Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision
Minmilt Realty Site
Town of Babylon, Suffolk County
Site Number 1-52-147

March 2002

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* ERIN M. CROTTY, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

Minmilt Realty Site
Town of Babylon, Suffolk County, New York
Site No. 1-52-147

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Minmilt Realty Class 2 Inactive Hazardous Waste Disposal Site which was chosen in accordance with the New York State Environmental Conservation Law. The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Minmilt Realty Inactive Hazardous Waste Disposal Site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A listing of the documents that are included in the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous waste constituents from this site have been addressed by implementing the interim remedial measures identified in this ROD. The removal of the contaminated storm drain sediments and the ongoing soil vapor extraction system has significantly reduced the threat to public health and the environment. Therefore, the site will no longer represent a current or potential significant threat to public health and the environment upon satisfactory completion of the operation of the soil vapor extraction system.

Description of Selected Remedy

Based on the results of the Remedial Investigation (RI) and the ongoing operation of the interim remedial measure (IRM) for the Minmilt Realty, the NYSDEC has selected source area remediation and continued monitoring as the remedy for the site. The components of the remedy are as follows:

- Continued operation of the soil vapor extraction (SVE) system. Confirmatory samples will be taken to demonstrate that NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046, Soil Cleanup Objectives have been achieved;
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- Continued operation of the existing groundwater extraction and treatment system;

- A comprehensive operation, maintenance and monitoring program that includes sampling of groundwater, air emissions and soil;

- Appropriate institutional controls and deed restrictions.

- The property owner will certify annually to the NYSDEC that the institutional controls are in place and that long term monitoring is being conducted as required by the remedy.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

_____ _____

Date

Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

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SECTION 1: SUMMARY OF THE RECORD OF DECISION:

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) has selected a remedy for the Minmilt Realty Class 2 Inactive Hazardous Waste Disposal Site. As more fully described in Sections 3 and 4 of this document, perchloroethylene (PCE), a volatile organic compound (VOC), was disposed in a drywell on the east side of the site building. These disposal activities resulted in the following significant threat to the public health and the environment:

- a significant threat to human health associated with PCE contaminated soils and contaminated groundwater;

- a significant threat to human health and the environment due to the contamination in the soils leaching into the groundwater which is utilized as a sole source aquifer.

During the course of the investigation, certain actions, also known as interim remedial measures (IRMs), were performed at the Minmilt Realty site in response to the threats identified above. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the Remedial Investigation/Feasibility Study (RI/FS). The IRMs performed at this site included the design, construction and operation of an on-site soil vapor extraction system and an off-site groundwater extraction and treatment system located on a downgradient adjacent property.

The selected remedy, discussed in detail as Alternative 4 in Section 7 of this document, is expected to attain the remediation goals selected for this site in Section 6 of this ROD, in conformity with applicable standards, criteria, and guidance (SCGs). The remedy includes the continued operation of the onsite SVE system and the offsite groundwater extraction and treatment system. The SVE system will continue to be operated until all site soils are at or below guidance values for soil cleanup. The groundwater extraction and treatment system will continue to operate until site groundwater meets NYSDEC groundwater standards, or operating data indicates that achievement of groundwater standards is technically impractical. The continued operation of the remedial systems requires maintenance and monitoring. There will also be deed restrictions and institutional controls associated with this remedy.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Minmilt Realty Site (formerly Hygrade Metals), approximately 2 acres in size, is located in the Town of Babylon, East Farmingdale, Suffolk County New York. The site is in a suburban industrial and commercial setting on Smith Street between New Highway to the west and Wellwood Avenue to the east (see Figures 1&2). Smith Street forms the northern border, Engineers Lane, a Cul-de-sac

off Central Avenue, is to the south and Central Avenue, parallel to Smith Street, is also to the south by approximately 1,500 feet.

The Minmilt Realty Site was originally the Hygrade Metal Mouldings (Hygrade) Site. The Hygrade building was constructed in 1965 specifically for Hygrade Metal Moulding. Prior to 1965, the property was vacant and used for agricultural purposes.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Hygrade manufactured metal mouldings from strip metals used in the construction of windows and other finished products. Hygrade used a vapor degreaser to clean metal parts with PCE.

From 1965 to 1983, the degreasing solvents were disposed directly into a dry well located to the east of the Minmilt Realty/Hygrade Metal Mouldings building. This dry well lies between the Hygrade Metals and the Great Neck Saw buildings (see Figure 3) and the entire area is paved with asphalt.

In the mid 1990's, the owner of Hygrade Metal Mouldings sold the machine shop, and retained ownership of the building under the new name of Minmilt Realty Corporation (Minmilt). Minmilt retained the environmental liability of the site. Eventually, Hygrade Metals moved out of the building. The Minmilt building was renovated and is now leased. The current tenant is the D'Addario guitar string company.

3.2: Remedial History

This site was identified as a potential threat to human health and the environment by the Suffolk County Department of Health Services (SCDHS) in the early 1980s. The SCDHS directed Hygrade Metals Inc. to discontinue disposal of perchlorethyene (PCE) into the on-site septic system, and this was terminated in 1983. The SCDHS issued Hygrade an Order on Consent (No. IW-91-0021) in January of 1992. The Consent Order alleged that Hygrade had caused or permitted the discharge of toxic or hazardous materials (PCE) to an on-site leaching pool subsequently violating the Suffolk County Sanitary Code.

Some inorganic (metals) and semi-volatile organic compound (SVOC) contamination was identified in the sediment of the boiler room dry well located in the northwest corner of the site (see Figure 4). These sediments were removed under the Suffolk County Article 12 requirements.

The SCDHS directed Hygrade Metals in 1989 to perform a site assessment to determine the extent of PCE contamination. Information collected for this site assessment was used by the NYSDEC in March 1994 to list the Hygrade Metals Site to the New York State Registry of Inactive Hazardous Waste Disposal Sites (Registry) in New York State as a Class 2 Site. A "Class 2" Site is a site at which hazardous waste poses a significant threat to public health and/or the environment.

SECTION 4: SITE CONTAMINATION

To evaluate the contamination present at the site and to evaluate alternatives to address the significant threat to human health and the environment posed by the presence of hazardous waste, the potentially responsible party (PRP) recently completed an RI/FS.

4.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted in two phases. The first phase, or on-site RI, was conducted between November 1994 and December 1995. The second phase, or off-site RI, was performed between December 1998 and December 2000. Quarterly sampling is also conducted for volatile organic compounds (VOCs) as part of the monitoring of the groundwater and the SVE system (to be discussed in Section 4.2). The following reports have been prepared, which describe the field activities and findings of the on-site and off-site RI in detail:

- "Investigation Report For Hygrade Metals Moulding Corp., January 1994,"
- "Remedial Investigation Report for Hygrade Metal Moulding Corp., February, 1996,"
- "Interim Remedial Measure to be conducted at Hygrade Metal Moulding, An Evaluation of Alternatives and Design, April 1996,"
- "Offsite Remedial Investigation and Feasibility Study, October 2001,"

The RI included the following activities:

- Sampling of 8 dry wells outside the building and drains inside the building.
- Sampling of the septic system and leach field.
- Installation of 12 soil borings for analysis of 38 soil samples and for testing of physical properties of soil.
- Installation and sampling of 10 monitoring wells, one of which is a multi-level well, and sampling of 11 additional downgradient wells, ranging in depth from the water table to 175 feet below ground surface (bgs) for analysis of groundwater and hydrogeologic conditions.
- Analysis of over 1,000 samples of on-site and off-site groundwater for VOCs.

To determine which media (soil, groundwater, etc.) are contaminated at levels of concern, the RI analytical data were compared to environmental Standards, Criteria, and Guidance values (SCGs). Groundwater, drinking water and surface water SCGs identified for the Minmilt Realty Site are based on NYSDEC Ambient Water Quality standards and guidance Values and Part 5 of New York State Sanitary Code. For soils, NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 provides soil cleanup guidelines based on the protection of groundwater, background conditions, and health-based exposure scenarios. Ambient air quality standards are applicable for the discharge(s) from the SVE and the groundwater air stripper systems.

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized below. More complete information can be found in the RI, Off-site RI and FS Reports.

Chemical concentrations are reported in parts per billion (ppb), parts per million (ppm), and parts per billion by volume (ppbv) for air samples. For comparison purposes, where applicable, SCGs are provided for each medium.

4.1.1: Site Geology and Hydrogeology

The Upper Glacial Aquifer formation (the shallowest aquifer) consists of fine sand with coarse sand-fine gravel deposits. The transition from the Upper Glacial to the Magothy Aquifer was found to occur at an approximate depth of 100 feet. In general, the Magothy aquifer in the vicinity of the site, to a depth of 180 feet below grade, consists of very fine sand in a silt matrix. From 180 to 198 feet the permeability decreases due to the presence of a dark brown, hard clay. This clay is considered an effective low permeability layer, (i.e. aquitard). The estimated average groundwater velocities for the Glacial and Magothy aquifers are 0.93 and 0.49 ft/day respectively.

The depth of the water table is about 40 feet below the ground surface. The direction of flow is south-southeast. Both the Upper Glacial and Magothy Aquifers have been designated as sole source aquifers and are protected under State and Federal legislation.

4.1.2: Nature of Contamination

As described in the RI report, many soil, groundwater and sediment samples were collected at the site to characterize the nature and extent of contamination. The main categories of contaminants which exceed their SCGs are VOCs, particularly PCE and the breakdown products trichlorethylene (TCE) and dichlorethylene (DCE). There is also low level upgradient contamination of TCE and DCE. The on-site PCE contamination was found to be migrating towards the water table from the exterior dry well.

4.1.3: Extent of Contamination

Table 1 summarizes the extent of contamination for the contaminants of concern in the soils and the groundwater, and compares the data with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation.

Dry wells, Cesspools and Underground Storage Tanks

The 1996 RI report identified a single dry well located on the east side of the Hygrade building, which received discharge from an on-site vapor degreasing process, as the source of the PCE contamination ("PCE Dry well" on Figure 3). A previously abandoned concrete tank, located approximately 85 ft south of the dry well, which received discharge from floor drains within the building, was identified as a potential secondary source. The report identified a previously abandoned fuel oil tank, located east of the Hygrade building, as the source of Non-Aqueous Phase Liquid or NAPL.

Soil

The subsurface soil results are summarized in Table 1. The highest concentration of 550 ppm of PCE was reported in 1993. This was from a soil sample collected from boring B-2 (see Figure 4) at the 34 to 36 foot interval. The RI results indicated that there was a need to address site soils for VOCs.

On-site Groundwater

During the course of the Remedial Investigation, eight monitoring wells were installed on site. These wells range in depth from the water table, or approximately 42 feet bgs, to 85 feet bgs. Most wells were shallow and screened at the groundwater table.

On-site groundwater was found to be highly contaminated with PCE from the vapor degreaser dry well discharge. Figure 3 details the monitoring wells on and near the site that have been sampled throughout the course of this project. The highest volatile organic compound concentration detected in MW 3 was 140,000 ppb of PCE (9/95). The groundwater standard for PCE is 5 ppb. The solvent contamination from the site was found to be limited to the east side of the property.

Off-site Groundwater

Groundwater flows from the Minmilt Realty Site to the south southeast. During the course of the remedial investigation, the PRP installed the following downgradient wells:

- to the southeast, one deep well 200 feet off-site to a depth of 175 feet,
- a multi-level well (ML1) 1,500 feet off-site with 12 screens ranging from 40 feet to 150 feet deep (see Figure 8); and
- a temporary well in the Beth Moses Cemetery (see Figure 9), sampled for VOCs at discrete intervals, to a depth of 200 feet.

The MW 9 analytical results indicate that the IRM recovery wells totally contain the site plume (see section 4.2). Successive sampling of the multi-level well, located on Central Avenue, reveals that the off-site concentrations continue to significantly decrease. Shallow off-site groundwater wells GW 1 through GW 4, located on the Cantor Brothers property, and SP 1 through SP 6, located on the Shorewood Packaging property, were tested for volatile organic compounds. The analytical results, listed in Table 2, also indicate, except for a period in the first half of 2000 when the recovery wells needed to be descaled of iron, where the VOC concentrations to temporarily rise, that off-site groundwater contamination is continuing to decline.

The temporary well in the Beth Moses Cemetery (see Figure 9) indicated concentrations of mostly trichloethane (TCA) above groundwater standards. The highest concentration of TCA was 35 ppb at 160-165 feet bgs. TCA is not a site related compound.

Groundwater sampling to 60 feet was also conducted by Minmilt in November 1998 in conjunction with Geoprobe sampling at the US Electroplating site (see Figure 9) in the West Babylon Industrial Park. This sampling event identified shallow groundwater contamination in the West Babylon area from sources other than the Minmilt Realty Site.

The nearest public supply well is 2.5 miles from the site, but not in a direct downgradient location. The public supply wells have not been impacted by the site contamination. Because the wellfield is not directly downgradient, and because any contamination not captured in the groundwater collection system is expected to attenuate over time, the Minmilt site is not believed to pose a threat to public water supplies in the area.

4.2: Interim Remedial Measures (IRM)

An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS. The NYSDEC approved the PRPs IRM proposal consisting of an SVE system to remediate the on-site soils and the extraction and treatment of near-site groundwater. Please refer to Figures 4 through 6 for a description of these systems.

Based on the NYSDEC approval of the design of the IRM, Minmilt proceeded to construct the IRM. The IRM has been operating for more than 4 years with a quarterly groundwater sampling and operational program in place.

The analytical data from the groundwater IRM quarterly sampling (see Table 2) shows that the IRM has been successful in intercepting the groundwater plume emanating from the site. In June 2000, a confirmatory soil sampling program was undertaken that demonstrated that the soil contamination has been reduced by the SVE system. The results of the June 2000 soil sampling event are found on Figure 7. These results indicated that, of 20 soil samples, only 4 exceeded guidance values from the soil boring (SB 1) near the original source area. The only boring with soil test results above cleanup criteria was Soil Boring 1 (SB 1). This boring was placed downgradient of the former disposal area, with the highest concentration of 50 ppm of PCE at 6 to 9 feet below grade. PCE levels below 9 feet then decreased with depth. By contrast, the same location, sampled as B-1 during the on-site RI before the IRM installation, was highly contaminated with PCE from 6 feet deep to the water table with the highest concentration of 550 ppm found at 20-22 feet bgs. The PCE soil cleanup TAGM guidance level is 1.4 ppm. These results indicate that significant contamination (PCE) has been removed from the entire soil column (15-42 ft. below grade) at the identified point source dry well.

4.3: 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. A more detailed discussion of the health risks can be found in Section 4 of the "Off-site Remedial Investigation/Feasibility Study Report."

An exposure pathway is the manner by which an individual may come in contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

The groundwater in Suffolk County is considered a sole source aquifer. However, no public or private drinking water wells are located in the vicinity of the site. The nearest downgradient public water supply is located approximately 2.5 miles south of the site. Therefore, human exposure to site related groundwater contamination is considered highly unlikely.

The site is currently paved, preventing direct contact with contaminated soils. However, contaminated soils could be accessed during construction related activities at the site.

Pathways which are known to or may exist at the site include:

- the potential inhalation of or direct contact with site related contaminants in soil during construction activities.

4.4: Summary of Environmental Exposure Pathways

This section summarizes the types of environmental exposures and ecological risks which may be presented by the site. The sole source groundwater has been impacted by site related contamination. However, there are no environmental exposure pathways of groundwater to surface water or ecological risks identified. There are no surface water bodies within a two-mile radius of the site.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers. The potential responsible party, Hygrade Metals Inc., was sold and the owner of the building, Minmilt Realty Corporation, retained environmental liability.

The following is the chronological enforcement history of this site.

		Orders on Consent
Date	Index	Subject
11/7/1994	#W1-0669-93-11	RI/FS

The NYSDEC and Minmilt Realty Corporation entered into a Consent Order on November 7, 1994. The Order obligates the responsible party to implement an RI/FS. As part of the implementation of this Record of Decision, the NYSDEC will approach the PRPs to implement the selected remedy under an Order on Consent.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. The overall remedial goal is to meet all standards, criteria and guidance (SCGs) and be protective of human health and the environment. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The goals selected for this site are:

- Eliminate, to the extent practicable, off-site migration of groundwater that does not attain NYSDEC Class GA Ambient Water Quality Criteria;

- Eliminate, to the extent practicable, exposures to on-site contamination through the remediation of volatile organic compounds in subsurface soils; and

- Eliminate, to the extent practicable, the migration of site contamination into the groundwater.

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy must be protective of human health and the environment, be cost effective, comply with other statutory laws and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Minmilt Realty site were identified, screened and evaluated in the report entitled "Offsite Remedial Investigation and Feasibility Study."

A summary of the detailed analysis follows. As presented below, the time to implement reflects only the time required to implement the remedy, and does not include the time required to design the remedy, procure contracts for design and construction or to negotiate with responsible parties for implementation of the remedy. These remedies are intended to address the contaminated soils and groundwater at the site.

7.1: Description of Remedial Alternatives

Alternative 1: No Further Remedial Action

Alternative 1 is the no further action alternative. The existing SVE and groundwater extraction and treatment remedial systems would be turned off and no further contaminant reduction would be achieved. The absence of continued soil vapor extraction or the operation of the groundwater extraction and treatment system would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Present Worth:	$ 0
Capital Cost:	$ 0
Annual O&M:	$ 0
Time to Implement:	0 months

Alternative 2: Monitored Natural Attenuation (MNA)

This alternative would consist of monitoring the natural attenuation processes in groundwater in an attempt to address the remaining onsite contamination and off-site plume. The ongoing SVE and groundwater extraction and treatment remedial systems would be turned off and no further contaminant reduction would be achieved. Environmental sampling during the off-site RI determined that the main mechanism for natural attenuation would be dispersion in the groundwater which would serve to reduce the concentration of the contaminants over time. Monitored Natural Attenuation, or MNA, would require soil sampling to establish the amount of the remaining source, an expanded off-site monitoring network and a long term groundwater monitoring program which includes analysis of geochemical parameters including: nitrates, sulfates, oxidation-reduction potential, total organic carbon, carbon dioxide, alkalinity, total chlorides, pH, temperature, total dissolved solids, dissolved oxygen and iron.

Capital Cost:	$ 22,500
O & M Cost per year:	$ 23,700
Estimated Present Worth:	$ 259,500
Time to Implement:	6-12 months

Alternative 3 : Full Plume Containment

Under this alternative, groundwater extraction systems would be constructed at two downgradient locations. Contaminated water would then be pumped back to the site for treatment. Based on the transport simulation modeling done in the offsite RI, the extent of the plume exceeding a concentration of 5 ppb would be approximately 4,000 feet downgradient of the site. Before the well layout could be designed, further investigatory work would be required to precisely determine the plume's width and downgradient position.

Operation of the IRMs would also become part of the final remedial action plan for the alternative. To reduce the remediation to a more reasonable time frame of 12.5 years, another extraction well would have to be added on Wellwood Avenue between the Minmilt property and Long Island Avenue. The estimated capital and O&M costs are based on this configuration.

Capital Cost:	$ 560,500
O & M per year:	$ 270,000
Estimated Present Worth:	$ 2,668,810
Time to Implement:	1-2 years

Alternative 4: Source Area Remediation With Continued Monitoring

This alternative would consist of the continued operation of the SVE and groundwater extraction and treatment systems. No further off-site migration of contaminated groundwater would occur under Alternative 4. Alternative 4 would also achieve complete source area removal through continued operation of the remedial systems, while the remaining off-site plume would naturally attenuate through biodegradation and dispersion/dilution. The existing on-site and near-site groundwater monitoring well network of 38 shallow, intermediate, deep and multi-level groundwater monitoring wells would be sampled on a quarterly basis. Although the offsite plume would be expected to naturally attenuate under this alternative, a formal MNA monitoring program would not be implemented. Since the IRM systems have already been installed and are currently operating, there are no capital costs associated with this alternative. Operation and maintenance costs are based on continued operation and maintenance of the IRM system, and quarterly sampling of the on-site and offsite monitoring wells and reporting for a period of approximately 3 years. Once the remedial objectives are attained and the remedial systems permanently shut off, quarterly monitoring would be terminated.

Capital Cost:	$ 0
O & M per year:	$ 120,000
Estimated Present Worth:	$ 326,760
Time to Implement:	6-12 months

7.2 Evaluation of Remedial Alternatives

The criteria used to compare the potential remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6 NYCRR Part 375). For each of the criteria, a brief description is provided, followed by an evaluation of the alternatives against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is included in the Feasibility Study.

The first two evaluation criteria are termed threshold criteria and must be satisfied in order for an alternative to be considered for selection.

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs).
Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance.

The most significant SCGs are Title 6 of New York State Code of Rules and Regulations (6 NYCRR) Part 700 series Groundwater Standards for Class GA Groundwater and Title 10 of NYCRR Part 5 Drinking Water Standards for public drinking water supplies. The NYSDEC Technical Assistance and Guidance Memorandum (TAGM) for soil cleanup criteria is also a guidance SCG.

Alternative 1 (no further action), would leave a significant amount of contamination in site soils and in the shallow groundwater beneath the site. This would not achieve SCGs for on-site soils and on-site or off-site groundwater. Therefore, Alternative 1 is eliminated from further evaluation for its inability to address SCGs. Alternative 2 would rely on monitored natural attenuation to achieve SCGs for soils and on-site groundwater. This is not expected to occur within a reasonable time frame.

Alternatives 3 and 4 would both achieve SCGs for on-site soils and on-site and near downgradient groundwater. Alternatives 3 and 4 accomplish this for site soils, on-site and near-site groundwater. Alternative 3 would meet all of the SCGs.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

Alternative 1 would not be protective of human health and the environment as it leaves a significant amount of site contamination at the source that would recontaminate downgradient groundwater; another reason Alternative 1 has been eliminated from further consideration beyond the threshold criteria. For Alternative 2, natural degradation processes alone are not expected to reduce PCE concentrations to acceptable levels in a reasonable time frame. Alternative 4 would rely on dispersion beyond the areas of active remediation to restore groundwater quality. Alternative 3 would provide the greatest degree of environmental restoration by actively pumping the entire area of groundwater contamination. Therefore, Alternative 2 would provide the least degree of environmental restoration, Alternative 4 would offer the next highest level, and Alternative 3 would provide the most environmental restoration. Because groundwater contamination is not likely to impact public or private water supplies in the area, Alternatives 2 through 4 would all offer the same degree of public health protection.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

Since the IRMs are already in place and running, there would be no short term impacts associated with Alternative 4. Alternative 2 would have only slight impacts as it would require monitoring well installation. For Alterative 3, the construction of the full plume containment system would require work on or near the county roads. This would impact road travel. Site access agreements would have to be obtained. However, no contaminant exposures are expected to occur with any of these alternatives.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

Alternative 2 would rely on natural attenuation processes to remediate both high levels of contamination on site and lower levels off site. Because MNA is not effective for high levels of contamination in a reasonable time frame, the long term effectiveness of Alternative 2 may not be effective. Alternative 4 would rely on natural attenuation processes for lower levels of off-site contamination, where it has been demonstrated to be effective. Alternative 3 would provide the greatest degree of long term effectiveness because all off-site contamination would be collected and treated.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternative 2 would not remove any additional contamination and therefore would provide the least reduction in toxicity, mobility and volume (TMV). Alternative 3 would provide a higher reduction of TMV by continued operation of the IRM until the remediation of the source area and near downgradient area would be complete. Alternative 4 would provide the highest degree of TMV reduction through complete plume interception.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

Alternative 2 would have difficulty in securing access to the downgradient properties to install the additional required monitoring well network in order to implement the MNA program. Alternative 3 would be the most difficult to implement, due to access issues, and the length of piping required to return the extracted groundwater to the existing treatment system at the Minmilt Site. The

discharge of additional treated water would also pose difficulties for Alternative 3. Alternative 4 would be highly implementable as it would only require the continued the operation of the current remedial systems in place until remedial goals are met.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision. The costs for each alternative are presented in Table 3. This final criterion is considered a modifying criterion and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

8. Community Acceptance. Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan have been evaluated. A "Responsiveness Summary" has been prepared that describes public comments received and the manner in which the Department will address the concerns raised. The selected remedy does not differ from the proposed remedy. Notices to the public will be issued describing the ROD.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based upon the results of the RI/FS, and the evaluation presented in Section 7, the NYSDEC has selected Alternative 4, continued source area remediation (SVE operation and groundwater extraction and treatment) and monitoring, which will effectively address the on-site and near site contamination. Source area remediation will remove the potential for inhalation of or direct contact with site-related contaminants in on-site soils and prevent further contamination of groundwater. The remaining groundwater plume has been cut off from the source, will naturally disperse and is not expected to impact any downgradient receptors.

Alternative 4 presents the most balanced and implementable alternative based on the evaluation of the remedial alternatives and the remedial action objectives for this site. Monitored Natural Attenuation, or MNA as detailed by the USEPA guidance, is not expected to completely remove contaminants in a reasonable time frame in Long Island groundwater. Therefore, comprehensive monitoring, including offsite monitoring wells, would be used in the ongoing monitoring of the IRM groundwater extraction and treatment system to verify that dispersion is satisfactorily occurring at and downgradient of the Minmilt Realty Site.

The estimated present worth cost to implement the remedy without the initial cost of the IRM design and construction is $326,800. The estimated average annual operation and maintenance cost for 3 years is $120,000 per year.

The elements of the selected remedy are as follows:

1. A remedial design program that will provide the details necessary for the operation and maintenance, and monitoring of the remedial program.

2. Operation of the SVE system until the site soils achieve NYSDEC Technical Assistance and Guidance Memorandum (TAGM) No. 4046 cleanup values for soils. Prior to closure, the

SVE system will be pulsed by turning on and off the individual wells. Once the concentrations of each vapor extraction well approaches non-detect levels, the SVE system will be shut down. Soil samples will then be taken and analyzed for VOCs to demonstrate that NYSDEC TAGM 4046 soil cleanup criteria have been achieved.

3. Operation of the downgradient groundwater extraction and treatment system that intercepts the entire contaminated groundwater plume until 6 NYCRR Part 700 Groundwater standards or site background concentrations are met for on-site groundwater; unless operating data indicates that this is technically impractical. Final shutoff will occur with the concurrence of the NYSDEC and NYSDOH.

4. Implementation of an operation, maintenance and monitoring program that will verify the effectiveness of the treatment systems to be detailed in an approved operation, maintenance and monitoring (OM&M) plan for the site. Final shutdown procedures will also be detailed in this OM&M plan. This includes an iron scaling prevention program for the groundwater recovery wells.

5. Institutional controls in the form of existing use and development restrictions limiting the use of groundwater from the affected areas as potable or process water unless the necessary water quality treatment is approved by the Suffolk County Department of Health Services.

6. Deed restrictions to be recorded in the chain of title of the property to restrict the future use of the site for industrial use only and notify the NYSDEC of any intrusive activities planned for the impacted areas.

7. The property owner will certify annually to the NYSDEC that these institutional controls are in place and that long term monitoring is being conducted as required by the remedy.

After approval and implementation of the OM&M plan, the NYSDEC will reclassify the Site from a Class 2 to a Class 4 on the New York State Registry of Inactive Hazardous Waste Disposal Sites. A Class 4 site means that a site has been properly closed but requires continued monitoring.

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken in an effort to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site: A repository for documents pertaining to the site was established in the Dix Hills Community Library.

- A site mailing list was established which included nearby property owners, local political officials, local media and other interested parties.

- In February 2002, the NYSDEC issued a press release and a mailing was sent out to the public, announcing the release of the PRAP.

- A public meeting was held on February 20, 2002. The PRAP was presented to and discussed with the public at the meeting. A comment period from February 1 to March 4, 2002 was provided for the public to send in their comments.

- In March 2002, a Responsiveness Summary was prepared and made available to the public, to address the comments received during the public comment period for the PRAP.

Table 1: Nature and Extent of Contamination
Sampling period of November 1994 to December 2000

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	CONCENTRATION RANGE	FREQUENCY of EXCEEDING SCGs/Background	SCG/ Bkgd.
Groundwater Onsite (ppb)	Volatile Organic Compounds (VOCs)	Trichloroethene	ND (.5) to 11,000	13 of 33	5
		Tetrachloroethene	ND to 140,000	26 of 33	5
		1,1 Dichloroethene	ND(.5) to 6	1 of 33	5
		1,2 Dichloroethene	ND(.5) to 1700	3 of 33	5
Groundwater Offsite (ppb)	VOCs	Trichloroethene	ND(.5) to 310	15 of 32	5
		Tetrachlorethene	ND(.5) to 19,000	16 of 32	5
		1,2 Dichlorethene	ND(.5) to 11	8 of 32	5
		1,1,1 Trichloroethane	ND(.5) to 35	11 of 32	5
		Ethyl Benzene	ND(.5) to 14	4 of 32	5
		Toluene	ND(.5) to 30	5 of 32	5
		1,2, Dichlorobenzene	ND(.5) to 89	5 of 32	5
		Trimethylbenzene	ND(.5) to 25	1 of 32	5
Soils (ppm)	VOCs	Tetrachlorethene	ND to 550	11 of 38	1.4
		Toluene	ND to 2.0	1 of 17	1.5

TABLE 2: IRM Quarterly Groundwater Monitoring Well PCE Concentrations *

Sampling Date	MW-1 ppb	MW-2 ppb	MW-3 ppb	MW-4 ppb	MW-5 ppb	MW-6 ppb	MW-7 ppb	MW-8 ppb	MW-9 ppb	SCDHS Well ppb
03/17/97	3	6,500	NS	1,100	1,000	4	3,500	500	17	NS
06/24/97	1	8,900	32,000	47	210	3	150	73	15	NS
09/23/97	56	13,000	>10,000	25	140	33	39	17	28	NS
12/15/97	<1	10,000	92,000	15	49	<1	33	6	28	NS
03/17/98	12	7,200	34,000	68	7	2	18	13	18	NS
09/17/98	2	3,400	38,000	70	8	2	14	2	NS	NS
12/22/98	3	2,000	51,000	6	5	3	34	3	NS	NS
3/17/99	<1	870	29,000	NS*	3	4	160	56	35	NS
06/30/99	22	240	25,000	NS*	2	4	2	<1	15	62
10/13/99	<1	210	26,000	<1	1	4	870	<1	10	NS
12/23/99	4	270	83,000	<1	<1	5	990	3	1	1,400
03/21/00	<1	110	12,000	<1	<1	4	1,700	4	2	170
08/04/00	<1	51	10,000	<1	<1	1	10	<1	<1	170
12/21/00	<1	35	820	16	<1	2	3	3	<1	NS
03/30/01	<1	24	2,100	NS	4	<1	2	36	<1	81
06/29/01	2	15	1,100	29	3	4	6	15	1	23
09/28/01	<1	12	410	4	<1	2	4	<1	1	20

Sampling Date	GW-1 ppb	GW-2 ppb	GW-3 ppb	GW-4 ppb	SP-1 ppb	SP-2 ppb	SP-3 ppb	SP-4 ppb	SP-5 ppb	SP-6 ppb
03/17/97	1	42	350	<1	9	52	1,000	15,000	610	36
06/24/97	60	190	46	230	3	6	120	1,100	78	10
09/23/97	4	4	9	5	1	2	28	360	7	39
12/15/97	6	11	23	8	1	1	15	110	9	1
03/17/98	7	4	27	3	<1	<1	15	57	4	<1
09/17/98	2	4	84	3	NS	NS	NS	NS	NS	NS
12/22/98	4	4	59	5	NS	NS	NS	NS	NS	NS
03/17/98	2	17	12	<1	NS	NS	NS	NS	NS	NS
06/30/99	<1	15	8	1	NS	NS	NS	NS	NS	NS
10/13/99	<1	88	9	<1	<1	2	10	280	86	<1
12/23/99	<1	37	3	<1	1	2	2	3,700	51	3
03/21/00	<1	53	6	<1	<1	1	2	6,400	35	4
08/04/00	10	54	61	1	<1	<1	2	1,100	150	1
03/30/01	<1	2	16	<1	<1	<1	2	25	NS*	<1
6/29/01	<1	<1	3	1	<1	<1	2	15	NS*	NS*
09/28/01	<1	<1	47	1	<1	<1	2	3	NS*	<1

*- See Figures 3 and 4 for monitoring well locations. SCDHS monitoring Well is located on Central Avenue due south of the site (see Figure 9).

Table 3: Central Avenue Multi-Level (ML) Well

		August-00		December-00		
		PCE	TCE	PCE	TCE	c-1,2-DCE
		ug/L	*ug/L*	*ug/L*	*ug/L*	*ug/L*
L	**39.5-40**	26	ND	NS	NS	NS
K	**49.5-50**	36	1	NS	NS	NS
J	**59.5-60**	50	2	NS	NS	NS
I	**69.5-70**	36	ND	NS	NS	NS
H	**79.5-80**	20	ND	NS	NS	NS
G	**89.5-90**	14	ND	NS	NS	NS
F	**99.5-100**	10	ND	NS	NS	NS
E	**109.5-110**	17	ND	NS	NS	NS
D	**119.5-120**	6	ND	NS	NS	NS
C	**129.5-130**	18	ND	3	<1	<1
B	**139.5-140**	1,100	ND	28	<1	2
A	**149.5-150**	4,400	ND	90	15	120

Table 3 Continued

		March-01			June-01		
		PCE	TCE	c-1,2-DCE	PCE	TCE	c-1,2-DCE
		ug/L	ug/L	ug/L	**ug/L**	**ug/L**	**ug/L**
L	**39.5-40**	**NS**	**NS**	**NS**	**25**	***4***	**37**
K	**49.5-50**	**NS**	**NS**	**NS**	**2**	***<1***	2
J	**59.5-60**	**NS**	**NS**	**NS**	**2**	***<1***	**<1**
I	**69.5-70**	**NS**	**NS**	**NS**	**4**	***<1***	**<1**
H	***79.5-80***	**NS**	**NS**	**NS**	**<1**	***<1***	**5**
G	***89.5-90***	**NS**	**NS**	**NS**	**<1**	***<1***	**40**
F	**99.5-100**	**NS**	**NS**	**NS**	**4**	***<1***	**3**
E	**109.5-110**	**NS**	**NS**	**NS**	**<1**	***<1***	**8**
D	**119.5-120**	**NS**	**NS**	**NS**	**<1**	***<1***	**11**
C	**129.5-130**	3	<1	2	**19**	***4***	**30**
B	**139.5-140**	27	2	4	**15**	***5***	**180**
A	**149.5-150**	290	2	130	**90**	***6***	**65**

Table 4: Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual O&M	Total Present Worth
1: No Further Action	$0	$0	$0
2: Monitored Natural Attenuation	$ 22,500	$ 23,700	$ 259,500
3: Full Plume Containment	$560,000	$270,000	$2,668,810
4: Source Area Remediation with Comprehensive Monitoring	$0	$120,000	$326,760

Table 5: Glossary of Terms

Capital Cost: Refers to the up front cost of constructing a remedial alternative

BGS: Below ground surface

DCA: Dichloroethane

DCE: Dichloroethylene

ECL: Environmental Conservation Law

FS: Feasibility Study- A report that evaluates cleanup alternatives for a site.

Groundwater Contours: Lines on a map connecting the same groundwater elevations (above mean sea level)

Glacial Aquifer: Refers the Glacial or shallow aquifer associated with Long Island

IRM: Interim Remedial Measure- A cleanup performed before a final remedy is selected for a site.

Magothy Aquifer: Refers to the section of the Long Island aquifer below the Glacial aquifer and above the Lloyd Aquifer

MGD: Million gallons per day, refers to daily rate of pumping groundwater

ND: Non-detect or below the detection limit of the analytical equipment

NYCRR: New York Codes, Rules and Regulations

NYSDEC: New York State Department of Environmental Conservation

NYSDOH: New York State Department of Health

O&M: Operation and maintenance, refers to operation of remedial systems

PAHs: Polycyclic Aromatic Hydrocarbons

PCE: Perchloroethylene (Also tetrachloroethylene) A chlorinated, organic solvent commonly used for degreasing metal components and dry cleaning

Plume: Contaminant dispersion in the groundwater

ppb: Part per billion

ppm: Part per million

PRAP: Proposed Remedial Action Plan. This is a document describing the remedy(s) proposed to mitigate the threat of hazardous waste disposal to human health and the environment

PRP: Potentially Responsible Party

RI/FS: Remedial Investigation and Feasibility Study

RAOs: Remedial Action Objectives, or the goals established to remedy a site based on findings of the RI

SCDHS: Suffolk County Department of Health Services

SCGs: Standards, Criteria and Guidance

SVE: Soil Vapor Extraction

SVOCs: Semi-volatile organic compounds

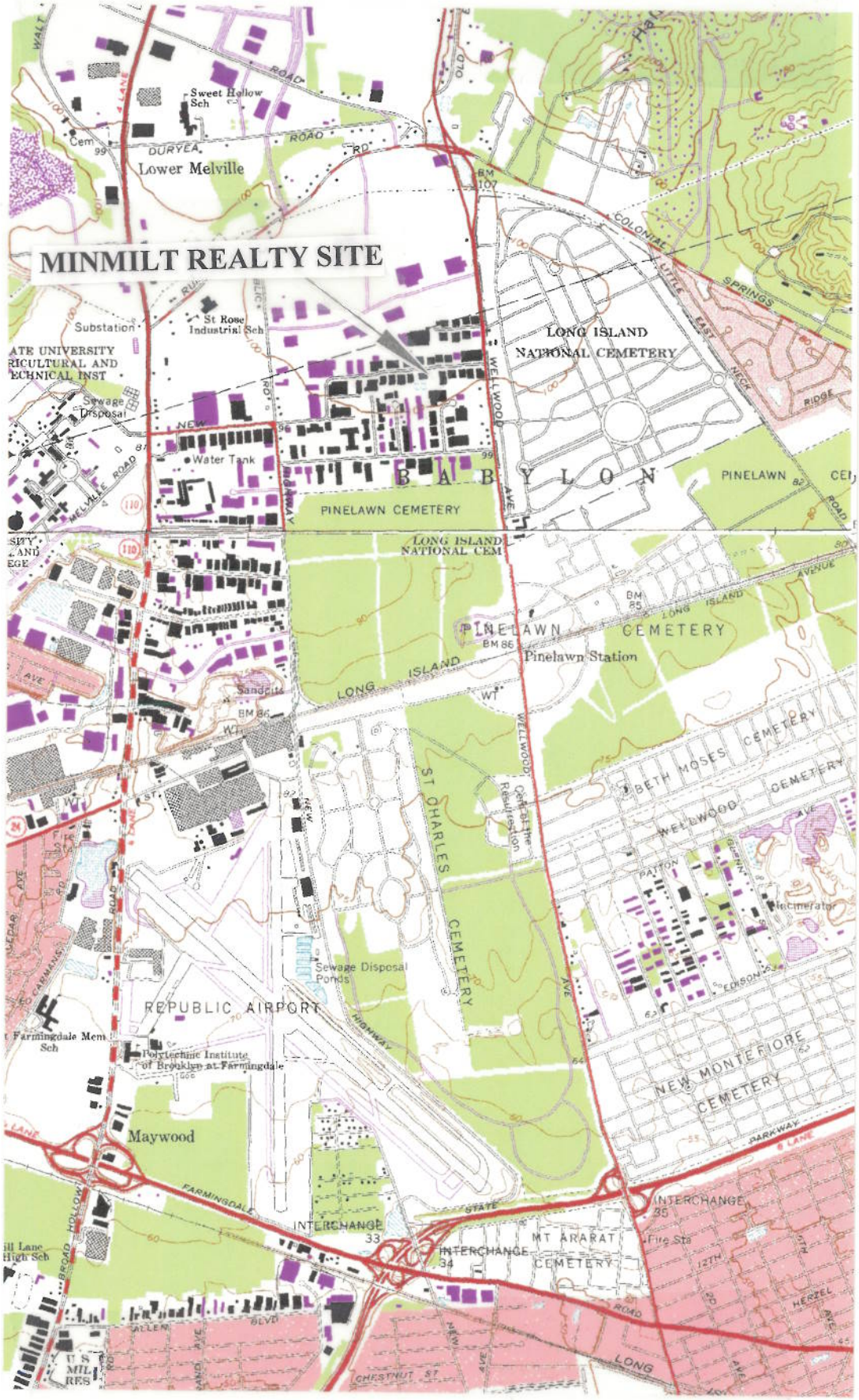
TAGM: Technical and Administrative Guidance Memorandum, guidance documents used by the NYSDEC

TCE: Trichloroethylene, a chlorinated organic solvent commonly used for degreasing

TMV: Toxicity, mobility and volume

TW: Temporary well used in the offsite RI/FS to sample various intervals in the groundwater

VOC: Volatile organic compound



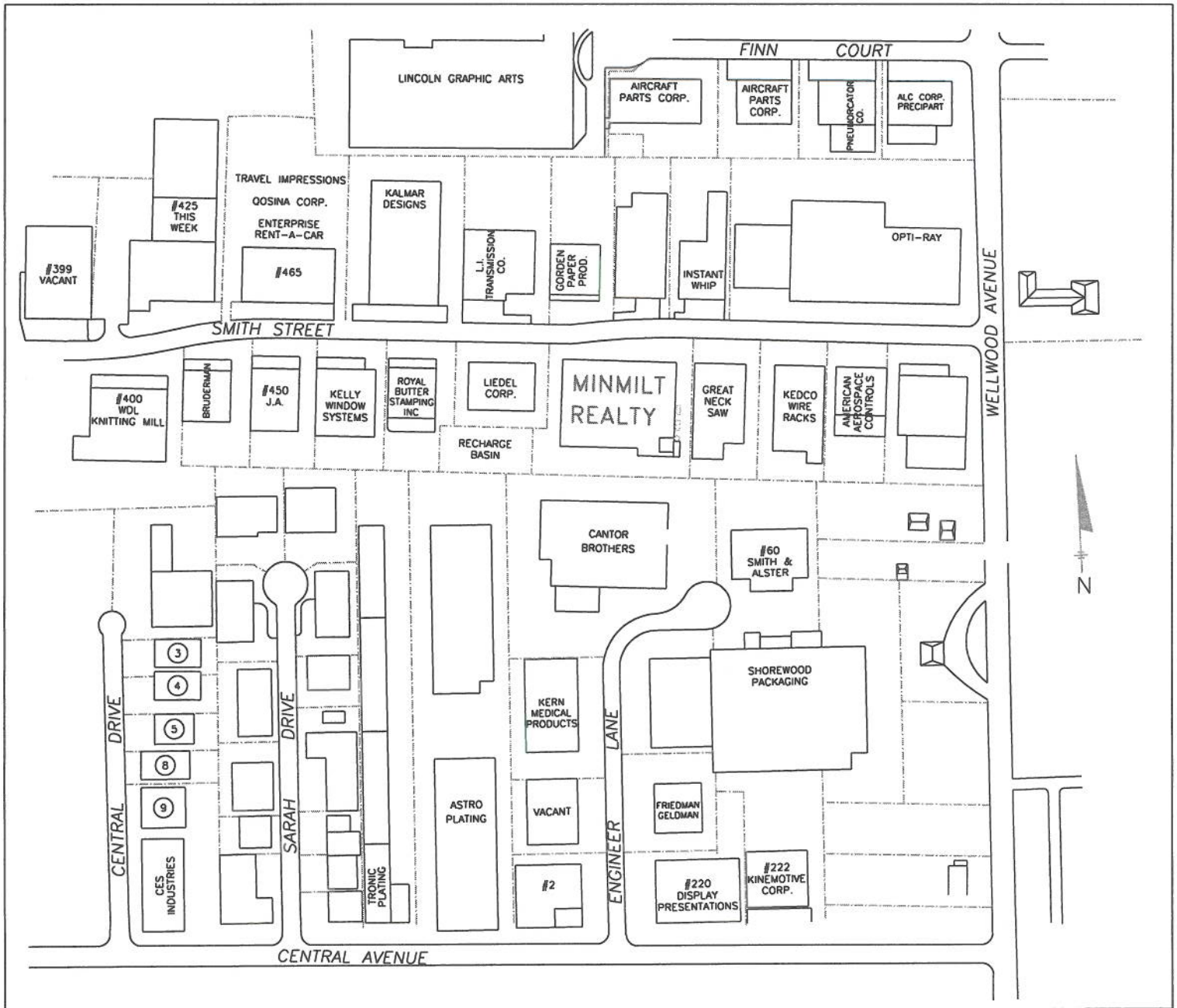
MINMILT REALTY SITE
NYSDEC SITE No. 1-52-147

DIVISION OF HAZARDOUS WASTE REMEDIATION

REVISED:
DATE: 12/7/01 DRAWING: MINSITE.DWG

MODIFIED BY: STEVEN M. SCHARF, P.E.

FIGURE 1: AREA LOCATION MAP



MINMILT REALTY SITE
NYSDEC SITE No. 1-52-147

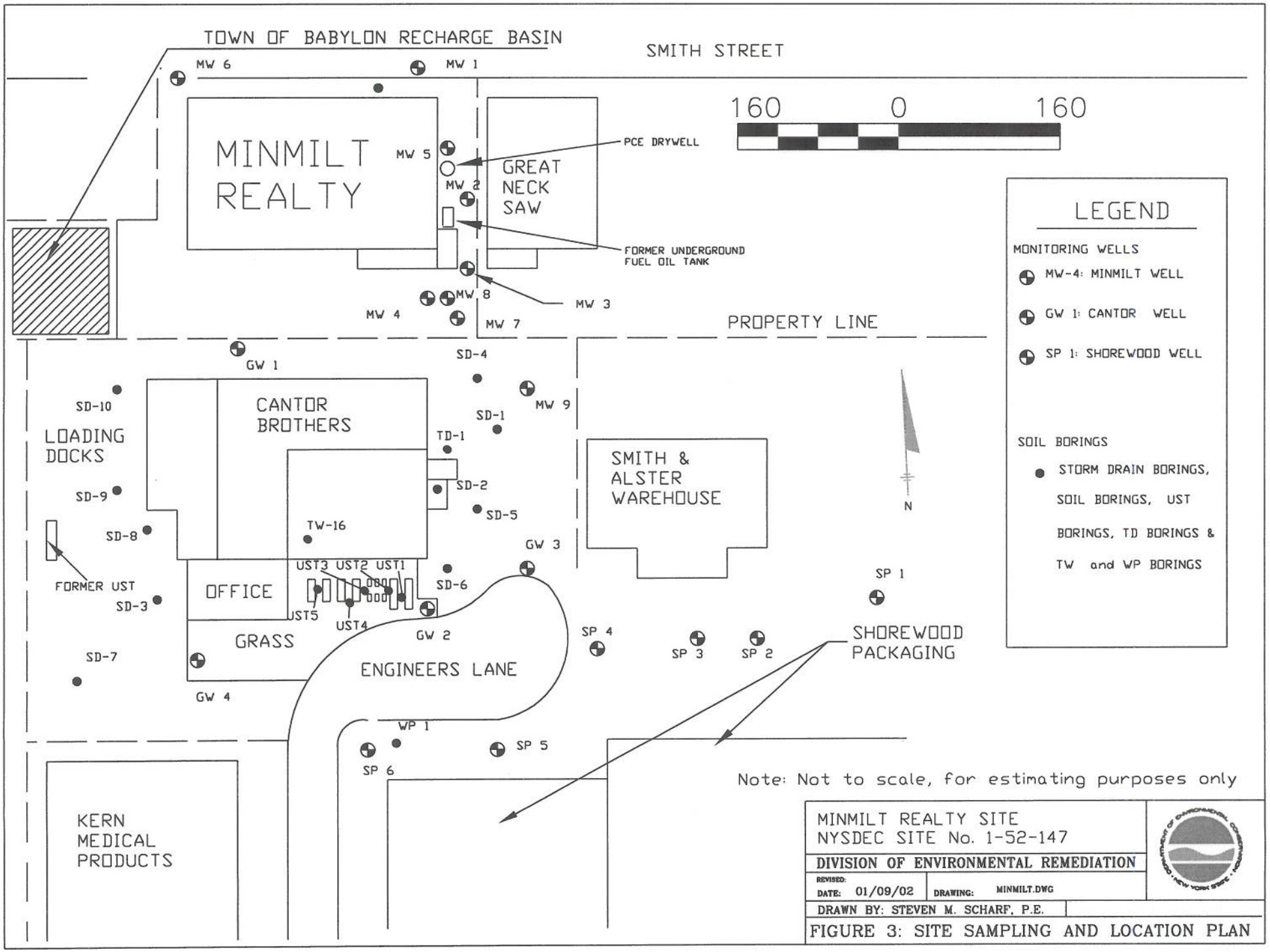
DIVISION OF ENVIRONMENTAL REMEDIATION

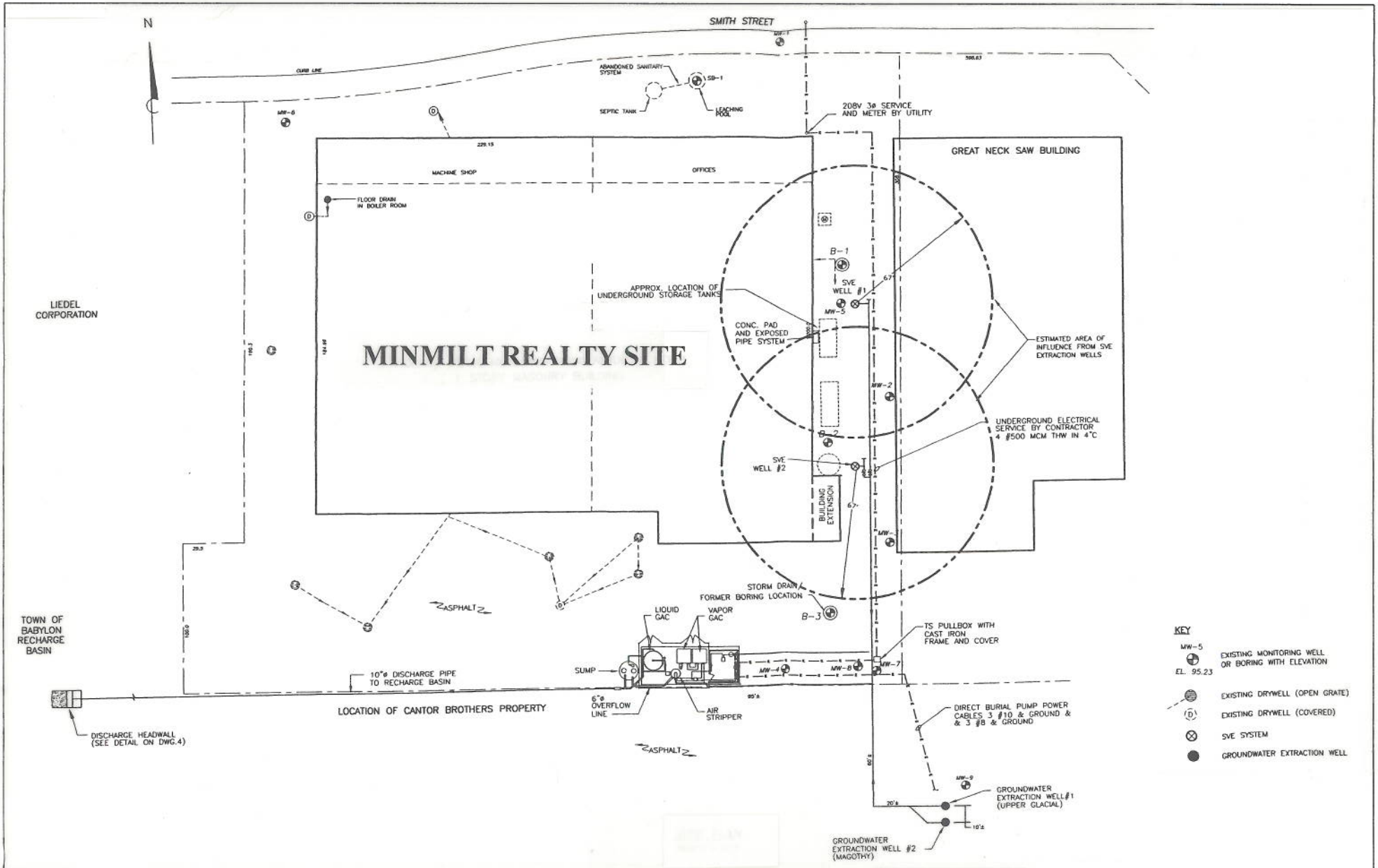
REVISED:
DATE: 01/10/02

DRAWING: MINFIG1.DWG

MODIFIED BY: STEVEN M. SCHARF, P.E.

FIGURE 2: AREA LOCATION MAP


TOWN OF BABYLON RECHARGE BASIN
SMITH STREET
MW 6
MW 1
MINMILT REALTY
MW 5
GREAT NECK SAW
MW 2
PCE DRYWELL
FORMER UNDERGROUND FUEL OIL TANK
MW 3
MW 8
MW 4
MW 7
PROPERTY LINE
GW 1
SD-4
SD-10
CANTOR BROTHERS
MW 9
SD-1
LOADING DOCKS
TD-1
SMITH & ALSTER WAREHOUSE
SD-2
SD-9
SD-5
SD-8
TW-16
GW 3
FORMER UST
SD-3
OFFICE
UST3 UST2 UST1
SD-6
UST5
UST4
GW 2
SP 1
SP 4
SP 3
SP 2
SHOREWOOD PACKAGING
GRASS
SD-7
ENGINEERS LANE
GW 4
WP 1
SP 5
SP 6
KERN MEDICAL PRODUCTS
160 0 160
N
LEGEND
MONITORING WELLS
MW-4: MINMILT WELL
GW 1: CANTOR WELL
SP 1: SHOREWOOD WELL
SOIL BORINGS
STORM DRAIN BORINGS, SOIL BORINGS, UST BORINGS, TD BORINGS & TW and WP BORINGS
Note: Not to scale, for estimating purposes only
MINMILT REALTY SITE
NYSDEC SITE No. 1-52-147
DIVISION OF ENVIRONMENTAL REMEDIATION
REVISED: DATE: 01/09/02
DRAWING: MINMILT.DWG
DRAWN BY: STEVEN M. SCHARF, P.E.
FIGURE 3: SITE SAMPLING AND LOCATION PLAN



MINMILT REALTY SITE
NYSDEC SITE No. 1-52-147

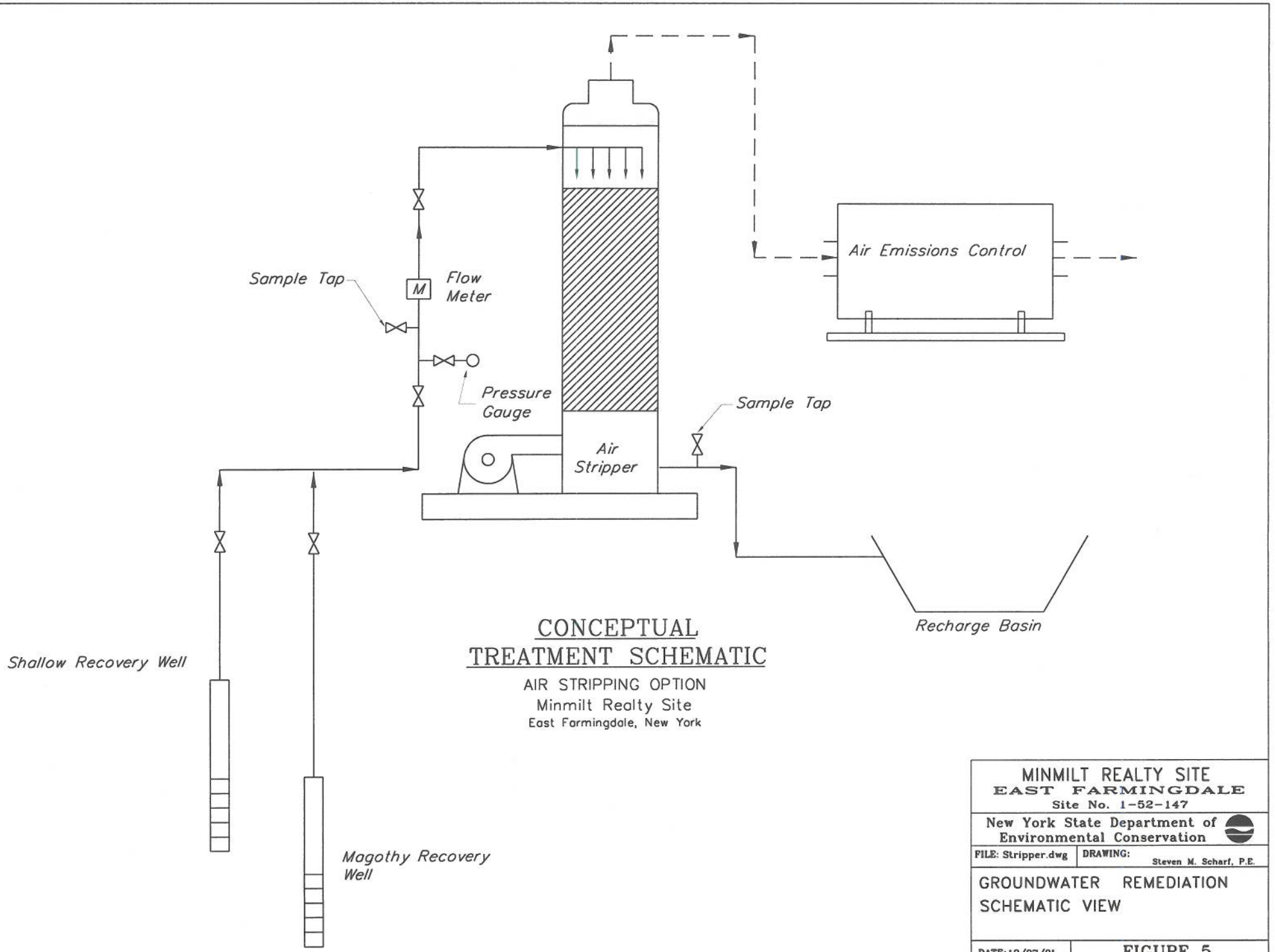
DIVISION OF HAZARDOUS WASTE REMEDIATION

REVISED:
DATE: 11/05/01

DRAWING: FROM P.W. GROSSER BASE MAP

MODIFIED BY: STEVEN M. SCHARF, P.E.

FIGURE 4: SVE AND GROUNDWATER EXTRACTION AND TREATMENT SYSTEMS



CONCEPTUAL TREATMENT SCHEMATIC

AIR STRIPPING OPTION
Minmilt Realty Site
East Farmingdale, New York

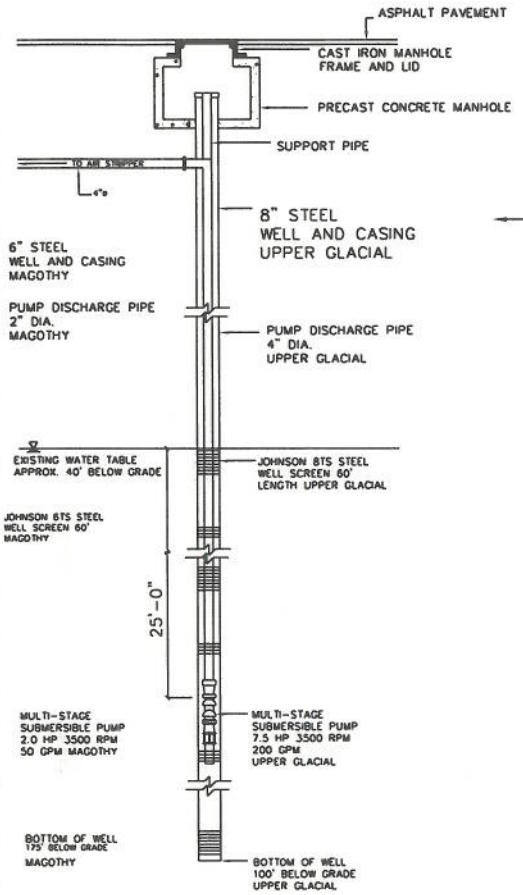
MINMILT REALTY SITE
EAST FARMINGDALE
Site No. 1-52-147

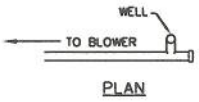
New York State Department of Environmental Conservation

FILE: Stripper.dwg | DRAWING: Steven M. Scharf, P.E.

GROUNDWATER REMEDIATION
SCHEMATIC VIEW

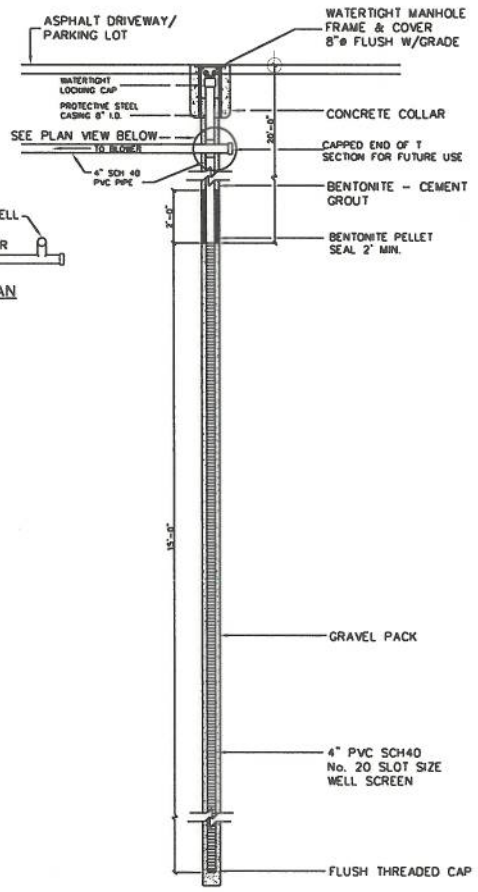
DATE: 12/07/01 | FIGURE 5





PLAN

GROUNDWATER EXTRACTION WELLS SCHEMATIC



EXISTING WATER TABLE
APPROX. 40' BELOW GRADE

TYPICAL SOIL VAPOR EXTRACTION WELL CONSTRUCTION DETAIL

NOTE: FOR ESTIMATING PURPOSES ONLY: NOT TO SCALE

MINMILT REALTY SITE

FIGURE 6- SVE & EXTRACTION WELL DETAILS

DIVISION OF HAZARDOUS WASTE REMEDIATION

REVISED:
DATE: 12/07/01

DRAWING: MINSVEGWE.DWG

EAST FARMINGDALE, SUFFOLK COUNTY SITE No. 1-52-147

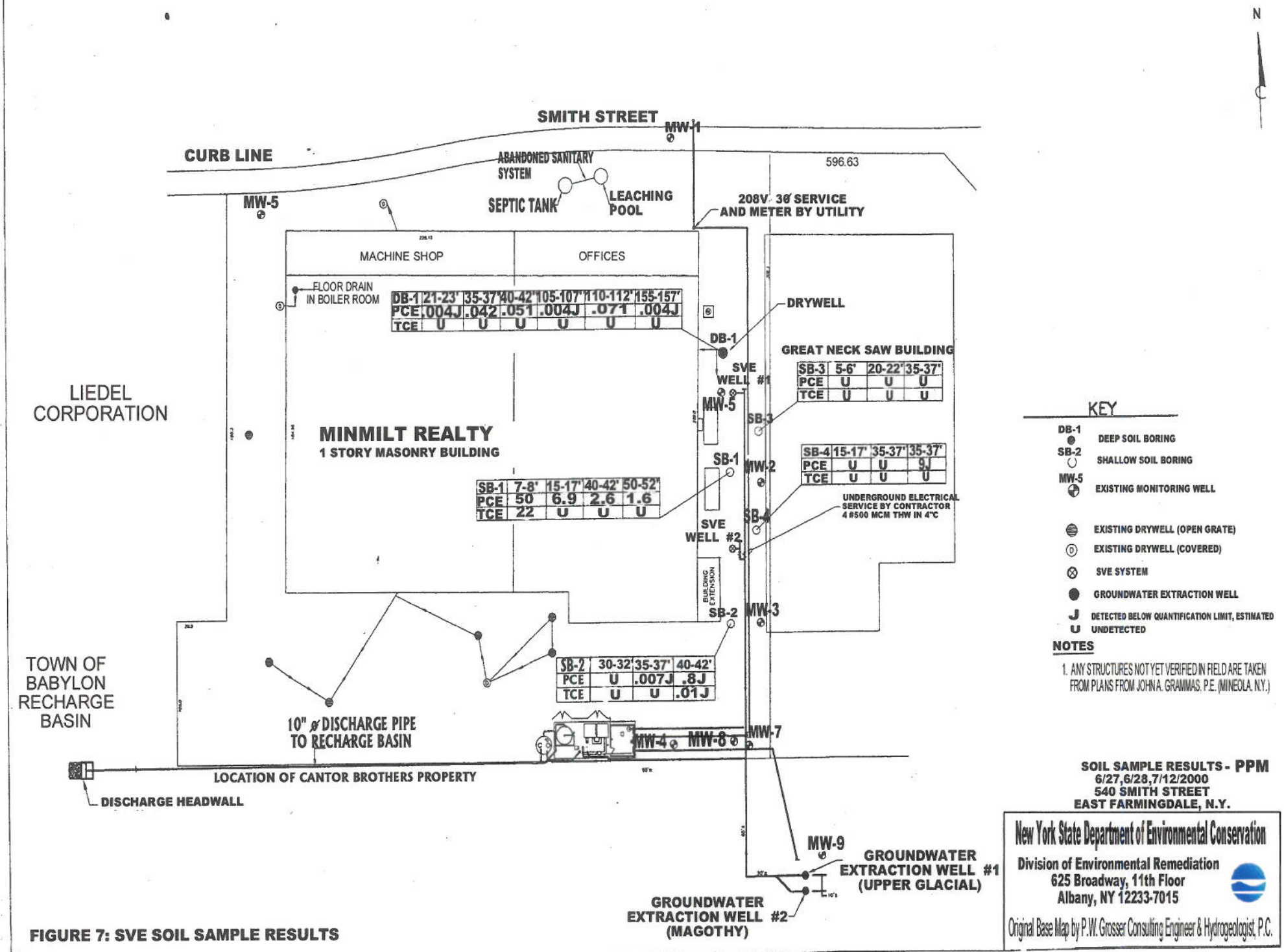
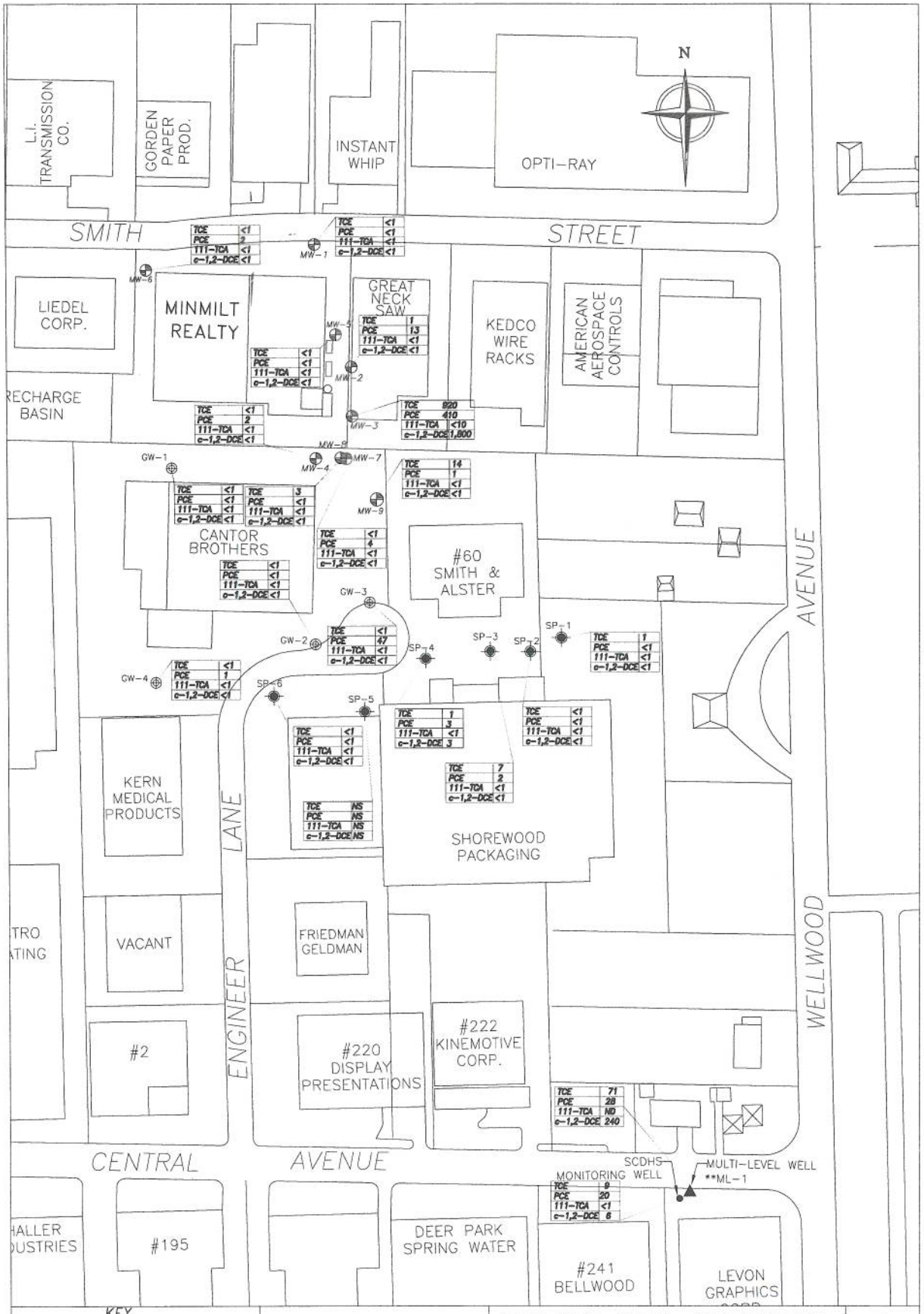


FIGURE 7: SVE SOIL SAMPLE RESULTS


N
L.I. TRANSMISSION CO.
GORDEN PAPER PROD.
INSTANT WHIP
OPTI-RAY
SMITH STREET
LIEDEL CORP.
MINMILT REALTY
GREAT NECK SAW
KEDCO WIRE RACKS
AMERICAN AEROSPACE CONTROLS
RECHARGE BASIN
CANTOR BROTHERS
#60 SMITH & ALSTER
AVENUE
KERN MEDICAL PRODUCTS
LANE
SHOREWOOD PACKAGING
VACANT
FRIEDMAN GELDMAN
ENGINEER
WELLWOOD
#2
#220 DISPLAY PRESENTATIONS
#222 KINEMOTIVE CORP.
CENTRAL AVENUE
SCDHS MONITORING WELL
MULTI-LEVEL WELL **ML-1
DEER PARK SPRING WATER
#195
#241 BELLWOOD
LEVON GRAPHICS
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
GW-1
GW-2
GW-3
GW-4
SP-1
SP-2
SP-3
SP-4
SP-5
SP-6
KEY
**ML-1 149-150' INTERVAL
GW-4 MONITORING WELL ASSOCIATED WITH CANTOR BROS SITE
MW-4 MONITORING WELL ASSOCIATED WITH MINMILT SITE
SP-4 MONITORING WELL ASSOCIATED WITH SHOREWOOD SITE
GROUNDWATER SAMPLING RESULTS
VOC'S(ug/L)
SEPTEMBER 28, 2001
FOR ESTIMATING PURPOSES ONLY - NOT TO SCALE
New York State Department Of Environmental Conservation
Minmilt Realty Site
Original Base Map From P.W. Grosser, Consulting Engineers and Hydrogeologists, P.C.
Figure No: 8
Date: 01/10/02

MINMILT REALTY SITE
NYSDEC SITE No. 1-52-147

DIVISION OF ENVIRONMENTAL REMEDIATION

REVISED:
DATE: 01/10/02 DRAWING: MINSITE.DWG

MODIFIED BY: STEVEN M. SCHARF, P.E.

FIGURE 9: LOCATION MAP

APPENDIX A
Responsiveness Summary
Minmilt Realty Site
Record of Decision
Town of Babylon, Suffolk County Site No. 1-52-147

The Proposed Remedial Action Plan (PRAP) for the Minmilt Realty Site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repository on February 1, 2002. This Plan outlined the preferred remedial measure proposed for the remediation of the contaminated soils and groundwater at the Minmilt Realty Site. The preferred remedy is continued operation of the soil vapor extraction and the groundwater extraction and treatment systems until standards, criteria and guidance (SCGs) have been attained. A quarterly sampling program will monitor the effectiveness of the remediation.

The release of the PRAP was announced via a notice to the mailing list, informing the public of the PRAP's availability.

A public meeting was held on February 20, 2002 which included a presentation of the Remedial Investigation (RI) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. Written comments were received from P.W. Grosser, Consulting Engineers and Hydrogeologists, P.C. via e-mail.

Pursuant to Title 6 New York Code Rules and Regulations (NYCRR) Part 375, the required thirty day public comment period for the PRAP ended on March 4, 2002. This Responsiveness Summary responds to all questions and comments raised at the February 20, 2002 public meeting and to the written comments received.

The following are the comments received at the public meeting and in writing, with the NYSDEC's responses:

Question 1: What about PCE vapors in the site building for the current tenants?

Response 1: During the course of the RI, the floor drains and the indoor air were sampled and the floor drains were traced to their discharge points. The indoor air testing and the sampling of the floor drains found no measurable concentrations of VOCs. The floor drains were also plugged.

In addition, with the ongoing operation of the SVE system, there is little potential for vapors to enter indoor air. The latest soil testing for the SVE system shows most of the contamination has been removed.

Question 2: Do the current operations of the tenant use PCE or similar solvents?

Response 2: The building is currently occupied by a guitar string company. According to the representative of the current tenant attending the public meeting, there are no solvents used in the former Hygrade Metals Building.

Question 3: Do we know what the groundwater quality is between the former source area and the recovery well?

Response 3: Groundwater quality is sampled on a quarterly basis. MW 3, which is upgradient of the groundwater extraction system and downgradient of the source area, has always been the most contaminated monitoring well. This well had both fuel oil and chlorinated organic contamination. However, due to the systematic removal procedure, there hasn't been any fuel oil for more than a year. The extremely high concentrations of PCE in MW 3 have also declined significantly from 92,000 ppb in December 1997 to 410 ppb in September 2001.

Question 4: Could air sparging be used to supplement the SVE system to remediate the hot spot? Are there any other technologies available as well?

Response 4: Air sparging was evaluated by the consultant for the PRP. There was a concern that air sparging, in close proximity to adjacent buildings, could cause indoor air quality problems. Therefore, this was ruled out as an applicable technology.

Other potential options include the use of hydrogen release compounds and other oxidative-reductive technologies to breakup the chlorinated residuals and move the remainder to the groundwater extraction wells. To date, the PRP has elected to continue the current systems to completion.

With respect to the former source area or hot spot, the highest soil concentration was 50 ppm and only in the boring number SB 1. Also, the highest analytical result for this soil boring was shallow and not near the water table. Currently, there are two SVE wells being pulsed to remove this residual contamination. This one area is between the two SVE wells and the pulsing should resolve this contaminated area. If this fails, another option is to add a third SVE well to complete the soils remediaton.

Question 5: From what I understand, the DEC expects to require another three years for these (remedial) systems to be operated. What would happen if the property changes hands? What would that mean for the new owners? What are the requirements of the consent order and who would pick up the responsibility?

Response 5: Minmilt Realty is currently under an order on consent and is responsible for operating the groundwater extraction and treatment, the soil vapor extraction remedial systems and conducts the quarterly monitoring. Once the Record of Decision (ROD) is signed, the NYSDEC will seek to enter into an operation, maintenance and monitoring (OM&M) order on consent with Minmilt Realty as the responsible party. Until the new order is signed, the RI/FS order is still in effect.

If the property ownership is transferred, Minmilt Realty could work out an arrangement as part of the property transfer that the new owner takes over the OM&M. The NYSDEC would then seek to

enter into a new order on consent with the new owners. In either case, whoever takes over the responsibility would be obligated to complete the remedial program specified in this ROD.

Question 6: If we determine that the remaining groundwater contamination has created problems for the downgradient receptors before dispersing, the Suffolk County Department of Health Services reserves the right to reopen the case.

Response 6: The NYSDEC has evaluated the projected fate and transport of this plume and doesn't foresee this happening. The quarterly monitoring results have shown that groundwater concentrations downgradient of the groundwater extraction and treatment system continue to significantly decrease. Nonetheless, the NYSDEC will continue to share monitoring data with the Suffolk County Department of Health Services (SCDHS) and work with the SCDHS to ensure that the remedy is protective of human health and the environment.

E-mail Comments, dated February 1, 2002, from P.W. Grosser:
Steve,

Thanks for faxing the PRAP. I took a look at it and noticed one item in need of correction. The document identifies SB1 as the soil boring within the source area drywell when actually it was DB1. SB1 was located southwest of DB1. This is an important point because DB1 did not detect any VOCs above TAGM guidance.

I also had a question on the use of institutional controls such as deed restrictions. This site is an industrially-zoned property which is located in an "industrial-commercial park". Due to it's location within a designated industrial area, it is likely that the zoning will remain unchanged for the foreseeable future. In this case wouldn't the zoning alone suffice as an institutional control, precluding the need for a deed restriction?

Thanks,
Charles B. Sosik
P.W. Grosser Consulting (631) 589-6353

Response to P.W. Grosser E-mail

The ROD will be changed to reflect that SB-1 is located downgradient of soil boring DB-1. SB-1 is the one boring from the June 2000 soil sampling program that exhibited volatile organic compounds (VOCs) above TAGM 4046 guidance criteria.

The NYSDEC is not involved in the zoning or rezoning of a property. In order to assure the restriction of the site for industrial use remains in place, the NYSDEC will require the property owner to record such restrictions on the deed. This would also protect prospective purchasers during the title search process.

APPENDIX B: ADMINISTRATIVE RECORD, MINMILT REALTY SITE

Proposed Remedial Action Plan, Minmilt Realty Site, February 2002

Off-Site Remedial Investigation/Feasibility Study (RI/FS), P.W. Grosser Consulting Engineer and Hydrogeologist, P.C. (PWGC), October 2001.

Off-Site Remedial Investigation Work Plan, PWGC, September, 1998

Addendum No. 1 to the Quality Assurance Project Plan for the Interim Remedial Measure at Minmilt Realty Site, East Farmingdale, NY, PWGC, March 1997

Addendum No. 2 to the Health and Safety Plan for the Interim Remedial Measure at Minmilt Realty Site, East Farmingdale, NY, PWGC, March 1997

Operation and Maintenance Program for the Interim Remedial Measure at Minmilt Realty, East Farmingdale, NY, PWGC, October 1996

Specifications for: Soil Vapor Extraction and Air Stripper System, PWGC, Final Draft, July 1996

Addendum to the Health and Safety Plan, Hygrade Metal Moulding, PWGC, July 1996

Risk Assessment for Hygrade Metal Moulding Manufacturing Corp., East Farmingdale, NY, PWGC, First Revision, July 1996

Interim Remedial Measure to be Conducted at Hygrade Metal Moulding, East Farmingdale, NY, PWGC, Revised, December 1995

Remedial Investigation and Feasibility Study Order on Consent, October 1994

Investigation Work Plan, Hygrade Metal Moulding Corp., PWGC, Second Revision, September 1994

Quality Assurance Project Plan for the Interim Remedial Measure at Minmilt Realty Site, East Farmingdale, NY, PWGC, March 1994

Investigation Report for the Hygrade Metal Moulding Corp., PWGC March 1993.