

3R - 166

REPORTS

DATE:

2001

Certified Mail: #7001 1940 0003 1553 8513

February 28, 2002

RECEIVED

MAR 04 2002

Mr. William C. Olson
New Mexico Oil Conservation Division
1220 St. Francis Dr.
Santa Fe, NM 87504

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RE: 2001 Pit Project Annual Groundwater Report

Dear Mr. Olson:

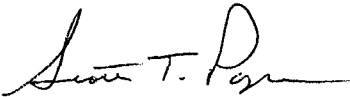
In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual reports for the 30 remaining groundwater impacted sites that were identified during our pit closure project of 1994 / 1995.

EPFS has organized the 30 reports (Volumes IA, IB, II and III), reports by land type. Volume IA and IB contain annual reports for sites found on Federal land. Volume II contains Non Federal sites and Volume III contains sites on Navajo land. Of the 30 reports submitted EPFS is requesting closure of three sites located on Navajo lands. Of the three Navajo sites submitted for closure OCD has closed the Charley Pah #4 and the John Charles #8. The Rementa et al #1 has not been closed by either agency. EPFS understands closure of groundwater sites on Navajo land falls under jurisdiction of the Navajo Environmental Protection Agency and original documents have been submitted to them for review. Other Navajo sites are included in the report for your information.

The Jaquez Com. C #1 and Jaquez Com. E #1 site is not included in with this report and will be submitted by the required deadline of April 1, 2002.

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

Sincerely,



Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # 7001 1940 0003 1553 8506**
Mr. Bill Liesse, BLM - w / enclosures (federal sites only), **Certified Mail # 7001 1940 0003 1553 8520**

SAN JUAN BASIN PIT CLOSURES

San Juan Basin, New Mexico

**El Paso Field Services
Pit Project Groundwater Sites
Annual Report
Volume IB-Federal Sites**

RECEIVED

MAR 04 2002

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

March 2002

Prepared for

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



MWH

MONTGOMERY WATSON HARZA

EPFS GROUNDWATER PITS 2001 ANNUAL GROUNDWATER REPORT

D Loop Line Drip
Meter Code LD169

SITE DETAILS

Legals Twn: 28N Rng: 08W Sec: 33 UNIT: I
NMOCD Haz Ranking 30 Land Type: Federal Operator: EPFS

PREVIOUS ACTIVITIES

Site Assessment: Jan-95 Excavation Feb-95 Soil Boring: Nov-95 Monitor Well: Nov-95
Geoprobe: Dec-96 Additional MWs: Dec-96 Downgradient MW's: NA Replace MW: NA
PSH Removal Initiated: NA ORC Nutrient Injection NA Re-Excavation: NA
Quarterly Initiated Nov-96 Annual Initiated NA Quarterly Resumed: NA

2001 ACTIVITY

Groundwater Monitoring - Quarterly sampling continued through 2001 for MW-1 through -3.

New Monitor Well Installation - MW-3 was replaced by a new monitoring well located five feet south. The original MW-3 was scheduled for permanent completion and became damaged during the well completion process. It was abandoned and the new well was drilled and completed in January 2002.

SUMMARY TABLES AND GRAPHS

Groundwater analytical data is presented in Table 1 BTEX. Copies of the laboratory data sheets and the associated quality assurance/quality control data are presented in attachment 1. Included are BTEX Data graphs for MW-1 through MW-3.

SITE MAP

Site Maps with BTEX concentrations and groundwater elevations are attached.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

The new MW-3 was completed in January 2002. Diagrams are included as Attachment 2

DISPOSITION OF GENERATED WASTES

No wastes were generated at this site during 2001.

EPFS GROUNDWATER PITS

2001 ANNUAL GROUNDWATER REPORT

D Loop Line Drip
Meter Code: LD169

ISOCONCENTRATION MAPS

No isoconcentration maps were generated at this site.

CONCLUSIONS

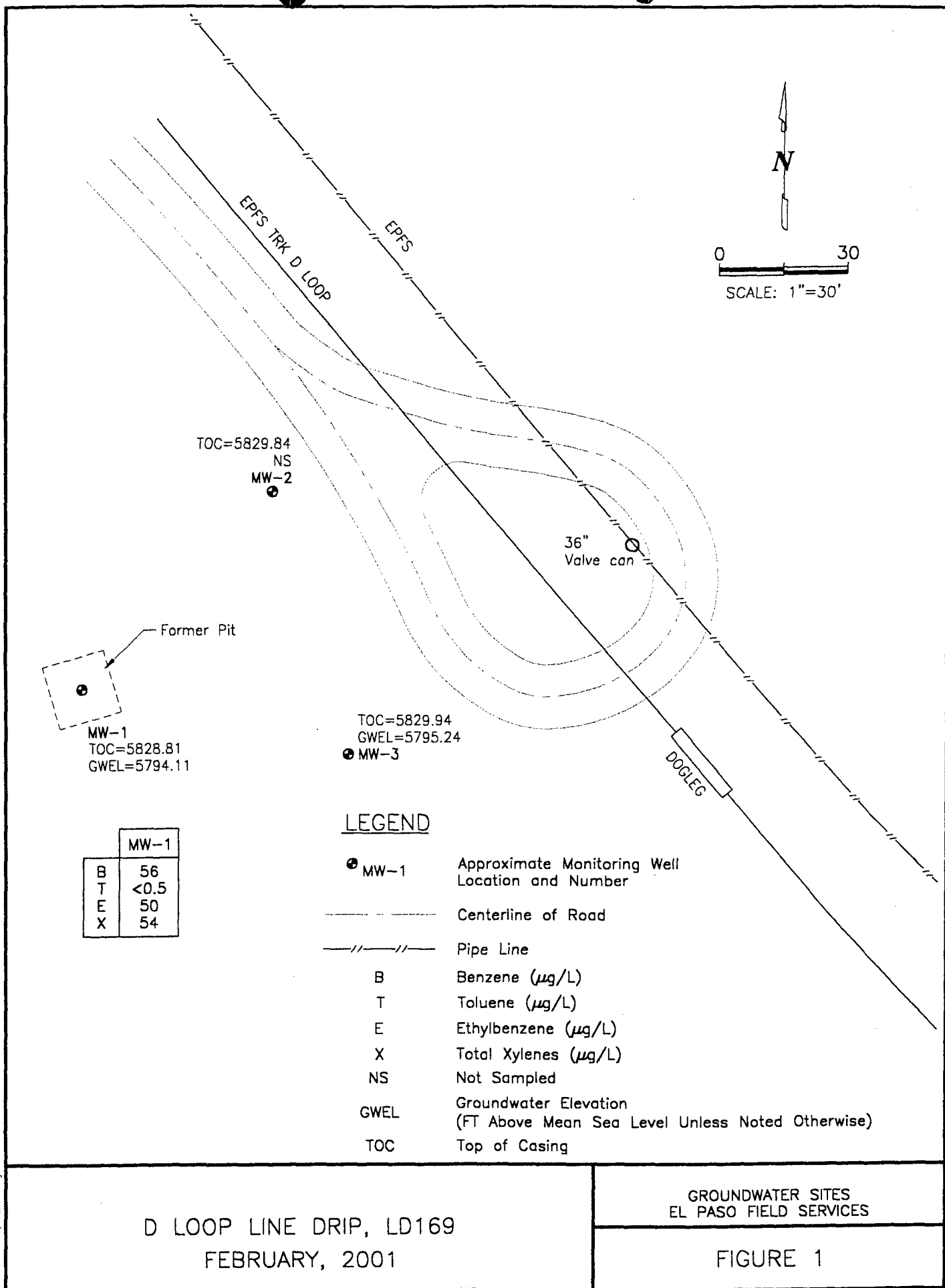
MW-1 has detected decreasing concentrations dropping from 56 ppb benzene in February 2001 to 5.5 ppb benzene in November 2001. Two sampling events in 2001 indicated benzene concentrations were less than 10 ppb benzene.

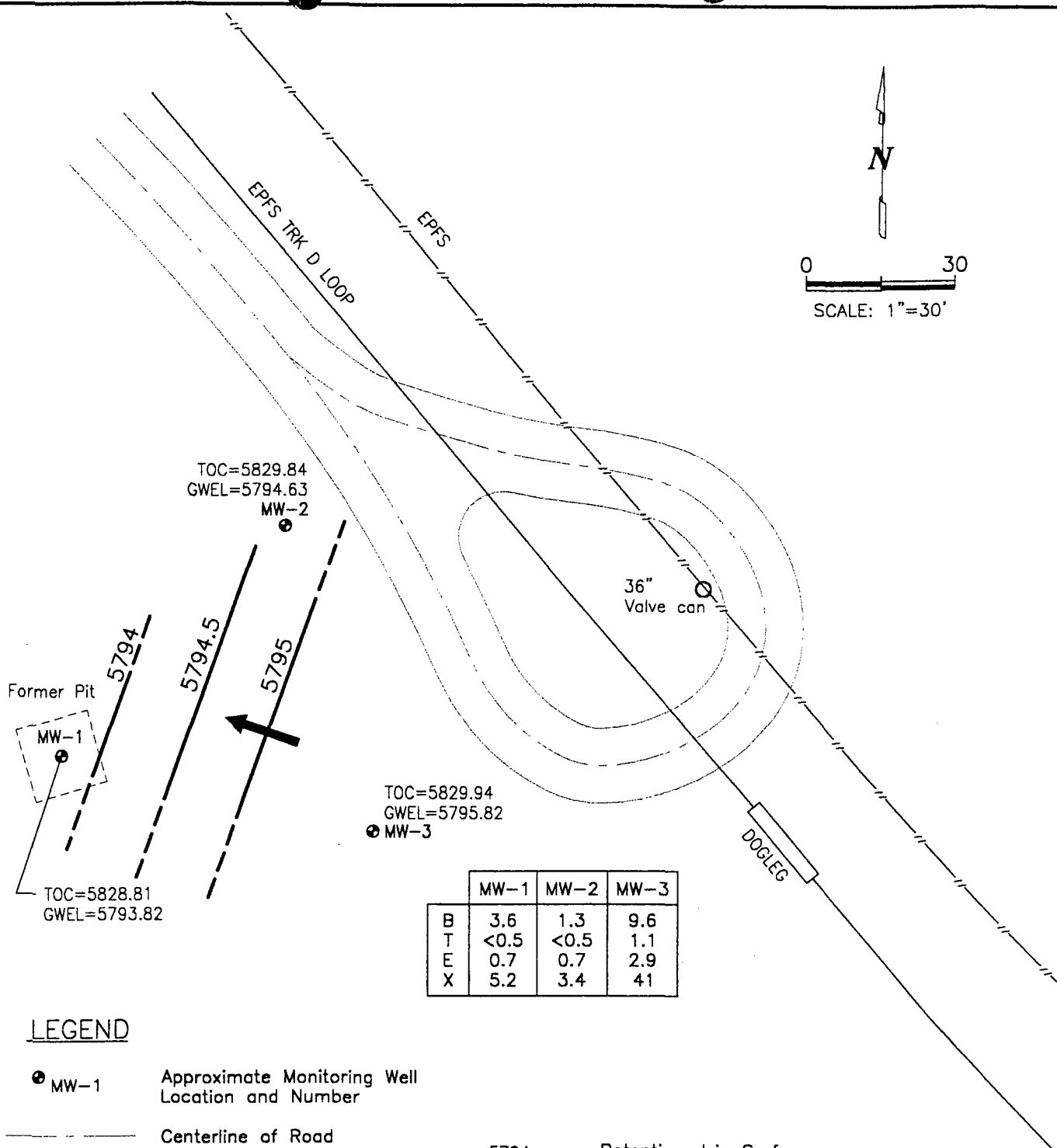
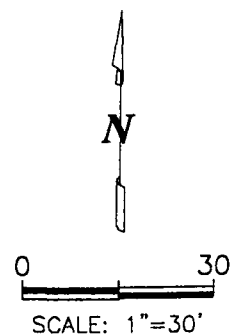
Four sampling events for both MW-2 and MW-3 have consistently demonstrated that BTEX concentrations are below NMWQCC standards at these locations.

Groundwater flows towards the west indicating that flow direction has shifted from the easterly direction observed in 2000.

RECOMMENDATIONS

- > Continue quarterly monitoring in MW1, and petition for closure once four consecutive quarters are obtained below NMWQCC standards.
- > Evaluate groundwater gradient and verify observed changes.
- > Reserve sampling MW-2 and MW-3 until closure.
- > Following OCD approval for closure, monitoring wells will be abandoned using OCD approved guidelines.





TOC=5829.94
GWEL=5795.82
● MW-3

TOC=5829.84
GWEL=5794.63
● MW-2

Former Pit
MW-1
TOC=5828.81
GWEL=5793.82

	MW-1	MW-2	MW-3
B	3.6	1.3	9.6
T	<0.5	<0.5	1.1
E	0.7	0.7	2.9
X	5.2	3.4	41

LEGEND

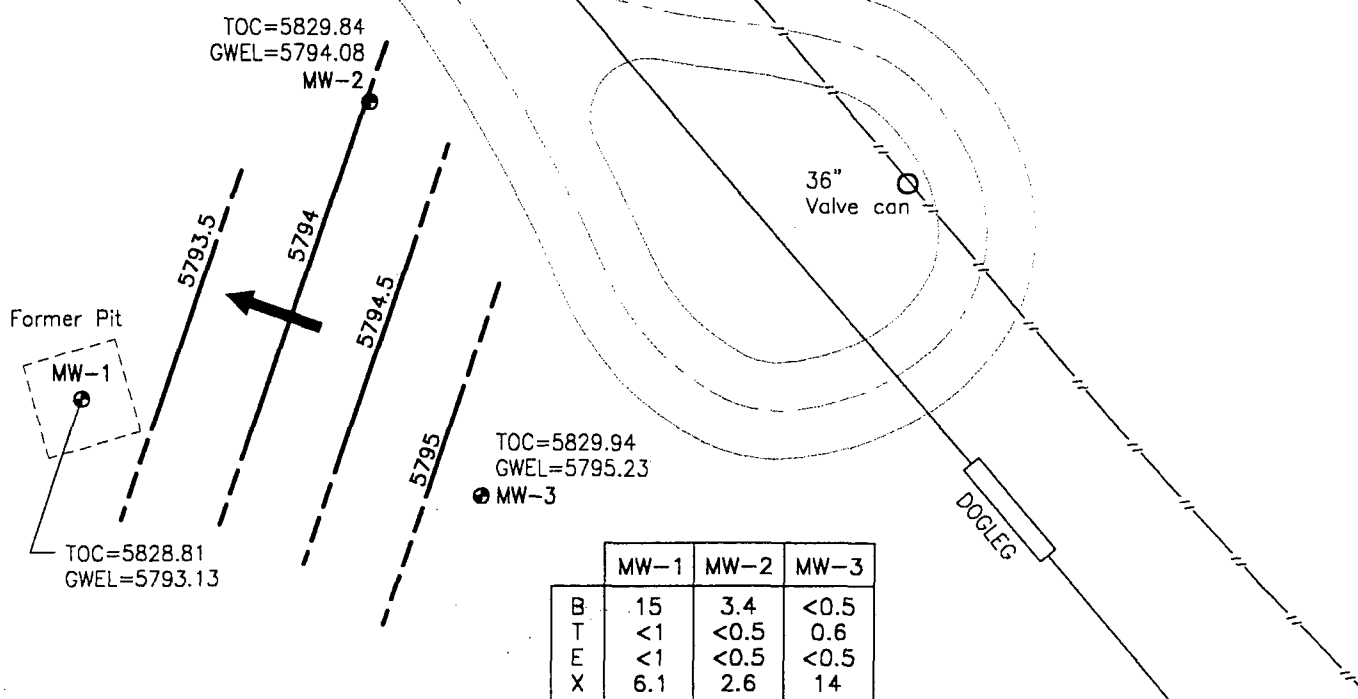
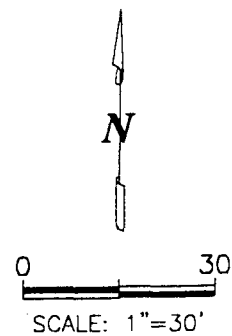
- MW-1 Approximate Monitoring Well Location and Number
- Centerline of Road
- - - - - Pipe Line
- B Benzene ($\mu\text{g/L}$)
- T Toluene ($\mu\text{g/L}$)
- E Ethylbenzene ($\mu\text{g/L}$)
- X Total Xylenes ($\mu\text{g/L}$)
- NS Not Sampled
- 5794 Potentiometric Surface (Approximate & Assumed Where Dashed)
- Direction of Groundwater Flow (Estimated)
- GWEL Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
- TOC Top of Casing

D LOOP LINE DRIP, LD169
JUNE, 2001

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 2

dlc0pld_01.rwg



	MW-1	MW-2	MW-3
B	.15	3.4	<0.5
T	<1	<0.5	0.6
E	<1	<0.5	<0.5
X	6.1	2.6	14

LEGEND

- MW-1 Approximate Monitoring Well Location and Number
- Centerline of Road
- Pipe Line
- B Benzene ($\mu\text{g/L}$)
- T Toluene ($\mu\text{g/L}$)
- E Ethylbenzene ($\mu\text{g/L}$)
- X Total Xylenes ($\mu\text{g/L}$)
- NS Not Sampled
- 5794 Potentiometric Surface (Approximate & Assumed Where Dashed)
- Direction of Groundwater Flow (Estimated)
- GWEL Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
- TOC Top of Casing

D LOOP LINE DRIP, LD169
AUGUST, 2001

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 3



0 30
SCALE: 1"=30'

	MW-1	MW-2
B	5.5	1.4
T	<0.5	<0.5
E	12.0	0.6
X	3	1.9

TOC=5829.84
GWEL=5794.11
MW-2

36"
Valve can

Former Pit

MW-1
TOC=5828.81
GWEL=5793.13

TOC=5829.94
NS
MW-3

LEGEND

- MW-1 Approximate Monitoring Well Location and Number
- Centerline of Road
- //—— Pipe Line
- B Benzene ($\mu\text{g/L}$)
- T Toluene ($\mu\text{g/L}$)
- E Ethylbenzene ($\mu\text{g/L}$)
- X Total Xylenes ($\mu\text{g/L}$)
- NS Not Sampled
- GWEL Groundwater Elevation
(FT Above Mean Sea Level Unless Noted Otherwise)
- TOC Top of Casing

GROUNDWATER SITES
EL PASO FIELD SERVICES

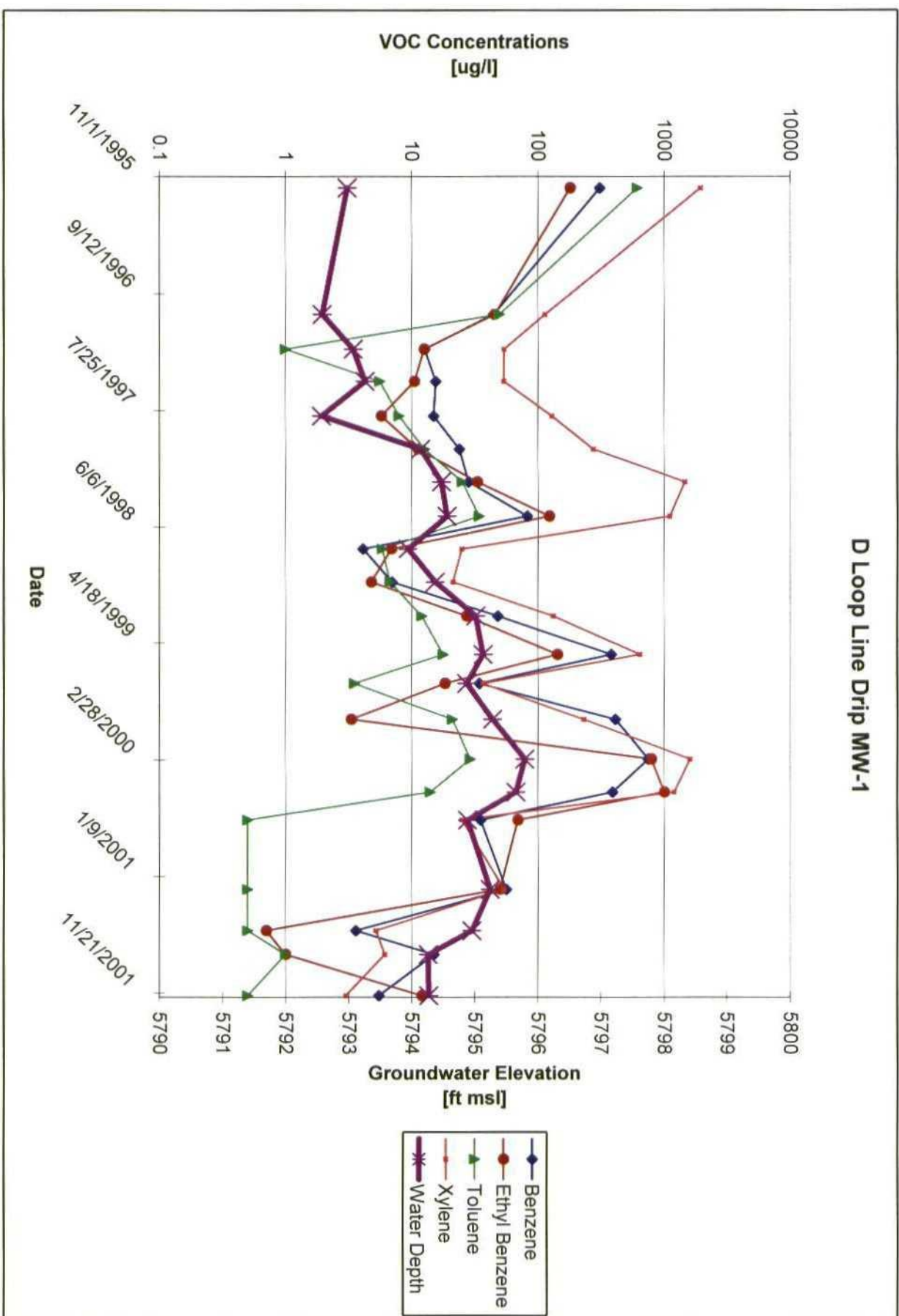
D LOOP LINE DRIP, LD169
NOVEMBER, 2001

FIGURE 4

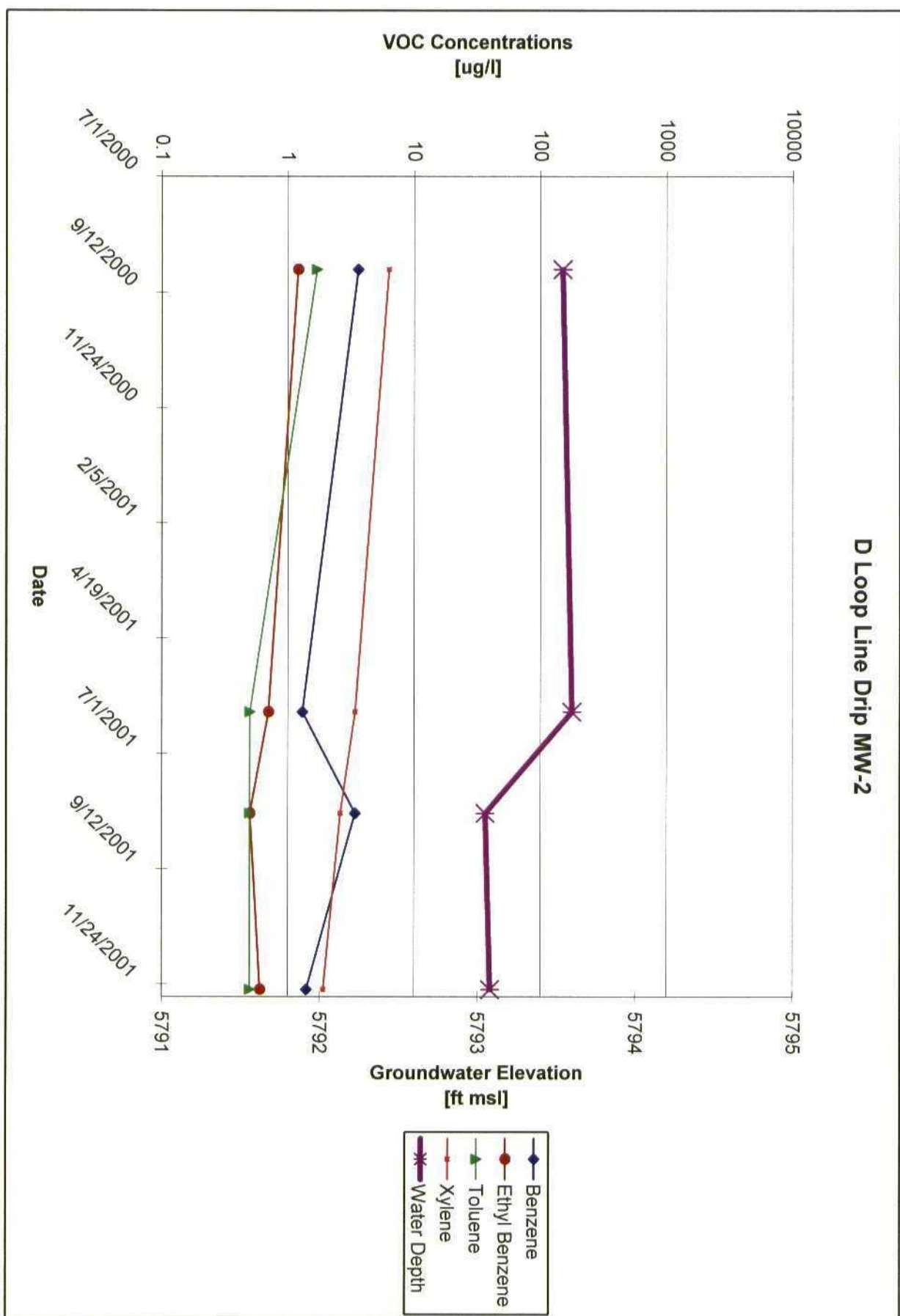
**Table 1 BTEX
D Loop Line Drip**

Sample #	Meter Line #	Site Name	Sample Date	MW#	Benzene (µg/l)	Ethyl Benzene (µg/l)	Toluene (µg/l)	Total Xylenes (µg/l)	Depth to Water (Feet)	Groundwater Elevation (feet)
1690201	LD169	D Loop Line Drip	2/12/2001	1	56	50	< 0.5	54	34.70	5795.24
1690106	LD169	D Loop Line Drip	6/4/2001	1	3.6	0.7	< 0.5	5.2	34.99	5794.95
1690108	LD169	D Loop Line Drip	8/7/2001	1	15	1.0	1	6.1	35.68	5794.26
112030	LD169	D Loop Line Drip	11/27/2001	1	5.5	12	< 0.5	3.0	35.67	5794.27
1690106	LD169	D Loop Line Drip	6/4/2001	2	1.3	0.7	< 0.5	3.4	35.21	5793.6
1690108	LD169	D Loop Line Drip	8/7/2001	2	3.4	< 0.5	< 0.5	2.6	35.76	5793.05
112030	LD169	D Loop Line Drip	11/27/2001	2	1.4	0.6	< 0.5	1.9	35.73	5793.08
1690106	LD169	D Loop Line Drip	6/4/2001	3	9.6	2.9	1.1	41	34.12	5795.72
1690108	LD169	D Loop Line Drip	8/7/2001	3	< 0.5	< 0.5	0.6	14	34.71	5795.13

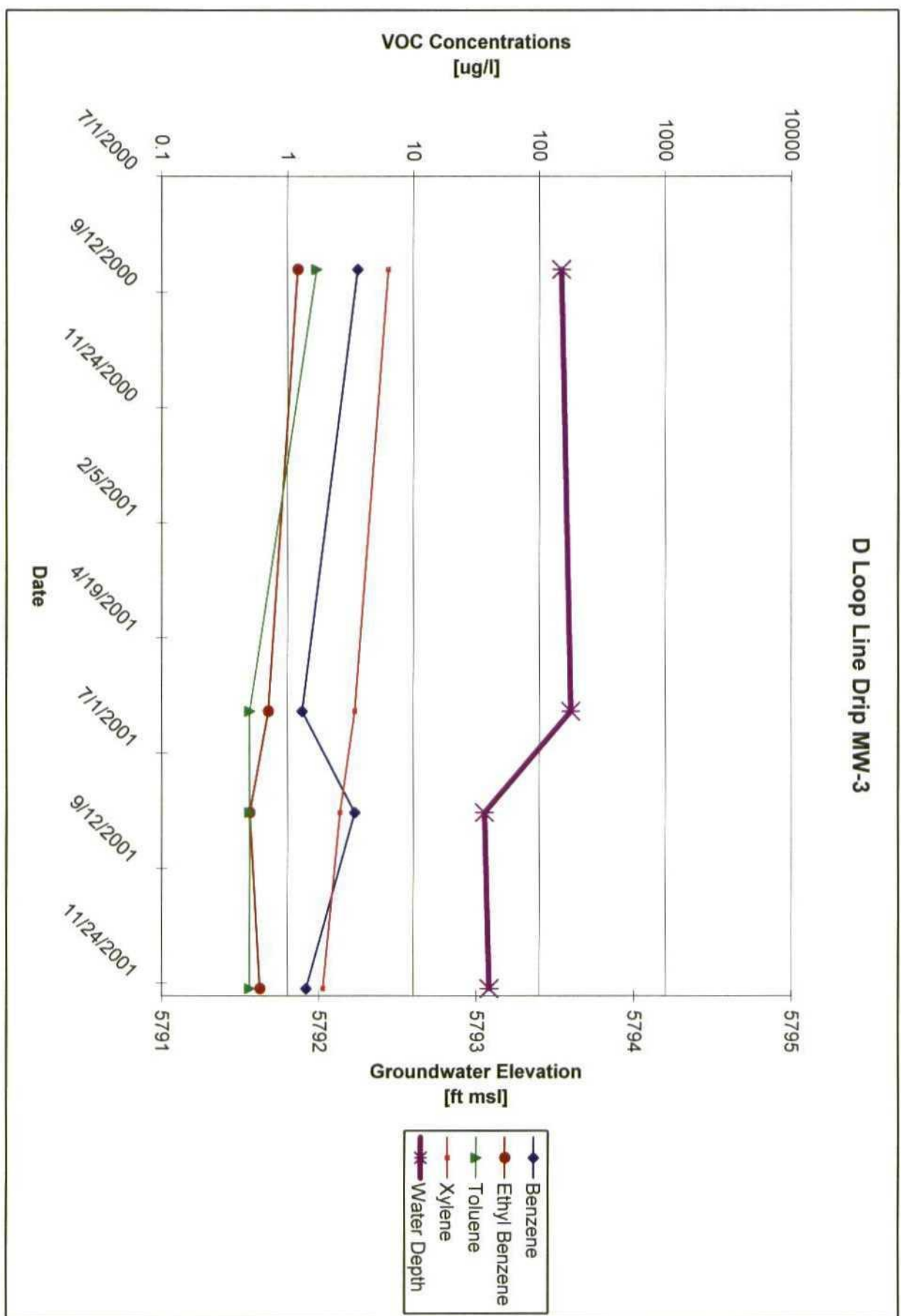
D Loop Line Drip MW-1



D Loop Line Drip MW-2



D Loop Line Drip MW-3



ATTACHMENT 1

2001 GROUNDWATER ANALYTICAL

PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS ARE FOR LAB USE ONLY.

Pinnacle Laboratories Inc.

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

PL Accession #

DATE: 12-10-01 PAGE: 1 OF 1

PROJECT MANAGER: LISA WIND

COMPANY: AMEC EARTH & ENVIRONMENTAL

ADDRESS: 2060 AFTON PLACE

FARMINGTON, NM 87401

PHONE: (505) 327-7928

FAX: (505) 326-5721

BILL TO: SCOTT POPE

COMPANY: 31 PASO FIELD SERVICE

ADDRESS: 611 KILLY AVE.

FARMINGTON, NM 87401

SAMPLE ID DATE TIME MATRIX LAB ID

169-1101-MW01 11-27-01 1547 H20

169-1101-MW02 11-27-01 1623 H20

Petroleum Hydrocarbons (418.1) TRPH
(MOD.8015) Diesel/Direct Inject

(M8015) Gas/Purge & Trap

8021 (BTEX)/8015 (Gasoline) MTBE

8021 (BTEX) ☐ MTBE ☐ TMB ☐ PCE

8021 (TCL)

8021 (EDX)

8021 (HALO)

8021 (CUST)

504.1 EDB ☐ / DBCP ☐

8260 (TCL) Volatile Organics

8260 (Full) Volatile Organics

8260 (CUST) Volatile Organics

8260 (Landfill) Volatile Organics

Pesticides /PCB (608/8081/8082)

Herbicides (615/8151)

Base/Neutral/Acid Compounds GC/MS (625/8270)

Polynuclear Aromatics (610/8310/8270-SIMS)

General Chemistry:

Priority Pollutant Metals (13)

Target Analyte List Metals (23)

RCRA Metals (8)

RCRA Metals by TCLP (Method 1311)

Metals:

NUMBER OF CONTAINERS

PROJECT INFORMATION

PROJ NO: 1517000121

PROJ NAME: EFS GLO PROJECT

P.O. NO:

SHIPPED VIA: GROUND

SAMPLE RECEIPT

NO. CONTAINERS

CUSTODY SEALS: Y/N/NA

RECEIVED INTACT

BLUE

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK

(NORMAL) ☒

CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

1. BOTTLE FROM MUD FLOZ AND
BROKE IN THE REFRIGERATOR.

RELINQUISHED BY: 1.

Signature: Time: 0815

Printed Name: Date: 12-10-01

Company: AMEC

RECEIVED BY: 1.

Signature: Time:

Printed Name: Date:

Company:

RELINQUISHED BY: 2.

Signature: Time:

Printed Name: Date:

Company:

RECEIVED BY: (LAB) 2.

Signature: Time:

Printed Name: Date:

Company: Pinnacle Laboratories Inc.

Page 1 of 1

Project No. 1517000121

Site Address PUERT SAN JUAN County

Serial No. (If applicable)

1957/2

72403

451 63

13c-1.2

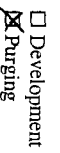
50 TSL

Water Disposal
KUTZ SEPARATOR

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	7.79	5.09	5.09 x 3
Gravel Pack			
Drilling Fluids			
Total			15.27

1

Document 1 10/5/01



WELL DEVELOPMENT AND PURGING DATA FORM

Well Number MY-02

Page 1 of 1

Project Name EPFS GW PROJECT

Project Manager LISA WYNN

Project No. 1S17000121

Client Company EL PASO FIELD SERVICES

site Name D loop LKs DRIP

Site Address PURAT SAN JUAN COUNTRY

Development Criteria

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

Methods of Development

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

Water Removal Data

[illegible]

Comments SAMPLED AT 1623.

Developer's Signature(s)

Robert Thompson

Date 11-27-01

Reviewer

Divine
Date 11/29/

1

Water Volume Calculation

Initial Depth of Well (feet) 41.88' 70R
Initial Depth to Water (feet) 35.73' 70R
Height of Water Column in Well (feet) 6.15'
Diameter (inches): Well 2 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	6.15	1.00	1.00 x 3
Gravel Pack			
Drilling Fluids			
Total			3.00

Instruments

☒ pH Meter YSI 63

☐ DO Monitor

☒ Conductivity Meter YSI 63

☒ Temperature Meter YSI 63

☐ Other _____

Water Disposal

KUTZ SEPARATOR

Survey ~ Profile

NOTES OF

Menu Monitoring

EPFS ~ TRC D Loop AT ES.

ES. _____ TO ES. _____

CO. NAME El Paso Field Services

FARM NAME & NO. Trunk D Loop Line Drp 119

LOCATION SE 1/4 SEC. 33 T. 28 N. R. 8 W. N.M.F.M

San San, N. Mex FROM _____ LINE _____ FROM _____ LINE _____

R/W No. _____ DATE Oct 11 2001

W/O No. _____ WEATHER Cloudy Cool

BOB ~ GPS Astro

Inst ~ Trimble DTK

Ref ~ Redune Book

Quads ~ Fresno Canyon

Note ~ Survey on

EPFS TRC D Redune

R.O.W

CREW (DEI)

A. Remedy

E. Seay

PT # NM280833

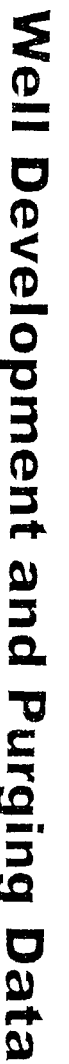
Lat. 36° 36' 57" N

Long. 107° 40' 44" W

File: TRKDLDs, TRKDLDT

CHECKED BY

PLOTTED BY



Page 1 of 1

Name/Identification	Site Address
D1000 LD/L10/169	Burns & Sons Tools Co.

Project Manager LISA KIMM

Water Volume Calculation

Initial Depth of Well (feet)

Initial Depth to Water (feet)

Height of Water Column in

☒ Temperature Meter

Water Volume in Well	Gallons to be
----------------------	---------------

Item	Cubic Feet	Gallons	Removed
------	------------	---------	---------

Well Casing	7.78	5.07x3	15.21

Gravel Pack			
-------------	--	--	--

Drilling Fluids		
-----------------	--	--

Total	15.71
-------	-------

Don G. St. John

•

No. of Containers 2

1

make Depth	Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Removed (gallons)		Temperature (°C)	pH	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Comments
		Increment	Cumulative	Increment	Cumulative					
		3.05	3.05			85.6	7.01	4810		Flow - 3.5 cfm
		3.05	6.50			82.9	7.08	3750		Flow - 3.5 cfm
		3.05	9.75			80.5	7.04	3150		Flow - 3.5 cfm
		3.05	13			79.4	7.07	2730		Flow - 3.5 cfm
	37.18	3.05	16.05			79	7.06	2560		No Change

1000

Date 7-01 Reviewer William Date 8/16

8/16



Well Development and Purging Data

Project No. CLC9 Development ☐
Task No. 2 Purging ☒

Page 1 of 1

Well No. AW 2 Site Name/Identification DLOOP 40(40/64) Site Address Rural San Juan CO.

Client/Project Name EL PASO Field Services EPOS Remediation project Project Manager LISA WINN

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 412 415
Initial Depth to Water (feet) 35 26
Height of Water Column in Well (feet) 6.69
Diameter (inches): Well 2" Gravel Pack _____

Instruments
☒ PH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☐ Other _____

Serial No. (if applicable)
Hydric
Hydric

Water Disposal
Auto Spill into Reservoir NW.

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

Item	Water Volume in Well Cubic Feet	Gallons	Gallons to be Removed
Well Casing	6.69	109X3	3.27
Gravel Pack			
Drilling Fluids			
Total			3.27

Sampling Activities
Type of Container LD4 No. of Containers 2
Parameters Sampled For STEX

Water Removal Data

Date	Time	Development Method	Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons) Increment	Cumulative	Product Volume Removed (gallons) Increment	Cumulative	Temperature (°C)	pH	Conductivity (microhm/cm)	Dissolved Oxygen (mg/L)	Comments
4-7-01	13:41		X				.25	.25			21.9	6.99	1710		Cloudy odor
	13:50		X				.25	1.5			19.7	7.00	1620		7.00/620
	13:52		X				.25	2.25			19.6	7.00	1620		7.00/620
	13:54		X				.25	3			18.9	6.99	1580		11
	13:57		X				.25	3.25			18.9	6.96	1520		no change

Comments Sampled for BTEX 1415

Developer's Signature (s) Chickory Date 8-7-01 Reviewer Julius Date 8/10/01

PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: Lisa Winn

COMPANY:

G.E.M.

ADDRESS:

906 SAN JAC RIVERO, S-17C D.

PHONE:

(505) 566-9116

FAX:

(505) 566-9120

BILL TO:

SCOTT PAGE

COMPANY:

El Paso Field Services

ADDRESS:

6041 Reilly Ave
Farmington NM 87401

SAMPLE ID

DATE

TIME

MATRIX

LAB ID

Petroleum Hydrocarbons (418.1) TRPH

(MOD.8015) Diesel/Direct Inject

(M8015) Gas/Purge & Trap

8021 (BTEX)/8015 (Gasoline) MTBE

8021 (BTEX) ☐ MTBE ☐ TMB ☐ PCE

8021 (TCL)

8021 (EDX)

8021 (HALO)

8021 (CUST)

504.1 EDB ☐ /DBCP ☐

8260 (TCL) Volatile Organics

8260 (Full) Volatile Organics

8260 (CUST) Volatile Organics

8260 (Landfill) Volatile Organics

Pesticides /PCB (608/8081/8082)

Herbicides (615/8151)

Base/Neutral/Acid Compounds GC/MS (625/8270)

Polynuclear Aromatics (610/8310/8270-SIMS)

General Chemistry:

Priority Pollutant Metals (13)

Target Analyte List Metals (23)

RCRA Metals (8)

RCRA Metals by TCLP (Method 1311)

Metals:

NUMBER OF CONTAINERS

ANALYSIS REQUEST

PROJECT INFORMATION

PROJ. NO.:

G169

PROJ. NAME:

EPA Remediation

P.O. NO.:

P-001

SHIPPED VIA:

SAMPLE RECEIPT

NO. CONTAINERS:

CUSTODY SEALS:

Y/N/NA

RECEIVED INTACT:

BLUE INK:

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK(NORMAL) ☒CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHERMETHANOL PRESERVATION ☐COMMENTS: FIXED FEE ☐DLOOP LD
meier # (LPI69)

RELINQUISHED BY:

Signature:

Time:

Date:

Date:

Printed Name:

Date:

Date:

Date:

Company:

Date:

Date:

Date:

Company:

Date:

Date:

Date:

Company:

Date:

Date:

Date:

Company:

Date:

Date:

Date:

Company:

Date:

Date:

Date:

Company:

Date:

Date:

Date:

Company:

Date:

Date:

Date:



Well Development and Purging Data

Project No. 6169
Task No. 2
Well No. Mw 1

Development ☐
Purging ☒

Page 1 of 1

Site Name/Identification D Loop (LD 169) Site Address Burnal San Juan Co.

Client/Project Name El Paso Field Services EPFS Remediation project Project Manager Lisa Mirra

Development Criteria

☒ 0.5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Water Volume Calculation
Initial Depth of Well (feet) 43.46
Initial Depth to Water (feet) 34.94
Height of Water Column in Well (feet) 8.47
Diameter (inches): Well 4 1/2 Gravel Pack

Methods of Development

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

Item	Water Volume in Well	Gallons to be Removed
Well Casing	Cubic Feet <u>8.47</u> Gallons <u>55.283</u>	<u>16.56</u>
Gravel Pack		
Drilling Fluids		
Total		<u>16.56</u>

Instruments
☒ PH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☐ Other
Serial No. (if applicable)
Hydac
Hydac
Hydac

Water Disposal
Leitz Separator Bloomfield W.M.

☐ Other

Water Removal Data

Date	Time	Development Method	Pump	Bailor	Removal Rate (gal/min)	Inake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)	Product Volume Removed (gallons)	Temperature (°C)	pH	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	Comments
6-4-01	1443			X				3.5	3.5	22.6	7.34	4070		10-41 gpg
	1448			X				3.5	7	18.7	7.33	3640		10-41 gpg
	1452			X				3.5	10.5	14.7	7.39	3340		"
	1457			X				3.5	14	17.5	7.41	2870		"
	1501			X			36.59	3.5	17.5	17.2	7.41	2550		no change

Circle the date and time that the development criteria are met.
Comments Sampled for BTEX 1510

Developer's Signature (s) Chris A. May Date 6-4-01 Reviewer J. Adams Date 6/7/01

Water Removal Data

Parameters Sampled For BTEX 8021

670

Date	Time	Development		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Removed (gallons)		Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
		Pump	Boiler				Increment	Cumulative	Increment	Cumulative					
5-4-01	1620		X				.25	.25			18.7	6.88	1580		210-0150-0
	1623		X				.25	1.5			18	6.95	1480		210-0150-0
	1625		X				.25	2.05			17.5	7.01	1460		"
	1626		X				.25	3			17.1	7.05	1450		"
	1630		X			35.28	.25	3.25			16.7	7.06	1440		No Change



Date _____

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PROJECT MANAGER: LISA Wynn		COMPANY: G.E.M.		ADDRESS: 906 San Juan Blvd		PHONE: Farmington NM. 877101		FAX: (505) 566-9126		BILL TO: SPES SCOTT PAGE		COMPANY: EL Paso Field Services		ADDRESS: 614 Reilly Ave		Farmington NM.	
SAMPLE ID	DATE	TIME	MATRIX	LAB ID													
169-0106-MW1	6-4-01	1510	H ₂ O														
169-0106-MW2	6-4-01	1640	H ₂ O														
169-0106-MW3	6-4-01	1555	H ₂ O														
					Petroleum Hydrocarbons (418.1) TRPH												
					(MOD.8015) Diesel/Direct Inject												
					(M8015) Gas/Purge & Trap												
					8021 (BTEX)/8015 (Gasoline) MTBE												
					8021 (BTEX) ☐ MTBE ☐ TMB ☐ PCE												
					8021 (TCL)												
					8021 (EDX)												
					8021 (HALO)												
					8021 (CUST)												
					504.1 EDB ☐ / DBCP ☐												
					8260 (TCL) Volatile Organics												
					8260 (Full) Volatile Organics												
					8260 (CUST) Volatile Organics												
					8260 (Landfill) Volatile Organics												
					Pesticides /PCB (608/8081/8082)												
					Herbicides (615/8151)												
					Base/Neutral/Acid Compounds GC/MS (625/8270)												
					Polynuclear Aromatics (610/8310/8270-SIMS)												
					General Chemistry:												
					Priority Pollutant Metals (13)												
					Target Analyte List Metals (23)												
					RCRA Metals (8)												
					RCRA Metals by TCLP (Method 1311)												
					Metals:												
					NUMBER OF CONTAINERS:												

PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS		RELINQUISHED BY:		RELINQUISHED BY:	
PROJ NO: 6169	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK	(NORMAL) ☒		Signature: [Signature]	Time: 1500	Signature: [Signature]	Time: 1500
PROJ NAME: EL Paso Field Services	CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER			Printed Name: Chris Macz	Date: 6-6-01	Printed Name: [Signature]	Date: [Signature]
P.O. NO:	METHANOL PRESERVATION ☐			Company: Pinnacle Laboratories Inc.		Company: Pinnacle Laboratories Inc.	
SHIPPED VIA:	COMMENTS: FIXED FEE ☐			RECEIVED BY: [Signature]	Time: [Signature]	RECEIVED BY: [Signature]	Time: [Signature]
SAMPLE RECEIPT				Printed Name: [Signature]	Date: [Signature]	Printed Name: [Signature]	Date: [Signature]
NO. CONTAINERS:				Company: Pinnacle Laboratories Inc.		Company: Pinnacle Laboratories Inc.	
CUSTODY SEALS:	Y/N/NA			Printed Name: [Signature]	Date: [Signature]	Printed Name: [Signature]	Date: [Signature]
RECEIVED INTACT				Company: Pinnacle Laboratories Inc.		Company: Pinnacle Laboratories Inc.	
BLUE ICE/CE				Printed Name: [Signature]	Date: [Signature]	Printed Name: [Signature]	Date: [Signature]

Project No. 62800107

Phase.Task No. 0301

2

Serial No. (If applicable)

Hydasc

1102

Hyda

B/om
x-iv

Water Disposal
Leakage Severs for Bloomfield

☒ Conductivity Meter Hydax
☒ Temperature Meter Hydax
☐ Other _____

Conductivity (mmho/cm)	Dissolved Oxygen (mg/l)	Comments
776040		C1024 x No odor
36060		"
95490		"
5170		"
5490		No Change

200

Reviewer K-1 Date 2/13/01

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **112030**
December 27, 2001

AMEC EARTH & ENVIRONMENTAL
2060 AFTON PLACE
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name
Project Number

EPFS GW PROJECT
1517000121

D Loop Line Drip LD-169

Attention: LISA WINN/SCOTT POPE

On 12/10/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.



H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: AMEC EARTH & ENVIRONMENTAL	PINNACLE ID	: 112030
PROJECT #	: 1517000121	DATE RECEIVED	: 12/10/01
PROJECT NAME	: EPFS GW PROJECT	REPORT DATE	: 12/27/01
PINNACLE			
ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
112030 - 01	169-1101-MW01	AQUEOUS	11/27/01
112030 - 02	169-1101-MW02	AQUEOUS	11/27/01

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
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PINNACLE
LABORATORIES

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000121
PROJECT NAME : EPFS GW PROJECT

PINNACLE I.D.: 112030

SAMPLE			DATE	DATE	DATE	DIL.
D. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
1	169-1101-MW01	AQUEOUS	11/27/01	NA	12/10/01	1
2	169-1101-MW02	AQUEOUS	11/27/01	NA	12/10/01	1

PARAMETER	DET. LIMIT	UNITS	169-1101-MW01	169-1101-MW02
BENZENE	0.5	UG/L	5.5	1.4
TOLUENE	0.5	UG/L	< 0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	12	0.6
TOTAL XYLENES	0.5	UG/L	3.0	1.9

SURROGATE:

BROMOFLUOROBENZENE (%)

115

114

SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

1/A



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Albuquerque, New Mexico 87107
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Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 112030
LAB I. D.	: 121001	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 12/10/01
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS GW PROJECT		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
ORTHAL XYLENES	UG/L	<0.5

surrogate:
BROMOFLUOROBENZENE (%) 111
 surrogate LIMITS: (80 - 120)
HIGHLIGHT NOTES:
/A

PINNACLE
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Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

EST : EPA 8021 MODIFIED
ISMSD # : 112031-06
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000121
PROJECT NAME : EPFS GW PROJECT

PINNACLE I.D. : 112030
DATE EXTRACTED : N/A
DATE ANALYZED : 12/11/01
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
ENZENE	<0.5	20.0	20.8	104	20.3	101	2	(80 - 120)	20
OLUENE	<0.5	20.0	20.7	103	20.6	103	0	(80 - 120)	20
THYLBENZENE	<0.5	20.0	20.5	103	20.1	100	2	(80 - 120)	20
OTAL XYLENES	<0.5	60.0	64.2	107	63.0	105	2	(80 - 120)	20

HEMIST NOTES:
I/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

PINNACLE
LABORATORIES

D-600P LD-169
2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number 108038
August 22, 2001

GOLDEN ENVIRONMENTAL MNGT.
906 SAN JUAN BLVD.
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name EPFS REMEDIAITON PROJECT
Project Number 6169

Attention: LISA WINN/SCOTT POPE

On 08/08/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.



H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	PINNACLE ID	: 108038
PROJECT #	: 6169	DATE RECEIVED	: 08/08/01
PROJECT NAME	: EPFS REMEDIAITON PROJECT	REPORT DATE	: 08/22/01
PINNACLE			DATE
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
108038 - 01	169-0108-MW1	AQUEOUS	08/07/01
108038 - 02	169-0108-MW2	AQUEOUS	08/07/01
108038 - 03	169-0108-MW3	AQUEOUS	08/07/01

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : GOLDEN ENVIRONMENTAL MNGT.
PROJECT # : 6169
PROJECT NAME : EPFS REMEDIAITON PROJECT

PINNACLE I.D.: 108038

APPENDIX A - DATA FROM REMEDIATION PROJECT						
SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	169-0108-MW1	AQUEOUS	08/07/01	NA	08/16/01	2
02	169-0108-MW2	AQUEOUS	08/07/01	NA	08/15/01	1
03	169-0108-MW3	AQUEOUS	08/07/01	NA	08/15/01	1

PARAMETER	DET. LIMIT	UNITS	169-0108-MW1	169-0108-MW2	169-0108-MW3
BENZENE	0.5	UG/L	15	3.4	< 0.5
TOLUENE	0.5	UG/L	< 1.0	< 0.5	0.6
ETHYLBENZENE	0.5	UG/L	< 1.0	< 0.5	< 0.5
TOTAL XYLENES	0.5	UG/L	6.1	2.6	14

SURROGATE:

BROMOFLUOROBENZENE (%)

106

104

115

SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

N/A

PINNACLE
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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 108038
BLANK I. D.	: 081501	DATE EXTRACTED	: NA
CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	DATE ANALYZED	: 08/15/01
PROJECT #	: 6169	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS REMEDIAITON PROJECT		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5

SURROGATE:

BROMOFLUOROBENZENE (%)

101

SURROGATE LIMITS:

(80 - 120)

CHILIST NOTES:

N/A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 108038
BLANK I. D.	: 081601	DATE EXTRACTED	: NA
CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	DATE ANALYZED	: 08/16/01
PROJECT #	: 6169	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS REMEDIAITON PROJECT		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 102
SURROGATE LIMITS: (80 - 120)
HIGHEST NOTES:
I/A

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GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST : EPA 8021 MODIFIED
MSMSD # : 108029-04
CLIENT : GOLDEN ENVIRONMENTAL MNGT.
PROJECT # : 6169
PROJECT NAME : EPFS REMEDIAITON PROJECT

PINNACLE I.D. : 108038
DATE EXTRACTED : NA
DATE ANALYZED : 08/15/01
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	20.9	105	21.3	107	2	(80 - 120)	20
TOLUENE	1.3	20.0	23.1	116	23.3	117	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	22.8	114	23.0	115	1	(80 - 120)	20
TOTAL XYLENES	2.4	60.0	69.6	116	70.0	117	1	(80 - 120.)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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[illegible]

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LABORATORIES

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Phone (505) 344-3777
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Pinnacle Lab ID number **106035**
June 13, 2001

GOLDEN ENVIRONMENTAL MNGT.
906 SAN JUAN BLVD.
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name EPFS REMEDIATION PROJECT
Project Number 6169

D-Loop
LD-169

Attention: LISA WINN/SCOTT POPE

On 06/07/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

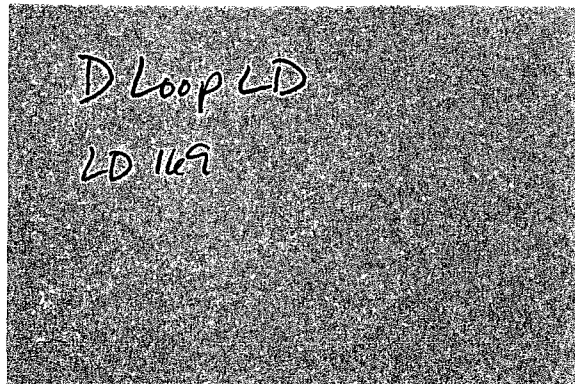
If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

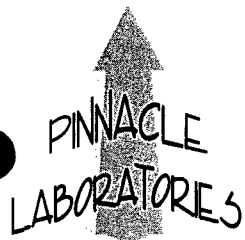


H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure





2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	PINNACLE ID	: 106035
PROJECT #	: 6169	DATE RECEIVED	: 06/07/01
PROJECT NAME	: EPFS REMEDIATION PROJECT	REPORT DATE	: 06/13/01

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
106035 - 01	169-0106-MW1	AQUEOUS	06/04/01
106035 - 02	169-0106-MW2	AQUEOUS	06/04/01
106035 - 03	169-0106-MW3	AQUEOUS	06/04/01

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : GOLDEN ENVIRONMENTAL MNGT.
PROJECT # : 6169
PROJECT NAME : EPFS REMEDIATION PROJECT

PINNACLE I.D.: 106035

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	169-0106-MW1	AQUEOUS	06/04/01	NA	06/12/01	1
02	169-0106-MW2	AQUEOUS	06/04/01	NA	06/12/01	1
03	169-0106-MW3	AQUEOUS	06/04/01	NA	06/12/01	1

PARAMETER	DET. LIMIT	UNITS	169-0106-MW1	169-0106-MW2	169-0106-MW3
BENZENE	0.5	UG/L	3.6	1.3	9.6
TOLUENE	0.5	UG/L	< 0.5	< 0.5	1.1
ETHYLBENZENE	0.5	UG/L	0.7	0.7	2.9
TOTAL XYLENES	0.5	UG/L	5.2	3.4	41

SURROGATE:
BROMOFLUOROBENZENE (%) 132* 103 154*
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

* = High surrogate results due to matrix interference.



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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 106035
BLANK I. D.	: 061201	DATE EXTRACTED	: NA
CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	DATE ANALYZED	: 06/12/01
PROJECT #	: 6169	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS REMEDIATION PROJECT		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
OTOL XYLENES	UG/L	<0.5

UNROGATE:
ROMOFLUOROBENZENE (%) 105
UNROGATE LIMITS: (80 - 120)
HEMIST NOTES:
/A



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GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

EST : EPA 8021 MODIFIED
SMSD # : 106034-04
CLIENT : GOLDEN ENVIRONMENTAL MNGT.
PROJECT # : 6169
PROJECT NAME : EPFS REMEDIATION PROJECT

PINNACLE I.D. : 106035
DATE EXTRACTED : NA
DATE ANALYZED : 06/12/01
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	3.4	20.0	21.2	89	20.4	85	4	(80 - 120)	20
TOLUENE	0.5	20.0	19.4	95	19.1	93	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	19.9	100	19.7	99	1	(80 - 120)	20
BTAL XYLENES	2.2	60.0	61.2	98	60.5	97	1	(80 - 120)	20

ANALYST NOTES:
NA

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **102074**
February 26, 2001

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

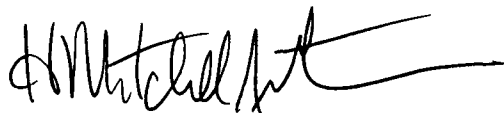
EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/SCOTT POPE

On 02/16/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.



H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 102074
PROJECT #	: 62800107	DATE RECEIVED	: 02/16/01
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 02/26/01
PINNACLE			DATE
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
102074 - 01	169-0201-MW01	AQUEOUS	02/12/01



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D.: 102074

SAMPLE		DATE	DATE	DATE	DIL.	
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	169-0201-MW01	AQUEOUS	02/12/01	NA	02/22/01	1
PARAMETER		DET. LIMIT	UNITS	169-0201-MW01		
BENZENE		0.5	UG/L	56		
TOLUENE		0.5	UG/L	< 0.5		
ETHYLBENZENE		0.5	UG/L	50		
TOTAL XYLENES		0.5	UG/L	54		

SURROGATE:
BROMOFLUOROBENZENE (%) 118
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 102074
BLANK I. D.	: 022201	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 02/22/01
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5

UNSATURATED:
MONOFLUOROBENZENE (%) 101
UNSATURATED LIMITS: (80 - 120)
CHEMIST NOTES:
I/A



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GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST : EPA 8021 MODIFIED
MSMSD # : 102072-02
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING
PINNACLE I.D. : 102074
DATE EXTRACTED : NA
DATE ANALYZED : 02/22/01
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	19.4	97	19.1	96	2	(80 - 120)	20
OLUENE	<0.5	20.0	17.8	89	17.9	90	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	19.0	95	19.4	97	2	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	55.9	93	57.2	95	2	(80 - 120)	20

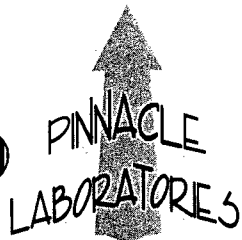
CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\% \text{ RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

ATTACHMENT 2

2001 MONITOR WELL INSTALLATION RECORDS

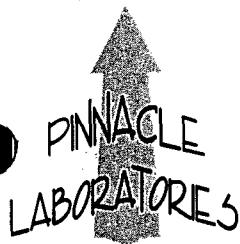


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Albuquerque, New Mexico 87107
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Fax (505) 344-4413

CLIENT : ENVIROTECH, INC.
PROJECT # : 97057-052
PROJECT NAME : EPFS

PINNACLE ID : 201044
DATE RECEIVED : 01/11/02
REPORT DATE : 01/22/02

PINNACLE	ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
	201044 - 01	MW-2A/21786	AQUEOUS	01/10/02



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Albuquerque, New Mexico 87107
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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : ENVIROTECH, INC.
PROJECT # : 97057-052
PROJECT NAME : EPFS

PINNACLE I.D.: 201044

SAMPLE		DATE		DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	MW-2A/21786	AQUEOUS	01/10/02	NA	01/11/02	1
PARAMETER		DET. LIMIT	UNITS		MW-2A/21786	
BENZENE		0.5	UG/L		< 0.5	
TOLUENE		0.5	UG/L		< 0.5	
ETHYLBENZENE		0.5	UG/L		< 0.5	
TOTAL XYLENES		1.0	UG/L		< 1.0	

SURROGATE:

BROMOFLUOROBENZENE (%)

106

SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

N/A



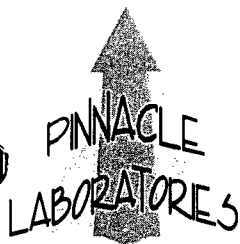
2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 201044
BLANK I. D.	: 011102	DATE EXTRACTED	: N/A
CLIENT	: ENVIROTECH, INC.	DATE ANALYZED	: 01/11/02
PROJECT #	: 97057-052	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0

SURROGATE:
BROMOFLUOROBENZENE (%) 106
SURROGATE LIMITS: (80 - 120)
CHECKLIST NOTES:
N/A



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Albuquerque, New Mexico 87107
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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST : EPA 8021 MODIFIED
BATCH ID# : 011102
CLIENT : ENVIROTECH, INC.
PROJECT # : 97057-052
PROJECT NAME : EPFS

PINNACLE I.D. : 201044
DATE EXTRACTED : N/A
DATE ANALYZED : 01/11/02
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	21.5	108	20.9	105	3	(80 - 120)	20
TOLUENE	<0.5	20.0	21.2	106	20.7	104	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.4	107	20.8	104	3	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	64.9	108	63.7	106	2	(80 - 120)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\% \text{ RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



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GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST : EPA 8021 MODIFIED
MSMSD # : 201027-01
CLIENT : ENVIROTECH, INC.
PROJECT # : 97057-052
PROJECT NAME : EPFS

PINNACLE I.D. : 201044
DATE EXTRACTED : N/A
DATE ANALYZED : 01/11/02
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	7.6	20.0	26.9	97	26.7	97	1	(80 - 120)	20
TOLUENE	20	20.0	37.5	88	37.0	88	1	(80 - 120)	20
ETHYLBENZENE	4.7	20.0	26.7	110	26.1	110	2	(80 - 120)	20
TOTAL XYLENES	34	60.0	98.5	108	96.9	108	2	(80 - 120)	20

CHART NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

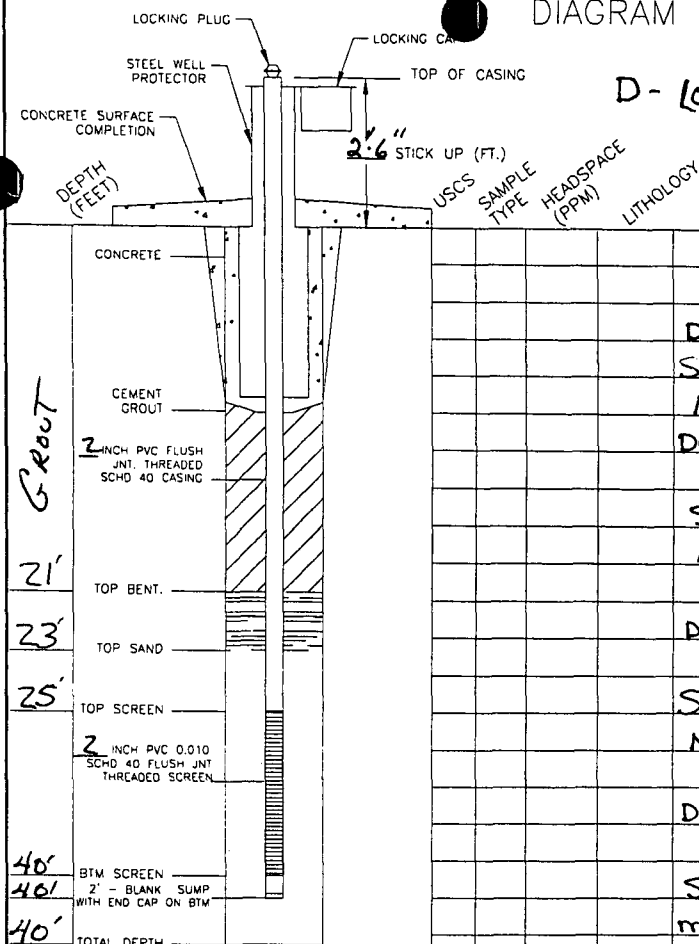
Note well diameter if not one of the above.

ABOVE GRADE WELL COMPLETION DIAGRAM / LITHOLOGY LOG

MW _____

SB _____

D-loop-LINE-DRIP



Well Materials Used:

- 7 Sks 10-12 Silica Sand
- 1 Sks Bentonite Chips
- 6 Sks Class "A" Cement
- 2 Sks Quickcrete
- 30 Ft Blank Casing
- 15 Ft Screen

Well Development:

- ☐ Bailed
- ☐ Pumped
- ☐ Gallons of Water

Remarks:

DRILLER: Kelly Padilla
 HELPER: T.J. VALDEZ
 DRILLING COMPANY: ACEI
 DRILLING METHOD: Auger

BIT SIZE: 8"
 TOTAL BORING DEPTH: 40'
 DATE STARTED: 1/18/02
 SAMPLER TYPE: _____

LOCATION: D-loop/EPES
 ELEVATION: _____
 DATE COMPLETED 1/18/02
 GEOLOGIST: _____

ENVIROTECH INC.

ENVIRONMENTAL SCIENTISTS & ENGINEERS
 5796 U.S. HIGHWAY 64
 FARMINGTON, NEW MEXICO 87401
 (505) 632-0615
AbvOrdug.dwg

REVISIONS

BY _____ DATE _____
 BY _____ DATE _____

JOB # _____

DATE _____ DRAWN _____ PAGE _____
 SCALE _____ APPROVED _____ OF _____

MONITOR WELL ABANDONMENT FORM

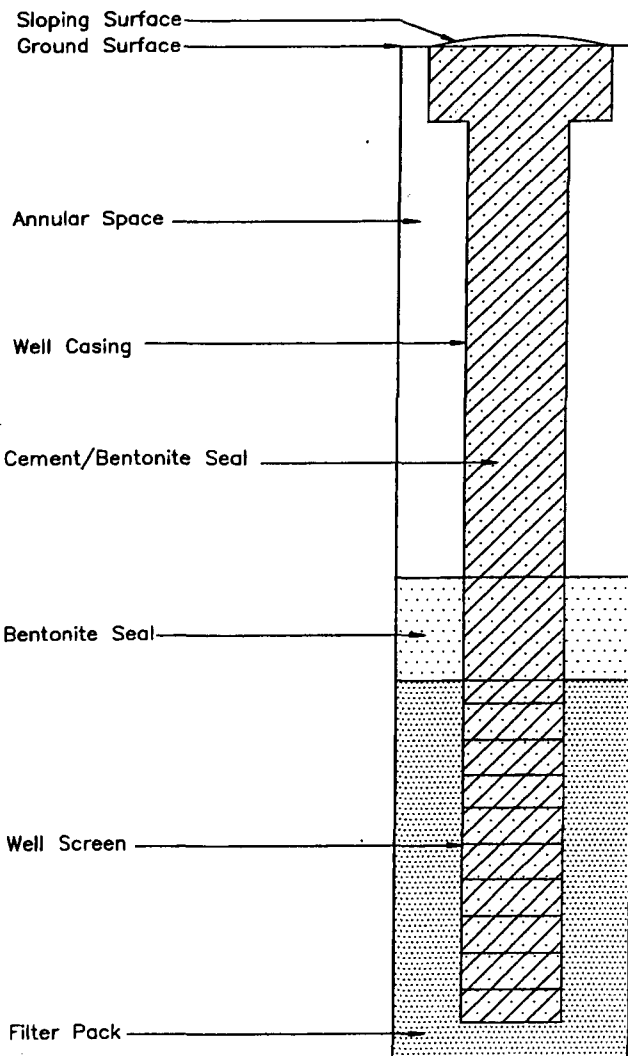
Envirotech Inc.
5796 US Hwy 64
Farmington, New Mexico 87401
(505)632-0615 Fax (505)632-1865

D-LOOP-LINE-DRIP

Project Name EPFS
Project Number/Phase _____
Driller Kelly Padilla
Date/Time Started 1-8-02
Date/Time Completed 1-8-02

Well # D-loop line drip
Well Location _____
Site Location D-loop line drip

WELL DIAGRAM

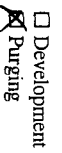


Ground Surface ↑ ↑ ↑
Top of Grout Ground Surface
Top of Riser _____
Water Level _____

Bottom of Grout 35'
Bottom of Well (TD) 35'

Comments: Pulled well Protector about 3' of casing came up with Protector. Grouted well.

Driller's Signature Kelly Padilla



WELL DEVELOPMENT AND PURGING DATA FORM

Well Number MW-03

Page 1 of 1

Project Name EPF5 GW Project

Project Manager LISA WYNN

Project No. 1517000121

Client Company EL PASO FIELD SERVICES

Site Name D 200P LINE DEEP

Site Address RURAL SAN JUAN COUNTRY

Development Criteria

~~X~~ 3 to 5 Casing Volumes of Water Removal

☐ Other

Methods of Development

Equipment	Yes	No	Other
Pump	☐	☐	☐
Centrifugal	☐	☒	☐
Submersible	☐	☐	☐
Peristaltic	☐	☐	☐
Other	☐	☐	☐
Bailer	☐	☒	☐
Bottom Valve	☐	☐	☐
Double Check Valve	☐	☐	☐
Stainless-steel Kemmerer	☐	☐	☐

Water Removal Data

[illegible]

Comments Could NOT Sample Obstruction in well Bailer in Borehole of well could NOT

Development Signature(s) Date Reviewer Date

Robert J. Harrison 12/12/01

Believe obstruction to be of ASPT well casing

Reviewer JW Date 12/12/2012

Document# 10/5/0