

90523

GROUND WATER ASSOCIATES, INC.

321-129

771 Brookside Plaza Drive, Westerville, Ohio 43081 (614) 882-3136

May 14, 1992

Mr. Gregory P. Sutton, P.E.
New York State Department of Environmental
Conservation
600 Delaware Street
Buffalo, New York 14202

RE: Town Well Interceptor Well Discharge Monitoring Summary, Signore, Inc., Ellicottville,
New York - NYSDEC Project No. 905023

Dear Mr. Sutton:

This letter presents a summary of the analytical results from the sampling of the discharge from the Town Well Interceptor Well (TWIW) for the period from April 25, 1991 through January 2, 1992.

The TWIW was installed upgradient of the Town Well as part of the Interim Remedial Measures (IRM) Project conducted by Signore, Inc., Ellicottville, New York. The design of the TWIW and associated pumping and discharge system is described in the October 29, 1990 Plans and Specifications for the Interceptor Well and Pumping System, prepared by Hydro Group, Inc. for Lozier/Ground Water Associates. The technical basis for the TWIW is described in the August 27, 1990 Interceptor Well Assessment Report prepared by Lozier/Ground Water Associates.

The TWIW was installed to capture volatile organic contaminants upgradient of the Town Well to reduce levels of these contaminants in the Town Well to below State standards. As documented in the Interceptor Well Assessment Report, the Town Well has been contaminated by low levels of volatile organic chemicals, with only trichloroethene (TCE) and 1,1,1-trichloroethane (TCA) found at concentrations above New York State Department of Environmental Conservation (NYSDEC) Maximum Contaminant Levels (MCLs).

After installation of the TWIW, the NYSDEC requested that a monitoring plan be developed to measure the concentrations of various volatile organics and metals in the TWIW discharge, which is conveyed to a tributary stream to Great Valley Creek. The NYSDEC surface water discharge limitations for the organics and metals are listed below.

Chloroethane	170 ug/l
1,1-Dichloroethane	30 ug/l
trans-1,2-Dichloroethene	30 ug/l
Tetrachloroethene	40 ug/l
1,1,1-Trichloroethane	20 ug/l
Trichloroethene	11 ug/l
Vinyl Chloride	50 ug/l
Dissolved Aluminum	100 ug/l
Total Chromium	180 ug/l
Total Copper	10 ug/l
Total Iron	300 ug/l
Total Lead	3 ug/l
Total Nickel	86 ug/l
Total Zinc	None

The approved monitoring plan was submitted to the NYSDEC on November 28, 1990. The plan outlined the frequency for the first six months of sampling; two samples per month were to be collected for analyses of TCE, TCA and tetrachloroethene and one sample per month was to be collected for analyses of the other volatiles and metals listed above.

The first TWIW discharge sample was collected by Signore on April 25, 1991. From April 25, 1991 to January 2, 1992, Signore collected thirteen grab samples from the TWIW discharge at the sampling tap in the meter pit, adjacent to the well. All the samples were shipped to Recra Environmental, Inc. in Amherst, New York for analyses; the volatile organics were analyzed by USEPA Method 524.2 and the metals were analyzed by the USEPA 200-series methods. The Recra Environmental laboratory reports for the twelve rounds of samples are presented in Attachment 1.

The dates of the discharge sampling are presented in Table 1. As shown, twice monthly samples were collected from April 25 through June 19, 1991. Problems with the TWIW controls prevented sampling at this frequency during the summer 1991 and only three samples were collected over the four month period from June 19 through October 15, 1991. The problems were corrected and bimonthly sampling was continued from October 15, 1991 through January 2, 1992. Of the thirteen sampling rounds, seven of samples were analyzed for the full list of volatile organics and metals listed above and six of the samples were analyzed only for only TCE, TCA and tetrachloroethene. Each time that a sample was collected, the total gallons pumped were noted, as presented in Table 2. The average pumping rate over the sampling period was 99 to 225 gallons per minute (gpm). However, the pump was not operating full time during the summer 1991 and therefore, the average pumping rate was approximately 160 gpm.

A summary of the discharge sampling analytical results is presented in Table 1, with concentrations expressed in micrograms per liter (ug/l). Additionally, graphical plots of concentration versus time for each of the volatile organics and metals constituents analyzed are presented in Attachment 2. Also shown on these graphs are the NYSDEC MCLs (plotted as "Ground Water Limit") for the volatile organics and the discharge limits (plotted as "Surface Water Discharge Limits") for the metals.

As shown in Table 1 and on the graphs in Attachment 2, none of the volatile organics constituents were detected at a concentration above the NYSDEC surface water discharge limits for the TWIW and only TCE was detected above NYSDEC MCLs for ground water. The concentrations detected and concentration trends for each of the seven volatile organics sampled for are discussed below.

- Chloroethane was not detected in any of the seven samples.
- 1,1-dichloroethane was detected in only three of the seven samples at estimated concentrations ranging from 0.1 to 1.0 ug/l.
- Trans-1,2-dichloroethene was detected in only two of the seven samples at estimated concentrations of 1.0 ug/l.
- Tetrachloroethene was detected in all thirteen samples at estimated concentrations ranging from 0.17 to 1.0 ug/l. As shown on the graph in Attachment 2, the concentrations have remained consistent at about 0.2 ug/l, except for the samples in July and August 1991, at 1.0 ug/l.
- 1,1,1-trichloroethane was detected in all thirteen samples at concentrations ranging from 3.4 to 5.0 ug/l. As shown on the graph in Attachment 2, the concentrations showed a slight decreasing trend from April to October 1991 and then remained constant at 4.0 ug/l through January 1992.
- Trichloroethene was detected in all thirteen samples at concentrations ranging from 4.5 to 6.7 ug/l. As shown on the graph in Attachment 2, the concentrations showed a slight decreasing trend from April to October and then remained constant at 6.0 ug/l through January 1992.
- Vinyl chloride was detected in only one of the seven samples at a concentration of 2 ug/l.

As shown in Table 1 and on the graphs in Attachment 2, three of the seven metals monitored in the TWIW discharge (dissolved aluminum, total copper and total lead) were detected more than once at concentrations above the NYSDEC surface water discharge limits for the TWIW. The concentrations detected and concentration trends for each of the seven metals sampled for are discussed below.

- Dissolved aluminum was detected in only two of the seven sampling rounds at concentrations of 110 ug/l. These two sampling results were above the surface water discharge limit of 100 ug/l.
- Total chromium was detected in only one of the seven samples at 29 ug/l, well below the surface water discharge limit of 180 ug/l.
- Total copper was detected in six of the seven samples at concentrations ranging from 9.0 to 16 ug/l, except for the October 30, 1991 sample at 910 ug/l. As shown on the graph in Attachment 2, the concentrations were consistently slightly above or below the surface water discharge limit of 10 ug/l.
- Total iron was detected in four of the seven samples at concentrations ranging from 31 to 460 ug/l. As shown on the graph in Attachment 2, all the concentrations except for the January 2, 1992 sample at 460 ug/l were below the surface water discharge limit of 300 ug/l.
- Total lead was detected in six of the seven samples at concentrations ranging from 3.0 to 33 ug/l, all equal to or above the surface water discharge limit of 3 ug/l. As shown on the graph in Attachment 2, there is a decreasing concentration trend from the highest measured concentration in the April 25, 1991 sample of 33 ug/l to constant concentrations of 3.0 to 6.0 ug/l in the samples from July 1991 through January 1992.
- Total nickel was not detected in any of the seven samples.
- Total zinc was detected all seven samples at concentrations ranging from 26 to 290 ug/l. As shown on the graph in Attachment 2, the concentrations ranged from 26 to 90 ug/l in the samples from April to September 1991 and then increased to 290 and 180 ug/l in the October and December 1991 samples.

Mr. Gregory P. Sutton, P.E.
NYSDEC
Buffalo, New York

Page Five

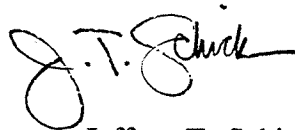
May 14, 1992

The initial thirteen samples collected from the TWIW discharge provide a satisfactory baseline to compare future sampling with. As stated above, none of the volatile organics were detected above the NYSDEC surface water discharge limits for the TWIW. The volatile organics do not show any increasing trends and TCE and TCA, the constituents of concern, have been fairly constant at 6.0 and 4.0 ug/l, respectively. Therefore, we propose that the monitoring frequency for sampling the TWIW discharge be changed to quarterly sampling for TCE and TCA and semi-annual sampling for the other volatile organics and metals listed above. A detailed monitoring plan is currently being prepared to monitor the effectiveness of the Signore corrective actions. This plan will include sampling of discharges from the TWIW and the On-Site Interceptor Well and sampling of ground water from on-site and off-site monitoring wells, the far downgradient domestic wells (Burleson and Germain), the School wells and the Town Well.

If you have any questions or comments regarding this transmittal, please call.

Sincerely,

GROUND WATER ASSOCIATES, INC.



Jeffrey T. Schick
Project Manager

JTS:sd
Attachments 1 & 2

cc: Mr. Gary Beck - Cattaraugus County Dept. of Health
Mr. Cameron O'Connor - NYSDOH
Mr. James Fitzpatrick - Signore, Inc.

RECEIVED

MAY 18 1992

ENVIRONMENTAL
SERVATION

TABLE 1
DISCHARGE SAMPLING RESULTS
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE IRM PROJECT
ELLCOTTVILLE, NEW YORK

	Discharge Limit	04/25/91	05/06/91	05/20/91	06/04/91	06/19/91	07/23/91	08/05/91
	-----	-----	-----	-----	-----	-----	-----	-----
Chloroethane	170	--	ND	--	ND	--	ND	ND
1,1-Dichloroethane	30	--	ND	--	ND	--	1.0 J	1.0 J
trans-1,2-Dichloroethene	30	--	1.0 J	--	ND	--	ND	1.0 J
Tetrachloroethene	40	0.23 J	0.22 J	0.24 J	0.19 J	0.29 J	1.0 J	1.0 J
1,1,1-Trichloroethane	20	4.3	4.1	4.6	3.5	4.2	4.0	4.2
Trichloroethene	11	6.7	6.0	6.3	4.5	6.5	5.6	5.9
Vinyl Chloride	50	--	ND	--	ND	--	2.0	ND
Aluminum, dissolved	100	--	ND	--	110	--	ND	130
Chromium, total	180	--	ND	--	29	--	ND	ND
Copper, total	10	--	10	--	9.0	--	ND	16 B
Iron, total	300	--	130	--	ND	--	31 B	240
Lead, total	3	--	33	--	14	--	4.0 B	3.0 B
Nickel, total	86	--	ND	--	ND	--	ND	ND
Zinc, total	--	--	90	--	26	--	36	71

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Notes: all concentrations in micrograms per liter
-- indicates not analyzed for this constituent
ND indicates constituent not detected
J indicates concentration estimated below quantitation limit
B indicates constituent detected in the method blank

TABLE 1
DISCHARGE SAMPLING RESULTS
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE IRM PROJECT
ELLICOTTVILLE, NEW YORK

	Discharge Limit	09/30/91	10/15/91	10/30/91	11/21/91	12/10/91	01/02/92
	-----	-----	-----	-----	-----	-----	-----
Chloroethane	170	ND	--	ND	--	ND	--
1,1-Dichloroethane	30	ND	--	ND	--	0.10 J	--
trans-1,2-Dichloroethene	30	ND	--	ND	--	ND	--
Tetrachloroethene	40	0.17 J	0.20	0.20 J	0.30 J	0.20 J	0.20
1,1,1-Trichloroethane	20	3.4	3.4	4.0	5.0	4.0 B	4.0
Trichloroethene	11	4.9 B	5.0 B	6.0	6.0	6.0	6.0
Vinyl Chloride	50	ND	--	ND	--	ND	--
Aluminum, dissolved	100	ND	--	ND	--	ND	--
Chromium, total	180	ND	--	ND	--	ND	--
Copper, total	10	13	--	910	--	12	--
Iron, total	300	ND	--	ND	--	460	--
Lead, total	3	5.0	--	ND	--	6.0	--
Nickel, total	86	ND	--	ND	--	ND	--
Zinc, total	--	41	--	290	--	180	--

Notes: all concentrations in micrograms per liter
-- indicates not analyzed for this constituent
ND indicates constituent not detected
J indicates concentration estimated below quantitation limit
B indicates constituent detected in the method blank

TABLE 2

TOWN WELL INTERCEPTOR WELL DISCHARGE MONITORING

SIGNORE IRM - ELLICOTTVILLE, NEW YORK

Sample Date	Sample Time	Meter Reading	Gallons Pumped	Ave GPM
04/25/91	11:00	---	---	-
05/06/91	15:00	---	---	-
05/20/91	09:30	---	---	-
06/04/91	09:00	18,330,700	---	-
06/19/91	13:20	23,032,300	4,701,600	215
07/23/91	09:45	28,494,500	5,462,200	112
08/05/91	11:00	32,718,500	4,224,000	225
09/30/91	10:30	40,661,200	7,942,700	99
10/15/91	08:45	43,853,100	3,191,900	148
10/30/91	08:45	47,146,600	3,293,500	152
11/21/91	11:30	51,783,400	4,636,800	146
12/10/91	12:00	56,142,000	4,358,600	159
01/02/92	10:30	61,488,200	5,346,200	162

ATTACHMENT 1

RECRA ENVIRONMENTAL LABORATORY REPORTS



RECEIVED MAY 31 1991

World
University
Games
Buffalo
1993
GRAND PATRON
HELPING TO BRING THE
WORLD TO BUFFALO

RECRA ENVIRONMENTAL, INC.

May 15, 1991

Chemical Waste Analysis, Prevention and Control

Mr. Fletcher Ward
Signore Incorporated
43 Jefferson St.
Ellicottville, NY 14731

Re: Analytical Results

Dear Mr. Ward:

Please find enclosed results concerning the analysis of the sample recently submitted by your firm. The Pertinent Information regarding this analysis is listed below:

Quote #: NY91-488
Matrix: Aqueous
Sample Received: 4/26/91
Sample Date: 4/25/91

If you have any questions concerning this data, please contact Mr. Robert Kissel, Project Manager at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Signore Incorporated with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Deborah J. Kinecki
Deborah J. Kinecki
Vice President
New York Environmental
Testing Operations

NW/DJK/TLK
Enclosure

I.D. #91-1074
#NY1A3361

ANALYTICAL RESULTS

Prepared For

Signore Incorporated
43 Jefferson Street
Ellicottville, New York 14731

Prepared By

Recra Environmental, Inc.
10 Hazelwood Drive, Suite 106
Amherst, New York 14228-2298

METHODOLOGIES

Method 524.2 was performed in accordance with United States Environmental Protection Agency protocol 600/4-88/039.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing standard qualifers as defined on the Organic Data Comment Page.

As per client request, no Quality Control information in the form of Matrix Spike/Matrix Spike Duplicate has been provided.

2

ORGANIC DATA COMMENT PAGE

Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Organic Data Qualifiers:

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G - Matrix Spike percent recovery is greater than the expected upper limit of analytical performance (>100%).
- L - Matrix Spike percent recovery is less than the expected lower limit of analytical performance.

AQUEOUS MATRIX
SELECTED METHOD 524.2

COMPOUND (Units of Measure = ug/l)	SAMPLE IDENTIFICATION (DATE)			
	Interceptor Well (4/25/91)	Q	VBLK36 **	Q
Tetrachloroethene	0.23	J	1.0	U
1,1,1-Trichloroethane	4.3	*	1.0	U
1,1,2-Trichloroethane	1.0	U	1.0	U
Trichloroethylene	6.7	.	1.0	U
Analysis Date	5/3/91		5/3/91	
Internal Standards				
Level Added = 50 ug/l				
(% Recovery)				
1,4-Difluorobenzene	88		90	
Chlorobenzene-D ₅	92		91	
Surrogates				
Level Added = 50 ug/l				
(% Recovery)				
4-Bromofluorobenzene	100		97	
1,2-Dichlorobenzene-D ₄	88		89	

* Chromatographically, 1,1,1-Trichloroethane and 1,1,2-Trichloroethane coelute.

** VBLK = Volatile Method Blank.

RECRA ENVIRONMENTAL, INC.

CHAIN OF CUSTODY RECORD

4

PROJECT NO.:			SITE NAME: <i>SIGNORE, INC.</i>		NO. OF CON. TAINERS	REMARKS										
SAMPLERS (SIGNATURE): <i>Stephen C. Card</i>																
STATION NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION											
	<i>1/25</i>	<i>11 AM</i>		<i>X</i>	<i>INTERCEPTOR WELL</i>	<i>4</i>										
RELINQUISHED BY (SIGNATURE): <i>FRENCH E. Card</i>		DATE/TIME: <i>1/25/11 11:00</i>		RECEIVED BY (SIGNATURE): <i>J. Wheeler</i>			DATE/TIME:		RELINQUISHED BY (SIGNATURE):		DATE/TIME:		RECEIVED BY (SIGNATURE):			
RELINQUISHED BY (SIGNATURE):		DATE/TIME:		RELINQUISHED BY (SIGNATURE):			DATE/TIME:		RELINQUISHED BY (SIGNATURE):		DATE/TIME:		RECEIVED BY (SIGNATURE):			
RELINQUISHED BY (SIGNATURE):		DATE/TIME:		RECEIVED FOR LABORATORY BY (SIGNATURE): <i>Stephen C. Card</i>			DATE/TIME:		RELINQUISHED BY (SIGNATURE):		DATE/TIME:		RECEIVED BY (SIGNATURE):		REMARKS: <i>4/26/11 SD</i>	

Distribution Original accompanies shipment copy to environmental field lab's



18601.0

RECRA ENVIRONMENTAL, INC.

Chemical and Environmental Analysis Services

RECEIVED JUN 14 1991

World
University
Games
Buffalo
1993
GRAND PATRON
HELPING TO BRING THE
WORLD TO BUFFALO

June 12, 1991

Mr. Fletcher Ward
Signore Incorporated
43 Jefferson St.
Elicottville, NY 14731

Re: Analytical Results

Dear Mr. Ward:

Please find enclosed results concerning the analyses of the sample recently submitted by your firm. The Pertinent Information regarding these analyses is listed below:

Quote #: NY91-488R
Project Name: Interceptor Well
Matrix: Aqueous
Sample Received: 5/7/91
Sample Date: 5/6/91

If you have any questions concerning these data, please contact Mr. Robert Kissel, Project Manager at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Signore Incorporated with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Deborah J. Kinecki

Deborah J. Kinecki
Vice President
New York Environmental
Testing Operations

DJK/DJK/tlk
Enclosure

cc: Mr. Jeffrey Schick
Groundwater Associates, Inc.
771 Brooside Plaza Drive
Westerville, OH 43081

I.D. #91-1179
#91-1179A
#NY1A3361

18601.1

ANALYTICAL RESULTS

Prepared For

Signore Incorporated
43 Jefferson St.
Elicottville, NY 14731

Prepared By

Recra Environmental, Inc.
10 Hazelwood Drive, Suite 106
Amherst, New York 14228-2298

METHODOLOGIES

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data table. The method numbers presented refer to one of the following U.S. Environmental Protection Agency references.

- o 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" October 24, 1984 (Federal Register) U.S. Environmental Protection Agency.

Volatile analyses were performed in accordance with the method 524.2 USEPA/600/4-881039 December 1988, "Methods for the Determination of Organic Compounds in Drinking Water."

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing standard qualifiers as defined on the Organic and Inorganic Data Comment Pages.

Quality control results were performed on a batch basis all reports were within acceptable limits.



ORGANIC DATA COMMENT PAGE

Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Organic Data Qualifiers:

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G - Matrix Spike percent recovery is greater than the expected upper limit of analytical performance (>100%).
- L - Matrix Spike percent recovery is less than the expected lower limit of analytical performance.



INORGANIC DATA COMMENT PAGE

Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Inorganic Data Qualifiers:

- B - Indicates a value greater than or equal to the instrument detection limit but less than the contract required detection limit.
- U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 100).
- E - Indicates a value estimated or not reported due to the presence of interference.
- S - Indicates value determined by Method of Standard Addition.
- N - Indicates spike sample recovery is not within control limits.
- * - Indicates duplicate analysis is not within control limits.
- + - Indicates the correlation coefficient for method of standard addition is less than 0.995.
- M - Indicates duplicate injection results exceeded control limits.
- W - Post digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.
- L - Matrix spike percent recovery is less than the expected lower limit of analytical performance.
- G - Matrix spike percent recovery is greater than the expected upper limit of analytical performance (>100%).



AQUEOUS MATRIX
METHOD 524.2 - VOLATILE ORGANICS

COMPOUND (Units of Measure = ug/l)	SAMPLE IDENTIFICATION (DATE)			
	Interceptor Well (5/6/91)	Q	VBLK37 *	Q
Chloroethane	2.0	U	2.0	U
1,1-transdichloroethane	1.0	U	1.0	U
trans-1,2-Dichloroethene	1.0	J	1.0	U
Tetrachloroethene	0.22	J	1.0	U
1,1,1-Trichloroethane	4.1		1.0	U
Trichloroethane	1.0	U	1.0	U
Vinyl Chloride	2.0	U	2.0	U
Trichloroethene	6.0		1.0	U
Analysis Date	5/8/91		5/8/91	
<u>Internal Standards</u>				
Level Added = 50 ug/l				
(% Recovery)				
1,4-Difluorobenzene-D ₄	103		102	
Chlorobenzene-D ₅	101		104	
<u>Surrogates</u>				
Level Added = 50 ug/l				
(% Recovery)				
4-Bromofluorobenzene	83		86	
1,2-Dichlorobenzene-D ₄	96		96	

* VBLK = Volatile Method Blank.

I.D. #91-1179



SIGNORE INCORPORATED
 AQUEOUS MATRIX
 TOTAL METALS

5

LAB NAME RECRA ENVIRONMENTAL INC.
 JC NO. 91-1179
 DESC INTERCEPTOR WELL
 SAMPLE NO. INTER. WELL

SAMPLE DATE 05/06/91

COMPOUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	200.7	05/09/91	0.01	U
Total Copper	MG/L	200.7	05/09/91	0.01	
Total Iron	MG/L	200.7	05/09/91	0.13	
Total Lead	MG/L	239.2	05/09/91	0.033	
Total Nickel	MG/L	200.7	05/09/91	0.02	U
Total Zinc	MG/L	200.7	05/09/91	0.09	

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SIGNORE INCORPORATED
AQUEOUS MATRIX
TOTAL METALS

6

LAB NAME RECRA ENVIRONMENTAL INC.
JC 3 NO. 91-1179

SAMPLE NO. METHOD BLANK

COMPOUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	200.7	05/09/91	0.01	U
Total Copper	MG/L	200.7	05/09/91	0.005	U
Total Iron	MG/L	200.7	05/09/91	0.02	U
Total Lead	MG/L	239.2	05/09/91	0.003	U
Total Nickel	MG/L	200.7	05/09/91	0.02	U
Total Zinc	MG/L	200.7	05/09/91	0.005	U

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SIGNORE INCORPORATED
AQUEOUS MATRIX
SOLUBLE METALS

7

LAB NAME RECRA ENVIRONMENTAL INC.
JO. NO. 91-1179
DE C INTERCEPTOR WELL
SAMPLE NO. INTER. WELL

SAMPLE DATE 05/06/91

COMPOUND (Units of Measure = MG/L)	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
sol ble Aluminum	202.1	05/13/91	0.1	U

146

RECRA ENVIRONMENTAL, INC.

CHAIN OF CUSTODY RECORD

5 PX

PROJECT NO.:		SITE NAME:		STATION LOCATION		NO. OF CON. TAINERS		REMARKS	
SAMPLERS (SIGNATURE): <i>D. Wheeler</i>		SIGNORE INTERCEPTOR		INTERCEPTOR CELL		1		NOT FILTERED No PRESERVATION	
STATION NO.	DATE	TIME	COMP.	GRAB					
	5-8	3pm		X					
1 L BOTTLE									
RELINQUISHED BY (SIGNATURE): <i>D. Wheeler</i>		DATE / TIME		RECEIVED BY (SIGNATURE):		DATE / TIME		RECEIVED BY (SIGNATURE):	
		5/9/91 1645							
RELINQUISHED BY (SIGNATURE):		DATE / TIME		RECEIVED BY (SIGNATURE):		DATE / TIME		RECEIVED BY (SIGNATURE):	
RELINQUISHED BY (SIGNATURE):		DATE / TIME		RECEIVED FOR LABORATORY BY (SIGNATURE):		DATE / TIME		REMARKS:	
				<i>D. Wheeler</i>		5/9/91 1645			

Field log!

Distribution Original accompanies shipment copy to Landwater Field files



RECRA ENVIRONMENTAL, INC.

Chemical and Environmental Analysis Services

July 8, 1991

Mr. Jeffrey Schick
Groundwater Associates, Inc.
771 Brookside Plaza Drive
Westerville, OH 43081

Re: Analytical Results

Dear Mr. Schick:

Please find enclosed the revised results concerning the analyses of the sample recently submitted by your firm. Preliminary results were sent via facsimile transmission to Signore, Inc. personnel on June 13, 1991. The Pertinent Information regarding these analyses is listed below:

Quote #:	NY91-488R
Project Name:	Interceptor Well
Matrix:	Aqueous
Sample Received:	5/21/91
Sample Date:	5/20/91

If you have any questions concerning these data, please contact Mr. Jeffrey Radin, Project Manager at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Signore, Inc. with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Deborah J. Kinecki
Vice President
New York Environmental
Testing Operations

NW/DJK/tlk
Enclosure
cc: Mr. Fletcher Ward
Signore, Inc.
43 Jefferson Street
Ellicottville, NY 14731

I.D. #91-1368 Revised
#NY1A3361

18765.1

ANALYTICAL RESULTS

Prepared For

Signore, Inc.
43 Jefferson St.
Ellicottville, NY 14731

Prepared By

Recra Environmental, Inc.
10 Hazelwood Drive, Suite 106
Amherst, New York 14228-2298

METHODOLOGIES

The specific methodology employed in obtaining the enclosed analytical results is indicated on the specific data table. The method number presented refers to the following U.S. Environmental Protection Agency reference.

- o Methods for the Determination of Organic Compounds in Drinking Water, EPA/600/4-88/039, December 1988, Revision 3.0, 1989.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing standard qualifiers as defined on the Organic Data Comment Page.

Quality control analyses were performed on a batch basis. All results were within acceptable limits.

Preliminary results were sent via facsimile transmission to Mr. Fletcher Ward of Signore, Inc. by Ms. Verl Preston of Recra Environmental, Inc. on June 13, 1991.



GROUNDWATER ASSOCIATES, INC.
AQUEOUS MATRIX
SELECTED METHOD 524.2

COMPOUND (Units of Measure = ug/l)	SAMPLE IDENTIFICATION (DATE)			
	Interceptor Well (5/20/91)	Q	VBLK50 *	Q
Tetrachloroethene	0.24	J	1.0	U
1,1,1-Trichloroethane	4.6		1.0	U
1,1,2-Trichloroethane	1.0	U	1.0	U
Trichloroethylene	6.3		1.0	U
Analysis Date Internal Standards Level Added = 50 ug/l (% Recovery) Fluorobenzene	99		101	
Surrogates Level Added = 50 ug/l (% Recovery) 4-Bromofluorobenzene 1,2-Dichloroethane-D ₄	89 93		82 90	

* VBLK = Volatile Method Blank.



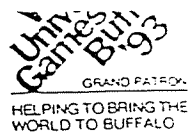
I.D. #91-1368



RECRA ENVIRONMENTAL, INC.

Chemical and Environmental Analysis Services

RECEIVED AUG 14 1991



July 3, 1991

Mr. Fletcher Ward
Signore, Inc.
43 Jefferson St.
Ellicottville, NY 14731

Re: Analytical Results

Dear Mr. Ward:

Please find enclosed results concerning the analyses of the sample recently submitted by your firm. The Pertinent Information regarding these analyses is listed below:

Quote #: NY91-488R
Project Name: Interceptor Well
Matrix: Aqueous
Sample Received: 6/5/91
Sample Date: 6/4/91

If you have any questions concerning these data, please contact Ms. Verl Preston, Director, Customer Service at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Signore, Inc. with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Deborah J. Kinecki

Deborah J. Kinecki
Vice President
New York Environmental
Testing Operations

AH/DJK/tlk
Enclosure

I.D. #91-1532
#NY1A3361

ANALYTICAL RESULTS

Prepared For

Signore, Inc.
43 Jefferson St.
Ellicottville, NY 14731

Prepared By

Recra Environmental, Inc.
10 Hazelwood Drive, Suite 106
Amherst, New York 14228-2298

METHODOLOGIES

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data table. The method numbers presented refer to the following U.S. Environmental Protection Agency reference unless otherwise noted.

- o 40CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act." October 24, 1984 (Federal Register) U.S. Environmental Protection Agency.

Method 524.2 was performed in accordance with Methods for the Determination of Organic Compounds in Drinking Water, EPA/600/4-88/039; December 1988, Revision 3.0, 1989.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing standard qualifiers as defined on the Organic and Inorganic Data Comment Page.

The samples submitted for soluble aluminum had to be filtered and preserved upon receipt by Recra Environmental, Inc.

Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Organic Data Qualifiers:

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G - Matrix Spike percent recovery is greater than the expected upper limit of analytical performance (>100%).
- L - Matrix Spike percent recovery is less than the expected lower limit of analytical performance.

Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Inorganic Data Qualifiers:

- B - Indicates a value greater than or equal to the instrument detection limit but less than the contract required detection limit.
- U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 100).
- E - Indicates a value estimated or not reported due to the presence of interference.
- S - Indicates value determined by Method of Standard Addition.
- N - Indicates spike sample recovery is not within control limits.
- * - Indicates duplicate analysis is not within control limits.
- + - Indicates the correlation coefficient for method of standard addition is less than 0.995.
- M - Indicates duplicate injection results exceeded control limits.
- W - Post digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.
- L - Matrix spike percent recovery is less than the expected lower limit of analytical performance.
- G - Matrix spike percent recovery is greater than the expected upper limit of analytical performance (>100%).

AQUEOUS PHASE
TOTAL METALS

LAB NAME RECRA ENVIRONMENTAL INC.
 JOB NO. 91-1532
 DESC INTERCEPTOR WELL
 SAMPLE NO. INTER WELL

SAMPLE DATE 06/04/91

COMPOUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	200.7	06/13/91	0.029	
Total Copper	MG/L	200.7	06/12/91	0.009	
Total Iron	MG/L	200.7	06/12/91	0.03	U
Total Lead	MG/L	239.2	06/12/91	0.014	
Total Nickel	MG/L	200.7	06/12/91	0.02	U
Total Zinc	MG/L	200.7	06/12/91	0.026	

AQUEOUS PHASE
SOLUBLE METALS

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-1532
DESC INTERCEPTOR WELL
SAMPLE NO. INTER. WELL

SAMPLE DATE 06/04/91

COMPOUND (Units of Measure = MG/L)	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Soluble Aluminum	200.7	06/12/91	0.11	

AQUEOUS PHASE
TOTAL METALS

LAB NAME RECRA ENVIRONMENTAL INC.
 JOB NO. 91-1532
 DESC METHOD BLANK
 SAMPLE NO. MB-1

COMPOUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	200.7	06/12/91	0.01	U
Total Copper	MG/L	200.7	06/12/91	0.005	U
Total Iron	MG/L	200.7	06/12/91	0.03	U
Total Lead	MG/L	239.2	06/12/91	0.003	U
Total Nickel	MG/L	200.7	06/12/91	0.02	U
Total Zinc	MG/L	200.7	06/12/91	0.005	U

AQUEOUS MATRIX
SELECTED METHOD 524.2

COMPOUND (Units of Measure = ug/l)	SAMPLE IDENTIFICATION (DATE)			
	Interceptor Well (6/6/91)	Q	VBLK52 *	Q
Chloroethane	2.0	U	2.0	U
1,1-Dichloroethane	1.0	U	1.0	U
trans-1,2-Dichloroethene	1.0	U	1.0	U
Tetrachloroethylene	0.19	J	1.0	U
1,1,1-Trichloroethane	3.5		1.0	U
1,1,2-Trichloroethane	1.0	U	1.0	U
Trichloroethylene	4.5		1.0	U
Vinyl Chloride	2.0	U	2.0	U
Analysis Date	6/6/91		6/6/91	
Internal Standards				
Level Added = 50 ug/l				
(% Recovery)				
Bromochloromethane	83		93	
1,4-Difluorobenzene	77		77	
Chlorobenzene-D ₅	81		84	
Surrogates				
Level Added = 50 ug/l				
(% Recovery)				
4-Bromofluorobenzene	105		104	
1,2-Dichloroethane-D ₄	109		105	
Toluene-D ₈	99		95	

* VBLK = Volatile Method Blank.

CHAIN OF CUSTODY RECORD

RECRA ENVIRONMENTAL, INC.

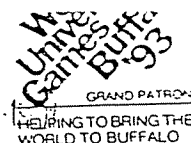
PROJECT NO.:		SITE NAME:		STATION LOCATION		NO. OF CON. TAINERS		REMARKS			
SAMPLERS (SIGNATURE): <i>Slater & Wood</i>		SIGNATURE: <i>[Signature]</i>		16 MC		1 LITER		METER READING # 34011			
STATION NO.	DATE	TIME	COMP.	GRAB							
6-11	9 AM	X			INTEC/ELECTOR CELL				PRESERVED - NITRIC ACID # 34012		
"	"	"	"	"	"				No PRESERVE		
"	"	"	"	"	"						
RELINQUISHED BY (SIGNATURE):		DATE / TIME		RECEIVED BY (SIGNATURE):		DATE / TIME		RELINQUISHED BY (SIGNATURE):		DATE / TIME	
RELINQUISHED BY (SIGNATURE):		DATE / TIME		RECEIVED BY (SIGNATURE):		DATE / TIME		RELINQUISHED BY (SIGNATURE):		DATE / TIME	
RELINQUISHED BY (SIGNATURE):		DATE / TIME		RECEIVED FOR LABORATORY BY (SIGNATURE):		DATE / TIME		REMARKS:		DATE / TIME	
				<i>[Signature]</i>		<i>6/15/90</i>				<i>0880</i>	



RECRA ENVIRONMENTAL, INC.

Chemical and Environmental Analysis Services

RECEIVED AUG 14 1991



July 10, 1991

Mr. Fletcher Ward
Signore, Inc.
43 Jefferson Street
Ellicottville, NY 14731

Re: Analytical Results

Dear Mr. Ward:

Please find enclosed results concerning the analyses of the sample recently submitted by your firm. The Pertinent Information regarding these analyses is listed below:

Quote #: NY91-488
Project Name: Interceptor Well
Matrix: Aqueous
Sample Received: 6/20/91
Sample Date: 6/19/91

If you have any questions concerning these data, please contact Ms. Verl Preston, Director, Customer Service at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Signore, Inc. with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Deborah J. Kinecki

Deborah J. Kinecki
Vice President
New York Environmental
Testing Operations

WW/DJK/tlk
Enclosure

I.D. #91-1683
#NY1A3361

ANALYTICAL RESULTS

Prepared For

Signore, Inc.
43 Jefferson Street
Ellicottville, NY 14731

Prepared By

Recra Environmental, Inc.
10 Hazelwood Drive, Suite 106
Amherst, New York 14228-2298

METHODOLOGIES

Method 524.2 was performed in accordance with Methods for the Determination of Organic Compounds in Drinking Water, EPA/600/4-88/039, December 1988, Revision 3.0, 1989.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing standard qualifiers as defined on the Organic Data Comment Page.

Quality control analyses were performed on a batch basis. All results were within acceptable limits.

ORGANIC DATA COMMENT PAGE

Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Organic Data Qualifiers:

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G - Matrix Spike percent recovery is greater than the expected upper limit of analytical performance (>100%).
- L - Matrix Spike percent recovery is less than the expected lower limit of analytical performance.

AQUEOUS MATRIX
SELECTED METHOD 524.2

COMPOUND (Units of Measure = ug/l)	SAMPLE IDENTIFICATION (DATE)	
	Interceptor Well (6/19/91)	Q
Tetrachloroethene	0.29	J
1,1,1-Trichloroethane	4.2	U
1,1,2-Trichloroethane	1.0	
Trichloroethene	6.5	
Analysis Date	6/24/91	
Internal Standards		
Level Added = 50 ug/l		
(% Recovery)		
Bromochloromethane	92	
1,4-Difluorobenzene	91	
Chlorobenzene-D ₅	94	
Surrogates		
Level Added = 50 ug/l		
(% Recovery)		
4-Bromofluorobenzene	93	
1,2-Dichloroethane-D ₄	107	
Toluene-D ₈	97	

I.D. #91-1683

AQUEOUS MATRIX
SELECTED METHOD 524.2

DESCRIPTION: VOLATILE METHOD BLANK

COMPOUND (Units of Measure = ug/l)	SAMPLE IDENTIFICATION	
	VBLK63	Q
Tetrachloroethene	1.0	U
1,1,1-Trichloroethane	1.0	U
1,1,2-Trichloroethane	1.0	U
Trichloroethene	1.0	U
Analysis Date	6/24/91	
<u>Internal Standards</u>		
Level Added = 50 ug/l		
(% Recovery)		
Bromochloromethane	86	
1,4-Difluorobenzene	92	
Chlorobenzene-D ₅	97	
<u>Surrogates</u>		
Level Added = 50 ug/l		
(% Recovery)		
4-Bromofluorobenzene	91	
1,2-Dichloroethane-D ₄	109	
Toluene-D ₈	98	



RECRA ENVIRONMENTAL, INC.

Chemical and Environmental Analysis Services

RECEIVED SEP - 6 1991



September 3, 1991

Mr. Fletcher Wood
Signore, Inc.
43 Jefferson Street
Ellicottville, NY 14731

Re: Analytical Results

Dear Mr. Wood:

Please find enclosed results concerning the analyses of the sample recently submitted by your firm. The Pertinent Information regarding these analyses is listed below:

Quote #: NY91-488R
Matrix: Aqueous
Sample Received: 7/24/91
Sample Date: 7/23/91

If you have any questions concerning these data, please contact Ms. Candace Steady, Project Manager, at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Signore, Inc. with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Deborah J. Kinecki

Deborah J. Kinecki
Vice President
New York Environmental
Testing Operations

DEC/DJK/dms
Enclosure
cc: Groundwater Associates

I.D. #91-2027
#NY1A3361

ANALYTICAL RESULTS

Prepared For

Signore, Inc.
43 Jefferson Street
Ellicottville, New York 14731

Prepared By

Recra Environmental, Inc.
10 Hazelwood Drive, Suite 106
Amherst, New York 14228-2298

METHODOLOGIES

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data table. The method numbers presented refer to the following U.S. Environmental Protection Agency reference.

- o 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" October 24, 1984 (Federal Register) U.S. Environmental Protection Agency.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed results have been reported utilizing USEPA data qualifiers as defined on the Organic and Inorganic Data Comment Pages.



Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Organic Data Qualifiers:

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G - The TCLP Matrix Spike recovery was greater than the upper limit of the analytical method.
- L - The TCLP Matrix Spike recovery was lower than the lower limit of the analytical method.
- T - This flag is used when the analyte is found in the associated TCLP extraction as well as in the sample.



Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Inorganic Data Qualifiers:

- B - Indicates a value greater than or equal to the instrument detection limit but less than the contract required detection limit.
- U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 100).
- E - Indicates a value estimated or not reported due to the presence of interference.
- S - Indicates value determined by Method of Standard Addition.
- N - Indicates spike sample recovery is not within control limits.
- * - Indicates duplicate analysis is not within control limits.
- + - Indicates the correlation coefficient for method of standard addition is less than 0.995.
- M - Indicates duplicate injection results exceeded control limits.
- W - Post digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.
- L - Matrix spike percent recovery is less than the expected lower limit of analytical performance.
- G - Matrix spike percent recovery is greater than the expected upper limit of analytical performance (>100%).



AQUEOUS MATRIX
SELECTED METHOD 524.2

COMPOUND (Units of Measure = ug/l)	SAMPLE IDENTIFICATION (DATE)		
	Interceptor Well (7/23/91)	Q	Method Blank
Chloroethane	2.0	U	2.0
trans-1,1-Dichloroethane	1.0	J	1.0
trans-1,2-Dichloroethene	1.0	U	1.0
Tetrachloroethene	1.0	J	1.0
1,1,1-Trichloroethane	4.0		1.0
Trichloroethene	5.6		1.0
Vinyl Chloride	2.0		2.0
Analysis Date	7/29/91		7/29/91
Internal Standards			
Level Added = 50 ug/l			
(% Recovery)			
Bromochloromethane	106		109
1,4-Difluorobenzene	95		102
Chlorobenzene-D ₅	99		107
Surrogates			
Level Added = 50 ug/l			
(% Recovery)			
4-Bromofluorobenzene	102		104
1,2-Dichloroethane-D ₄	104		110
Toluene-D ₈	97		95



I.D. #91-2027

SIGNORE, INC.
AQUEOUS MATRIX
TOTAL METALS

5

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-2027
DESC INTERCEPTOR WELL
SAMPLE NO. WELL

SAMPLE DATE 07/23/91

COMPOUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	218.1	08/07/91	0.005	U
Total Copper	MG/L	200.7	08/05/91	0.01	U
Total Iron	MG/L	200.7	08/05/91	0.031	B
Total Lead	MG/L	239.2	07/01/91	0.004	B
Total Nickel	MG/L	200.7	08/05/91	0.02	U
Total Zinc	MG/L	200.7	08/05/91	0.036	

SIGNORE, INC.
AQUEOUS MATRIX
TOTAL METALS

6

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-2027

SAMPLE NO. METHOD BLANK

COMPOUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	218.1	08/07/91	0.005	U
Total Copper	MG/L	200.7	08/05/91	0.01	U
Total Iron	MG/L	200.7	08/05/91	0.03	U
Total Lead	MG/L	239.2	08/01/91	0.003	U
Total Nickel	MG/L	200.7	08/05/91	0.02	U
Total Zinc	MG/L	200.7	08/05/91	0.005	U

274

SIGNORE, INC.
AQUEOUS MATRIX
SOLUBLE METALS

LAB NAME RECRA ENVIRONMENTAL INC.
J B NO. 91-2027
D SC INTERCEPTOR WELL
SAMPLE NO. WELL

SAMPLE DATE 07/23/91

COMPOUND (Units of Measure = MG/L)	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Soluble Aluminum	6010	08/05/91	0.05	U

SIGNORE, INC.
AQUEOUS MATRIX
SOLUBLE METALS

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-2027

SAMPLE NO. METHOD BLANK

COMPOUND (Units of Measure = MG/L)	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Soluble Aluminum	6010	08/05/91	0.05	U



RECRA ENVIRONMENTAL, INC.

Chemical and Environmental Analysis Services

August 24, 1991



Mr. Fletcher Ward
 Signore, Inc.
 43 Jefferson Street
 Ellicottville, NY 14731

Re: Analytical Results

Dear Mr. Ward:

Please find enclosed results concerning the analyses of the samples recently submitted by your firm. The Pertinent Information regarding these analyses is listed below:

Quote #: NY91-488R
 Matrix: Aqueous
 Sample Received: 8/6/91
 Sample Dates: 8/5/91

If you have any questions concerning these data, please contact Ms. Candace Steady, Project Manager, Customer Service at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Signore, Inc., with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Deborah J. Kinecki

Deborah J. Kinecki
 Vice President
 New York Environmental
 Testing Operations

DEC/DJK/pab

Enclosure

cc: Mr. Jeffrey Schick
 Groundwater Associates, Inc.
 771 Brookedge Plaza Drive
 Westerville, OH 43081

I.D.#91-2141
 #NY1A3361

ANALYTICAL RESULTS

Prepared For

Signore, Inc.
43 Jefferson Street
Ellicottville, NY 14731

Prepared By

Recra Environmental, Inc.
10 Hazelwood Drive, Suite 106
Amherst, New York 14228-2298

METHODOLOGIES

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data table. The method numbers presented refer to the following U.S. Environmental Protection Agency reference unless noted otherwise in this report.

- o 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" October 24, 1984 (Federal Register) U.S. Environmental Protection Agency.

- o Method 524.2 was performed in accordance with methods for the Determination of Organic Compounds in Drinking Water, EPA/600/4-88/039: December 1988, Revision 3,0,1989.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed results have been reported utilizing USEPA data qualifiers as defined on the Organic and Inorganic Data Comment Pages.



AQUEOUS MATRIX
SELECTED METHOD 524.2 - VOLATILE PRIORITY POLLUTANT

COMPOUND (Units of Measure = ug/l)	SAMPLE IDENTIFICATION (DATE)			
	Interceptor Well (8/5/91)	Q	Method Blank	Q
Chloroethane	2.0	U	2.0	U
trans-1,1-Dichloroethane	1.0	J	1.0	U
trans-1,2-Dichloroethene	1.0	J	1.0	U
Tetrachloroethylene	1.0	J	1.0	U
1,1,1-Trichloroethane	4.2		1.0	U
Trichloroethene	5.9		1.0	U
Vinyl Chloride	2.0	U	2.0	U
Analysis Date	8/7/91		8/7/91	
<u>Internal Standards</u> Level Added = 50 ug/l (% Recovery)				
Bromochloromethane	94		- 89	
1,4-Difluorobenzene	93		89	
Chlorobenzene-D ₅	96		90	
<u>Surrogates</u> Level Added = 50 ug/l (% Recovery)				
4-Bromofluorobenzene	99		98	
1,2-Dichloroethane-D ₄	102		102	
Toluene-D ₈	97		101	

I.D. #91-2141



SIGNORE, INC.
AQUEOUS MATRIX
TOTAL METALS

I B NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-2141
D^FSC INTERCEPTOR WELL
S MPLE NO. WELL

SAMPLE DATE 08/05/91

IC POUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	200.7	08/13/91	0.01	U
Total Copper	MG/L	200.7	08/13/91	0.016	B
Total Iron	MG/L	200.7	08/13/91	0.24	
Total Lead	MG/L	200.7	08/09/91	0.003	B
Total Nickel	MG/L	200.7	08/13/91	0.02	U
Total Zinc	MG/L	200.7	08/13/91	0.071	

SIGNORE, INC.
AQUEOUS MATRIX
TOTAL METALS

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-2141

SAMPLE NO. METHOD BLANK

COMPOUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	200.7	08/13/91	0.01	U
Total Copper	MG/L	200.7	08/13/91	0.01	U
Total Iron	MG/L	200.7	08/13/91	0.058	
Total Lead	MG/L	200.7	08/09/91	0.003	U
Total Nickel	MG/L	200.7	08/13/91	0.02	U
Total Zinc	MG/L	200.7	08/13/91	0.01	U

SIGNORE, INC.
AQUEOUS MATRIX
SOLUBLE METALS

5

LAB NAME RECRA ENVIRONMENTAL INC.
J B NO. 91-2141
D SC INTERCEPTOR WELL
SAMPLE NO. WELL

SAMPLE DATE 08/05/91

COMPOUND (Units of Measure = MG/L)	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Soluble Aluminum	200.7	08/13/91	0.13	

146



RECRA ENVIRONMENTAL, INC.

Chemical and Environmental Analysis Services

October 15, 1991

Mr. Fletcher Ward
Signore, Inc.
43 Jefferson Street
Ellicottville, NY 14731

Re: Analytical Results

Dear Mr. Ward:

Please find enclosed results concerning the analyses of the sample recently submitted by your firm. The Pertinent Information regarding these analyses is listed below:

Quote #: NY91-488R
Matrix: Aqueous
Sample Received: 10/01/91
Sample Date: 9/30/91

If you have any questions concerning these data, please contact Ms. Candace Steady, Project Manager at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Signora, Inc. with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.
Deborah J. Kinecki

Deborah J. Kinecki
Vice President
New York Environmental
Testing Operations

HAT/KCM/nmm
Enclosure

I.D.#91-2816
#NY1A3361

ANALYTICAL RESULTS

Prepared For

Signore, Inc.
43 Jefferson Street
Ellicottville, NY 14731

Prepared By

Recra Environmental, Inc.
10 Hazelwood Drive, Suite 106
Amherst, New York 14228-2298

METHODOLOGIES

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data table. The method numbers presented refer to the following U.S. Environmental Protection Agency reference unless noted otherwise in this report.

- o 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" October 24, 1984 (Federal Register) U.S. Environmental Protection Agency.
- o Method 524.2 was performed in accordance with Methods for the Determination of Organic Compounds in Drinking Water, EPA/600/4-88/039; December 1988, Revision 3.0, 1989.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed results are reported utilizing data qualifiers (Q) as defined on the attached Organic and Inorganic Data Comment Pages.

The volume for Soluble Aluminum analysis was filtered and preserved by Recra Environmental, Inc. personnel upon sample receipt.

Parameters reported as soluble were filtered through a 0.45 um filter prior to analysis.

Quality control analyses were performed on a batch basis.

2

ORGANIC DATA COMMENT PAGE

Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Organic Data Qualifiers:

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G - Matrix Spike percent recovery is greater than the expected upper limit of analytical performance (>100%).
- L - Matrix Spike percent recovery is less than the expected lower limit of analytical performance.

Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Inorganic Data Qualifiers:

- B - Indicates a value greater than or equal to the instrument detection limit but less than the contract required detection limit.
- U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 100).
- E - Indicates a value estimated or not reported due to the presence of interference.
- S - Indicates value determined by Method of Standard Addition.
- N - Indicates spike sample recovery is not within control limits.
- * - Indicates duplicate analysis is not within control limits.
- + - Indicates the correlation coefficient for method of standard addition is less than 0.995.
- M - Indicates duplicate injection results exceeded control limits.
- W - Post digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.
- G - The TCLP Matrix Spike recovery was greater than the upper limit of the analytical method.
- L - The TCLP Matrix Spike recovery was lower than the lower limit of the analytical method.

4

SIGNORE, INC.
 AQUEOUS MATRIX
 METHOD 524.2 - HAZARDOUS SUBSTANCE LIST
 VOLATILE ORGANICS

L B NAME RECRA ENVIRONMENTAL INC.
 J B NO. 91-2816
 DESC INTERCEPTOR WELL
 SAMPLE NO. INTER.WELL

SAMPLE DATE 09/30/91
 ANALYSIS DATE 10/08/91

COMPOUND (Units of Measure = UG/L)	RESULT	Q
Chloroethane	2.0	U
1,1-Dichloroethane	1.0	U
trans-1,2-Dichloroethene	1.0	U
Tetrachloroethene	0.17	J
1,1,1-Trichloroethane	3.4	
Trichloroethene	4.9	B
Vinyl chloride	2.0	U

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SIGNORE, INC.
 AQUEOUS MATRIX
 METHOD 524.2 - HAZARDOUS SUBSTANCE LIST
 VOLATILE ORGANICS

LAB NAME RECRA ENVIRONMENTAL INC.
 JOB NO. 91-2816
 DESC INTERCEPTOR WELL
 SAMPLE NO. INTER.WELL

SAMPLE DATE 09/30/91
 ANALYSIS DATE 10/08/91

COMPOUND	RESULT	Q
Internal Standards		
(%Recovery)		
1,4-Difluorobenzene	99	
Chlorobenzene-D5	94	
Surrogates		
(%Recovery)		
p-Bromofluorobenzene	82	
1,4-Dichlorobenzene	82	

6

SIGNORE, INC.
AQUEOUS MATRIX
METHOD 524.2 - HAZARDOUS SUBSTANCE LIST
VOLATILE ORGANICS

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-2816

SAMPLE NO. METHODBLANK

ANALYSIS DATE 10/07/91

COMPOUND (Units of Measure = UG/L)	RESULT	Q
Chloroethane	2.0	U
1,1-Dichloroethane	1.0	U
trans-1,2-Dichloroethene	1.0	U
Tetrachloroethene	1.0	U
1,1,1-Trichloroethane	1.0	U
Trichloroethene	0.93	J
Vinyl chloride	2.0	U

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SIGNORE, INC.
 AQUEOUS MATRIX
 METHOD 524.2 - HAZARDOUS SUBSTANCE LIST
 VOLATILE ORGANICS

LAB NAME RECRA ENVIRONMENTAL INC.
 JOB NO. 91-2816

SAMPLE NO. METHODBLANK

ANALYSIS DATE 10/07/91

COMPOUND	RESULT	Q
Internal Standards		
(%Recovery)		
1,4-Difluorobenzene	102	
Chlorobenzene-D5	102	
Surrogates		
(%Recovery)		
p-Bromofluorobenzene	85	
1,4-Dichlorobenzene	81	

SIGNORE, INC.
AQUEOUS MATRIX
TOTAL METALS

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-2816
DESC INTERCEPTOR WELL
SAMPLE NO. INTER.WELL

SAMPLE DATE 09/30/91

COMPOUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	200.7	10/07/91	0.01	U
Total Copper	MG/L	200.7	10/07/91	0.013	
Total Iron	MG/L	200.7	10/07/91	0.04	U
Total Lead	MG/L	239.2	10/08/91	0.005	
Total Nickel	MG/L	200.7	10/07/91	0.02	U
Total Zinc	MG/L	200.7	10/07/91	0.041	

SIGNORE, INC.
AQUEOUS MATRIX
TOTAL METALS

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-2816

SAMPLE NO. METHODBLANK

COMPOUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	200.7	10/07/91	0.01	U
Total Copper	MG/L	200.7	10/07/91	0.01	U
Total Iron	MG/L	200.7	10/07/91	0.04	U
Total Lead	MG/L	239.2	10/08/91	0.003	U
Total Nickel	MG/L	200.7	10/07/91	0.02	U
Total Zinc	MG/L	200.7	10/07/91	0.01	U

SIGNORE, INC.
AQUEOUS MATRIX
SOLUBLE METALSLAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-2816
DESC INTERCEPTOR WELL
SAMPLE NO. INTER.WELL

SAMPLE DATE 09/30/91

COMPOUND (Units of Measure = MG/L)	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Soluble Aluminum	202.1	10/07/91	0.2	U

RECEIVED NOV - 1 1991

**RECRA ENVIRONMENTAL, INC.***Chemical and Environmental Analysis Services*

October 25, 1991

Mr. Fletcher Ward
Signore, Inc.
43 Jefferson Street
Ellicottville, NY 14731

Re: Analytical Results

Dear Mr. Ward:

Please find enclosed results concerning the analyses of the sample recently submitted by your firm. The Pertinent Information regarding these analyses is listed below:

Quote #: NY91-488R
Matrix: Aqueous
Sample Received: 10/16/91
Sample Date: 10/15/91

If you have any questions concerning these data, please contact Ms. Candace Steady, Project Manager, at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Signore, Inc. with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Kenneth C. Malinowski, PhD
Vice President

PJV/KCM/dms
Enclosure

I.D. #91-2994
#NY1A3361

ANALYTICAL RESULTS

Prepared For

Signore, Inc.
43 Jefferson Street
Ellicottville, New York 14731

Prepared By

Recra Environmental, Inc.
10 Hazelwood Drive, Suite 106
Amherst, New York 14228-2298

METHODOLOGIES

The specific methodology employed in obtaining the enclosed analytical results is indicated on the specific data table. The method number presented refers to the following U.S. Environmental Protection Agency reference.

- o 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" October 24, 1984 (Federal Register) U.S. Environmental Protection Agency.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing USEPA data qualifiers (Q) as defined on the Organic Data Comment Page.

Quality control analyses were performed on a batch basis. All results were within acceptable limits.

The Method Blank for Volatile Organic Method 524.2 H.S.L., VBLK05, exhibits slight contamination by T.C.L. compound Trichloroethene exceeding the protocol allowable limit for a method blank. However, the presence of this compound in the associated sample, Interceptor Well, should not be attributed to blank contamination.

Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Organic Data Qualifiers:

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G - The TCLP Matrix Spike recovery was greater than the upper limit of the analytical method.
- L - The TCLP Matrix Spike recovery was lower than the lower limit of the analytical method.
- T - This flag is used when the analyte is found in the associated TCLP extraction as well as in the sample.

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SIGNORE, INC.
 AQUEOUS MATRIX
 METHOD 524.2 - HAZARDOUS SUBSTANCE LIST
 VOLATILE ORGANICS

I B NAME RECRA ENVIRONMENTAL INC.
 JOB NO. 91-2994
 DESC INTERCEPTOR WELL
 S MPLE NO. I.W.

SAMPLE DATE 10/15/91
 ANALYSIS DATE 10/22/91

COMPOUND (Units of Measure = UG/L)	RESULT	Q
Chloroethane	2.0	U
1,1-Dichloroethane	0.33	J
trans-1,2-Dichloroethene	1.0	U
Tetrachloroethene	0.2	
1,1,1-Trichloroethane	3.4	
Trichloroethene	5.0	B
Vinyl chloride	2.0	U

SIGNORE, INC.
AQUEOUS MATRIX
METHOD 524.2 - HAZARDOUS SUBSTANCE LIST
VOLATILE ORGANICS

4

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-2994
DESC INTERCEPTOR WELL
SAMPLE NO. I.W.

SAMPLE DATE 10/15/91
ANALYSIS DATE 10/22/91

COMPOUND	RESULT	Q
Internal Standards		
(%Recovery)		
1,4-Difluorobenzene	98	
Chlorobenzene-D5	100	
Surrogates		
(%Recovery)		
p-Bromofluorobenzene	89	
1,4-Dichlorobenzene	85	

SIGNORE, INC.
AQUEOUS MATRIX
METHOD 524.2 - HAZARDOUS SUBSTANCE LIST
VOLATILE ORGANICS

AB NAME RECRE ENVIRONMENTAL INC.
JOB NO. 91-2994
DESC VOLATILE METHOD BLANK
SAMPLE NO. VBLK05

ANALYSIS DATE 10/22/91

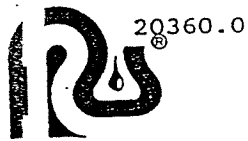
COMPOUND (Units of Measure = UG/L)	RESULT	Q
Chloroethane	2.0	U
1,1-Dichloroethane	1.0	U
trans-1,2-Dichloroethene	1.0	U
Tetrachloroethene	0.11	U
1,1,1-Trichloroethane	0.11	U
Trichloroethene	0.43	U
Vinyl chloride	2.0	U

SIGNORE, INC.
AQUEOUS MATRIX
METHOD 524.2 - HAZARDOUS SUBSTANCE LIST
VOLATILE ORGANICS

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-2994
DESC VOLATILE METHOD BLANK
SAMPLE NO. VBLK05

ANALYSIS DATE 10/22/91

COMPOUND	RESULT	Q
Internal Standards		
(%Recovery)		
1,4-Difluorobenzene	97	
Chlorobenzene-D5	100	
Surrogates		
(%Recovery)		
p-Bromofluorobenzene	88	
1,4-Dichlorobenzene	96	



RECRA ENVIRONMENTAL, INC.

Chemical and Environmental Analysis Services



November 19, 1991

Mr. Fletcher Ward
Signore, Inc.
43 Jefferson Street
Ellicottville, NY 14731

Re: Analytical Results

Dear Mr. Ward:


Please find enclosed results concerning the analyses of the sample recently submitted by your firm. The Pertinent Information regarding these analyses is listed below:

Quote #: NY91-488R
Matrix: Aqueous
Sample Received: 10/31/91
Sample Date: 10/30/91

If you have any questions concerning these data, please contact Ms. Candace Steady, Project Manager at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Signora, Inc. with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.


Kenneth C. Malinowski, PhD
Vice President

DEC/KCM/nmm

Enclosure

cc: Mr. Jeffrey T. Schick
Groundwater Associates, Inc.
771 Brookedge Plaza Drive
Westerville, OH 43081

I.D.#91-3185
#NY1A3361

SIGNORE, INC.
AQUEOUS MATRIX
METHOD 524.2 - VOLATILE ORGANICS

I B NAME RECRA ENVIRONMENTAL INC.
J B NO. 91-3185
DESC INTERCEPTOR WELL
SAMPLE NO. WELL

SAMPLE DATE 10/30/91
ANALYSIS DATE 11/02/91

COMPOUND (Units of Measure = UG/L)	RESULT	Q
Chloroethane	2.0	U
1,1-Dichloroethane	1.0	U
trans-1,2-Dichloroethene	1.0	U
Tetrachloroethene	0.2	J
1,1,1-Trichloroethane	4.0	
Trichloroethene	6.0	
Vinyl chloride	2.0	U

DILUTION FACTOR = 1.0

313

SIGNORE, INC.
AQUEOUS MATRIX
TOTAL METALSL 3 NAME RECRA ENVIRONMENTAL INC.
J 3 NO. 91-3185
DESC INTERCEPTOR WELL
SAMPLE NO. WELL

SAMPLE DATE 10/30/91

COMPOUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	200.7	11/05/91	0.01	U
Total Copper	MG/L	200.7	11/05/91	0.91	
Total Iron	MG/L	200.7	11/05/91	0.03	U
Total Lead	MG/L	239.2	11/05/91	0.003	U
Total Nickel	MG/L	200.7	11/05/91	0.02	U
Total Zinc	MG/L	200.7	11/05/91	0.29	

SIGNORE, INC.
AQUEOUS MATRIX
SOLUBLE METALS

10

L 3 NAME RECRA ENVIRONMENTAL INC.
J 3 NO. 91-3185
DESC INTERCEPTOR WELL
SAMPLE NO. WELL

SAMPLE DATE 10/30/91

COMPOUND (units of Measure = MG/L)	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Soluble Aluminum	202.1	11/08/91	0.2	U

146



RECRA ENVIRONMENTAL, INC.

Chemical and Environmental Analysis Services

RECEIVED DEC - 9 1991

World
University
Games
Buffalo
1993
GRAND PATRON
HELPING TO BRING THE
WORLD TO BUFFALO

December 5, 1991

Mr. Fletcher Ward
Signore, Inc.
43 Jefferson Street
Ellicottville, NY 14731

Re: Analytical Results

Dear Mr. Ward:

Please find enclosed results concerning the analyses of the sample recently submitted by your firm. The Pertinent Information regarding these analyses is listed below:

Quote #: NY91-488R
Matrix: Aqueous
Sample Received: 11/22/91
Sample Date: 11/21/91

If you have any questions concerning these data, please contact Ms. Candace Steady, Project Manager at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Signore, Inc. with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Kenneth C. Malinowski JKMA
Kenneth C. Malinowski, PhD
Vice President

DEC/KCM/nmm

Enclosure

cc: Mr. Jeffrey T. Schick
Groundwater Associates, Inc.
771 Brookedge Plaza Drive
Westerville, OH 43081

I.D.#91-3473
#NY1A3361

SIGNORE, INC.
AQUEOUS MATRIX
METHOD 524.2 - VOLATILE ORGANICS

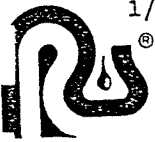
3

L B NAME RECRA ENVIRONMENTAL INC.
J B NO. 91-3473
DESC INTERCEPTOR WELL
SAMPLE NO. WELL

SAMPLE DATE 11/21/91
ANALYSIS DATE 11/27/91

COMPOUND (Units of Measure = UG/L)	RESULT	Q
Tetrachloroethene	0.3	J
1,1,1-Trichloroethane	5.0	
Trichloroethene	6.0	

313



1/20658

RECRA ENVIRONMENTAL, INC.

Chemical and Environmental Analysis Services

World
University
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Buffalo
1993
GRAND PATRON
HELPING TO BRING THE
WORLD TO BUFFALO

RECEIVED JAN 6 1992

January 3, 1992

Mr. Fletcher Ward
Signore, Inc.
43 Jefferson Street
Ellicottville, NY 14731

Re: Analytical Results

Dear Mr. Ward:

Please find enclosed results concerning the analyses of the sample recently submitted by your firm. The Pertinent Information regarding these analyses is listed below:

Quote #: NY91-488
Matrix: Aqueous
Sample Received: 12/11/91

If you have any questions concerning these data, please contact Ms. Candace Steady at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Signore, Inc. with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Kenneth C. Malinowski, PhD
Vice President

AH/KCH/mec

Enclosure cc: Jeffrey Schick
Ground Water Associates, Inc.
771 Brooksedge Plaza Drive
Westerville, OH 43081

I.D. #91-3697
#NY1A3361

ANALYTICAL RESULTS

Prepared For

Signore, Inc.
43 Jefferson Street
Ellicottville, NY 14731

Prepared By

Recra Environmental, Inc.
10 Hazelwood Drive, Suite 106
Amherst, New York 14228-2298

METHODOLOGIES

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data table. The method numbers presented refer to the following U.S. Environmental Protection Agency reference.

- o 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" October 24, 1984 (Federal Register) U.S. Environmental Protection Agency.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing USEPA data qualifiers (Q) as defined on the Organic and Inorganic Data Comment Pages.

Quality control analysis was performed on a batch basis.

The sample aliquot for Soluble Aluminum analysis was filtered and preserved by Recra Environmental, Inc.

Parameters reported as soluble were filtered through a 0.45 um filter prior to analysis.

Volatile method blank (VBLK05) is slightly contaminated with 1,1,1-Trichloroethane. Therefore, the presence of this compound in the associated sample may be attributed to this contamination.

ORGANIC DATA COMMENT PAGE

10

Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Organic Data Qualifiers:

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G - The TCLP Matrix Spike recovery was greater than the upper limit of the analytical method.
- L - The TCLP Matrix Spike recovery was lower than the lower limit of the analytical method.
- T - This flag is used when the analyte is found in the associated TCLP extraction as well as in the sample.

INORGANIC DATA COMMENT PAGE

3

Laboratory Name RECRA ENVIRONMENTAL, INC.

USEPA Defined Inorganic Data Qualifiers:

- B - Indicates a value greater than or equal to the instrument detection limit but less than the contract required detection limit.
- U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 100).
- E - Indicates a value estimated or not reported due to the presence of interference.
- S - Indicates value determined by Method of Standard Addition.
- N - Indicates spike sample recovery is not within control limits.
- * - Indicates duplicate analysis is not within control limits.
- + - Indicates the correlation coefficient for method of standard addition is less than 0.995.
- M - Indicates duplicate injection results exceeded control limits.
- W - Post digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.
- G - The TCLP Matrix Spike recovery was greater than the upper limit of the analytical method.
- L - The TCLP Matrix Spike recovery was lower than the lower limit of the analytical method.

SIGNORE, INC.
AQUEOUS MATRIX
METHOD 524.2 - VOLATILE ORGANICS

LA NAME RECRA ENVIRONMENTAL INC.
JC NO. 91-3697
DESC INTERCEPTOR WELL
SAMPLE NO. INTERCEPTOR

ANALYSIS DATE 12/13/91

COMPOUND (Units of Measure = UG/L)	RESULT	Q
Chloroethane	2.0	U
1,1-Dichloroethane	0.1	J
trans-1,2-Dichloroethene	1.0	U
Tetrachloroethene	0.2	J
1,1,1-Trichloroethane	4.0	B
Trichloroethene	6.0	
Vinyl chloride	2.0	U

DILUTION FACTOR = 1

SIGNORE, INC.
 AQUEOUS MATRIX
 METHOD 524.2 - VOLATILE ORGANICS

5/

LAB NAME RECRA ENVIRONMENTAL INC.
 JOB NO. 91-3697
 LISC INTERCEPTOR WELL
 SAMPLE NO. INTERCEPTOR

ANALYSIS DATE 12/13/91

COMPOUND	RESULT	Q
Internal Standards		
(%Recovery)		
Chlorobenzene-D5	100	
1,4-Difluorobenzene	97	
Fluorobenzene	96	
Surrogates		
(%Recovery)		
p-Bromofluorobenzene	97	
1,2-Dichlorobenzene-d4	94	

SIGNORE, INC.
AQUEOUS MATRIX
METHOD 524.2 - VOLATILE ORGANICS

6

LAB NAME RECRA ENVIRONMENTAL INC.
J B NO. 91-3697
L_SC VOLATILE METHOD BLANK
SAMPLE NO. VBLK 05

ANALYSIS DATE 12/13/91

COMPOUND (Units of Measure = UG/L)	RESULT	Q
Chloroethane	2.0	U
1,1-Dichloroethane	1.0	U
trans-1,2-Dichloroethene	1.0	U
Tetrachloroethene	1.0	U
1,1,1-Trichloroethane	0.3	J
Trichloroethene	1.0	U
Vinyl chloride	2.0	U

DILUTION FACTOR = 1.0

313

SIGNORE, INC.
 AQUEOUS MATRIX
 METHOD 524.2 - VOLATILE ORGANICS

7

LAB NAME RECRA ENVIRONMENTAL INC.
 JOB NO. 91-3697
 LESC VOLATILE METHOD BLANK
 SAMPLE NO. VBLK 05

ANALYSIS DATE 12/13/91

COMPOUND	RESULT	Q
<u>Internal Standards</u>		
(%Recovery)		
Chlorobenzene-D5	103	
1,4-Difluorobenzene	98	
Fluorobenzene	99	
<u>Surrogates</u>		
(%Recovery)		
p-Bromofluorobenzene	96	
1,2-Dichlorobenzene-d4	91	

SIGNORE, INC.
 AQUEOUS MATRIX
 TOTAL METALS

8

LFB NAME RECRA ENVIRONMENTAL INC.
 JOB NO. 91-3697
 DESC INTERCEPTOR WELL
 SAMPLE NO. INTERCEPTOR

COMPOUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	218.1	12/23/91	0.01	U
Total Copper	MG/L	200.7	12/20/91	0.012	
Total Iron	MG/L	200.7	12/20/91	0.46	U
Total Lead	MG/L	239.2	12/20/91	0.006	
Total Nickel	MG/L	200.7	12/20/91	0.02	
Total Zinc	MG/L	200.7	12/20/91	0.18	

SIGNORE, INC.
AQUEOUS MATRIX
TOTAL METALS

9

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-3697

SAMPLE NO. METHOD BLANK

COMPOUND	UNIT OF MEASURE	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Total Chromium	MG/L	218.1	12/23/91	0.01	U
Total Copper	MG/L	200.7	12/20/91	0.01	U
Total Iron	MG/L	200.7	12/20/91	0.03	U
Total Lead	MG/L	239.2	12/20/91	0.003	U
Total Nickel	MG/L	200.7	12/20/91	0.02	U
Total Zinc	MG/L	200.7	12/20/91	0.01	U

274

SIGNORE, INC.
AQUEOUS MATRIX
SOLUBLE METALS

10

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 91-3697
DISC INTERCEPTOR WELL
SAMPLE NO. INTERCEPTOR

SAMPLE DATE 12/11/91

COMPOUND (Units of Measure = MG/L)	METHOD NUMBER	ANALYSIS DATE	RESULT	Q
Soluble Aluminum	200.7	12/20/91	0.06	U

SIGNORE INCORPORATED
AQUEOUS MATRIX
METHOD 524.2 - VOLATILE ORGANICS

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 92-0029
DESC INTERCEPTOR WELL
SAMPLE NO. AS005504

SAMPLE DATE 01/02/92
ANALYSIS DATE 01/06/92

COMPOUND (Units of Measure = UG/L)	RESULT	Q
Tetrachloroethene	0.2	
1,1,1-Trichloroethane	4.0	
Trichloroethene	6.0	

DILUTION FACTOR = 1.0

4

SIGNORE INCORPORATED
AQUEOUS MATRIX
METHOD 524.2 - VOLATILE ORGANICS

LAB NAME RECRA ENVIRONMENTAL INC.
JOB NO. 92-0029
DESC INTERCEPTOR WELL
SAMPLE NO. AS005504

SAMPLE DATE 01/02/92
ANALYSIS DATE 01/06/92

COMPOUND	RESULT	Q
Internal Standards		
(%Recovery)		
Chlorobenzene-D5	82	
1,4-Difluorobenzene	85	
Surrogates		
(%Recovery)		
p-Bromofluorobenzene	90	

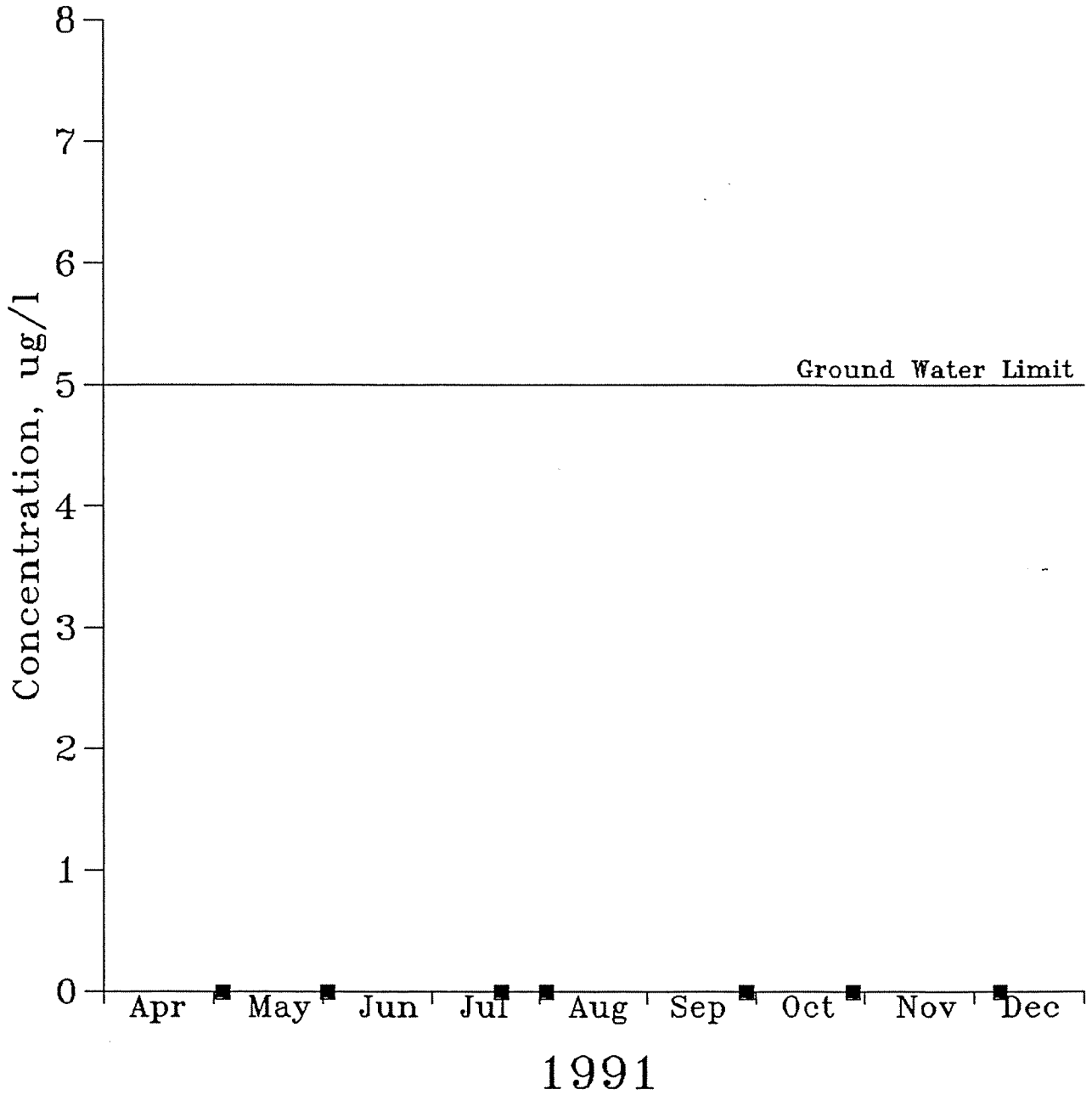
DILUTION FACTOR = 1.0

ATTACHMENT 2

GRAPHICAL PLOTS OF CONCENTRATIONS VERSUS TIME

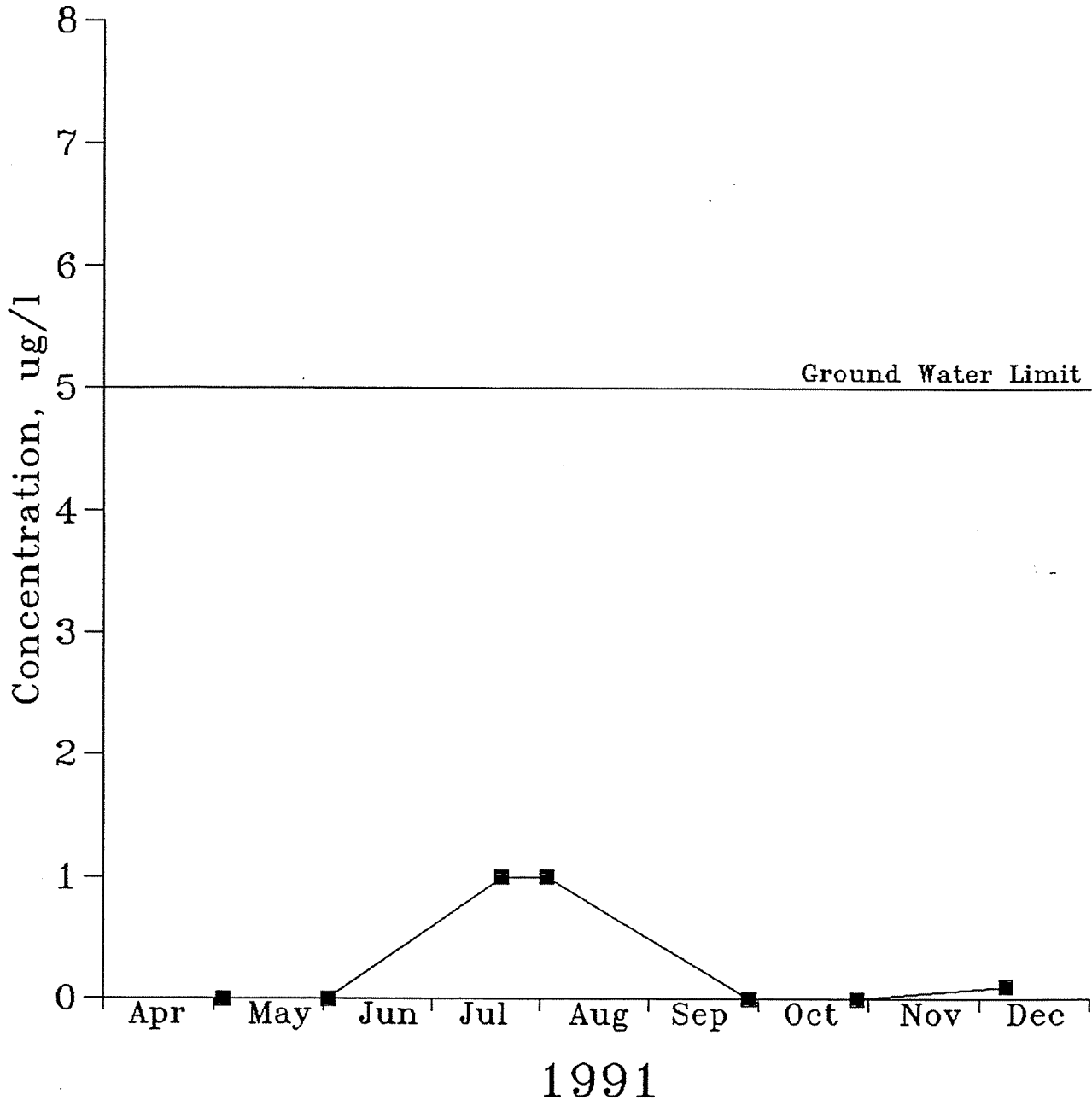
Discharge limit 170 ppb

CHLOROETHANE ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



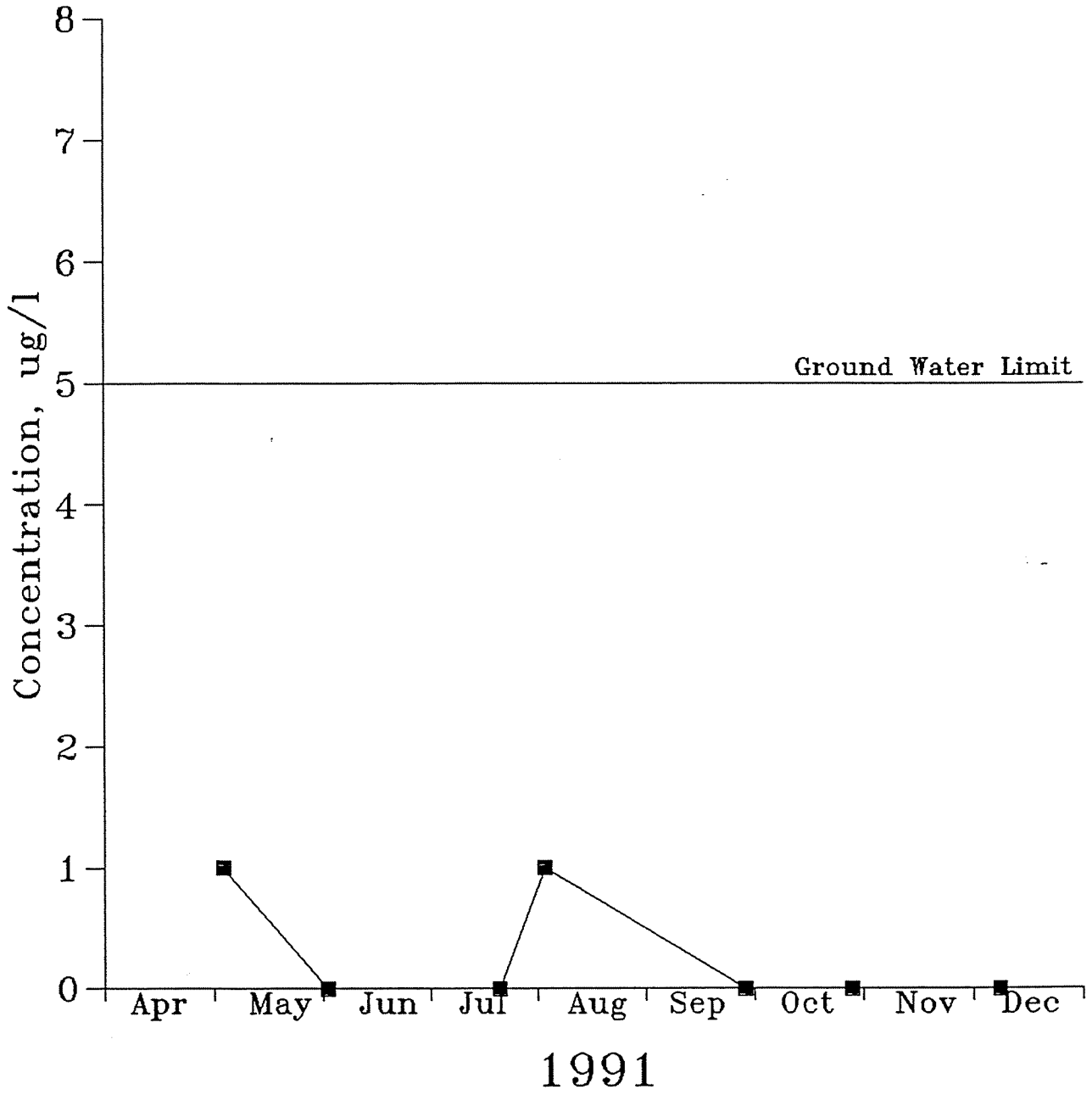
Discharge limit 30ppb

1,1-DICHLOROETHANE ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



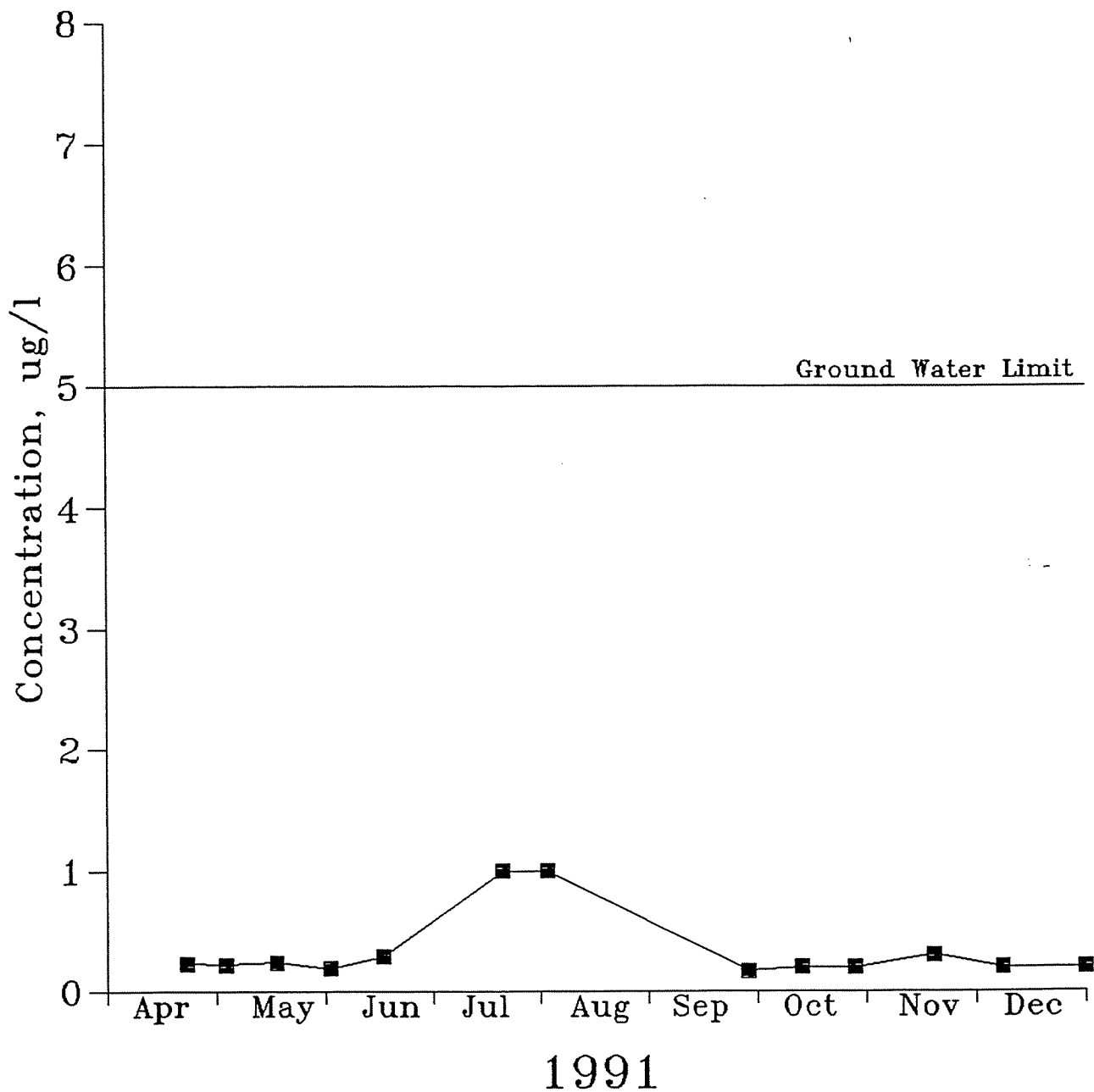
Discharge limit 30 ppb

TRANS-1,2-DICHLOROETHENE ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



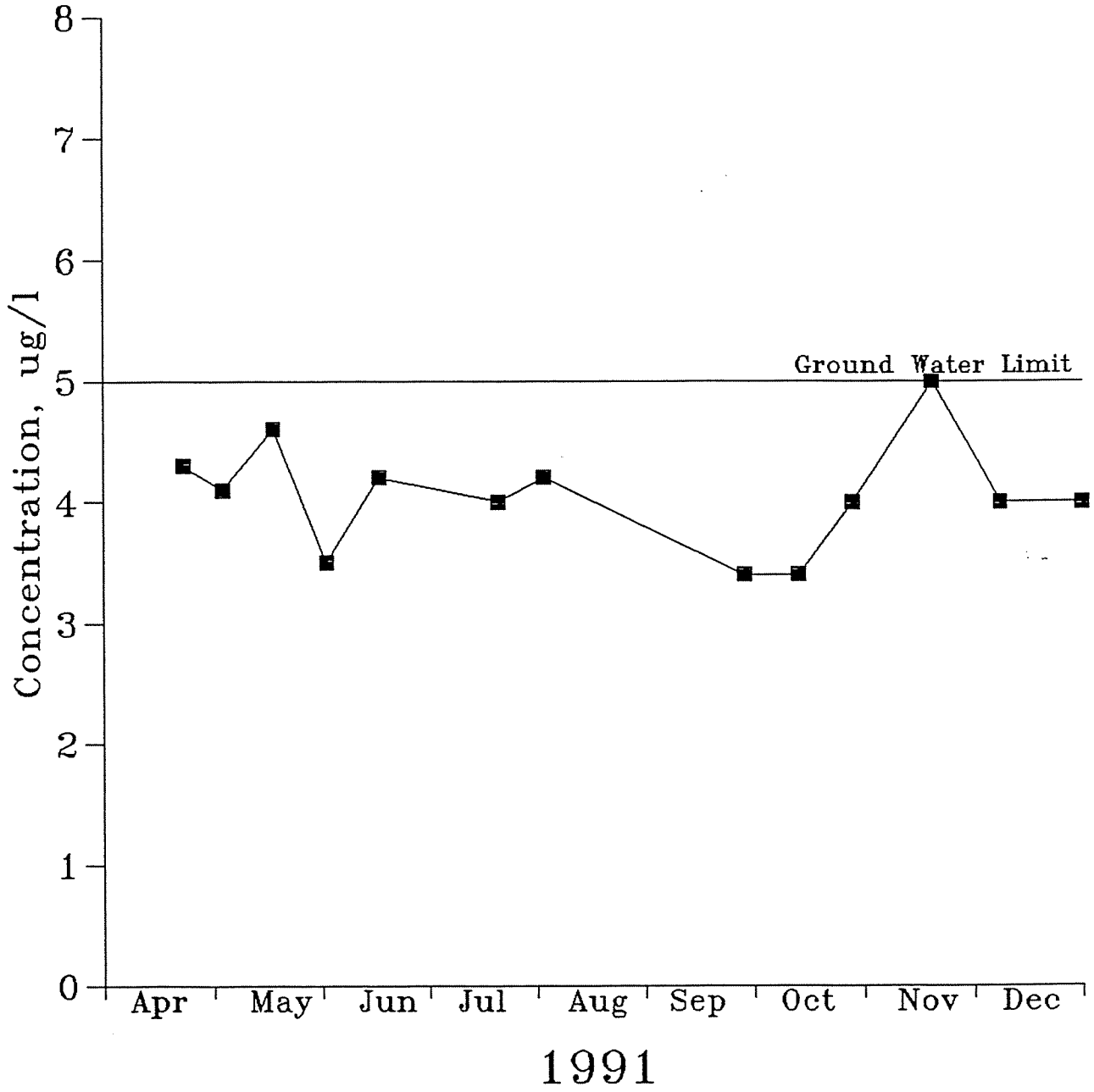
Discharge limit 40ppb

TETRACHLOROETHENE ANALYSES
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SIGNORE - ELLICOTTVILLE, NEW YORK



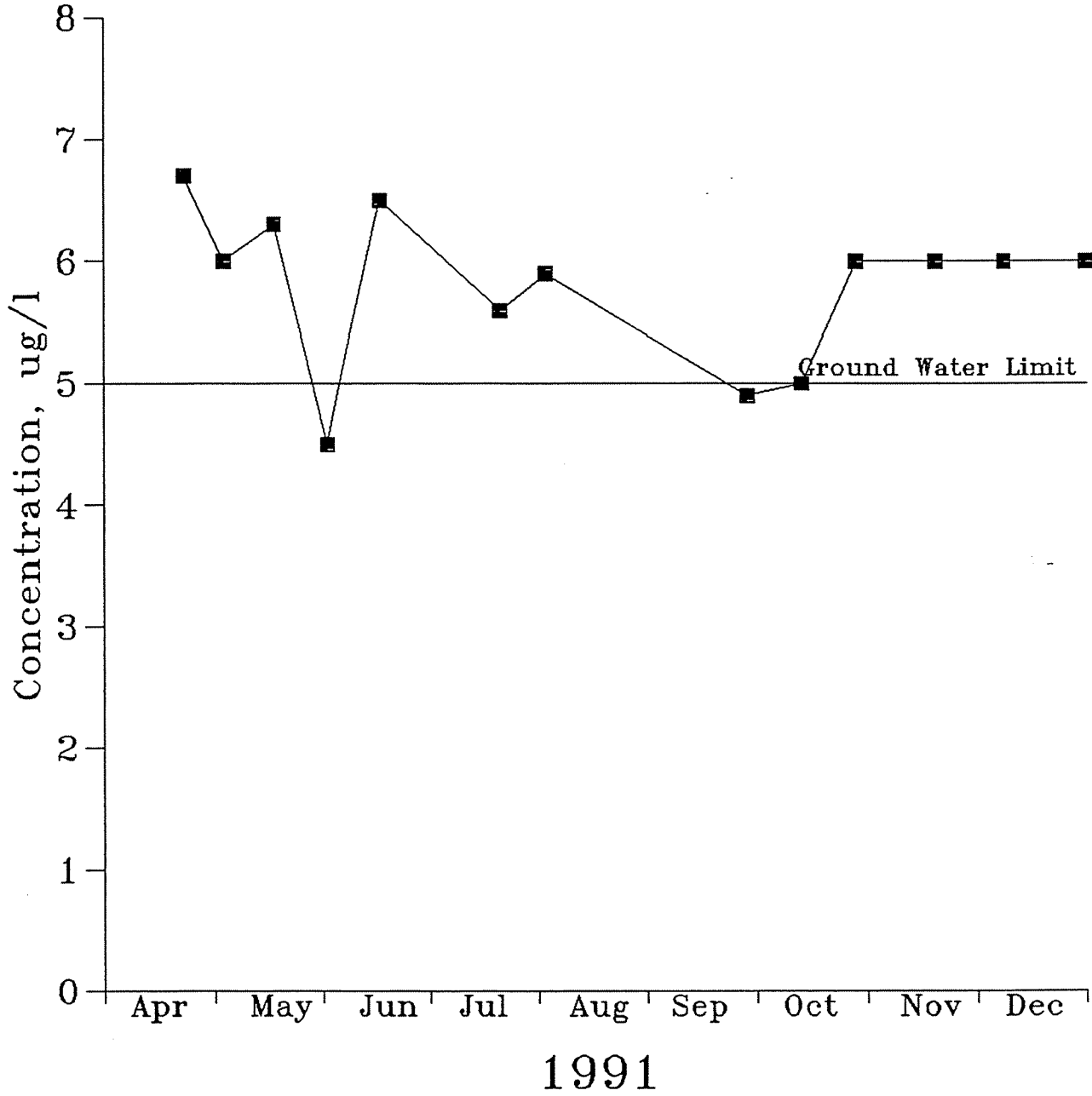
Discharge limit 20 ppb

1,1,1-TRICHLOROETHANE ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



Discharge limit 11 ppb

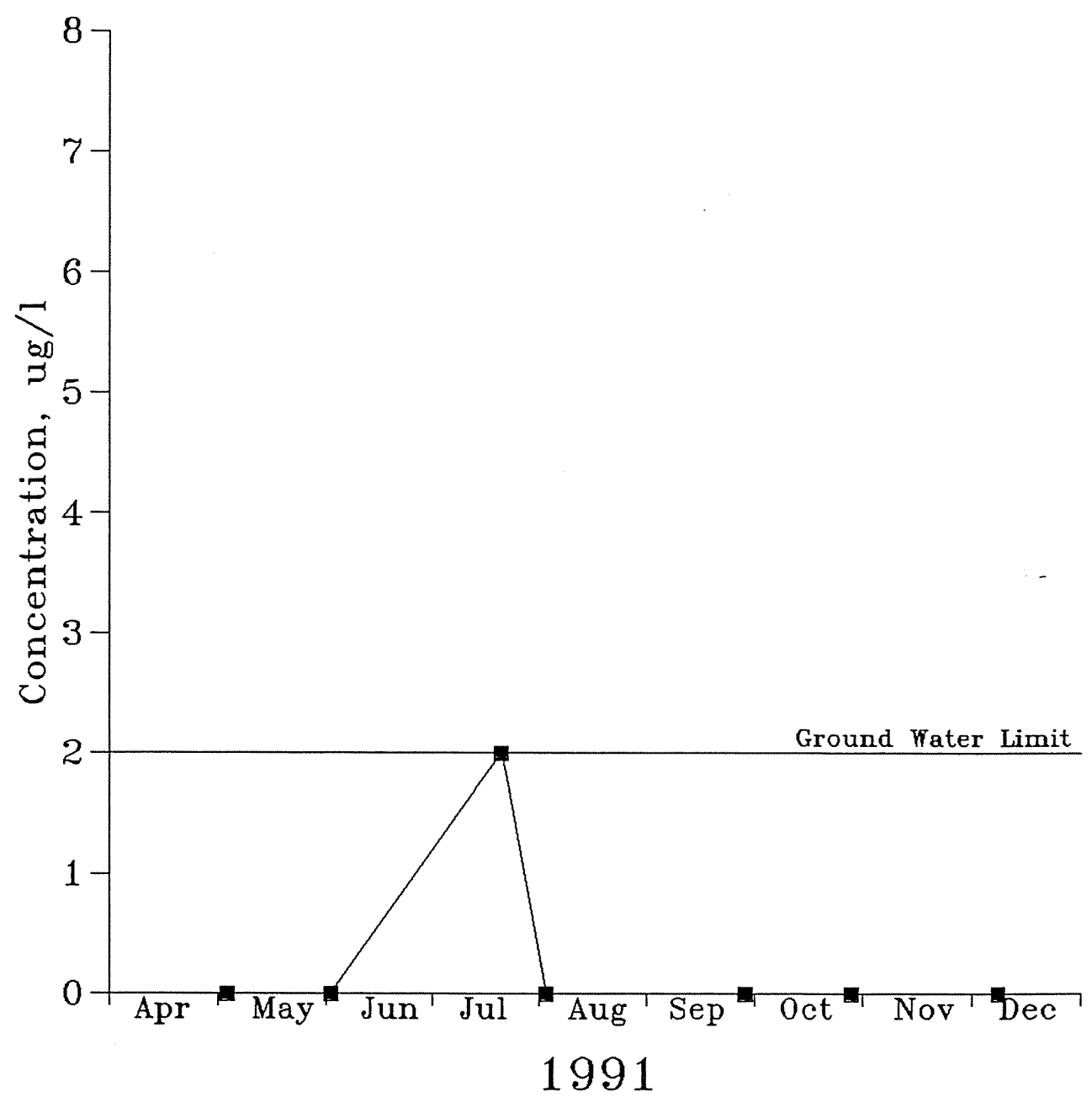
TRICHLOROETHENE ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



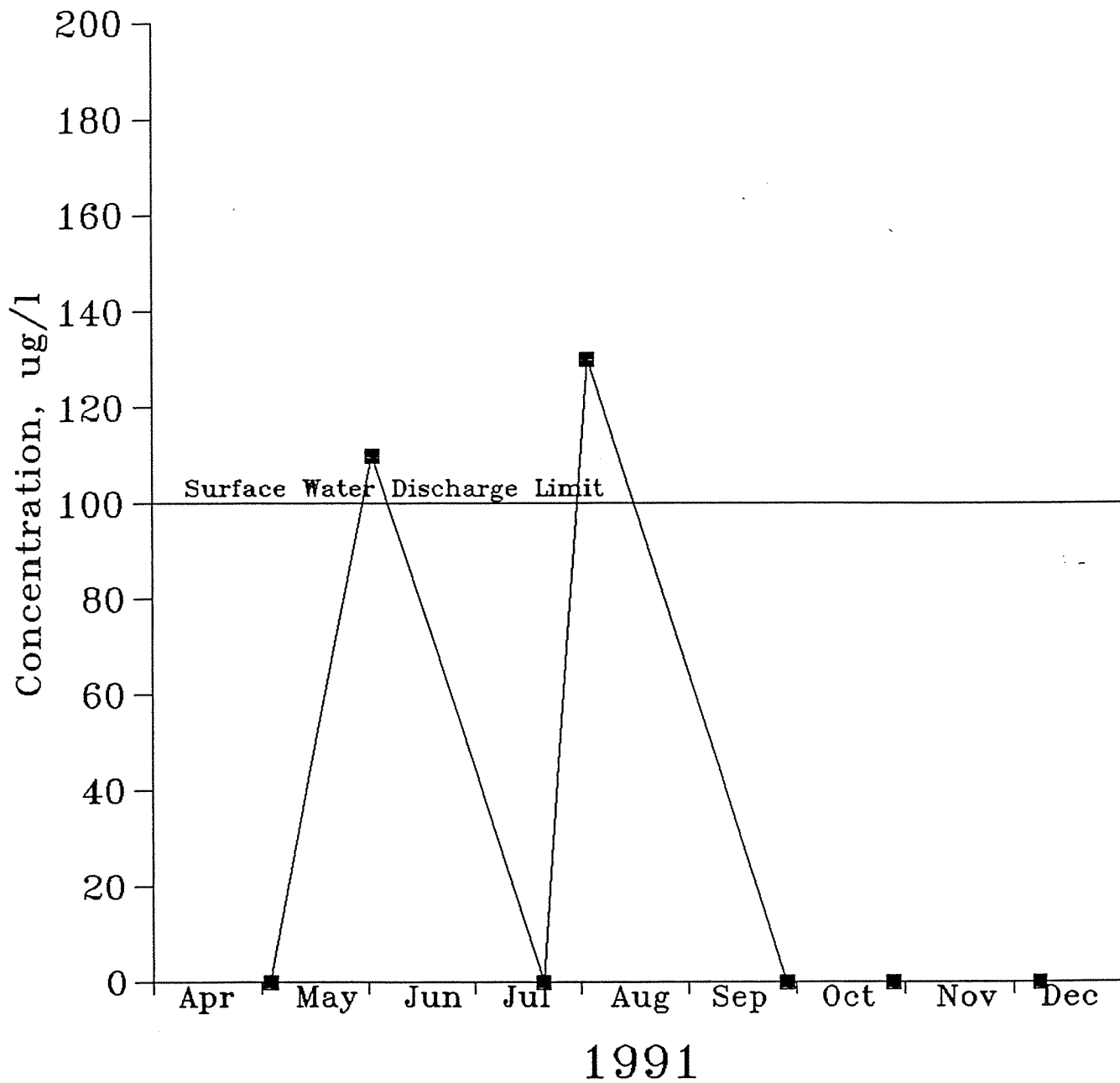
~~10/10/91~~

Discharge Limit 50ppb

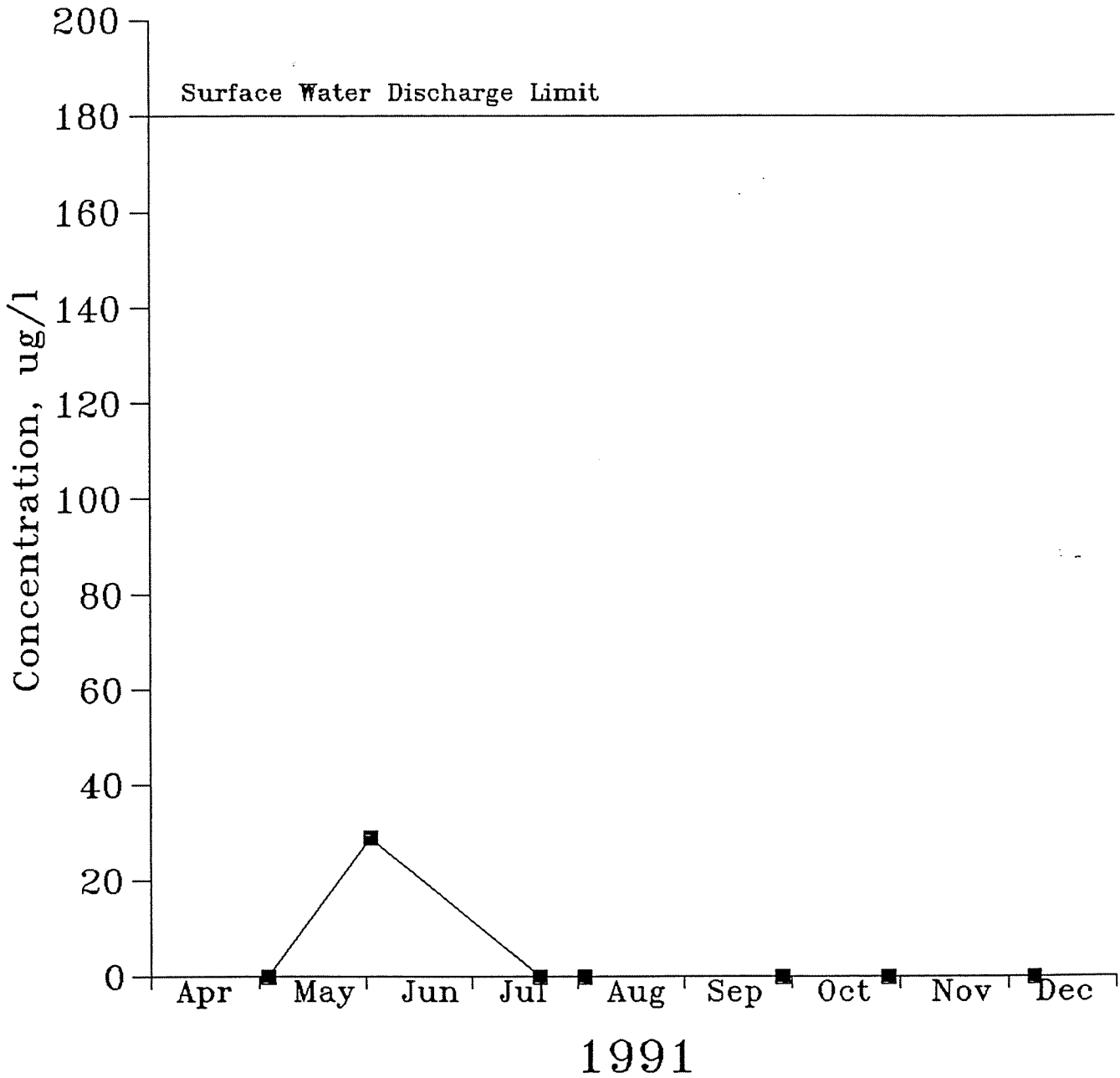
VINYL CHLORIDE ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



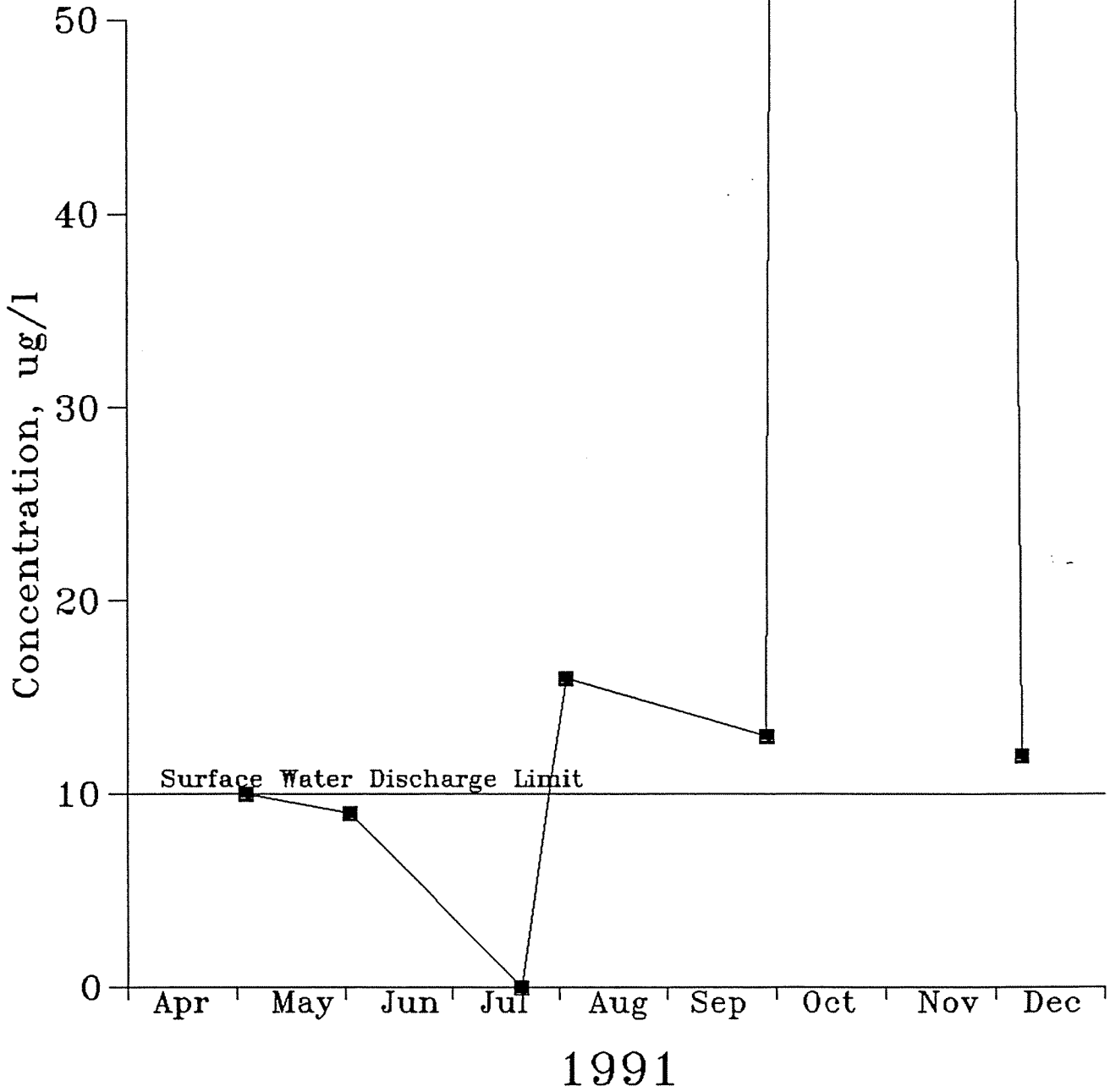
DISSOLVED ALUMINUM ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



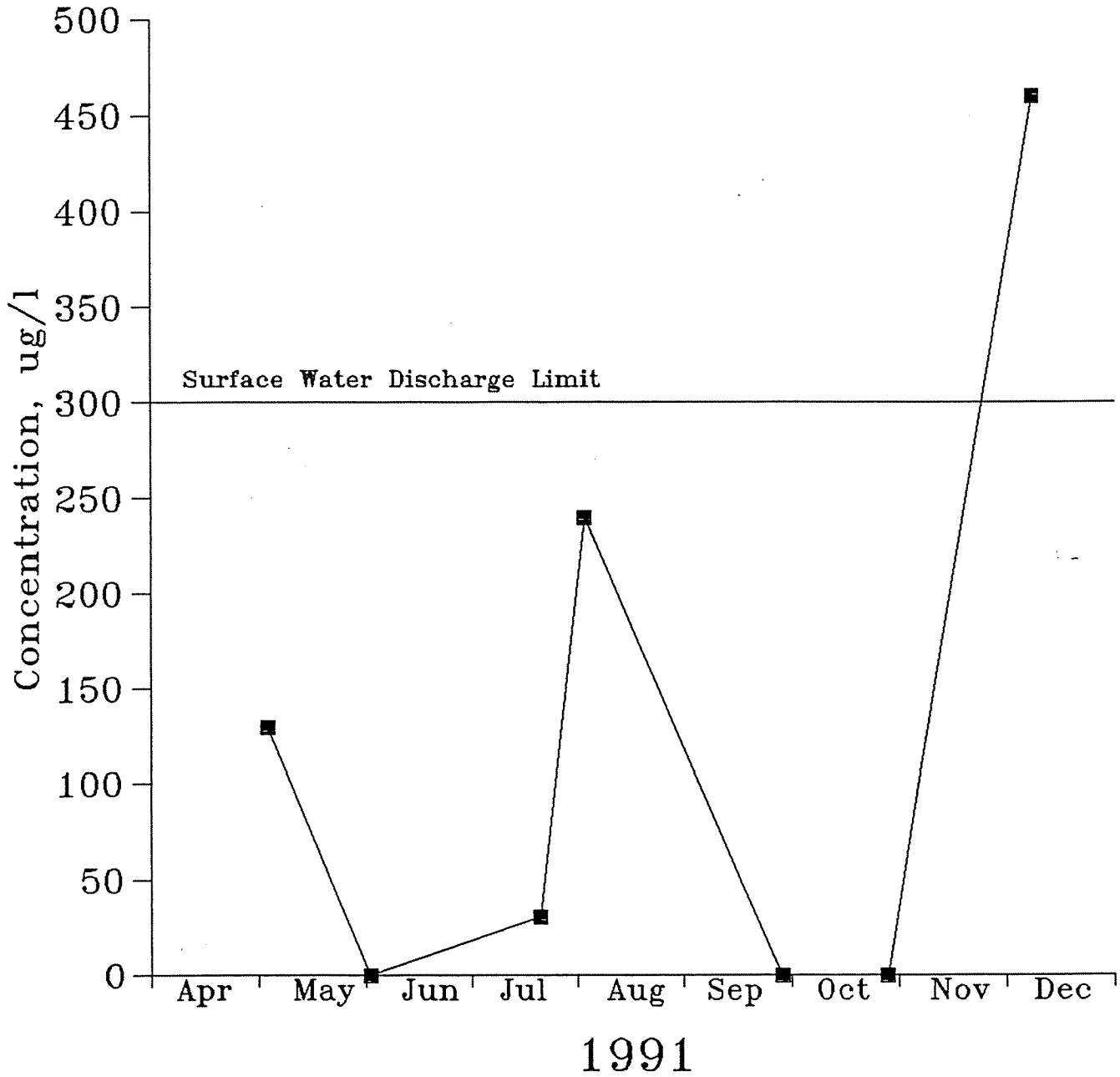
TOTAL CHROMIUM ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



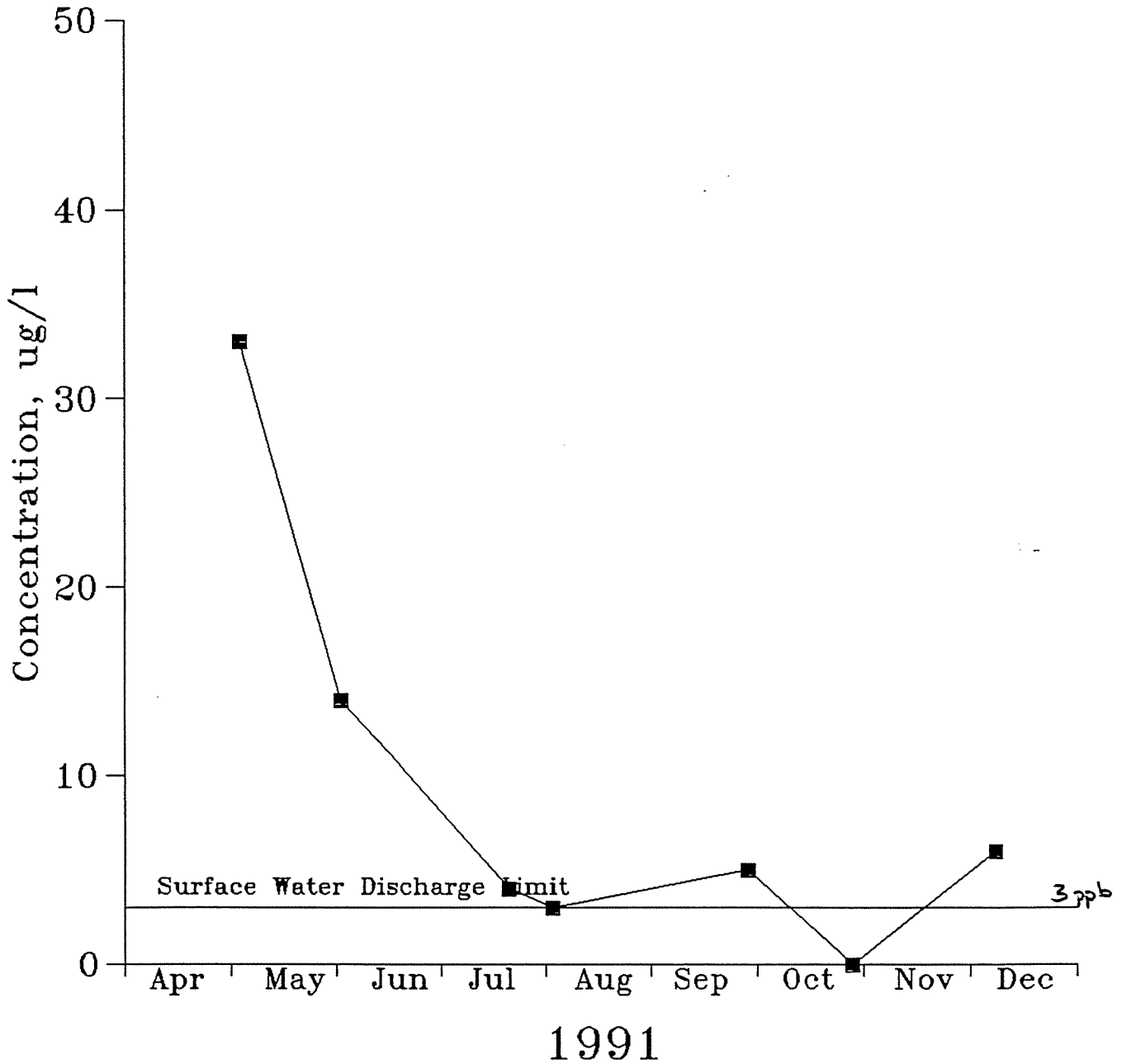
TOTAL COPPER ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



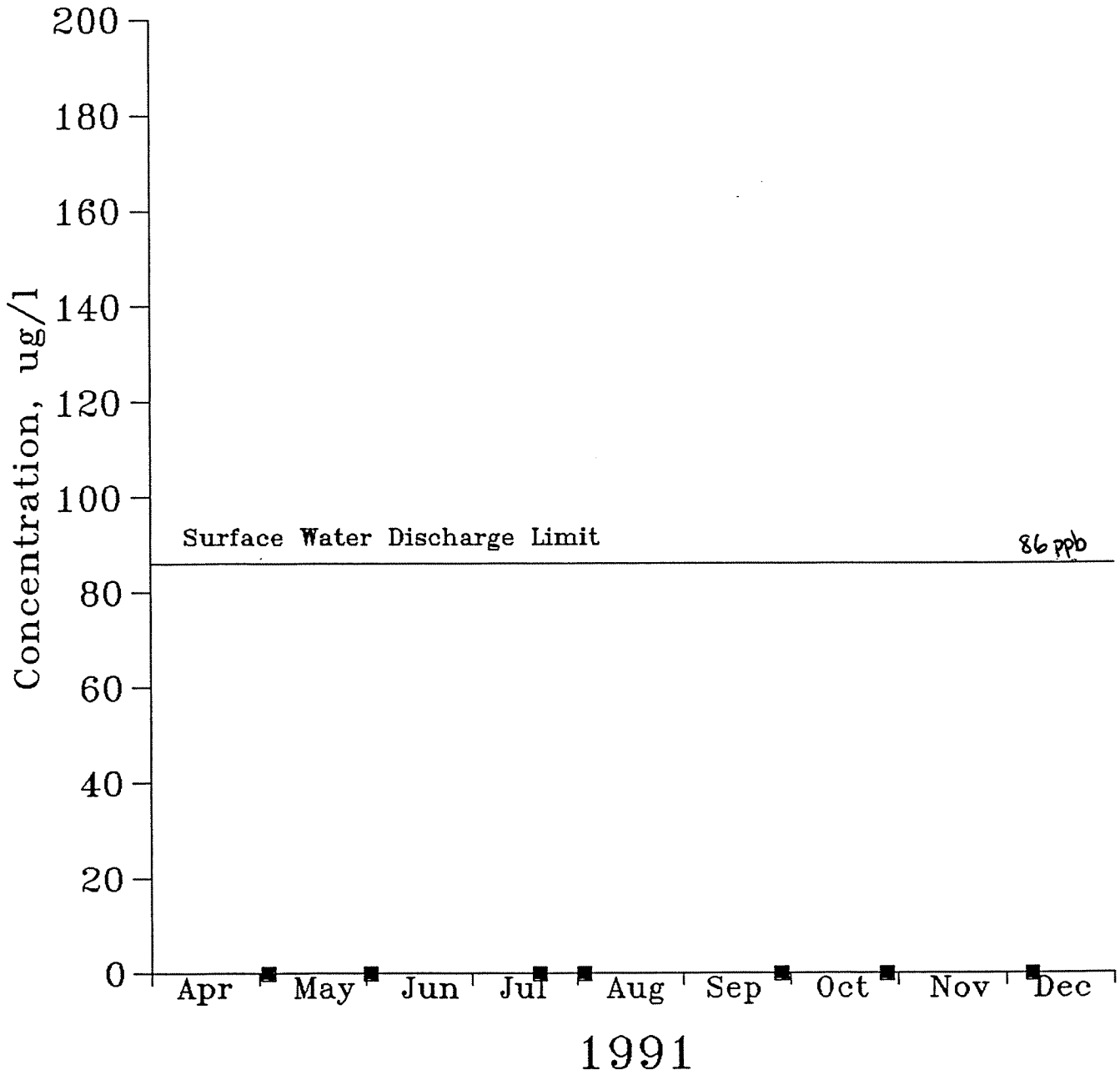
TOTAL IRON ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



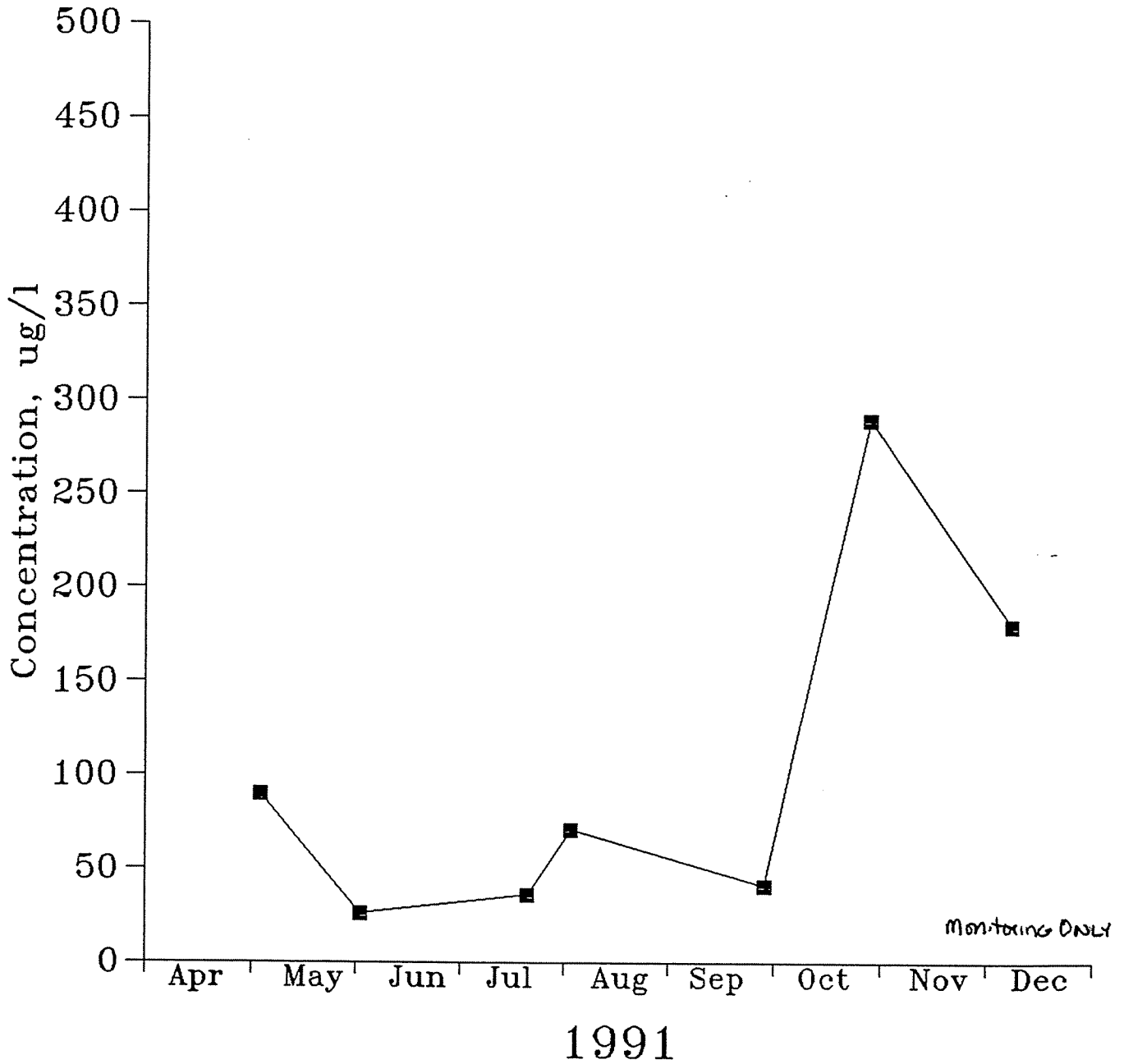
TOTAL LEAD ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



TOTAL NICKEL ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



TOTAL ZINC ANALYSES
TOWN WELL INTERCEPTOR WELL MONITORING
SIGNORE - ELLICOTTVILLE, NEW YORK



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