COOK COMPOSITES AND POLYMERS CO.
SAUKVILLE, WISCONSIN
(Formerly: Freeman Chemical Corporation)
1990 ANNUAL REPORT

Prepared for:

COOK COMPOSITES AND POLYMERS CO.
Saukville, Wisconsin

Prepared by:

HATCHER-SAYRE, INC.
Richmond, Virginia

Job No. 0001-003

January, 1991

HATCHER-SAYRE, INC.

January 28, 1991

Mr. William E. Muno, Chief
RCRA Enforcement Branch
USEPA, Region V
230 South Dearborn St.
Chicago, Illinois 60604

Re: 1990 Annual Report
Cook Composites and Polymers Co.
Formerly: Freeman Chemical Corporation
Saukville, WI
Job No. 0001-003

Dear Mr. Muno:

Attached is a copy of the 1990 Annual Report for the above referenced project. The report presents the data from the four (4) quarterly sampling periods conducted last year. Data from previous years were also included as appropriate.

The presentation of the data is in accordance with the agency approved project plan, except for the individual trend analyses and isoconcentration maps of benzene, toluene, ethylbenzene and xylene (BTEX). As discussed previously with Mr. Bob Smith in your branch, since these data mirror the data for total VOCs, the individual breakdown for each compound would not provide any additional useful information.

Based upon the data analysis, recommendations have been made concerning the parameters to be analyzed and the future sampling schedule. If these recommended changes are approved, revisions to the project work plan will be prepared and submitted to the agencies.

905 Southlake Boulevard, Richmond, Virginia 23236 (804) 794-0216 Fax No. (804) 379-8934

Should you have any questions concerning the report, please contact either Steve Werner or me.

Sincerely,

HATCHER-SAYRE, INC.

Robert D. Money

Robert D. Money
Project Hydrogeologist

RDM/sp
muno.ltr
Enclosures
cc: Robert Smith (2 reports)
Jill Jefferson (3 reports)
Franklin Schultz (2 reports)
Craig Bostwick (1 report)
Russell Cerk (1 report)

COOK COMPOSITES AND POLYMERS CO.
(Formerly: Freeman Chemical Corporation)
1990 ANNUAL REPORT

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1990 ANNUAL REPORT

1.0 INTRODUCTION

As required by the current program at the Cook Composites and Polymers Co., formerly Freeman Chemical Corporation, Saukville Plant, quarterly groundwater monitoring for January, 1990 (Winter quarter), April 1990 (Spring quarter), July, 1990 (Summer quarter) and November, 1990 (Fall quarter) was conducted. The November, 1990 sampling period represents the annual sampling event. The collection of field data and groundwater sampling was conducted by CBC Environmental Services, Oak Creek, Wisconsin, and the water quality analyses were conducted by Enseco/ERCO Laboratory, Cambridge, Massachusetts. Both water quality and field observation tests have been submitted to U.S. Environmental Protection Agency (USEPA), Region V, Wisconsin Department of Natural Resources (WDNR) and Cook Composites and Polymers Co. (CCPC) on a quarterly basis. The intent of this annual report is to summarize the data collected during 1990 and to make pertinent evaluations and recommendations.

2.0 GROUNDWATER MONITORING

2.1 Water Levels

Table 1 lists the wells and laboratory analysis methods in the current groundwater monitoring program at the CCPC's Saukville facility. Locations for the sampled wells are presented on Figures 1 and 2. Water level observations were recorded for each monitoring well in the current sampling program. These water level readings were used to construct quarterly potentiometric surface maps for both the glacial and dolomite aquifers. These maps are included in Appendix A. During the sampling periods (quarters), several wells were dry or water levels could not be obtained due to mechanical difficulties. These wells are noted on Table 1. CCPC also maintains a daily record of running times for various pumping wells and this information is presented in Table 2.

The potentiometric surface maps for both the glacial and dolomite aquifers were contoured using a statistical kriging method. Because groundwater elevations at this site can reasonably be assumed to follow a linear pattern, these maps represent the groundwater (potentiometric) surface of the aquifers underlying the site. Only those wells associated with a particular aquifer are included in the database for groundwater elevation contouring. Figures 1 and 2 show the location of the wells used and the particular aquifer which they monitor. A 24 x 36 inch version of Figure 2 is included as Appendix F and may be referenced when viewing the potentiometric maps located in Appendix A.

Examination of the groundwater maps for the glacial aquifer shows the groundwater surface generally slopes downward to the east toward the Milwaukee River at a near gradient of 4.5% across the site. Deflections in the contours represent the induced changes in the glacial aquifer due to the pumping of the Ranney-type Collectors. As indicated in Table 2 pumping of the Ranney-type Collectors (RC1, RC2 and RC3) has not been continuous. This is attributed to fluctuating water levels in the glacial aquifer. The variability in the glacial water levels is at least partially

TABLE 1

Groundwater Monitoring Wells, Sampling Frequency and Laboratory Analyses Method Number

Quarterly Monitoring

	Laboratory Analysis Method Number			
Glacial Wells	Winter	Spring	Summer	Fall
6A	624	624	624	624
14B	624	624	624	624
20	624	624	624	624
27	602	602	602	624
37	602	602	602	624
41	602	602	602	624
42	Dry	602	602	624
43	602	602	Dry	624
44	Dry	Dry	Dry	Dry
45	Dry	Dry	Dry	Dry
46	624	624	624	624
47	602	602	602	624
48	602	602	602	624
Ranney Collectors				
RC1	602	602	602	624
RC2	602	602	602	624
RC3	602	602	602	624
Shallow Dolomite Wells				
3A	624	624	624	624
7	624	624	624	624
21A	602	602	602	624
23	624	624	624	624
24A	602	602	602	624
28	602	602	602	624
29	624	624	624	624
38	602	602	602	624
40	624	624	624	624
Deep Dolomite Wells				
MW1	624	624	624	624
MW2	624	624	624	624
MW3	624	624	624	624
30	624	624	624	624
PW8	624	624	624	624

TABLE 1 (continued)

Groundwater Monitoring Wells, Sampling Frequency and Laboratory Analyses Method Number

Annual Monitoring

Laboratory Analysis Method Number

Glacial Wells	Winter	Spring	Summer	Fall
1A	NA	NA	NA	624
3B	NA	NA	NA	624
4A	NA	NA	NA	Dry
8	NA	NA	NA	Dry
16A	NA	NA	NA	Dry
18A	NA	NA	NA	624
19A	NA	NA	NA	624
Shallow Dolomite Wells				
22	NA	NA	NA	624
25	NA	NA	NA	624
39	NA	NA	NA	624
Deep Dolomite Wells				
MW4	NA	NA	NA	624

NA = Not analyzed (annual sampling conducted only)
Dry = Well did not contain water

NOTE: The following wells were dry during the sampling quarter listed:

Quarter	Dry Wells
Winter, 1990	42, 44, and 45
Spring, 1990	44 and 45
Summer, 1990	43, 44, and 45
Fall, 1990	4A, 8, 16A, 44, and 45

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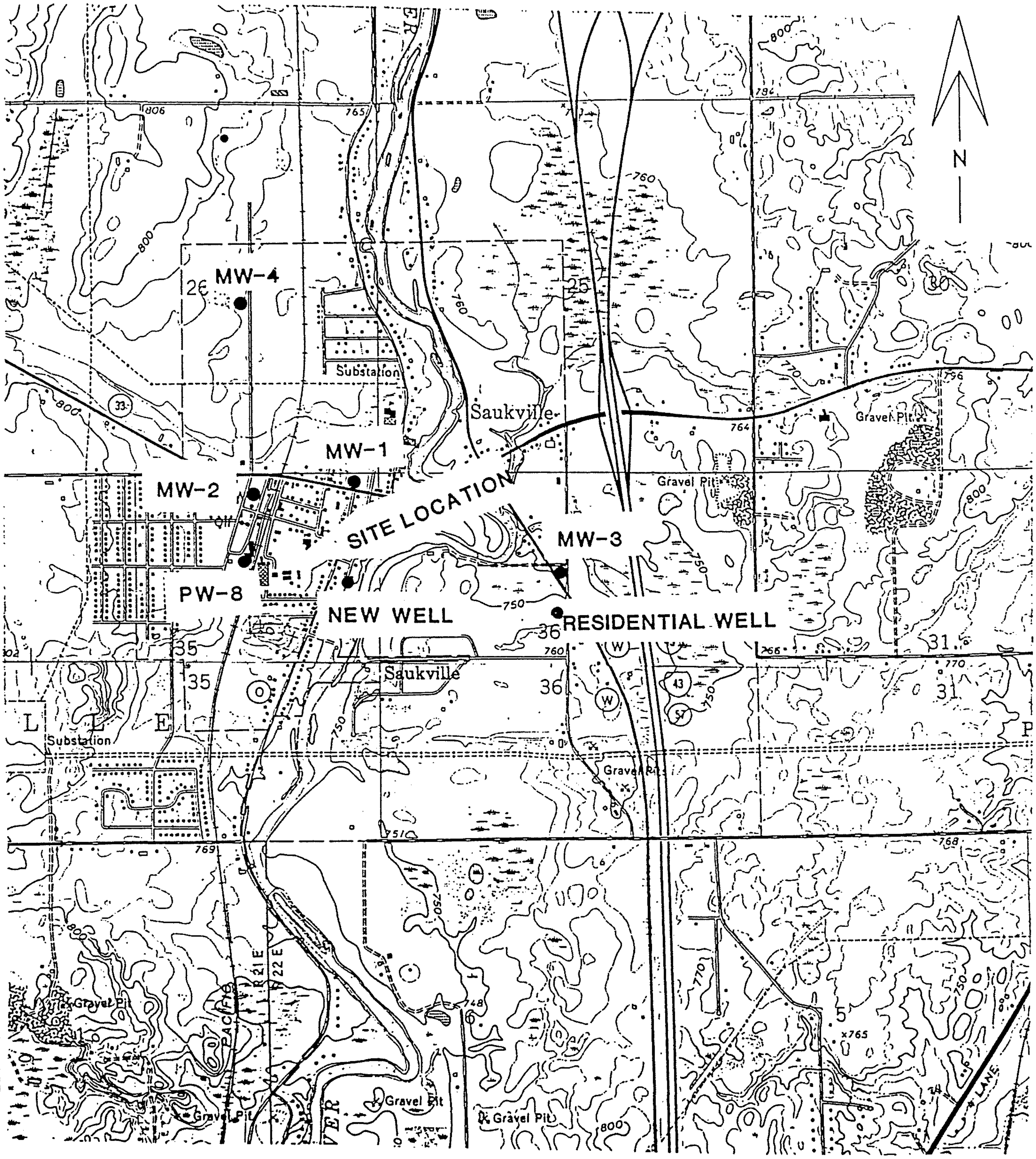
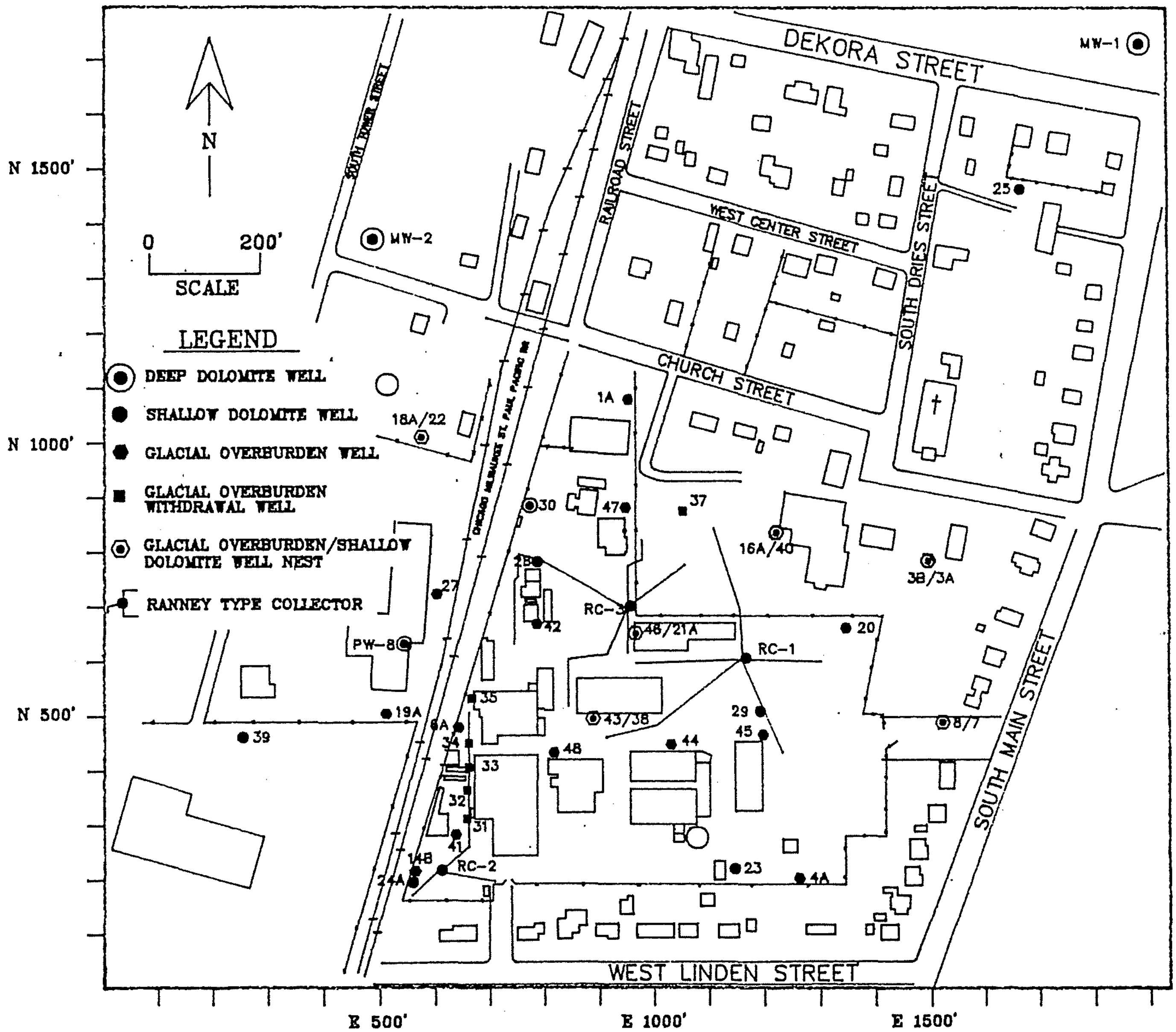


FROM USGS 7.5' TOPOGRAPHIC QUADRANGLE: PORT WASHINGTON WEST, WISCONSIN

JOB #:0001-003	FIGURE 1	HATCHER-SAYRE, INC.
DATE: 1/28/91	LOCATION OF MUNICIPAL WELLS AND OUTLYING MONITORING WELLS	
SCALE: 1:24000	FREEMAN CHEMICAL CORPORATION	
DRAWN BY: RDM	SAUKVILLE, WISCONSIN	



JOB #:	0001-003
DATE:	1/28/91
SCALE:	1":300'
DRAWN BY:	RDM

FIGURE 2

MONITORING
WELL LOCATION PLAN
FREEMAN CHEMICAL CORP.
SAUKVILLE, WISCONSIN

HATCHER-SAYRE, INC.

TABLE 2

Summary of Well Running Times

Below is a summary for the well operation (running times) of the various dolomite wells, glacial wells and Ranney Collectors for calendar year 1990. This information has been compiled by Cook Composite and Polymers Co. in conjunction with its daily monitoring of the systems.

Well I.D.	Total Running Time	Weekly Average	Daily Average	Last Date Operations	Comments
W21[1]	796 hr 54 min	15 hr 54 min	2 hr 18 min	12/14/90	Consistent
W24[1]	171 hr 12 min	3 hr 24 min	30 min	12/24/90	Consistent
W28[1]	3449 hr 54 min	68 hr 54 min	9 hr 54 min	12/14/90	Consistent
W29[1]	8135 hr 18 min	162 hr 42 min	23 hr 24 min	12/14/90	Almost continuous operation
RC1[2]	314 hr 48 min	6 hr 18 min	54 min	12/14/90	Peaked in May and Sept.
RC2[2]	1948 hr 36 min	36 hr 54 min	5 hr 36 min	12/14/90	Not often in Jan or Feb. Peaked in April and July
RC3[2]	473 hr 18 min	9 hr 30 min	1 hr 24 min	12/13/90	Peaked in May
W31[2]	0 min	0 min	0 min	Never	Never ran
W32[2]	0 min	0 min	0 min	Never	Never ran
W33[2]	56 hr 6 min	1 hr 6 min	12 min	12/24/90	Consistent
W34[2]	7358 hr	147 hr 12 min	21 hr 6 min	12/14/90	Consistent
W35[2]	11 hr 30 min	12 min	2 min	12/14/90	About 1 hr per month since June
W37[2]	64 hr 42 min	1 hr 18 min	12 min	12/04/90	A great deal in spring; limited running since Aug

1 Combined average discharge rate for pumping dolomite wells 21A, 24A, 28, and 29 = 3.1 gpm for a annual discharge of approximately 1,528,900 gallons.

2 Combined average discharge rate for Ranney-type Collectors RC1, RC2 and RC3, and glacial overburden pumping wells 23, 25, 31, 32, 33, and 37 = 2.97 gpm for an annual discharge of approximately 1,490,166 gallons.

NOTE:

- The wells are listed as dolomite (21, 24, 28, 29) and Ranney Collectors (RC1, RC2, and RC2) and associated glacial wells (W31, W32, W33, W34, W35, and W37.
- The total running time represents the period of January 1, 1990 through December 14, 1990. Running times are recorded daily and reported appropriately.
- The weekly average accounts for the 50-week period beginning January 1, 1990.
- The daily average represents the 348 days elapsed during 1990 through December 14, 1990.
- The last date of operation represents the last known date a respective timer registered running time for the particular well.

It is important to understand that the above averages are under the "ideal" notion that there is running time each day and/or week. However, certain facts indicate that this is not always the case. For instance, the four dolomite wells (W21, W24, W28, W29) were shut off during the January, February, and March (frigid weather months) to prevent pipe freeze-up other than for required quarterly groundwater sampling. Wells 31 and 32 have never shown any run time. All other wells have run at least some time during each of the months of 1990.

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attributable to variations in precipitation and water available for recharge to the glacial aquifer. Precipitation data for the Saukville plant are given in Table 3. The potentiometric surface maps for the glacial aquifer show similar patters to those presented in the 1989 Annual Report.

The groundwater maps for the dolomite aquifer indicate the general groundwater gradient also slopes downward to the east, with contour deflections in the vicinity of pumping Well 30 due to drawdown of the groundwater surface of the dolomite aquifer. Well 30 has an average discharge rate of 367 gpm. Also minor localized deflections in the groundwater elevation contours appear around the shallow dolomite wells 21, 24, 28, and 29. However, because these wells are not pumped at as great a discharge rate (combined rate of 3.1 gpm) or as continuously, their effects on the potentiometric surface are less dramatic than that of well 30. The potentiometric surface maps for the dolomite aquifer are generally similar to those presented in the 1989 Annual Report.

2.2 Water Quality Data

The water quality data generated for the past year are included in Appendix B. These tables list the sample analyses results for the quarterly sampling events by well number. These data have been summarized in Tables 4 through 11. Additionally, the data for total VOC concentrations for both the glacial and dolomite wells are presented in Appendix C for the four sampling quarters of 1990. These maps depict the isoconcentration contours for the glacial and dolomite aquifers. It is important to note that VOC maps for the glacial aquifer do not include data for the Ranney-type collectors. Results reported for these three systems actually represent results for composite samples of groundwater collected from the various Ranney collection lines, each of which discharges to a control sump in each system. Consequently, the geographic distribution of water quality data cannot be accurately represented on the maps for these three collectors. When reviewing

TABLE 3

Precipitation Data for the Saukville Plant
Cook Composites and Polymers Co.

MONTH	1987	1988	1989	1990
	Monthly Precipitation (in)*			
January	0.97	2.01	0.67	1.84
February	0	0.87	1.01	0.6
March	2.74	0.82	2.71	2.47
April	4.2	3.43	0.9	1.36
May	4.01	0.44	3.49	4.01
June	1.2	0.89	1.88	3.79
July	7.63	1.28	4.01	1.38
August	6.55	1.88	5.15	2.21
September	2.89	5.48	1.44	2.46
October	1.69	1.68	1.74	2.74
November	2.51	4.4	0.49	2.52
December	4.00	2.08	0.2	1.07
TOTALS	38.39	25.26	23.69	26.45

YEAR	TOTAL PRECIPITATION (in.)
1983**	37.47
1984**	39.60
1985**	37.29
1986**	42.17

* Recorded on daily basis from the best estimates, weather reports and the in-plant rain gauge, as noted by Saukville Plant employees.

** Data Source: National Climatic Data Center for the Milwaukee area.

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the data for the past year and assessing the effectiveness of remediation, it is important to review the trend analyses for individual wells (Appendix D). This has been taken into account in the subsequent sections.

2.2.1 Glacial Wells and Ranney-Type Collectors

Tables 4 and 5 list the VOCs detected and the total VOC concentrations respectively for each glacial well and sampling quarter for 1990. All the annually sampled glacial wells (1A, 3B, 4A, 8, 16A, 18A, 19A) which contained water (4A, 8 and 16A were dry) showed no detection of the parameters analyzed except 19A. Quarterly sampled wells 14B, 27, 37, 42, 43, and 46 indicate seasonal variation in total VOC concentrations with a general reduction in VOC concentrations for the year. Significant VOC concentrations were detected in wells 6A, 37, 42, 43, and 47. We have considered for the purpose of this report, that values greater than 1 mg/l are "significant". The VOCs detected and the total VOC concentrations for the Ranney-type Collectors are listed in Tables 6 and 7, respectively. Although seasonal fluctuations in total VOC concentrations exist, review of the water quality data for these three collectors indicate a general reduction in VOCs.

The annually sampled glacial wells: 1A, 3B, 4A, 8, 16A and 18A have exhibited non-detectable or minor (less than 20 μg/l) concentrations since remediation began during the Spring of 1987 at the Saukville Plant. Wells 14B, 20, and 27 indicate overall continually decreasing concentrations. Wells 1A, 3B, 4A, 8, 16A, 18A, 14B, 20, and 27 are located around the perimeter of the Plant area and based upon the chemical analyses to date, indicate the limits of the contaminant plume in the glacial aquifer. The wells which lie within the area outlined by the above referenced wells fluctuate in contaminant concentration levels as the glacial aquifer varies in recharge. This flushing action explains the variable quarterly concentration levels of the parameters analyzed in these glacial wells and the Ranney-type Collectors (RC1, RC2, and RC3).

TABLE 4 - VOCs DETECTED IN GLACIAL OVERBURDEN WELLS

WELL ID	WINTER	SPRING	SUMMER	FALL
1A	*	*	*	ND
3B	*	*	*	ND
4A	*	*	*	DRY
6A	T,E,X	ACETONE, 1,2-DCE B,T,X	PCE T,E,X	ACETONE, 1,2-DCE 2-BUTANONE B,T,E,X
8	*	*	*	DRY
14B	ND	T,X	ND	ND
16A	*	*	*	DRY
18A	*	*	*	ND
19A	*	*	*	1,2-DCE, TCE
20	ND	B,E,X	X	B,E
27	B	B	B,X	1,2-DCE, TCE
37	B,T,E,X	B,T,E,X	T,E,X	T,X
41	E,X	B,E,X	B,E,X	E,X
42	DRY	B,T,E,X	B,T,E,X	B,T,X
43	B,T,E,X	B,T,E,X	DRY	B,T,E,X
44	DRY	DRY	DRY	DRY
45	DRY	DRY	DRY	DRY
46	T,E,X	ND	ND	ND
47	B,T,E,X	B,T,E,X	T,E,X	ACETONE, 1,2-DCE 2-BUTANONE, TCE B,T,E,X
48	B,T,E,X	B,X	X	1,2-DCA

B = BENZENE
T = TOLUENE
E = ETHYLBENZENE
X = XYLENES(TOTAL)

TCE = TRICHLOROETHENE
DCE = DICHLOROETHENE
DCA = DICHLOROETHANE

PCE = TETRACHLOROETHENE
ND = NONE DETECTED
* = SAMPLED ANNUALLY

TABLE 5 - TOTAL VOC CONCENTRATIONS IN THE GLACIAL OVERBURDEN WELLS (MICROGRAMS/LITER)

WELL ID	WINTER	SPRING	SUMMER	FALL
1A	*	*	*	ND
3B	*	*	*	ND
4A	*	*	*	DRY
6A	192,000	175,900	218,700	230,960
8	*	*	*	DRY
14B	ND	47.7	ND	ND
16A	*	*	*	DRY
18A	*	*	*	ND
19A	*	*	*	415
20	ND	41.1	10	27.6
27	9.0	60	30.1	286
37	172,100	178,880	153,000	164,000
41	250	574	1016.6	247
42	DRY	8,550	9,020	3,870
43	73	12,310	DRY	42,600
44	DRY	DRY	DRY	DRY
45	DRY	DRY	DRY	DRY
46	38.5	ND	ND	ND
47	196,000	541,740	400,000	808,845
48	80	3.2	13	30

ND = NONE DETECTED
* = SAMPLED ANNUALLY

TABLE 6 - VOCs DETECTED IN RANNEY-TYPE COLLECTORS

RANNEY COLLECTOR	WINTER	SPRING	SUMMER	FALL
RC-1	B,T,E,X	B,T,E,X	B,T,E,X	1,2-DCE T,E,X
RC-2	T,E,X	B,T,E,X	B,T,E,X	CARBON DISULFIDE 1,2-DCE B,T,E,X
RC-3	T,E,X	1,2-DICHLORO-BENZENE B,T,E,X	B,T,E,X	1,2-DCE B,T,E,X

B = BENZENE E = ETHYLBENZENE DCE = DICHLOROETHENE
T = TOLUENE X = XYLENES(TOTAL)

TABLE 7 - TOTAL VOC CONCENTRATIONS IN THE RANNEY-TYPE COLLECTORS (MICROGRAMS/LITER)

RANNEY COLLECTOR	WINTER	SPRING	SUMMER	FALL
RC-1	59,650	6,494	9,820	45,320
RC-2	49,900	14,460	40,970	54,040
RC-3	47,500	73,003	66,270	42,600

2.2.2 Shallow Dolomite Wells

Tables 8 and 9 list the VOCs detected and the total VOC concentrations respectively for each shallow dolomite well and sampling quarter for 1990. The annually sampled shallow dolomite wells 22 and 39 showed no detection of VOCs while well 25 showed a concentration of 6.3 μg/l. No VOCs were detected in the quarterly sampled wells 7 and 40 for the year. Although seasonal fluctuations in concentration levels exist, general overall reduction of VOCs was indicated for wells 3A, 21A, 24A, 29, and 38. Although slight increases are indicated in Table 9 for wells 24A and 38, trend analyses presented in Appendix D for these two wells support the statement for overall reduction.

2.2.3 Deep Dolomite Wells

The VOCs detected and the total VOC concentrations for the deep dolomite wells are listed in Tables 10 and 11, respectively. Review of the water quality data indicates no VOCs detected in the Municipal Wells MW1, MW2, MW3, and MW4. There were seasonal fluctuations in wells 30 and PW8 for the year, but general overall reductions in VOC concentrations based upon the trend analyses shown in Appendix D for these two wells.

The annually sampled dolomite wells 22, 25, 39, and MW4 have exhibited non-detectable or minor (less than 10 μg/l) concentrations since remediation began. Wells MW1, MW2, and MW3 have shown no detectable contamination and wells 3A, 7, 23, 24A, 28, 30, 40 and PW8 have shown decreasing and/or maximum concentration levels less than 400 μg/l, since remediation began at the Saukville plant. The success of the areal reduction of groundwater contamination at the plant is believed to be related to the influence pumping well 30 has had and continues to have upon the dolomite aquifer.

TABLE 8 - VOCs DETECTED IN SHALLOW DOLOMITE WELLS

WELL ID	WINTER	SPRING	SUMMER	FALL
3A	ND	X	ND	ND
7	ND	ND	ND	ND
21A	B,T,E,X	B,T,E,X	B,T,E,X	B,T,E,X
22	*	*	*	ND
23	ND	ND	ND	X
24A	B	B	B	1,2-DCE
25	*	*	*	X
28	B,T,E,X	B	B,T,E,X	B,X
29	B,E,X	B,E,X	B,E,X	B,E,X
38	B,E,X	B,E,X	B,T,E,X	B,T,E,X
39	*	*	*	ND
40	ND	ND	ND	ND

B = BENZENE
T = TOLUENE
E = ETHYLBENZENE
X = XYLENES(TOTAL)
DCE = DICHLOROETHENE
ND = NONE DETECTED
* = SAMPLED ANNUALLY

TABLE 9 - TOTAL VOC CONCENTRATIONS IN THE SHALLOW DOLOMITE WELLS (MICROGRAMS/LITER)

WELL ID	WINTER	SPRING	SUMMER	FALL
3A	ND	5.4	ND	ND
7	ND	ND	ND	ND
21A	36,800	35,000	27,800	29,600
22	*	*	*	ND
23	ND	ND	ND	24
24A	4.3	1.8	1.3	23
25	*	*	*	6.3
28	58.6	6.1	144.7	35
29	6,300	8,100	6,100	4,500
38	5,800	6,800	7,970	8,373
39	*	*	*	ND
40	ND	ND	ND	ND

ND = NONE DETECTED
* = SAMPLED ANNUALLY

TABLE 10 - VOCs DETECTED IN DEEP DOLOMITE WELLS

WELL ID	WINTER	SPRING	SUMMER	FALL
MW-1	ND	ND	ND	ND
MW-2	ND	ND	ND	ND
MW-3	ND	ND	ND	ND
MW-4	*	*	*	ND
30	B,E,X	B,E,X	B,E,X	T,E,X
PW-8	ND	CARBON DISULFIDE	CARBON DISULFIDE	ND

B = BENZENE
T = TOLUENE
E = ETHYLBENZENE
X = XYLENES(TOTAL)
ND = NONE DETECTED
* = SAMPLED ANNUALLY

TABLE 11 - TOTAL VOC CONCENTRATIONS IN THE DEEP DOLOMITE WELLS (MICROGRAMS/LITER)

WELL ID	WINTER	SPRING	SUMMER	FALL
MW-1	ND	ND	ND	ND
MW-2	ND	ND	ND	ND
MW-3	ND	ND	ND	ND
MW-4	*	*	*	ND
30	74	60	36.9	223
PW-8	ND	13	5	ND

ND = NONE DETECTED
* = SAMPLED ANNUALLY

2.2.4 Publicly Owned Treatment Works (POTW)

The yearly data for the Publicly Owned Treatment Works (POTW) sampling is listed in Table 12. The POTW influent, effluent and sludge were analyzed for Method 624 VOCs and total phenolics. Acetone, methylene chloride (found in the POTW influent samples) and possible toluene and xylenes found in both the POTW influent and sludge samples are suspected laboratory or field contamination as field blanks taken at the POTW contained these compounds. Total phenolics were detected in the POTW influent and sludge samples while no phenolics were detected in the effluent.

2.2.5 Isoconcentration Maps

The Revised Project Plans, Tasks 3A, 3B, and 3C for the Freeman Chemical Corporation, Saukville, Wisconsin document, submitted by Hatcher-Sayre, Inc., April 6, 1989, states that the annual report will include isoconcentration contour maps and trend analyses for total VOCs and for the following individual parameters:

Methylene chloride	Benzene
Acetone	4-methyl-2-pentanone
Trans-1,2-dichloroethene	Toluene
2-butanone	Ethylbenzene
	Total Xylenes

These isoconcentration maps are included in Appendices C and E with the following exceptions.

Both methylene chloride and acetone (in some instances) are attributable to laboratory and/or field contamination, as these compounds were detected in method or field blanks prepared by the laboratory or sampled by the field personnel. The compound 4-methyl-2-pentanone was not detected in any of the samples collected and analyzed during the 1990 sampling quarters. The parameter 1,2-dichloroethene was detected in six samples collected during 1990 at five well locations. 2-butanone was detected in two samples and at two different well locations during the 1990 sampling quarters.

TABLE 12
RESULTS OF CHEMICAL ANALYSES CONDUCTED ON THE POTW INFLUENT, EFFLUENT AND SLUDGE SAMPLES

	VOCs DETECTED			
SAMPLE ID	WINTER	SPRING	SUMMER	FALL
INFLUENT POTW	X	ACETONE STYRENE E,X	ACETONE 1,1,1-TCA T,E,X	ACETONE 2-BUTANONE STYRENE X
EFFLUENT POTW	ND	ND	ND	ND
SLUDGE POTW	ND	ACETONE 2-BUTANONE B,T,X	ACETONE T	ACETONE

TOTAL VOC CONCENTRATIONS (mg/l)

	WINTER	SPRING	SUMMER	FALL
INFLUENT POTW	0.029	0.446	0.283	0.2443
EFFLUENT POTW	ND	ND	ND	ND
SLUDGE POTW	ND	0.172	0.100	0.110

PHENOLICS, TOTAL (mg/l)

	WINTER	SPRING	SUMMER	FALL
INFLUENT POTW	0.099	0.072	0.023	0.040
EFFLUENT POTW	0.030	0.012	ND	ND
SLUDGE POTW	0.091	0.048	0.12	0.048

B = BENZENE
T = TOLUENE
E = ETHYLBENZENE

X = XYLENES (TOTAL)
TCA = TRICHLOROETHANE
ND = NONE DETECTED

Because isoconcentration and trend analyses for the concentration of the individual BTEX parameters essentially mirror the total VOC isoconcentration maps and trend analyses graphs (given in Appendices C and D, respectively), individual maps and graphs are not presented for these parameters.

Additionally, trichloroethene, 1,2-dichloroethane, vinyl chloride and carbon disulfide were detected in a limited number of samples and wells. The isoconcentration maps for these and for acetone, 1,2-dichloroethene (total) and 2-butanone are given in Appendix E. As seen on the isoconcentration maps, the detection of these non-BTEX compounds were generally in the wells that are located on or near the western portion of the site boundary.

3.0 SUMMARY

Compared to 1989, groundwater levels (elevations) in 1990 were generally unchanged in the glacial and dolomite aquifers except for seasonal variations in early 1990. This variation appeared to be directly related to the local precipitation, as withdrawal rates of the glacial and dolomite pumping wells were similar to 1989 values.

Groundwater appears to flow in an easterly direction toward the Milwaukee River. Local glacial groundwater flow is influenced by the Ranney-type Collectors, glacial pumping wells and an apparent sinkhole which underlies the eastern portion of the site. The local dolomite groundwater flow is primarily affected by well 30 which provides cooling water to the plant. This well is pumped constantly at a rate of 367 gpm.

Both the glacial and dolomite remedial measures appear to be operating as planned, albeit very gradually. Over the past 2 to 3 years, a noticeable reduction in the areal extent of contamination can be observed. Essentially all of the outer boundary wells which originally indicated contamination have shown marked decreases in contaminant concentrations.

Contamination still exists in the glacial aquifer in the vicinity of each Ranney Collector as well as the extreme northern portion of the site (well 47) which extends east to pumping well 37. As indicated in Table 13, all of these areas as well as most of the other wells indicating contamination are comprised of the BTEX (Method 602) parameters. The only wells in which contaminants other than BTEX parameters were found are the off-site, upgradient wells near the western portion of the site (i.e., 19A, 24A, 27, 46, 47, 48 and PW8. The degree of all known on-site contamination, therefore, can effectively be measured by evaluating the BTEX parameters.

The non-BTEX compounds detected during quarterly sampling/analyses are listed in Table 14. This list excludes methylene chloride since this compound is attributable to either laboratory or field contamination.

TABLE 13 - TOTAL VOCs (624) VS BTEX COMPONENTS (602)
FOR WELLS ANALYZED BY METHOD 624
(MICROGRAMS/LITER)

WELL ID	WINTER TOTAL VOCs (624)	WINTER BTEX (602)	SPRING TOTAL VOCs (624)	SPRING BTEX (602)	SUMMER TOTAL VOCs (624)	SUMMER BTEX (602)	FALL TOTAL VOCs (624)	FALL BTEX (602)
GLACIAL WELLS								
1A	--	--	--	--	--	--	ND	ND
3B	--	--	--	--	--	--	ND	ND
6A	192,000	192,000	175,900	172,600	218,700	216,000	230,960	225,700
14B	ND	ND	47.7	47.7	ND	ND	ND	ND
18A	--	--	--	--	--	--	ND	ND
19A	--	--	--	--	--	--	415	ND
20	ND	ND	41.1	41.1	10	10	27.6	27.6
27	9.0	9.0	--	--	--	--	286	286
37	--	--	--	--	--	--	164,000	164,000
41	--	--	--	--	--	--	247	247
42	--	--	--	--	--	--	3,870	3,870
43	--	--	--	--	--	--	42,600	42,600
46	38.5	38.5	ND	ND	ND	ND	ND	ND
47	ND	ND	--	--	--	--	808,845	797,480
48	--	--	--	--	--	--	30	ND
SHALLOW DOLOMITE WELLS								
3A	2.1	2.1	5.4	5.4	ND	ND	ND	ND
7	ND	ND	ND	ND	ND	ND	ND	ND
21A	--	--	--	--	--	--	29,600	29,600
22	--	--	--	--	--	--	ND	ND
23	ND	ND	ND	ND	ND	ND	24	24
24A	--	--	--	--	--	--	23	ND
25	--	--	--	--	--	--	6.3	6.3
28	--	--	--	--	--	--	35	35
29	6,300	6,300	8,100	8,100	6,100	6,100	4,500	4,500
38	--	--	--	--	--	--	8,373	8,373
39	--	--	--	--	--	--	ND	ND
40	ND	ND	ND	ND	ND	ND	ND	ND
DEEP DOLOMITE WELLS								
MW-1	ND	ND	ND	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND	ND	ND	ND
MW-4	--	--	--	--	--	--	ND	ND
30	74	74	60	60	36.9	36.9	223	223
PW-8	ND	ND	13	ND	24	ND	ND	ND

ND = NONE DETECTED
-- = NOT ANALYZED FOR METHOD 624

TABLE 14
NON-BTEX COMPOUNDS DETECTED DURING 1990 SAMPLING QUARTERS
GLACIAL AND DOLOMITE WELLS

COMPOUND	FREQUENCY OF DETECTION	WELL ID/ # OF DETECTS	QUARTER/ CONC. (ug/l)
ACETONE	4 / 78	6A / 2	SPRING / 1600 FALL / 3000
		46 / 1	WINTER / 54
		47 / 1	FALL / 10000
1,2-DICHLOROETHENE (TOTAL)	6 / 78	6A / 2	SPRING / 1700 FALL / 1900
		19A / 1	FALL / 75
		27 / 1	FALL / 56
		47 / 1	FALL / 530
		24A / 1	FALL / 23
2-BUTANONE	2 / 78	6A / 1	FALL / 360
		47 / 1	FALL / 740
TRICHLOROETHENE	3 / 78	19A / 1	FALL / 340
		27 / 1	FALL / 230
		47 / 1	FALL / 95
TETRACHLOROETHENE	1 / 78	6A / 1	SUMMER / 2700
1,2-DICHLOROETHANE	1 / 78	48 / 1	FALL / 30
CARBON DISULFIDE	2 / 78	PW-8 / 2	SPRING / 13 SUMMER / 5

GLACIAL WELLS : 6A, 19A, 27, 46, 47, 48
SHALLOW DOLOMITE WELL : 24A
DEEP DOLOMITE WELL : PW-8

FREQUENCY OF DETECTION IS BASED UPON THE NUMBER OF SAMPLES IN WHICH 624 ANALYSES WERE CONDUCTED (I.E. 78).

The glacial wells 6A, 19A, 27, 46, 47, and 48 located in the western portion of the site, were the only glacial wells in which non-BTEX compounds were detected. These compounds include: acetone, 1,2-dichloroethene (total), 2-butanone, trichloroethene tetrachloroethane and 1,2-dichloroethane. As discussed earlier, the glacial aquifer water table gradient slopes downward to the east, thus contamination introduced into the glacial aquifer from (an) unknown source(s) west of the site could migrate to the east and be intercepted by these wells.

The dolomite wells 24A and PW8 located near the southern and western boundaries of the site, were the only dolomite wells in which non-BTEX parameters were detected. These parameters were of 1,2-dichloroethene (total) and carbon disulfide. As noted earlier, the dolomite aquifer potentiometric surface gradient generally slopes downward to the east, and due to the drawdown of the dolomite aquifer within the radius of influence of pumping well 30, groundwater from areas to the west and south of the site could intersect the wells near the western and southern site boundaries.

Additionally, as the compounds listed in Table 14 were not associated with products utilized by CCPC, Saukville Plant, an off-site source for these compounds would explain their detection in the wells located near the site boundary.

It is important to note that precipitation over the past three years (1988-1990) appears to be 13 to 16 inches below normal (assuming annual average of about 39 inches). This explains why a number of the glacial wells have been dry subsequent to installation, as well design was based upon normal precipitation conditions. During periods of normal precipitation, increased groundwater pumping and more effective remediation will occur.

4.0 RECOMMENDATIONS

As the data indicate, the systems are operating to control the migration of the site contaminants and slowly remove them from the soil and groundwater. It is evident that this remedial action, while effective, will take considerable time. In fact, just reviewing the annual data does not show any obvious trends; it is only by reviewing the past 2 to 3 years of data that trends become observable. As a result of the considerable data base which as been generated to date and due to the anticipated long-term remediation and lack of observable trends over the short-term, we recommend that the quarterly sampling currently scheduled, be reduced to semi-annual sampling. Since changes are only observable after 1 or 2 years, this schedule allows for the more effective use of collected data. The data could still be utilized to show trends, isoconcentrations and effectiveness of the remediation systems without reducing the quality of the program.

Furthermore, since all of the on-site contamination is directly measurable by EPA Method 602 as shown by the last two to three years of data, it is recommended that Method 602 be utilized to analyze all wells except MW1, MW2, MW3, MW4, RC1, RC2, RC3, PW8, 22, 27, 19A, 24A, 23, 28, and 30. Since the above wells are subject to contamination from off-site and the Ranney collectors are discharged to the Saukville POTW, these systems would continue to have VOCs analyzed by EPA Method 624 at the current program frequency. This change in methodology would not affect the quality of the data.

0001-3.rpt/sdb

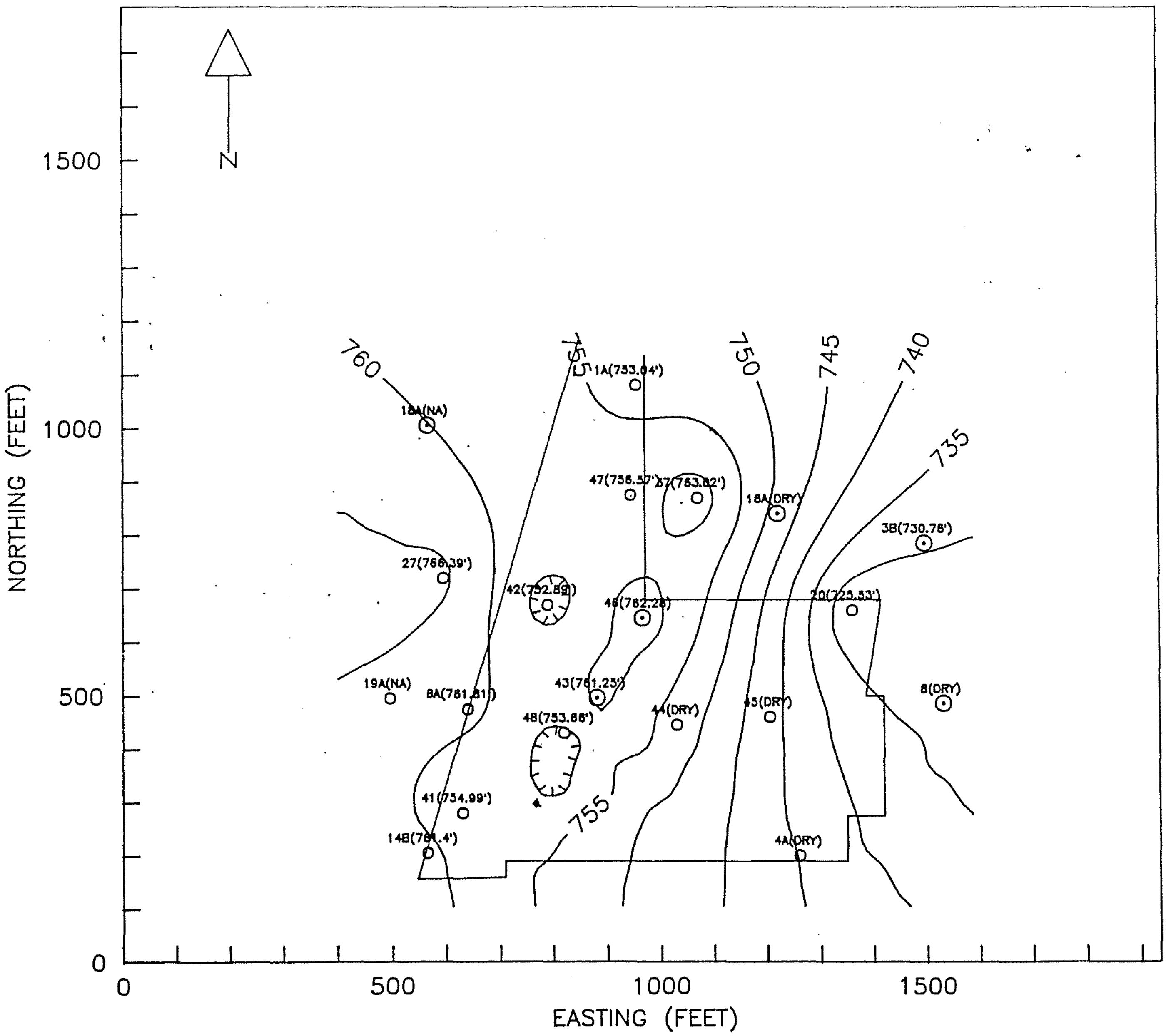
APPENDIX A

Potentiometric Surface Maps for the Glacial and Dolomite Aquifers

Glacial Aquifer - Winter, 1990
Glacial Aquifer - Spring, 1990
Glacial Aquifer - Summer, 1990
Glacial Aquifer - Fall, 1990
Dolomite Aquifer - Winter, 1990
Dolomite Aquifer - Spring, 1990
Dolomite Aquifer - Summer, 1990
Dolomite Aquifer - Fall, 1990

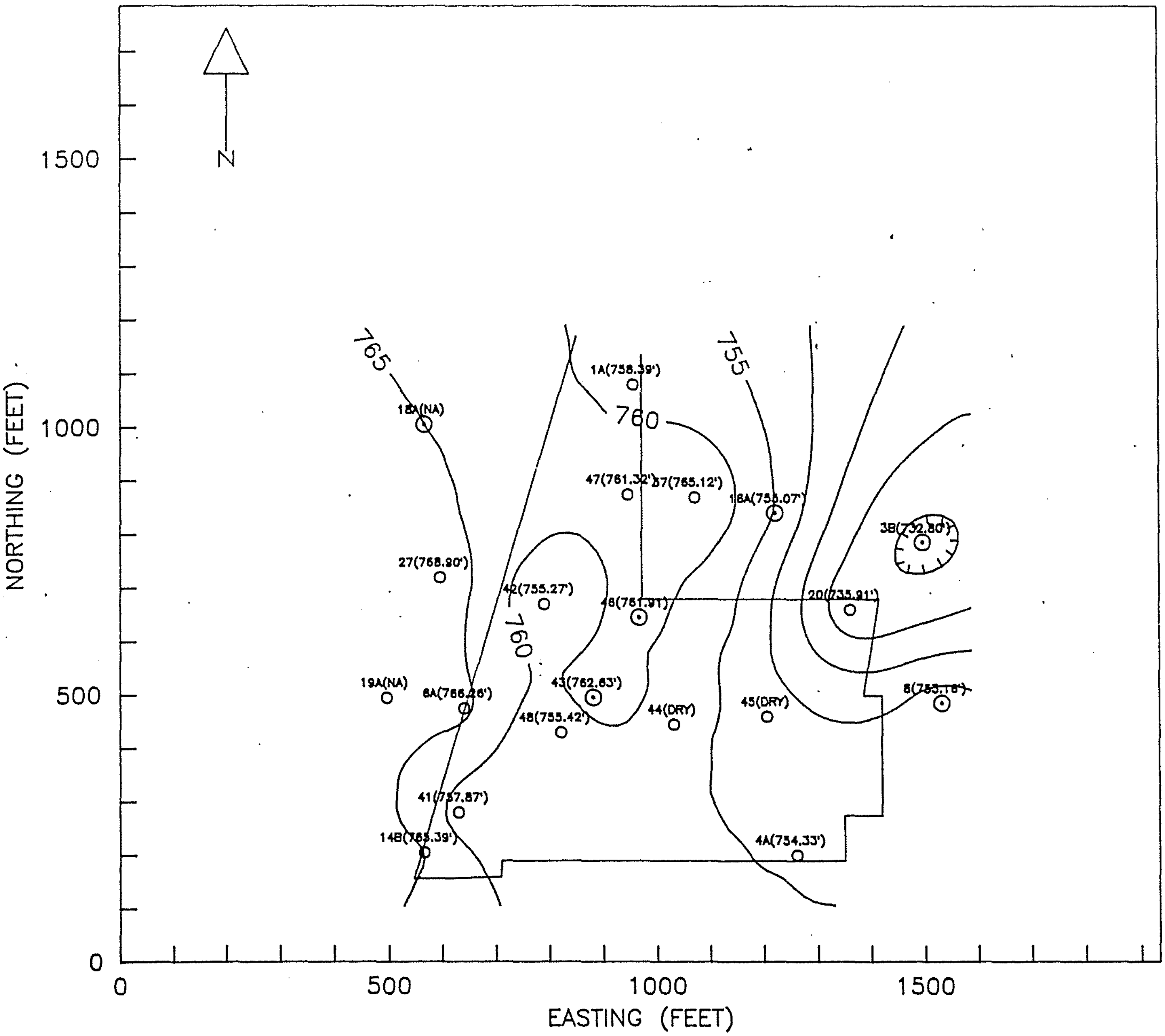
GLACIAL AQUIFER – WINTER 1990

WATER–TABLE ELEVATION CONTOURS (CI=5 FEET)



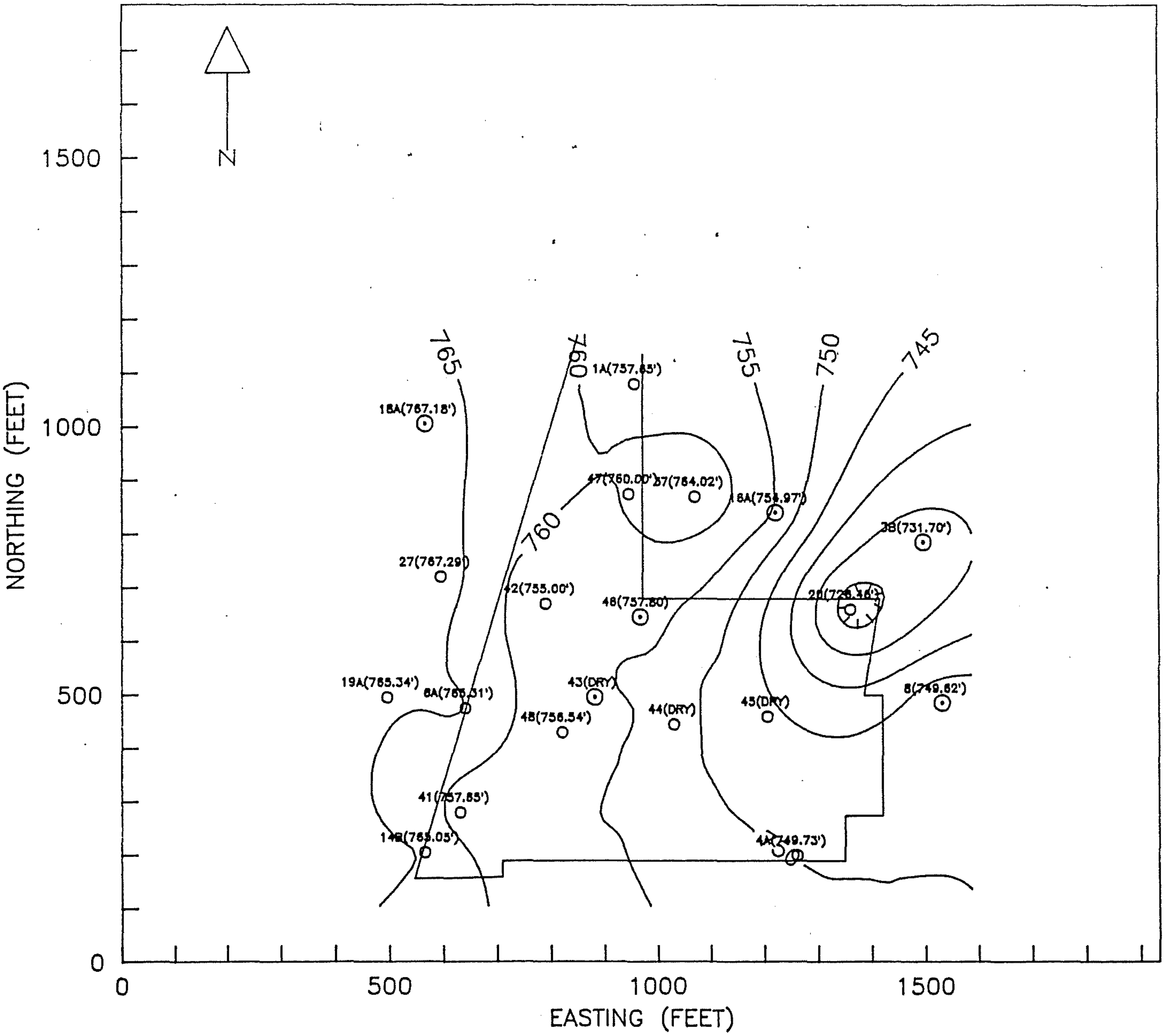
GLACIAL AQUIFER — SPRING 1990

WATER—TABLE ELEVATION CONTOURS (CI=5 FEET)



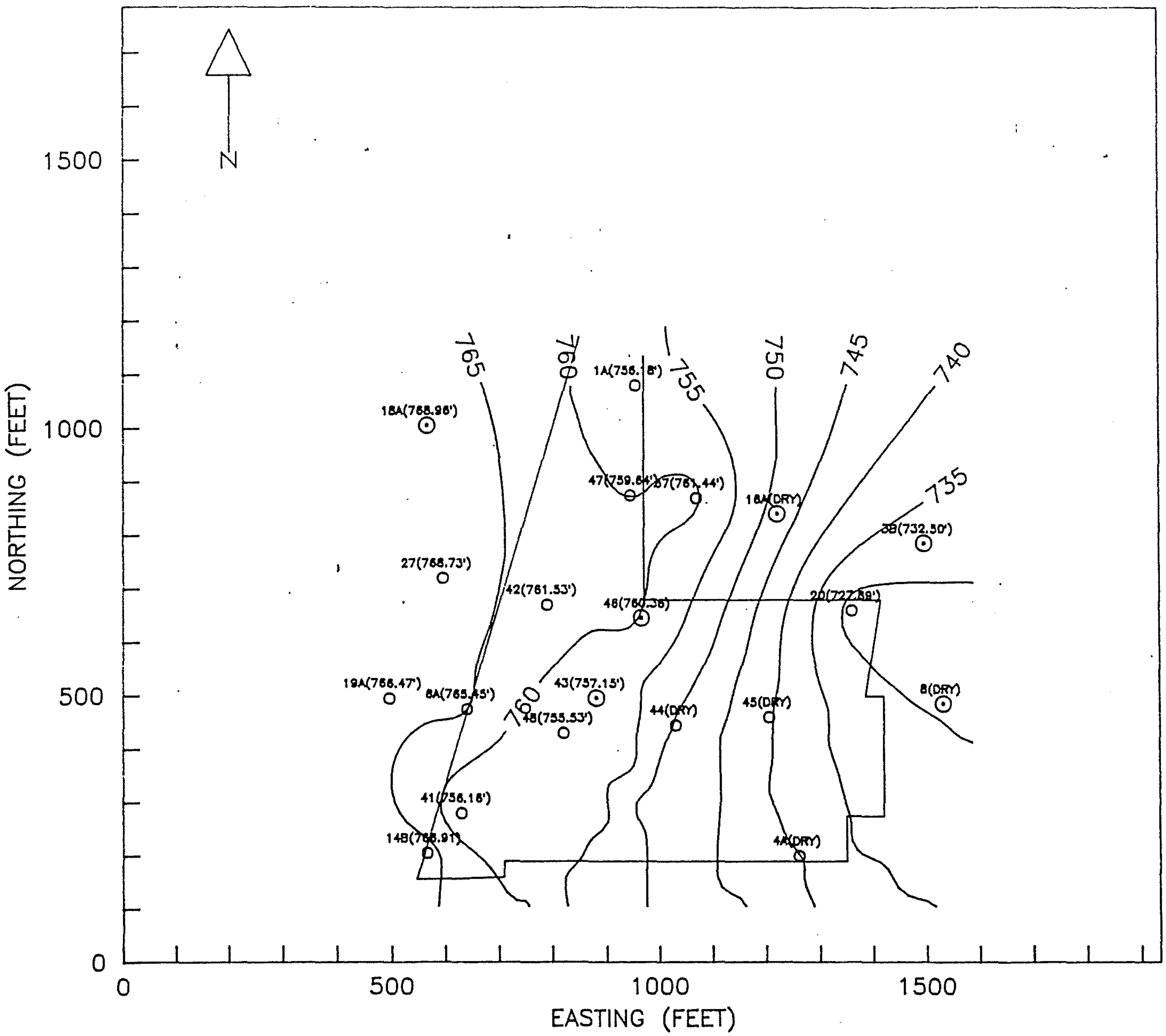
GLACIAL AQUIFER – SUMMER 1990

WATER–TABLE ELEVATION CONTOURS (CI=5 FEET)



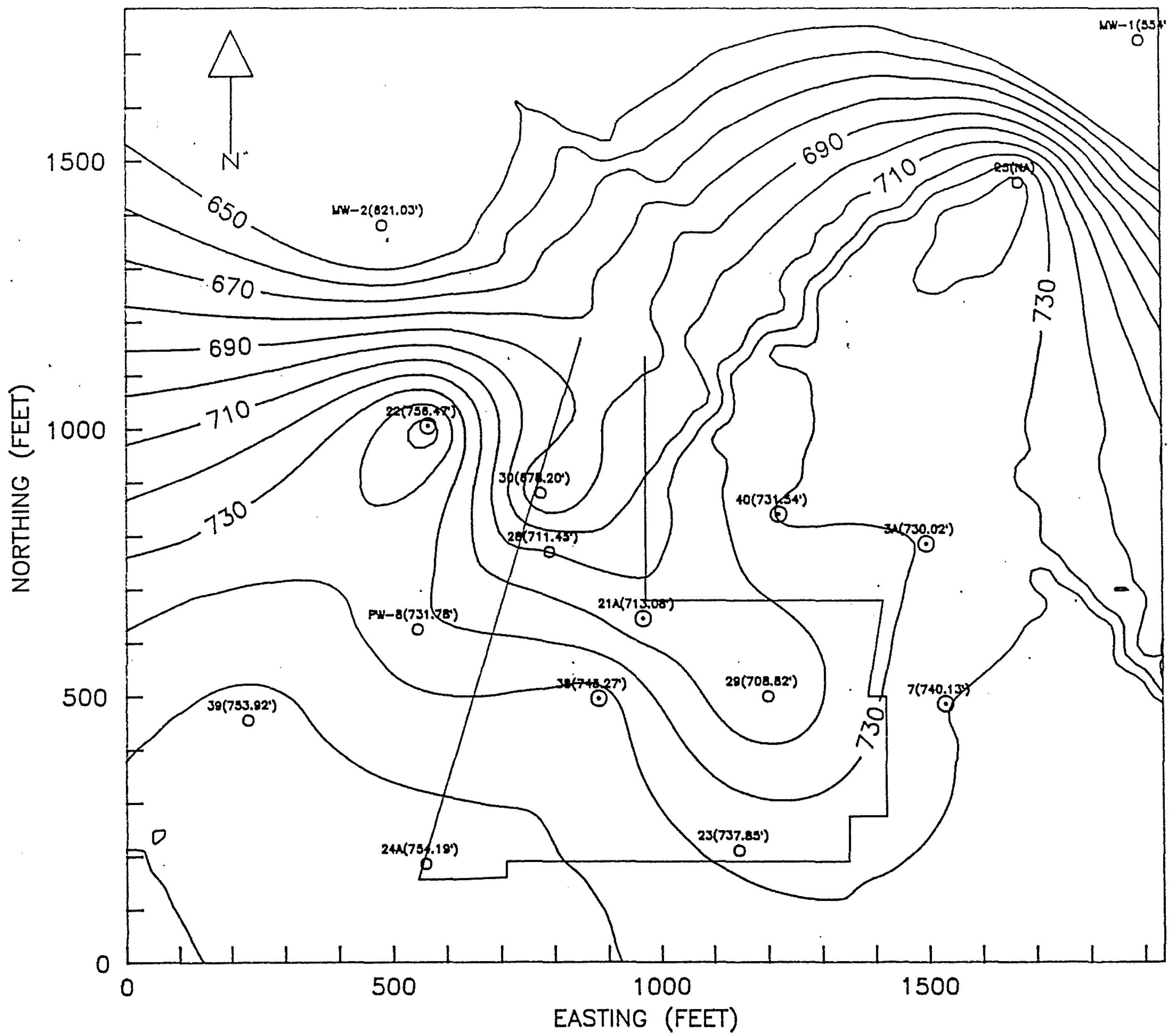
GLACIAL AQUIFER — FALL 1990

WATER–TABLE ELEVATION CONTOURS (CI=5 FEET)



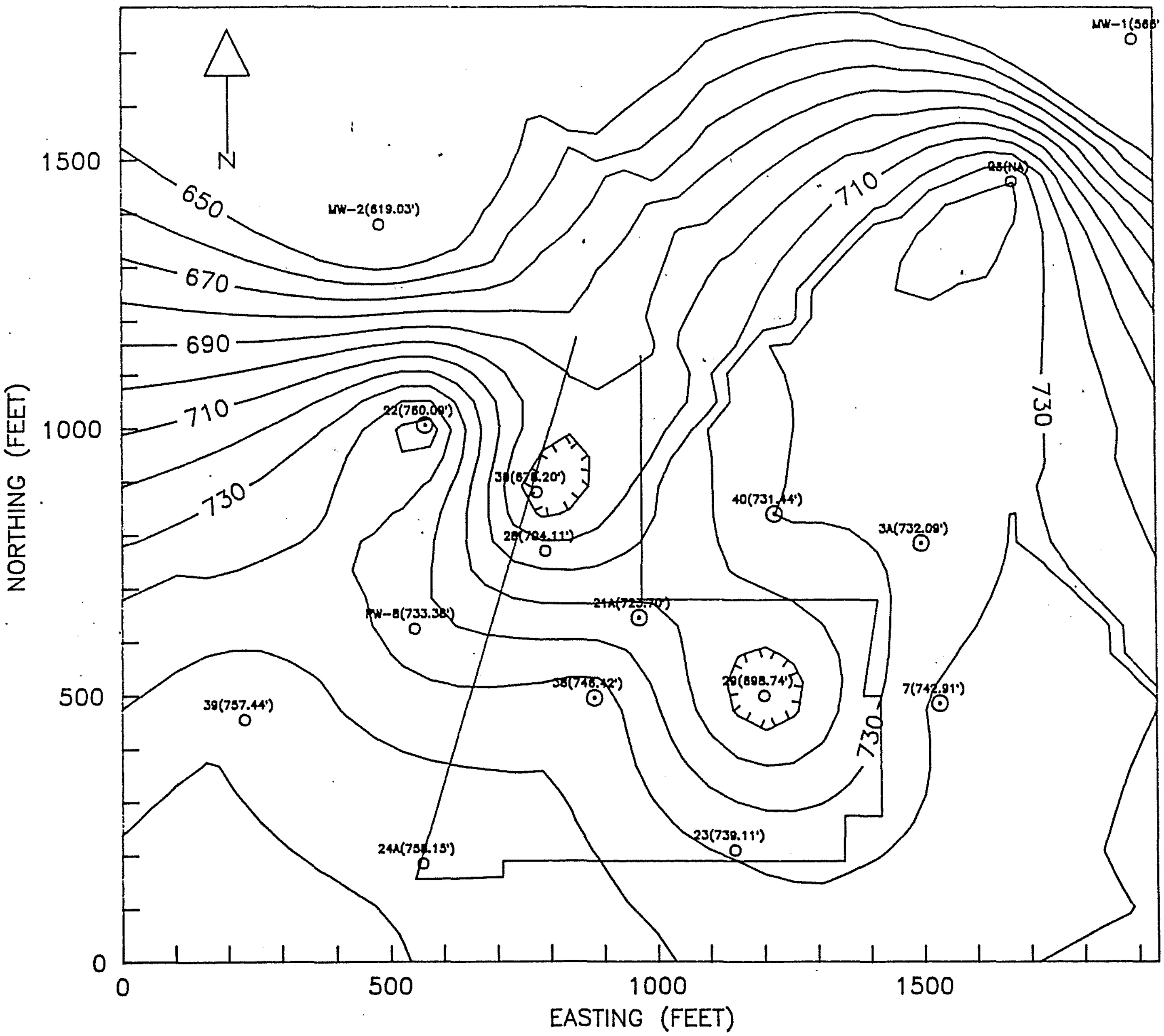
DOLOMITE AQUIFER – WINTER 1990

WATER–TABLE ELEVATION CONTOURS (CI=10 FEET)



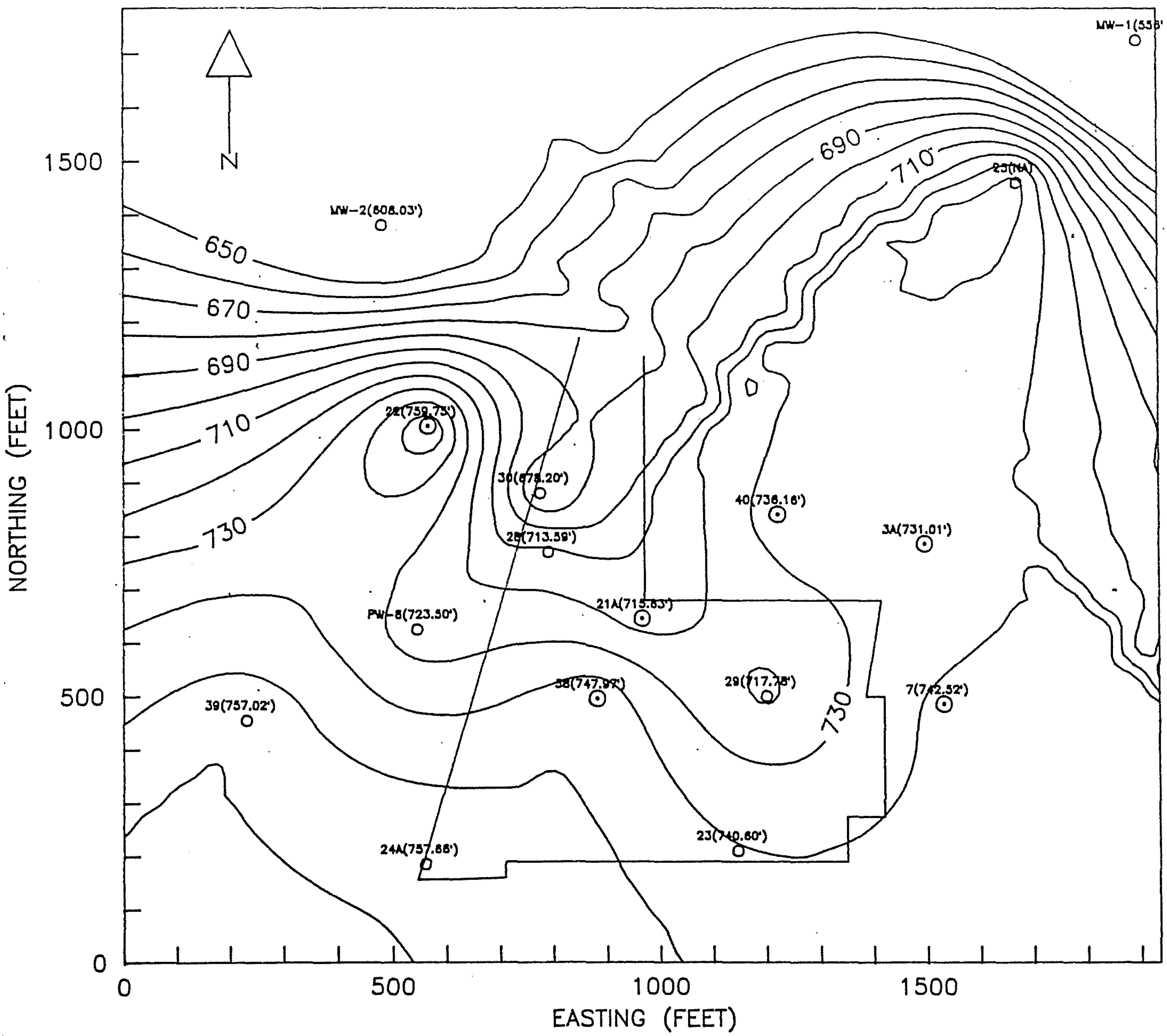
DOLOMITE AQUIFER – SPRING 1990

WATER–TABLE ELEVATION CONTOURS (CI=10 FEET)



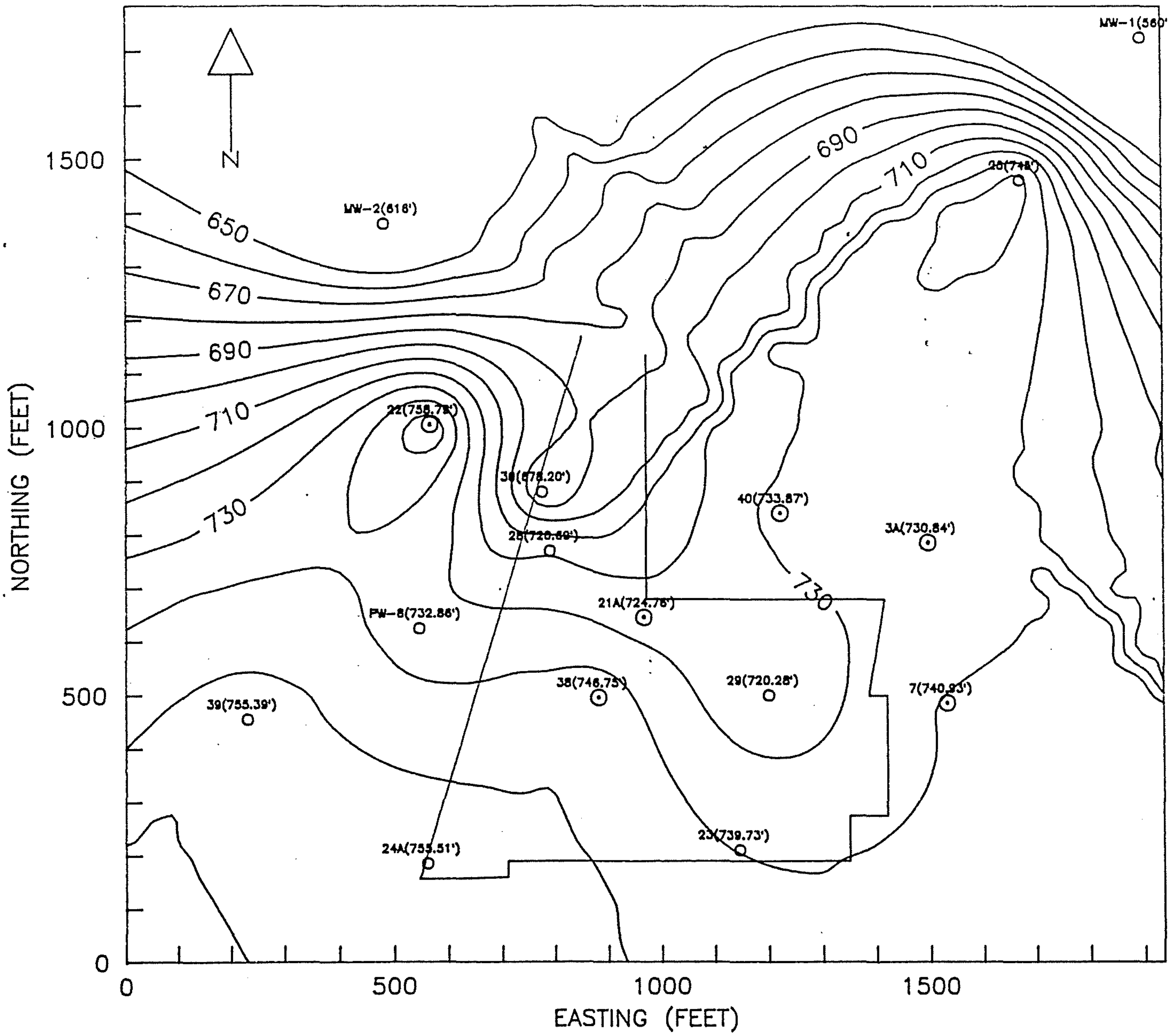
DOLOMITE AQUIFER - SUMMER 1990

WATER-TABLE ELEVATION CONTOURS (CI=10 FEET)



DOLOMITE AQUIFER – FALL 1990

WATER–TABLE ELEVATION CONTOURS (CI=10 FEET)



APPENDIX B

Summary Tables of Quarterly Sampling Results for the Glacial and Dolomite Wells

Glacial Wells: 1A, 3B, 4A, 6A, 8, 14B, 16A, 18A, 19A, 20, 27, 37, 41, 42, 43, 44, 45, 46, 47, and 48

Ranney-type Collectors: RC-1, RC-2, and RC-3

Shallow Dolomite Wells: 3A, 7, 21A, 22, 23, 24A, 25, 28, 29, 38, 39, and 40

Deep Dolomite Wells: MW-1, MW-2, MW-3, MW-4, 30 and PW-8

POTW Samples: Influent, Effluent, and Stabilized Sludge

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 1A

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	ANNUAL	ANNUAL	ANNUAL	
CHLOROMETHANE				<10
BROMOMETHANE				<10
VINYL CHLORIDE				<10
CHLOROETHANE				<10
METHYLENE CHLORIDE				* 12
ACETONE				<10
CARBON DISULFIDE				<5.
1,1-DICHLOROETHENE				<5.
1,1-DICHLOROETHANE				<5.
1,2-DICHLOROETHENE(TOTAL)				<5.
CHLOROFORM				<5.
1,2-DICHLOROETHANE				<5.
2-BUTANONE				<10
1,1,1-TRICHLOROETHANE				<5.
CARBON TETRACHLORIDE				<5.
VINYL ACETATE				<10
BROMODICHLOROMETHANE				<5.
1,2-DICHLOROPROPANE				<5.
CIS-1,3-DICHLOROPROPENE				<5.
TRICHLOROETHENE				<5.
DIBROMOCHLOROMETHANE				<5.
1,1,2-TRICHLOROETHANE				<5.
BENZENE				<5.
TRANS-1,3-DICHLOROPROPENE				<5.
BROMOFORM				<5.
4-METHYL-2-PENTANONE				<10
2-HEXANONE				<10
1,1,2,2-TETRACHLOROETHANE				<5.
TETRACHLOROETHENE				<5.
TOLUENE				<5.
CHLOROBENZENE				<5.
ETHYLBENZENE				<5.
STYRENE				<5.
XYLENE(TOTAL)				<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 3B

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	ANNUAL	ANNUAL	ANNUAL	
CHLOROMETHANE				<10
BROMOMETHANE				<10
VINYL CHLORIDE				<10
CHLOROETHANE				<10
METHYLENE CHLORIDE				* 7.0
ACETONE				<10
CARBON DISULFIDE				<5.
1,1-DICHLOROETHENE				<5.
1,1-DICHLOROETHANE				<5.
1,2-DICHLOROETHENE(TOTAL)				<5.
CHLOROFORM				<5.
1,2-DICHLOROETHANE				<5.
2-BUTANONE				<10
1,1,1-TRICHLOROETHANE				<5.
CARBON TETRACHLORIDE				<5.
VINYL ACETATE				<10
BROMODICHLOROMETHANE				<5.
1,2-DICHLOROPROPANE				<5.
CIS-1,3-DICHLOROPROPENE				<5.
TRICHLOROETHENE				<5.
DIBROMOCHLOROMETHANE				<5.
1,1,2-TRICHLOROETHANE				<5.
BENZENE				<5.
TRANS-1,3-DICHLOROPROPENE				<5.
BROMOFORM				<5.
4-METHYL-2-PENTANONE				<10
2-HEXANONE				<10
1,1,2,2-TETRACHLOROETHANE				<5.
TETRACHLOROETHENE				<5.
TOLUENE				<5.
CHLOROBENZENE				<5.
ETHYLBENZENE				<5.
STYRENE				<5.
XYLENE(TOTAL)				<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 4A

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	ANNUAL	ANNUAL	ANNUAL	DRY
CHLOROMETHANE				
BROMOMETHANE				
VINYL CHLORIDE				
CHLOROETHANE				
METHYLENE CHLORIDE				
ACETONE				
CARBON DISULFIDE				
1,1-DICHLOROETHENE				
1,1-DICHLOROETHANE				
1,2-DICHLOROETHENE(TOTAL)				
CHLOROFORM				
1,2-DICHLOROETHANE				
2-BUTANONE				
1,1,1-TRICHLOROETHANE				
CARBON TETRACHLORIDE				
VINYL ACETATE				
BROMODICHLOROMETHANE				
1,2-DICHLOROPROPANE				
CIS-1,3-DICHLOROPROPENE				
TRICHLOROETHENE				
DIBROMOCHLOROMETHANE				
1,1,2-TRICHLOROETHANE				
BENZENE				
TRANS-1,3-DICHLOROPROPENE				
BROMOFORM				
4-METHYL-2-PENTANONE				
2-HEXANONE				
1,1,2,2-TETRACHLOROETHANE				
TETRACHLOROETHENE				
TOLUENE				
CHLOROBENZENE				
ETHYLBENZENE				
STYRENE				
XYLENE(TOTAL)				
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 6A

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10,000	<250	<5,000	<100
BROMOMETHANE	<10,000	<250	<5,000	<100
VINYL CHLORIDE	<10,000	<250	<5,000	<100
CHLOROETHANE	<10,000	<250	<5,000	<100
METHYLENE CHLORIDE	<5,000	<120	<2,500	* 68
ACETONE	<10,000	1,600	<5,000	3,000
CARBON DISULFIDE	<5,000	<120	<2,500	<50
1,1-DICHLOROETHENE	<5,000	<120	<2,500	<50
1,1-DICHLOROETHANE	<5,000	<120	<2,500	<50
1,2-DICHLOROETHENE(TOTAL)	<5,000	1,700	<2,500	1,900
CHLOROFORM	<5,000	<120	<2,500	<50
1,2-DICHLOROETHANE	<5,000	<120	<2,500	<50
2-BUTANONE	<10,000	<250	<5,000	360
1,1,1-TRICHLOROETHANE	<5,000	<120	<2,500	<50
CARBON TETRACHLORIDE	<5,000	<120	<2,500	<50
VINYL ACETATE	<10,000	<250	<5,000	<100
BROMODICHLOROMETHANE	<5,000	<120	<2,500	<50
1,2-DICHLOROPROPANE	<5,000	<120	<2,500	<50
CIS-1,3-DICHLOROPROPENE	<5,000	<120	<2,500	<50
TRICHLOROETHENE	<5,000	<120	<2,500	<50
DIBROMOCHLOROMETHANE	<5,000	<120	<2,500	<50
1,1,2-TRICHLOROETHANE	<5,000	<120	<2,500	<50
BENZENE	<5,000	1,600	<2,500	1,700
TRANS-1,3-DICHLOROPROPENE	<5,000	<120	<2,500	<50
BROMOFORM	<5,000	<120	<2,500	<50
4-METHYL-2-PENTANONE	<10,000	<240	<5,000	<100
2-HEXANONE	<10,000	<240	<5,000	<100
1,1,2,2-TETRACHLOROETHANE	<5,000	<120	<2,500	<50
TETRACHLOROETHENE	<5,000	<120	2,700	<50
TOLUENE	73,000	71,000	78,000	68,000
CHLOROBENZENE	<5,000	<120	<2,500	<50
ETHYLBENZENE	24,000	<120	28,000	26,000
STYRENE	<5,000	<120	<2,500	<50
XYLENE(TOTAL)	95,000	100,000	110,000	130,000
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 8

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	ANNUAL	ANNUAL	ANNUAL	DRY
CHLOROMETHANE				
BROMOMETHANE				
VINYL CHLORIDE				
CHLOROETHANE				
METHYLENE CHLORIDE				
ACETONE				
CARBON DISULFIDE				
1,1-DICHLOROETHENE				
1,1-DICHLOROETHANE				
1,2-DICHLOROETHENE(TOTAL)				
CHLOROFORM				
1,2-DICHLOROETHANE				
2-BUTANONE				
1,1,1-TRICHLOROETHANE				
CARBON TETRACHLORIDE				
VINYL ACETATE				
BROMODICHLOROMETHANE				
1,2-DICHLOROPROPANE				
CIS-1,3-DICHLOROPROPENE				
TRICHLOROETHENE				
DIBROMOCHLOROMETHANE				
1,1,2-TRICHLOROETHANE				
BENZENE				
TRANS-1,3-DICHLOROPROPENE				
BROMOFORM				
4-METHYL-2-PENTANONE				
2-HEXANONE				
1,1,2,2-TETRACHLOROETHANE				
TETRACHLOROETHENE				
TOLUENE				
CHLOROBENZENE				
ETHYLBENZENE				
STYRENE				
XYLENE(TOTAL)				
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 14B

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<5.	* 6.3	<5.	<5
ACETONE	<10	<10	* 17	<10
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	<5.	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	5.7	<5.	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	<5.	<5.	<5.
STYRENE	<5.	<5.	<5.	<5.
XYLENE(TOTAL)	<5.	42	<5.	<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LAB CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 16A

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	ANNUAL	ANNUAL	ANNUAL	DRY
CHLOROMETHANE				
BROMOMETHANE				
VINYL CHLORIDE				
CHLOROETHANE				
METHYLENE CHLORIDE				
ACETONE				
CARBON DISULFIDE				
1,1-DICHLOROETHENE				
1,1-DICHLOROETHANE				
1,2-DICHLOROETHENE(TOTAL)				
CHLOROFORM				
1,2-DICHLOROETHANE				
2-BUTANONE				
1,1,1-TRICHLOROETHANE				
CARBON TETRACHLORIDE				
VINYL ACETATE				
BROMODICHLOROMETHANE				
1,2-DICHLOROPROPANE				
CIS-1,3-DICHLOROPROPENE				
TRICHLOROETHENE				
DIBROMOCHLOROMETHANE				
1,1,2-TRICHLOROETHANE				
BENZENE				
TRANS-1,3-DICHLOROPROPENE				
BROMOFORM				
4-METHYL-2-PENTANONE				
2-HEXANONE				
1,1,2,2-TETRACHLOROETHANE				
TETRACHLOROETHENE				
TOLUENE				
CHLOROBENZENE				
ETHYLBENZENE				
STYRENE				
XYLENE(TOTAL)				
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 18A

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	ANNUAL	ANNUAL	ANNUAL	
CHLOROMETHANE				<10
BROMOMETHANE				<10
VINYL CHLORIDE				<10
CHLOROETHANE				<10
METHYLENE CHLORIDE				* 6.6
ACETONE				<10
CARBON DISULFIDE				<5.
1,1-DICHLOROETHENE				<5.
1,1-DICHLOROETHANE				<5.
1,2-DICHLOROETHENE(TOTAL)				<5.
CHLOROFORM				<5.
1,2-DICHLOROETHANE				<5.
2-BUTANONE				<10
1,1,1-TRICHLOROETHANE				<5.
CARBON TETRACHLORIDE				<5.
VINYL ACETATE				<10
BROMODICHLOROMETHANE				<5.
1,2-DICHLOROPROPANE				<5.
CIS-1,3-DICHLOROPROPENE				<5.
TRICHLOROETHENE				<5.
DIBROMOCHLOROMETHANE				<5.
1,1,2-TRICHLOROETHANE				<5.
BENZENE				<5.
TRANS-1,3-DICHLOROPROPENE				<5.
BROMOFORM				<5.
4-METHYL-2-PENTANONE				<10
2-HEXANONE				<10
1,1,2,2-TETRACHLOROETHANE				<5.
TETRACHLOROETHENE				<5.
TOLUENE				<5.
CHLOROBENZENE				<5.
ETHYLBENZENE				<5.
STYRENE				<5.
XYLENE(TOTAL)				<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 19A

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	ANNUAL	ANNUAL	ANNUAL	
CHLOROMETHANE				<50
BROMOMETHANE				<50
VINYL CHLORIDE				<50
CHLOROETHANE				<50
METHYLENE CHLORIDE				<25
ACETONE				<50
CARBON DISULFIDE				<25
1,1-DICHLOROETHENE				<25
1,1-DICHLOROETHANE				<25
1,2-DICHLOROETHENE(TOTAL)				75
CHLOROFORM				<25
1,2-DICHLOROETHANE				<25
2-BUTANONE				<50
1,1,1-TRICHLOROETHANE				<25
CARBON TETRACHLORIDE				<25
VINYL ACETATE				<50
BROMODICHLOROMETHANE				<25
1,2-DICHLOROPROPANE				<25
CIS-1,3-DICHLOROPROPENE				<25
TRICHLOROETHENE				340
DIBROMOCHLOROMETHANE				<25
1,1,2-TRICHLOROETHANE				<25
BENZENE				<25
TRANS-1,3-DICHLOROPROPENE				<25
BROMOFORM				<25
4-METHYL-2-PENTANONE				<50
2-HEXANONE				<50
1,1,2,2-TETRACHLOROETHANE				<25
TETRACHLOROETHENE				<25
TOLUENE				<25
CHLOROBENZENE				<25
ETHYLBENZENE				<25
STYRENE				<25
XYLENE(TOTAL)				<25
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 20

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<5.	<10	<10	<10
BROMOMETHANE	<5.	<10	<10	<10
VINYL CHLORIDE	<5.	<10	<10	<10
CHLOROETHANE	<5.	<10	<10	<10
METHYLENE CHLORIDE	<5.	<5.	<5.	* 11
ACETONE	<10	<10	* 10	<10
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	10	<5.	8.6
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	<5.	<5.	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	8.1	<5.	19
STYRENE	<5.	<5.	10	<5.
XYLENE(TOTAL)	<5.	23	<5.	<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 27

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<10
BROMOMETHANE				<10
VINYL CHLORIDE				<10
CHLOROETHANE				<10
METHYLENE CHLORIDE				* 12
ACETONE				<10
CARBON DISULFIDE				<5.
1,1-DICHLOROETHENE				<5.
1,1-DICHLOROETHANE				<5.
1,2-DICHLOROETHENE(TOTAL)				56
CHLOROFORM				<5.
1,2-DICHLOROETHANE				<5.
2-BUTANONE				<10
1,1,1-TRICHLOROETHANE				<5.
CARBON TETRACHLORIDE				<5.
VINYL ACETATE				<10
BROMODICHLOROMETHANE				<5.
1,2-DICHLOROPROPANE				<5.
CIS-1,3-DICHLOROPROPENE				<5.
TRICHLOROETHENE				230
DIBROMOCHLOROMETHANE				<5.
1,1,2-TRICHLOROETHANE				<5.
BENZENE				<5.
TRANS-1,3-DICHLOROPROPENE				<5.
BROMOFORM				<5.
4-METHYL-2-PENTANONE				<10
2-HEXANONE				<10
1,1,2,2-TETRACHLOROETHANE				<5.
TETRACHLOROETHENE				<5.
TOLUENE				<5.
CHLOROBENZENE				<5.
ETHYLBENZENE				<5.
STYRENE				<5.
XYLENE(TOTAL)				<5.
METHOD 602				NA
BENZENE	9.0	60	29	
TOLUENE	<1.	<1.	<1.	
ETHYLBENZENE	<1.	<1.	<1.	
CHLOROBENZENE	<1.	<1.	1.1	
XYLENE(TOTAL)	<1.	<1.	<1.	
1,4-DICHLOROBENZENE	<1.	<1.	<1.	
1,3-DICHLOROBENZENE	<1.	<1.	<1.	
1,2-DICHLOROBENZENE	<1.	<1.	<1.	

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 37

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<5,000
BROMOMETHANE				<5,000
VINYL CHLORIDE				<5,000
CHLOROETHANE				<5,000
METHYLENE CHLORIDE				<2,500
ACETONE				<5,000
CARBON DISULFIDE				<2,500
1,1-DICHLOROETHENE				<2,500
1,1-DICHLOROETHANE				<2,500
1,2-DICHLOROETHENE(TOTAL)				<2,500
CHLOROFORM				<2,500
1,2-DICHLOROETHANE				<2,500
2-BUTANONE				<5,000
1,1,1-TRICHLOROETHANE				<2,500
CARBON TETRACHLORIDE				<2,500
VINYL ACETATE				<5,000
BROMODICHLOROMETHANE				<2,500
1,2-DICHLOROPROPANE				<2,500
CIS-1,3-DICHLOROPROPENE				<2,500
TRICHLOROETHENE				<2,500
DIBROMOCHLOROMETHANE				<2,500
1,1,2-TRICHLOROETHANE				<2,500
BENZENE				<2,500
TRANS-1,3-DICHLOROPROPENE				<2,500
BROMOFORM				<2,500
4-METHYL-2-PENTANONE				<5,000
2-HEXANONE				<5,000
1,1,2,2-TETRACHLOROETHANE				<2,500
TETRACHLOROETHENE				<2,500
TOLUENE				54,000
CHLOROBENZENE				<2,500
ETHYLBENZENE				<2,500
STYRENE				<2,500
XYLENE(TOTAL)				110,000
METHOD 602				NA
BENZENE	1,100	880	<1,000	
TOLUENE	58,000	60,000	51,000	
ETHYLBENZENE	17,000	18,000	15,000	
CHLOROBENZENE	<1,000	<100	<1,000	
XYLENE(TOTAL)	96,000	100,000	87,000	
1,4-DICHLOROBENZENE	<1,000	<100	<1,000	
1,3-DICHLOROBENZENE	<1,000	<100	<1,000	
1,2-DICHLOROBENZENE	<1,000	<100	<1,000	

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 41

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<10
BROMOMETHANE				<10
VINYL CHLORIDE				<10
CHLOROETHANE				<10
METHYLENE CHLORIDE				* 13
ACETONE				<10
CARBON DISULFIDE				<5.
1,1-DICHLOROETHENE				<5.
1,1-DICHLOROETHANE				<5.
1,2-DICHLOROETHENE(TOTAL)				<5.
CHLOROFORM				<5.
1,2-DICHLOROETHANE				<5.
2-BUTANONE				<10
1,1,1-TRICHLOROETHANE				<5.
CARBON TETRACHLORIDE				<5.
VINYL ACETATE				<10
BROMODICHLOROMETHANE				<5.
1,2-DICHLOROPROPANE				<5.
CIS-1,3-DICHLOROPROPENE				<5.
TRICHLOROETHENE				<5.
DIBROMOCHLOROMETHANE				<5.
1,1,2-TRICHLOROETHANE				<5.
BENZENE				<5.
TRANS-1,3-DICHLOROPROPENE				<5.
BROMOFORM				<5.
4-METHYL-2-PENTANONE				<10
2-HEXANONE				<10
1,1,2,2-TETRACHLOROETHANE				<5.
TETRACHLOROETHENE				<5.
TOLUENE				<5.
CHLOROBENZENE				<5.
ETHYLBENZENE				17
STYRENE				<5.
XYLENE(TOTAL)				230
METHOD 602				NA
BENZENE	<5.	4.0	6.6	
TOLUENE	<5.	<1.	<5.	
ETHYLBENZENE	100	170	350	
CHLOROBENZENE	<5.	<1.	<5.	
XYLENE(TOTAL)	150	400	660	
1,4-DICHLOROBENZENE	<5.	<1.	<5.	
1,3-DICHLOROBENZENE	<5.	<1.	<5.	
1,2-DICHLOROBENZENE	<5.	<1.	<5.	

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 42

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<1,000
BROMOMETHANE				<1,000
VINYL CHLORIDE				<1,000
CHLOROETHANE				<1,000
METHYLENE CHLORIDE				<500
ACETONE				<1,000
CARBON DISULFIDE				<500
1,1-DICHLOROETHENE				<500
1,1-DICHLOROETHANE				<500
1,2-DICHLOROETHENE(TOTAL)				<500
CHLOROFORM				<500
1,2-DICHLOROETHANE				<500
2-BUTANONE				<1,000
1,1,1-TRICHLOROETHANE				<500
CARBON TETRACHLORIDE				<500
VINYL ACETATE				<1,000
BROMODICHLOROMETHANE				<500
1,2-DICHLOROPROPANE				<500
CIS-1,3-DICHLOROPROPENE				<500
TRICHLOROETHENE				<500
DIBROMOCHLOROMETHANE				<500
1,1,2-TRICHLOROETHANE				<500
BENZENE				680
TRANS-1,3-DICHLOROPROPENE				<500
BROMOFORM				<500
4-METHYL-2-PENTANONE				<1,000
2-HEXANONE				<1,000
1,1,2,2-TETRACHLOROETHANE				<500
TETRACHLOROETHENE				<500
TOLUENE				590
CHLOROBENZENE				<500
ETHYLBENZENE				<500
STYRENE				<500
XYLENE(TOTAL)				2,600
METHOD 602	DRY			NA
BENZENE		860	1,500	
TOLUENE		2,800	1,700	
ETHYLBENZENE		590	820	
CHLOROBENZENE		<10	<50	
XYLENE(TOTAL)		4,300	5,000	
1,4-DICHLOROBENZENE		<10	<50	
1,3-DICHLOROBENZENE		<10	<50	
1,2-DICHLOROBENZENE		<10	<50	

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 43

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<1,000
BROMOMETHANE				<1,000
VINYL CHLORIDE				<1,000
CHLOROETHANE				<1,000
METHYLENE CHLORIDE				<500
ACETONE				<1,000
CARBON DISULFIDE				<500
1,1-DICHLOROETHENE				<500
1,1-DICHLOROETHANE				<500
1,2-DICHLOROETHENE(TOTAL)				<500
CHLOROFORM				<500
1,2-DICHLOROETHANE				<500
2-BUTANONE				<1,000
1,1,1-TRICHLOROETHANE				<500
CARBON TETRACHLORIDE				<500
VINYL ACETATE				<1,000
BROMODICHLOROMETHANE				<500
1,2-DICHLOROPROPANE				<500
CIS-1,3-DICHLOROPROPENE				<500
TRICHLOROETHENE				<500
DIBROMOCHLOROMETHANE				<500
1,1,2-TRICHLOROETHANE				<500
BENZENE				3,600
TRANS-1,3-DICHLOROPROPENE				<500
BROMOFORM				<500
4-METHYL-2-PENTANONE				<1,000
2-HEXANONE				<1,000
1,1,2,2-TETRACHLOROETHANE				<500
TETRACHLOROETHENE				<500
TOLUENE				4,200
CHLOROBENZENE				<500
ETHYLBENZENE				6,800
STYRENE				<500
XYLENE(TOTAL)				28,000
METHOD 602			DRY	NA
BENZENE	8.6	710		
TOLUENE	3.4	3,900		
ETHYLBENZENE	17	1,700		
CHLOROBENZENE	<1.	<100		
XYLENE(TOTAL)	44	6,000		
1,4-DICHLOROBENZENE	<1.	<100		
1,3-DICHLOROBENZENE	<1.	<100		
1,2-DICHLOROBENZENE	<1.	<100		

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 44

COMPOUND	CONCENTRATIONS (micrograms/L) WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	DRY	DRY	DRY	DRY
CHLOROMETHANE				
BROMOMETHANE				
VINYL CHLORIDE				
CHLOROETHANE				
METHYLENE CHLORIDE				
ACETONE				
CARBON DISULFIDE				
1,1-DICHLOROETHENE				
1,1-DICHLOROETHANE				
1,2-DICHLOROETHENE(TOTAL)				
CHLOROFORM				
1,2-DICHLOROETHANE				
2-BUTANONE				
1,1,1-TRICHLOROETHANE				
CARBON TETRACHLORIDE				
VINYL ACETATE				
BROMODICHLOROMETHANE				
1,2-DICHLOROPROPANE				
CIS-1,3-DICHLOROPROPENE				
TRICHLOROETHENE				
DIBROMOCHLOROMETHANE				
1,1,2-TRICHLOROETHANE				
BENZENE				
TRANS-1,3-DICHLOROPROPENE				
BROMOFORM				
4-METHYL-2-PENTANONE				
2-HEXANONE				
1,1,2,2-TETRACHLOROETHANE				
TETRACHLOROETHENE				
TOLUENE				
CHLOROBENZENE				
ETHYLBENZENE				
STYRENE				
XYLENE(TOTAL)				
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				
XYLENE(TOTAL)				

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 45

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	DRY	DRY	DRY	DRY
CHLOROMETHANE				
BROMOMETHANE				
VINYL CHLORIDE				
CHLOROETHANE				
METHYLENE CHLORIDE				
ACETONE				
CARBON DISULFIDE				
1,1-DICHLOROETHENE				
1,1-DICHLOROETHANE				
1,2-DICHLOROETHENE(TOTAL)				
CHLOROFORM				
1,2-DICHLOROETHANE				
2-BUTANONE				
1,1,1-TRICHLOROETHANE				
CARBON TETRACHLORIDE				
VINYL ACETATE				
BROMODICHLOROMETHANE				
1,2-DICHLOROPROPANE				
CIS-1,3-DICHLOROPROPENE				
TRICHLOROETHENE				
DIBROMOCHLOROMETHANE				
1,1,2-TRICHLOROETHANE				
BENZENE				
TRANS-1,3-DICHLOROPROPENE				
BROMOFORM				
4-METHYL-2-PENTANONE				
2-HEXANONE				
1,1,2,2-TETRACHLOROETHANE				
TETRACHLOROETHENE				
TOLUENE				
CHLOROBENZENE				
ETHYLBENZENE				
STYRENE				
XYLENE(TOTAL)				
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 46

COMPOUND	CONCENTRATIONS (micrograms/L) WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<5.	<5.	<5.	<5.
ACETONE	* 54	<10	<10	<10
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	<5.	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	11	<5.	<5.	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	5.5	<5.	<5.	<5.
STYRENE	<5.	<5.	<5.	<5.
XYLENE(TOTAL)	21	<5.	<5.	<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				
XYLENE(TOTAL)				

* = SUSPECTED LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 47

COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
	CONCENTRATIONS (micrograms/L)			
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<100
BROMOMETHANE				<100
VINYL CHLORIDE				<100
CHLOROETHANE				<100
METHYLENE CHLORIDE				* 150
ACETONE				10,000
CARBON DISULFIDE				<50
1,1-DICHLOROETHENE				<50
1,1-DICHLOROETHANE				<50
1,2-DICHLOROETHENE(TOTAL)				530
CHLOROFORM				<50
1,2-DICHLOROETHANE				<50
2-BUTANONE				740
1,1,1-TRICHLOROETHANE				<50
CARBON TETRACHLORIDE				<50
VINYL ACETATE				<100
BROMODICHLOROMETHANE				<50
1,2-DICHLOROPROPANE				<50
CIS-1,3-DICHLOROPROPENE				<50
TRICHLOROETHENE				95
DIBROMOCHLOROMETHANE				<50
1,1,2-TRICHLOROETHANE				<50
BENZENE				480
TRANS-1,3-DICHLOROPROPENE				<50
BROMOFORM				<50
4-METHYL-2-PENTANONE				<100
2-HEXANONE				<100
1,1,2,2-TETRACHLOROETHANE				<50
TETRACHLOROETHENE				<50
TOLUENE				49,000
CHLOROBENZENE				<50
ETHYLBENZENE				88,000
STYRENE				<50
XYLENE(TOTAL)				660,000
METHOD 602				NA
BENZENE	3,000	740	<2,500	
TOLUENE	20,000	41,000	23,000	
ETHYLBENZENE	23,000	70,000	47,000	
CHLOROBENZENE	<2,500	<500	<2,500	
XYLENE(TOTAL)	150,000	430,000	330,000	
1,4-DICHLOROBENZENE	<2,500	<500	<2,500	
1,3-DICHLOROBENZENE	<2,500	<500	<2,500	
1,2-DICHLOROBENZENE	<2,500	<500	<2,500	

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 48

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<10
BROMOMETHANE				<10
VINYL CHLORIDE				<10
CHLOROETHANE				<10
METHYLENE CHLORIDE				<5.
ACETONE				<10
CARBON DISULFIDE				<5.
1,1-DICHLOROETHENE				<5.
1,1-DICHLOROETHANE				<5.
1,2-DICHLOROETHENE(TOTAL)				<5.
CHLOROFORM				<5.
1,2-DICHLOROETHANE				30
2-BUTANONE				<10
1,1,1-TRICHLOROETHANE				<5.
CARBON TETRACHLORIDE				<5.
VINYL ACETATE				<10
BROMODICHLOROMETHANE				<5.
1,2-DICHLOROPROPANE				<5.
CIS-1,3-DICHLOROPROPENE				<5.
TRICHLOROETHENE				<5.
DIBROMOCHLOROMETHANE				<5.
1,1,2-TRICHLOROETHANE				<5.
BENZENE				<5.
TRANS-1,3-DICHLOROPROPENE				<5.
BROMOFORM				<5.
4-METHYL-2-PENTANONE				<10
2-HEXANONE				<10
1,1,2,2-TETRACHLOROETHANE				<5.
TETRACHLOROETHENE				<5.
TOLUENE				<5.
CHLOROBENZENE				<5.
ETHYLBENZENE				<5.
STYRENE				<5.
XYLENE(TOTAL)				<5.
METHOD 602				NA
BENZENE	2.1	1.6	<1.	
TOLUENE	4.2	<1.	<1.	
ETHYLBENZENE	9.7	<1.	<1.	
CHLOROBENZENE	<1.	<1.	<1.	
XYLENE(TOTAL)	64	1.6	13	
1,4-DICHLOROBENZENE	<1.	<1.	<1.	
1,3-DICHLOROBENZENE	<1.	<1.	<1.	
1,2-DICHLOROBENZENE	<1.	<1.	<1.	

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - RC-1

COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
	CONCENTRATIONS (micrograms/L)			
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<1,000
BROMOMETHANE				<1,000
VINYL CHLORIDE				<1,000
CHLOROETHANE				<1,000
METHYLENE CHLORIDE				<500
ACETONE				<1,000
CARBON DISULFIDE				<500
1,1-DICHLOROETHENE				<500
1,1-DICHLOROETHANE				<500
1,2-DICHLOROETHENE(TOTAL)				520
CHLOROFORM				<500
1,2-DICHLOROETHANE				<500
2-BUTANONE				<1,000
1,1,1-TRICHLOROETHANE				<500
CARBON TETRACHLORIDE				<500
VINYL ACETATE				<1,000
BROMODICHLOROMETHANE				<500
1,2-DICHLOROPROPANE				<500
CIS-1,3-DICHLOROPROPENE				<500
TRICHLOROETHENE				<500
DIBROMOCHLOROMETHANE				<500
1,1,2-TRICHLOROETHANE				<500
BENZENE				<500
TRANS-1,3-DICHLOROPROPENE				<500
BROMOFORM				<500
4-METHYL-2-PENTANONE				<1,000
2-HEXANONE				<1,000
1,1,2,2-TETRACHLOROETHANE				<500
TETRACHLOROETHENE				<500
TOLUENE				5,900
CHLOROBENZENE				<500
ETHYLBENZENE				5,500
STYRENE				<500
XYLENE(TOTAL)				37,000
METHOD 602				NA
BENZENE	650	74	130	
TOLUENE	4,700	1,100	2,700	
ETHYLBENZENE	4,300	620	990	
CHLOROBENZENE	<500	<50	<50	
XYLENE(TOTAL)	50,000	4,700	6,000	
1,4-DICHLOROBENZENE	<500	<50	<50	
1,3-DICHLOROBENZENE	<500	<50	<50	
1,2-DICHLOROBENZENE	<500	<50	<50	

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - RC-2

COMPOUND	CONCENTRATIONS (micrograms/L) WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<1,000
BROMOMETHANE				<1,000
VINYL CHLORIDE				<1,000
CHLOROETHANE				<1,000
METHYLENE CHLORIDE				<500
ACETONE				* 3,600
CARBON DISULFIDE				870
1,1-DICHLOROETHENE				<500
1,1-DICHLOROETHANE				<500
1,2-DICHLOROETHENE(TOTAL)				970
CHLOROFORM				<500
1,2-DICHLOROETHANE				<500
2-BUTANONE				<1,000
1,1,1-TRICHLOROETHANE				<500
CARBON TETRACHLORIDE				<500
VINYL ACETATE				<1,000
BROMODICHLOROMETHANE				<500
1,2-DICHLOROPROPANE				<500
CIS-1,3-DICHLOROPROPENE				<500
TRICHLOROETHENE				<500
DIBROMOCHLOROMETHANE				<500
1,1,2-TRICHLOROETHANE				<500
BENZENE				<500
TRANS-1,3-DICHLOROPROPENE				<500
BROMOFORM				<500
4-METHYL-2-PENTANONE				<1,000
2-HEXANONE				<1,000
1,1,2,2-TETRACHLOROETHANE				<500
TETRACHLOROETHENE				<500
TOLUENE				13,000
CHLOROBENZENE				<500
ETHYLBENZENE				5,200
STYRENE				<500
XYLENE(TOTAL)				34,000
METHOD 602				NA
BENZENE	<500	260	970	
TOLUENE	6,900	3,000	13,000	
ETHYLBENZENE	4,000	1,400	4,000	
CHLOROBENZENE	<500	<10	<100	
XYLENE(TOTAL)	39,000	9,800	23,000	
1,4-DICHLOROBENZENE	<500	<10	<100	
1,3-DICHLOROBENZENE	<500	<10	<100	
1,2-DICHLOROBENZENE	<500	<10	<100	

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - RC-3

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<500
BROMOMETHANE				<500
VINYL CHLORIDE				<500
CHLOROETHANE				<500
METHYLENE CHLORIDE				<250
ACETONE				<500
CARBON DISULFIDE				<250
1,1-DICHLOROETHENE				<250
1,1-DICHLOROETHANE				<250
1,2-DICHLOROETHENE(TOTAL)				1,200
CHLOROFORM				<250
1,2-DICHLOROETHANE				<250
2-BUTANONE				<500
1,1,1-TRICHLOROETHANE				<250
CARBON TETRACHLORIDE				<250
VINYL ACETATE				<500
BROMODICHLOROMETHANE				<250
1,2-DICHLOROPROPANE				<250
CIS-1,3-DICHLOROPROPENE				<250
TRICHLOROETHENE				<250
DIBROMOCHLOROMETHANE				<250
1,1,2-TRICHLOROETHANE				<250
BENZENE				<250
TRANS-1,3-DICHLOROPROPENE				<250
BROMOFORM				<250
4-METHYL-2-PENTANONE				<500
2-HEXANONE				<500
1,1,2,2-TETRACHLOROETHANE				<250
TETRACHLOROETHENE				<250
TOLUENE				3,400
CHLOROBENZENE				<250
ETHYLBENZENE				4,000
STYRENE				<250
XYLENE(TOTAL)				34,000
METHOD 602				
BENZENE	<1,000	250	670	
TOLUENE	3,300	10,000	9,600	
ETHYLBENZENE	3,200	6,700	6,000	
CHLOROBENZENE	<1,000	<50	<500	
XYLENE(TOTAL)	41,000	56,000	50,000	
1,4-DICHLOROBENZENE	<1,000	<50	<500	
1,3-DICHLOROBENZENE	<1,000	<50	<500	
1,2-DICHLOROBENZENE	<1,000	53	<500	

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 3A

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<5.	<5.	<5.	* 7.7
ACETONE	<10	<10	<10	<10
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	<5.	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	<5.	<5.	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	<5.	<5.	<5.
STYRENE	<5.	<5.	<5.	<5.
XYLENE(TOTAL)	<5.	5.4	<5.	<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 7

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<5.	* 5.3	* 5.8	<5.
ACETONE	<10	<10	<10	<10
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	<5.	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	<5.	<5.	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	<5.	<5.	<5.
STYRENE	<5.	<5.	<5.	<5.
XYLENE(TOTAL)	<5.	<5.	<5.	<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 21A

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<250
BROMOMETHANE				<250
VINYL CHLORIDE				<250
CHLOROETHANE				<250
METHYLENE CHLORIDE				<120
ACETONE				<250
CARBON DISULFIDE				<120
1,1-DICHLOROETHENE				<120
1,1-DICHLOROETHANE				<120
1,2-DICHLOROETHENE(TOTAL)				<120
CHLOROFORM				<120
1,2-DICHLOROETHANE				<120
2-BUTANONE				<250
1,1,1-TRICHLOROETHANE				<120
CARBON TETRACHLORIDE				<120
VINYL ACETATE				<250
BROMODICHLOROMETHANE				<120
1,2-DICHLOROPROPANE				<120
CIS-1,3-DICHLOROPROPENE				<120
TRICHLOROETHENE				<120
DIBROMOCHLOROMETHANE				<120
1,1,2-TRICHLOROETHANE				<120
BENZENE				1,500
TRANS-1,3-DICHLOROPROPENE				<120
BROMOFORM				<120
4-METHYL-2-PENTANONE				<250
2-HEXANONE				<250
1,1,2,2-TETRACHLOROETHANE				<120
TETRACHLOROETHENE				<120
TOLUENE				6,700
CHLOROBENZENE				<120
ETHYLBENZENE				6,400
STYRENE				<120
XYLENE(TOTAL)				15,000
METHOD 602				
BENZENE	1,600	1,700	1,300	
TOLUENE	10,000	9,700	6,900	
ETHYLBENZENE	9,200	8,600	6,600	
CHLOROBENZENE	<250	<100	<250	
XYLENE(TOTAL)	16,000	15,000	13,000	
1,4-DICHLOROBENZENE	<250	<100	<250	
1,3-DICHLOROBENZENE	<250	<100	<250	
1,2-DICHLOROBENZENE	<250	<100	<250	

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 22

COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
	CONCENTRATIONS (micrograms/L)			
METHOD 624	ANNUAL	ANNUAL	ANNUAL	
CHLOROMETHANE				<10
BROMOMETHANE				<10
VINYL CHLORIDE				<10
CHLOROETHANE				<10
METHYLENE CHLORIDE				* 11
ACETONE				<5.
CARBON DISULFIDE				<5.
1,1-DICHLOROETHENE				<5.
1,1-DICHLOROETHANE				<5.
1,2-DICHLOROETHENE(TOTAL)				<5.
CHLOROFORM				<5.
1,2-DICHLOROETHANE				<5.
2-BUTANONE				<10
1,1,1-TRICHLOROETHANE				<5.
CARBON TETRACHLORIDE				<5.
VINYL ACETATE				<10
BROMODICHLOROMETHANE				<5.
1,2-DICHLOROPROPANE				<5.
CIS-1,3-DICHLOROPROPENE				<5.
TRICHLOROETHENE				<5.
DIBROMOCHLOROMETHANE				<5.
1,1,2-TRICHLOROETHANE				<5.
BENZENE				<5.
TRANS-1,3-DICHLOROPROPENE				<5.
BROMOFORM				<5.
4-METHYL-2-PENTANONE				<10
2-HEXANONE				<10
1,1,2,2-TETRACHLOROETHANE				<5.
TETRACHLOROETHENE				<5.
TOLUENE				<5.
CHLOROBENZENE				<5.
ETHYLBENZENE				<5.
STYRENE				<5.
XYLENE(TOTAL)				<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 23

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<5.	<5.	<5.	<5.
ACETONE	<10	<10	<10	<10
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	<5.	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	<5.	<5.	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	<5.	<5.	<5.
STYRENE	<5.	<5.	<5.	<5.
XYLENE(TOTAL)	<5.	<5.	<5.	24
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 24A

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<10
BROMOMETHANE				<10
VINYL CHLORIDE				<10
CHLOROETHANE				<10
METHYLENE CHLORIDE				<5.
ACETONE				<10
CARBON DISULFIDE				<5.
1,1-DICHLOROETHENE				<5.
1,1-DICHLOROETHANE				<5.
1,2-DICHLOROETHENE(TOTAL)				23
CHLOROFORM				<5.
1,2-DICHLOROETHANE				<5.
2-BUTANONE				<10
1,1,1-TRICHLOROETHANE				<5.
CARBON TETRACHLORIDE				<5.
VINYL ACETATE				<10
BROMODICHLOROMETHANE				<5.
1,2-DICHLOROPROPANE				<5.
CIS-1,3-DICHLOROPROPENE				<5.
TRICHLOROETHENE				<5.
DIBROMOCHLOROMETHANE				<5.
1,1,2-TRICHLOROETHANE				<5.
BENZENE				<5.
TRANS-1,3-DICHLOROPROPENE				<5.
BROMOFORM				<5.
4-METHYL-2-PENTANONE				<10
2-HEXANONE				<10
1,1,2,2-TETRACHLOROETHANE				<5.
TETRACHLOROETHENE				<5.
TOLUENE				<5.
CHLOROBENZENE				<5.
ETHYLBENZENE				<5.
STYRENE				<5.
XYLENE(TOTAL)				<5.
METHOD 602				NA
BENZENE	4.3	1.8	1.3	
TOLUENE	<1.	<1.	<1.	
ETHYLBENZENE	<1.	<1.	<1.	
CHLOROBENZENE	<1.	<1.	<1.	
XYLENE(TOTAL)	<1.	<1.	<1.	
1,4-DICHLOROBENZENE	<1.	<1.	<1.	
1,3-DICHLOROBENZENE	<1.	<1.	<1.	
1,2-DICHLOROBENZENE	<1.	<1.	<1.	

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 25

COMPOUND	CONCENTRATIONS (micrograms/L) WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	ANNUAL	ANNUAL	ANNUAL	
CHLOROMETHANE				<10
BROMOMETHANE				<10
VINYL CHLORIDE				<10
CHLOROETHANE				<10
METHYLENE CHLORIDE				* 5.4
ACETONE				<10
CARBON DISULFIDE				<5.
1,1-DICHLOROETHENE				<5.
1,1-DICHLOROETHANE				<5.
1,2-DICHLOROETHENE(TOTAL)				<5.
CHLOROFORM				<5.
1,2-DICHLOROETHANE				<5.
2-BUTANONE				<10
1,1,1-TRICHLOROETHANE				<5.
CARBON TETRACHLORIDE				<5.
VINYL ACETATE				<10
BROMODICHLOROMETHANE				<5.
1,2-DICHLOROPROPANE				<5.
CIS-1,3-DICHLOROPROPENE				<5.
TRICHLOROETHENE				<5.
DIBROMOCHLOROMETHANE				<5.
1,1,2-TRICHLOROETHANE				<5.
BENZENE				<5.
TRANS-1,3-DICHLOROPROPENE				<5.
BROMOFORM				<5.
4-METHYL-2-PENTANONE				<10
2-HEXANONE				<10
1,1,2,2-TETRACHLOROETHANE				<5.
TETRACHLOROETHENE				<5.
TOLUENE				<5.
CHLOROBENZENE				<5.
ETHYLBENZENE				<5.
STYRENE				<5.
XYLENE(TOTAL)				6.3
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 28

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<10
BROMOMETHANE				<10
VINYL CHLORIDE				<10
CHLOROETHANE				<10
METHYLENE CHLORIDE				<5.
ACETONE				<10
CARBON DISULFIDE				<5.
1,1-DICHLOROETHENE				<5.
1,1-DICHLOROETHANE				<5.
1,2-DICHLOROETHENE(TOTAL)				<5.
CHLOROFORM				<5.
1,2-DICHLOROETHANE				<5.
2-BUTANONE				<10
1,1,1-TRICHLOROETHANE				<5.
CARBON TETRACHLORIDE				<5.
VINYL ACETATE				<10
BROMODICHLOROMETHANE				<5.
1,2-DICHLOROPROPANE				<5.
CIS-1,3-DICHLOROPROPENE				<5.
TRICHLOROETHENE				<5.
DIBROMOCHLOROMETHANE				<5.
1,1,2-TRICHLOROETHANE				<5.
BENZENE				11
TRANS-1,3-DICHLOROPROPENE				<5.
BROMOFORM				<5.
4-METHYL-2-PENTANONE				<10
2-HEXANONE				<10
1,1,2,2-TETRACHLOROETHANE				<5.
TETRACHLOROETHENE				<5.
TOLUENE				<5.
CHLOROBENZENE				<5.
ETHYLBENZENE				<5.
STYRENE				<5.
XYLENE(TOTAL)				24
METHOD 602				NA
BENZENE	17	6.1	12	
TOLUENE	12	<1.	10	
ETHYLBENZENE	5.6	<1.	2.7	
CHLOROBENZENE	<1.	<1.	<1.	
XYLENE(TOTAL)	24	<1.	120	
1,4-DICHLOROBENZENE	<1.	<1.	<1.	
1,3-DICHLOROBENZENE	<1.	<1.	<1.	
1,2-DICHLOROBENZENE	<1.	<1.	<1.	

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 29

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<500	<250	<100	<100
BROMOMETHANE	<500	<250	<100	<100
VINYL CHLORIDE	<500	<250	<100	<100
CHLOROETHANE	<500	<250	<100	<100
METHYLENE CHLORIDE	<250	<120	<50	<50
ACETONE	<500	<250	<100	<100
CARBON DISULFIDE	<250	<120	<50	<50
1,1-DICHLOROETHENE	<250	<120	<50	<50
1,1-DICHLOROETHANE	<250	<120	<50	<50
1,2-DICHLOROETHENE(TOTAL)	<250	<120	<50	<50
CHLOROFORM	<250	<120	<50	<50
1,2-DICHLOROETHANE	<250	<120	<50	<50
2-BUTANONE	<500	<250	<100	<100
1,1,1-TRICHLOROETHANE	<250	<120	<50	<50
CARBON TETRACHLORIDE	<250	<120	<50	<50
VINYL ACETATE	<500	<250	<100	<100
BROMODICHLOROMETHANE	<250	<120	<50	<50
1,2-DICHLOROPROPANE	<250	<120	<50	<50
CIS-1,3-DICHLOROPROPENE	<250	<120	<50	<50
TRICHLOROETHENE	<250	<120	<50	<50
DIBROMOCHLOROMETHANE	<250	<120	<50	<50
1,1,2-TRICHLOROETHANE	<250	<120	<50	<50
BENZENE	1,100	1,400	1,500	1,100
TRANS-1,3-DICHLOROPROPENE	<250	<120	<50	<50
BROMOFORM	<250	<120	<50	<50
4-METHYL-2-PENTANONE	<500	<250	<100	<100
2-HEXANONE	<500	<250	<100	<100
1,1,2,2-TETRACHLOROETHANE	<250	<120	<50	<50
TETRACHLOROETHENE	<250	<120	<50	<50
TOLUENE	<250	<120	<50	<50
CHLOROBENZENE	<250	<120	<50	<50
ETHYLBENZENE	1,800	2,200	1,700	1,200
STYRENE	<250	<120	<50	<50
XYLENE(TOTAL)	3,400	4,500	2,900	2,200
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 38

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	NA	NA	NA	
CHLOROMETHANE				<100
BROMOMETHANE				<100
VINYL CHLORIDE				<100
CHLOROETHANE				<100
METHYLENE CHLORIDE				* 70
ACETONE				<100
CARBON DISULFIDE				<50
1,1-DICHLOROETHENE				<50
1,1-DICHLOROETHANE				<50
1,2-DICHLOROETHENE(TOTAL)				<50
CHLOROFORM				<50
1,2-DICHLOROETHANE				<50
2-BUTANONE				<100
1,1,1-TRICHLOROETHANE				<50
CARBON TETRACHLORIDE				<50
VINYL ACETATE				<100
BROMODICHLOROMETHANE				<50
1,2-DICHLOROPROPANE				<50
CIS-1,3-DICHLOROPROPENE				<50
TRICHLOROETHENE				<50
DIBROMOCHLOROMETHANE				<50
1,1,2-TRICHLOROETHANE				<50
BENZENE				1,600
TRANS-1,3-DICHLOROPROPENE				<50
BROMOFORM				<50
4-METHYL-2-PENTANONE				<100
2-HEXANONE				<100
1,1,2,2-TETRACHLOROETHANE				<50
TETRACHLOROETHENE				<50
TOLUENE				73
CHLOROBENZENE				<50
ETHYLBENZENE				1,700
STYRENE				<50
XYLENE(TOTAL)				5,000
METHOD 602				
BENZENE	1,400	1,500	1,600	
TOLUENE	<50	<50	270	
ETHYLBENZENE	1,300	1,500	1,800	
CHLOROBENZENE	<50	<50	<50	
XYLENE(TOTAL)	3,100	3,800	4,300	
1,4-DICHLOROBENZENE	<50	<50	<50	
1,3-DICHLOROBENZENE	<50	<50	<50	
1,2-DICHLOROBENZENE	<50	<50	<50	

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 39

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	ANNUAL	ANNUAL	ANNUAL	
CHLOROMETHANE				<10
BROMOMETHANE				<10
VINYL CHLORIDE				<10
CHLOROETHANE				<10
METHYLENE CHLORIDE				* 17
ACETONE				<10
CARBON DISULFIDE				<5.
1,1-DICHLOROETHENE				<5.
1,1-DICHLOROETHANE				<5.
1,2-DICHLOROETHENE(TOTAL)				<5.
CHLOROFORM				<5.
1,2-DICHLOROETHANE				<5.
2-BUTANONE				<10
1,1,1-TRICHLOROETHANE				<5.
CARBON TETRACHLORIDE				<5.
VINYL ACETATE				<10
BROMODICHLOROMETHANE				<5.
1,2-DICHLOROPROPANE				<5.
CIS-1,3-DICHLOROPROPENE				<5.
TRICHLOROETHENE				<5.
DIBROMOCHLOROMETHANE				<5.
1,1,2-TRICHLOROETHANE				<5.
BENZENE				<5.
TRANS-1,3-DICHLOROPROPENE				<5.
BROMOFORM				<5.
4-METHYL-2-PENTANONE				<10
2-HEXANONE				<10
1,1,2,2-TETRACHLOROETHANE				<5.
TETRACHLOROETHENE				<5.
TOLUENE				<5.
CHLOROBENZENE				<5.
ETHYLBENZENE				<5.
STYRENE				<5.
XYLENE(TOTAL)				<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 40

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<5.	<5.	<5.	* 10
ACETONE	<10	<10	<10	<10
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	<5.	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	<5.	<5.	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	<5.	<5.	<5.
STYRENE	<5.	<5.	<5.	<5.
XYLENE(TOTAL)	<5.	<5.	<5.	<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - MW-1

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<5.	* 5.4	<5.	<5.
ACETONE	<10	<10	<10	<10
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	<5.	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	<5.	<5.	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	<5.	<5.	<5.
STYRENE	<5.	<5.	<5.	<5.
XYLENE(TOTAL)	<5.	<5.	<5.	<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - MW-2

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<5.	<5.	<5.	* 7.1
ACETONE	<10	<10	<10	<10
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	<5.	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	<5.	<5.	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	<5.	<5.	<5.
STYRENE	<5.	<5.	<5.	<5.
XYLENE(TOTAL)	<5.	<5.	<5.	<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - MW-3

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<5.	<5.	<5.	7.1
ACETONE	<10	<10	<10	<10
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	<5.	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	<5.	<5.	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	<5.	<5.	<5.
STYRENE	<5.	<5.	<5.	<5.
XYLENE(TOTAL)	<5.	<5.	<5.	<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - MW-4

COMPOUND	CONCENTRATIONS (micrograms/L) WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624	ANNUAL	ANNUAL	ANNUAL	
CHLOROMETHANE				<10
BROMOMETHANE				<10
VINYL CHLORIDE				<10
CHLOROETHANE				<10
METHYLENE CHLORIDE				* 7.3
ACETONE				<10
CARBON DISULFIDE				<5.
1,1-DICHLOROETHENE				<5.
1,1-DICHLOROETHANE				<5.
1,2-DICHLOROETHENE(TOTAL)				<5.
CHLOROFORM				<5.
1,2-DICHLOROETHANE				<5.
2-BUTANONE				<10
1,1,1-TRICHLOROETHANE				<5.
CARBON TETRACHLORIDE				<5.
VINYL ACETATE				<10
BROMODICHLOROMETHANE				<5.
1,2-DICHLOROPROPANE				<5.
CIS-1,3-DICHLOROPROPENE				<5.
TRICHLOROETHENE				<5.
DIBROMOCHLOROMETHANE				<5.
1,1,2-TRICHLOROETHANE				<5.
BENZENE				<5.
TRANS-1,3-DICHLOROPROPENE				<5.
BROMOFORM				<5.
4-METHYL-2-PENTANONE				<10
2-HEXANONE				<10
1,1,2,2-TETRACHLOROETHANE				<5.
TETRACHLOROETHENE				<5.
TOLUENE				<5.
CHLOROBENZENE				<5.
ETHYLBENZENE				<5.
STYRENE				<5.
XYLENE(TOTAL)				<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - 30

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<50
BROMOMETHANE	<10	<10	<10	<50
VINYL CHLORIDE	<10	<10	<10	<50
CHLOROETHANE	<10	<10	<10	<50
METHYLENE CHLORIDE	<5.	<5.	* 6.5	<25
ACETONE	<10	<10	<10	<50
CARBON DISULFIDE	<5.	<5.	<5.	<25
1,1-DICHLOROETHENE	<5.	<5.	<5.	<25
1,1-DICHLOROETHANE	<5.	<5.	<5.	<25
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<25
CHLOROFORM	<5.	<5.	<5.	<25
1,2-DICHLOROETHANE	<5.	<5.	<5.	<25
2-BUTANONE	<10	<10	<10	<50
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<25
CARBON TETRACHLORIDE	<5.	<5.	<5.	<25
VINYL ACETATE	<10	<10	<10	<50
BROMODICHLOROMETHANE	<5.	<5.	<5.	<25
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<25
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<25
TRICHLOROETHENE	<5.	<5.	<5.	<25
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<25
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<25
BENZENE	18	14	11	<25
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<25
BROMOFORM	<5.	<5.	<5.	<25
4-METHYL-2-PENTANONE	<10	<10	<10	<50
2-HEXANONE	<10	<10	<10	<50
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<25
TETRACHLOROETHENE	<5.	<5.	<5.	<25
TOLUENE	<5.	<5.	<5.	46
CHLOROBENZENE	<5.	<5.	<5.	<25
ETHYLBENZENE	22	17	8.9	27
STYRENE	<5.	<5.	<5.	<25
XYLENE(TOTAL)	34	29	17	150
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
WELL I.D. - PW-8

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<5.	* 8.5	<5.	* 6.4
ACETONE	<10	<10	* 19	* 30
CARBON DISULFIDE	<5.	13	5	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	<5.	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	<5.	<5.	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	<5.	<5.	<5.
STYRENE	<5.	<5.	<5.	<5.
XYLENE(TOTAL)	<5.	<5.	<5.	<5.
METHOD 602	NA	NA	NA	NA
BENZENE				
TOLUENE				
ETHYLBENZENE				
CHLOROBENZENE				
XYLENE(TOTAL)				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
1,2-DICHLOROBENZENE				

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
SAMPLE I.D. - POTW INFLUENT

COMPOUND	CONCENTRATIONS (micrograms/L)			
	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<25	<5.	<5.	* 8.4
ACETONE	* 32	63	58	80
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	57
1,1,1-TRICHLOROETHANE	<5.	<5.	12	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	<5.	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	<5.	25	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	53	18	<5.
STYRENE	<5.	110	<5.	9.3
XYLENE(TOTAL)	29	220	170	98
METHOD 420.1				
PHENOLICS, TOTAL	99	72	23	40

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
SAMPLE I.D. - POTW EFFLUENT

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<5.	<5.	<5.	* 6.9
ACETONE	* 18	<10	<10	<10
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	<10	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	<5.	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	<5.	<5.	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	<5.	<5.	<5.
STYRENE	<5.	<5.	<5.	<5.
XYLENE(TOTAL)	<5.	<5.	<5.	<5.
METHOD 420.1				
PHENOLICS, TOTAL	<10	12	30	<10

* = LABORATORY CONTAMINATION

YEARLY SUMMARY OF QUARTERLY SAMPLING
SAMPLE I.D. - POTW STABILIZED SLUDGE

	CONCENTRATIONS (micrograms/L)			
COMPOUND	WINTER 90	SPRING 90	SUMMER 90	FALL 90
METHOD 624				
CHLOROMETHANE	<10	<10	<10	<10
BROMOMETHANE	<10	<10	<10	<10
VINYL CHLORIDE	<10	<10	<10	<10
CHLOROETHANE	<10	<10	<10	<10
METHYLENE CHLORIDE	<5.	<5.	<5.	* 7.5
ACETONE	<10	83	98	110
CARBON DISULFIDE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHENE	<5.	<5.	<5.	<5.
1,1-DICHLOROETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROETHENE(TOTAL)	<5.	<5.	<5.	<5.
CHLOROFORM	<5.	<5.	<5.	<5.
1,2-DICHLOROETHANE	<5.	<5.	<5.	<5.
2-BUTANONE	<10	15	<10	<10
1,1,1-TRICHLOROETHANE	<5.	<5.	<5.	<5.
CARBON TETRACHLORIDE	<5.	<5.	<5.	<5.
VINYL ACETATE	<10	<10	<10	<10
BROMODICHLOROMETHANE	<5.	<5.	<5.	<5.
1,2-DICHLOROPROPANE	<5.	<5.	<5.	<5.
CIS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
TRICHLOROETHENE	<5.	<5.	<5.	<5.
DIBROMOCHLOROMETHANE	<5.	<5.	<5.	<5.
1,1,2-TRICHLOROETHANE	<5.	<5.	<5.	<5.
BENZENE	<5.	16	<5.	<5.
TRANS-1,3-DICHLOROPROPENE	<5.	<5.	<5.	<5.
BROMOFORM	<5.	<5.	<5.	<5.
4-METHYL-2-PENTANONE	<10	<10	<10	<10
2-HEXANONE	<10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	<5.	<5.	<5.	<5.
TETRACHLOROETHENE	<5.	<5.	<5.	<5.
TOLUENE	<5.	42	2	<5.
CHLOROBENZENE	<5.	<5.	<5.	<5.
ETHYLBENZENE	<5.	<5.	<5.	<5.
STYRENE	<5.	<5.	<5.	<5.
XYLENE(TOTAL)	<5.	16	<5.	<5.
METHOD 420.1				
PHENOLICS, TOTAL	91	48	120	48

* = LABORATORY CONTAMINATION

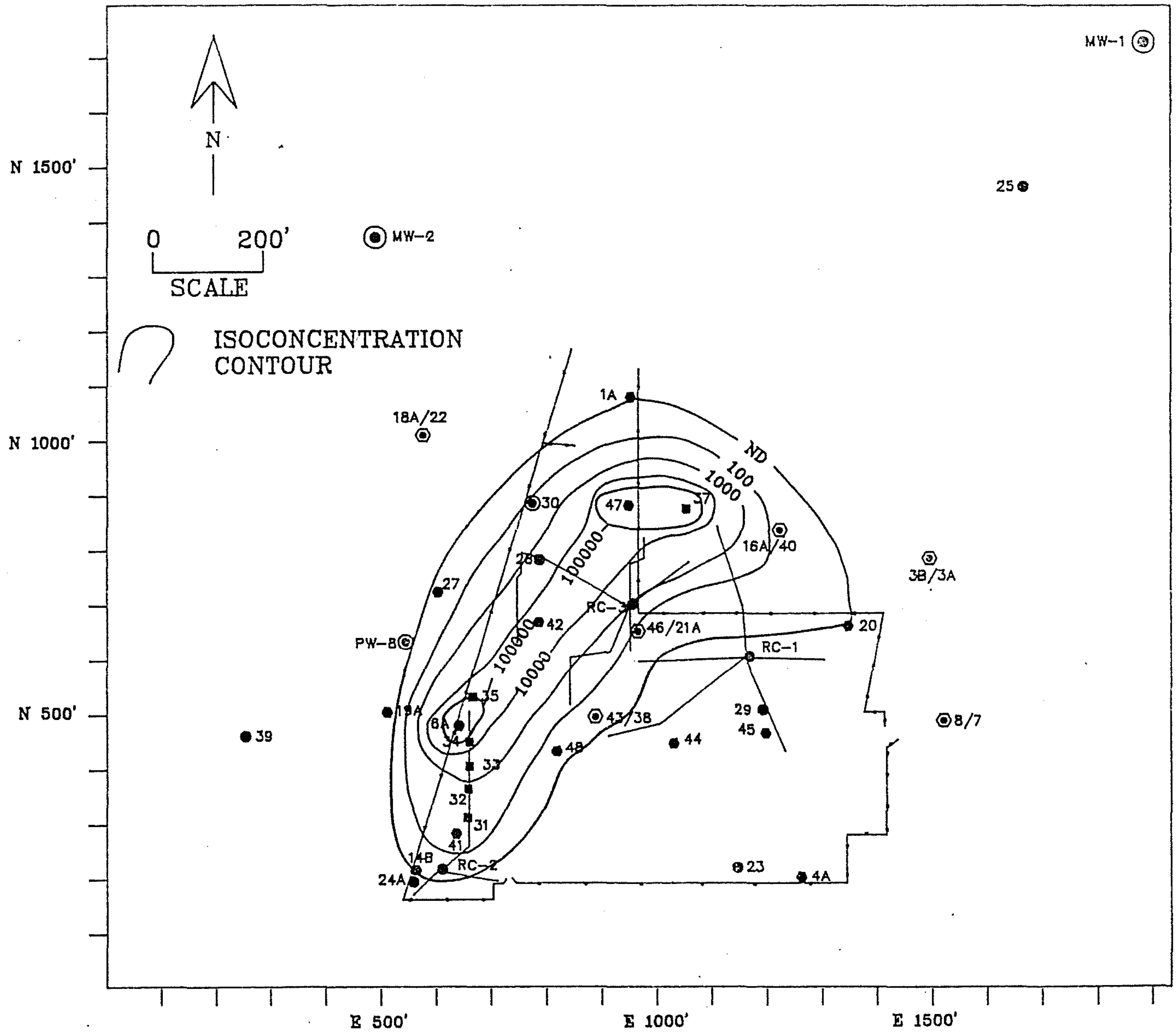
APPENDIX C

Total VOC Isoconcentration Maps for the Glacial and Dolomite Aquifers

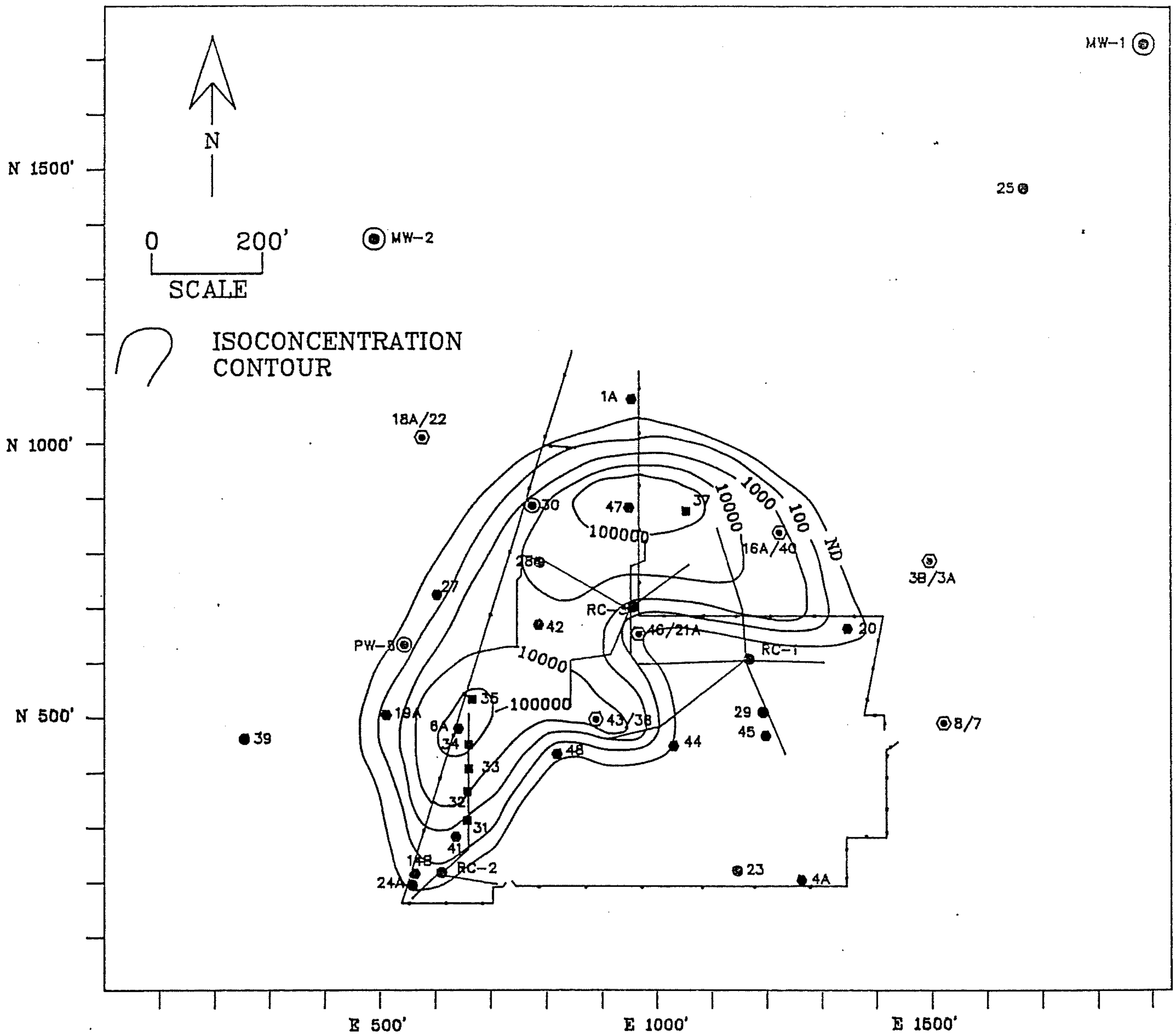
Glacial Aquifer - Winter, 1990
Glacial Aquifer - Spring, 1990
Glacial Aquifer - Summer, 1990
Glacial Aquifer - Fall, 1990

Dolomite Aquifer - Winter, 1990
Dolomite Aquifer - Spring, 1990
Dolomite Aquifer - Summer, 1990
Dolomite Aquifer - Fall, 1990

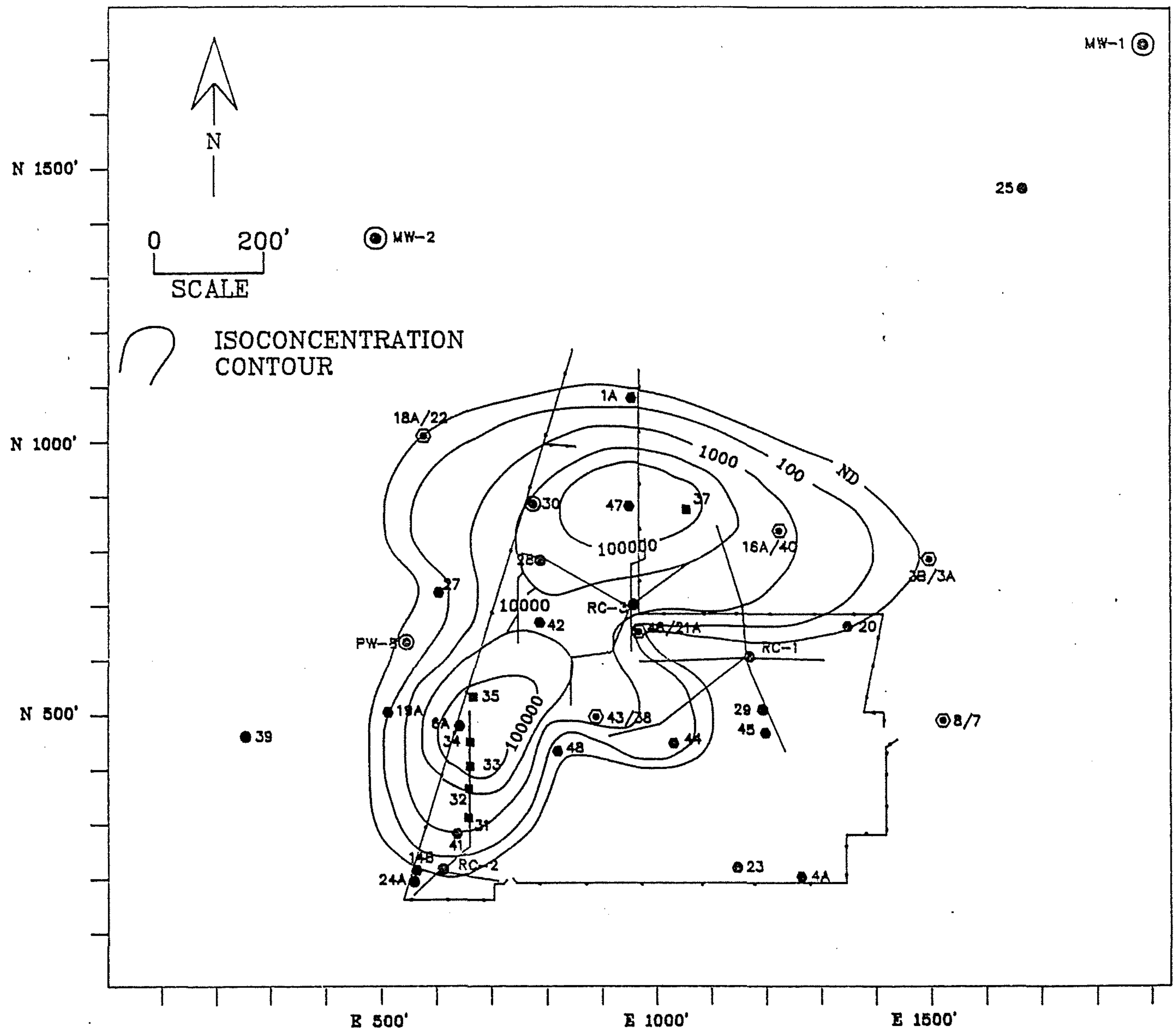
GLACIAL AQUIFER – WINTER 1990
TOTAL VOC CONCENTRATIONS (MICROGRAMS/LITER)



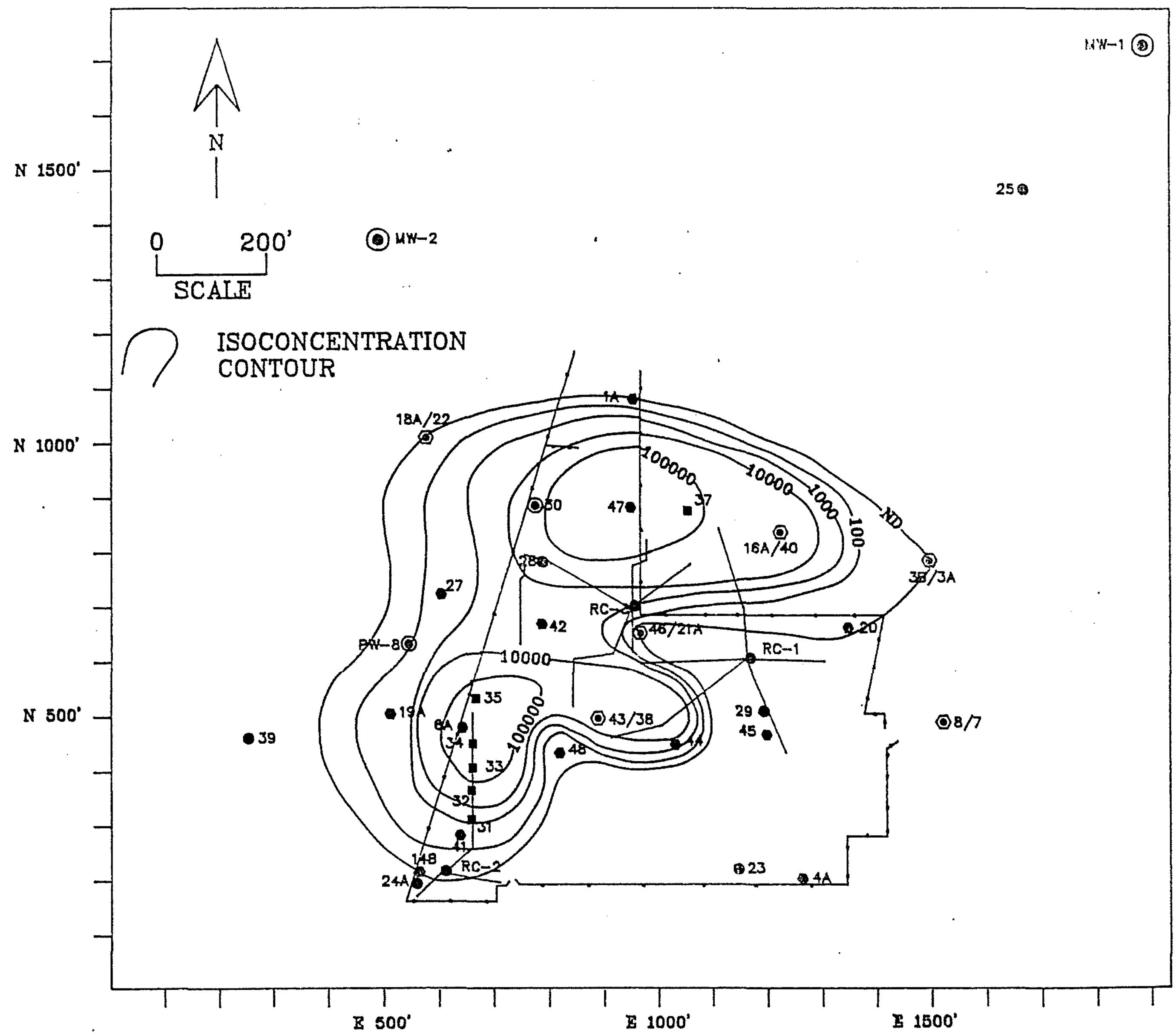
GLACIAL AQUIFER - SPRING 1990
TOTAL VOC CONCENTRATIONS (MICROGRAMS/LITER)



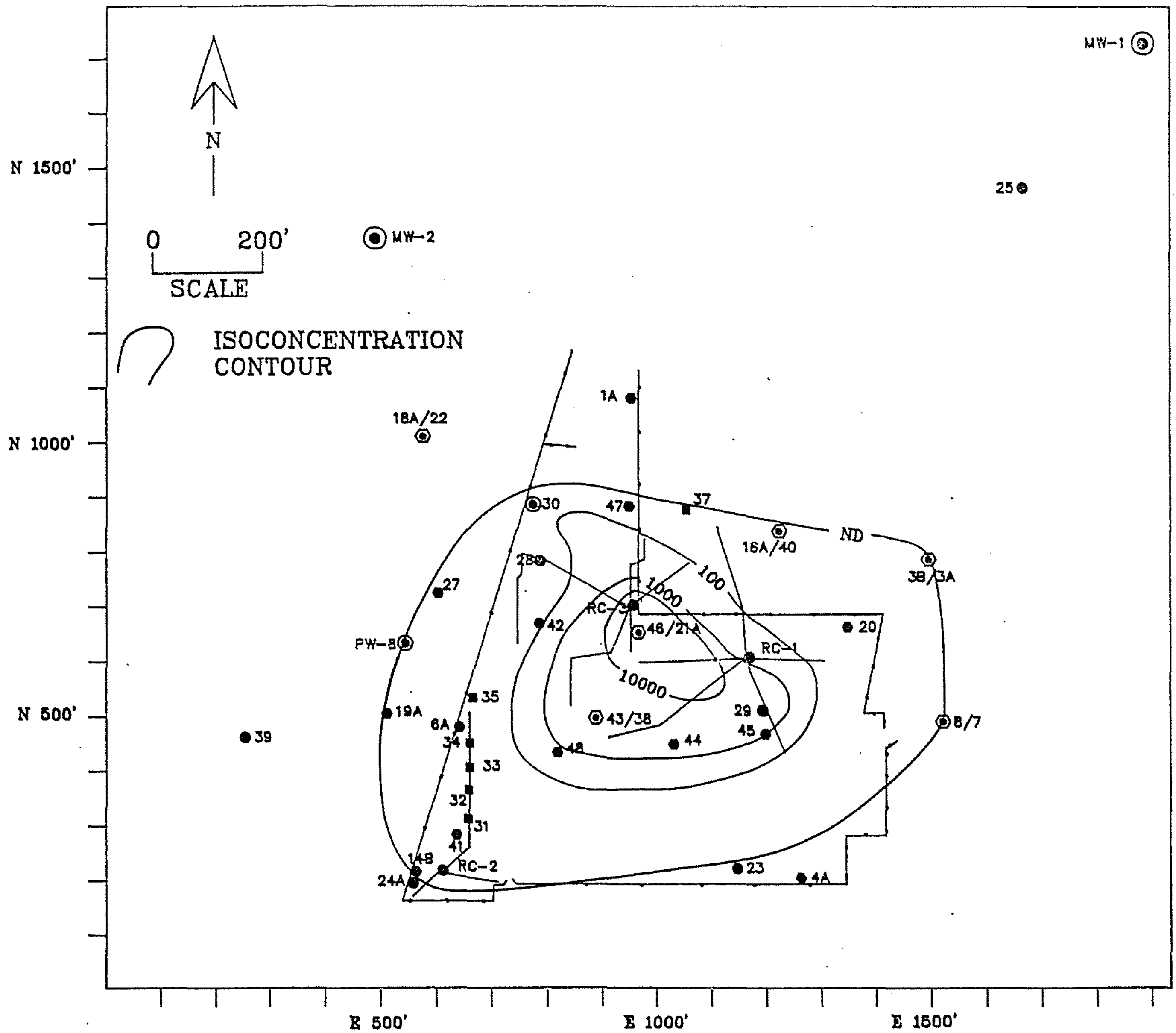
GLACIAL AQUIFER - SUMMER 1990
TOTAL VOC CONCENTRATIONS (MICROGRAMS/LITER)



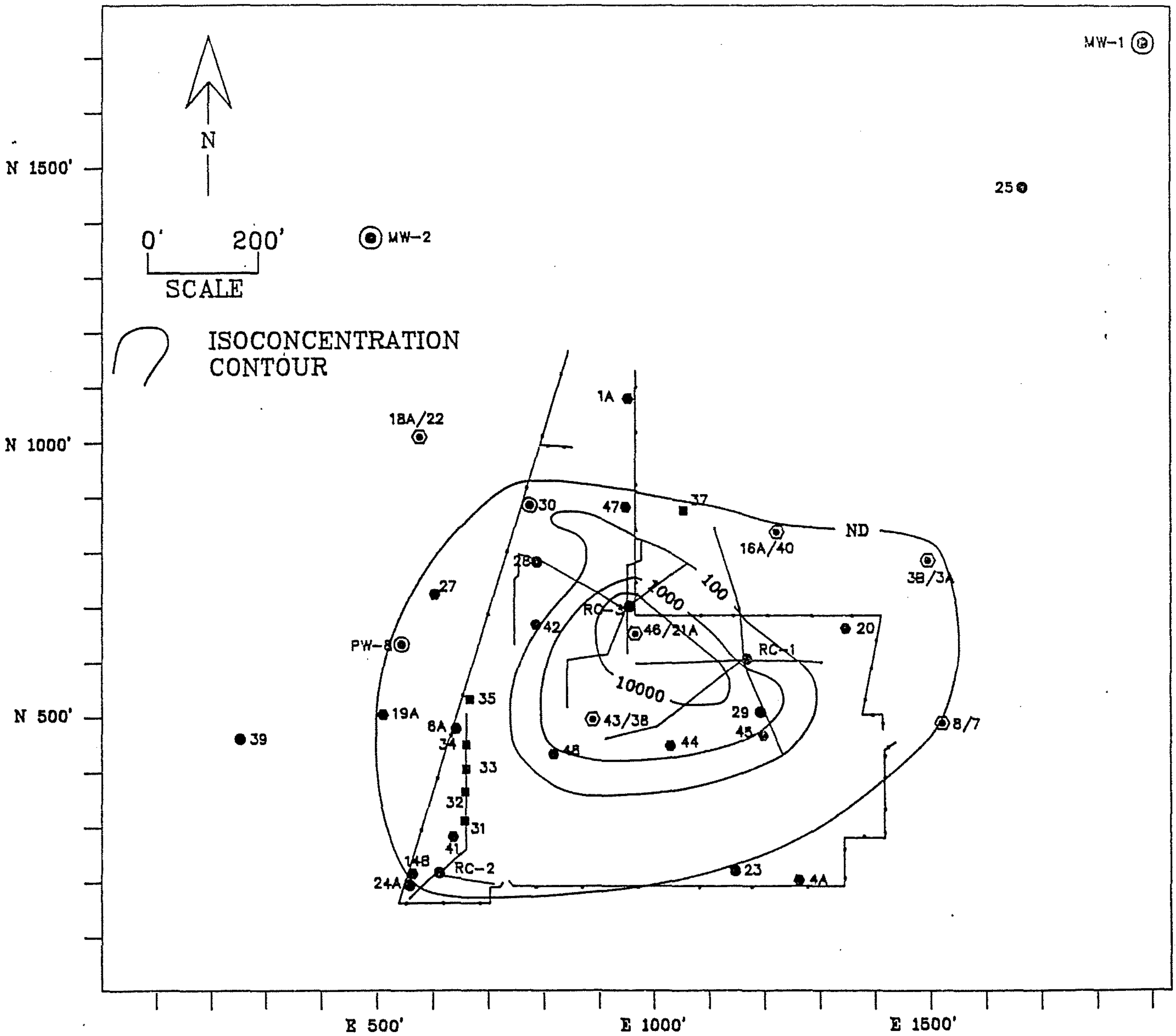
GLACIAL AQUIFER -- FALL 1990
TOTAL VOC CONCENTRATIONS (MICROGRAMS/LITER)



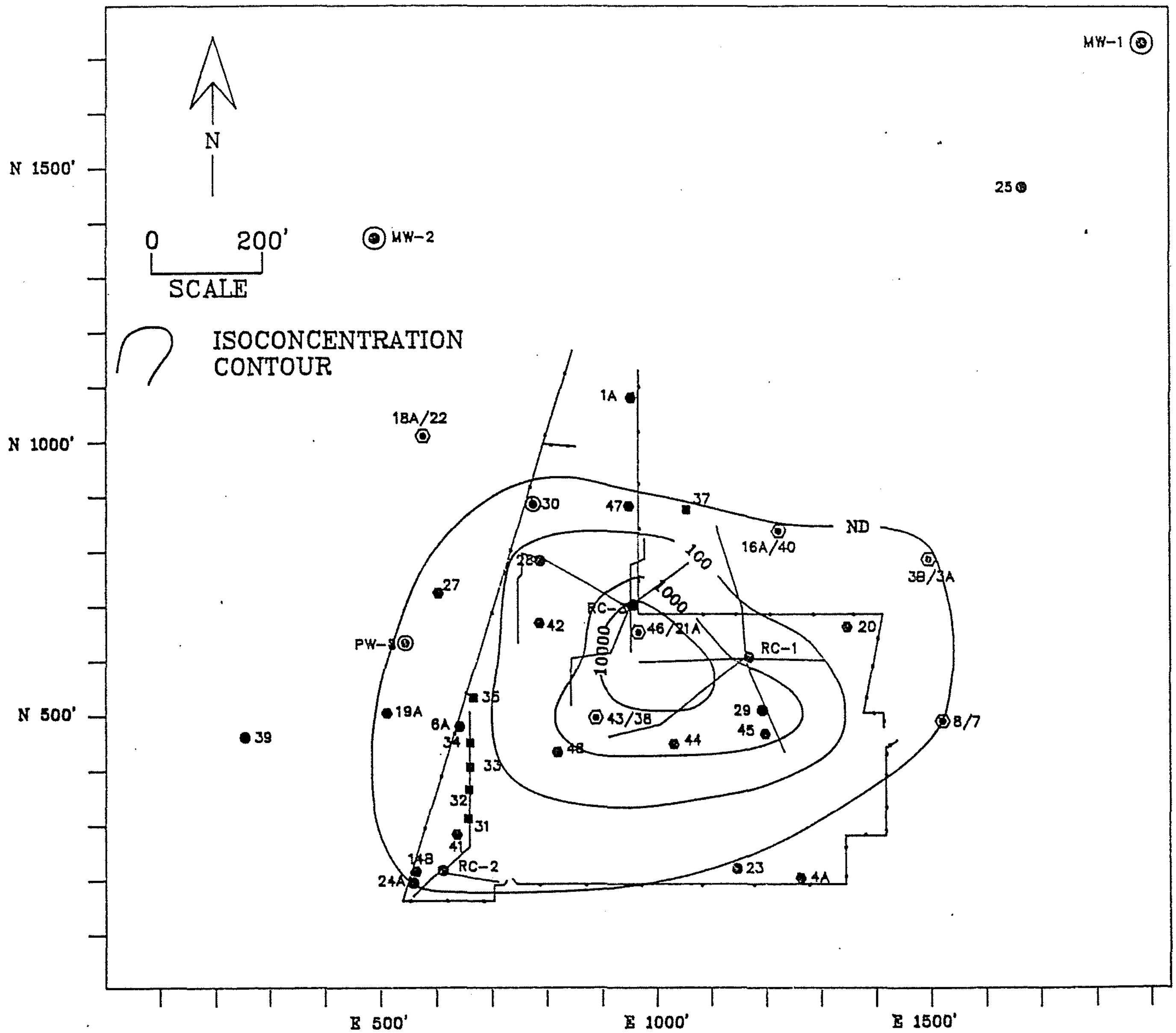
DOLOMITE AQUIFER – WINTER 1990
TOTAL VOC CONCENTRATIONS (MICROGRAMS/LITER)



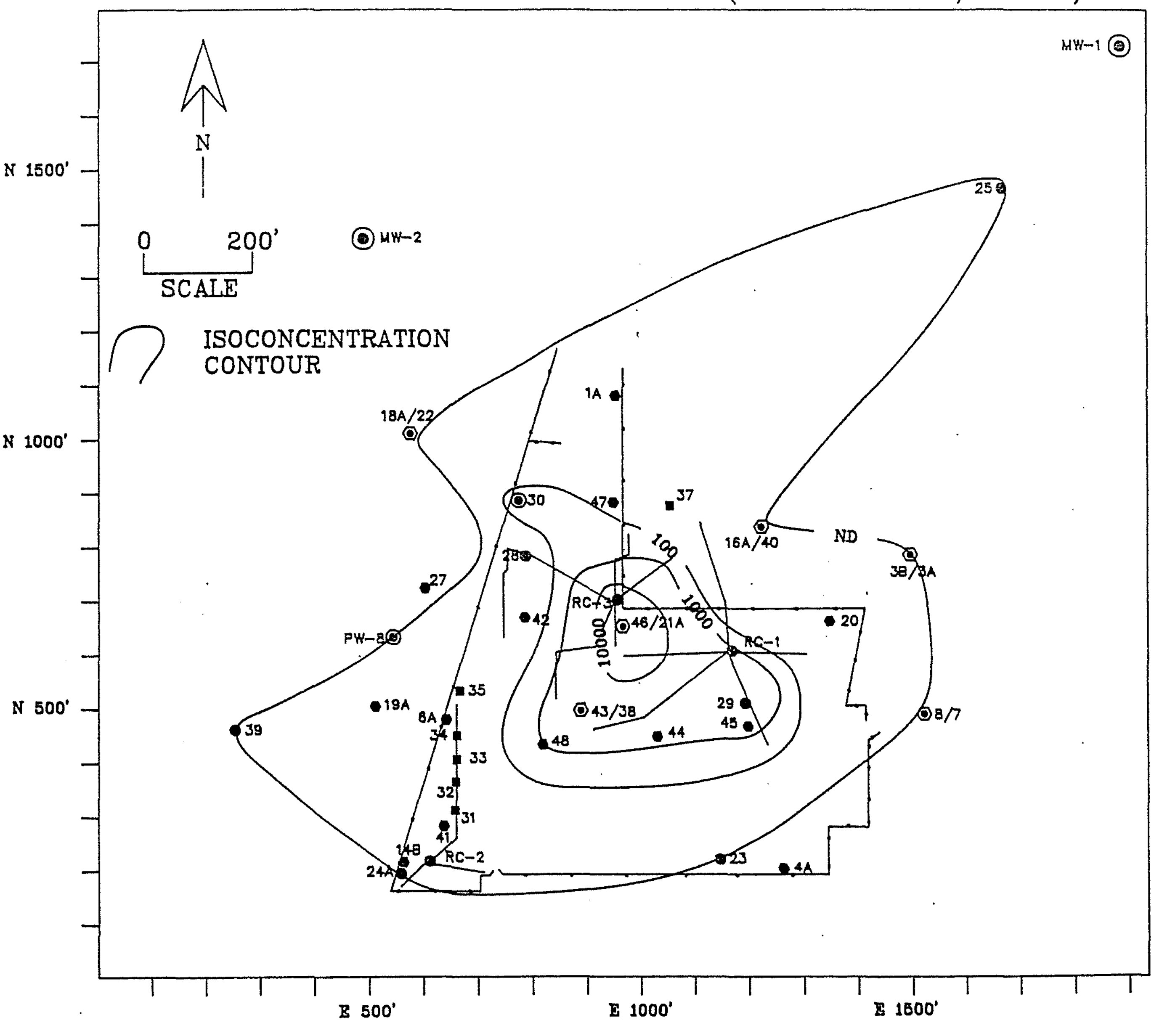
DOLOMITE AQUIFER - SPRING 1990
TOTAL VOC CONCENTRATIONS (MICROGRAMS/LITER)



DOLOMITE AQUIFER - SUMMER 1990
TOTAL VOC CONCENTRATIONS (MICROGRAMS/LITER)



DOLOMITE AQUIFER – FALL 1990
TOTAL VOC CONCENTRATIONS (MICROGRAMS/LITER)



APPENDIX D

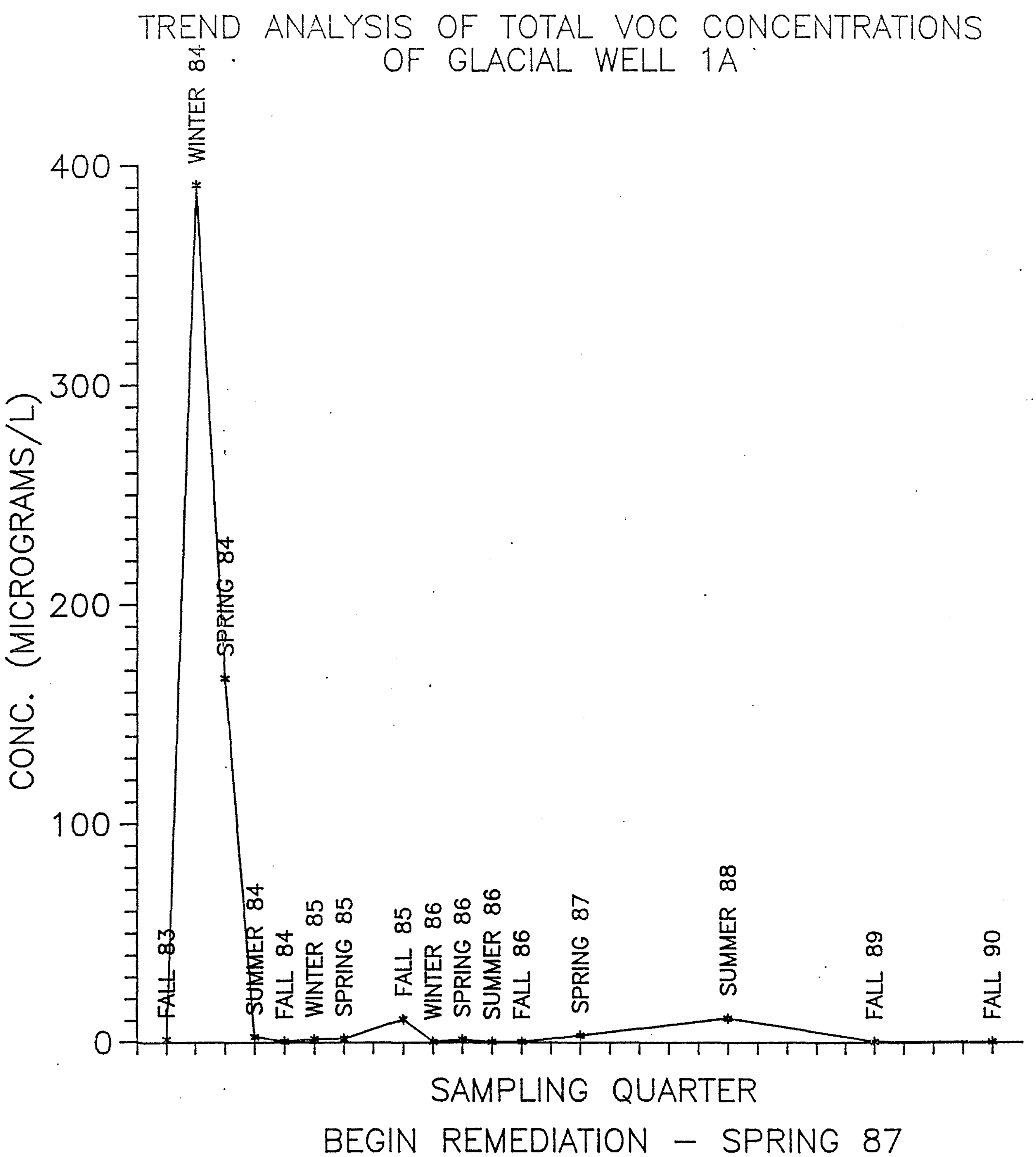
Total VOC Concentrations Trend Analysis Graphs for the Glacial and Dolomite Wells

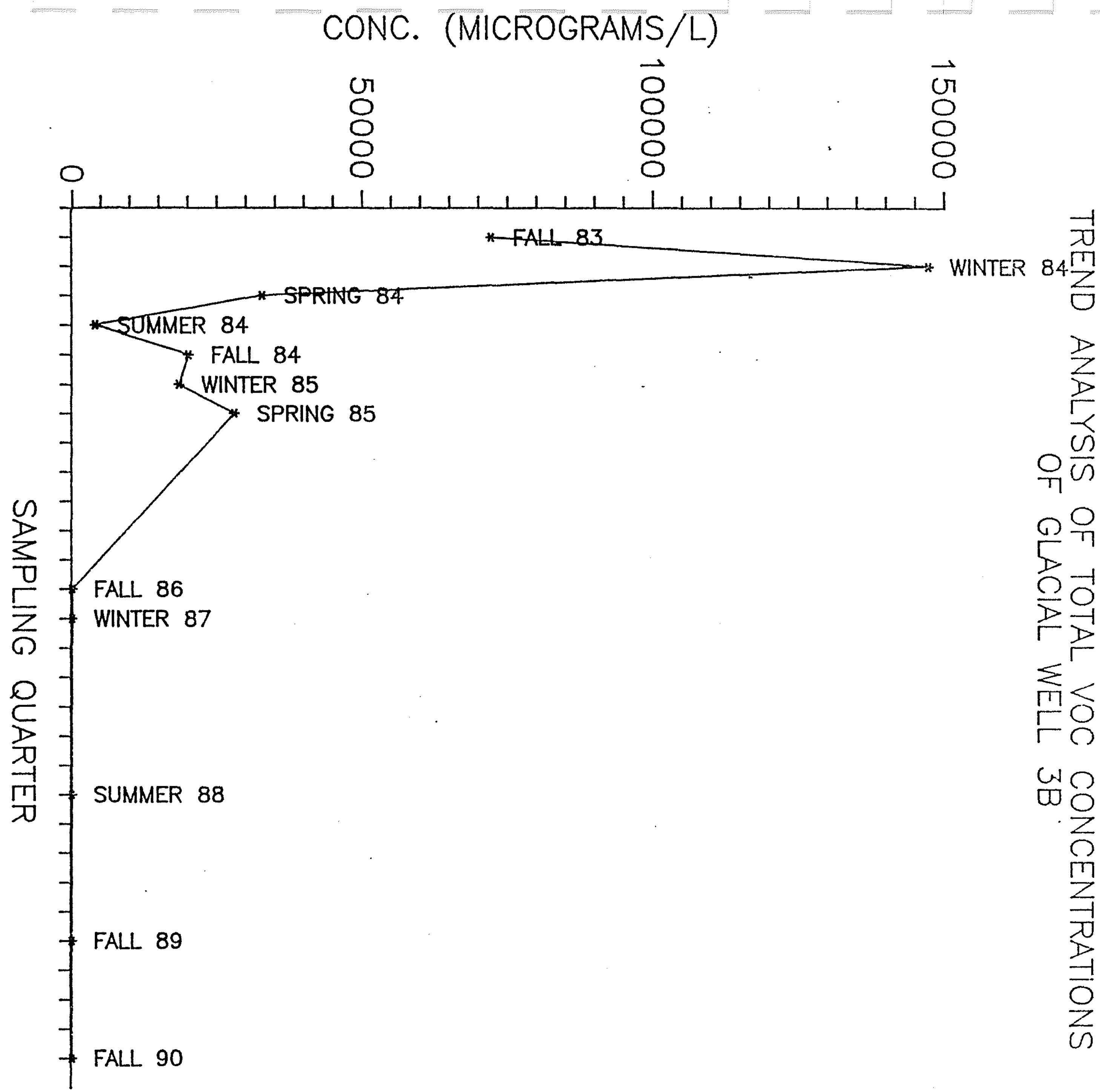
Glacial Wells: 1A, 3B, 4A, 6A, 8, 14B, 16A, 18A, 19A, 20, 27, 37, 41, 42, 43, 44, 45, 46, 47, and 48

Ranney-type Collectors: RC-1, RC-2, and RC-3

Shallow Dolomite Wells: 3A, 7, 21A, 22, 23, 24A, 25, 28, 29, 38, 39, and 40

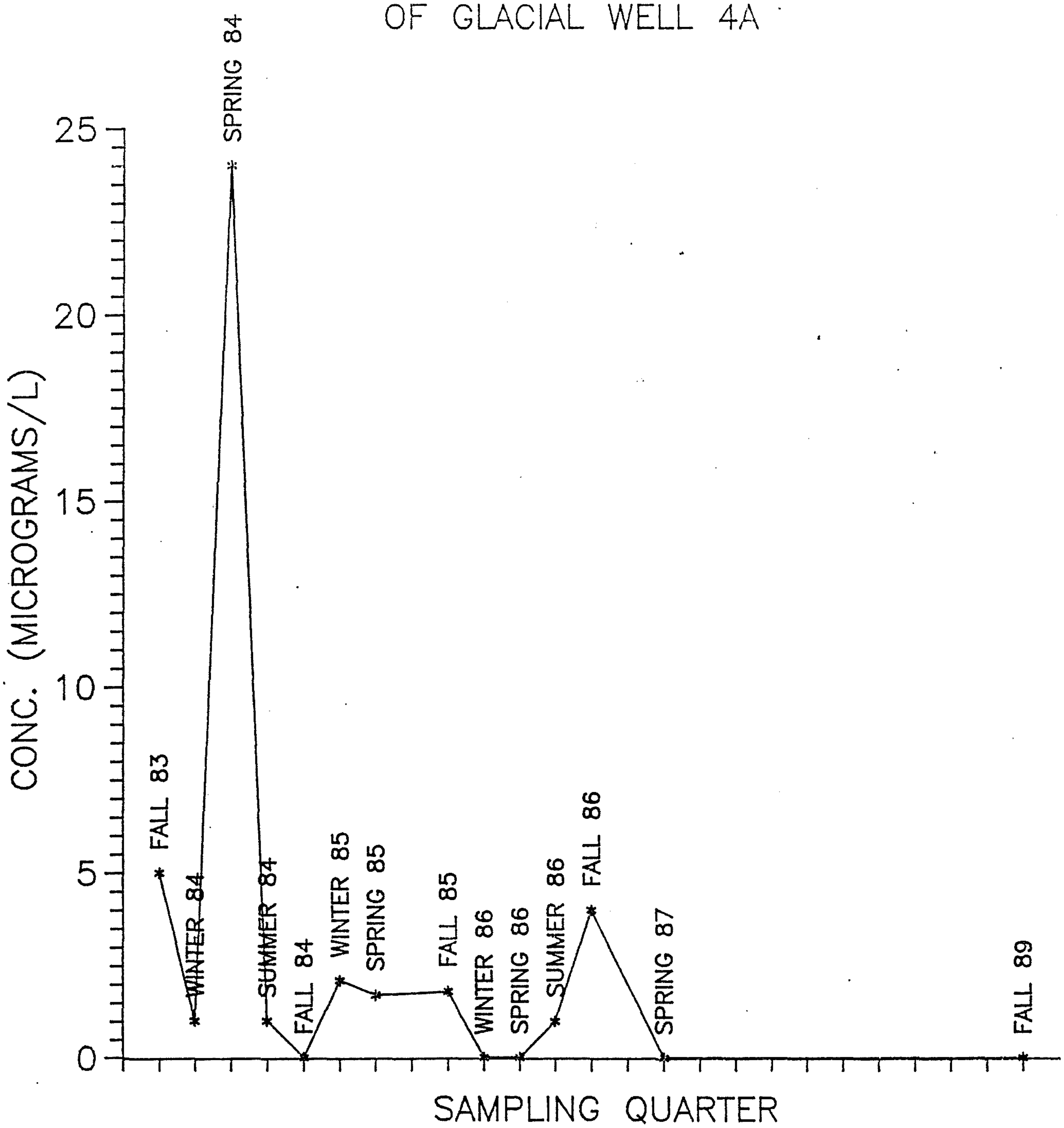
Deep Dolomite Wells: MW-1, MW-2, MW-3, MW-4, 30, and PW-8


TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 1A
CONC. (MICROGRAMS/L)
0
100
200
300
400
FALL 83
WINTER 84
SPRING 84
SUMMER 84
FALL 84
WINTER 85
SPRING 85
FALL 85
WINTER 86
SPRING 86
SUMMER 86
FALL 86
SPRING 87
SUMMER 88
FALL 89
FALL 90
SAMPLING QUARTER
BEGIN REMEDIATION – SPRING 87

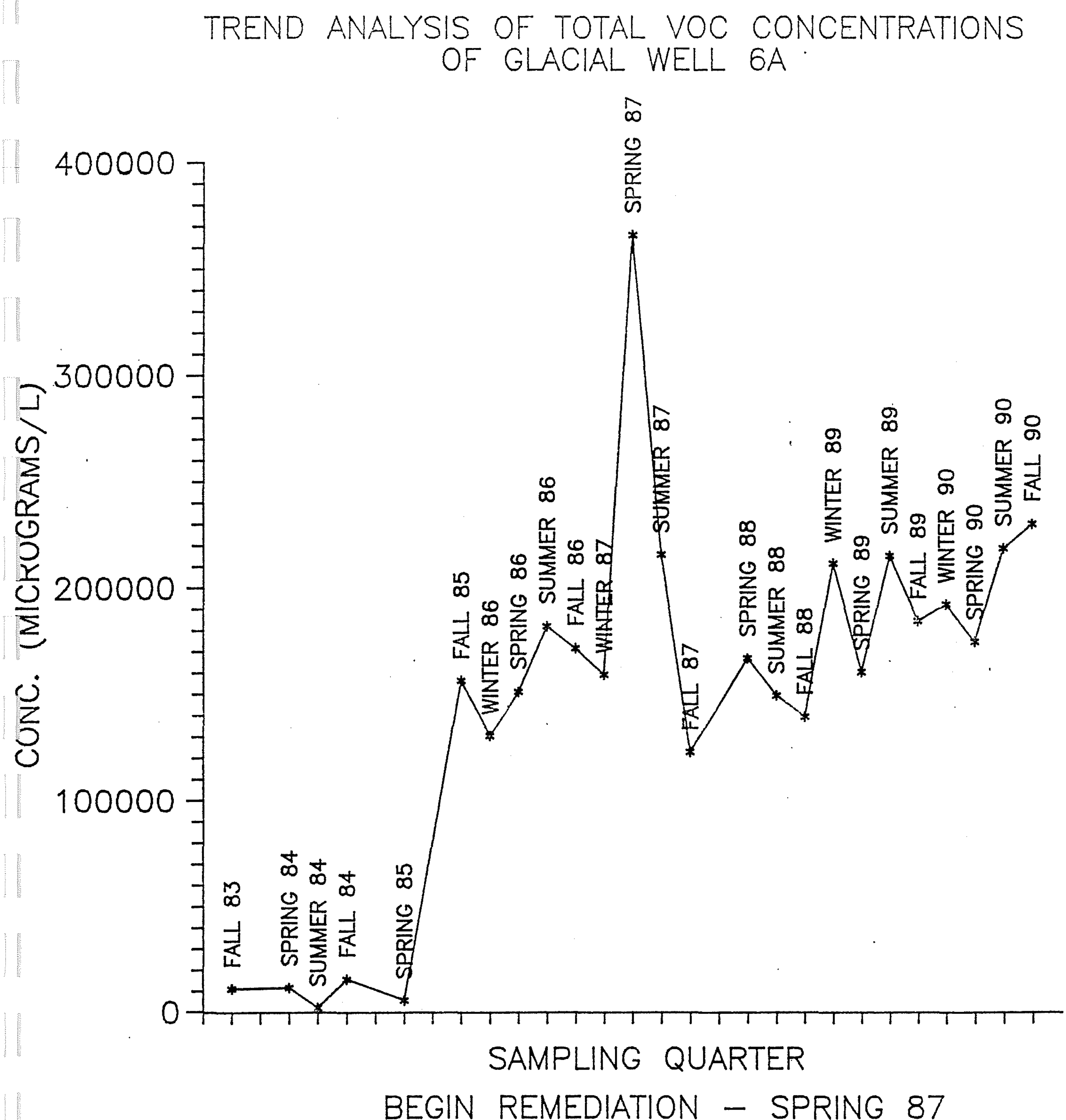


TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 3B
CONC. (MICROGRAMS/L)
0
50000
100000
150000
SAMPLING QUARTER
FALL 83
WINTER 84
SPRING 84
SUMMER 84
FALL 84
WINTER 85
SPRING 85
FALL 86
WINTER 87
SUMMER 88
FALL 89
FALL 90

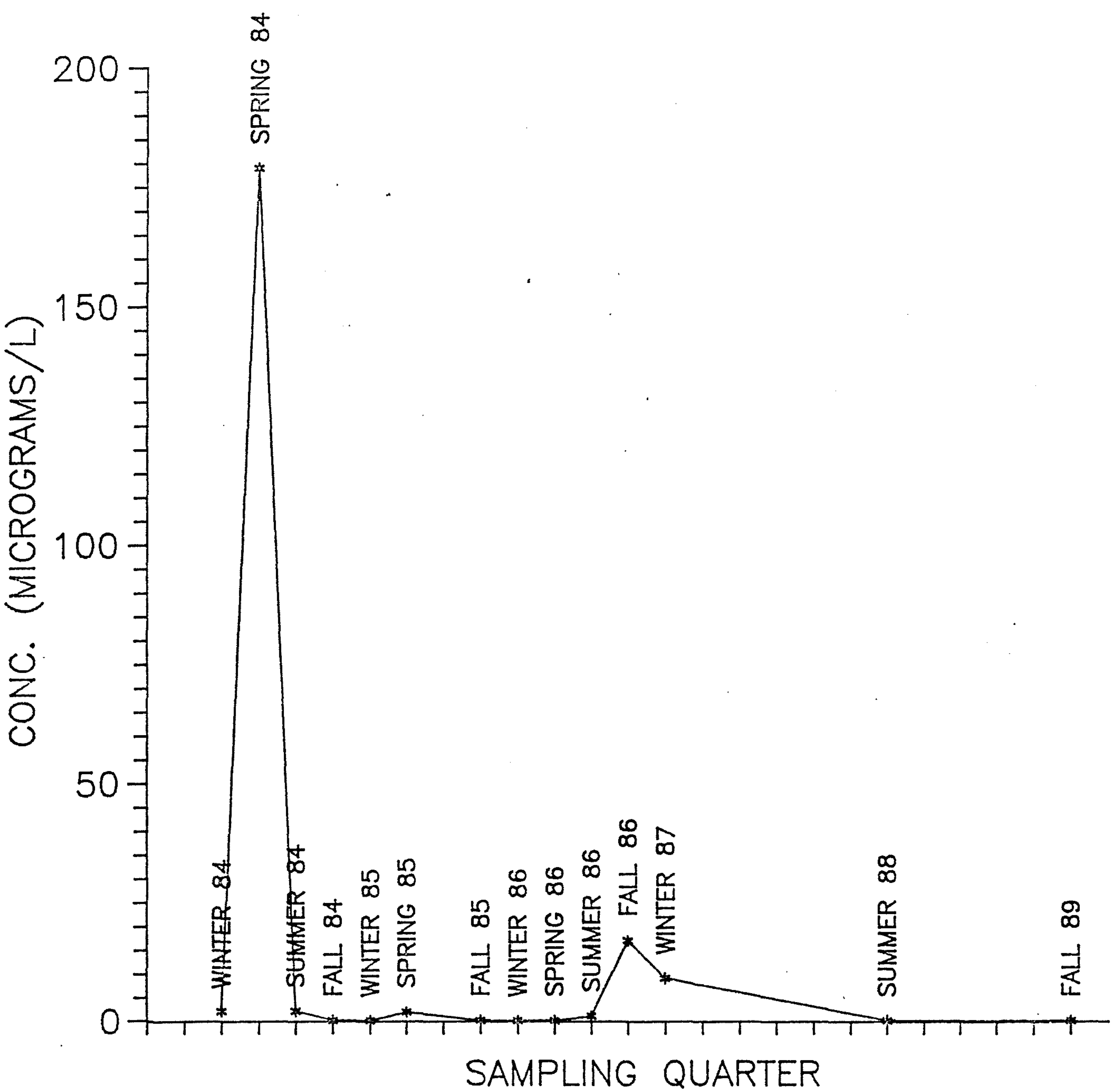
TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 4A



BEGIN REMEDIATION – SPRING 87

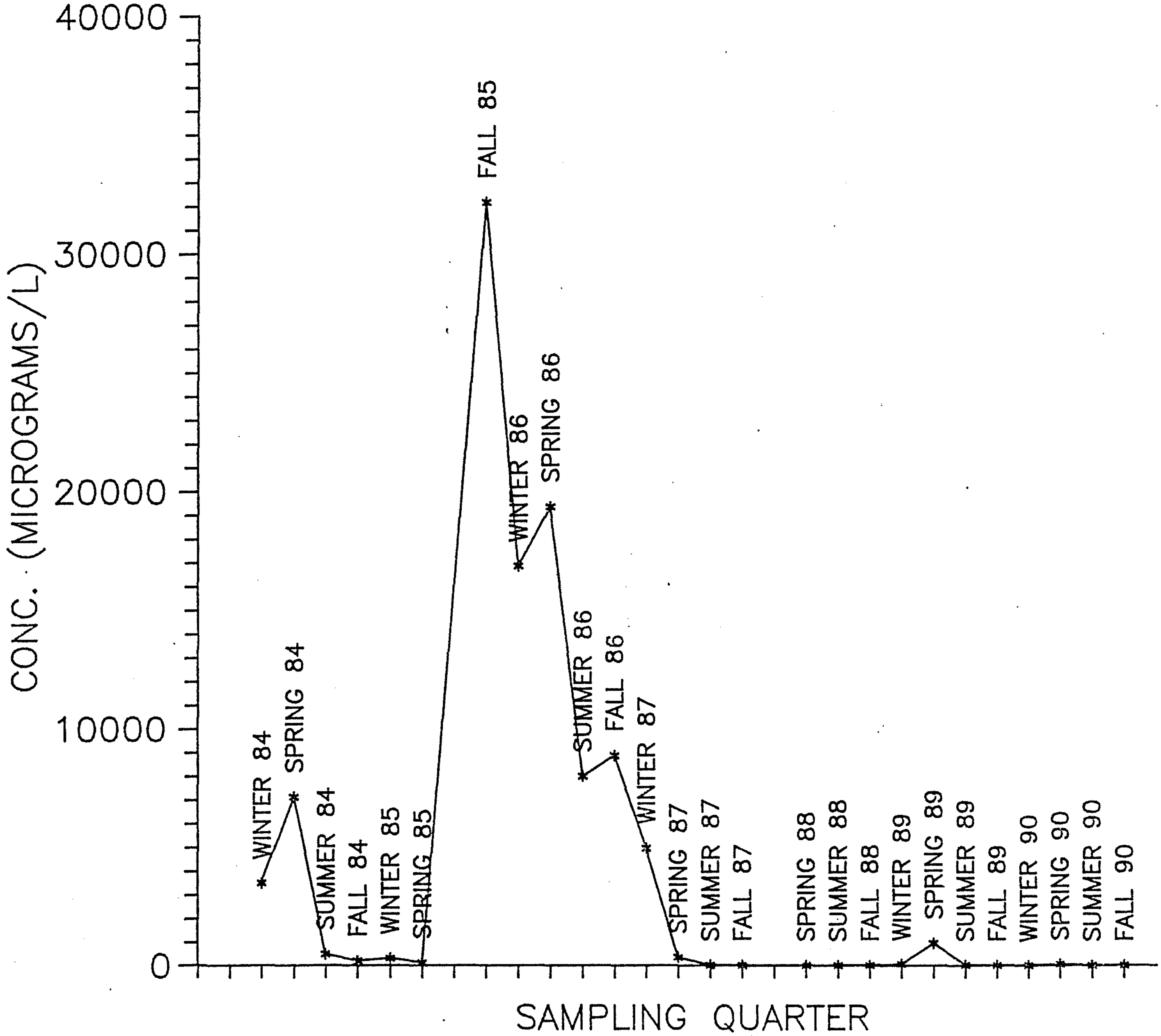

TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 6A
CONC. (MICROGRAMS/L)
0
100000
200000
300000
400000
FALL 83
SPRING 84
SUMMER 84
FALL 84
SPRING 85
FALL 85
WINTER 86
SPRING 86
SUMMER 86
FALL 86
WINTER 87
SPRING 87
SUMMER 87
FALL 87
SPRING 88
SUMMER 88
FALL 88
WINTER 89
SPRING 89
SUMMER 89
FALL 89
WINTER 90
SPRING 90
SUMMER 90
FALL 90
SAMPLING QUARTER
BEGIN REMEDIATION – SPRING 87

TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 8



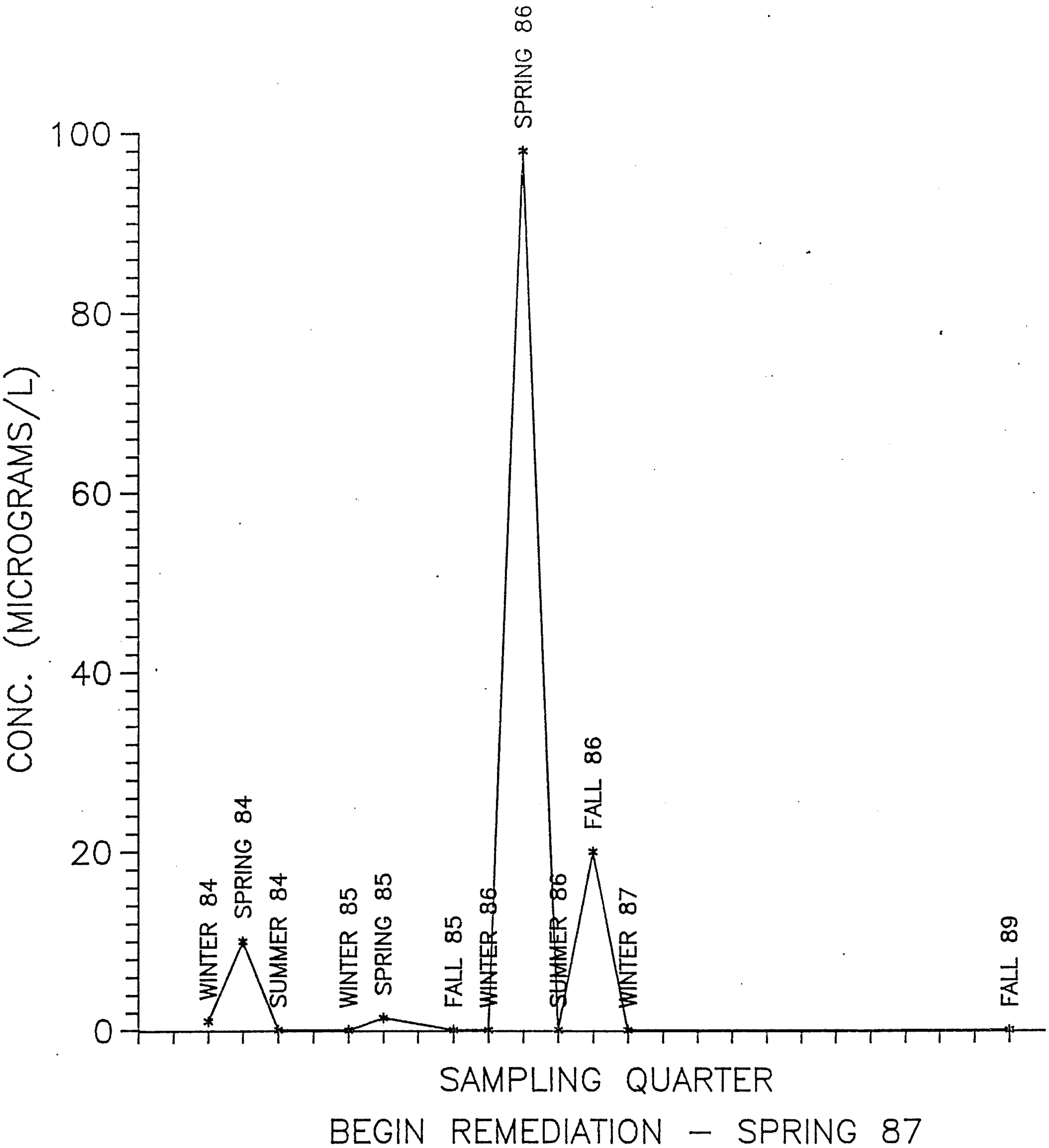
BEGIN REMEDIATION – SPRING 87

TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 14B

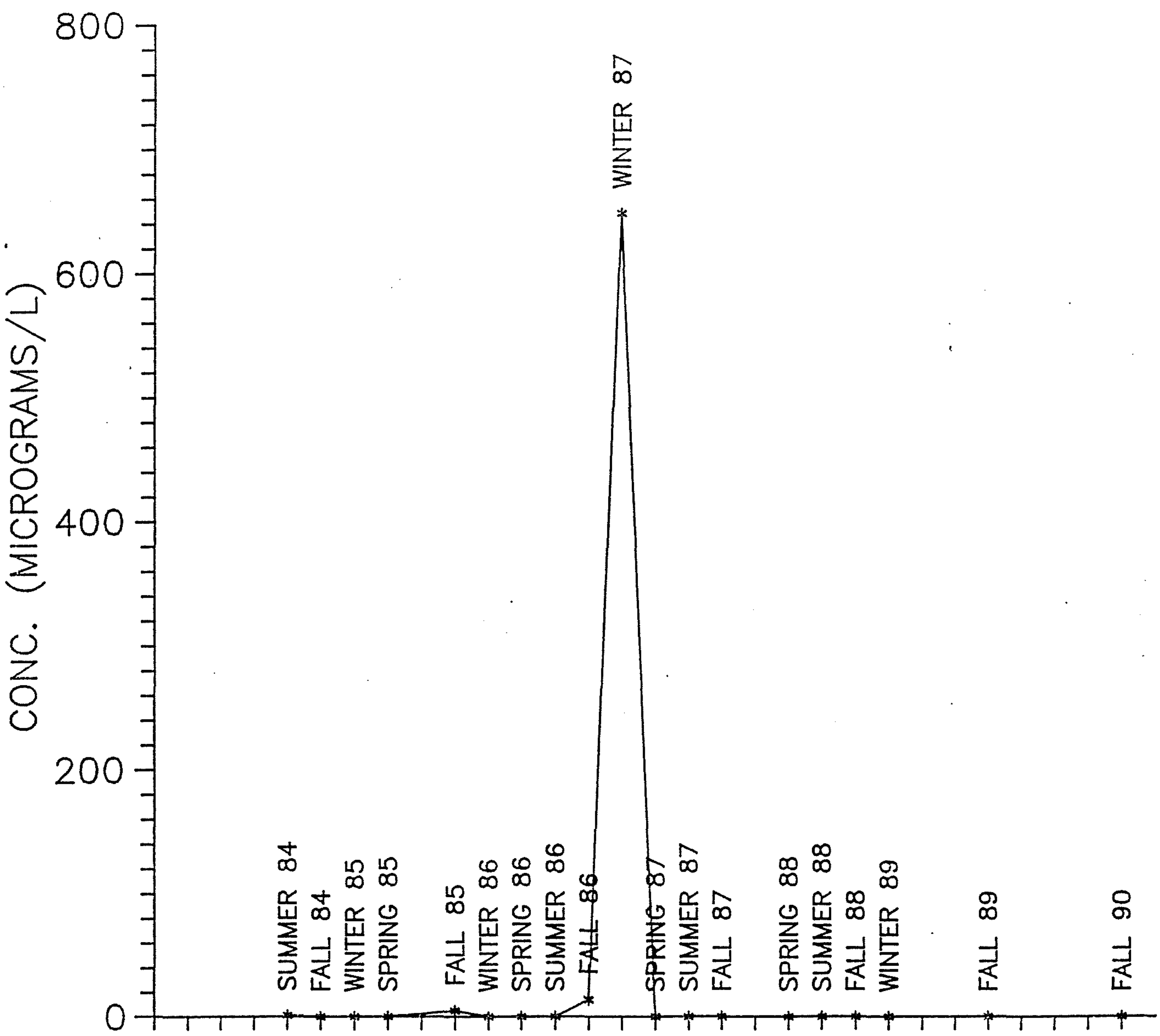


BEGIN REMEDIATION — SPRING 87

TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 16A

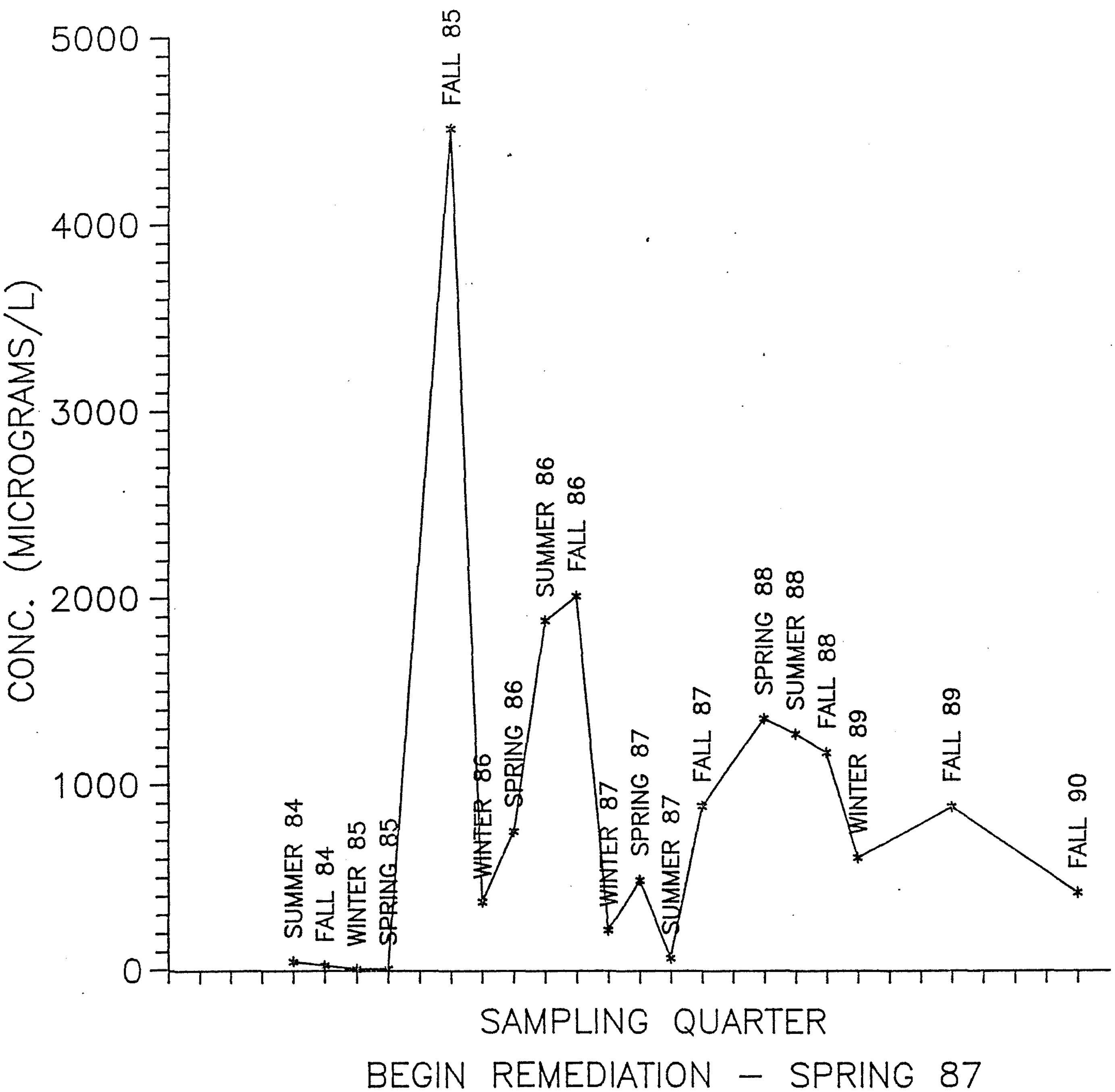


TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 18A

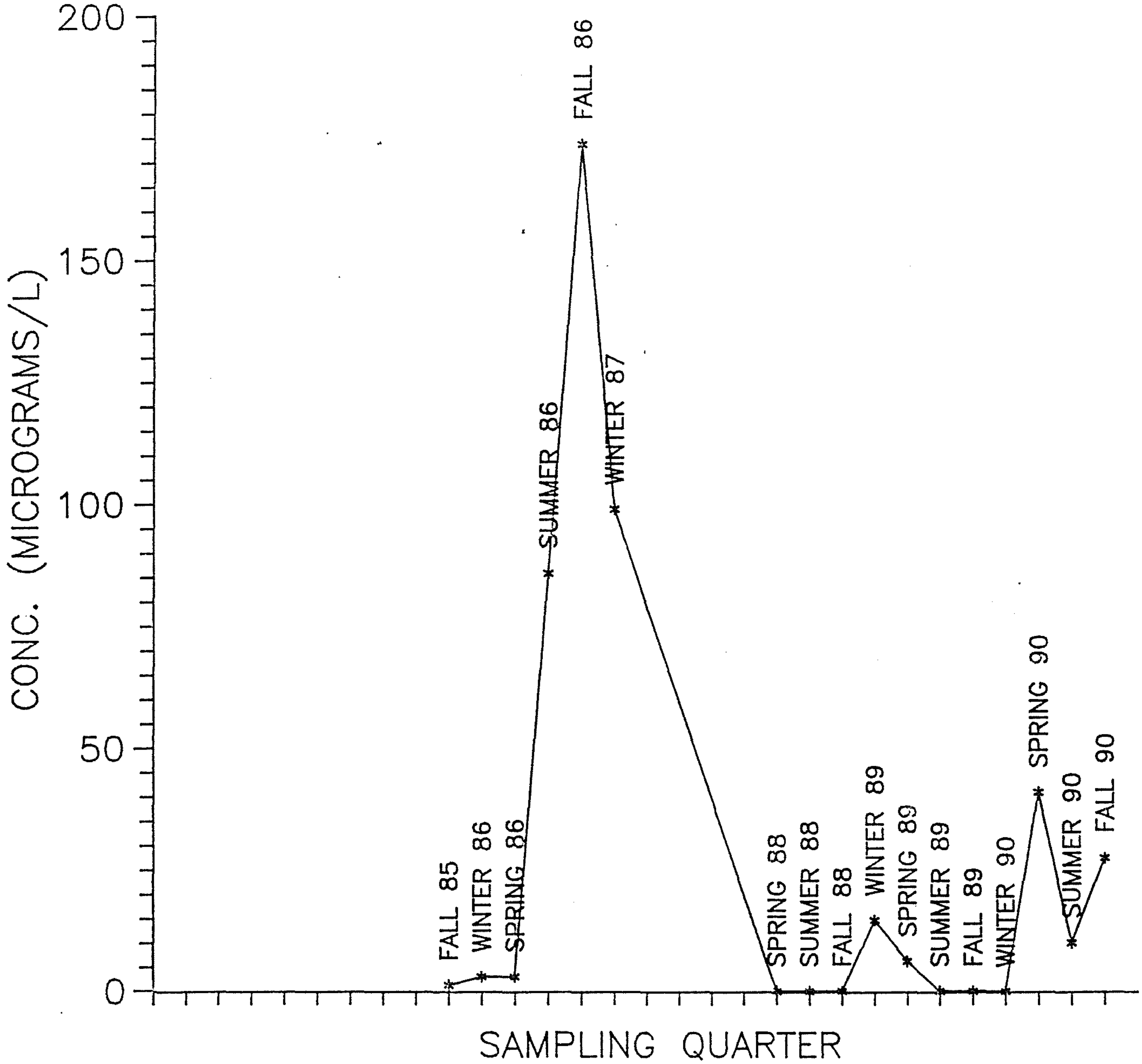


SAMPLING QUARTER
BEGIN REMEDIATION – SPRING 87

TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 19A

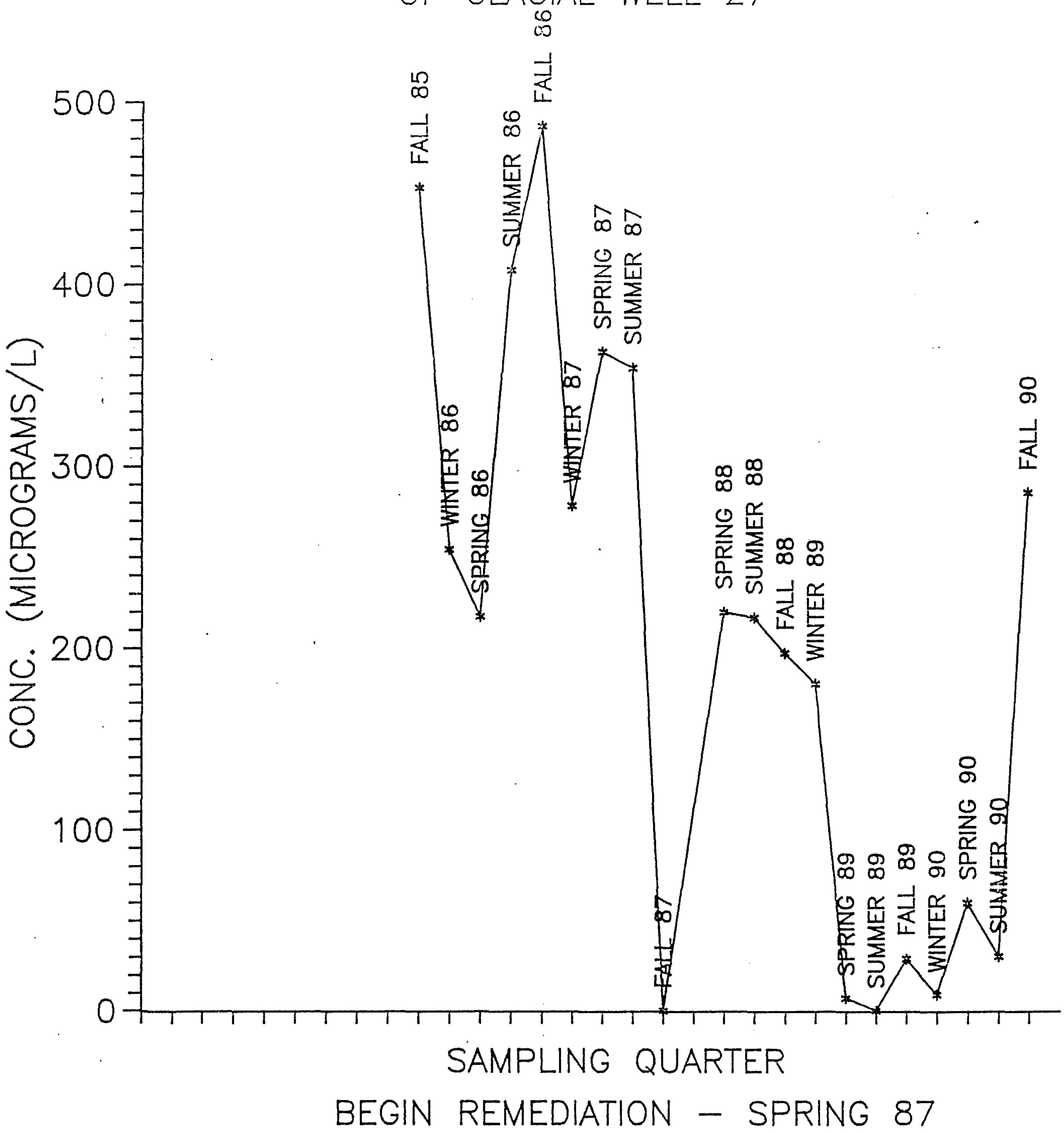


TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 20

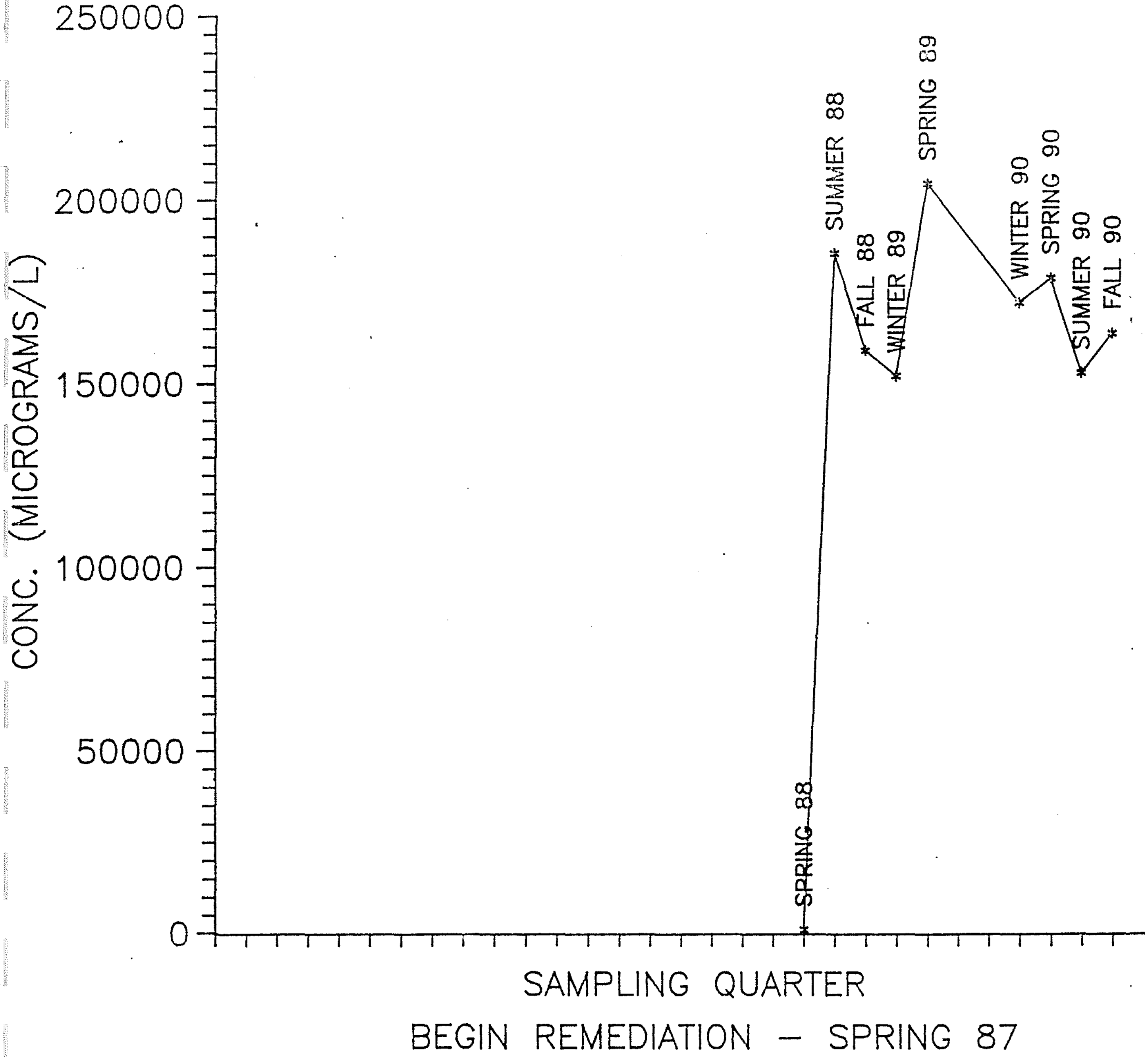


BEGIN REMEDIATION – SPRING 87

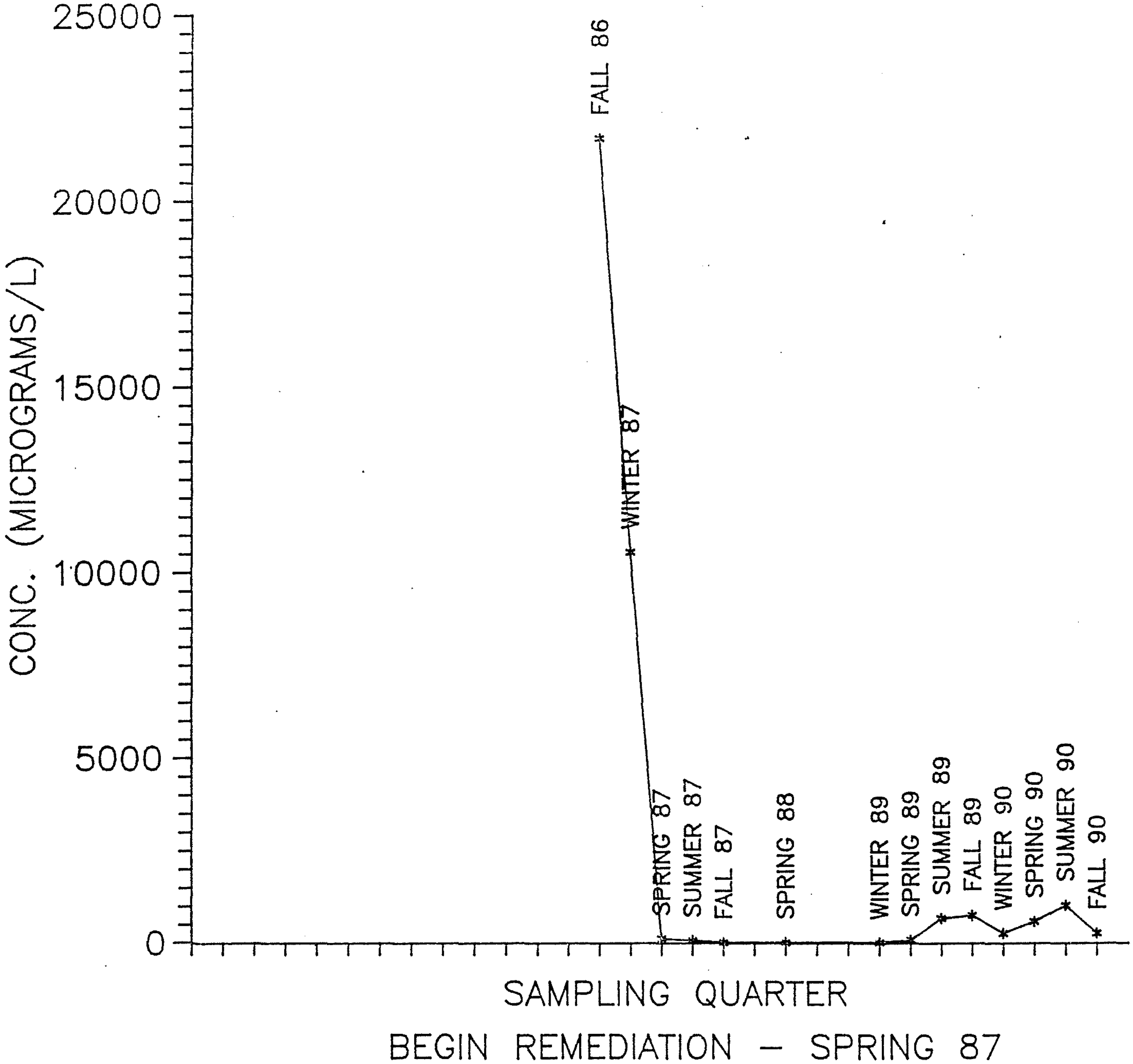
TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 27



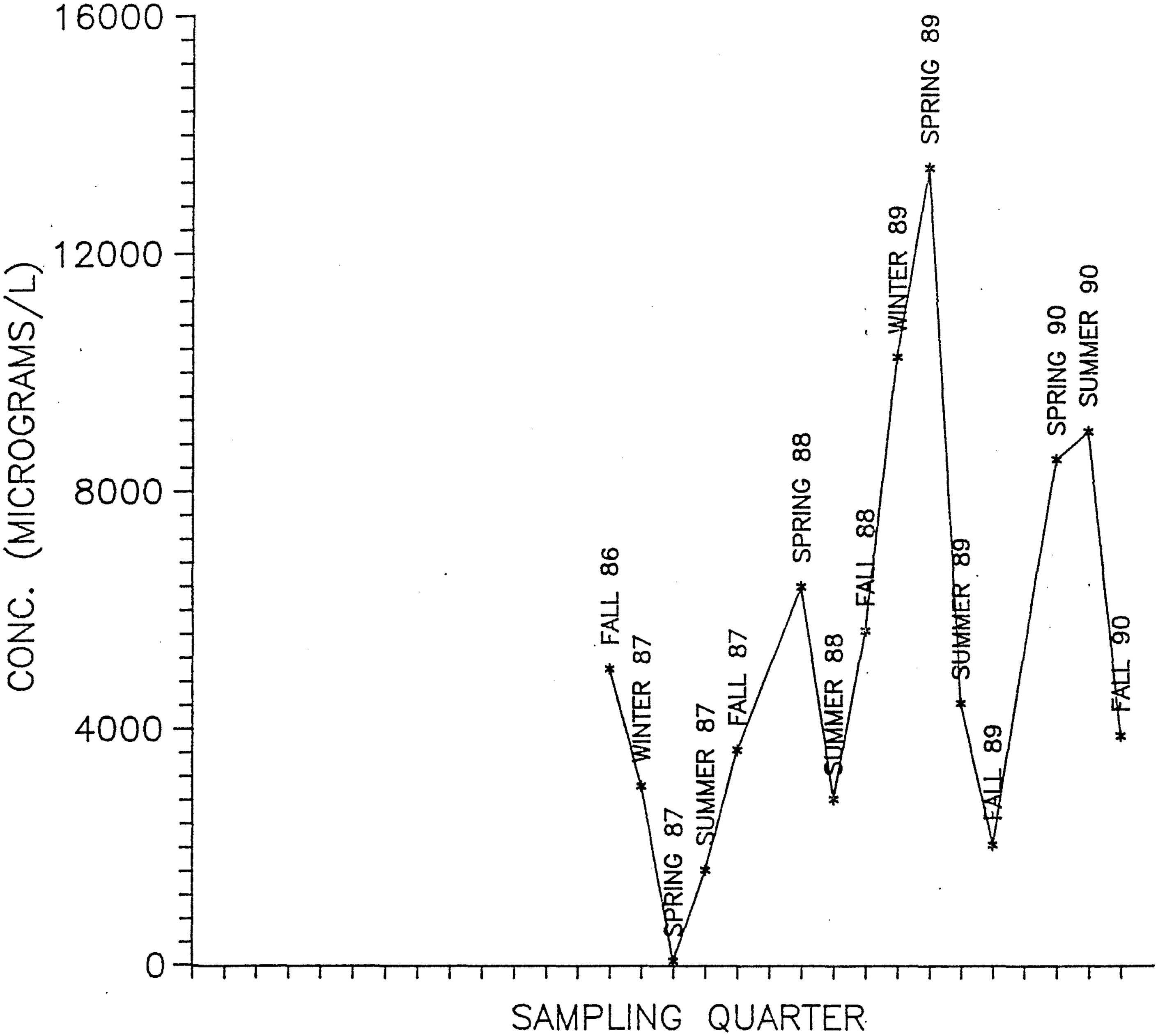
TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS OF GLACIAL WELL 37



TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 41

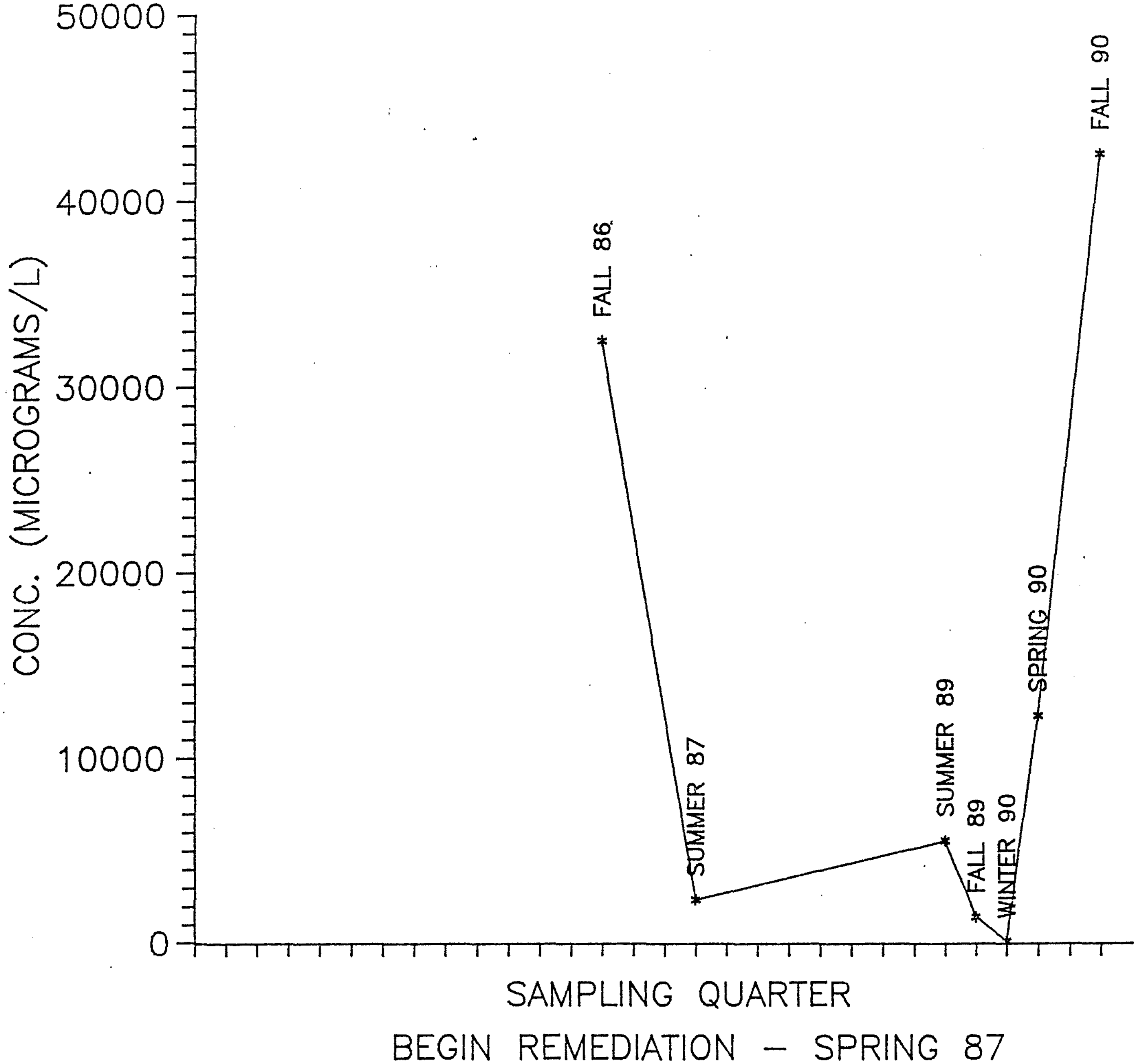


TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS OF GLACIAL WELL 42

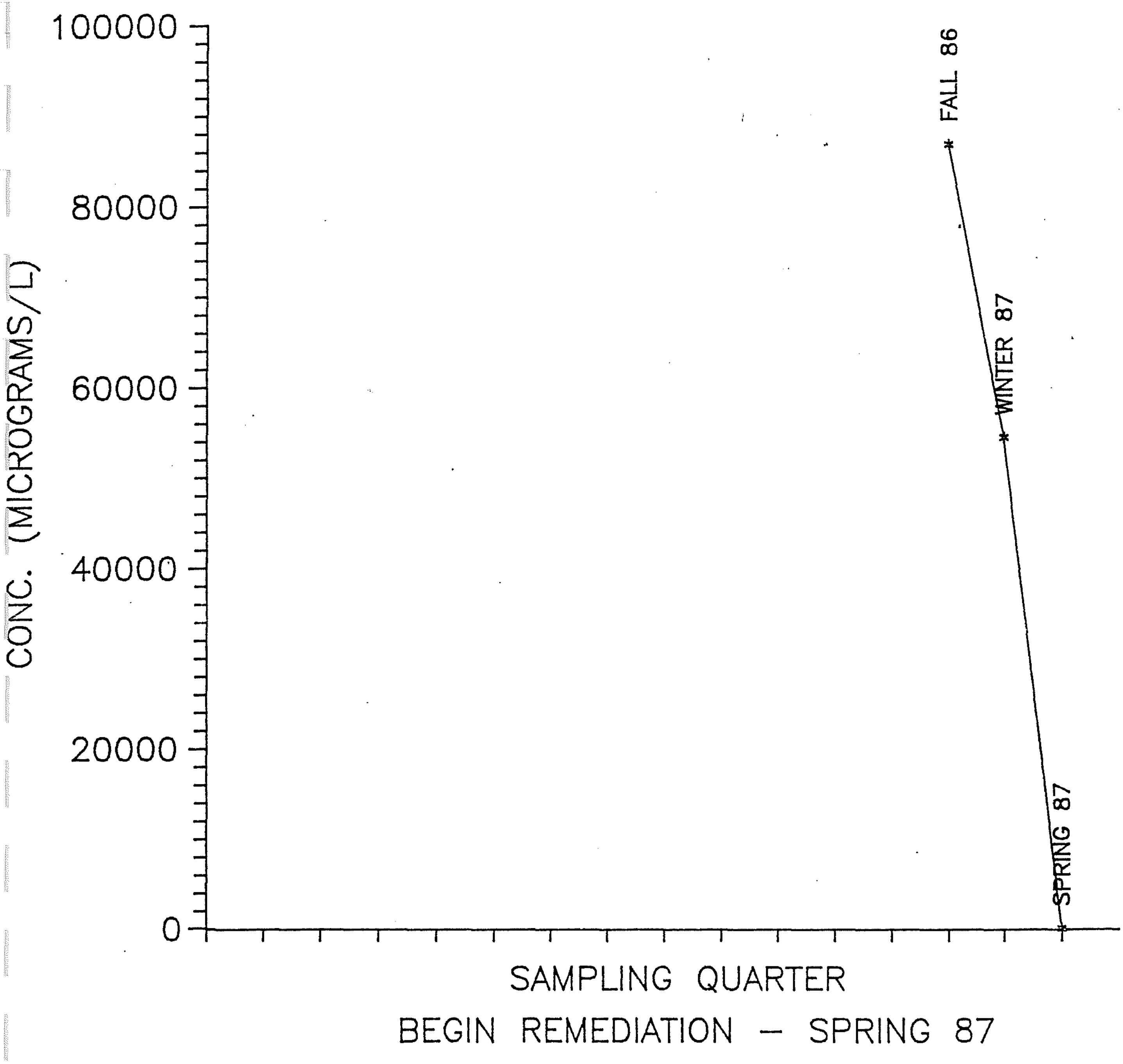


BEGIN REMEDIATION – SPRING 87

TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 43

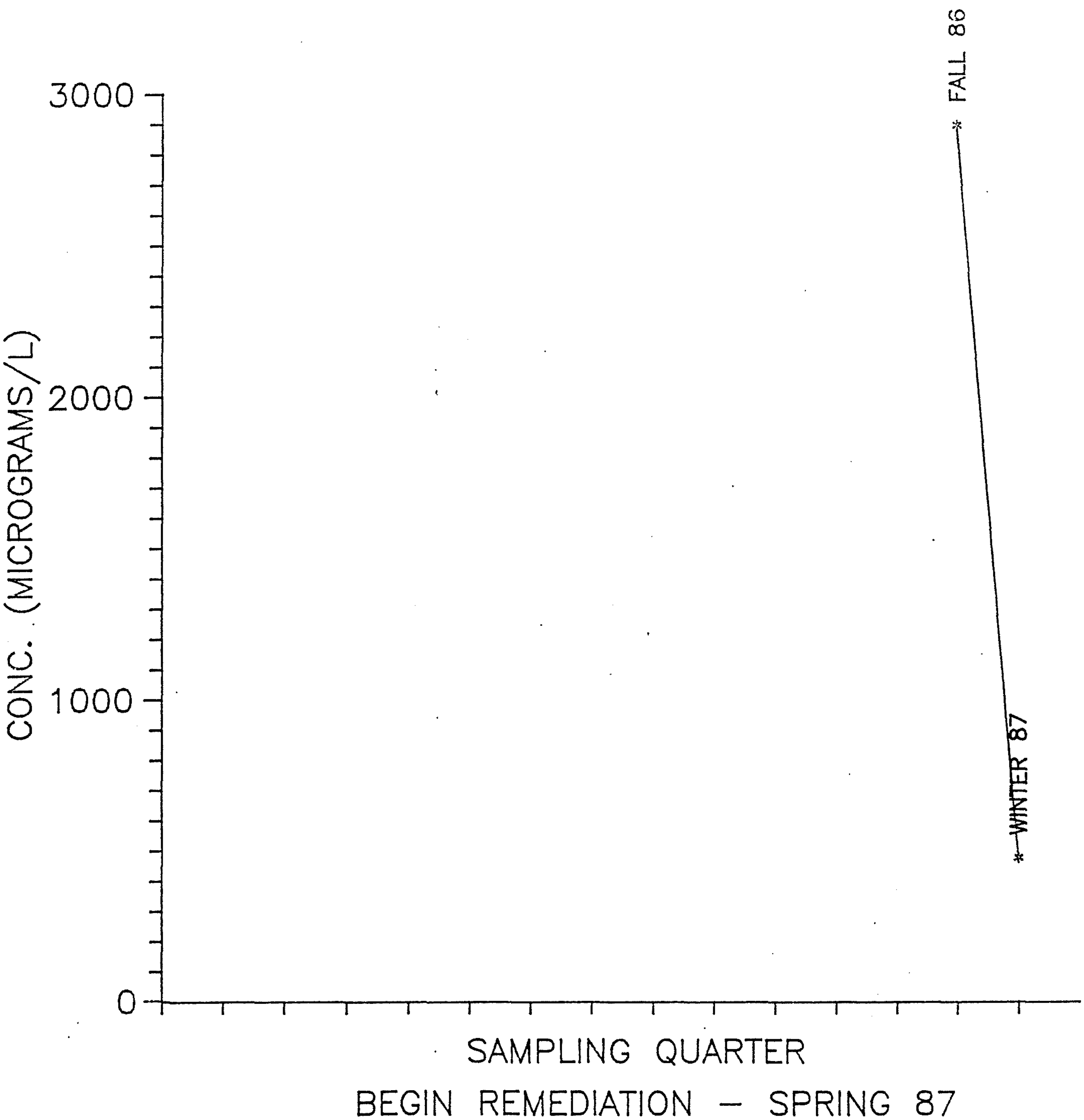


TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS OF GLACIAL WELL 44

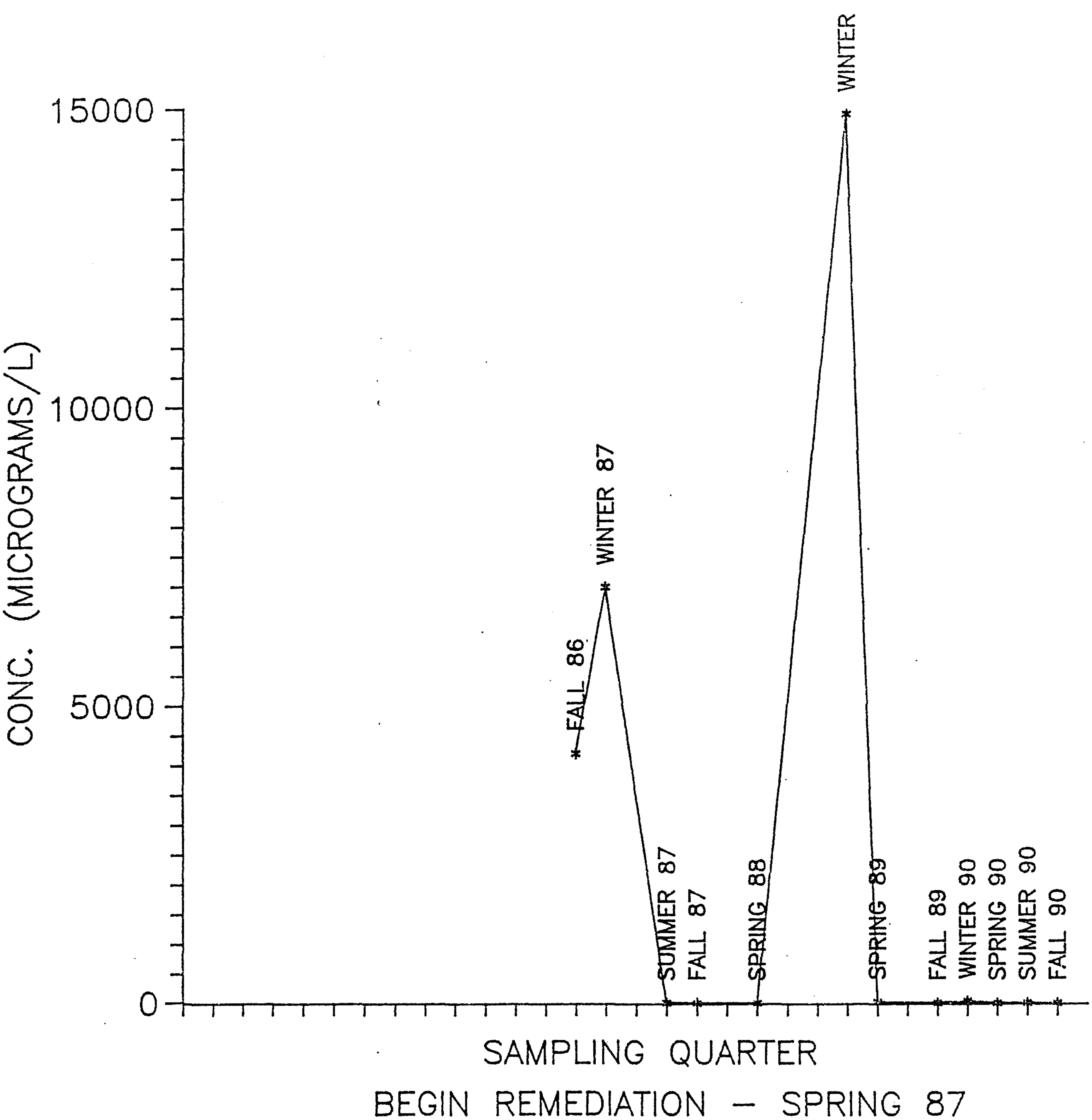


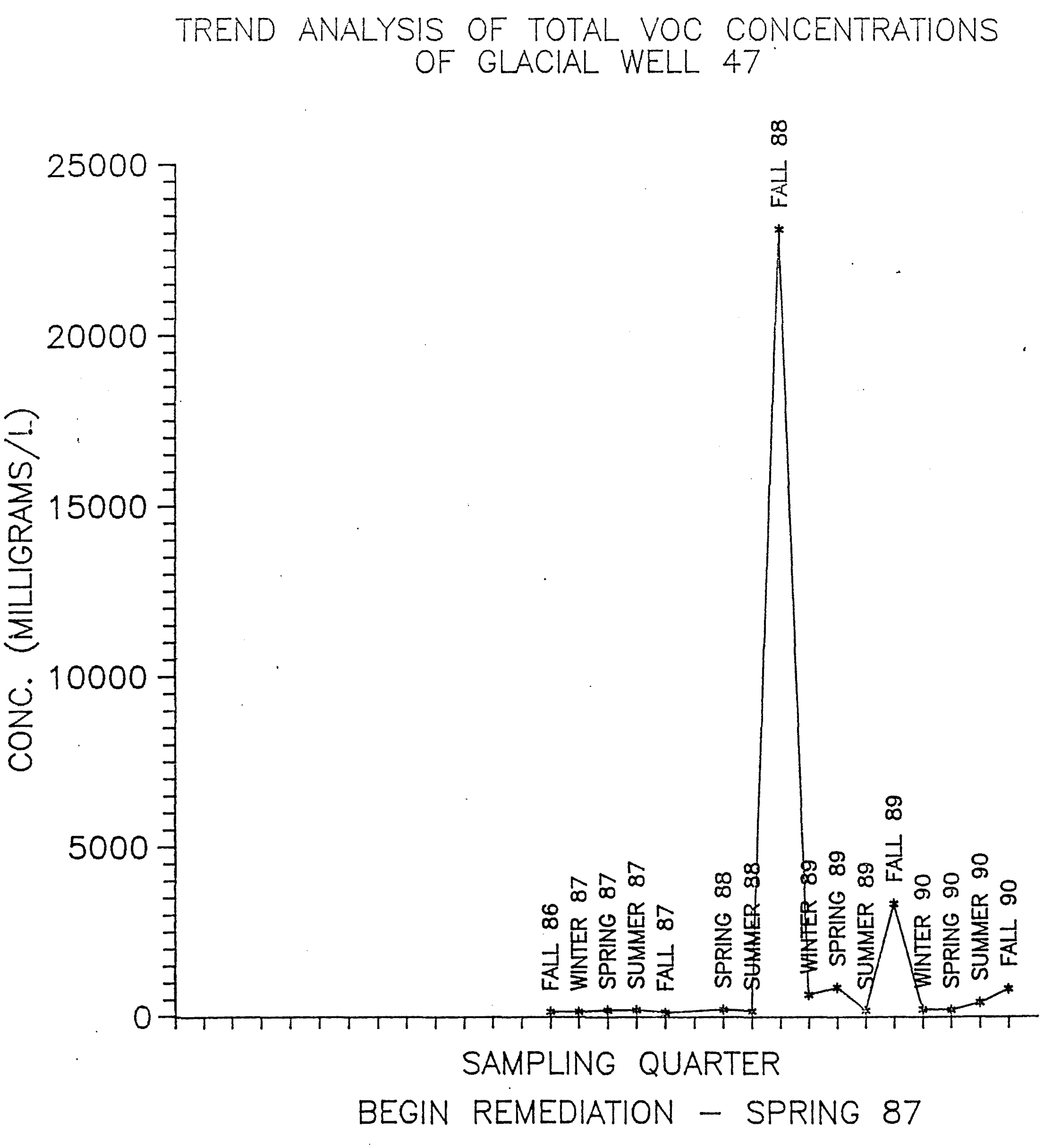
BEGIN REMEDIATION – SPRING 87

TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS OF GLACIAL WELL 45



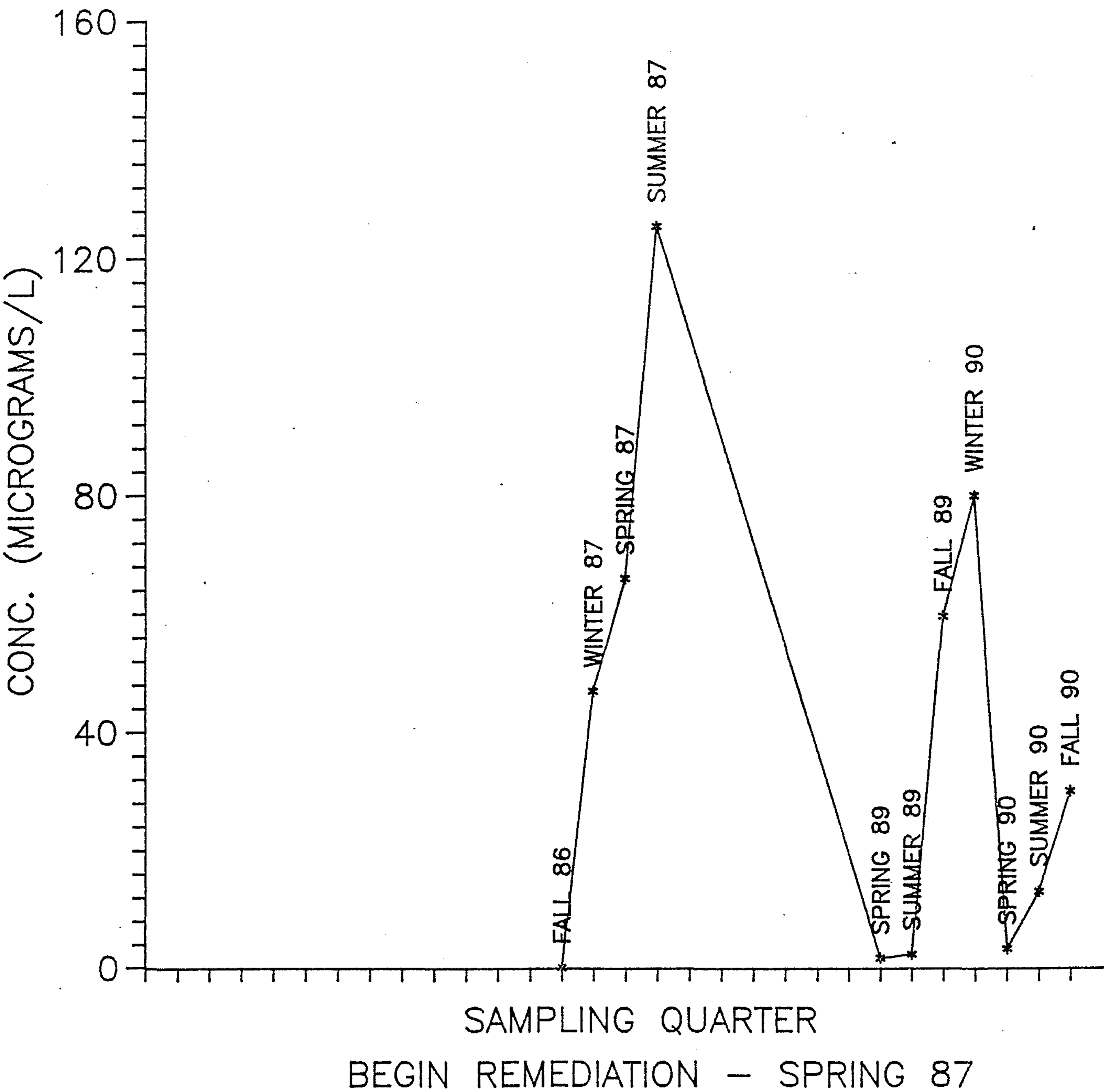
TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 46



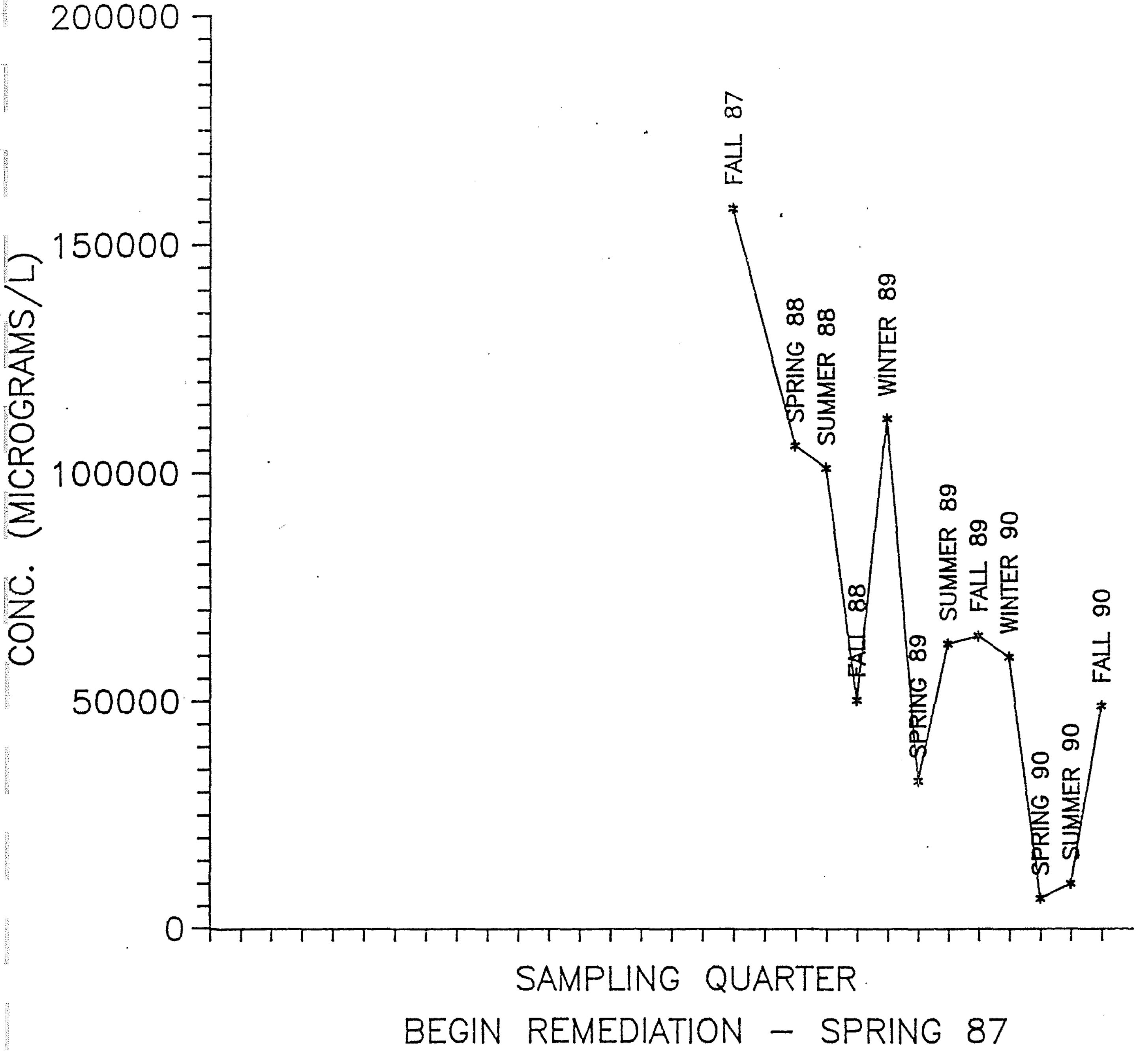


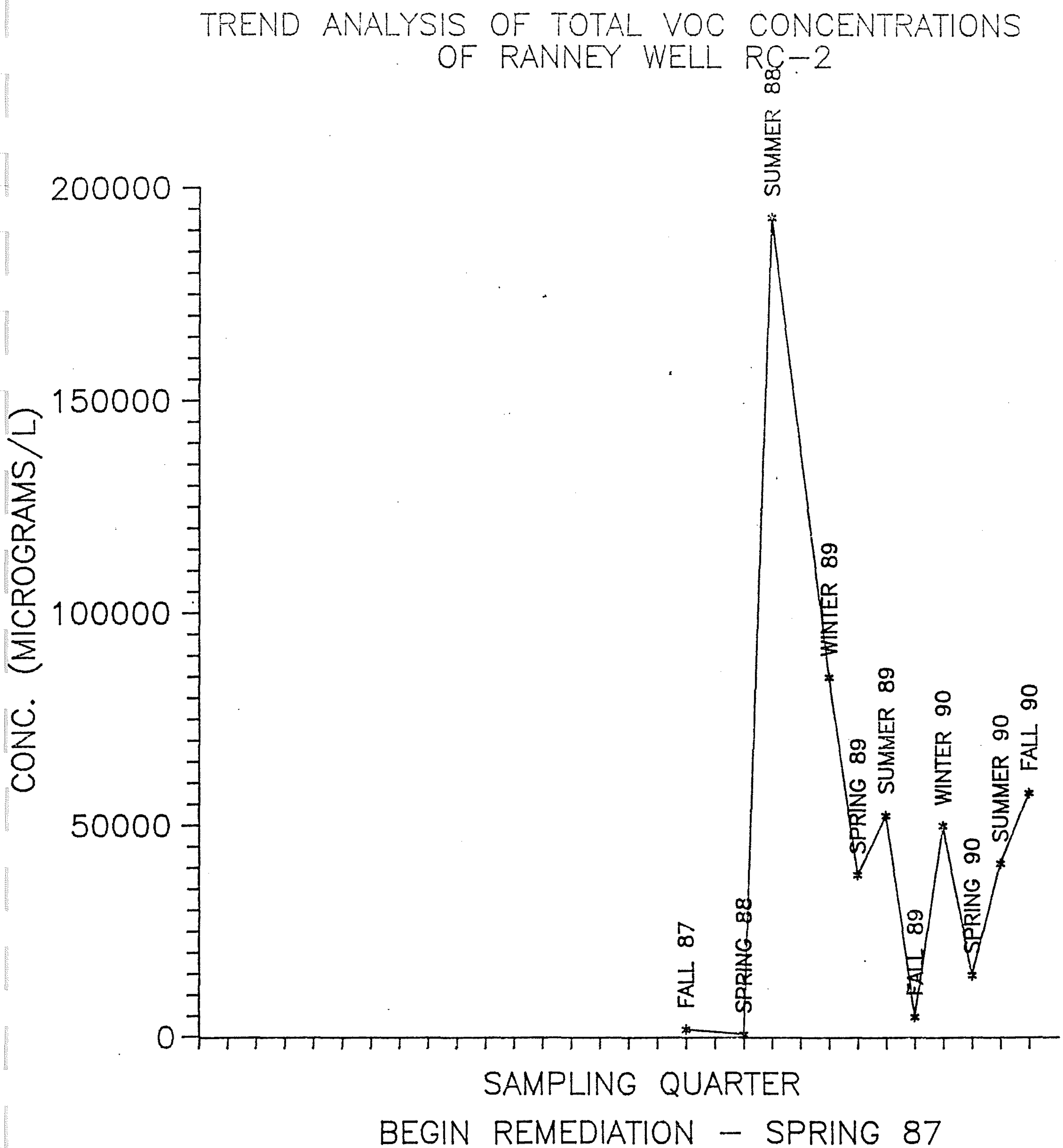
TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF GLACIAL WELL 47
CONC. (MILLIGRAMS/L)
0
5000
10000
15000
20000
25000
FALL 86
WINTER 87
SPRING 87
SUMMER 87
FALL 87
SPRING 88
SUMMER 88
FALL 88
WINTER 89
SPRING 89
SUMMER 89
FALL 89
WINTER 90
SPRING 90
SUMMER 90
FALL 90
SAMPLING QUARTER
BEGIN REMEDIATION – SPRING 87

TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS OF GLACIAL WELL 48

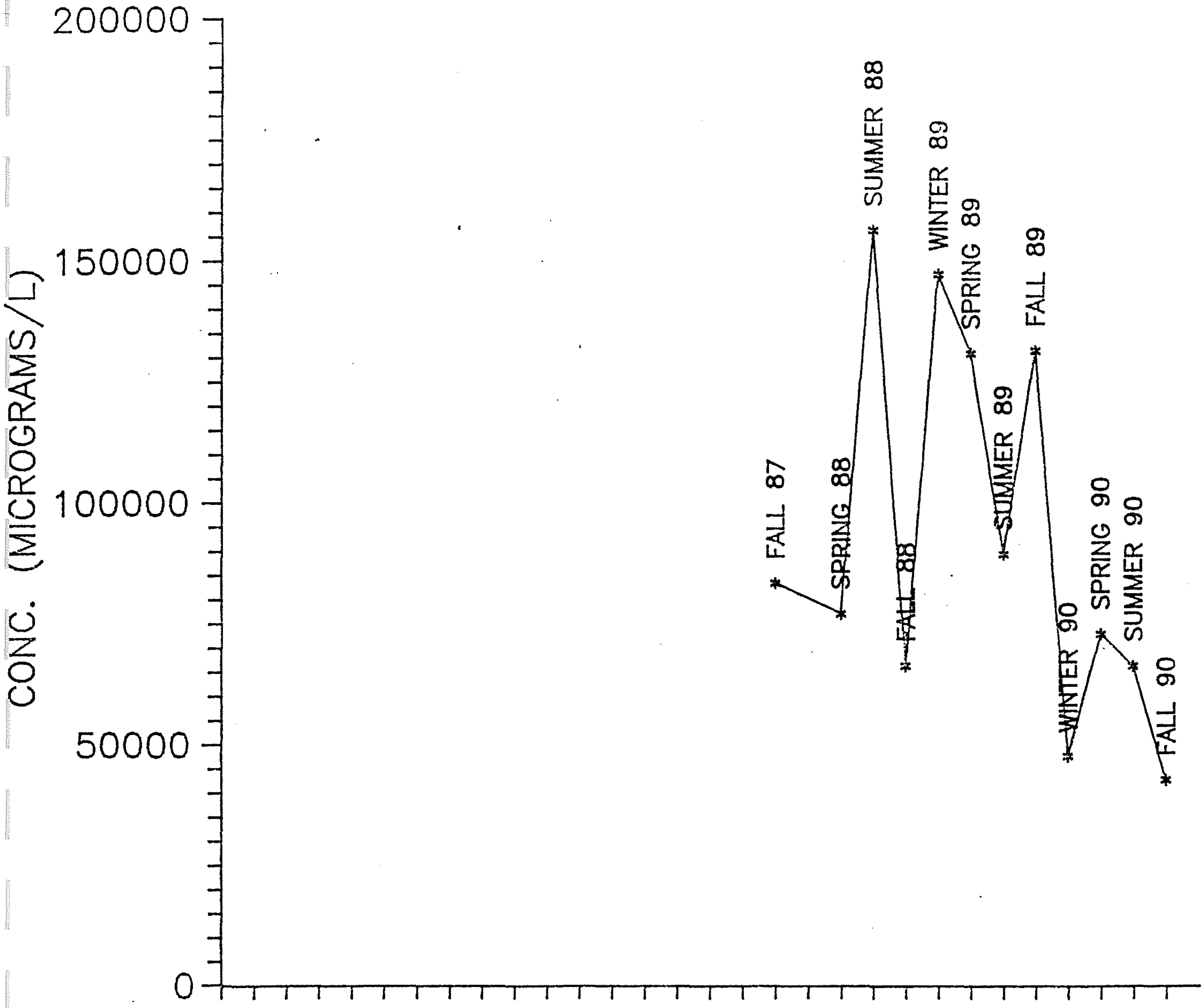


TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF RANNEY WELL RC-1




TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF RANNEY WELL RC-2
CONC. (MICROGRAMS/L)
200000
150000
100000
50000
0
FALL 87
SPRING 88
SUMMER 88
WINTER 89
SPRING 89
SUMMER 89
FALL 89
WINTER 90
SPRING 90
SUMMER 90
FALL 90
SAMPLING QUARTER
BEGIN REMEDIATION - SPRING 87

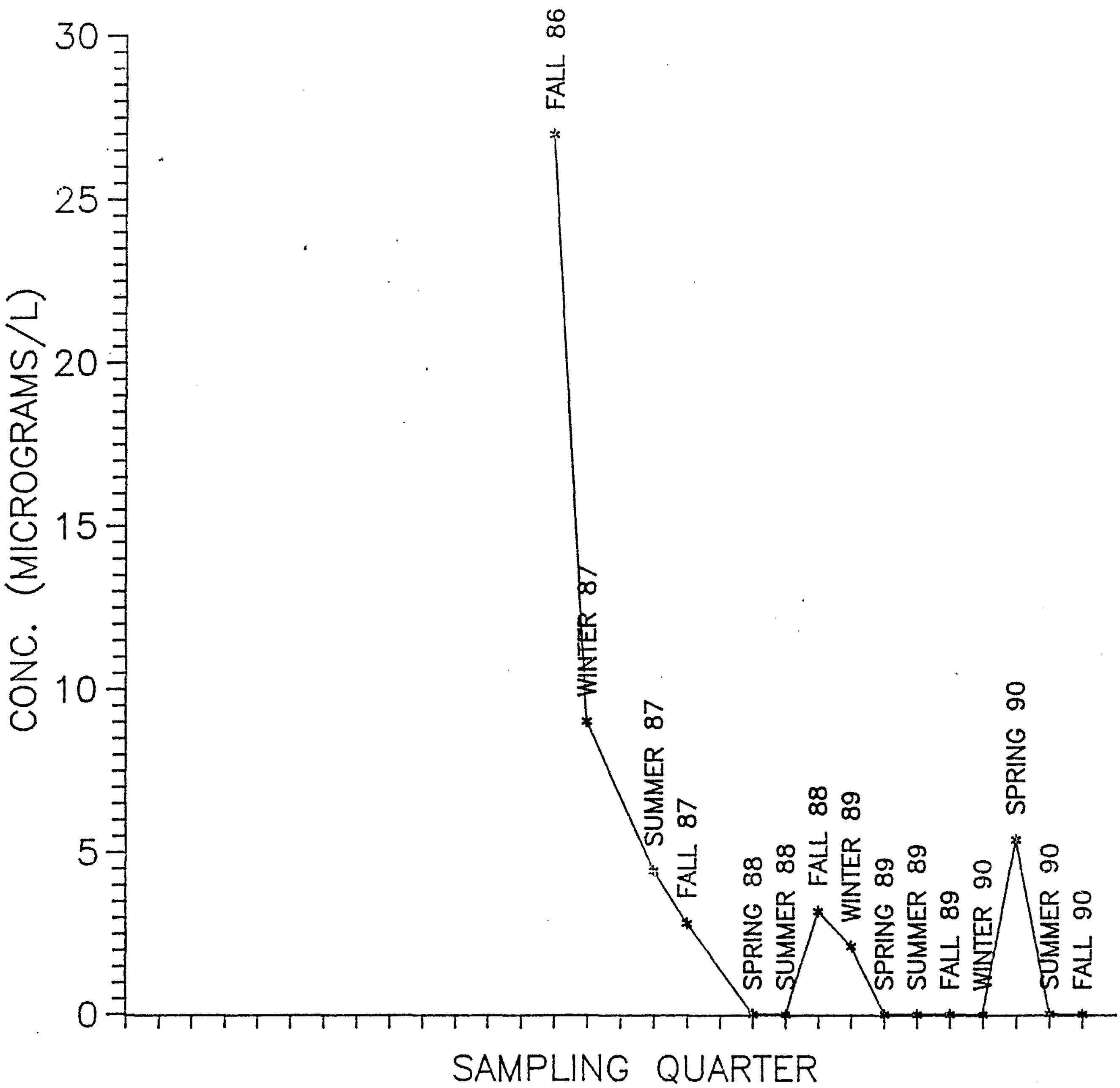
TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF RANNEY WELL RC-3



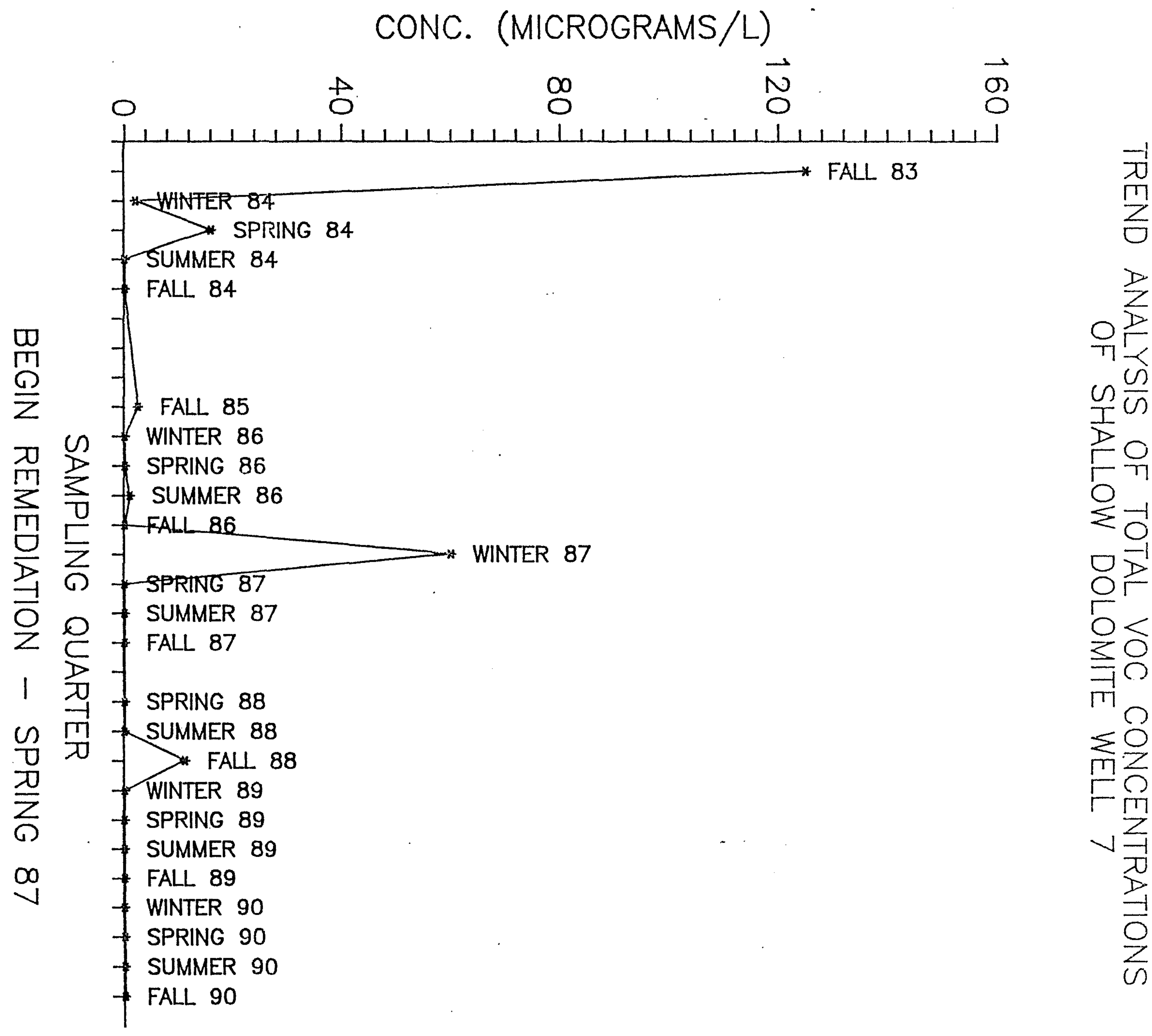
SAMPLING QUARTER

BEGIN REMEDIATION - SPRING 87

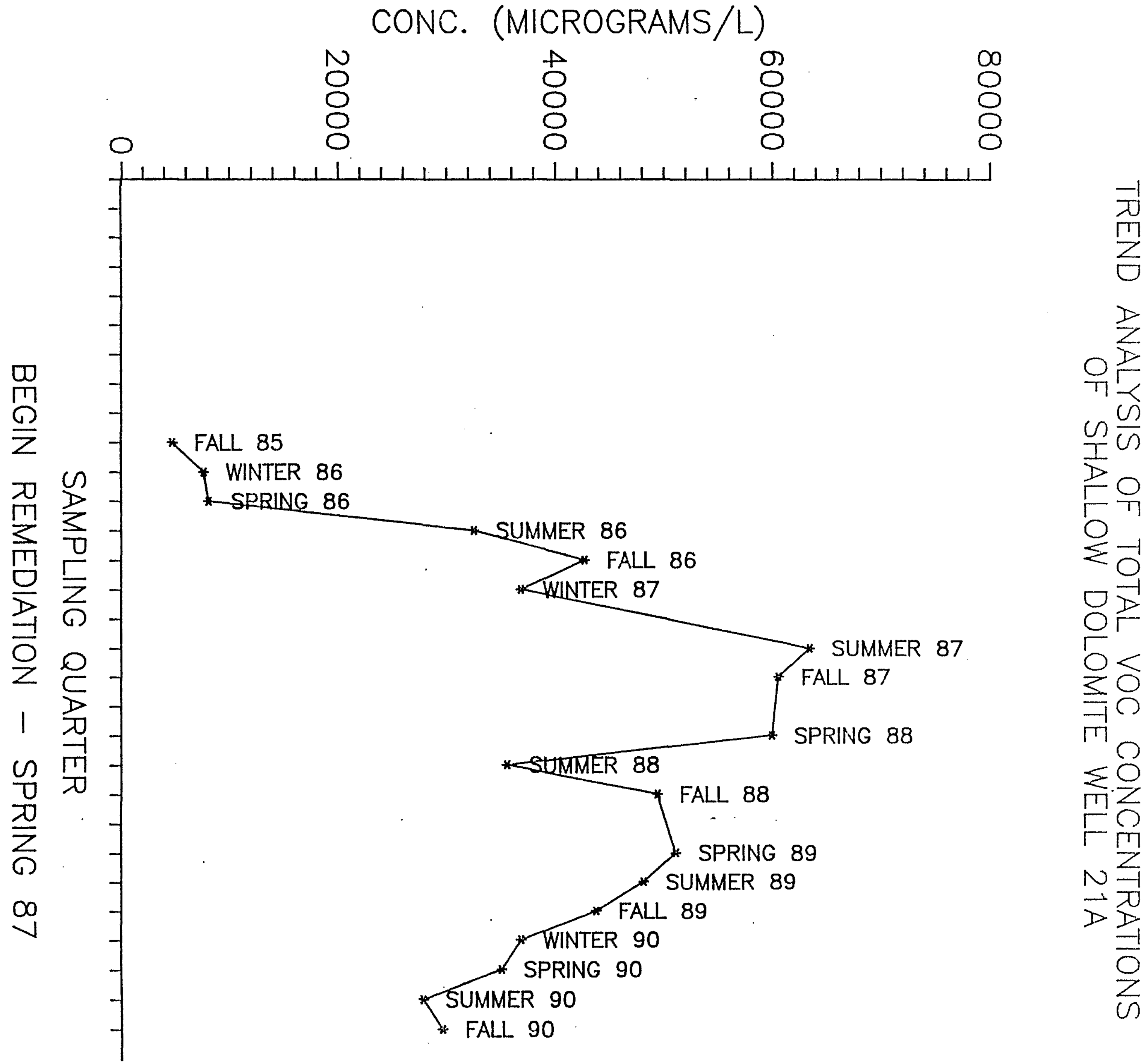
TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS OF SHALLOW DOLOMITE WELL 3A



BEGIN REMEDIATION – SPRING 87

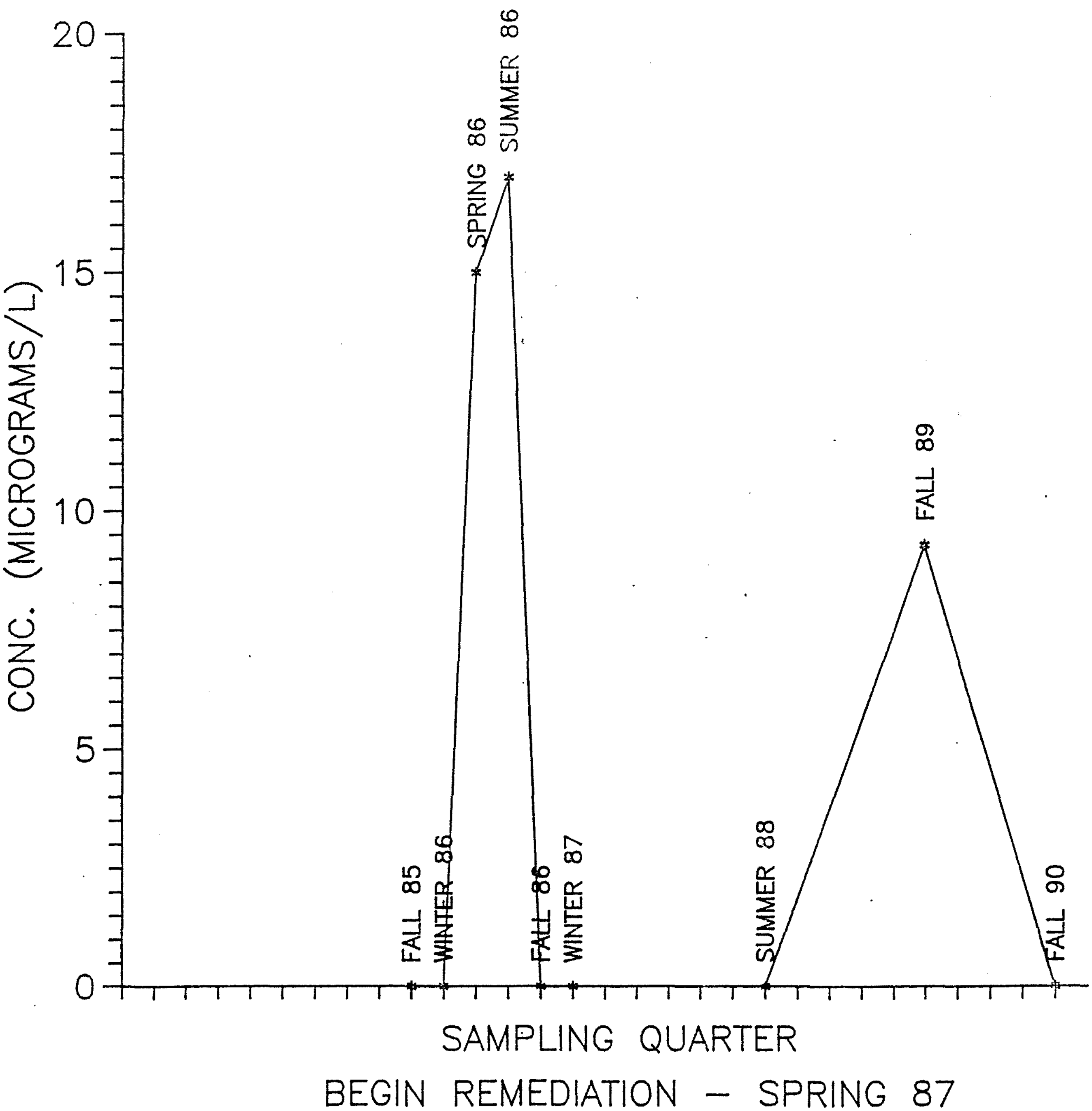


TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF SHALLOW DOLOMITE WELL 7
CONC. (MICROGRAMS/L)
0
40
80
120
160
FALL 83
WINTER 84
SPRING 84
SUMMER 84
FALL 84
FALL 85
WINTER 86
SPRING 86
SUMMER 86
FALL 86
WINTER 87
SPRING 87
SUMMER 87
FALL 87
SPRING 88
SUMMER 88
FALL 88
WINTER 89
SPRING 89
SUMMER 89
FALL 89
WINTER 90
SPRING 90
SUMMER 90
FALL 90
SAMPLING QUARTER
BEGIN REMEDIATION - SPRING 87

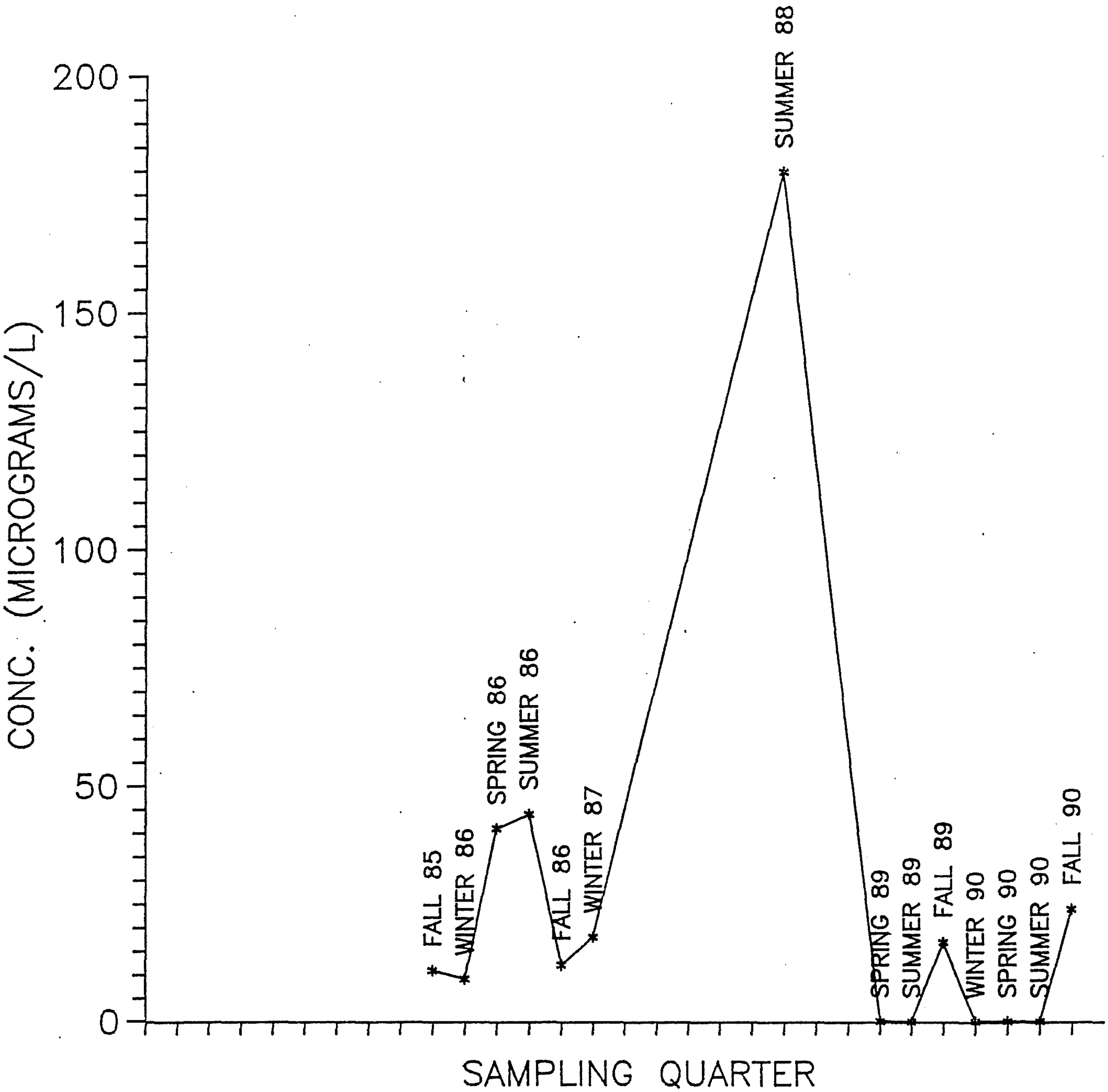


TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF SHALLOW DOLOMITE WELL 21A
CONC. (MICROGRAMS/L)
0
20000
40000
60000
80000
SAMPLING QUARTER
BEGIN REMEDIATION - SPRING 87
FALL 85
WINTER 86
SPRING 86
SUMMER 86
FALL 86
WINTER 87
SUMMER 87
FALL 87
SPRING 88
SUMMER 88
FALL 88
SPRING 89
SUMMER 89
FALL 89
WINTER 90
SPRING 90
SUMMER 90
FALL 90

TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF SHALLOW DOLOMITE WELL 22

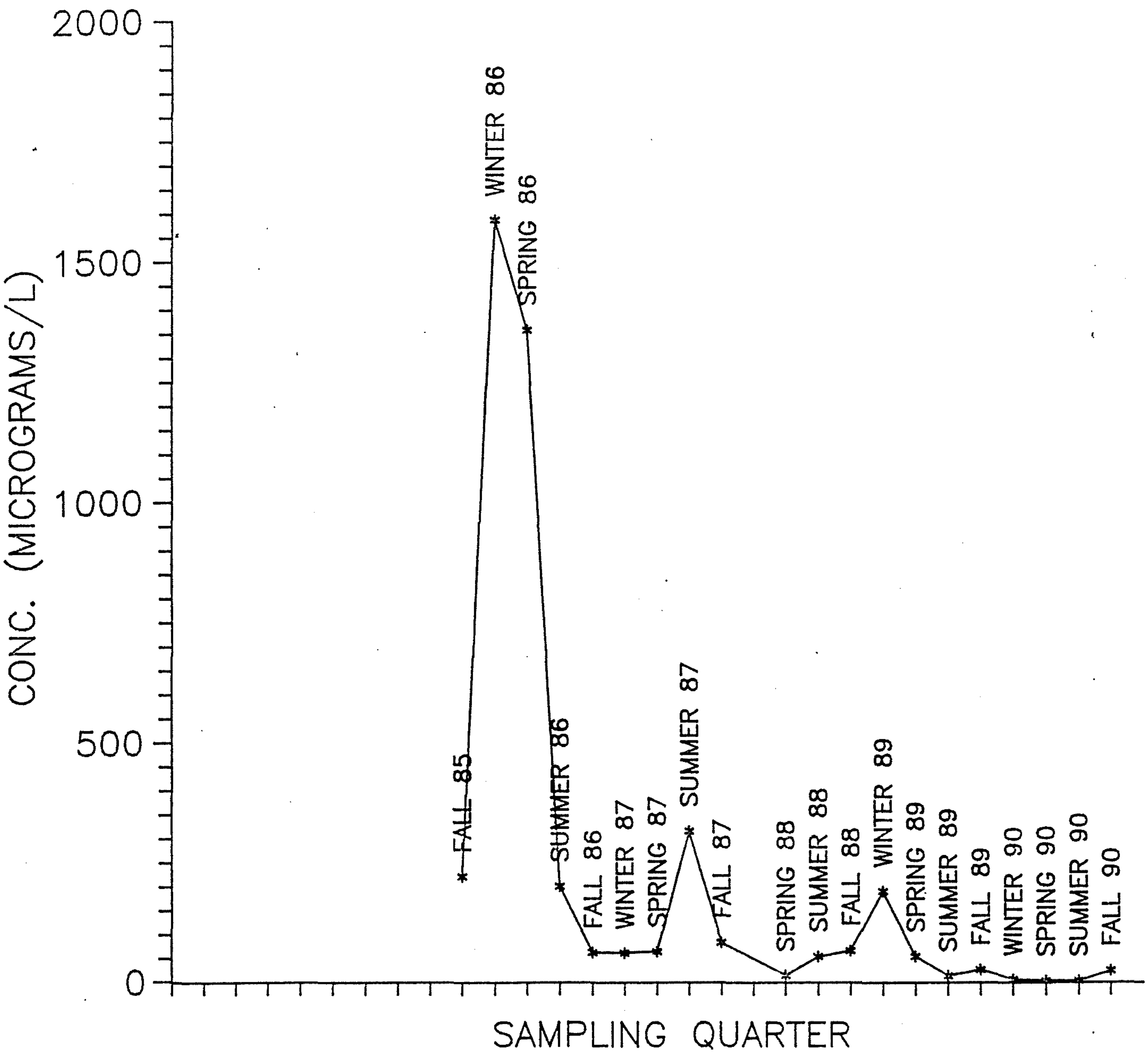


TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF SHALLOW DOLOMITE WELL 23



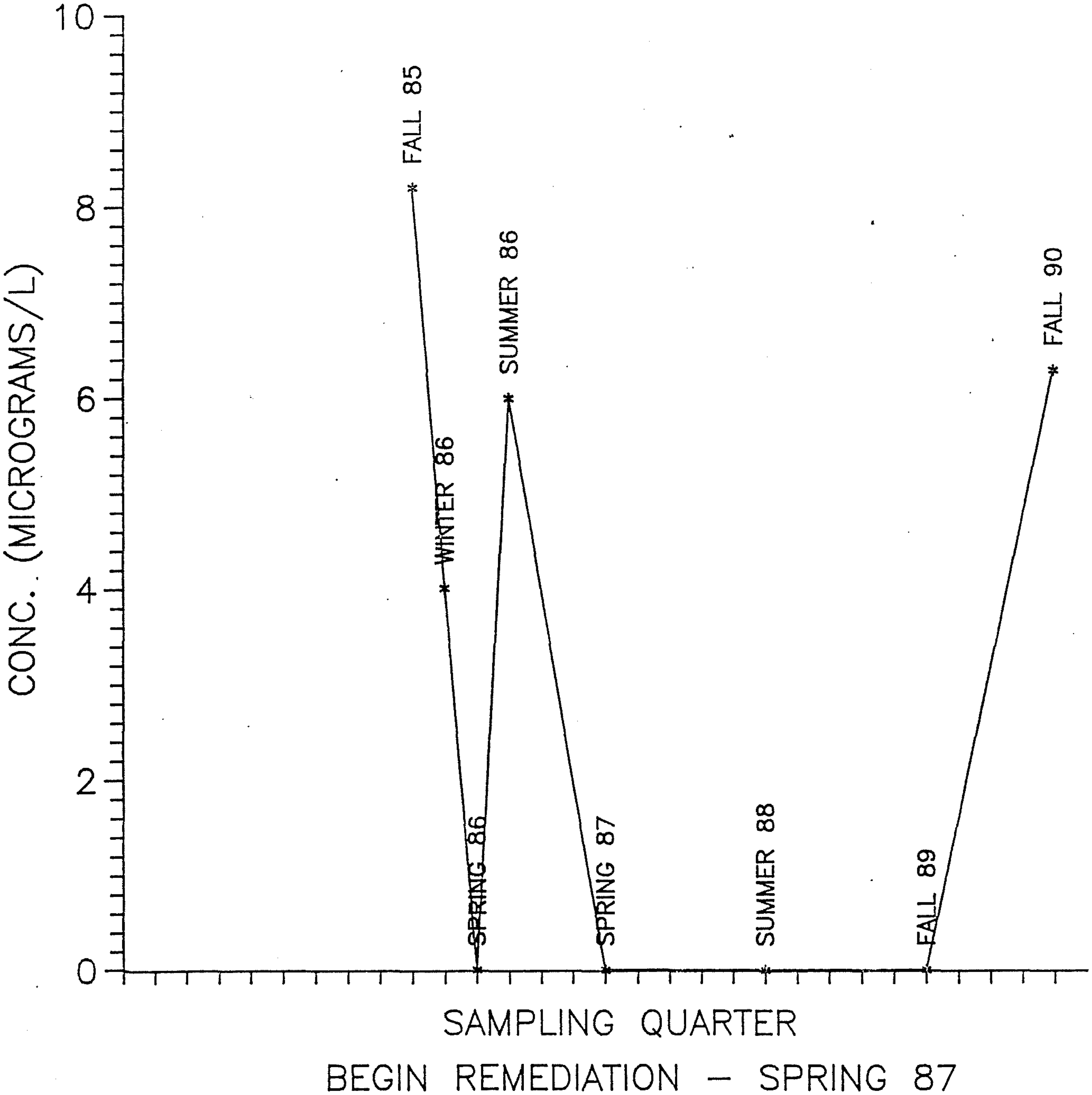
BEGIN REMEDIATION – SPRING 87

TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS OF SHALLOW DOLOMITE WELL 24A

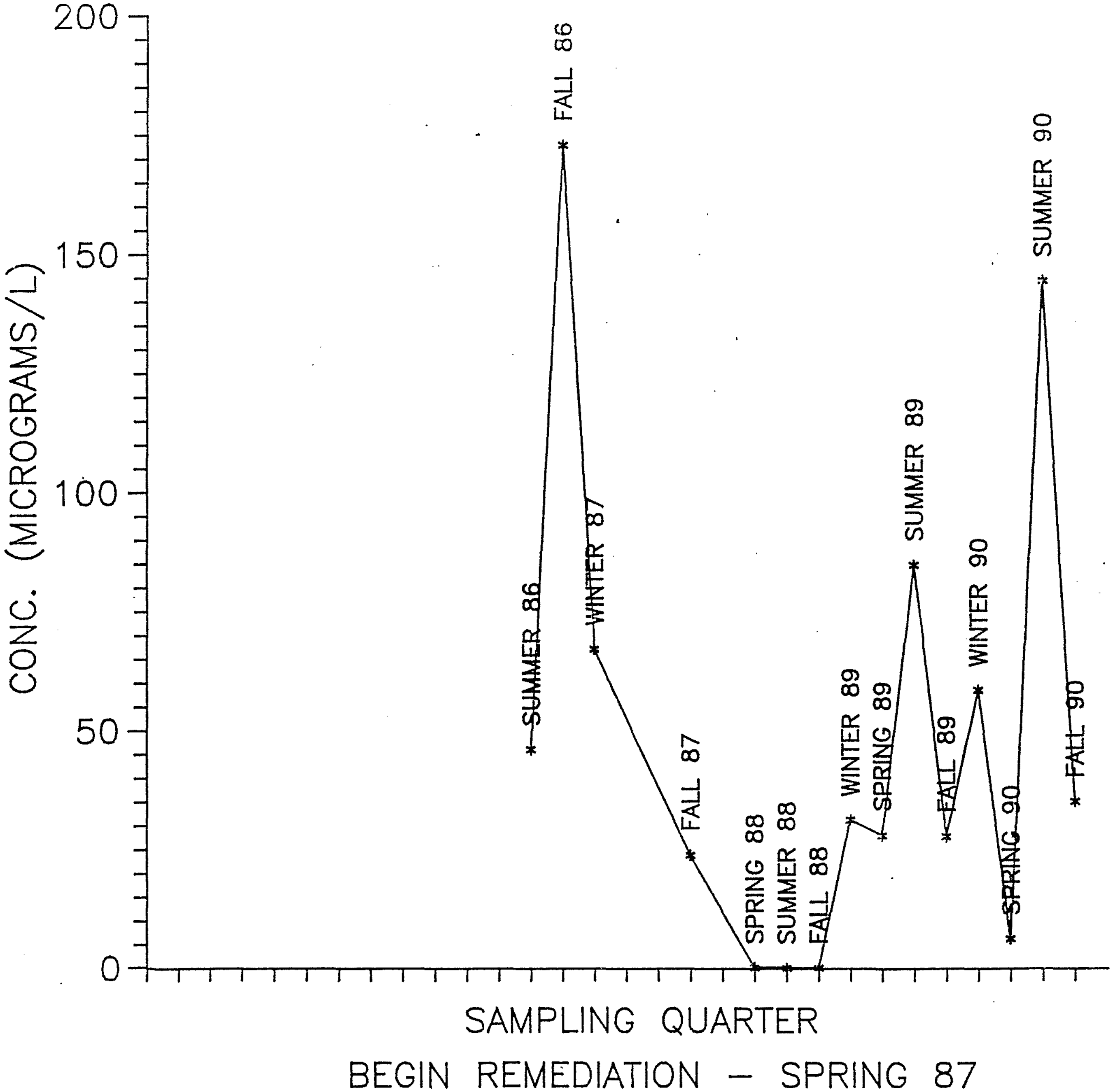


BEGIN REMEDIATION – SPRING 87

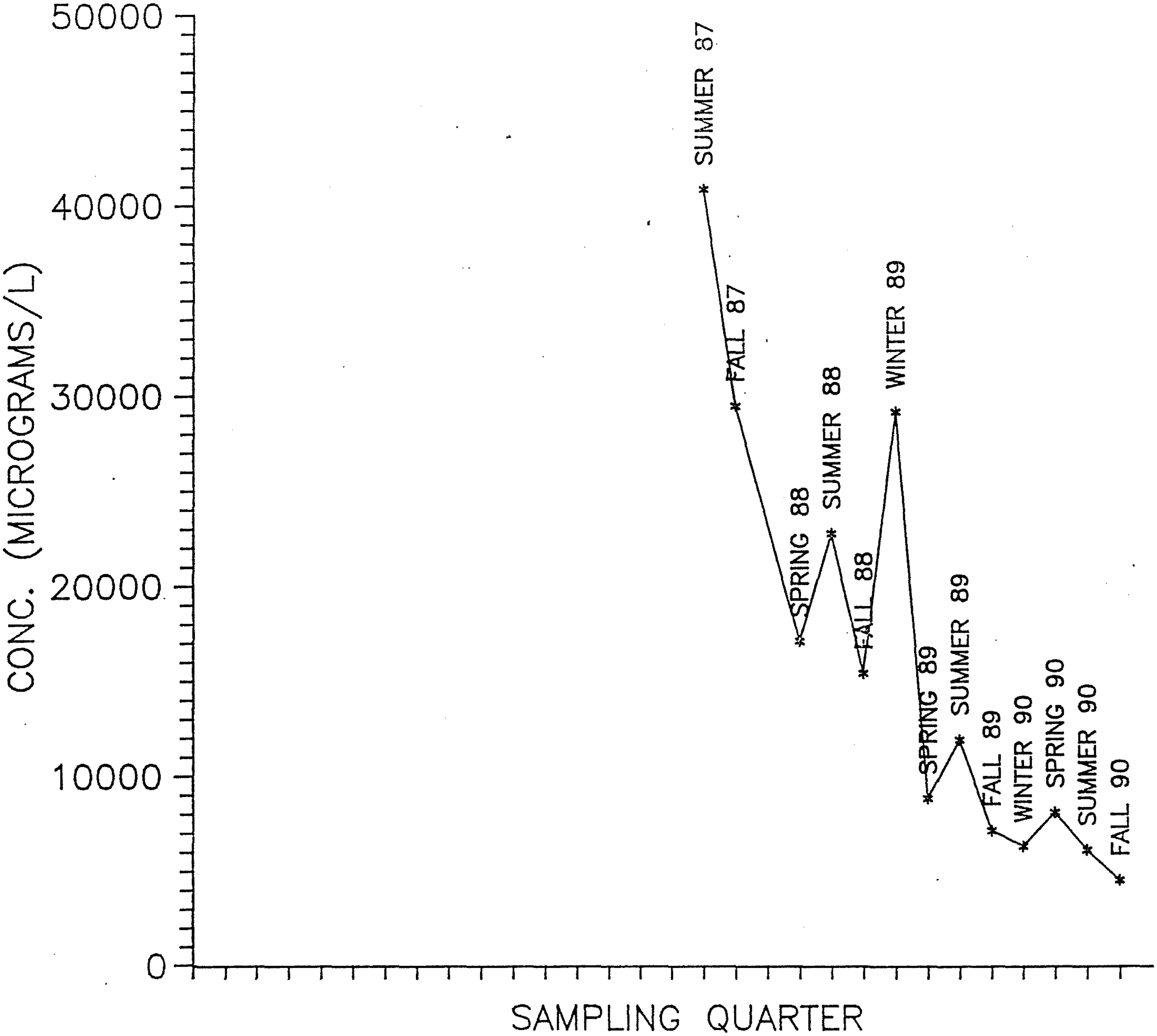
TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF SHALLOW DOLOMITE WELL 25



TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF SHALLOW DOLOMITE WELL 28

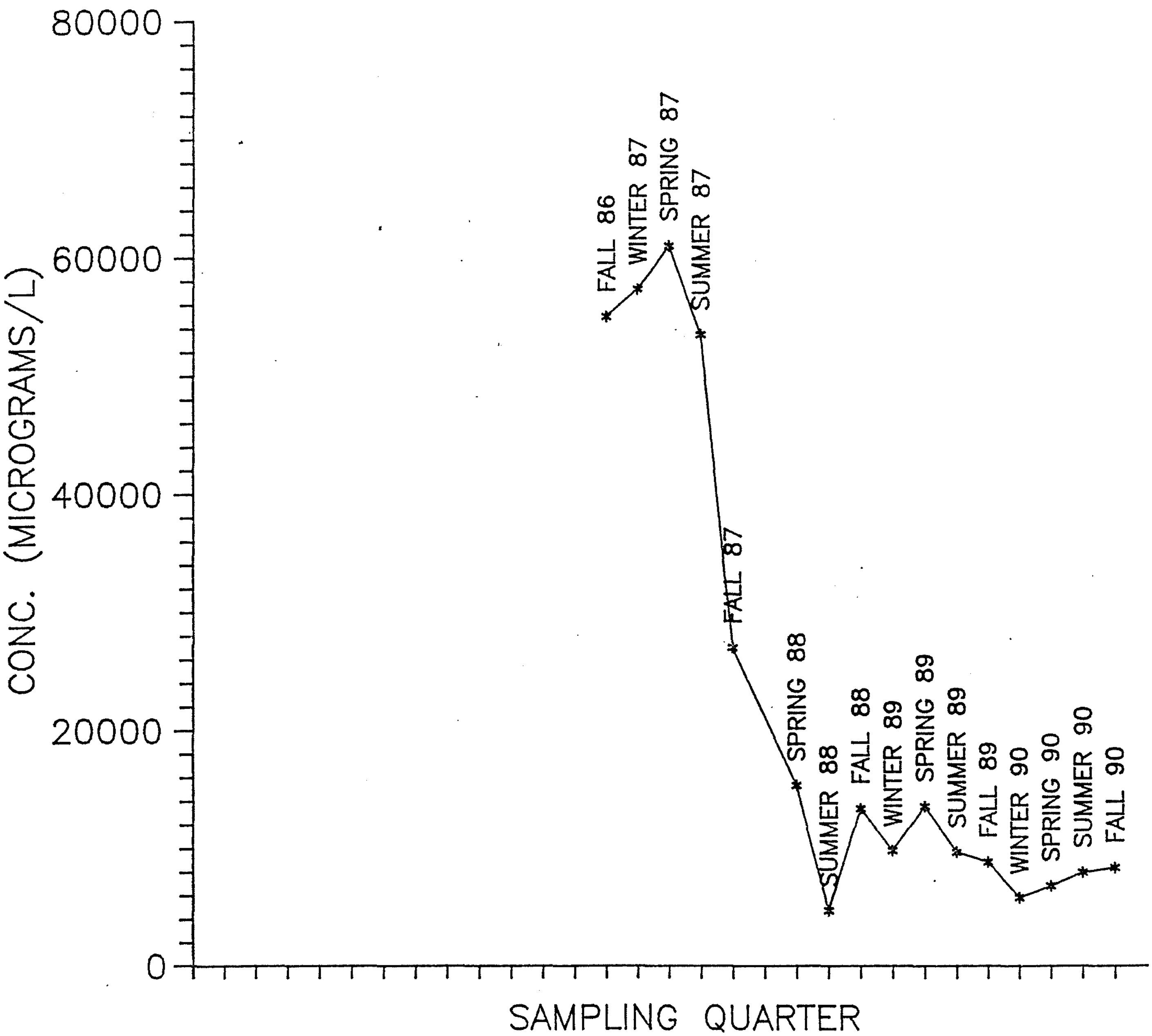


TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS OF SHALLOW DOLOMITE WELL 29



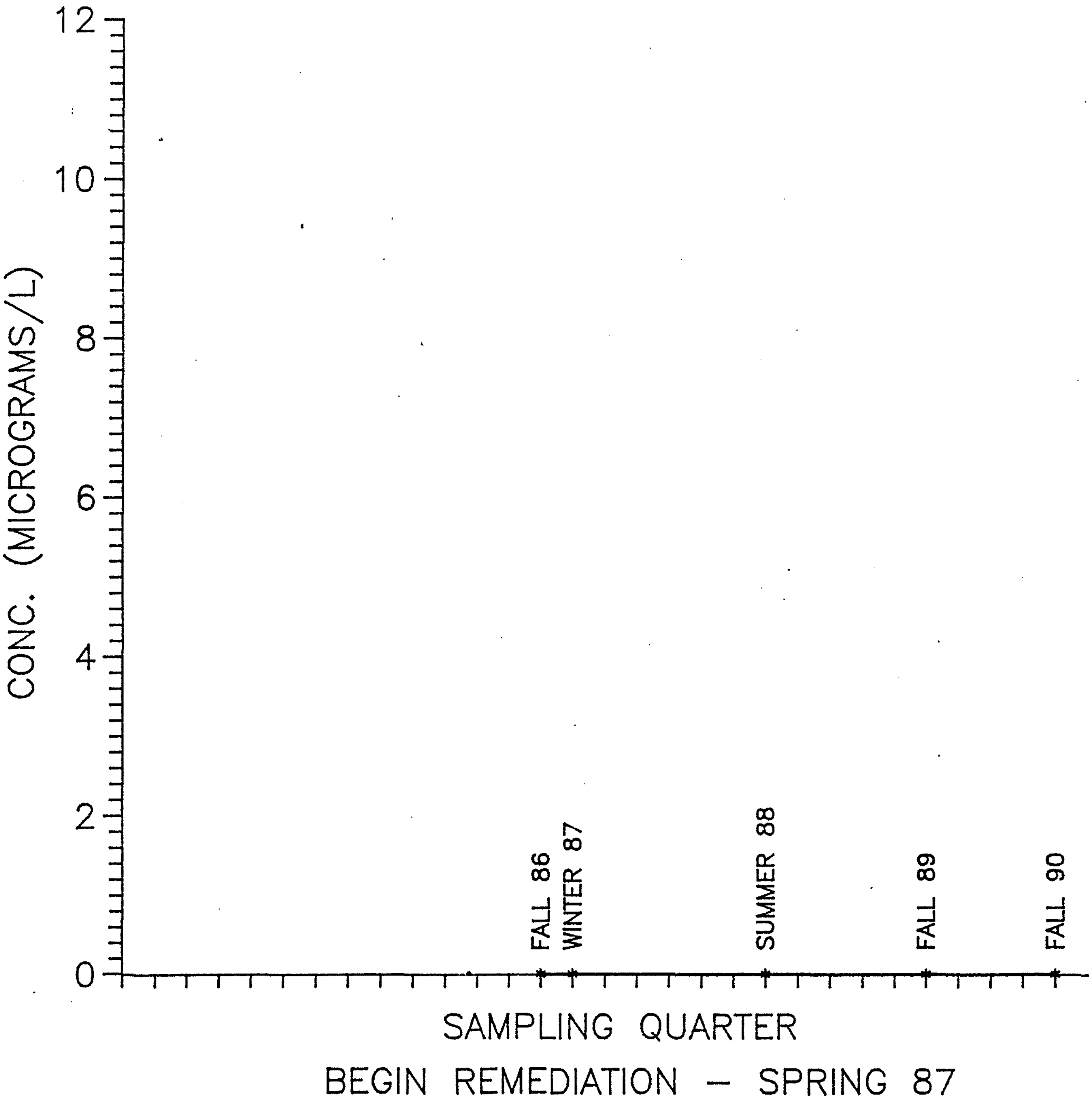
BEGIN REMEDIATION – SPRING 87

TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF SHALLOW DOLOMITE WELL 38

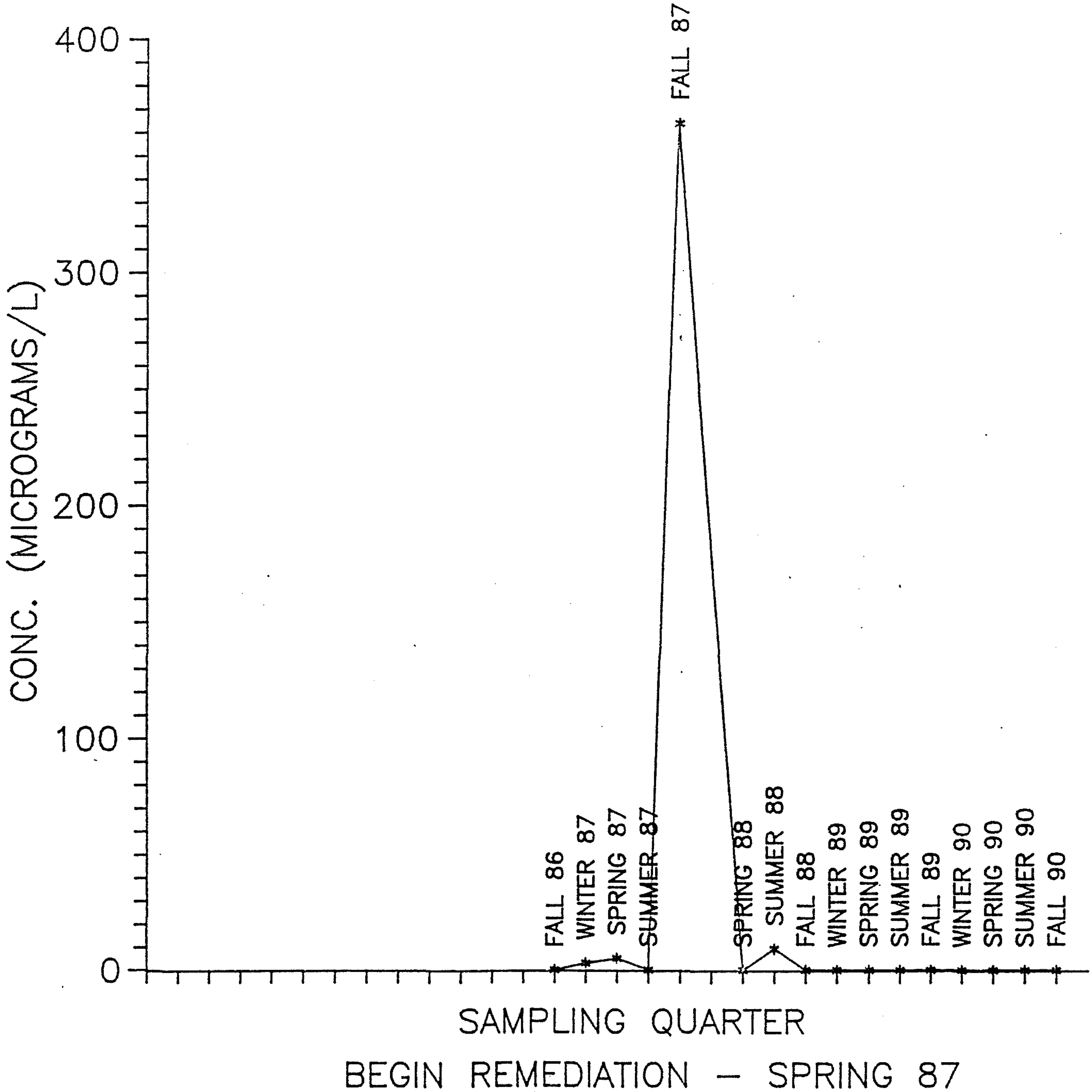


BEGIN REMEDIATION – SPRING 87

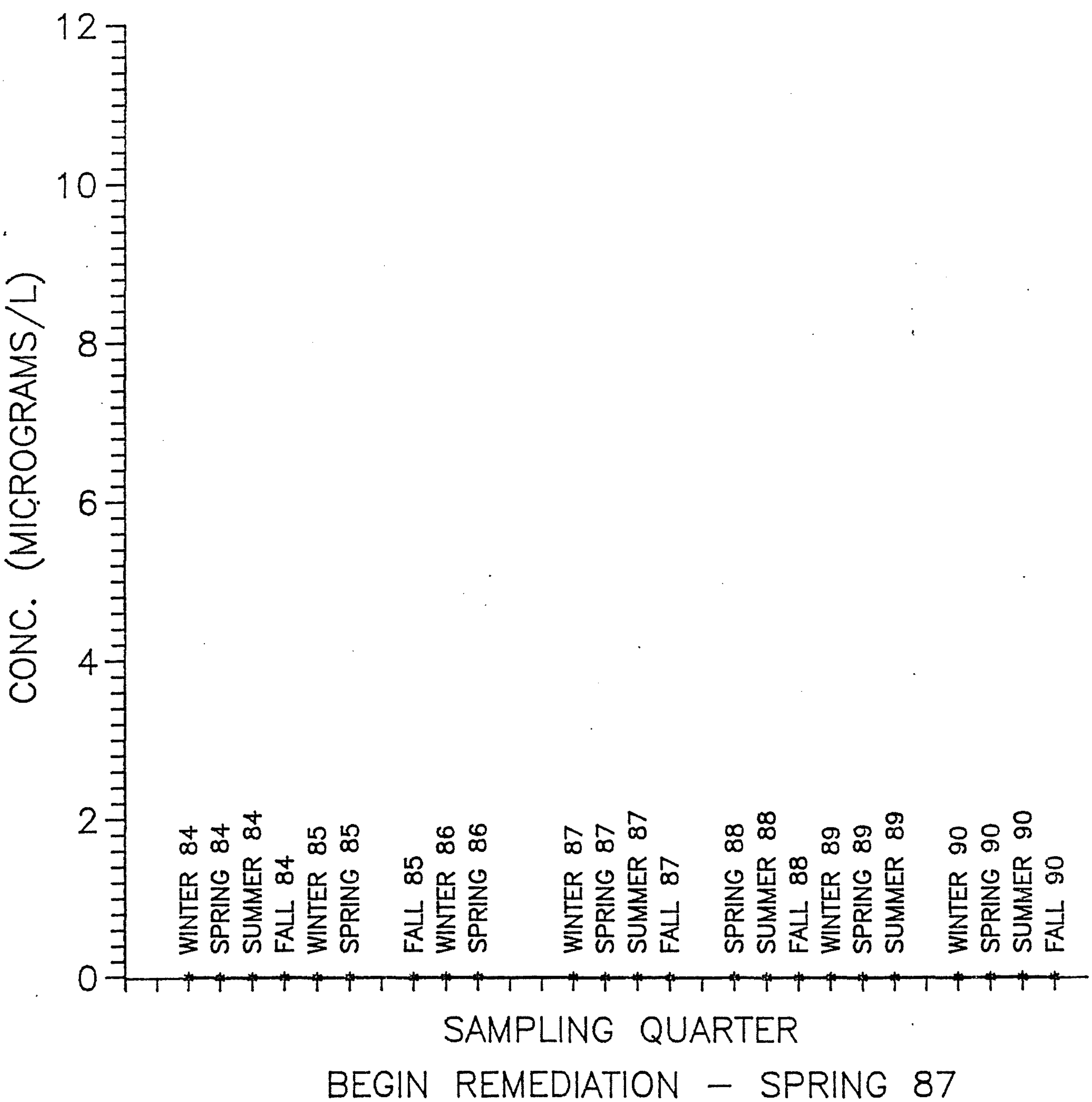
TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS OF SHALLOW DOLOMITE WELL 39



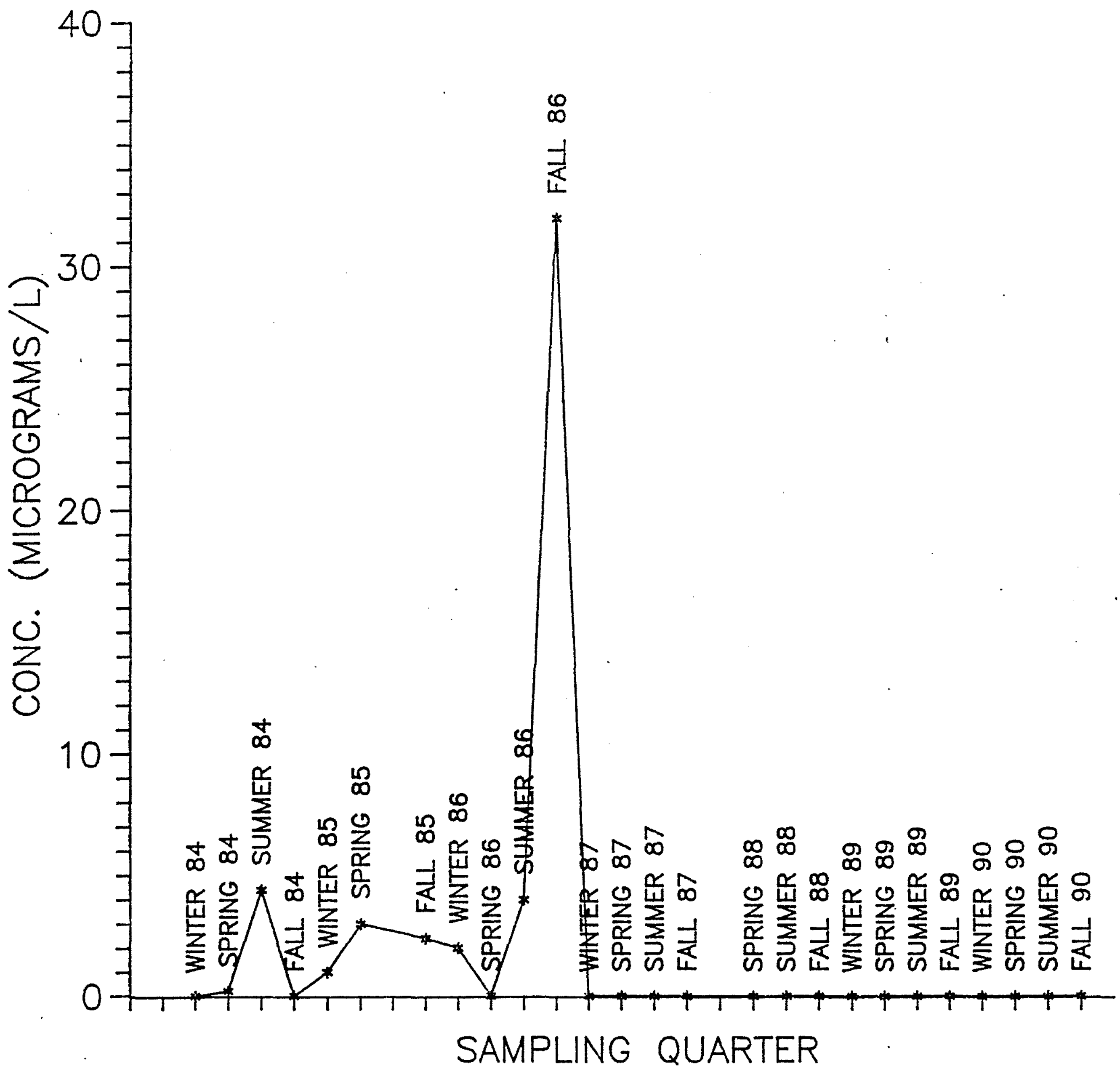
TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS OF SHALLOW DOLOMITE WELL 40



TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF DEEP DOLOMITE WELL MW-1

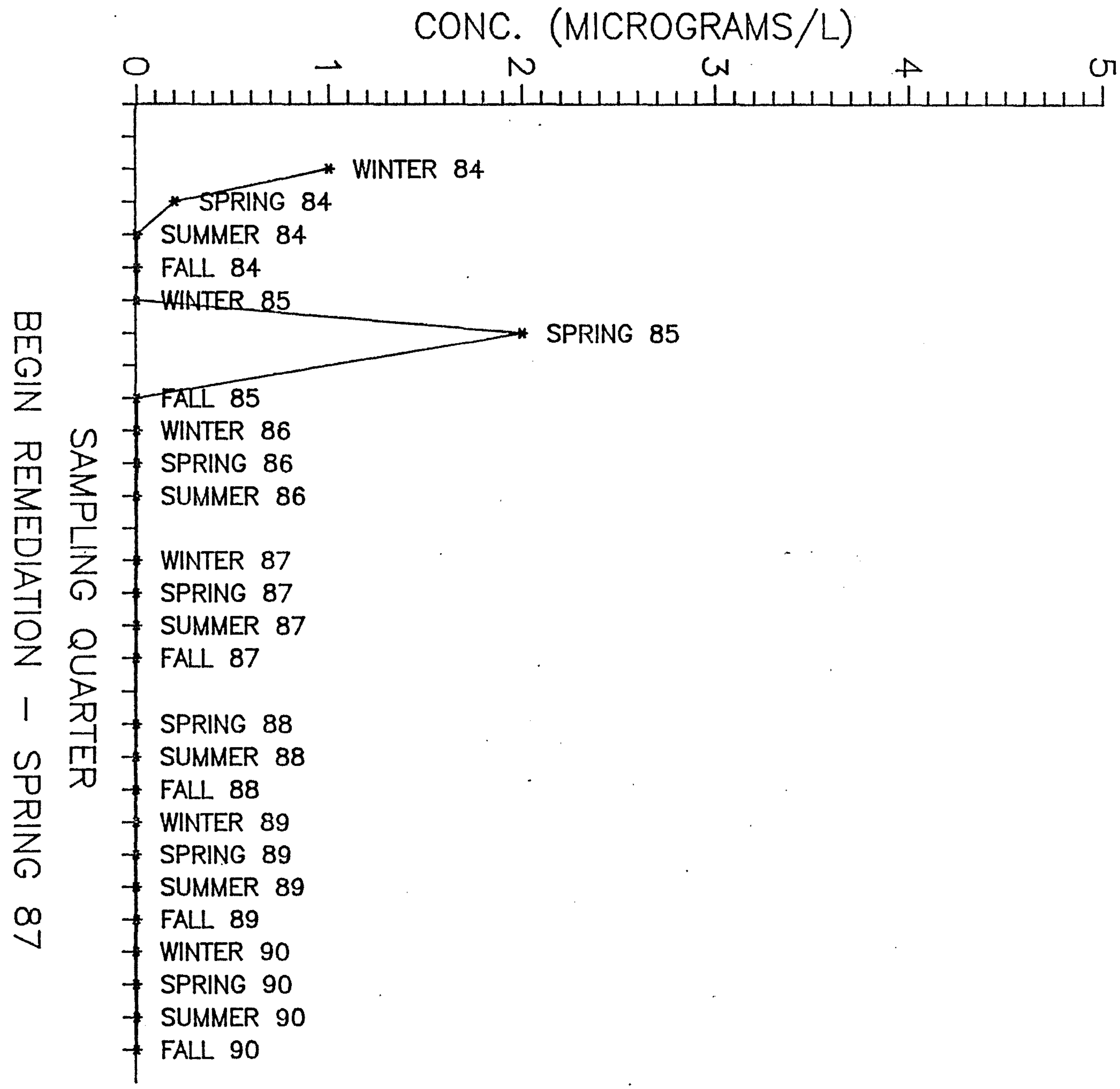


TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF DEEP DOLOMITE WELL MW-2

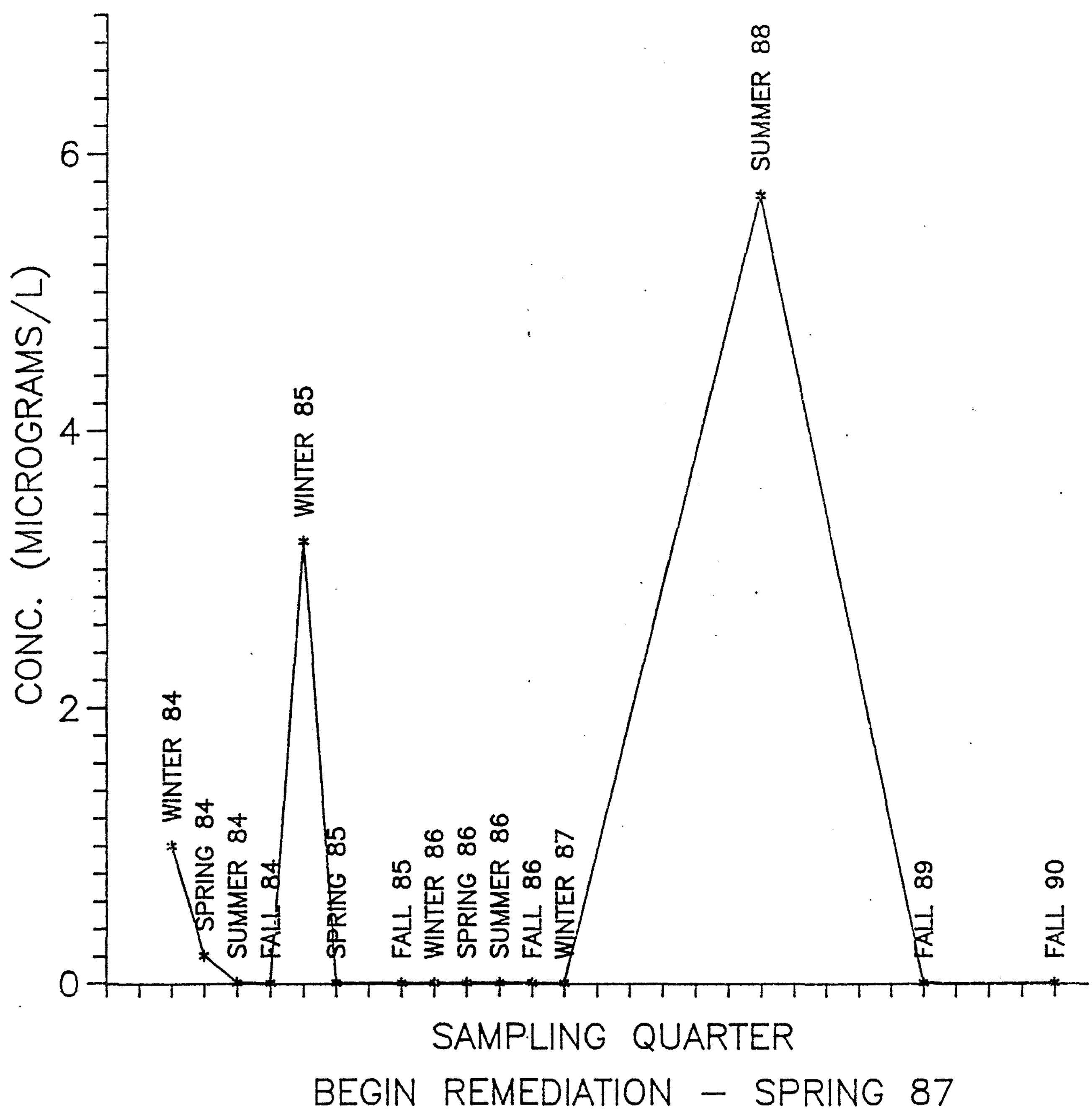


BEGIN REMEDIATION – SPRING 87

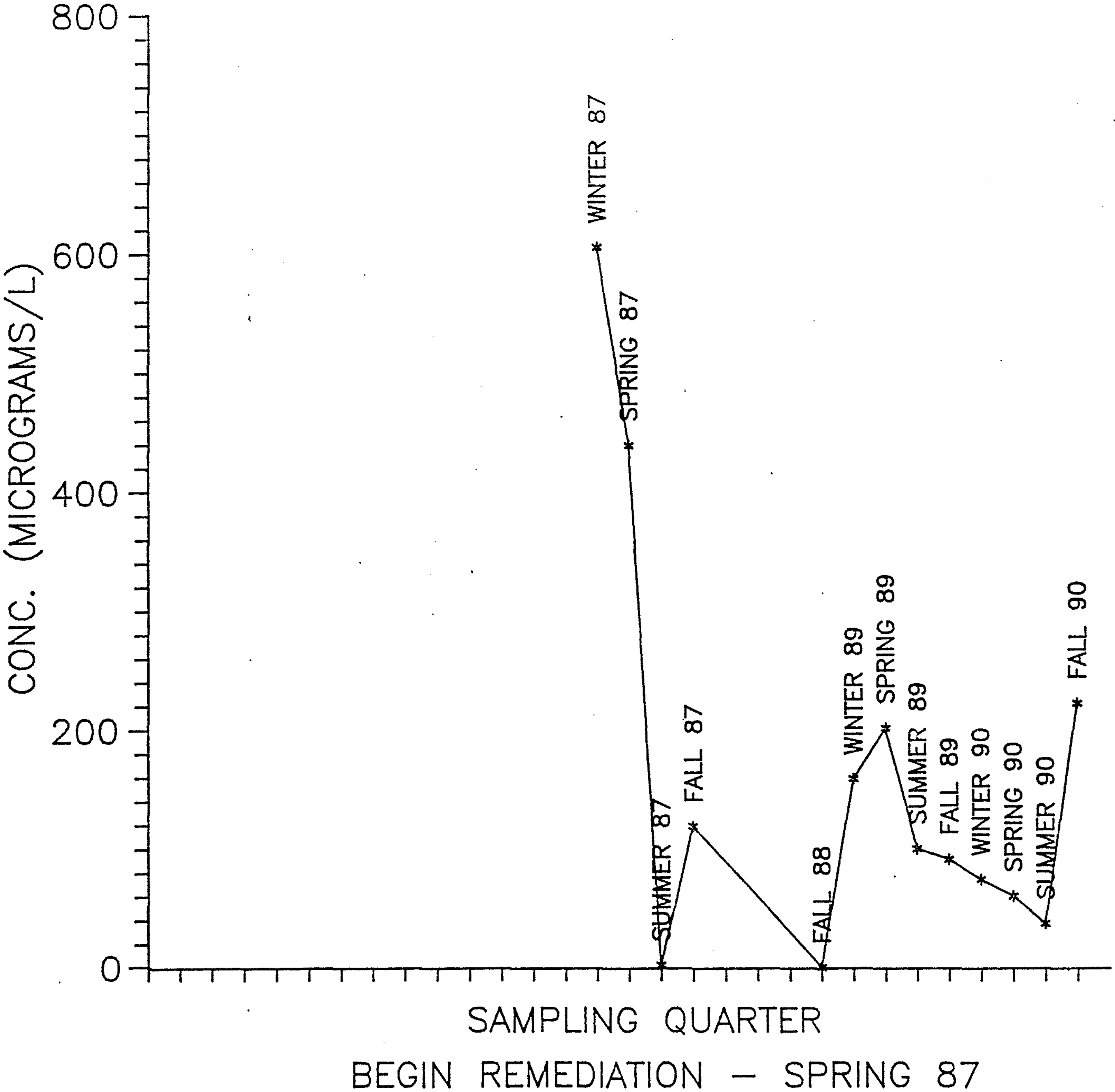
TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS OF DEEP DOLOMITE WELL MW-3



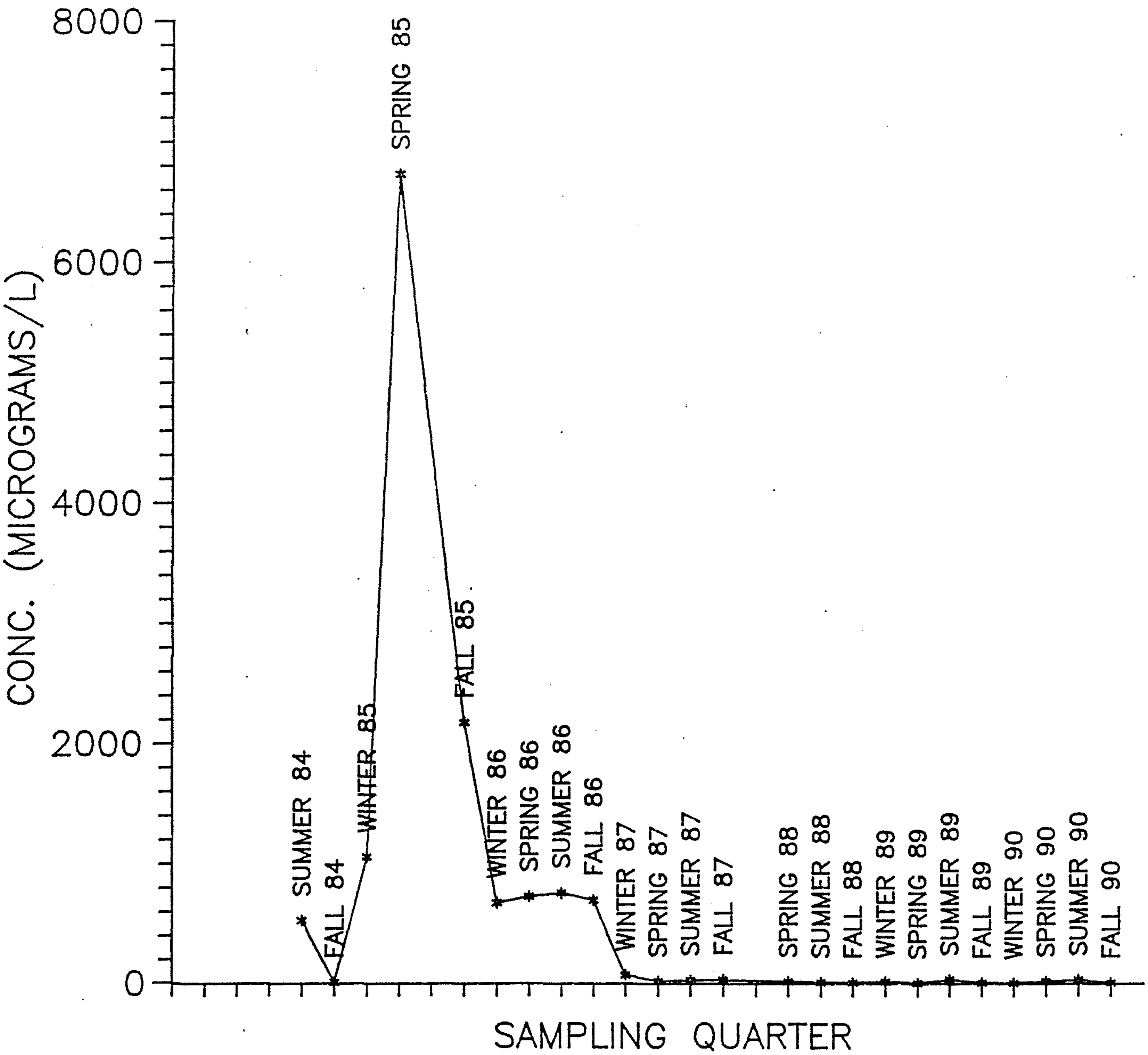
TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS OF DEEP DOLOMITE WELL MW-4



TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF DEEP DOLOMITE WELL 30



TREND ANALYSIS OF TOTAL VOC CONCENTRATIONS
OF DEEP DOLOMITE WELL PW-8



BEGIN REMEDIATION – SPRING 87

APPENDIX E

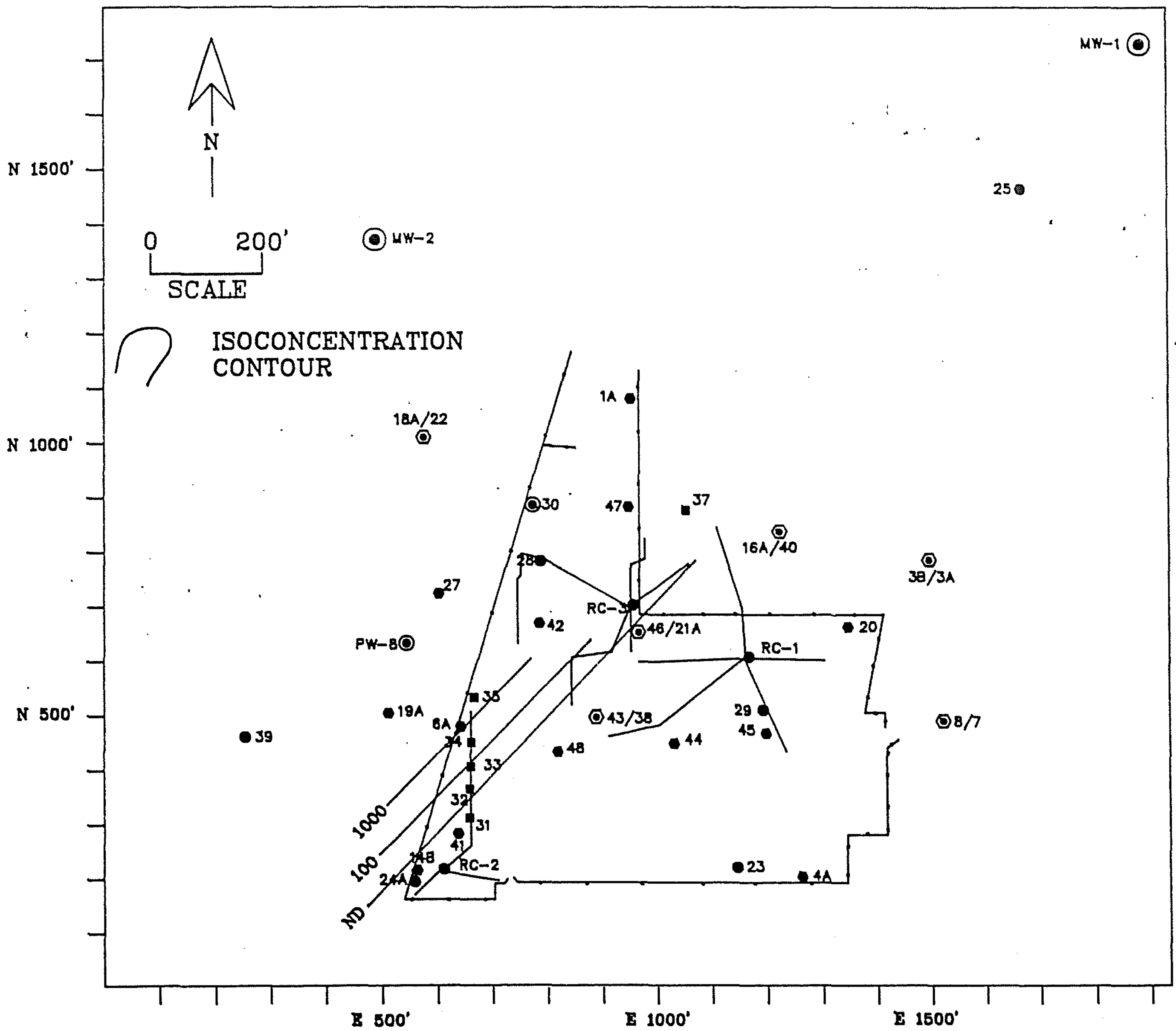
Isoconcentration Maps for Non-BTEX Compounds Detected in the Glacial and Dolomite Aquifers

Glacial Aquifer - Spring, 1990 - Acetone
Glacial Aquifer - Spring, 1990 - 1,2-Dichloroethene (total)
Glacial Aquifer - Spring, 1990 - Carbon Disulfide

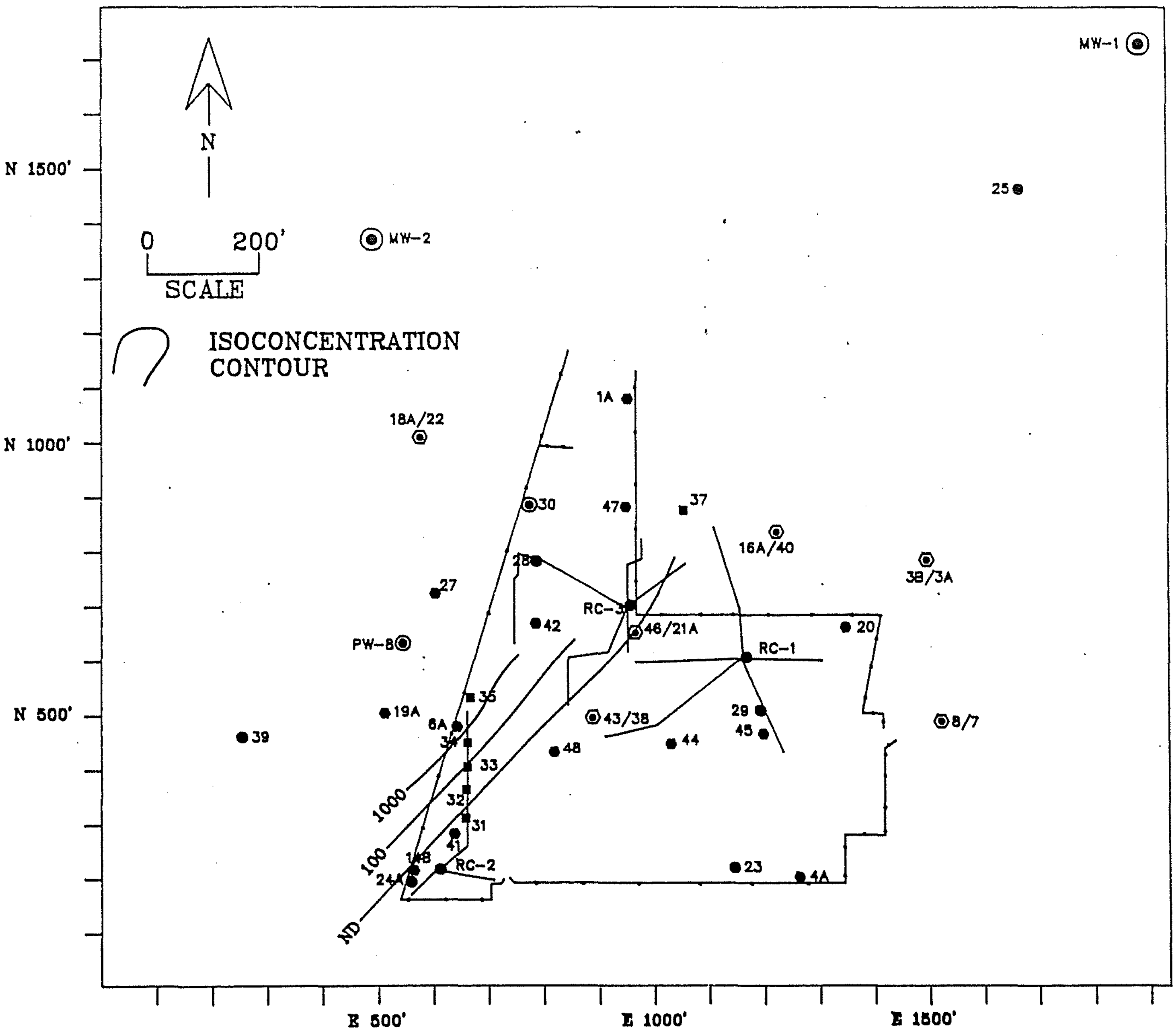
Glacial Aquifer - Summer, 1990 - Tetrachloroethane
Dolomite Aquifer - Summer, 1990 - Carbon Disulfide
Glacial Aquifer - Fall, 1990 - Acetone
Glacial Aquifer - Fall, 1990 - 1,2-Dichloroethene (total)
Glacial Aquifer - Fall, 1990 - 1,2-Dichloroethane
Glacial Aquifer - Fall, 1990 - 2-Butanone
Glacial Aquifer - Fall, 1990 - Trichloroethene
Dolomite Aquifer - Fall, 1990 - 1,2-Dichloroethene (total)

Note: No non-BTEX parameters detected during Winter, 1990

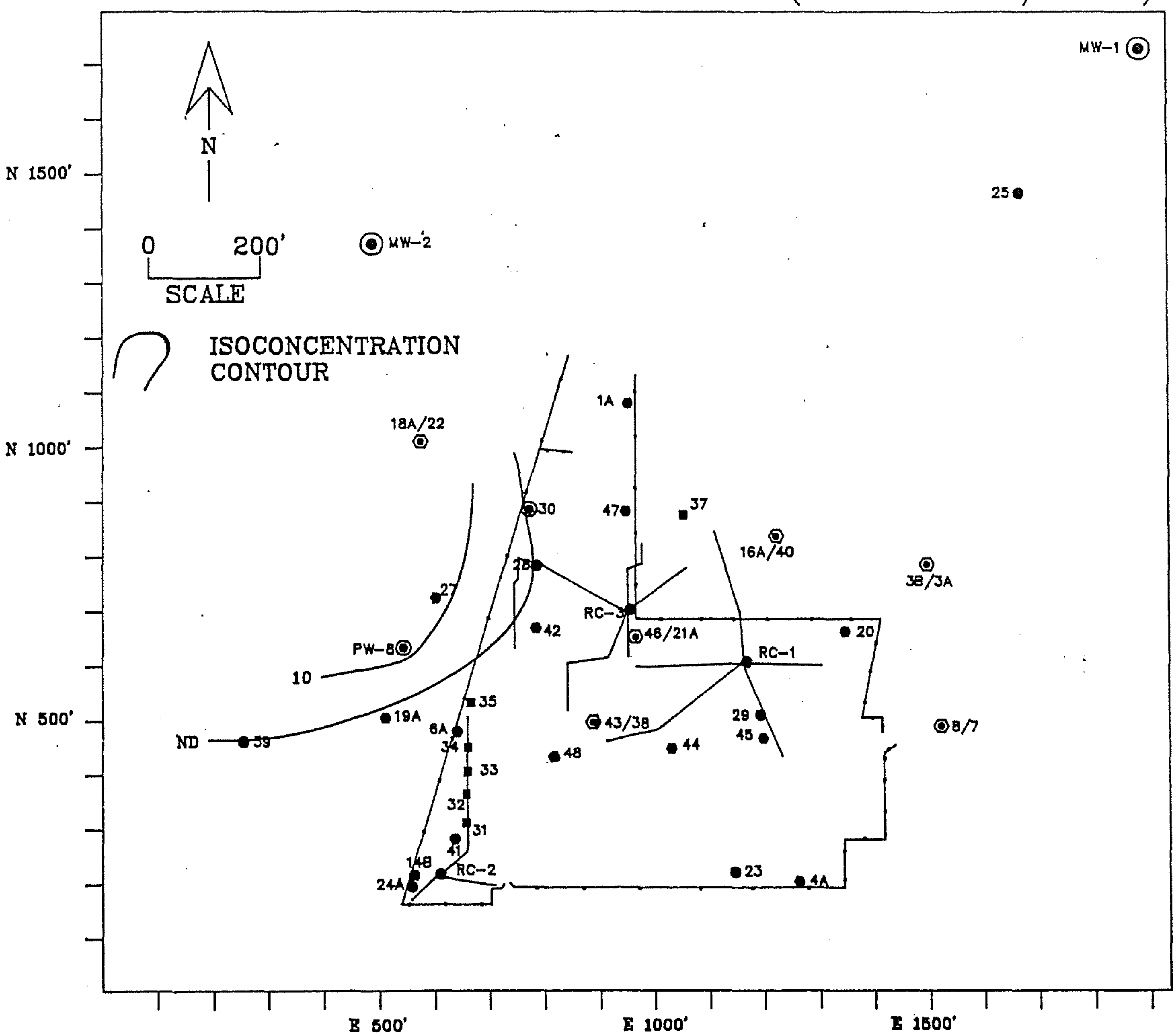
GLACIAL AQUIFER - SPRING 1990
ACETONE CONCENTRATIONS (MICROGRAMS/LITER)



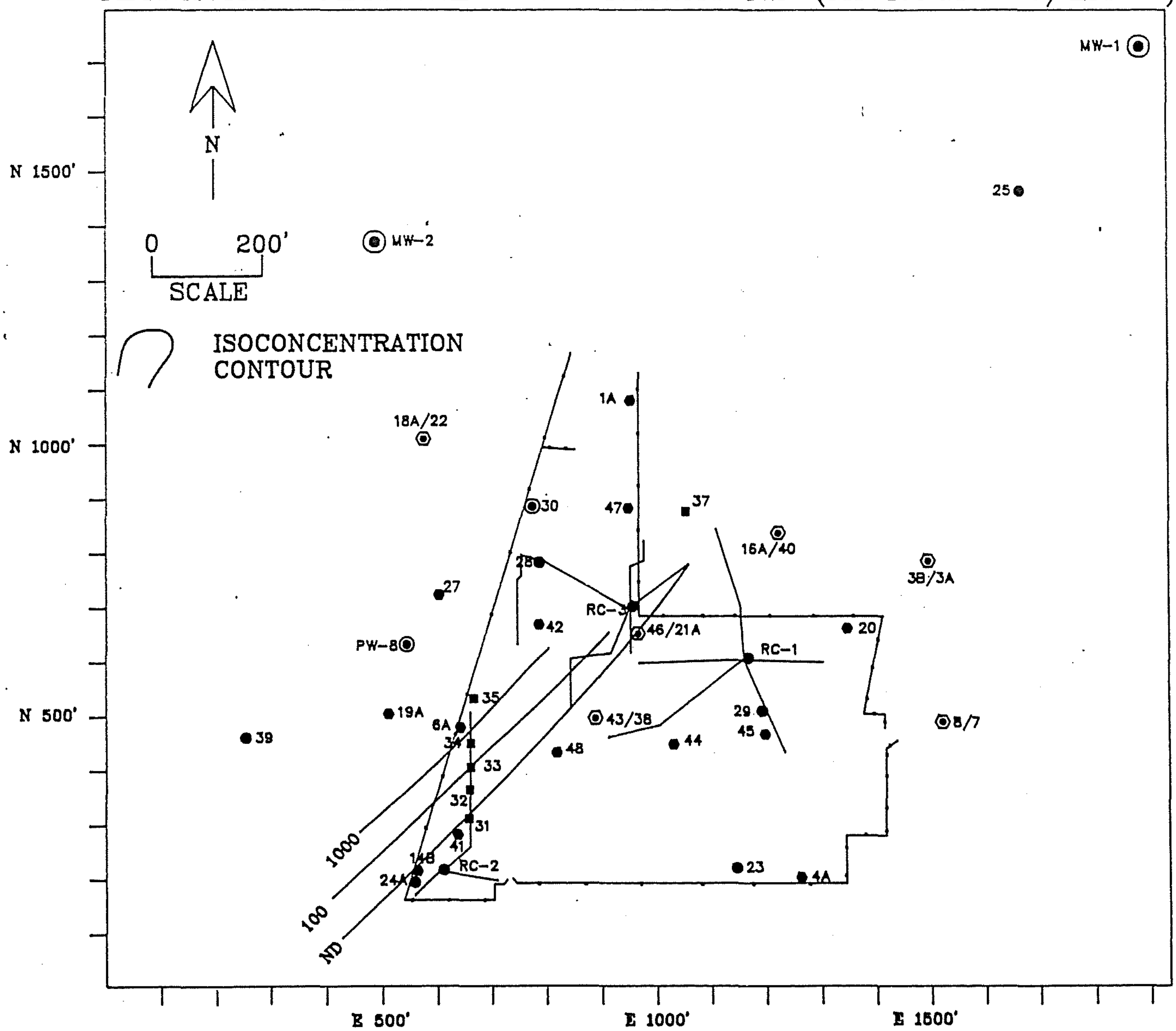
GLACIAL AQUIFER - SPRING 1990
1,2-DICHLOROETHENE (TOTAL) CONCENTRATIONS (MICROGRAMS/LITER)



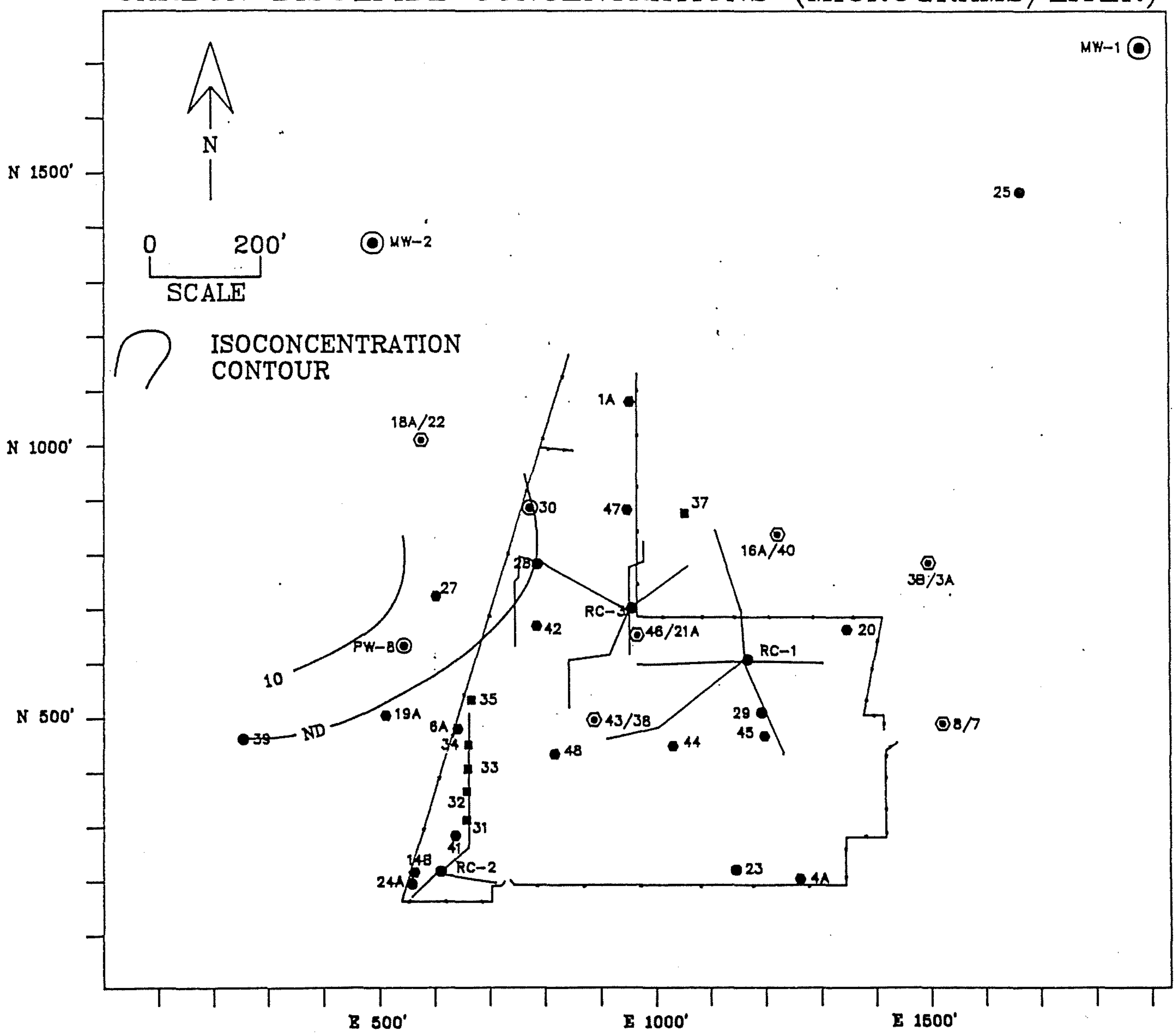
GLACIAL AQUIFER – SPRING 1990
CARBON DISULFIDE CONCENTRATIONS (MICROGRAMS/LITER)



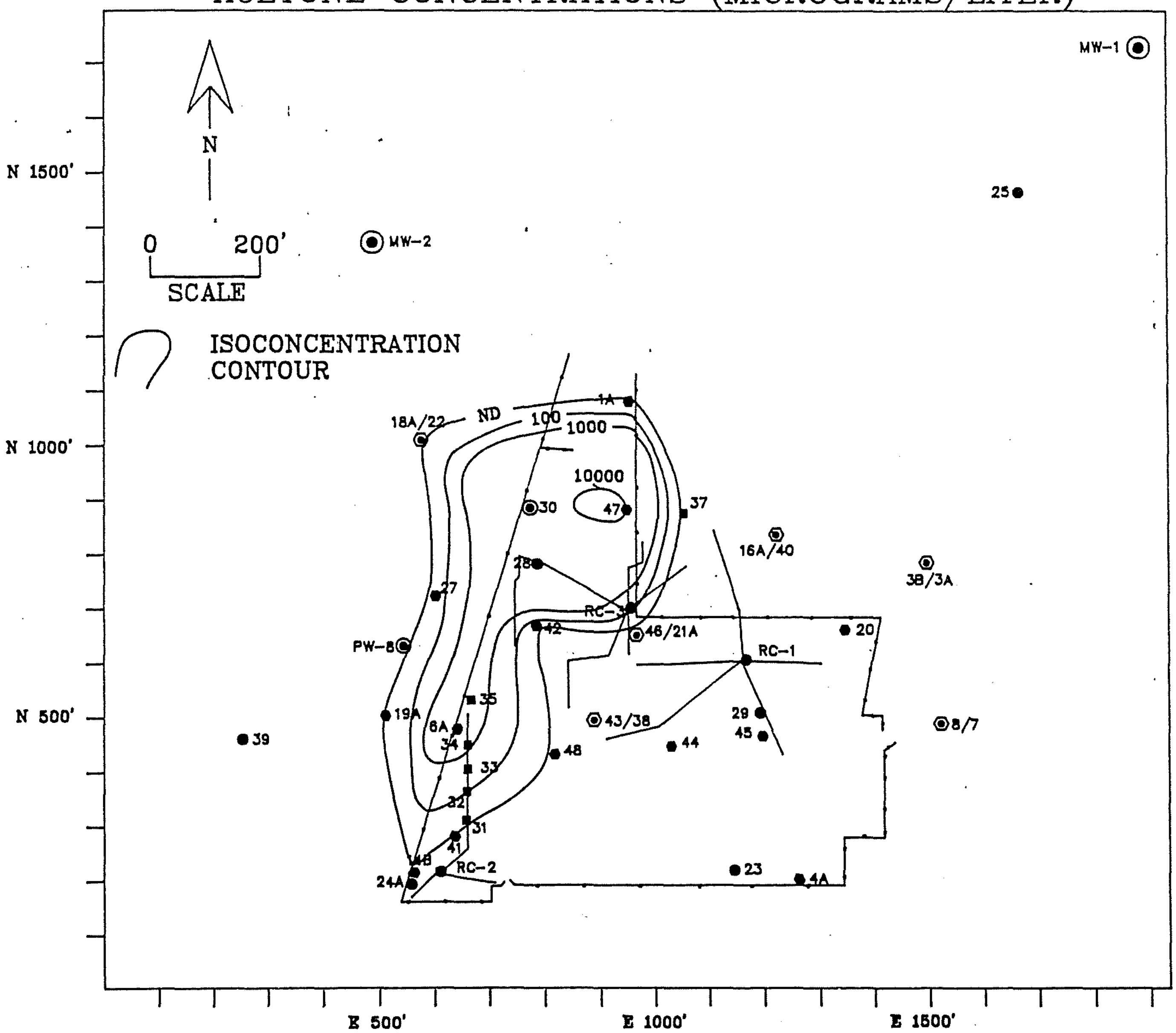
GLACIAL AQUIFER - SUMMER 1990
TETRACHLOROETHENE CONCENTRATIONS (MICROGRAMS/LITER)



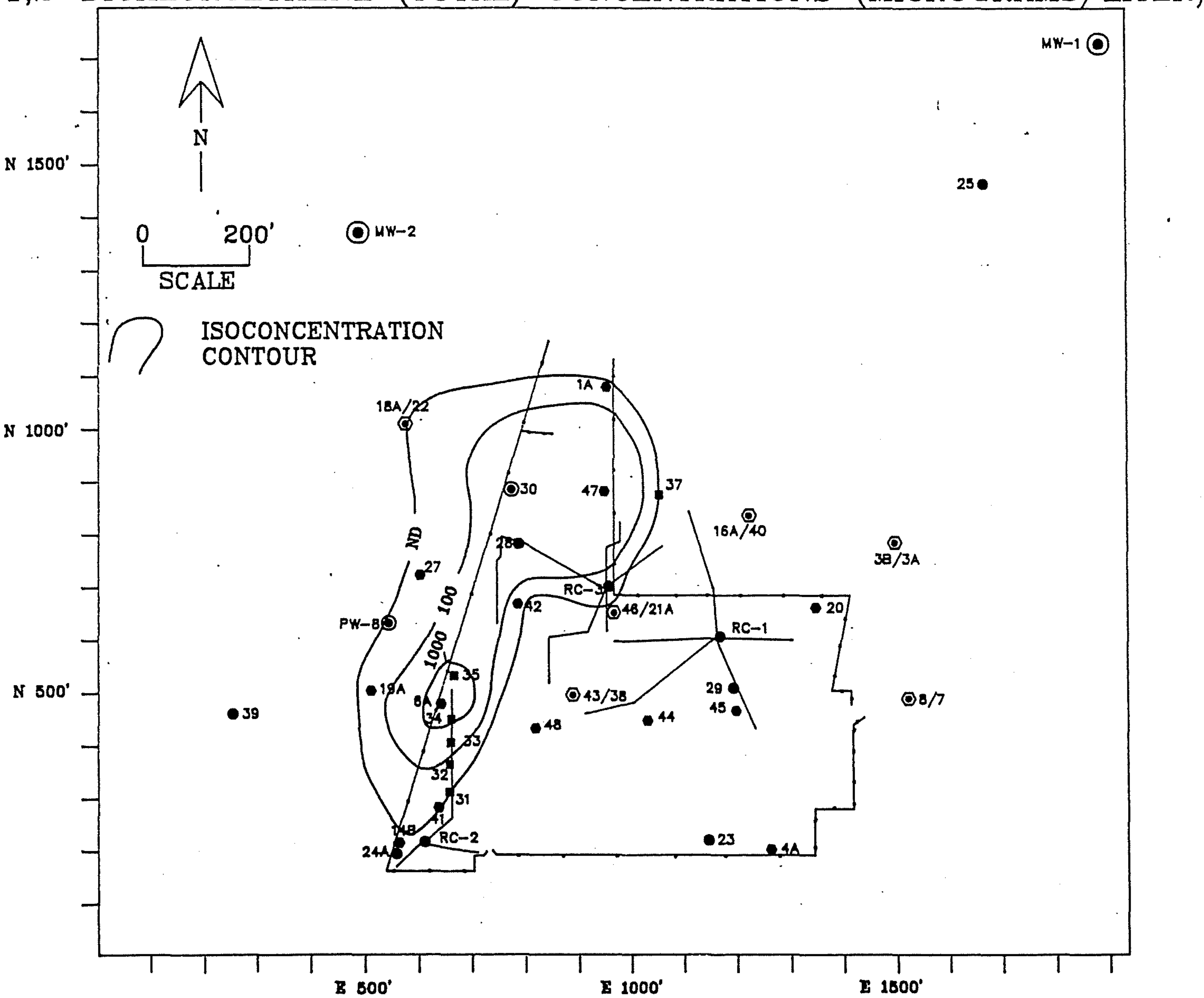
DOLOMITE AQUIFER – SUMMER 1990
CARBON DISULFIDE CONCENTRATIONS (MICROGRAMS/LITER)



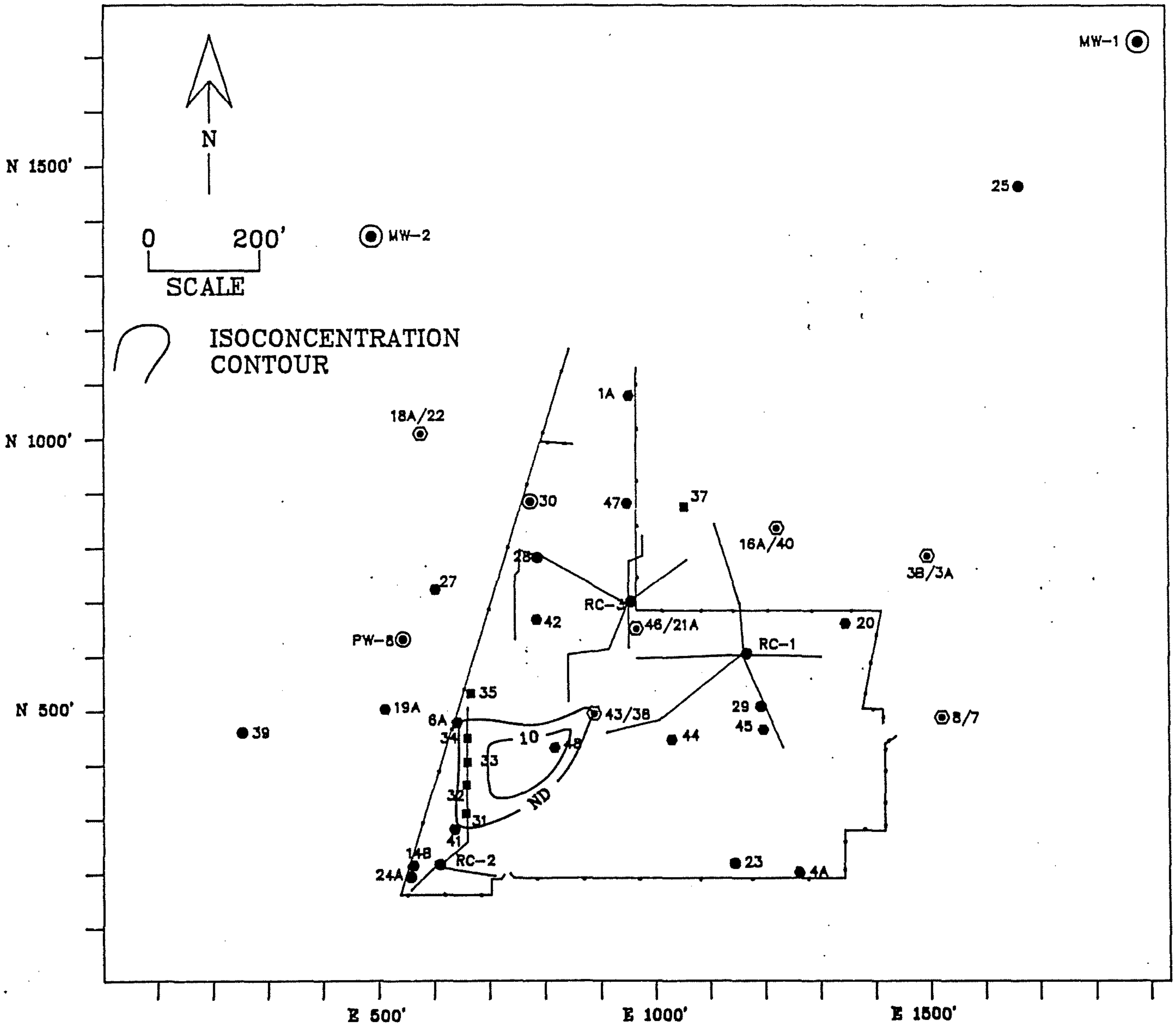
GLACIAL AQUIFER – FALL 1990
ACETONE CONCENTRATIONS (MICROGRAMS/LITER)



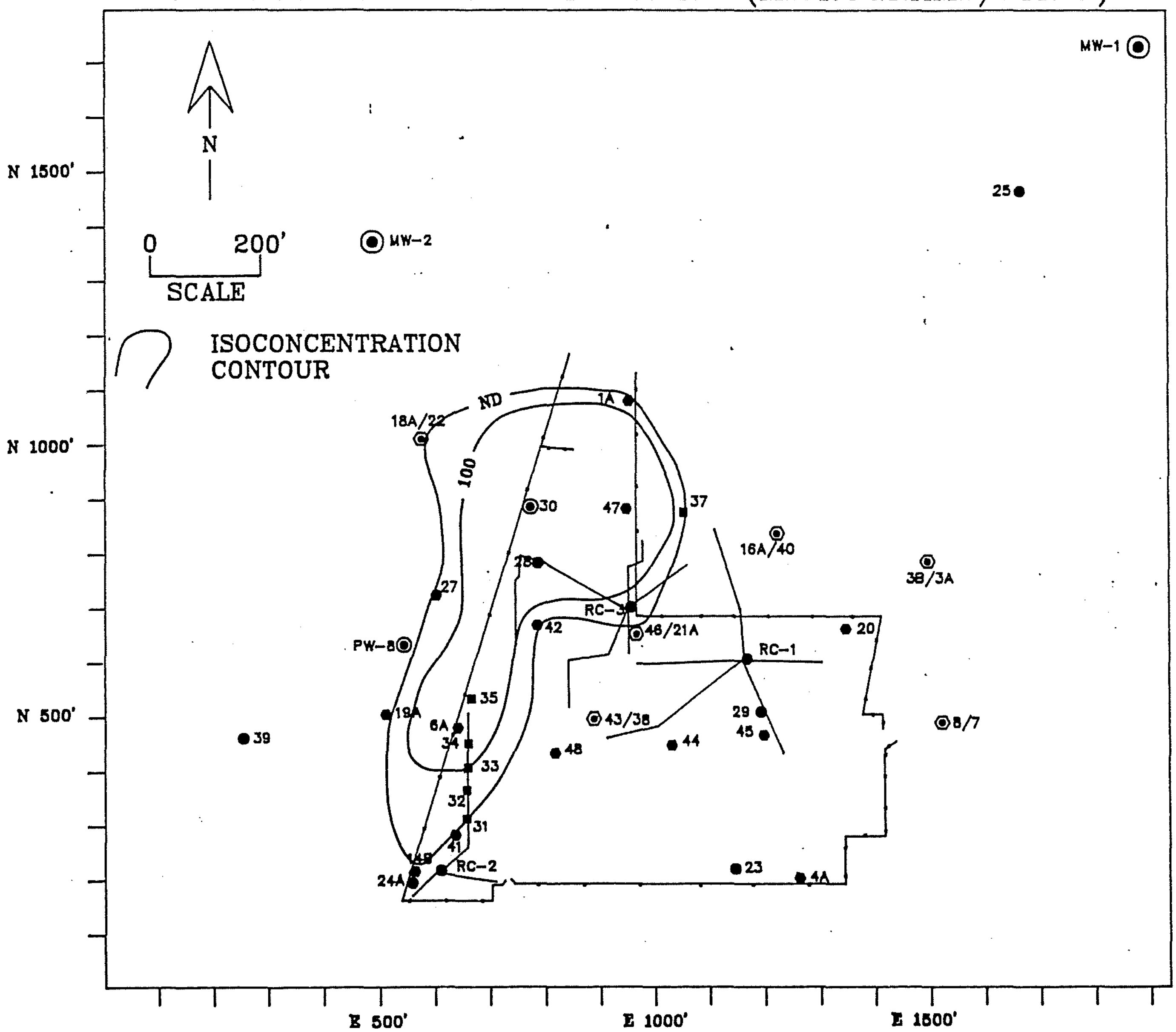
GLACIAL AQUIFER – FALL 1990
1,2-DICHLOROETHENE (TOTAL) CONCENTRATIONS (MICROGRAMS/LITER)



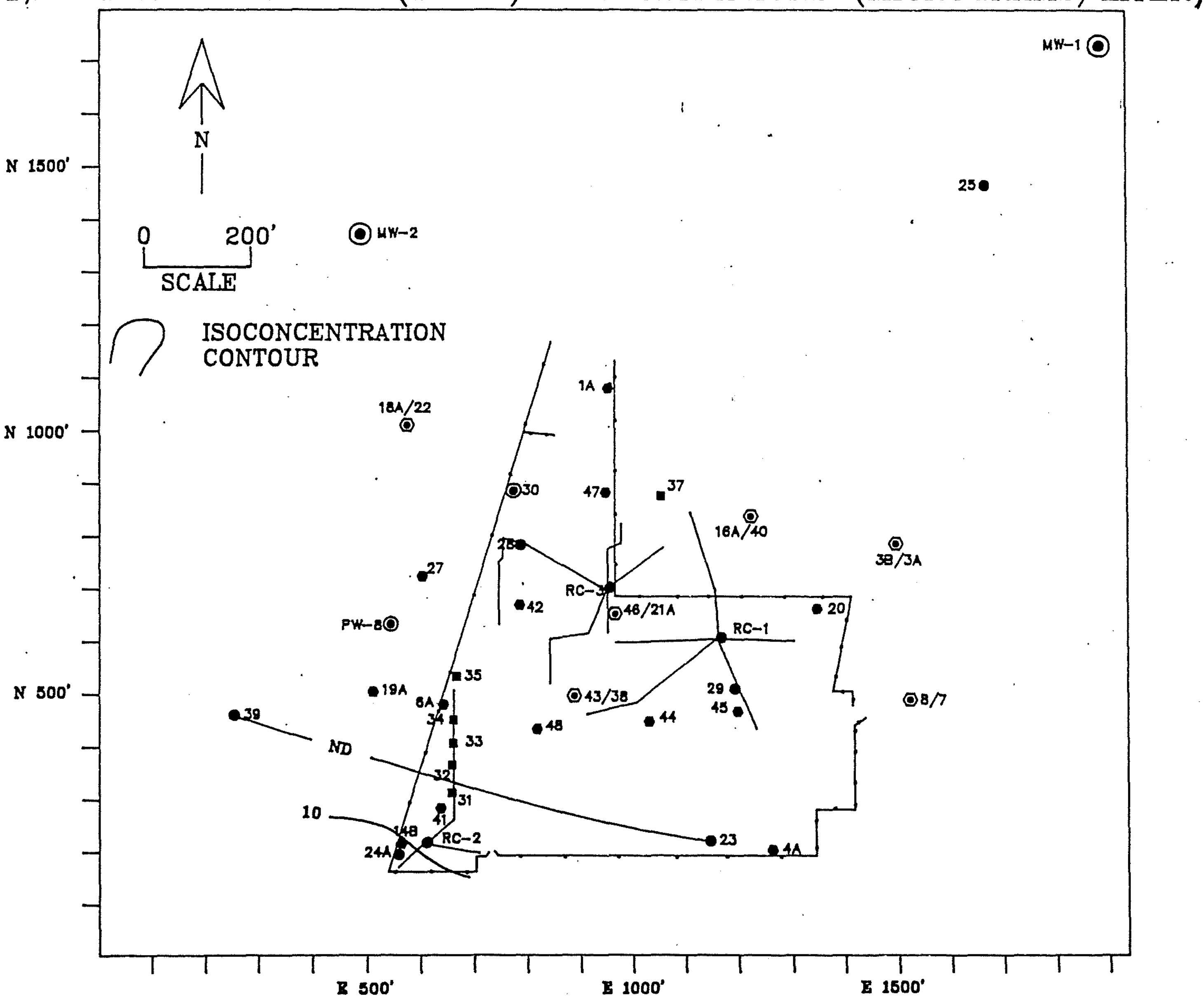
GLACIAL AQUIFER - FALL 1990
1,2-DICHLOROETHANE CONCENTRATIONS (MICROGRAMS/LITER)



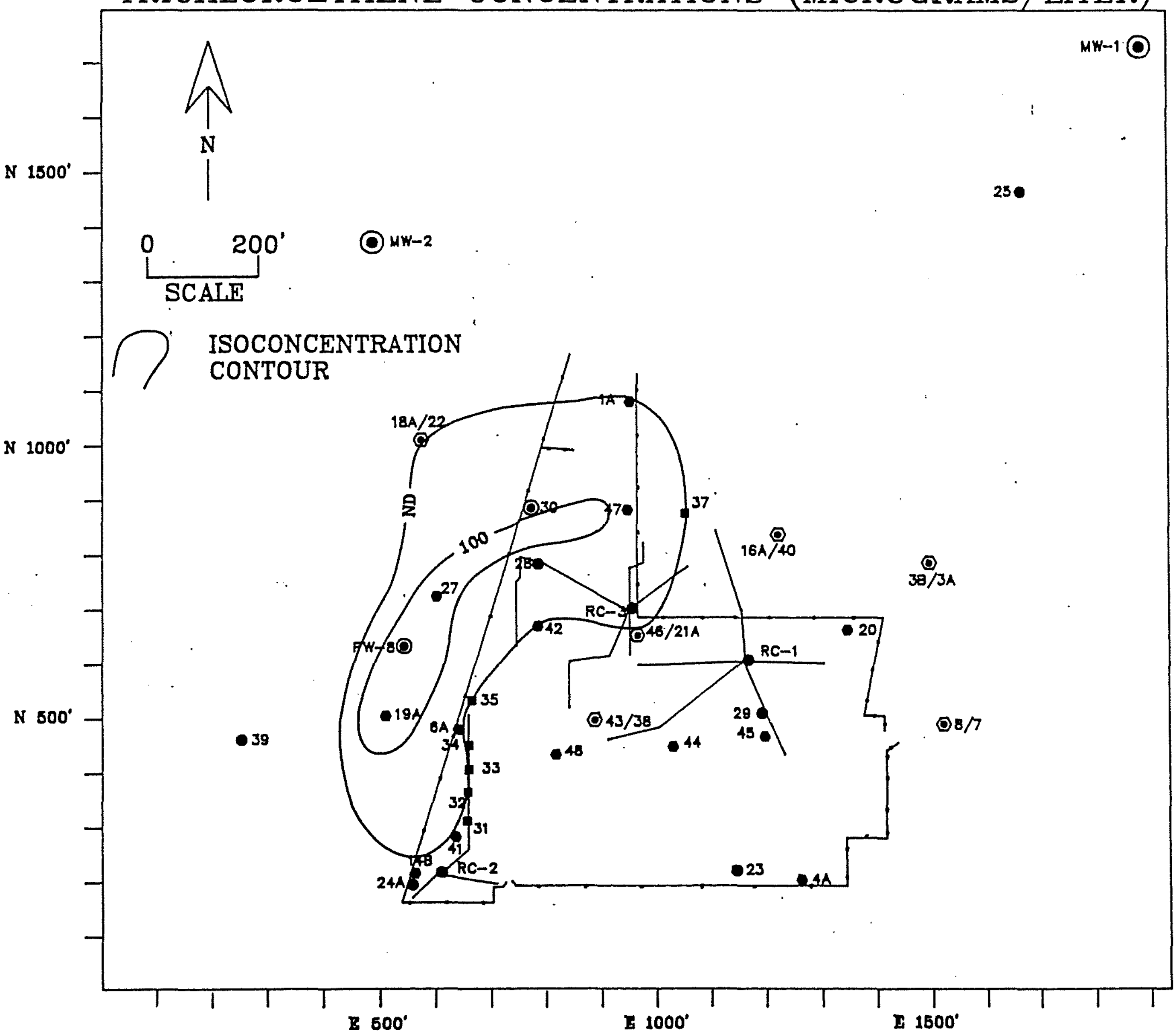
GLACIAL AQUIFER – FALL 1990
2-BUTANONE CONCENTRATIONS (MICROGRAMS/LITER)



DOLOMITE AQUIFER - FALL 1990
1,2-DICHLOROETHENE (TOTAL) CONCENTRATIONS (MICROGRAMS/LITER)



GLACIAL AQUIFER - FALL 1990
TRICHLOROETHENE CONCENTRATIONS (MICROGRAMS/LITER)



APPENDIX F

Monitoring Well Location Map (24 x 36 inch)