

3R - 213

REPORTS

DATE:

2001

Certified Mail: #7001 1940 0003 1553 8513

February 28, 2002

RECEIVED

MAR 04 2002

**ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION**

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

RE: 2001 Pit Project Annual Groundwater Report

Dear Mr. Olson:

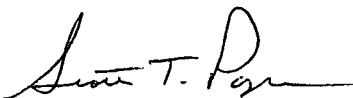
In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual reports for the 30 remaining groundwater impacted sites that were identified during our pit closure project of 1994 / 1995.

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, NMOC, 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 IA-Federal Sites**

March 2002

Prepared for

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



MWH

MONTGOMERY WATSON HARZA

EL PASO FIELD SERVICES ANNUAL GROUNDWATER REPORT

FEDERAL SITES VOLUME IA

TABLE OF CONTENTS

Site Map

METER or LINE ID	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
89961	Fields A#7A	32N	11W	34	E
89232	Johnston Fed #6A	31N	09W	35	F
94715	James F. Bell #1E	30N	13W	10	P
89620	Sandoval GC A #1A	30N	09W	35	C
87493	W D Heath B-5	30N	09W	31	M
LD151	[Lat 0-21 Line Drip]	30N	09W	12	O
73220	Fogelson 4-1 Com. #14	29N	11W	4	P



MWH

MONTGOMERY WATSON HARZA

This is a detailed topographic map of the Gallup, New Mexico area. The map features a grid with latitude and longitude coordinates. Key geographical features include the Colorado River flowing through the center, the Navajo Indian Reservation to the east, and the Hopi and Zuni Indian Reservations to the west. Towns such as Gallup, Blanding, and Bluff are labeled. The map also shows various canyons, mountains, and infrastructure like roads and railroads. The terrain is depicted with contour lines and shading to indicate elevation.

3 mi Scale: 1 : 600,000 Detail: 3-4 Datum: WGS84

EPFS GROUNDWATER PITS 2001 ANNUAL GROUNDWATER REPORT

Lat 0-21 Line Drip

Meter Code LD151

SITE DETAILS

Legals TwN: 30N Rng: 09W Sec: 12 UNIT: O
NMOCD Haz Ranking 40 Land Type: Federal Operator: EPFS

PREVIOUS ACTIVITIES

Site Assessment: Jan-95 Excavation Jan-95 Soil Boring: Oct-95 Monitor Well: Oct-95
Geoprobe: Nov-96 Additional MWs: Jul-00 Downgradient MW's: Jul-00 Replace MW: NA
PSH Removal Initiated: NA ORC Nutrient Injection NA Re-Excavation: NA
Quarterly Initiated Nov-96 Annual Initiated May-97 Quarterly Resumed: NA

2001 ACTIVITY

Groundwater monitoring - Annual sampling continued through 2001.

The site was re-surveyed on November 11, 2001.

SUMMARY TABLES AND GRAPHS

Groundwater analytical data are presented in Table 1 BTEX. Copies of the laboratory data sheets and the associated quality assurance/quality control data are presented as 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

No drilling activities were performed at this site for 2001.

DISPOSITION OF GENERATED WASTES

No wastes were generated at this site for 2001.

EPFS GROUNDWATER PITS 2001 ANNUAL GROUNDWATER REPORT

Lat 0-21 Line Drip
Meter Code: LD151

ISOCONCENTRATION MAPS

No isoconcentration maps were generated at this site.

CONCLUSIONS

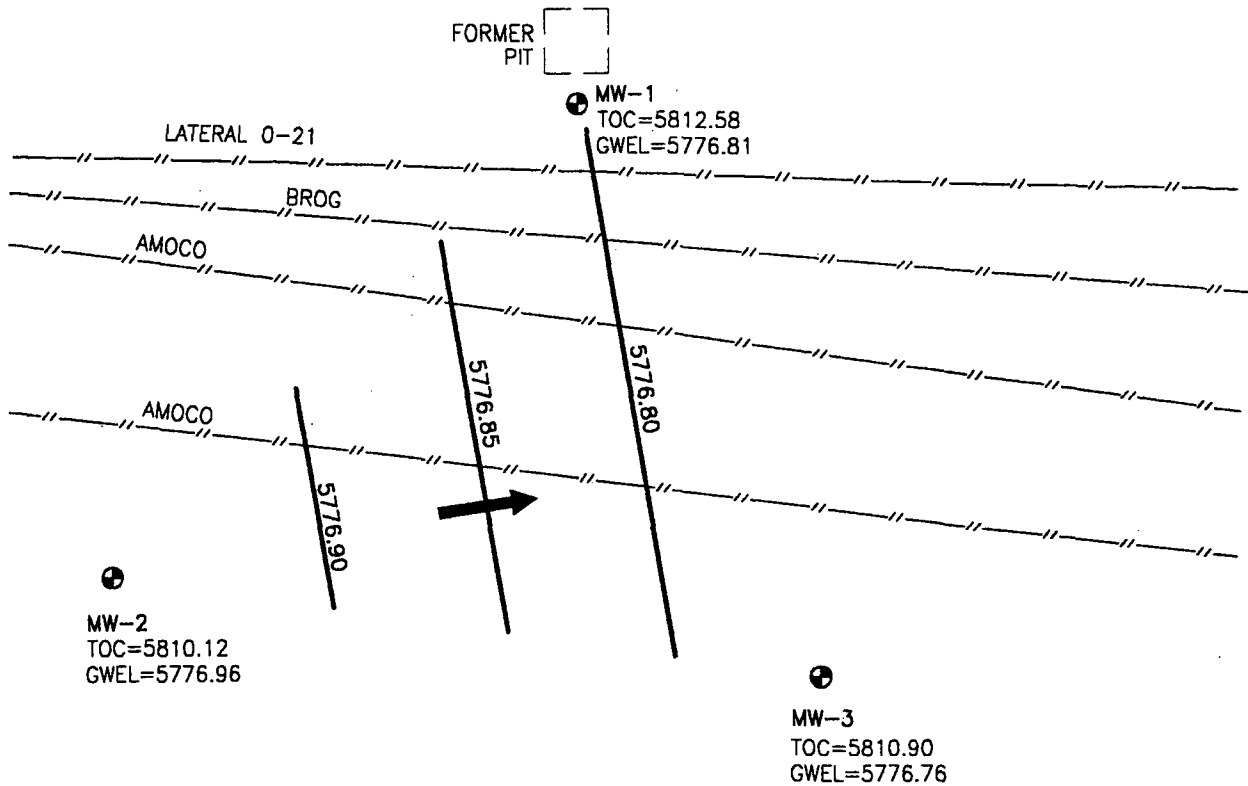
MW-1 hydrocarbon concentrations remain above 1,000 ppb for benzene, toluene, and xylenes and appear to be increasing. EPFS suspects additional hydrocarbon sources in the area may be contributing to observed concentration trends. Additional sources include four pipelines owned by Amoco, Burlington Resources, and EPFS immediately adjacent to MW-1 and located between MW-1 and MW-2/MW-3. Other sources in the area include the Amoco disposal facility.

Cross-gradient monitoring well MW-3 has shown a decrease in benzene concentration from 190 to 34 ppb. Upgradient monitoring well MW-2 has remained less than 10 ppb benzene from 2000 through 2001.

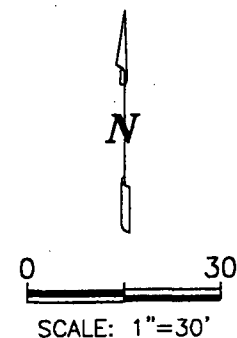
Groundwater flow is toward the east.

RECOMMENDATIONS

- > EPFS will obtain quarterly groundwater elevation data to better define the flow direction at this site.
- > Evaluate and verify groundwater flow direction
- > EPFS will continue annual sampling at this site until BTEX constituents fall below NMWQCC Standard .
- > Once OCD approval for closure is obtained, all monitoring wells will be abandoned in accordance with OCD guidelines.



	MW-1	MW-2	MW-3
B	1400	<0.5	34
T	2000	<0.5	4.7
E	37	<0.5	68
X	2500	2	130



LEGEND

● MW-1	Approximate Monitoring Well Location and Number	5777	Potentiometric Surface (Approximate & Assumed Where Dashed)
—//—//—	Pipe Line	→	Direction of Groundwater Flow (Estimated)
B	Benzene ($\mu\text{g/L}$)	GWEL	Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
T	Toluene ($\mu\text{g/L}$)	TOC	Top of Casing
E	Ethylbenzene ($\mu\text{g/L}$)		
X	Total Xylenes ($\mu\text{g/L}$)		

LATERAL 0-21 LINE DRIP, LD151
JUNE, 2001

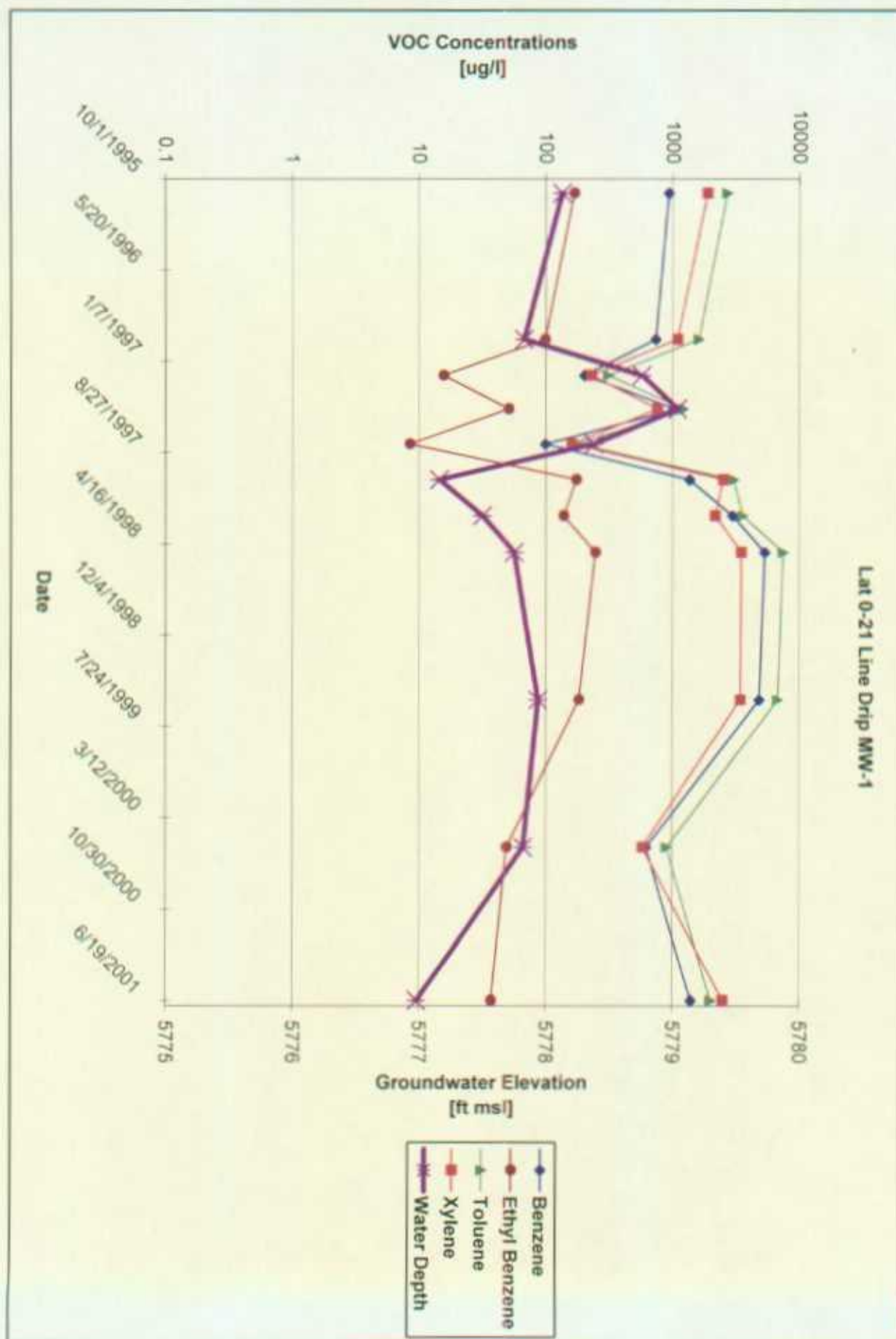
GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 1

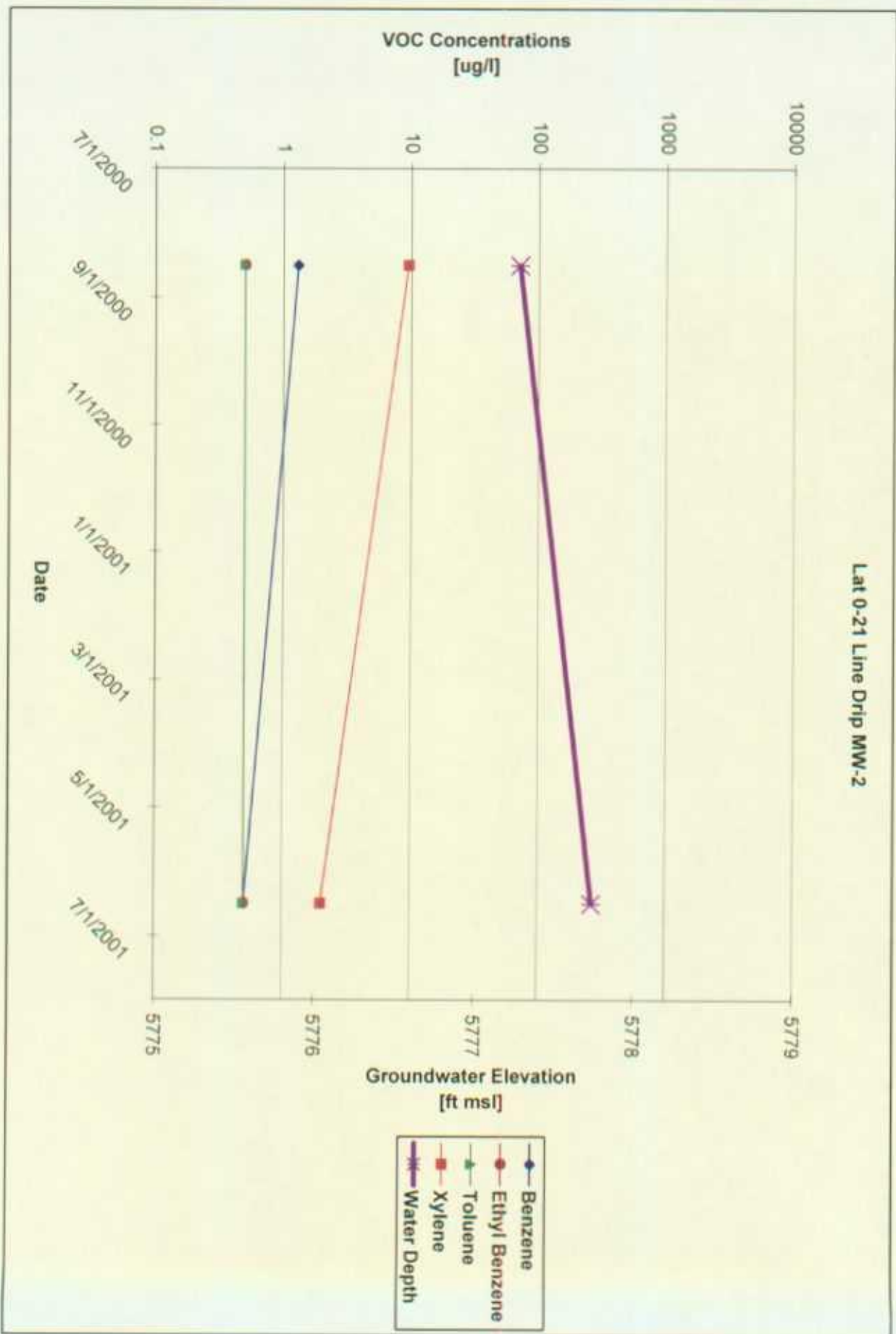
Table 1 BTEX
Lat 0-21 Line Drip

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)
1510106	LD151	Lat 0-21 Line Drip	6/18/2001	1	1400	37	2000	2500	35.60	5776.98
1510106	LD151	Lat 0-21 Line Drip	6/18/2001	2	0.5	0.5	0.5	2	33.16	5777.74
1510106	LD151	Lat 0-21 Line Drip	6/18/2001	3	34	68	4.7	130	34.14	5775.98

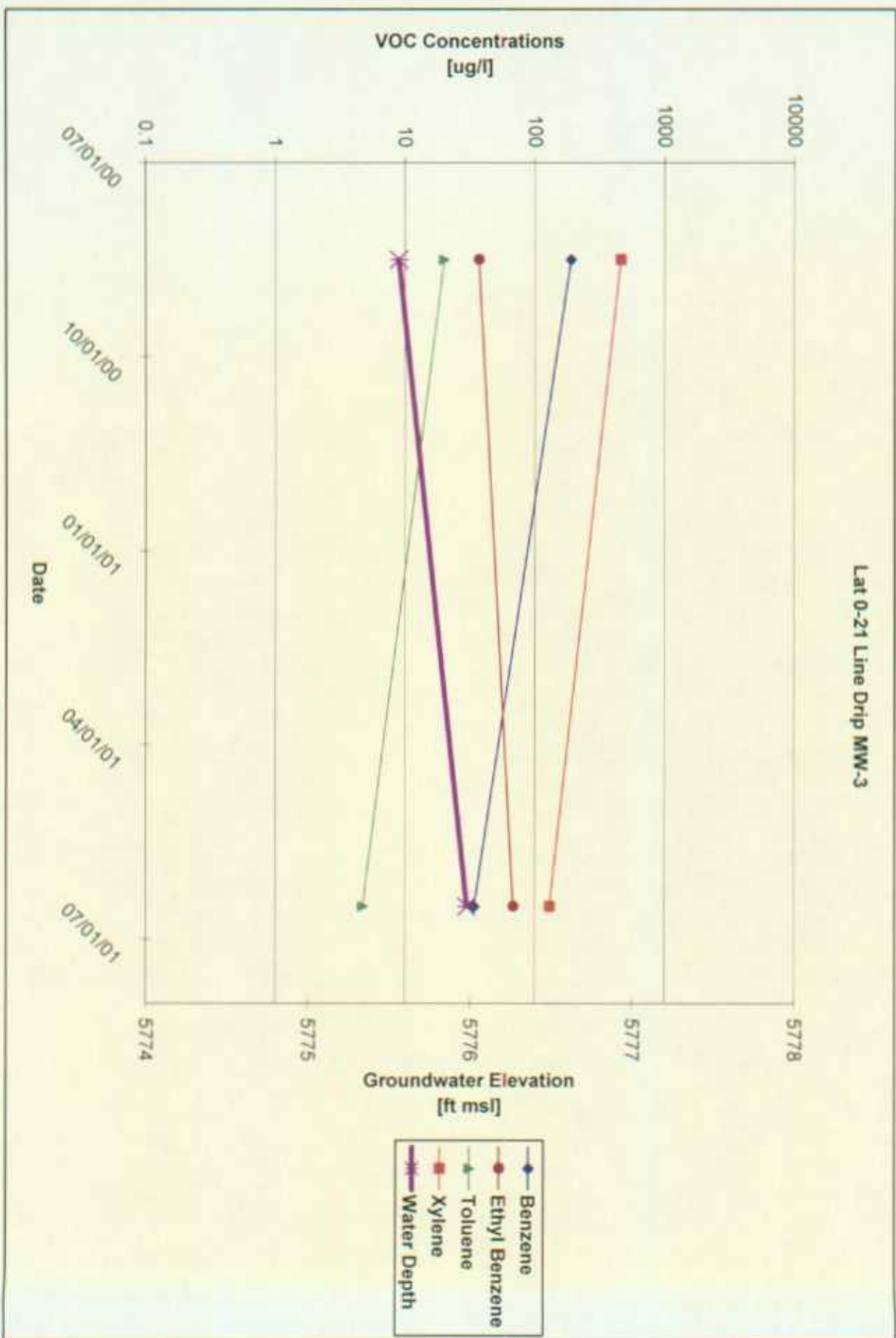
Lat 0-21 Line Drip MW-1



Lat 0-21 Line Drip MW-2



Lat 0-21 Line Drip MW-3



ATTACHMENT 1

2001 GROUNDWATER ANALYTICAL



Well Development and Purging Data

☒ Purging

→

Sara Parker CO

Project Manager Lisa Weir

Serial No. (if applicable)

Answer

Arde

[illegible]

No. of Conta

☐ Other _____

Water Disposal

Leakage Separator

Sampling Activities

No. of Conta

X

Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Removed (gallons)		Temperature
	Increment	Cumulative	Increment	Cumulative	
	4.50	4.50			20
	4.50	9			19
	4.50	13.5			17.5
	4.50	18			17
35.62	4.50	22.5			17.5

1000



Water Removal Data

[illegible]

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

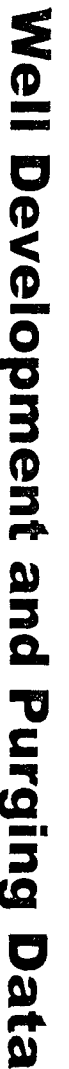
Comments Sampled for BTEX 1130

Developer's Sig

Date 6-18-01

Reviewer

Data



Well Development and Purging Data

Water Removal Data

Water Removal Data

[illegible]

Sampled for BTPX 1145

Date _____

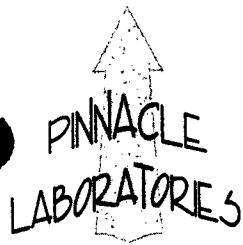
SHADED AREAS ARE FOR LAB USE ONLY.

PLI Accession #:

DATE: 6-18-01 PAGE: 1 OF 1

PROJECT INFORMATION		PRIORITY AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	
PROJ. NO. 6169	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK	(NORMAL) ☒	
PROJ. NAME: E P F 3 Remediation project	CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER		
P.O. NO.:	METHANOL PRESERVATION ☐		
SHIPPED VIA:	COMMENTS: FIXED FEE ☐		
SAMPLE RECEIPT			
NO. CONTAINERS			
CUSTODY SEALS	Y / N / NA		
RECEIVED INTACT			
BLUE ICONE			
6-AT0-21 (L0151)			
Signature: Chris F. [Signature]		Time: 1300	RELINQUISHED BY: 1
Printed Name: Chris F. [Signature]		Date: 6-21-01	
Company: [Signature]	Company: [Signature]		
See reverse side (Force Majeure)			
RECEIVED BY: 1		RECEIVED BY: (LAB) 2	
Signature: [Signature]	Time: [Signature]	Signature: [Signature]	Time: [Signature]
Printed Name: [Signature]	Date: [Signature]	Printed Name: [Signature]	Date: [Signature]
Company: [Signature]	Pinnacle Laboratories Inc.		

11/10/98. Pinnacle Laboratories, Inc. 2709-D Pan American Freeway, NE • Albuquerque, New Mexico 87107 • (505) 344-3777 • Fax (505) 344-4413 • E-mail: PIN_LAB@WORLDNET.ATT.NET • DISTRIBUTION: Wm. H. Ingle, P.L., Canary - Originator



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

Pinnacle Lab ID number **106103**
July 09, 2001

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

EL PASO FIELD SERVICES
614 RIELLY AVENUE
FARMINGTON, NM 87401

Project Name EPFS REMEDIATION PROJECT
Project Number 6169

Attention: LISA WINN/SCOTT POPE *LATO-21 LD-151*

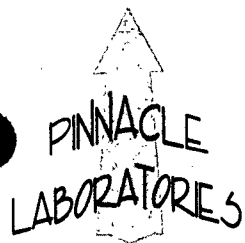
On 06/22/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

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	: 106103
PROJECT #	: 6169	DATE RECEIVED	: 06/22/01
PROJECT NAME	: EPFS REMEDIATION PROJECT	REPORT DATE	: 07/09/01

PINNACLE			DATE
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
106103 - 01	ISI-0106-MW 1	AQUEOUS	06/18/01
106103 - 02	ISI-0106-MW 2	AQUEOUS	06/18/01
106103 - 03	ISI-0106-MW 3	AQUEOUS	06/18/01



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GAS CHROMATOGRAPHY RESULTS

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

PINNACLE I.D.: 106103

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	ISI-0106-MW 1	AQUEOUS	06/18/01	NA	06/27/01	10
02	ISI-0106-MW 2	AQUEOUS	06/18/01	NA	7/01/01	1
03	ISI-0106-MW 3	AQUEOUS	06/18/01	NA	06/26/01	1

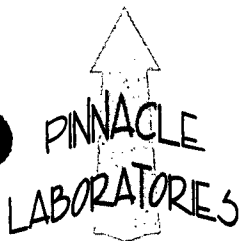
PARAMETER	DET. LIMIT	UNITS	ISI-0106-MW 1	ISI-0106-MW 2	ISI-0106-MW 3
BENZENE	0.5	UG/L	1400	< 0.5	34
TOLUENE	0.5	UG/L	2000	< 0.5	4.7
ETHYLBENZENE	0.5	UG/L	37	< 0.5	68
TOTAL XYLENES	0.5	UG/L	2500	2.0	130

SURROGATE:

BROMOFLUOROBENZENE (%)	99	97	120
SURROGATE LIMITS (80 - 120)			

CHEMIST NOTES:

N/A



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

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 106103
BLANK I. D.	: 062601	DATE EXTRACTED	: NA
CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	DATE ANALYZED	: 06/26/01
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
TOTAL XYLENES	UG/L	<0.5

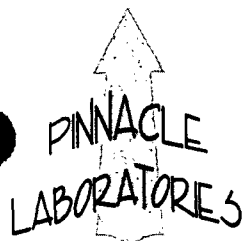
SURROGATE:

3-BROMOFLUOROBENZENE (%)	92
--------------------------	----

SURROGATE LIMITS: (80 - 120)

CHEMIST NOTES:

N/A



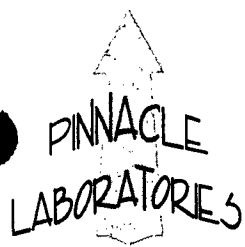
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Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 106103
BLANK I. D.	: 062701	DATE EXTRACTED	: NA
CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	DATE ANALYZED	: 06/27/01
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
TOTAL XYLENES	UG/L	<0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 92
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A



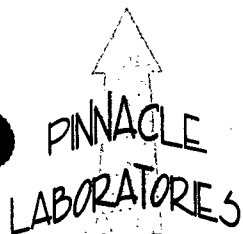
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Albuquerque, New Mexico 87107
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Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 106103
BLANK I. D.	: 063001	DATE EXTRACTED	: NA
CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	DATE ANALYZED	: 06/30/01
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
TOTAL XYLENES	UG/L	<0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 95
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A



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Albuquerque, New Mexico 87107
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GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST : EPA 8021 MODIFIED
MSMSD # : 106106-01
CLIENT : GOLDEN ENVIRONMENTAL MNGT.
PROJECT # : 6169
PROJECT NAME : EPFS REMEDIATION PROJECT

PINNACLE I.D. : 106103
DATE EXTRACTED : NA
DATE ANALYZED : 06/26/01
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	21.3	107	22.7	114	6	(80 - 120)	20
TOLUENE	<0.5	20.0	20.4	102	21.9	110	7	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.6	103	22.5	113	9	(80 - 120)	20
TOTAL XYLENES	1.5	60.0	62.8	105	68.1	114	8	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

ANALYSIS REQUEST

PLEASE FILL THIS FORM IN COMPLETELY.

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