3R - 214

REPORTS

DATE:

2004

3RP214

Via Federal Express

February 04, 2005

Mr. Ed Martin
New Mexico Oil Conservation Division
1220 St. Francis Dr.
Santa Fe, NM 87504

RE: Closure Request for the Lindrith B #24

Dear Mr. Martin;

El Paso Field Services (EPFS) hereby requests written approval of the closure of the Lindrith B #24 site. The enclosed report details investigation, remedial action, monitoring and the most recent closure sampling at the site. Documentation supporting previous monitoring performed at the site has been submitted in earlier Annual Reports.

If you have any questions concerning the enclosed closure report or require additional information please call me at (719) 520-4433.

Sincerely,

Scott T. Pope, P.G.
Senior Environmental Scientist

Attachments: as stated

cc: Mr. Donald Candelaria c/o Mr. Robert Sherman, EPC - Farmington; **Fed Ex**

3RP214

EPFS GROUNDWATER SITES
2004 CLOSURE REPORT

Lindrith B #24
Meter Code: 94967

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EPFS GROUNDWATER SITES
2004 CLOSURE REPORT

Lindrith B #24
Meter Code: 94967

SITE DETAILS

Legal Description: **Town:** 24N **Range:** 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
Re-Excavation:	8/95 (180 cy)	**Probe Holes:**	12/95	**Monitor Well:**	5/97
Additional MWs:	10/99	**Downgradient MWs:**	10/99	**Quarterly Initiated:**	8/97
ORC Nutrient Injection:	NA	**PSH Removal Initiated:**	2/01		

A site map is attached in Figure 1.

Following the initial site assessment in August 1994, the pit was excavated in October 1994 and 60 cy of source material was removed. A headspace PID soil reading was 233 ppm. Soil Sample KP307 indicated the following concentrations: benzene, 3.2 mg/kg; toluene, 15 mg/kg; ethylbenzene, <0.5 mg/kg; total xylenes, 55 mg/kg; total BTEX, 73.7 mg/kg; and total petroleum hydrocarbons (TPH), 4270 mg/kg (see Appendix A).

In June 1995, a soil boring was drilled into the backfilled pit. Water was encountered at 19.4 feet below ground surface (bgs), and headspace PID readings of soil samples from 20 to 22 feet bgs were up to 795 ppm. No groundwater sample was collected, and the boring was grouted (Appendix B).

In August 1995, the existing pit was re-excavated to a depth of 21 feet below ground surface (bgs), at which point groundwater was encountered. Approximately 180 cubic yards (cy) of source material were removed and disposed of at the Envirotech facility. The headspace soil reading from the bottom of the excavation was 25 ppm. A soil sample (JP55) and water sample (JP 54) were submitted for analysis. Soil analytical data for the sample JP55 are as follows: benzene, <0.5 mg/kg; toluene, <0.5 mg/kg; ethylbenzene, <0.5 mg/kg; total xylenes, <1.5 mg/kg; total BTEX, <3 mg/kg; and total petroleum hydrocarbons (TPH), 46.3 mg/kg. Water analytical data for sample JP54 were above BTEX standards; the benzene concentration was 1260 ppb (Appendix B).

In December 1995, three soil probe holes were completed (depths ranged between 21 and 27 ft bgs) and groundwater samples were collected. Groundwater from probe holes PH-01 and PH-02 (see Appendix C for locations) had BTEX concentrations below standards.

However, the benzene concentration from PH-03, located northwest of the pit, was above the standard, at 34 ppb (Appendix C).

In May 1997, monitoring well MW-1 was completed at a depth of 30 feet within the backfilled pit (see Figure 1 for location). The geologic logs and completion diagrams are provided in Appendix D. MW-1 was developed and sampled for BTEX and provided the following concentrations: benzene, 90.4 ppb; toluene, 428 ppb; ethylbenzene, 97.8 ppb; total xylenes, 822 ppb; and total BTEX, 1440 ppb (Table 1 and Appendix D).

Additional monitoring wells MW-2 and MW-3 were installed on October 5, 1999 (see Figure 1 for locations). These wells were located downgradient from MW-1, to the south-southwest. The geologic logs and well completion diagrams are provided in Appendix E. Since well construction and initial well-development, MW-2 and MW-3 have reported non-detectable concentrations of BTEX for all sampling events (Table 1; Figure 4 and Figure 5).

Groundwater sampling was initiated at MW-1 in May 1997, and has continued through closure sampling in 2004. BTEX levels in MW-1 have generally declined since quarterly sampling was initiated (Figure 2). Free-product was observed in MW-1 during four monitoring events (8/6/01, 8/31/01, 8/18/03, and 11/26/03; Figure 3). Since November 2003, free product has not been observed at the site.

SUMMARY OF 2004 ACTIVITIES

Because analytical data reports from prior years have been submitted in previous annual reports, only the analytical data reports for 2004 are included with this report as Appendix F. Similarly, field documentation for 2004 activities are included in Appendix G.

Quarterly groundwater sampling and water level monitoring was performed at MW-1 in 2004. BTEX concentrations during all, four quarterly monitoring periods were below NMWQCC standards (Table 1). No free product was observed in MW-1 during the quarterly monitoring events (Table 2). MW-2 and MW-3 were sampled during the November 2004 sampling event (Table 1); BTEX was not detected in MW-2 or MW-3, nor was free product observed. Data from 2004 represent four consecutive quarters of data below closure standards.

SITE MAPS

A site map is attached in Figure 1, which presents 2004 analytical data, the location of monitoring wells, 2004 water elevation data, a potentiometric surface map, and the location of the former pit.

EPFS GROUNDWATER SITES
2004 CLOSURE REPORT

Lindrith B #24
Meter Code: 94967

SUMMARY TABLES AND GRAPHS

Historic analytical (1997 through present) and free-product recovery data are summarized in Table 1 and Table 2, respectively. These data are presented graphically in Figures 2 through 5 for the wells.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at this site during 2004.

DISPOSITION OF GENERATED WASTES

No wastes were generated at this site during 2004.

ISOCONCENTRATION MAPS

No isoconcentration maps were prepared for this site, however, the attached site map presents analytical data collected during 2004.

CONCLUSIONS

EPFS excavated a total of 240 cubic yards of source material from the former pit in 1994/1995. A confirmation soil sample from the pit following the final excavation indicated BTEX concentrations below detection limits. A monitoring well, MW-1, was installed in the former pit in 1997, and has since been monitored quarterly. BTEX concentrations from MW-1 generally declined over time. Free-product was detected and removed from this well on four occasions. Since November 2003, free-product has not been observed at the site. BTEX concentrations have been below closure standards for four consecutive quarters of 2004 (February, June, August and November 2004).

Groundwater wells MW-2 and MW-3 were installed downgradient of MW-1 in 1999, and have consistently reported non-detectable BTEX concentrations with no observable free-product.

It has been demonstrated that the majority of source material was removed from the former EPFS pit approximately ten years ago. Minimal impact to groundwater exists resulting from the EPFS pit at this site. Therefore, EPFS requests closure of the former EPFS pit at this site.

RECOMMENDATIONS

- New Mexico Oil Conservation Division (NMOCD) criteria have been met at the former EPFS pit location. EPFS requests closure of the Lindrith B #24 site from NMOCD.

- Following NMOCD approval for closure, monitoring wells MW-1, MW-2, and MW-3 will be abandoned in accordance with the approved Monitoring Well Abandonment Plan.

TABLES

TABLE 1

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

Site Name	Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft btoc)	Groundwater Elevation (ft MSL)
Lindrith B #24	MW-1	5/27/1997	90.4	428	97.8	822	23.90	6847.74
Lindrith B #24	MW-1	8/7/1997	69.8	437	85.5	785	24.46	6847.18
Lindrith B #24	MW-1	11/14/1997	53.8	151	59.2	564	24.43	6847.21
Lindrith B #24	MW-1	2/4/1998	67.5	282	122	1350	24.58	6847.06
Lindrith B #24	MW-1	5/11/1998	63.9	65.6	66	575	24.27	6847.37
Lindrith B #24	MW-1	8/5/1998	61.2	156	84.8	874	24.48	6847.16
Lindrith B #24	MW-1	11/16/1998	60.2	87.7	79.2	788	24.21	6847.43
Lindrith B #24	MW-1	2/4/1999	48.7	23.1	62.4	668	24.43	6847.21
Lindrith B #24	MW-1	5/3/1999	56.4	94.8	64.7	849	24.64	6847.00
Lindrith B #24	MW-1	8/17/1999	70.3	69	56.8	595	23.96	6847.68
Lindrith B #24	MW-2	10/19/1999	< 1.0	< 1.0	< 1.0	< 1.0	21.45	6847.78
Lindrith B #24	MW-3	10/19/1999	< 1.0	< 1.0	< 1.0	< 1.0	21.20	6846.93
Lindrith B #24	MW-1	11/10/1999	48	22	40	260	24.24	6847.40
Lindrith B #24	MW-1	2/24/2000	120	39	78	830	24.64	6847.00
Lindrith B #24	MW-1	5/18/2000	52	5.6	53	320	24.40	6847.24
Lindrith B #24	MW-1	8/3/2000	41	< 1.0	52	420	24.87	6846.77
Lindrith B #24	MW-2	10/20/2000	< 1.0	< 1.0	< 1.0	< 1.0	22.08	6847.15
Lindrith B #24	MW-3	10/20/2000	< 1.0	< 1.0	< 1.0	< 1.0	22.37	6845.76
Lindrith B #24	MW-1	11/7/2000	11	12	25	160	25.14	6846.50
Lindrith B #24	MW-1	2/13/2001	18	< 1.0	23	110	25.29	6846.35
Lindrith B #24	MW-1	6/6/2001	9.8	0.5	16	47	25.31	6846.33
Lindrith B #24	MW-1	8/6/2001	110	39	180	1700	26.02	6845.62
Lindrith B #24	MW-1	11/29/2001	280	< 1.0	< 1.0	3500	25.93	6845.71
Lindrith B #24	MW-1	2/26/2002	13	14	46	720	25.79	6845.85
Lindrith B #24	MW-1	5/20/2002	< 1.0	< 1.0	8.9	140	25.98	6845.66
Lindrith B #24	MW-1	2/26/2003	4.3	0.8	4.7	22.5	26.15	6845.49
Lindrith B #24	MW-1	5/22/2003	< 1.0	< 1.0	19.7	86.2	26.25	6845.39
Lindrith B #24	MW-1	2/23/2004	< 1.0	< 1.0	23.9	81.5	26.09	6845.56
Lindrith B #24	MW-1	6/3/2004	7.1	8.7	48.6	20.4	25.73	6847.11
Lindrith B #24	MW-1	8/19/2004	< 1.0	< 1.0	14.8	45.2	26.34	6846.53
Lindrith B #24	MW-1	11/29/2004	< 1.0	< 1.0	5.7	10.0	26.56	6845.08
Lindrith B #24	MW-2	11/29/2004	< 1.0	< 1.0	< 1.0	< 2.0	25.39	6843.84
Lindrith B #24	MW-3	11/29/2004	< 1.0	< 1.0	< 1.0	< 2.0	25.79	6842.34

ug/L	micrograms per liter
ft btoc	feet below top of casing
ft MSL	feet above mean sea level
<	value was not detected at the method detection limit shown.

TABLE 2

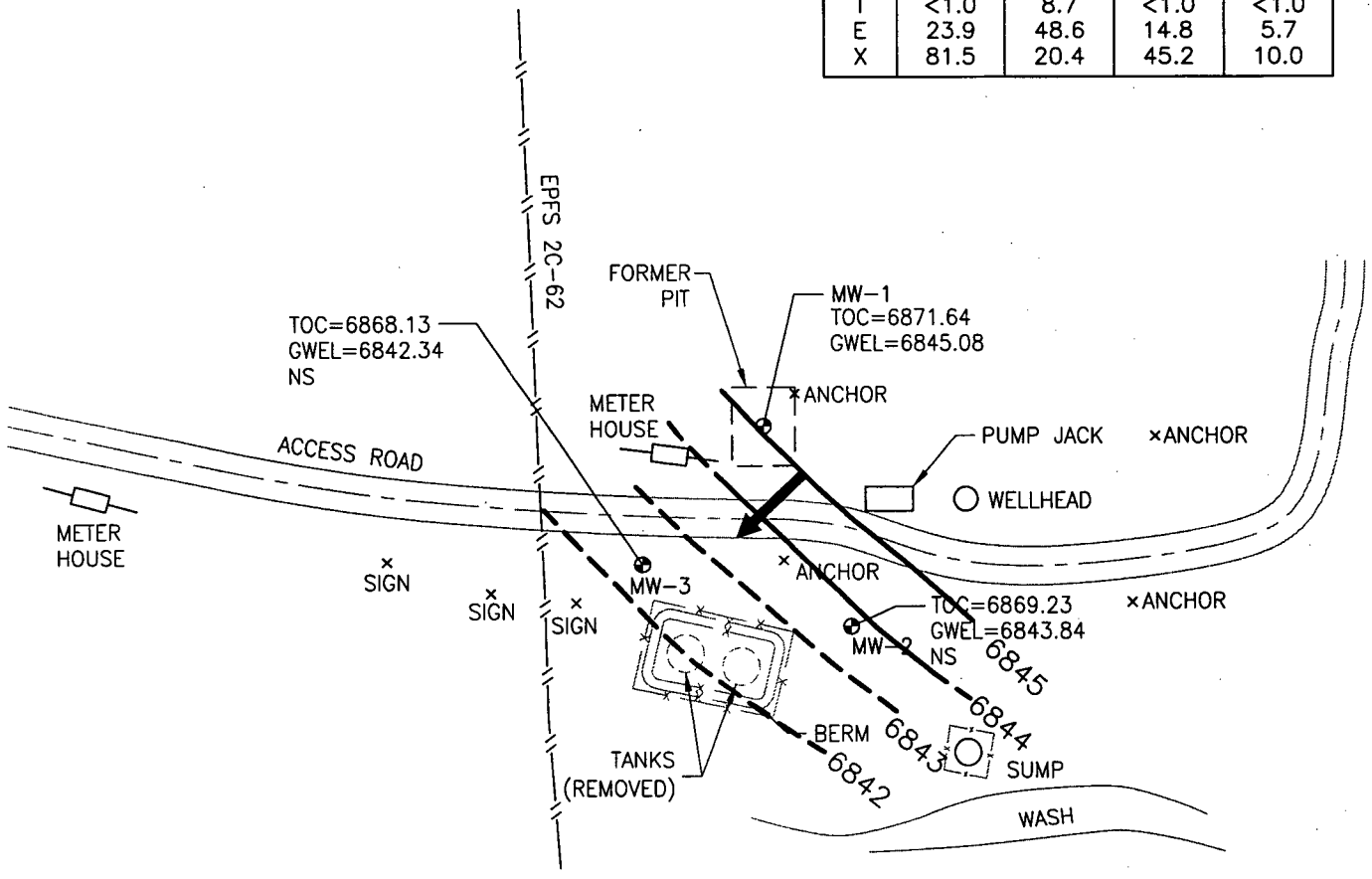
SUMMARY OF HISTORIC FREE-PRODUCT RECOVERY IN MW-1
LINDRITH B #24 (METER #94967)

Site Name	Monitoring Well	Removal Date	Depth to Product (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Volume of Product Removed (gallons)	Cummulative Volume of Product Removed (gallons)
Lindrith B #24	MW-1	2/13/01	No Product	25.29	0.03	0.00	0.00
Lindrith B #24	MW-1	6/6/01	No Product	25.31	0.01	0.00	0.00
Lindrith B #24	MW-1	8/6/01	25.43	26.02	0.59	0.10	0.10
Lindrith B #24	MW-1	8/31/01	25.43	25.50	0.07	0.25	0.35
Lindrith B #24	MW-1	11/29/01	No Product	25.93	0.00	0.00	0.35
Lindrith B #24	MW-1	2/26/02	No Product	25.79	0.00	0.00	0.35
Lindrith B #24	MW-1	5/20/02	No Product	25.98	0.00	0.00	0.35
Lindrith B #24	MW-1	2/26/03	No Product	26.15	0.00	0.00	0.35
Lindrith B #24	MW-1	5/22/03	No Product	26.25	0.00	0.00	0.35
Lindrith B #24	MW-1	8/18/03	26.51	26.80	0.29	0.20	0.55
Lindrith B #24	MW-2	11/26/03	25.89	25.9	0.01	0.01	0.56
Lindrith B #24	MW-3	2/23/04	No Product	26.085	0.00	0.00	0.56
Lindrith B #24	MW-1	6/3/04	No Product	25.73	0.00	0.00	0.56
Lindrith B #24	MW-1	8/19/04	No Product	26.32	0.00	0.00	0.56
Lindrith B #24	MW-1	11/29/04	No Product	26.56	0.00	0.00	0.56

ft btoc — feet below top of casing
ft MSL — feet above mean sea level

FIGURES

MW-1	2/23/04	6/03/04	8/19/04	11/29/04
B	<1.0	7.1	<1.0	<1.0
T	<1.0	8.7	<1.0	<1.0
E	23.9	48.6	14.8	5.7
X	81.5	20.4	45.2	10.0



LEGEND

MW-1	Approximate Monitoring Well Location and Number
——— – ———	Centerline of Road
5260	Potentiometric Surface (November 2004) (Approximate & Assumed Where Dashed)
——x——x——	Fence Line
——//——//——	Pipe Line
B	Benzene (μg/L)
T	Toluene (μg/L)
E	Ethylbenzene (μg/L)
X	Total Xylenes (μg/L)
GWEL	Groundwater Elevation (Feet Above Mean Sea Level Unless Noted Otherwise)
TOC	Top of Casing
NS	Not Sampled
NM	Not Measured
<	Not Detected. Value Shown is Detection Limit.

N

0 80

SCALE: 1"=80'

lindrithb24_2004.dwg

LINDRITH B#24, METER 94967
2004

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 1

FIGURE 2
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
MW-1

Historic Figures Lindrith.xls,Lindrith MW1

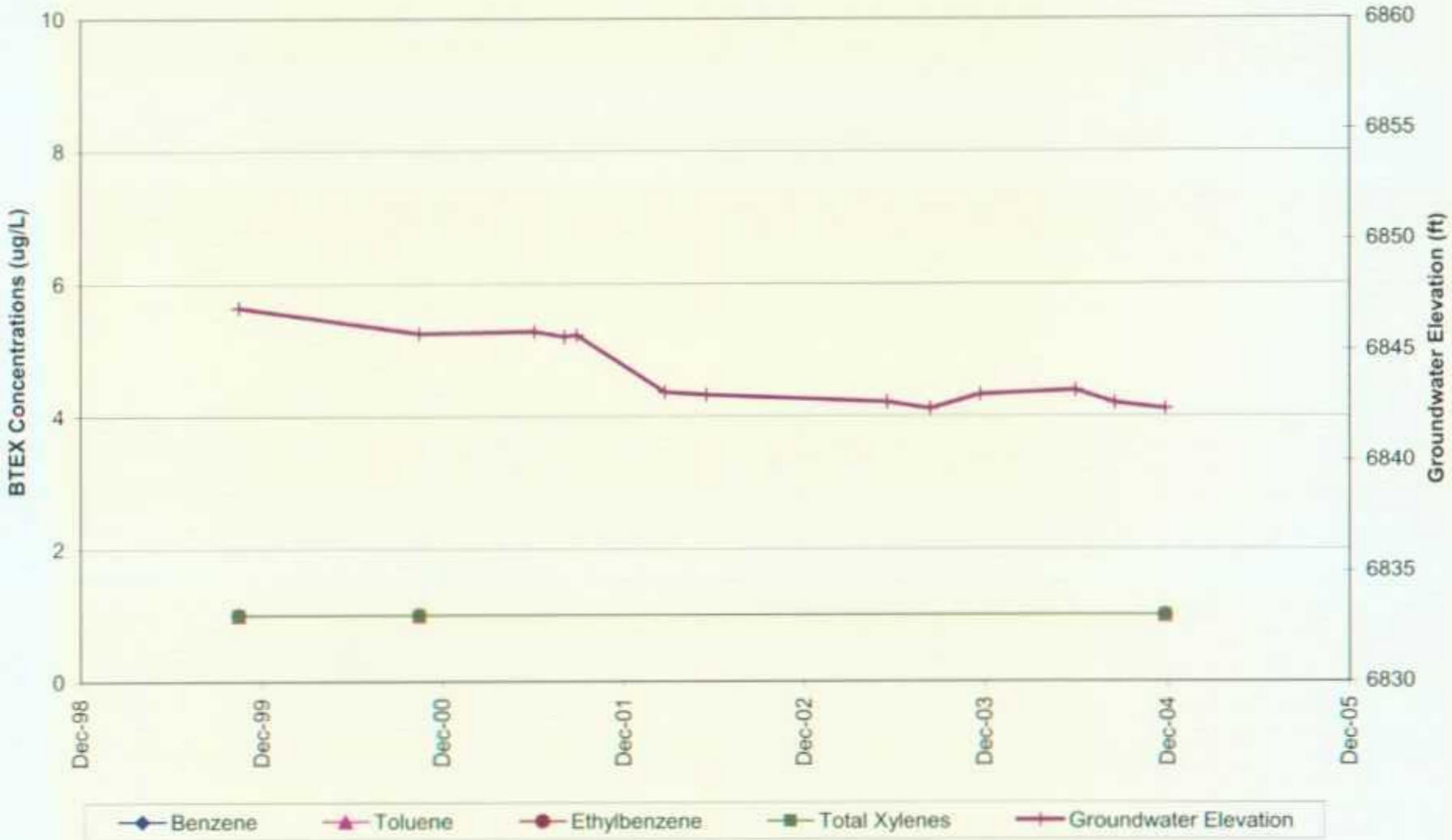
FIGURE 3
HISTORIC FREE-PRODUCT RECOVERY
MW-1

Historic Figures Lindrith.xls, Lindrith PR1

FIGURE 4
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
MW-2

Historic Figures Lindrith.xls,Lindrith MW2

FIGURE 5
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
MW-3



Historic Figures Lindrith.xls,Lindrith MW3

APPENDIX A

PHASE I PIT SITE ASSESSMENT, EXCAVATION, AND SOIL SAMPLE RESULTS (1994)

FIELD PIT SITE ASSESSMENT FORM

GENERAL

Meter: 94967 Location: Lindrith B 24

Operator #: 6098 Operator Name: Mobil P/L District: OJITO

Coordinates: Letter: N Section 9 Township: 24 Range: 3

Or Latitude _____ Longitude _____

Pit Type: Dehydrator ___ Location Drip: ✓ Line Drip: ___ Other: _____

Site Assessment Date: 8/2/94 Area: 08 Run: 82

SITE ASSESSMENT

NMOCD Zone: (From NMOCD Maps) Inside ☒ (1) Outside ☐ (2)

Land Type: BLM ☐ (1) State ☐ (2) Fee ☒ (3) Indian _____

Depth to Groundwater

Less Than 50 Feet (20 points) ☒ (1)
50 Ft to 99 Ft (10 points) ☐ (2)
Greater Than 100 Ft (0 points) ☐ (3)

Wellhead Protection Area :

Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? ☐ (1) YES (20 points) ☒ (2) NO (0 points)

Horizontal Distance to Surface Water Body

Less Than 200 Ft (20 points) ☒ (1)
200 Ft to 1000 Ft (10 points) ☐ (2)
Greater Than 1000 Ft (0 points) ☐ (3)

Name of Surface Water Body Canada Largo

(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)

Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)
☐ (2) > 100'

TOTAL HAZARD RANKING SCORE: 40 **POINTS**

REMARKS

Remarks : Redline Book - Inside Vulnerable Zone Topo - Inside
2 pits. Will close/. Pit has liquid in it

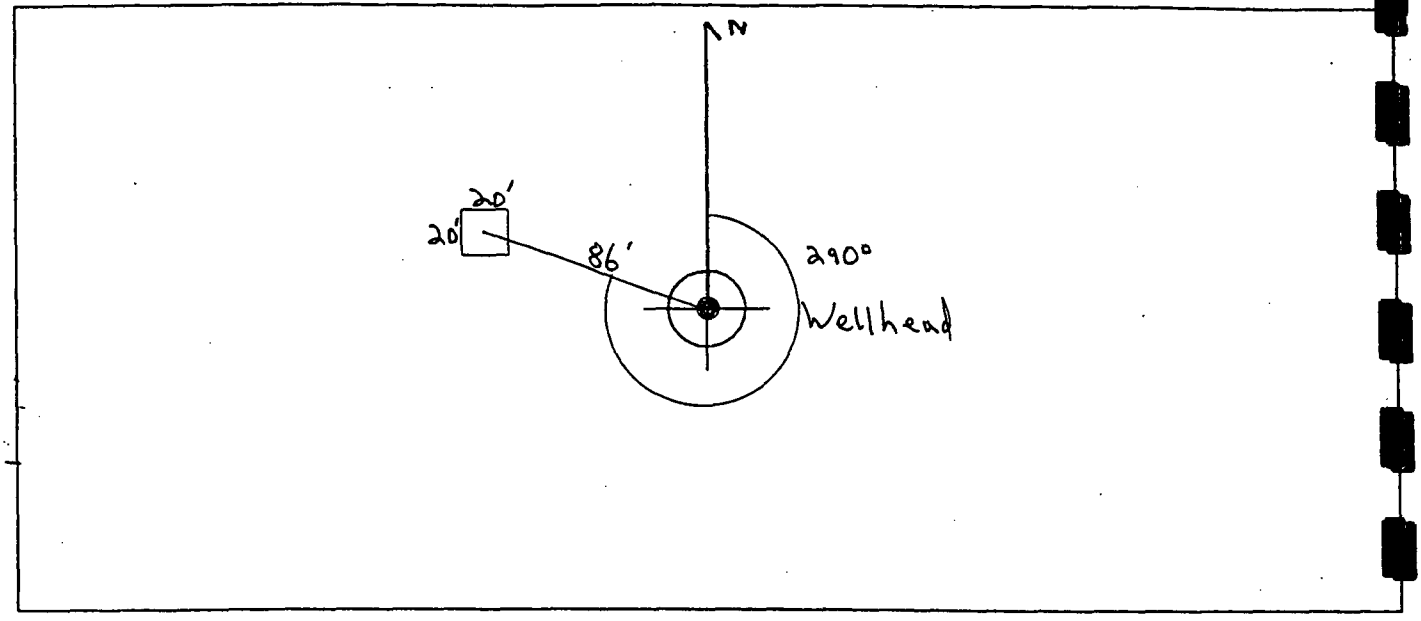
DIG/HAUL

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 290° Footage from Wellhead 86'

b) Length : 20' Width : 20' Depth : 6'



REMARKS

Remarks :

Pictures @ 1126

Completed By:

Signature

8/2/94

Date

El Paso Natural Gas Company

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KP307	946395
MTR CODE | SITE NAME:	10/19/94 KPK 949107	N/A
SAMPLE DATE | TIME (Hrs):	10-11-94	0930
SAMPLED BY:	N/A	
DATE OF TPH EXT. | ANAL.:	10-17-94	10.17.94
DATE OF BTEX EXT. | ANAL.:	10-19-94	10-23-94
TYPE | DESCRIPTION:	VC	Brown Sand & Clay

REMARKS: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	3.2	MG/KG	20			
TOLUENE	15	MG/KG	20			
ETHYL BENZENE	<0.5	MG/KG	20			
TOTAL XYLENES	55	MG/KG	20			
TOTAL BTEX	73.7	MG/KG				
TPH (418.1)	4270	MG/KG			2.15	28
HEADSPACE PID	233	PPM				
PERCENT SOLIDS	90.3	%				

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

e Surrogate Recovery was at 90 % for this sample All QA/QC was acceptable.

rrative:

AT 1 Results attached.

Dilution Factor Used

pproved By: _____ Date: 11/3/94

Analytical Technologies, Inc.

2709-D Pan American Freeway, NE Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. **410405**

October 26, 1994

El Paso Natural Gas Company
P.O. Box 4990
Farmington, NM 87499

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

On **10/18/94**, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-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.

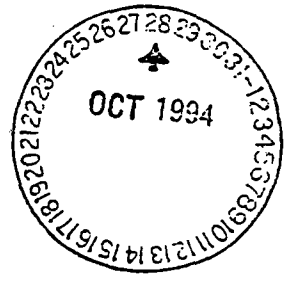
If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Letitia Krakowski, Ph.D.
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)
CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 410405
PROJECT # : 24324
PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.		MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	946395	KP307	NON-AQ	10/11/94	10/19/94	10/23/94	20
05	946396	KP308	NON-AQ	10/11/94	10/19/94	10/19/94	1
06	946397	KP309	NON-AQ	10/11/94	10/19/94	10/19/94	1

PARAMETER	UNITS	04	05	06
BENZENE	MG/KG	3.2	<0.025	<0.025
TOLUENE	MG/KG	15	<0.025	<0.025
ETHYLBENZENE	MG/KG	<0.5	<0.025	<0.025
TOTAL XYLENES	MG/KG	55	<0.025	<0.025
SURROGATE:				
BROMOFLUOROBENZENE (%)		90	101	102

****
Test Method for
Oil and Grease and Petroleum Hydrocarbons
in Water and Soil

Perkin-Elmer Model 1600 FT-IR
Analysis Report
****

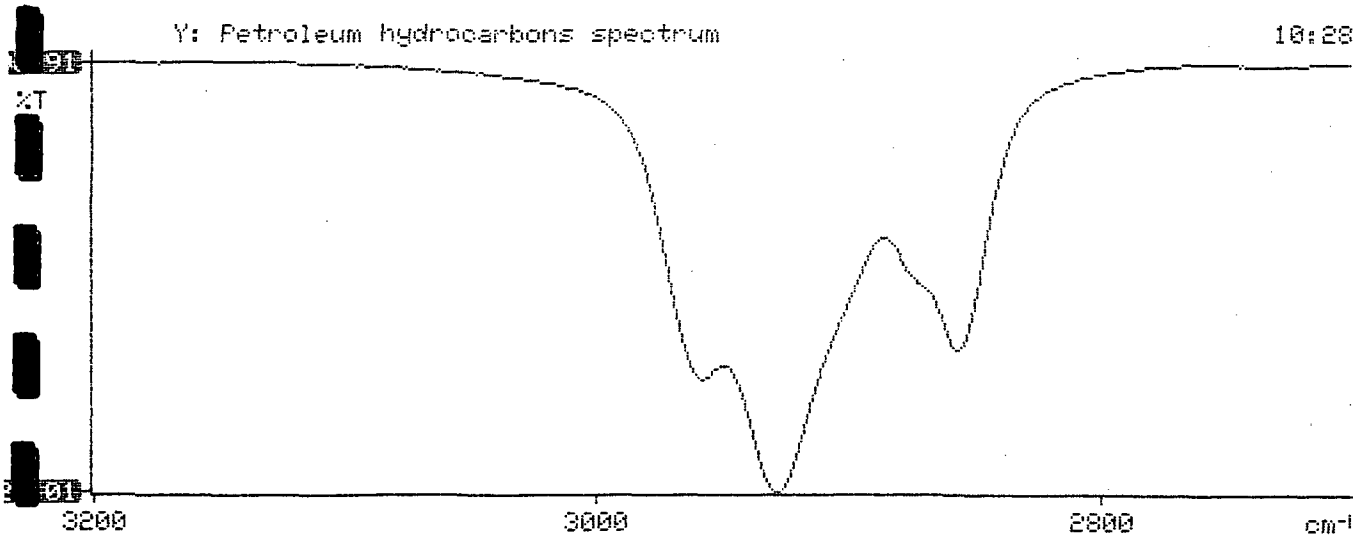
4/10/17 10:27

Sample identification
[redacted]395

Initial mass of sample, g
.50

Volume of sample after extraction, ml
[redacted]000

Petroleum hydrocarbons, ppm
272.072
Net absorbance of hydrocarbons (2930 cm-1)
[redacted]070



El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

Page _____ of _____

PROJECT NUMBER	PROJECT NAME
# 24324	Pit Closure Project

SAMPLERS: (Signature) Kelly Padilla DATE: 10-11-94

LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	REQUESTED ANALYSIS: TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
946394	10-11-94	0900	Soil	KP 306	1	VC	X	X				278	
946395	10-11-94	0930	Soil	KP 307	1	VC	X	X				279	
946396	10-11-94	1121	Soil	KP 308	1	VG	X	X				280	
946397	10-11-94	1121	Soil	KP 309	1	D	X	X					
946398	10-11-94	1126	Soil	KP 310	1	B	X	X					
946399	10-11-94	1530	Soil	KP 311	1	VC	X	X				281	
946400	10-11-94	1600	Soil	KP 312	1	VG	X	X				282	

CONTRACT LABORATORY P. O. NUMBER

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Kelly Padilla 10-11-94	2000	Brenda Kress	Brenda Kress	10/14/94 0925	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)

REQUESTED TURNAROUND TIME:
☐ ROUTINE ☐ RUSH _____

CARRIER CO.

BILL NO.:

SAMPLE RECEIPT REMARKS

CHARGE CODE

RESULTS & INVOICES TO:

FIELD SERVICES LABORATORY
EL PASO NATURAL GAS COMPANY
P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

505-599-2144 FAX: 505-599-2261

EM 08.0565 A (Rev 05-94)

APPENDIX B

PHASE II PIT EXCAVATION, SOIL AND WATER SAMPLE RESULTS, AND SOIL BORING RESULTS (1995)

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-1
Well #
Page 1 of 1

PHILLIP ENVIRONMENTAL
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPNG PITS
Project Number 14509 Phase 6000 / 77
Project Location Lindrith B#24 94967

Elevation
Borehole Location
GWL Depth
Logged By CM CHANCE
Drilled By ~~M DONOHUE~~ K. Padilla
Date/Time Started 6/7/95 - 1045
Date/Time Completed 6/7/95 - 1150

Well Logged By CM Chance
Personnel On-Site K. Padilla, F. Rivera, D. Tsalate
Contractors On-Site
Client Personnel On-Site

Drilling Method 4 1/4" ID HSA
Air Monitoring Method PID, CGI

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 HS	Drilling Conditions & Blow Counts
0				Backfill to 12'						
5										
10										
15	1	15-17	8"	Redish Br silty-SAND, vf-f sand, loose, sl moist, odor			0	200	955/642	-10.54
20	2	20-22	4"	Br silty SAND, vf-f sand, trmed sand, loose, saturated, strong odor, yellow liquid			0	460	758/795	-GW @ 19.4' -11.02
				TDB 22'						
25										
30										
35										
40										

Comments: Hit groundwater @ 19.7'. Water level rose to 19.4' after 10 min. Yellow liquid on tape. Backfilled BH w/ 4' Enviroplug grout to surface. No sample due to poor recovery & high PID.

Geologist Signature

FIELD PIT REMEDIATION/CLOSURE FORM/PHASE II

GENERAL

Meter: 94967 Location: Lindrith B # 24

Coordinates: Letter: N Section 09 Township: 24 Range: 03

Or Latitude _____ Longitude _____

Date Started : 8-28-95 Area: 08 Run: 83

FIELD OBSERVATIONS

Sample Number(s): 4P54 4P55 _____ _____

Sample Depth: 21 Feet

Final PID Reading 25 ppm PID Reading Depth 21 Feet

Yes No

Groundwater Encountered ☒ (1) ☐ (2) Approximate Depth 21' Feet

Final Dimensions: Length 32 Width 34 Depth 21'

CLOSURE

Remediation Method :

Excavation ☒ (1) Approx. Cubic Yards 180 @ 9/19/95

Onsite Bioremediation ☐ (2)

Backfill Pit Without Excavation ☐ (3)

Overburden Cubic Yards 86 @ 9/19/95

Soil Disposition:

Envirotech ☒ (1) ☐ (3) Tierra

Other Facility ☐ (2) Name: _____

Pit Closure Date: 8-29-95 Pit Closed By: Philip Env.

REMARKS

Phase III

Remarks : Encountered ground water at 21'ft, Took PID's West wall was 03ppm, South wall was 03ppm North wall was 27ppm, East wall was 55 ppm. Comp. Sample was 25 ppm Used 25 lbs Fertilizer

Signature of Specialist: James L Thomas

El Paso Natural Gas Company

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JP55	947372
MTR CODE | SITE NAME:	94967	Lindrith B #24
SAMPLE DATE | TIME (Hrs):	08-29-95	1115
PROJECT:	Phase II Excavation	
DATE OF TPH EXT. | ANAL.:	8-31-95	
DATE OF BTEX EXT. | ANAL.:	8/31/95 9/1/95	9/5/95
TYPE | DESCRIPTION:	~~VG~~ VC RDL	BROWN SAND + CLAY

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	< .5	MG/KG				
TOLUENE	< .5	MG/KG				
ETHYL BENZENE	< .5	MG/KG				
TOTAL XYLENES	< 1.5	MG/KG				
TOTAL BTEX	< 3	MG/KG				
TPH (418.1)	46.3	MG/KG			2.00	28
HEADSPACE PID		PPM				
PERCENT SOLIDS	89.0	%				

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 93% for this sample All QA/QC was acceptable.

Narrative:

DF = Dilution Factor Used

Approved By: _____ Date: 9-7-95

El Paso Natural Gas Company

Phase II Excavation

CHAIN OF CUSTODY RECORD

Page _____ of _____

PROJECT NUMBER	PROJECT NAME
# 24324	Pit Closure Project

SAMPLERS: (*Signature*) James F Powers DATE: 8-29-95

LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	REQUESTED ANALYSIS: TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
947372	8-29-95	1115	Soil	fP55	1	VC	X	X				49	Lindrith B #24 94967

CONTRACT LABORATORY P. O. NUMBER

RELINQUISHED BY: (*Signature*)	DATE/TIME	RECEIVED BY: (*Signature*)	RELINQUISHED BY: (*Signature*)	DATE/TIME	RECEIVED BY: (*Signature*)
James F Powers	8-30-95 1730	Julie Dicks	Julie Dicks	8/31/95 9:45	
RELINQUISHED BY: (*Signature*)	DATE/TIME	RECEIVED BY: (*Signature*)	RELINQUISHED BY: (*Signature*)	DATE/TIME	RECEIVED OF LABORATORY BY: (*Signature*)

REQUESTED TURNAROUND TIME:
☐ ROUTINE ☐ RUSH _____

CARRIER CO.

BILL NO.:

SAMPLE RECEIPT REMARKS

CHARGE CODE

RESULTS & INVOICES TO:

FIELD SERVICES LABORATORY
EL PASO NATURAL GAS COMPANY
P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

505-599-2144 FAX: 505-599-2261

White - *Testing Laboratory* Canary - *EPNG Lab* Pink - *Field Sampler*

FM-08-0565 A (Rev. 05-94)

****
Test Method for
Oil and Grease and Petroleum Hydrocarbons
in Water and Soil

Perkin-Elmer Model 1600 FT-IR
Analysis Report
****

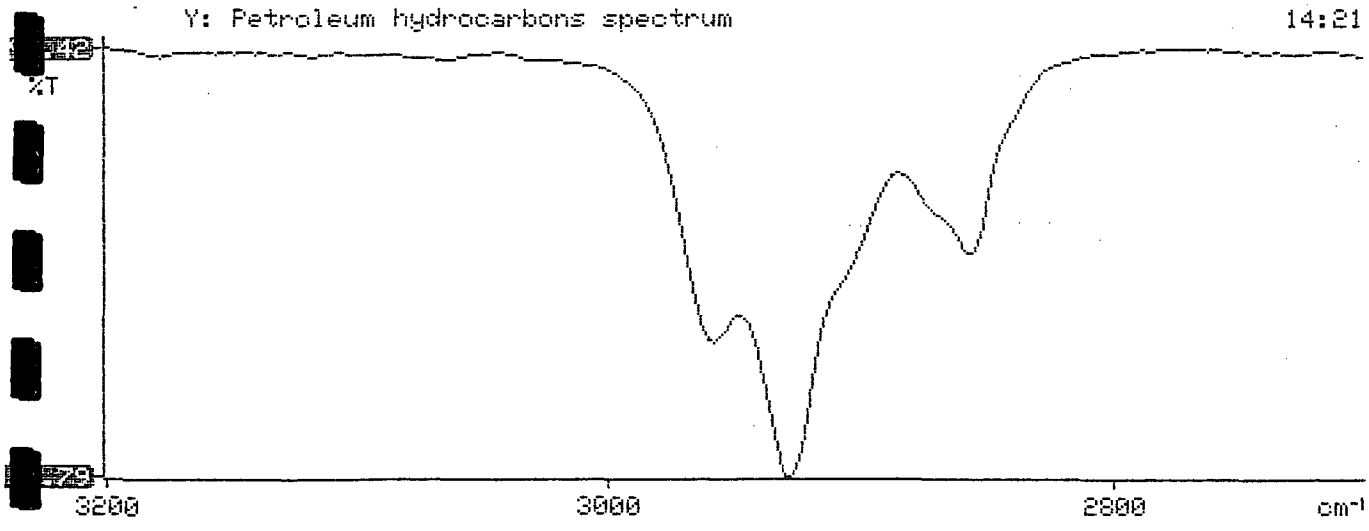
75/08/31 14:21

Sample identification
7372

Initial mass of sample, g
000

Volume of sample after extraction, ml
28.000

Petroleum hydrocarbons, ppm
48.254
Net absorbance of hydrocarbons (2930 cm-1)
016



BTEX SOIL SAMPLE WORKSHEET

File :	947372	Date Printed :	9/6/95
Soil Mass (g) :	5.14	Multiplier (L/g) :	0.00097
Extraction vol. (mL) :	20	DF (Analytical) :	200
Shot Volume (uL) :	100	DF (Report) :	0.19455

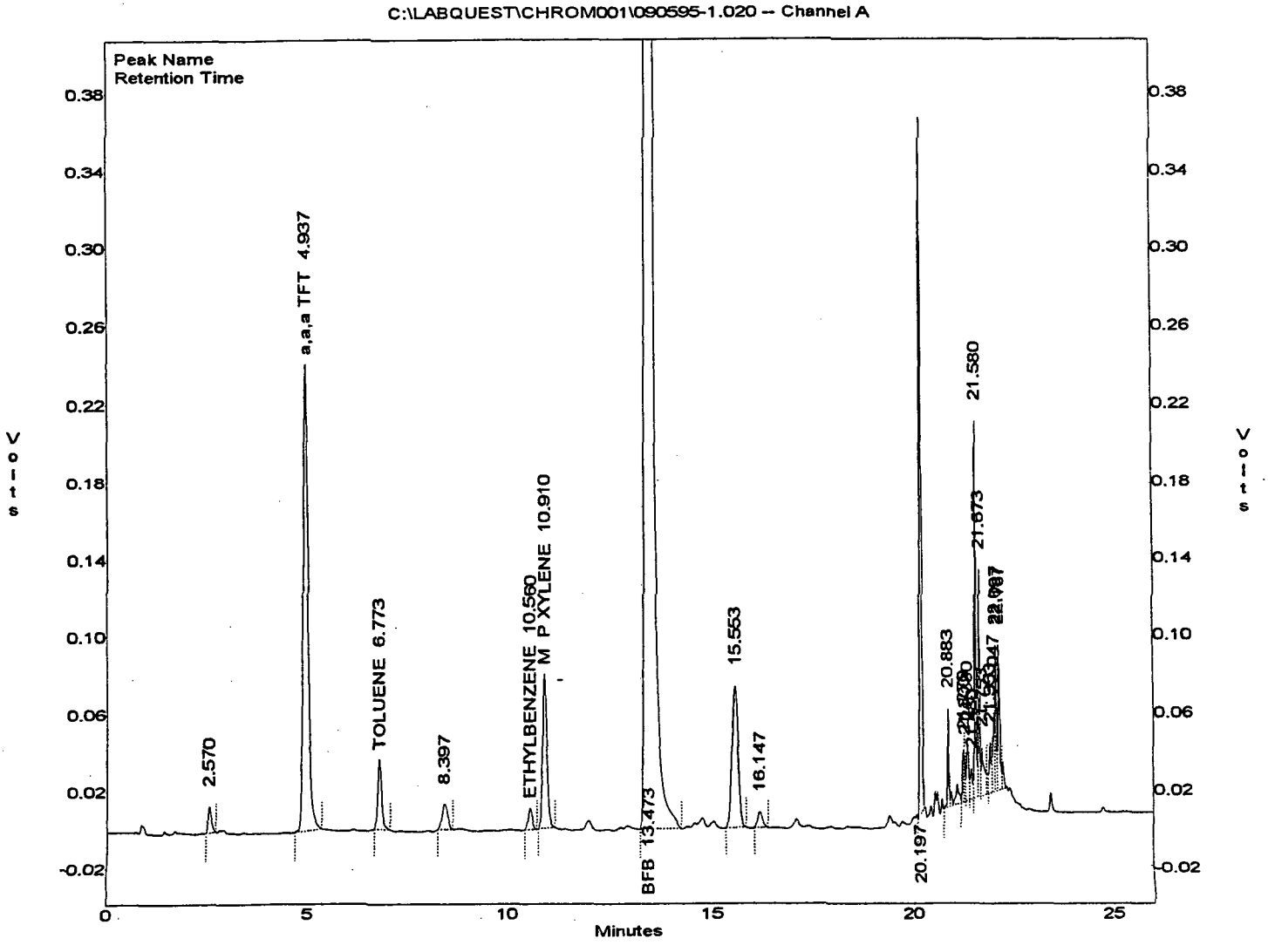
				Det. Limit
Benzene (ug/L) :	0.00	Benzene (mg/Kg):	**0.000**	0.486
Toluene (ug/L) :	0.00	Toluene (mg/Kg):	**0.000**	0.486
Ethylbenzene (ug/L) :	0.00	Ethylbenzene (mg/Kg):	**0.000**	0.486
p & m-xylene (ug/L) :	0.00	p & m-xylene (mg/Kg):	0.000	0.973
o-xylene (ug/L) :	0.00	o-xylene (mg/Kg):	0.000	0.486
		Total xylenes (mg/Kg):	**0.000**	1.459
		Total BTEX (mg/Kg):	**0.000**	

EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM001\090595-1.020
Method : C:\LABQUEST\METHODS\9001.MET
Sample ID : 947372,5.14G,100U
Acquired : Sep 04, 1995 22:46:32
Printed : Sep 04, 1995 23:12:51
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	3.390	0	0.0000
a,a,a TFT	4.937	1999487	84.0153
TOLUENE	6.773	251785	0.0514
ETHYLBENZENE	10.560	77684	-0.0883
M & P XYLENE	10.910	588441	-0.8166
O XYLENE	11.877	0	0.0000
BFB	13.473	32560292	92.6991



El Paso Natural Gas Company

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Water

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	947371
FIELD ID:	JP54
MTR CODE:	94967
SAMPLE DATE:	08-29-95
SAMPLE TYPE:	~~Phase~~ RO 1/31/95 Excavation
SITE NAME:	Lindrith
PROJECT:	Phase III Excavation
DATE OF BTEX ANALYSIS:	9/1/95

FIELD COMMENTS: _____

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT	QUALIFIER	WQCC LIMIT PPB
TDS - TOTAL DISSOLVED SOLIDS (PPM)	NA		None
BENZENE (PPB)	1260	D	10
TOLUENE (PPB)	3260	D	740
ETHYL BENZENE (PPB)	6210	D	750
TOTAL XYLENES (PPB)	4610	D	620
SURROGATE % RECOVERY	87/85	Allowed Range 80 to 120 %	

NOTES:

The D qualifier indicates that the sample was run at a dilution for quantitation.

Approved By: John Fowler

9-7-95
Date

El Paso Natural Gas Company

Phase II Excavation

CHAIN OF CUSTODY RECORD

Page _____ of _____

PROJECT NUMBER	PROJECT NAME
# 24324	Pit Closure Project

SAMPLERS: (Signature) James F Thomas DATE: 8-29-95

LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	REQUESTED ANALYSIS: TPH EPA 418.1 (TDS)	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
941371	8-29-95	0900	Water	SP54	2	VG	X	X				48	Lindrith B #24 T4967

CONTRACT LABORATORY P. O. NUMBER

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
James F Thomas	8-30-95 1730	Judi Dills	Judi Dills	8/31/95 9:45	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)

REQUESTED TURNAROUND TIME:
☐ ROUTINE ☐ RUSH _____

CARRIER CO.

BILL NO.:

SAMPLE RECEIPT REMARKS

CHARGE CODE

RESULTS & INVOICES TO:

FIELD SERVICES LABORATORY
EL PASO NATURAL GAS COMPANY
P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

505-599-2144 FAX: 505-599-2261

White - *Testing Laboratory* Canary - *EPNG Lab* Pink - *Field Sampler*

FM-08-0565 A (Rev. 05-94)

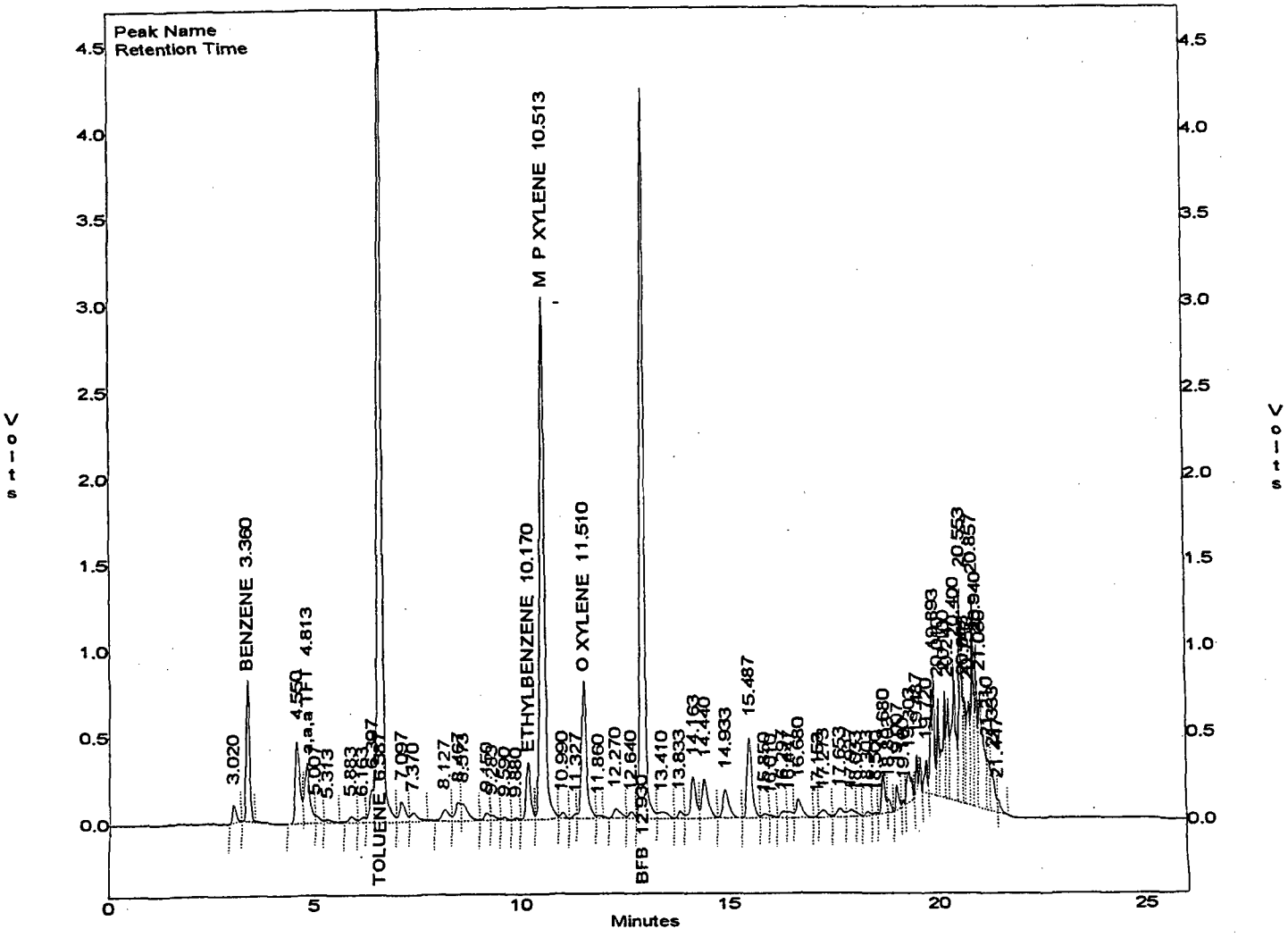
EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM001\090195-1.007
Method : C:\LABQUEST\METHODS\9001.MET
Sample ID : 947371x25
Acquired : Sep 01, 1995 21:21:11
Printed : Sep 02, 1995 12:30:45
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	3.360	4361227	1256.6598
a,a,a TFT	4.813	3107209	3263.9988 — OVER
TOLUENE	6.587	37402164	5685.7188
ETHYLBENZENE	10.170	2501973	411.0041
M & P XYLENE	10.513	23447502	3495.5989
O XYLENE	11.510	6450743	1111.8998
BFB	12.930	30456154	2167.7163

C:\LABQUEST\CHROM001\090195-1.007 -- Channel A

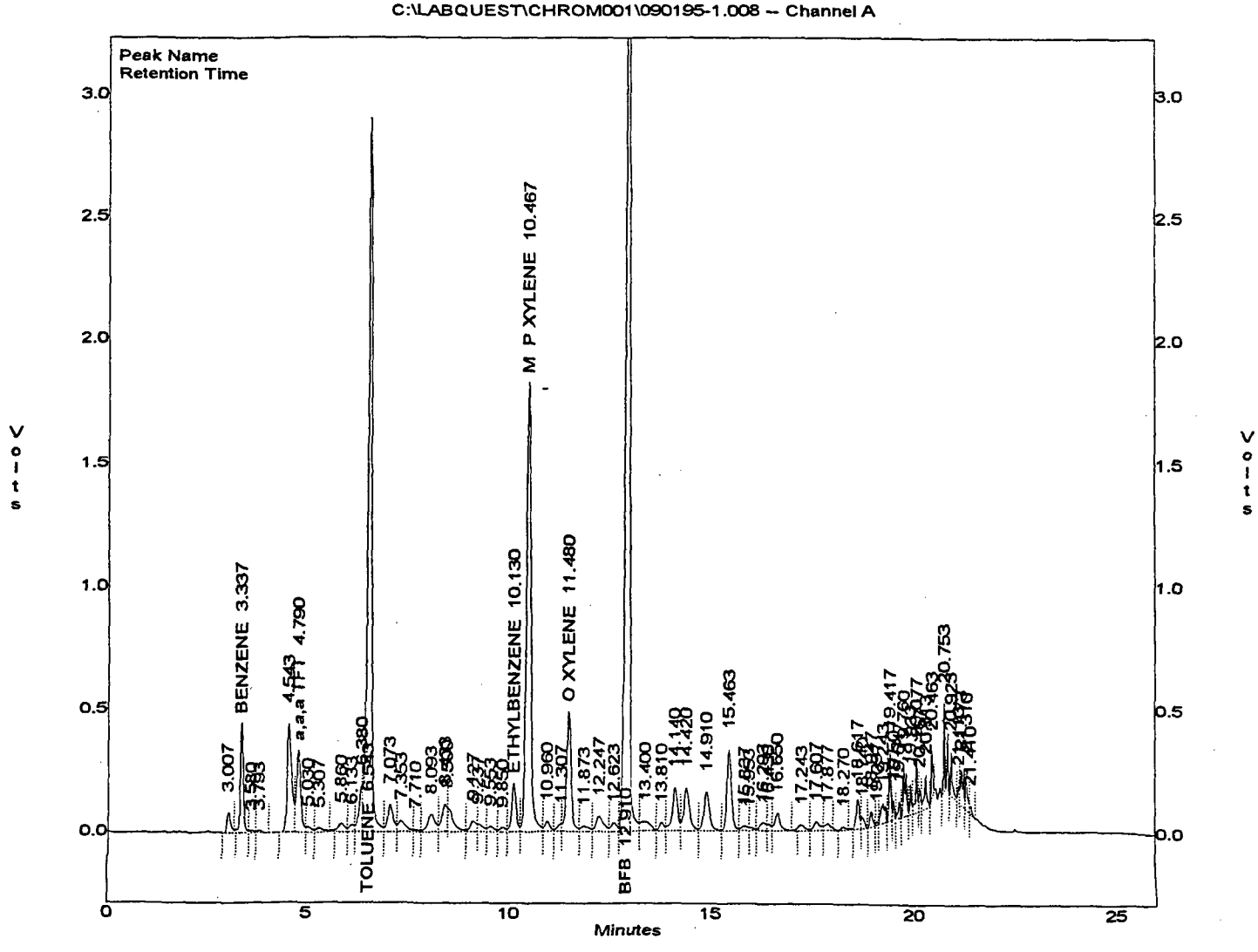


EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM001\090195-1.008
Method : C:\LABQUEST\METHODS\9001.MET
Sample ID : 947371x50
Acquired : Sep 01, 1995 21:57:29
Printed : Sep 02, 1995 12:31:32
User : MARLON

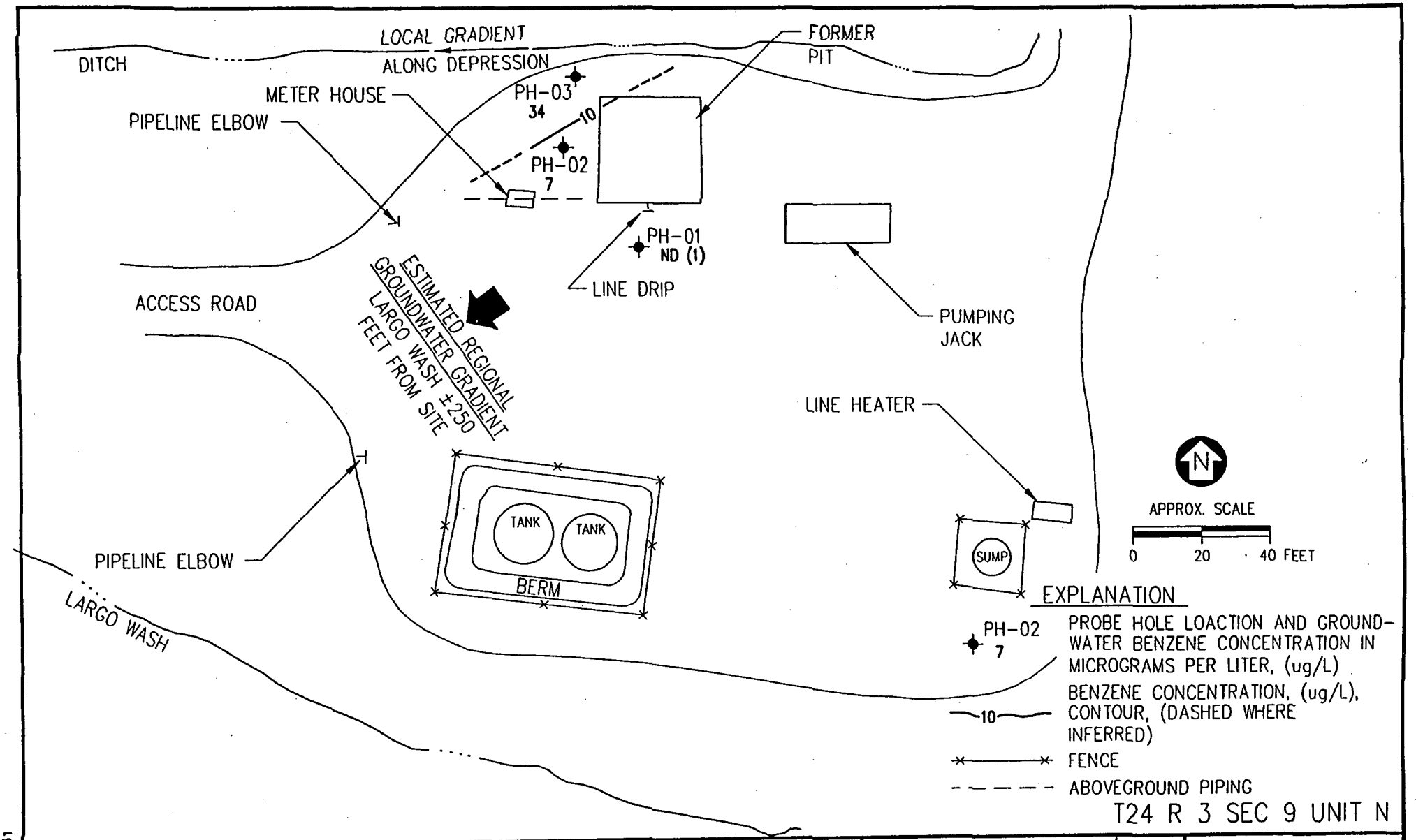
Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	3.337	2287930	1287.6729
a,a,a TFT	4.790	2637622	5541.4341
TOLUENE	6.543	20547882	6213.6406
ETHYLBENZENE	10.130	1542072	494.7851
M & P XYLENE	10.467	14018700	4090.6582
O XYLENE	11.480	3855617	1329.2761
BFB	12.910	29988250	4268.8267



APPENDIX C

PROBE HOLE LOCATIONS AND GROUNDWATER DATA (1995)



PHILIP ENVIRONMENTAL

TITLE:
LINDRITH B NO. 24
METER 94967
"GROUNDWATER ONLY"

SCALE	AS NOTED	DATE	PROJECT NO: 13947
DWN:	M.R.W.	12/12/95	EPNG-RECON PITS
DES:			
CHKD:	K.B.G.	12/15/95	FIGURE 31
APPD:			REV: 1

OL. J:\13947\CM\CL031

PHILIP

RECON SAMPLE ANALYSIS

DATA SUMMARY TABLE

Project: 13947

Sample I.D.	Probe Hole Number	Depth (feet)	Benzene (ug/L)	Toluene (ug/L)	Ethyl benzene (ug/L)	m+p-Xylene (ug/L)	o-Xylene (ug/L)	Comments
LINDRITHB24-02	PH-02	21-27	7	2	ND(1)	<1	ND(1)	Groundwater
LINDRITHB24-03	PH-03	21-27	34	7	50	194	72	Groundwater
LINDRITHB24-03-D	PH-03	21-27	34	10	52	202	102	QC - Duplicate
LINDRITHB24-03-MS	PH-03	21-27	169	2,598	2,945	3,643	3,008	QC - Matrix Spike
Blank-95	N/A	N/A	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	QC - System Blank
QCRT-31	N/A	N/A	9	545	588	579	600	QC - Retention Times
Blank-96	N/A	N/A	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	QC - System Blank
STD-1206	N/A	N/A	12	705	705	706	707	Calibration Standard
Blank-97	N/A	N/A	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	QC - System Blank
Blank-98	N/A	N/A	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	QC - Probe Rod Blank
SJU28679PM-01	PH-01	30-36	3	4	<1	2	1	Groundwater
SJU28679PM-02	PH-02	30-36	ND(1)	<1	ND(1)	ND(1)	ND(1)	Groundwater
SJU28679PM-03	PH-03	30-36	73	152	28	220	77	Groundwater
SJU28679PM-04	PH-04	30-36	2,460	10,168	1,592	12,140	3,552	Groundwater
SJU28679PM-05	PH-05	30-36	6,349	14,827	2,505	19,685	7,288	Groundwater
SJU28679PM-06	PH-06	30-36	4,329	11,327	1,611	11,542	3,577	Groundwater
SJU28679PM-07	PH-07	30-36	ND(1)	6	ND(1)	ND(1)	ND(1)	Groundwater
SJU28679PM-06-D	PH-06	30-36	3,852	11,043	1,501	10,957	3,377	QC - Duplicate
SJU28679PM-06-MS	PH-06	30-36	4,364	14,581	4,888	17,736	7,787	QC - Matrix Spike
Blank-99	N/A	N/A	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	QC - System Blank
QCRT-32	N/A	N/A	9	499	466	446	515	QC - Retention Times
Blank-100	N/A	N/A	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	QC - System Blank
STD-1207	N/A	N/A	12	705	705	706	707	Calibration Standard
Blank-101	N/A	N/A	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	QC - System Blank
Blank-102	N/A	N/A	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	QC - Probe Rod Blank
MB1J-01	PH-01	18-20	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	Soil-gas
MB1J-02	PH-02	9	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	Soil-gas
MB1J-03	PH-03	8	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	Soil-gas

D = duplicate analysis.
QC = quality control.
ug/L = micrograms of compound detected per liter of soil or groundwater vapor analyzed.
ND = not detected at the lower quantifiable limit indicated in parenthesis.
N/A = not applicable.
MS = matrix spike.

QA Review: Paul E Anderson

Review Date: 1-31-96 AK 2/14/96

El Paso Natural Gas Company

Recon

Lindrith B No. 24 Water #94967

CHAIN OF CUSTODY RECORD

Page 1 of 1

PROJECT NUMBER	PROJECT NAME
# 24324	Pit Closure Project

SAMPLERS: (Signature) Karen Gallaher

DATE: 12/5/95

LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
	12/5/95	1310	Water	LINDRITH B24-03	2	W		X					Lindrith B No.24, PH-03, 21'
	12/5/95	1315	Water	Trip Blank	1	B		X					Trip Blank

CONTRACT LABORATORY P. O. NUMBER

REQUESTED ANALYSIS

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Karen Gallaher	12/6/95 0645 33°F	Kelly Stovall	Kelly Stovall	12/6/95 9:15 36°	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)

REQUESTED TURNAROUND TIME:

☐ ROUTINE ☐ RUSH

CARRIER CO.

BILL NO.:

SAMPLE RECEIPT REMARKS

CHARGE CODE

RESULTS & INVOICES TO:

FIELD SERVICES LABORATORY
EL PASO NATURAL GAS COMPANY
P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

505-599-2144 FAX: 505-599-2261

White - Testing Laboratory Canary - EPNG Lab Pink - Field Sampler

FM-08-0565 A (Rev. 05-94)

APPENDIX D

MW-1 BORELOG AND WELL CONSTRUCTION FORMS
MW-1 WELL DEVELOPMENT AND SAMPLING DATA
(1997)

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH 1
Well # MW1
Page of

PHILIP ENVIRONMENTAL
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPFS GW PITS
Project Number 17520 Phase 6002.77
Project Location Lindrith B 24 94967

Elevation
Borehole Location Ltr N-S9-T24-R3
GWL Depth 20.5'
Logged By CM Chance
Drilled By R. Padilla
Date/Time Started 5/27/97-1000
Date/Time Completed 5/27/97-1125

Well Logged By CM Chance
Personnel On-Site D Charley, R. Thompson
Contractors On-Site
Client Personnel On-Site

Drilling Method 6¼ 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: NDU BZ	BH	S	Drilling Conditions & Blow Counts
0										
5										
10										
15										
20				Backfill to 21'						GW@20.5'
				Br-gry clayey SAND, vF-F, saturated						
25										
				Br SAND, F-med, saturated						
30				TDB 30'						
35										
40										

Comments: No sample collected (backfill to GW). GW @ 20.5' BGS. TDB 30'
Set well

Geologist Signature Cory Chance

MONITORING WELL INSTALLATION RECORD

Borehole # BH-1
Well # MW-1
Page 1 of 1

Philip Environmental Services, Inc.
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPFS GW
Project Number 17520 Phase 6002
Site Location Lindrith B24 94967

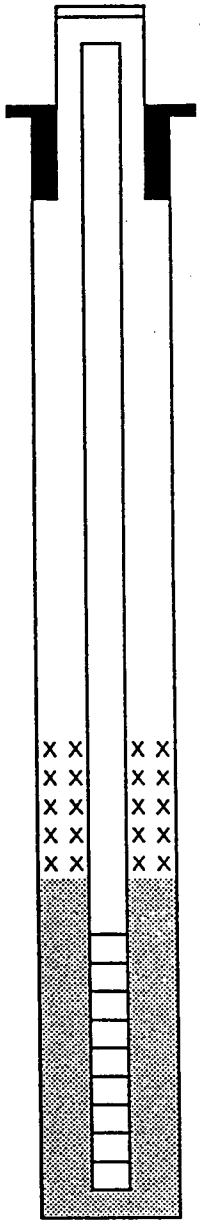
Elevation
Well Location T24 R3 S9 LTRN
GWL Depth 20.5' BGS
Installed By K Padilla

Date/Time Started 5/27/97-1125
Date/Time Completed 5/27/97-1330

On-Site Geologist CM CHANCE
Personnel On-Site D CHARLEY, R Thompson
Contractors On-Site
Client Personnel On-Site

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing	8" steel well vault	+3.1
Bottom of Protective Casing		1.9
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete		N/A
Bottom of Concrete		N/A
Top of Grout	Type I/II Portland cement	0
Bottom of Grout	Powder Bentonite	8.6
Top of Well Riser	4" SCH 40 PVC	+3
Bottom of Well Riser	FLUSH THREAD	13.6
Top of Well Screen	4" SCH 40 PVC	13.6
Bottom of Well Screen	0.01 SLOT FLUSH THREAD	28.6
Top of Peltonite Seal	ENVIROPLUG	8.6
Bottom of Peltonite Seal		10.6
Top of Gravel Pack	10-20 SILICA SAND	10.6
Bottom of Gravel Pack		28.6
Top of Natural Cave-In		28.6
Bottom of Natural Cave-In		30
Top of Groundwater		20.5
Total Depth of Borehole		30



Top of Protective Casing +3.1
Top of Riser +3
Ground Surface 0
Top of Seal 8.6
Top of Gravel Pack 10.6
Top of Screen 13.6
Bottom of Screen 28.6
Bottom of Borehole 30

Comments: Seal hydrated w 5gal potable water. Locking well cap & padlock placed on well.

Geologist Signature Cory Chance

MWINSTAL.wk1

PHILIP ENVIRONMENTAL

Well Number MW-1

Serial No. WDPD-

☒ Development ☐ Purging

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name EPFS GW PITS | Project Manager CORY CHANCE | Project No. 17520

Client Company EL PASO FIELD SERVICES | Phase/Task No. 6003.77

Site Name LINDRITH B #24 (94967) | Site Address RIO ARRIBA CO., NM

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) 32.15 TOB
Initial Depth to Water (feet) 23.90 TOB
Height of Water Column in Well (feet) 8.25
Diameter (inches): Well 4 Gravel Pack ____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	8.25	5.39	26.95
Gravel Pack			
Drilling Fluids			
Total			26.95

Instruments

	Serial No. (If applicable)
☒ pH Meter	OYSTER
☐ DO Monitor	
☒ Conductivity Meter	OYSTER
☒ Temperature Meter	OYSTER
☐ Other	

Water Disposal

ON GROUND ON SITE

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
5-27-97	1342		X				5	5			14.4	6.90	1010		DARK BROWN
5-27-97	1353		X				5	10			13.4	7.20	990		DARK BROWN
5-27-97	1401		X				5	15			14.9	7.24	980		DARK BROWN
5-27-97	1412		X				5	20			12.5	7.37	980		DARK BROWN
5-27-97	1422		X				5	25			12.6	7.37	970		DARK BROWN
5-27-97	1432		X				5	30			13.3	7.41	970		BROWN

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

Comments _____

Developer's Signature(s) Robert Thompson Date 5-27-97 Reviewer _____ Date _____

PHILIP ENVIRONMENTAL

Location No. MW-1

Serial No. WSD-

WATER SAMPLING DATA

Group List Number

Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other _____ Date 5·27·97

Project Name EPFS GW-PITS Project No. 17520

Project Manager CORY CHANCE Phase.Task No. 6003.77

Site Name LINDRITH B #24

Sampling Specifications

Requested Sampling Depth Interval (feet) TOP 3'

Requested Wait Following Development/Purging (hours) NONE

Initial Measurements

Time Elapsed From Final Development/Purging (hours) 15 MIN.

Initial Water Depth (feet) 23.90

Nonaqueous Liquids Present (Describe) NONE

Water Quality/Water Collection

DO = Dissolved Oxygen; Cond. = Conductivity

Date	Time	Sampler Initials	Water Quality Readings				Water Collection Data					Notes (Explain in Comment Below)
			Temp. (°C)	pH	DO (mg/L)	Cond. (µmhos/cm)	Volume Removed (gallons)	Removal Rate (gal/min)	Pump Intake Depth (ft)	Bail	Final Water Depth ft)	
	SEE WELL DEVELOPMENT AND PURGING DATA FORM											

Container Type: G = Clear Glass; A = Amber Glass; P = Plastic; V = VOA Vial (Glass); O = Other (Specify)

Sample Containers

Preservatives: H = HCl; N = HNO_3; S = H_2SO_4; A = NaOH; O = Other (Specify); --- = None

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
BTEX	2	V	40		X	H	X		SAMPLED AT 1447

Filter Type NONE Chain-of-Custody Form Number EPFS

Comments _____

Signature Robert Thompson Date 5·27·97 Reviewer _____ Date _____

EL PASO FIELD SERVICES

6-18-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	RT7	970510
MTR CODE | SITE NAME:	94967	Lindrith B #24
SAMPLE DATE | TIME (Hrs):	5/27/97	1447
PROJECT:	Phase II Drilling - Initial	
DATE OF BTEX EXT. | ANAL.:	5/30/97	5/30/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	90.4	PPB	5	D		
TOLUENE	428	PPB	5	D		
ETHYL BENZENE	97.8	PPB	5	D		
TOTAL XYLENES	822	PPB	5	D		
TOTAL BTEX	1440	PPB				

The Surrogate Recovery was at 88.6 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used
The "D" qualifier indiciates that the analyte calculated is based on a secondary dilution factor.

Narrative:

Approved By: _____ Date: 5/31/97

970510,6/4/97

EL PASO FIELD SERVICES LABORATORY
EPA METHOD 8020 - BTEX

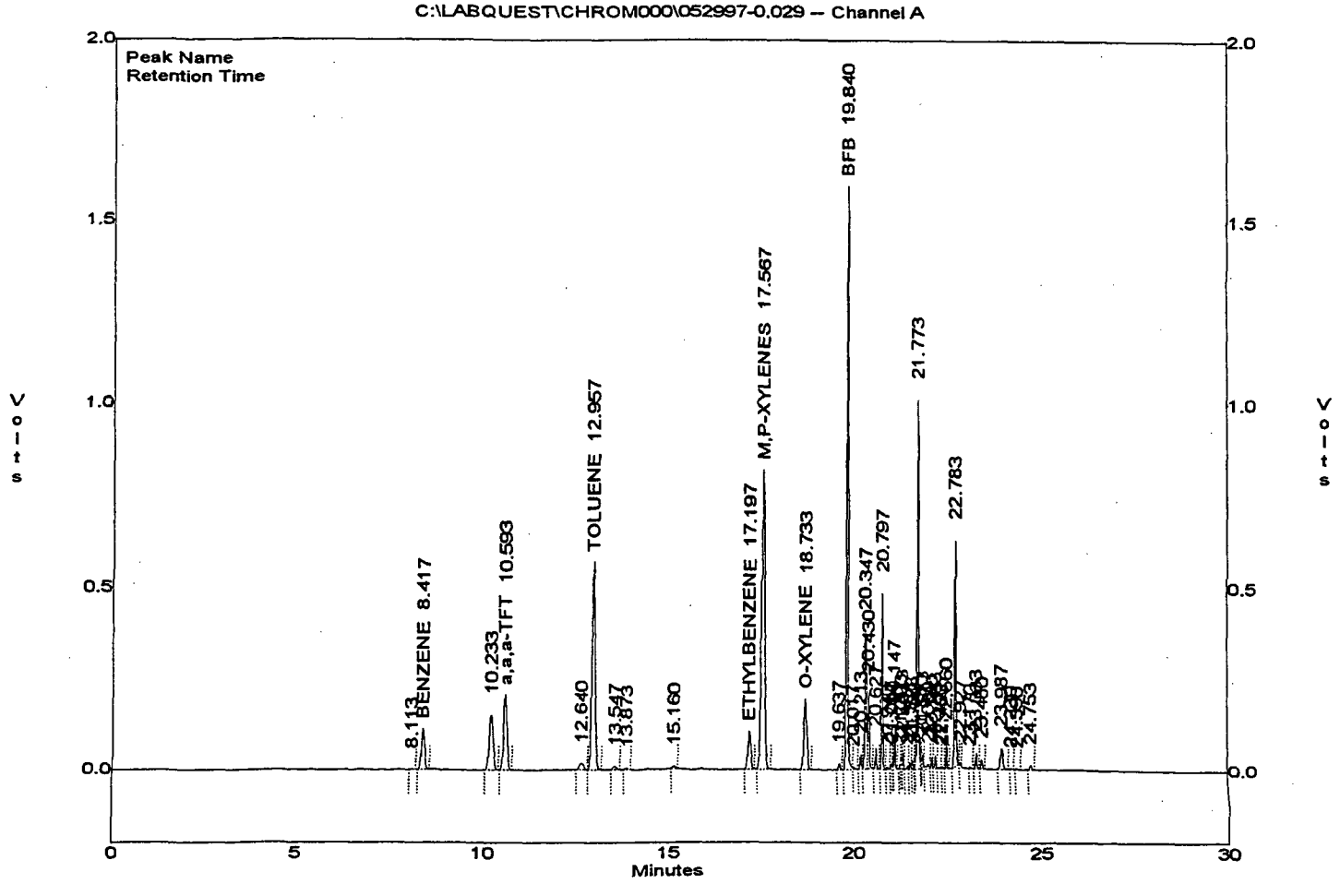
File : C:\LABQUEST\CHROM000\052997-0.029
Method : C:\LABQUEST\METHODS\0-051397.MET
Sample ID : 970510 X5
Acquired : May 30, 1997 08:24:36
Printed : May 30, 1997 08:55:05
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	8.417	697667	90.3522
a,a,a-TFT	10.593	1305641	509.0658
TOLUENE	12.957	3407222	427.6129
ETHYLBENZENE	17.197	604015	97.7553
M,P-XYLENES	17.567	5113950	638.6775
O-XYLENE	18.733	1152856	182.8250
BFB	19.840	4962647	442.7125

Channel A Group Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
TOTAL XYLENES		6266806	821.5025



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970511
MTR CODE | SITE NAME:	94967	Lindrith B #24
SAMPLE DATE | TIME (Hrs):	5/27/97	1447
PROJECT:	Phase II Drilling - Initial	
DATE OF BTEX EXT. | ANAL.:	5/29/97	5/29/97
TYPE | DESCRIPTION:	Blank	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	<6	PPB				

The Surrogate Recovery was at 94.5 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John Labadie Date: 5/30/97

970511,6/4/97

EL PASO FIELD SERVICES LABORATORY
EPA METHOD 8020 - BTEX

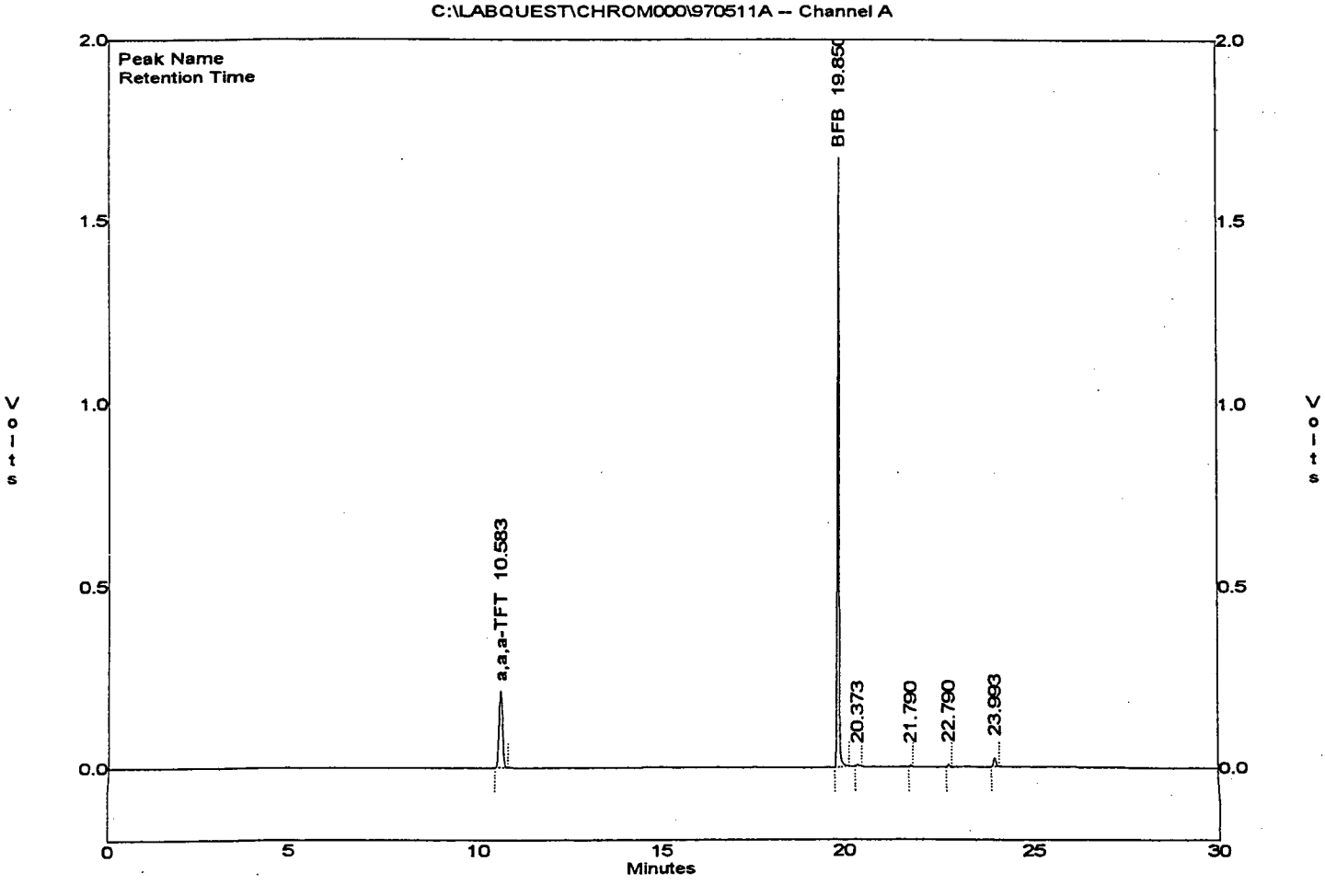
File : C:\LABQUEST\CHROM000\970511A
Method : C:\LABQUEST\METHODS\0-051397.MET
Sample ID : 970511 X1
Acquired : May 29, 1997 12:10:52
Printed : May 29, 1997 12:41:17
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	8.400	0	0.0000
a,a,a-TFT	10.583	1347667	105.0903
TOLUENE	12.920	0	0.0000
ETHYLBENZENE	17.270	0	0.0000
M,P-XYLENES	17.647	0	0.0000
O-XYLENE	18.793	0	0.0000
BFB	19.850	5298620	94.5369

Channel A Group Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
TOTAL XYLENES		0	0.0000



EL PASO Natural Gas Company

CHAIN OF CUSTODY RECORD

Page 1 of 1

PROJECT NUMBER	PROJECT NAME
# 24324	Pit Closure Project

SAMPLERS: (Signature) Robert Thompson DATE: 5-27-97

LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
	5-27-97	1447	H_2O	RT 7	2			X					LINDRITH B#24 - 94967
	5-27-97			TRIP BLANK									

CONTRACT LABORATORY P. O. NUMBER

36°

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Robert Thompson	5-27-97 1750		Cain Williams	5/29/97 9:25	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)
					Marian Hagger

REQUESTED TURNAROUND TIME:
☐ ROUTINE ☐ RUSH _____

CARRIER CO.

BILL NO.:

SAMPLE RECEIPT REMARKS

CHARGE CODE

RESULTS & INVOICES TO:

FIELD SERVICES LABORATORY
EL PASO NATURAL GAS COMPANY
P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

505-599-2144 FAX: 505-599-2261

White - *Testing Laboratory* Canary - *EPNG Lab* Pink - *Field Sampler*

FM-08-0565 A (Rev. 05-94)

APPENDIX E

MW-2 AND MW-3 BORELOG & WELL CONSTRUCTION FORMS
MW-2 AND MW-3 WELL DEVELOPMENT AND SAMPLING DATA
(1999)

PHILIP SERVICES CORP.

Industrial Services Group
Central Region

MHE: 94967

March 31, 2000

Mr. Scott Pope
El Paso Field Services Company
614 Reilly Ave.
Farmington, New Mexico 87401

RE: Geologic Logs and Well Completion Diagrams for 1999.

Dear Mr. Pope:

Please find enclosed the geologic logs and well completion diagrams for work completed in 1999.

If you have any questions or require additional information, please do not hesitate to contact me at (505) 326-2262.

Respectfully submitted,

PHILIP SERVICES CORPORATION

Stephen Stellavato

Stephen Stellavato
Geologist

...ORD OF SUBSURFACE EXPLORATIO.

Borehole # 1
Well # MW2
Page 1 of 2

...lip Environmental Services Corp.
...0 Monroe Road
...New Mexico 87401
...282 FAX (506) 326-2388

Project Name EPFS GROUNDWATER
Project Number 62800018 Phase 35
Project Location LINDRITH B 24

Elevation
Borehole Location T24N R3W S9 N
...WL Depth 20.68'
...ogged By C. CULLICOTT
Drilled By E. PADILLA & D. PADILLA
Date/Time Started 10/5/99 10am
...ate/Time Completed 10/5/99 11:30am
MOTOR 94567

Well Logged By C CULLICOTT
Personnel On-Site E PADILLA & D. PADILLA
Contractors On-Site Ø
Client Personnel On-Site Ø

Drilling Method AUGER
Air Monitoring Method PID

Depth (Feet)		Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S	Drilling Conditions & Blow Counts
0				(1) SURFACE - GRAVELLY SAND - PAD MATERIAL						
5	(1)	5-7'		(1) 12" RECOVERY LOOSE, POORLY SORTED SAND (FINE → COARSE). WHITE W/ ORANGE STAIN IN PLACES. CLEAN						(1) 14 BLOWS SS 0.0 PPM
10	(2)	10-11½'		(2) FULL RECOVERY MOSTLY ORANGE LOOSE, POORLY SORTED SAND - 2 patches (a few inches each) w/ higher SILT CONTENT. CLEAN						(2) 9 BLOWS SS 0.0 PPM
15	(3)	15-17'		(3) 18" RECOVERY LOOSE, POORLY SORTED (BOT) 60% COARSE) REDDISH BROWN SAND - CLEAN						(3) 14 BLOWS SS 0.0 PPM
20	(4)	20-22'		(4) 12" RECOVERY. FIRST 6" SATURATED REDDISH BROWN MEDIUM SAND BOTTOM 2" SATURATED REDDISH BROWN POORLY SORTED SAND FINE → COARSE WT ~ 21'						(4) 10 BLOWS SS 0.0 PPM
25										
30										
35										
40				TD 30'						

...ments: SUNNY, COOL
DTW IN MW1 = 21.4'
@ BOTTOM OF HOLE, WHEN AUGERS WERE DISCONNECTED FROM RIG THEY SANK ~1 foot. Geologist Signature Cathy Cullicott

ITORING WELL INSTALLATION RECORD

Borehole # 1
Well # MW 2
Page 2 of 2

Environmental Services Corp.
Road
ew Mexico 87401
326-2262 FAX (505) 326-2388

Project Name EPFS GROUND WATER
Project Number 62800018 Phase 35
Project Location LINDRITH B#24

ation
Location T24N R3W S9 N
VL Depth 20.68'
stalled By K. PADILLA & D. PADILLA

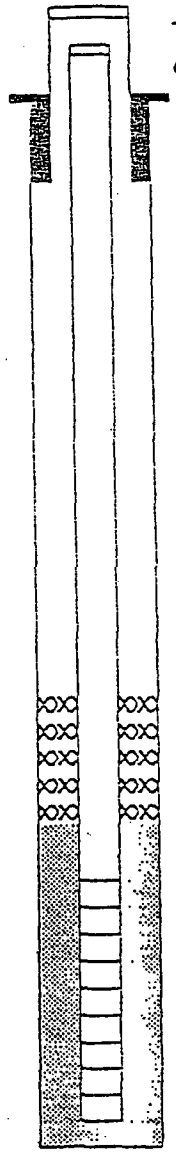
On-Site Geologist C. CULLICOTT
Personnel On-Site K. PADILLA AND D. PADILLA
Contractors On-Site Ø
Client Personnel On-Site Ø

e/Time Started 10/5/99 10am
ate/Time Completed 10/5/99 11:30am

METER 94967

Depths in Reference to Ground Surface

em	Material	Depth
Top of Protective Casing		
ottom of Protective Casing		
Top of Permanent Borehole Casing		
ottom of Permanent Borehole Casing		
Top of Concrete		
of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser	2"	+
Bottom of Well Riser	2"	14.5'
Top of Well Screen	2"	14.5'
Bottom of Well Screen	2"	29.5'
Top of Peltonite Seal	BENT.	10.5'
Bottom of Peltonite Seal	CHIPS	12.5'
Top of Gravel Pack	CO	12.5'
Bottom of Gravel Pack	SAND	29.5'
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		20.68'
Total Depth of Borehole		29.5'



Top of Protective Casing
Top of Riser
Ground Surface

OPEN - FILLED W/ CUTTINGS

Top of Seal 10.5'
Top of Gravel Pack 12.5'
Top of Screen 14.5'
Bottom of Screen 29.5'
Bottom of Borehole 29.5'

nts: HOLE WAS DRILLED TO 30', BUT SEDIMENT BACKFILLED AUGERS. WELL SET @ 29'/2" TO

Geologist Signature Cathy Cullicott

WELL DEVELOPED WITH 8 gallons removed 12:30 - 12:50 pm. Well is good producer water was very turbid the entire time (REDDISH BROWN SEDIMENT)

DTW after Bailing 20.79'

RECORD OF SUBSURFACE EXPLORATI

Borehole # 2
Well # MW3
Page 1 of 2

Philip Environmental Services Corp.
4000 Monroe Road
n, New Mexico 87401
.6-2262 FAX (505) 326-2388

Project Name EPFS GROUNDWATER
Project Number 628000.18 Phase 35
Project Location LINDRITH B #24

Elevation
Borehole Location T24N R3W S9N
GWL Depth 21.1
Logged By C. CULLICOTT
Drilled By K. PADILLA & D. PADILLA
Date/Time Started 10/5/99 11:30 am
Date/Time Completed 10/5/99 1:00 pm
METC - 94567

Well Logged By C. CULLICOTT
Personnel On-Site K. PADILLA & D. PADILLA
Contractors On-Site ø
Client Personnel On-Site ø

Drilling Method AUGER
Air Monitoring Method PID

Depth (Feet)		Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S	Drilling Conditions & Blow Counts
0				SURFACE - GRAVELLY SAND PAD MATERIAL						
				(1) 8" RECOVERY LOOSE, TAN, SILTY FINE SAND, CLEAN. BROWNISH RED SILT IN VERY BOTTOM OF SPLIT SPOON						
5	(1)	5-7'								(1) 4 BLOWS SS 0.0 ppm
10	(2)	10-11½		(2) 12" RECOVERY LOOSE BROWNISH RED POORLY SORTED SAND. SMALL % SILT @ TOP FEW INCHES OF SAMPLE						(2) 12 BLOWS SS 0.0 ppm
15	(3)	15-16½		(3) 12" RECOVERY UPPER 6" ~~BROWNISH RED~~ ~~REDDISH~~ MEDIUM SAND ~~BROWN~~ LOWER 6" BROWNISH RED POORLY SORTED SAND (FINE → COARSE.						(3) 16 BLOWS SS 0.0 PPM
20	(4)	20-21½								(4) 9 BLOWS SS ppm
25				(4) 6" RECOVERY SATURATED POORLY SORTED SAND, 75% COARSE. WT ~ 21'						
30										
35										
40										

Comments: SUNNY, BREEZY, WARM

Geologist Signature Cathy Cullicott

ONITORING WELL INSTALLATION RECORD

p Environmental Services Corp.
Road
New Mexico 87401
326-2262 FAX (505) 326-2388

Borehole # 2
Well # MW3
Page 1 of 2

Project Name EPFS GROUNDWATER

Project Number 628000 Phase 35
Project Location LINDRITH NM

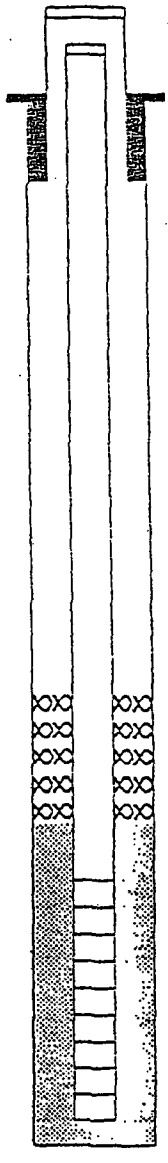
On-Site Geologist C. CULLICOTT
Personnel On-Site E. PADILLA JD. PADILLA
Contractors On-Site Ø
Client Personnel On-Site Ø

vation
ll Location T24N R3W S9N
WL Depth 21.1'
nstalled By E. PADILLA & D. PADILLA
te/Time Started 10/5/99 11:30am
Date/Time Completed 10/5/99 1pm

Meter 94967

Depths in Reference to Ground Surface

Item	Material	Depth
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser	2"	0
Bottom of Well Riser	2"	15
Top of Well Screen	2"	15
Bottom of Well Screen	2"	30
Top of Peltonite Seal	BENT.	11
Bottom of Peltonite Seal	CHIPS	13
Top of Gravel Pack	CO	13
Bottom of Gravel Pack	SAND	30
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		21.1'
Total Depth of Borehole		30'



Top of Protective Casing
Top of Riser
Ground Surface

Top of Seal 11
Top of Gravel Pack 13
Top of Screen 15
Bottom of Screen 30
Bottom of Borehole 30

ents: SOME SEDIMENT FLOW INTO AUGERS

DTW AFTER PURGING = 21.1' Geologist Signature Cathy Cullicott
WELL DEVELOPED W/ 8 gallons
removed 1:05-1:25 pm WELL IS EXCELLENT PRODUCER
WATER RAISED THROUGHOUT BAILING. BROWN SED.

Lindrith B #24 -

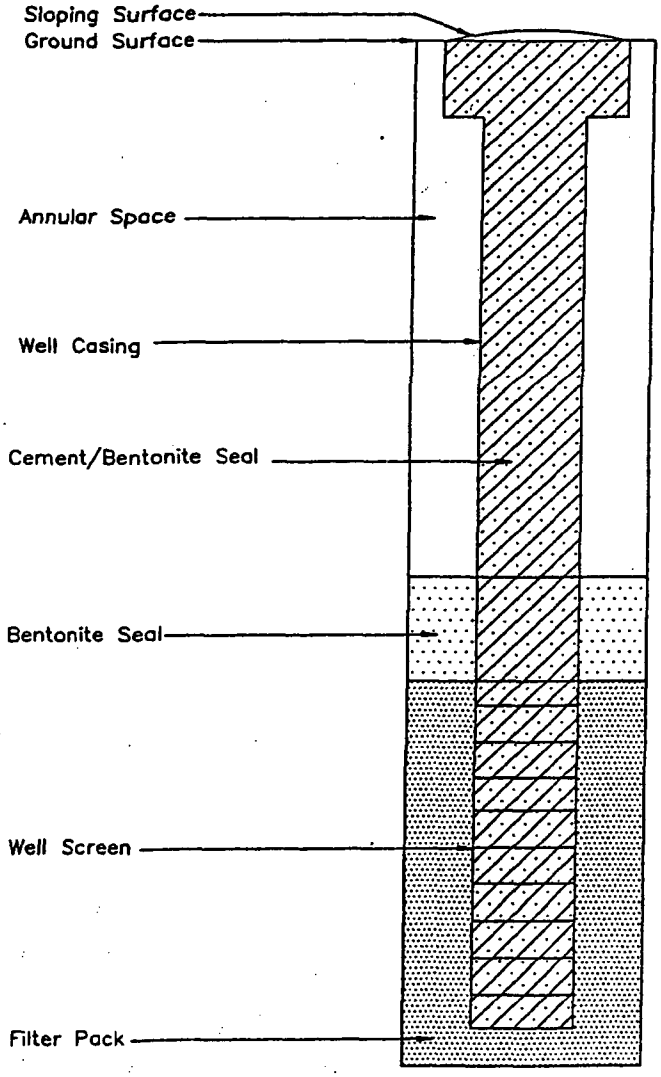
MONITOR WELL ABANDONMENT FORM

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

Project Name: EPFS Completions
Project Number/Phase: 97057-049
Driller: Kelly Padilla
Date/Time Started: _____
Date/Time Completed: _____

Well #: #2 AND #3
Well Location: Lindrith B #24
Site Location: Lindrith

WELL DIAGRAM



Ground Surface _____
Top of Grout _____
Top of Riser _____
Water Level _____

Bottom of Grout _____
Bottom of Well (TD) _____

Comments: MW-2 and MW-3 Put Well Protector and Cement Pad

Driller's Signature: Kelly Padilla

PINNACLE LABORATORIES

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

Pinnacle Lab ID number **910073**
October 28, 1999

EL PASO FIELD SERVICES
770 WEST NAVAJO
FARMINGTON, NM 87401

Project Name PIT MONITOR WELLS
Project Number (none)

Attention: JOHN LAMBDIN

On 10/21/99 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.

Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure

Reviewed & Accepted
J. Lambdin 11/2/99

PINNACLE LABORATORIES

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

CLIENT	: EL PASO FIELD SERVICES	PINNACLE ID	: 910073
PROJECT #	: (none)	DATE RECEIVED	: 10/21/99
PROJECT NAME	: PIT MONITOR WELLS	REPORT DATE	: 10/28/99

PIN I.D. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	990416	AQUEOUS	10/15/99
02	990417	AQUEOUS	10/15/99
03	990418	AQUEOUS	10/15/99
04	990419	AQUEOUS	10/15/99
05	990420	AQUEOUS	10/15/99
06	990421	AQUEOUS	10/15/99
07	990422	AQUEOUS	10/15/99
08	990423	AQUEOUS	10/15/99
09	TRIP BLANK	AQUEOUS	10/15/99
10	990424	AQUEOUS	10/19/99
11	990425	AQUEOUS	10/19/99

American Environmental Network (NM), Inc.

CHAIN OF CUSTODY

DATE: 10-20-99 PAGE: 1 OF 1

AEN(NM) Accession #: 9916733

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:	JOHN LAMBDIN
COMPANY:	EL PASO FIELD SERVICES
ADDRESS:	720 WEST NAVAJO
	FARMINGTON NM 87401
PHONE:	(505) 599-2144
FAX:	(505) 599-2261
BILL TO:	SAME AS ABOVE
COMPANY:	
ADDRESS:	

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)	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)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310)	General Chemistry:			Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:		NUMBER OF CONTAINERS
990416	10-15-99	0955	WATER						X																						2
990417	10-15-99	1025	WATER						X																						2
990418	10-15-99	1125	WATER						X																						2
990419	10-15-99	1150	WATER						X																						2
990420	10-15-99	1250	WATER						X																						2
990421	10-15-99	1335	WATER						X																						2
990422	10-15-99	1450	WATER						X																						2
990423	10-15-99	1505	WATER						X																						2
TRIP BLANK	10-15-99		WATER						X																						1

PROJECT INFORMATION

PROJ. NO.:

PROJ. NAME: PIT MONITOR WELLS

P.O. NO.:

SHIPPED VIA: FED-X

SAMPLE RECEIPT

NO. CONTAINERS	17
CUSTODY SEALS	(Y) N/A
RECEIVED INTACT	Y (N)
BLUE ICE (ICE)	(Y) N

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

RELINQUISHED BY: 1

Signature: Dennis Bird Time: 1258

Printed Name: DENNIS BIRD Date: 10-20-99

Company: EL PASO FIELD SERVICE

RECEIVED BY: 1

Signature: Time:

Printed Name: Date:

Company:

RELINQUISHED BY: 2

Signature: Time:

Printed Name: Date:

Company:

RECEIVED BY: (LAB) 2

Signature: Time: 1625

Printed Name: Date: 10/20/

American Environmental Network (NM), Inc.

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 : EL PASO FIELD SERVICES
PROJECT # : (none)
PROJECT NAME : PIT MONITOR WELLS

PINNACLE I.D.: 910073

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	990416	AQUEOUS	10/15/99	NA	10/25/99	1
02	990417	AQUEOUS	10/15/99	NA	10/25/99	1
03	990418	AQUEOUS	10/15/99	NA	10/25/99	1

PARAMETER	DET. LIMIT	UNITS	990416	990417	990418
BENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOLUENE	0.5	**UG/L**	**2.1**	**0.9**	< 0.5
ETHYLBENZENE	0.5	**UG/L**	**5.5**	< 0.5	< 0.5
TOTAL XYLENES	0.5	**UG/L**	**2.8**	**3.1**	< 0.5

SURROGATE:				
BROMOFLUOROBENZENE (%)		102	96	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

TEST : EPA 8021 MODIFIED
CLIENT : EL PASO FIELD SERVICES
PROJECT # : (none)
PROJECT NAME : PIT MONITOR WELLS

PINNACLE I.D.: 910073

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	990419	AQUEOUS	10/15/99	NA	10/25/99	1
05	990420	AQUEOUS	10/15/99	NA	10/25/99	1
06	990421	AQUEOUS	10/15/99	NA	10/25/99	1

PARAMETER	DET. LIMIT	UNITS	990419	990420	990421
BENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5	< 0.5	< 0.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			103	104	101
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

TEST : EPA 8021 MODIFIED
CLIENT : EL PASO FIELD SERVICES
PROJECT # : (none)
PROJECT NAME : PIT MONITOR WELLS

PINNACLE I.D.: 910073

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
07	990422	AQUEOUS	10/15/99	NA	10/25/99	1
08	990423	AQUEOUS	10/15/99	NA	10/25/99	1
09	TRIP BLANK	AQUEOUS	10/15/99	NA	10/25/99	1

PARAMETER	DET. LIMIT	UNITS	990422	990423	TRIP BLANK
BENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5	< 0.5	< 0.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			102	100	97
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

PHILIP ENVIRONMENTAL

Well Number MW-2

☐ Development ☐ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Page 1 of 1

Project Name EPFS GW Inv Project Manager Cecil Irby Project No. 62800018

Client Company EPFS Phase.Task No. 035

Site Name Lindrith B 24 Site Address Meter 94967

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) 31
Initial Depth to Water (feet) 21.45
Height of Water Column in Well (feet) 9.55
Diameter (inches): Well 2 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	.22	1.7	5.14 +
Gravel Pack			
Drilling Fluids			
Total			

Instruments

	Serial No. (if applicable)
☒ pH Meter	
☐ DO Monitor	
☒ Conductivity Meter	
☒ Temperature Meter	
☐ Other	

Water Disposal

NA - No Known Contamination

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
10-19-99									1.7	1.7	64	7.1	1634	NA	
"									1.7	3.4	57.2	7.3	1420		
"									1.7	5.1	56.2	7.2	1549		
"									1.7	6.8	54	7.3	1593		
"									1.7	8.5	53.5	7.3	1590		

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

Comments Bailed 10 gallons after above stabilization & prior to sampling
Sample ID CF-10

Developer's Signature(s) Cecil Irby Date 10-19-99 Reviewer Date

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990425
MTR CODE | SITE NAME:	94967	Lindrith B #24
SAMPLE DATE | TIME (Hrs):	10/19/1999	1600
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. | ANAL.:	N/A	10/25/1999
TYPE | DESCRIPTION:	MW-3	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<0.5	PPB				
TOLUENE	<0.5	PPB				
ETHYL BENZENE	<0.5	PPB				
TOTAL XYLENES	<0.5	PPB				
TOTAL BTEX	<2.0	PPB				

--BTEX is by EPA Method 8021 --

The Surrogate Recovery was at 101 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:
Sample Analyzed by Pinnacle Laboratories, Albuquerque, NM.

Approved By: John Saenz Date: 11/2/99

PHILIP ENVIRONMENTAL

Well Number MW-3

☐ Development ☐ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Page 1 of 1

Project Name EPFS GW Inv Project Manager Cecil Irby Project No. 62800018

Client Company EPFS Phase.Task No. 035

Site Name Lindrith B 24 Site Address Meter 94967

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) 29.9
Initial Depth to Water (feet) 21.2
Height of Water Column in Well (feet) 8.7
Diameter (inches): Well 2 Gravel Pack ____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	.19	1.425	4.275
Gravel Pack			
Drilling Fluids			
Total			

Instruments

	Serial No. (if applicable)
☒ pH Meter	
☐ DO Monitor	
☒ Conductivity Meter	
☒ Temperature Meter	
☐ Other _____	

Water Disposal

_____

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
10-19											60.7	7.2	1635		
											56.4	7.1	1590		
											56.9	7.3	1757		
											55.0	7.3	1994		
											54.0	7.5	1983		
											54.4	7.6	2100		
											53.5	7.5	2120		

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

Comments Sample ID CI-11

Developer's Signature(s) Cecil Irby Date 10-19-95 Reviewer _____ Date _____

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990424
MTR CODE | SITE NAME:	94967	Lindrith B #24
SAMPLE DATE | TIME (Hrs):	10/19/1999	1552
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. | ANAL.:	N/A	10/25/1999
TYPE | DESCRIPTION:	MW-2	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<0.5	PPB				
TOLUENE	<0.5	PPB				
ETHYL BENZENE	<0.5	PPB				
TOTAL XYLENES	<0.5	PPB				
TOTAL BTEX	<2.0	PPB				

–BTEX is by EPA Method 8021 –

The Surrogate Recovery was at 103 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:
Sample Analyzed by Pinnacle Laboratories, Albuquerque, NM.

Approved By: John Loudermilk Date: 11/2/99

American Environmental Network (Arizona), Inc.

CHAIN OF CUSTODY

DATE 10-20-99 PAGE 1 OF 1

AEN LAB I.D. 91073

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

REPORT: Attn. to: JOHN CAMBOIN

COMPANY: EL PASO FIELD SERVICES
ADDRESS: 770 WEST NAVAJO
FARMINGTON NM 87401
PHONE: (505) 599-2144
FAX: (505) 599-2261

BILL TO: SAMEAS ABOVE
COMPANY:
ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	COMPOSITE OR GRAB
990484	10-1999	1552	WATER	-10	
990485	10-1999	1600	WATER	-11	

ANALYSIS REQUEST

Petroleum Hydrocarbons (418.1)	(MOD.8015) Fuel Fingerprint	(M8015) Gas	(BLS-191) Diesel	BTXE/MTBE (8020/602)	BTEX 1228	Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	Volatiles 502.2 (SDWA/UST)	Pesticides/PCB (608/8080/505/508)	Herbicides (615/8150/515)	Semi-Volatiles GC/MS (Tics/No Tics)	Volatile Organics GC/MS (624/8240/8260)	Polynuclear Aromatics (610/8310)	RCRA Metals by Total Digestion	RCRA Metals by TCLP (1311)	NUMBER OF CONTAINERS
				X	X											2
				X	X											2

PROJECT INFORMATION

PROJ. NO.:
PROJ. NAME: PIT MONITOR WELLS
P.O. NO.:
SHIPPED VIA: FED-X

☐ UST (72 hr. ext.) ☐ NPDES ☐ SDWA ☐ RCRA ☐ OTHER

SAMPLE RECEIPT

NO. CONTAINERS	4
CUSTODY SEALS	Y / N / NA
RECEIVED INTACT	Y / N / NA
RECEIVED ICE	Y / N / NA

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒ 2 WEEKS

Comments:

3.6

SAMPLED & RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Dennis Bird Time: 1259	Signature: Time:	Signature: Time:
Printed Name: DENNIS BIRD Date: 10-20-99	Printed Name: Date:	Printed Name: Date:
Company: EL PASO FIELD SERVICE Phone:	Company:	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: (LAB) 3.
Signature: Time:	Signature: Time:	Signature: Time: 1625
Printed Name: Date:	Printed Name: Date:	Printed Name: Date: 10/21
Company:	Company:	

American Environmental Network

PHILIP ENVIRONMENTAL

Chain of Custody Record

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

COC Serial No. C 2394

Project Name EPFS GW Inv.

Project Number 628000 C 8 Phase . Task 035.

Samplers C Irby, M Hare

Laboratory Name

Location ~~Lindrith~~ CI

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: BTEX (8021)	Comments
CI-10	10-14-99	1552	Water	2	✓	Lindrith B-24 - MW-2
CI-11	10-12-99	1600	Water	2	✓	Lindrith B-24 MW-3

Relinquished by:

Signature	Date	Time
Carl Irby	10-19-99	5:45
Locked Refrig CI	10-20-99	10:08

Received By:

Signature	Date	Time
Locked Refrigerator	10-19-99	5:45 CT
Dennis Bird	10-20-99	10:10

Samples Iced: ☐ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☐ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Carrier: Airbill No.

Shipping and Lab Notes:

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 : EL PASO FIELD SERVICES
PROJECT # : (none)
PROJECT NAME : PIT MONITOR WELLS

PINNACLE I.D.: 910073

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
10	990424	AQUEOUS	10/19/99	NA	10/25/99	1
11	990425	AQUEOUS	10/19/99	NA	10/25/99	1

PARAMETER	DET. LIMIT	UNITS	990424	990425
BENZENE	0.5	UG/L	< 0.5	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5	< 0.5
SURROGATE:				
BROMOFLUOROBENZENE (%)			103	101
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.	: 910073
BLANK I. D.	: 102599	DATE EXTRACTED	: NA
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 10/25/99
PROJECT #	: (none)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: PIT MONITOR WELLS		

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)	

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		
MSMSD #	: 910073-03	PINNACLE I.D.	: 910073
CLIENT	: EL PASO FIELD SERVICES	DATE EXTRACTED	: NA
PROJECT #	: (none)	DATE ANALYZED	: 10/25/99
PROJECT NAME	: PIT MONITOR WELLS	SAMPLE MATRIX	: AQUEOUS
		UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	19.7	99	19.8	99	1	(80 - 120)	20
TOLUENE	<0.5	20.0	20.7	104	20.3	102	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.0	105	20.8	104	1	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	64.7	108	64.0	107	1	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

APPENDIX F

LABORATORY REPORTS
(2004)

DATA VERIFICATION WORKSHEET

Analytical Method/Analytes: SW-846 8021B (BTEX) **Sample Collection Date(s):** 11/29/04

Laboratory: Accutest **MWH Job Number:** EPC-SJRB (Groundwater)

Batch Identification: T8875 **Matrix:** Water

MS/MSD Parent(s)[a]: None **Field Replicate Parent(s):** None

Verification Complete: [signature] 12-15-04
(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
None	Trip Blank	291104TB01	T8875-01	N		
None	Lindrith	MW-2	T8875-02	N		
None	Lindrith	MW-3	T8875-03	N		
None	Lindrith	MW-1	T8875-04	Y		

DATA VERIFICATION WORKSHEET
(Page 2 of 2)

Analytical Method: SW-846 8021B (BTEX) **MWH Job Number:** EPC-SJRB (Groundwater)

Laboratory: Accutest **Batch Identification:** T8875

Verification Criteria								
Sample ID	**291104TB 01**	**Lindrith MW-2**	**Lindrith MW-3**	**Lindrith MW-1**				
Lab ID	**T8875-01**	**T8875-02**	**T8875-03**	**T8875-04**				
Holding Time	A	A	A	A				
Analyte List	A	A	A	A				
Reporting Limits	A	A	A	A				
Surrogate Spike Recovery	A	A	A	A				
Trip Blank	A	A	A	A				
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A				
Field Duplicate/Replicate	N/A	N/A	N/A	N/A				
Initial Calibration	N	N	N	N				
Initial Calibration Verification (ICV)	N	N	N	N				
Continuing Calibration Verification (CCV)	N	N	N	N				
Method Blank	A	A	A	A				
Laboratory Control Sample (LCS)	A	A	A	A				
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N				
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	N/A	N/A				
Retention Time Window	N	N	N	N				
Injection Time(s)	N	N	N	N				
Hardcopy vs. Chain-of-Custody	A	A	A	A				
EDD vs. Hardcopy	N	N	N	N				
EDD vs. Chain of Custody	N	N	N	N				

(a) List QC batch identification if different than Batch ID
A indicates verification criteria were met
A/L indicates verification criteria met based upon Laboratory's QC Summary Form
X indicates verification criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

Gulf Coast
ACCUTEST. Laboratories

12/13/04

Technical Report for

Montgomery Watson

EPFS San Juan Basin Groundwater Site

D-MWH-04-01-03-MSG-01

Accutest Job Number: T8875

Sampling Date: 11/29/04

Report to:

Montgomery Watson

brian.buttars@us.mwhglobal.com

ATTN: Brian Buttars

Total number of pages in report: 17

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino
Laboratory Manager

Table of Contents

Sections: 1 2 3 4

-1-

Accutest Laboratories

Sample Summary

Montgomery Watson

Job No: T8875

EPFS San Juan Basin Groundwater Site
Project No: D-MWH-04-01-03-MSG-01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T8875-1	11/29/04	05:00	MN	11/30/04	AQ	Trip Blank Water	291104TB01
T8875-2	11/29/04	09:25	MN	11/30/04	AQ	Ground Water	LINDRITH MW-2
T8875-3	11/29/04	10:00	MN	11/30/04	AQ	Ground Water	LINDRITH MW-3
T8875-4	11/29/04	10:50	MN	11/30/04	AQ	Ground Water	LINDRITH MW-1

Accutest Laboratories

Report of Analysis

Client Sample ID:	291104TB01		
Lab Sample ID:	T8875-1	Date Sampled:	11/29/04
Matrix:	AQ - Trip Blank Water	Date Received:	11/30/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	EPFS San Juan Basin Groundwater Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK03220.D	1	12/09/04	JH	n/a	n/a	GKK477
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	105%		71-127%
98-08-8	aaa-Trifluorotoluene	115%		66-136%

(a) CCV failed high, sample is non-detect.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	LINDRITH MW-2		
Lab Sample ID:	T8875-2	Date Sampled:	11/29/04
Matrix:	AQ - Ground Water	Date Received:	11/30/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	EPFS San Juan Basin Groundwater Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK03221.D	1	12/09/04	JH	n/a	n/a	GKK477
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	106%		71-127%
98-08-8	aaa-Trifluorotoluene	118%		66-136%

(a) CCV failed high, sample is non-detect.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	LINDRITH MW-3		
Lab Sample ID:	T8875-3	Date Sampled:	11/29/04
Matrix:	AQ - Ground Water	Date Received:	11/30/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	EPFS San Juan Basin Groundwater Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK03222.D	1	12/09/04	JH	n/a	n/a	GKK477
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	106%		71-127%
98-08-8	aaa-Trifluorotoluene	119%		66-136%

(a) CCV failed high, sample is non-detect.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	LINDRITH MW-1		
Lab Sample ID:	T8875-4	Date Sampled:	11/29/04
Matrix:	AQ - Ground Water	Date Received:	11/30/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	EPFS San Juan Basin Groundwater Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK03274.D	1	12/10/04	JH	n/a	n/a	GKK479
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	5.7	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	10.0	2.0	0.80	ug/l	
95-47-6	o-Xylene	0.83	1.0	0.40	ug/l	J
	m,p-Xylene	9.2	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		71-127%
98-08-8	aaa-Trifluorotoluene	101%		66-136%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY 291104TMW01

ACCUTEST Laboratories

10165 Harwin Drive, Ste. 150, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking # 8493 0450 1305 | Bottle Order Control # | Accutest Quote # | Accutest Job # T8875

Client / Reporting Information

Company Name: El Paso
Address: 2 North Nevada
City: Colorado Springs State: CO Zip: 80903
Project Contact: Scott Pope E-mail:
Phone #: 719 520 4433
Fax #: 719 520 4716
Sampler's Name: M Nee

Project Information

Project Name: Ground Water
Street:
City: State:
Project #:
Client Purchase Order #:

Requested Analysis

BTEX

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; LAB USE ONLY

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles	BTEX
1	291104TB01		11/29/04	0500	MW	WG	2	2	X
2	Lindseth MW-2		11/29/04	0925	MW	WG	2	2	X
3	Lindseth MW-3		11/29/04	1023	MW	WG	2	2	X
4	Lindseth MW-1		11/30/04	1050	MW	WG	2	2	X

Turnaround Time (Business Days)

- [X] 10 Day STANDARD — Approved By: / Date:
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Tier 1
- [ ] TRRP13
- [ ] EDD Format

Commercial "A" = Results Only

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date Time:	Received by:	Relinquished by	Date Time:	Received by:
1		11/29/04 1430		2	11/30	
3				4		
5				Custody Seal #	Preserved where applicable	On Ice / Cooler Temp
				Yes	A	9 / 3

3.1 3

T8875: Chain of Custody
Page 1 of 2

ACCUTEST. SAMPLE RECEIPT LOG

JOB #: T8875 DATE/TIME RECEIVED: 11/30

CLIENT: El PASO INITIALS:

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see variance for explanation):

1. Y N Sample received in undamaged condition.
2. Y N Samples received within temp. range.
3. Y N Sample received with proper pH.
4. Y N Sample received in proper containers.
5. Y N Sample volume sufficient for analysis.
6. Y N Sample received with chain of custody.
7. Y N Chain of Custody matches sample IDs and analysis on containers.
8. Y N Custody seal received intact and tamper evident on cooler.
9. Y N Custody seal received intact and tamper evident on bottles.

SAMPLE or FIELD ID	BOTTLE #	DATE SAMPLED	MATRIX	VOLUME	LOCATION	PRESERV.	PH
1	1-2	11/29	W	VOA	VLab	1,2,3,4,5,6	U, <2, >12, NA
2						1,2,3,4,5,6	U, <2, >12, NA
3						1,2,3,4,5,6	U, <2, >12, NA
4						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA

LOCATION: WI: Walk-In VR: Volatile Refrig. SUB: Subcontract EF: Encore Freezer

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: Other

Comments:

pH of waters checked excluding volatiles

pH of soils N/A

Delivery method: Courier: ______ Tracking#: ______

COOLER TEMP: 3° COOLER TEMP: ______ COOLER TEMP: ______ COOLER TEMP: ______

Method of sample disposal: (circle one) Accutest disposal Hold Return to Client

Form: SM012, Rev. 6/4/04, QAO

3.1 3

T8875: Chain of Custody

Page 2 of 2

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T8875
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK477-MB	KK03218.D	1	12/09/04	JH	n/a	n/a	GKK477

The QC reported here applies to the following samples: Method: SW846 8021B

T8875-1, T8875-2, T8875-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	106%	71-127%
98-08-8	aaa-Trifluorotoluene	116%	66-136%

Method Blank Summary

Job Number: T8875
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK479-MB	KK03268.D	1	12/10/04	JH	n/a	n/a	GKK479

The QC reported here applies to the following samples: Method: SW846 8021B

T8875-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	97%	71-127%
98-08-8	aaa-Trifluorotoluene	100%	66-136%

Blank Spike Summary

Job Number: T8875
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK477-BS	KK03219.D	1	12/09/04	JH	n/a	n/a	GKK477

The QC reported here applies to the following samples: Method: SW846 8021B

T8875-1, T8875-2, T8875-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.1	96	76-128
100-41-4	Ethylbenzene	20	18.2	91	79-129
108-88-3	Toluene	20	18.8	94	77-126
1330-20-7	Xylenes (total)	60	55.5	93	79-126
95-47-6	o-Xylene	20	18.8	94	78-125
	m,p-Xylene	40	36.6	92	79-127

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	112%	71-127%
98-08-8	aaa-Trifluorotoluene	116%	66-136%

Blank Spike Summary

Job Number: T8875
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK479-BS [a]	KK03269.D	1	12/10/04	JH	n/a	n/a	GKK479

The QC reported here applies to the following samples: Method: SW846 8021B

T8875-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.3	97	76-128
100-41-4	Ethylbenzene	20	19.7	99	79-129
108-88-3	Toluene	20	20.1	101	77-126
1330-20-7	Xylenes (total)	60	60.3	101	79-126
95-47-6	o-Xylene	20	20.3	102	78-125
	m,p-Xylene	40	40.0	100	79-127

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	110%	71-127%
98-08-8	aaa-Trifluorotoluene	102%	66-136%

(a) %Recovery adjusted for double spike.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T8875
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T8894-9MS	KK03226.D	5	12/09/04	JH	n/a	n/a	GKK477
T8894-9MSD	KK03227.D	5	12/09/04	JH	n/a	n/a	GKK477
T8894-9	KK03225.D	5	12/09/04	JH	n/a	n/a	GKK477

The QC reported here applies to the following samples: Method: SW846 8021B

T8875-1, T8875-2, T8875-3

CAS No.	Compound	T8894-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	537	E	100	624	87	605	68* [a]	3	70-134/21
100-41-4	Ethylbenzene	1080	E	100	1140	60* [a]	1100	20* [a]	4	73-132/15
108-88-3	Toluene	124		100	217	93	209	85	4	66-137/22
1330-20-7	Xylenes (total)	560		300	749	63*	719	53*	4	69-130/19
95-47-6	o-Xylene	179		100	251	72	242	63*	4	66-131/20
	m,p-Xylene	380		200	498	59*	477	49*	4	68-132/19

CAS No.	Surrogate Recoveries	MS	MSD	T8894-9	Limits
460-00-4	4-Bromofluorobenzene	128%* [b]	125%	114%	71-127%
98-08-8	aaa-Trifluorotoluene	155%* [b]	152%* [b]	131%	66-136%

(a) Outside control limits due to high level in sample relative to spike amount.
(b) Outside control limits due to matrix interference. Confirmed by reanalysis.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T8875
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T8904-2MS	KK03284.D	1	12/11/04	JH	n/a	n/a	GKK479
T8904-2MSD	KK03285.D	1	12/11/04	JH	n/a	n/a	GKK479
T8904-2	KK03283.D	1	12/11/04	JH	n/a	n/a	GKK479

The QC reported here applies to the following samples: Method: SW846 8021B

T8875-4

CAS No.	Compound	T8904-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	20.5	103	21.6	108	5	70-134/21
100-41-4	Ethylbenzene	ND		20	20.4	102	21.5	108	5	73-132/15
108-88-3	Toluene	ND		20	20.8	104	21.8	109	5	66-137/22
1330-20-7	Xylenes (total)	ND		60	61.9	103	65.1	109	5	69-130/19
95-47-6	o-Xylene	ND		20	20.6	103	21.6	108	5	66-131/20
	m,p-Xylene	ND		40	41.3	103	43.5	109	5	68-132/19

CAS No.	Surrogate Recoveries	MS	MSD	T8904-2	Limits
460-00-4	4-Bromofluorobenzene	99%	98%	89%	71-127%
98-08-8	aaa-Trifluorotoluene	99%	98%	100%	66-136%

DATA VERIFICATION WORKSHEET

Analytical Method/Analytes: SW-846 8021B (BTEX) **Sample Collection Date(s):** 08/19/04

Laboratory: Accutest **MWH Job Number:** EPC-SJRB (Groundwater)

Batch Identification: T8063 **Matrix:** Water

MS/MSD Parent(s)[a]: None **Field Replicate Parent(s):** None

Verification Complete: Brian Buttars 9-6-04 (Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
1	Lindreth	MW-1	T8063-01	Y		
None	Trip Blank	190804TB01	T8063-02	N		

DATA VERIFICATION WORKSHEET

Analytical Method: SW-846 8021B (BTEX) **MWH Job Number:** EPC-SJRB (Groundwater)

Laboratory: Accutest **Batch Identification:** T8063

Verification Criteria								
Sample ID	**Lindreth MW-1**	**190804TB 01**						
Lab ID	**T8063-01**	**T8063-02**						
Holding Time	A	A						
Analyte List	A	A						
Reporting Limits	A	A						
Surrogate Spike Recovery	A[1]	A						
Trip Blank	A	A						
Equipment Rinseate Blanks	N/A	N/A						
Field Duplicate/Replicate	N/A	N/A						
Initial Calibration	N	N						
Initial Calibration Verification (ICV)	N	N						
Continuing Calibration Verification (CCV)	N	N						
Method Blank	A	A						
Laboratory Control Sample (LCS)	A	A						
Laboratory Control Sample Duplicate (LCSD)	N	N						
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A						
Retention Time Window	N	N						
Injection Time(s)	N	N						
Hardcopy vs. Chain-of-Custody	A	A						
EDD vs. Hardcopy	N	N						
EDD vs. Chain of Custody	N	N						

(a) List QC batch identification if different than Batch ID
A indicates verification criteria were met
A/L indicates verification criteria met based upon Laboratory's QC Summary Form
X indicates verification criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

1) Surrogate percent recovery outside acceptance criteria for aaa-Trifluorobenzene @ 272% (66-136). Only one surrogate outside acceptance criteria, no data qualified.

Gulf Coast
ACCUTEST. Laboratories

08/31/04

Technical Report for

Montgomery Watson

EPFS San Juan Basin Groundwater Site

D-MWH-04-01-03-MSG-01

Accutest Job Number: T8063

Sampling Date: 08/19/04

Report to:

Montgomery Watson

brian.buttars@us.mwhglobal.com

ATTN: Brian Buttars

Total number of pages in report: 12

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino
Laboratory Manager

Sections: 1 2 3 4

Table of Contents

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Accutest Laboratories

Sample Summary

Montgomery Watson

Job No: T8063

EPFS San Juan Basin Groundwater Site
Project No: D-MWH-04-01-03-MSG-01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T8063-1	08/19/04	08:45	MN	08/20/04	AQ	Water	LINDRITH MW-1
T8063-2	08/19/04	07:00	MN	08/20/04	AQ	Water	190804TB01

Accutest Laboratories

Report of Analysis

Client Sample ID:	LINDRITH MW-1		
Lab Sample ID:	T8063-1	Date Sampled:	08/19/04
Matrix:	AQ - Water	Date Received:	08/20/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	EPFS San Juan Basin Groundwater Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK01544.D	1	08/30/04	BC	n/a	n/a	GKK422
Run #2	KK01545.D	10	08/30/04	BC	n/a	n/a	GKK422

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	14.8	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	45.2	3.0	1.0	ug/l	
95-47-6	o-Xylene	4.1	1.0	0.50	ug/l	
	m,p-Xylene	41.1	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	119%	116%	71-127%
98-08-8	aaa-Trifluorotoluene	272% [a]	136%	66-136%

(a) Outside control limits due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	190804TB01		
Lab Sample ID:	T8063-2	Date Sampled:	08/19/04
Matrix:	AQ - Water	Date Received:	08/20/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	EPFS San Juan Basin Groundwater Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK01542.D	1	08/30/04	BC	n/a	n/a	GKK422
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	0.50	ug/l	
	m,p-Xylene	ND	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	105%		71-127%
98-08-8	aaa-Trifluorotoluene	106%		66-136%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY 190804-MN01

ACCUTEST Laboratories

10165 Harwin Drive, Ste. 150, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking #: 8421627916559
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: T8063

Client / Reporting Information

Company Name: El Paso
Address: 2 North Nevada
City: Colorado Springs State: CO Zip: 80903
Project Contact: Scott Pope E-mail:
Phone #: 719 520 4433
Sampler's Name: M Nee

Project Information

Project Name: Groundwater
Street:
City: State:
Project #:
Fax #: 719 520 4716
Client Purchase Order #:

Requested Analysis: BTEX

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	BTEX	LAB USE ONLY
1	Lindrith MW-1		81904	0845	mn	WG	2	✓								X	
2	19080471801		81904	0700	mn	WQ	1	✓								X	

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Turnaround Time (Business Days)

- ☒ 10 Day STANDARD
- ☐ 5 Day RUSH
- ☐ 3 Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY
- ☐ Other

Approved By: / Date:

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- ☐ Commercial "A"
- ☐ Commercial "B"
- ☐ Reduced Tier 1
- ☐ Full Tier 1
- ☐ TRRP13
- ☐ EDD Format

Commercial "A" = Results Only

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received by:	Relinquished by:	Date Time:	Received by:
1 [signature] 8.19.04	1600	1 [signature] 8/20/04 0900	2		2
Relinquished by: 3	Date Time:	Received by: 3	Relinquished by: 4	Date Time:	Received by: 4
Relinquished by: 5	Date Time:	Received by: 5	Custody Seal #	Preserved where applicable ☐	On Ice: X Cooler Temp. 6°C

3.1

3

T8063: Chain of Custody
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ACCUTEST.

SAMPLE RECEIPT LOG

JOB #: T8063 DATE/TIME RECEIVED: 8/24/4 0900

CLIENT: El Paso INITIALS: PM

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see variance for explanation):

1. (Y) N Sample received in undamaged condition.
2. (Y) N Samples received within temp. range.
3. (Y) N Sample received with proper pH.
4. (Y) N Sample received in proper containers.
5. (Y) N Sample volume sufficient for analysis.
6. (Y) N Sample received with chain of custody.
7. (Y) N Chain of Custody matches sample IDs and analysis on containers.
8. (Y) N Custody seal received intact and tamper evident on cooler.
9. (Y) N Custody seal received intact and tamper evident on bottles.

SAMPLE or FIELD ID	BOTTLE #	DATE SAMPLED	MATRIX	VOLUME	LOCATION	PRESERV.	PH
1	1-2	8/19/4	AQ	2x VOA	VREF	1,(2),3,4,5,6	U,(<2),>12, NA
2	1-2	√	√	√	√	1,(2),3,4,5,6	U,(<2),>12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
		PM 8/24/4				1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA

LOCATION: WI: Walk-In VR: Volatile Refrig. SUB: Subcontract EF: Encore Freezer

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: Other

Comments:

pH of waters checked excluding volatiles

pH of soils N/A

Delivery method: Courier: Fedex

Tracking#: 8424 5277 6499

COOLER TEMP: 6°C COOLER TEMP:

COOLER TEMP: COOLER TEMP:

Method of sample disposal: (circle one) Accutest disposal Hold Return to Client

Form: SM012, Rev. 6/4/04, QAO

T8063: Chain of Custody
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GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Sections: 1 2 3 4

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Sample Summary

Montgomery Watson

Job No: T6937

EPFS San Juan Basin Groundwater Site
Project No: D-MWH-04-01-03-MSG-01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T6937-1	02/23/04	11:25	MN	02/27/04	AQ	Ground Water	LINDERITH B24 MW-1
T6937-2	02/23/04	07:00	MN	02/27/04	AQ	Trip Blank Water	230204TB01

Accutest Laboratories

Report of Analysis

Client Sample ID:	LINDERITH B24 MW-1		
Lab Sample ID:	T6937-1	Date Sampled:	02/23/04
Matrix:	AQ - Ground Water	Date Received:	02/27/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	EPFS San Juan Basin Groundwater Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE008971.D	1	03/07/04	JH	n/a	n/a	GEE483
Run #2	EE008997.D	10	03/08/04	JH	n/a	n/a	GEE483

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND <10	1.0	0.50	ug/l	
108-88-3	Toluene	ND <10	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	23.9 21.7	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	81.5 74.1	3.0	1.0	ug/l	
95-47-6	o-Xylene	7.2	1.0	0.50	ug/l	
	m,p-Xylene	74.4	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	36%	91%	64-121%
98-08-8	aaa-Trifluorotoluene	64%	78%	71-121%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	230204TB01		
Lab Sample ID:	T6937-2	Date Sampled:	02/23/04
Matrix:	AQ - Trip Blank Water	Date Received:	02/27/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	EPFS San Juan Basin Groundwater Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE008972.D	1	03/07/04	JH	n/a	n/a	GEE483
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	0.50	ug/l	
	m,p-Xylene	ND	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	16% [a]		64-121%
98-08-8	aaa-Trifluorotoluene	15% [a]		71-121%

(a) Outside of control limits, insufficient sample for reanalysis.

(b) Spiked incorrectly

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Method Blank Summary

Job Number: T8063
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK422-MB	KK01530.D	1	08/30/04	BC	n/a	n/a	GKK422

The QC reported here applies to the following samples: Method: SW846 8021B

T8063-1, T8063-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	0.50	ug/l	
	m,p-Xylene	ND	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	106%	71-127%
98-08-8	aaa-Trifluorotoluene	106%	66-136%

Blank Spike Summary

Job Number: T8063
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK422-BS	KK01529.D	1	08/30/04	BC	n/a	n/a	GKK422

The QC reported here applies to the following samples: Method: SW846 8021B

T8063-1, T8063-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.5	98	76-128
100-41-4	Ethylbenzene	20	20.6	103	79-129
108-88-3	Toluene	20	20.5	103	77-126
1330-20-7	Xylenes (total)	60	62.2	104	79-126
95-47-6	o-Xylene	20	21.0	105	78-125
	m,p-Xylene	40	41.2	103	79-127

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	134%* [a]	71-127%
98-08-8	aaa-Trifluorotoluene	124%	66-136%

(a) Outside of control limits biased high.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T8063
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T8044-1MS	KK01536.D	10	08/30/04	BC	n/a	n/a	GKK422
T8044-1MSD	KK01537.D	10	08/30/04	BC	n/a	n/a	GKK422
T8044-1	KK01538.D	1	08/30/04	BC	n/a	n/a	GKK422
T8044-1	KK01535.D	10	08/30/04	BC	n/a	n/a	GKK422

The QC reported here applies to the following samples: Method: SW846 8021B

T8063-1, T8063-2

CAS No.	Compound	T8044-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		200	201	101	206	103	2	70-134/21
100-41-4	Ethylbenzene	ND		200	206	103	213	107	3	73-132/15
108-88-3	Toluene	ND		200	212	106	219	110	3	66-137/22
1330-20-7	Xylenes (total)	ND		600	628	105	641	107	2	69-130/19
95-47-6	o-Xylene	ND		200	213	107	217	109	2	66-131/20
	m,p-Xylene	ND		400	415	104	425	106	2	68-132/19

CAS No.	Surrogate Recoveries	MS	MSD	T8044-1	T8044-1	Limits
460-00-4	4-Bromofluorobenzene	117%	117%	115%	111%	71-127%
98-08-8	aaa-Trifluorotoluene	139%* [a]	137%* [a]	428%* [a]	138%*	66-136%

(a) Outside control limits due to matrix interference. Confirmed by reanalysis.

DATA VERIFICATION WORKSHEET

Analytical Method/Analytes: SW-846 8021B (BTEX) **Sample Collection Date(s):** 06/03/04

Laboratory: Accutest **MWH Job Number:** EPC-SJRB (Groundwater)

Batch Identification: T7620 **Matrix:** Water

MS/MSD Parent(s)[(a)]: None **Field Replicate Parent(s):** None

Verification Complete: Brian Buttars 6-16-04
(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
1	Lindreth B24	MW-1	T7620-01	Y		
2	Trip Blank	030604TB01	T7620-02	N		

DATA VERIFICATION WORKSHEET

Analytical Method: SW-846 8021B (BTEX) **MWH Job Number:** EPC-SJRB (Groundwater)

Laboratory: Accutest **Batch Identification:** T7620

Verification Criteria								
Sample ID	**Lindreth B24 MW-1**	**030604TB 01**						
Lab ID	**T7620-01**	**T7620-02**						
Holding Time	A	A						
Analyte List	A	A						
Reporting Limits	A	A						
Surrogate Spike Recovery	A[1]	A[2]						
Trip Blank	A	A						
Equipment Rinseate Blanks	N/A	N/A						
Field Duplicate/Replicate	N/A	N/A						
Initial Calibration	N	N						
Initial Calibration Verification (ICV)	N	N						
Continuing Calibration Verification (CCV)	N	N						
Method Blank	A	A						
Laboratory Control Sample (LCS)	A	A						
Laboratory Control Sample Duplicate (LCSD)	N	N						
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A						
Retention Time Window	N	N						
Injection Time(s)	N	N						
Hardcopy vs. Chain-of-Custody	A	A						
EDD vs. Hardcopy	N	N						
EDD vs. Chain of Custody	N	N						

(a) List QC batch identification if different than Batch ID
A indicates verification criteria were met
A/L indicates verification criteria met based upon Laboratory's QC Summary Form
X indicates verification criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

1) Surrogate percent recovery outside acceptance criteria for aaa-Trifluorotoluene @ 183% (66-136). Only one surrogate outside acceptance criteria, no data qualified.

2) Surrogate percent recovery outside acceptance criteria for 4-Bromofluorobenzene @ 62% (71-127). Only one surrogate outside acceptance criteria, no data qualified.

Gulf Coast
ACCUTEST. Laboratories

06/15/04

Technical Report for

Montgomery Watson

EPFS San Juan Basin Groundwater Site

D-MWH-04-01-03-MSG-01

Accutest Job Number: T7620

Sampling Date: 06/03/04

Report to:

Montgomery Watson

brian.buttars@us.mwhglobal.com

ATTN: Brian Buttars

Total number of pages in report: **15**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino
Laboratory Manager

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Accutest Laboratories

Sample Summary

Montgomery Watson

Job No: T7620

EPFS San Juan Basin Groundwater Site
Project No: D-MWH-04-01-03-MSG-01

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
T7620-1	06/03/04	08:40 MN	06/04/04	AQ	Ground Water	LINDRETH B24 MW-1
T7620-2	06/03/04	07:00 MN	06/04/04	AQ	Trip Blank Water	030604TB01

Accutest Laboratories

Report of Analysis

Client Sample ID:	LINDRETH B24 MW-1		
Lab Sample ID:	T7620-1	Date Sampled:	06/03/04
Matrix:	AQ - Ground Water	Date Received:	06/04/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	EPFS San Juan Basin Groundwater Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK00914.D	1	06/14/04	NS	n/a	n/a	GKK394
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	7.1	1.0	0.50	ug/l	
108-88-3	Toluene	8.7	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	48.6	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	20.4	3.0	1.0	ug/l	
95-47-6	o-Xylene	20.4	1.0	0.50	ug/l	
	m,p-Xylene	ND	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	126%		71-127%
98-08-8	aaa-Trifluorotoluene	183% [a]		66-136%

(a) Outside control limits due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	030604TB01		
Lab Sample ID:	T7620-2	Date Sampled:	06/03/04
Matrix:	AQ - Trip Blank Water	Date Received:	06/04/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	EPFS San Juan Basin Groundwater Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK00893.D	1	06/11/04	NS	n/a	n/a	GKK393
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	0.50	ug/l	
	m,p-Xylene	ND	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	62% [a]		71-127%
98-08-8	aaa-Trifluorotoluene	81%		66-136%

(a) Outside of control limits. Unable to re analyze due to lack of sample volume.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

CUTEST.
Laboratories

10165 Harwin Drive, Ste. 150, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
842152796780	
Accutest Quote #	**Accutest Job #**

Client / Reporting Information		Project Information	
Company: BL 350		Project Name: Ground Water	
Address: 1014 ... Hwy		Street	
City / State / Zip: Farmington NM 87401		City	State
Project Contact: Scott Pope	E-mail	Project #	
Phone #: 505 599 2124		Fax #: 505 599 2119	
Sampler's Name: M Nee		Client Purchase Order #	

Requested Analysis: BTEX

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	BTEX	LAB USE ONLY
1	Lindrith B24 MW-1		6304	0840	MN	WG	2	X								X	
2	030604TB01		6304	0700	MN	WG	1	X								X	

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Turnaround Time (Business Days)

- ☑ 10 Day STANDARD
- ☐ 5 Day RUSH
- ☐ 3 Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY
- ☐ Other

Approved By: / Date:

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- ☐ Commercial "A"
- ☐ Commercial "B"
- ☐ Reduced Tier 1
- ☐ Full Tier 1
- ☐ TRRP13
- ☐ EDD Format ______

Commercial "A" = Results Only

Comments / Remarks

T7620

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received by:	Relinquished by:	Date Time:	Received by:
1 [signature] 6304	1600	1 [signature] 6/9/04 1030	2		2
Relinquished by: 3	Date Time:	Received by: 3	Relinquished by: 4	Date Time:	Received by: 4
Relinquished by: 5	Date Time:	Received by: 5	Custody Seal #	Preserved where applicable ☐	On Ice: X Cooler Temp.: 6

3.1

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T7620: Chain of Custody

Page 1 of 2

ACCUTEST Laboratories

ACCUTEST.

SAMPLE RECEIPT LOG

JOB #: T7620 DATE/TIME RECEIVED: 6/4/4 1030

CLIENT: El Paso INITIALS: TW

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see variance for explanation):

1. (Y) N Sample received in undamaged condition.
2. (Y) N Samples received within temp. range.
3. (Y) N Sample received with proper pH.
4. (Y) N Sample received in proper containers.
5. (Y) N Sample volume sufficient for analysis.
6. (Y) N Sample received with chain of custody.
7. (Y) N Chain of Custody matches sample IDs and analysis on containers.
8. (Y) N Custody seal received intact and tamper evident on cooler.
9. (Y) N Custody seal received intact and tamper evident on bottles.

SAMPLE or FIELD ID	BOTTLE #	DATE SAMPLED	MATRIX	VOLUME	LOCATION	PRESERV.	PH
1	1-2	6/3/4	AQ	2x 40ml	VREF	1,(2),3,4,5,6	U, (<2), >12, NA
2	1	√	√	√	√	1,(2),3,4,5,6	U, (<2), >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA

TW 6/4/4

LOCATION: WI: Walk-In VR: Volatile Refrig. SUB: Subcontract EF: Encore Freezer

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: Other

Comments: ____________________

pH of waters checked excluding volatiles

pH of soils N/A

Delivery method: Courier: FedEx COOLER TEMP: 6 COOLER TEMP: ____

Tracking#: 842452796780 COOLER TEMP: ____ COOLER TEMP: ____

Method of sample disposal: (circle one) Accutest disposal Hold Return to Client

Form: SM012, Rev. 6/4/04, QAO

3 3.1

T7620: Chain of Custody

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GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T7620
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK393-MB	KK00886.D	1	06/11/04	NS	n/a	n/a	GKK393

The QC reported here applies to the following samples: Method: SW846 8021B

T7620-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	0.50	ug/l	
	m,p-Xylene	ND	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	83%	71-127%
98-08-8	aaa-Trifluorotoluene	79%	66-136%

Method Blank Summary

Job Number: T7620
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK394-MB	KK00911.D	1	06/14/04	NS	n/a	n/a	GKK394

The QC reported here applies to the following samples: Method: SW846 8021B

T7620-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	0.50	ug/l	
	m,p-Xylene	ND	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	99%	71-127%
98-08-8	aaa-Trifluorotoluene	118%	66-136%

Blank Spike Summary

Job Number: T7620
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK393-BS	KK00887.D	1	06/11/04	NS	n/a	n/a	GKK393

The QC reported here applies to the following samples: Method: SW846 8021B

T7620-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	17.0	85	76-128
100-41-4	Ethylbenzene	20	18.1	91	79-129
108-88-3	Toluene	20	17.0	85	77-126
1330-20-7	Xylenes (total)	60	55.5	93	79-126
95-47-6	o-Xylene	20	17.9	90	78-125
	m,p-Xylene	40	37.6	94	79-127

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	88%	71-127%
98-08-8	aaa-Trifluorotoluene	82%	66-136%

Blank Spike Summary

Job Number: T7620
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK394-BS	KK00912.D	1	06/14/04	NS	n/a	n/a	GKK394

The QC reported here applies to the following samples: Method: SW846 8021B

T7620-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	21.8	109	76-128
100-41-4	Ethylbenzene	20	22.5	113	79-129
108-88-3	Toluene	20	22.6	113	77-126
1330-20-7	Xylenes (total)	60	65.9	110	79-126
95-47-6	o-Xylene	20	21.8	109	78-125
	m,p-Xylene	40	44.1	110	79-127

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	113%	71-127%
98-08-8	aaa-Trifluorotoluene	118%	66-136%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T7620
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T7624-1MS	KK00891.D	500	06/11/04	NS	n/a	n/a	GKK393
T7624-1MSD	KK00892.D	500	06/11/04	NS	n/a	n/a	GKK393
T7624-1	KK00890.D	500	06/11/04	NS	n/a	n/a	GKK393

The QC reported here applies to the following samples: Method: SW846 8021B

T7620-2

CAS No.	Compound	T7624-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	12800		10000	21000	82	20500	77	2	70-134/21
100-41-4	Ethylbenzene	ND		10000	7590	76	7430	74	2	73-132/15
108-88-3	Toluene	752		10000	8140	74	7980	72	2	66-137/22
1330-20-7	Xylenes (total)	ND		30000	23900	80	23300	78	3	69-130/19
95-47-6	o-Xylene	ND		10000	7540	75	7330	73	3	66-131/20
	m,p-Xylene	ND		20000	16400	82	16000	80	2	68-132/19

CAS No.	Surrogate Recoveries	MS	MSD	T7624-1	Limits
460-00-4	4-Bromofluorobenzene	70%*	68%*	67%* [a]	71-127%
98-08-8	aaa-Trifluorotoluene	83%	84%	82%	66-136%

(a) Outside control limits due to matrix interference.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T7620
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T7641-1MS	KK00918.D	20	06/14/04	NS	n/a	n/a	GKK394
T7641-1MSD	KK00919.D	20	06/14/04	NS	n/a	n/a	GKK394
T7641-1	KK00917.D	20	06/14/04	NS	n/a	n/a	GKK394

The QC reported here applies to the following samples: Method: SW846 8021B

T7620-1

CAS No.	Compound	T7641-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1060		400	1360	75	1340	70	1	70-134/21
100-41-4	Ethylbenzene	210		400	633	106	626	104	1	73-132/15
108-88-3	Toluene	134		400	577	111	568	109	2	66-137/22
1330-20-7	Xylenes (total)	183		1200	1510	111	1490	109	1	69-130/19
95-47-6	o-Xylene	54.0		400	477	106	473	105	1	66-131/20
	m,p-Xylene	129		800	1030	113	1020	111	1	68-132/19

CAS No.	Surrogate Recoveries	MS	MSD	T7641-1	Limits
460-00-4	4-Bromofluorobenzene	109%	109%	98%	71-127%
98-08-8	aaa-Trifluorotoluene	113%	121%	115%	66-136%

DATA VERIFICATION WORKSHEET

Analytical Method/Analytes: SW-846 8021B (BTEX) **Sample Collection Date(s):** 02/23/04

Laboratory: Accutest **MWH Job Number:** EPC-SJRB (Groundwater)

Batch Identification: T6937 **Matrix:** Water

MS/MSD Parent(s)[a]: None **Field Replicate Parent(s):** None

Verification Complete: Brian Bottaro 3-10-04 (Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
1	Lindreth B24	MW-1	T6937-01	Y	UJ	Benzene @ <1 µg/l
					UJ	Toluene @ <1 µg/l
					J	Ethylbenzene @ 23.9 µg/l
					J	Xylenes (total) @ 81.5 µg/l
					J	o-Xylene @ 7.2 µg/l
					J	m/p-Xylene @ 74.4 µg/l
2	Trip Blank	230204TB01	T6937-02	N	UJ	Benzene @ <1 µg/l
					UJ	Toluene @ <1 µg/l
					UJ	Ethylbenzene @ <1 µg/l
					UJ	Xylenes (total) @ <3 µg/l
					UJ	o-Xylene @ <1 µg/l
					UJ	m/p-Xylene @ <2 µg/l

DATA VERIFICATION WORKSHEET
(Page 2 of 2)

Analytical Method: SW-846 8021B (BTEX) **MWH Job Number:** EPC-SJRB (Groundwater)

Laboratory: Accutest **Batch Identification:** T6937

Verification Criteria								
Sample ID	**Lindreth B24 MW-1**	**230204TB 01**						
Lab ID	**T6937-01**	**T6937-02**						
Holding Time	A	A						
Analyte List	A	A						
Reporting Limits	A	A						
Surrogate Spike Recovery	A[1]	A[2]						
Trip Blank	A	A						
Equipment Rinseate Blanks	N/A	N/A						
Field Duplicate/Replicate	N/A	N/A						
Initial Calibration	N	N						
Initial Calibration Verification (ICV)	N	N						
Continuing Calibration Verification (CCV)	N	N						
Method Blank	A	A						
Laboratory Control Sample (LCS)	A	A						
Laboratory Control Sample Duplicate (LCSD)	N	N						
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A						
Retention Time Window	N	N						
Injection Time(s)	N	N						
Hardcopy vs. Chain-of-Custody	A	A						
EDD vs. Hardcopy	N	N						
EDD vs. Chain of Custody	N	N						

(a) List QC batch identification if different than Batch ID
A indicates verification criteria were met
A/L indicates verification criteria met based upon Laboratory's QC Summary Form
X indicates verification criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

1) Surrogate percent recoveries outside acceptance criteria for 4-Bromofluorobenzene @ 36% (64-121) and aaa-Trifluorotoluene @ 64% (71-121), indicating a possible low bias. Qualify associated non-detect sample results with "UJ" flags indicating possible false negatives and qualify associated sample detect results with "J" flags indicating the data are estimated and possibly biased low.

2) Surrogate percent recoveries outside acceptance criteria for 4-Bromofluorobenzene @ 16% (64-121) and aaa-Trifluorotoluene @ 15% (71-121), indicating a possible low bias. *No analytes detected in associated sample; qualify associated non-detect sample* results with "UJ" flags indicating possible false negatives.

e-Hardcopy 2.0
Automated Report

Gulf Coast
ACCUTEST Laboratories

03/09/04

Technical Report for

Montgomery Watson

EPFS San Juan Basin Groundwater Site

D-MWH-04-01-03-MSG-01

Accutest Job Number: T6937

Report to:

Montgomery Watson

brian.buttars@us.mwhglobal.com

ATTN: Brian Buttars

Total number of pages in report: **12**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino
Laboratory Manager

CHAIN OF CUSTODY 230204MNP1

ACCUTEST. Laboratories

10165 Harwin Drive, Ste. 150, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking # 864215276872 | Bottle Order Control #
Accutest Quote # | Accutest Job # T6937

Client / Reporting Information

Company Name: EL Paso
Address: 614 Reilly
City: Farmington State: NM Zip: 87401
Project Contact: Scott Pope E-mail:
Phone #: 505 599 2124
Sampler's Name: M Nee

Project Information

Project Name: Ground Water
Street:
City: State:
Project #:
Fax #: 505 599 2119
Client Purchase Order #:

Requested Analysis

BTEX

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OL - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

LAB USE ONLY

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	BTEX
1	Lindrith B24 MW-1		2-25-04	1125	MN	WG	2	2	2
2	230204TB01		2-25-04	0700	MN	WQ	1	1	1

Turnaround Time (Business Days)

- [x] 10 Day STANDARD — Approved By: / Date:
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Tier 1
- [ ] TRRP13
- [ ] EDD Format: _____

Commercial "A" = Results Only

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery

Relinquished by Sampler:	Date Time:	Received by	Relinquished by	Date Time:	Received by:
1 [signature] 2260	1300	1	2		2
Relinquished by:	Date Time:	Received by:	Relinquished by:	Date Time:	Received by:
3		3	4		4
Relinquished by	Date Time:	Received by:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp.
5	2-27-04	5 [signature] 1000		☐	X 2°C

3.1 3

T6937: Chain of Custody
Page 1 of 2

ACCUTEST. Laboratories

ACCUTEST.

SAMPLE RECEIPT LOG

JOB #: T6937

DATE/TIME RECEIVED: 2-27-04

CLIENT: El Paso

INITIALS: [illegible]

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see variance for explanation):

1. (Y) N Sample received in undamaged condition.
2. (Y) N Samples received within temp. range.
3. Y (NA) Sample received with proper pH.
4. (Y) N Sample received in proper containers.
5. (Y) N Sample volume sufficient for analysis.
6. (Y) N Sample received with chain of custody.
7. (Y) N Chain of Custody matches sample IDs on containers.
8. Y (NA) Custody seal received intact and tamper evident on cooler.
9. Y (NA) Custody seal received intact and tamper evident on bottles.

SAMPLE or FIELD ID	BOTTLE #	DATE SAMPLED	MATRIX	VOLUME	LOCATION	PRESERV.	PH
1	1-2	2-23-04	W	40ml	VRef	1,2,3,4,5,6	U, <2, >12, NA
2	1	↓	↓	↓	↓	1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA

2-27-04

LOCATION: WI: Walk-In VR: Volatile Refrig. SUB: Subcontract EF: Encore Freezer

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: Other

Comments: ______

pH of waters checked excluding volatiles

pH of soils N/A

Delivery method: Courier: ______

Tracking#: ______

COOLER TEMP: 2°C COOLER TEMP: ______

COOLER TEMP: ______ COOLER TEMP: ______

Method of sample disposal: (circle one) Accutest disposal Hold Return to Client

Form: SM012

3 3.1

T6937: Chain of Custody

Page 2 of 2

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T6937
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE483-MB	EE008956.D	1	03/06/04	JH	n/a	n/a	GEE483

The QC reported here applies to the following samples: Method: SW846 8021B

T6937-1, T6937-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	0.50	ug/l	
	m,p-Xylene	ND	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	96%	64-121%
98-08-8	aaa-Trifluorotoluene	92%	71-121%

Blank Spike Summary

Job Number: T6937
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE483-BS	EE008955.D	1	03/06/04	JH	n/a	n/a	GEE483

The QC reported here applies to the following samples: Method: SW846 8021B

T6937-1, T6937-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.6	103	74-119
100-41-4	Ethylbenzene	20	20.5	103	82-115
108-88-3	Toluene	20	20.5	103	77-116
1330-20-7	Xylenes (total)	60	61.4	102	79-115
95-47-6	o-Xylene	20	20.4	102	78-114
	m,p-Xylene	40	41.0	103	79-116

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	108%	64-121%
98-08-8	aaa-Trifluorotoluene	103%	71-121%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T6937
Account: MWHSLCUT Montgomery Watson
Project: EPFS San Juan Basin Groundwater Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T6913-1MS	EE008990.D	50	03/07/04	JH	n/a	n/a	GEE483
T6913-1MSD	EE008991.D	50	03/07/04	JH	n/a	n/a	GEE483
T6913-1	EE008967.D	1	03/07/04	JH	n/a	n/a	GEE483
T6913-1	EE008987.D	50	03/07/04	JH	n/a	n/a	GEE483

The QC reported here applies to the following samples: Method: SW846 8021B

T6937-1, T6937-2

CAS No.	Compound	T6913-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	220 [a]		1000	1200	98	1160	94	3	64-124/16
100-41-4	Ethylbenzene	1380 [a]		1000	2350	97	2280	90	3	64-123/14
108-88-3	Toluene	41.4		1000	990	95	961	92	3	64-120/13
1330-20-7	Xylenes (total)	1430 [a]		3000	4300	96	4170	91	3	66-118/18
95-47-6	o-Xylene	102	E	1000	1050	95	1020	92	3	65-119/20
	m,p-Xylene	1270	E	2000	3250	99	3150	94	3	66-120/14

CAS No.	Surrogate Recoveries	MS	MSD	T6913-1	T6913-1	Limits
460-00-4	4-Bromofluorobenzene	89%	86%	86%	91%	64-121%
98-08-8	aaa-Trifluorotoluene	88%	84%	93%	94%	71-121%

(a) Result is from Run #2.

APPENDIX G

FIELD DOCUMENTATION
(2004)

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: Groundwater Client: MWH/EL Paso
Location: Lindrith B24 Well No: MW-1 Development **Sampling**
Project Manager MJN Date 11/29/04 Start Time 1024 Weather snow, teens
Depth to Water 26.56 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 5.22 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer x Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal X stabilization of Indicator Parameters X Other or bail dry

	Water Volume in Well		
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
5.22 x 0.65	3.39 x 3		10.17 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°f)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1030	**5.60**	**844**	**57.0**				**1**	**clear, sheen, odor**
	5.47	**833**	**54.6**				**2**	**clear, sheen, odor**
	5.48	**848**	**53.5**				**3**	**clear, sheen, odor**
	5.80	**869**	**51.4**				**9**	**clear, sheen, odor**
	5.89	**911**	**51.6**				**10**	**clear, sheen, odor**
1047	**5.85**	**897**	**51.8**				**11**	**clear, sheen, odor**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1047	**5.85**	**897**	**51.8**					**11**	**clear, sheen, odor**

COMMENTS:

INSTRUMENTATION: pH Meter X _____ Temperature Meter x
DO Monitor X _____ Other _____
Conductivity Meter X _____

Water Disposal Kutz Sample ID Lindreth B24 MW-1 Sample Time 1050

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 291104TB01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: Groundwater Client: MWH/EL Paso
Location: Lindrith B24 Well No: MW-2 Development **Sampling**
Project Manager MJN Date 11/29/04 Start Time 0900 Weather snow, teens
Depth to Water 25.39 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 5.61 Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer x Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal X stabilization of Indicator Parameters X Other or bail dry

	Water Volume in Well		
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
5.61 x 0.16	.897 x 3		2.69 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°f)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0904	6.45	889	54.0				.5	brown, roots
	6.05	876	52.3				1	brown, roots
	6.08	923	51.2				1.5	brown, roots, silty
	6.08	937	50.6				2.0	brown, roots, silty
	6.08	1015	50.5				2.5	brown, roots, silty
0921	6.10	937	50.2				3.0	brown, roots, silty

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0921	6.10	937	50.2					3.0	brown, roots, silty

COMMENTS: Initially, roots were so thick a water level could not be recorded. Pounding and reaming with the water level indicator chopped the weeds and a water level and TD were obtained. Extensive root material was purged from the well and a few strands of root were collected with the sample.

INSTRUMENTATION: pH Meter X _____ Temperature Meter x
DO Monitor X _____ Other _____
Conductivity Meter X _____

Water Disposal Kutz Sample ID Lindrith B24 MW-2 Sample Time 0925
BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 291104TB01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Groundwater Client: MWH/EL Paso
Location: Lindrith B24 Well No: MW-3 Development **Sampling**
Project Manager MJN Date 11/29/04 Start Time 0936 Weather snow, teens
Depth to Water 25.79 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 6.21 Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer x Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	**Gal**/oz to be removed
6.21 x 0.16	.99 x 3		2.98 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°f)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0941	**6.04**	**831**	**50.4**				**.5**	**light brown**
	5.98	**913**	**51.5**				**1**	**light brown, roots**
	6.00	**984**	**51.2**				**1.5**	**light brown, roots**
	6.06	**10130**	**50.8**				**2.0**	**silty, brown, roots**
	6.06	**10690**	**50.5**				**2.5**	**silty, brown, roots**
	6.07	**10700**	**50.6**				**3.0**	**silty, brown, roots**
0959	**6.07**	**10680**	**50.7**				**3.5**	**silty, brown, roots**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0959	**6.07**	**10680**	**50.7**					**3.5**	**silty, brown, roots**

COMMENTS: Extensive root material in well.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor**X** _____ Other _____
Conductivity Meter **X** _____

Water Disposal Kutz Sample ID Lindrith B24 MW-3 Sample Time 1000

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 291104TB01

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PRODUCT RECOVERY/WATER LEVEL DATA

Project Name_	**San Juan Basin Ground Water**	**Project No.**	**30001.0**
Project Manager	**MJN**		
Client Company	**MWH**	**Date**	**8-19-04**
Site Name	**Lindreth B24**		

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-1	0800		26.32		
MW-2		-	25.11	-	-
MW-3		-	25.52	-	-

Comments
There were many weeds on the interface probe following the water level check at MW-2. I could not pull any water or weeds with the bailer. I'm not sure what is going on here, maybe weeds in bottom of almost dry well.

Signature: *Marlin J. Nee* Date: August 19, 2004

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: Groundwater Client: MWH/EL Paso
Location: Lindreth B24 Well No: MW-1 Development **Sampling**
Project Manager MJN Date 8/19/04 Start Time 0824 Weather Sunny 70s
Depth to Water 26.34 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 5.46 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer x Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal X stabilization of Indicator Parameters X Other or bail dry

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
6.06 x 0.65	3.55 x 3		10.65 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°f)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0829	**6.59**	**1028**	**60.3**				**1**	**clear, sheen, odor**
	6.80	**992**	**57.7**				**2**	**clear, sheen, odor**
	6.77	**996**	**57.3**				**3**	**clear, sheen, odor**
	6.85	**996**	**57.3**				**5**	**clear, sheen, odor**
	7.03	**992**	**57.4**				**9**	**clear, sheen, odor**
	7.23	**1006**	**57.3**				**10**	**clear, sheen, odor**
0844	**7.18**	**997**	**57.3**				**11**	**clear, sheen, odor**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0844	**7.18**	**997**	**57.3**					**11**	**clear, sheen, odor**

COMMENTS:

INSTRUMENTATION: pH Meter X _____ Temperature Meter x
DO Monitor X _____ Other _____
Conductivity Meter X _____

Water Disposal Kutz Sample ID Lindreth B24 MW-1 Sample Time 0845
BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 030604TB01

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PRODUCT RECOVERY/WATER LEVEL DATA

Project Name_	**San Juan Basin Ground Water**	**Project No.**	**30001.0**
Project Manager	**MJN**		
Client Company	**MWH**	**Date**	**6-3-04**
Site Name	**Lindreth B24**		

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-1	0800		25.73		
MW-2		-	24.53	-	-
MW-3		-	24.94	-	-

Comments
No product was found in MW-1. Groundwater samples were collected from MW-1. The previously stuck bailer in MW-3 was free so it must have been frozen.

Signature: *Martin J. Nee* Date: June 3, 2004

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: Groundwater Client: MWH/EL Paso
Location: Lindreth B24 Well No: MW-1 Development **Sampling**
Project Manager MJN Date 6/3/04 Start Time 0809 Weather Sunny 70s
Depth to Water 25.73 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 6.06 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer x Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal X stabilization of Indicator Parameters X Other or bail dry

	Water Volume in Well		
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
6.06 x 0.65	3.939 x 3		11.82 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°f)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0815	**6.27**	**661**	**60.9**				**1**	**Clear, slight sheen**
	6.24	**644**	**57.5**				**2**	**Clear, slight sheen**
	6.26	**662**	**56.3**				**3**	**Clear, light grayish, slight sheen**
	6.30	**658**	**56.0**				**5**	**Clear, light grayish, slight sheen**
	6.43	**679**	**56.2**				**9**	**Clear, light grayish, slight sheen**
	6.46	**674**	**56.2**				**10**	**Clear, light grayish, slight sheen**
	6.52	**696**	**56.0**				**11**	**Clear, light grayish, slight sheen**
0833	**6.55**	**681**	**56.0**				**12**	**Clear, light grayish, slight sheen**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0833	**6.55**	**681**	**56.0**					**12**	**Clear, light grayish, slight sheen**

COMMENTS:

INSTRUMENTATION: pH Meter X _____ Temperature Meter x
DO Monitor X _____ Other _____
Conductivity Meter X _____

Water Disposal Kutz Sample ID Lindreth B24 MW-1 Sample Time 0840

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 030604TB01

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PRODUCT RECOVERY/WATER LEVEL DATA

Project Name_	**San Juan Basin Ground Water**	**Project No.**	**30001.0**
Project Manager	**MJN**		
Client Company	**MWH**	**Date**	**2-23-04**
Site Name	**Lindreth B24**		

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-1	1024		26.085		
MW-2		-	24.90	-	-
MW-3		-	na	-	-

Comments

No product was found in MW-1. Groundwater samples were collected from MW-1. MW-2 was found to have heavy root matter that indicated no water in the well. I was able to remove root matter and measure water level. The bailer in MW-3 is lodged in the well approximately 4 inches beneath top of casing. It may be frozen. Attempted to dislodge the bailer by shaking and sliding a lath and wire down beside the bailer but was not successful. Will bring materials necessary to free up bailer on next visit.

Signature: *Marlin J. Nee* Date: February 23, 2004

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: San Juan River Plant Client: MWH/EL Paso
Location: Lindreth B24 Well No: MW-1 Development **Sampling**
Project Manager MJN Date 2/23/04 Start Time 1046 Weather 30s
Depth to Water 26.085 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 5.66 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer x Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal X stabilization of Indicator Parameters X Other or bail dry

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
5.66 x 0.65	3.68 x 3		11.046 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°f)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1053	6.73	820	59.6				1	Clear, sheen, suspended solids. Possibly paraffin.
	6.77	814	55.7				2	As above
	6.78	812	55.1				3	As above
	7.07	820	54.3				8	As above
	7.15	818	54.1				10	As above
	7.26	817	54.0				11	As above
1119	7.19	810	54.0				12	As above

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1119	7.19	810	54.0					12	Clear, sheen, suspended solids, possibly paraffin.

COMMENTS:

INSTRUMENTATION: pH Meter X _____ Temperature Meter x
DO Monitor X _____ Other _____
Conductivity Meter X _____

Water Disposal Kutz Sample ID Lindreth B24 MW-1 Sample Time 1125

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 230204TB01