

3R - 240

REPORTS

DATE:

1997



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

RECEIVED

MAR 02 1998

Environmental Bureau
Oil Conservation Division

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,

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; **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

EPFS GROUNDWATER PITS

1997 ANNUAL GROUNDWATER REPORT

TRUJILLO GAS COM A #1
Meter/Line ID - 95136

SITE DETAILS

Legals - Twn: 29N Rng: 10W Sec: 28 Unit: C
NMOCD Hazard Ranking: 40 Land Type: FEE
Operator: AMOCO PRODUCTION COMPANY

PREVIOUS ACTIVITIES

Site Assessment: Apr-94 Excavation: Apr-94 (30 cy) 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.

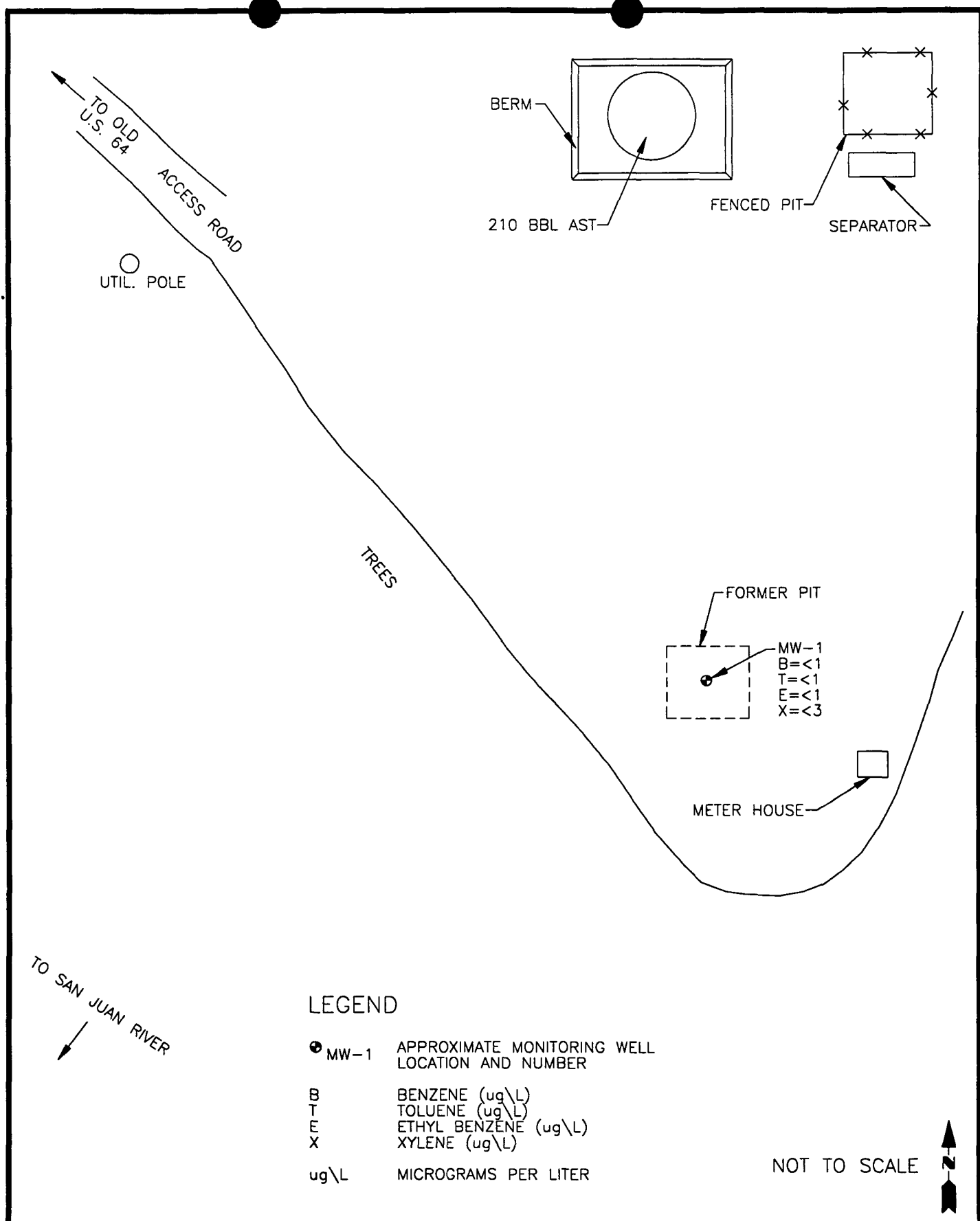
Quarterly Groundwater Monitoring - Quarterly groundwater monitoring was initiated on 8/4/97. Groundwater analytical data are presented in Table 1. A site map is presented in Figure 1.

CONCLUSIONS

Groundwater analytical data has been below standards since quarterly sampling was initiated at MW-1. Minimal impact to groundwater has occurred 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.



COL. 17520Z-001



TITLE:

TRUJILLO GC A#1
95136

DWN:

TMM

DES.:

CC

PROJECT NO.:

17520

CHKD:

CC

APPJ:

DATE:

12/8/97

REV.:

0

EPFS GW PITS

FIGURE 1

TABLE 1

Sample #	Water/ Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Nylens (PPB)	Total BTEX
970248	95136	Trujillo GC A#1	4/3/97	1	Phase II Drilling - Initial	< 1	< 1	< 1	< 3	< 6
970804	95136	Trujillo GC A#1	8/4/97	1	Sample 4 - 1st Qtr	< 1	< 1	< 1	< 3	< 6
971179	95136	Trujillo GC A#1	11/3/97	1	Sample 4 - 2nd Qtr	< 1	< 1	< 1	< 3	< 6

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 TEWILLO GCA #1 - 95136

Elevation _____
Borehole Location T29 R10- S28- Ltr C
GWL Depth 5.5' BGS
Logged By D CESARK
Drilled By K PADILLA
Date/Time Started 3/24/97-1200
Date/Time Completed " -1330

Well Logged By D CESARK
Personnel On-Site D CESARK, C MAIZ
Contractors On-Site J KIRBY
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			Drilling Conditions & Blow Counts
							BZ	BH	S	
0				BACKFILL						
5				TO 7'						
				GWC 5.5'						
10				COBBLES/GRAVELS C 8'						
				TD=13'						
15										
20										
25										
30										
35										
40										

Comments:

ENCOUNTERED GW C 5.5' BGS. OVER-DRILLED TO 13' BGS + SET GW MW-1.
NO SAMPLES COLLECTED. PLEASE REFER TO MON. WELL 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

TRUJILLO GC A #1 - 95136

Elevation

Well Location **T29N-R10W-S-28-LC'**

GWL Depth **5.5' BGS**

Installed By **K PADILLA**

On-Site Geologist

D CESARK

Personnel On-Site

D CHARLEY, C MAIZ

Contractors On-Site

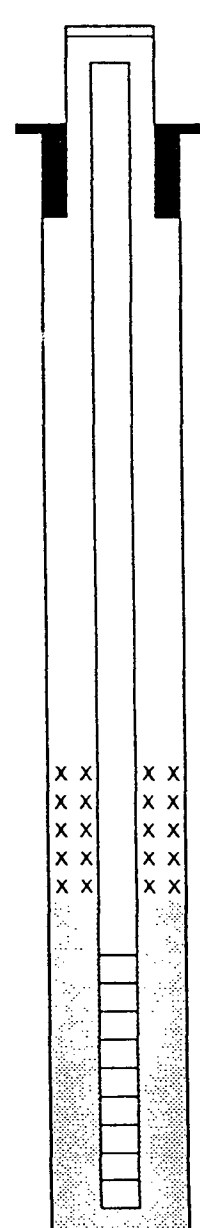
J KIRBY

Client Personnel On-Site

Date/Time Started **3/24/97 - 1330**

Date/Time Completed **" - 1500**

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	+2.5'
Bottom of Well Riser	"	-2.5'
Top of Well Screen	1.010 SLOT	-2.5'
Bottom of Well Screen	"	-12.5'
Top of Peltonite Seal	ENVIROPLUG	-1'
Bottom of Peltonite Seal	"	-2'
Top of Gravel Pack	10-20 S. SAND	-2'
Bottom of Gravel Pack	"	-12.5'
Top of Natural Cave-In		-12.5'
Bottom of Natural Cave-In		-13'
Top of Groundwater		-5.5'
Total Depth of Borehole		-13'



Top of Protective Casing +2.5'

Top of Riser +2.5'

Ground Surface -0'-

Top of Seal -1'

Top of Gravel Pack -2'

Top of Screen -2.5'

Bottom of Screen -12.5'

Bottom of Borehole -13'

Comments:

Geologist Signature

**1997 GROUNDWATER
ANALYTICAL**



CHAIN OF CUSTODY RECORD

[illegible]



EL PASO FIELD SERVICES



5-22-97

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	DRC29	970248
MTR CODE SITE NAME:	95136	Trujillo GC A#1
SAMPLE DATE TIME (Hrs):	4/3/97	1410
PROJECT:	Phase II Drilling - Initial	
DATE OF BTEX EXT. ANAL.:	4/4/97	4/4/97
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 97.8 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

Date: 4/8/97

970248,4/8/97

Well Development and Purging Data

~~Development~~
~~Purging~~

Well Number MW-1

Serial No. WDPD.

Page 1 of 1

Project Name

GW PITS

Project Manager

C CHANCE

Project No.

02521

Client Company

SPS

Site Name
TRUJILLO GC A #1 - 95136

TRUJILO GC A #1 - 95136

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) 12.5' 8665
Initial Depth to Water (feet) 4.5' 8665
Height of Water Column in Well (feet) 8'
Diameter (inches): Well 4 Gravel Pack

Methods of Development

Pump

☐ Centrifugal

☐ Submersible

☐ Peristaltic

☐ Other _____

Bailer

☒ Bottom Valve

☐ Double Check Valve

☐ Stainless-steel Kemmerer

Instruments

struments

☒ 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	Findings
First hauler was clean, muddy after that, no evidence of HCs, did not bail well during	

Developer's Signature(s)

Date 4/3/97

Reviewer

Date _____



Water Sampling Data

Location No. MW-1Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 4/3/97Project Name EPFS GW PITS Project No. 17520Project Manager C CHANCE Phase Task No. 6003.77Site Name TRUJILLO GC A #1 - 95136

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 (Explain in Comments Below)
			Temp. (°C)	pH	DO (mg/L)	Cond. (µmhos/ cm)	Volume Removed (gallons)	Removal Rate (gal/min)	Pump Intake Depth (feet)	Bail	Final Water Depth (feet)	

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

Sample Containers

Preservatives: H = HCl; N = HNO₃; S = H₂SO₄; A = NaOH; O = Other (Specify); - = None

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
EPA 8020 BTEX	DRC28	VV	40		X	Y	X		TRIP BLANK
"	DRC29	"	"		X	Y	X		MW-1

Filter Type Chain-of-Custody Form Number Comments * PLEASE REFER TO WELL DEVP. + PURGING DATA FORMSignature [Signature] Date 4/3/97 Reviewer Date



A 2039

CHAIN OF CUSTODY RECORD

[illegible]



8-7/97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970804
MTR CODE SITE NAME:	95136	Trujillo GC A #1
SAMPLE DATE TIME (Hrs):	8/4/97	1132
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. ANAL.:	8/5/97	8/5/97
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				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 97.0 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John Smith

Date:

8/7/97



Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	970804
DATE SAMPLED:	08/04/97
TIME SAMPLED (Hrs):	1132
SAMPLED BY:	N/A
MATRIX:	Water
METER CODE:	95136
SAMPLE SITE NAME:	Trujillo GC A #1
SAMPLE POINT:	MW-1

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	7.9	Units	08/05/97
Alkalinity as CO ₃	0.0	PPM	08/05/97
Alkalinity as HCO ₃	279	PPM	08/05/97
Calcium as Ca	117	PPM	08/05/97
Magnesium as Mg	13	PPM	08/05/97
Total Hardness as CaCO ₃	346	PPM	08/05/97
Chloride as Cl	6	PPM	08/06/97
Sulfate as SO ₄	249	PPM	08/06/97
Fluoride as F	0.4	PPM	08/05/97
Nitrate as NO ₃ -N	<0.2	PPM	08/06/97
Nitrite as NO ₂ -N	<0.2	PPM	08/06/97
Ammonium as NH ₄ ⁺	<0.1	PPM	08/05/97
Phosphate as PO ₄	<0.2	PPM	08/06/97
Potassium as K	3.7	PPM	08/05/97
Sodium as Na	72	PPM	08/05/97
Total Dissolved Solids	670	PPM	08/05/97
Conductivity	963	umhos/cm	08/05/97
Anion/Cation %	0.9%	%, < 5.0 Accepted	08/07/97

Lab Remarks:

Reported By:

mda

Approved By:

John L. Allen

Date:

8/7/97



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	970804
SAMPLE DATE:	08/04/97
SAMPLE TIME (Hrs):	1132
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	95136
SAMPLE SITE NAME:	Trujillo G.C. A #1
SAMPLE POINT:	MW-1

REMARKS:

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC (As)	0.007	0.100
BARIUM (Ba)	0.11	1.00
CADMIUM (Cd)	<0.0002	0.010
CHROMIUM (Cr)	0.004	0.050
LEAD (Pb)	<0.003	0.050
MERCURY (Hg)	<0.0002	0.002
SELENIUM (Se)	<0.011	0.050
SILVER (Ag)	<0.0004	0.050

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: CV

Approved By: John L. Larkin

Date: 9-11-97



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

Sample ID: 970804
Date Reported: 09/05/97

STANDARD REFERENCE MATERIAL

Analyte	Found Result (mg/L)	Known Value (mg/L)	% Recovery
Arsenic	0.031	0.032	94.4%
Barium	0.059	0.065	90.6%
Cadmium	0.0013	0.0012	110%
Chromium	0.008	0.007	103%
Lead	0.044	0.042	105%
Mercury	0.0041	0.0046	89.3%
Selenium	0.040	0.041	98.8%
Silver	0.0062	0.0068	91.2%

DUPLICATE ANALYSIS (mg/L)

Analyte	Original Sample Result	Duplicate Sample Result	% RPD
Arsenic	0.008	0.008	0.8%
Barium	0.106	0.114	7.3%
Cadmium	ND	ND	NA
Chromium	0.004	0.005	4.7%
Lead	ND	ND	NA
Mercury	ND	ND	NA
Selenium	ND	ND	NA
Silver	ND	ND	NA

SPIKE ANALYSIS (mg/L)

Analyte	Original Sample Result	Spike Sample Result	Spike Added	Recovery Percent
Arsenic	0.008	0.118	0.100	107%
Barium	0.106	0.997	1.00	89.1%
Cadmium	ND	0.0105	0.010	99.7%
Chromium	0.004	0.052	0.050	94.9%
Lead	ND	0.054	0.050	102%
Mercury	ND	0.0017	0.0020	89.0%
Selenium	ND	0.054	0.050	105%
Silver	ND	0.0393	0.005	78.4%

METHOD BLANK

Analyte	Found Result (mg/L)	Detection Level (mg/L)
Arsenic	ND	0.004
Barium	ND	0.019
Cadmium	ND	0.0002
Chromium	ND	0.004
Lead	ND	0.003
Mercury	ND	0.00019
Selenium	ND	0.011
Silver	ND	0.0004

ND: Not Detected at stated detection level.

NA: Not Applicable.

Reported By: mh

Approved By: John Linder

Date: 9-8-97



Well Number mw-1
Meter Code 95136

Site Name TRUTLO G.C. A#1

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 14.80
Initial Depth to Water (feet) 8.89
Height of Water Column in Well (feet) 5.91

Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume In Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		3.9	11.7
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal
KV72 SEPARATOR

Water Removal Data

[illegible]

Comments
THE NEW METER CODE FOR THIS LOCATION IS 97989.

Developer's Signature Dennis Bied

Date 8-24-97 Reviewer J. A. Smith Date 8/27/97

A 2110

CHAIN OF CUSTODY RECORD

[illegible]



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	971179
MTR CODE SITE NAME:	95136	Trujillo GC A #1
SAMPLE DATE TIME (Hrs):	11/3/97	1457
PROJECT:	Sample 4 2nd Quarter	
DATE OF BTEX EXT. ANAL.:	11/5/97	11/5/97
TYPE DESCRIPTION:	MW-1	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

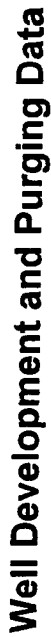
Narrative: _____

Approved By: _____

John L. L. L.

Date: 11-12-97

971179BTEXMW,11/10/97



Well Number MW-1
Meter Code 95/36

Site Name TPW760 GC A#1

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 14.80
Initial Depth to Water (feet) 8.20
Height of Water Column in Well (feet) 6.60

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume In Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		4.4	13.1
Gravel Pack			
Drilling Fluids			
Total			

Instruments

- | | |
|-------------------------------------|---------------------|
| ☒ | pH Meter |
| ☐ | DO Monitor |
| ☒ | Conductivity Meter |
| ☒ | Temperature Meter |
| ☒ | Other <i>D.O. C</i> |

Water Disposal

KUTZ SEPARATOR

Water Removal Data

[illegible]

Comments THE NEW METER CODE FOR THIS LOCATION IS 977989

Developer's Signature Dennis Bird Date 11-3-97 Reviewer _____

John L. Lutz Date 11-12-97