4/28/93

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GIANT REFINING COMPANY - CINIZA

ANNUAL GROUNDWATER MEASUREMENT - 1993

Well No.	Date	Depth to Water	Casing Elevation	Groundwater Elevation
MW-1	04-28-93	5.00	6878.52	6873.52
MW-2	04-28-93	8.22	6880.84	6872.62
MW-4	04-28-93	5.97	6882.54	6876.57
MW-5	04-28-93	11.81	6883.32	6871.51
OW-11	04-28-93	18.01	6923.89	6905.88
SMW-3	04-28-93	38.32	6884.56	6846.24
SMW-4	04-28-93	31.24	6880.08	6848.84
SMW-5	04-28-93	31.00	6878.02	6847.02
SMW-6	04-28-93	31.81	6880.71	6848.90
OW-1	04-28-93	0.0	6868.0	6868.00
OW-2	04-28-93	28.64	6871.0	6842.36
OW-3	04-28-93	31.15	6876.0	6844.85

Calculation Sheet for Semi–Annual Evaluation of Indicator Parameters

Print Your Name: Lynn Shelton **Telephone:** (505) 722–0227

Facility Name: GIANT CINIZA **EPA ID #:** NMD000333211–2

Date: Spring, 93 **Parameter::** pH

Well Number: MW–1 **Up or Downgradient:** : DOWN

Please list the values calculated for the background parameters on the Background Indicator Parameter Calculation Sheet:

X(b)=	8.51	S(b)2=	0.015	t(b)=	2.947
W(b)=	0.000937	n(b)=	16		

Please list the current values for this monitoring well.

	Value	(Value – X(m))2
1	8.84	0.005625
2	8.81	0.002025
3	8.8	0.001225
4	8.8	0.001225
Total 1	35.25	Total 2 0.0101

Mean value X(m)	8.8125
Variance S(m)2	0.003366

t(m)=	5.841
W(m)=	0.000841

t(*)=	7.171616
t(c)=	4.316058

If t(*) absolute is less than t(c) there has not been an increase in the value

Lynn Shelton

Signature

Calculation Sheet for Semi–Annual Evaluation of Indicator Parameters

Print Your Name: Lynn Shelton **Telephone:** (505) 722–0227

Facility Name: GIANT CINIZA **EPA ID #:** NMD000333211–2

Date: Spring, 93 **Parameter::** pH

Well Number: MW–2 **Up or Downgradient: :** DOWN

Please list the values calculated for the background parameters on the Background Indicator Parameter Calculation Sheet:

X(b)=	8.51	S(b)2=	0.015	t(b)=	2.947
W(b)=	0.000937	n(b)=	16		

Please list the current values for this monitoring well.

	Value	(Value – X(m))2
1	8.79	0.000625
2	8.8	0.001225
3	8.83	0.004225
4	8.8	0.001225
Total 1	35.22	Total 2 0.0073

Mean value X(m)	8.805	t(m)=	5.841
Variance S(m)2	0.002433	W(m)=	0.000608

t(*)=	7.503099
t(c)=	4.085878

If t(*) absolute is less than t(c) there has not been an increase in the value

Lynn Shelton

Signature

Calculation Sheet for Semi–Annual Evaluation of Indicator Parameters

Print Your Name: Lynn Shelton **Telephone:** (505) 722–0227

Facility Name: GIANT CINIZA **EPA ID #:** NMD000333211–2

Date: Spring, 93 **Parameter::** pH

Well Number: MW–4 **Up or Downgradient:** UP

Please list the values calculated for the background parameters on the Background Indicator Parameter Calculation Sheet:

X(b)=	8.51	S(b)2=	0.015	t(b)=	2.947
W(b)=	0.000937	n(b)=	16		

Please list the current values for this monitoring well.

	Value	(Value – X(m))2
1	8.44	0.105625
2	8.42	0.119025
3	8.49	0.075625
4	8.48	0.081225
Total 1	33.83	Total 2 0.3815

Mean value X(m)	8.4575
Variance S(m)2	0.127166

t(m)=	5.841
W(m)=	0.031791

t(*)=	–0.29019
t(c)=	5.758103

If t(*) absolute is less than t(c) there has not been an increase in the value

Lynn Shelton

Signature

Calculation Sheet for Semi–Annual Evaluation of Indicator Parameters

Print Your Name: Lynn Shelton **Telephone:** (505) 722–0227

Facility Name: GIANT CINIZA **EPA ID #:** NMD000333211–2

Date: Spring, 93 **Parameter::** pH

Well Number: MW–5 **Up or Downgradient: :** DOWN

Please list the values calculated for the background parameters on the Background Indicator Parameter Calculation Sheet:

X(b)=	8.51	S(b)2=	0.015	t(b)=	2.947
W(b)=	0.000937	n(b)=	16		

Please list the current values for this monitoring well.

	Value	(Value – X(m))2
1	8.82	0.003025
2	8.72	0.002025
3	8.82	0.003025
4	8.95	0.034225
Total 1	35.31	Total 2 0.0423

Mean value X(m)	8.8275
Variance S(m)2	0.0141

t(m)=	5.841
W(m)=	0.003525

t(*)=	4.752855
t(c)=	5.233016

If t(*) absolute is less than t(c) there has not been an increase in the value

Lynn Shelton

Signature

Calculation Sheet for Semi–Annual Evaluation of Indicator Parameters

Print Your Name: Lynn Shelton **Telephone:** (505) 722–0227

Facility Name: GIANT CINIZA **EPA ID #:** NMD000333211–2

Date: Spring 93 **Parameter::** SPEC. COND.

Well Number: MW–1 **Up or Downgradient: :** DOWN

Please list the values calculated for the background parameters on the Background Indicator Parameter Calculation Sheet:

X(b)=	984	S(b)2=	1487	t(b)=	2.602
W(b)=	92.9375	n(b)=	16		

Please list the current values for this monitoring well.

	Value	(Value – X(m))2
1	1110	900
2	1160	6400
3	1150	4900
4	1150	4900
Total 1	4570	Total 2 17100

Mean value X(m)	1142.5	t(m)=	4.541
Variance S(m)2	5700	W(m)=	1425

t(*)=	4.068200
t(c)=	4.422282

If t(*) is negative there has not been an increase in the value

L Shelton

Signature

Calculation Sheet for Semi–Annual Evaluation of Indicator Parameters

Print Your Name: Lynn Shelton **Telephone:** (505) 722–0227

Facility Name: GIANT CINIZA **EPA ID #:** NMD000333211–2

Date: Spring 93 **Parameter::** SPEC. COND.

Well Number: MW–2 **Up or Downgradient: :** DOWN

Please list the values calculated for the background parameters on the Background Indicator Parameter Calculation Sheet:

X(b)=	984	S(b)2=	1487	t(b)=	2.602
W(b)=	92.9375	n(b)=	16		

Please list the current values for this monitoring well.

	Value	(Value – X(m))2
1	1150	4900
2	1160	6400
3	1180	10000
4	1170	8100
Total 1	4660	Total 2 29400

Mean value X(m)	1165
Variance S(m)2	9800

t(m)=	4.541
W(m)=	2450

t(*)=	3.589308
t(c)=	4.470134

If t(*) is negative there has not been an increase in the value

Lynn Shelton

Signature

Calculation Sheet for Semi–Annual Evaluation of Indicator Parameters

Print Your Name: Lynn Shelton **Telephone:** (505) 722–0227

Facility Name: GIANT CINIZA **EPA ID #:** NMD000333211–2

Date: Spring 93 **Parameter::** SPEC. COND.

Well Number: MW–4 **Up or Downgradient:** UP

Please list the values calculated for the background parameters on the Background Indicator Parameter Calculation Sheet:

X(b)=	984	S(b)2=	1487	t(b)=	2.602
W(b)=	92.9375	n(b)=	16		

Please list the current values for this monitoring well.

	Value	(Value – X(m))2
1	1240	25600
2	1200	14400
3	1200	14400
4	1200	14400
Total 1	4840	Total 2 68800

Mean value X(m)	1210
Variance S(m)2	22933.33

t(m)=	4.541
W(m)=	5733.333

t(*)=	2.960827
t(c)=	4.510070

If t(*) is negative there has not been an increase in the value

Lynn Shelton

Signature

Calculation Sheet for Semi–Annual Evaluation of Indicator Parameters

Print Your Name: Lynn Shelton **Telephone:** (505) 722–0227

Facility Name: GIANT CINIZA **EPA ID #:** NMD000333211–2

Date: Spring 93 **Parameter::** SPEC. COND.

Well Number: MW–5 **Up or Downgradient: :** DOWN

Please list the values calculated for the background parameters on the Background Indicator Parameter Calculation Sheet:

X(b)=	984	S(b)2=	1487	t(b)=	2.602
W(b)=	92.9375	n(b)=	16		

Please list the current values for this monitoring well.

	Value	(Value – X(m))2
1	1090	100
2	1140	3600
3	1140	3600
4	1170	8100
Total 1	4540	Total 2 15400

Mean value X(m)	1135	t(m)=	4.541
Variance S(m)2	5133.333	W(m)=	1283.333

t(*)=	4.070286
t(c)=	4.410062

If t(*) is negative there has not been an increase in the value

Lynn Shelton

Signature

TOLERANCE INTERVAL

1993

LEAD

SMW-3

MEAN	0.0016	SD	0.0017

DATE	RESULT		TOL LIMIT	UNITS	
4-93	0.0025	*	0.005	ppm	Does not exceed the tolerance limit.

SMW-4

MEAN	0.0018	SD	0.0016

DATE	RESULT		TOL LIMIT	UNITS	
4-93	0.0025	*	0.005	ppm	Does not exceed the tolerance limit.

SMW-5

MEAN	0.0015	SD	0.0017

DATE	RESULT		TOL LIMIT	UNITS	
4-93	0.0025	*	0.005	ppm	Does not exceed the tolerance limit.

SMW-6

MEAN	0.0015	SD	0.0017

DATE	RESULT		TOL LIMIT	UNITS	
4-93	0.0025	*	0.005	ppm	Does not exceed the tolerance limit.

* 1/2 of Reporting Limit.

CHROME

SMW –3 MEAN= 0.003 SD= 0.004

DATE	RESULT		TOL LIMIT	UNITS	
4–92	0.012	*	0.011	ppm	Exceeds the tolerance limit by 9.1%

SMW –4 MEAN= 0.0044 SD= 0.0039

DATE	RESULT		TOL LIMIT	UNITS	
4–93	0.014	*	0.012	ppm	Exceeds the tolerance limit by 16.7%
4–93	D .011		0.012	ppm	Does not exceed the tolerance limit.

SMW –5 MEAN= 0.0032 SD= 0.0038

DATE	RESULT		TOL LIMIT	UNITS	
4–93	0.012	*	0.018	ppm	Does not exceed the tolerance limit.

SMW –6 MEAN= 0.0035 SD= 0.0059

DATE	RESULT		TOL LIMIT	UNITS	
4–93	0.02	*	0.015	ppm	Exceeds the tolerance limit by 33.3%

* 1/2 of reporting limit.

pH

SMW-3

MEAN =	7.86	SD =	0.1517

DATE	RESULT
4-93	7.9

TOL LIMIT	UNITS
8.163	ppm

Does not exceed the tolerance limit.

SMW-4

MEAN =	8.309	SD =	0.1649

DATE	RESULT
4-93	8.2

TOL LIMIT	UNITS
8.639	ppm

Does not exceed the tolerance limit.

SMW-5

MEAN =	8.425	SD =	0.3405

DATE	RESULT
4-93	8.5

TOL LIMIT	UNITS
9.106	ppm

Does not exceed the tolerance limit.

SMW-6

MEAN =	8.075	SD =	0.2908

DATE	RESULT
4-93	8.2

TOL LIMIT	UNITS
8.657	ppm

Does not exceed the tolerance limit.

EC

SMW –3 MEAN = 3226.13 SD = 352.15

DATE	RESULT
4–93	3170

TOL LIMIT	UNITS
3930.430	ppm

Does not exceed the tolerance limit.

SMW –4 MEAN = 1225 SD = 107.98

DATE	RESULT
4–93	1300

TOL LIMIT	UNITS
1440.960	ppm

Does not exceed the tolerance limit.

SMW –5 MEAN = 1134.3 SD = 85.72

DATE	RESULT
4–93	1130

TOL LIMIT	UNITS
1305.740	ppm

Does not exceed the tolerance limit.

SMW –6 MEAN = 1527.5 SD = 226.63

DATE	RESULT
4–93	1300

TOL LIMIT	UNITS
1980.760	ppm

Does not exceed the tolerance limit.

TEMPERATURE

SMW-3 MEAN = 55 SD = 2.619

DATE	RESULT
4-93	56.75

TOL LIMIT	UNITS
60.240	ppm

Does not exceed the tolerance limit.

SMW-4 MEAN = 55.5 SD = 2.988

DATE	RESULT
4-93	56.75

TOL LIMIT	UNITS
61.476	ppm

Does not exceed the tolerance limit.

SMW-5 MEAN = 54.786 SD = 2.852

DATE	RESULT
4-93	56.5

TOL LIMIT	UNITS
60.490	ppm

Does not exceed the tolerance limit.

SMW-6 MEAN = 54.929 SD = 3.469

DATE	RESULT
4-92	55.5

TOL LIMIT	UNITS
61.870	ppm

Does not exceed the tolerance limit.

WATER LEVEL

SMW-3

MEAN =	6850.84	SD =	2.08

DATE	RESULT
4-93	6846.24

TOL LIMIT	UNITS
6855.000	ppm

Does not exceed the tolerance limit.

SMW-4

MEAN =	6848.63	SD =	1.52

DATE	RESULT
4-93	6851.67

TOL LIMIT	UNITS
6851.866	ppm

Does not exceed the tolerance limit.

SMW-5

MEAN =	6847.23	SD =	1.26

DATE	RESULT
4-93	6847.89

TOL LIMIT	UNITS
6850.410	ppm

Does not exceed the tolerance limit.

SMW-6

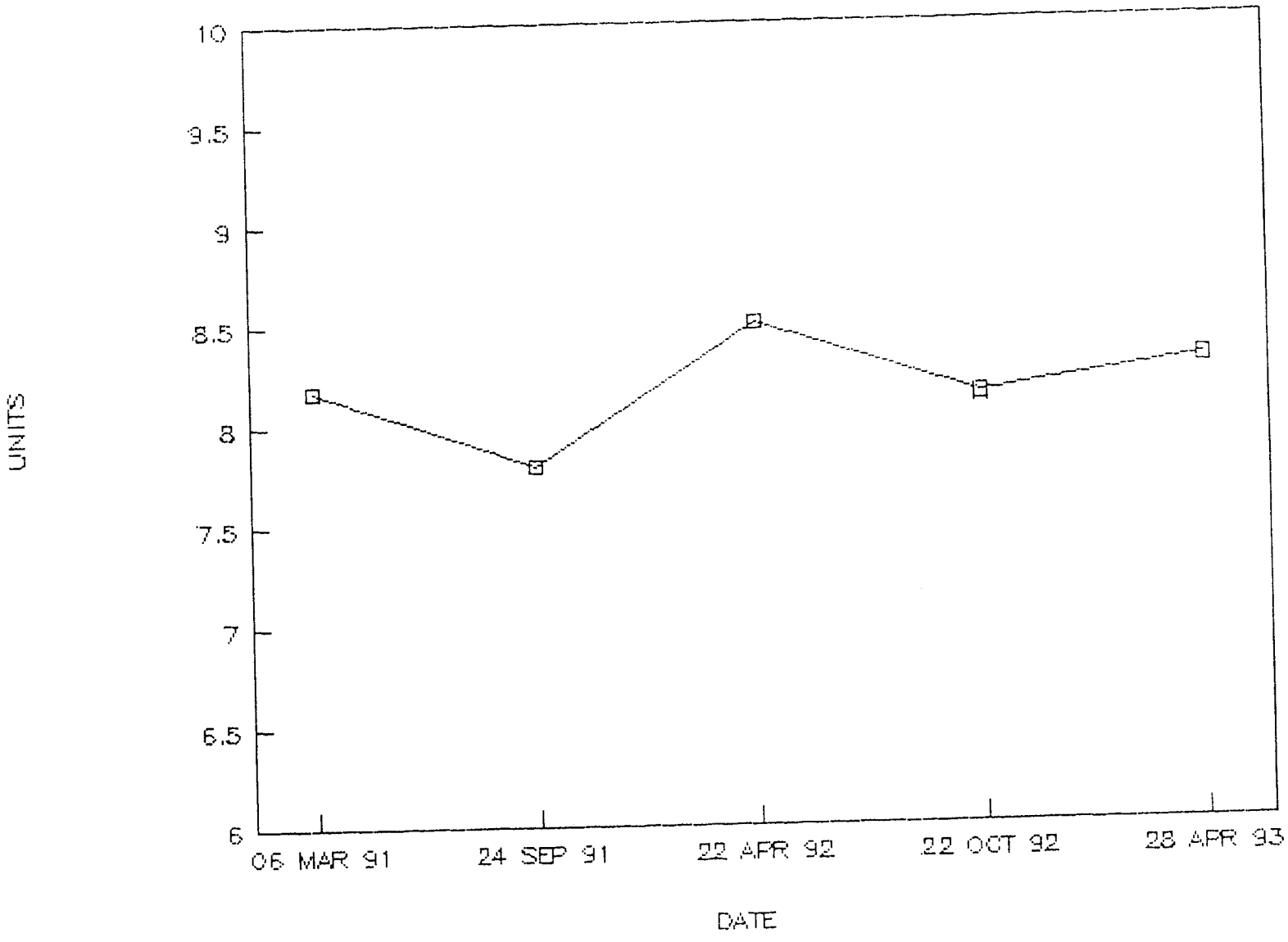
MEAN =	6856.64	SD =	5.03

DATE	RESULT
4-93	6858.91

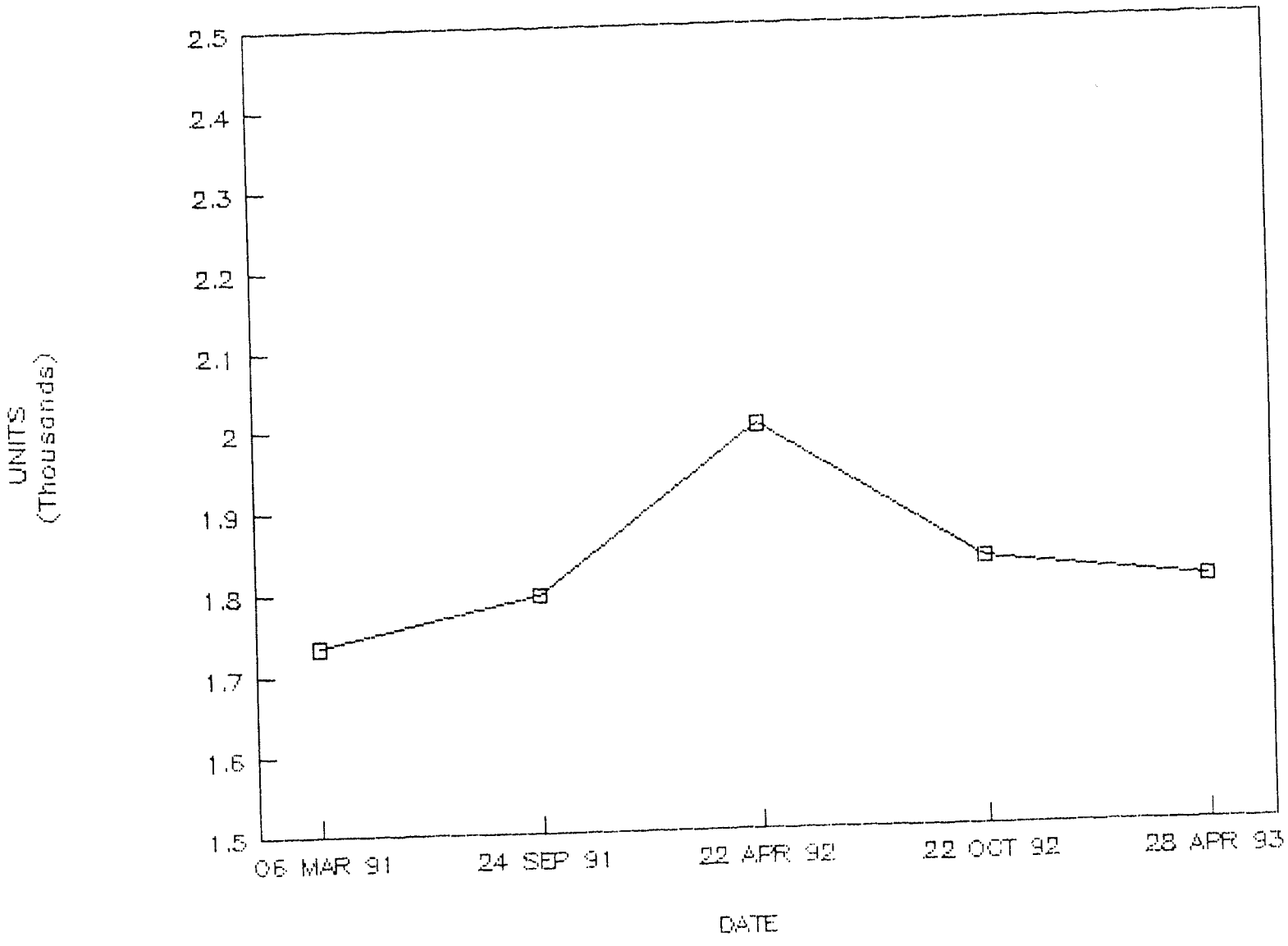
TOL LIMIT	UNITS
6866.700	ppm

Does not exceed the tolerance limit.

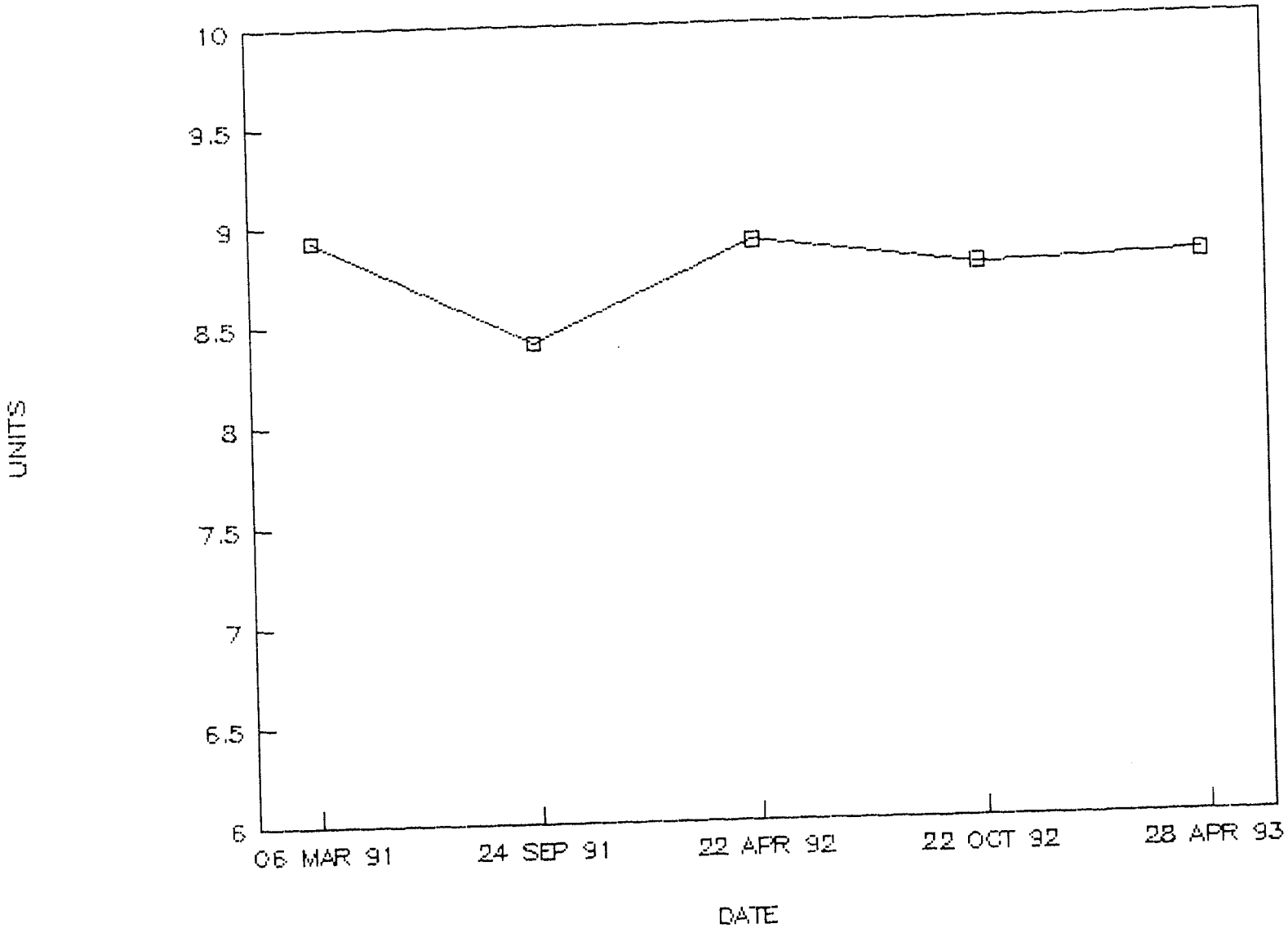
OW-11 pH


10
9.5
9
8.5
8
7.5
7
6.5
6
UNITS
06 MAR 91
24 SEP 91
22 APR 92
22 OCT 92
28 APR 93
DATE

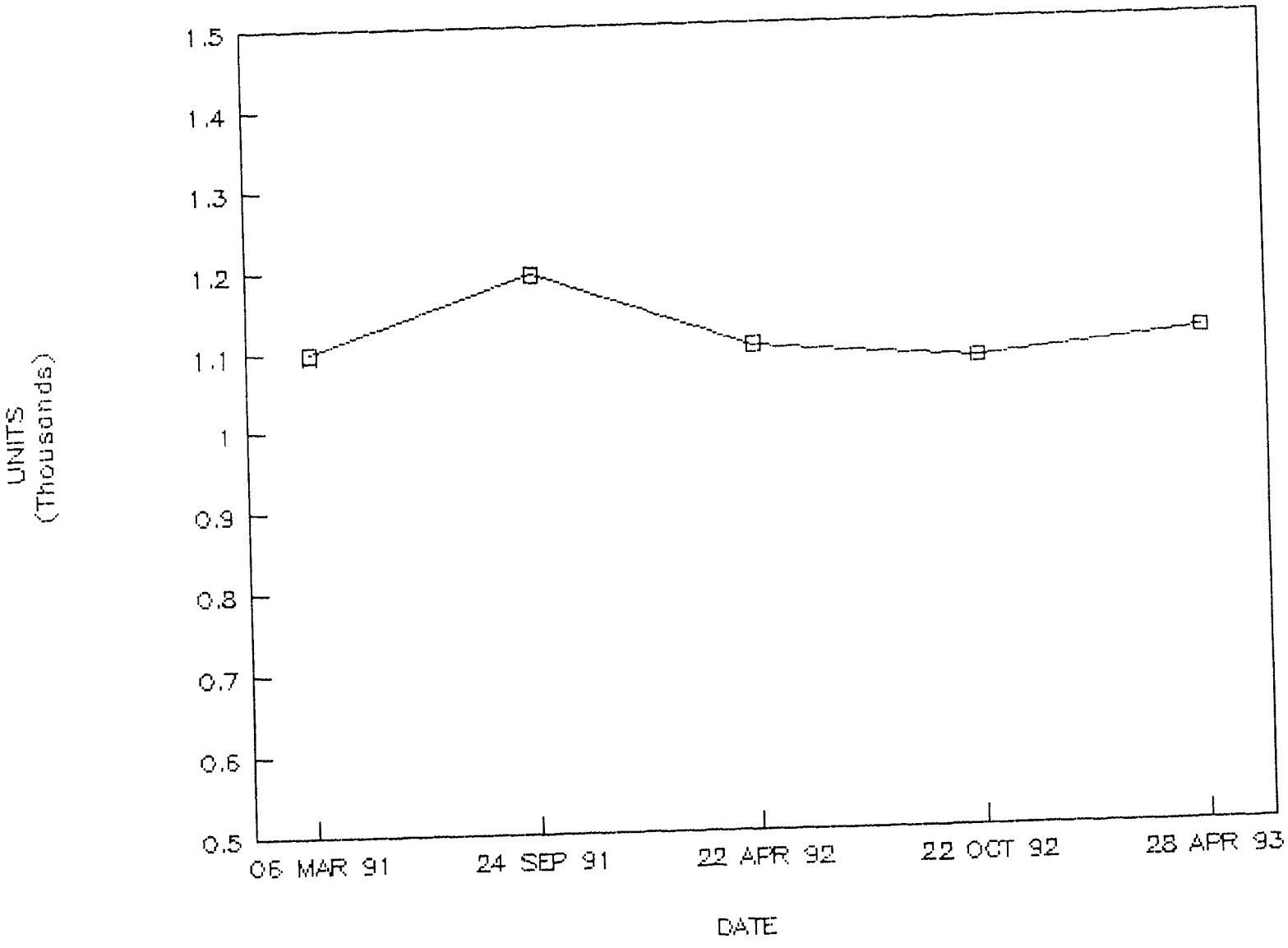
OW-11 EC


2.5
2.4
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
UNITS
(Thousands)
06 MAR 91
24 SEP 91
22 APR 92
22 OCT 92
28 APR 93
DATE

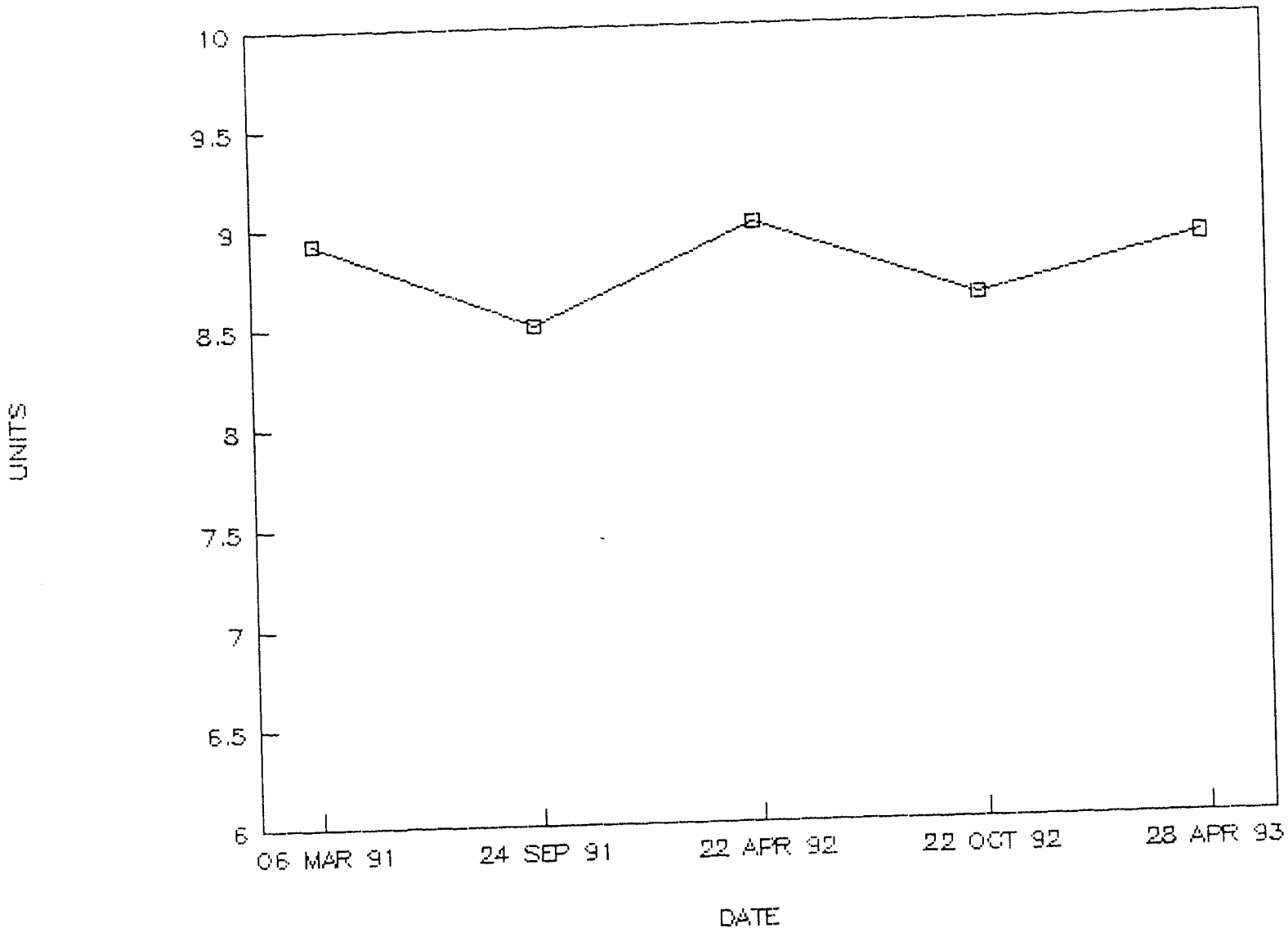
MW-1 pH


10
9.5
9
8.5
8
7.5
7
6.5
6
UNITS
06 MAR 91
24 SEP 91
22 APR 92
22 OCT 92
28 APR 93
DATE

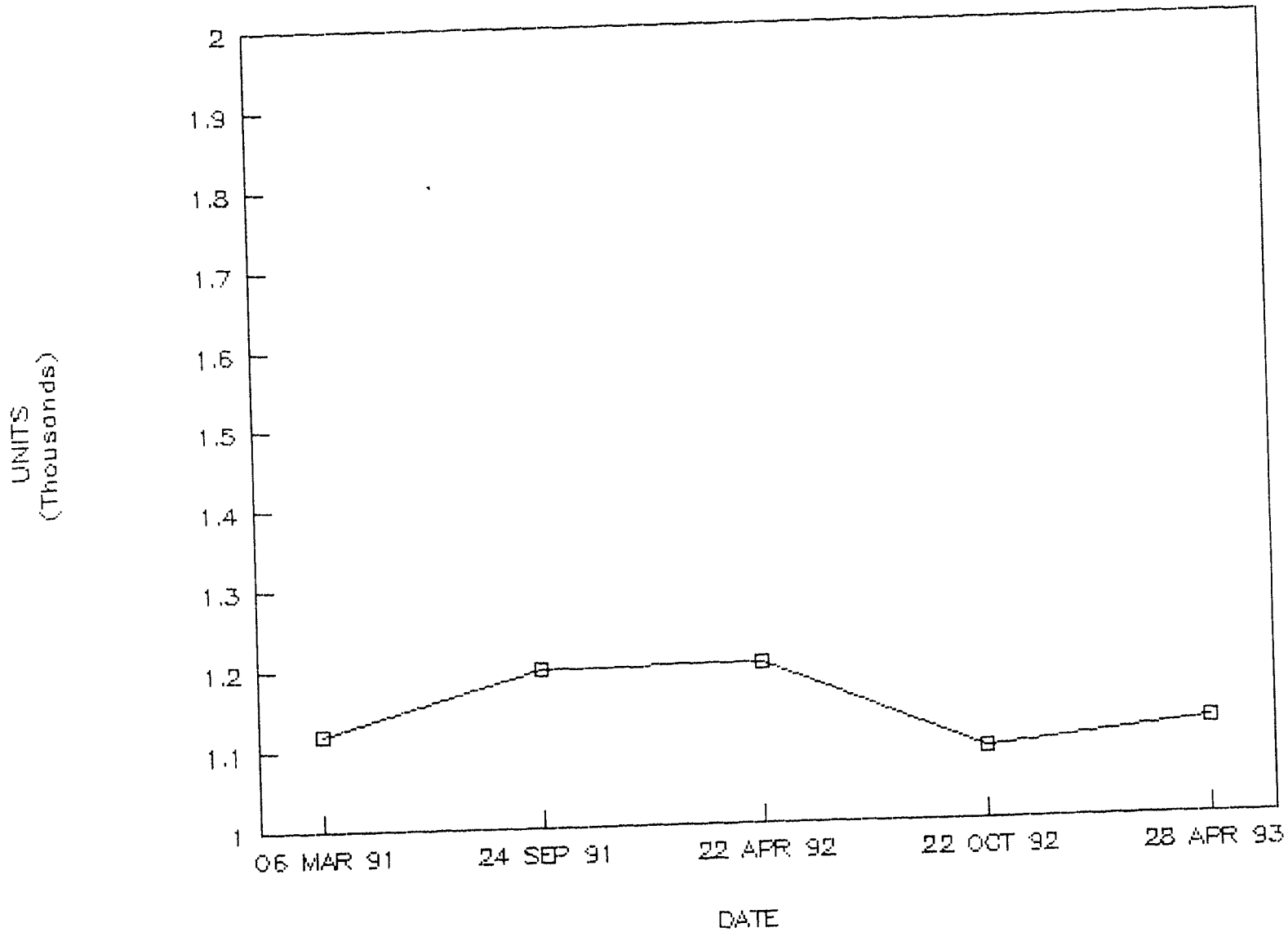
MW-1 EC


1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
UNITS
(Thousands)
06 MAR 91
24 SEP 91
22 APR 92
22 OCT 92
28 APR 93
DATE

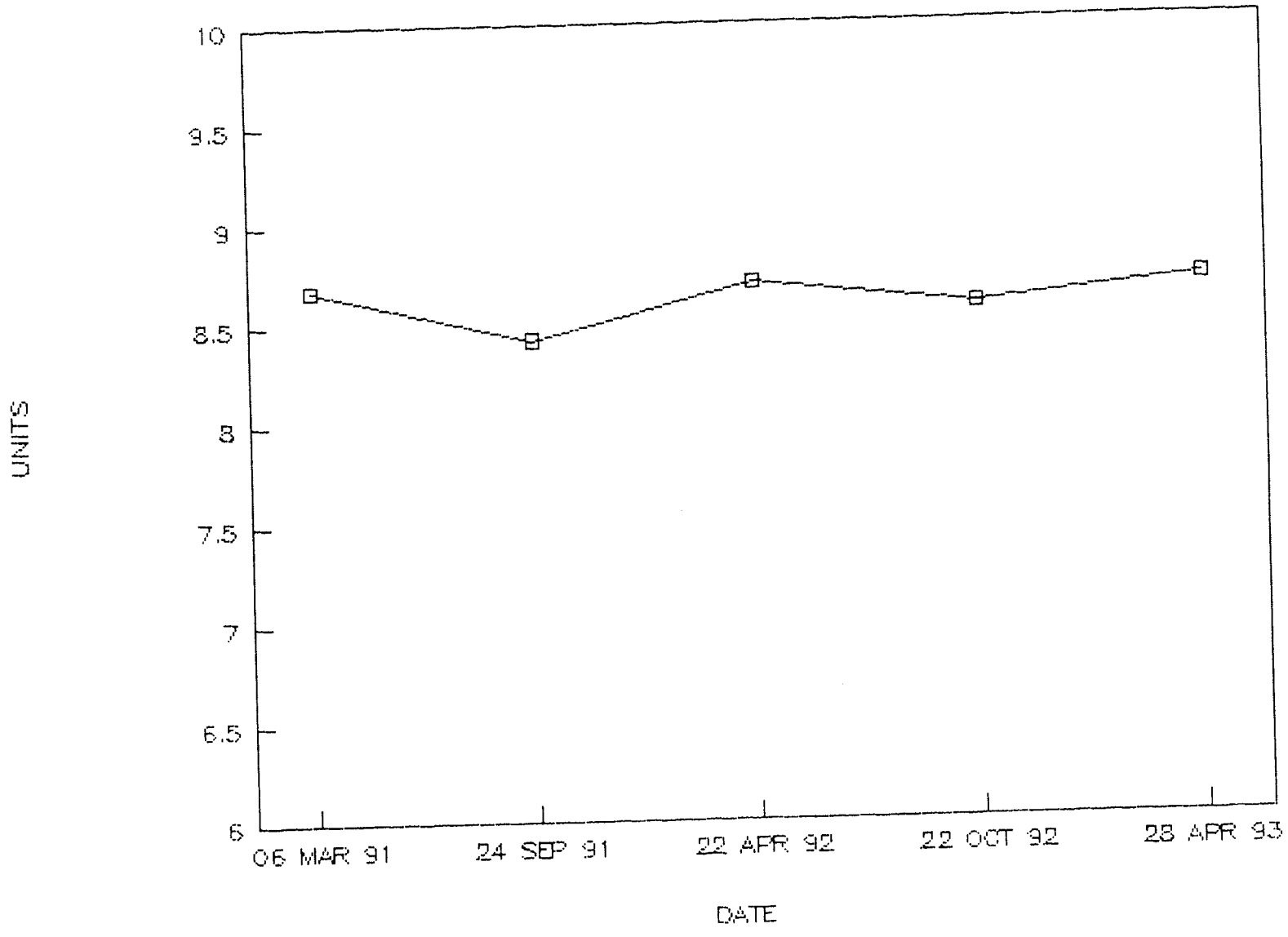
MW-2 pH


10
9.5
9
8.5
8
7.5
7
6.5
6
UNITS
06 MAR 91
24 SEP 91
22 APR 92
22 OCT 92
28 APR 93
DATE

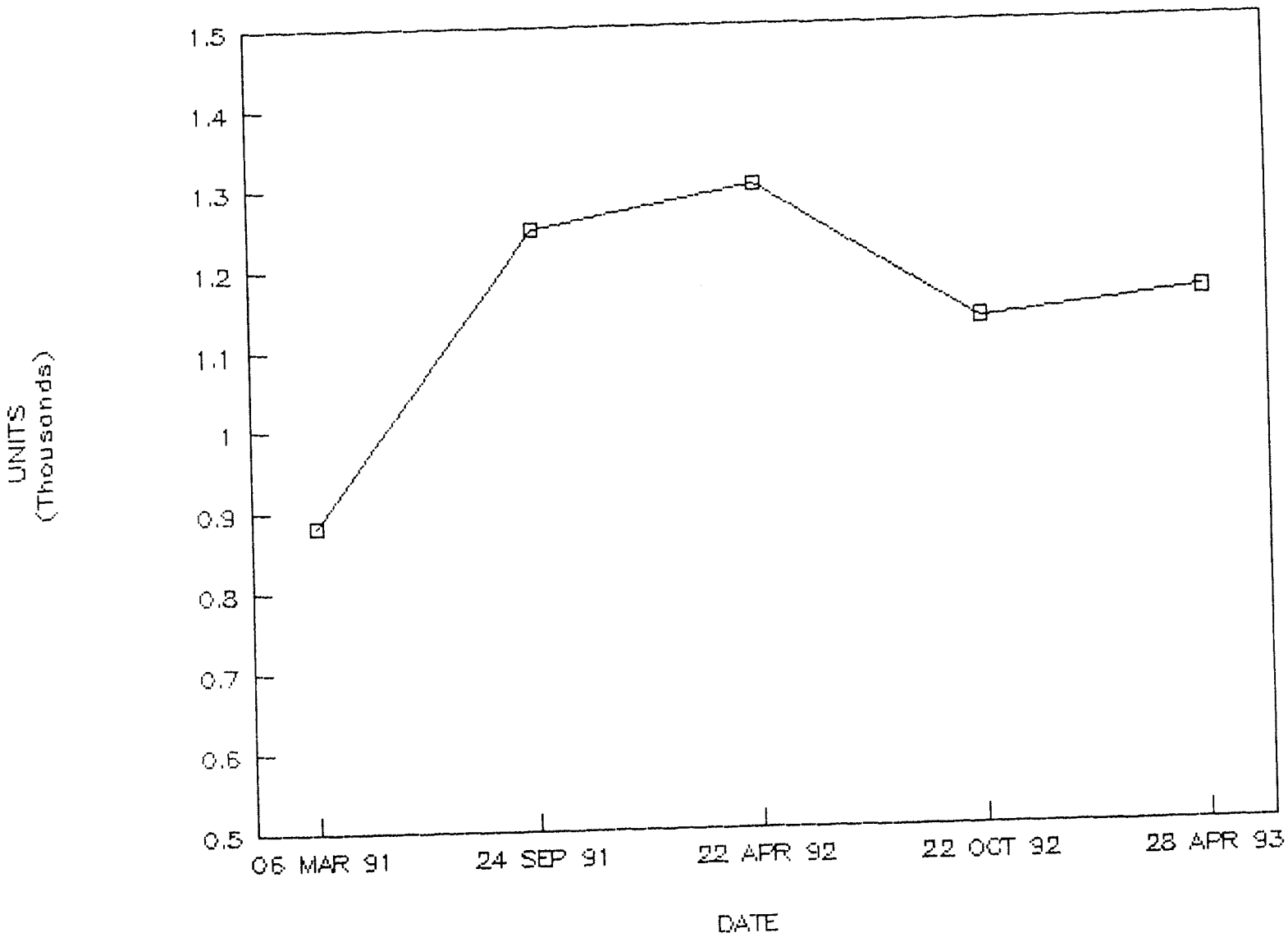
MW-2 EC


2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
UNITS
(Thousands)
06 MAR 91
24 SEP 91
22 APR 92
22 OCT 92
28 APR 93
DATE

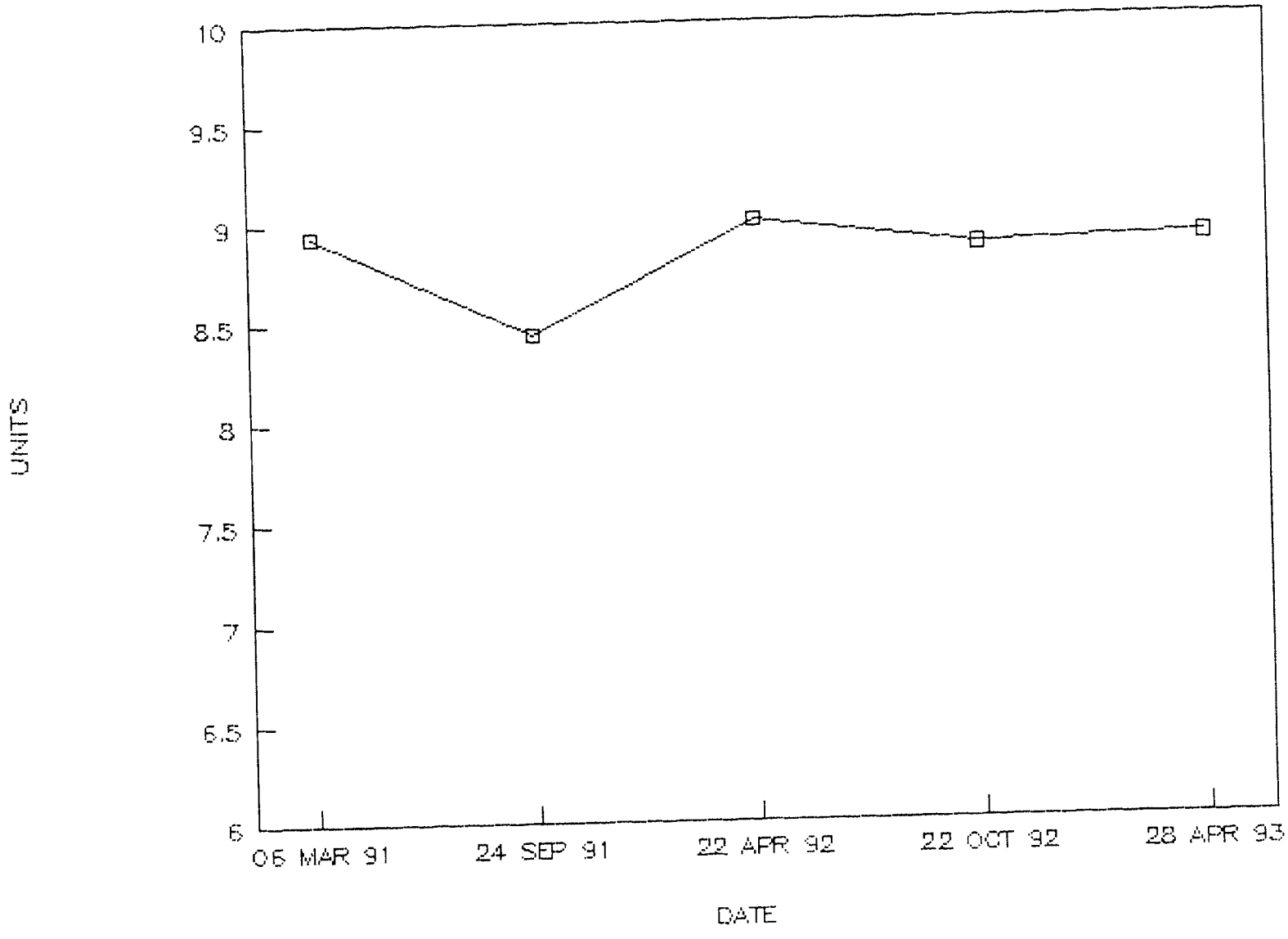
MW-4 pH


10
9.5
9
8.5
8
7.5
7
6.5
6
UNITS
06 MAR 91
24 SEP 91
22 APR 92
22 OCT 92
28 APR 93
DATE

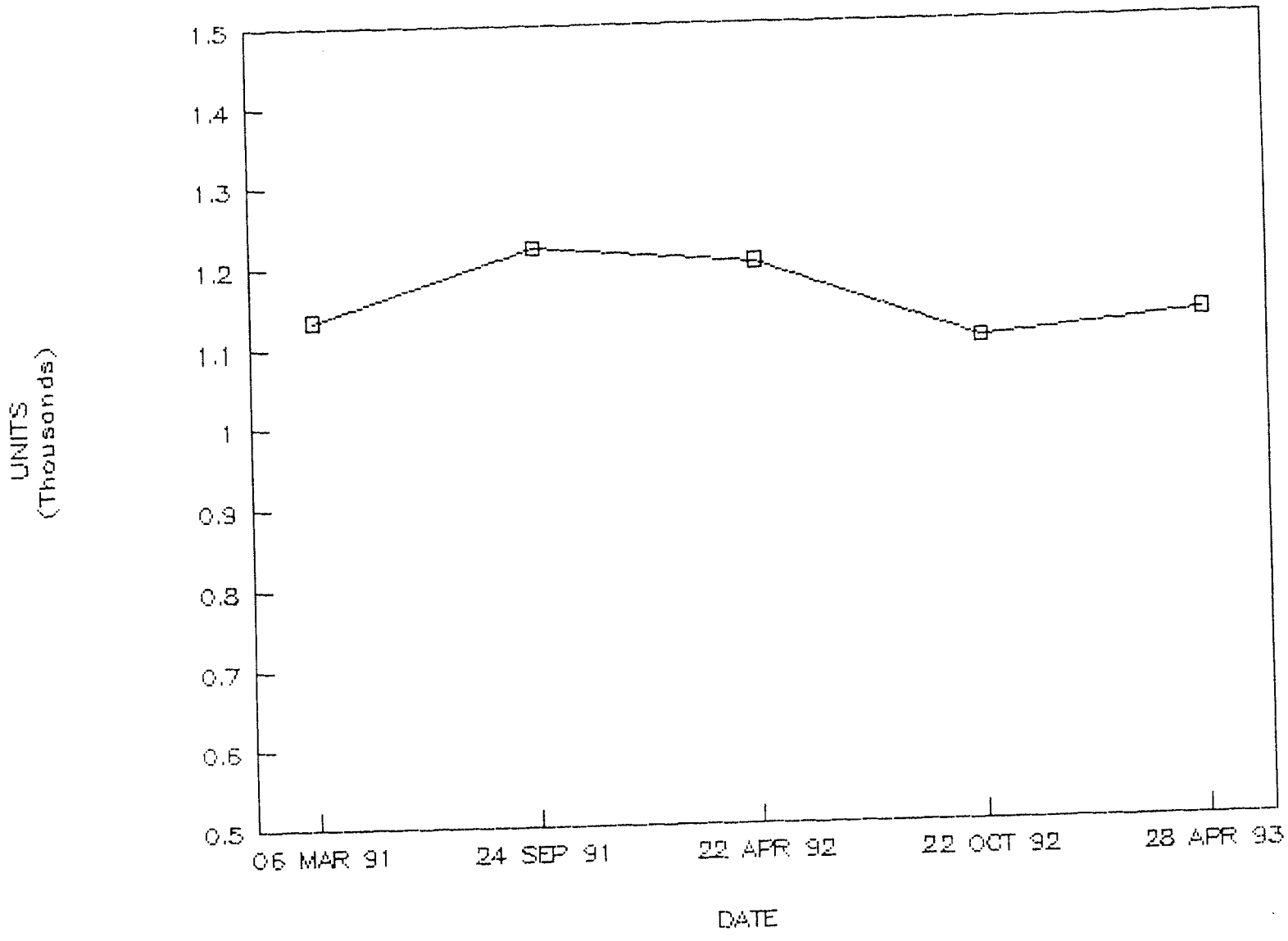
MW-4 EC


1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
UNITS
(Thousands)
06 MAR 91
24 SEP 91
22 APR 92
22 OCT 92
28 APR 93
DATE

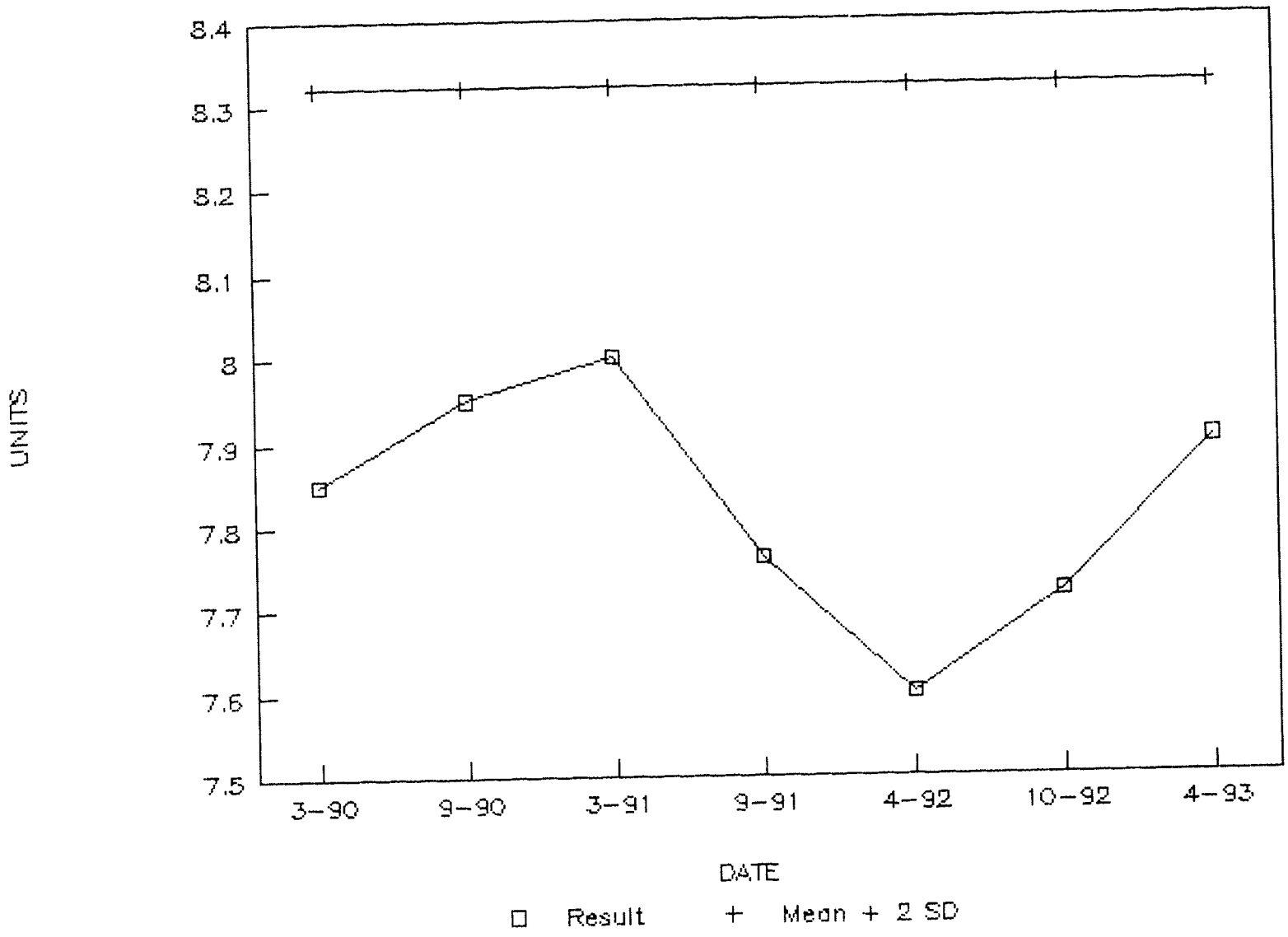
MW-5 pH


10
9.5
9
8.5
8
7.5
7
6.5
6
UNITS
06 MAR 91
24 SEP 91
22 APR 92
22 OCT 92
28 APR 93
DATE

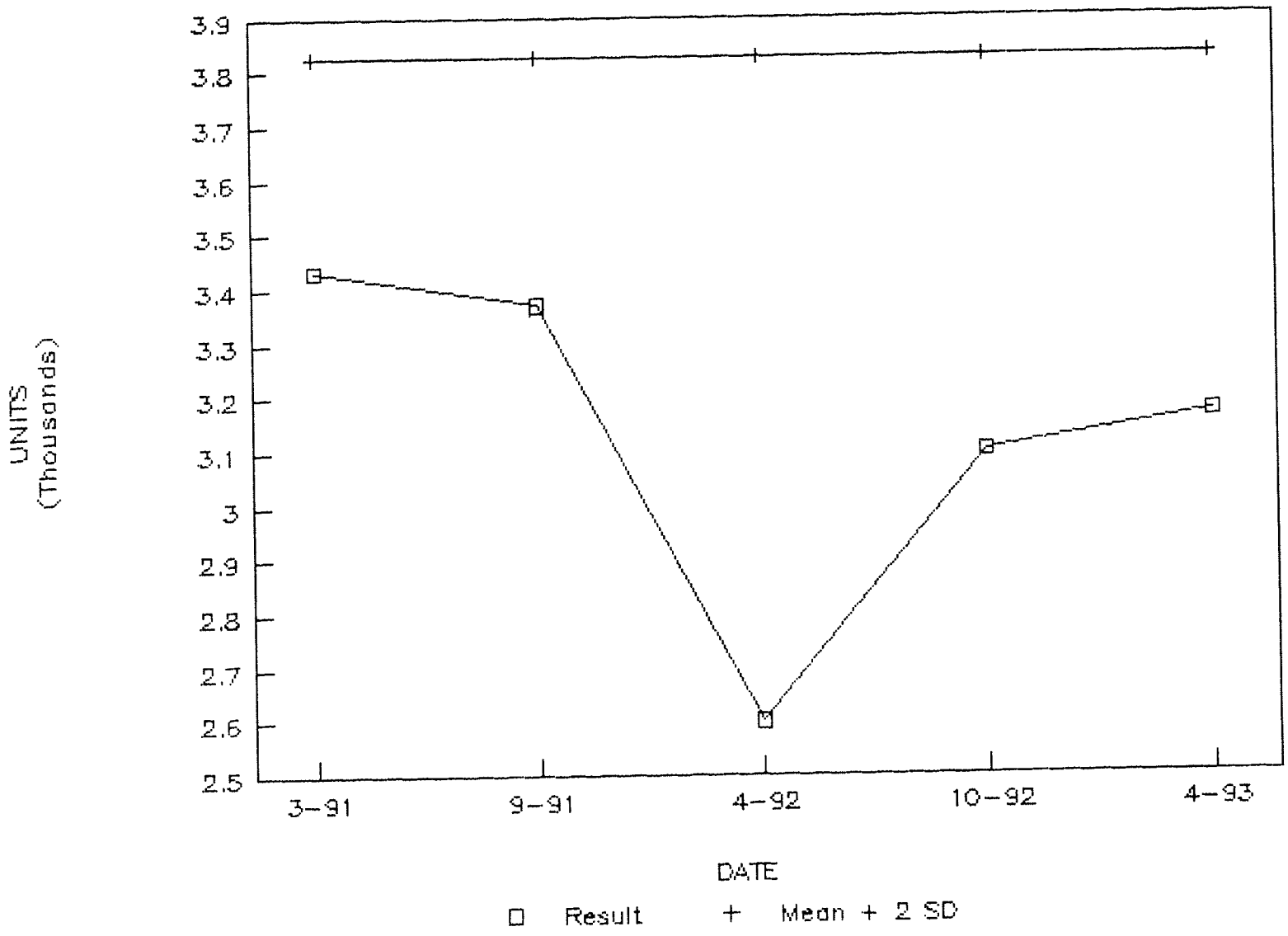
MW-5 EC


1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
UNITS
(Thousands)
06 MAR 91
24 SEP 91
22 APR 92
22 OCT 92
28 APR 93
DATE

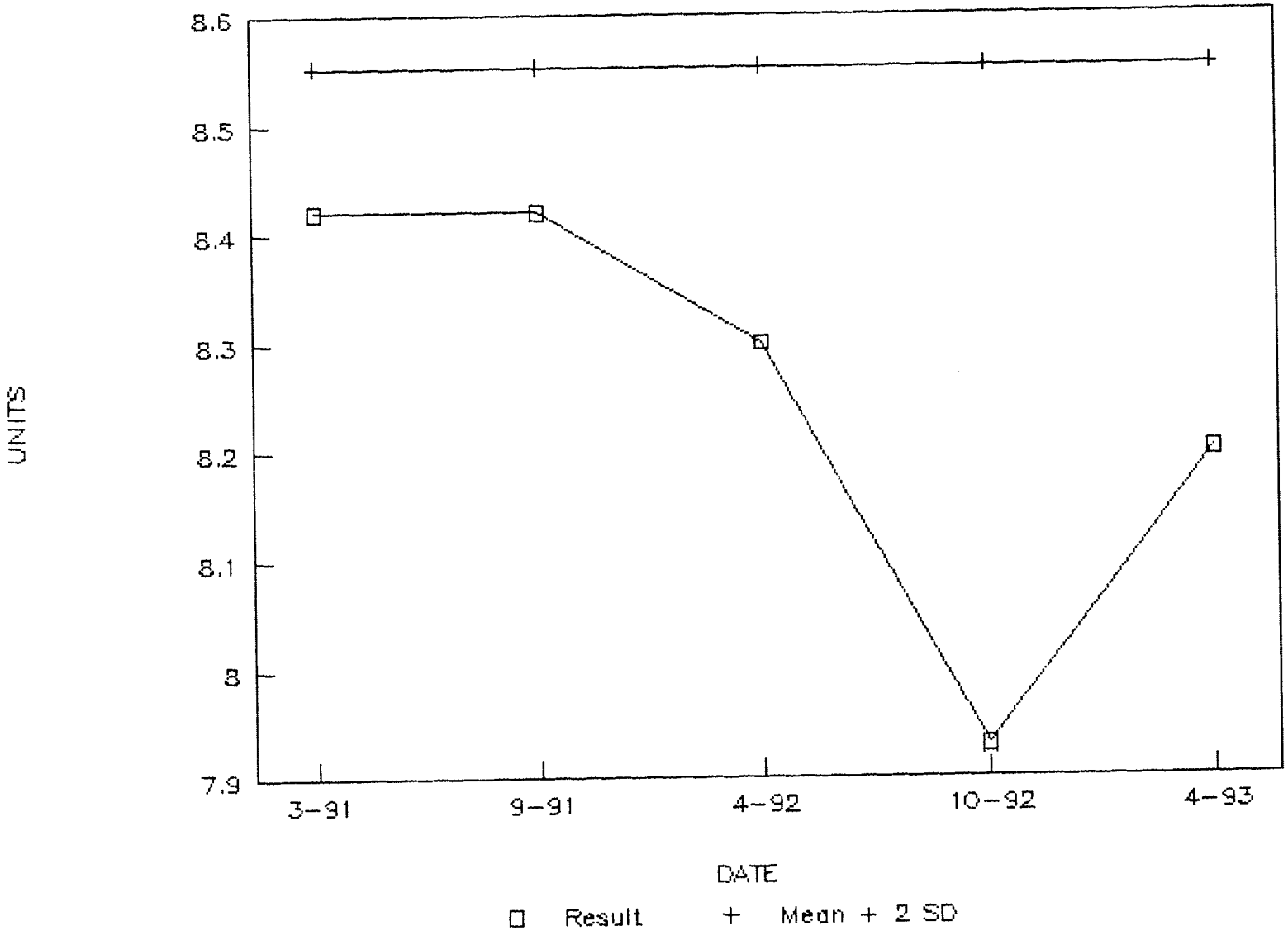
SMW-3 pH


8.4
8.3
8.2
8.1
8
7.9
7.8
7.7
7.6
7.5
UNITS
3-90
9-90
3-91
9-91
4-92
10-92
4-93
DATE
Result
Mean + 2 SD

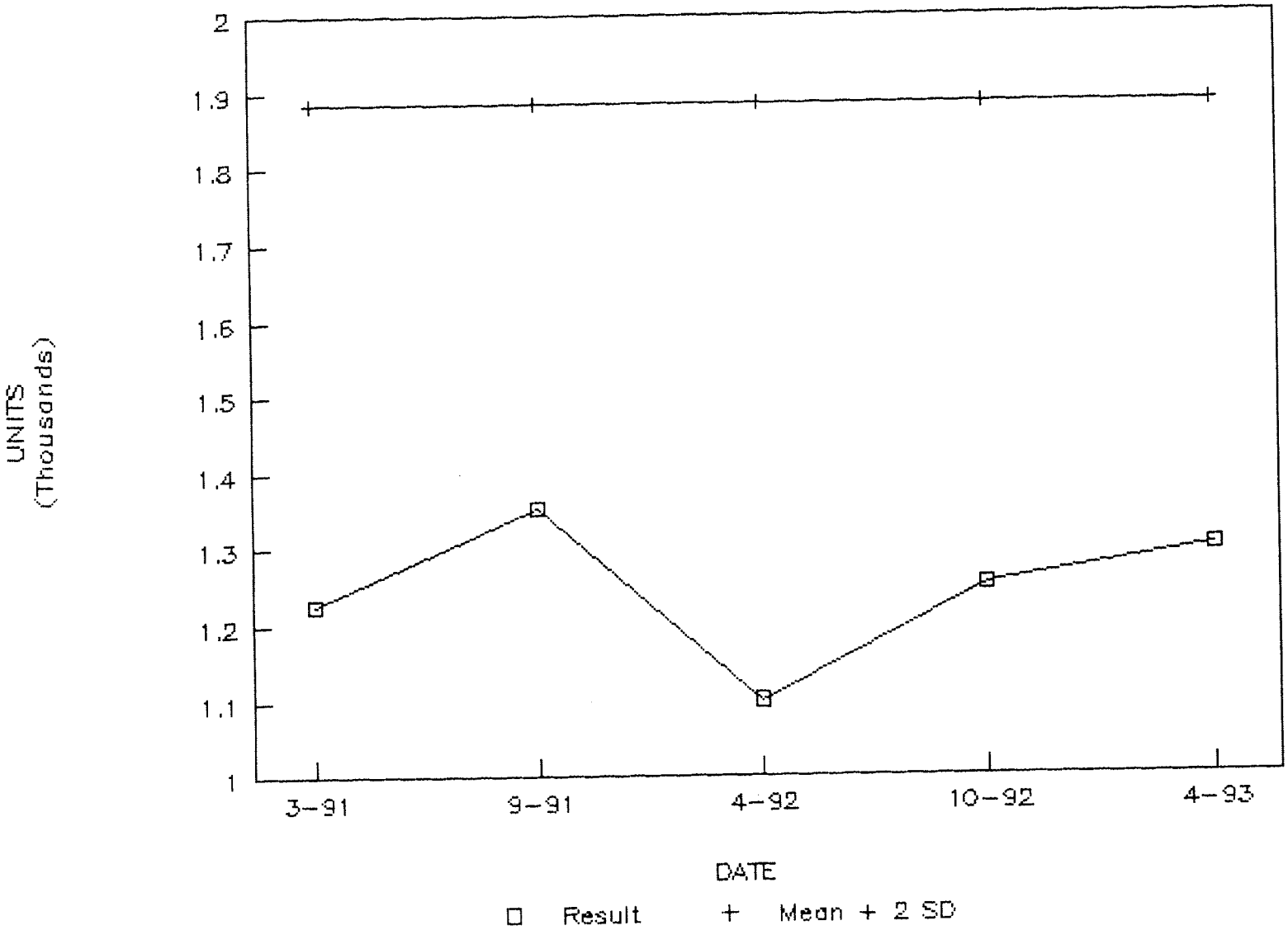
SMW-3 EC


3.9
3.8
3.7
3.6
3.5
3.4
3.3
3.2
3.1
3
2.9
2.8
2.7
2.6
2.5
UNITS
(Thousands)
3-91
9-91
4-92
10-92
4-93
DATE
Result
Mean + 2 SD

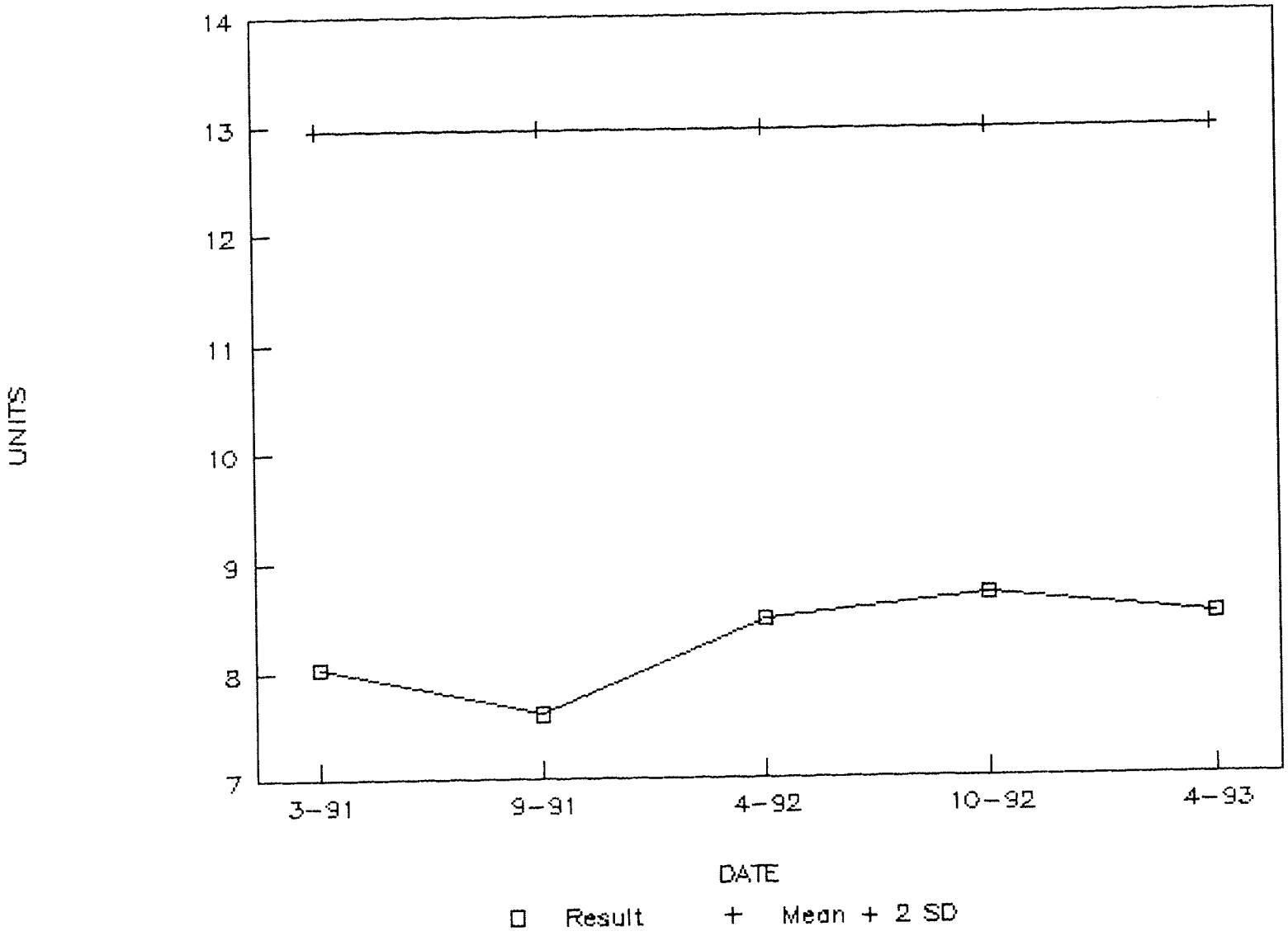
SMW-4 pH


8.6
8.5
8.4
8.3
8.2
8.1
8
7.9
UNITS
3-91
9-91
4-92
10-92
4-93
DATE
Result
Mean + 2 SD

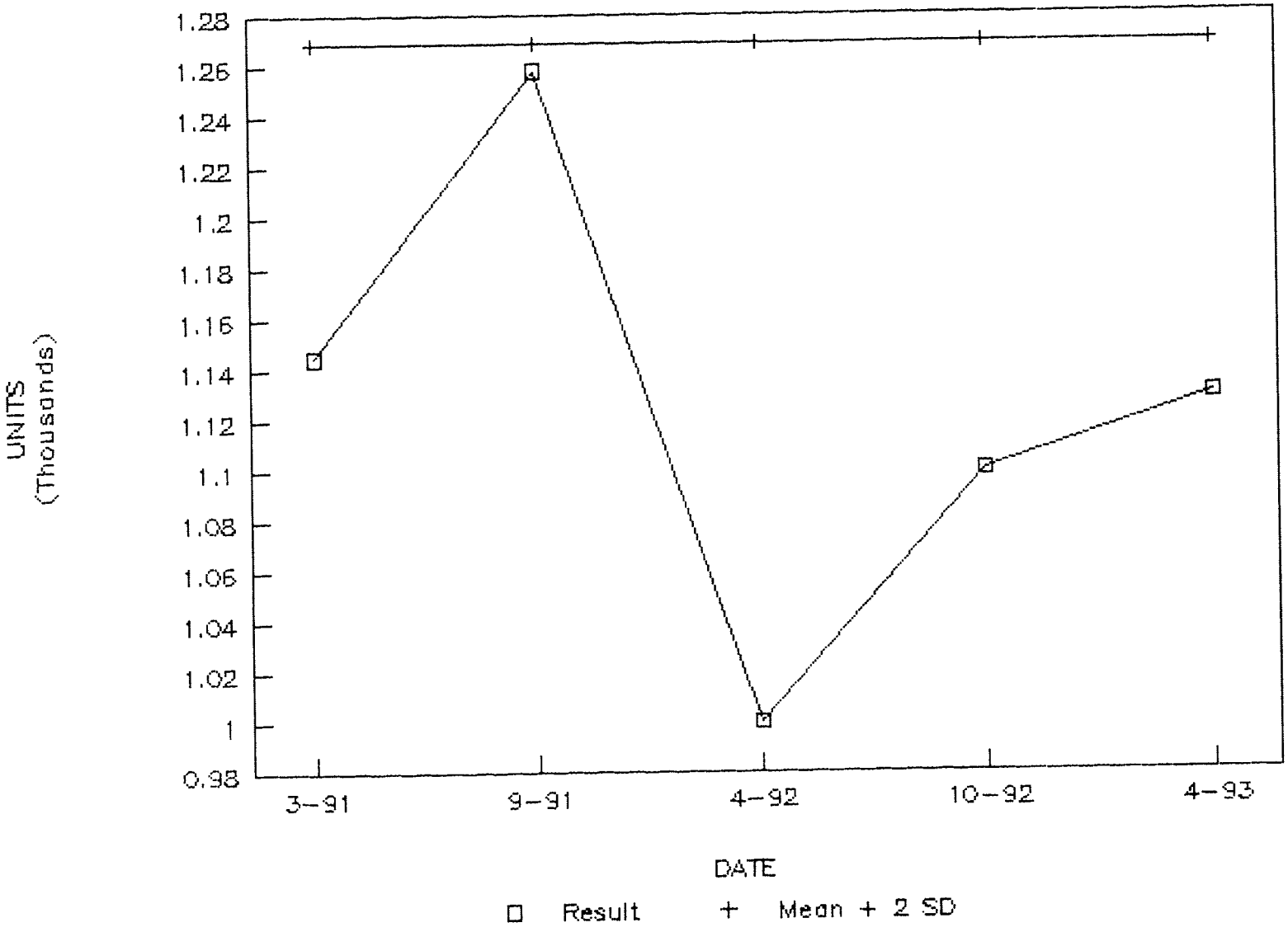
SMW-4 EC


2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
UNITS
(Thousands)
3-91
9-91
4-92
10-92
4-93
DATE
Result
Mean + 2 SD

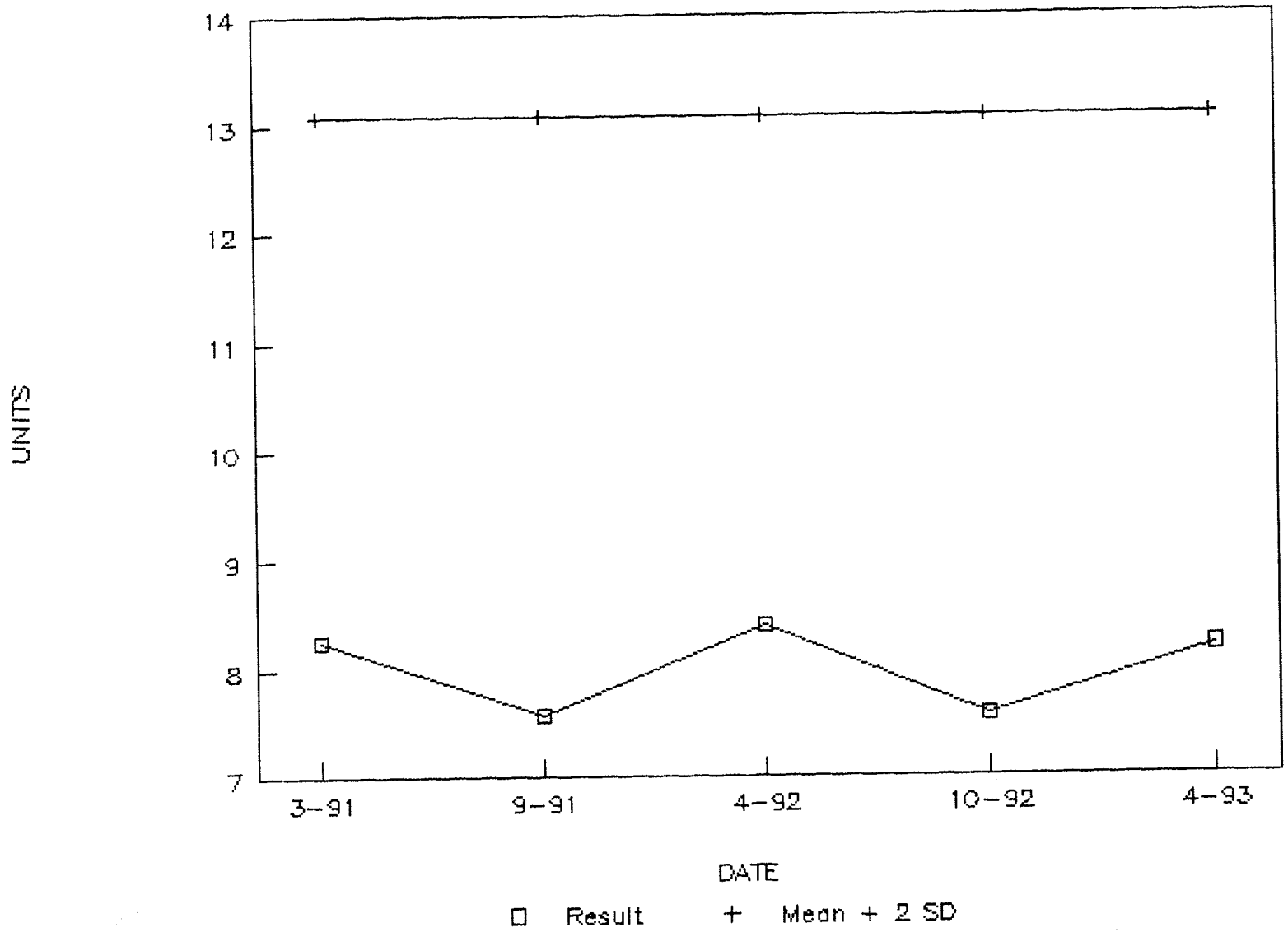
SMW-5 pH

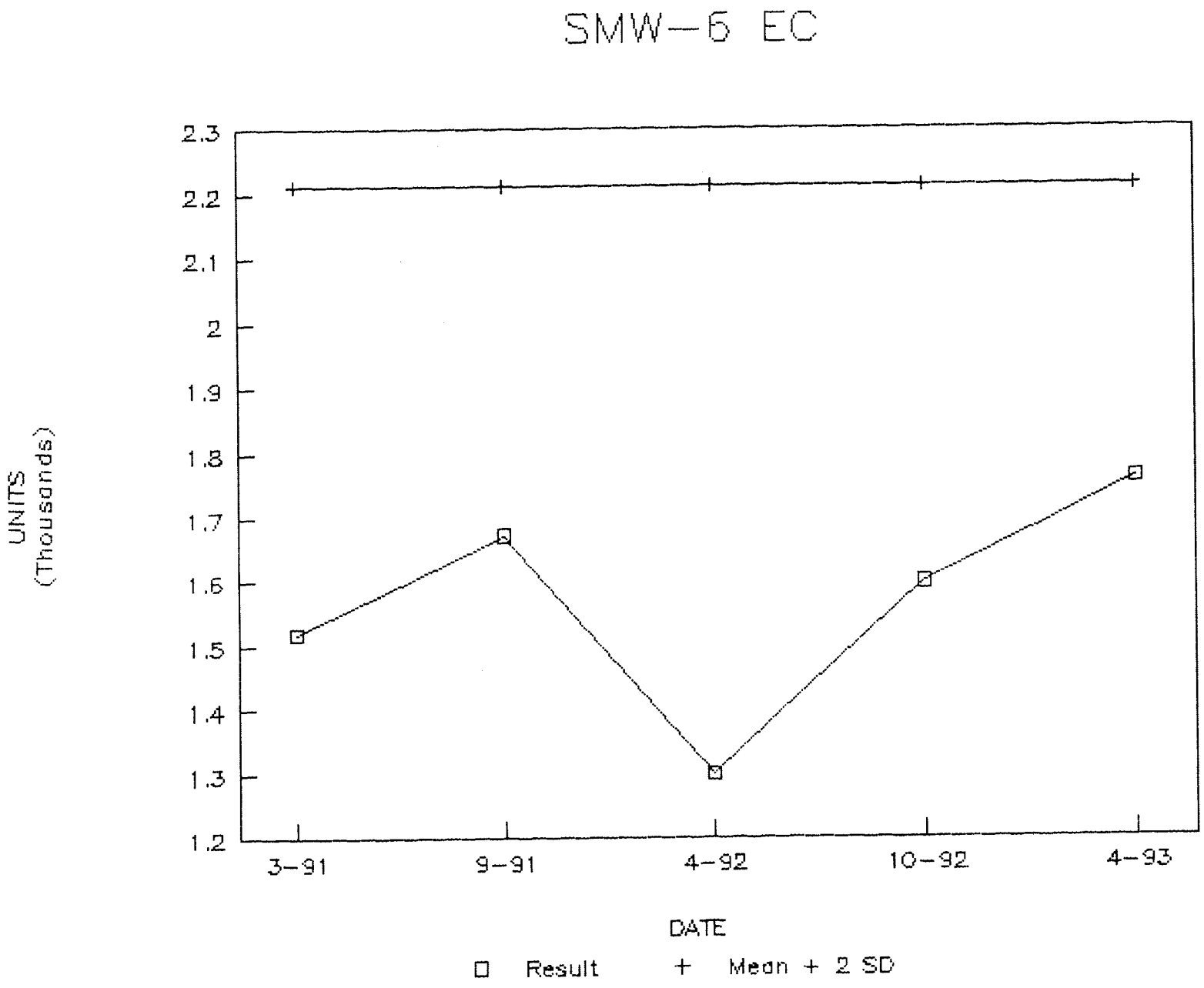

14
13
12
11
10
9
8
7
UNITS
3-91
9-91
4-92
10-92
4-93
DATE
Result
Mean + 2 SD

SMW-5 EC


1.28
1.26
1.24
1.22
1.2
1.18
1.16
1.14
1.12
1.1
1.08
1.06
1.04
1.02
1
0.98
UNITS
(Thousands)
3-91
9-91
4-92
10-92
4-93
DATE
Result
Mean + 2 SD

SMW-6 pH


14
13
12
11
10
9
8
7
UNITS
3-91
9-91
4-92
10-92
4-93
DATE
Result
Mean + 2 SD


SMW-6 EC
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
UNITS
(Thousands)
3-91
9-91
4-92
10-92
4-93
DATE
Result
Mean + 2 SD

Analytical Technologies, Inc.

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

ATI I.D. **304455**

May 20, 1993

Giant Refining Co.
Route 3, Box 7
Gallup, NM 87301

Project Name/Number: ANNUAL GRDWTR

Attention: Lynn Shelton

On **04/30/93**, Analytical Technologies, Inc. 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.

Total Organic Carbon and Total Organic Halides analyses were performed by ATI, Fort Collins.

All other analyses were performed by ATI, Phoenix.

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

Letitia Krakowski
Assistant Project Manager

Gregory R. Jordan
Laboratory Manager

GJ:td

Enclosure

Analytical Technologies, Inc.

CLIENT : GIANT REFINING CO.
PROJECT # : (NONE)
PROJECT NAME : ANNUAL GRDWTR

DATE RECEIVED : 04/30/93
REPORT DATE : 05/20/93

ATI I.D. : 304455

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SMW-3 (TOTAL)	AQUEOUS	04/29/93
02	SMW-3 (DISSOLVED)	AQUEOUS	04/29/93
03	SMW-4 (TOTAL)	AQUEOUS	04/29/93
04	SMW-4 (DISSOLVED)	AQUEOUS	04/29/93
05	SMW-5 (TOTAL)	AQUEOUS	04/29/93
06	SMW-5 (DISSOLVED)	AQUEOUS	04/29/93
07	SMW-6 (TOTAL)	AQUEOUS	04/29/93
08	SMW-6 (DISSOLVED)	AQUEOUS	04/29/93
09	SMW-4D (TOTAL)	AQUEOUS	04/29/93
10	SMW-4D (DISSOLVED)	AQUEOUS	04/29/93

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	10

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.

Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 304455

CLIENT : GIANT REFINING CO.
PROJECT # : (NONE)
PROJECT NAME : ANNUAL GRDWTR

DATE RECEIVED : 04/30/93

REPORT DATE : 05/20/93

PARAMETER	UNITS	01	03	05	07	09
CARBONATE (CACO3)	MG/L	<1	<1	10	<1	<1
BICARBONATE (CACO3)	MG/L	630	420	335	591	426
HYDROXIDE (CACO3)	MG/L	<1	<1	<1	<1	<1
TOTAL ALKALINITY (AS CACO3)	MG/L	630	420	345	591	426
CHLORIDE (EPA 325.2)	MG/L	70	61	61	90	60
CONDUCTIVITY, (UMHOS/CM)		3170	1310	1130	1760	1300
PH (EPA 150.1)	UNITS	7.9	8.2	8.5	8.2	8.2
SULFATE (EPA 375.2)	MG/L	1000	180	140	220	180
T. DISSOLVED SOLIDS (160.1)	MG/L	2300	840	770	1100	840
TOTAL ORGANIC CARBON	MG/L	3	3	8	2	4
TOTAL ORGANIC HALIDES	MG/L	40	40	90	< 20	90

Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : GIANT REFINING CO.
PROJECT # : (NONE)
PROJECT NAME : ANNUAL GRDWTR

ATI I.D. : 304455

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CARBONATE	MG/L	30445501	<1	<1	NA	NA	NA	NA
BICARBONATE	MG/L		630	629	0.2	NA	NA	NA
HYDROXIDE	MG/L		<1	<1	NA	NA	NA	NA
TOTAL ALKALINITY	MG/L		630	629	0.2	NA	NA	NA
CHLORIDE	MG/L	30445509	60	59	2	163	100	103
CONDUCTIVITY(UMHOS/CM)		30445501	3170	3240	2	NA	NA	NA
PH	UNITS	30445501	7.9	8.0	1	NA	NA	NA
SULFATE	MG/L	30445501	1000	1000	0	2000	990	101
TOTAL DISSOLVED SOLIDS	MG/L	30445507	1100	1100	0	NA	NA	NA
TOTAL ORGANIC CARBON	MG/L	30445501	3	3	0	NA	NA	NA
TOTAL ORGANIC HALIDES	MG/L	930422902	< 20	NA	NA	400	400	100

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

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

Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 304455

CLIENT : GIANT REFINING CO.
PROJECT # : (NONE)
PROJECT NAME : ANNUAL GRDWTR

DATE RECEIVED : 04/30/93

REPORT DATE : 05/20/93

PARAMETER	UNITS	01	02	03	04	05
CALCIUM (EPA 200.7/6010)	MG/L	-	43.5	-	4.2	-
CHROMIUM (EPA 200.7/6010)	MG/L	0.012	-	0.014	-	0.020
POTASSIUM (EPA 200.7/6010)	MG/L	-	<1.0	-	<1.0	-
MAGNESIUM (EPA 200.7/6010)	MG/L	-	15.6	-	1.4	-
SODIUM (EPA 200.7/6010)	MG/L	-	820	-	318	-
LEAD (200.7/6010)	MG/L	<0.10	-	<0.10	-	<0.10

Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 304455

CLIENT : GIANT REFINING CO.
PROJECT # : (NONE)
PROJECT NAME : ANNUAL GRDWTR

DATE RECEIVED : 04/30/93
REPORT DATE : 05/20/93

PARAMETER	UNITS	06	07	08	09	10
CALCIUM (EPA 200.7/6010)	MG/L	3.4	-	9.6	-	4.6
CHROMIUM (EPA 200.7/6010)	MG/L	-	0.012	-	0.011	-
POTASSIUM (EPA 200.7/6010)	MG/L	1.3	-	<1.0	-	<1.0
MAGNESIUM (EPA 200.7/6010)	MG/L	1.5	-	3.2	-	1.5
SODIUM (EPA 200.7/6010)	MG/L	256	-	443	-	321
LEAD (200.7/6010)	MG/L	-	<0.10	-	<0.10	-

Analytical Technologies, Inc.

METALS - QUALITY CONTROL

CLIENT : GIANT REFINING CO.
PROJECT # : (NONE)
PROJECT NAME : ANNUAL GRDWTR

ATI I.D. : 304455

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CALCIUM	MG/L	30551402	16.6	16.2	2	65.1	50.0	97
CHROMIUM	MG/L	30550801	0.018	0.016	12	0.898	1.00	88
POTASSIUM	MG/L	30551402	13.8	13.6	1	62.6	50.0	98
MAGNESIUM	MG/L	30551402	6.4	6.4	0	30.8	25.0	98
SODIUM	MG/L	30551402	1060	1050	0.9	1480	500	84
LEAD	MG/L	30445105	<0.10	<0.10	NA	1.01	1.00	101

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

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

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 30445501

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : GIANT REFINING CO.
PROJECT # : (NONE)
PROJECT NAME : ANNUAL GRDWTR
CLIENT I.D. : SMW-3 (TOTAL)
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 04/29/93
DATE RECEIVED : 04/30/93
DATE EXTRACTED : N/A
DATE ANALYZED : 05/05/93
UNITS : UG/L
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
TRANS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2-TRICHLOROETHANE	<1
BENZENE	<1
CIS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYLBENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	101
BROMOFLUOROBENZENE (%)	101
TOLUENE-D8 (%)	101

Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : VOLATILE ORGANICS (EPA 8240)

ATI I.D. : 30445501

COMPOUNDS	RESULTS
NO ADDITIONAL COMPOUNDS	

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 30445503

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : GIANT REFINING CO.
PROJECT # : (NONE)
PROJECT NAME : ANNUAL GRDWTR
CLIENT I.D. : SMW-4 (TOTAL)
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 04/29/93
DATE RECEIVED : 04/30/93
DATE EXTRACTED : N/A
DATE ANALYZED : 05/05/93
UNITS : UG/L
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
TRANS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2-TRICHLOROETHANE	<1
BENZENE	<1
CIS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYLBENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	97
BROMOFLUOROBENZENE (%)	100
TOLUENE-D8 (%)	99

Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : VOLATILE ORGANICS (EPA 8240)

ATI I.D. : 30445503

COMPOUNDS	RESULTS
NO ADDITIONAL COMPOUNDS	

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 30445505

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: GIANT REFINING CO.	DATE SAMPLED	: 04/29/93
PROJECT #	: (NONE)	DATE RECEIVED	: 04/30/93
PROJECT NAME	: ANNUAL GRDWTR	DATE EXTRACTED	: N/A
CLIENT I.D.	: SMW-5 (TOTAL)	DATE ANALYZED	: 05/05/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
TRANS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2-TRICHLOROETHANE	<1
BENZENE	<1
CIS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYLBENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	96
BROMOFLUOROBENZENE (%)	100
TOLUENE-D8 (%)	99

Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : VOLATILE ORGANICS (EPA 8240)

ATI I.D. : 30445505

COMPOUNDS	RESULTS
NO ADDITIONAL COMPOUNDS	

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 30445507

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: GIANT REFINING CO.	DATE SAMPLED	: 04/29/93
PROJECT #	: (NONE)	DATE RECEIVED	: 04/30/93
PROJECT NAME	: ANNUAL GRDWTR	DATE EXTRACTED	: N/A
CLIENT I.D.	: SMW-6 (TOTAL)	DATE ANALYZED	: 05/06/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
TRANS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2-TRICHLOROETHANE	<1
BENZENE	<1
CIS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYLBENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	105
BROMOFLUOROBENZENE (%)	98
TOLUENE-D8 (%)	97

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : VOLATILE ORGANICS (EPA 8240)

ATI I.D. : 30445507

COMPOUNDS	RESULTS
NO ADDITIONAL COMPOUNDS	

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 30445509

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: GIANT REFINING CO.	DATE SAMPLED	: 04/29/93
PROJECT #	: (NONE)	DATE RECEIVED	: 04/30/93
PROJECT NAME	: ANNUAL GRDWTR	DATE EXTRACTED	: N/A
CLIENT I.D.	: SMW-4D (TOTAL)	DATE ANALYZED	: 05/06/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
TRANS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2-TRICHLOROETHANE	<1
BENZENE	<1
CIS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYLBENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	102
BROMOFLUOROBENZENE (%)	96
TOLUENE-D8 (%)	97

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : VOLATILE ORGANICS (EPA 8240)

ATI I.D. : 30445509

COMPOUNDS	RESULTS
NO ADDITIONAL COMPOUNDS	

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: GIANT REFINING CO.	ATI I.D.	: 304455
PROJECT #	: (NONE)	DATE EXTRACTED	: 05/05/93
PROJECT NAME	: ANNUAL GRDWTR	DATE ANALYZED	: 05/05/93
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
TRANS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2-TRICHLOROETHANE	<1
BENZENE	<1
CIS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYLBENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	99
BROMOFLUOROBENZENE (%)	100
TOLUENE-D8 (%)	100

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: GIANT REFINING CO.	ATI I.D.	: 304455
PROJECT #	: (NONE)	DATE EXTRACTED	: 05/06/93
PROJECT NAME	: ANNUAL GRDWTR	DATE ANALYZED	: 05/06/93
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
TRANS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2-TRICHLOROETHANE	<1
BENZENE	<1
CIS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYLBENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	98
BROMOFLUOROBENZENE (%)	99
TOLUENE-D8 (%)	97

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 304455

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : GIANT REFINING CO.
PROJECT # : (NONE)
PROJECT NAME : ANNUAL GRDWTR
REF I.D. : 30549805

DATE ANALYZED : 05/06/93
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	50	44	88	50	100	13
TRICHLOROETHENE	<1	50	45	90	48	96	6
CHLOROBENZENE	<1	50	48	96	49	98	2
TOLUENE	<1	50	50	100	53	106	6
BENZENE	<1	50	50	100	52	104	4

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

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

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 304455

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : GIANT REFINING CO.
PROJECT # : (NONE)
PROJECT NAME : ANNUAL G.W.
REF I.D. : 30445509

DATE ANALYZED : 05/06/93
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	50	46	92	51	102	10
TRICHLOROETHENE	<1	50	45	90	48	96	6
CHLOROBENZENE	<1	50	46	92	48	96	4
TOLUENE	<1	50	48	96	51	102	6
BENZENE	<1	50	48	96	51	102	6

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

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

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

CHAIN OF CUSTODY

DATE: 4-29-93 PAGE 1 OF 1

ATI LAB I.D. 304455

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

PROJECT MANAGER:

COMPANY: GIANT
ADDRESS: 140 EAST 39
JAMESTOWN NM 87347
PHONE: 722 0227
FAX:

BILL TO:
COMPANY: SAME
ADDRESS:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	~~BTXE/MTBE (8020)~~	GENERAL CHEMISTRY *	Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.	Cr + Pb (NOT FILTERED)	Ca, Mg, K, Na (NOT FILTERED)	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)	TOX	TOC	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
SMW-3	4-29	12:45	W	01/02					X				X	X				X		X	X											10
SMW-4		1:10	W	03/04					X				X	X				X		X	X											10
SMW-5		1:40	W	05/06					X				X	X				X		X	X											8
SMW-6		1:55	W	07/08					X				X	X				X		X	X											8
SMW-4D		1:25	W	09/10 (D)					X				X	X				X		X	X											7

PROJECT INFORMATION

PROJ. NO.:
PROJ. NAME: ANNUAL GROWTR
P.O. NO.: 9979009 14
SHIPPED VIA: FED EX

SAMPLE RECEIPT

NO. CONTAINERS	43
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:
* SEE ATTACHED LIST OF PARAMETERS

SAMPLED & RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Lynn Shelton Time: 3:30	Signature: Time:	Signature: Time:
Printed Name: LINN SHELTON Date: 4-29-93	Printed Name: Date:	Printed Name: Date:
Company: GIANT Phone: 722 0227	Company:	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: (LAB) 3.
Signature: Time:	Signature: Time:	Signature: Time: 0955
Printed Name: Date:	Printed Name: Date:	Printed Name: Terri Dettre Date: 4/30/93
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 4/30/93 PAGE 2 OF 2

NETWORK PROJECT MANAGER: BETH PROFFITT

COMPANY: Analytical Technologies, Inc.
ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87106

Dissolved metals: Ca, Mg, K, Na

CLIENT PROJECT MANAGER:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	TOX	TOC	ORGANIC LEAD	SULFIDE	SURFACTANTS (MBAS)	Dissolved Metals - See list	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
304455-10	4/29	1325	AQ	10						X																1

PROJECT INFORMATION	
PROJECT NUMBER:	304455
PROJECT NAME:	GRC
QC LEVEL:	STD. IV
QC REQUIRED:	MS MSD BLANK
TAT:	STANDARD RUSH!

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	1
CHAIN OF CUSTODY SEALS	N
INTACT?	Y
RECEIVED GOOD COND./COLD	Y
LAB NUMBER	

SAMPLES SENT TO:	
SAN DIEGO	
FT. COLLINS	
RENTON	
PENSACOLA	
PHOENIX	X
BARRINGER	
FIBEROUANT	

DUE DATE: 5/14/93
RUSH SURCHARGE: —
CLIENT DISCOUNT: ____ %
see att-quote

W.O. #28405

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.
Signature: Terri Dettre Time: 1800	Signature: Time:
Printed Name: Terri Dettre Date: 4/30/93	Printed Name: Date
Analytical Technologies, Inc. Albuquerque	Company:
RECEIVED BY: (LAB) 1.	**RECEIVED BY: (LAB) 2.**
Signature: Time:	Signature: R. Tubesczewski Time: 1005
Printed Name: Date:	Printed Name: R. Tubesczewski Date: 5/3/93
Company:	Company: ATI-Phx

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

AnalyticalTechnologies,Inc. Albuquerque, NM

Chain of Custody

DATE 4/30/93 PAGE 1 OF 1

NETWORK PROJECT MANAGER: BETH PROFFITT

COMPANY: **Analytical Technologies, Inc.**

ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87106

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
304455-1	4/29	1245	AQ	01	X	X																												5
-3		1310		02	X	X																												3
-5		1340		03	X	X																												3
-7		1355		04	X	X																												2
-9		1325		05	X	X																												

TOX

PROJECT INFORMATION	
PROJECT NUMBER:	304455
PROJECT NAME:	GRC
QC LEVEL:	STD IV
QC REQUIRED:	MS MSD BLANK
TAT:	STANDARD RUSH!

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	18
CHAIN OF CUSTODY SEALS	N
INTACT?	NA
RECEIVED GOOD COND./COLD	Y
LAB NUMBER	93-04-228

DUE DATE: 5/14/93

RUSH SURCHARGE:

CLIENT DISCOUNT: — %

See quote

W.O. # LK406

SAMPLES SENT TO:	
SAN DIEGO	
FT. COLLINS	X
RENTON	
PENSACOLA	
PHOENIX	
BARRINGER	
FIBERQUANT	

RELINQUISHED BY: 1.
Signature: Terri Dottre Time: 1800
Printed Name: Terri Dottre Date: 4/30/93
Analytical Technologies, Inc. Albuquerque

RECEIVED BY: (LAB) 1.
Signature: Time:
Printed Name: Date:
Company: Fed-Ex

RELINQUISHED BY: 2.
Signature: Time:
Printed Name: Date
Company: Fed-Ex

RECEIVED BY: (LAB) 2.
Signature: Chris Miller Time: 1340
Printed Name: Chris Miller Date: 5-2
Company: ATI

lytical**Technologies,**Inc. Albuquerque, NM

Chain of Custody

DATE 4/30/93 PAGE 1 OF 2

NETWORK PROJECT MANAGER: BETH PROFFITT

COMPANY: **Analytical Technologies, Inc.**
ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87106

General Chem: pH, cond, TDS, alk, Cl, F
Total metals: Cr, Pb
Dissolved metals: Ca, Mg, K, Na

CLIENT PROJECT MANAGER:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	TOX	TOC	ORGANIC LEAD	SULFIDE	SURFACTANTS (MBAS)	Gen. Chem - (att. list)	632/632 MOD	619/619 MOD	610/8310	Total Metals / please see att. list	Dissolved Metals	8240 (TCLP 1311) ZHE	Diesel/Gasoline/BTXE/MTBE/ (MOD 8015/8020)	Volatile Organics GC/MS (624/8240) Br, Bet	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
304455-1	4/29	1245	FQ	1						X				X				X										4
-2		"		2											X													1
-3		1310		3						X				X				X										4
-4		"		4											X													1
-5		1340		5						X				X				X										4
-6		"		6											X													1
-7		1355		7						X				X				X										4
-8		"		8											X													1
-9		1325		9						X				X				X										4

PROJECT INFORMATION	
PROJECT NUMBER:	304455
PROJECT NAME:	GRC
QC LEVEL:	STD. IV
QC REQUIRED:	MS MSD BLANK
TAT:	STANDARD RUSH!

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	24
CHAIN OF CUSTODY SEALS	N
INTACT?	Y
RECEIVED GOOD COND./COLD	Y
LAB NUMBER	304455

DUE DATE: 5/14/93
RUSH SURCHARGE: —
CLIENT DISCOUNT: — %
see att. quote

W.O. # LK405

TC-Fedex 5/1/93 1200

SAMPLES SENT TO:	
SAN DIEGO	
FT. COLLINS	
RENTON	
PENSACOLA	
PHOENIX	X
BARRINGER	
FIBERQUANT	

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.
Signature: Terri Dettre Time: 1800	Signature: Time:
Printed Name: Terri Dettre Date 4/30/93	Printed Name: Date
Analytical Technologies, Inc. Albuquerque	Company:
RECEIVED BY: (LAB) 1.	**RECEIVED BY: (LAB) 2.**
Signature: Time:	Signature: R. Tubeszewski Time: 1005
Printed Name: Date:	Printed Name: R. Tubeszewski Date: 5/3/93
Company:	Company: ATI-Phx

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