

3R - 236

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
Pit Closure Report

March 1998

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 17520

PHILIP
ENVIRONMENTAL

EPFS GROUNDWATER PITS

1997 ANNUAL GROUNDWATER REPORT

SAN JUAN 28-6 #79 (MV)
Meter/Line ID - 72265

SITE DETAILS

Legals - Twn: 27N	Rng: 6W	Sec: 11	Unit: M
NMOCD Hazard Ranking: 40			Land Type: FEDERAL
Operator: BURLINGTON RESOURCES			

PREVIOUS ACTIVITIES

Site Assessment: Mar-95	Excavation: Mar-95 (240cy)	Re-Excavation: Aug-95 (686cy)
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 8/14/97. Groundwater analytical data are presented in Table 1. A site map is presented in Figure 1.

CONCLUSIONS

Initial groundwater analytical data from MW-1 were slightly above standards on benzene at 10.2 ppb. Based on initial groundwater samples there appears to be minimal impact to groundwater 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.

TITLE:

SAN JUAN 28-6 #79 PM
METER 72265

PROJECT NO.: 17520

EPFS GW PITS

FIGURE 1

DWN: TMM

DES.: CC

APPD:

CHKD: CC

DATE: 1/19/98

REV.: 0

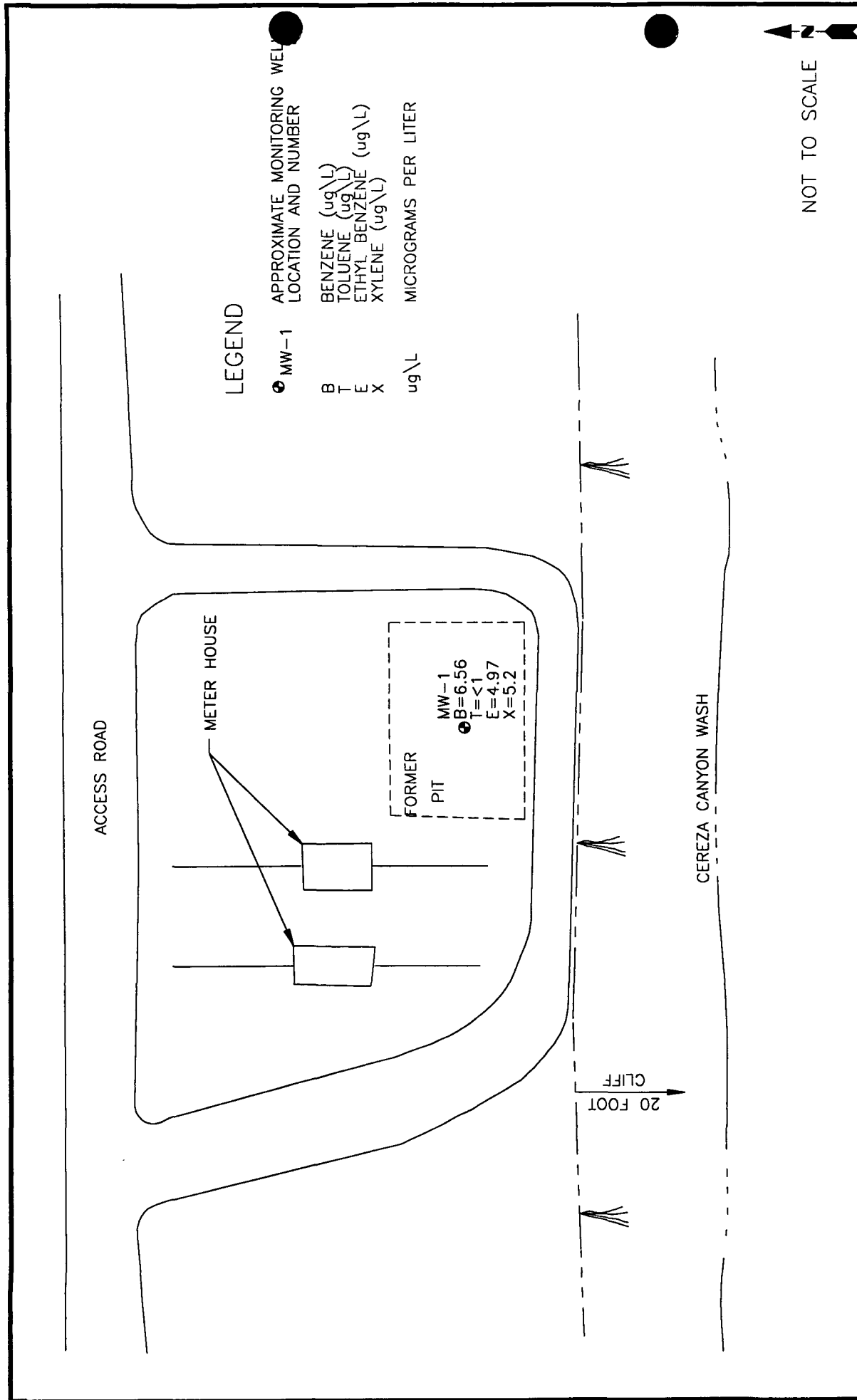


TABLE 1

Sample #	Meter/ Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX
970295	72265	SJ 28-6 #79	4/14/97	1	Phase II Drilling - Initial	= 16.1	= 3.98	= 11.2	= 112	= 143
970861	72265	SJ 28-6 #79	8/14/97	1	Sample 4 - 1st Qtr	= 10.2	< 1	= 5.19	= 11.4	= 27
971178	72265	SJ 28-6 #79	11/3/97	1	Sample 4 - 2nd Qtr	= 6.56	< 1	= 4.97	= 5.2	= 17

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 2

Project Name EPFS GW PITS
Project Number 17520 Phase 6002.77
Project Location SAN JUAN 28-10 UNIT #79 MV- 72265

Elevation _____
Borehole Location T27R6-S11-Ltr M
GWL Depth 22' BGS
Logged By D CESARK
Drilled By MCLEOD/K PADILLA
Date/Time Started 3/13/97-0830
Date/Time Completed " - 0900

Well Logged By D CESARK
Personnel On-Site D CHARLEY, C MAIZ
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						
5				TO						
10				19'						
15										
20				GWC 22'						
25										
30				TD=32'						
35										
40										

Comments:

INSTALLED BH-2 ~10' EAST OF BH-1. ENCOUNTERED GW @ 22' BGS. OVER-DRAINED 10' + COMPLETED MW-1 @ 32' BGS. NO SAMPLES COLLECTED. PLEASE REFER TO SITE SKETCH & WELL COMP. DIAGRAM.

Geologist Signature

[Signature]

Geologist Signature

**1997 GROUNDWATER
ANALYTICAL**



4/14/09 - INITIAL WATER SAMPLING

Page 1 of 1White - Testing Laboratory Canary - EPNG Lab Pink - Field Sampler



5-6-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	DRC 37	970295
MTR CODE SITE NAME:	72265	ST 28-6 #79
SAMPLE DATE TIME (Hrs):	4/14/97	1630
PROJECT:	Phase II Drilling - Initial	
DATE OF BTEX EXT. ANAL.:	4/18/97	4/18/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

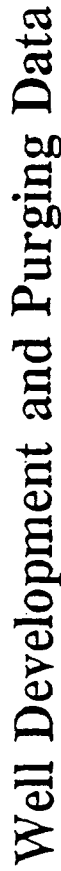
RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	16.1	PPB				
TOLUENE	3.98	PPB				
ETHYL BENZENE	11.2	PPB				
TOTAL XYLENES	112	PPB				
TOTAL BTEX	143	PPB				

The Surrogate Recovery was at 90.0 % for this sample All QA/QC was acceptable.

Narrative: _____

Approved By: John LallierDate: 4/24/97



~~Development~~
~~Purging~~

Well Number MW-1

Page 1 of 1

Development Criteria

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal

☒ Stabilization of Indicator Parameters

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 32' ~~18'~~ BGS
Initial Depth to Water (feet) 19' BGS
Height of Water Column in Well (feet) 13'
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

Water Disposal

Water Removal Data

[illegible]

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

Comments	
	1ST BAILEY CONTAINED SOME SEDIMENT, RELATIVELY HIGH VOL. OF SAND/SILT PURGED FROM WELL.
	PUMP WAS LOCKED + INTAKT DEER TO SAMPLING EVENT. WELL DIDNOT BAIL DRY. NO EVIDENCE OF HCS.

Developer's Signature(s) _____ Date 4/14/97
Reviewer _____ Date _____



Water Sampling Data

Location No. MW-1Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 4/14/97Project Name EPFS GW PITS Project No. 17520Project Manager C CHANCE Phase Task No. 6003.77Site Name SAN JUAN 28-6 #79 - 72265

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	2	G/VV	40		X	Y	X		SJ 28-6 #79 (MW-1)

er Type Chain-of-Custody Form Number Comments * PLEASE REFER TO WELL DEVELOPMENT + PURGING DATA FORM.Signature Date 4/14/97 Reviewer Date



A 2057

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Sample Information				Type and No. of Sample Containers	Preservation Technique	Requested Analysis	Remarks
Samplers: (Signature)	Date	Time	Comp.	GRAB	Sample Number				
<i>Matthew</i>									
<i>WATER 8/14/97</i>		1339		X	970861	G-1	4°C	X	
<i>WATER 8/14/97</i>		1339		X	970862 Field	G-1	4°C	X	
<i>WATER 8/14/97</i>				X		G-1	4°C	X	
Relinquished by: (Signature) <i>Donnie Bird</i> Date/Time 8/14/97 1635 Received by: (Signature) Date/Time Relinquished by: (Signature) Date/Time Received by: (Signature) Date/Time 									
Relinquished by: (Signature) Date/Time Received for Laboratory by: (Signature) <i>Marvin Hopper</i> Date/Time 8/15/97 0740 Remarks: 									
Carrier Co:	Date Results Reported / by: (Signature)								
Air Bill No.:									



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	Field ID N/A	Lab ID 970861
MTR CODE SITE NAME:	72265	San Juan 28-6 #79 MW-1
SAMPLE DATE TIME (Hrs):	8/14/97	1339
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. ANAL.:	8/15/97	8/15/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	10.2	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	5.19	PPB				
TOTAL XYLENES	11.4	PPB				
TOTAL BTEX	27	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 101 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John L. Lach

Date:

8/28/97

970861BTEX,8/28/97

EL PASO FIELD SERVICES

Field Services Laboratory Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	970861
DATE SAMPLED:	08/14/97
TIME SAMPLED (Hrs):	1339
SAMPLED BY:	DB
MATRIX:	Water
METER CODE:	72265
SAMPLE SITE NAME:	San Juan 28-6 #79
SAMPLE POINT:	MW-1

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	8.36	Units	08/15/97
Alkalinity as CO ₃	4.0	PPM	08/15/97
Alkalinity as HCO ₃	403	PPM	08/15/97
Calcium as Ca	9.3	PPM	08/18/97
Magnesium as Mg	1.21	PPM	08/18/97
Total Hardness as CaCO ₃	28	PPM	08/18/97
Chloride as Cl	7.1	PPM	08/15/97
Sulfate as SO ₄	120	PPM	08/15/97
Fluoride as F	1.50	PPM	08/15/97
Nitrate as NO ₃ -N	<0.1	PPM	08/15/97
Nitrite as NO ₂ -N	<0.1	PPM	08/15/97
Ammonium as NH ₄ ⁺	<0.3	PPM	08/18/97
Phosphate as PO ₄	<0.1	PPM	08/15/97
Potassium as K	<0.3	PPM	08/18/97
Sodium as Na	214	PPM	08/18/97
Total Dissolved Solids	634	PPM	08/15/97
Conductivity	885	umhos/cm	08/15/97
Anion/Cation %	1.8%	%, <5.0 Accepted	08/28/97

Lab Remarks:

Reported By: ev

Approved By: John Fitch

Date: 8/25/97



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	970861
SAMPLE DATE:	08/14/97
SAMPLE TIME (Hrs):	1339
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	72265
SAMPLE SITE NAME:	San Juan 28-6 #79
SAMPLE POINT:	MW-1

REMARKS:

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC (As)	0.005	0.100
BARIUM (Ba)	0.08	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. Leland

Date: 9-18-97



QUALITY CONTROL REPORT

Sample ID: 970861 & 970862
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	0.064	0.065	98.8%
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: [Signature]

Date: 9-8-97



Well Number 11W-1
Meter Code 72265

Site Name SPAN JUAN 286 #79

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

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

☐ Other

Initial Depth of Well (feet) 34.85
Initial Depth to Water (feet) 22.97
Height of Water Column in Well (feet) 11.88

Diameter (inches): Well

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		7.9	23.6
Gravel Pack			
Drilling Fluids			
Total			

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

Water Disposal
KUTZ SEPARATOR

[illegible]

Continued

Date 8/14/97 Reviewer Don Fiedl. Date 8/28/97

SAMPLE 4 2ND QTR



A 2109

CHAIN OF CUSTODY RECORD

Project No.		Project Name		MC # 72265		Date: 11-3-97		Requested Analysis		Remarks	
Samplers: (Signature)		Dennis Bied		Date: 11-3-97		Sample Number		Type and No. of Sample Containers		Preservation Technique	
Date	Time	Comp.	GRAB								
MATRIX	11-3-97	1233	X		971178	G-1	40C	X			SANITIZED 28-6 #79 MW-1
WATER	11-3-97	---	X		---	G-1	40C	X			TRIP BLANK
Relinquished by: (Signature)		Dennis Bied		Date/Time		11-3-97 1632		Received by: (Signature)		Date/Time	
Relinquished by: (Signature)				Date/Time				Relinquished by: (Signature)		Date/Time	
Relinquished by: (Signature)				Date/Time				Relinquished by: (Signature)		Date/Time	
Carrier Co:		Mardon Happe		Carrier Phone No.				Date Results Reported / by: (Signature)		11/4/97 0720	
Air Bill No.:											



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	971178
MTR CODE SITE NAME:	72265	San Juan 28-6 #79
SAMPLE DATE TIME (Hrs):	11/3/97	1233
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	6.56	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	4.97	PPB				
TOTAL XYLENES	5.20	PPB				
TOTAL BTEX	17	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 91.1 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

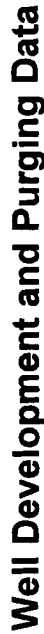
Approved By:

John Larchi

Date:

11-12-97

971178BTEXMW,11/10/97



☐	Development
☒	Purging

Well Number	MW-1
Meter Code	72265

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

Initial Depth of Well (feet) 34.85
Initial Depth to Water (feet) 23.37
Height of Water Column in Well (feet) 11.48

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

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

KUTZ SEPARATOR

[illegible]

Developer's Signature Dennis Bird

Date 11-3-97 Reviewer _____

John Todd

Date 11-12-97