

3R - 214

REPORTS

DATE:

2002

Certified Mail: #7001 1940 0002 1371 7676

February 28, 2003

RECEIVED

MAR 05 2003

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

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

RE: 2002 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 Annual Reports (Volumes 1, 2 and 3) by land type. Volume 1 contains Annual Reports for sites found on Federal land. Volume 2 contains Non Federal sites and Volume 3 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 and EPFS reiterates request for closure of this site. EPFS understands closure of groundwater sites on Navajo land falls under jurisdiction of the Navajo Nation Environmental Protection Agency and original documents have been submitted to them for review. Other Navajo sites are included in the report for your information.

Three additional sites were submitted for closure in 2002. EPFS recently has received closure on the W.D. Heath B-5. Closure approval is pending on the D Loop Line Drip and Hammond # 41A. All of these sites are included in the 2002 Annual Report.

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 0002 1371 7669**
Mr. Bill Liesse, BLM - w / enclosures (federal sites only), **Certified Mail # 7001 1940 0002 1371 7652**



RECEIVED

MAR 05 2003

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

El Paso Field Services

San Juan Basin Pit Program Groundwater Sites Project

2002 Annual Report Non-Federal Sites (Volume 2)

March 2003



MWH

10619 South Jordan Gateway, Suite 100
Salt Lake City, Utah 84095

EL PASO FIELD SERVICES ANNUAL GROUNDWATER REPORT

NON-FEDERAL SITES VOLUME II

TABLE OF CONTENTS

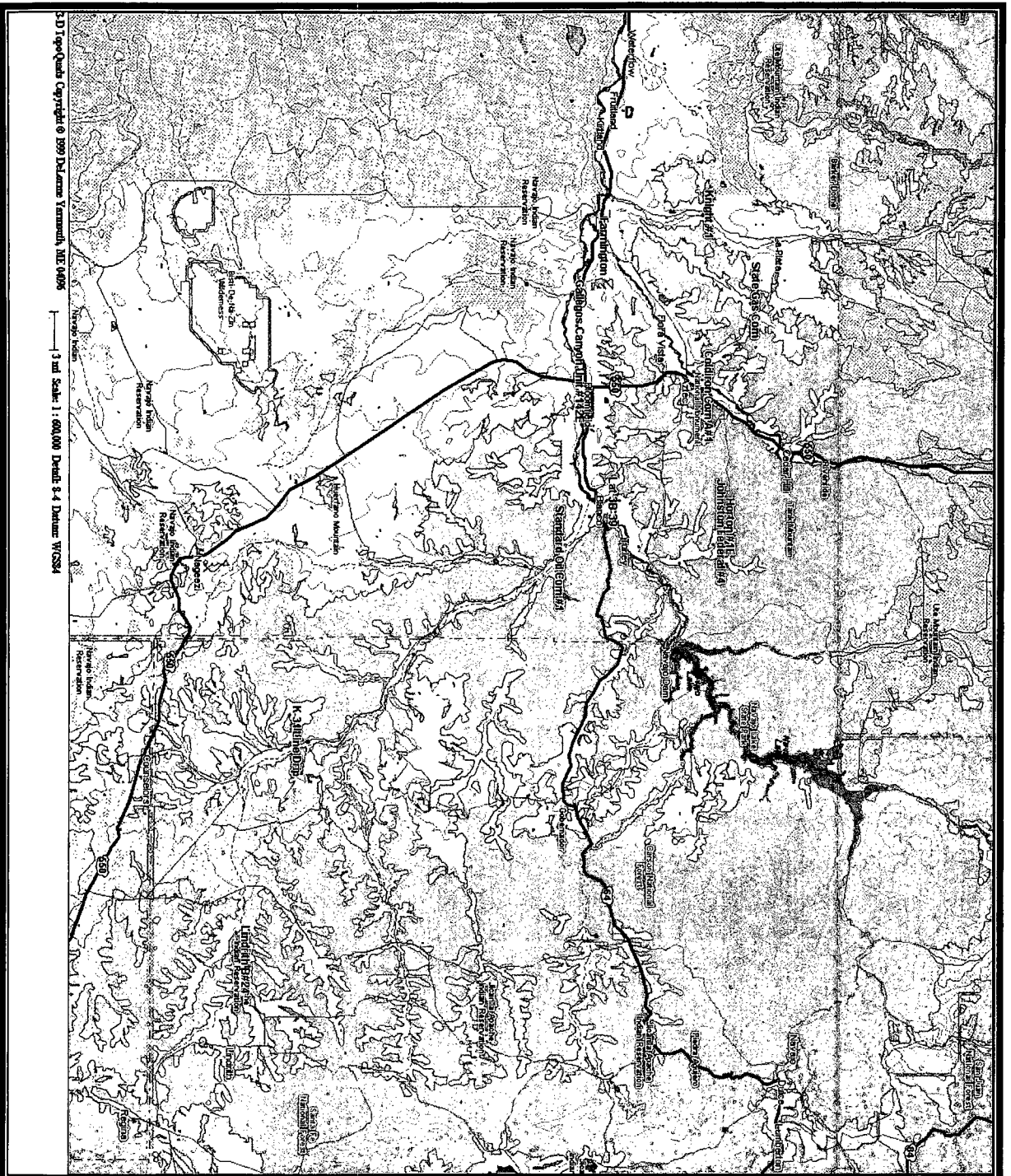
Site Map

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

Non - Federal Groundwater Site Map



**EPFS GROUNDWATER SITES
2002 ANNUAL GROUNDWATER REPORT**

**Lindrith B #24
Meter Code: 94967**

SITE DETAILS

LEGAL DESCRIPTION: Twn: 24N Rng: 3W Sec: 9 Unit: N
NMOCD Haz Ranking: 40 **Land Type:** Fee **Operator:** Mobil

PREVIOUS ACTIVITIES

Site Assessment: 8/94 **Excavation:** 10/94 (60 cy) **Soil Boring:** 6/95
Monitor Well: 5/97 **Geoprobe:** NA **Additional MWs:** 10/99
Downgradient MWs: 10/99 **Replace MW:** NA **Quarterly Initiated:** 8/97
ORC Nutrient Injection: NA **Re-Excavation:** 8/97 (180 cy) **PSH Removal Initiated:** 2/01
Annual Initiated: NA **Quarterly Resumed:** NA

SUMMARY OF 2002 ACTIVITIES

MW-1: Groundwater sampling and water level monitoring were performed in February and May 2002.

MW-2: Water level monitoring was performed in February and May 2002.

MW-3: Water Level monitoring was performed in February and May 2002.

Site-Wide Activities: No other activities were performed at this site during 2002.

SUMMARY TABLES AND GRAPHS

- Analytical data are summarized in Table 1 and are presented graphically in Figure 3.
- Laboratory reports are presented in Attachment 1.

SITE MAP

Site maps are attached as Figures 1 and 2.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at his site during 2002.

DISPOSITION OF GENERATED WASTES

No wastes were generated at this site during 2002.

ISOCONCENTRATION MAPS

No isoconcentration maps were prepared for this site, however, the attached site maps present the potentiometric surface and analytical data collected during 2002.

EPFS GROUNDWATER SITES
2002 ANNUAL GROUNDWATER REPORT

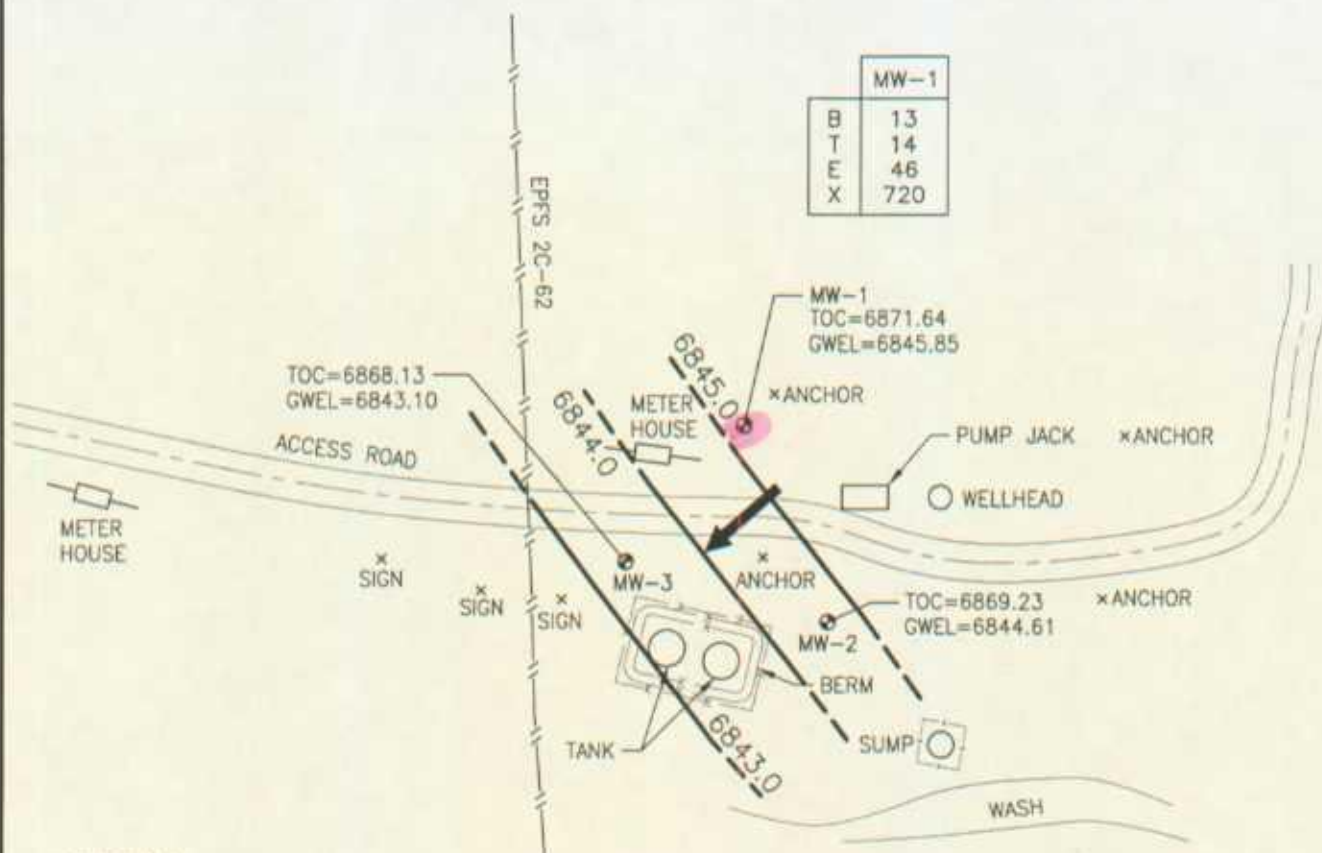
Lindrith B #24
Meter Code: 94967

CONCLUSIONS

- The groundwater flow direction trends to the southwest.
- Free-product was not detected in MW-1 during 2002.
- Benzene concentrations in MW-1 significantly decreased from 280 µg/l in 2001 to below detection limits in May 2002.

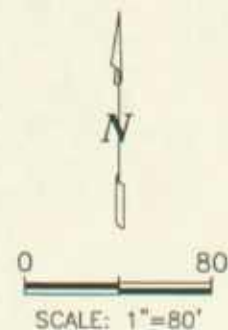
RECOMMENDATIONS

- EPFS recommends that MW-1 be sampled in February 2003, and if BTEX concentrations remain below closure criteria, this well will be sampled on a quarterly basis until this site qualifies for closure.
- Because historical analytical results from MW-2 and MW-3 indicate BTEX concentrations below detection limits, EPFS recommends that these wells not be sampled until the final closure samples are collected at this site.
- EPFS recommends that quarterly water level measurements are collected at MW-2 and MW-3.
- Following approval for closure, all monitoring wells will be removed according to the approved EPFS Monitoring Well Abandonment Plan.



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)

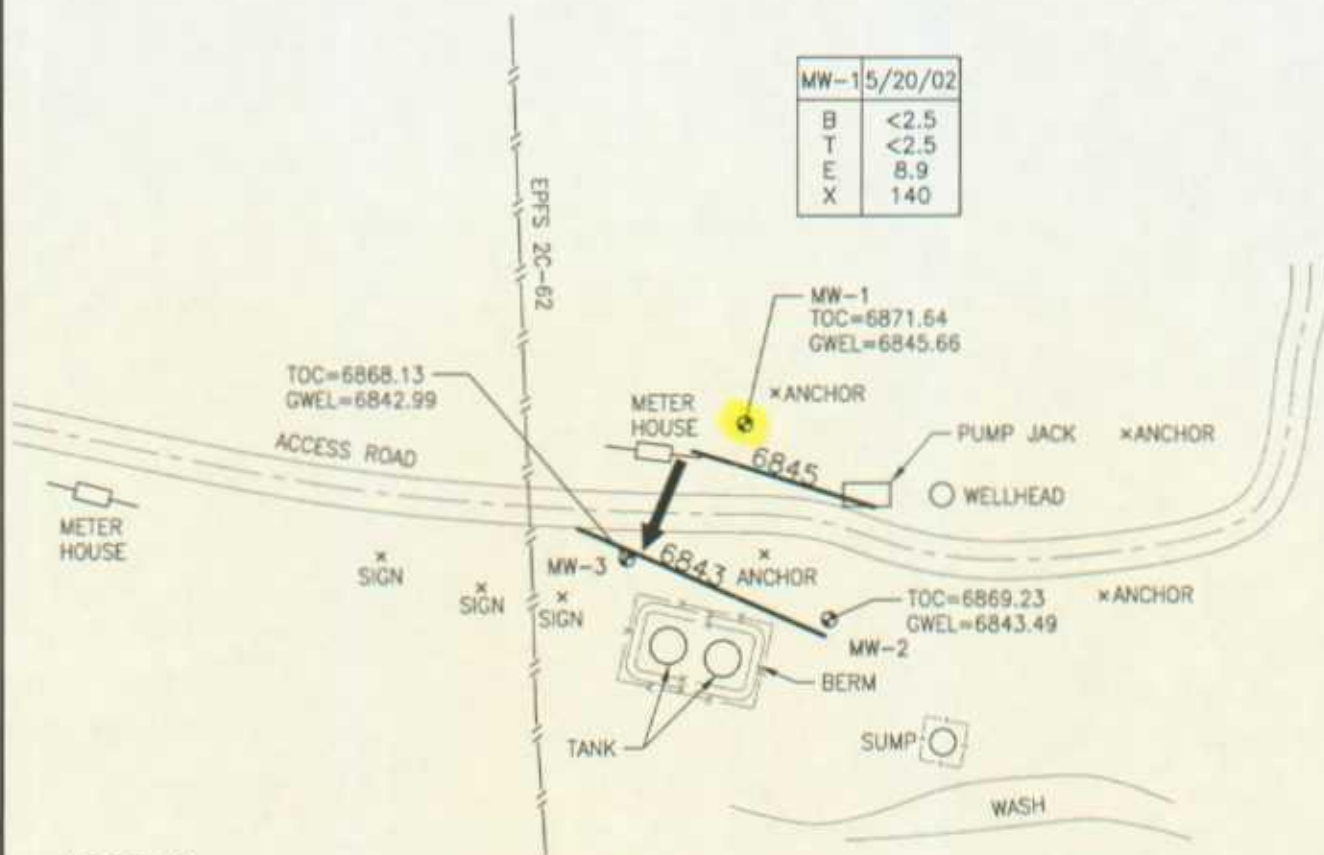


LINDRITH NO.24, METER 94967
FEBRUARY, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

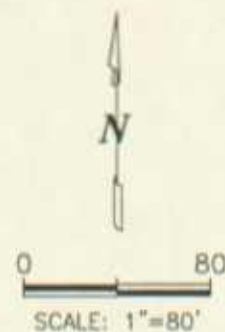
FIGURE 1

MW-1	5/20/02
B	<2.5
T	<2.5
E	8.9
X	140



LEGEND

- MW-1 Approximate Monitoring Well Location and Number
- Centerline of Road
- xx 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 NO.24, METER 94967
MAY, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 2

Figure 3
 BTEX Concentration and Groundwater Elevation vs. Time
 Lindrieth B#24 (Meter #94967)
 MW-1

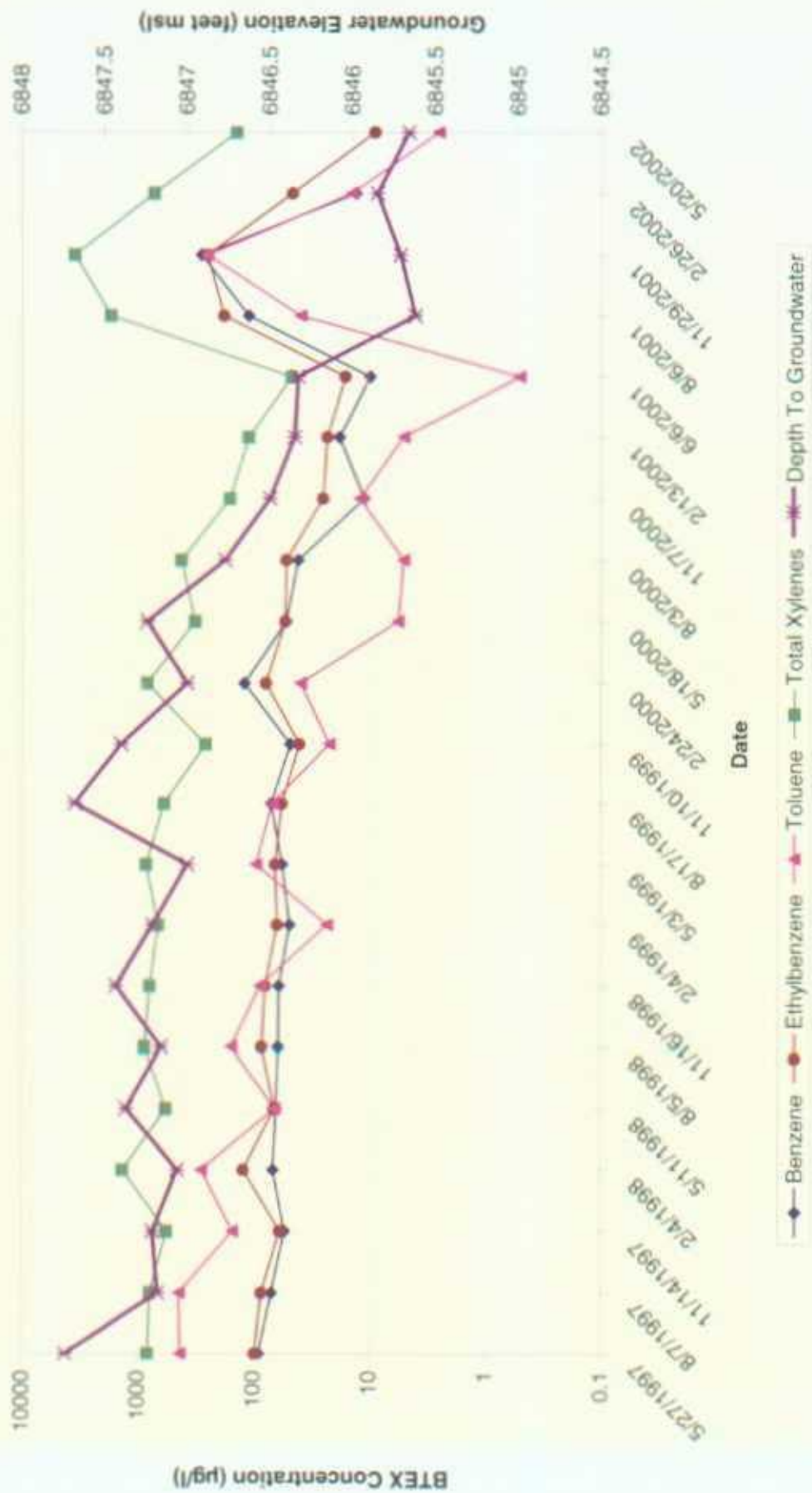


TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER
LINDRITH B #24 (METER #94967)

(Page 1 of 1)

Sample Identification	Sample Date	MW Identification	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)
LIN-0202	26-Feb-2002	1	13	14	46	720
LIN-0205	20-May-2002	1	<2.50	<2.50	8.90	140

ATTACHMENT 1
LABORATORY REPORTS

PINNACLE
LABORATORIES

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

Pinnacle Lab ID number 205203
June 12, 2002

AMEC EARTH & ENVIRONMENTAL
2060 AFTON PLACE
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name LINDRITH B #24
Project Number 1517000121

Attention: LISA WINN/SCOTT POPE

On 05/24/02 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

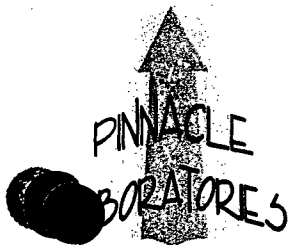
MR: jt

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	: 205203
PROJECT #	: 1517000121	DATE RECEIVED	: 05/24/02
PROJECT NAME	: LINDRITH B #24	REPORT DATE	: 06/12/02
PINNACLE			DATE
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
205203 - 01	LIN-0205-MW1	AQUEOUS	05/20/02



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Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

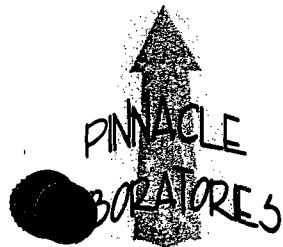
TEST : EPA 8021 MODIFIED
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000121
PROJECT NAME : LINDRITH B #24

PINNACLE I.D.: 205203

SAMPLE		DATE	DATE	DATE	DIL.	
I. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
	LIN-0205-MW1	AQUEOUS	05/20/02	NA	06/03/02	5
PARAMETER	DET. LIMIT	UNITS	LIN-0205-MW1			
BENZENE	0.5	UG/L	< 2.5			
TOLUENE	0.5	UG/L	< 2.5			
ETHYLBENZENE	0.5	UG/L	8.9			
BTOTAL XYLENES	1.0	UG/L	140			

URROGATE:
ROMOFLUOROBENZENE (%) 96
URROGATE LIMITS (80 - 120)

HEMIST NOTES:
/A



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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 205203
LABORATORY I.D.	: 060302	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/03/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: LINDRITH B #24		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
CHLORUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
ORTHAL XYLENES	UG/L	<1.0

CHLOROBENZENE: 103

CHLOROBENZENE LIMITS: (80 - 120)

ANALYST NOTES:

1/1



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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

EST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 205203
ATCH #	: 060302	DATE EXTRACTED	: N/A
LIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/03/02
ROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: LINDRITH B #24	UNITS	: UG/L

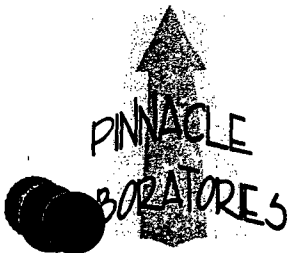
PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
ENZENE	<0.5	20.0	19.5	98	18.6	93	5	(80 - 120)	20
OLUENE	<0.5	20.0	19.9	100	19.3	97	3	(80 - 120)	20
THYLBENZENE	<0.5	20.0	20.2	101	19.8	99	2	(80 - 120)	20
OTAL XYLENES	<1.0	60.0	62.3	104	61.8	103	1	(80 - 120)	20

HEMIST NOTES:

I/A

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

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



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

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

EST : EPA 8021 MODIFIED
SMSD # : 205246-02
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000121
PROJECT NAME : LINDRITH B #24
PINNACLE I.D. : 205203
DATE EXTRACTED : N/A
DATE ANALYZED : 06/03/02
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	21.4	107	20.5	103	4	(80 - 120)	20
OLUENE	<0.5	20.0	21.9	110	20.8	104	5	(80 - 120)	20
THYLBENZENE	<0.5	20.0	22.4	112	21.3	107	5	(80 - 120)	20
OTAL XYLENES	<1.0	60.0	69.4	116	65.8	110	5	(80 - 120)	20

HEMIST NOTES:

I/A

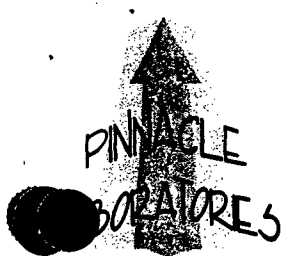
$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

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

PROJECT MANAGER: LISA WINN		ANALYSIS REQUEST	
COMPANY: AMEC		General Chemistry:	
ADDRESS: 2060 AFTON PLACE		Polynuclear Aromatics (610/8310/8270-SIMS)	
FARMINGTON NM. 87401		Base/Neutral/Acid Compounds GC/MS (625/8270)	
PHONE: (505) 327-7924		Herbicides (615/8151)	
FAX: (505) 326-5721		Pesticides /PCB (608/8081/8082)	
BILL TO: Scott Pope		8260 (Landfill) Volatile Organics	
COMPANY: El Paso Field Services		8260 (CUST) Volatile Organics	
ADDRESS: 614 Reilly AVE		8260 (Full) Volatile Organics	
FARMINGTON NM. 87401		8260 (TCL) Volatile Organics	
SAMPLE ID: DATE: TIME: MATRIX: LAB ID:		504.1 EDB □ / DBCP □	
Lin-0206-MW1	5-20-02	1115	H ₂ O
PRIORITY AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS		8021 (CUST)	
PROJECT INFORMATION	(RUSH) □ 24hr □ 48hr □ 72hr □ 1 WEEK	8021 (HALO)	
PROJ. NO.: 15700921	CERTIFICATION REQUIRED: □ NM □ SDWA □ OTHER	8021 (EDX)	
PROJ. NAME: EpB GW. PROJ	METHANOL PRESERVATION □	8021 (TCL)	
P.O. NO.:	COMMENTS: FIXED FEE □	8021 (BTEX) □ MTBE □ TMB □ PCE	
SHIPPED VIA: Greyhound		8021 (BTEX)/8015 (Gasoline) MTBE	
SAMPLE RECEIPT		(M8015) Gas/Purge & Trap	
NO. CONTAINERS		(MOD.8015) Diesel/Direct Inject	
CUSTODY SEALS		Petroleum Hydrocarbons (418.1) TRPH	
RECEIVED IN CONTACT			
LAB RECEIPT			
RECEIVED BY (LAB)			
Signature: [Signature]			
Printed Name: [Name]			
Date: [Date]			
Company: [Company]			
RECEIVED BY			
Signature: [Signature]			
Printed Name: [Name]			
Date: [Date]			
Company: [Company]			
RECEIVED BY			
Signature: [Signature]			
Printed Name: [Name]			
Date: [Date]			
Company: [Company]			

SHADED AREAS ARE FOR LAB USE ONLY. PLEASE FILL THIS FORM IN COMPLETELY.

LindriTH B#241
meter # (94967)



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

Pinnacle Lab ID number 202124
March 05, 2002

AMEC EARTH & ENVIRONMENTAL
2060 AFTON PLACE
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name LINDRITH B#24
Project Number 1517000121

Attention: LISA WINN/SCOTT POPE

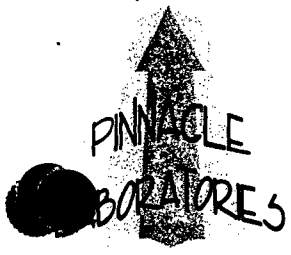
On 02/27/02 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze aqueous samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

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



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

CLIENT	: AMEC EARTH & ENVIRONMENTAL	PINNACLE ID	: 202124
PROJECT #	: 1517000121	DATE RECEIVED	: 02/27/02
PROJECT NAME	: LINDRITH B#24	REPORT DATE	: 03/05/02

PINNACLE		DATE	
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
202124 - 01	LIN-0202-MW1	AQUEOUS	02/26/02
202124 - 02	TRIP BLANK	AQUEOUS	11/26/01

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 : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000121
PROJECT NAME : LINDRITH B#24

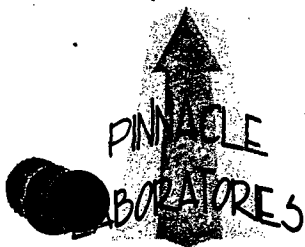
PINNACLE I.D.: 202124

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	LIN-0202-MW1	AQUEOUS	02/26/02	NA	02/28/02	1
02	TRIP BLANK	AQUEOUS	11/26/01 H	NA	02/27/02 H	1
PARAMETER		DET. LIMIT	UNITS	LIN-0202-MW1	TRIP BLANK	
BENZENE		0.5	UG/L	13	< 0.5	
TOLUENE		0.5	UG/L	14	< 0.5	
ETHYLBENZENE		0.5	UG/L	46	< 0.5	
TOTAL XYLENES		1.0	UG/L	720 - D100	< 1.0	
SURROGATE:						
BROMOFLUOROBENZENE (%)				96	92	
SURROGATE LIMITS		(80 - 120)				

CHEMIST NOTES:

H = The Trip Blank was received and analyzed out of hold time.

D100 = Sample was analyzed at 100X dilution on 02/27/02 for these compounds.



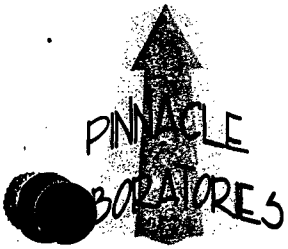
2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 202124
BLANK I. D.	: 022702	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 02/27/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: LINDRITH B#24		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0

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



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

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 202124
LAB I. D.	: 022802	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 02/28/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: LINDRITH B#24		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0

SURROGATE:
BROMOFLUOROBENZENE (%) 91
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
LCS/LCSD

EST : EPA 8021 MODIFIED
ATCH # : 022702
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000121
PROJECT NAME : LINDRITH B#24

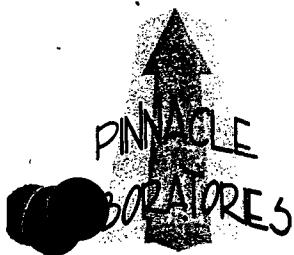
PINNACLE I.D. : 202124
DATE EXTRACTED : N/A
DATE ANALYZED : 02/27/02
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
MONOCHLOROBENZENE	<0.5	20.0	19.5	98	19.6	98	1	(80 - 120)	20
1,2-DICHLOROBENZENE	<0.5	20.0	19.0	95	19.2	96	1	(80 - 120)	20
1,4-DICHLOROBENZENE	<0.5	20.0	18.7	94	18.7	94	0	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	57.4	96	57.9	97	1	(80 - 120)	20

NOTES:

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

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



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

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

EST : EPA 8021 MODIFIED
ATCH # : 022802
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000121
PROJECT NAME : LINDRITH B#24

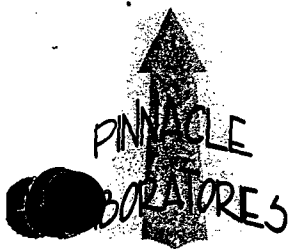
PINNACLE I.D. : 202124
DATE EXTRACTED : N/A
DATE ANALYZED : 02/28/02
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
ENZENE	<0.5	20.0	20.1	101	19.5	98	3	(80 - 120)	20
OLUENE	<0.5	20.0	19.6	98	19.2	96	2	(80 - 120)	20
THYLBENZENE	<0.5	20.0	19.0	95	18.7	94	2	(80 - 120)	20
OTAL XYLENES	<1.0	60.0	59.2	99	58.0	97	2	(80 - 120)	20

NOTES:

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

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



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

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

EST : EPA 8021 MODIFIED
SMSD # : 202123-01
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000121
PROJECT NAME : LINDRITH B#24

PINNACLE I.D. : 202124
DATE EXTRACTED : N/A
DATE ANALYZED : 02/27/02
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	20.1	101	19.5	98	3	(80 - 120)	20
OLUENE	<0.5	20.0	19.7	99	19.1	96	3	(80 - 120)	20
THYLBENZENE	<0.5	20.0	19.2	96	18.7	94	3	(80 - 120)	20
OTAL XYLENES	<1.0	60.0	59.2	99	57.5	96	3	(80 - 120)	20

NOTES:

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

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

ATTACHMENT 2
FIELD DOCUMENTATION

Well Number MW1

MW1

Project Name EPFS G.W. Project

Client Company Feld and Field Services

Site Name Lindri Th B#24 (94967)

Project Manager Lisa Winn

Site Address Rio Arriba CO

Page 1 of 1

Project No. 15/7000121

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 31.16
Initial Depth to Water (feet) 25.98
Height of Water Column in Well (feet) 5
Diameter (inches): Well 4 Gravel Pack 0

Item	Water Volume In Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	5.76	3,724.3	11.31
Gravel Pack			
Drilling Fluids			
Total			11.31

Methods of Development

Pump

☐ Centrifugal

☐ Submersible

☐ Peristaltic

☐ Other _____

Bailer

☒ Bottom Valve

☐ Double Check Valve

☐ Stainless-steel Kemmerer

Water Disposal
Unit Separator Bloomfield U.M.

Water Removal Data

[illegible]

Comments 28.90 TO product thickness .08 SAMPLED for BTX 1115

Developer's Signature(s) Chad M.

Date S-20-02

Reviewer mm Date 5/22/02

amec

Project No.: 1517000121

Task: 2

Date: 5-20-02

Date: 5-20-02

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Signature: Chris A. Muen Date: 5-20-02

Date: 5-20-02

☐ Development
☒ Purging

WELL DEVELOPMENT AND PURGING DATA FORM

Well Number MW 1

Page 1 of 1

Project Name EPFS Giv project

Project Manager USA winn

Project No 1517000121

Client Company El Paso Field Services

Site Name Lindero #3241 (94967)

Site Address Rio Arriba CO.

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 31.25
Initial Depth to Water (feet) 25.29
Height of Water Column in Well (feet) 5.97
Diameter (inches): Well 4" Gravel Pack _____

Item	Water Volume in Well	Gallons to be Removed
Well Casing	5.97	384 X 3
Gravel Pack		11.67
Drilling Fluids		
Total		11.67

Instruments

- ☒ pH Meter YSI 63
☐ DO Monitor _____
☒ Conductivity Meter YSI 63
☒ Temperature Meter YSI 63
☐ Other _____

Water Disposal

WTS Separator Bloomfield NM.

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 (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
						Incremental	Cumulative	Incremental	Cumulative					
2-25-02	1033	X				2.5	2.5			10.9	6.83	828		Cloudy 10-15-02
	1038	X				2.5	5			11.1	6.88	869		Water 10-15-02
	1043	X				2.5	7.5			11.0	7.14	902		Water 10-15-02
	1047	X				2.5	10			11.1	7.20	924		"
	1052	X				2.5	12.5			11.1	7.24	939		no change

Comments Sampled for BTEX 1100

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

Date 2-26-02

Reviewed [Signature] Date 3/1/02



Project No.: 1517000121

Task: 2

Date: 2-26-02

[illegible]

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW2 & MW3 Recently Completed with well protect
and cement pad. H₂O Level taken T.O.R -

Date: 2-26-02



Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE 2-26-02 PAGE 1 OF 1

PROJECT MANAGER: Lisa Winn

COMPANY: AMEC

ADDRESS: 2060 AFTON PLACE

PHONE: Farmington NH 87401

FAX: (505) 332-7928

BILL TO: (505) 326-5721

COMPANY: SCOTT POPE

ADDRESS: EL PASO Field Services

614 Rellly AVE

Farmington N.H.

PROJECT NO: 0202-MW1

TRIP Blank

2-26-02 11:00 AM

11-26-02 11:45 AM

11-26-02 11:45 AM

11-26-02 11:45 AM

11-26-02 11:45 AM

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11-26-02 11:45 AM

11-26-02 11:45 AM

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 (CWST)

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

CERTIFICATION REQUIRED ☐ NM ☐ SDWA ☐ OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

LINDA B.#24

METER# (94967)

Signature: [Signature]

Time: 1500

Date: 2-26-02

Company: AMEC

Signature: [Signature]

Time: [Time]

Date: [Date]

Company: [Company]

Signature: [Signature]

Time: [Time]

Date: [Date]

Company: [Company]

Signature: [Signature]

DISTRIBUTION: When: [When] By: [By] Originator: [Originator]

PROJECT MANAGER: Lisa Winn

SHADDED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

ADDRESS:

Farmington N.M.

Blank	126-47	U
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F. O. B.

rip blank

1

100

PROJECT INFORMATION

PROJ. NO.: 8/5/700021

PROJ NAME C-ES G W J

id. nio idA

P.O. NO.: _____

SHIPPED VIA Greyhound

11 SAMPLES

NO CONTAINERS

CUSTODY SEALS

RECEIVED INTA-T

THE UNIVERSITY OF CHICAGO

30/01/2025

CELESTIAL

1

WELCOME

Handwritten: 10/16/94

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