

3R - 248

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:

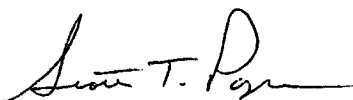
In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual reports for the 30 remaining groundwater impacted sites that were identified during our pit closure project of 1994 / 1995.

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, 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 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

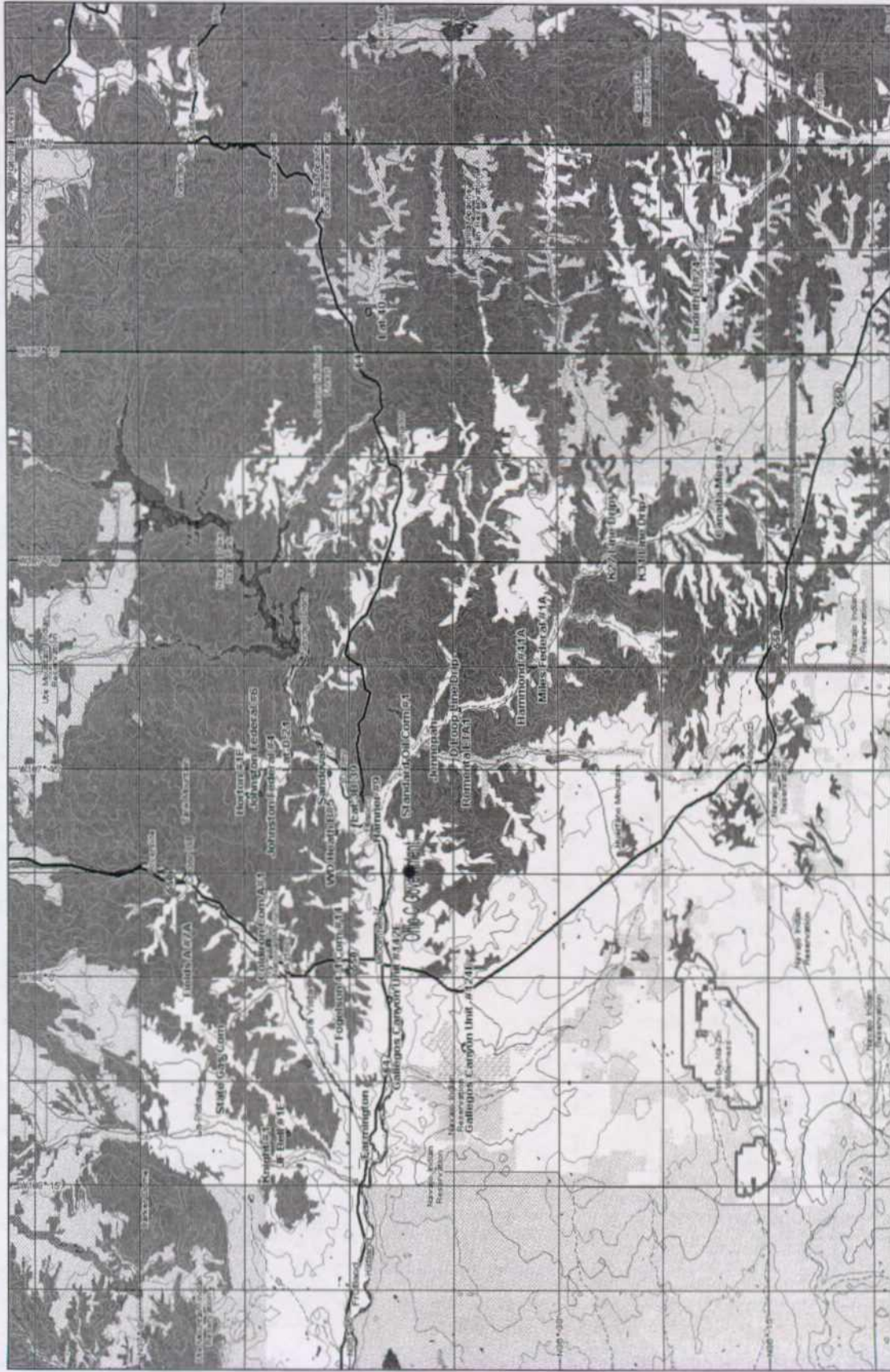
METER or LINE ID	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
89961	Fields A#7A	32N	11W	34	E
89232	Johnston Fed #6A	31N	09W	35	F
94715	James F. Bell #1E	30N	13W	10	P
89620	Sandoval GC A #1A	30N	09W	35	C
87493	W D Heath B-5	30N	09W	31	M
LD151	Lat 0-21 Line Drip	30N	09W	12	O
73220	Fogelson 4-1 Com. #14	29N	11W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



MWH

MONTGOMERY WATSON HARZA

Groundwater Site Map



3-D Topo-Quad Copyright © 1999 DeLorme Vermont, NE 04866 3 and Scale: 1:600,000 Detail: 3-4 Datum: WGS84

EPFS GROUNDWATER PITS 2001 ANNUAL GROUNDWATER REPORT

W D Heath B-5

Meter Code 87493

SITE DETAILS

Legals Twn: 30N Rng: 09W Sec: 31 UNIT: M

NMOCD Haz Ranking 30 Land Type: Federal Operator: Amoco Production Company

PREVIOUS ACTIVITIES

Site Assessment: Apr-94 Excavation May-94 (50cy) Soil Boring: May-95 Monitor Well: May-95

Geoprobe: Jan-97 Additional MWs: NA Downgradient MW's: NA Replace MW: NA

PSH Removal Initiated: NA ORC Nutrient Injection NA Re-Excavation: NA

Quarterly Initiated Apr-1996 Annual Initiated NA Quarterly Resumed: NA

2001 ACTIVITY

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

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 is a BTEX Data 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 initiated in 2001, at this site.

DISPOSITION OF GENERATED WASTES

No wastes were generated at this site in 2001.

**EPFS GROUNDWATER PITS
2001 ANNUAL GROUNDWATER REPORT**

W D Heath B-5
Meter Code: 87493

ISOCONCENTRATION MAPS

An isoconcentration map was not generated at this site.

CONCLUSIONS

Hydrocarbon concentrations in MW-1 have ranged from 2.6 to 14 ppb benzene. The last two sampling events of 2001 had benzene concentrations less than 10 ppb benzene.

Please note that the first quarter sampling for 2002 detected benzene concentrations less than 2 ppb benzene.

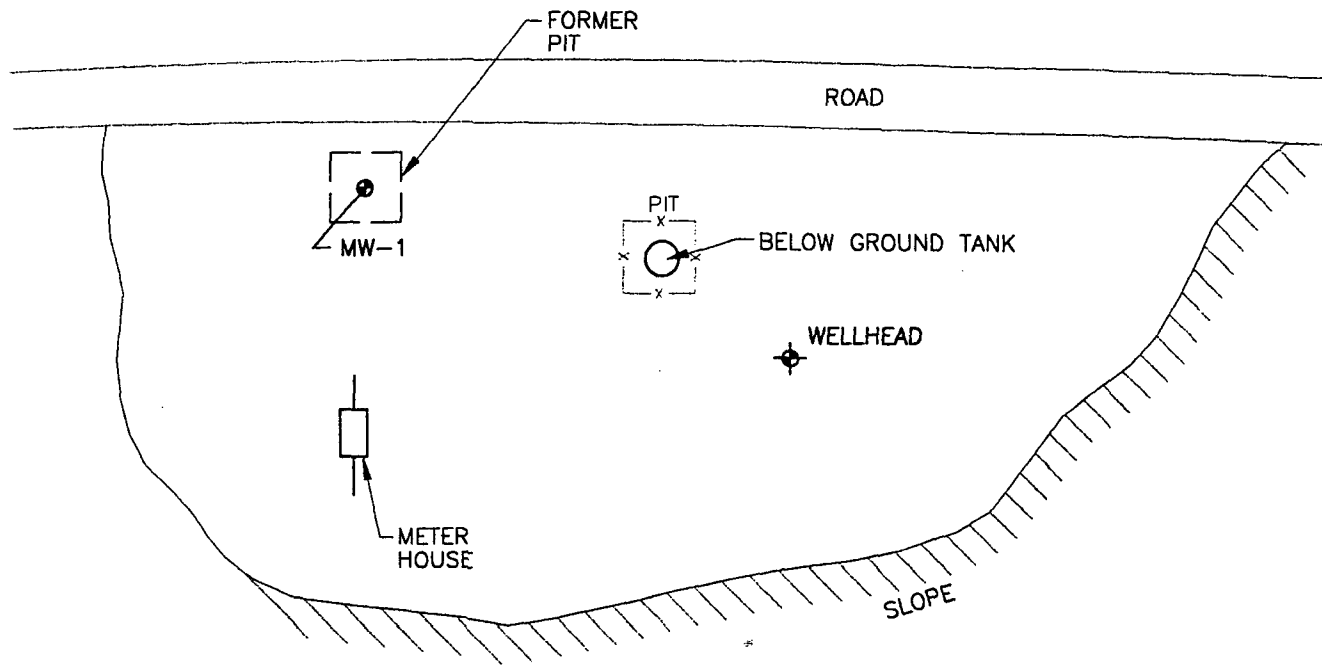
Groundwater elevations have fluctuated about one foot over the course of the year.

RECOMMENDATIONS

- > Continue quarterly monitoring in MW-1, for closure. We anticipate that a closure request may be forthcoming following the second quarter of 2002.
- > Following OCD approval for closure MW-1 will be abandoned using OCD approved procedures.

WELL LOCATIONS

MW-1	1/3/01	4/3/01	7/5/01	10/1/01
B	2.6	14	4.3	6.6
T	<0.5	0.7	<0.5	0.91
E	2	10	8	5.7
X	<0.5	2.7	1.2	2.7



LEGEND

● MW-1 Approximate Monitoring Well Location and Number



NOT TO SCALE

wdheath_01.dwg

WD HEATH B#5, METER 87493
 JANUARY, APRIL, JULY, AND OCTOBER, 2001

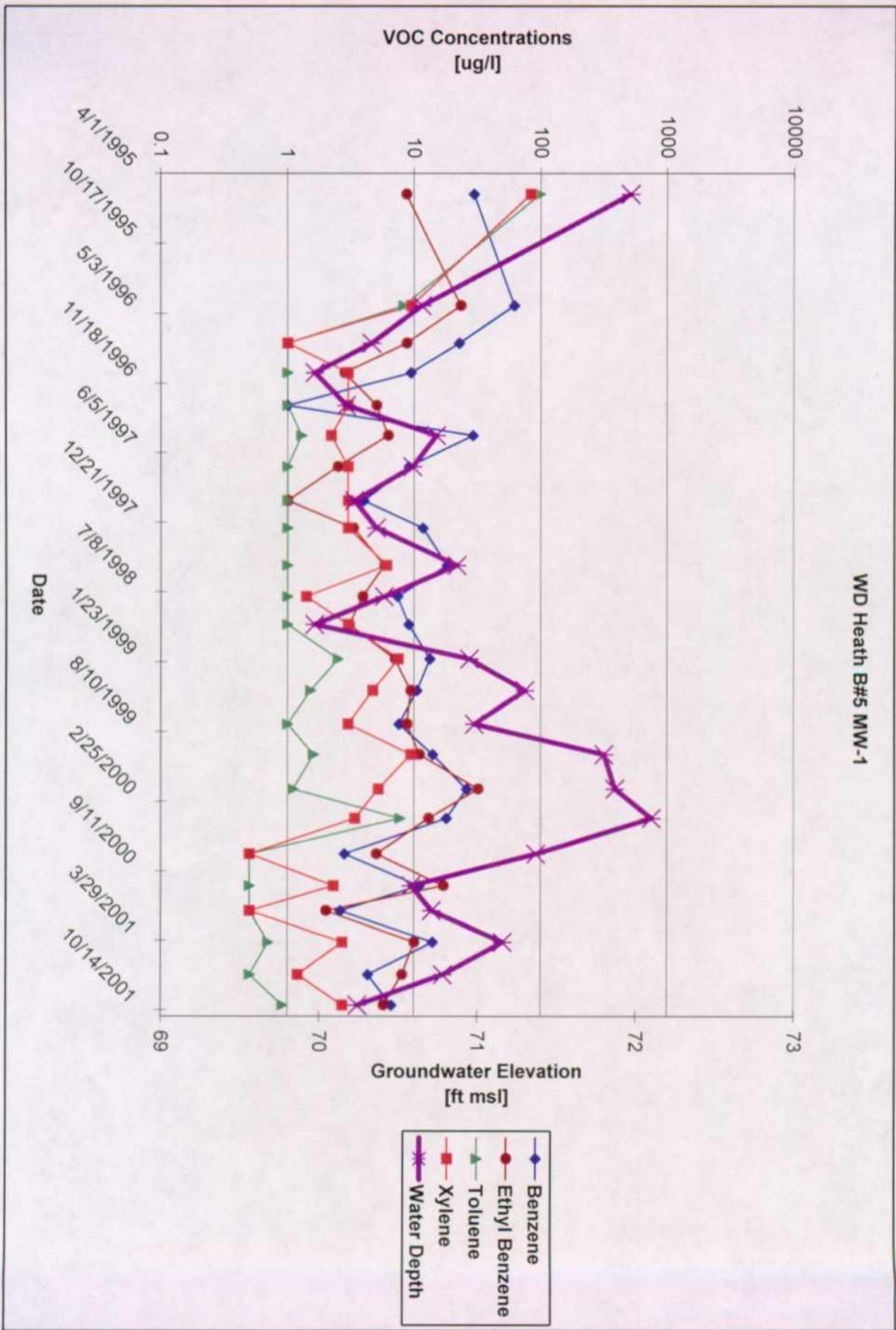
GROUNDWATER SITES
 EL PASO FIELD SERVICES

FIGURE 1

Table 1 BTEX
WD Heath B#5

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)
WDH0101	87493	W D Heath B-5	1/3/2001	1	2.6	2	<0.5	<0.5	29.29	70.71
WDH0104	87493	W D Heath B-5	4/3/2001	1	14	10	0.7	2.7	28.84	71.16
WDH0107	87493	W D Heath B-5	7/5/2001	1	4.3	8	<0.5	1.2	29.22	70.78
WDH0110	87493	W D Heath B-5	10/1/2001	1	6.6	5.7	0.91	2.7	29.76	70.24

WD Heath B#5 MW-1



ATTACHMENT 1

2001 GROUNDWATER ANALYTICAL



Well Development and Purging Data

Project No. 6169 Development Purging Page 1 of 1

Task No. _____ Site Name/Identification WD HEALTH B#5 (87493) Site Address Reval San Juan CO.

Well No. MW1 Project/Project Name EL PASO FIELD SERVICES EPCS Remediation Project Project Manager LISA WILSON

Development Criteria

5 Casing Volumes of Water Removal

Stabilization of Indicator Parameters

Other _____

Methods of Development

Pump

Centrifugal

Submersible

Peristaltic

Other _____

Bailer

Bottom Valve

Double Check Valve

Stainless-steel Kemmerer

Water Volume Calculation

Initial Depth of Well (feet) 45.21

Initial Depth to Water (feet) 29.76

Height of Water Column in Well (feet) 15.45

Diameter (inches): Well 2" Gravel Pack _____

Item	Water Volume in Well Cubic Feet	Gallons	Gallons to be Removed
Well Casing	<u>15.45</u>	<u>8.52X3</u>	<u>7.56</u>
Gravel Pack			
Drilling Fluids			
Total			<u>7.56</u>

Water Disposal Other _____

Water Disposal Water Separator Bloomfield NW

Serial No. (if applicable) Hydax

Hydax

Hydax

Water Removal Data

Date	Time	Development Method		Removal Rate (gal/min)	Inlet Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Removed (gallons)		Temperature (°C)	pH	Conductivity (microsiemen)	Dissolved Oxygen (mg/L)	Comments
		Pump	Bailer				Incremental	Cumulative	Incremental	Cumulative					
10-1-01	1527		X				1.75				21.3	6.44	6610		CREV 1/1/12 SEPTIC 03
	1530		X				1.75				19.3	6.84	6720		"
	1534		X				1.25				18.3	6.94	6730		"
	1537		X				1.75				18.1	6.94	6640		"
	1541		X				35.98	1.75			12.8	6.97	6460		NO Change

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

Comments Sampled for BTEX 1600

Developer Signature (s) David A. M... Date 10-1-01

Reviewer DM244WA Date 10/3/01

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: Lisa Wynn		COMPANY: GEM		ADDRESS: 906 San Juan Blvd Suite D Farmington NM 87401		PHONE: (505) 565-9116		FAX: (505) 565-9120		BILL TO: SCOTT PUYE		COMPANY: El Paso Field Services		ADDRESS: 101 Reilly Ave Farmington NM 87401					
SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH (MOD.8015) Diesel/Direct Inject (M8015) Gas/Purge & Trap 8021 (BTEX)/8015 (Gasoline) MTBE 8021 (BTEX) <input type="checkbox"/> MTBE <input type="checkbox"/> TMB <input type="checkbox"/> PCE 8021 (TCL) 8021 (EDX) 8021 (HALO) 8021 (CUST) 504.1 EDB <input type="checkbox"/> / DBCP <input type="checkbox"/> 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:														
PROJECT INFORMATION				PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS (RUSH) <input type="checkbox"/> 24hr <input type="checkbox"/> 48hr <input type="checkbox"/> 72hr <input type="checkbox"/> 1 WEEK (NORMAL) <input checked="" type="checkbox"/> CERTIFICATION REQUIRED: <input type="checkbox"/> NM <input type="checkbox"/> SDWA <input type="checkbox"/> OTHER METHANOL PRESERVATION <input type="checkbox"/> COMMENTS: FIXED FEE <input type="checkbox"/> W.D. HATH B#S meter # 87493															
PROJ. NO.: G169		PROJ. NAME: PIPES Rehabilitation		SHIPPED VIA:		NO. CONTAINERS:		CUSTODY SEALS: Y/N/N/A		RECEIVED INTACT:		RECEIVED BY: (LAB)		RECEIVED BY:					
PO. NO.:		METHANOL PRESERVATION <input type="checkbox"/>		COMMENTS: FIXED FEE <input type="checkbox"/>		Signature:		Time:		Signature:		Time:		Signature:		Time:			
Signature:		Time:		Signature:		Time:		Signature:		Time:		Signature:		Time:		Signature:		Time:	



Well Development and Purging Data

Project No. 1169 Development Purging Page 1 of 1

Task No. _____ Site Name/Identification WV 1 WETHL B'S (G9493) Site Address Rural San Juan Co

Client/Project Name El Paso Field Services EPCS 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) 45.21
 Initial Depth to Water (feet) 29.22
 Height of Water Column in Well (feet) 15.99
 Diameter (inches): Well _____ Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	15.99	2.60x3	7.8
Gravel Pack			
Drilling Fluids			
Total			7.8

Methods of Development
 Pump Bailor Bottom Valve Double Check Valve Peristaltic Stainless-steel Kemmerer Other _____

Water Disposal Other _____
Water Separator Room Field KMA-
 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	Bailor				Increment	Current	Increment	Current					
7-5-01	1308						1.25	1.25			25.4	6.87	6130		CLEAR, NO BTEX
	1312						1.25	3.5			22.2	6.88	5890		"
	1317						1.25	5.25			20.9	6.91	5830		"
	1321						1.75	7			20.7	6.97	5770		"
	1325						34.64	8.25			19.6	2.00	5670		No Change

Comments Sampled for BTEX 1340

Developer's S re (s) Brian J May Date 7-5-01 Reviewer AWJ Date 7/11/01

Check the data and time data for development operations are real.



PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: Lisa Winn

COMPANY: GENA
 ADDRESS: 906 San Juan Blvd.
 Farmington NM 87401
 PHONE: (505) 566-9116
 FAX: (505) 566-9120

BILL TO: SCOTT POBPT
 COMPANY: EL PASO FIELD SERVICES
 ADDRESS: 614 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) <input type="checkbox"/> MTBE <input type="checkbox"/> TMB <input type="checkbox"/> PCE	X
8021 (TCL)	X
8021 (EDX)	
8021 (HALO)	
8021 (CUST)	
504.1 EDB <input type="checkbox"/> / DBCP <input type="checkbox"/>	
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) <input type="checkbox"/> 24hr <input type="checkbox"/> 48hr <input type="checkbox"/> 72hr <input type="checkbox"/> 1 WEEK (NORMAL) <input checked="" type="checkbox"/>	Signature: [Signature] Time: 0800	Signature: [Signature] Time:
PROJ NAME: W.D. Heath BTF's meter # (92493)	CERTIFICATION REQUIRED: <input type="checkbox"/> NM <input type="checkbox"/> SDWA <input type="checkbox"/> OTHER	Printed Name: M. S. Amos Date: 2-5-01	Printed Name: Date:
P.O. NO.:	METHANOL PRESERVATION <input type="checkbox"/>	Company: [Blank]	Company: [Blank]
SHIPPED VIA:	COMMENTS: FIXED FEE <input type="checkbox"/>	RECEIVED BY: [Signature] Time: [Blank]	RECEIVED BY: (LAB) [Signature] Time: [Blank]
SAMPLE RECEIPT		See reverse side (Force Majeure)	
NO. CONTAINERS		Signature: [Blank] Time: [Blank]	Signature: [Blank] Time: [Blank]
CUSTODY SEALS		Printed Name: [Blank] Date: [Blank]	Printed Name: [Blank] Date: [Blank]
RECEIVED INTACT		Company: [Blank]	Company: Pinnacle Laboratories Inc.
BLUE ICE/ICE			



Well Number Mr 1

WELL DEVELOPMENT AND PURGING DATA
Page 1 of 1

Project Name EPFS quarterly Sampling
Client Company Enpass Field Services
Site Name W.D. HEATH BPTS (87493)

Serial No. (if applicable)
Project No. 62500107
Phase/Task No. 0301
Rural En-Jam Co.

Development Criteria
 0 to 5 Casing Volumes of Water Removal
 Stabilization of Indicator Parameters
 Other

Instruments
 pH Meter
 DO Monitor
 Conductivity Meter
 Temperature Meter
 Other

Serial No. (if applicable)
Hdac
Hdac
Hdac

Methods of Development

- Pump: Centrifugal Bottom Valve
- Submersible Double Check Valve
- Peristaltic Stainless-steel Kermeter
- Other

16.37 267x3 8.01 8.01

Water Disposal
KITZ Separator Risemfield Alms

Water Removal Data

Date	Time	Development Method Pump/Bailer	Removal Rate (gal/min)	Indice Depth (feet)	Indicator (feet)	pH	Conductivity (microsiemens/cm)	Dissolved Oxygen (mg/L)	Comments
4-3-01	1424	X	1.75	1.75	21.4	6.61	5330		CISEV, ROTAWEG
	1430	X	1.75	3.50	19.7	6.59	5330		"
	1431	X	1.75	5.25	14.7	6.50	5290		"
	1440	X	1.75	7	12.8	6.44	5240		"
	1446	X	1.75	8.75	11.4	6.37	5190		No Change

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

Comments Sampled for RTX 1445

Developer's Signature(s) Chris A. May

Reviewer RT Date 4/3/01

Project Name EPFS quarterly Sampling
Client Company El Paso Field Services
Site Name W.D. HEATH BRS (87493)

Operator Lisa Winn
Rural San Juan Co.
Project No. 62500107
Phase/Task No. 0301

Development Criteria
 5 Casing Volumes of Water Removal
 Stabilization of Indicator Parameters
 Other _____

Initial Depth (feet) 45.21
Initial Water Level (feet) 29.84
Depth of Indicator (feet) 16.37
Indicator Depth (feet) 21

Instruments
 pH Meter
 DO Monitor
 Conductivity Meter
 Temperature Meter
 Other _____

Methods of Development

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

Flow Rate (gpm) 16.37
Flow Rate (m³/d) 267x3
Flow Rate (m³/h) 8.01
Flow Rate (m³/d) 8.01

Water Disposal LTZ Separator Passfield Ann.

Water Removal Data

Date	Time	Development Method	Boiler	Removal Rate (gal/min)	Initial Depth (feet)	Ending Depth (feet)	Flow Rate (gpm)	Flow Rate (m³/d)	Flow Rate (m³/h)	Flow Rate (m³/d)	pH	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/l)	Comments
4-30-01	1424	X	X											Check Bottoms
	1430	X	X											"
	1434	X	X											"
	1440	X	X											"
	1446	X	X											no change

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

Comments Sampled for BTEX 1445

Developer's Signature(s) Chris A. May

Date 4-3-01 Reviewer BT Date 4/3/01

Well Number Mw 01

Development
 Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDDP. _____

Project Manager R Thompson

Page 1 of 1

Project Name EPFS quarterly Samplings

Project No. 62600102

Phase/Task No. 0301

Client Company EL Paso Field Services

Site Address Blanco NM.

Site Name WD. HEATH B#5 (82493)

Development Criteria

- 5 Casing Volumes of Water Removal
- Stabilization of Indicator Parameters
- Other _____

Methods of Development

- Pump
- Centrifugal
- Submersible
- Peristaltic
- Other _____
- Bottom Valve
- Double Check Valve
- Stainless-steel Kemmerer

Water Removal Data

Water Volume Distribution	Initial Depth of Well (feet)	<u>45.21</u>
Initial Depth to Water (feet)	<u>29.89</u>	
Height of Water Column in Well (feet)	<u>15.92</u>	
Drummeter (inches): Well	<u>2" General Pack</u>	
Item	Water Volume in Well	Collected to be Removed
Well Casing	<u>5.92</u> Cords/feet	<u>259x3</u> Gallons
Casing Port		
Drilling Fluids		
Total		<u>277</u>

Instruments

- pH Meter
- DO Monitor
- Conductivity Meter
- Temperature Meter
- Other _____

Water Disposal

KT-2 Separator Bloomfield NM.

Date	Time	Development Method	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume (gallons)		Temperature (F)	pH	Conductivity (umho/cm)	Dissolved Oxygen (mg/l)	Comments
						Incremental	Cumulative					
0-03-01	1245	X				1.75	1.75	12.9	6.45	10030		Clear, bottom 250 gal
	1250	X				1.75	3.50	13.3	6.61	10420		"
	1255	X				1.75	5.25	13.3	6.56	10380		"
	1301	X				1.75	7	13.4	6.56	10460		"
	1306	X				1.25	8.25	13.4	6.56	10310		no change

Circle the date and time that the development criteria are met.
Comments Sampled for BTEX 1311

Developer's Signature(s) Art A. May Date 1/3/01 Reviewer RT Date 2/20/01

Well Number Mw 01

Project Name Development

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD- _____

Page 1 of 1

Project Name EPFS quarterly Samplings

Client Company EL Paso Field Services

Project No. 62800107

Site Name W.D. HEATH B#5 (82493)

Site Address Blanco N.M.

Phase/Task No. 0301

Development Criteria

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

Water Volume Production

Initial Depth of Well (feet) 45.31
 Initial Depth to Water (feet) 29.29
 Height of Water Column in Well (feet) 25.92
 Diameter (inches) 2" Casing Pack

Instruments

- pH Meter Hydac
- DO Monitor
- Conductivity Meter Hydac
- Temperature Meter Hydac
- Other _____

Methods of Development

- Pump
- Centrifugal
- Submersible
- Peristaltic
- Other _____
- Bojler
- Bottom Valve
- Double Check Valve
- Stainless-steel Kemmerer

Water Removal Data

Item	Water Volume in Well	Calculated to be Removed
Well Volume	5.92	259x3
Casing Port		777
Drill Pipe		777

Water Disposal

KIT2 Separator Bloomfield N.M.

Date	Time	Development Method	Pump Bojler	Removal Rate (gal/min)	Indata Depth (feet)	Ending Water Depth (feet)	Water Volume Produced (gallons)	Production Rate (gallons/min)	Production Conditions	Temperature (°F)	pH	Conductivity (microhm/cm)	Dissolved Oxygen (mg/l)	Comments
01-03-01	045		X		1.75	1.75	1.75	1.75		12.9	6.45	10030		Clerk Austin egg abor
	1250		X		1.75	1.75	3.50	3.50		13.3	6.61	10420		"
	1255		X		1.75	1.75	5.25	5.25		13.3	6.56	10380		"
	1301		X		1.75	1.75	7	7		13.4	6.56	10460		"
	1306		X		1.75	1.75	8.75	8.75		13.4	6.56	10310		no change

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

Comments Sampled for BTEX 1311

Developer's Signature(s) [Signature] Date 01-03-01 Reviewer RT Date 1/15/01

PINNACLE
LABORATORIES

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

Pinnacle Lab ID number **110013**
October 11, 2001

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

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

WD Heath

Project Name EPFS REMEDIATION PROJECT
Project Number 6169

Attention: LISA WINN/SCOTT POPE

On 10/02/01 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 : 110013
PROJECT # : 6169 DATE RECEIVED : 10/02/01
PROJECT NAME : EPFS REMEDIATION PROJECT REPORT DATE : 10/11/01

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
110013 - 01	WDH-0110-MW1	AQUEOUS	10/01/01

**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.: 110013

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	WDH-0110-MW1	AQUEOUS	10/01/01	NA	10/03/01	1

PARAMETER	DET. LIMIT	UNITS	WDH-0110-MW1
BENZENE	0.5	UG/L	6.6
TOLUENE	0.5	UG/L	0.91
ETHYLBENZENE	0.5	UG/L	5.7
TOTAL XYLENES	0.5	UG/L	2.7

PROGATE:
BROMOFLUOROBENZENE (%) 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. : 110013
BLANK I. D. : 100301 DATE EXTRACTED : NA
CLIENT : GOLDEN ENVIRONMENTAL MNGT. DATE ANALYZED : 10/03/01
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)
CHECKLIST 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 QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 110013
MSMSD #	: 109114-02	DATE EXTRACTED	: NA
CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	DATE ANALYZED	: 10/03/01
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	<0.5	20.0	21.6	108	21.7	109	0	(80 - 120)	20
TOLUENE	<0.5	20.0	20.1	101	20.3	102	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.5	103	20.7	104	1	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	62.2	104	62.7	105	1	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

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-TEO
Farmington NM 87401
PHONE: (505) 565-9116
FAX: (505) 566-9120
BILL TO: SCOTT POPE
COMPANY: Elk Power Field Services
ADDRESS: 604 Reilly Ave
Farmington NM 87401

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
WDH-010-MW1	10-1-01	600	H ₂ O	01

ANALYSIS REQUEST	NUMBERS OF CONTAINERS
Petroleum Hydrocarbons (418.1) TRPH	
(MOD.8015) Diesel/Direct Inject	
(M8015) Gas/Purge & Trap	
8021 (BTEX)/8015 (Gasoline) MTBE	
8021 (BTEX) <input type="checkbox"/> MTBE <input type="checkbox"/> TMB <input type="checkbox"/> PCE	X
8021 (TCL)	
8021 (EDX)	
8021 (HALO)	
8021 (CUST)	
504.1 EDB <input type="checkbox"/> / DBCP <input type="checkbox"/>	
8260 (TCL) Volatile Organics	
8260 (Full) Volatile Organics	
8260 (CUST) Volatile Organics	
8260 (Landfill) Volatile Organics	
8260 (PCB) Volatile Organics	
Pesticides /PCB (608/8081/8082)	
Herbicides (615/8151)	
Base/Neutral/Acid Compounds GCMS (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:	

PROJECT INFORMATION	PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	RELINQUISHED BY: 1.	RELINQUISHED BY: 2.
PROJ. NO.: 6169	(RUSH) <input type="checkbox"/> 24hr <input type="checkbox"/> 48hr <input type="checkbox"/> 72hr <input type="checkbox"/> 1 WEEK <input checked="" type="checkbox"/> (NORMAL)	Signature: <i>[Signature]</i>	Signature: _____
PROJ. NAME: EPES Remediation Project	CERTIFICATION REQUIRED: <input type="checkbox"/> NM <input type="checkbox"/> SDWA <input type="checkbox"/> OTHER	Printed Name: _____	Printed Name: _____
P.O. NO.:	METHANOL PRESERVATION <input type="checkbox"/>	Date: 10-2-01	Date: _____
SHIPPED VIA:	COMMENTS: FIXED FEE <input type="checkbox"/>	Company: _____	Company: _____
SAMPLE RECEIPT:	W.D. HATH BPS	See reverse side (Force Majeure)	RECEIVED BY: (LAB)
NO. CONTAINERS: 2	meter # 87493		Signature: <i>[Signature]</i>
CUSTODY SEALS: Y/N/D			Printed Name: JACINTA TENOXIO
RECEIVED-INTACT: Y/N			Date: 10/2
BIURENCE: 4.3			Company: Pinnacle Laboratories Inc.

PINNACLE
LABORATORIES

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

Pinnacle Lab ID number **107031**
July 12, 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 07/06/01 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 : 107031
PROJECT # : 6169 DATE RECEIVED : 07/06/01
PROJECT NAME : EPFS REMEDIATION PROJECT REPORT DATE : 07/12/01

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
107031 - 01	W.D.H-0107-MW1	AQUEOUS	07/05/01
107031 - 02	TRIP BLANK	AQUEOUS	06/18/01

**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. PINNACLE I.D.: 107031
PROJECT # : 6169
PROJECT NAME : EPFS REMEDIATION PROJECT

SAMPLE	DATE	DATE	DATE	DIL.		
D. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
11	W.D.H-0107-MW1	AQUEOUS	07/05/01	NA	07/10/01	1
12	TRIP BLANK	AQUEOUS	06/18/01	NA	07/09/01	1

PARAMETER	DET. LIMIT	UNITS	W.D.H-0107- MW1	TRIP BLANK
BENZENE	0.5	UG/L	4.3	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	7.7	< 0.5
XYLENES	0.5	UG/L	1.2	< 0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 95 93
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
I/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. : 107031
BLANK I. D. : 070901 DATE EXTRACTED : NA
CLIENT : GOLDEN ENVIRONMENTAL MNGT. DATE ANALYZED : 07/09/01
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 (%) 94
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. : 107031
BLANK I. D. : 071001 DATE EXTRACTED : NA
CLIENT : GOLDEN ENVIRONMENTAL MNGT. DATE ANALYZED : 07/10/01
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:
PERCENT FLUOROBENZENE (%) 94
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 QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 107031
MSMSD #	: 107026-01	DATE EXTRACTED	: NA
CLIENT	: GOLDEN ENVIRONMENTAL MNGT.	DATE ANALYZED	: 07/09/01
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	<0.5	20.0	19.7	99	19.9	100	1	(80 - 120)	20
TOLUENE	<0.5	20.0	20.1	101	20.5	103	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.5	103	20.8	104	1	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	61.6	103	62.5	104	1	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

PROJECT MANAGER: LISA Winn
 COMPANY: G.E.M.
 ADDRESS: 906 San Juan Blvd,
Farmington N.M. 87401
 PHONE: (505) 566-9116
 FAX: (505) 566-9120
 BILL TO: SCOTT POPE
 COMPANY: El Paso Field Services
 ADDRESS: 614 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) <input type="checkbox"/> MTBE <input type="checkbox"/> TMB <input type="checkbox"/> PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB <input type="checkbox"/> / DBCP <input type="checkbox"/>	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	8260 (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			
<u>W.D.H-0107-Mw</u>	<u>12-5-01</u>	<u>1340</u>	<u>H2O</u>	<u>01</u>																												<u>2</u>
<u>TRIP Blank</u>	<u>6-19-01</u>	<u>1350</u>	<u>H2O</u>	<u>02</u>					<u>X</u>	<u>X</u>																						<u>1</u>

ANALYSIS REQUEST

PROJECT INFORMATION

PROJ. NO.: 6169

PROJ. NAME: EPFS Remediation project

P.O. NO.:

SHIPPED VIA:

SAMPLE RECEIPT

NO. CONTAINERS: 2

CUSTODY SEALS: YES

RECEIVED INTACT: YES

BLUE ICE: 23

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS (NORMAL)

(RUSH) 24hr 48hr 72hr 1 WEEK

CERTIFICATION REQUIRED: NM SDWA OTHER

METHANOL PRESERVATION

COMMENTS: FIXED FEE
W.D. HEATH BFFS
meter # (87493)

RELINQUISHED BY:	RELINQUISHED BY:
Signature: <u>[Signature]</u> Printed Name: <u>Chris McE2</u> Company: <u>See reverse side (Force Majeure)</u>	Signature: <u>[Signature]</u> Printed Name: <u>[Signature]</u> Company: <u>Pinnacle Laboratories Inc.</u>
Time: <u>0700</u> Date: <u>7-6-01</u>	Time: <u>[Time]</u> Date: <u>[Date]</u>
RECEIVED BY:	RECEIVED BY: (LAB)
Signature: <u>[Signature]</u> Printed Name: <u>[Name]</u> Company: <u>[Company]</u>	Signature: <u>[Signature]</u> Printed Name: <u>[Name]</u> Company: <u>[Company]</u>
Time: <u>[Time]</u> Date: <u>[Date]</u>	Time: <u>[Time]</u> Date: <u>[Date]</u>

PINNACLE
LABORATORIES

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

July 9, 2001

Scott Pope

This is to inform you that Pinnacle Laboratories, Inc. received samples on 7-6-01.
Enclosed is a copy of the Chain of Custody. If you have any questions regarding the status of
your project please reference Pinnacle ID number 107031.

Thank you

Jacinta Tenorio for
Jacinta Tenorio, Project Manager
Pinnacle Laboratories, Inc.

PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: Lisa Winn

COMPANY: GELIX
 ADDRESS: 906 Sans Jean Blvd.
 Farmington, NM. 87401
 PHONE: (505) 566-9116
 FAX: (505) 566-9120
 BILL TO: SCOTT POPE
 COMPANY: EL Paso Field Services
 ADDRESS: 614 Reilly Ave
 Farmington NM 87401

SAMPLE ID: W.D.H-0107-MW 125-01/1340 H&D 01
 DATE: 6-19-01/1350 H&D 02
 MATRIX: TRIP Blank

- 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 GCMS (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)

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	ANALYSIS REQUEST
W.D.H-0107-MW 125-01/1340	6-19-01	1350	H&D	01	8021 (BTEX) <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> TMB <input type="checkbox"/> PCE
TRIP Blank	6-19-01	1350	H&D	02	8021 (TCL)
					8021 (EDX)
					8021 (HALO)
					8021 (CUST)
					504.1 EDB <input type="checkbox"/> / DBCP <input type="checkbox"/>
					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 GCMS (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)

PROJECT INFORMATION

PROJ. NO.: 6169

PROJ. NAME: EPOFS Remediation Project

PO. NO.:

SHIPPED VIA:

SAMPLE RECEIPT

NO. CONTAINERS: 2

CUSTODY SEALS: YN (M)

RECEIVED INTACT: Yes

BLUE ICE/ICE: 2.3

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) 24hr 48hr 72hr 1 WEEK (NORMAL)

CERTIFICATION REQUIRED: NM SDWA OTHER

METHANOL PRESERVATION

COMMENTS: FIXED FEE
 W.D. HEATH B#S
 meter # (97493)

RELINQUISHED BY: 1.

Signature: Chris Ames Date: 7-5-01

Printed Name: Chris Ames

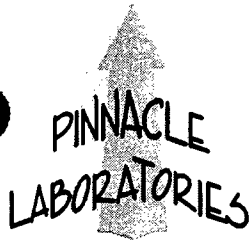
Company: Pinnacle Laboratories

RECEIVED BY: (LAB)

Signature: [Signature] Date: [Date]

Printed Name: [Name]

Company: Pinnacle Laboratories



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

Pinnacle Lab ID number **104010**
April 12, 2001

PHILIP SERVICE CORPORATION
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 04/04/01 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 SERVICE CORPORATION	PINNACLE ID	: 104010
PROJECT #	: 62800107	DATE RECEIVED	: 04/04/01
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 04/12/01
PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
104010 - 01	WDH-0104-MW 1	AQUEOUS	04/03/01

**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 : PHILIP SERVICE CORPORATION
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D.: 104010

SAMPLE	DATE	DATE	DATE	DIL.		
D. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
1	WDH-0104-MW 1	AQUEOUS	04/03/01	NA	04/09/01	1

PARAMETER	DET. LIMIT	UNITS	WDH-0104-MW
BENZENE	0.5	UG/L	14
TOLUENE	0.5	UG/L	0.7
ETHYLBENZENE	0.5	UG/L	9.6
TOTAL XYLENES	0.5	UG/L	2.7

SURROGATE:
BROMOFLUOROBENZENE (%) 104
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. : 104010
BLANK I. D. : 040901 DATE EXTRACTED : NA
CLIENT : PHILIP SERVICE CORPORATION DATE ANALYZED : 04/09/01
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

RECURRENCE:
RECOVERY OF FLUOROBENZENE (%) : 96
RECOVERY LIMITS: (80 - 120)
REMARKS:
N/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

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 104010
MSMSD #	: 104030-01	DATE EXTRACTED	: NA
CLIENT	: PHILIP SERVICE CORPORATION	DATE ANALYZED	: 04/10/01
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING	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	20.3	102	19.8	99	2	(80 - 120)	20
TOLUENE	<0.5	20.0	20.8	104	20.0	100	4	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.8	109	20.9	105	4	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	60.6	101	57.0	95	6	(80 - 120)	20

CHEMIST NOTES:

N/A

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

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



Chain of Custody Record

4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

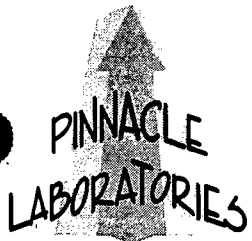
104010

COC Serial No. C 2833

Project Name	Project Number	Phase	Task	Type of Analysis and Bottle			Total Number of Bottles	Comments
				Type of Analysis	Bottle			
E pfs quarterly samplings	6800107		0301			2		
<div style="display: flex; justify-content: space-between;"> Lab ID# 1001 BTEX 8031 </div>								
Samplers C. Maerz								
Laboratory Name pinnacale								
Location ALBQ NM								
Sample Number (and depth)	Date	Time	Matrix					
WDH-0104-MW 1	4.3-01	1445	H ₂ O	X	01	2	W.P. HEATH (87493)	

Relinquished by:	Signature	Date	Time	Received By:	Signature	Date	Time
Ch-A Maerz		4-4-01	0900	Stamm		4/4/01	1700

Samples Iced: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Preservatives (ONLY for Water Samples) <input type="checkbox"/> Cyanide Sodium hydroxide (NaOH) <input type="checkbox"/> Volatile Organic Analysis Hydrochloric acid (HCl) <input type="checkbox"/> Metals Nitric acid (HNO ₃) <input type="checkbox"/> TPH (418.1) Sulfuric acid (H ₂ SO ₄) <input checked="" type="checkbox"/> Other (Specify) H ₂ SO ₄ <input type="checkbox"/> Other (Specify)	Carrier: Greyhound Shipping and Lab Notes: Rec'd @ 9:30
--	---



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

Pinnacle Lab ID number **101015**
January 08, 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

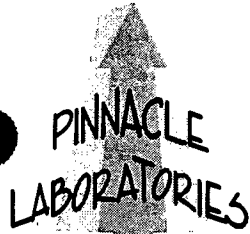
On 01/05/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

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	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 101015
PROJECT #	: 62800107	DATE RECEIVED	: 01/05/01
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 01/08/01

PINNACLE		DATE	
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
101015 - 01	WDH-0101-MW01	AQUEOUS	01/03/01



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

GAS CHROMATOGRAPHY RESULTS

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

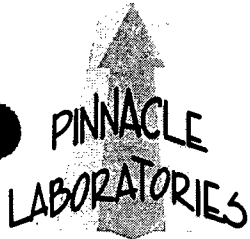
PINNACLE I.D.: 101015

SAMPLE	DATE	DATE	DATE	DIL.
D. #	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	01/03/01	NA	01/05/01	1

PARAMETER	DET. LIMIT	UNITS	WDH-0101-MW01
BENZENE	0.5	UG/L	2.6
TOLUENE	0.5	UG/L	< 0.5
ETHYLBENZENE	0.5	UG/L	2.4
TOTAL XYLENES	0.5	UG/L	< 0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 96
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A



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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 101015
LAB I. D.	: 010501	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 01/05/01
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
XYLENES	UG/L	<0.5

REMARKS:
REMARKS: FLUOROBENZENE (%) 99
REMARKS: LIMITS: (80 - 120)
REMARKS: NOTES:
/A



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GAS CHROMATOGRAPHY QUALITY CONTROL
 MSMSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 101015
MSMSD #	: 010501	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 01/05/01
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING	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	20.6	103	20.7	104	0	(80 - 120)	20
TOLUENE	<0.5	20.0	19.0	95	19.0	95	0	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.1	106	20.5	103	3	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	60.7	101	60.1	100	1	(80 - 120)	20

CHEMIST NOTES:
 N/A

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

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



Chain of Custody Record

4000 Monroe Road
Farmington, NM 87401

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

101015

COC Serial No. C 2818

Project Name EpFS quarterly Sampling		Type of Analysis and Bottle RTX 8021 LAB ID		Comments WR HEATA BRS (87593)
Project Number 64500107 Phase Task 0301		Total Number of Bottles 01		
Samplers C. M. C. Z	Name PINNACLE	Time 1311	Matrix H ₂ O	
Laboratory	Location ALBQ N.M.	Date 01-03-01		
Sample Number (and depth)				
WDH 0101-MW01				

Relinquished by:		Received By:	
Signature Chris T. May	Date 01 04 01	Signature Stancine Jaine	Date 1/5/01
Time 11 00		Time 1055	

Carrier: Greyhound	Airbill No. GJI/606719831
Shipping and Lab Notes:	
<input type="checkbox"/> Cyanide <input type="checkbox"/> Volatile Organic Analysis <input type="checkbox"/> Metals <input type="checkbox"/> TPH (418.1) <input checked="" type="checkbox"/> Other (Specify) Hg, Cd, Pb <input type="checkbox"/> Other (Specify)	
Rec'd @ 1.7°C	