---|---|
| BTEX | 2 | G | 40 | | ☒ | H | ☒ | | SAL-L0153-01 T: 1045 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Filter Type _____ Chain-of-Custody Form Number C-3055

Comments _____

Signature James E. Ly Date 3-11-97 Reviewer _____ Date _____

Form A0202 Rev. 02/24/94

EL PASO FIELD SERVICES

5-21-97

# FIELD SERVICES LABORATORY
# ANALYTICAL REPORT
# PIT CLOSURE PROJECT

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | JAL LD153-01 | 970205 |
| MTR CODE \| SITE NAME: | LD153 | Trunk 2B Drip X-1 |
| SAMPLE DATE \| TIME (Hrs): | 3/10/97 | 1045 |
| PROJECT: | Phase II Drilling - Initial | |
| DATE OF BTEX EXT. \| ANAL.: | 3/14/97 | 3/14/97 |
| TYPE \| DESCRIPTION: | Monitor Well | Water |

Field Remarks: _____

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS DF | Q | | |
|---|---|---|---|---|---|---|
| BENZENE | 12.1 | PPB | | | | |
| TOLUENE | <1 | PPB | | | | |
| ETHYL BENZENE | 30.2 | PPB | | | | |
| TOTAL XYLENES | 27.1 | PPB | | | | |
| TOTAL BTEX | 69.4 | PPB | | | | |

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 99.0 for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: _____ Date: 4/5/97

970205,4/4/97

# PHILIP ENVIRONMENTAL Well Development and Purging Data

☒ Development ☐ Purging  Well Number MW1

Serial No. WDPD-  Page ____ of ____

Project Name EPFS GW PITS  Project Manager Cory Chenge  Project No. 17520

Client Company El Paso Field Services  Phase.Task No. 6003.27

Site Name TRUNK 23 DRIP #1. LUIS 3  Site Address ____

## Development Criteria

- ☒ 3 to (5) Casing Volumes of Water Removal
- ☒ Stabilization of Indicator Parameters
- ☐ Other ____

## Methods of Development

| Pump | Bailer |
|---|---|
| ☐ Centrifugal | ☒ Bottom Valve |
| ☐ Submorsible | ☐ Double Check Valve |
| ☐ Peristaltic | ☐ Stainless-steel Kemmerer |

☐ Other ____

## Water Volume Calculation

Initial Depth of Well (feet) 16.18

Initial Depth to Water (feet) 9.04

Height of Water Column in Well (feet) 7.14

Diameter (inches): Well 4 Gravel Pack ____

| Item | Water Volume in Well | | Gallons to be Removed |
|---|---|---|---|
| | Cubic Feet | Gallons | |
| Well Casing | | 4.6 | x5 |
| Gravel Pack | | | |
| Drilling Fluids | | | |
| Total | | | 23.3 |

## Instruments

Serial No. (if applicable)

- ☒ pH Meter — OYSTER
- ☐ DO Monitor
- ☒ Conductivity Meter
- ☒ Temperature Meter
- ☐ Other ____

## Water Disposal

Drumed + Dumped at KWB separator in Bloomfield

## Water Removal Data

| Date | Time | Development Method: Pump | Development Method: Bailer | Removal Rate (gal/min) | Intake Depth (feet) | Ending Water Depth (feet) | Water Volume Removed (gallons): Increment | Water Volume Removed (gallons): Cumulative | Product Volume Removed (gallons): Increment | Product Volume Removed (gallons): Cumulative | Temperature (°C) | pH | Conductivity (umhos/cm) | Dissolved Oxygen (mg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3-11-97 | 0920 | | X | | | | 5 | 5 | | | 10.9 | 6.36 | 231 | | GREY SILTY |
| | 0930 | | ) | | | | 5 | 10 | | | 10.9 | 6.73 | 262 | | " |
| | 0942 | | ) | | | | 5 | 15 | | | 11.1 | 6.88 | 284 | | " |
| | 0952 | | ) | | | | 5 | 20 | | | 11.6 | 6.93 | 269 | | GRAY SILTY BAILED DRY |
| | 1025 | | ) | | | | 5 | 25 | | | 11.5 | 7.08 | 320 | | GREY SILTY |
| 3-11-97 | 1036 | | X | | | | 5 | 30 | | | 11.7 | 7.09 | 321 | | GREY SILTY |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

*Circle the date and time that the development criteria are met.*

Comments ____

Developer's Signature(s) [signature]  Date 3-11-97  Reviewer ____  Date ____

Form A0101 Rev. 03/21/94

El Paso Natural Gas Company

A 2474

# CHAIN OF CUSTODY RECORD

| Project No. | Project Name | Type and No. of Sample Containers | Preservation Technique | Requested Analysis | | | Remarks |
|---|---|---|---|---|---|---|---|
| | HUERFANO PIPELINE | | | BTXE | GENERIC CHEMISTRY | RCRA METALS | |
| Samplers: (Signature) Dennis Bird | Date: 6-4-97 | | | | | | |

| MATRIX | Date | Time | Comp. | GRAB | Sample Number | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WATER | 6-4-97 | 1544 | | X | 970523 | G-1 | 4°C | X | | | | PIEZOMETER P2-2 MC LOI53 |
| WATER | 6-4-97 | 1119 | | X | 970524 | G-1 | 4°C | X | | | | PIEZOMETER P2-3 MC LOI53 |
| WATER | 6-4-97 | 1101 | | X | 970525 | G-1 pr2 | 4°C | X | X | X | | TRUNK 2B DRIP X-1 MC LOI53 |
| WATER | 6-4-97 | — | | X | — | G-1 | 4°C | X | | | | TRIP BLANK |

| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Relinquished by: (Signature) | Date/Time | Received by: (Signature) |
|---|---|---|---|---|---|
| Dennis Bird | 6-4-97 1645 | | | | |
| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Relinquished by: (Signature) | Date/Time | Received by: (Signature) |
| | | | | | |
| Relinquished by: (Signature) | Date/Time | Received for Laboratory by: (Signature) | Date/Time | Remarks: | |
| | | Marla Hoppe | 6/5/97 0748 | | |
| | | Carrier Phone No. | | Date Results Reported / by: (Signature) | |

san juan repro Form 71-55 A

EL PASO FIELD SERVICES

6-18-97

# FIELD SERVICES LABORATORY
# ANALYTICAL REPORT
# PIT CLOSURE PROJECT

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | N/A | 970525 |
| MTR CODE \| SITE NAME: | LD153 | Trunk 2B Drip X-1 MW-1 |
| SAMPLE DATE \| TIME (Hrs): | 6/4/97 | 1101 |
| PROJECT: | Sample 4 - 1st Quarter | |
| DATE OF BTEX EXT. \| ANAL.: | 6/6/97 | 6/6/97 |
| TYPE \| DESCRIPTION: | Monitor Well | Water |

Field Remarks: _____

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|---|---|---|---|---|---|---|
| | | | DF | Q | | |
| BENZENE | 9.82 | PPB | | | | |
| TOLUENE | <1 | PPB | | | | |
| ETHYL BENZENE | 10.8 | PPB | | | | |
| TOTAL XYLENES | <3 | PPB | | | | |
| TOTAL BTEX | 20.6 | PPB | | | | |

The Surrogate Recovery was at 92.1 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John Sabine Date: 6-16-97

970525,6/13/97

# EL PASO FIELD SERVICES

6-18-97

## Field Services Laboratory
## Analytical Report

## SAMPLE IDENTIFICATION

| | |
|---|---|
| EPFS LAB ID: | 970525 |
| DATE SAMPLED: | 06/04/97 |
| TIME SAMPLED (Hrs): | 1101 |
| SAMPLED BY: | N/A |
| MATRIX: | Water |
| METER CODE: | LD153 |
| SAMPLE SITE NAME: | Trunk 2B Drip X-1 |
| SAMPLE POINT: | MW-1 |

FIELD REMARKS: _____

## GENERAL CHEMISTRY WATER ANALYSIS RESULTS

| PARAMETER | RESULT | UNITS | DATE ANALYZED |
|---|---|---|---|
| Laboratory pH | 8.1 | Units | 06/09/97 |
| Alkalinity as $C0_3$ | 0.0 | PPM | 06/09/97 |
| Alkalinity as $HC0_3$ | 523 | PPM | 06/09/97 |
| Calcium as Ca | 223 | PPM | 06/09/97 |
| Magnesium as Mg | 15 | PPM | 06/09/97 |
| Total Hardness as $CaC0_3$ | 617 | PPM | 06/09/97 |
| Chloride as Cl | 52 | PPM | 06/06/97 |
| Sulfate as $S0_4$ | 2,080 | PPM | 06/06/97 |
| Fluoride as F | 2.1 | PPM | 06/10/97 |
| Nitrate as $N0_3$-N | <0.6 | PPM | 06/06/97 |
| Nitrite as $N0_2$-N | <0.6 | PPM | 06/06/97 |
| Ammonium as $NH_4^+$ | <0.6 | PPM | 06/09/97 |
| Phosphate as $PO_4$ | <0.6 | PPM | 06/06/97 |
| Potassium as K | 5 | PPM | 06/09/97 |
| Sodium as Na | 938 | PPM | 06/11/97 |
| Total Dissolved Solids | 3,600 | PPM | 06/09/97 |
| Conductivity | 4,460 | umhos/cm | 06/06/97 |
| Anion/Cation % | 0.2% | %, <5.0 Accepted | 06/13/97 |

Lab Remarks:

Reported By: _____ Approved By: _____ Date: 6/16/97

EL PASO FIELD SERVICES

7-21-97

# FIELD SERVICES LABORATORY
# ANALYTICAL REPORT

## SAMPLE IDENTIFICATION

| | |
|---|---|
| SAMPLE NUMBER: | 970525 |
| SAMPLE DATE: | 06/04/97 |
| SAMPLE TIME (Hrs): | 1101 |
| SAMPLED BY: | N/A |
| MATRIX: | Water |
| METER CODE: | LD153 |
| SAMPLE SITE NAME: | Trunk 2B Drip X-1 |
| SAMPLE POINT: | MW-1 |

REMARKS: _____

## RESULTS

| PARAMETER | TOTAL RESULT (mg/L) | N. M. WQCC LIMIT (mg/L) |
|---|---|---|
| ARSENIC | <.029 | 0.100 |
| BARIUM | 0.09 | 1.00 |
| CADMIUM | <0.0002 | 0.010 |
| CHROMIUM | 0.007 | 0.050 |
| LEAD | <.002 | 0.050 |
| MERCURY | <0.0002 | 0.002 |
| SELENIUM | <0.005 | 0.050 |
| SILVER | 0.0090 | 0.050 |

NOTE: The sample results have been corrected for volume adjustment associated with Method 3015.

**References:**


Method 3015, Microwave Assisted Acid Digestion of Aqueous Samples and Extracts, Test Methods for Evaluating Solid Waste, SW-846, Sept., 1994.

Method 7061A, Arsenic (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Method 7081, Barium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Method 7131, Cadmium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 7191, Chromium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 7421, Lead (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 245.5, Mercury (Automated Cold Vapor Technique), Methods for the Determination of Metals in Environmental Samples, EPA 600/4-91/010, USEPA, June, 1991.

Method 7741A, Selenium (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.

Method 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.


Reported By: mda Approved By: John Labbe Date: 7/7/97

EL PASO FIELD SERVICES

# QUALITY CONTROL REPORT

Sample ID: 970525
Date Reported: 07/16/97

## LABORATORY CONTROL SAMPLE

| Analyte | Found Result (mg/L) | Known Value (mg/L) | % Recovery |
|---|---|---|---|
| Arsenic | 0.031 | 0.032 | 97% |
| Barium | 0.062 | 0.065 | 96% |
| Cadmium | 0.0025 | 0.0024 | 104% |
| Chromium | 0.0049 | 0.0048 | 103% |
| Lead | 0.033 | 0.030 | 111% |
| Mercury | 0.0043 | 0.0046 | 93% |
| Selenium | 0.038 | 0.041 | 94% |
| Silver | 0.0051 | 0.0043 | 118% |

## DUPLICATE ANALYSIS (mg/L)

| Analyte | Original Sample Result | Duplicate Sample Result | % RPD |
|---|---|---|---|
| Arsenic | ND | ND | NA |
| Barium | ND | ND | NA |
| Cadmium | ND | ND | NA |
| Chromium | 0.0052 | 0.0048 | 8.3% |
| Lead | ND | ND | NA |
| Mercury | ND | ND | NA |
| Selenium | ND | ND | NA |
| Silver | 0.0024 | 0.0023 | 4.3% |

## SPIKE ANALYSIS (mg/L)

| Analyte | Original Sample Result | Spike Sample Result | Spike Added | Recovery Percent |
|---|---|---|---|---|
| Arsenic | 0.012 | 0.107 | 0.100 | 95.1% |
| Barium | 0.018 | 0.960 | 1.00 | 94.2% |
| Cadmium | ND | 0.0091 | 0.010 | 91.2% |
| Chromium | 0.005 | 0.054 | 0.050 | 96.9% |
| Lead | ND | 0.039 | 0.050 | 77.3% |
| Mercury | ND | 0.0017 | 0.0020 | 84.5% |
| Selenium | ND | 0.047 | 0.050 | 93.2% |
| Silver | 0.0020 | 0.0509 | 0.050 | 97.8% |

## METHOD BLANK

| Analyte | Found Result (mg/L) | Detection Level (mg/L) |
|---|---|---|
| Arsenic | ND | 0.027 |
| Barium | ND | 0.019 |
| Cadmium | ND | 0.0002 |
| Chromium | ND | 0.004 |
| Lead | ND | 0.002 |
| Mercury | ND | 0.0002 |
| Selenium | ND | 0.011 |
| Silver | ND | 0.0005 |

ND: Not Detected at stated detection level. NA: Not Applicable.

Reported By: mh Approved By: John Laudon Date: 7/17/97

EPFS
EL PASO FIELD SERVICES

# Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name TRUNK 2B DRIP X-1

Meter Code LO153

## Development Criteria

☒ 3 to 5 Casing Volumes of Water Removed
☐ Stabilization of Indicator Parameters
☐ Other_____

## Water Volume Calculation

Initial Depth of Well (feet) 15.81
Initial Depth to Water (feet) 9.11
Height of Water Column in Well (feet) 6.70
Diameter (inches): Well 4 Gravel Pack_____

| Item | Water Volume in Well | | Gallons to be Removed |
|---|---|---|---|
| | Cubic Feet | Gallons | |
| Well Casing | | 44 | 13.3 |
| Gravel Pack | | | |
| Drilling Fluids | | | |
| Total | | | |

## Instruments

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

## Methods of Development

| Pump | Bailer |
|---|---|
| ☐ Centrifugal | ☒ Bottom Valve |
| ☐ Submersible | ☐ Double Check Valve |
| ☐ Peristaltic | ☐ Stainless-steel Kemmerer |

☐ Other_____

## Water Disposal

KOTZ SEPARATOR

## Water Removal Data

| Date | Time | Development Method | | Removal Rate | Intake Depth | Ending Water Depth | Water Volume Removed (gal) | | Product Volume Removed ( gallons) | | Temperature °C | pH | Conductivity µmho/cm | Dissolved Oxygen mg/L | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Pump | Bailer | (gal/min) | (feet) | (feet) | Increment | Cumulativ | Increment | Cumulative | | | | | |
| 6-4-97 | 1013 | | | | | | | | | | 18.9 | 6.61 | 4710 | | |
| 6-4-97 | 1019 | | | | | | 5.0 | 5.0 | | | 17.0 | 6.96 | 4580 | | |
| 6-4-97 | 1029 | | | | | | 5.0 | 10.0 | | | 17.3 | 7.18 | 4200 | | |
| 6-4-97 | 1049 | | | | | | 5.0 | 15.0 | | | 18.5 | 7.30 | 4280 | 2.5 | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Comments_____

Developer's Signature Dennis Bird Date 6-4-97 Reviewer_____ Date_____

SAMPLE 4 2ND QTR

El Paso Natural Gas Company

A 2090

## CHAIN OF CUSTODY RECORD

| Project No. | Project Name | Type and No. of Sample Containers | Preservation Technique | Requested Analysis | | | Remarks |
|---|---|---|---|---|---|---|---|
| | MC #LD153 | | | BTXE | | | |
| Samplers: (Signature) Dennis Bird | Date: 9-22-97 | | | | | | |

| MATRIX | Date | Time | Comp. | GRAB | Sample Number | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WATER | 9-22-97 | 1332 | | X | 971043 | G-1 | 4°C | X | | | | TRUNK 2B DRIP X-1 MW-1 |

| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Relinquished by: (Signature) | Date/Time | Received by: (Signature) |
|---|---|---|---|---|---|
| Dennis Bird | 9-22-97 1548 | | | | |
| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Relinquished by: (Signature) | Date/Time | Received by: (Signature) |
| | | | | | |
| Relinquished by: (Signature) | Date/Time | Received for Laboratory by: (Signature) | Date/Time | Remarks: | |
| | | Marlon Hopper | 9/23/97 0750 | | |

Carrier Co:

Air Bill No.:

Carrier Phone No.

Date Results Reported / by: (Signature)

EL PASO FIELD SERVICES

# FIELD SERVICES LABORATORY
# ANALYTICAL REPORT
# PIT CLOSURE PROJECT

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | N/A | 971043 |
| MTR CODE \| SITE NAME: | LD153 | Trunk 2B Drip X-1 |
| SAMPLE DATE \| TIME (Hrs): | 9/22/97 | 1332 |
| PROJECT: | Sample 4 2nd Quarter | |
| DATE OF BTEX EXT. \| ANAL.: | 9/24/97 | 9/24/97 |
| TYPE \| DESCRIPTION: | MW-1 | Water |

Field Remarks: _____

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS DF | Q | | |
|---|---|---|---|---|---|---|
| BENZENE | 7.55 | PPB | | | | |
| TOLUENE | <1 | PPB | | | | |
| ETHYL BENZENE | 8.80 | PPB | | | | |
| TOTAL XYLENES | 4.14 | PPB | | | | |
| TOTAL BTEX | 20 | PPB | | | | |

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 99.2 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: _____ Date: 9-29-97

971042BTEXMW,9/25/97

EPFS
EL PASO FIELD SERVICES

# Well Development and Purging Data

[ ] Development
[X] Purging

Well Number MW-1

Site Name TRUNK 2B DRIP X-1

Meter Code L0153

## Development Criteria

- [X] 3 to 5 Casing Volumes of Water Removed
- [ ] Stabilization of Indicator Parameters
- [ ] Other

## Methods of Development

| Pump | | Bailer | |
|---|---|---|---|
| [ ] | Centrifugal | [X] | Bottom Valve |
| [ ] | Submersible | [ ] | Double Check Valve |
| [ ] | Peristaltic | [ ] | Stainless steel Kemmerer |

[ ] Other

## Water Volume Calculation

Initial Depth of Well (feet) 15.81
Initial Depth to Water (feet) 8.96
Height of Water Column in Well (feet) 6.85
Diameter (inches) Well 4 Gravel Pack

| Item | Water Volume in Well | | Gallons to be Removed |
|---|---|---|---|
| | Cubic Feet | Gallons | |
| Well Casing | | 45 | 13.6 |
| Gravel Pack | | | |
| Drilling Fluids | | | |
| Total | | | |

## Instruments

- [X] pH Meter
- [ ] DO Monitor
- [X] Conductivity Meter
- [X] Temperature Meter
- [X] Other D.O. CHEMETS KIT

## Water Disposal

KUTZ SEPARATOR

## Water Removal Data

| Date | Time | Development Method | | Removal Rate | Intake Depth | Ending Water Depth | Water Volume Removed (gal) | | Product Volume Removed (gallons) | | Temperature °C | pH | Conductivity µmho/cm | Dissolved Oxygen mg/L | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Pump | Bailer | (gal/min) | (feet) | (feet) | Increment | Cumulative | Increment | Cumulative | | | | | |
| 9-22-97 | 1246 | | | | | | | | | | 21.3 | 6.97 | 3670 | | |
| 9-22-97 | 1252 | | | | | | 5.0 | 5.0 | | | 19.7 | 7.09 | 3690 | | |
| 9-22-97 | 1304 | | | | | | 5.0 | 10.0 | | | 19.7 | 7.24 | 3560 | | |
| 9-22-97 | 1321 | | | | | | 5.0 | 15.0 | | | 19.3 | 7.35 | 3480 | 1.5 | |
| | | | | | | | | | | | | | | | |
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Comments

Developer's Signature Dennis Bird Date 9-22-97 Reviewer John Zelli Date 9/29/97

SAMPLE 4 3RD QTR

El Paso Natural Gas Company

A 2168

## CHAIN OF CUSTODY RECORD

| Project No. | Project Name | Type and No. of Sample Containers | Preservation Technique | Requested Analysis | | | Remarks |
|---|---|---|---|---|---|---|---|
| | MC #LD153 | | | BTXE | | | |
| Samplers: (Signature) Dennis Bird | Date: 12-12-97 | | | | | | |

| MATRIX | Date | Time | Comp. | GRAB | Sample Number | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WATER | 12-12-97 | 1504 | | X | 971298 | G2 | 4°C | X | | | | TRUNK 2B DRIP X-1 MW-1 |

| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Relinquished by: (Signature) | Date/Time | Received by: (Signature) |
|---|---|---|---|---|---|
| Dennis Bird | 12-12-97 1615 | | | | |
| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Relinquished by: (Signature) | Date/Time | Received by: (Signature) |
| | | | | | |
| Relinquished by: (Signature) | Date/Time | Received for Laboratory by: (Signature) | 12/ Date/Time | Remarks: | |
| | | Marlon Hooper | 15/97 0730 | | |

Carrier Co: | Carrier Phone No. | Date Results Reported / by: (Signature)

Air Bill No.:

# EL PASO FIELD SERVICES

## FIELD SERVICES LABORATORY
## ANALYTICAL REPORT
## PIT CLOSURE PROJECT

## SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|---|---|---|
| SAMPLE NUMBER: | N/A | 971298 |
| MTR CODE \| SITE NAME: | LD153 | Trunk 2B Drip X-1 |
| SAMPLE DATE \| TIME (Hrs): | 12/12/97 | 1504 |
| PROJECT: | Sample 4 3rd Quarter | |
| DATE OF BTEX EXT. \| ANAL.: | 12/16/97 | 12/16/97 |
| TYPE \| DESCRIPTION: | MW-1 | Water |

**Field Remarks:** _____

## RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|---|---|---|---|---|---|---|
| | | | DF | Q | | |
| BENZENE | 7.09 | PPB | | | | |
| TOLUENE | <1 | PPB | | | | |
| ETHYL BENZENE | 6.62 | PPB | | | | |
| TOTAL XYLENES | 2.22 | PPB | | | | |
| TOTAL BTEX | 16 | PPB | | | | |

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 103.5 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

**Narrative:**

Approved By: _____ Date: 1/2/98

EL PASO FIELD SERVICES

# Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name TRUNK 28 DRIP K-1

Meter Code LD153

## Development Criteria

☒ 3 to 5 Casing Volumes of Water Removel
☐ Stabilization of Indicator Parameters
☐ Other

## Water Volume Calculation

Initial Depth of Well (feet) 15.81
Initial Depth to Water (feet) 8.77
Height of Water Column in Well (feet) 7.04
Diameter (inches): Well 4 Gravel Pack

| Item | Water Volume in Well | | Gallons to be Removed |
|---|---|---|---|
| | Cubic Feet | Gallons | |
| Well Casing | | 4.7 | 14.0 |
| Gravel Pack | | | |
| Drilling Fluids | | | |
| Total | | | |

## Instruments

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

## Methods of Development

| Pump | | Bailer | |
|---|---|---|---|
| ☐ | Centrifugal | ☒ | Bottom Valve |
| ☐ | Submersible | ☐ | Double Check Valve |
| ☐ | Peristaltic | ☐ | Stainless-steel Kemmerer |

☐ Other

## Water Disposal

KOTZ SEPARATOR

## Water Removal Data

| Date | Time | Development Method | | Removal Rate | Intake Depth | Ending Water Depth | Water Volume Removed (gal) | | Product Volume Removed (gallons) | | Temperature °C | pH | Conductivity µmho/cm | Dissolved Oxygen mg/L | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Pump | Bailer | (gal/min) | (feet) | (feet) | Increment | Cumulative | Increment | Cumulative | | | | | |
| 12-12-97 | 1424 | | | | | | | | | | 12.3 | 6.65 | 5080 | | |
| 12-12-97 | 1430 | | | | | | 5.0 | 5.0 | | | 11.6 | 6.56 | 4890 | | |
| 12-12-97 | 1439 | | | | | | 5.0 | 10.0 | | | 11.0 | 7.09 | 4520 | | |
| 12-12-97 | 1455 | | | | | | 5.0 | 15.0 | | | 10.7 | 7.18 | 4400 | 2.5 | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | |

Comments THE WATER HAD A LIGHT HYDROGEN SULFIDE SMELL.

Developer's Signature Dennis Bird Date 12-12-97 Reviewer John Loth Date 1/2/98