

**3R - 220**

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# **REPORTS**

**DATE:**

**July, 1997**

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November 5, 1997

**Certified Mail**

**Return Receipt Nos. P 532 649 088  
P 532 649 089**

**RECEIVED**

**NOV 11 1997**

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

Environment Bureau  
Oil Conservation Division

**Re: Request for Closure of Eleven Groundwater Locations**

Dear Mr. Olson:

I have enclosed closure packages for eleven groundwater locations that were identified during our pit closure project. El Paso Field Services (EPFS) hereby requests your review and approval for closure of these sites.

I have included a summary listing of the eleven locations. If you have any questions regarding this information, please call me at 505/599-2141.

Sincerely,

A handwritten signature in cursive script that reads 'Sandra D. Miller'.

Sandra D. Miller  
Environmental Manager

xc: Mr. Bill Liesse, BLM w/o enclosures  
Mr. Denny Foust, NMOCD - Aztec w/enclosures

Groundwater Locations  
Request for Closure, 11/97

| Meter/Line # | Location/Line Name        | LTR | Sec | TN | RG | Land Type   |
|--------------|---------------------------|-----|-----|----|----|-------------|
| 74943        | NM COM G1                 | P   | 36  | 30 | 10 | 1 - State   |
| LD102        | 2C-22 #1 LINE DRIP        | N   | 35  | 24 | 06 | 2 - Federal |
| 94180        | SALAZAR G 34-1            | K   | 34  | 25 | 06 | 2 - Federal |
| 89230        | JOHNSTON FEDERAL #3A      | I   | 12  | 30 | 09 | 2 - Federal |
| 73079        | Mae Gail Com #1           | E   | 24  | 29 | 11 | 4 - Fee     |
| 70862        | MCGRATH #1                | F   | 07  | 30 | 11 | 4 - Fee     |
| 93156        | MARY ACKROYD #1           | J   | 18  | 30 | 11 | 4 - Fee     |
| 93828        | JACQUEZ #3                | E   | 25  | 30 | 09 | 4 - Fee     |
| 94984        | ANDERSON GAS COM A#1 PC   | C   | 28  | 29 | 10 | 4 - Fee     |
| 93296        | GALLEGOS CANYON UNIT 188E | B   | 30  | 29 | 12 | 4 - Fee     |
| 93462        | GALLEGOS CANYON UT 145 E  | D   | 26  | 29 | 12 | 4 - Fee     |

} Filed  
individually  
in  
case files

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

**Pit Closure Report**

**July 1997**

**RECEIVED**

NOV 11 1997

Environmental Bureau  
Oil Conservation Division

**Prepared For**

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

**Project 17520**

**PHILIP**  
**ENVIRONMENTAL**

## Closure Checklist

### Meter Code

70862

Summary  
Site Map  
Site Assessment Sheet

☒  
☒  
☒

### Phase I Excavation

Y

closure form  
soil analytical results  
soil chain-of-custody  
groundwater analytical results  
groundwater chain-of-custody

☒  
☒  
☒  
☐  
☐

### Phase II Soil Boring

Y

boring log  
soil analytical results  
soil chain-of-custody  
well installation form  
development form  
groundwater analytical  
groundwater chain-of-custody

☒  
☐  
☐  
☐  
☐  
☐  
☐

### Phase III Excavation

Y

closure form  
soil analytical results  
soil chain-of-custody  
groundwater analytical  
groundwater chain of-custody

☒  
☒  
☒  
☐  
☐

### Phase IV Soil Boring

Y

boring log  
soil analytical results  
soil chain-of-custody  
well installation form  
development form  
groundwater analytical  
groundwater chain-of-custody

☒  
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If item boxes are not checked they are not applicable



Environmental Services Group  
Southern Region

**McGrath #1**  
**Meter Code 70862**

Pit was excavated to 6 feet beneath ground surface. The headspace soil reading from the excavation bottom was 197 parts per million. Soil analytical were as follows; benzene - <2.32 mg/kg, total BTEX - 146 mg/kg, TPH - 1970 mg/kg.

One soil boring was completed and no monitoring well was installed. No soil sample was collected due to encountering shallow groundwater.

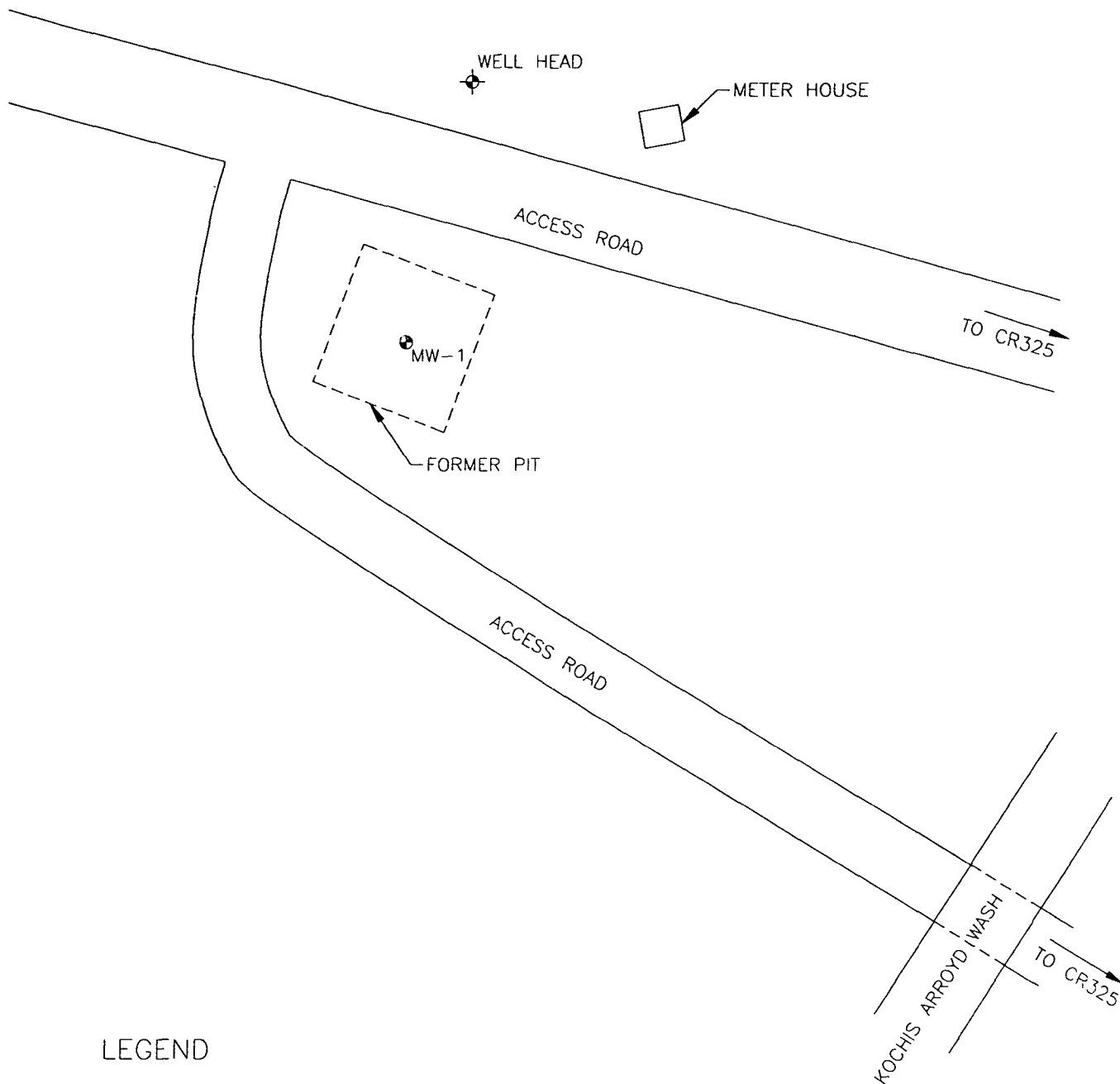
The pit was re-excavated to 16 feet beneath ground surface and groundwater was not encountered. The headspace soil reading from the excavation bottom was 4 parts per million. Soil analytical were as follows; benzene - <0.5 mg/kg, total BTEX - <3 mg/kg, TPH - <10 mg/kg.

A groundwater monitoring well was installed and groundwater samples were collected. Groundwater analytical results were as follows: benzene - <1 ppb, toluene - <1 ppb, ethyl benzene - <1 ppb, total xylenes - <3 ppb.

This site is ready for closure based on the following:

- Re-excavation soil samples were below standards on benzene and total BTEX, and TPH.
- Groundwater samples were below standards.





# LEGEND

● MW-1 APPROXIMATE WELL LOCATION AND NUMBER

NOT TO SCALE



**PHILIP**  
ENVIRONMENTAL

TITLE:  
McGRATH #1-70862

|         |       |
|---------|-------|
| DWN:    | DES.: |
| TMM     | CC    |
| CHKD:   | APPD: |
| CC      |       |
| DATE:   | REV.: |
| 7/11/97 | 0     |

PROJECT NO.: 17520  
EPFS GW PITS

FIGURE 1

COL. 17520G

# FIELD PIT SITE ASSESSMENT FORM

Meter: 70862 Location: McGRATH #1  
 Operator #: \_\_\_\_\_ Operator Name: \_\_\_\_\_ P/L District: KUTZ  
 Coordinates: Letter: F Section 7 Township: 30 Range: 11  
 Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Pit Type: Dehydrator \_\_\_\_\_ Location Drip: X Line Drip: \_\_\_\_\_ Other: \_\_\_\_\_  
 Site Assessment Date: 12-12-94 Area: 02 Run: 63

|             |            |        |                                         |
|-------------|------------|--------|-----------------------------------------|
| NMOCD Zone: | Land Type: | BLM    | <input type="checkbox"/> (1)            |
| (From NMOCD |            | State  | <input type="checkbox"/> (2)            |
| Maps)       | Inside     | Fee    | <input checked="" type="checkbox"/> (3) |
|             | Outside    | Indian | _____                                   |

## Depth to Groundwater

Less Than 50 Feet (20 points) ☒ (1)  
 50 Ft to 99 Ft (10 points) ☐ (2)  
 Greater Than 100 Ft (0 points) ☐ (3)

## Wellhead Protection Area :

Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? ☐ (1) YES (20 points) ☒ (2) NO (0 points)

## Horizontal Distance to Surface Water Body

Less Than 200 Ft (20 points) ☐ (1)  
 200 Ft to 1000 Ft (10 points) ☒ (2)  
 Greater Than 1000 Ft (0 points) ☐ (3)

Name of Surface Water Body KACHIS ARROYO

(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)

Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)  
☐ (2) > 100'

TOTAL HAZARD RANKING SCORE: 30 POINTS

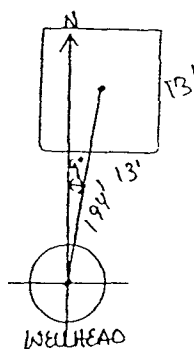
Remarks : REDLINE & TOPO SHOW LOCATION INSIDE V.Z. ONE PIT ON LOCATION -  
BELONGS TO EPNG. WILL CLOSE PIT.



70862

### ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 9° Footage from Wellhead 194'  
b) Length : 13' Width : 13' Depth : 2'



Remarks :

PHOTOS- 1357

Completed By:

Robert J. Harrison

12-12-94

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## **Phase I Excavation**

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# FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 70862 Location: Mc GRATH #1

Coordinates: Letter: E Section 1 Township: 30 Range: 11

Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

Date Started : 12-22-94 Run: 02 63

OBSERVATIONS

Sample Number(s): KP 370

Sample Depth: 370 6' Feet

Final PID Reading 197 PID Reading Depth 6' Feet

Yes No

Groundwater Encountered ☐ ☒ Approximate Depth \_\_\_\_\_ Feet

CLOSURE

Remediation Method :

Excavation ☒ Approx. Cubic Yards 30

Onsite Bioremediation ☐

Backfill Pit Without Excavation ☐

Soil Disposition:

Envirotech ☐ ☒ Tierra

Other Facility ☐ Name: \_\_\_\_\_

Pit Closure Date: 12-22-94 Pit Closed By: B.ET

REMARKS

Remarks : line markers started Remediating TO 12'  
AT 6' Hit SAND STONE. Closed Pit.

11 P. 1.11

**FIELD SERVICES LABORATORY  
ANALYTICAL REPORT  
PIT CLOSURE PROJECT****SAMPLE IDENTIFICATION**

|                            | Field ID                               | Lab ID         |
|----------------------------|----------------------------------------|----------------|
| SAMPLE NUMBER:             | KP370                                  | 946546         |
| MTR CODE   SITE NAME:      | 70862                                  | McGrath #1     |
| SAMPLE DATE   TIME (Hrs):  | 12/22/94                               | 1350           |
| PROJECT:                   | Phase I <del>Drilling</del> EXCAVATION |                |
| DATE OF TPH EXT.   ANAL.:  | 12/28/94                               | 12/28/94       |
| DATE OF BTEX EXT.   ANAL.: | 12/28/94                               | 1/4/95         |
| TYPE   DESCRIPTION:        | VC                                     | Gray sand/clay |

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

**RESULTS**

| PARAMETER      | RESULT | UNITS | QUALIFIERS |   |      |       |
|----------------|--------|-------|------------|---|------|-------|
|                |        |       | DF         | Q | M(g) | V(ml) |
| BENZENE        | 2.32   | MG/KG |            |   |      |       |
| TOLUENE        | 40.2   | MG/KG |            |   |      |       |
| ETHYL BENZENE  | 10.4   | MG/KG |            |   |      |       |
| TOTAL XYLENES  | 93.3   | MG/KG |            |   |      |       |
| TOTAL BTEX     | 146    | MG/KG |            |   |      |       |
| TPH (418.1)    | 1,970  | MG/KG |            |   | 1.94 | 28    |
| HEADSPACE PID  | 197    | PPM   |            |   |      |       |
| PERCENT SOLIDS | 91.6   | %     |            |   |      |       |

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 163 for this sample All QA/QC was acceptable.

Narrative:

BFB co-dated

DF = Dilution Factor Used

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

INGVZPIT.XLS

Date: 3-20-95



## Page \_\_\_\_\_ of \_\_\_\_\_

**BILL NO.:**

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## **Phase II Soil Boring**

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# CORD OF SUBSURFACE EXPLORATION

Tip Environmental Services Corp.

Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole #

BH-1

Well #

Page

of

Project Name

EPNG Pits

Project Number

14509

Phase

6016000

Project Location

McGrath #1, 70862

Elevation

Borehole Location

T30, R11, S. 7, E

GWL Depth

Logged By

S. Kelly

Drilled By

M. Donohue

Date/Time Started

10/6/95, 1040

Date/Time Completed

Well Logged By

S. Kelly

Personnel On-Site

J. Long, J. Johnson

Contractors On-Site

Client Personnel On-Site

Drilling Method

4 1/4" ID HSA

Air Monitoring Method

CGI, PID

| Depth<br>(feet) | Sample<br>Number | Sample<br>Interval | Sample<br>Type &<br>Recovery<br>(inches) | Sample Description<br>Classification System: USCS                                                                                                                                | USCS<br>Symbol | Depth<br>Lithology<br>Change<br>(feet) | Air Monitoring<br>Units: NDU |    |   | Drilling Conditions<br>& Blow Counts |
|-----------------|------------------|--------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------|------------------------------|----|---|--------------------------------------|
| 0               |                  |                    |                                          | Backfill<br>to 6'                                                                                                                                                                |                |                                        | BZ                           | BH | S |                                      |
| 5               |                  |                    |                                          | 1K 10/6/95                                                                                                                                                                       |                |                                        |                              |    |   |                                      |
| 10              |                  |                    |                                          | Hit water at H. 7' 17.0'<br>No sample taken due<br>to shallow ground-water.<br>No split spoon driven<br>due to shallow ground-<br>water.<br>Water rose to 11.7'<br>after 10 min. |                |                                        |                              |    |   |                                      |
| 15              |                  |                    |                                          |                                                                                                                                                                                  |                |                                        |                              |    |   |                                      |
| 20              |                  |                    |                                          | TOB-18.0'                                                                                                                                                                        |                |                                        |                              |    |   |                                      |
| 25              |                  |                    |                                          |                                                                                                                                                                                  |                |                                        |                              |    |   |                                      |
| 30              |                  |                    |                                          |                                                                                                                                                                                  |                |                                        |                              |    |   |                                      |
| 35              |                  |                    |                                          |                                                                                                                                                                                  |                |                                        |                              |    |   |                                      |
| 40              |                  |                    |                                          |                                                                                                                                                                                  |                |                                        |                              |    |   |                                      |

Comments:

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## **Phase III Excavation**

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# FIELD PIT REMEDIATION/CLOSURE FORM/PHASE II

Meter: 70862 Location: Mc Grath #1

Coordinates: Letter: E Section 07 Township: 30 Range: 11

Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

Date Started : 11-28-95 Area: 02 Run: 63

Sample Number(s): AP90 AP91 AP92

Sample Depth: 16 Feet

Final PID Reading 04 PID Reading Depth 16 Feet  
Yes No

Groundwater Encountered ☐ (1) ☒ (2) Approximate Depth \_\_\_\_\_ Feet

Pit Dimensions: Length 35 Width 22 Depth 16

## Remediation Method :

Excavation ☒ (1) Approx. Cubic Yards 530 LT 11/30/95

Onsite Bioremediation ☐ (2)

Backfill Pit Without Excavation ☐ (3)

Overburden Cubic Yards 13 LT 11/30/95

## Soil Disposition:

Envirotech ☐ (1) ☒ (3) Tierra

Other Facility ☐ (2) Name: \_\_\_\_\_

Pit Closure Date: 11-28-95 Pit Closed By: Philip Env

Phase III

Remarks : Dug pit to 16 Ft through sand stone, did not encounter  
water Took PID readings N wall 06 ppm S wall 17 ppm E wall 05 ppm  
W wall 04 ppm Bot 01 ppm Comp 04 ppm No Fertilizer used

11/30/95

**FIELD SERVICES LABORATORY  
ANALYTICAL REPORT  
PIT CLOSURE PROJECT****SAMPLE IDENTIFICATION**

|                            |                      |                 |
|----------------------------|----------------------|-----------------|
|                            | Field ID             | Lab ID          |
| SAMPLE NUMBER:             | JP90                 | 947810          |
| MTR CODE   SITE NAME:      | 70862                | McGrath #1      |
| SAMPLE DATE   TIME (Hrs):  | 11/28/95             | 1130            |
| PROJECT:                   | Phase III Excavation |                 |
| DATE OF TPH EXT.   ANAL.:  | 11/30/95             | 11/30/95        |
| DATE OF BTEX EXT.   ANAL.: | 11/29/95             | 11/29/95        |
| TYPE   DESCRIPTION:        | VC                   | Brown fine sand |

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

**RESULTS**

| PARAMETER      | RESULT | UNITS | QUALIFIERS |   |      |       |
|----------------|--------|-------|------------|---|------|-------|
|                |        |       | DF         | Q | M(g) | V(ml) |
| BENZENE        | <0.5   | MG/KG |            |   |      |       |
| TOLUENE        | <0.5   | MG/KG |            |   |      |       |
| ETHYL BENZENE  | <0.5   | MG/KG |            |   |      |       |
| TOTAL XYLENES  | <1.5   | MG/KG |            |   |      |       |
| TOTAL BTEX     | <3     | MG/KG |            |   |      |       |
| TPH (418.1)    | <10    | MG/KG |            |   | 1.99 | 28    |
| HEADSPACE PID  | 4      | PPM   |            |   |      |       |
| PERCENT SOLIDS | 89.4   | %     |            |   |      |       |

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 96.0 for this sample All QA/QC was acceptable.  
Narrative: \_\_\_\_\_

DF = Dilution Factor Used

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

INGVZPIT.XLS

Date: 12/4/95

| PROJECT NUMBER                         |          | PROJECT NAME                |        | CONTACT LABORATORY P. O. NUMBER |                  |
|----------------------------------------|----------|-----------------------------|--------|---------------------------------|------------------|
| 2417810                                |          | Pit Closure Project # 24324 |        |                                 |                  |
| SAMPLERS: (Signature)                  |          | DATE:                       |        |                                 |                  |
| James L. Lauer                         |          |                             |        |                                 |                  |
| LABID                                  | DATE     | TIME                        | MATRIX | SAMPLE NUMBER                   | REMARKS          |
| 2417810                                | 11-28-95 | 11:30                       | Soil   | 4P90                            | McGrath #1 70862 |
| 2417811                                | 11-28-95 | 11:30                       | Soil   | 4P91                            |                  |
| 2417812                                | 11-28-95 | 11:35                       | Soil   | 4P92                            |                  |
| [Large diagonal line across the table] |          |                             |        |                                 |                  |

| REQUESTED ANALYSIS |    | TOTAL NUMBERS OF CONTAINERS |    | SAMPLE TYPE |    | TPH EPA 418.1 |   | BTX EPA 8020 |   | PID HS |    | SEQ # |  |
|--------------------|----|-----------------------------|----|-------------|----|---------------|---|--------------|---|--------|----|-------|--|
| 1                  | VC | 1                           | VC | 1           | VC | X             | X | X            | X | 4      | 48 |       |  |
| 1                  | B  | 1                           | B  | 1           | B  | X             | X | X            | X | 1      |    |       |  |
| 1                  | B  | 1                           | B  | 1           | B  | X             | X | X            | X | NW     |    |       |  |

| RELINQUISHED BY: (Signature) |           | RECEIVED BY: (Signature) |           | DATE/TIME |           |
|------------------------------|-----------|--------------------------|-----------|-----------|-----------|
| James L. Lauer               | 11-28-95  | V. L. Stueck             | 11/29/95  | 11:10     | 11:10     |
| RELINQUISHED BY: (Signature) | DATE/TIME | RECEIVED BY: (Signature) | DATE/TIME | DATE/TIME | DATE/TIME |
|                              |           |                          |           |           |           |

| REQUESTED TURNAROUND TIME:       |                               | SAMPLE RECEIPT REMARKS |  | RESULTS & INVOICES TO:       |  |
|----------------------------------|-------------------------------|------------------------|--|------------------------------|--|
| <input type="checkbox"/> ROUTINE | <input type="checkbox"/> RUSH |                        |  | FIELD SERVICES LABORATORY    |  |
|                                  |                               |                        |  | EL PASO NATURAL GAS COMPANY  |  |
|                                  |                               |                        |  | P. O. BOX 4990               |  |
|                                  |                               |                        |  | FARMINGTON, NEW MEXICO 87499 |  |
| CARRIER CO.                      |                               | CHARGE CODE            |  | FAX: 505-599-2261            |  |
|                                  |                               |                        |  | 505-599-2144                 |  |

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## **Phase IV Soil Boring**

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# RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL SERVICES INC.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

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

Project Name EPFS GW PITS  
Project Number 17520 Phase 600277  
Project Location MCGRATH #1-70862

Elevation \_\_\_\_\_  
Borehole Location T-D R 11-S 7-Ltr F  
GWL Depth 17' BGS  
Logged By D CESARK  
Drilled By K PADILLA  
Date/Time Started 3/26/97 - 1215  
Date/Time Completed " - 1430

Well Logged By D CESARK  
Personnel On-Site DICKERSON, C MAIZ  
Contractors On-Site \_\_\_\_\_  
Client Personnel On-Site \_\_\_\_\_

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

| Depth<br>(Feet) | Sample<br>Number | Sample<br>Interval | Sample<br>Type &<br>Recovery<br>(inches) | Sample Description<br>Classification System: USCS | USCS<br>Symbol | Depth<br>Lithology<br>Change<br>(feet) | Air Monitoring<br>Units: PPM |    |   | Drilling Conditions<br>& Blow Counts |
|-----------------|------------------|--------------------|------------------------------------------|---------------------------------------------------|----------------|----------------------------------------|------------------------------|----|---|--------------------------------------|
|                 |                  |                    |                                          |                                                   |                |                                        | BZ                           | BH | S |                                      |
| 0               |                  |                    |                                          | BACKFILL                                          |                |                                        |                              |    |   |                                      |
| 5               |                  |                    |                                          |                                                   |                |                                        |                              |    |   |                                      |
| 10              |                  |                    |                                          |                                                   |                |                                        |                              |    |   |                                      |
| 15              |                  |                    |                                          |                                                   |                |                                        |                              |    |   |                                      |
| 20              |                  |                    |                                          | SS @ 17' (DIFFICULT DRILLING)<br>GWC @ 17'        |                |                                        |                              |    |   |                                      |
| 25              |                  |                    |                                          | TD = 22.5'                                        |                |                                        |                              |    |   |                                      |
| 30              |                  |                    |                                          |                                                   |                |                                        |                              |    |   |                                      |
| 35              |                  |                    |                                          |                                                   |                |                                        |                              |    |   |                                      |
| 40              |                  |                    |                                          |                                                   |                |                                        |                              |    |   |                                      |

Comments:

ENCOUNTERED SS + GWC @ 17' BGS. OVER-DRILLED + COMPLETED G.W.  
MW-1. AUGER REFUSAL @ 22.5' BGS. NO SAMPLES COLLECTED. PLEASE  
REFER TO MW INSTALLATION RECORD.

Geologist Signature

*[Signature]*

# MONITORING WELL INSTALLATION RECORD

Philip Environmental Services, Inc.

4000 Monroe Rd.

Farmington, NM 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # 2

Well # 1

Page 1 of 1

Project Name

**EPFS GW PITS**

Project Number

**17520**

Phase **6005.77**

Site Location

**MCGRATH #1 - 70802**

Elevation

Well Location

**T30N-R11W-S7-L1F**

GWL Depth

**17' BGS**

Installed By

**R PADILLA**

On-Site Geologist

**D CESARK**

Personnel On-Site

**D CHARLEY, C MAIZ**

Contractors On-Site

Client Personnel On-Site

Date/Time Started

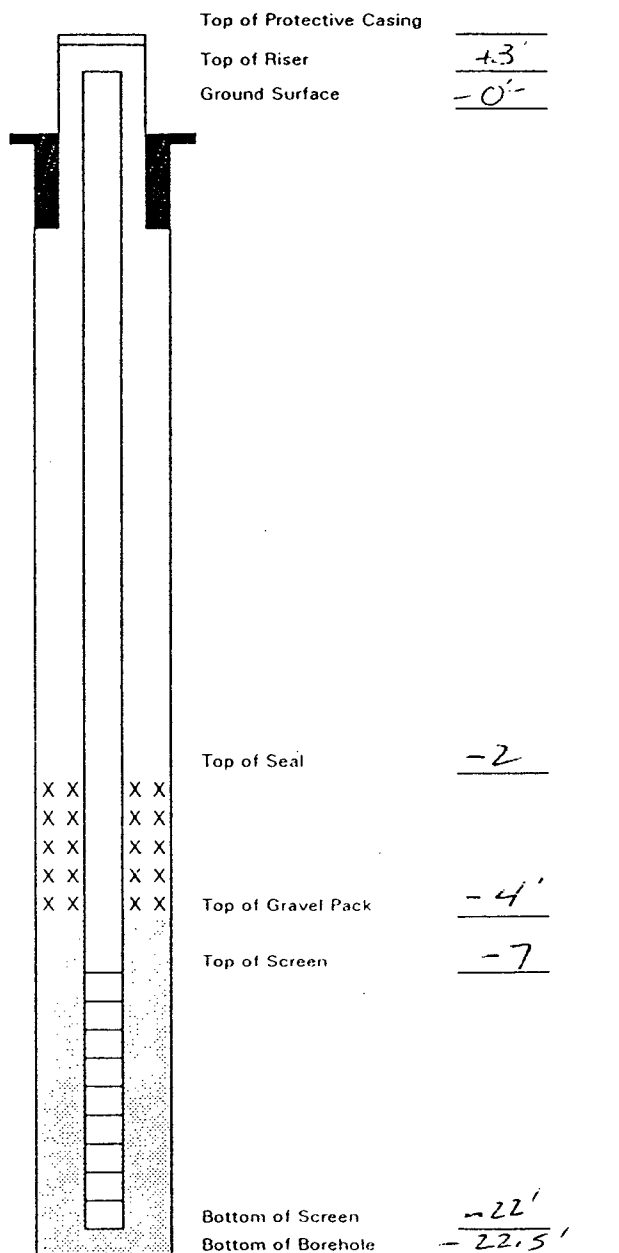
**3/20/97 - 1430**

Date/Time Completed

**" - 1545**

## 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                | "             | -7'          |
| Top of Well Screen                  | 1010 SLOT     | -7'          |
| Bottom of Well Screen               | "             | -22'         |
| Top of Peltonite Seal               | ENVIROPLUG    | -2'          |
| Bottom of Peltonite Seal            | "             | -4'          |
| Top of Gravel Pack                  | 10-20 S. SAND | -4'          |
| Bottom of Gravel Pack               | "             | -22'         |
| Top of Natural Cave-In              |               | -22'         |
| Bottom of Natural Cave-In           |               | -22.5'       |
| Top of Groundwater                  |               | -17'         |
| Total Depth of Borehole             |               | -22.5'       |



Comments:

Geologist Signature

# Well Development and Purging Data

~~Development~~  
~~Purging~~

Well Number MW-1

Serial No. WDPP.

Project Name

GW PITS

Project Manager

# CHANCE

Client Company

EPFS

Site Name  
McGRATH #1 - 70862

Mc GATH #1 - 70862

Site Address

## Development Criteria

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

## Water Volume Calculation

Initial Depth of Well (feet) 22' BGS

Initial Depth to Water (feet) 12' BGS

Height of Water Column in Well (feet) 10'Diameter (inches): Well 4 Gravel Pack

## Methods of Development

- Pump
- ☐ Centrifugal
- ☐ Submersible
- ☐ Peristaltic
- ☐ Other \_\_\_\_\_
- Bailer
- ☒ Bottom Valve
- ☐ Double Check Valve
- ☐ Stainless-steel Kemmerer

## Instruments

- ☒ pH Meter  
☐ DO Monitor  
☒ Conductivity Meter  
☒ Temperature Meter  
☐ Other

Serial No. (If applicable)

## Water Disposal

## Water Removal Data

[illegible]

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

### Comments

First 2-3 billion were clear muddy thenafter. well slightly - instead of sub. well build near

Developer's Signature(s)

Date 4/9/97

Reviewer

Date \_\_\_\_\_



# Water Sampling Data

Location No. MW-1Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other  Date 4/9/97Project Name EPFS GW PITS Project No. 17520Project Manager C CHANCE Phase Task No. 6003.77Site Name MC GRATH #1-7086Z

## Sampling Specifications

Requested Sampling  
Depth Interval (feet)   
Requested Wait Following  
Development/Purging (hours) 

## Initial Measurements

Time Elapsed From Final Development/Purging (hours)   
Initial Water Depth (feet)   
Nonaqueous Liquids Present (Describe) 

## Water Quality/Water Collection

DO = Dissolved Oxygen; Cond. = Conductivity

| Date | Time | Sampler Initials | Water Quality Readings |    |              |                         | Water Collection Data          |                              |                                   |      |                                   | Notes<br>(Explain in<br>Comments Below) |
|------|------|------------------|------------------------|----|--------------|-------------------------|--------------------------------|------------------------------|-----------------------------------|------|-----------------------------------|-----------------------------------------|
|      |      |                  | Temp.<br>(°C)          | pH | DO<br>(mg/L) | Cond.<br>(µmhos/<br>cm) | Volume<br>Removed<br>(gallons) | Removal<br>Rate<br>(gal/min) | Pump<br>Intake<br>Depth<br>(feet) | Bail | Final<br>Water<br>Depth<br>(feet) |                                         |
|      |      |                  |                        |    |              |                         |                                |                              |                                   |      |                                   |                                         |
|      |      |                  |                        |    |              |                         |                                |                              |                                   |      |                                   |                                         |
|      |      |                  |                        |    |              |                         |                                |                              |                                   |      |                                   |                                         |
|      |      |                  |                        |    |              |                         |                                |                              |                                   |      |                                   |                                         |
|      |      |                  |                        |    |              |                         |                                |                              |                                   |      |                                   |                                         |

## Sample Containers

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

Preservatives: H = HCl; N = HNO<sub>3</sub>; S = H<sub>2</sub>SO<sub>4</sub>; A = NaOH; O = Other (Specify); - = None

| Analytical<br>Parameter List | Container |      |             | Field<br>Filtered |    | Preserved | Cooled<br>During<br>Collection |    | Comments            |
|------------------------------|-----------|------|-------------|-------------------|----|-----------|--------------------------------|----|---------------------|
|                              | Number    | Type | Volume (mL) | Yes               | No |           | Yes                            | No |                     |
| EPA 8020<br>BTEX             | 3         | G/VV | 40          |                   | X  | Y         | X                              |    | DRC 31 (MW-1)       |
| "                            | 1         | "    | "           |                   |    |           | X                              |    | DRC 30 (TRIP BLANK) |
|                              |           |      |             |                   |    |           |                                |    |                     |
|                              |           |      |             |                   |    |           |                                |    |                     |
|                              |           |      |             |                   |    |           |                                |    |                     |
|                              |           |      |             |                   |    |           |                                |    |                     |
|                              |           |      |             |                   |    |           |                                |    |                     |
|                              |           |      |             |                   |    |           |                                |    |                     |
|                              |           |      |             |                   |    |           |                                |    |                     |
|                              |           |      |             |                   |    |           |                                |    |                     |

Filter Type  Chain-of-Custody Form Number Comments \* PLEASE REFER TO WELL DEVELOPMENT + PURGING DATA FORM.Signature  Date 4/9/97 Reviewer  Date





4-23-97

FIELD SERVICES LABORATORY  
ANALYTICAL REPORT  
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

Field ID

Lab ID

SAMPLE NUMBER:

DRC31

970260

MTR CODE | SITE NAME:

70862

McGrath #1

SAMPLE DATE | TIME (Hrs):

4/9/97

1103

PROJECT:

Phase II Drilling - Initial

DATE OF BTEX EXT. | ANAL.:

4/11/97

4/11/97

TYPE | DESCRIPTION:

Monitor Well

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   |            |   |  |  |

The Surrogate Recovery was at  
DF = Dilution Factor Used

104

for this sample All QA/QC was acceptable.

Narrative:

Approved By:

*John L. L...*

Date:

4/16/97



**QUALITY CONTROL REPORT  
EPA METHOD 8020 - BTEX**

**Samples: 970259 - 970268**

QA/QC for 04/11/97 Sample S

**LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:**

| SAMPLE<br>NUMBER                                     | TYPE     | EXPECTED<br>RESULT<br>PPB | ANALYTICAL<br>RESULT<br>PPB | %R   | ACCEPTABLE |    |
|------------------------------------------------------|----------|---------------------------|-----------------------------|------|------------|----|
|                                                      |          |                           |                             |      | YES        | NO |
|                                                      |          |                           |                             |      | RANGE      |    |
| <b>ICV LA-52589<br/>50 PPB</b>                       |          |                           |                             |      |            |    |
| Benzene                                              | Standard | 50.0                      | 49.7                        | 99.4 | 75 - 125 % | X  |
| Toluene                                              | Standard | 50.0                      | 49.6                        | 99.2 | 75 - 125 % | X  |
| Ethylbenzene                                         | Standard | 50.0                      | 49.6                        | 99.2 | 75 - 125 % | X  |
| m & p - Xylene                                       | Standard | 100                       | 99.3                        | 99.3 | 75 - 125 % | X  |
| o - Xylene                                           | Standard | 50.0                      | 49.7                        | 99.4 | 75 - 125 % | X  |
| <b>SAMPLE<br/>NUMBER<br/>LCS LA-45476<br/>25 PPB</b> |          |                           |                             |      |            |    |
| Benzene                                              | Standard | 25.0                      | 24.9                        | 99.6 | 39 - 150   | X  |
| Toluene                                              | Standard | 25.0                      | 24.9                        | 99.6 | 46 - 148   | X  |
| Ethylbenzene                                         | Standard | 25.0                      | 24.9                        | 99.6 | 32 - 160   | X  |
| m & p - Xylene                                       | Standard | 50.0                      | 50.4                        | 101  | Not Given  | X  |
| o - Xylene                                           | Standard | 25.0                      | 25.2                        | 101  | Not Given  | X  |
| <b>SAMPLE<br/>NUMBER<br/>CCV LA-52589<br/>50 PPB</b> |          |                           |                             |      |            |    |
| Benzene                                              | Standard | 50.0                      | 48.8                        | 97.6 | 75 - 125 % | X  |
| Toluene                                              | Standard | 50.0                      | 49.4                        | 98.8 | 75 - 125 % | X  |
| Ethylbenzene                                         | Standard | 50.0                      | 49.2                        | 98.4 | 75 - 125 % | X  |
| m & p - Xylene                                       | Standard | 100                       | 98.9                        | 98.9 | 75 - 125 % | X  |
| o - Xylene                                           | Standard | 50.0                      | 49.4                        | 98.8 | 75 - 125 % | X  |
| <b>SAMPLE<br/>NUMBER<br/>CCV LA-52589<br/>50 PPB</b> |          |                           |                             |      |            |    |
| Benzene                                              | Standard | 50.0                      | 48.7                        | 97.4 | 75 - 125 % | X  |
| Toluene                                              | Standard | 50.0                      | 49.0                        | 98.0 | 75 - 125 % | X  |
| Ethylbenzene                                         | Standard | 50.0                      | 48.5                        | 97.0 | 75 - 125 % | X  |
| m & p - Xylene                                       | Standard | 100                       | 97.1                        | 97.1 | 75 - 125 % | X  |
| o - Xylene                                           | Standard | 50.0                      | 48.7                        | 97.4 | 75 - 125 % | X  |

Narrative: Acceptable.

EL PASO FIELD SERVICES LAB  
QUALITY CONTROL REPORT  
EPA METHOD 8020 - BTEX  
Samples: 970259 - 970268

**LABORATORY DUPLICATES:**

| SAMPLE ID      | TYPE             | SAMPLE RESULT PPB | DUPLICATE RESULT PPB | RPD  | ACCEPTABLE |    |
|----------------|------------------|-------------------|----------------------|------|------------|----|
|                |                  |                   |                      |      | YES        | NO |
| 970261         |                  |                   |                      |      | RANGE      |    |
| Benzene        | Matrix Duplicate | <1                | <1                   | 0.00 | +/- 20 %   | X  |
| Toluene        | Matrix Duplicate | <1                | <1                   | 0.00 | +/- 20 %   | X  |
| Ethylbenzene   | Matrix Duplicate | <1                | <1                   | 0.00 | +/- 20 %   | X  |
| m & p - Xylene | Matrix Duplicate | <2                | <2                   | 0.00 | +/- 20 %   | X  |
| o - Xylene     | Matrix Duplicate | <1                | <1                   | 0.00 | +/- 20 %   | X  |

Narrative: Acceptable.

**LABORATORY SPIKES:**

| SAMPLE ID           | SPIKE ADDED PPB | SAMPLE RESULT PPB | SPIKE SAMPLE RESULT PPB | %R   | ACCEPTABLE |    |
|---------------------|-----------------|-------------------|-------------------------|------|------------|----|
|                     |                 |                   |                         |      | YES        | NO |
| 2nd Analysis 970261 |                 |                   |                         |      | RANGE      |    |
| Benzene             | 50              | <1                | 49.5                    | 99.0 | 75 - 125 % | X  |
| Toluene             | 50              | <1                | 50.4                    | 101  | 75 - 125 % | X  |
| Ethylbenzene        | 50              | <1                | 50.4                    | 101  | 75 - 125 % | X  |
| m & p - Xylene      | 100             | <2                | 100                     | 100  | 75 - 125 % | X  |
| o - Xylene          | 50              | <1                | 50.5                    | 101  | 75 - 125 % | X  |

Narrative: Acceptable

**ADDITIONAL ANALYTICAL BLANKS:**

| AUTO BLANK    | SOURCE       | PPB  | STATUS     |
|---------------|--------------|------|------------|
| Benzene       | Boiled Water | <1.0 | ACCEPTABLE |
| Toluene       | Boiled Water | <1.0 | ACCEPTABLE |
| Ethylbenzene  | Boiled Water | <1.0 | ACCEPTABLE |
| Total Xylenes | Boiled Water | <3.0 | ACCEPTABLE |

Narrative: Acceptable.

| SOIL VIAL BLANK | SOURCE Lot MB1461   | PPB (Analyzed with this set) | STATUS     |
|-----------------|---------------------|------------------------------|------------|
| Benzene         | Vial + Boiled Water | <1.0                         | ACCEPTABLE |
| Toluene         | Vial + Boiled Water | <1.0                         | ACCEPTABLE |
| Ethylbenzene    | Vial + Boiled Water | <1.0                         | ACCEPTABLE |
| Total Xylenes   | Vial + Boiled Water | <3.0                         | ACCEPTABLE |

Narrative: Acceptable.

| CONTAMINATION CARRYOVER CHECK | SOURCE              | PPB (One analyzed with this set) | STATUS     |
|-------------------------------|---------------------|----------------------------------|------------|
| Benzene                       | Vial + Boiled Water | <1.0                             | ACCEPTABLE |
| Toluene                       | Vial + Boiled Water | <1.0                             | ACCEPTABLE |
| Ethylbenzene                  | Vial + Boiled Water | <1.0                             | ACCEPTABLE |
| Total Xylenes                 | Vial + Boiled Water | <3.0                             | ACCEPTABLE |

Narrative: Acceptable.

Reported By:

*Inda*

Approved By:

*Adrian*

Date:

*4/16/97*