3R - 194

REPORTS

DATE:

9/2/1994

El Paso
Natural Gas Company

P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

September 2, 1994

Mr. William C. Olson
New Mexico Oil Conservation Division
1190 St. Francis Drive
Santa Fe, NM 87502

Dear Mr. Olson:

Enclosed for your review is EPNG's follow up report of the Jaquez Com. C #1 and Jaquez Com. E #1 remediation project of 1993. Please provide me with your approval to proceed with our recommendations regarding further action at the site. If you have any questions regarding the data, please do not hesitate to contact me at 599-2141.

Sincerely,

Sandra D. Miller
Sr. Environmental Scientist

xc: Mr. John Jaquez, Jr., Landowner
Mr. Denny Foust, NMOCD - Aztec
Mr. W.D. Hall, EPNG

Jaquez Com. E #1 and Jaquez Com. C #1
Soil & Groundwater Remediation
Follow Up Report

Background Information

The Jaquez Com. C #1 and Jaquez Com. E #1 meter sites are currently owned and operated by El Paso Natural Gas Co. (EPNG). They are located in Section 6, Township 29N, and Range 9W, near the town of Blanco, NM. The two meter houses are situated approximately 40 feet of each other on the same location. This location historically had an earthen pit(s) which was used to collect pipeline liquids. Listed below is a brief chronology of events which lead to this follow up report.

Late 1992 - Landowner expressed concern regarding potential hydrocarbon contamination in a garden area located near the meter site location.

March 1993 - Comprehensive soil and groundwater investigation performed on meter site location and in the nearby garden area.

June 1993 - EPNG submits a remedial plan to NMOCD for the site.

July 1993 - NMOCD approves the remedial plan.

August 1993 - Remediation activities commenced.

September 1993 - Remediation activities completed.

September 1993 to present - Monitor wells on site periodically sampled.

Sampling Schedule For Monitor Wells

Ten monitor wells were installed at the site as part of the remedial plan. The wells were sampled on a monthly basis from September 1993 through March 1994. The sampling frequency was then switched to quarterly and occurred again in June 1994. All sampling events included BTEX analysis, water level measurement, and LNAPL measurement where applicable. All wells were sampled once for polynuclear aromatic hydrocarbons (PAH's); results are enclosed. Analytical information is summarized on the Water Analysis Summary included in this report.

Water Level Fluctuations

Water levels showed a consistent decrease in all wells between October and January. Between the months of January and March the water levels began to rise again and this trend has continued through June. The total decrease from October to January ranged between 2.75 and 4.3 feet in the deep wells north of the ditch, and from 1.65 and 2.45 feet

in the shallow wells south of the ditch. Water levels in all wells in June had recovered to at least October levels, and in some wells the levels were as much as .5 feet above October levels. (Note that the data from R1 and R2 have not been adjusted to account for the apparent LNAPL thickness.) Water level graphs for each well are enclosed.

It is anticipated that the water levels in these wells will continue to show seasonal variation due to precipitation differences and to seasonal irrigation practices. The higher water levels in the summer do not appear to have pinched out the recoverable product from wells R-1 and R-2.

LNAPL Presence in Monitor Wells R-1 & R-2

No significant LNAPL was measured in wells R-1 and R-2 until January 1994. By January, approximately 17" and 24" of LNAPL was measured in R-1 and R-2, respectively. In order to determine the most cost effective means of handling the floating product in these wells, EPNG decided to perform a rough test to determine product recovery rates. Our intent was to determine justification for a constant product recovery system or to see whether manual bailing of the well could achieve the same efficiency.

A summary of the effects of manual bailing of R-1 and R-2 is enclosed. Based on that data and the assumption that the source of the LNAPL was removed during the remediation (excavation) of the site, EPNG has deemed that manual removal of the LNAPL would achieve the same effects as a fully powered recovery system.

Dissolved Phase Contaminants

- R-1: Floating Product
- R-2: Floating Product
- R-3: October and December of 1993 indicated levels of benzene slightly above the regulatory limit. All parameters for BTEX have been below regulatory limits since December 1993.
- R-4: Benzene levels have consistently exceeded regulatory limits. All other constituents for BTEX have been consistently below regulatory limits. Benzene levels have shown a slight rise in concentration.
- R-5: BTEX levels have remained nondetectable in this upgradient well.
- M-1: BTEX levels have remained nondetectable throughout the sampling period.

- M-2: BTEX levels have remained nondetectable throughout the sampling period with the exception of October and November of 1993 which indicated trace amounts of benzene and toluene.

- M-3: Initial concentrations of benzene were above regulatory limits. All constituents for BTEX are below regulatory limits from February 1994 through June 1994.

- M-4: Benzene levels have been consistently above regulatory limits throughout the sampling period. All other constituents for BTEX are below limits. Benzene levels have shown a slight decline since the well was installed.

- M-5: BTEX levels have remained nondetectable throughout the sampling period.

A site map is enclosed depicting the location of each monitor well.

Proposal

EPNG has initiated the following items for the Jaquez site as follow up to the remediation of August 1993:

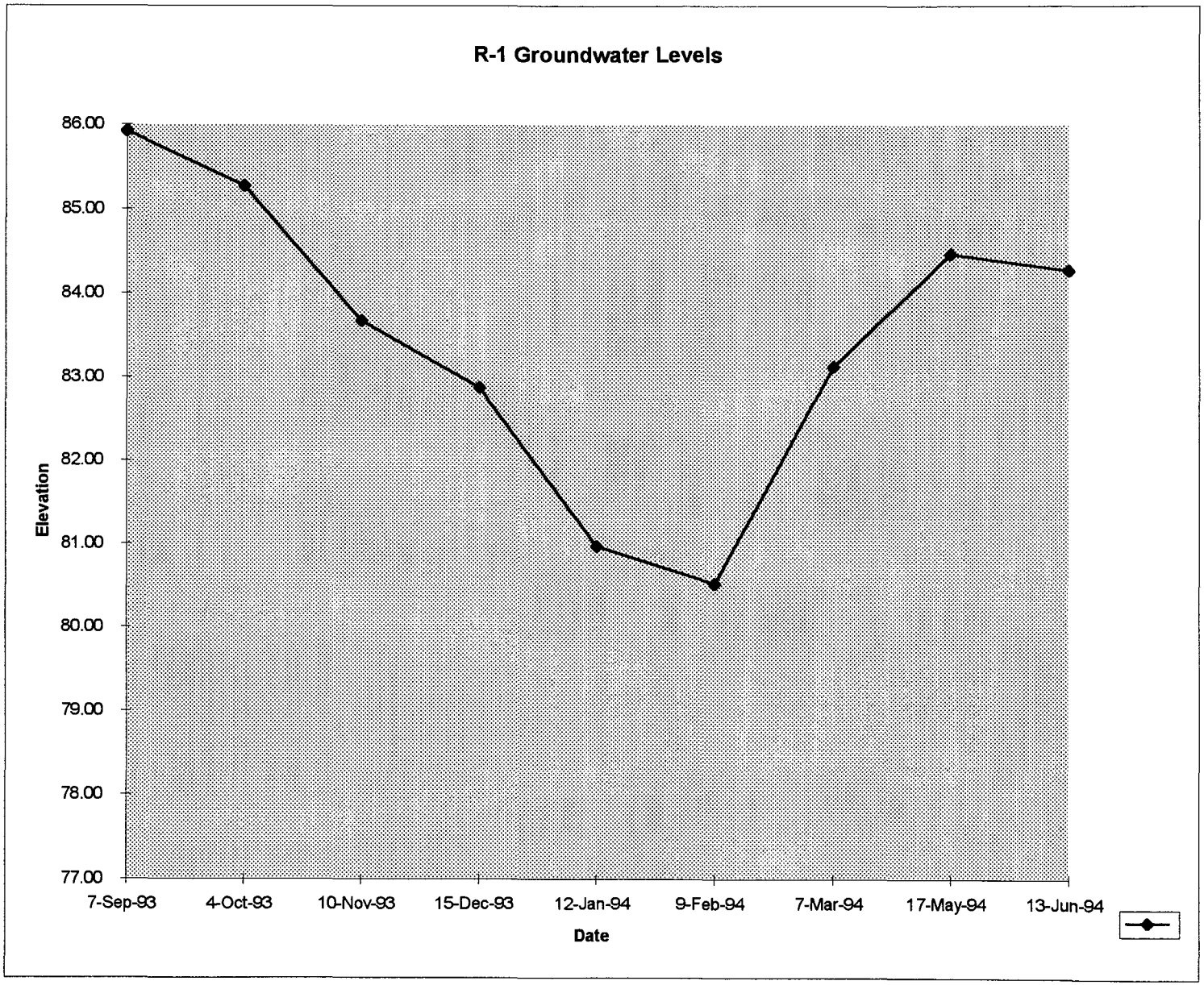
- EPNG has installed two passive skimmer systems to remove LNAPL from monitor wells R-1 and R-2. The passive system, *Petrotrap* is manufactured by Enviro Products, Inc. Information on the *Petrotrap* is enclosed. The LNAPL will be removed from the wells and collected in a small holding tank on location. LNAPL will be transported to EPNG's Oil Water separator as needed for disposal. The *Petrotrap* canisters will be emptied initially on a weekly basis. Frequency of this activity may increase or decrease as EPNG gathers more data with regard to product recovery. EPNG will record water level and product recovered each time.

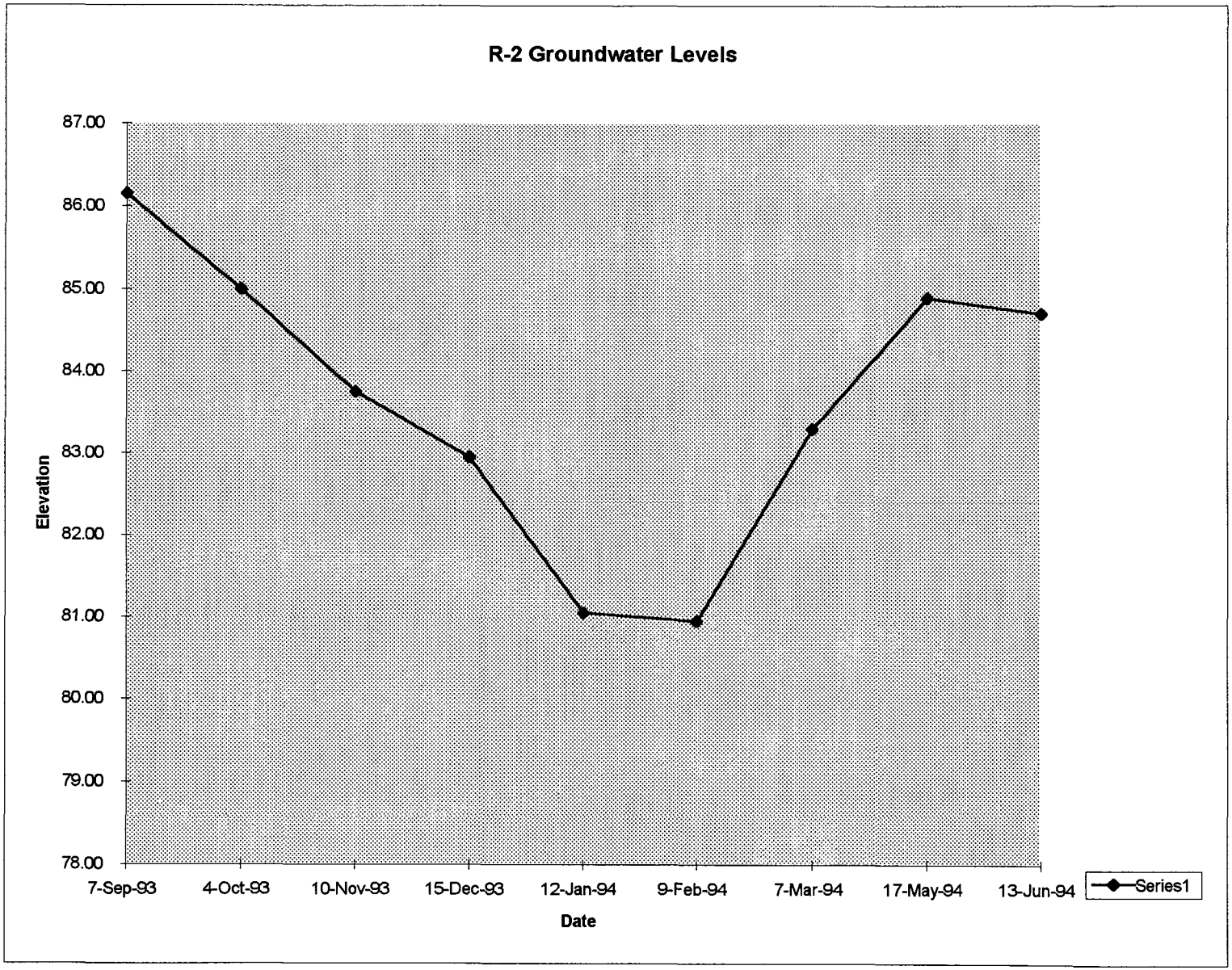
- No further action is proposed for the area south of the ditch. Concentrations of BTEX are declining in M-4, and no BETX components have been identified in downgradient wells. It is anticipated that the BTEX concentrations will continue to decrease due to biodegradation.

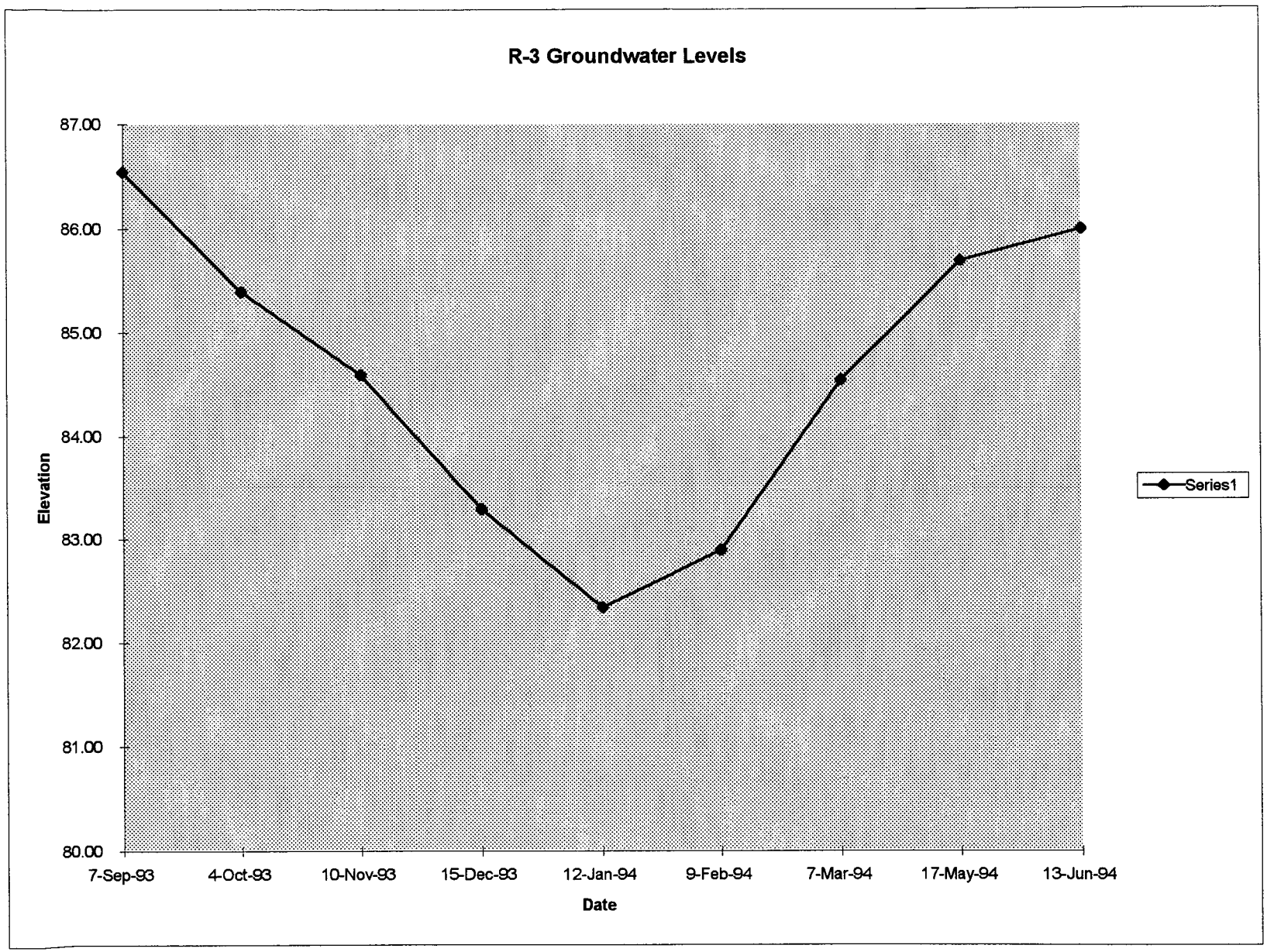
- EPNG continues to monitor groundwater quality on a quarterly basis in all wells except R-1 and R-2. Samples from R-1 and R-2 will be taken after LNAPL recovery is complete.

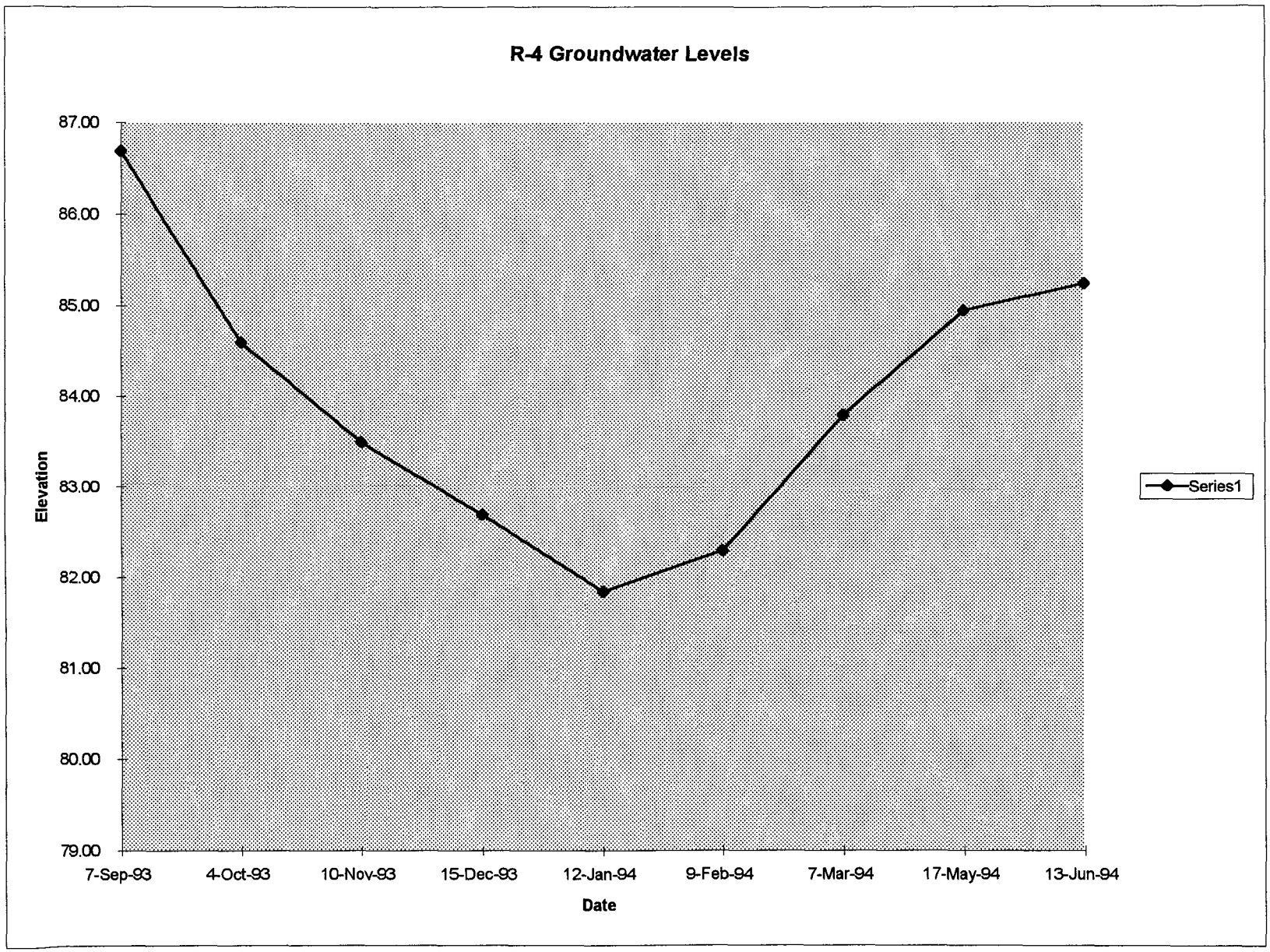
Summary of Attachments

Water Level Graphs
Monitor Well Water Analysis Summary
PAH Analysis - March 1994
Monitor Well BTEX Graphs
R-1 & R-2 Manual Bail Exercise
Petrotrap Information Sheet
Site Map - Monitor Well Locations


R-1 Groundwater Levels
86.00
85.00
84.00
83.00
82.00
81.00
80.00
79.00
78.00
77.00
Elevation
7-Sep-93
4-Oct-93
10-Nov-93
15-Dec-93
12-Jan-94
9-Feb-94
7-Mar-94
17-May-94
13-Jun-94
Date


R-2 Groundwater Levels
87.00
86.00
85.00
84.00
83.00
82.00
81.00
80.00
79.00
78.00
Elevation
7-Sep-93
4-Oct-93
10-Nov-93
15-Dec-93
12-Jan-94
9-Feb-94
7-Mar-94
17-May-94
13-Jun-94
Date
Series1


R-3 Groundwater Levels
87.00
86.00
85.00
84.00
83.00
82.00
81.00
80.00
Elevation
7-Sep-93
4-Oct-93
10-Nov-93
15-Dec-93
12-Jan-94
9-Feb-94
7-Mar-94
17-May-94
13-Jun-94
Date
Series1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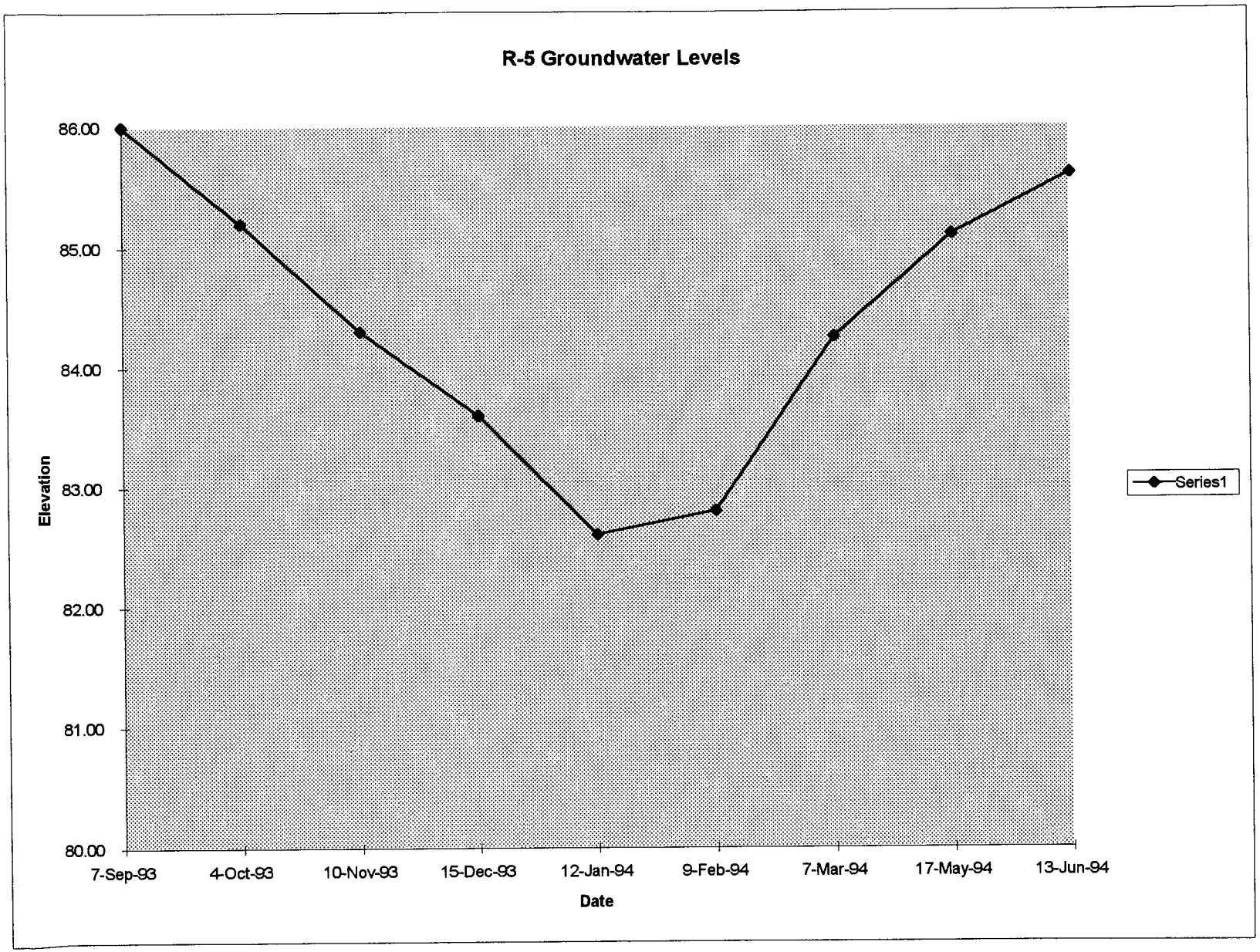
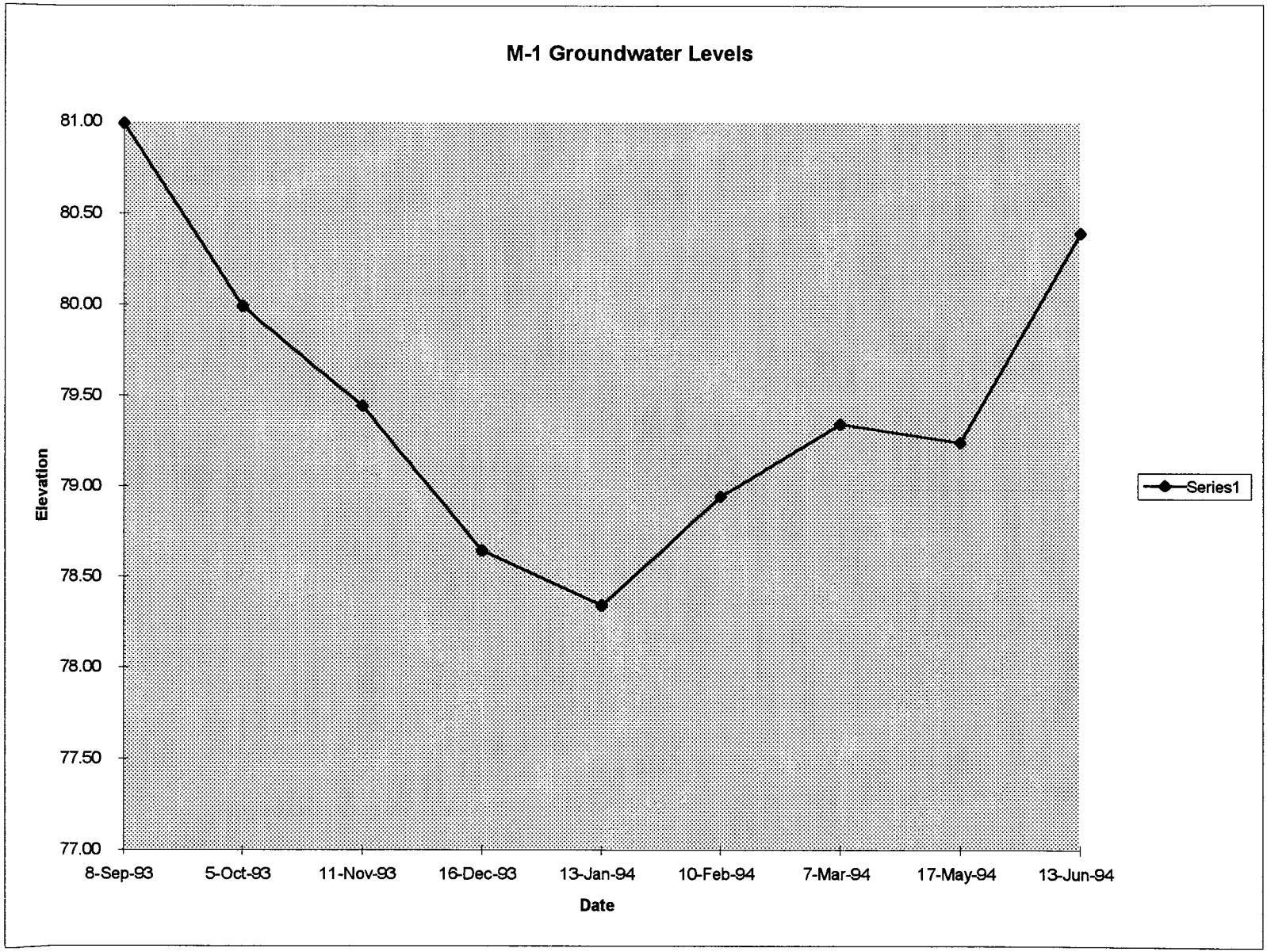
86.00
85.00
84.00
83.00
82.00
81.00
80.00
79.00
Elevation
7-Sep-93
4-Oct-93
10-Nov-93
15-Dec-93
12-Jan-94
9-Feb-94
7-Mar-94
17-May-94
13-Jun-94
Date
Series1


R-5 Groundwater Levels
86.00
85.00
84.00
83.00
82.00
81.00
80.00
Elevation
7-Sep-93
4-Oct-93
10-Nov-93
15-Dec-93
12-Jan-94
9-Feb-94
7-Mar-94
17-May-94
13-Jun-94
Date
Series1


M-1 Groundwater Levels
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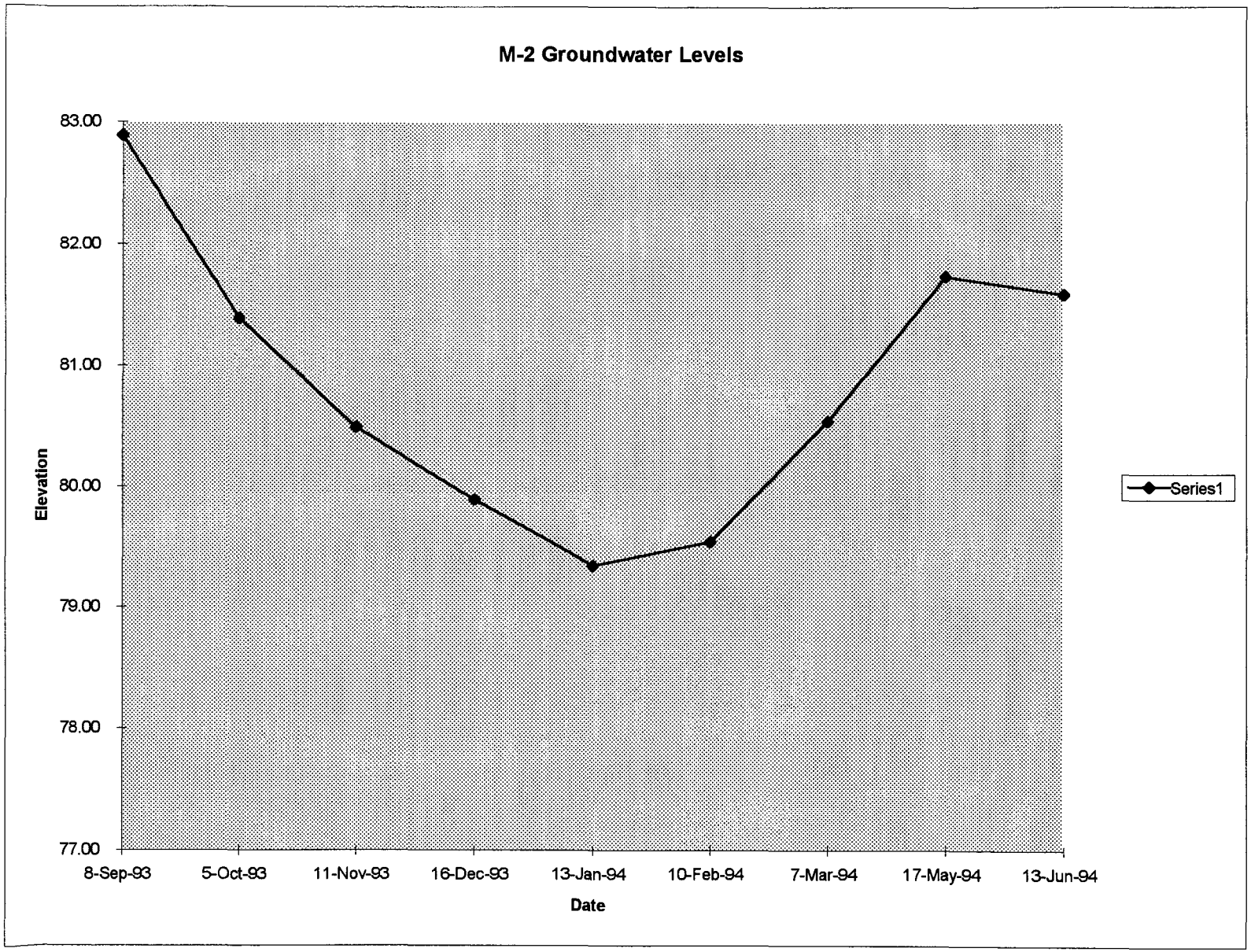
80.50
80.00
79.50
79.00
78.50
78.00
77.50
77.00
Elevation
8-Sep-93
5-Oct-93
11-Nov-93
16-Dec-93
13-Jan-94
10-Feb-94
7-Mar-94
17-May-94
13-Jun-94
Date
Series1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81.00
80.00
79.00
78.00
77.00
Elevation
8-Sep-93
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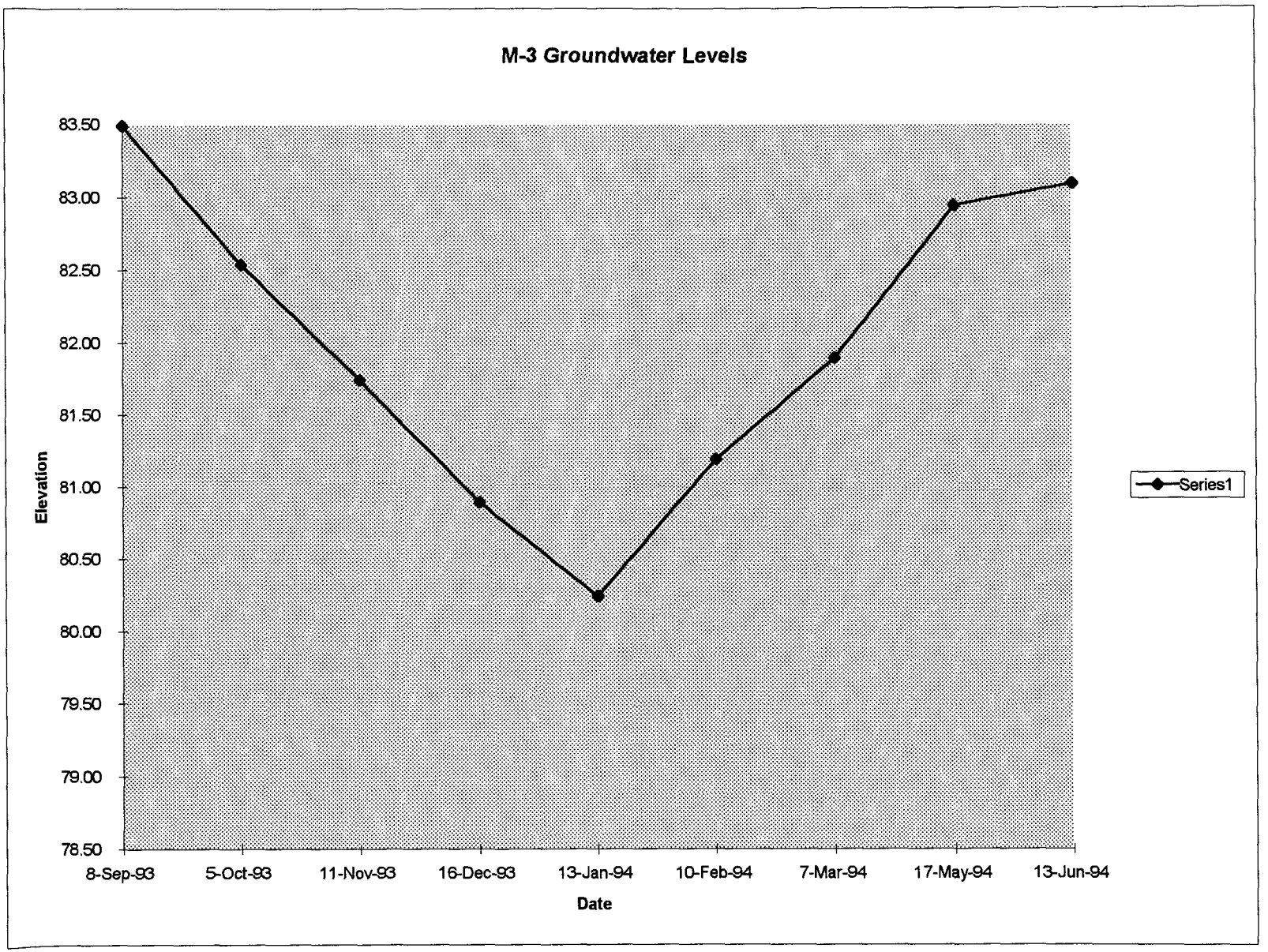
11-Nov-93
16-Dec-93
13-Jan-94
10-Feb-94
7-Mar-94
17-May-94
13-Jun-94
Date
Series1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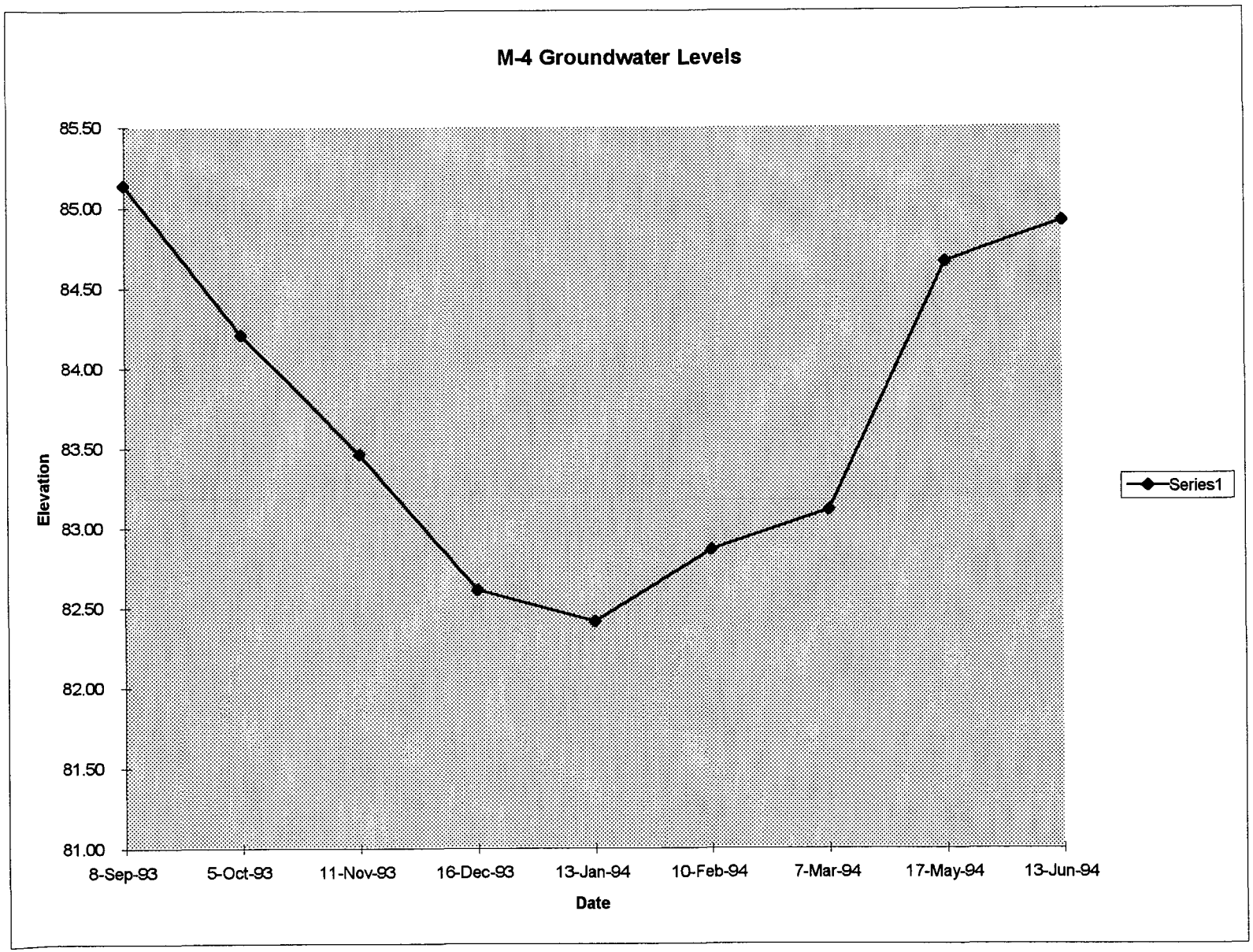
83.00
82.50
82.00
81.50
81.00
80.50
80.00
79.50
79.00
78.50
Elevation
8-Sep-93
5-Oct-93
11-Nov-93
16-Dec-93
13-Jan-94
10-Feb-94
7-Mar-94
17-May-94
13-Jun-94
Date
Series1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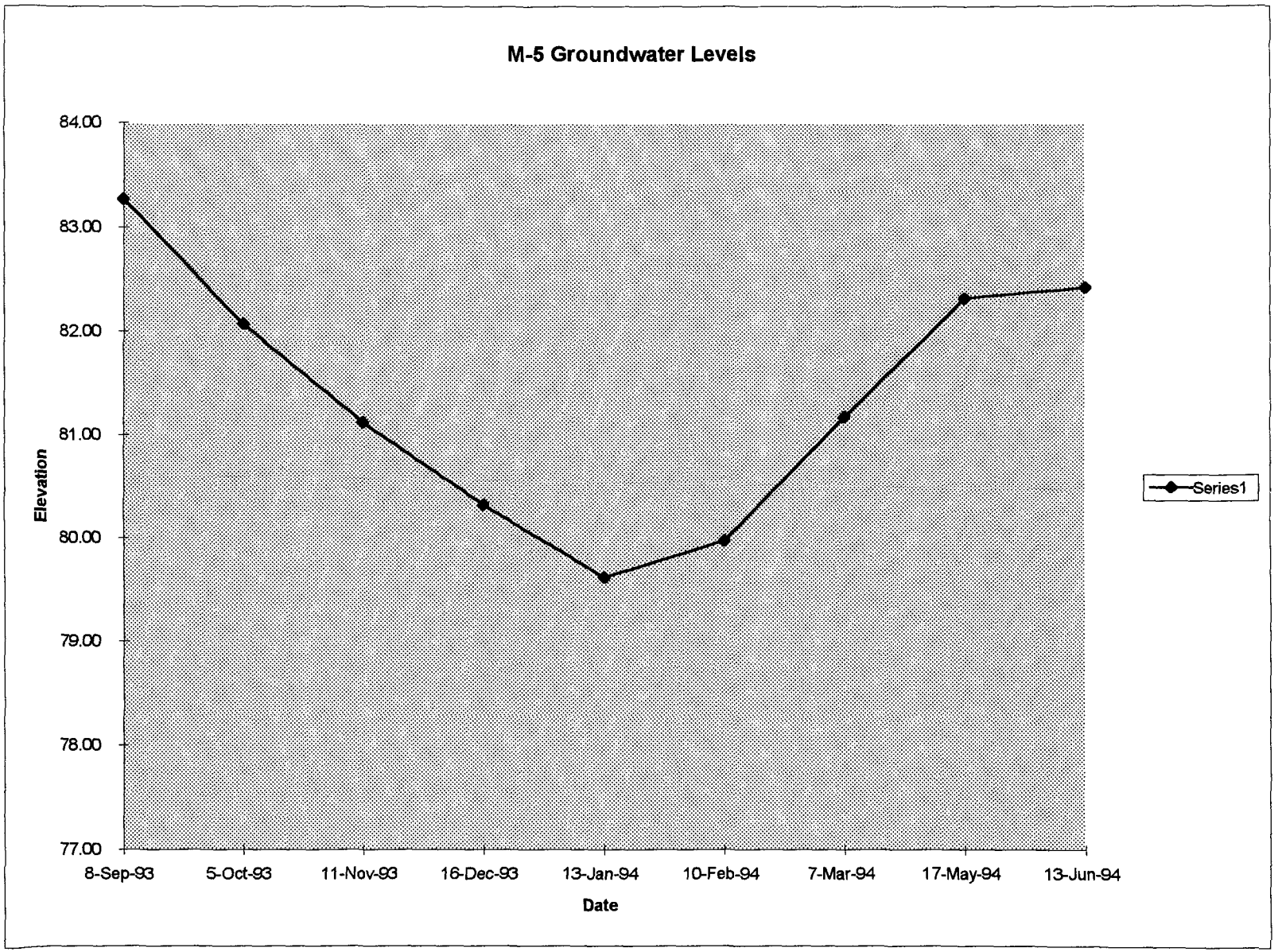
85.50
85.00
84.50
84.00
83.50
83.00
82.50
82.00
81.50
81.00
Elevation
8-Sep-93
5-Oct-93
11-Nov-93
16-Dec-93
13-Jan-94
10-Feb-94
7-Mar-94
17-May-94
13-Jun-94
Date
Series1


M-5 Groundwater Levels
84.00
83.00
82.00
81.00
80.00
79.00
78.00
77.00
Elevation
8-Sep-93
5-Oct-93
11-Nov-93
16-Dec-93
13-Jan-94
10-Feb-94
7-Mar-94
17-May-94
13-Jun-94
Date
Series1

2-Sep-94

JAQUEZ COM. C #1 & JAQUEZ COM. E #1
MONITOR WELL
WATER ANALYSIS SUMMARY

Well Number	Sample Number	Date Sampled	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylene ug/L	Total BTEX ug/L	Water Table Elev.	Floating Product Feet
R-1	N30969	7-Sep-93	991	164	113	1111	2379	85.92	ND
R-1	N31056	4-Oct-93	1280	1328	74	799	3481	85.27	0.08
R-1	N31240	10-Nov-93	242	322	15.0	93.9	673	83.67	ND
R-1	N31384	15-Dec-93	328	411	26.6	196	962	82.87	ND
R-1	940026	12-Jan-94	1830	1965	90.3	1053	4938	80.97	1.42
R-1	940233	9-Feb-94	1255	1504	42.3	730	3531	80.52	2.67
R-1*	940491	7-Mar-94	7600	8500	280	2700	19080	83.12	0.33
R-1	N/A	17-May-94	No Test	No Test	No Test	No Test	No Test	84.47	0.83
R-1	941003	13-Jun-94	1450	1930	70.0	944	7394	84.27	0.92
R-2	N30970	7-Sep-93	278	651	59.0	538	1526	86.15	ND
R-2	N31057	4-Oct-93	509	789	73.0	741	2112	85.00	ND
R-2	N31241	10-Nov-93	284	470	38.0	401	1193	83.75	ND
R-2	N31385	15-Dec-93	529	864	65.3	709	2167	82.95	0.08
R-2	940027	12-Jan-94	1722	2501	150	1702	6075	81.05	2.00
R-2	940234	9-Feb-94	2806	3667	89.5	1520	8083	80.95	2.17
R-2*	940492	7-Mar-94	5600	6800	290	2700	15390	83.30	0.33
R-2	N/A	17-May-94	No Test	No Test	No Test	No Test	No Test	84.90	0.58
R-2	941004	13-Jun-94	3210	3790	139	1670	8809	84.70	0.58
R-3	N30971	7-Sep-93	<2.0	61.4	22.0	207	290	86.54	ND
R-3	N31058	4-Oct-93	21	179	32.0	310	542	85.39	ND
R-3	N31242	10-Nov-93	6.19	27.7	10.4	89.2	134	84.59	ND
R-3	N31386	15-Dec-93	26	88.4	19.4	178	312	83.29	ND
R-3	940028	12-Jan-94	4.4	2.9	2.7	18	28	82.34	ND
R-3	940235	9-Feb-94	<2.0	10.9	8.3	59.6	79	82.89	ND
R-3*	940493	7-Mar-94	7.7	43	24	220	295	84.54	ND

2-Sep-94

JAQUEZ COM. C #1 & JAQUEZ COM. E #1
MONITOR WELL
WATER ANALYSIS SUMMARY

Well Number	Sample Number	Date Sampled	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylene ug/L	Total BTEX ug/L	Water Table Elev.	Floating Product Feet
R-3	N/A	17-May-94	No Test	No Test	No Test	No Test	No Test	85.69	ND
R-3	941005	13-Jun-94	3.03	41.4	18.4	188	251	85.99	ND
R-4	N30972	7-Sep-93	104	267	39.9	370	781	86.69	ND
R-4	N31060	4-Oct-93	118	266	41	364	789	84.59	ND
R-4	N31243	10-Nov-93	93.6	132	40.4	347	613	83.49	ND
R-4	N31387	15-Dec-93	102	161	48.4	418	729	82.69	ND
R-4	940030	12-Jan-94	124	101	38.5	353	617	81.84	ND
R-4	940237	9-Feb-94	120	51.4	20.8	150	342	82.29	ND
R-4*	940494	7-Mar-94	150	63	20	190	423	83.79	ND
R-4	N/A	17-May-94	No Test	No Test	No Test	No Test	No Test	84.94	ND
R-4	941007	13-Jun-94	179	60.6	17.2	176	433	85.24	ND
R-5	N30973	7-Sep-93	<2.0	<2.0	<2.0	<2.0	N/A	86.00	ND
R-5	N31061	4-Oct-93	<2.0	<2.0	<2.0	<2.0	N/A	85.20	ND
R-5	N31244	10-Nov-93	<2.0	<2.0	<2.0	<2.0	N/A	84.30	ND
R-5	N31388	15-Dec-93	<2.0	<2.0	<2.0	<2.0	N/A	83.60	ND
R-5	940031	12-Jan-94	<2.0	<2.0	<2.0	<2.0	N/A	82.60	ND
R-5	940238	9-Feb-94	<2.0	<2.0	<2.0	<2.0	N/A	82.80	ND
R-5*	940496	7-Mar-94	<0.5	<0.5	<0.5	<0.5	N/A	84.25	ND
R-5	N/A	17-May-94	No Test	No Test	No Test	No Test	No Test	85.10	ND
R-5	941008	13-Jun-94	<2.0	<2.0	<2.0	<2.0	N/A	85.60	ND
M-1	N30974	8-Sep-93	<2.0	<2.0	<2.0	<2.0	N/A	80.99	ND
M-1	N31062	5-Oct-93	<2.0	<2.0	<2.0	<2.0	N/A	79.99	ND
M-1	N31245	11-Nov-93	<2.0	<2.0	<2.0	<2.0	N/A	79.44	ND
M-1	N31389	16-Dec-93	<2.0	<2.0	<2.0	<2.0	N/A	78.64	ND
M-1	940032	13-Jan-94	<2.0	<2.0	<2.0	<2.0	N/A	78.34	ND

2-Sep-94

JAQUEZ COM. C #1 & JAQUEZ COM. E #1
MONITOR WELL
WATER ANALYSIS SUMMARY

Well Number	Sample Number	Date Sampled	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylene ug/L	Total BTEX ug/L	Water Table Elev.	Floating Product Feet
M-1	940239	10-Feb-94	<2.0	<2.0	<2.0	<2.0	N/A	78.94	ND
M-1*	940497	7-Mar-94	<0.5	<0.5	<0.5	<0.5	N/A	79.34	ND
M-1	N/A	17-May-94	No Test	No Test	No Test	No Test	No Test	79.24	ND
M-1	941009	13-Jun-94	<2.0	<2.0	<2.0	<2.0	N/A	80.39	ND
M-2	N30975	8-Sep-93	<2.0	<2.0	<2.0	<2.0	N/A	82.89	ND
M-2	N31063	5-Oct-93	2.0	2.0	<2.0	<2.0	4.0	81.39	ND
M-2	N31246	11-Nov-93	2.3	2.0	<2.0	<2.0	4.3	80.49	ND
M-2	N31390	16-Dec-93	<2.0	<2.0	<2.0	<2.0	N/A	79.89	ND
M-2	940033	13-Jan-94	<2.0	<2.0	<2.0	<2.0	N/A	79.34	ND
M-2	940240	10-Feb-94	<2.0	<2.0	<2.0	<2.0	N/A	79.54	ND
M-2*	940498	7-Mar-94	<0.5	<0.5	<0.5	<0.5	N/A	80.54	ND
M-2	N/A	17-May-94	No Test	No Test	No Test	No Test	No Test	81.74	ND
M-2	941010	13-Jun-94	<2.0	<2.0	<2.0	<2.0	N/A	81.59	ND
M-3	N30976	8-Sep-93	116	<2.0	3.0	37.6	157	83.49	ND
M-3	N31064	5-Oct-93	306	<2.0	4.0	19	329	82.54	ND
M-3	N31247	11-Nov-93	8.4	5.3	<2.0	2.6	16	81.74	ND
M-3	N31391	16-Dec-93	42	<2.0	<2.0	<2.0	42	80.89	ND
M-3	940034	13-Jan-94	19	2.1	<2.0	<2.0	21	80.24	ND
M-3	940241	10-Feb-94	<2.0	<2.0	<2.0	<2.0	N/A	81.19	ND
M-3*	940499	7-Mar-94	<0.5	<0.5	<0.5	2.5	3	81.89	ND
M-3	N/A	17-May-94	No Test	No Test	No Test	No Test	No Test	82.94	ND
M-3	941011	13-Jun-94	3.65	<2.0	<2.0	<2.0	4	83.09	ND
M-4	N30977	8-Sep-93	213	13.3	58	519	803	85.14	ND
M-4	N31065	5-Oct-93	302	2.0	55	395	754	84.21	ND

2-Sep-94

JAQUEZ COM. C #1 & JAQUEZ COM. E #1
MONITOR WELL
WATER ANALYSIS SUMMARY

Well Number	Sample Number	Date Sampled	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylene ug/L	Total BTEX ug/L	Water Table Elev.	Floating Product Feet
M-4	N31248	11-Nov-93	234	2.0	56	383	675	83.46	ND
M-4	N31392	16-Dec-93	171	<2.0	34.3	244	449	82.61	ND
M-4	940035	13-Jan-94	175	2.5	38	288	504	82.41	ND
M-4	940242	10-Feb-94	137	<2.0	29.8	192	359	82.86	ND
M-4*	940500	7-Mar-94	120	<2.5	27	220	367	83.11	ND
M-4	N/A	17-May-94	No Test	No Test	No Test	No Test	No Test	84.66	ND
M-4	941012	13-Jun-94	151	<2.0	28.4	246	425	84.91	ND
M-5	N30979	8-Sep-93	<2.0	<2.0	<2.0	<2.0	N/A	83.27	ND
M-5	N31066	5-Oct-93	<2.0	<2.0	<2.0	<2.0	N/A	82.07	ND
M-5	N31250	11-Nov-93	<2.0	<2.0	<2.0	<2.0	N/A	81.12	ND
M-5	N31393	16-Dec-93	<2.0	<2.0	<2.0	<2.0	N/A	80.32	ND
M-5	940036	13-Jan-94	<2.0	<2.0	<2.0	<2.0	N/A	79.62	ND
M-5	940243	10-Feb-94	<2.0	<2.0	<2.0	<2.0	N/A	79.97	ND
M-5*	940501	7-Mar-94	<0.5	<0.5	<0.5	<0.5	N/A	81.17	ND
M-5	N/A	17-May-94	No Test	No Test	No Test	No Test	No Test	82.32	ND
M-5	941013	13-Jun-94	<2.0	<2.0	<2.0	<2.0	N/A	82.42	ND

* = PAH Analysis Performed

Shaded areas indicate levels above regulatory limit.

T.O.P. = Top of Pipe

STATIC LEVELS ARE MEASURED FROM THE TOP OF THE WATER LEVEL.
(NO CORRECTION FOR APPARENT LNAPL THICKNESS)

Regulatory Limits:	Benzene <10 ug/L
	Toluene <750 ug/L
	Ethylbenzene <750 ug/L
	Total Xylenes <620 ug/L

Analytical **Technologies,** Inc.

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

ATI I.D. **403336**

March 29, 1994

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

Project Name/Number: JAQUEZ 10604

Attention: John Lambdin

On **03/10/94**, Analytical Technologies, Inc., (ADHS License No. AZ0015), 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.

All analyses were performed by Analytical Technologies, Inc., 225 Commerce Drive, Fort Collins, CO.

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:jd

Enclosure

Analytical Technologies, Inc.

LIENT : EL PASO NATURAL GAS COMPANY DATE RECEIVED: 03/10/94
ROJECT # : 10604
ROJECT NAME: JAQUEZ REPORT DATE : 03/29/94

ATI I.D.: 403336

TI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
03336-01	940491- R-1	AQUEOUS	03/07/94
03336-02	940492 - R-2	AQUEOUS	03/07/94
03336-03	940493- R-3	AQUEOUS	03/07/94
03336-04	940494- R-4	AQUEOUS	03/07/94
03336-05	940495- R-4 Field Dup	AQUEOUS	03/07/94
03336-06	940496- R-5	AQUEOUS	03/07/94
03336-08	940497- m-1	AQUEOUS	03/07/94
03336-08	940498- m-2	AQUEOUS	03/07/94
03336-09	940499- m-3	AQUEOUS	03/07/94
03336-10	940500- m-4	AQUEOUS	03/07/94
03336-11	940501- m-5	AQUEOUS	03/07/94

----TOTALS----

MATRIX	# SAMPLES
AQUEOUS	11

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

POLYNUCLEAR AROMATIC HYDROCARBONS

Analytical Technologies, Inc.

Method 610

Sample ID

403336-1

EPN ID 940491 MW R-1

Lab Name: Analytical Technologies Inc.
Client Name: ATI-NM
Client Project ID: EPN -- 403336
Lab Sample ID: 94-03-085-01

Sample Matrix: Water
Cleanup: N/A

Date Collected: 03/07/94
Date Extracted: 03/11/94
Date Analyzed: 03/17/94

Sample Volume: 1050 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	17	0.30
Acenaphthylene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	1.5	0.040
Phenanthrene	2.4	0.030
Anthracene	ND	0.010
Fluoranthene	3.1	0.030
Pyrene	ND	0.040
Benzo(a)anthracene	0.25	0.010
Chrysene	0.54	0.020
Benzo(b)fluoranthene	0.18	0.010
Benzo(k)fluoranthene	0.35	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a,h)anthracene	ND	0.030
Benzo(g,h,i)perylene	ND	0.040
Indeno(1,2,3,c,d)pyrene	ND	0.030
1-Methylnaphthalene	22	0.30
2-Methylnaphthalene	23	0.30

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	66	34 - 120

ND - Not Detected

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 610

Analytical Technologies, Inc.

Lab Name: Analytical Technologies Inc.
Client Name: ATI-NM
Client Project ID: EPN -- 403336
Lab Sample ID: 94-03-085-02

Sample Matrix: Water
Cleanup: N/A

Sample ID: 403336-2 940492

Date Collected: 03/07/94 MW
Date Extracted: 03/11/94 R-2
Date Analyzed: 03/17/94

Sample Volume: 1050 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	24	0.30
Acenaphthylene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	1.9	0.040
Phenanthrene	2.8	0.030
Anthracene	ND	0.010
Fluoranthene	4.1	0.030
Pyrene	ND	0.040
Benzo(a)anthracene	0.10	0.010
Chrysene	0.68	0.020
Benzo(b)fluoranthene	0.10	0.010
Benzo(k)fluoranthene	0.18	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a,h)anthracene	0.53	0.030
Benzo(g,h,i)perylene	ND	0.040
Indeno(1,2,3,c,d)pyrene	ND	0.030
1-Methylnaphthalene	25	0.30
2-Methylnaphthalene	25	0.30

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	87	34 - 120

ND - Not Detected

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 610

Analytical Technologies, Inc.

Lab Name: Analytical Technologies Inc.
Client Name: ATI-NM
Client Project ID: EPN -- 403336
Lab Sample ID: 94-03-085-03

Sample Matrix: Water
Cleanup: N/A

Sample ID

403336-3

940493

Date Collected: 03/07/94 MW
Date Extracted: 03/11/94 R-3
Date Analyzed: 03/17/94

Sample Volume: 1050 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	1.8	0.30
Acenaphthylene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	0.17	0.040
Phenanthrene	0.11	0.030
Anthracene	ND	0.010
Fluoranthene	0.11	0.030
Pyrene	ND	0.040
Benzo(a)anthracene	ND	0.010
Chrysene	ND	0.020
Benzo(b)fluoranthene	ND	0.010
Benzo(k)fluoranthene	ND	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a,h)anthracene	ND	0.030
Benzo(g,h,i)perylene	ND	0.040
Indeno(1,2,3,c,d)pyrene	ND	0.030
1-Methylnaphthalene	1.2	0.30
2-Methylnaphthalene	1.5	0.30

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	87	34 - 120

ND - Not Detected

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 610

Analytical Technologies, Inc.

Lab Name: Analytical Technologies Inc.
Client Name: ATI-NM
Client Project ID: EPN -- 403336
Lab Sample ID: 94-03-085-04

Sample Matrix: Water
Cleanup: N/A

Sample ID

403336-4 940494

Date Collected: 03/07/94 MW
Date Extracted: 03/11/94 R-4
Date Analyzed: 03/17/94

Sample Volume: 1050 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	2.7	0.30
Acenaphthylene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	0.54	0.040
Phenanthrene	0.57	0.030
Anthracene	ND	0.010
Fluoranthene	1.0	0.030
Pyrene	ND	0.040
Benzo(a)anthracene	0.10	0.010
Chrysene	ND	0.020
Benzo(b)fluoranthene	ND	0.010
Benzo(k)fluoranthene	0.019	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a,h)anthracene	0.048	0.030
Benzo(g,h,i)perylene	ND	0.040
Indeno(1,2,3,c,d)pyrene	ND	0.030
1-Methylnaphthalene	4.6	0.30
2-Methylnaphthalene	4.9	0.30

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	87	34 - 120

ND - Not Detected

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 610

Analytical Technologies, Inc.

Lab Name: Analytical Technologies Inc.
Client Name: ATI-NM
Client Project ID: EPN -- 403336
Lab Sample ID: 94-03-085-05

Sample Matrix: Water
Cleanup: N/A

Sample ID: **403336-5**

940495
MW
R-4
Field
DUP

Date Collected: 03/07/94
Date Extracted: 03/11/94
Date Analyzed: 03/17/94

Sample Volume: 1050 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	2.5	0.30
Acenaphthylene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	0.57	0.040
Phenanthrene	0.76	0.030
Anthracene	ND	0.010
Fluoranthene	1.6	0.030
Pyrene	ND	0.040
Benzo(a)anthracene	0.085	0.010
Chrysene	0.21	0.020
Benzo(b)fluoranthene	ND	0.010
Benzo(k)fluoranthene	0.072	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a,h)anthracene	0.43	0.030
Benzo(g,h,i)perylene	ND	0.040
Indeno(1,2,3,c,d)pyrene	ND	0.030
1-Methylnaphthalene	4.8	0.30
2-Methylnaphthalene	5.2	0.30

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	70	34 - 120

ND - Not Detected

POLYNUCLEAR AROMATIC HYDROCARBON

Analytical Technologies, Inc.

Method 610

Lab Name: Analytical Technologies Inc.
Client Name: ATI-NM
Client Project ID: EPN -- 403336
Lab Sample ID: 94-03-085-06

Sample Matrix: Water
Cleanup: N/A

Sample ID

403336-6

940496 MW R-5

Date Collected: 03/07/94
Date Extracted: 03/11/94
Date Analyzed: 03/17/94

Sample Volume: 1050 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.30
Acenaphthylene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	ND	0.040
Phenanthrene	ND	0.030
Anthracene	ND	0.010
Fluoranthene	ND	0.030
Pyrene	ND	0.040
Benzo(a)anthracene	ND	0.010
Chrysene	ND	0.020
Benzo(b)fluoranthene	ND	0.010
Benzo(k)fluoranthene	ND	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a,h)anthracene	ND	0.030
Benzo(g,h,i)perylene	ND	0.040
Indeno(1,2,3,c,d)pyrene	ND	0.030
1-Methylnaphthalene	ND	0.30
2-Methylnaphthalene	ND	0.30

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	85	34 - 120

ND - Not Detected

POLYNUCLEAR AROMATIC HYDROCARBONS

Analytical Technologies, Inc.

Method 610

Sample ID: 403336-7

G40497

Lab Name: Analytical Technologies Inc.
Client Name: ATI-NM
Client Project ID: EPN -- 403336
Lab Sample ID: 94-03-085-07

Sample Matrix: Water
Cleanup: N/A

Date Collected: 03/07/94
Date Extracted: 03/11/94
Date Analyzed: 03/17/94

Sample Volume: 1050 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.30
Acenaphthylene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	ND	0.040
Phenanthrene	ND	0.030
Anthracene	ND	0.010
Fluoranthene	ND	0.030
Pyrene	ND	0.040
Benzo(a)anthracene	ND	0.010
Chrysene	ND	0.020
Benzo(b)fluoranthene	ND	0.010
Benzo(k)fluoranthene	ND	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a.h)anthracene	ND	0.030
Benzo(g,h.i)perylene	ND	0.040
Indeno(1.2.3,c.d)pyrene	ND	0.030
1-Methylnaphthalene	ND	0.30
2-Methylnaphthalene	ND	0.30

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	89	34 - 120

ND - Not Detected

POLYNUCLEAR AROMATIC HYDROCARBON

Analytical Technologies, Inc.

Method 610

Lab Name: Analytical Technologies Inc.
Client Name: ATI-NM
Client Project ID: EPN -- 403336
Lab Sample ID: 94-03-085-08

Sample Matrix: Water
Cleanup: N/A

Sample ID

403336-8

940498 MW M-2

Date Collected: 03/07/94
Date Extracted: 03/11/94
Date Analyzed: 03/17/94

Sample Volume: 1050 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.30
Acenaphthylene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	ND	0.040
Phenanthrene	ND	0.030
Anthracene	ND	0.010
Fluoranthene	ND	0.030
Pyrene	ND	0.040
Benzo(a)anthracene	ND	0.010
Chrysene	ND	0.020
Benzo(b)fluoranthene	ND	0.010
Benzo(k)fluoranthene	ND	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a,h)anthracene	ND	0.030
Benzo(g,h,i)perylene	ND	0.040
Indeno(1,2,3,c,d)pyrene	ND	0.030
1-Methylnaphthalene	ND	0.30
2-Methylnaphthalene	ND	0.30

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	77	34 - 120

ND - Not Detected

POLYNUCLEAR AROMATIC HYDROCARBON

Analytical Technologies, Inc.

Method 610

Lab Name: Analytical Technologies Inc.
Client Name: ATI-NM
Client Project ID: EPN -- 403336
Lab Sample ID: 94-03-085-09

Sample Matrix: Water
Cleanup: N/A

Sample ID

403336-9

940499

Date Collected: 03/07/94
Date Extracted: 03/11/94
Date Analyzed: 03/17/94

MW
MW-3

Sample Volume: 1050 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.30
Acenaphthylene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	0.054	0.040
Phenanthrene	0.23	0.030
Anthracene	ND	0.010
Fluoranthene	0.37	0.030
Pyrene	0.14	0.040
Benzo(a)anthracene	ND	0.010
Chrysene	ND	0.020
Benzo(b)fluoranthene	ND	0.010
Benzo(k)fluoranthene	ND	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a,h)anthracene	ND	0.030
Benzo(g,h,i)perylene	ND	0.040
Indeno(1,2,3,c,d)pyrene	ND	0.030
1-Methylnaphthalene	ND	0.30
2-Methylnaphthalene	ND	0.30

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	62	34 - 120

ND - Not Detected

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 610

Analytical Technologies, Inc.

Lab Name: Analytical Technologies Inc.
Client Name: ATI-NM
Client Project ID: EPN -- 403336
Lab Sample ID: 94-03-085-10

Sample Matrix: Water
Cleanup: N/A

Sample ID

403336-10

940500

Date Collected: 03/07/94 MW
Date Extracted: 03/11/94
Date Analyzed: 03/17/94 M-4

Sample Volume: 1050 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	2.6	0.30
Acenaphthylene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	0.24	0.040
Phenanthrene	0.087	0.030
Anthracene	ND	0.010
Fluoranthene	0.042	0.030
Pyrene	ND	0.040
Benzo(a)anthracene	ND	0.010
Chrysene	ND	0.020
Benzo(b)fluoranthene	ND	0.010
Benzo(k)fluoranthene	ND	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a,h)anthracene	ND	0.030
Benzo(g,h,i)perylene	ND	0.040
Indeno(1,2,3,c,d)pyrene	ND	0.030
1-Methylnaphthalene	1.3	0.30
2-Methylnaphthalene	1.6	0.30

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	76	34 - 120

ND - Not Detected

POLYNUCLEAR AROMATIC HYDROCARBON

Analytical Technologies, Inc. Method 610

Lab Name: Analytical Technologies Inc.
Client Name: ATI-NM
Client Project ID: EPN -- 403336
Lab Sample ID: 94-03-085-11

Sample Matrix: Water
Cleanup: N/A

Sample ID

403336-11

G40501
MW
M-5

Date Collected: 03/07/94
Date Extracted: 03/11/94
Date Analyzed: 03/17/94

Sample Volume: 1050 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.30
Acenaphthylene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	ND	0.040
Phenanthrene	ND	0.030
Anthracene	ND	0.010
Fluoranthene	ND	0.030
Pyrene	ND	0.040
Benzo(a)anthracene	ND	0.010
Chrysene	ND	0.020
Benzo(b)fluoranthene	ND	0.010
Benzo(k)fluoranthene	ND	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a,h)anthracene	ND	0.030
Benzo(g,h,i)perylene	ND	0.040
Indeno(1,2,3,c,d)pyrene	ND	0.030
1-Methylnaphthalene	ND	0.30
2-Methylnaphthalene	ND	0.30

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	67	34 - 120

ND - Not Detected

POLYNUCLEAR AROMATIC HYDROCARBON

Analytical Technologies, Inc.

Method 610

Lab Name: Analytical Technologies Inc.
Client Name: ATI-NM
Client Project ID: EPN -- 403336
Lab Sample ID: WRB1 03/11/94

Sample Matrix: Water
Cleanup: N/A

Sample ID

Reagent Blank

Date Collected: N/A
Date Extracted: 03/11/94
Date Analyzed: 03/17/94

Sample Volume: 1000 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.30
Acenaphthylene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	ND	0.040
Phenanthrene	ND	0.030
Anthracene	ND	0.010
Fluoranthene	ND	0.030
Pyrene	ND	0.040
Benzo(a)anthracene	ND	0.010
Chrysene	ND	0.020
Benzo(b)fluoranthene	ND	0.010
Benzo(k)fluoranthene	ND	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a,h)anthracene	ND	0.030
Benzo(g,h,i)perylene	ND	0.040
Indeno(1,2,3,c,d)pyrene	ND	0.030
1-Methylnaphthalene	ND	0.30
2-Methylnaphthalene	ND	0.30

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	83	34 - 120

ND - Not Detected

Accepted.
3/22/94

POLYNUCLEAR AROMATIC HYDROCARBON MATRIX SPIKE

Analytical Technologies, Inc.

Method 610

Lab Name: Analytical Technologies, Inc.

Client Name: ATI-NM
Client Project ID: EPN -- 403336

Lab Sample ID: 94-03-080-01

Sample Matrix: Water

Sample ID: In House

Date Extracted: 03/11/94
Date Analyzed: 03/18/94

Instrument ID: HPLC

Acceptable
3/14/94

Analyte	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS Percent Recovery	QC Limits % Rec
Acenaphthylene	10	ND	2.0	20 *	36-113
Phenanthrene	1.0	9.9	12	÷	30-114
Pyrene	1.0	ND	*	*	43-108
Dibenzo(a,h)anthracene	1.0	ND	0.22	22 *	42-111
Benzo(k)fluoranthene	0.25	ND	0.074	30 *	45-115

Analyte	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD Percent Recovery	RPD	QC Limits RPD
Acenaphthylene	10	2.4	24 *	15	20
Phenanthrene	1.0	7.2	÷	÷	20
Pyrene	1.0	*	*	*	20
Dibenzo(a,h)anthracene	1.0	0.27	27 *	20	20
Benzo(k)fluoranthene	0.25	0.077	31 *	3	20

SURROGATE RECOVERY MS/MSD

Analyte	% Recovery (MS)	% Recovery(MSD)	% Rec Limits
2-Chloroanthracene	71	83	15 - 117

ND = Not Detected
÷ Cannot be calculated due to high levels of target analyte.
* - Out of limits due to matrix interference and required dilution.

Acceptable.

POLYNUCLEAR AROMATIC HYDROCARBON BLANK SPIKE

Analytical Technologies, Inc.

Method 610

Lab Name: Analytical Technologies, Inc.

Lab Sample ID: WBS1 03/11/94

Client Name: ATI-NM

Client Project ID: EPN -- 403336

Date Extracted: 03/11/94

Date Analyzed: 03/18/94

Sample Matrix: Water

Instrument ID: HPLC

Analyte	Spike Added (ug/L)	BS Concentration (ug/L)	BS Percent Recovery	QC Limits % Rec
Acenaphthylene	10	5.7	57	36-113
Phenanthrene	1.0	0.67	67	30-114
Pyrene	1.0	0.56	56	43-108
Dibenzo(a,h)anthracene	1.0	0.49	49	42-111
Benzo(k)fluoranthene	0.25	0.12	48	45-115

SURROGATE RECOVERY BS

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	95	15 - 117

Acceptable.
4/14/94

Analytical Technologies, Inc., Albuquerque, NM
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland • Albuquerque

DATE: 3-7-94 PAGE 1 OF 2

405830

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

PROJECT MANAGER: JOHN CAMPBELL

COMPANY: EL PASO NATURAL GAS CO.
ADDRESS: P.O. BOX 4990
FARMINGTON N.M. 87499
PHONE: 505-599-2144
FAX: 505-599-2261

BILL TO: SAME AS ABOVE
COMPANY:
ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
940491	3-7-94	1137	WATER	01
940492	3-7-94	1157	WATER	02
940493	3-7-94	1235	WATER	03
940494	3-7-94	1345	WATER	04
940495	3-7-94	1345	WATER	05
940496	3-7-94	1405	WATER	06
940497	3-7-94	1502	WATER	07
940498	3-7-94	1517	WATER	08
940499	3-7-94	1543	WATER	09

ANALYSIS REQUEST

Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	BTXE/MTBE (8020)	Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.	Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Volatile Organics GC/MS (624/8240)	Polynuclear Aromatics (610/8310)	SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal	The 13 Priority Pollutant Metals	RCRA Metals by Total Digestion	RCRA Metals by TCLP (1311)	NUMBER OF CONTAINERS
											X								
											X								
											X								
											X								
											X								
											X								
											X								
											X								
											X								

PROJECT INFORMATION

PROJ. NO.: 10604
PROJ. NAME: JAQUEZ
P.O. NO.:
SHIPPED VIA:

SAMPLE RECEIPT

NO. CONTAINERS	18
CUSTODY SEALS	Y / N / (NA)
RECEIVED INTACT	Y
RECEIVED COLD	Y

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

Comments: CHARGE TO
86-10604-01-0911-0030-5/-1250

SAMPLED & RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Dennis Bird Time: 1617	Signature: Time:	Signature: Time:
Printed Name: DENNIS BIRD Date: 3-7-94	Printed Name: Date:	Printed Name: Date:
Company: EL PASO NATURAL GAS Phone: 599-2142	Company:	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: (LAB) 3.
Signature: Time:	Signature: Time:	Signature: Time:
Printed Name: Date:	Printed Name: Date:	Printed Name: Date: 3/10/94
Company:	Company:	Analytical Technologies, Inc.

ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777 DISTRIBUTION: White, Canary - ATI • Pink - ORIGINATOR

Analytical Technologies, Inc., Albuquerque, NM
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland • Albuquerque

DATE: 3-7-94 PAGE 2 OF 2

4033360

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

PROJECT MANAGER: JOHN LAMBOIN

COMPANY: EL PASO NATURAL GAS CO.
ADDRESS: P.O. BOX 4990
FARMINGTON N.M. 87499
PHONE: 505-599-2144
FAX: 505-599-2261

BILL TO: SAME AS ABOVE
COMPANY:
ADDRESS:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
940500	3-7-94	1608	WATER	10
940501	3-7-94	1635	WATER	11

	Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	BTXE/MTBE (8020)			Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.			Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Volatile Organics GC/MS (624/8240)	Polynuclear Aromatics (610/8310)			SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal			The 13 Priority Pollutant Metals	RCRA Metals by Total Digestion	RCRA Metals by TCLP (1311)		NUMBER OF CONTAINERS
940500																X												2
940501																X												2

PROJECT INFORMATION

PROJ. NO.: 10604
PROJ. NAME: JAQUEZ
P.O. NO.:
SHIPPED VIA:

SAMPLE RECEIPT

NO. CONTAINERS	4
CUSTODY SEALS	Y / N / (NA)
RECEIVED INTACT	Y
RECEIVED COLD	Y

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

Comments: CHARGE TO
186-10604-01-0911-0030-51-1258

SAMPLED & RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Dennis Bird Time: 1630	Signature: Time:	Signature: Time:
Printed Name: DENNIS BIRD Date: 3-7-94	Printed Name: Date:	Printed Name: Date:
Company: EL PASO NATURAL GAS Phone: 599-2144	Company:	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: (LAB) 3.
Signature: Time:	Signature: Time:	Signature: Time: 1155
Printed Name: Date:	Printed Name: Date:	Printed Name: Date:
Company:	Company:	Analytical Technologies, Inc.

ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777 DISTRIBUTION: White, Canary - ATI • Pink - ORIGINATOR

Analytical**Technologies,**Inc. Albuquerque, NM

Chain of Custody

DATE 3/10/94 PAGE 1 OF 2

NETWORK PROJECT MANAGER: BETH PROFFITT

COMPANY: **Analytical Technologies, Inc.**

ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87107

CLIENT PROJECT MANAGER:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	TOX	TOC	ORGANIC LEAD	SULFIDE	SURFACTANTS (MBAS)	632/632 MOD	619/619 MOD	610/6310	8240 /TCLP 1311) ZHE	Diesel/Gasoline/BTXE/MTBE/ (MOD 8015/8020)	Volatile Organics GC/MS (624/8240)	NACE	ASBESTOS	BOD	TOTAL COLIFORM	FECAL COLIFORM	GROSS ALPHA/BETA	RADIUM 226/228	AIR - O2, CO2, METHANE	AIR/Diesel/Gasoline/BTXE/ (MOD 8015/8020)	NUMBER OF CONTAINERS
403336-1	3/7/94	1137	DW	01								X													2
-2		1157		02								X													2
-3		1235		03								X													2
-4		1345		04								X													2
-5		1345		05								X													2
-6		1405		06								X													2
-7		1502		07								X													2
-8		1517		08								X													2
-9		1543		09								X													2

PROJECT INFORMATION

PROJECT NUMBER: 403336
PROJECT NAME: EPN
QC LEVEL: (STD.) IV
QC REQUIRED: MS MSD BLANK
TAT: (STANDARD) RUSHI

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS	21
CHAIN OF CUSTODY SEALS	
INTACT?	N/A
RECEIVED GOOD COND./COLD	Y
LAB NUMBER	94-03-055

DUE DATE: 3/24/94
RUSH SURCHARGE:
CLIENT DISCOUNT: 10 %

W.O.# 1K574

Only one container provided for 403336-1.

SAMPLES SENT TO:

SAN DIEGO	
FT. COLLINS	X
RENTON	
PENSACOLA	
PHOENIX	
BARRINGER	
FIBERQUANT	

RELINQUISHED BY: 1.
Signature: Terri Dottie Time: 17:30
Printed Name: Terri Dottie Date: 3/10/94
Analytical Technologies, Inc.
Albuquerque

RECEIVED BY: (LAB) 1.
Signature: Time:
Printed Name: Date:
Company: AIRBORNE

RELINQUISHED BY: 2.
Signature: Time:
Printed Name: Date
Company: AIRBORNE

RECEIVED BY: (LAB) 2.
Signature: Debi Burdick Time: 10:45a
Printed Name: DEBI BURDICK Date: 3/11/94
Company: ATI

Analytical**Technologies,**Inc. Albuquerque, NM

Chain of Custody

DATE 3/10/94 PAGE 2 OF 2

NETWORK PROJECT MANAGER: BETH PROFFITT

COMPANY: **Analytical Technologies, Inc.**

ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87107

CLIENT PROJECT MANAGER:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	TOX	TOC	ORGANIC LEAD	SULFIDE	SURFACTANTS (MBAS)	632/632 MOD	619/619 MOD	610/8310	8240 /TCLP 1311) ZHE	Diesel/Gasoline/BTXE/MTBE/ (MOD 8015/8020)	Volatile Organics GC/MS (624/8240)	NACE	ASBESTOS	BOD	TOTAL COLIFORM	FECAL COLIFORM	GROSS ALPHA/BETA	RADIUM 226/228	AIR - O2, CO2, METHANE	AIR/Diesel/Gasoline/BTXE/ (MOD 8015/8020)	NUMBER OF CONTAINERS
H03336-10	3/7/94	1618	AQ	10								X													03
-11	"	1635	"	11								X													

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJECT NUMBER:	H03336	TOTAL NUMBER OF CONTAINERS	21
PROJECT NAME:	EPN	CHAIN OF CUSTODY SEALS	N/A
QC LEVEL:	(STD) IV	INTACT?	
QC REQUIRED:	MS MSD BLANK	RECEIVED GOOD COND./COLD	Y
TAT:	(STANDARD) RUSH!	LAB NUMBER	94-03-085

DUE DATE: 3/24/94 W.O.#K574

RUSH SURCHARGE:

CLIENT DISCOUNT: 10 %

SAMPLES SENT TO:

- SAN DIEGO
- FT. COLLINS X
- RENTON
- PENSACOLA
- PHOENIX
- BARRINGER
- FIBERQUANT

RELINQUISHED BY: 1.

Signature: Jessi Dottie Time: 1730

Printed Name: Jessi Dottie Date: 3/10/94

Analytical Technologies, Inc.
Albuquerque

RECEIVED BY: (LAB) 1.

Signature: Time:

Printed Name: Date:

Company:

RELINQUISHED BY: 2.

Signature: Time:

Printed Name: Date

Company: Auburn

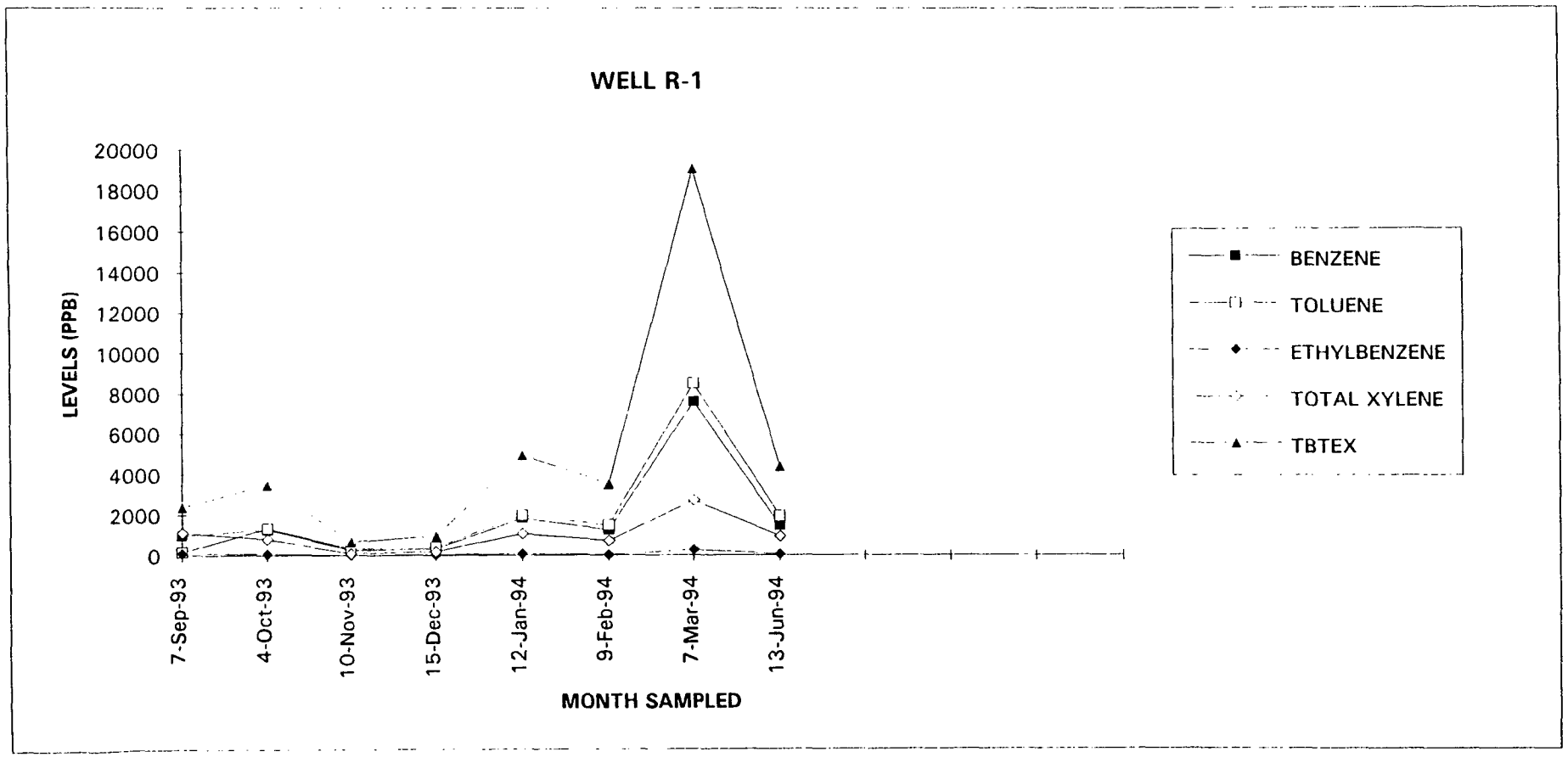
RECEIVED BY: (LAB) 2.

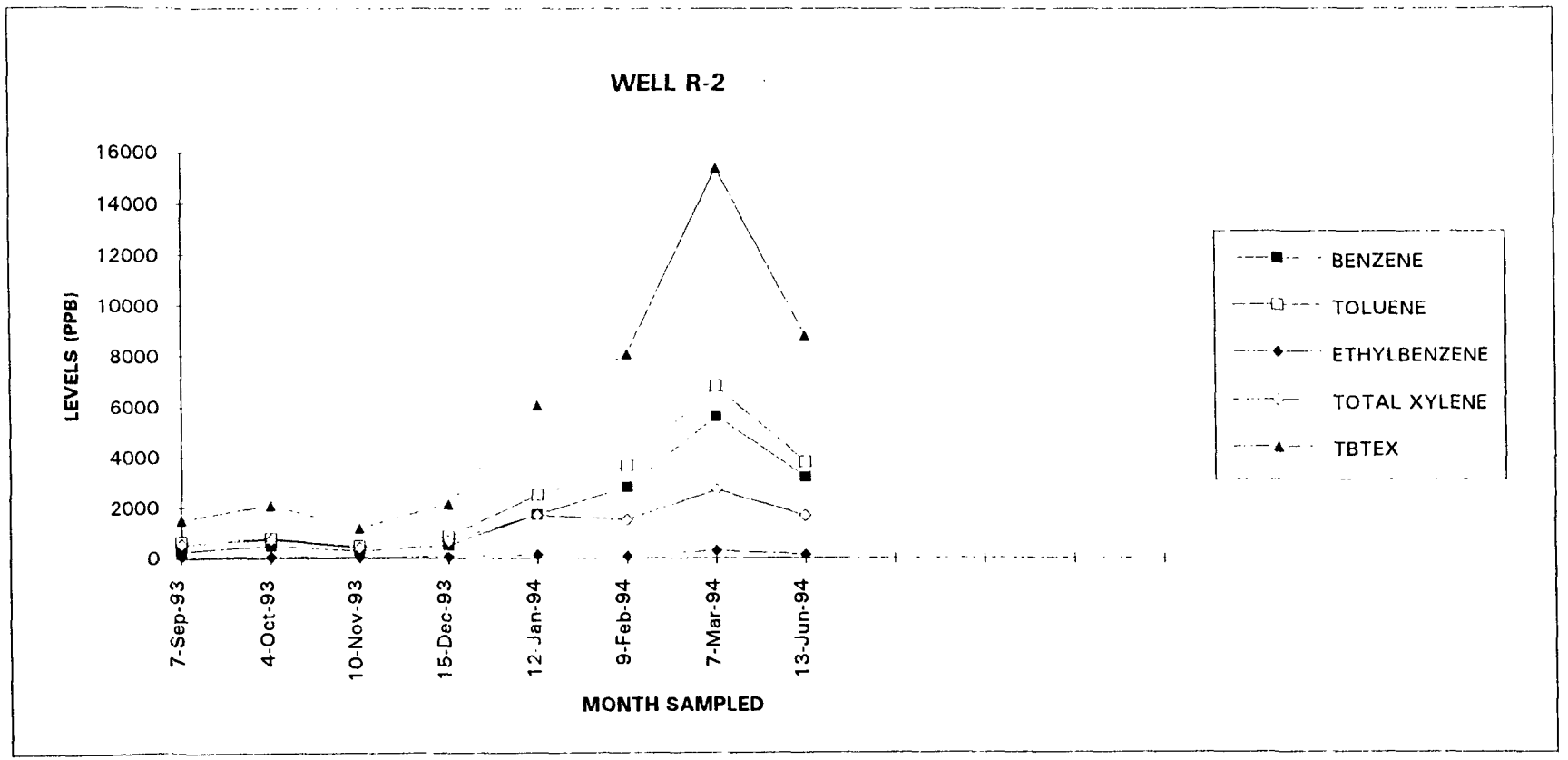
Signature: Debi Brodrick Time: 10:45a

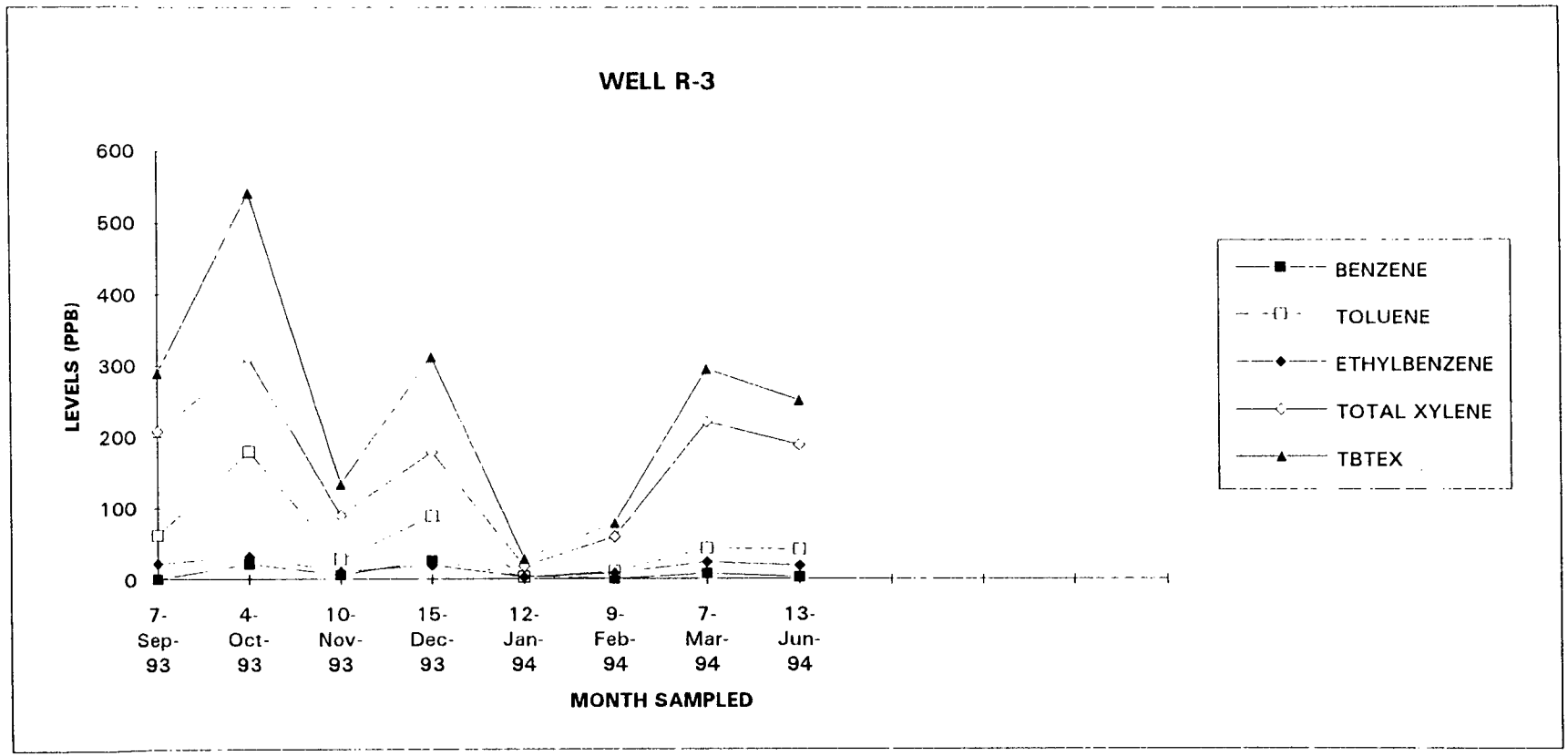
Printed Name: DEBI BRODRICK Date: 3/4/94

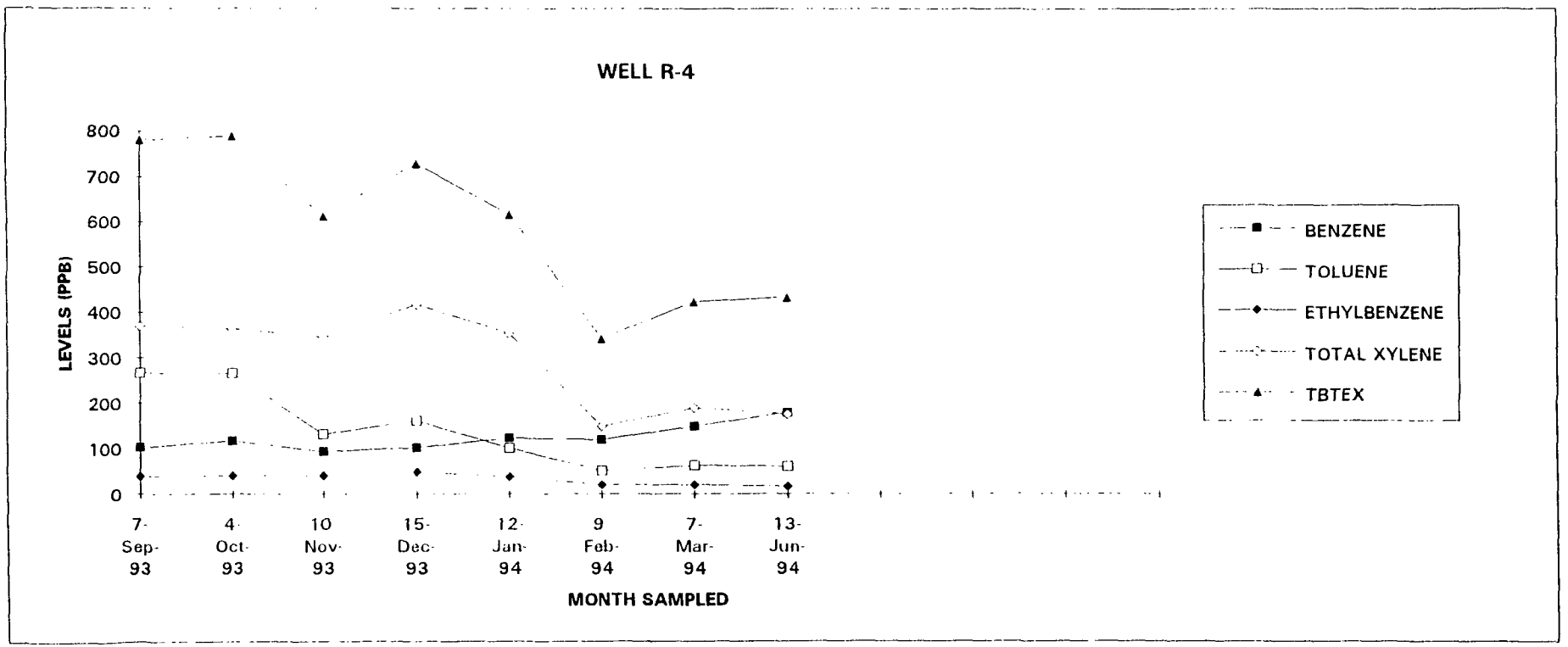
Company: ATI

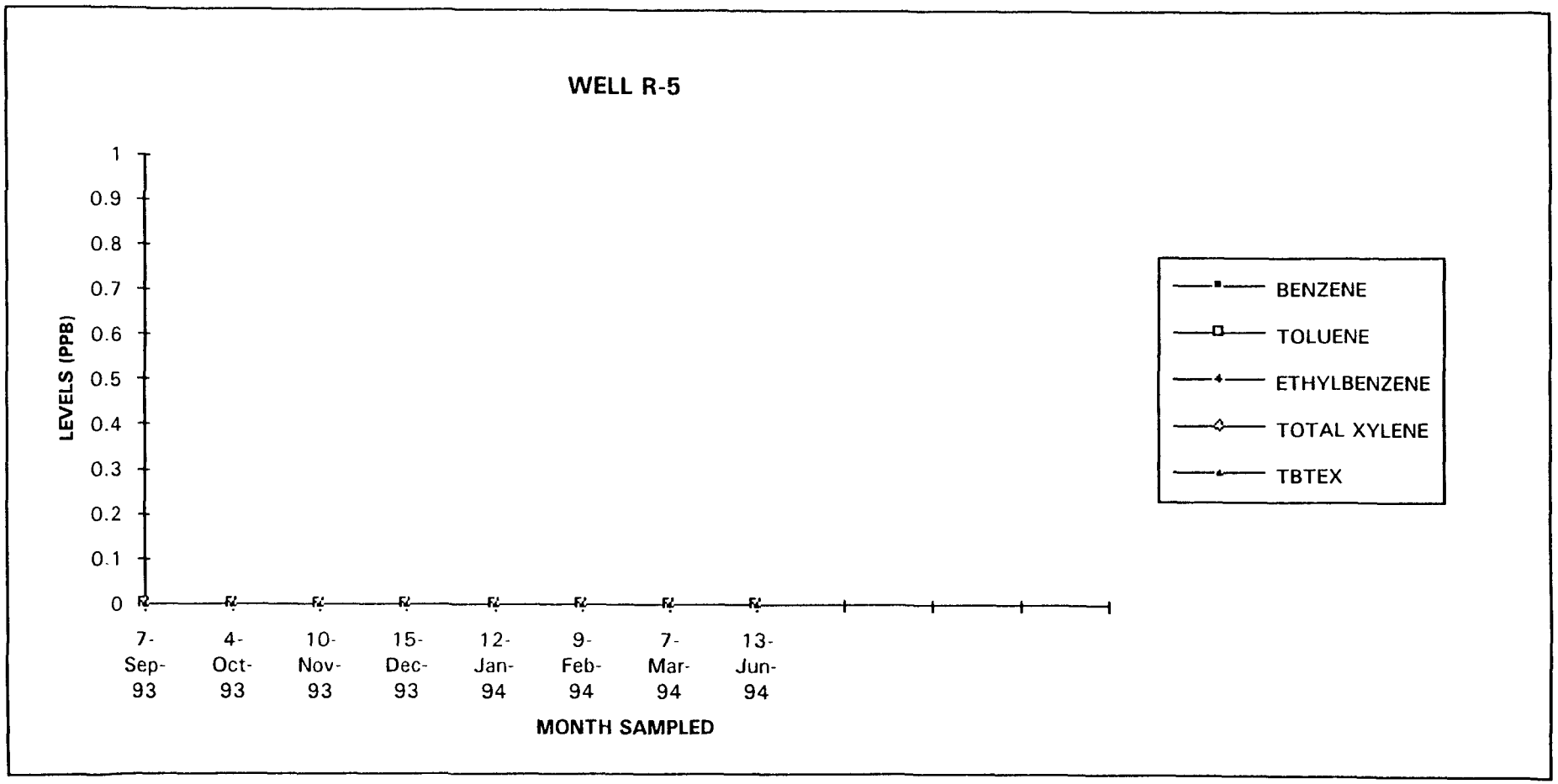
ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777 DISTRIBUTION: White, Canary - ATI • Pink - ORIGINATOR

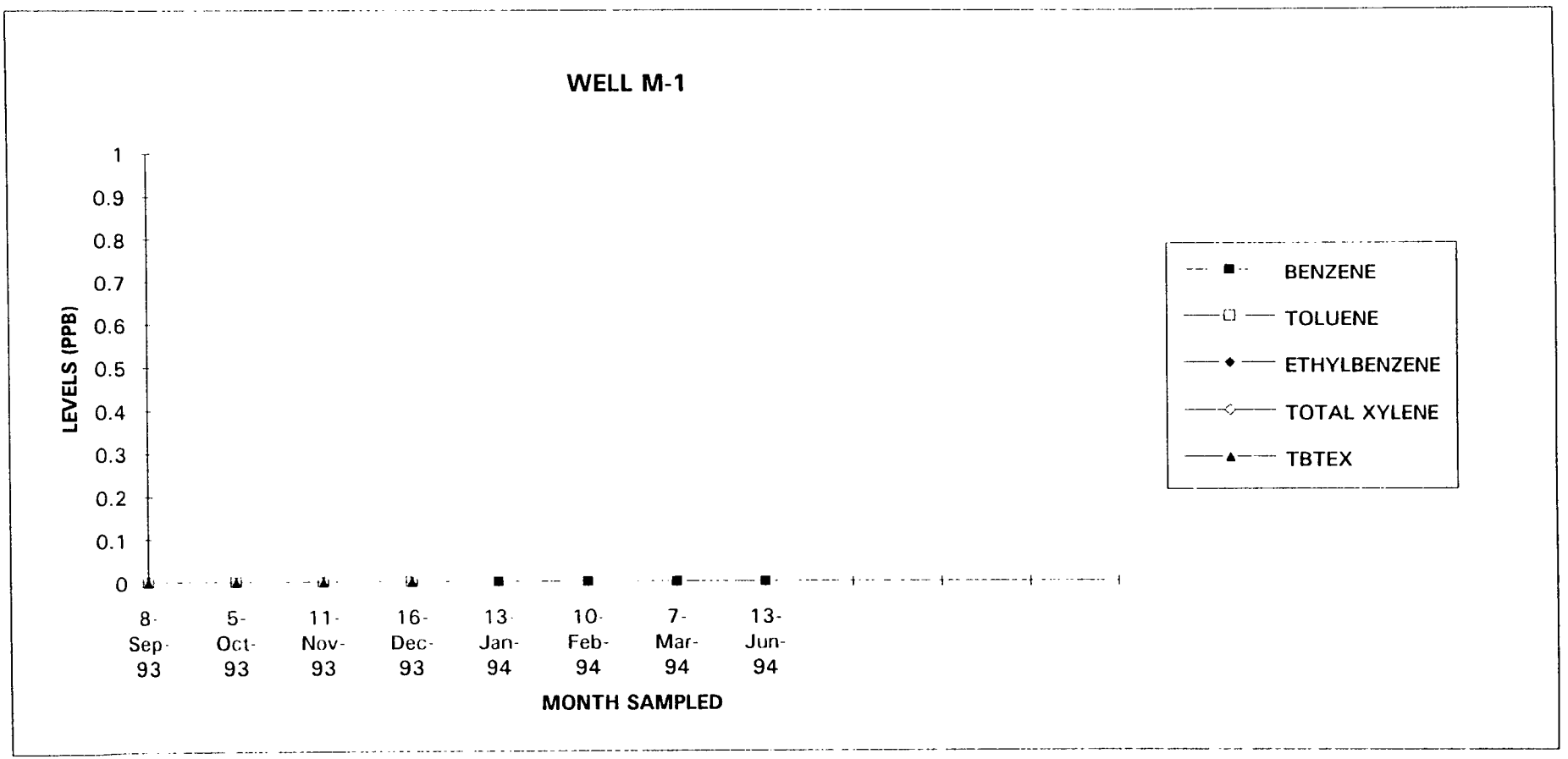

WELL R-1
LEVELS (PPB)
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
7-Sep-93
4-Oct-93
10-Nov-93
15-Dec-93
12-Jan-94
9-Feb-94
7-Mar-94
13-Jun-94
MONTH SAMPLED
BENZENE
TOLUENE
ETHYLBENZENE
TOTAL XYLENE
TBTEX

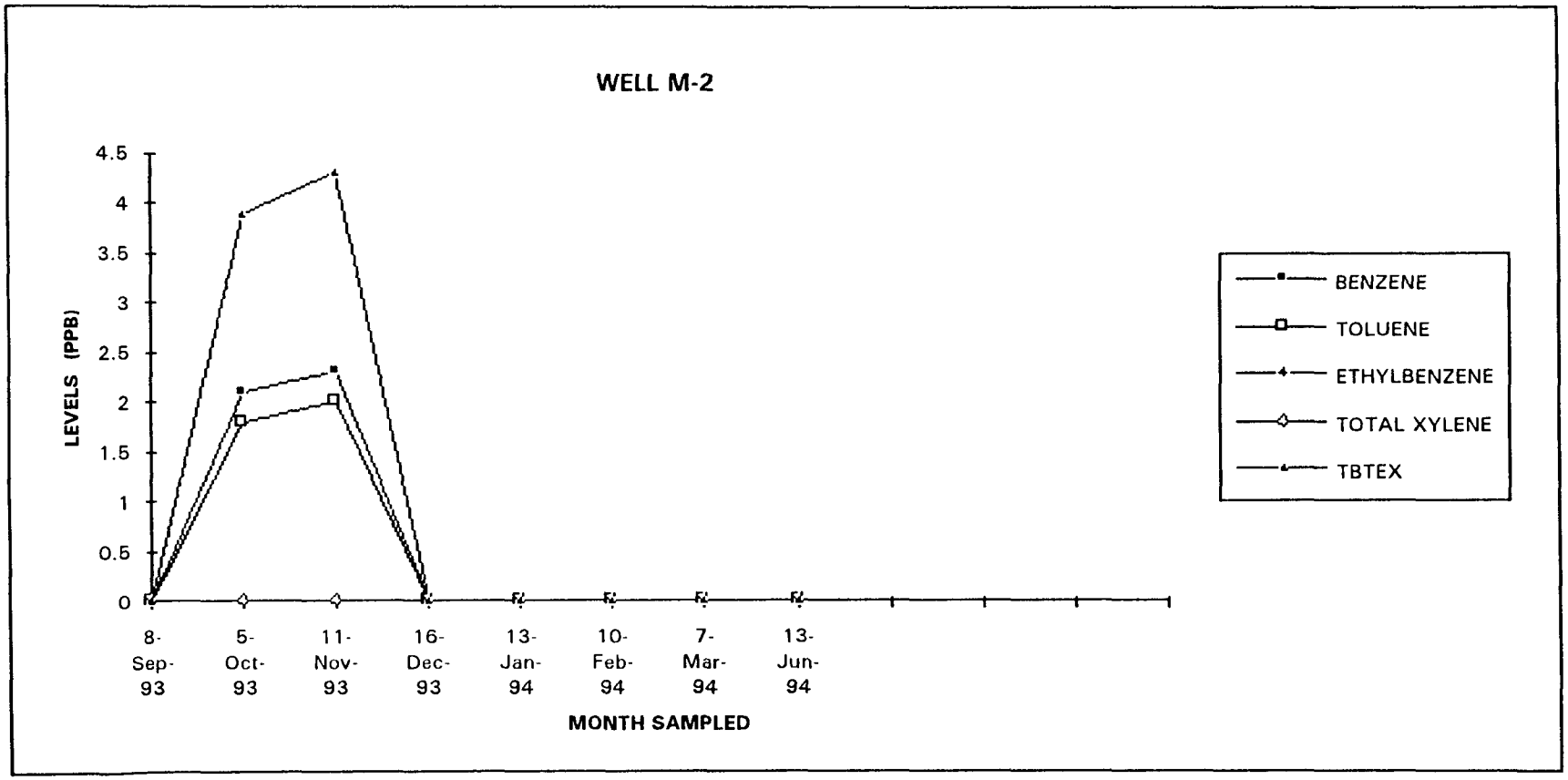

WELL R-2
LEVELS (PPB)
16000
14000
12000
10000
8000
6000
4000
2000
0
7-Sep-93
4-Oct-93
10-Nov-93
15-Dec-93
12-Jan-94
9-Feb-94
7-Mar-94
13-Jun-94
MONTH SAMPLED
BENZENE
TOLUENE
ETHYLBENZENE
TOTAL XYLENE
TBTEX

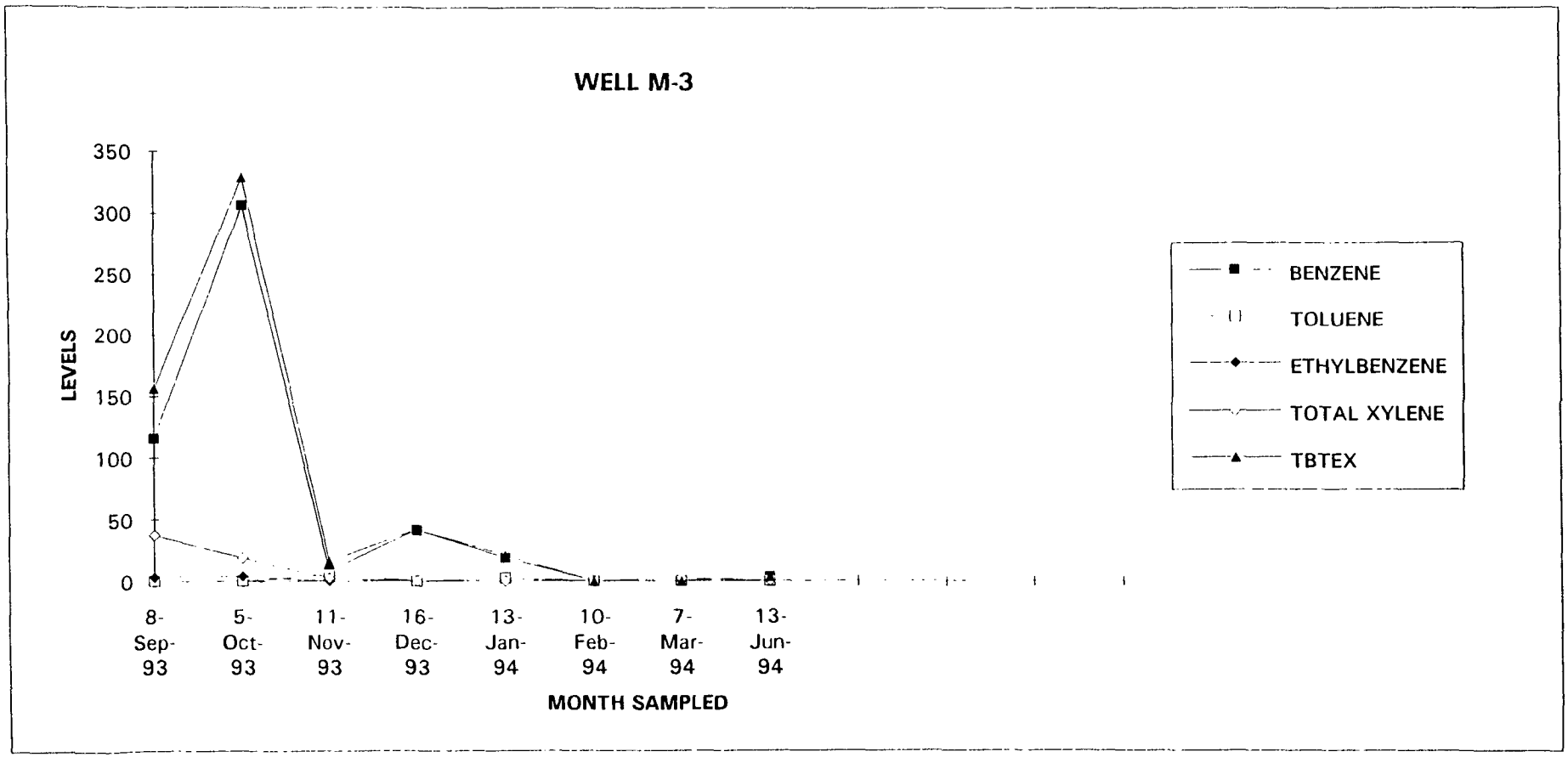

WELL R-3
600
500
400
300
200
100
0
LEVELS (PPB)
7-Sep-93
4-Oct-93
10-Nov-93
15-Dec-93
12-Jan-94
9-Feb-94
7-Mar-94
13-Jun-94
MONTH SAMPLED
BENZENE
TOLUENE
ETHYLBENZENE
TOTAL XYLENE
TBTEX

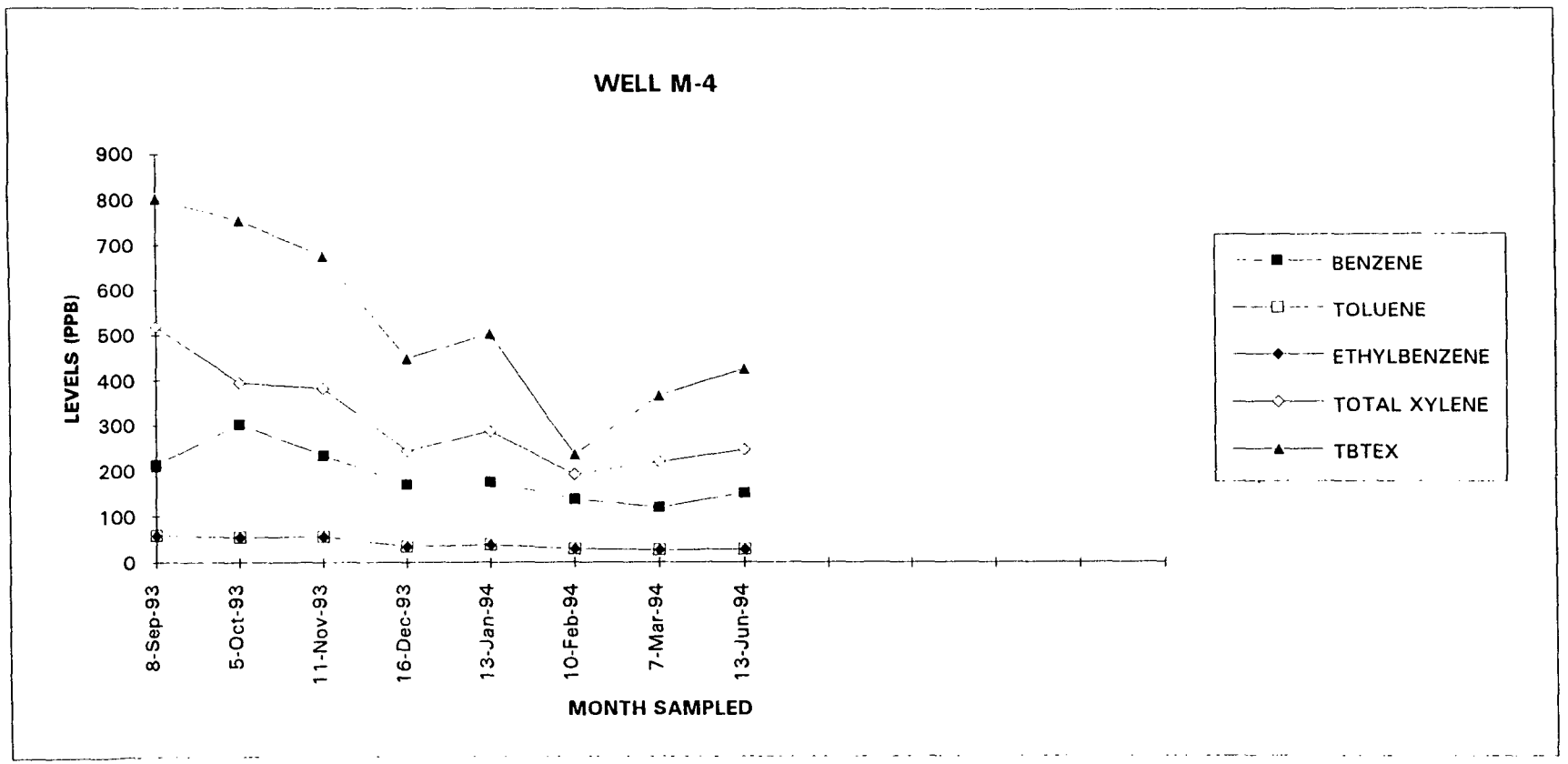

WELL R-4
LEVELS (PPB)
800
700
600
500
400
300
200
100
0
7-Sep-93
4-Oct-93
10-Nov-93
15-Dec-93
12-Jan-94
9-Feb-94
7-Mar-94
13-Jun-94
MONTH SAMPLED
BENZENE
TOLUENE
ETHYLBENZENE
TOTAL XYLENE
TBTEX


WELL R-5
LEVELS (PPB)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
7-Sep-93
4-Oct-93
10-Nov-93
15-Dec-93
12-Jan-94
9-Feb-94
7-Mar-94
13-Jun-94
MONTH SAMPLED
BENZENE
TOLUENE
ETHYLBENZENE
TOTAL XYLENE
TBTEX

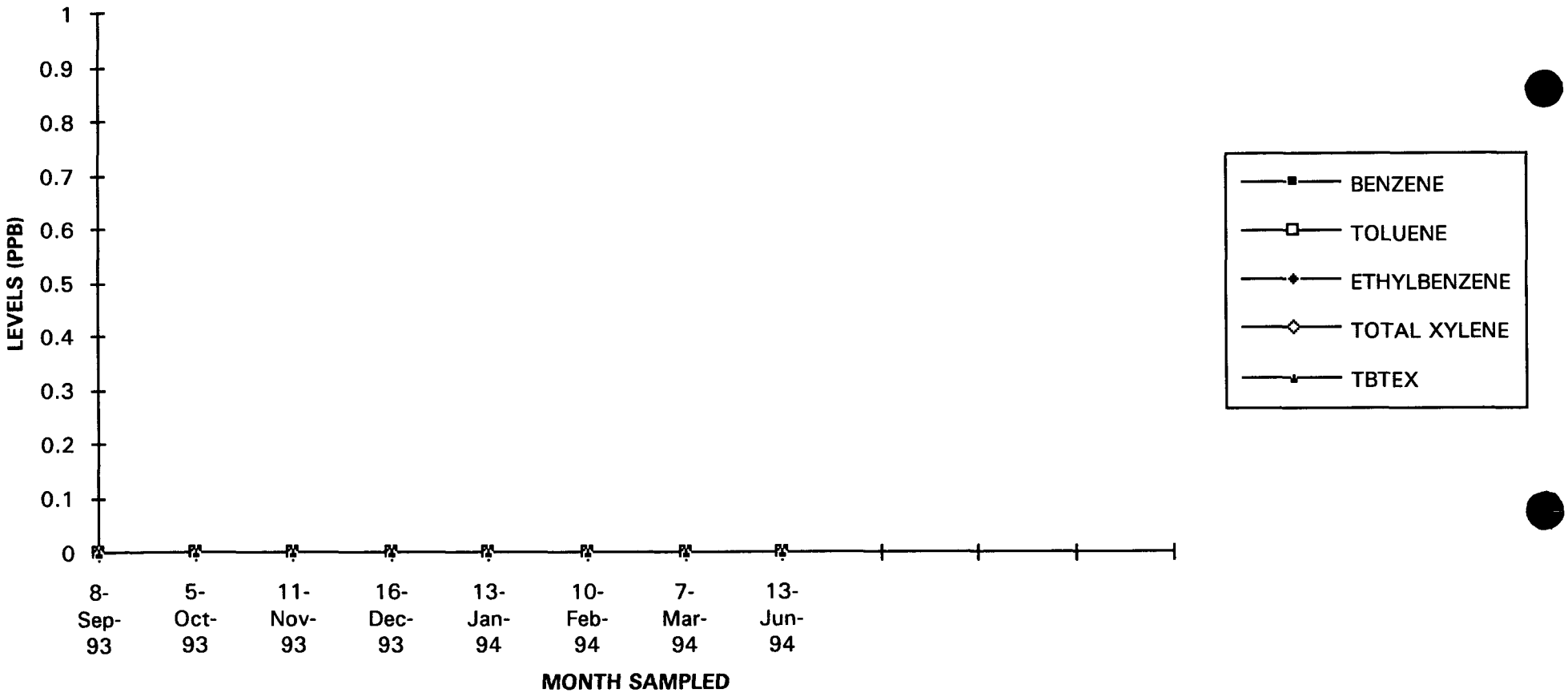

WELL M-1
LEVELS (PPB)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
8-Sep-93
5-Oct-93
11-Nov-93
16-Dec-93
13-Jan-94
10-Feb-94
7-Mar-94
13-Jun-94
MONTH SAMPLED
BENZENE
TOLUENE
ETHYLBENZENE
TOTAL XYLENE
TBTEX


WELL M-2
LEVELS (PPB)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
8-Sep-93
5-Oct-93
11-Nov-93
16-Dec-93
13-Jan-94
10-Feb-94
7-Mar-94
13-Jun-94
MONTH SAMPLED
BENZENE
TOLUENE
ETHYLBENZENE
TOTAL XYLENE
TBTEX

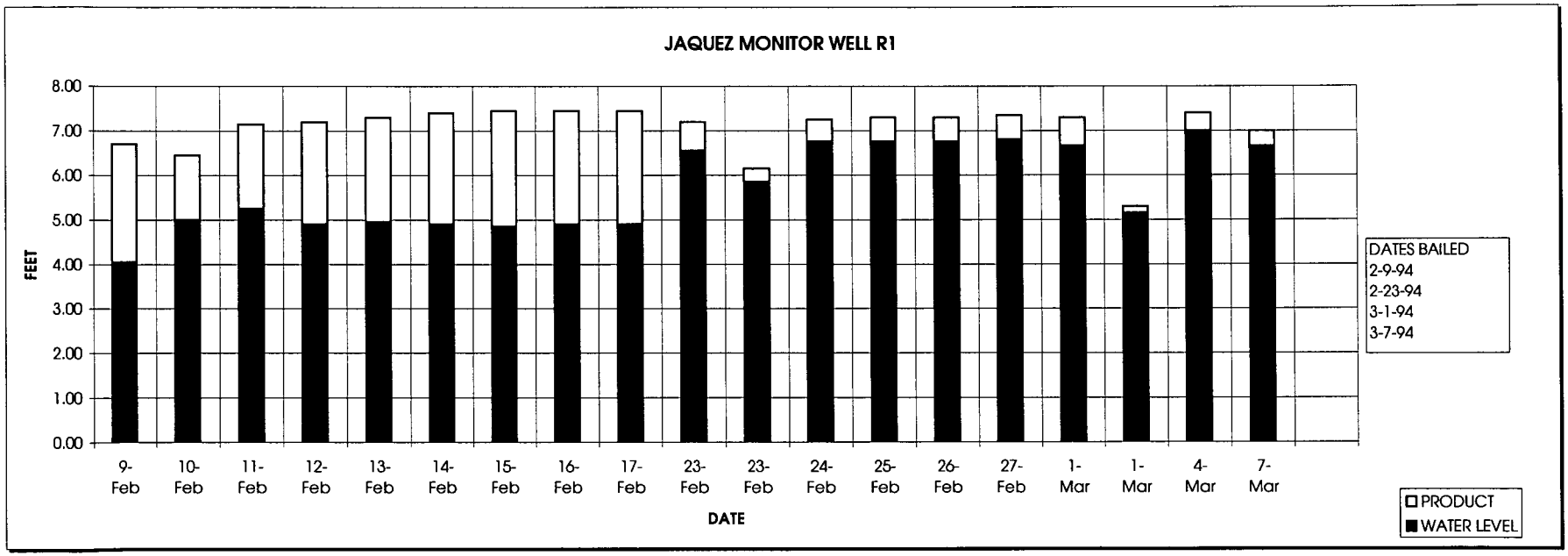

WELL M-3
350
300
250
200
150
100
50
0
LEVELS
8-Sep-93
5-Oct-93
11-Nov-93
16-Dec-93
13-Jan-94
10-Feb-94
7-Mar-94
13-Jun-94
MONTH SAMPLED
BENZENE
TOLUENE
ETHYLBENZENE
TOTAL XYLENE
TBTEX


WELL M-4
LEVELS (PPB)
900
800
700
600
500
400
300
200
100
0
8-Sep-93
5-Oct-93
11-Nov-93
16-Dec-93
13-Jan-94
10-Feb-94
7-Mar-94
13-Jun-94
MONTH SAMPLED
BENZENE
TOLUENE
ETHYLBENZENE
TOTAL XYLENE
TBTEX

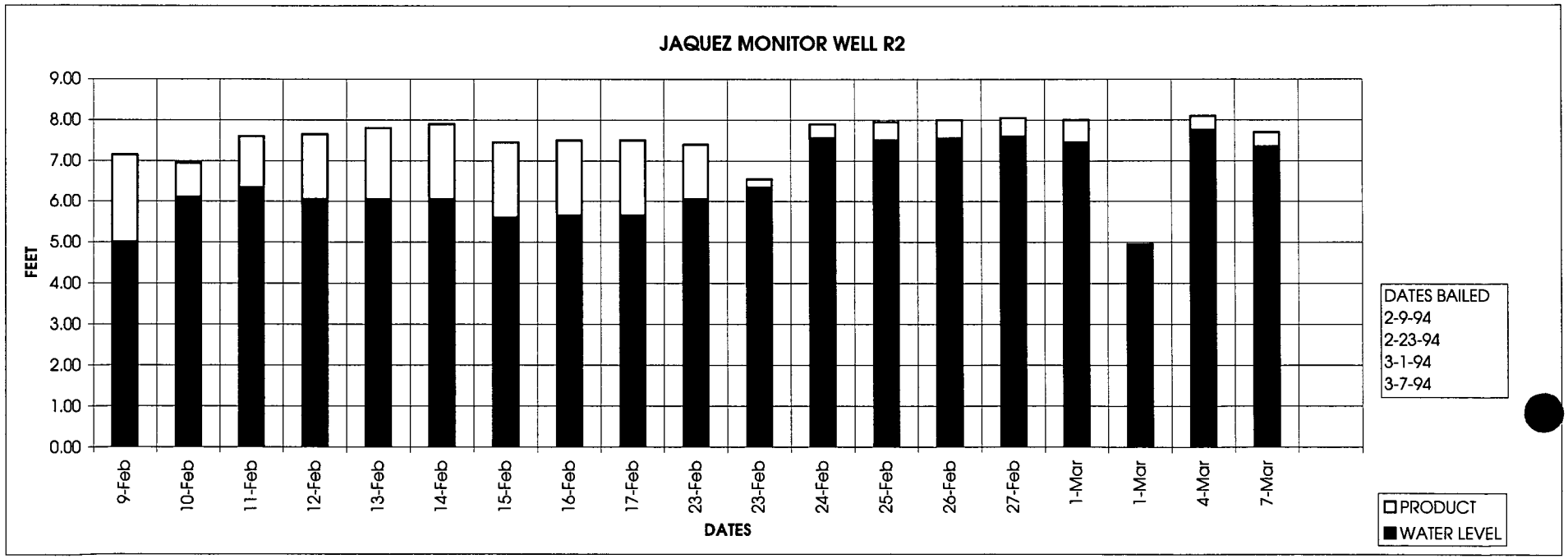
WELL M-5


1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
LEVELS (PPB)
8-Sep-93
5-Oct-93
11-Nov-93
16-Dec-93
13-Jan-94
10-Feb-94
7-Mar-94
13-Jun-94
MONTH SAMPLED
BENZENE
TOLUENE
ETHYLBENZENE
TOTAL XYLENE
TBTEX

	9-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	23-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	1-Mar	1-Mar	4-Mar	7-Mar
WELL HEIGHT	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60
LIQUID LEVEL	6.70	6.45	7.15	7.20	7.30	7.40	7.45	7.45	7.45	7.20	6.15	7.25	7.30	7.30	7.35	7.30	5.30	7.40	7.00
	9-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	23-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	1-Mar	1-Mar	4-Mar	7-Mar
WATER LEVEL	4.05	5.00	5.25	4.90	4.95	4.90	4.85	4.90	4.90	6.55	5.85	6.75	6.75	6.75	6.80	6.65	5.15	7.00	6.65
PRODUCT	2.65	1.45	1.90	2.30	2.35	2.50	2.60	2.55	2.55	0.65	0.30	0.50	0.55	0.55	0.55	0.65	0.15	0.40	0.35



	9-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	23-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	1-Mar	1-Mar	4-Mar	7-Mar
WELL HEIGHT	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.10	22.1
LIQUID LEVEL	7.15	6.95	7.60	7.65	7.80	7.90	7.45	7.50	7.50	7.90	7.30	7.90	7.95	8.00	8.05	8.00	4.95	8.10	7.65
	9-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	23-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	1-Mar	1-Mar	4-Mar	7-Mar
WATER LEVEL	5.00	6.10	6.35	6.05	6.05	6.05	5.60	5.65	5.65	6.05	6.35	7.55	7.50	7.55	7.60	7.45	4.90	7.75	7.35
PRODUCT	2.15	0.85	1.25	1.60	1.75	1.85	1.85	1.85	1.85	1.35	0.20	0.35	0.45	0.45	0.45	0.55	0.05	0.35	0.35



PetroTrap™

Another "Pure & Simple" Product

Rental Now Available!

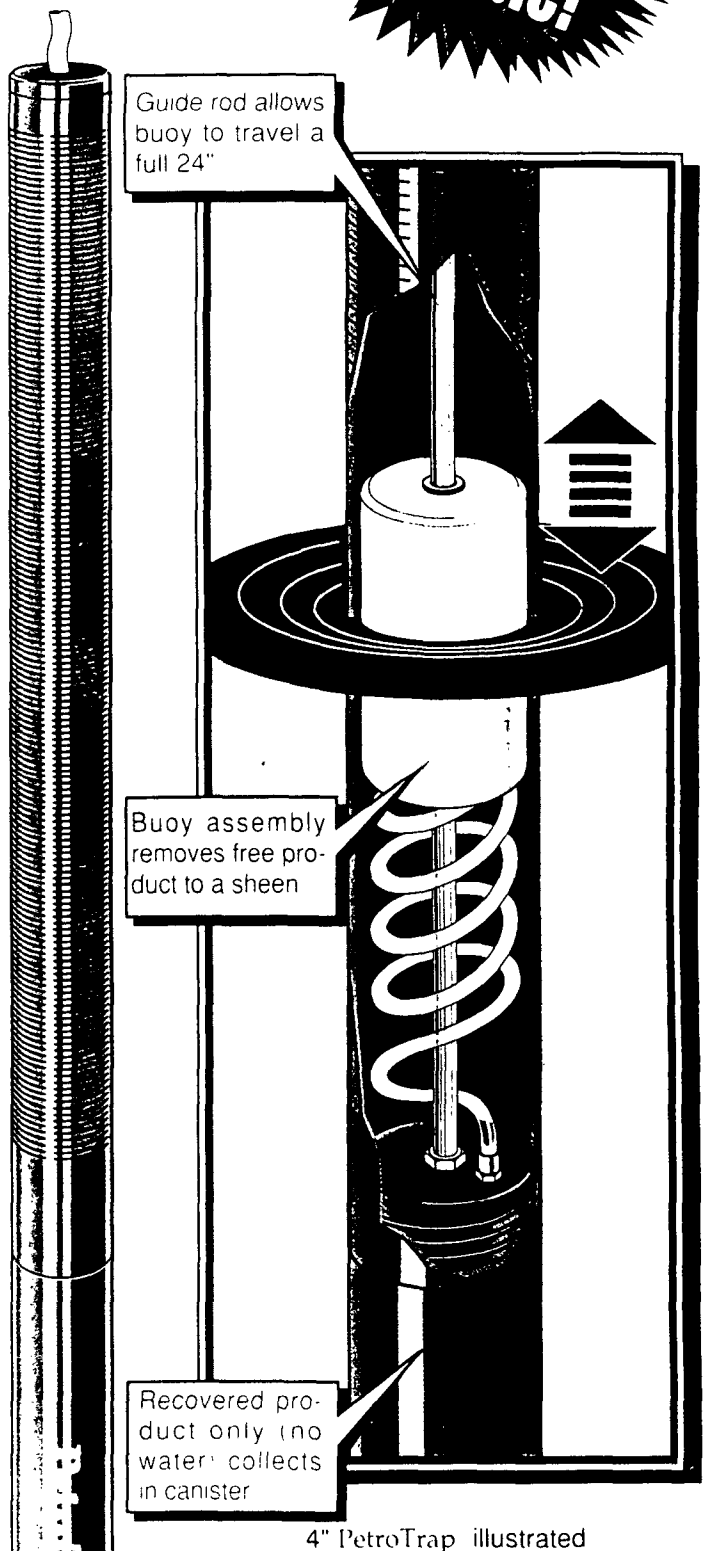
Introducing **PetroTrap**™—a unique passive skimmer system which incorporates the use of an active buoy assembly. This buoy assembly removes free product to a sheen. The skimming action of our system is equally effective with water table fluctuations as great as 24 inches.

PetroTrap™ can be installed in minutes and is ideal on sites where free product recovery must begin *immediately*. The system employs the use of a collection canister, eliminating the need to run electricity or air lines to the well.

PetroTrap™ is lowered into the well much the same way as a bailer, then is suspended using the lanyard/vent tube (standard 25' length). The unit begins recovering product as soon as product is available. Periodically, the canister is emptied manually through the drain valve at the bottom of the canister.

Features:

- **No Power Source Required**
- **Installation Takes Only Minutes**
- **Effective with Petroleum Fuels**
- **Ideal Monitoring Device to Indicate Migrating Plumes**
- **Available for 2" and 4" Wells**
- **Full Product Warranty**



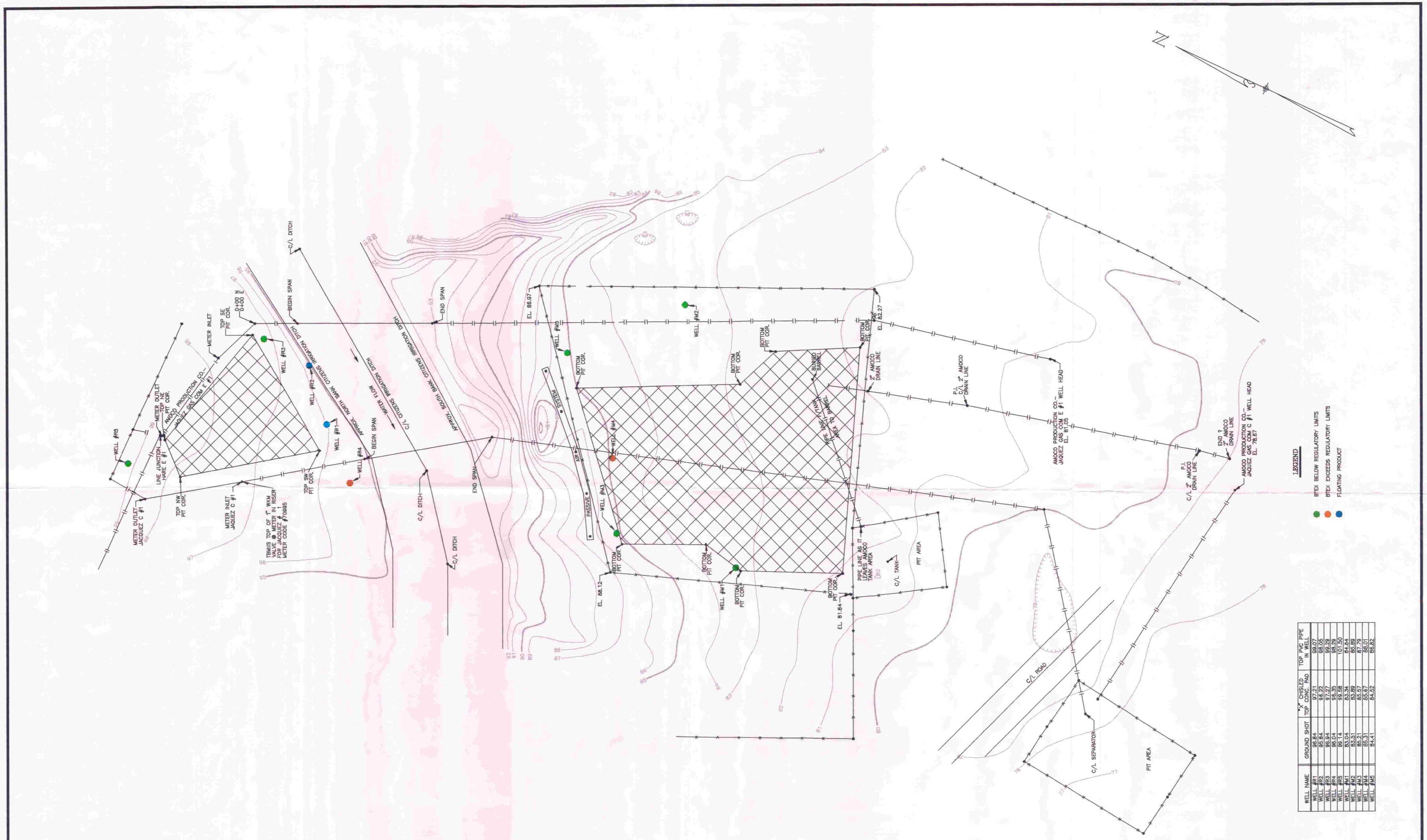
4" PetroTrap illustrated

Specifications:

	4" PetroTrap	2" PetroTrap
Dimen.	3.5" Dia/61.0" Lth	1.75 Dia/76.88" Lth
Weight	18 Lbs	6.25 Lbs
Materials of Const.	Polyvinylchloride (PVC) Stainless Steel 303 Series UHMW Polyethylene Brass	Polyvinylchloride (PVC) Stainless Steel 303 Series UHMW Polyethylene Brass
Volume	2.0 Liters /.53 Gallons (Other Volumes Optional)	0.7 Liters /.20 Gallons (Other Volumes Optional)

Call 1-800-ENVIRO 4

ENVIRO PRODUCTS INC
1431 Rensen Street • Suite A • Lansing, Michigan 48910
(517) 887-1222 • 1-800-ENVIRO 4 • Fax: (517) 887-8374



WELL NAME	GROUND SHOT	CHISLED TOP CONC. PAD	TOP PVC PIPE IN WELL
WELL #R1	96.84	97.21	99.07
WELL #R2	96.46	96.72	98.55
WELL #R3	95.94	97.27	99.29
WELL #R4	96.04	96.35	98.29
WELL #R5	99.14	99.28	101.50
WELL #M1	83.04	83.39	84.84
WELL #M2	83.55	83.98	85.66
WELL #M3	85.21	85.57	87.79
WELL #M4	85.31	85.67	88.01
WELL #M5	84.41	84.62	86.82

LEGEND	DWG. NO.	TITLE	NO.	DATE	BY	DESCRIPTION	W.O.	APP.	PRT.	SEP.	DATE	TO	W.O.
	REFERENCE DRAWINGS		REVISIONS						PRINT RECORD				

ENG. RECORD		DATE
DRAFTING DESIGN	RAF	9/27/93
COMPUTER GRAPHICS	RAF / MD	9/01/94
CHECKED		
PROJECT APPROVAL		
DESIGN APPROVAL		
COMPUTER SAVE NAME	CORNFL2	

El Paso NATURAL GAS COMPANY

JACQUEZ GAS COM E #1 & C #1 WELLS FOLLOW UP SITE MAP

SE/4 SECTION 6, T-29-N, R-9-W, N.M.P.M.

SCALE: 1" = 20' | DWG. NO. | REV.

W.O.: 51570 & 52452