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Department of Environmental Conservation

Division of Environmental Remediation

PROPOSED REMEDIAL ACTION PLAN

Vibratech, Inc. Site
City of Buffalo, Erie County
Registry Number 915165

February 1997

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* **JOHN P. CAHILL,** *Acting Commissioner*

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PROPOSED REMEDIAL ACTION PLAN

Vibratech Inc.

Buffalo (C), Erie County, New York
Site No. 915145
February 1997

SECTION 1: PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYS DOH) is proposing **"No Further Action"** for the Vibratech Inc. site.

Continued groundwater monitoring is required, however, to assess the effectiveness of the Interim Remedial Measure implemented for the Vibratech, Inc. Site which addressed VOC (volatile organic compound) contaminated surface and subsurface soils.

The NYSDEC is also proposing that the site be reclassified in the NYS Registry of Inactive Hazardous Waste Sites from a Class 3 site (a site that does not present a significant threat to the public health or the environment) to a Class 4 site (a site that has been properly closed but requires continued management).

This Proposed Remedial Action Plan (PRAP) identifies the preferred remedy and discusses the rationale for this preference. The NYSDEC will select a final remedy for the site only after careful consideration of all comments submitted during the public comment period.

The NYSDEC has issued this PRAP as a component of the citizen participation plan developed pursuant to the New York State Environmental Conservation Law (ECL) and state regulation 6 NYCRR Part 375. This document summarizes the information that can be found in greater detail in the Remedial Investigation (RI) and Remedial Summary (RS) reports available at the document repositories.

The NYSDEC may modify the preferred alternative or select another alternative based on new information or public comments. Therefore, the public is encouraged to review and comment on this proposal.

To better understand the site, and the alternatives evaluated, the public is encouraged to review the project documents which are available at the following repositories:

NYSDEC Region 9 Office
270 Michigan Avenue
Buffalo, New York 14203-2999
Contact: Mr. Maurice F. Moore
Project Manager
(716) 851-7220
(by appointment only)

East Delavan Branch Library
1187 E. Delavan Ave.
Buffalo, New York 14215
(716)896-4433

Written comments on the PRAP can be submitted to Mr. Moore at the above address.

DATES TO REMEMBER:

Public comment period on PRAP:
February 19 - March 21, 1997
Public meeting:
Monday, March 10, 1997 at 6:00 pm. at the:
East Delavan Branch Library
1187 E. Delavan Ave.

Buffalo, New York 14215
(716)896-4433

SECTION 2: SITE LOCATION AND DESCRIPTION

The Vibratech, Inc. facility is located at 537 East Delavan Ave. in the City of Buffalo, Erie County, New York. The company is a manufacturer of vibration dampers and rotary shock absorbers for the trucking and railroad industry. The facility is located on the south side of East Delavan in a mixed industrial, commercial and residential area. The facility was built in 1927 and was occupied by Vibratech, Inc., a paint coating operation, and a tire warehouse. The neighborhood is an urban area with residences to the east, industry to the south (machine & tool company), a commercial operation to the north (auto wrecker yard), and small manufacturing and commercial businesses to the west (Figure 1).

The site is situated on a flat lake plain. The geology of the area consists of approximately two (2) to five (5) feet of native, silty clay and/or gravel, sand and silty fill over fractured Onondaga Limestone bedrock. Bedrock in this portion of the Buffalo area is generally shallow (approximately five (5) feet below ground surface) and dips slightly to the southwest.

The groundwater at the site is found in the uppermost bedrock water bearing zone, in the top five (5) feet of the fractured bedrock. There are no water bodies in the general vicinity of the site. The Scajaquada Drain (Creek), which accepts the majority of stormwater flow for this area of Buffalo, is located approximately 1100 feet south of the property. The specific area of contamination, or the "area of concern," is the railroad spur area in the rear of the facility, between the building and the boiler room extending south adjacent to the front of Buffalo Powder Coatings (Figure 2). The total extent of the "area of concern" is approximately 6250 sq. ft.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Built in 1927, the facility has seen major building additions between 1927 through 1936 and in each of the years; 1937, 1938, 1940 and 1944. Various industries have occupied the facility such as, Buffalo Arms, British Arms, Houdaille-Hershey Corporation, Houde Engineering, Houdaille Hydraulics, Houdaille Industries, and Vibratech Inc. The current occupant of the facility is an automobile recycling operation that dismantles cars for their recyclable materials, such as, crumb glass, steel, copper, and rubber.

A Phase II Environmental Investigation conducted in December 1993 revealed the presence of degreasing solvents containing volatile organic compounds, also known as VOCs. Degreasing solvents are commonly used in the manufacturing of metal items to clean off oils, greases and other petroleum products. Used, or "dirty," solvent is considered a hazardous waste and its disposal is heavily regulated to prevent improper disposal or use. It is believed that this VOC contamination is a result of incidental spillage, over time, of degreasing solvents. The VOCs of concern are: 1,1-dichloroethane; 1,2-dichloroethane; cis-1,2-dichloroethene; toluene; 1,1,1-trichloroethane; trichloroethene; vinyl chloride; and total xylenes.

3.2: Remedial History

Three 10,000 gallon underground storage tanks (USTs), one containing diesel fuel, one containing curing/quenching oil and one containing an unknown flammable degreasing solvent were emptied, cleaned and removed in the 1980's. One additional (UST) of unknown contents was emptied and filled with concrete in August/September 1986.

On October 3, 1988 a release of 2 ounces of polychlorinated biphenyl (PCB) oil from a transformer onto a concrete floor was reported to the National Response Center. This spill was cleaned up and the transformer removed. According to a Phase 1 Environmental Assessment by Conestoga-Rovers & Associates,

Vibratech personnel have stated that all electrical transformers containing polychlorinated biphenyls (PCBs) have been drained and rinsed or removed and replaced.

An environmental regulation compliance audit and a multi-phase remedial investigation have been completed for the Vibratech property beginning in January 1992 through April 1995. These reports included all aspects of the Vibratech site including soil sampling and monitoring well installation and sampling.

On February 14, 1995, Vibratech officials met with NYSDEC and voluntarily discussed the results of the environmental investigations performed at the site. After reviewing the information, it was apparent the site did not constitute an imminent threat to the environment, and/or public health but performing selective remediation action would mitigate the potential long term hazardous waste risks to the environment and public health.

A "Soil Vapor Extraction Work Plan" dated May 1995, proposing an interim remedial measure (IRM) for the excavation and treatment of the contaminated soils, was prepared by Vibratech Inc.'s consultant, Conestoga-Rovers Associates, as an addendum to a remedial Order on Consent (a legal agreement).

A public meeting was held on September 11, 1995 presenting details of the IRM.

On October 18, 1995 the site was listed on the New York State Registry of Inactive Hazardous Waste Sites as a Class 3 site. A Class 3 site designation means that the site does not presently constitute a significant threat to human health or the environment. A significant threat does not exist even though the contamination was exposed on the ground surface and in the soil at high concentrations because it is in a restricted area. There is localized, contaminated groundwater, however, all residents in this area are on public drinking water supplies and the Winchester Avenue sewer is acting as a sump preventing outward migration of the contaminants.
Remediation work began in October 1995 to excavate and treat VOC contaminated soils in accordance to the aforementioned work plan.

In addition to the above remediation that was performed as agreed, Vibratech also cleaned and properly closed the six above-ground storage tanks, cleaned up and closed the basement hazardous waste storage area, the basement sump and the degreaser clarifier.

SECTION 4: CURRENT STATUS

With NYSDEC oversight, Vibratech Inc. has recently completed the IRM at the site. The IRM responded to the presence of hazardous waste in the soils above guidelines. This waste has contributed to groundwater contamination at the site. The IRM consisted of soil excavation and on-site treatment of the soil from the rail spur area (see fig. 2). Soil samples were analyzed to confirm that all the contaminated soil in this area was removed. In addition, samples of the excavated, treated, soil piles have been collected and were found to have met the clean up goals identified in the Soil Vapor Extraction Work Plan. These treated soils will be replaced back into the rail spur area and the excavation south of the fuel oil tanks.

This Proposed Remedial Action Plan (PRAP) has been prepared by the Department proposing that **No Further Action** is required at this site. Continued groundwater monitoring will be required to determine if the IRM has mitigated the source of the groundwater contamination and that removal and treatment of the soil is indeed the final remedy. This continued monitoring will also verify that the Winchester Avenue sewer is continuing to prevent contaminated groundwater migration. NYSDEC is also proposing that the site be reclassified from a Class 3 Hazardous Waste Site to a Class 4 Hazardous Waste Site (a Class 4 Hazardous Waste Site is a site that has been remediated but continues to require monitoring and maintenance). This classification

reflects that although the believed source of the groundwater contamination has been removed, residual groundwater contamination will require continuing monitoring.

4.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of hazardous waste contamination resulting from previous activities at the site.

The RI was conducted in five phases beginning in August 1992 and ending in April 1995.

To determine which media (soil, groundwater, etc.) contain contamination at levels of concern, the RI analytical data was compared to environmental Standards, Criteria, and Guidance (SCGs). Groundwater, drinking water and surface water SCGs identified for the Vibratech , Inc. site were based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of NYS Sanitary Code. Soil contamination was compared to NYSDEC TAGM # HWR-94-4046 (Revised) "Determination of Soil Cleanup Objectives and Cleanup Levels" for the protection of groundwater. The RI(s) included the installation of soil borings and monitoring wells for analysis of soils and groundwater as well as physical properties of soil and hydrogeologic conditions.

4.1.1 Summary of Soil and Groundwater Investigations:

Seventeen soil borings and six test pits were completed during the remedial investigations.

Based upon the results of the soil investigations, soil contamination was found in the rail spur area at the southeast corner of the site (See fig 2). The area of concern was determined to be approximately 6250 square feet with contamination an average depth of 3.5 feet. The volume of contaminated soil was estimated to be approximately 500 - 700 cubic yards (yd^3). This soil contained total VOC contamination as high as 807 parts per million. These sampling results were compared to the SCGs. It was determined from potential public health and environmental exposure routes that this area of the site required remediation.

Eight monitoring wells were installed during the remedial investigations. From these monitoring wells, groundwater elevations were collected to determine localized groundwater flow. Hydraulic head measurements show a regional influence of the local bedrock. Shallow groundwater movement from northeast to southwest is indicative of the slightly dipping bedrock. There is a noted local hydraulic depression in the vicinity of Monitoring Wells MW-02 and MW-07 (See fig. 3). The Winchester Avenue sewer runs north/south and parallel to the Vibratech building. The indication of a hydraulic depression suggests that this sewer or its bedding are acting as a sump for the uppermost groundwater and restricts flow beyond this point.

In addition to hydraulic data, groundwater chemistry data was collected in April 1994 from monitoring wells MW-1, MW-2, MW-3, and MW-4. In October 1994, as part of the supplemental groundwater investigation, four additional wells, MW-5 through MW-8, were installed. These additional wells were sampled except monitoring well MW-8 which was dry and not sampled. In May 1996, monitoring wells MW-2, MW-3, MW-5, MW-6, and MW-7 were again sampled. MW-4 had been removed during remediation and could not be sampled in May 1996. Monitoring wells MW-1 and MW-8 also were not sampled in May 1996. MW-1 was not sampled because of its upgradient position to the contamination source and MW-8 was again dry and not sampled.

The data indicates that VOC contamination in groundwater exists at the Vibratech Inc. site at relatively low levels. Infiltration from the VOC contaminated soil has penetrated the upper water bearing zone, however, no widespread or highly contaminated groundwater plume is indicated. For both sampling events the highest concentrations of VOC concentrations were

measured in MW-2. Total VOC concentration in this well from the 1994 sample was 1718 micrograms per liter (ug/L). There was a minor increase in the total VOC concentrations reported for MW-5 (75.4 ug/L in 1994 compared to 199.1 ug/L in 1996), and there was a slight increase in the values from 1994 to 1996 in MW-6 (27 ug/L to 60.3 ug/L respectively). The slight increase during this period may be attributed to either the removal of the cover soil in the rail spur area exposing the bedrock surface or the increased concentration of the contaminants due to the decreased volume of water. The increased infiltration potential from soil cover removal could be moving contaminants that may have been trapped in the crevices and fractures in the bedrock. The sampling during the month of May was during a low water period while the sample from 1994 was collected in October which usually experiences an increase in groundwater elevation. No VOCs were detected during either sampling that were above the detection limits in MW-3 or MW-7.

It is indicated that the Winchester Avenue sewer is acting as a barrier to outward migration from the site. Samples were collected from sewer manholes in area of MW-7 and MW-8 during a dry weather period. Low levels of trihalomethane compounds typically found in chlorinated drinking water were detected, however, no site-related compounds were detected. Any groundwater that enters the sewer is eventually treated by the Buffalo Sewer authority. It is noted that no increase in sewer water contamination was found as the sewer water passes the Vibratech facility.
Results of the monitoring well and sewer samples are tabulated and compared to groundwater standards in table 1.

More complete information can be found in the RI Reports.

4.2 Interim Remedial Measures:

Interim Remedial Measures (IRMs) are conducted at sites when a source of contamination or exposure pathway can be effectively addressed before completion of the Remedial Investigation/Feasibility Study (RI/FS). Detailed procedures and requirements of the IRM conducted at this site can be found in the document entitled, "Soil Vapor Extraction Work Plan", Vibratech, Inc., Buffalo, New York, May 1995.

4.2.1: Summary of the Interim Remedial Measure:

The objective of the IRM was to remove all VOC contaminated soil at the site, pile the soil into specially engineered above ground (ex-situ) soil vapor extraction cells and treat the soil using soil vapor extraction technology. Soil Vapor Extraction or SVE is a technology by which a vacuum is applied to soil which in turn removes the volatile contamination from the air spaces within the soil. Ex-situ SVE was chosen because the contaminated soil volume was small and the above ground cell construction helps to speed the remediation process. When treated, the soil is deposited back into the excavation.

Before the start of excavation activities, soil samples were collected and analyzed to determine the extent of the contamination. The identification of the extent of VOC contamination revealed that all the soil in the rail spur area needed to be excavated. Soil samples were screened using a photo ionization detector (PID), (an instrument which can detect volatile organic compound vapors in the field).

Prior to excavation, clean surface gravel was cleared to expose the rail spur. All track, tie plates and spikes were cleaned and removed for recycling. The rail ties were cut in half and transported to Browning-Ferris for incineration. An area adjacent to the underground fuel tanks was prepared for accepting the soil piles (see fig 4). This area was then swept clean of all debris and the asphalt covered by both a 10 mil and a 6 mil sheet of plastic approximately 20 feet by 100 feet in size. Herbert F. Darling, an excavation contractor hired by Vibratech, excavated the

contaminated soil from the rail spur area and placed it in piles onto the plastic. These piles were then leveled off and two 2-inch diameter slotted pipes were placed on top of the soil and additional soil was placed on top of the pipe. Twenty mil, black plastic was placed over the entire pile and then staked and trussed to create the soil vapor extraction cell. An additional 20 yd^3 of soil from the area south of the fuel oil tanks was excavated to clean clay and placed in the cells. A total of five cells, four of which contained approximately 139 cubic yards (yd^3) of contaminated soil and one smaller cell containing approximately 83 yd^3 of contaminated soil were constructed. The contaminated soil was excavated to bedrock resulting in the soil being completely removed from the rail spur area. Confirmatory soil samples of the excavated area were taken to determine that all contamination had been removed from the area of concern. Location of these samples can be seen on figure 5. Results of these samples are tabulated in table 2.

The five cells were then connected together with 2-inch PVC piping into one common header system. A vacuum extraction blower was attached to the header producing a vacuum on the system. As the air was drawn from the soil piles the contaminants volatilized, separating them from the soil.

Air and VOC contamination which was removed from the soil was passed through granular activated carbon and discharged into the atmosphere. Designed so that the removed VOCs would be captured, activated carbon systems function by absorbing the contamination onto granules of carbon. Only trace amounts, if any, are released into the air. Approximately weekly, the soil piles were monitored for their performance and vapor content. A total of 639 yd^3 of contaminated soil was excavated and treated in this manner. The carbon, which now has the contamination absorbed onto it, will be disposed of in an environmentally safe manner.

While excavating the VOC contaminated soil, soil contaminated with #6 fuel oil was encountered. This soil was deemed inappropriate for SVE treatment and was excavated and placed directly into eleven, 20 yd^3 rolloffs which were transported to Chemical Waste Management for disposal. A total of 132.5 tons of fuel oil contaminated soil was disposed of in this manner. A complete summary of this soil removal work can be found in the report Soil Remediation Construction Summary by Conestoga-Rovers & Associates, dated March, 1996

During the excavation two 3-inch underground steel pipes were uncovered near the end of the rail spur. These pipes ran parallel to the rail spur emptying into two catch basins at the end of the rail spur. Sampling of the catch basins revealed that they too were contaminated with VOCs (see Table 2, Sample No. 7). On April 15, 1996, Zebra Environmental was contracted to remove and dispose of the sediments in the catch basin. A total of three (3), 55-gallon drums of material were removed from these basins on May 3, 1996 and transported for treatment and disposal at Northeast Chemical Corporation, located outside Cleveland, Ohio. Complete details of this removal and a diagram of the catch basins can be found in the report entitled Soil Vapor Extraction Program - Monthly Progress Report, May 1996 Groundwater Monitoring Event, Remediation of Catchbasin Soils by Conestoga-Rovers & Assoc., dated June 1996.

The SVE system was started on November 6, 1995 and ran until December 22, 1995 when it was shut down for winter. The system was restarted on May 17, 1996 and ran until August 12, 1996. Vibratech then obtained preliminary samples to determine if confirmatory sampling could take place. The results of the preliminary sampling indicated that the SVE piles had attained clean up goals and confirmatory sampling was warranted. The sampling locations of the SVE piles can be located on figure 6 and the sampling results are tabulated in table 3.

4.2.2: <u>IRM remediation goals:</u>

The IRM conducted by Vibratech was intended to prevent potential adverse impacts to the groundwater, the environment and public health from site soils containing VOCs.

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR 375-1.10. These goals are established under the guideline of meeting all standards, criteria, and guidance (SCGs) and protecting human health and the environment. At a minimum, the remedy selected should eliminate or mitigate all significant threats to public health and the environment presented by the hazardous waste present at the site through the proper application of scientific and engineering principles.

The immediate objective of this IRM was to remove soils containing VOCs at levels which would continue to contaminate groundwater thereby reducing VOC contamination to a level which was protective of public health and the environment. The cleanup goals for VOCs selected for the Vibratech, Inc. site soils are tabulated as follows:

Environmental Media		Cleanup Goal
Soil	Acetone	0.2 ppm
	Benzene	0.06 ppm
	1,1-Dichloroethane	0.2 ppm
	1,2-Dichloroethane	0.1 ppm
	1,1-Dichloroethene	0.4 ppm
	trans-1,2-Dichloroethene	0.3 ppm
	Tetrachloroethene	1.4 ppm
	1,1,1 Trichloroethane	0.8 ppm
	Trichloroethene	0.7 ppm
	Vinyl Chloride	0.2 ppm

Total of all VOCs* not to exceed 10 ppm

* (Total VOCs as listed in Appendix A, Table 1 of TAGM (HWR-94-4046 Revised)).

The goals selected for this site are:

- Reduce soil VOC contamination present within the soils to the cleanup goals established.
- Eliminate the potential for direct human or animal contact with the contaminated soils on site.
- Eliminate the potential for contaminated soil to continue to contaminate groundwater.
- Monitor groundwater to ensure groundwater does not pose a threat to the area residences and/or the environment.

4.4 Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site.

An exposure pathway is the route by which an individual may be exposed to a contaminant. The five elements of an exposure pathway are: 1) the source of contamination; 2) the environmental media (e.g., soil, groundwater, air) and transport mechanisms; 3) the point of exposure; 4) the route of exposure (e.g. ingestion and inhalation) and 5) the receptor population. These elements of an exposure pathway may be based on past, present or future events.

Completed pathways which are known to or that may have existed at the site include: dermal contact with contaminated soils; inhalation of volatile contaminants from soils; and contact with and possibly ingestion of contaminated soil. Pathways which are not complete nor have been completed in the past include ingestion of contaminated groundwater (this is unlikely since there are currently no known users of groundwater in the vicinity). The IRM removed the contaminated soil and treated it to acceptable levels (established clean up goals) which removed the VOCs from the soil, eliminating these routes of exposure.

4.5 Summary of Environmental Exposure Pathways:

Continual degradation of the quality of the local groundwater from infiltration existed as long as the contamination remained in the soil. Removal of this source will allow for the natural restoration of the local groundwater. Since the source of the contamination has been removed and the soil clean-up goals have been met no further environmental exposure pathway exists.

SECTION 5: ENFORCEMENT STATUS

In September 1995, Vibratech Inc., a Unit of IDEX, entered into a Consent Order with NYSDEC to implement an Interim Remedial Measure to remove and treat the contaminated soil on the site. An Interim Order on Consent, Index no. B9-0471-95-01, was signed on September 9, 1995.

SECTION 6: SUMMARY OF THE REMEDIAL GOALS AND SELECTED ACTION

The selected remedy for any site should, at a minimum, eliminate or mitigate all significant threats to the public health or the environment presented by the hazardous waste present at the site. The State believes that the remediation now in place, which is described in section 4.2, would accomplish this provided that it continues to be monitored in a manner consistent with the design.

Based upon the results of the RI, previous investigations and the IRMs that have been performed at the site, the NYSDEC is proposing **"No Further Action"** as the preferred remedial alternative for the site. The Department would also reclassify the site from a Class 3 to a Class 4 which means "Site is properly closed - requires continued management" in the New York State Registry of Inactive Hazardous Waste Disposal Sites.

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The IRM conducted at the site accomplished the goals as identified above in Section 6. Confirmatory soil sampling has shown compliance with applicable soil clean-up goals. Further investigation and the development and evaluation of remedial alternatives is not necessary for this site. Continued groundwater monitoring is necessary, however, to ensure groundwater contamination poses no environmental or health issue. In addition, groundwater monitoring will provide data to evaluate the natural attenuation of the VOC contamination and confirm that the Winchester Avenue sewer prevents outward migration of the contamination.

Several factors make this approach appropriate. These include relatively low concentrations of contaminants in the groundwater, no use of groundwater locally, no human health exposures, and no significant environmental threat.

This action takes into account that the remediation of the site completed under the IRM has addressed the hazardous waste disposal and no further action is required. This is an acceptable alternative, as the site would remain in its present condition, and human health and the environment have been adequately protected by the completion of the IRM, as documented by the soil monitoring. The New York State Department of Health concurs with the remedy proposed for this site.

Community Acceptance - Concerns of the community regarding the IRM and the Proposed Remedial Action Plan will be evaluated. A "Responsiveness Summary" will be prepared that describes public comments received and how the NYSDEC will address the concerns raised. If the final remedy selected differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

SECTION 8: SUMMARY OF THE PREFERRED REMEDY

The Proposed Remedial Action Plan for the Vibratech Inc. site is **"No Further Action"**. This selection is based upon the results of the Interim Remedial Measure (IRM) previously conducted at the site. The IRM consisted of:

- The removal and treatment (soil vapor extraction) of all contaminated soil.
- Collection and analysis of soil samples in the area of the excavation that confirmed that clean-up goals had been achieved.

The **"No Further Action"** alternative is justified because the completion of the IRM complied with all the SCGs, was protective of public health and the environment, adequately addressed the short and long term effectiveness with the expedient treatment to reduce toxicity or mobility or removal of all wastes from the site, was readily implementable and was of a reasonable cost to implement. This alternative will require reclassification of the site from a Class 3 to a Class 4 hazardous waste site on the State's Registry of Inactive Hazardous Waste Sites and continued long-term monitoring of groundwater to assist in the evaluation of the effectiveness of the proposed remedy.

SECTION 9: CITIZEN PARTICIPATION ACTIVITIES

As part of the Interim Remedial Measure Decision Document, the following Citizen Participation activities were conducted prior to the implementation of the IRM:

- September 1, 1995 - Sent fact sheets describing the Interim Remedial Measure.
- September 11, 1995 - A public meeting was held to present the Draft IRM Decision Document for public comment.
- October 5, 1995 - Comments received during the meeting and the comment period, with the NYSDEC's responses, are included in a "Responsiveness Summary" which is attached to the Decision Document as Appendix B and sent to attendees of the public meeting. No significant comments were received and the IRM proceeded as proposed.
- October 18, 1995 - Sent a notice to adjacent property owners regarding the listing of the Vibratech Inc. site on the NYS Registry of Inactive Hazardous Waste Sites.
- April 23, 1996 - Details of the remediation presented at the monthly meeting of the Buffalo Environmental Management Commission.
- November 6, 1996 - Sent a project update detailing the progress of the remediation and future events.

Figure 1
Site Location Map

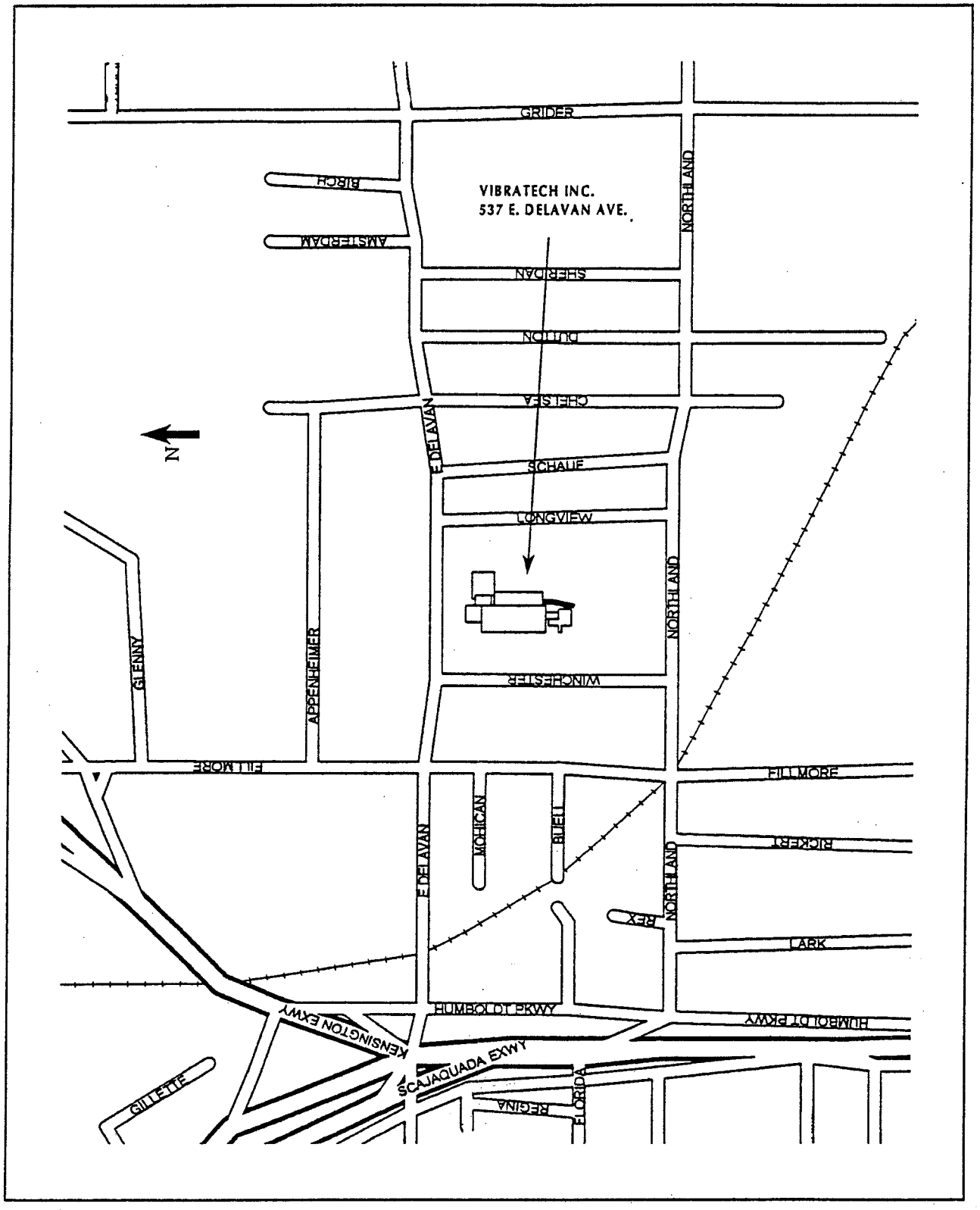

Figure 2
Site Plan

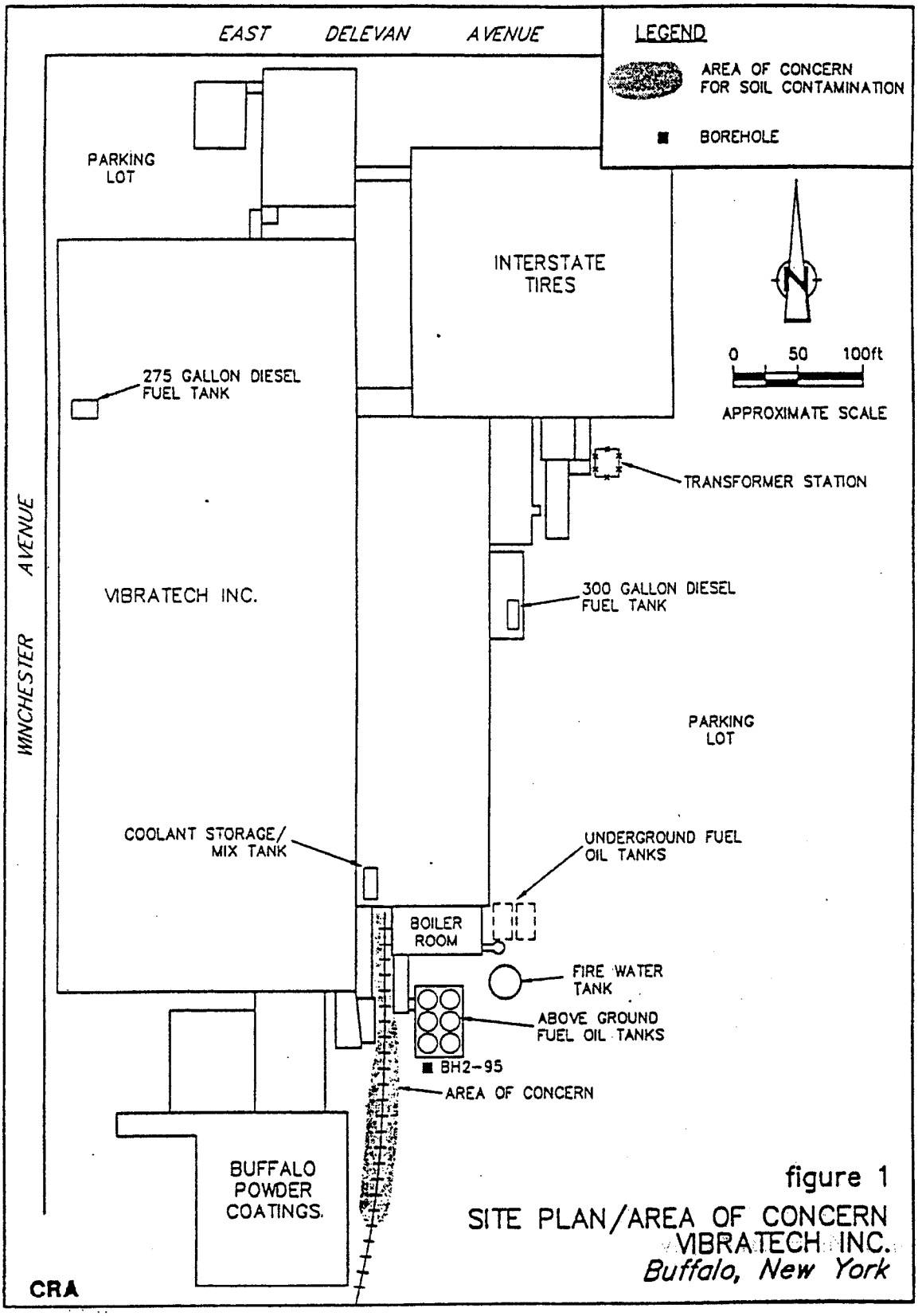

Figure 3
Groundwater Contour Map

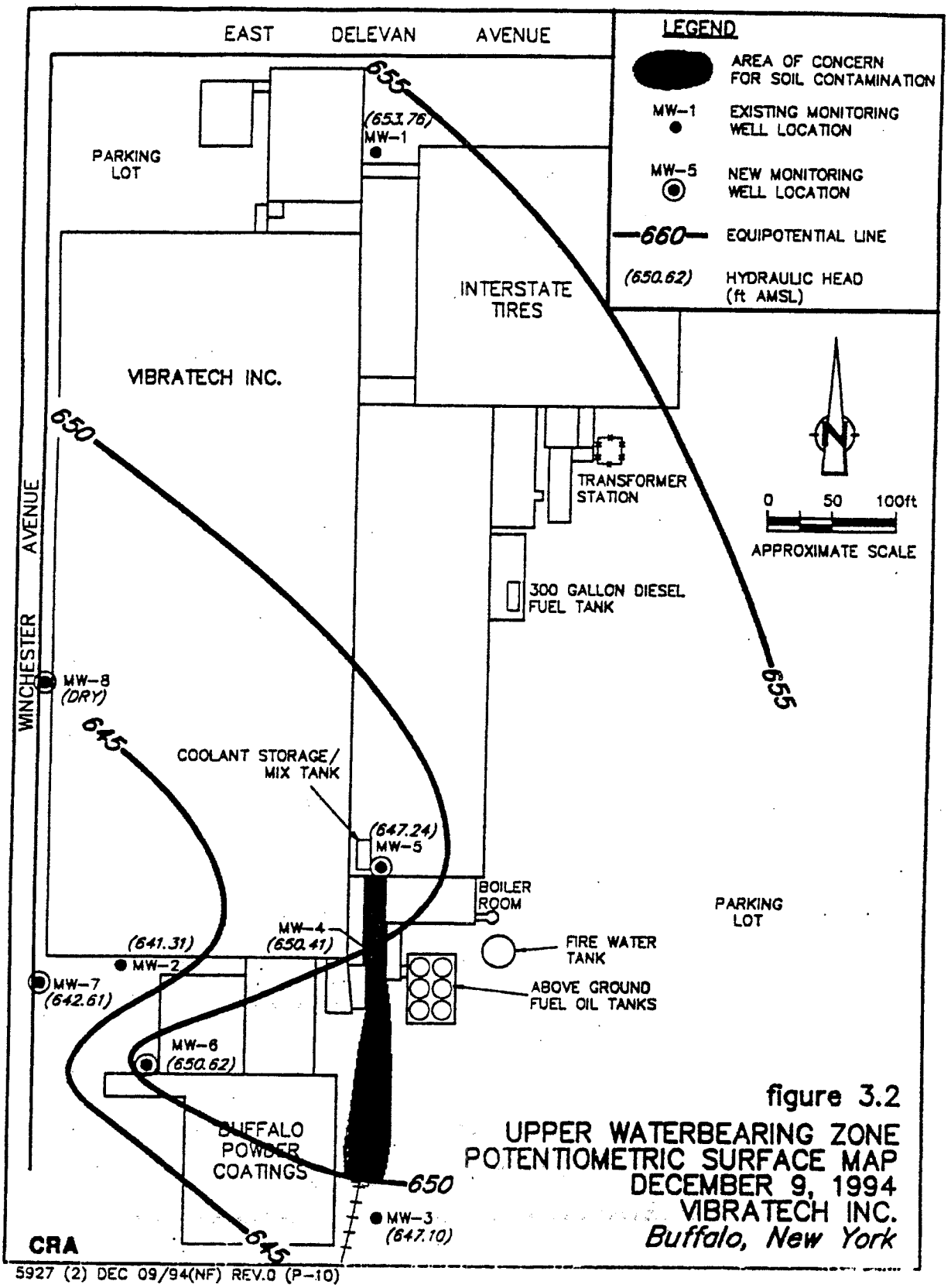

Figure 4
SVE Soil Pile Location

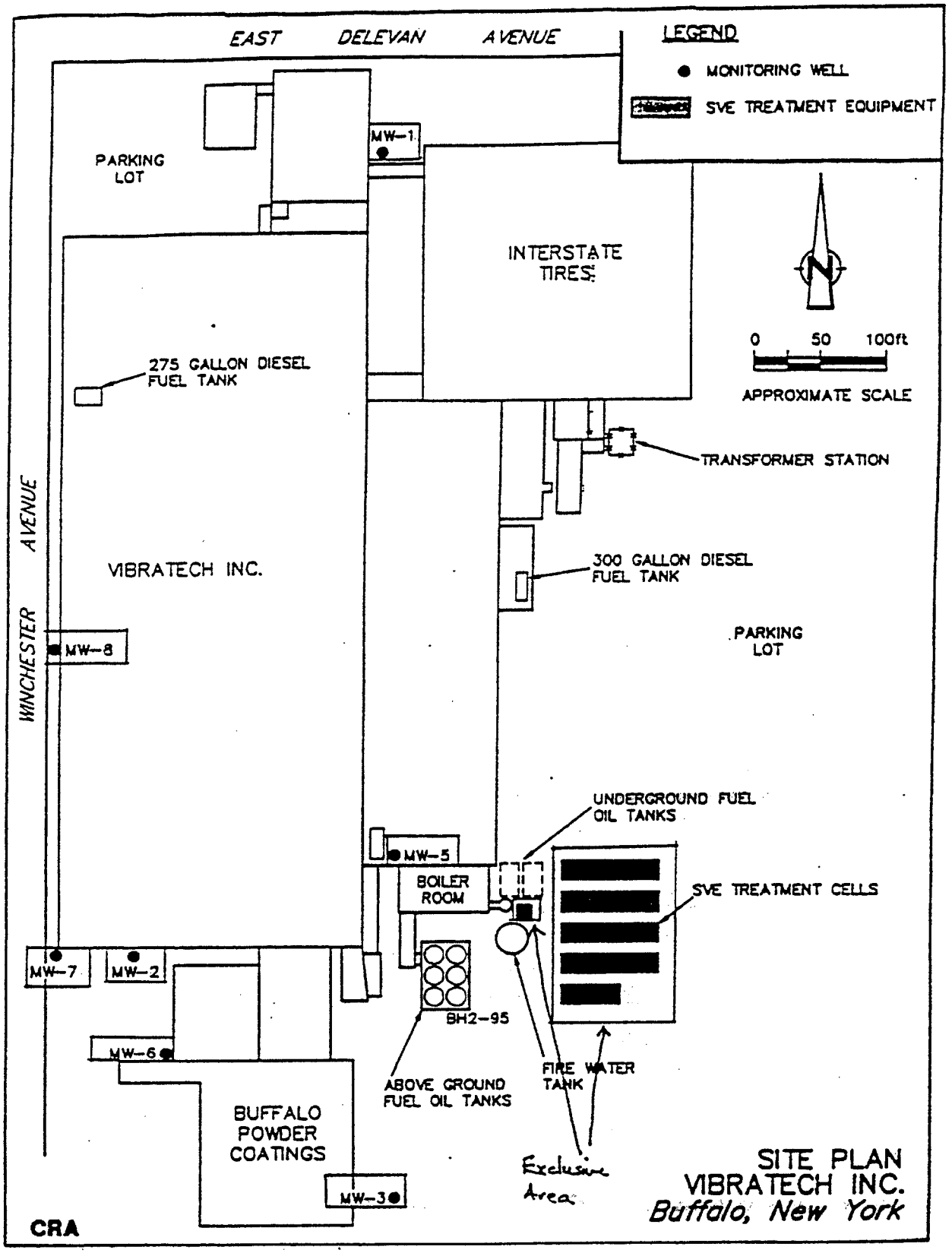

Figure 5
Soil Excavation
Confirmatory Sampling Locations

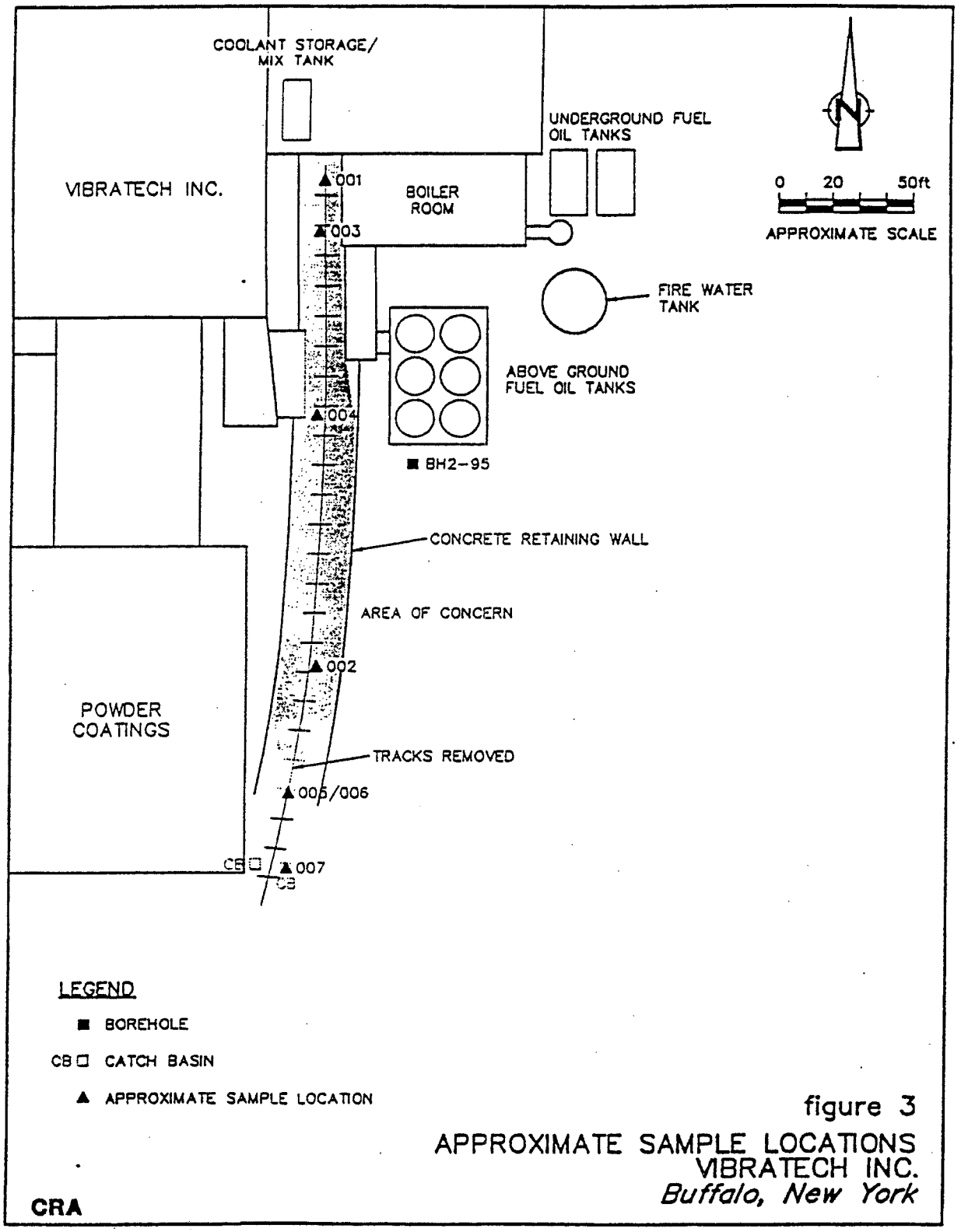

Figure 6
SVE Soil Pile
Confirmatory Sample Locations

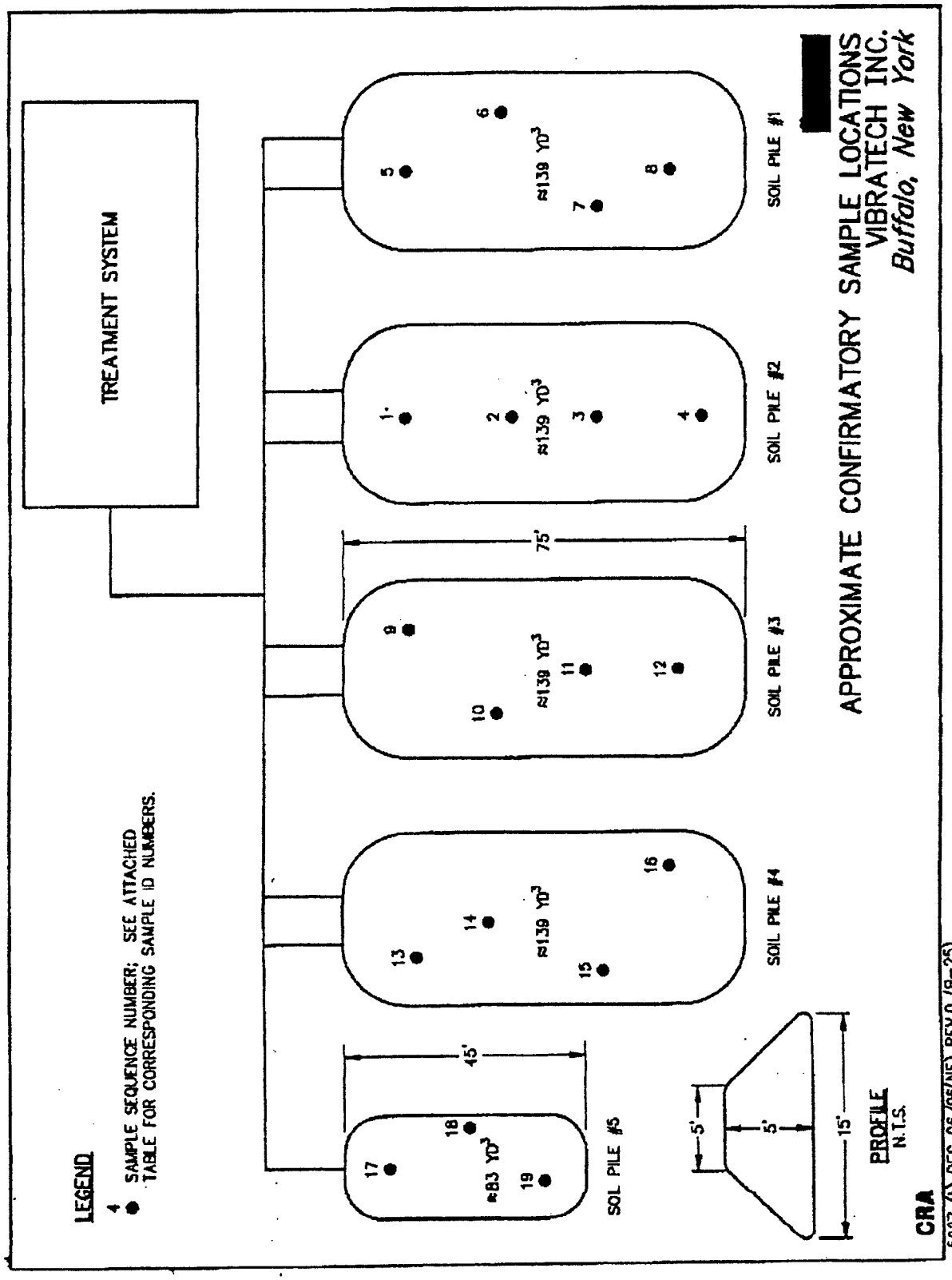

Table 1

Groundwater/Sewer Sampling Results
April 1994, October 1994 & May 1996

(Monitoring well locations denoted on Figure 3)

PARAMETER	Groundwater SCG Value ug/l	Source	MW-01 4/94	MW-02 4/94	MW-02 5/96	MW-03 4/94	MW-03 5/96	MW-04 4/94	MW-05 10/94
Vinyl chloride	2	A	ND	240	48	ND	ND	150	ND
Chloroethane			ND	140	150	ND	ND	ND	ND
Acetone	50	C	ND	ND	ND	ND	ND	33	ND
1,1-Dichloroethene	5	A	ND	16	8.7	ND	ND	ND	ND
1,1-Dichloroethane	5	A	ND	640	320	ND	ND	430	9.5
1,2-Dichloroethene (total)	50	B	ND	390	161.9	ND	ND	439	22
1,2-Dichloroethane	5	A	ND	ND	ND	ND	ND	11	ND
1,1,1-Trichloroethane	5	A	ND	260	140	ND	ND	13	ND
Trichloroethene	5	A	ND	13	6.3	ND	ND	5.0	34
Benzene	0.7	A	ND	ND	2.0	ND	ND	14	ND
Tetrachloroethene	5		ND	ND	ND	ND	ND	ND	ND
Toluene	5	A	ND	ND	3.2	ND	ND	15	ND
Ethylbenzene	5	A	ND	ND	2.0	ND	ND	ND	ND
Xylene (total)	5	A	ND	19	7.7	ND	ND	ND	9.9
Total VOCs			ND	1718	849.8	ND	ND	1110	75.4

A - NYSDEC WATER QUALITY STANDARDS AND GUIDANCE VALUES, OCTOBER 1993
B - CHAPTER I, NYS SANITARY CODE, SUBPART 5-1, PRINCIPLE ORGANIC CONTAMINANT
C - CHAPTER I, NYS SANITARY CODE, SUBPART 5-1, UNSPECIFIED ORGANIC CONTAMINANT

Table 1

Groundwater/Sewer Sampling Results
April 1994, October 1994 & May 1996

(Monitoring well locations denoted on Figure 3)

PARAMETER	Groundwater SCG Value ug/l	Source	MW-05 5/96	MW-06 10/94	MW-06 5/96	MW-07 10/94	MW-07 5/96	WS1* 5/96	WS2** 5/96
Vinyl chloride	2	A	19	ND	2.2	ND	ND	ND	ND
Acetone	50	C	4.1	ND	ND	ND	ND	ND	ND
Bromodichloromethane			ND	ND	ND	ND	ND	4.0	4.1
1,1-Dichloroethene	5	A	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	A	43	14	8.6	ND	ND	ND	ND
1,2-Dichloroethene (total)	50	B	110	ND	12	ND	ND	ND	ND
Chloroethane			1.7	13	12	ND	ND	ND	ND
Chloroform	7	A	1.3	ND	ND	ND	ND	ND	ND
Chloromethane			ND	ND	ND	ND	ND	4.4	4.5
Dibromochloromethane			ND	ND	ND	ND	ND	1.7	1.7
1,2-Dichloroethane	5	A	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	A	15	ND	ND	ND	ND	ND	ND
Trichloroethene	5	A	3.4	ND	10	ND	ND	ND	ND
Benzene	0.7	A	1.6	ND	1.5	ND	ND	ND	ND
Tetrachloroethene	5	A	ND	ND	14	ND	ND	ND	ND
Toluene	5	A	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	A	ND	ND	ND	ND	ND	ND	ND
Xylene (total)	5	A	ND	ND	ND	ND	ND	ND	ND
Total VOCs	10		199.1	27	60.3	ND	ND	10.1	10.3

A - NYSDEC WATER QUALITY STANDARDS AND GUIDANCE VALUES, OCTOBER 1993
B - CHAPTER I, NYS SANITARY CODE, SUBPART 5-1, PRINCIPLE ORGANIC CONTAMINANT
C - CHAPTER I, NYS SANITARY CODE, SUBPART 5-1, UNSPECIFIED ORGANIC CONTAMINANT

* Sample collected from manhole in Winchester Avenue sewer west of MW-2.
** Sample collected from manhole in Winchester Avenue sewer adjacent to MW-8.

Table 2

Area of Concern Excavation
Confirmation, Catchbasin and Background Soil Samples
October 1995

(Locations denoted on Figure 5)

		Confirmation Samples				Catchbasin Sample *	Background Sample **
Volatile Organic Compounds (VOCs)	NYSDEC Cleanup Levels (ug/kg)(1)	Sample # 001	Sample # 003	Sample # 004	Sample # 005	Sample # 007	Sample # 008
Acetone	200	150	230	ND	ND	ND	ND
Benzene	60	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	200	ND	ND	90	ND	ND	ND
1,2-Dichloroethane	100	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	400	ND	ND	ND	ND	ND	ND
total -1,2-Dichloroethene	300 ***	110	ND	ND	ND	***36000***	***330***
Tetrachloroethene	1400	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	800	12	ND	150	12	***87000***	ND
Trichloroethene	700	ND	ND	ND	ND	***540000***	77
Vinyl chloride	200	ND	ND	ND	ND	ND	ND

(1) - TAGM-4046, Determination of Soil Cleanup Objectives and Cleanup Levels (revised), 1/24/94
Bold Italic - exceeds NYSDEC clean up levels

* Analysis of a sample collected from solid concrete catchbasin. All materials were removed and disposed of 4/15/96.

** Analysis represents a sample from soils at the northeast corner of the building represents background.

*** Guidance value represents TAGM number given for the trans-1,2-dichloroethane isomer. Total-1,2-dichloroethane includes both the cis and the trans isomer for this compound.

Table 3
SVE Piles
Confirmation Soil Samples
November 1996
(Locations denoted on Figure 6)

Volatile Organic Compounds (VOCs)	NYSDEC Cleanup Levels (ug/kg)(1)	Sample # 1	Sample # 2	Sample # 3	Sample # 4	Sample # 5	Sample # 6	Sample # 7	Sample # 8
Acetone	200	ND	33	ND	ND	110	100	ND	44
Benzene	60	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	200	44	81	110	44	44	47	110	29
1,2-Dichloroethane	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	400	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	-	36	120	510	140	190	510	1100	250
trans-1,2-Dichloroethene	300	5.7	14	35	14	25	94	180	65
Tetrachloroethene	1400	20	240	340	60	ND	ND	ND	ND
1,1,1-Trichloroethane	800	11	34	43	14	ND	ND	ND	ND
Trichloroethene	700	30	45	63	26	53	260	550	100
Vinyl chloride	200	ND	ND	ND	ND	ND	ND	ND	10

(1) - TAGM-4046, Determination of Soil Cleanup Objectives and Cleanup Levels (revised), 1/24/94

Bold Italic - exceeds NYSDEC clean up levels

Table 3
SVE Pile
Confirmation Soil Samples
November 1996
(Locations denoted on Figure 6)

Volatile Organic Compounds (VOCs)	NYSDEC Cleanup Levels (ug/kg)(1)	Sample # 9	Sample # 10	Sample # 11	Sample # 12	Sample # 13	Sample # 14	Sample # 15	Sample # 16
Acetone	200	ND	ND	ND	26	ND	ND	ND	ND
Benzene	60	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	200	***220***	23	57	32	ND	ND	ND	ND
1,2-Dichloroethane	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	400	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	-	380	59	150	45	26	19	25	41
trans-1,2-Dichloroethene	300	38	9.4	22	6.5	ND	ND	ND	ND
Tetrachloroethene	1400	180	10	28	170	11	ND	ND	ND
1,1,1-Trichloroethane	800	62	15	ND	80	ND	ND	ND	ND
Trichloroethene	700	130	30	72	18	7.4	ND	6.3	ND
Vinyl chloride	200	ND	ND	ND	ND	ND	ND	ND	8.8

(1) - TAGM-4046, Determination of Soil Cleanup Objectives and Cleanup Levels (revised), 1/24/94

Bold Italic - exceeds NYSDEC clean up levels

Table 3
SVE Pile
Confirmation Soil Samples
November 1996
(Locations denoted on Figure 6)

Volatile Organic Compounds (VOCs)	NYSDEC Cleanup Levels (ug/kg)(1)	Sample # 17	Sample # 18	Sample # 19					
Acetone	200	ND	ND	ND					
Benzene	60	ND	ND	ND					
1,1-Dichloroethane	200	ND	ND	ND					
1,2-Dichloroethane	100	ND	ND	ND					
1,1-Dichloroethene	400	ND	ND	ND					
cis-1,2-Dichloroethene	-	90	70	110					
trans-1,2-Dichloroethene	300	7.7	6.3	8.9					
Tetrachloroethene	1400	ND	7.0	ND					
1,1,1-Trichloroethane	800	ND	ND	ND					
Trichloroethene	700	26	16	31					
Vinyl chloride	200	ND	ND	ND					

(1) - TAGM-4046, Determination of Soil Cleanup Objectives and Cleanup Levels (revised), 1/24/94

Bold Italic - exceeds NYSDEC clean up levels