

3R - 207

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:

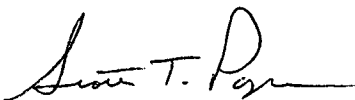
In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual reports for the 30 remaining groundwater impacted sites that were identified during our pit closure project of 1994 / 1995.

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 II-Non-Federal Sites**

March 2002

Prepared for

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



MWH

MONTGOMERY WATSON HARZA

EL PASO FIELD SERVICES ANNUAL GROUNDWATER REPORT

NON-FEDERAL SITES VOLUME II

TABLE OF CONTENTS

Site Map

METER or LINE ID	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
71669	State Gas Com N #1	31N	12W	16	H
70194	Johnston Fed #4	31N	09W	33	H
93388	Horton #1E	31N	09W	28	H
72556	Knight #1	30N	13W	5	A
73551	Coldiron A #1	30N	11W	2	K
03906	GCU Com A #142E	29N	12W	25	G
70445	Standard Oil Com #1	29N	09W	36	N
LD146	Lat 3B-39 Line Drip	29N	09W	10	M
LD087	K-31 Line Drip	25N	06W	16	N
94967	Lindrith B #24	24N	03W	9	N



MWH

MONTGOMERY WATSON HARZA

This is a detailed topographic map of the Gallegos Canyon area in New Mexico. The map features a grid system with latitude and longitude coordinates. Key geographical features include the Rio Grande, which flows through the center of the map, and the Gallegos Canyon. Major towns and settlements shown are Lordsburg, Lordsburg, and Lordsburg. The map also depicts various military units, including the 1st Cavalry Division, 1st Infantry Division, and 1st Armored Division. Other notable features include the Gallegos Canyon, the Rio Grande, and the Gallegos Canyon. The map is oriented with North at the top.

3-D TopoQuad Copyright © 1999 DeLorme Yarmouth, ME 04096
 3rd Scale: 1 : 600,000 Detail: 2.4 Datum: WGS84

EPFS GROUNDWATER PITS

2001 ANNUAL GROUNDWATER REPORT

Knight #1

Meter Code 72556

SITE DETAILS

Legals Twn: 30N Rng: 13W Sec: 5 UNIT: A
NMOCD Haz Ranking 30 Land Type: Fee Operator: Fuller Petroleum Inc.

PREVIOUS ACTIVITIES

Site Assessment: Jan-95 Excavation Jan-95 (60cy) Soil Boring: Oct-95 Monitor Well: Oct-95
Geoprobe: Jan-97 Additional MWs: Nov-00 Downgradient MW's: Dec-95 Replace MW: NA
PSH Removal Initiated: Sep-01 ORC Nutrient Injection Nov-96 Re-Excavation: NA
Quarterly Initiated Apr-96 Annual Initiated NA Quarterly Resumed: NA

2001 ACTIVITY

Groundwater Monitoring - Annual sampling was performed on MW-2, MW-4, and MW-5 during October 2001.

Phase Separated Hydrocarbons (PSH) removal - PSH was removed throughout 2001 on MW-1 and MW-3

Specific Gravity - A specific gravity sample was taken from MW-1, with result of 0.790 g/cc.

SUMMARY TABLES AND GRAPHS

Groundwater analytical data are presented in Table 1 BTEX and the product recovery table. Copies of the laboratory data sheets and associated quality assurance/quality control data are presented as Attachment 1. Included are BTEX Data graphs for MW-1 through MW-5 and Free Product Recovery graphs for MW-1 and MW-3.

SITE MAP

Site Maps with BTEX concentrations and groundwater elevations are attached.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No drilling was done at this site during 2001.

DISPOSITION OF GENERATED WASTES

All PSH removed was disposed of at the Kutz Separator in Bloomfield, New Mexico.

EPFS GROUNDWATER PITS 2001 ANNUAL GROUNDWATER REPORT

Knight #1

Meter Code: 72556

ISOCONCENTRATION MAPS

No isoconcentration maps were generated for this site, because free product is present in two of five wells.

CONCLUSIONS

Free phase hydrocarbon recovery was performed on MW-1 with a cumulative total of 0.19 gallons and MW-3 with a cumulative total of 0.52 gallons. A total of 0.73 gallons was recovered in 2001.

MW-2 is located immediately adjacent to and downgradient of the operator's separator tank and other operator facilities. Fuller Petroleum is the operator at this site. Concentrations in MW-2 appear to fluctuate with the rise and fall of the water table.

Downgradient well MW-5 is less than 0.5 ppb benzene in the 2001 sampling event.

Groundwater flow at this site is to the south.

RECOMMENDATIONS

- > Continue product recovery in MW-1 and MW-3 as needed, then sample annually once free product is removed.
- > Continue annual monitoring in MW-2, MW-4, and MW-5 until groundwater constituents are near New Mexico groundwater standards, then sample quarterly for closure.

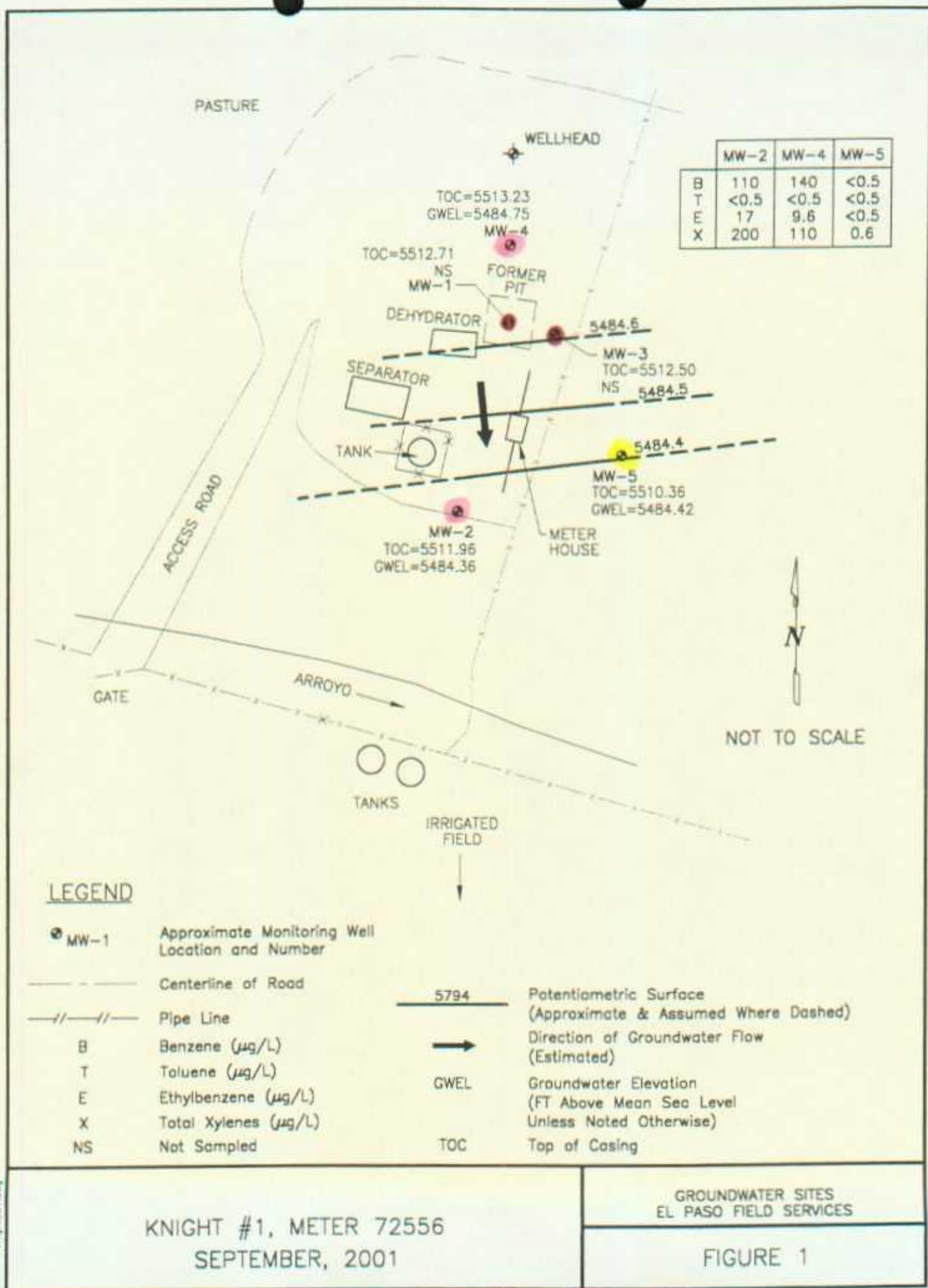
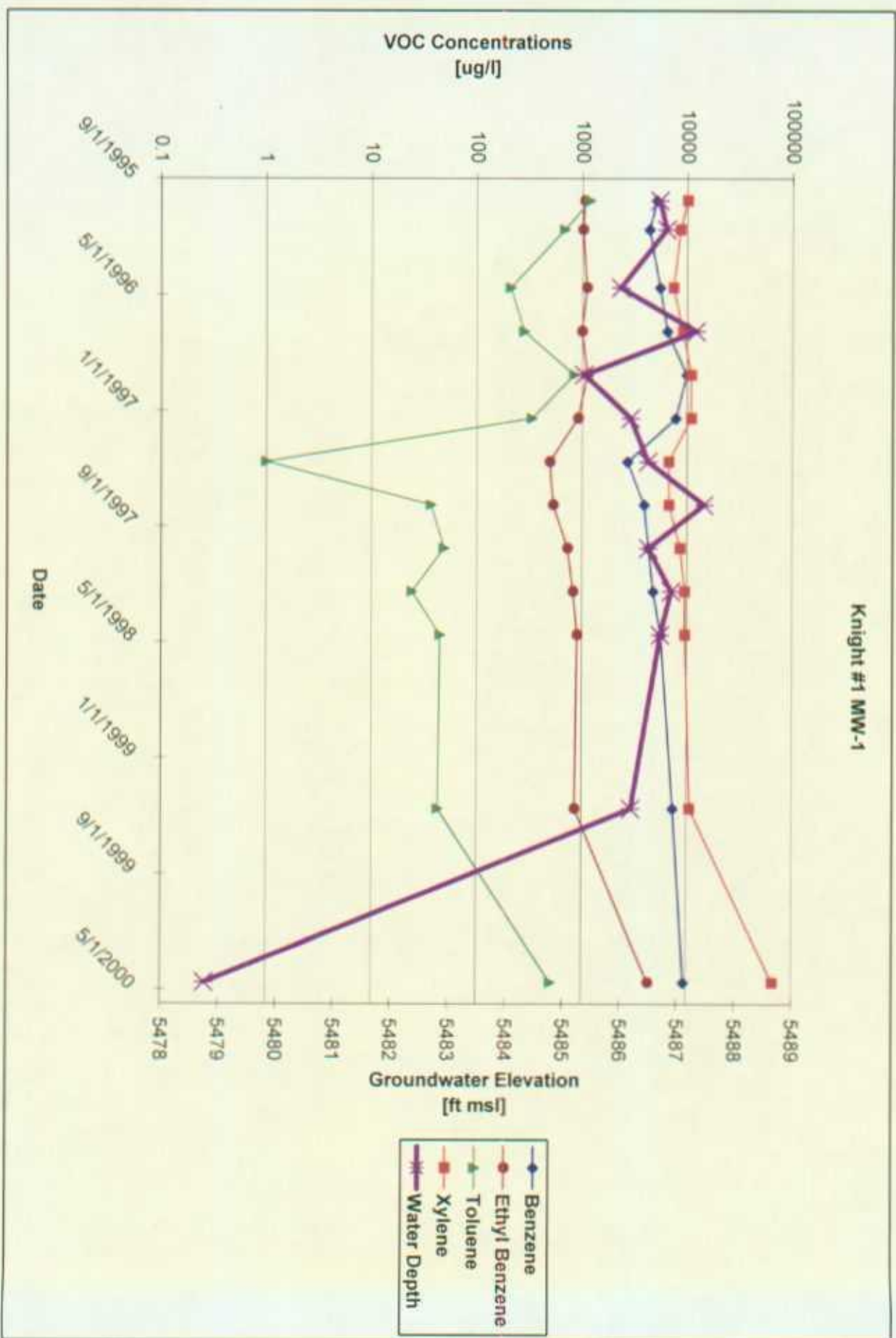


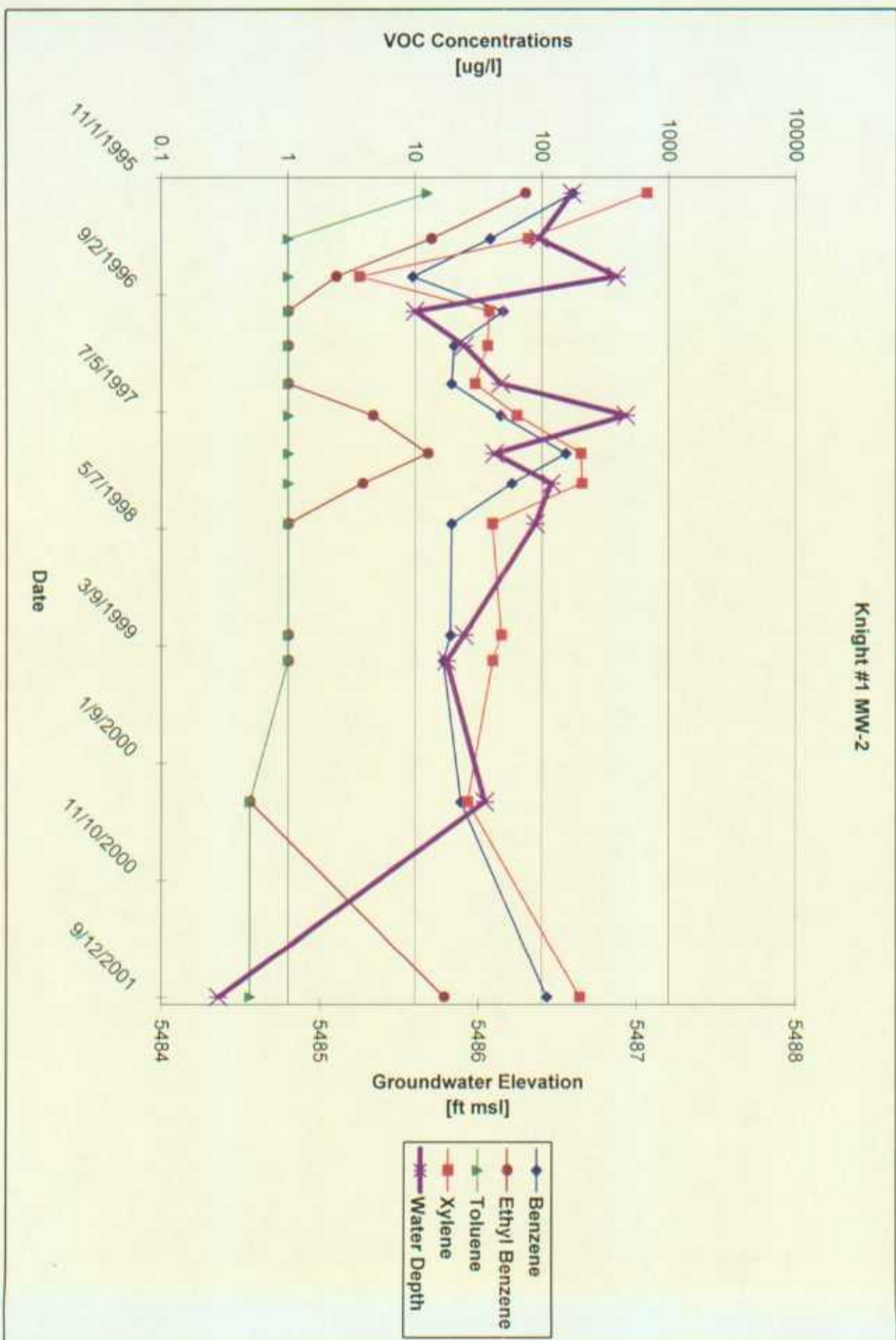
Table 1 BTEX
Knight #1

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)
KN10109	72556	Knight #1	9/11/01	2	110	17	0.5	200	27.60	5484.36
KN10109	72556	Knight #1	9/11/01	4	140	9.6	0.5	110	28.48	5484.75
KN10109	72556	Knight #1	9/11/01	5	0.5	0.5	0.5	0.6	25.94	5484.42

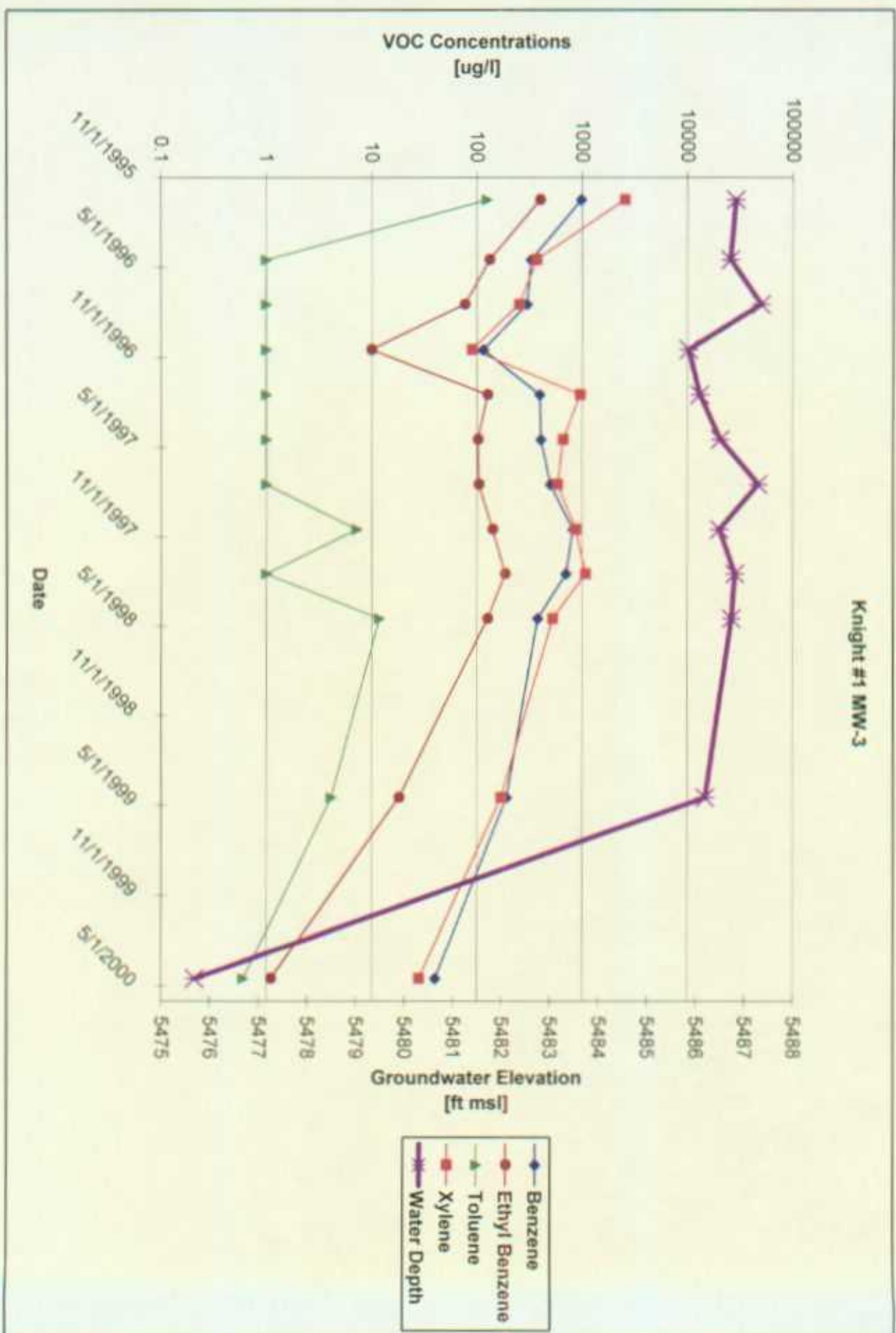
Knight #1 MW-1



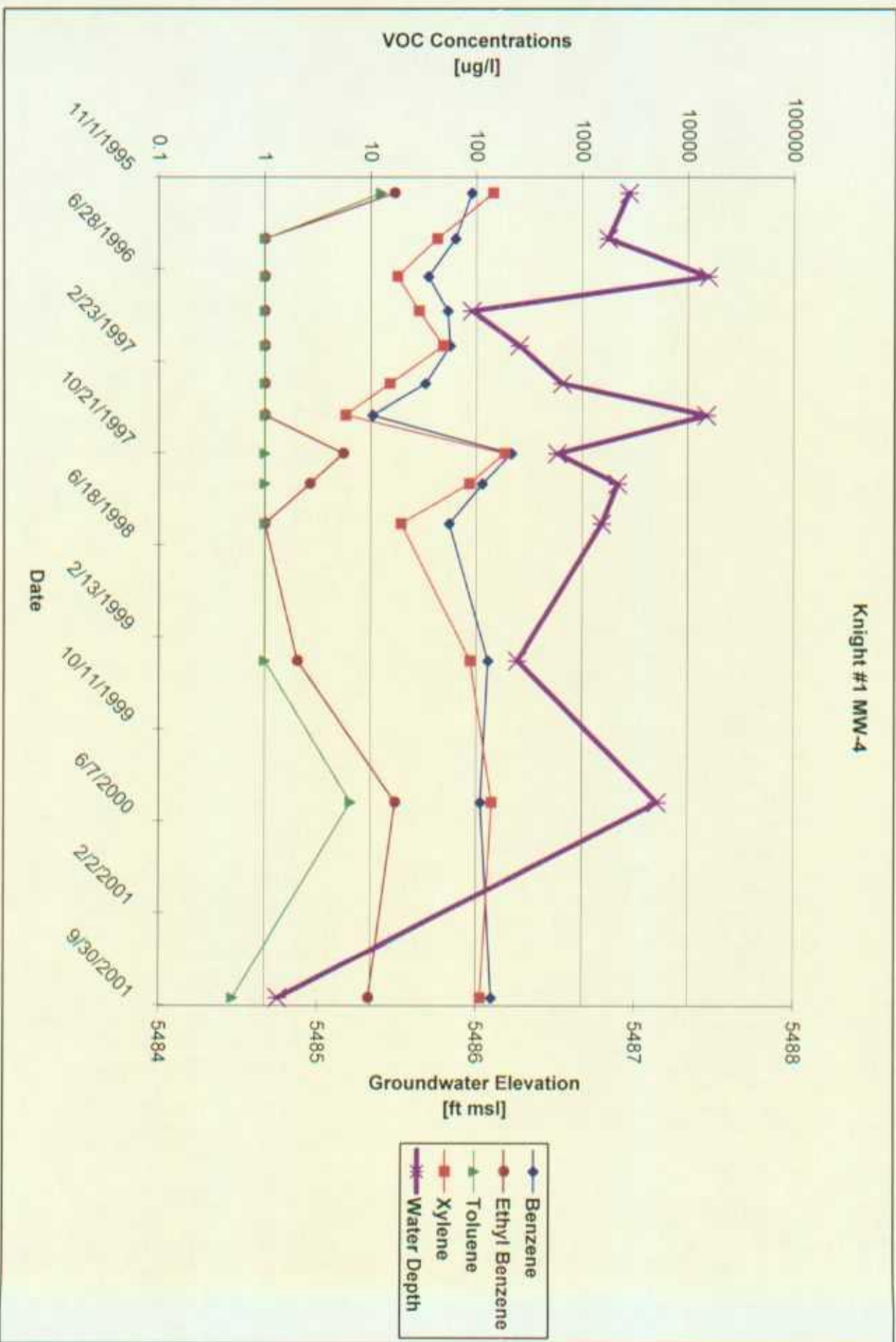
Knight #1 MW-2



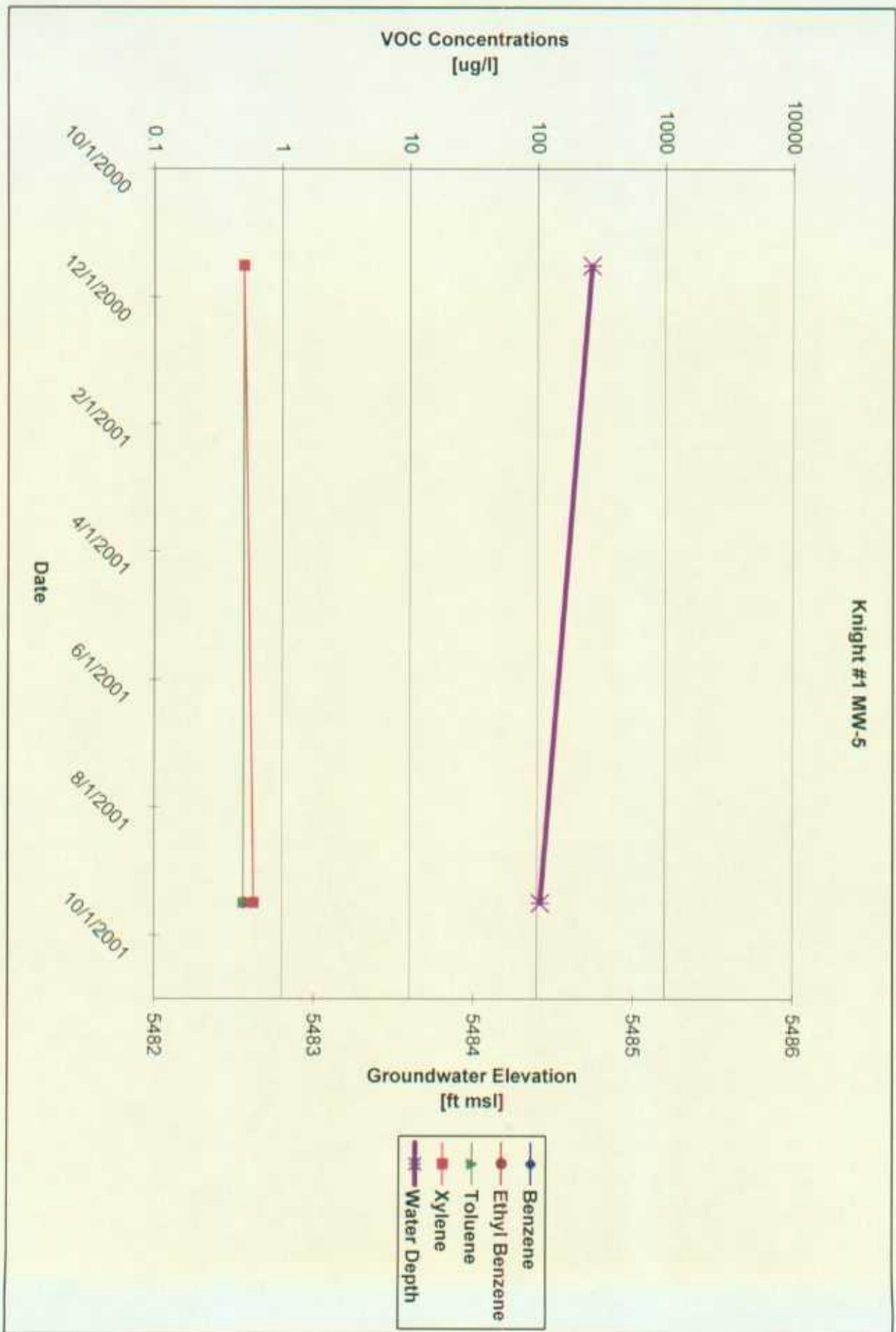
Knight #1 MW-3



Knight #1 MW-4



Knight #1 MW-5

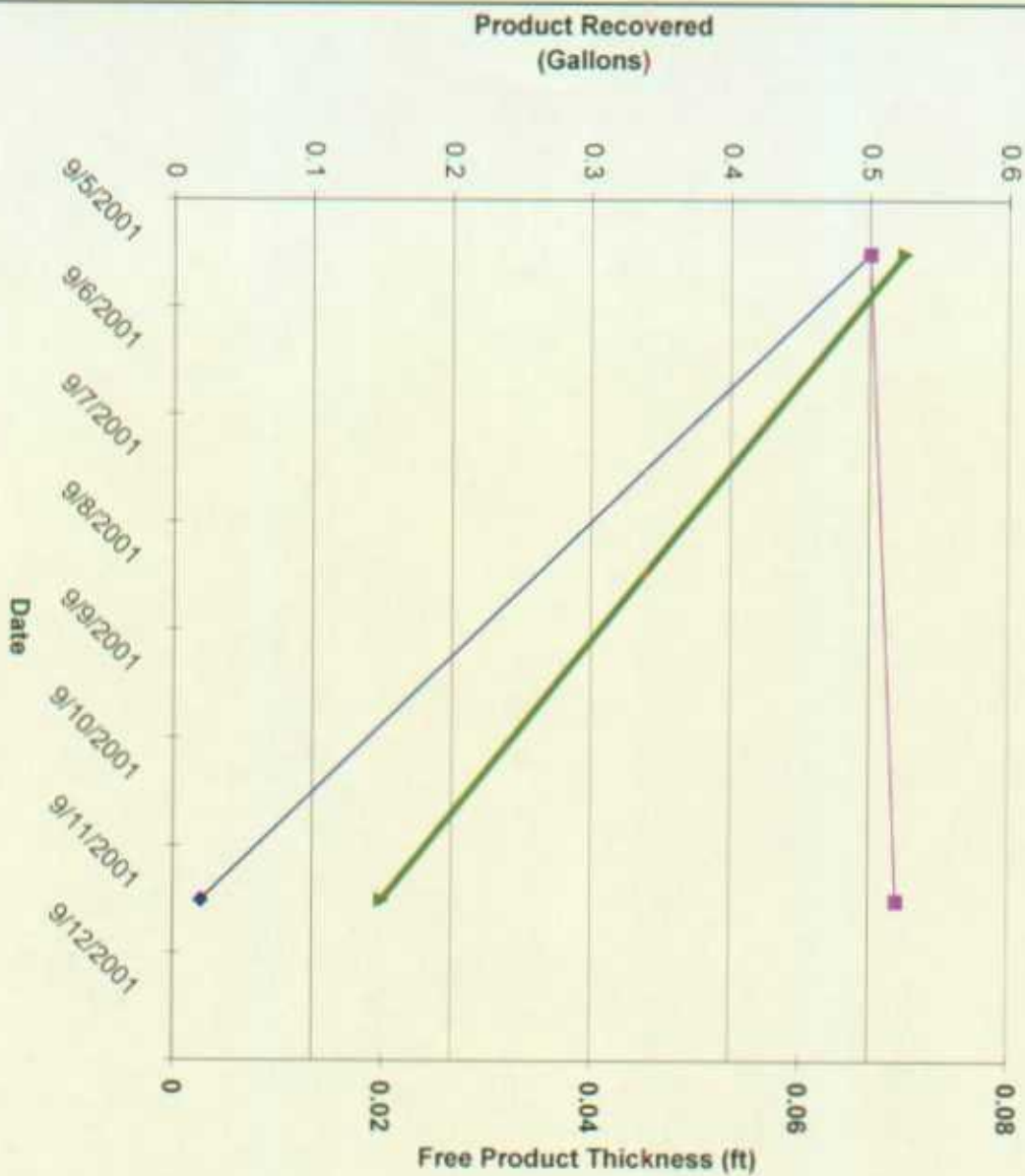


Product Removal Table
Knight #1

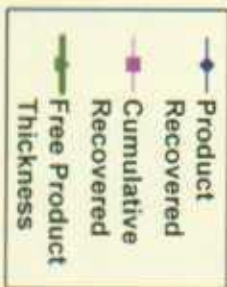
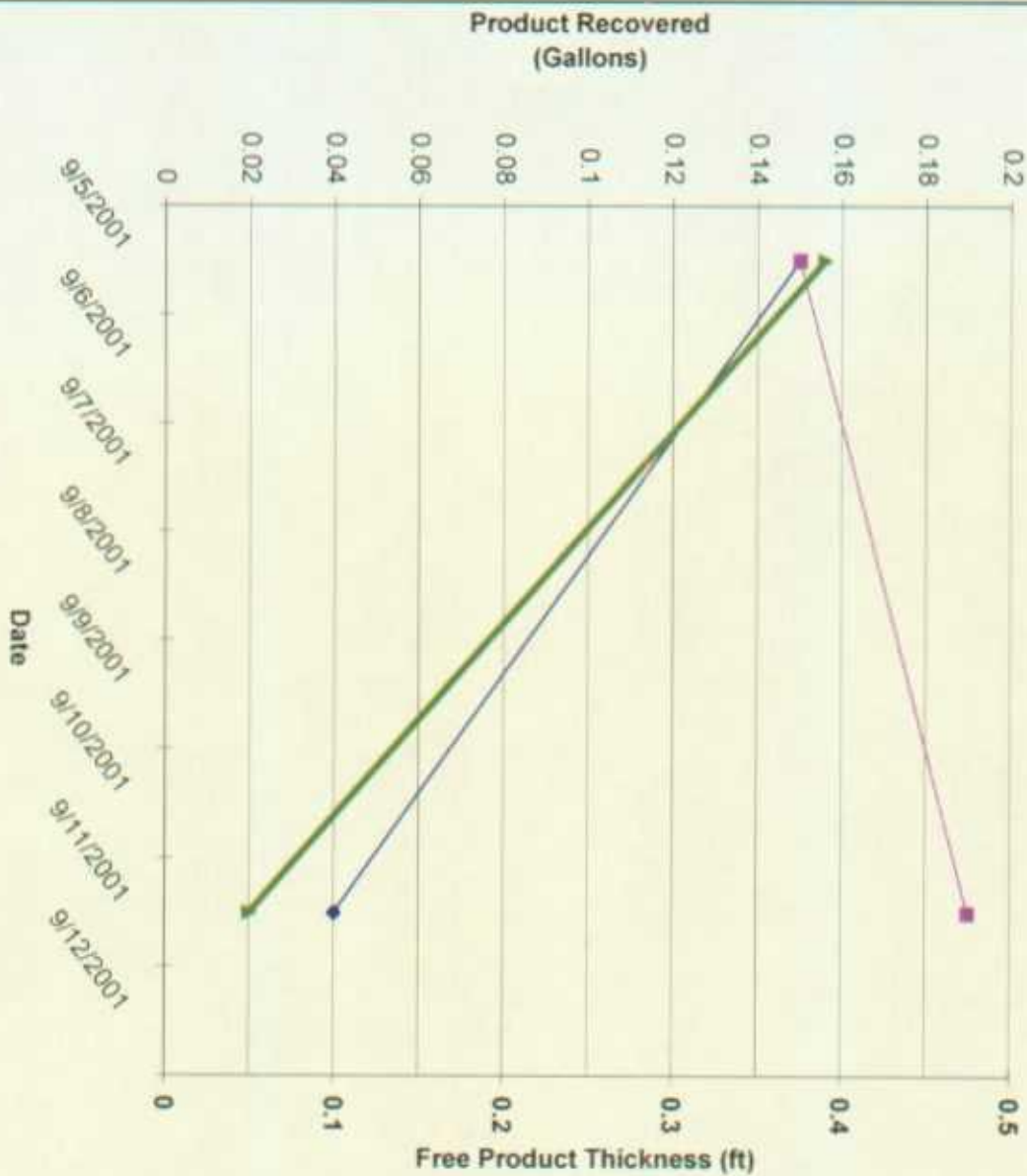
Meter Line	Site Name	MW#	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Volume Removed (Gallons)	Cumulative Total (Gallons)
72556	Knight #1	1	9/5/2001	27.93	28.32	0.39	0.15	0.15
72556	Knight #1	1	9/11/2001	28.05	28.10	0.05	0.04	0.19
72556	Knight #1	3	9/5/2001	27.84	27.91	0.07	0.5	0.5
72556	Knight #1	3	9/11/2001	27.89	27.91	0.02	0.02	0.52

No product removed from MW-2 for 2001

Free Product Recovery Knight #1 MW-3

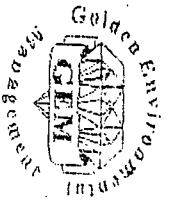


Free Product Recovery Knight #1 MW-1



ATTACHMENT 1

2001 GROUNDWATER ANALYTICAL



Well Development and Purging Data

Project No. C169 Development ☐
Task No. 1 Purging ☒

Page 1 of 1

Well No. Mw 2 Site Name/Identification knights #1 (2556)

Site Address Rural San Juan Co.

Client/Project Name El Paso Field Services EPDS Remediation project

Project Manager LISA WELCH

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal

☐ Stabilization of Indicator Parameters

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 36.94

Initial Depth to Water (feet) 27.60

Height of Water Column in Well (feet) 9.34

Diameter (inches): Well 4" Gravel Pack _____

Methods of Development

Pump

☒ Butler

☐ Centrifugal

☒ Bottom Valve

☐ Submersible

☐ Double Check Valve

☐ Peristaltic

☐ Stainless-steel Kemmerer

☐ Other _____

Item	Water Volume in Well	Gallons to be Removed
Well Casing	9.34	609.33
Gravel Pack		18.27
Drilling Fluids		
Total		18.27

☐ Other _____

Water Disposal 11

Water Separator Bloomfield NM

Sampling Activities

Type of Container VOA

No. of Containers 2

Parameters Sampled For BTEX

Water Removal Data

Date	Time	Development Method	Removal Rate (gpm)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)	Product Volume Removed (gallons)	Temperature (°C)	pH	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Comments
9-11-01	1033	X				3.25	3.25	14	7.20	2290		Cloudy/no odor
	1037	X				3.25	7.5	17.3	7.19	2350		"
	1044	X				3.25	11.85	17.1	7.15	2400		"
	1052	X				3.95	15	17.1	7.15	2420		"
	1054	X				3.25	18.25	17	7.14	2410		no change

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

Comments Bailed well Downyale to get 5 water quality readings Sampled for BTEX 1110

Developer's Signature (s) _____

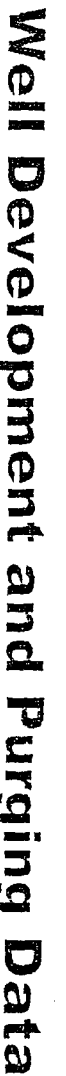
Blaise A. May

Date 9-11-01

Reviewer _____

Adrian

Date 9/11/01



Page 1 of 1

Burrell Saw Tann CO.

Project Manager Lisa Lina

7.3.5 Casing Volumes of Water Removal

Water Volume Calculation

Initial Depth of Well (feet)	<u>36.8</u>
Initial Depth to Water (feet)	<u>28.48</u>
Height of Water Column in Well (feet)	<u>8.32</u>
Diameter (inches): Well	<u>4.11</u>
	Gravel Pack

Serial No. (if applicable)

Hydrazine

Figure 1. The effect of the number of trials on the mean accuracy of the responses. The error bars represent the standard error of the mean.

Hydraz

Water Disposal

Kent Shepherdson Broomfield WA

Pump	Bailer
------	--------

☒ Bottom Valve

☐ Double Check Valve

☐ Stainless-steel Kemmerer

☐ Other

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	8.32	543x3	16.29
Gravel Pack			
Drilling Fluids			
Total			16.29

Type of Container 10ANo. of Containers 2

Date	Time	Development Method		Removal Rate (gallons)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Removed (gallons)		Temperature (°C)	pH	Conductivity (micro/cm)	Dissolved Oxygen (mg/L)	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
9-11-01	0617		X				3.5	3.5			17.2	6.66	2360		Cloudy / no bars
	0622		X				3.5	7			16.1	6.89	2290		Cloudy/light Brown
	0924		X				3.5	10.5			15.5	6.95	2270		
	0933		X				3.5	14			15.5	7.01	2290		
	0739		X			28.61	3.5				15.5	7.05	2286		No Change

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

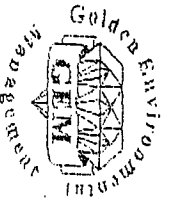
Comments Sampled for 177x 0950

Da

00-11-

Reviewer

Date _____



Well Development and Purging Data

Project No. 6169
Task No. _____

Development ☐
Purging ☒

Page 1 of 1

Well No. MW 5 Site Name/Identification Knight #1

Site Address Rural Sam Jones CO.

Client/Project Name El Paso Field Services EPFS Remediation project

Project Manager Lisa Linn

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal

☐ Stabilization of Indicator Parameters

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 3286

Initial Depth to Water (feet) 2594

Height of Water Column in Well (feet) 692

Diameter (inches): Well 2" Gravel Pack _____

Methods of Development

Pump ☒ Bailor

☒ Centrifugal ☒ Bottom Valve

☐ Submersible ☐ Double Check Valve

☐ Peristaltic ☐ Stainless-steel Kemmerer

☐ Other _____

Item	Water Volume in Well Cubic Feet	Gallons	Gallons to be Removed
Well Casing	6.92	11223	3.36
Gravel Pack			
Drilling Fluids			
Total			3.36

☐ Other _____

Water Disposal

K-12 Separator Bloomfield NM.

Sampling Activities

Type of Container VOA No. of Containers 2

Parameters Sampled For 13TEX

Water Removal Data

Date	Time	Development Method	Pump	Bailor	Removal Rate (gal/min)	Inlet 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
7-11-01	11:21			X				.75	.75	17.2	7.12	2490		Obs'd 15 min
	11:23			X				.75	1.5	15.8	7.04	2400		"
	11:26			X				.75	2.25	15.5	7.01	2350		"
	11:29			X				.75	3	15.1	7.04	2312		"
	11:31			X			26.74	.75	3.75	15.2	7.08	2330		no change

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

Comments Sampled for BTEX 11/15

Developer's Signature (S) _____

Date 7-11-01 Reviewer _____

Date 9/1/01

PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS ARE FOR LAB USE ONLY.

Pinnacle Laboratories

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 9-11-01 PAGE: 1 OF 1

PLI Accession #:

ANALYSIS REQUEST

PROJECT MANAGER: Lisa Wynn

COMPANY: GEM.

ADDRESS: 706 SAM JAIL RD S-TE D

FARMINGTON NM 87401

PHONE: (505) 366-9116

FAX: (505) 566-9120

BILL TO: SCOTT ADGE

COMPANY: EL PASO FIELD Services

ADDRESS: 604 Kelly AVE

FARMINGTON NM 87401

SAMPLE ID DATE TIME MATRIX LAB I.D.

KNT-000-MW 2 9-11-01 1110 H₂OKNT-0109-MW 4 9-11-01 0950 H₂OKNT-0109-MW 5 9-11-01 1145 H₂OPetroleum 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

(NORMAL) ☒

RELINQUISHED BY: 1.

RELINQUISHED BY: 2.

PROJ NO: 6169

PROJ NAME: EPTS Remediation Project

Signature: [Signature] Time: 1500

Signature: [Signature] Time: [Blank]

PO NO:

METHANOL PRESERVATION ☐

Company: [Blank]

Company: [Blank]

SAMPLE RECEIPT

COMMENTS: FIXED FEE ☐

Signature: [Signature] Time: [Blank]

Signature: [Signature] Time: [Blank]

NO. CONTAINERS:

Y/N/NA

Printed Name: [Blank] Date: [Blank]

Printed Name: [Blank] Date: [Blank]

CUSTODY SEALS:

Y/N/NA

Printed Name: [Blank] Date: [Blank]

Printed Name: [Blank] Date: [Blank]

RECEIVED INTACT:

Y/N/NA

Printed Name: [Blank] Date: [Blank]

Printed Name: [Blank] Date: [Blank]

BLUE ICE/ICE

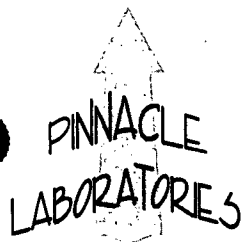
Pinnacle Laboratories, Inc. • 2709-D Pan American Freeway, NE • Albuquerque, New Mexico 87107 •

344-3777 • Fax (505) 344-4413 • E-mail: PULAB@WORLDNET.ATT.NET

DISTRIBUTION: White Canary - Originator

Date 9-11-01

Date 9-5-01



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

Pinnacle Lab ID number **109049**
October 11, 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

Knight

Attention: LISA WINN/SCOTT POPE

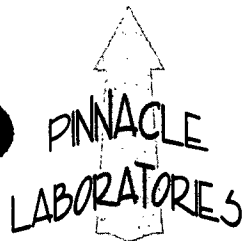
On 09/13/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

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

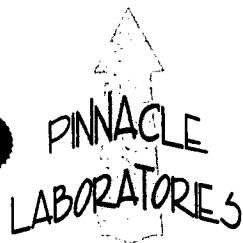
Enclosure



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

CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	PINNACLE ID	: 109049
PROJECT #	: 6169	DATE RECEIVED	: 09/13/01
PROJECT NAME	: EPFS REMEDIATION PROJECT	REPORT DATE	: 10/11/01

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
109049 - 01	KNI-0109-MW2	AQUEOUS	09/11/01
109049 - 02	KNI-0109-MW4	AQUEOUS	09/11/01
109049 - 03	KNI-0109-MW5	AQUEOUS	09/11/01



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 : GOLDEN ENVIRONMENTAL MNGT.
PROJECT # : 6169
PROJECT NAME : EPFS REMEDIATION PROJECT

PINNACLE I.D.: 109049

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	KNI-0109-MW2	AQUEOUS	09/11/01	NA	09/14/01	1
02	KNI-0109-MW4	AQUEOUS	09/11/01	NA	09/14/01	1
03	KNI-0109-MW5	AQUEOUS	09/11/01	NA	09/18/01	1

PARAMETER	DET. LIMIT	UNITS	KNI-0109-MW2	KNI-0109-MW4	KNI-0109-MW5
BENZENE	0.5	UG/L	110	140	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	17	9.6	< 0.5
TOTAL XYLENES	0.5	UG/L	200	110	0.6

SURROGATE:

BROMOFLUOROBENZENE (%)

SURROGATE LIMITS (80 - 120)

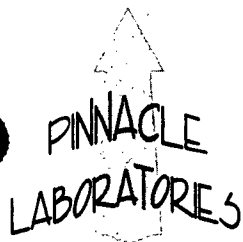
94

101

100

CHEMIST NOTES:

N/A



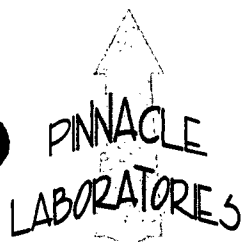
2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 109049
BLANK I. D.	: 091401	DATE EXTRACTED	: NA
CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	DATE ANALYZED	: 09/14/01
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



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.	: 109049
BLANK I. D.	: 091801	DATE EXTRACTED	: NA
CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	DATE ANALYZED	: 09/18/01
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:

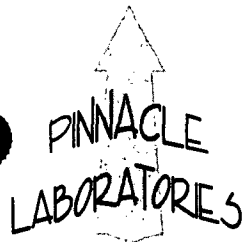
BROMOFLUOROBENZENE (%)

103

SURROGATE LIMITS: (80 - 120)

ANALYST NOTES:

N/A



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

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST : EPA 8021 MODIFIED
MSMSD # : 091401
CLIENT : GOLDEN ENVIRONMENTAL MNGT.
PROJECT # : 6169
PROJECT NAME : EPFS REMEDIATION PROJECT

PINNACLE I.D. : 109049
DATE EXTRACTED : NA
DATE ANALYZED : 09/14/01
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	16.2	81	16.5	83	2	(80 - 120)	20
TOLUENE	<0.5	20.0	19.2	96	19.6	98	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.1	106	21.1	106	0	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	63.3	106	65.1	109	3	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: Lisa Winn

COMPANY: G.E.M.

ADDRESS: 906 SAN JUAN BLVD S.W. 87401

PHONE: (505) 366-9116

FAX: (505) 566-9120

BILL TO: SCOTT POPE

COMPANY: EL PASO FIELD SERVICES

ADDRESS: 604 REILLY AVE

FARMINGTON NM. 87401

ANALYSIS REQUEST	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTX)/8015 (Gasoline) MTBE	8021 (BTX) ☐ 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:	NUMERICAL CONTAINERS	
																											2
																											2
																											2

PROJECT INFORMATION

PROJ. NO.: 6169

PROJ. NAME: EPCS Remediation project

P.O. NO.:

SHIPPED VIA:

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK

CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

KNIGHT # 1

meter # 72556

RECEIVED BY: (LAB)

Signature: [Signature]

Printed Name: [Name]

Date: [Date]

Company: [Company]

RECEIVED BY: (LAB)

Signature: [Signature]

Printed Name: [Name]

Date: [Date]

Company: [Company]

RECEIVED BY: (LAB)

Signature: [Signature]

Printed Name: [Name]

Date: [Date]

Company: [Company]

PLEASE FILL THIS FORM IN COMPLETELY.



Date: 9/11/01
Client: Golden Environmental Management
Lab ID: 0301W03833 - 3843
Project: G169

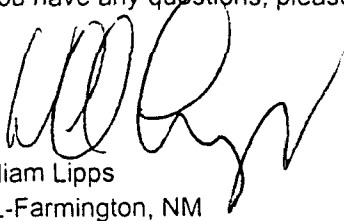
Dear Client:

The samples were received for analysis at Inter-Mountain Laboratories (IML), Farmington, New Mexico. Enclosed are the results of these analyses.

Comment:

Analytical results were obtained by approved methods. Sample analyses were obtained within the method specific holding times. Practical Quantitation Limits (PQL's) are based on method requirements, and any dilutions necessary to maintain proper method response without matrix interference.

If you have any questions, please call me at (505) 326-4737.



William Lipps
IML-Farmington, NM

Analytical Report

Client: Golden Environmental Management
Project: G169
IML Set: 0301W03833

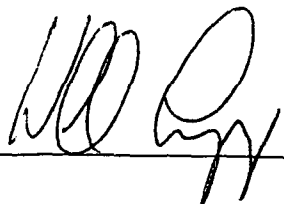
Page 1 of 1

Date Received: 09/06/01

Date Reported: 09/11/01

Lab Id	Sample Id	Date Sampled	Specific Gravity g/cc
0301W03833	LIN-0109-MW1	09/04/01	0.811
0301W03834	CAN-0109-MW1	09/04/01	0.736
0301W03835	GAL-0109-MW1	09/04/01	0.833
0301W03836	JFB-0109-MW3	09/04/01	0.773
0301W03837	072-0109-MW2	09/04/01	0.751
0301W03838	MIL-0109-MW1	09/04/01	0.754

Reviewed By:



Analytical Report

Client: Golden Environmental Management
Project: G169
IML Set: 0301W03839

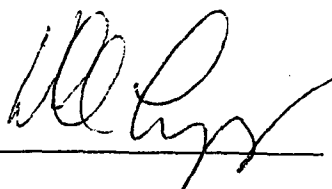
Page 1 of 1

Date Received: 09/06/01

Date Reported: 09/11/01

Lab Id	Sample Id	Date Sampled	Specific Gravity g/cc
0301W03839	JOH-0109-MW1	09/05/01	0.750
0301W03839D	JOH-0109-MW1	09/05/01	0.751
0301W03840	JON-0109-MW1	09/05/01	0.757
0301W03841	KNI-0109-MW1	09/05/01	0.790
0301W03842	STA-0109-MW3	09/05/01	0.741
0301W03843	JEN-0109-MW1	09/05/01	0.761

Reviewed By:



Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 9-6-01 PAGE: 1 OF 2

PLJ Accession #:

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: LISA WILSON		ANALYSIS REQUEST	
COMPANY:	ADDRESS:	PHONE:	FAX:
GOLDEN ENVIRONMENTAL MGMT.	906 S. W. JAMES BLVD. SUITE D	FARMINGTON NM. 87401	(505) 565-9114
BILL TO:	SCOTT ROPE		
COMPANY:	El Paso Field Services		
ADDRESS:	604 RALLY AVE		
	FARMINGTON NM. 87401		
SAMPLE ID	DATE	TIME	MATRIX
JOH-0109-MW 1	9-5-01	0900	Liq. HC
JOH-0109-MW 1	9-5-01	1000	Liq. HC
KNI-0109-MW 1	9-5-01	1100	Liq. HC
STA-0109-MW 3	9-5-01	1200	Liq. HC
JEN-0109-MW 1	9-5-01	1300	Liq. HC
PRIORITY AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS			
(RUSH) ☐ 12hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒			
CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER			
METHANOL PRESERVATION ☐			
COMMENTS: FIXED FEE ☐ JOHNSTON FLD # 6 (89232) JOHNSTON FLD # 4 (70194) KNI-ENT # 1 (72556) STATE GEO. COLL. N#1 (71669) JENNEPAH # 1 (71816)			
PROJECT INFORMATION		RELINQUISHED BY:	
PROJ. NO.: 6169	PROJ. NAME: GPRS Remediation Project	Signature: [Signature]	Time: 0711
P.O. NO.:		Printed Name: Chris Mace	Date: 9-6-01
SHIPPED VIA:		Company:	
SAMPLE RECEIPT		RECEIVED BY: (LAB)	
NO. CONTAINERS		Signature: [Signature]	Time: 5110
CUSTODY SEALS	Y/N/NA	Printed Name: [Signature]	Date: 9/6/01
RECEIVED INTACT		Company:	
BLUE ICE/ICE		Pinnacle Laboratories Inc.	

