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POST-REMEDIATION GROUNDWATER MONITORING REPORT

SECOND QUARTER 1997 SAMPLING EVENT

Vibratech, Inc.
Buffalo, New York

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Vibratech, Inc.
Buffalo, New York

SEPTEMBER 1997
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CONESTOGA-ROVERS & ASSOCIATES

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1.0 INTRODUCTION

In 1996, Vibratech, Inc. (Vibratech) sold its facility located at 537 East Delavan Avenue in Buffalo, New York (Site). The facility had been used for manufacture of vibration dampers and rotary shock adsorbers for the trucking and railroad industries.

During environmental investigations conducted prior to the sale of the property, an area of soil contamination was discovered along a railroad spur on the south portion of the property. The chemicals of concern are volatile organic compounds (VOCs), specifically: 1,1-dichloroethane; 1,2-dichloroethane; cis-1,2-dichloroethene; trans-1,2-dichloroethene; toluene; 1,1,1-trichloroethane; trichloroethene; vinyl chloride; and total xylenes. The former area of soil contamination is shown on Figure 1.1.

These VOCs were also detected in groundwater. Figure 1.2 shows total VOC concentrations in Site monitoring wells.

In 1995-1996, the contaminated soil was excavated and disposed off-Site or treated on-Site using soil vapor extraction (SVE). This remedial action removed the source of groundwater contamination. Remaining chemical presence in groundwater is expected to naturally attenuate over time.

A post-remediation groundwater monitoring program was developed to continue to monitor VOC presence in groundwater. The program is described in a report written by Conestoga-Rovers & Associates (CRA) entitled "Post-Remediation Groundwater Monitoring Plan", dated April 1997. The plan provides for groundwater sample collection from three downgradient monitoring wells designated MW-2, MW-6, and MW-7. Groundwater samples are analyzed for selected VOCs using SW-846 Method 8620. The frequency of groundwater sampling specified in the Post-Remediation Groundwater Monitoring Plan is as follows:

i) quarterly for the first four quarters (first year);
ii) semi-annually during the second year; and
iii) annually during years three through five.

At the end of five years, the monitoring program will be re-evaluated. An earlier re-evaluation may be conducted but no changes from the above will be implemented without the consent of the New York State Department of Environmental Conservation (NYSDEC).

This report presents the results of the post-remediation sampling event which took place during the second quarter of 1997.

2.0 WORK PERFORMED

CRA conducted the second quarter 1997 groundwater sampling event at the Former Vibratech Facility at 532 East Delavan Avenue in Buffalo, New York on June 19, 1997.

Monitoring wells MW-2, MW-6, and MW-7 were sampled in accordance with the Post-Remediation Groundwater Monitoring Plan dated April 1997. A blind duplicate sample was collected at MW-2 and identified as BTF-61197-MW-9. A matrix spike and matrix spike duplicate was collected at MW-6. Samples were picked up by Columbia Analytical Services (CAS) on the date of sampling. Samples were analyzed using SW-846 Method 8260.

3.0 RESULTS

3.1 DATA QUALITY

CRA performed an assessment and validation of the laboratory's analytical results. The data reported by CRA was determined to be acceptable for use without qualification. Appendix A contains the Analytical Data Quality Assessment and Validation report.

3.2 ANALYTICAL RESULTS

The following chemicals were detected in samples collected during the second quarter of 1997:

Chemical	*MW-2*	*MW-2 (Duplicate)*	*MW-6*	*MW-7*
1,1-Dichloroethane	310	260	78	5.0 U
cis-1,2-Dichloroethene	410	430	130	5.0 U
1,1,1-Trichloroethane	63	65	5.0 U	5.0 U
Trichloroethene	12	12	5.9	5.0 U
Vinyl chloride	280	270	74	5.0 U
o-Xylene	5.6	5.3	5.0 U	5.0 U
m&p-Xylene	5.9	5.7	5.0 U	5.0 U

Notes:

U Non-detect at the associated value.

In subsequent reports, these data will be used with the results of future sampling events to assess any trends in groundwater chemistry.

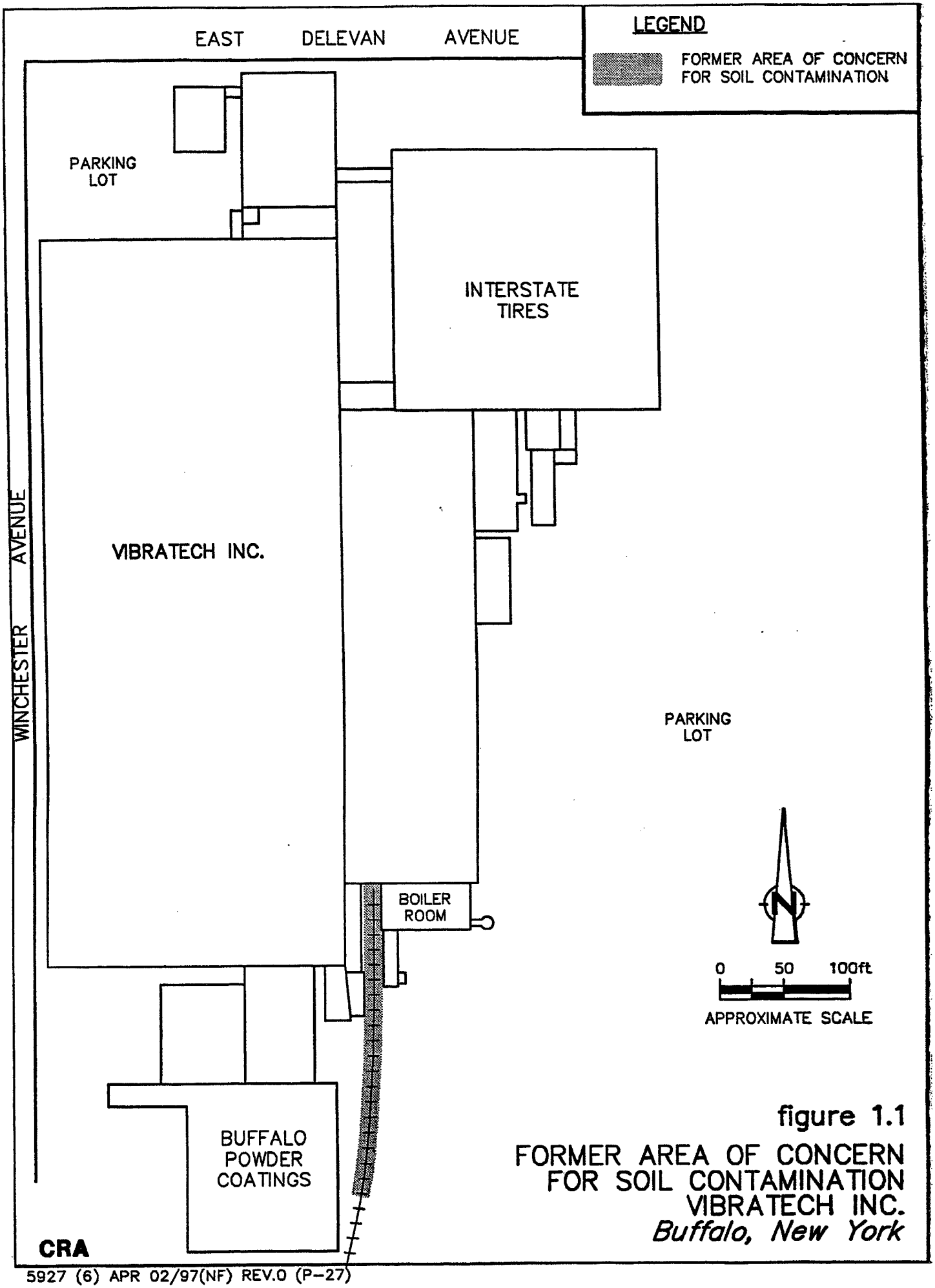

figure 1.1

FORMER AREA OF CONCERN FOR SOIL CONTAMINATION
VIBRATECH INC.
Buffalo, New York

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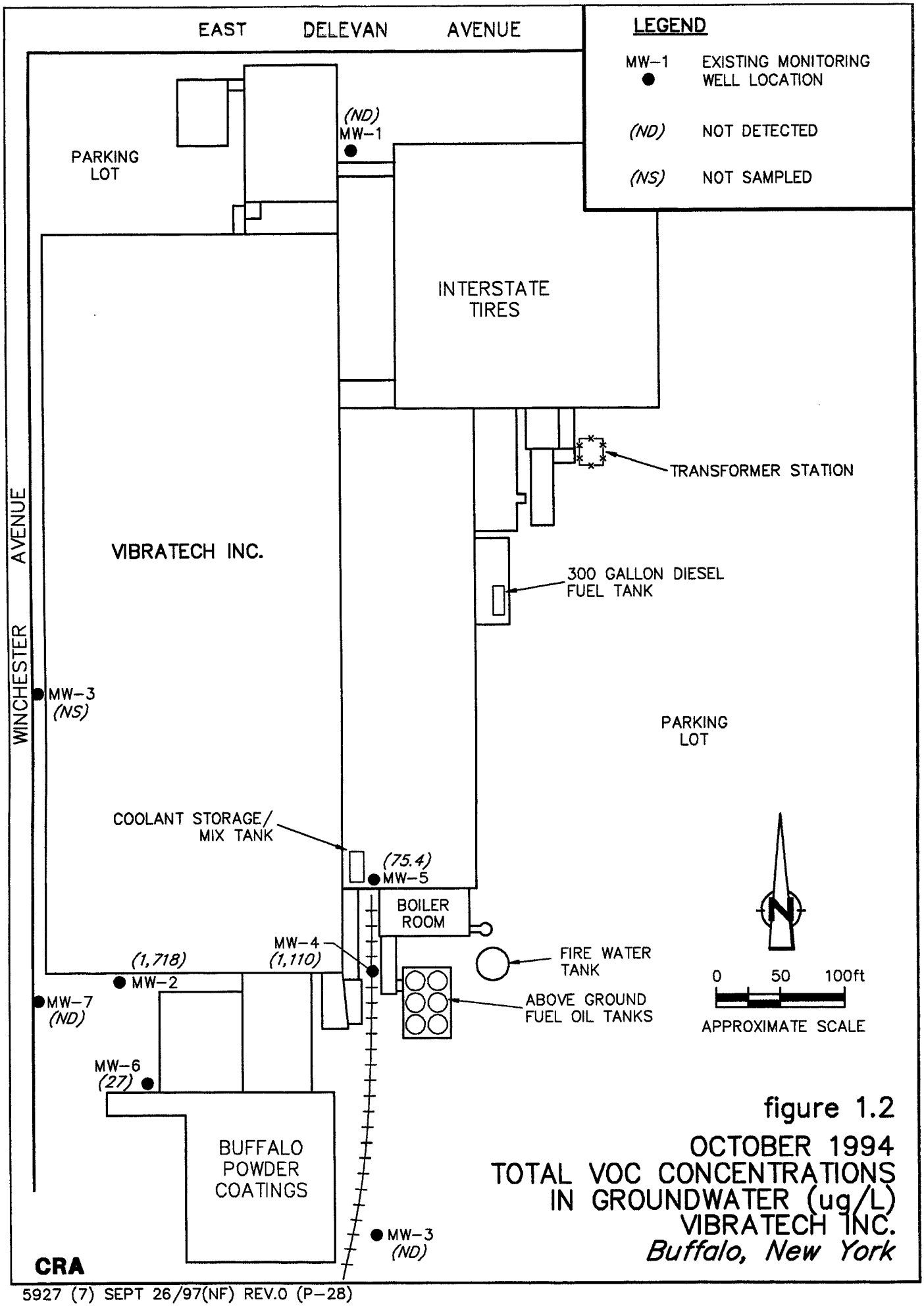

figure 1.2

OCTOBER 1994
TOTAL VOC CONCENTRATIONS
IN GROUNDWATER (ug/L)
VIBRATECH INC.
Buffalo, New York

CRA

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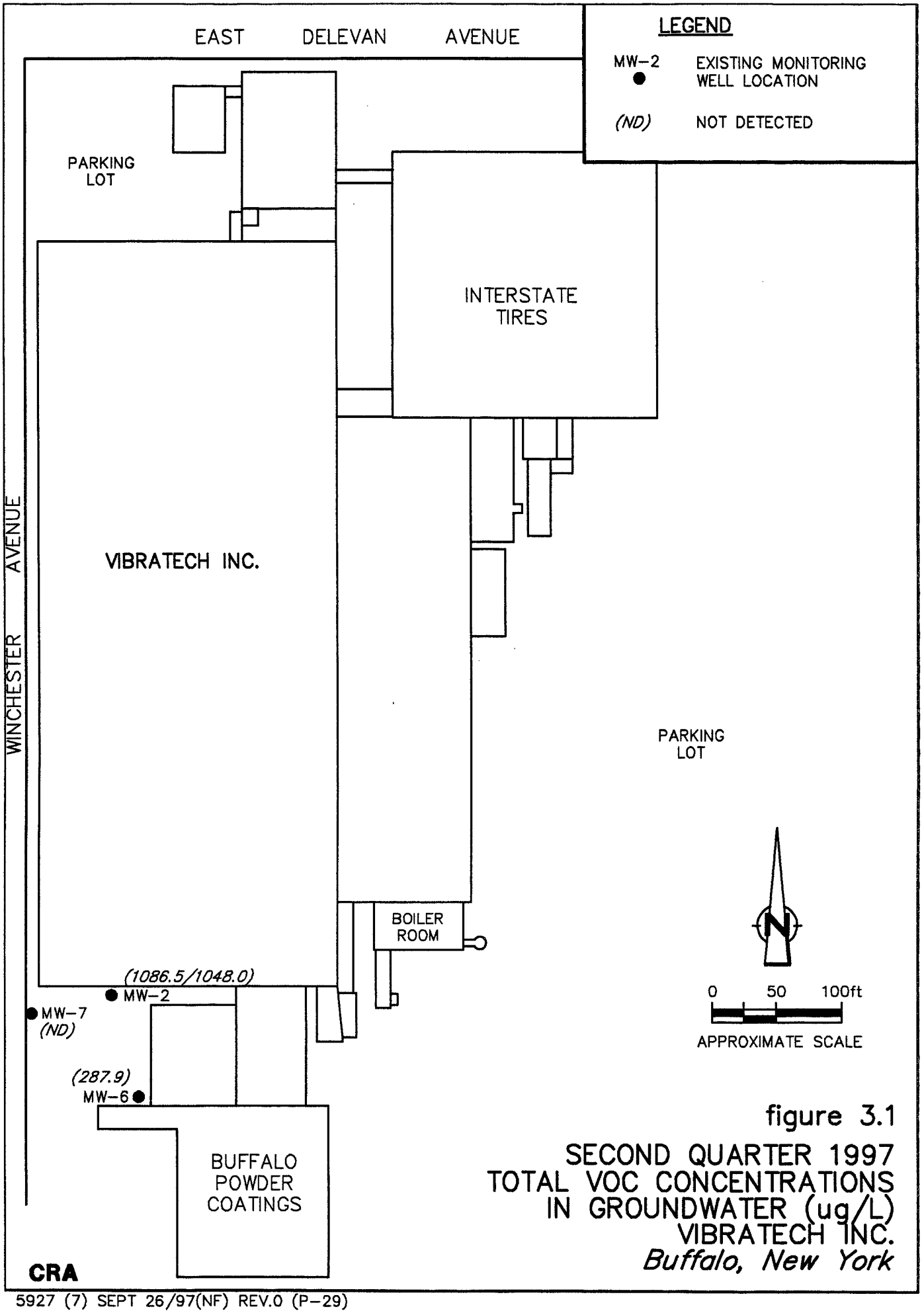

figure 3.1

SECOND QUARTER 1997
TOTAL VOC CONCENTRATIONS
IN GROUNDWATER (ug/L)
VIBRATECH INC.
Buffalo, New York

CRA

5927 (7) SEPT 26/97(NF) REV.0 (P-29)

APPENDIX A

ANALYTICAL DATA QUALITY ASSESSMENT AND VALIDATION

MEMO

TO: Kelly McIntosh REFERENCE NO: 5927

FROM: Deborah Andrasko/js/10 DATE: July 30, 1997

RE: Analytical Data Quality Assessment and Validation
Groundwater Sampling
Vibratech Site, Buffalo, New York
June 1997

C.C.: Bryan Foulke

The following details an assessment and validation of analytical results reported by Columbia Analytical Services, Inc. (CAS) for environmental samples collected in June 1997 from the Vibratech Site (Site). The samples collected were submitted for Site-specific volatile organic compounds (VOCs) as follows:

Parameter	*Matrix*	*Investigative Samples*	*Field Duplicates*	*MS/MSD*	*Trip Blanks*	*Total*
VOCs	Water	3	1	1/1	1	7

Notes:
MS/MSD - Matrix Spike/Matrix Spike Duplicate.

Samples were analyzed by Method 8260, referenced from "Test Methods for Evaluating Solid Waste", SW-846, 3rd Edition, 1986.

For sample identification and location, a sample collection summary is presented in Table 1. A summary of the analytical results is presented in Table 2. Evaluation of the data was based on information obtained from finished data sheets, blank data, and recovery data from matrix, blank, and surrogate spikes. Quality Assurance/Quality Control (QA/QC) criteria by which these data have been assessed are referenced from the SW-846 method of analysis and the "National Functional Guidelines for Organic Data Review" (February 1994), both prepared by the United States Environmental Protection Agency (USEPA).

ANALYTICAL ASSESSMENT AND VALIDATION

All samples were properly transported and stored at 4°C (±2°C). The samples were preserved with hydrochloric acid to a pH of less than two. All analyses were performed within the SW-846 recommended holding time of 14 days.

The surrogate compounds 4-bromoflurobenzene, toluene-d_8, and dibromofluoromethane were added to all samples, blanks, and QC samples. All recoveries were acceptable, indicating good analytical efficiency.

Laboratory method blank analyses yielded non-detect results for all parameters, indicating that laboratory contamination was not a factor for this investigation.

A blank spike analysis was performed for all parameters of interest. All percent recoveries were acceptable, indicating good analytical accuracy.

One MS/MSD analysis was performed on sample BTF-61997-MW6. All percent recoveries (%R) and relative percent differences (RPDs) were within the control limits, indicating that good analytical accuracy and precision were achieved.

FIELD QA/QC RESULTS

One trip blank was submitted to the laboratory for VOC analysis on June 19, 1997. The analysis of the trip blank yielded non-detect results for all parameters, indicating that contamination from shipment and storage activities was not a factor for this investigation.

One field duplicate sample was collected and submitted "blind" to the laboratory for analysis. The results showed acceptable agreement with the original sample, demonstrating good sampling and analytical precision.

CONCLUSION

The data reported by CAS are acceptable for use without qualification.

TABLE 1

SAMPLE COLLECTION SUMMARY
VIBRATECH, INC.
BUFFALO, NEW YORK
JUNE 1997

Sample Identification	*Sample Location*	*Sample Matrix*	*Collection Date*	*Collection Time*	*Sample Analyses **	*Comments*
BTF-61997-MW2	MW2	Water	06/19/97	0925	Site-SpecificVolatiles	
BTF-61997-MW6	MW6	Water	06/19/97	0930	Site-SpecificVolatiles	MS/MSD
BTF-61997-MW7	MW7	Water	06/19/97	0940	Site-SpecificVolatiles	
BTF-61997-MW9	MW9	Water	06/19/97	1000	Site-SpecificVolatiles	Field Duplicate of MW2

Notes:

* Site-specific volatiles:
1,1-Dichloroethane, 1,2-Dichloroethane, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Toluene, 1,1,1-Trichloroethane, Trichloroethene, Vinyl Chloride, o-Xylene, m&p-Xylene.

MS Matrix Spike.

MSD Matrix Spike Duplicate.

TABLE 2

ANALYTICAL RESULTS SUMMARY
VIBRATECH, INC.
BUFFALO, NEW YORK
JUNE 1997

Sample ID:	*BTF-61997-MW2*	*BTF-61997-MW9*	*BTF-61997-MW6*	*BTF-61997-MW7*
Collection Date:	*06/19/97*	*06/19/97* (*Dup of BTF-61997-MW2*)	*06/19/97*	*06/19/97*
Volatiles (µg/L)				
1,1-Dichloroethane	310	260	78	5.0 U
1,2-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	410	430	130	5.0 U
trans-1,2-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1-Trichloroethane	63	65	5.0 U	5.0 U
Trichloroethene	12	12	5.9	5.0 U
Vinyl chloride	280	270	74	5.0 U
o-Xylene	5.6	5.3	5.0 U	5.0 U
m&p-Xylene	5.9	5.7	5.0 U	5.0 U

Notes:
Dup Field Duplicate.
U Non detect at the associated value.