

3R - 205

REPORTS

DATE:

2000



Certified Mail: #7000 1670 0012 7260 6739

February 26, 2001

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

RECEIVED

FEB 28 2001

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RE: 2000 Pit Project Annual Groundwater Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual updates for the 32 remaining groundwater impacted sites that were identified during our pit closure project of 1994 / 1995.

Of the 32 reports (Volumes 1-4), EPFS hereby requests closure of six sites. The six sites EPFS is requesting closure on are presented in one separate binder entitled "San Juan Basin Pit Closures, El Paso Field Services, Pit Closure Reports". Four of the six sites were submitted in last years report and a decision has not been made on closure. The remaining two sites have been submitted in previous years and denied closure.

The Jaquez Com. C #1 and Jaquez Com. E #1 site is not included in with this years report and will be submitted by the required deadline of April 1, 2001

EPFS has also included for your information six Navajo sites in a separate binder.

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Scott T. Pope'.

Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # 7000 1670 0012 7260 6722**
Mr. Bill Liesse, BLM - w / enclosures (federal sites only), **Certified Mail # 7000 1670 0012 7260 6715**

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services
Pit Project Groundwater Report
Annual Report
Volume III

March 2001

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 62800398



205

EPFS GROUNDWATER PITS

2000 ANNUAL GROUNDWATER REPORT

K-31 LINE DRIP

Meter/Line ID - LD087

SITE DETAILS

Legals - Twn: 25N	Rng: 6W	Sec: 16	Unit: N
NMOCD Hazard Ranking: 40			Land Type: STATE
Operator: EL PASO FIELD SERVICES			

PREVIOUS ACTIVITIES

Site Assessment: Jul-94 Excavation: Aug-94 (90 cy) Soil Boring: Sep-95
Monitor Well: Mar-97 Re-excavation: Nov-95 (1,786 cy) Quarterly Sampling Initiated: Jun-97
Well Points: Jul-97 Annual Sampling Initiated: June-99
Additional Monitor Wells: Jul-00

2000 ACTIVITIES

Annual Groundwater Monitoring - Annual groundwater monitoring was conducted June of 2000.

Monitor Well Installation - Following approval from the State of New Mexico, two downgradient-monitoring wells were drilled as requested in OCD correspondence dated July 28, 1999.

SUMMARY TABLES

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

SITE MAP

A site map showing the groundwater gradient is presented as Figure 1.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

Drilling activities were conducted July 28, 2000 to install MW-2 and MW-3 downgradient of MW-1. As noted in the geologic logs and well completion diagrams, presented in Attachment 2, borehole 1 was drilled and MW-2 was installed northeast of MW-1; borehole 2 was drilled to 22-feet and no water was encountered; borehole 3 was drilled and MW-3 was installed southeast of MW-1.

DISPOSITION OF GENERATED WASTES

There were no wastes generated at this site in 2000.

ISOCONCENTRATION MAPS

An isoconcentration map was generated for benzene and is included as Figure 2.

CONCLUSIONS

The pit is approximately 100-200 yards from Largo Wash and is in a very remote location. Analytical results of groundwater samples from MW-1 show levels of benzene above New Mexico

EPFS GROUNDWATER PITS

2000 ANNUAL GROUNDWATER REPORT

groundwater standards. Additional monitor wells were drilled based on the topographical features of the site in effort to delineate the extent of hydrocarbon migration. Groundwater elevations obtained from MW-1, MW-2, and MW-3 identify a groundwater flow that trends to the north-northeast, similar to the flow direction of the Largo Wash.

Analytical results of groundwater samples from MW-2, downgradient of MW-1, exhibited levels of hydrocarbon constituents above the NMWQCC standards for benzene and exceeding the levels of BTEX measured in MW-1, which is located within the former pit. The direction of groundwater flow indicated by the available data places MW-3 cross-gradient of MW1. There were no detectable levels of BTEX found in the analytical results of groundwater samples from MW-3.

RECOMMENDATIONS

- Sample MW-1 and MW-2 semi-annually, until analytical results show hydrocarbon constituents are near New Mexico Groundwater Standards, then sample quarterly for closure.
- Sample MW-3 for closure.
- Following OCD approval for closure, monitor wells will be abandoned using OCD approved abandonment procedures.

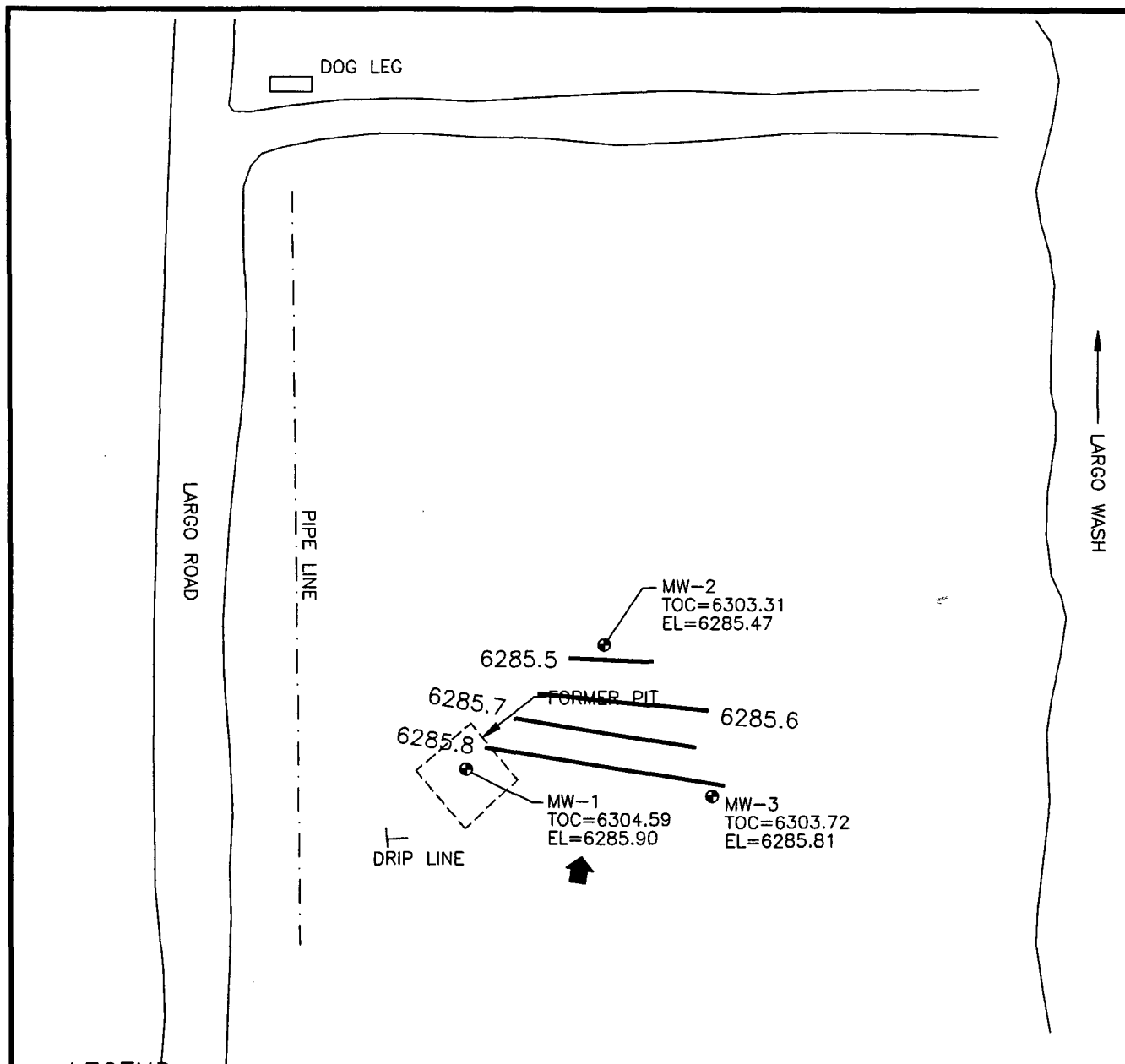
Table 1

March 2001

Sample #	Meter / Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX (PPB)
087-0006-MW1	LD087	K-31 Line Drip	6/27/00	1	Sample 1 - 7th Event	= 29	< 0.5	= 3.7	= 11	43.7
087-0008-MW2	LD087	K-31 Line Drip	8/31/00	2	Sample 1 - 1st Annual	= 1,800	= 590	= 86	= 490	2,966
087-0008-MW3	LD087	K-31 Line Drip	8/31/00	3	Sample 1 - 1st Annual	< 0.5	< 0.5	< 0.5	< 0.5	ND

ND - No detectable levels

Sample 1 - Annual Sampling



LEGEND

- MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER
- TOC TOP OF CASING ELEVATION
- EL GROUNDWATER ELEVATION
- ▲ GROUNDWATER GRADIENT
- 25.0- GROUNDWATER POTENTIOMETRIC SURFACE



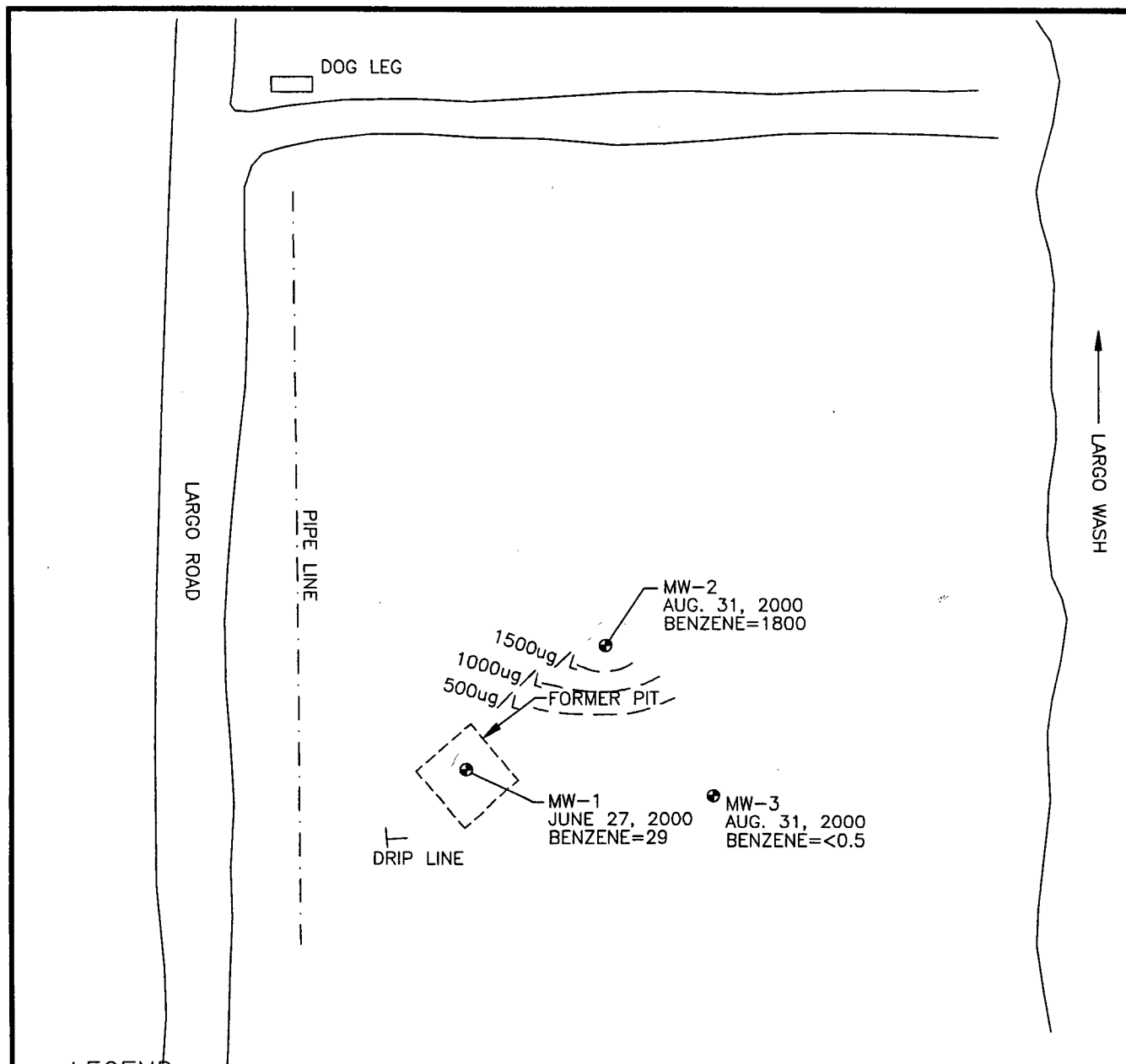
COL 628\002190-004



TITLE:
K-31 LINE DRIP
LD087
SEPTEMBER 5, 2000

DWN: TMM	DES.: LW
CHKD: LW	APPD: MN
DATE: 1/30/01	REV.: 0

PROJECT NO.: 62800219 EPFS GW PITS
FIGURE 1



LEGEND

- MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER
- B BENZENE (ug\L)
- ug\L MICROGRAMS PER LITER
- 25.0 GROUNDWATER POTENTIOMETRIC SURFACE

0 40
FEET



COL 628\002190-005



TITLE:
K-31 LINE DRIP - LD087
AUG. 31, 2000 ISOCONCENTRATION
MAP- BENZENE

DWN: TMM	DES.: LW
CHKD: LW	APPD: MN
DATE: 2/20/01	REV.: 0

PROJECT NO.: 62800219 EPFS GW PITS
FIGURE 2

ATTACHMENT 1

2000 GROUNDWATER ANALYTICAL

Project Name EPFS QUARTERLY SAMPLING

Project Manager R. Thompson

Project No. 62800107

Client Company: EPFS

Phase.Task No. 0301

Site Name K-31 LD (LD087)

Site Address RURAL RIO AERIBA CO.

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal

☒ Stabilization of Indicator Parameters☐ Other

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 29.42 TOR

Initial Depth to Water (feet) 18.10 TOR

Height of Water Column in Well (feet) 11.32

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	11.32	7.4 x 3	22.2
Gravel Pack			
Drilling Fluids			
Total			22.2

Instruments

☒ pH Meter

HYDAC

☐ DO Monitor☒ Conductivity Meter

HYDAC

☒ Temperature: Meter

HYDAC

☐ Other

Water Disposal

KUTZ SEPARATOR BLOOMFIELD, NW

Water Removal Data

[illegible]

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

Comments	Well bailed dry at 9/ gallons. Let recharge and sampled for BTEX at
----------	---

1125. Water reacted very actively with HCl in VOA.

Developer's Signature(s) Jean Wagner

Date 6/27/00

Reviewer RT Date 7/5/00

Chain of Custody Record

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

COC Serial No. C 2593

Relinquished by:



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

Pinnacle Lab ID number **006106**
June 30, 2000

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/LEAUDRA STANLEY

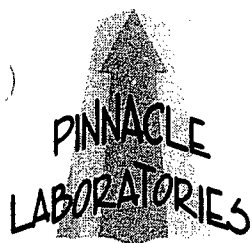
On 06/28/00 Pinnacle Laboratories, Inc. Inc., (ADHS License No. AZ0592 pending), received a request to analyze aqueous samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

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	: 006106
PROJECT #	: 62800107	DATE RECEIVED	: 06/28/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 06/30/00
PIN			
ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	087-0006-MW01	AQUEOUS	06/27/00
02	087-0006-MW51	AQUEOUS	06/27/00
03	TRIP BLANK	AQUEOUS	06/27/00

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.: 006106

SAMPLE						
ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	087-0006-MW01	AQUEOUS	06/27/00	NA	06/28/00	1
02	087-0006-MW51	AQUEOUS	06/27/00	NA	06/28/00	1
03	TRIP BLANK	AQUEOUS	06/27/00	NA	06/28/00	1

PARAMETER	DET. LIMIT	UNITS	087-0006-MW01	087-0006-MW51	TRIP BLANK
BENZENE	0.5	UG/L	29	30	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
BENZENE	0.5	UG/L	3.7	3.5	< 0.5
TOTAL XYLENES	0.5	UG/L	11	12	< 0.5

SURROGATE:

BROMOFLUOROBENZENE (%)

SURROGATE LIMITS (80 - 120)

* * 96

CHEMIST NOTES:

* = Surrogate not recoverable due to matrix interference.



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.	: 006106
BLANK I. D.	: 062800	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 06/28/00
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:
1,2-DIFLUOROBENZENE (%)

85

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 # : 006098-02
 CLIENT : PHILIP ENVIRONMENTAL
 PROJECT # : 62800107
 PROJECT NAME : EPFS QUARTERLY SAMPLING

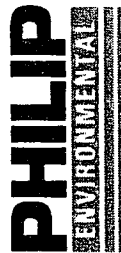
PINNACLE I.D. : 006106
 DATE EXTRACTED : NA
 DATE ANALYZED : 06/28/00
 SAMPLE MATRIX : AQUEOUS
 UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	18.2	91	17.1	86	6	(80 - 120)	20
TOLUENE	<0.5	20.0	21.4	107	19.8	99	8	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.5	108	20.8	104	3	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	65.9	110	63.2	105	4	(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

COC Serial No. C 2593

[illegible]

Relinquished by:

Received By:

Signature	Date	Time	Signature	Date	Time
Jennubagnen	6/27/00	1505	[Signature]	6/28/00	8:400

Carrier: GREYHOUND LINES		Airbill No. GLI1606651035	
Shipping and Lab Notes:			
Samples Iced: ☒ Yes ☐ No			
Preservatives (ONLY for Water Samples)			
☐ Cyanide Sodium hydroxide (NaOH)			
☒ Volatile Organic Analysis Hydrochloric acid (HCl)			
☐ Metals Nitric acid (HNO ₃)			
☐ TPH (418.1) Sulfuric acid (H ₂ SO ₄)			
☐ Other (Specify) _____			
☐ Other (Specify) _____			

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name EPFS quarterly sampling Serial No. WDPD-
Project Manager R Thompson

Page _____ of _____
Project No. 62800107
Phase/Task No. 0301

Site Name K-31/line Drip (L0087) Site Address Rural San Juan Co.

Development Criteria

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

Water Volume Calculation

Initial Depth of well (feet)	23.96
Initial Depth to Water (feet)	17.69
Height of Water Column in Well (feet)	6.27
Diameter (inches): well 3"	Gravel Pack

Instruments

☒ pH Meter

☐ DO Monitor

☒ Conductivity Meter

☒ Temperature Meter

☐ Other _____

Serial No. (If applicable) Hydac

Hydac

Hydac

Water Disposal

Water Disposal
Kut 2 Separator Bloomfield U.M.

Water Removal Data

[illegible]

Circle the date and time that the development criteria are met

Comments Sampled for BTEX 1205 pm

Developer's Signature(s) David M. [Signature]

Date 08-31-00

Reviewer _____ Date: _____

Date _____

☐ Development
☐ Purging

Page _____ of _____

Serial No. WDPD-

Project Name EPFS Quarterly Sampling

Project Manager R Thompson

Project No. 62800107

Client Company LEO FES

Phase.Task No. 030/

Site Name K-31 Line Drop LD087

Site Address Rural San Juan CO

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 24.44
Initial Depth to Water (feet) 12.36
Height of Water Column in Well (feet) 7.08
Diameter (inches): Well 2 " Gravel Pack

Instruments

☒ pH Meter

☐ DO Monitor

☒ Conductivity Meter

☒ Temperature Meter

☐ Other _____

Methods of Development

Pump

☐ Centrifugal

☐ Submersible

☐ Peristaltic

☐ Other

Bajler

☒ Bottom Valve

☐ Double Check Valve

☐ Stainless-steel Kemmerer

Item	Water Volume In Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	2.08	1.15 X 3	3.45
Gravel Pack			
Drilling Fluids			
Total			3.45

Water Disposal

Water Disposal
K.T.2 Separator Bloomfield N.M.

Water Removal Data

[illegible]

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

Comments	Sampled for BTEX	1.06 ppm

Developer's Signature(s) Chris A. May

Date 8-31-00

Reviewer _____ Date _____

Chain of Custody Record

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

COC Serial No. C 2659

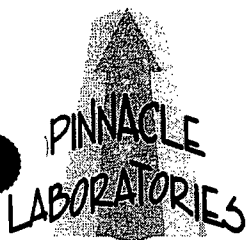
[illegible]

Relinquished by:

Received By:

Received by:		Signature		Date	Time	Signature	Date	Time
Jenn Wagner		Jenn Wagner		8/31/20	1530			

Samples Iced: ☒ Yes ☐ No		Carrier: <u>GROUNDB LINES</u>	Airbill No. <u>6LFI606918544</u>
Preservatives (ONLY for Water Samples) ☐ Cyanide Sodium hydroxide (NaOH) ☐ Volatile Organic Analysis Hydrochloric acid (HCl) ☐ Metals Nitric acid (HNO ₃) ☐ TPH (418.1) Sulfuric acid (H ₂ SO ₄) ☒ Other (Specify) <u>Hg/12</u> ☐ Other (Specify) _____		Shipping and Lab Notes:	



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

Pinnacle Lab ID number 009004
September 06, 2000

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/LEAUDRA STANLEY

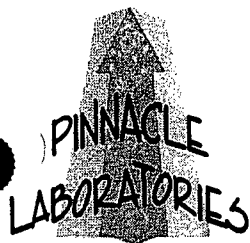
On 09/01/00 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

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

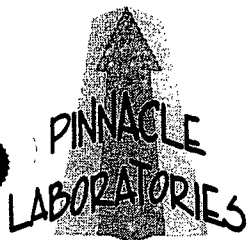
MR: jt

Enclosure



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

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 009004
PROJECT #	: 62800107	DATE RECEIVED	: 09/01/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 09/06/00
PIN			DATE
ID. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	087-0008-MW02	AQUEOUS	08/31/00
02	087-0008-MW03	AQUEOUS	08/31/00
03	TRIP BLANK	AQUEOUS	08/31/00



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.: 009004

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	087-0008-MW02	AQUEOUS	08/31/00	NA	09/05/00	20
02	087-0008-MW03	AQUEOUS	08/31/00	NA	09/05/00	1
03	TRIP BLANK	AQUEOUS	08/31/00	NA	09/05/00	1

PARAMETER	DET. LIMIT	UNITS	087-0008-MW02	087-0008-MW03	TRIP BLANK
BENZENE	0.5	UG/L	1800	< 0.5	< 0.5
TOLUENE	0.5	UG/L	590	< 0.5	< 0.5
ETHYL BENZENE	0.5	UG/L	86	< 0.5	< 0.5
XYLENES	0.5	UG/L	490	< 0.5	< 0.5

SURROGATE:

BROMOFLUOROBENZENE (%)

108

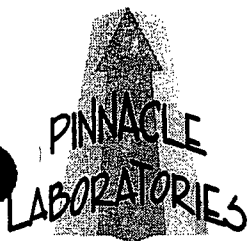
101

99

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.	: 009004
BLANK I. D.	: 090500	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 09/05/00
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 (%)

102

SURROGATE LIMITS: (80 - 120)

COMPUTER NOTES:

N/A



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

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST : EPA 8021 MODIFIED
MSMSD # : 090500
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D. : 009004
DATE EXTRACTED : NA
DATE ANALYZED : 09/05/00
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	20.5	103	19.8	99	3	(80 - 120)	20
TOLUENE	<0.5	20.0	21.3	107	20.5	103	4	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.9	110	21.2	106	3	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	66.0	110	63.5	106	4	(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

COC Serial No. C 2659

009004

Project Name		Project Number		Phase / Task		Samplers		Laboratory		Name		Location		Sample Number (and depth)		Date		Time		Matrix		Total Number of Bottles		Type of Analysis and Bottle		Comments	
EPFS QUARTERLY SAMPLING		62800107		Phase 1 Task 0301		C. MAEZ		PINNACLE		ALBQ, NM		087-0008-mw02		8/31/00		1306		H2O		2		X		K-31, LD 087			
087-0008-mw03		8/31/00		1205		H2O		2		X		K-31, LD 087															
TRIP BLANK		8/31/00		1206		H2O		1		X		TRIP BLANK															

Relinquished by:		Received By:	
Signature	Date	Signature	Date
Jean Wagner	8/31/00	Jean Wagner	9/1/00
	1530		0930

Samples Iced:		Carrier:		Airbill No.	
☒ Yes	☐ No	GREYHOUND LINES	6LFI1606918544		
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) <u>HgCl2</u>					
☐ Other (Specify) _____					

Rec'd @ 2.6°C

ATTACHMENT 2

**2000 MONITOR WELL
INSTALLATION RECORDS**

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

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

Borehole # AAW-Z 1
Well # MLW-2
Page 1 of 2

Project Number 62800219 Phase 35
Project Name EPPS DRILLING
Project Location K-31 LD
LARGO CANYON

Elevation _____

Borehole Location K-31

GWL Depth _____

Drilled By DANNY PADILLA, RYAN Lefebvre

Well Logged By S STELLAVATO

Date Started 7/28/00 1000

Date Completed 7/28/00 1115

Weather: hot, dry, ± 90°F ↑

Drilling Method 4 1/4 ID HSA CME-75

Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ BH S			Drilling Conditions & Blow Counts
0										
5	1	5-7'	16"	5-7' Light-Gray hard Clay Grading into Med-brown fine (+) sandy clay moist			Ø	Ø	Ø	9 counts Headspace 51 PPM
10	2	10-12'	6"	10'-12' med-brown fine sandy clay moist			Ø	Ø	Ø	10 counts Headspace 53 PPM
15	3	15-17'	6"	15-17' med-brown fine sandy clay. wet at 17 feet.			Ø	Ø	Ø	3 counts Headspace 37 PPM
20				TD = 20' BGS						
25										
30										
35										
40										

Comments: No problems encountered. Well completed.

Geologist Signature

Stephen Stellavato

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

(5) 326-2262 FAX (505) 326-2388

Borehole # MW 32
Well # NA
Page 1 of 2

Project Number 62800219 Phase 35
Project Name EPFS DRILLING
Project Location LARGO CANYON
K-31 LD

Elevation _____
Borehole Location _____
GWL Depth _____
Drilled By DANNY PADILLA
Well Logged By S STELLAVATO
Date Started 7/28/00 1130
Date Completed NOT COMPLETED

Weather: hot, dry, ~95°F ↑

Drilling Method 4 1/4 ID HSA

Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ BH S			Drilling Conditions & Blow Counts
0										
5	1	5-7'	12"	5-7' LIGHT GRAY HARD dense dry CLAY.			Ø	Ø	Ø	18 COUNTS Headspace 0.4 PPM
10		10-12'	Ø	10'-12' NO Recovery						10 COUNTS
15		15-17'	Ø	15'-17' NO Recovery WATER						3 COUNTS
20	2	20-22'	6"	20-22' med-brown fine sandy CLAY. Moist.						4 COUNTS
25										
30				ABANDONED well NO WATER.						
35										
40										

Comments:

Moved to new location to Redrill MW-3.

Geologist Signature

Stephen Stellavato

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

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

Borehole # MW-3 3
Well # MW-3
Page 1 of 2

Project Number 62800219 Phase 35

Project Name EPFS DRILLING

Project Location LARGO CANYON

K-31 LD

Elevation _____

Borehole Location K-31

GWL Depth _____

Drilled By DANNY PADILLA

Well Logged By S STELLAVATO

Date Started 7/28/00 1310

Date Completed 7/29/00 1415

Drilling Method 4 1/4 ID HSA

CME-75

Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ BH S			Drilling Conditions & Blow Counts
0										16 COUNTS
5	1	5-7'	6"	5-7' Light-Gray hard Clay Grading into med-brown fine sandy clay, moist			Ø	Ø	Ø	Headspace 31 PPM
10	2	10-12'	18"	10-12' med-brown fine sandy clay, moist			Ø	Ø	Ø	9 COUNTS Headspace 2.1 PPM
15				15-17' med-brown fine sandy clay, wet			Ø	Ø	Ø	6 COUNTS Headspace 27 PPM
20				TD = 20' BCS						
25										
30										
35										
40										

Comments: Had to relocate MW-3 due to dry well at first location.

Geologist Signature

Stephen Stellavato

MONITOR WELL INSTALLATION FORM

Philip Services Corp.

4000 Monroe Rd.

Farmington, NM 87401

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

Borehole # MW-33

Well # MW-3

Page 2 of 2

Project Name EPFS DRILLING

Project Number 62800219 Phase 35

Site Location LARGO CANYON

K-31 LD

On-Site Geologist S. STELLAVATO

Personnel On-Site RYAN Lefebvre

Contractors On-Site NONE

Client Personnel On-Site NONE

Elevation K-31

Well Location K-31

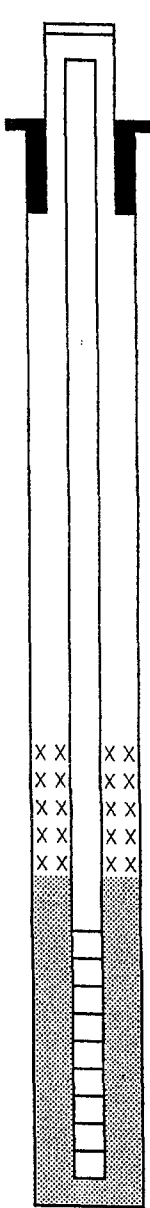
GWL Depth

Installed By DANNY PADILLA

Date/Time Started 7/28/00 1310

Date/Time Complete 7/28/00 1415

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing		+3.05'
Bottom of Protective Casing		0
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser	PVC SCH 10 2"	+3.05'
Bottom of Well Riser	PVC SCH 10 2"	-5'
Top of Well Screen	PVC 0.010 2"	-5'
Bottom of Well Screen	PVC 2" 0.010	-20'
Top of Peltonite Seal	3/8 Bentonite Holeplug	0
Bottom of Peltonite Seal	3/8 Bentonite Holeplug	-3'
Top of Gravel Pack	10x20 Silica Sand	-3'
Bottom of Gravel Pack	10x20 Silica Sand	-20'
Top of Natural Cave-in		
Bottom of Natural Cave-in		
Top of Groundwater		-13.00'
Total Depth of Borehole		-20'



Top of Protective Casing +3.05'

Top of Riser (survey elev.) +3.05'

Ground Surface 0

Top of Seal 0

3/8 Bentonite Holeplug (2 BAGS) -3'

Top of Gravel Pack -3'

Top of Screen -5'

10 x 20 Silica Sand (8 BAGS)

Bottom of Screen -20'

Bottom of Borehole -20'

Comments

Geologist Signature

Stephen Stellavato



Certified Mail: #Z 213 707 666 (Box 1 of 2)
 #Z 213 707 664 (Box 2 of 2)

March 24, 2000

Mr. William C. Olson
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87504

RECEIVED

MAR 23 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RE: 1999 Pit Project Annual Groundwater Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual updates for the 32 remaining groundwater impacted locations that were identified during our pit closure project of 1994 / 1995.

Of the 32 reports, EPFS hereby requests closure of 4 of these locations. The 4 sites EPFS is requesting closure on are presented in one separate binder entitled "San Juan Basin Pit Closures, El Paso Field Services, Pit Closure Reports".

The Jaquez Com. C #1 and Jaquez Com. E #1 site is included in a separate report which is entitled "Jaquez Com. C #1 and Jaquez Com. E #1 Annual Report for Soil and Groundwater Remediation".

EPFS has also included for your information five Navajo sites in a separate binder and a separate report for the Bisti Flare Pit #1.

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

Sincerely,

A handwritten signature in black ink that reads 'Scott T. Pope' with a stylized 'P.G.' at the end.

Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # Z 213 707 667**
Mr. Bill Liesse, BLM - w / enclosures; **Certified Mail # Z 213 707 668**
Mr. John Jaquez, - w / Jaquez enclosures; **Certified Mail # Z 213 707 669**
Ms. Charmaine Tso, Navajo EPA - w / enclosures; **Certified Mail # Z 213 707 670**

bc: J. A. Lambdin w / enclosures

Philip Services Corp. – Cecil Irby, w / o enclosures

B. B. McDaniel / 24321 – NMOCD Regulatory w / o