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POST-REMEDIATION GROUNDWATER MONITORING PLAN

Vibratech, Inc.
Buffalo, New York

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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.

In anticipation of the sale of the property, Conestoga-Rovers & Associates (CRA) was retained by Vibratech to conduct environmental investigations of the Site to assess the existing environmental conditions resulting from current and former operations at the facility. In August 1992, CRA performed a Phase I Environmental Assessment at the Site. The results of this assessment are presented in the report entitled "Phase I Environmental Assessment Report, Vibratech, Inc., Buffalo, New York", dated September 10, 1992. Based on the Phase I assessment results, it was recommended that soil sampling be performed to better assess the environmental condition of the Site soils. CRA was retained to conduct the soil sampling program, the results of which are presented in the report entitled "Phase II Environmental Investigation Report, Vibratech, Inc., Buffalo, New York", dated February 9, 1994. CRA subsequently recommended a supplemental investigation that included additional soil sampling on the south side of the property along the railroad spur to better delineate the extent of contamination. The results of this supplemental investigation are presented in the report entitled "Supplemental Investigation, Vibratech, Inc., Buffalo, New York", dated June 1994.

Based on the results of these investigations, CRA delineated an area of approximately 6,250 square feet on the south side of the property along the railroad spur where elevated concentrations of volatile organic compounds (VOCs) were measured in soil samples (refer to Table 3.1 of the Supplemental Investigation Report). The VOCs of concern were: 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 area of soil contamination is shown on Figure 1.1.

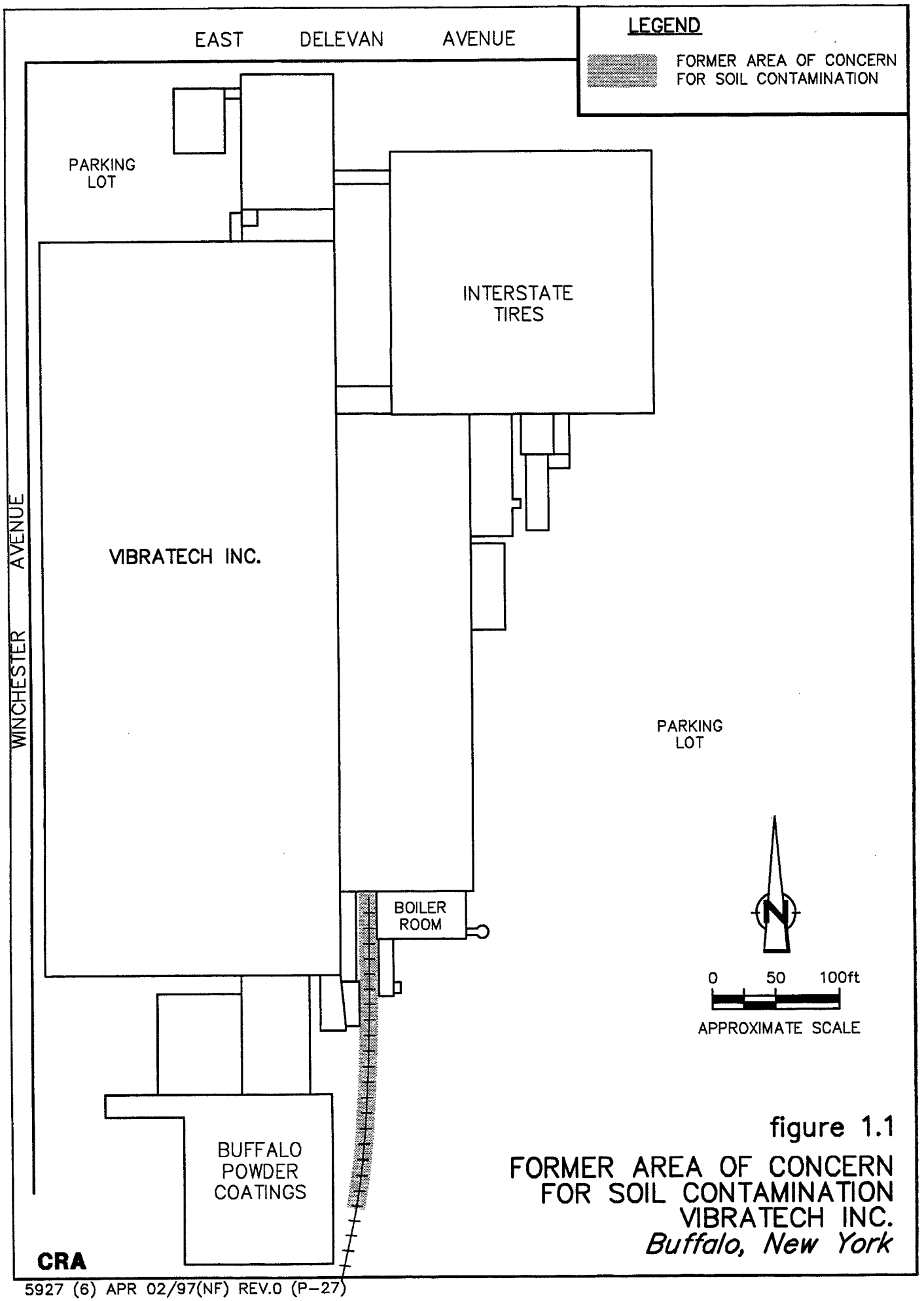

figure 1.1

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

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Vibratech retained CRA to prepare a plan for remediation of the contaminated soil. The remedial technology selected was on-Site treatment using ex situ soil vapor extraction (ESVE). The system design is presented in the report entitled "Soil Vapor Extraction Work Plan, Vibratech, Inc., Buffalo, New York", May 1995, prepared by CRA. This report was approved by the New York State Department of Environmental Conservation (NYSDEC).

The contaminated soil was excavated and the ESVE system was constructed in October 1995. The system was operated continuously through August 12, 1996 except for a shut down during the winter months of 1995 to 1996 (December 23, 1995 through May 16, 1996). The confirmation soil sampling was conducted on October 24, 1996 and November 18, 1996. The results of the confirmation soil sampling showed that the VOC concentrations in the soil had been reduced below the project cleanup criteria and that the soil was acceptable for use in backfilling the excavated area. The backfilling of the excavation was completed on March 12, 1997.

This report presents the groundwater monitoring program which will be implemented to verify that the source of contamination in groundwater at the Site has been effectively remediated. This Work Plan is presented in five sections. Section 2.0 presents the groundwater monitoring plan; Section 3.0 presents field procedures; and Section 4.0 presents reporting requirements.

2.0 GROUNDWATER MONITORING PLAN

2.1 GROUNDWATER MONITORING WELLS

The downgradient monitoring wells installed at the Site will be sampled for the post-remediation groundwater monitoring program. These wells are:

i) MW-2;
ii) MW-6; and
iii) MW-7.

The well locations are shown on Figure 2.1. Other existing wells at the Site will be permanently closed in accordance with NYSDEC protocols.

2.2 SAMPLING FREQUENCY

The frequency of groundwater sampling will be 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 NYSDEC.

2.3 CHEMICAL ANALYSES

2.3.1 Analytical Parameter

The groundwater samples will be analyzed for the project chemicals of concern:

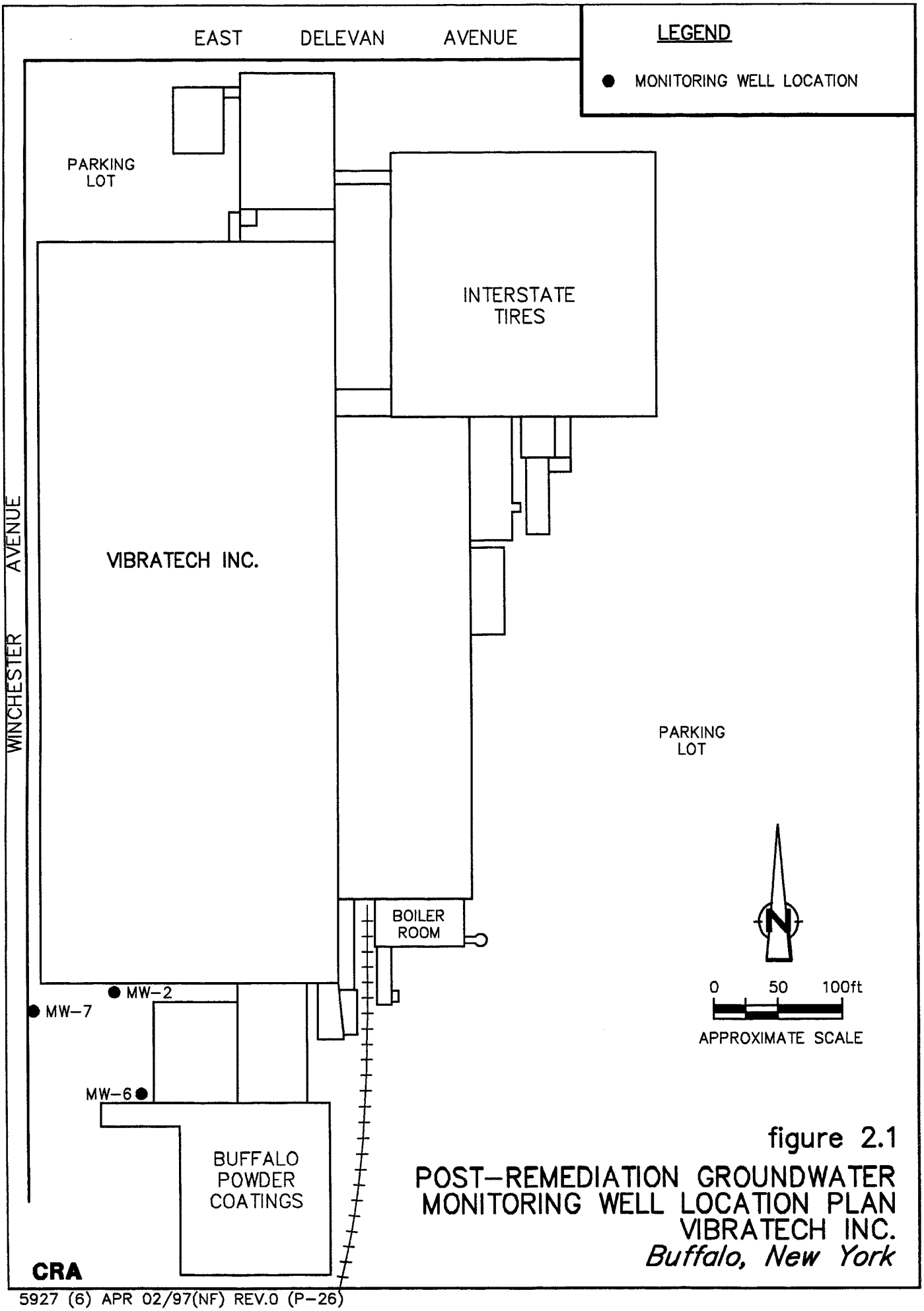

figure 2.1

POST-REMEDIATION GROUNDWATER MONITORING WELL LOCATION PLAN
VIBRATECH INC.
Buffalo, New York

CRA

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i) 1,1-Dichloroethane;
ii) 1,2-Dichloroethane;
iii) cis-1,2-Dichloroethene;
iv) trans-1,2-Dichloroethene;
v) Toluene;
vi) 1,1,1-Trichloroethane;
vii) Trichloroethene;
viii) Vinyl chloride; and
ix) Total xylenes.

2.3.2 Analytical Methods and QA/QC

The project chemicals of concern will be analyzed using SW-846 Method 8260, referenced from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", 3rd Edition, September 1986 and subsequent revisions. The results will be reported with standard SW-846 deliverables. The cited methodology and deliverables are consistent with the investigative work previously performed at the Site.

Quality Assurance/Quality Control (QA/QC) samples will be collected and/or submitted at the following frequencies:

i) Matrix Spike/Matrix Spike Duplicate (MS/MSD) - one per sampling event;

ii) Field Duplicates - one per sampling event;

iii) Trip Blanks - one submitted per container (cooler) of samples; and

iv) Rinse Blank - a minimum of one per sampling event (if non-dedicated equipment is used).

The laboratory chosen to perform the analyses will be certified by the New York State Department of Health (NYSDOH) for the analysis of VOCs in non-potable water.

3.0 FIELD PROCEDURES

The groundwater level will be measured in each well prior to purging any well. Groundwater levels will be measured in accordance with American Society for Testing and Materials (ASTM) D4750 (ASTM 1987).

Prior to sampling, the wells will be purged until consistent measurements of ±5 percent are obtained from three consecutive readings of pH, conductivity, and temperature or until a maximum of five well volumes had been removed. Any low-yielding wells will be purged until dry. After recovery, the well purged to dryness will be sampled. Purging will be conducted using a peristaltic or dedicated pump or bailer. The purging rate will be controlled to minimize turbidity. Purged water will be collected and containerized for proper disposal in accordance with appropriate regulations. All sampling activities will be recorded in a bound field notebook.

Any sampling or purging equipment which is not dedicated will be steam cleaned before and after each use. Strict chain of custody procedures will be followed during shipping and handling of groundwater samples.

4.0 REPORTING

Vibratech, or its Contractor, will prepare a report presenting the results of each sampling event. Therefore, the reports will be submitted quarterly for the first year, semi-annually for the second year, and annually for years three through five. After five years (or earlier if appropriate), an interpretive report will be prepared which re-evaluates the monitoring program and makes recommendations regarding the need for, or nature of, any continuing groundwater monitoring program.