

3R - 214

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:

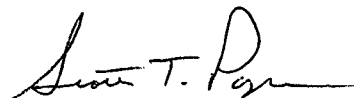
In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual reports for the 30 remaining groundwater impacted sites that were identified during our pit closure project of 1994 / 1995.

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

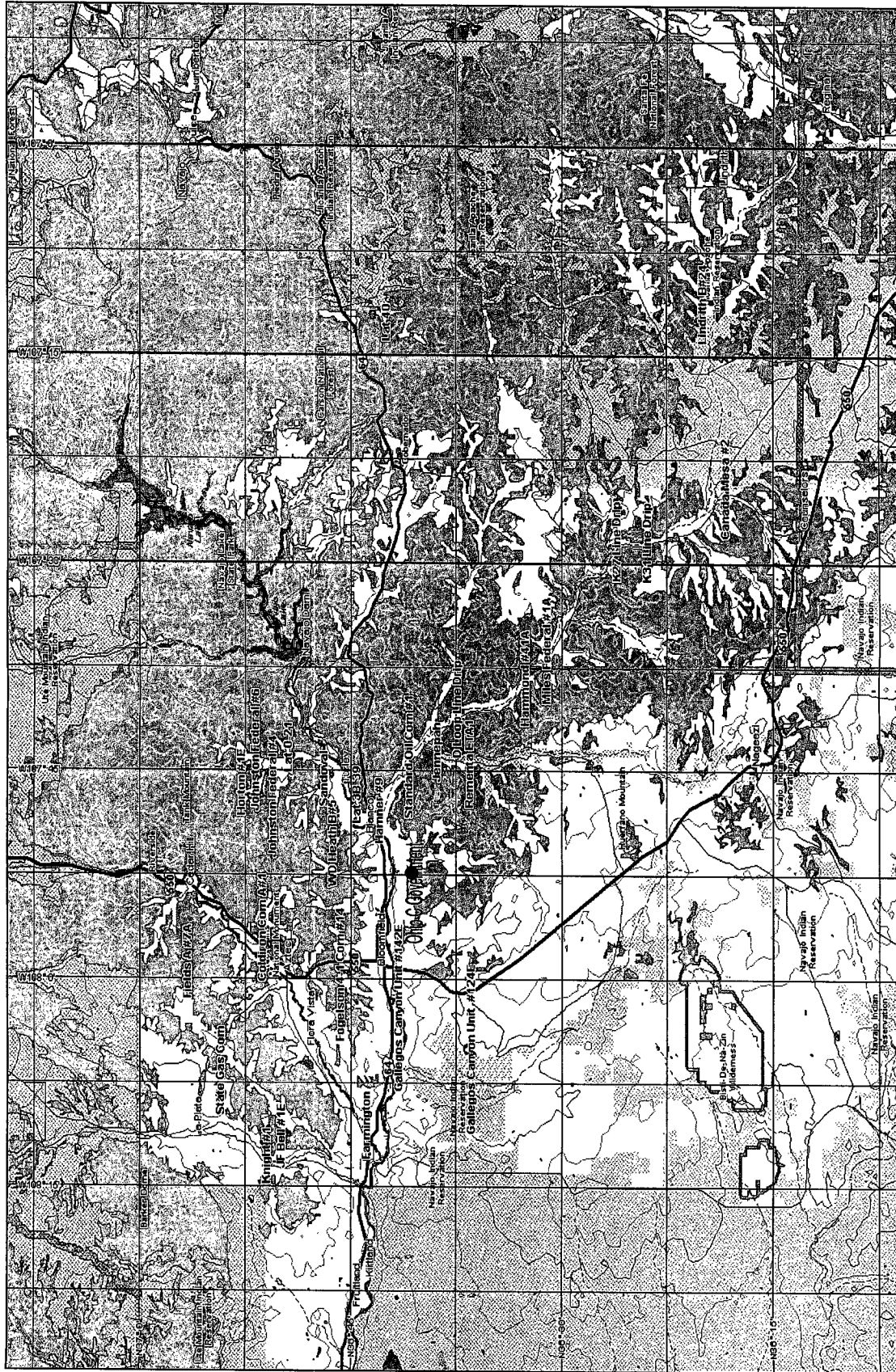
METER or LINE ID	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
71669	State Gas Com N #1	31N	12W	16	H
70194	Johnston Fed #4	31N	09W	33	H
93388	Horton #1E	31N	09W	28	H
72556	Knight #1	30N	13W	5	A
73551	Coldiron A #1	30N	11W	2	K
03906	GCU Com A #142E	29N	12W	25	G
70445	Standard Oil Com #1	29N	09W	36	N
LD146	Lat 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

Groundwater Site Map



3-D TopoQuad Copyright © 1999 Delorme Vermont, ME 04906
 3 mi Scale 1:600,000 Dated 8-4 Datum WGS84

EPFS GROUNDWATER PITS

2001 ANNUAL GROUNDWATER REPORT

Lindrith B #24

Meter Code 94967

SITE DETAILS

Legals Twn: 24N Rng: 03W Sec: 9 UNIT: N
NMOCD Haz Ranking 40 Land Type: Fee Operator: Mobil

PREVIOUS ACTIVITIES

Site Assessment: Aug-94 Excavation Oct-94 (60cy) Soil Boring: Jun-95 Monitor Well: May-97
Geoprobe: NA Additional MWs: Oct-99 Downgradient MW's: Oct-99 Replace MW: NA
PSH Removal Initiated: Feb-01 ORC Nutrient Injection NA Re-Excavation: Aug-97 (180cy)
Quarterly Initiated Aug-97 Annual Initiated NA Quarterly Resumed: NA

2001 ACTIVITY

Groundwater monitoring - Quarterly sampling on MW-1 continued through 2001.

Specific gravity - Sampled September 4, 2001 for MW-1. Results 0.811 g/cc.

Phase Separated Hydrocarbons (PSH) Removal - PSH removal initiated February 2001 at MW-1. Monitoring of MW-2 and MW-3 were completed as permanent monitoring wells. Previous sampling events have not detected hydrocarbons (1999 and 2000). Therefore, further sampling is awaiting site closure. ✓

SUMMARY TABLES AND GRAPHS

Groundwater analytical data are presented in Table 1 BTEX and Product Removal Table. Copies of the Laboratory Data Sheets and the associated quality assurance/quality control data are presented as Attachment 1. Included is a BTEX Data graph for MW-1 and a Free Product Recovery graph for MW-1.

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

All PSH removed disposed of at Kutz Separator, Bloomfield, NM.

EPFS GROUNDWATER PITS 2001 ANNUAL GROUNDWATER REPORT

Lindrith B #24

Meter Code: 94967

ISOCONCENTRATION MAPS

No isoconcentration maps were generated at this site.

CONCLUSIONS

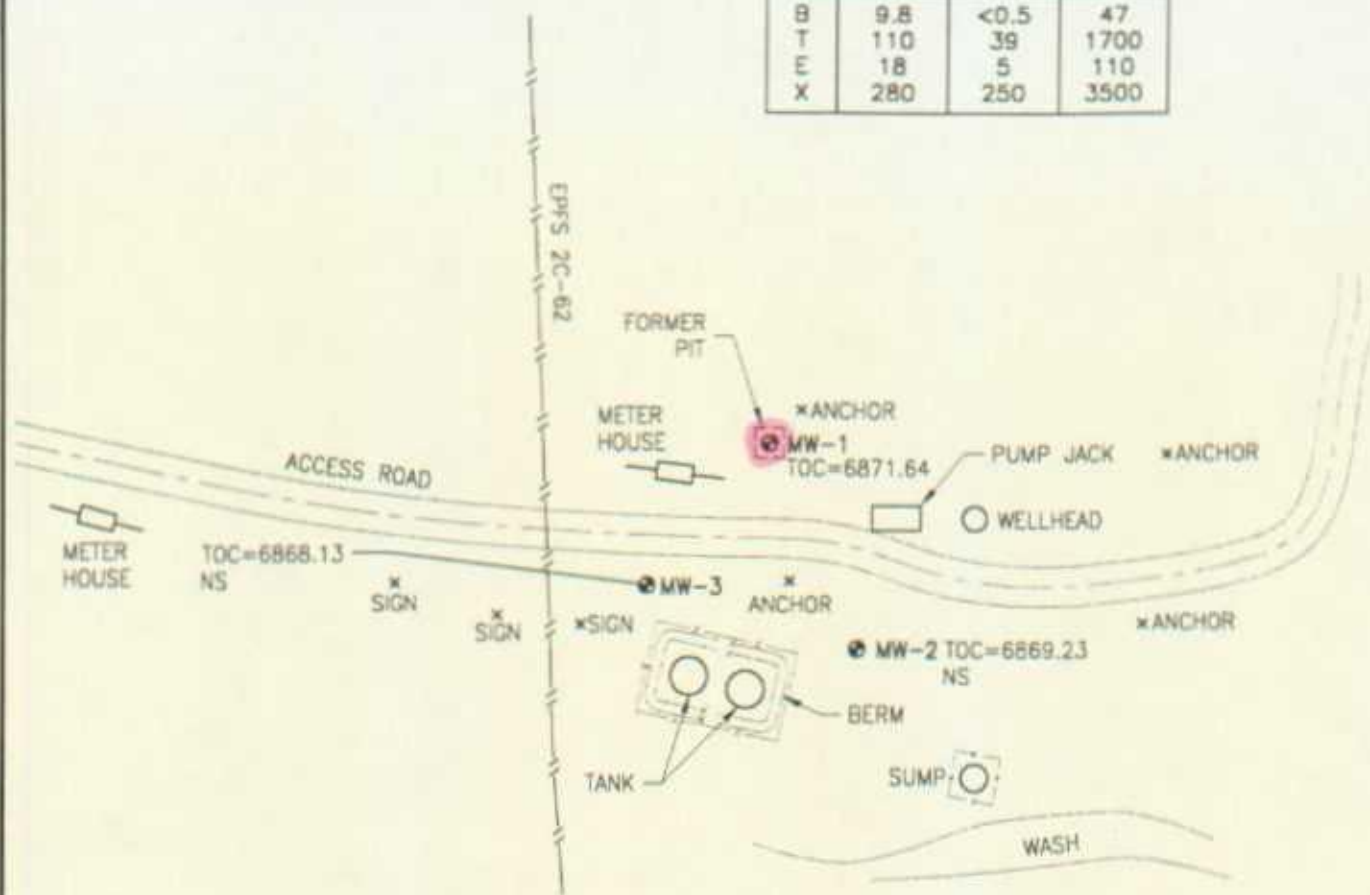
Phase separated hydrocarbon recovery was initiated in February 2001 and we recovered 0.35 gallons from MW-1 in 2001. MW-1 was sampled quarterly. Groundwater elevations have decreased several feet between 2000 and 2001; groundwater flow is toward the west.

No samples were collected from MW-2 or MW-3, since BTEX compounds have never been detected in these wells.

RECOMMENDATIONS

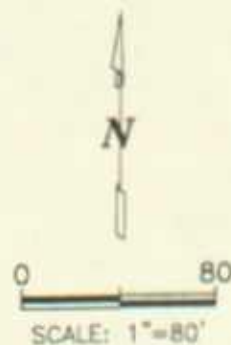
- > Product removal will continue as needed in MW-1.
- > MW-1 will be sampled annually until BTEX constituents fall below NMWQCC standards for four consecutive quarters, at which time the well will be sampled quarterly to demonstrate closure.
- > Sample MW-2 and MW-3 one final time at the time of closure.
- > Following OCD approval for closure, monitoring wells will be abandoned using OCD approved guidelines.

MW-1	2/13/01	6/6/01	11/24/01
B	9.8	<0.5	47
T	110	39	1700
E	18	5	110
X	280	250	3500



LEGEND

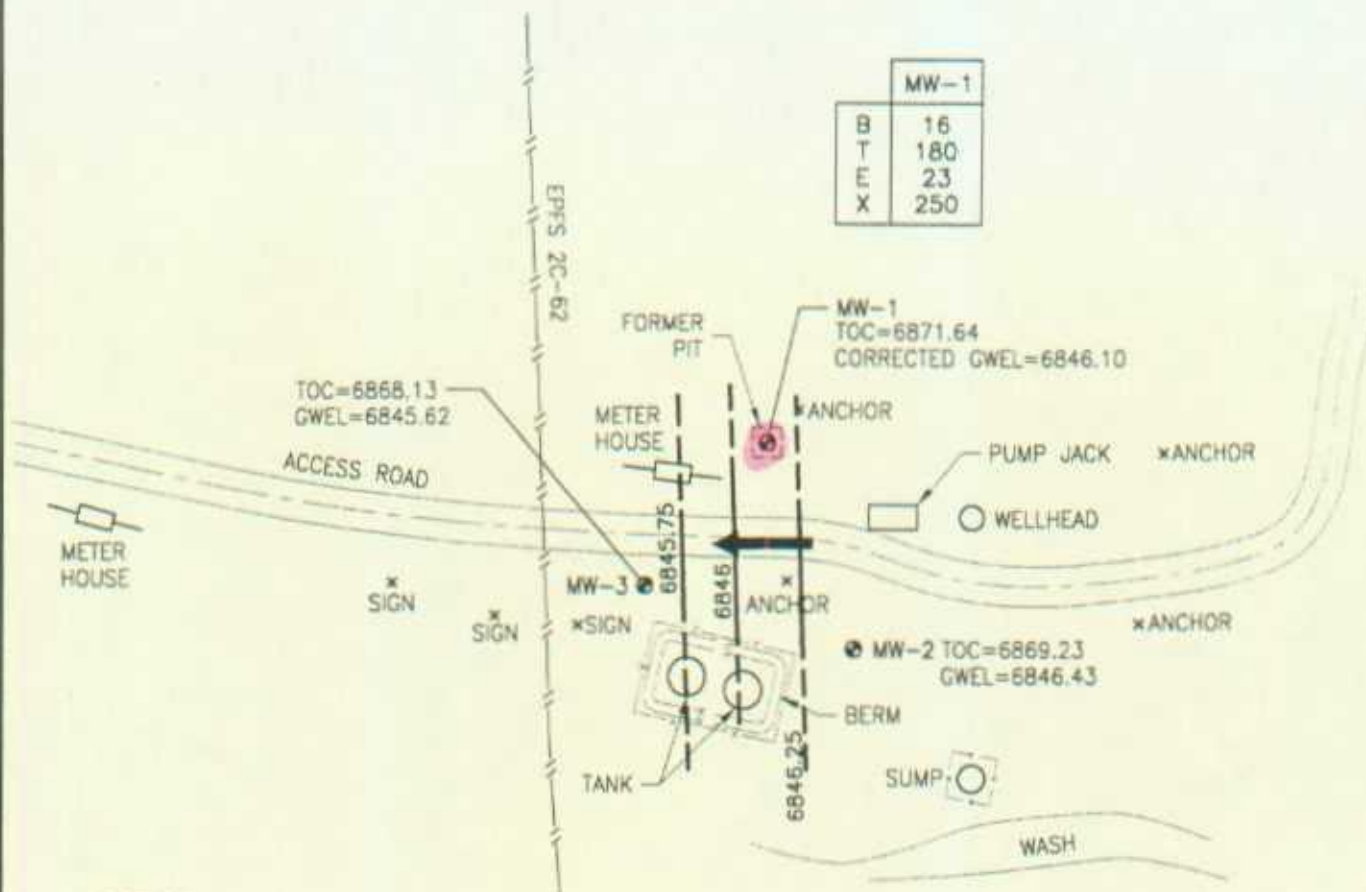
- MW-1 Approximate Monitoring Well Location and Number
- — — — — Centerline of Road
- - - - - Fence Line
- / - / - / - Pipe Line
- B Benzene ($\mu\text{g/L}$)
- T Toluene ($\mu\text{g/L}$)
- E Ethylbenzene ($\mu\text{g/L}$)
- X Total Xylenes ($\mu\text{g/L}$)
- NS Not Sampled
- GWEL Groundwater Elevation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



LINDRITH B NO.24, METER 94967
FEBRUARY, JUNE, AND NOVEMBER, 2001

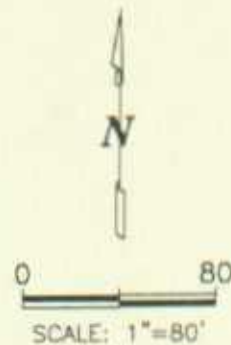
GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 1



LEGEND

-  MW-1 Approximate Monitoring Well Location and Number
-  Centerline of Road
-  Fence Line
-  Pipe Line
- B Benzene ($\mu\text{g/L}$)
- T Toluene ($\mu\text{g/L}$)
- E Ethylbenzene ($\mu\text{g/L}$)
- X Total Xylenes ($\mu\text{g/L}$)
- GWEL Groundwater Elevation
(FT Above Mean Sea Level Unless Noted Otherwise)
- TOC Top of Casing
- 6846 Potentiometric Surface
(Approximate & Assumed Where Dashed)
-  Direction of Groundwater Flow
(Estimated)



LINDRITH B NO.24, METER 94967
AUGUST, 2001

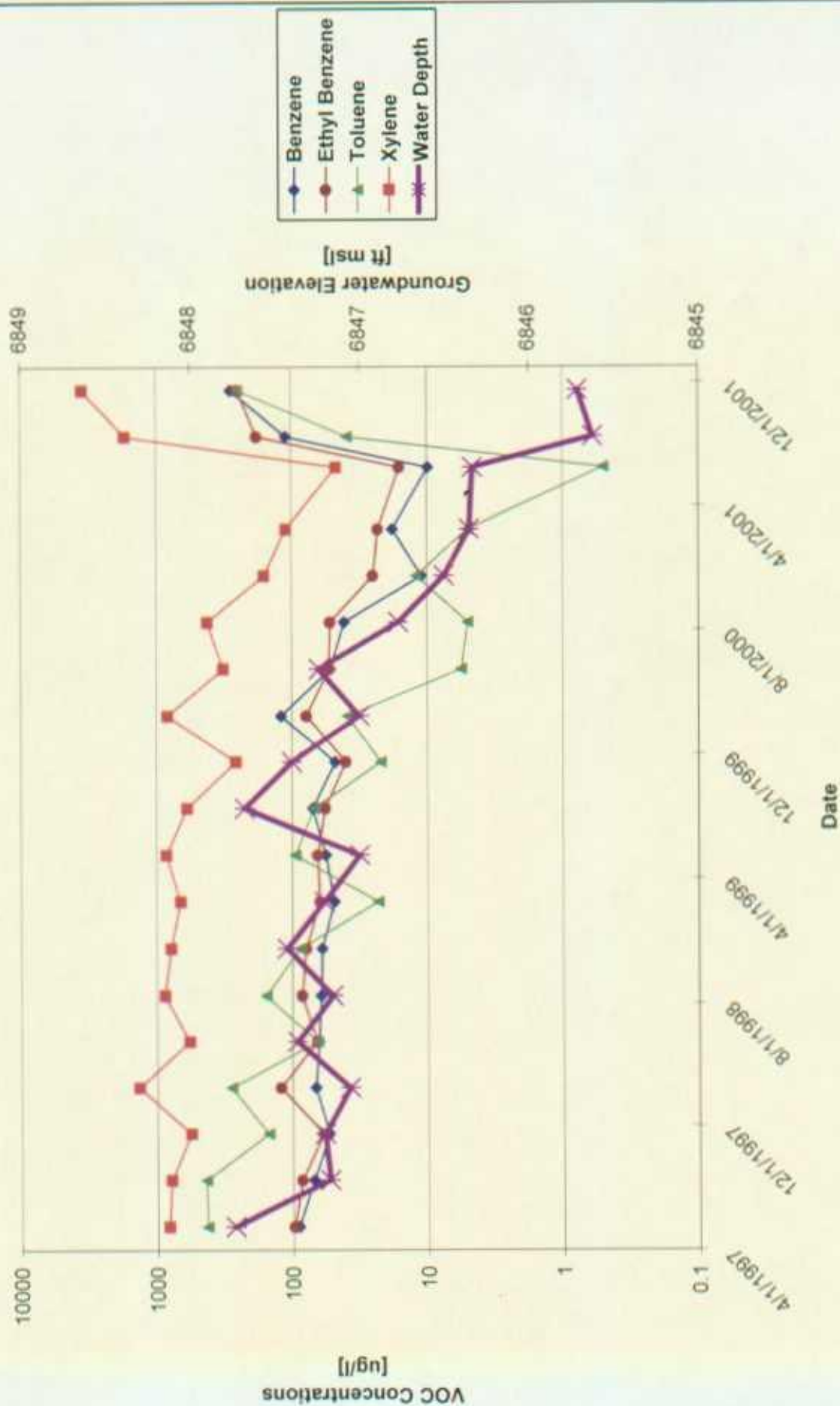
GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 2

Table 1 BTEX
Lindrith B#24

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)
LIN0201	94967	Lindrith B #24	2/13/2001	1	18	23	5	110	25.29	6846.35
LIN0106	94967	Lindrith B #24	6/6/2001	1	9.8	16	< 0.5	47	25.31	6846.33
LIN0108	94967	Lindrith B #24	8/6/2001	1	110	180	39	1700	26.02	6845.62
LIN1101	94967	Lindrith B #24	11/29/2001	1	280	250	250	3500	25.93	6845.71

Lindrith B#24 MW-1



Product Removal Table
Lindrith B #24

Meter Line	Site Name	MW#	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Volume Removed (Gallons)	Cumulative Total (Gallons)
94967	Lindrith B #24	1	8/6/2001	25.43	26.02	0.59	0.1	0.1
94967	Lindrith B #24	1	8/31/2001	25.43	25.50	0.07	0.25	0.35

No product removed from MW-2 and MW-3 for 2001

Free Product Recovery Lindriith B#24 MW-1



Lindrieth B# 24

MONITOR WELL ABANDONMENT FORM

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

Project Name

EPFS Completions

Project Number/Phase

97057-049

Driller

Kelly Padilla

Date/Time Started

Date/Time Completed

Well #

#2 AND #3

Well Location

Lindrieth B#24

Site Location

Lindrieth

WELL DIAGRAM

Sloping Surface
Ground Surface

Annular Space

Well Casing

Cement/Bentonite Seal

Bentonite Seal

Well Screen

Filter Pack

Ground Surface

Top of Grout

Top of Riser

Water Level

Bottom of Grout

Bottom of Well (TD)

Comments:

mw 2 and mw3 Put Well Proctable and Cemented
Pad

Driller's Signature

Kelly Padilla

ATTACHMENT 1

2001 GROUNDWATER ANALYTICAL

Document ID: 128/01

PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS ARE FOR LAB USE ONLY.

Pinnacle
Laboratories

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

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

PLI Accession #

PROJECT MANAGER: LISA WINN

COMPANY: AMEC EARTH & ENVIRONMENTAL

ADDRESS: 2060 AFTON PLACE

FARMINGTON, NM 87401

PHONE: (505) 327-7928

FAX: (505) 326-5721

BILL TO: SCOTT POPE

COMPANY: EL PASO FIELD SERVICE

ADDRESS: 614 KELLY AVE

FARMINGTON, NM 87401

SAMPLE ID: DATE: 11-29-01 TIME: 11:05 MATRIX: H2O LAB ID:

LIN - 1101 - MW01

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: 1517000121

PROJ. NAME: PPS GW Project

P.O. NO:

SHIPPED VIA: GILBERTSON

SAMPLE RECEIPT:

NO. CONTAINERS

CUSTODY SEALS

RECEIVED IN AGT

BLUE

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEKCERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHERMETHANOL PRESERVATION ☐COMMENTS: FIXED FEE ☐

RELINQUISHED BY:

Signature: [Signature] Time: 0315

Printed Name: [Name] Date: 12-10-01

Company: AMEC

See (reverse side) (Force Majeure)

RECEIVED BY:

Signature: [Signature] Time: 1

Printed Name: [Name] Date: [Date]

Company: Pinnacle Laboratories Inc.

RELINQUISHED BY:

Signature: [Signature] Time: [Time]

Printed Name: [Name] Date: [Date]

Company: [Company]

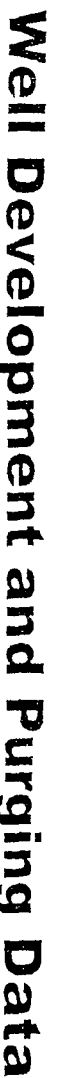
RECEIVED BY: (LAB)

Signature: [Signature] Time: 2

Printed Name: [Name] Date: [Date]

Company: Pinnacle Laboratories Inc.

Date 8-31-61



☒

Rural Rio Arriba CO.

Project Manager LISA KIMM

Water Volume Calculation

Initial Depth of Well (feet) 31.76

Initial Depth to Water (feet) 26.02

Height of Water Column in Well (feet) 5.24

Serial No. (if applicable)

Hydroc

15

Hydro

154

1

Methods of Development

Pump	Bailer

☐ Centrifugal

☒ Bottom Valve

☐ Submersible ☐ Double Check Valve

☐ Peristaltic ☐ Stainless-steel Kemmerer

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☐ Other

Water Removal Data

Date	Time	Development Method		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Removed (gallons)		Temperature (°C)	pH	Conductivity (microhm/cm)	Dissolved Oxygen (mg/L)	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
4-6-01	1235						2.5	2.5			20.8	6.73	0930		product / cloudy
	1240						2.5	5			18.5	7.10	0930		product / cloudy
	1244						2.5	7.5			17.6	7.09	0940		product / cloudy
	1246						2.5	10			17.2	7.18	0980		product / cloudy
	1253					26.02	2.5	12.5			17.2	7.19	0970		product / cloudy

Sampling Activities

Type of Container

Parameters Sampled For

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Water Disposal

Ante Separation of the North Atlantic

Developer's Signature(s)

Dr. A. J. M. L.

Date:

C-01

Reviewer

Date _____

10/03

SHADED AREAS ARE FOR LAB USE ONLY.

PLI Accession #:

DATE: 1/21 PAGE: 1 OF 1

11/1/09) Pinnacle Laboratories, Inc. • 2709-D Pan American Freeway, NE • Albuquerque, New Mexico 87110 • (505) 344-3777 • Fax (505) 344-4413 • e-mail: PIN_LAB@WORLDNET.AT.TE • DISTRIBUTION • P.L., Canary - Original

Date 11.59



Well Development and Purging Data

☒ ☐

Russell
~~But~~ Arriba Co.

Project Manager LISA Wink

Water Volume Calculation

Initial Depth of Well (feet)

Initial Depth to Water (feet)

Height of Water Column in

Gravel Pack

THE UNIVERSITY OF CHICAGO

100

Bärle

☒ Bottom Valve

☐ Double Check Valve

☐ Stainless-steel Kemmerer

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	6.45	421 X 3	12.63
Gravel Pack			
Drilling Fluids			
Total			12.63

Sampling Activities	
Type of Container	VOA
No. of Containers	2
Parameters Sampled For	BTEX

Water Removal Data

Date	Time	Development Method		Removal Rate (gal/min)	Intake 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
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
5-6-01	0730		X				3	3			18.1	6.92	0990		Cloudy water
	0736		X				3	6			15.2	7.01	1000		Cloudy water
	0941		X				3	9			17.1	7.19	1000		Cloudy water
	0945		X				3	12			13.5	7.51	10320		"
	0951		X			26.17	3	15			13.5	7.17	10370		No Change

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

Comments 25:30 To avoid product Thickness .01 Sanded for BTex 1000

Done & Done

Date _____

6-6-1

Reviewer

John

Date _____

670

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:		ANALYSIS REQUEST	
COMPANY: G.F.M.		Petroleum Hydrocarbons (418.1) TRPH	
ADDRESS: 906 5th Ave. Bldg.		(MOD.8015) Diesel/Direct Inject	
PHONE: (505) 566-9116		(M8015) Gas/Purge & Trap	
FAX: (505) 566-9120		8021 (BTEX)/8015 (Gasoline) MTBE	
BILL TO: GFS Scott Pope		8021 (BTEX) ☐ MTBE ☐ TMB ☐ PCE	
COMPANY: El Paso Field Services		8021 (TCL)	
ADDRESS: 610 Kelly Ave		8021 (EDX)	
Evanston N.M.		8021 (HALO)	
SAMPLE ID		8021 (CUST)	
DATE		504.1 EDB ☐ / DBCP ☐	
TIME		8260 (TCL) Volatile Organics	
MATRIX		8260 (Full) Volatile Organics	
LAB ID		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		PRIORITY AUTHORIZATION REQUIRED FOR RUSH PROJECTS	
PROJ. NO: 6161		(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK	
PROJ. NAME: GFS Remediation		CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER	
P.O. NO: 1111		METHANOL PRESERVATION ☐	
SHIPPED VIA:		COMMENTS: FIXED FEE ☐	
SAMPLE RECEIPT		RECEIVED BY: [Signature] Time: 1500	
NO. CONTAINERS		Printed Name: [Signature] Date: 6-6-01	
CUSTODY SEALS		Company: [Signature]	
RECEIVED/INTACT		See reverse side (Force Majeure)	
BLUE ICE/CE		RECEIVED BY: [Signature] Time: 1500	
		Printed Name: [Signature] Date: 6-6-01	
		Company: [Signature]	
		RECEIVED BY: [Signature] Time: 1500	
		Printed Name: [Signature] Date: 6-6-01	
		Company: [Signature]	

Date 6-6-01

PHILIP

ENVIRONMENTAL

Well Number MW 01

☐ Development
☒ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WORD

Page 1 of 1

Project Name DFS Quarterly Sampling

Project Manager R Thompson

Project No. 62500107

Client Company El Paso Field Services

Site Address Rural Rio Arriba County

Phase/Task No. 0301

Development Criteria

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

Water Volume Distribution

Initial Depth of Well (feet) 31.77
Initial Depth to Water (feet) 25.29
Height of Water Column in Well (feet) 6.48
Diameter (inches) 4" Girth of Pipe

Instruments

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☐ Other

Serial No. (if applicable)
Hydac
Hydac

Methods of Development

Pump
☐ Centrifugal
☐ Submersible
☐ Peristaltic
☐ Other

Boiler
☒ Bottom Valve
☐ Double Check Valve
☐ Stainless-Steel Kemmerer

Item	Water Volume in Well	Volume to be Removed
Well Casing	6.48	4.23 x 3
Casing Port		12.69
Drilling Fluid Is		
Total		12.69

Water Disposal

K-17 Separator Bloomfield NM

Water Removal Data

Date	Time	Development Method	Removal Rate (gal/min)	Injection Depth (feet)	Ending Water Depth (feet)	Water Volume		Product Volume (gallons)	Removal Efficiency (%)	pH	Conductivity (micromhos/cm)	Dissolved Oxygen (mg/l)	Comments
						Injection	Removal						
02-13-01	10:25	X				2.75	2.75		11.9	5.51	1130		Clear Product
	10:31	X				2.75	5.50		10.9	5.56	1120		"
	10:36	X				2.75	8.25		10.9	5.51	1170		"
	10:40	X				2.75	11		10.7	5.48	1180		"
	10:44	X				2.75	13.75		10.3	5.44	1190		no change

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

Comments Product in well product Thickness .03 Sampled for BTEX

1100

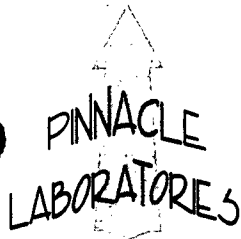
Developer's Signature(s) Bliss A. May

Date 2-13-01

Reviewer RT

Date 2/20/01

6-56



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

Pinnacle Lab ID number **112033**
December 27, 2001

AMEC EARTH & ENVIRONMENTAL
2060 AFTON PLACE
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name EPFS GW PROJECT
Project Number 1517000121

Lindroth 824 94967

Attention: LISA WINN/SCOTT POPE

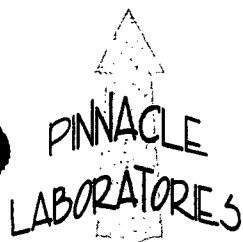
On 12/10/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

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

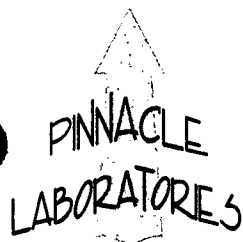
MR: jt

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	: 112033
PROJECT #	: 1517000121	DATE RECEIVED	: 12/10/01
PROJECT NAME	: EPFS GW PROJECT	REPORT DATE	: 12/27/01
PINNACLE			DATE
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
112033 - 01	LIN-1101-MW01	AQUEOUS	11/29/01



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

GAS CHROMATOGRAPHY RESULTS

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

PINNACLE I.D.: 112033

PROJECT NAME		PROJECT		DATE			DIL.
SAMPLE			DATE	DATE	DATE		
D. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR	
1	LIN-1101-MW01	AQUEOUS	11/29/01	NA	12/13/01	500	
PARAMETER		DET. LIMIT	UNITS	LIN-1101-MW01			
BENZENE		0.5	UG/L	280			
TOLUENE		0.5	UG/L	< 250			
ETHYLBENZENE		0.5	UG/L	< 250			
TOTAL XYLENES		0.5	UG/L	3500			

3 SURROGATE:

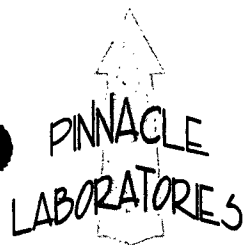
3 1,2,4-TRIFLUOROBENZENE (%)

115

3 SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

N/A



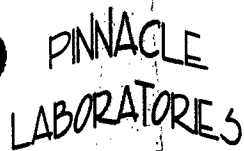
2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 112033
BLANK I. D.	: 121301	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 12/13/01
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
TOTAL XYLENES	UG/L	<0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 107
SURROGATE LIMITS: (80 - 120)
ANALYST NOTES:
N/A



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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST : EPA 8021 MODIFIED
MSMSD # : 121301
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000121
PROJECT NAME : EPFS GW PROJECT

PINNACLE I.D. : 112033
DATE EXTRACTED : N/A
DATE ANALYZED : 12/13/01
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	22.7	114	22.3	112	2	(80 - 120)	20
TOLUENE	<0.5	20.0	21.9	109	21.2	106	3	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.4	107	20.8	104	3	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	67.0	112	65.0	108	3	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

PROJECT MANAGER: LISA WINN		ANALYSIS REQUEST	
COMPANY: AMEC EARTH & ENVIRONMENTAL	ADDRESS: 2060 AFTON PLACE	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics
PHONE: (505) 327-7928	FARMINGTON, NM 87401	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics
FAX: (505) 326-5721		Pesticides /PCB (608/8081/8082)	Herbicides (615/8151)
BILL TO: SCOTT POPE		Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)
COMPANY: EL PASO FIELD SERVICE		504.1 EDB □ /DBCP □	General Chemistry:
ADDRESS: 614 REILLY AVE		8021 (BTEX) □ MTBE □ PCE	Target Analyte List Metals (23)
FARMINGTON NM 87401		8021 (TCL)	RCRA Metals (8)
		8021 (EDX)	RCRA Metals by TCLP (Method 1311)
		8021 (HALO)	Metals:
		8021 (CUST)	
		(M8015) Gas/Purge & Trap	
		8021 (BTEX)/8015 (Gasoline) MTBE	
		(MOD.8015) Diesel/Direct Inject	
		Petroleum Hydrocarbons (418.1) TRPH	
SAMPLE ID: LIN-1101-MW01	DATE: 11-29-01	TIME: 1105	HzD
PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	
PROJ. NO.: 1517000121	(RUSH) □ 24hr □ 48hr □ 72hr □ 1 WEEK	(NORMAL) ☒	
PROJ. NAME: EPPS GW PROTECT	CERTIFICATION REQUIRED: □ NM □ SDWA □ OTHER		
P.O. NO.:	METHANOL PRESERVATION □		
SHIPPED VIA: GREYHOUND	COMMENTS: FIXED FEE □		
RECEIVED BY: 1		RECEIVED BY: 2	
Signature: Scott Thompson	Time: 0815	Signature: [Signature]	Time: 12-10-01
Printed Name: Scott Thompson	Date: 12-10-01	Printed Name: [Name]	Date: 12-10-01
Company: AMEC	See reverse side (Forca Majore)	Company: Pinnacle Laboratories Inc.	

PLEASE FILL THIS FORM IN COMPLETELY.



Phone (505) 326-4737 Fax (505) 325-4182

Inter-Mountain Laboratories, Inc.

2506 West Main Street, Farmington, NM 87401

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

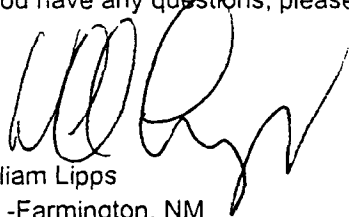
Dear Client:

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

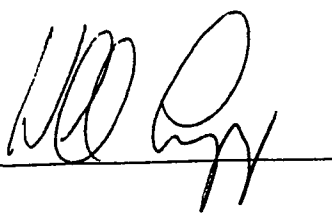
Client: Golden Environmental Management
Project: G169
IML Set: 0301W03833

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

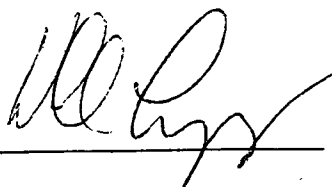
Page 1 of 1

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:



PROJECT MANAGER: LISA WATSON

COMPANY: GOLDEN ENVIRONMENTAL MGMT.
ADDRESS: 706 S. JAMES BLVD. SUITE D
FARMINGTON NM. 87401
PHONE: (505) 865-9114
FAX: (505) 866-7140

BILL TO: SCOTT POPE

COMPANY: EL PASO FIELD SERVICES
ADDRESS: 601 RALLY AVE
FARMINGTON NM. 87401

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.
JOH-0109-MW 1	9-5-01	0700	Liq. HC	
JON-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	
JEAN-0109-MW 1	9-5-01	1300	Liq. HC	

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ANALYSIS REQUEST

[illegible]

PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS				RELINQUISHED BY:		1.		RELINQUISHED BY:		2	
PROJ. NO.:	6169	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK	(NORMAL) ☒		Signature:		Time:		Signature:		Time:		
PROJ. NAME:	GPS Reduction Project	CERTIFICATION REQUIRED: ☐ INM ☐ SDWA ☐ OTHER			Printed Name:		Date:		Printed Name:		Date:		
P.O. NO.:		METHANOL PRESERVATION ☐			Company:		Date:		Company:		Date:		
SHIPPED VIA:		COMMENTS: FIXED FEE ☐											
SAMPLE RECEIPT		JOHNSTON FIELD # 6 (89232)											
NO. CONTAINERS		JOHNSTON FIELD # 4 (70174)											
CUSTODY SEALS	Y/N/NA	KNIFE # 1 (22556)											
RECEIVED INTACT		STATE GEO. COM. N#1 (71669)											
BLUE ICE/CE		JENNIE PAH # 1 (71816)											
RECEIVED BY:		Signature:		Time:		RECEIVED BY: (LAB)		Signature:		Time:		RECEIVED BY: (LAB)	
Printed Name:		Printed Name:		Date:		Printed Name:		Printed Name:		Date:		Printed Name:	
Company:		Company:		Date:		Company:		Company:		Date:		Company:	

PROJECT MANAGER: Lisa Winton

COMPANY: GOLDEN ENVIRONMENTAL MGMT.
ADDRESS: 926 San Jara Blvd. Suite D
Farmington NM. 87410
PHONE: (505) 566-9116
FAX: (505) 566-9120
BILL TO: SCOTT POPE
COMPANY: EL PASO FIELD SERVICES
ADDRESS: 604 RULLY AVE
Farmington NM. 87410

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.
WIN-0109 - MW 1	9-4-01	11:00	L ₁₉ HC	
CAN-0109 - MW 1	9-4-01	13:00	L ₁₉ HC	
BAL-0109 - MW 1	9-4-01	14:00	L ₁₉ HC	
JFB-009 - MW 3	9-4-01	15:00	L ₁₉ HC	
DD-0109 - MW 2	9-4-01	16:00	L ₁₉ HC	
MIL-0109 - MW 1	9-4-01	17:00	L ₁₉ HC	

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PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS				RELINQUISHED BY:	
PROJECT NO.	PROJECT NAME	(PUSH) ☐ 12hr ☐ 48hr ☐ 172hr	☐ 1 WEEK	(NORMAL) ☒	Signature:	Time:	
6169	6169				Chris Adams	0911	
P.O. NO.:		CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER			Printed Name:	Date:	
SHIPPED VIA:		METHANOL PRESERVATION ☐			Chris Adams	9-6-01	
SAMPLE RECEIPT		COMMENTS: FIXED FEE ☐					
NO. CONTAINERS		LINDRITH #241 (945167)					
CUSTODY SEALS	Y/N/NA	CANADA MESA #2 (976110)					
RECEIVED INTACT		GALLIGAN #12, 15 (95-608)					
BLUE ICE/ICE		J.F. BELL #1E (94725)					
		K-3710 (00072)					
		MILLS FED #1A (94810)					

ANALYSIS REQUEST		RELINQUISHED BY:	
SAMPLE ID	DATE TIME MATRIX LAB ID	Signature:	Time:
WIN-0109-MW1	9-4-01 1100 LG HC		
CAN-0109-MW1	9-4-01 1300 LG HC		
GAL-0109-MW1	9-4-01 1400 LG HC		
JFB-009-MW3	9-4-01 1500 LG HC		
222-0109-MW2	9-4-01 1600 LG HC		
MIL-0109-MW1	9-4-01 1700 LG HC		

ANALYSIS REQUEST		RELINQUISHED BY:	
SAMPLE ID	DATE TIME MATRIX LAB ID	Signature:	Time:
WIN-0109-MW1	9-4-01 1100 LG HC		
CAN-0109-MW1	9-4-01 1300 LG HC		
GAL-0109-MW1	9-4-01 1400 LG HC		
JFB-009-MW3	9-4-01 1500 LG HC		
222-0109-MW2	9-4-01 1600 LG HC		
MIL-0109-MW1	9-4-01 1700 LG HC		

ANALYSIS REQUEST		RELINQUISHED BY:	
SAMPLE ID	DATE TIME MATRIX LAB ID	Signature:	Time:
WIN-0109-MW1	9-4-01 1100 LG HC		
CAN-0109-MW1	9-4-01 1300 LG HC		
GAL-0109-MW1	9-4-01 1400 LG HC		
JFB-009-MW3	9-4-01 1500 LG HC		
222-0109-MW2	9-4-01 1600 LG HC		
MIL-0109-MW1	9-4-01 1700 LG HC		

ANALYSIS REQUEST		RELINQUISHED BY:	
SAMPLE ID	DATE TIME MATRIX LAB ID	Signature:	Time:
WIN-0109-MW1	9-4-01 1100 LG HC		
CAN-0109-MW1	9-4-01 1300 LG HC		
GAL-0109-MW1	9-4-01 1400 LG HC		
JFB-009-MW3	9-4-01 1500 LG HC		
222-0109-MW2	9-4-01 1600 LG HC		
MIL-0109-MW1	9-4-01 1700 LG HC		

ANALYSIS REQUEST		RELINQUISHED BY:	
SAMPLE ID	DATE TIME MATRIX LAB ID	Signature:	Time:
WIN-0109-MW1	9-4-01 1100 LG HC		
CAN-0109-MW1	9-4-01 1300 LG HC		
GAL-0109-MW1	9-4-01 1400 LG HC		
JFB-009-MW3	9-4-01 1500 LG HC		
222-0109-MW2	9-4-01 1600 LG HC		
MIL-0109-MW1	9-4-01 1700 LG HC		

ANALYSIS REQUEST		RELINQUISHED BY:	
SAMPLE ID	DATE TIME MATRIX LAB ID	Signature:	Time:
WIN-0109-MW1	9-4-01 1100 LG HC		
CAN-0109-MW1	9-4-01 1300 LG HC		
GAL-0109-MW1	9-4-01 1400 LG HC		
JFB-009-MW3	9-4-01 1500 LG HC		
222-0109-MW2	9-4-01 1600 LG HC		
MIL-0109-MW1	9-4-01 1700 LG HC		

ANALYSIS REQUEST		RELINQUISHED BY:	
SAMPLE ID	DATE TIME MATRIX LAB ID	Signature:	Time:
WIN-0109-MW1	9-4-01 1100 LG HC		
CAN-0109-MW1	9-4-01 1300 LG HC		
GAL-0109-MW1	9-4-01 1400 LG HC		
JFB-009-MW3	9-4-01 1500 LG HC		
222-0109-MW2	9-4-01 1600 LG HC		
MIL-0109-MW1	9-4-01 1700 LG HC		

ANALYSIS REQUEST		RELINQUISHED BY:	
SAMPLE ID	DATE TIME MATRIX LAB ID	Signature:	Time:
WIN-0109-MW1	9-4-01 1100 LG HC		
CAN-0109-MW1	9-4-01 1300 LG HC		
GAL-0109-MW1	9-4-01 1400 LG HC		
JFB-009-MW3	9-4-01 1500 LG HC		
222-0109-MW2	9-4-01 1600 LG HC		
MIL-0109-MW1	9-4-01 1700 LG HC		

ANALYSIS REQUEST		RELINQUISHED BY:	
SAMPLE ID	DATE TIME MATRIX LAB ID	Signature:	Time:
WIN-0109-MW1	9-4-01 1100 LG		

PINNACLE
LABORATORIES

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

Pinnacle Lab ID number 108042
August 22, 2001

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

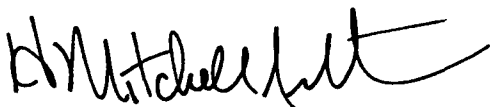
EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name EPFS REMEDIATION PROJECT
Project Number 6169

Attention: LISA WINN/SCOTT POPE

On 08/09/01 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	: 108042
PROJECT #	: 6169	DATE RECEIVED	: 08/09/01
PROJECT NAME	: EPFS REMEDIATION PROJECT	REPORT DATE	: 08/22/01
PINNACLE			
ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
108042 - 01	LIN-0108-MW1	AQUEOUS	08/06/01
108042 - 02	TRIP BLANK	AQUEOUS	08/01/01

PINNACLE
LABORATORIES

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.: 108042

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	LIN-0108-MW1	AQUEOUS	08/06/01	NA	08/16/01	50
02	TRIP BLANK	AQUEOUS	08/01/01	NA	08/16/01	1

PARAMETER	DET. LIMIT	UNITS	LIN-0108-MW1	TRIP BLANK
BENZENE	0.5	UG/L	110	< 0.5
TOLUENE	0.5	UG/L	39	< 0.5
ETHYLBENZENE	0.5	UG/L	180	< 0.5
TOTAL XYLENES	0.5	UG/L	1700	< 0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 104 105
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.	: 108042
LABORATORY I.D.	: 081601	DATE EXTRACTED	: NA
CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	DATE ANALYZED	: 08/16/01
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

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

PINNACLE
LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

EST : EPA 8021 MODIFIED
MSMSD # : 108050-01
CLIENT : GOLDEN ENVIRONMENTAL MNGT.
PROJECT # : 6169
PROJECT NAME : EPFS REMEDIATION PROJECT

PINNACLE I.D. : 108042
DATE EXTRACTED : NA
DATE ANALYZED : 08/16/01
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	20.7	104	20.7	104	0	(80 - 120)	20
OLUENE	<0.5	20.0	22.0	110	22.2	111	1	(80 - 120)	20
THYLBENZENE	<0.5	20.0	22.6	113	22.8	114	1	(80 - 120)	20
OTAL XYLENES	<0.5	60.0	67.8	113	68.3	114	1	(80 - 120)	20

CHEMIST NOTES:
JA

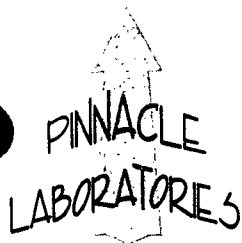
Recovery = $\frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$

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

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: Lisa Winn COMPANY: GEM ADDRESS: 906 SAN JUAN BLVD S.W. Farmington NM. 87401 PHONE: (505) 568-9116 FAX: (505) 566-9120 BILL TO: SCOTT POPE COMPANY: EL PASO Field Services ADDRESS: 604 Reilly Ave Farmington N.M. 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) RCRA Metals (8) RCRA Metals by TCLP (Method 1311) Metals: NUM OF CONTAINERS											
SAMPLE ID LTW-0108-MW1 Trip Blank				DATE 7-6-01 7-10-01				TIME 1304 1430				LAB ID 01 02			
PROJECT INFORMATION PROJ. NO.: 6169 PROJ. NAME: EPCS Reclamation P.O. NO.: SHIPPED VIA: SAMPLE RECEIPT NO CONTAINERS CUSTODY SEALS RECEIVED INTACT BLUE (CE)				PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS (RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒ CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER METHANOL PRESERVATION ☐ COMMENTS: FIXED FEE ☐ LTW D-TH B# 24 meter # (94967) On Ice											
RELINQUISHED BY: Signature: [Signature] Printed Name: Chris Meez Date: 7-9-01 Company:				RELINQUISHED BY: Signature: [Signature] Printed Name: [Signature] Date: 7-9-01 Company:				RECEIVED BY: Signature: [Signature] Printed Name: [Signature] Date: 7-9-01 Company:				RECEIVED BY: Signature: [Signature] Printed Name: [Signature] Date: 7-9-01 Company:			



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

Pinnacle Lab ID number 106039
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

LINDRITH B#24
94967

Attention: LISA WINN/SCOTT POPE

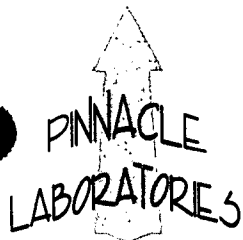
On 06/07/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

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

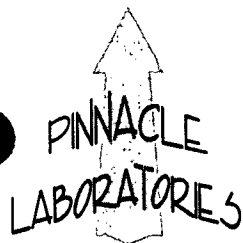
MR: jt

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	: 106039
PROJECT #	: 6169	DATE RECEIVED	: 06/07/01
PROJECT NAME	: EPFS REMEDIATION PROJECT	REPORT DATE	: 06/13/01
PINNACLE		DATE	
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
106039 - 01	LIN-0106-MW1	AQUEOUS	06/06/01
106039 - 02	TRIP BLANK	AQUEOUS	05/02/01



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.: 106039

PROJECT NAME: 7-10-01 NEWBORN PROJECT						
SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	LIN-0106-MW1	AQUEOUS	05/06/01	NA	06/12/01	1
02	TRIP BLANK	AQUEOUS	05/02/01	NA	06/12/01	1

PARAMETER	DET. LIMIT	UNITS	LIN-0106-MW1	TRIP BLANK
BENZENE	0.5	UG/L	9.8	< 0.5
TOLUENE	0.5	UG/L	0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	16	< 0.5
TOTAL XYLENES	0.5	UG/L	47	< 0.5

SURROGATE:

BROMOFLUOROBENZENE (%)

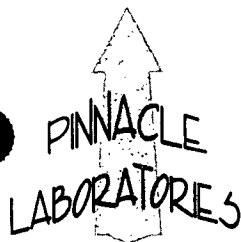
119

103

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.	: 106039
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
TOTAL XYLENES	UG/L	<0.5

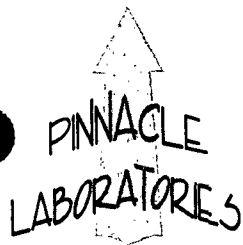
SURROGATE:

3-BROMOFLUOROBENZENE (%)	105
--------------------------	-----

SURROGATE LIMITS: (80 - 120)

CHEMIST NOTES:

1/A



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Albuquerque, New Mexico 87107
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GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

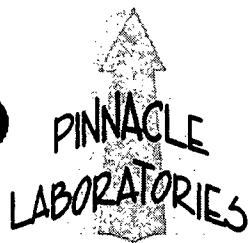
TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 106039
MSMSD #	: 106034-04	DATE EXTRACTED	: NA
CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	DATE ANALYZED	: 06/12/01
PROJECT #	: 6169	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS REMEDIATION PROJECT	UNITS	: UG/L

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
TOTAL XYLENES	2.2	60.0	61.2	98	60.5	97	1	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
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Pinnacle Lab ID number **102070**
February 27, 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.

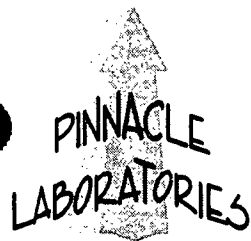
The scheduled reagent blank associated with this study did not run. However, clean samples validated the instrument in lieu of the reagent blank. The sample data is reported.

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

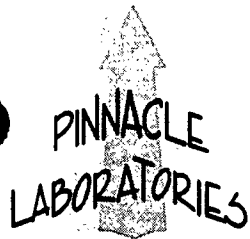
MR: jt

Enclosure



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

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 102070
PROJECT #	: 62800107	DATE RECEIVED	: 02/16/01
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 02/27/01
PINNACLE			DATE
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
102070 - 01	LIN-0201-MW01	AQUEOUS	02/13/01



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.: 102070

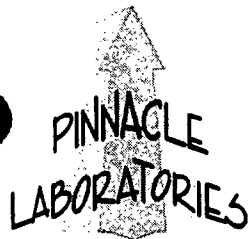
SAMPLE	DATE	DATE	DATE	DIL.		
D. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	LIN-0201-MW01	AQUEOUS	02/13/01	NA	02/22/01	10

PARAMETER	DET. LIMIT	UNITS	LIN-0201-MW01
BENZENE	0.5	UG/L	18
TOLUENE	0.5	UG/L	< 5.0
ETHYLBENZENE	0.5	UG/L	23
TOTAL XYLENES	0.5	UG/L	110

SURROGATE:
BROMOFLUOROBENZENE (%) 111
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.	: 102070
BLANK I. D.	: 022101-B	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 02/21/01
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

SURROGATE:
BROMOFLUOROBENZENE (%) 101
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 QUALITY CONTROL
MSMSD

TEST : EPA 8021 MODIFIED
MSMSD # : 102067-01
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D. : 102070
DATE EXTRACTED : NA
DATE ANALYZED : 02/21/01
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	19.1	96	19.3	97	1	(80 - 120)	20
TOLUENE	<0.5	20.0	18.0	90	17.9	90	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	19.4	97	19.7	99	2	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	57.5	96	57.5	96	0	(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) =
$$\frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



Chain of Custody Record

4000 Monroe Road
Farmington, NM 87401

(505) 326-2262 Phone
(505) 326-2388 FAX

COC Serial No. C 2811

Project Name <u>EpiFS Quarterly Sampling</u>		Type of Analysis and Bottle <u>ETEX 8021</u>	
Project Number <u>62400107 Phase Task 0301</u>		Total Number of Bottles	
Samplers <u>C. Maoz</u>			
Laboratory			
Name <u>PINNACLE</u>			
Location <u>ALBQ NM</u>			
Sample Number (and depth)	Date	Time	Matrix
<u>LIN-0201-MW01</u>	<u>02-13-01</u>	<u>1100</u>	<u>H₂O</u>
2 X			

Comments

Lindberg 13#24
(94963)

Relinquished by:

Signature

Chris A. May

Date

02-15-01

Time

1600

Received By:

Signature

[Signature]

Date

02-16-01

Time

18:30

Samples Iced: ☒ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide Sodium hydroxide (NaOH)
☐ Volatile Organic Analysis Hydrochloric acid (HCl)
☐ Metals Nitric acid (HNO₃)
☐ TPH (418.1) Sulfuric acid (H₂SO₄)
☒ Other (Specify) H₂SO₄
☐ Other (Specify) _____

Carrier: Greyhound

Shipping and Lab Notes:

4.90

Airbill No. GLI/606919864