Department of Environmental Conservation

Division of Environmental Remediation

Environmental Restoration
Record of Decision
Village of Vernon Office/Garage Site
Village of Vernon, Oneida County, New York
Site No. B00060-6

March 2004

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

DECLARATION STATEMENT
ENVIRONMENTAL RESTORATION RECORD OF DECISION

Village of Vernon Office / Garage Site Environmental Restoration Site
Village of Vernon, Oneida County New York
Site No. B-00060-6

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Village of Vernon Office / Garage site, an environmental restoration site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Village of Vernon Office / Garage environmental restoration site, and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of petroleum products from this site have been addressed by implementing the interim remedial measure identified in this ROD. The removal of contaminated soil and waste materials from the site has significantly reduced the threat to public health and the environment. Therefore, a groundwater monitoring program will be implemented to monitor the effectiveness of previous remedial actions in preventing further contamination of the groundwater.

Description of Selected Remedy

Based on the results of the Site Investigation/Remedial Alternatives Report (SI/RAR) for the Village of Vernon Office / Garage site and the criteria identified for evaluation of alternatives, the NYSDEC has selected No Further Action with institutional controls. The components of the remedy include:

1. Development of a plan for the continued monitoring of groundwater.

2. Development of a soils management plan to address residual contaminated soils that may be excavated from the site during future redevelopment. The plan would require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations.

3. The property owner would provide an annual certification, prepared and submitted by a professional engineer or environmental professional acceptable to the Department, which would certify that the institutional controls put in place, are unchanged from the previous certification and nothing has occurred that would impair the ability of the control to protect public health or the environment or constitute a violation or failure to comply with any operation an maintenance or soil management plan.

4. Imposition of an institutional control in form of an environmental easement that would: (a) require compliance with the approved soils management plan, (b) limit the use and development of the property to commercial or industrial uses only; (c) restrict use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYS Department of Health; and, (d) require the property owner to complete and submit to the NYSDEC an annual certification.

5. Collection of sub-slab soil gas samples, utilizing appropriate NYSDOH guidance, from within the rear portion of the building currently occupied by the Village Police Department, the western portion currently used as Village offices, and the garage. Sub-slab soil vapor data will be evaluated to determine the need for mitigation measures.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is 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.

MAR 3 1 2004

Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

TABLE OF CONTENTS

Environmental Restoration
RECORD OF DECISION

Village of Vernon Office / Garage Site
Village of Vernon, Oneida County, New York
Site No. B-00060-6
March 2004

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 this remedy for the Village of Vernon Office/Garage Environmental Restoration Program. The presence of hazardous substances has created threats to human health and/or the environment that are addressed by this remedy. As more fully described in Sections 3 and 5 of this document, petroleum leaks and spills resulted in the discharge of gasoline and fuel oil. These hazardous substances contaminated the soil and groundwater at the site, and resulted in:

- a significant threat to human health associated with potential exposure to petroleum contaminated soil and groundwater.

- an environmental threat associated with the impacts of contaminants to groundwater.

During the course of the investigation certain actions, known as interim remedial measures (IRMs), were undertaken at the Village of Vernon Office/Garage 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 site investigation/remedial alternatives report (SI/RAR). The IRMs undertaken at this site included:

- The removal of three (3) underground storage tanks (UST's) (1,000 gallon gasoline, 3,000 gallon gasoline and 3,000 gallon fuel oil);

- the excavation and disposal of 273 tons of contaminated soil;

- the removal and disposal of 1,935 gallons of petroleum/water mixture removed from the UST's; and

- the removal and disposal of 3,200 gallons of contaminated water vacuumed from the tank pit excavation.

Based on the success of the above IRM, the findings of the investigation of this site indicated that the site no longer poses a threat to human health or the environment, therefore **No Further Action**, with institutional controls, was selected as the remedy for this site.

The selected remedy, discussed in detail in Section 6, is intended to attain the remediation goals identified for this site in Section 6. The remedy must conform with officially promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Village of Vernon Office/Garage site, which is approximately 1/3 of an acre in size, is located on the easterly side of Ruth Street, in the Village of Vernon, County of Oneida and State of New York (Figure 1). The building houses the Village offices, public meeting room, police department and highway maintenance garage. The building is situated in a light commercial area. Adjacent properties support a restaurant, livestock auction, horse supply store, residences, and Village Park.

With the exception of the building, the entire property is paved. A driveway along the north side of the building is utilized by the police department. An existing aboveground gasoline storage tank is located along the south side of the structure. This is also the former location of the underground storage tanks removed during this project. The land to the southeast of the building is vacant and covered with grass, brush, pieces of concrete and several small timber piles.

In general, the property is flat, with a slight downward slope towards the north west. To the east is an embankment, which leads to an adjacent Village Park. A gravel roadway is cut into the eastern hillside, and joins a driveway providing access from Route 5 to the eastern neighboring lands and the Village Park.

The nearest water bodies to the site include a small tributary, situated at the base of the hillside to the south of the neighboring southern lot, and Sconondа Creek located to the east of the Village Park. These waterways are not adjacent to the subject property. The small unnamed tributary flows from west to east, eventually joining with Sconondoa Creek.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

The Village of Vernon Office/Garage was purchased by the Village in 1969 from Earl Stacks (C&E Trucking), and has been used as the Village garage and offices since that time. Prior to the Village's acquisition, the reported use of the site was as a trucking service garage. The abandoned USTs were installed during these previous site operations.

A 500 gallon aboveground gasoline storage tank was installed by the Village in 1985 and registered in accordance with the Petroleum Bulk Storage (PBS) regulations. Prior to 1985 the Village purchased fuel by fleet credit card at private stations. Discussions with Village personnel during this project revealed no prior knowledge that the USTs installed by the previous site owners were used by the Village. Two out-of-service underground storage tanks (one 1,000 gallon gasoline tank and one 3,000 gallon gasoline tank) were also registered at the site following discovery by the Village. A third tank was suspected following discovery of a vent pipe during a NYSDEC inspection. The underground storage tanks were located along the south side of the building. The NYSDEC also

indicated that a gasoline/water mixture appeared to be present in at least one of the tanks (tank nearest building corner).

In 1996, Niagara Mohawk encountered petroleum stained soils and odors (gasoline) while excavating a trench along the west side of the facility while upgrading natural gas service. A petroleum sheen was observed on the water seeping into the open excavation. NYSDEC spill response personnel were notified and witnessed the remainder of the excavation. The NYSDEC reported the detection of organic vapors within the excavation using a photoionization detector (PID) at 120 parts per million (ppm). NYSDEC Spill No.9606328 was assigned to the site as a result of these observations.

3.2: Remedial History

A shallow subsurface investigation was performed by the Village's consultant on September 5, 1996 to investigate the extent of the conditions identified during the Niagara Mohawk trench excavation. Two augered borings (TB-1 and TB-2) and one geoprobe location (GEO-1) were completed as part of this work. The locations of these borings are indicated on Figure 2. One of the augered borings (TB-2) was completed in an area now occupied by offices completed during a building addition. The other boring (TB-1) was completed in the area of the blacktop next to the Village Office entrance. The geoprobe location (GEO-1) was situated adjacent to the building, along the west side of the facility and near the location of the trench excavation for the utility installation by Niagara Mohawk.

The consultant's report indicates that the two augered borings were each completed to a depth of 10 feet, while the geoprobe could not penetrate deeper than 3 feet due to the dense subsurface materials. Groundwater was not identified in any of the subsurface investigation locations. PID readings were recorded for samples collected from each location to screen for total volatile organic vapors. For the most part, elevated PID readings were detected within the first 3 feet below ground surface. The exception was a reading of 9 ppm detected at 5.5 feet in TB-2. The highest reading was 20 ppm, recorded from 2 feet below ground surface at TB-2. TB-1 exhibited a high reading of 8 ppm at 0-1 feet in depth, while GEO-1 recorded a high of 1 ppm at 0-1 feet below ground surface.

The borings indicated that the soils beneath the site consist of a gravelly fill beneath the asphalt to a depth of approximately 4 feet. The fill is underlain by a dense clay, silt, sand and gravel mixture of apparent glacial origin, most likely a till.

SECTION 4: 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.

Since no viable PRPs have been identified, there are currently no ongoing enforcement actions. However, legal action may be initiated at a future date by the state to recover state response costs should PRPs be identified. The Village of Vernon will assist the state in its efforts by providing all information to the state which identifies PRPs. The Village of Vernon will also not enter into any agreement regarding response costs without the approval of the NYSDEC.

SECTION 5: SITE CONTAMINATION

A site investigation/remedial alternatives report (SI/RAR) has been conducted to evaluate the alternatives for addressing the significant threats to human health and/or the environment.

5.1: Summary of the Site Investigation

The purpose of the SI was to define the nature and extent of any contamination resulting from previous activities at the site. The SI was conducted between March 1998 and June 2003. The field activities and findings of the investigation are described in the SI report.

The following activities were conducted during the SI:

- Research of historical information;
- Soil gas survey at 45 locations to locate VOC contaminated soils and possible vapor exposure pathways;
- Excavation of test pits to locate underground drainage/leach fields;
- Installation of 9 soil borings and 8 shallow and 8 deep monitoring wells for analysis of soils and groundwater as well as physical properties of soil and hydrogeologic conditions;
- Sampling of 16 new and existing monitoring wells;
- A survey of public and private water supply wells in the area around the site;
- Collection of 2 surface water samples;
- Collection of 2 aquatic sediment samples;

To determine whether the soil or groundwater contains contamination at levels of concern, data from the investigation were compared to the following SCGs:

- Groundwater, drinking water, and surface water SCGs are based on NYSDEC "Ambient Water Quality Standards and Guidance Values" and Part 5 of the New York State Sanitary Code.
- Soil SCGs are based on the NYSDEC "Technical and Administrative Guidance Memorandum (TAGM) 4046; Determination of Soil Cleanup Objectives and Cleanup Levels".
- Sediment SCGs are based on the NYSDEC "Technical Guidance for Screening Contaminated Sediments."

Based on the SI 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 SI report.

5.1.1: Site Geology and Hydrogeology

The geology within the site investigation area was observed during the removal of the three underground storage tanks and through the advancement of subsurface borings associated with the well installation program. The uppermost soil horizon is characterized as a sandy and gravelly fill layer with an approximate thickness ranging from 1 ½ to 3 feet. This fill layer is situated above native soils, shown on regional surficial geologic mapping as a "till moraine", a glacially derived formation typically deposited along the sides or in front of an advancing ice sheet. At the site, this material was noted as chiefly consisting of silt and clay with minor amounts of sand and virtually no gravel. Installation of the soil vapor survey probes confirmed that this layer is present across the site at approximately the same depth observed during the removal of the USTs.

The subsurface logs indicate that the deeper portion of the till unit incorporates many thin lenses and layers of wet sand throughout the investigation area. However, there did not appear to be any sand layer that could be traced continuously across the site. It is believed that the majority of these features are discontinuous and localized.

Groundwater was encountered at the site representing a shallow water table and a deeper zone of water-bearing materials. Several of the shallow small-diameter monitoring wells installed to bisect the interface between the uppermost fill layer and the underlying till unit, indicated a water level above the elevation of the till unit, while others exhibited a water level below the interface. This condition appears to be generally isolated to the center of the site, although its extent varies seasonally. The lower permeability of the underlying finer-grained till material will cause contaminants to migrate slower or to be immobile in the till, effectively remaining on site.

Water elevations collected from the shallow wells indicated that the area on site exhibiting the highest water table elevations (99.01 to 100.94 feet) is located within the vicinity of the MW-5/5A, near the southwest corner of the Office/Garage building.

The thin wet sand lenses and layers present within the deeper portions of the till give rise to the zone of deeper water-bearing materials at approximately 15 feet deep. The surface configuration of the piezometric elevations measured in this zone appears to be consistent with the regional water table in the area, with Sononda Creek acting as a likely discharge point for groundwater flowing to the north and east of the site. The groundwater contours for the deeper piezometric surface however indicate that the localized directions of groundwater flow are to the northeast, north and northwest across the site from a high point located off-site and to the south of the study area.

Hydraulic conductivity testing for wells MW-1 through MW-5 indicated a range of values identified for the till of 10^{-4} to 10^{-6} cm/sec.

5.1.2: Nature of Contamination

As described in the SI report, many soil, groundwater and sediment samples were collected to characterize the nature and extent of contamination. As summarized in Table 1, the main categories of contaminants that exceed their SCGs are volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs) and lead.

The VOCs of concern are benzene, ethylbenzene, isopropyl benzene, n-propylbenzene, toluene, 1,2,4 trimethylbenzene, 1,3,5 trimethylbenzene, o-xylene, m-xylene, p-xylene, naphthalene, methyl tert butyl ether (MTBE), and tert-butyl-benzene; which are associated with gasoline. The SVOCs of concern are phenol, benzo (a) anthracene, chrysene, benzo (b) fluoranthene, benzo (a) pyrene, 2-methyl phenol, 4-methyl phenol, naphthalene and bis (2-ethythexyl) phthalate; which are associated with fuel oil. Both VOCs and SVOCs are lighter than water and are typically found at or above the water table. The VOCs are more soluble in water; therefore more mobile than the SVOCs, which tend to adhere to the soil particles.

5.1.3: Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated.

Chemical concentrations are reported in parts per billion (ppb) for water, parts per million (ppm) for soil and sediment. For comparison purposes, where applicable, SCGs are provided for each medium.

Table 1 summarizes the degree of contamination for the contaminants of concern 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.

Contamination present on site resulted from the leakage of petroleum into the subsurface from three former USTs. During the excavation and the subsequent tank removal and cleaning program completed in April 1999, it was observed that the tanks exhibited several holes. The presence of strong petroleum odors and visible staining of the soils within the tank pit excavation confirmed that the USTs were the source of contaminants detected at the site. The following section discusses the identified contaminant distribution within the subsurface and the potential for off-site migration and pathways, if any, which represent potential risks to human health and wildlife.

Soil Vapor Survey Results

The results of the soil vapor survey indicated that there was a probable contaminant influence present within the upper fill layer to the southwest of the Village Office/Garage. This impact coincided, for the most part, with the paved areas of the site. There were no vapors detected at any of the five survey locations completed within the interior of the Village Garage with a PID, nor have there been any reported indoor air problems at the facility. The results do not indicate the potential for a significant contaminant influence within the immediate vicinity of the former UST pit, with the exception of the southwestern edge of the pit.

Subsurface Soil

Soil samples collected during the soil boring program were analyzed for total lead, and volatile and semi-volatile organics. Most of the samples were collected from the shallow fill layer at the site, since this is the horizon that exhibited elevated PID readings during borehole advancement. For the most part, the suite of contaminants present resembles the petroleum hydrocarbons detected in the tank pit soils during the tank removal portion of the project, although at lower concentrations.

Boring locations B-2 (MW-2) and B-6 exhibited one semi-volatile parameter (benzo (a) pyrene) marginally in excess of NYSDEC TAGM 4046 cleanup objectivese However, since these locations only exhibit water table elevations above the fill/till interface seasonally, it is not likely that these conditions are associated with the leaking underground storage tanks. Rather, these marginal exceedances are more likely associated with localized, historic incidences or related to the paving of the parking area. The boring completed at MW-8 (B-9) exhibited four semi-volatile compounds (benzo (a) anthracene, chrysene, benzo (b) fluoranthene and benzo (a) pyrene) at levels slightly above TAGM 4046 cleanup objectives. The greater number of parameters detected and the proximity of this location to the former UST area suggests that this location exhibits a likely impact from the spill.

Soil samples for lead ranged from less than 2 ppb to 120 ppb, which are typical background levels.

Soils directly impacted by the release of petroleum from the USTs appears limited to the soils surrounding MW-8, near the western side of the tank pit. Figure 3 presents the approximate extent of soil contamination in exceedance of TAGM 4046 cleanup objectives impacted by the tank release.

Groundwater

The depth to groundwater in the shallow aquifer ranged from 0.10 feet to 7.46 feet deep; and the depth to groundwater in the deep aquifer ranged from 12.93 feet to 21.20 feet deep.

Groundwater samples collected during the site investigation were analyzed for the presence of volatile and semi-volatile organics as well as total lead. As shown, the groundwater analytical results demonstrate an impact from petroleum contaminants in the vicinity of MW-5/5A, located adjacent to former UST-1 and the southwest corner of the garage. Of the pair of wells installed at MW-5, the shallow well, screening the upper fill layer, exhibits several volatile organic compounds in exceedance of their respective groundwater standard or guidance value. A few semi-volatile organic compounds were also detected, but inconsistently throughout the site investigation. These compounds, therefore, do not represent a static condition and are not considered contaminants of concern. The spectrum of VOC contaminants present is representative of a petroleum-based contaminant source, including elevated levels of methyl tertiary butyl ether (MTBE), a gasoline additive. Figure 4 presents the extent of MTBE groundwater contamination in the shallow water table, while Figure 5 illustrates the total VOC impacted shallow groundwater area, excluding MTBE. This figure demonstrates the limited extent of overall VOC contamination apart from the extent of the more mobile constituent MTBE. Only MTBE was detected in exceedance of the groundwater standard in the deeper of the two wells at this location.

MTBE was also detected in exceedance of the groundwater standard at the deeper well of the MW-8 well pair, with minor concentrations of MTBE in the shallow well. MTBE was also detected in shallow well MW-1. Figure 6 presents the extent of MTBE contamination in the deeper water-bearing materials.

Total lead concentrations were detected above the groundwater standard at both the shallow and deep wells at MW-1, the deep well at MW-2, the shallow well at MW-4, and the deep well at MW-6.

Lead concentrations observed at the MW-5 well pair (the location exhibiting the greatest petroleum hydrocarbon impact) were consistently detected below the groundwater standard. The elevated lead concentrations does not appear to be a function of the observed groundwater or petroleum distribution, but is likely related to lead as a component of the soil matrix.

Surface Water and Sediments

Sediment and surface samples were collected from the tributary to Sconondа Creek on November 10, 1999 as part of the second round of environmental sampling performed at the site. There were no volatile or semi-volatile organic compounds detected at the surface water sampling locations.

Several semi-volatile organic compounds were detected at sediment sampling location SED-2, but they did not exceed the NYSDEC sediment guidelines. There were, however, no volatile organic compounds detected at either location.

While some of the SVOC compounds were also detected at a few of the on-site soil sampling locations, there were no semi-volatile organic compounds detected in the shallow groundwater on-site. Since groundwater migration would be the mechanism for contaminant movement from the site to the tributary, and SVOC soil contamination does not extend beyond the property line in the direction of the sediment samples, it does not appear that contaminants detected in the sediments are related to the site or past site operations. Since the semi-volatile organic compounds are off-site and related to off-site sources, they are not considered further in this investigation.

5.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the SI/RAR.

The IRMs undertaken at this site included:

- The removal of three (3) underground storage tanks (UST's) (1,000 gallon gasoline, 3,000 gallon gasoline and 3,000 gallon fuel oil);
- the excavation and disposal of 273 tons of contaminated soil;
- the removal and disposal of 1,935 gallons of petroleum/water mixture removed from the UST's; and
- the removal and disposal of 3,200 gallons of contaminated water vacuumed from the tank pit excavation.

5.3: 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 human exposure pathways can be found in Section 2.4 of the RI report.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

There are no exposed soil areas at the site as a result of the paved parking areas and driveways. Therefore, there are no existing direct contact or ingestion pathways deemed complete with respect to soil contamination. However, in the event that this soil becomes exposed as a result of underground utility line maintenance or site construction, exposed soil may result in direct contact or incidental ingestion pathway to workers. Specific health and safety measures would be required to reduce the potential for direct contact and ingestion with contaminated media during site activity resulting in the exposure of these media. Therefore, a direct contact exposure pathway is only complete during future construction activities, which can be mitigated with engineering controls.

Since contaminated media exists under, and adjacent to, the building and would be exposed during future site construction or an underground utility line maintenance event, an inhalation exposure scenario could occur under these conditions.

There are no private water supply wells serving nearby residents. As such, there are no existing pathways complete for the ingestion of contaminated groundwater.

5.4: Summary of Environmental Impacts

This section summarizes the existing and potential future environmental impacts presented by the site. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as aquifers and wetlands.

There are no visible indications that the site has impacted local water bodies or vegetation, nor does the site appear to exhibit the potential to impact wildlife. Since most of the surface water runoff is directed towards Ruth Street, there is little potential that the tributary to Sconondoa Creek would become impacted.

The environment within the vicinity of the Village of Vernon Office/Garage is not known to have any listed or proposed endangered or threatened species.

Potential wildlife impacts were assessed for the site. The land use on and adjacent to the site consist of a mixture of residential and commercial/light industrial uses to the south, west and north of the site. East of the site, the primary land-use is recreational, occupied by a park with various athletic fields. Several small (1,000-2,000 square feet) areas support either forested or shrubby vegetation that can provide habitat for wildlife, however, these areas are isolated from each other and do not connect to any other such habitat within the vicinity of the site. This lack of connection combined with the relatively intensive land-use in the area would discourage many types of wildlife from utilizing the site and therefore the potential impacts to wildlife is limited and likely negligible.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS AND SELECTED REMEDY

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous substances disposed at the site through the proper application of scientific and engineering principles.

The proposed future use for the Village of Vernon site is commercial.

Prior to the completion of the IRM described in Section 5.2, the remediation goals for this site were to eliminate or reduce to the extent practicable:

- exposures of persons at or around the site to petroleum compounds in the soil, air, and/or groundwater;
- environmental exposures of flora or fauna to petroleum compounds in the soil, air, and/or groundwater;
- the release of contaminants from soil into groundwater that may create exceedances of groundwater quality standards; and
- the release of contaminants from petroleum compounds in the soil and/or groundwater under the building into indoor air through volatilization of contaminants.

Further, the remediation goals for the site include attaining to the extent practicable:

- ambient groundwater quality standards; and
- TAGM 4046 cleanup objectives.

The NYSDEC believes that the IRM has accomplished these remediation goals, provided that it continues to be operated and maintained in a manner consistent with the proposed operation, maintenance, and monitoring.

Based on the IRM and subsequent investigations at the site, the IRM that has been performed, and the evaluation discussed below, the NYSDEC has selected No Further Action as the preferred alternative for the site.

The basis for this selection is the NYSDEC's conclusion that No Further Action will be protective of human health and the environment and will meet all SCGs. Overall protectiveness is achieved through meeting the remediation goals listed above.

The IRM has achieved each of the remediation goals by removal of three underground storage tanks and the contaminated soils within the immediate vicinity of the tanks which could serve as an on-going contaminant source.

Monitoring of the groundwater has demonstrated that the impacts to the site from the petroleum releases has not been extensive. Subsequently the residual groundwater contamination is expected to attenuate due to the removal of the source material.

The main SCGs applicable to this project are as follows:

- Ambient Water Quality Standards and Guidance Values Part 703. The removal of tanks, product, and contaminated soil during the IRM has eliminated to source of contamination that has impacted groundwater quality.

- Soil Cleanup Objectives contained in NYSDEC TAGM 4046. The removal of contaminated soils from around the UST and repaving of the site will prevent exposure to residual soil contamination remaining on the site.

Therefore, the NYSDEC concludes that the elements of the IRM already completed have achieved the remediation goals for the site and that No Further Action, with institutional controls, is needed other than the institutional controls listed below.

1. Development of a plan for the continued monitoring of groundwater.

2. Development of a soils management plan to address residual contaminated soils that may be excavated from the site during future redevelopment. The plan would require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations.

3. The property owner would provide an annual certification, prepared and submitted by a professional engineer or environmental professional acceptable to the Department, which would certify that the institutional controls put in place, are unchanged from the previous certification and nothing has occurred that would impair the ability of the control to protect public health or the environment or constitute a violation or failure to comply with any operation an maintenance or soil management plan.

4. Imposition of an institutional control in form of an environmental easement that would: (a) require compliance with the approved soils management plan, (b) limit the use and development of the property to commercial or industrial uses only; (c) restrict use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYS Department of Health; and, (d) require the property owner to complete and submit to the NYSDEC an annual certification.

5. Collection of sub-slab soil gas samples, utilizing appropriate NYSDOH guidance, from within the rear portion of the building currently occupied by the Village Police Department, the western portion currently used as Village offices, and the garage. Sub-slab soil vapor data will be evaluated to determine the need for mitigation measures.

SECTION 7: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken 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:

- Repositories for documents pertaining to the site were established.
- A public contact list, which included nearby property owners, elected officials, local media and other interested parties, was establish.
- A public meeting was held on February 25, 2004 to present and receive comments on the PRAP.
- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

In general, the public comments received were supportive of the selected remedy.

TABLE 1
Nature and Extent of Contamination
March 1998 - June 2003

SUBSURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	ND - 15	0.060	2 of 19
	Ethyl benzene	ND - 25	5.5	1 of 19
	Isopropyl benzene	ND - 4.7	2.3	1 of 19
	n-propylbenzene	ND - 7.3	3.7	1 of 19
	Toluene	ND - 11	1.5	1 of 19
	1,2,4 Trimethylbenzene	ND - 57	10	1 of 19
	1,3,5 Trimethylbenzene	ND - 14	3.3	1 of 19
	o-Xylene	ND - 11	0.65	1 of 19
	m-Xylene	ND - 100	0.83	2 of 19
Semivolatile Organic Compounds (SVOCs)	Phenol	ND - 0.067	0.03	1 of 19
	Benzo (a) anthracene	ND - 1.4	0.224	2 of 19
	Chrysene	ND - 1.6	0.400	1 of 19
	Benzo (b) fluoranthene	ND - 2.5	1.100	1 of 19
	Benzo (a) pyrene	ND - 1.7	0.061	5 of 19

GROUNDWATER	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	ND - 2200	0.7	6 of 63
	Toluene	ND - 1100	5	5 of 63
	o-Xylene	ND - 310	5	5 of 63
	m & p-Xylene	ND - 3400	5	4 of 63
	Total Xylene	ND - 3640	5	5 of 63
	Isopropyl benzene	ND - 230	5	4 of 63
	n-propylbenzene	ND - 100	5	1 of 63
	Naphthalene	ND - 180	10	3 of 63

GROUNDWATER	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
	Methyl tert butyl ether	ND - 6900	10	17 of 63
	Ethyl benzene	ND - 1300	5	4 of 63
	Tert-Butyl-Benzene	ND - 190	5	1 of 63
	1,3,5 Trimethylbenzene	ND - 180	5	3 of 63
	1,2,4 Trimethylbenzene	ND - 960	5	4 of 63
Semivolatile Organic Compounds (SVOCs)	Phenol	ND - 24	1	1 of 63
	2-Methyl phenol	ND - 50	1	1 of 63
	4-Methyl phenol	ND- 40	1	1 of 63
	Naphthalene	ND- 60	10	2 of 63
	bis (2-Ethythexyl) phthalate	ND - 270	5	3 of 63
Inorganic Compounds	Lead	ND - 110	25	9 of 63

[a] ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water;
ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
ug/m^3 = micrograms per cubic meter

[b] SCG = standards, criteria, and guidance values; list SCGs for each medium

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Village of Vernon Garage/Office Environmental Restoration Site
Village of Vernon, Oneida County, New York
Site No. B-00060-6

The Proposed Remedial Action Plan (PRAP) for the Village of Vernon Garage/Office site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 14, 2004. The PRAP outlined the remedial measure proposed for the contaminated soils, groundwater, and waste at the Village of Vernon Garage/Office site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on February 25, 2004 which included a presentation of the Site Investigation (SI) and the Remedial Alternatives Report (RAR) 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. The public comment period for the PRAP ended on March 30, 2004

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the NYSDEC's responses:

COMMENT 1:

The Village requests the deletion of item 5 for the proposed institutional controls. This item relates to the collection of additional sub-slab soil gas samples in the building. The proposed additional investigation is redundant and not supported by the results of the Site Investigation. The Site Investigation included a soil vapor survey across the site, which included samples of sub-slab soil gas from locations within the highway garage. The soil vapor survey did not identify the presence of volatile organic compounds within the building sub-slab soil gas. VOCs were detected in soil gas from areas of the site outside the building, indicating that the approved methodology was capable of detecting elevated soil gas readings. The methods approved in the Work Plan for this phase of the project included testing by photo-ionization detector (PID). While this methodology may be considered a screening level analysis when compared to the draft soil gas sampling guidance being prepared by tile NYSDEC and NYSDOH in reaction to the IBM Endicott project, it is important to note that no VOCs were detected by the PID soil gas vapor survey methods beneath the building. The sub-slab soil gas sample points from within the garage were positioned between the area of concern (near MWS surrounding the old USTs), and the northern and eastern sides of the site which were shown to be contaminant free. Since no VOCs were detected beneath the building slab, we feel that the collection of additional site data at this time is redundant, and would be disruptive to Village operations, and is an unnecessary cost to be borne by the Village and NYSDEC.

RESPONSE 1:

The potential for vapors under the segment of the building where occupied office space is located has not been evaluated. While the use of a PID may be appropriate for initial screening of a site, it is not appropriate for evaluation of vapors under an occupied building. We do not agree that the collection of this data is redundant, nor do we believe that it is an unnecessary cost when human occupants could be impacted by volatile petroleum - contaminated soil remaining under, and adjacent to, the building.

COMMENT 2:

The No Further Action alternative recommended for implementation in the Site Investigation/ Remedial Alternatives Report included the placement of an asphalt Cap, above the former UST pit area of the site. The purpose of the asphalt cap was to limit water infiltration (and therefore subsurface contaminant transport) into the area of concern where residual soil and groundwater are present, and to prevent direct contact with site soils in this area. The Village proactively installed this cap prior to the conclusion of the Site Investigation. The asphalt cap is not discussed in the No Further Action decision proposed in the PRAP. The Village requests that the Record of Decision include the full No Further Action alternative presented in the Site Investigation/ Remedial Alternatives Report which includes the asphalt cap. Inclusion of the full alternative presented in the SIRAR, will acknowledge the benefit of limiting storm water infiltration into the subsurface areas containing residual petroleum compounds, and allow the Village to obtain Environmental Restoration Program reimbursement funding for this pro-active remedial action.

RESPONSE 2:

The NYSDEC concurs with the Village that the paving of the area above the former UST pit will limit storm water infiltration and is an eligible item. Invoices must be submitted with the final payment package.

COMMENT 3:

The Village requests that the Operation Maintenance and Monitoring Plan for the site be limited to annual sampling of MW #1 (shallow), MW #5 (shallow and deep), and MW #8 (deep).

RESPONSE 3:
The details of monitoring and frequency must be included in the OM&M Plan which has yet to be submitted. The justification for the request to limit sampling to an annual event must be supported technically in that document.

APPENDIX B

Administrative Record

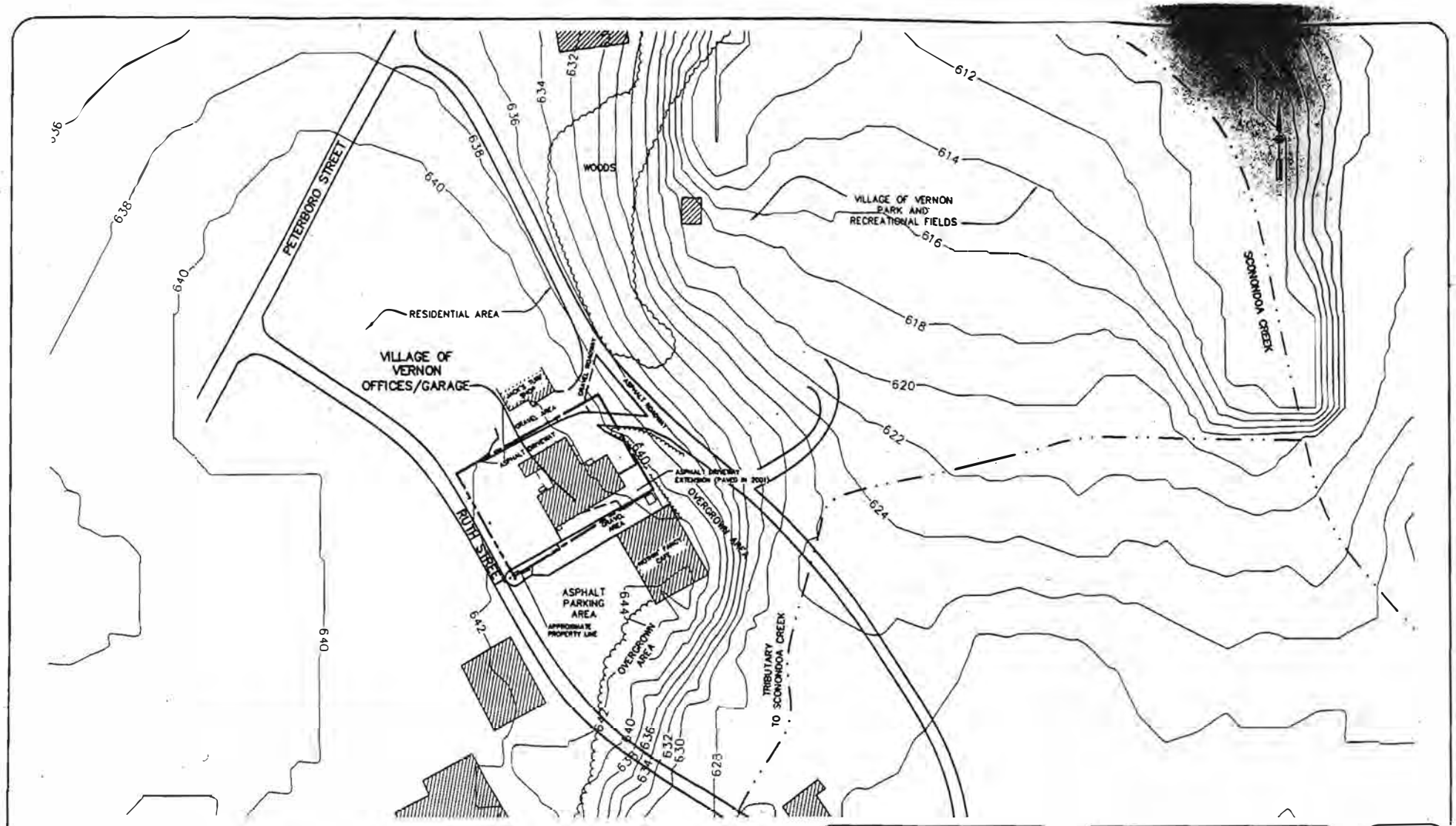
Administrative Record

Village of Vernon
Tax Map No. 323.16 Parcel 40
Site No. B-00060-6

1. Proposed Remedial Action Plan for the Village of Vernon site, Tax Map No. 323.16, Parcel 40, dated January 2004, prepared by the NYSDEC;

2. Village of Vernon Environmental Restoration Project Revised Site Investigation/Remedial Alternatives Report, June-2003, Barton & Loguidice Consulting Engineers, June 12, 2003;

3. Village of Vernon Environmental Restoration Project, Tank Closure Report, November-1999, Barton & Loguidice Consulting Engineers, November 19, 1999.



SOURCE:
1. MYERS & ASSOCIATES. 1999. SITE FEATURES MAPPING AND MONITORING WELL LOCATIONS.
2. TOPOGRAPHY FROM 1985, USGS MAPPING.

APPROX. SCALE: 1" = 100'

Barton & Loguidice, P.C.
Consulting Engineers

VILLAGE OF VERNON OFFICE/GARAGE
ENVIRONMENTAL RESTORATION PROJECT

SITE VICINITY MAP

VILLAGE OF VERNON ONEIDA COUNTY, N.Y.

Figure 1
Project No. 507.016

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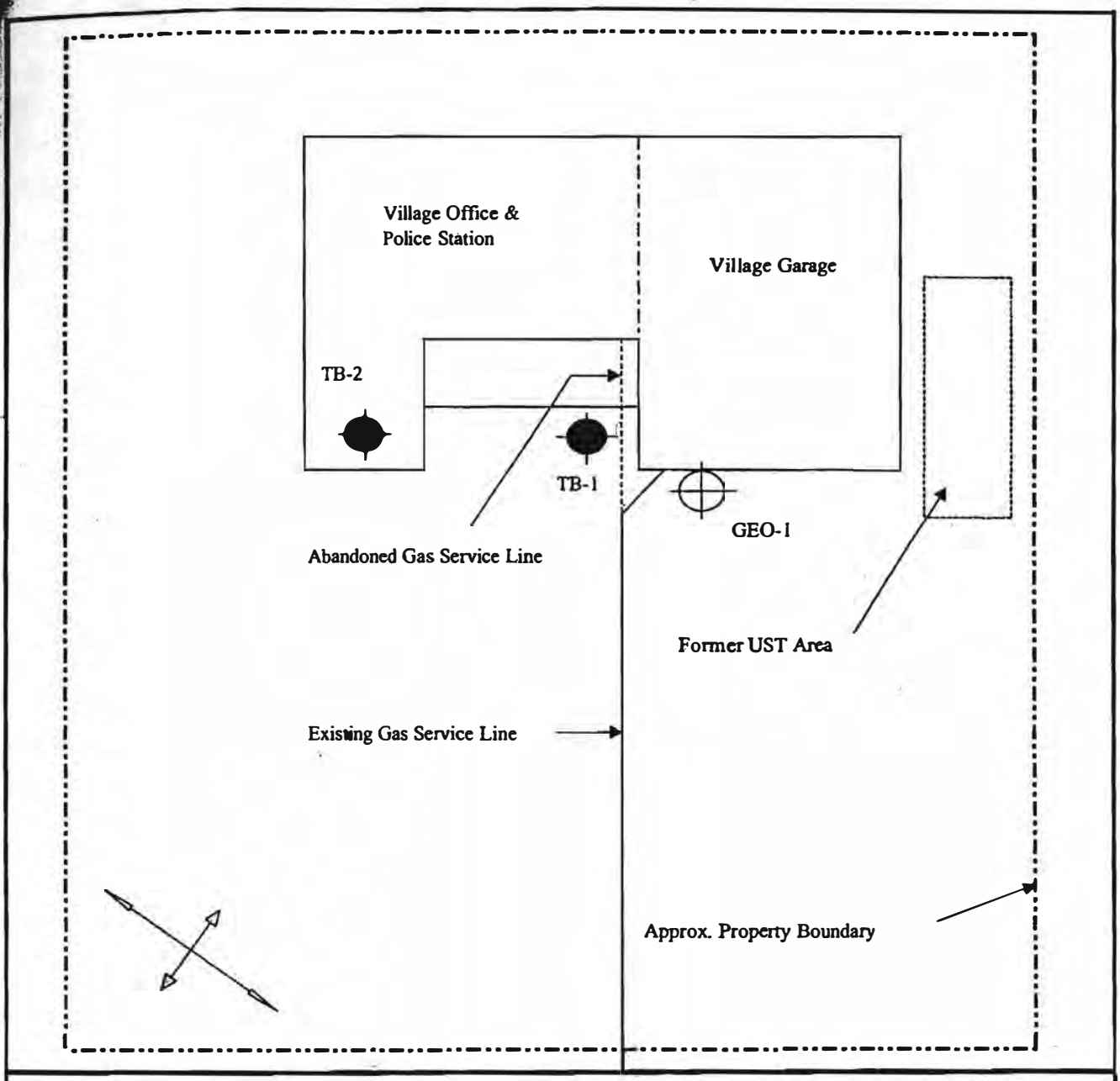
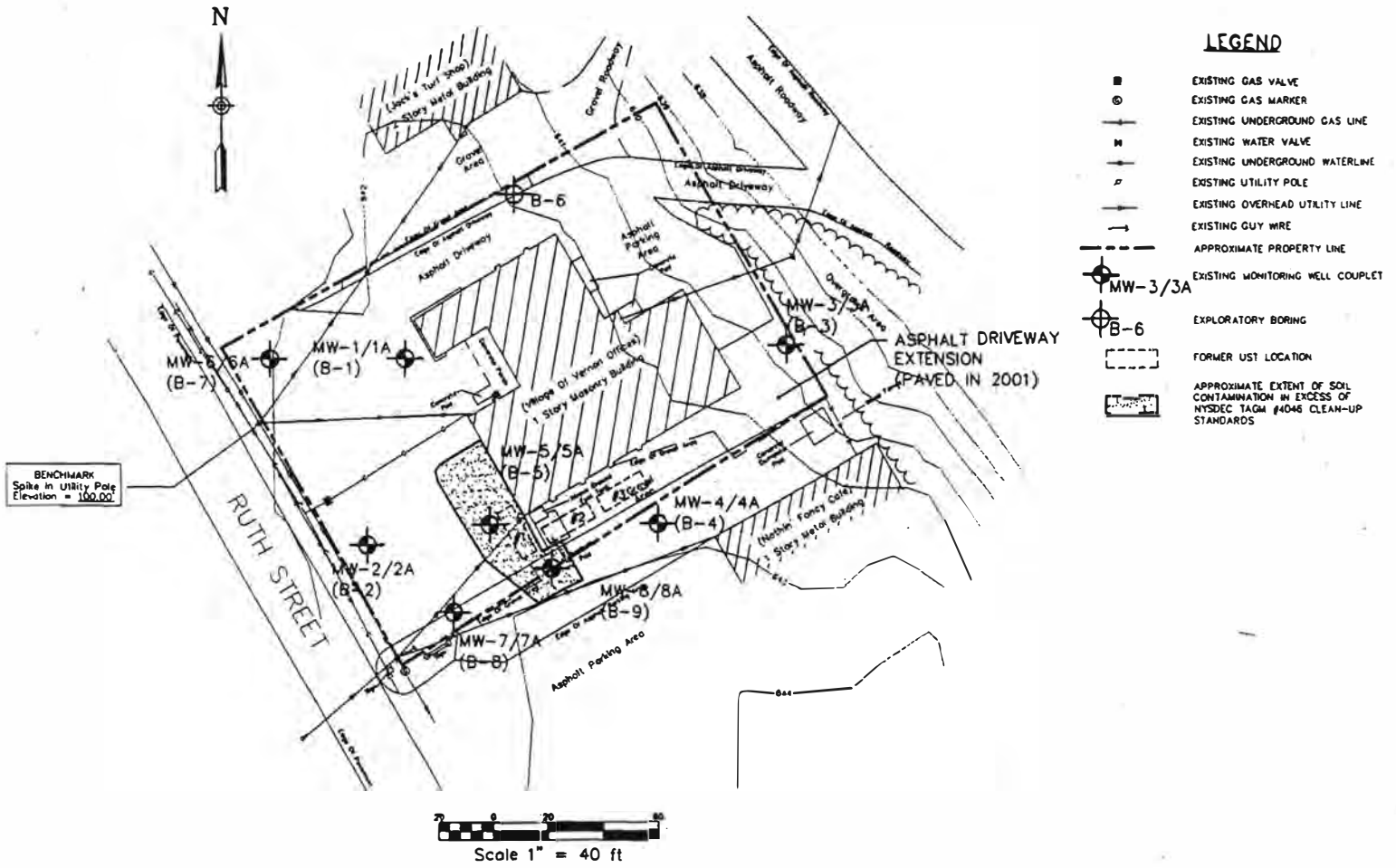


NOTE: Drawing is not to scale

Barton & Loguidice, P.C. *Consulting Engineers*	Village of Vernon Office/Garage ENVIRONMENTAL RESTORATION PROJECT SITE INVESTIGATION/REMEDIAL ALTERNATIVES REPORT PREVIOUS INVESTIGATION LOCATIONS Village of Vernon — Oneida County, NY	Figure 2 Project No. 507.016



NOTES:

1. DATUM – VERTICAL: ASSUMED
2. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM A COMBINATION OF FIELD MEASUREMENTS, AVAILABLE MAPS, RECORDS AND INFORMATION PROVIDED BY THE OWNER. THEREFORE THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE ONLY. THERE ALSO MAY BE OTHER FACILITIES, STRUCTURES OR UTILITIES THE EXISTENCE OF WHICH IS PRESENTLY UNKNOWN.
3. MYERS & ASSOCIATES, 1999. SITE FEATURES MAPPING AND MONITORING WELL LOCATIONS.
4. TOPOGRAPHY FROM 1985, USGS MAPPING.

Barton & Loguidice, P.C.
Consulting Engineers
290 Elwood Davis Road / Box 2507, Syracuse, New York 13220

VILLAGE OF VERNON
ENVIRONMENTAL RESTORATION PROJECT
APPROXIMATE EXTENT OF SOIL CONTAMINATION
VILLAGE OF VERNON ONEIDA COUNTY, N.Y.

Figure 3
Project No.
507.016

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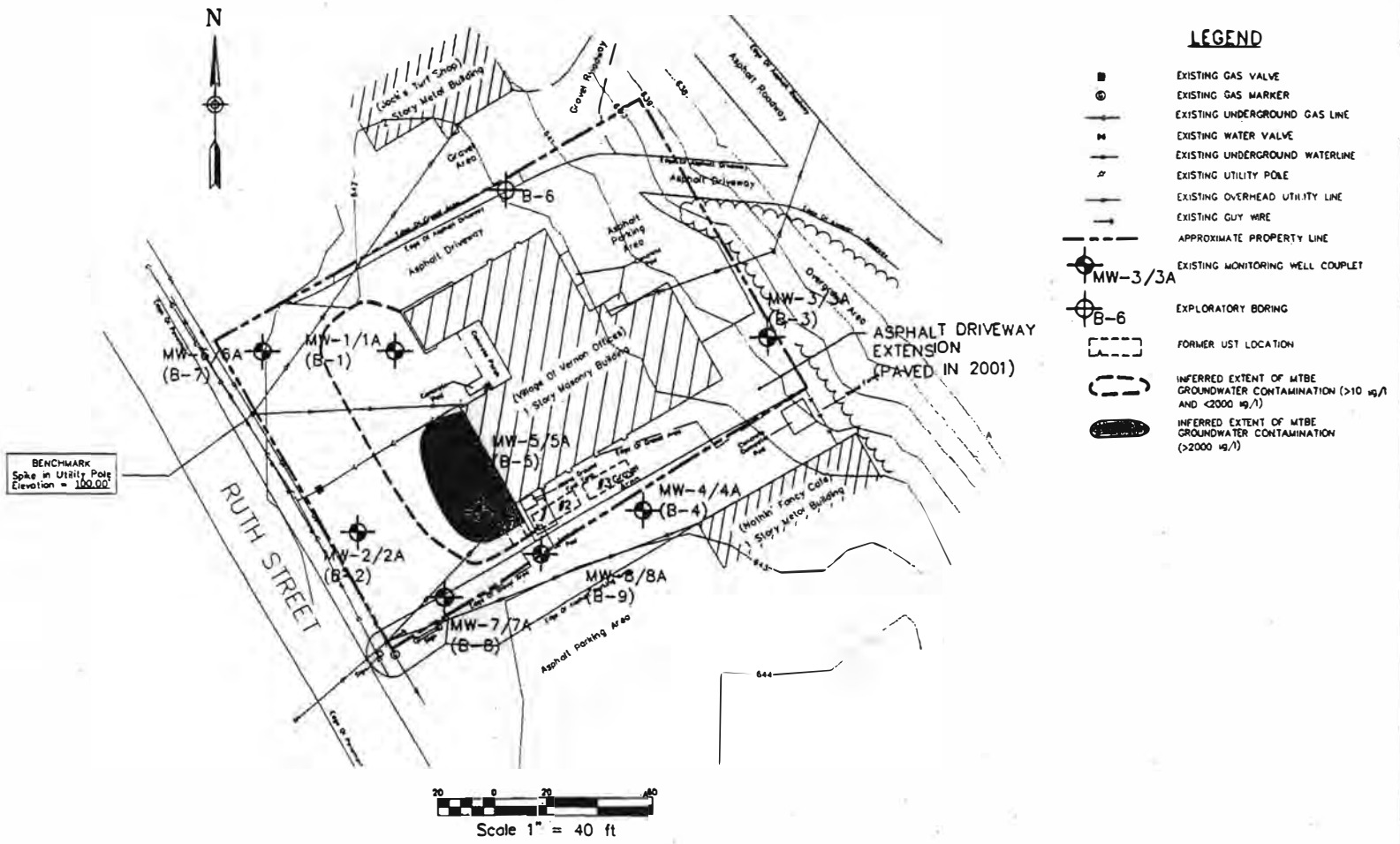

LEGEND

- EXISTING GAS VALVE
- EXISTING GAS MARKER
- EXISTING UNDERGROUND GAS LINE
- EXISTING WATER VALVE
- EXISTING UNDERGROUND WATERLINE
- EXISTING UTILITY POLE
- EXISTING OVERHEAD UTILITY LINE
- EXISTING GUY WIRE
- APPROXIMATE PROPERTY LINE
- MW-3/3A — EXISTING MONITORING WELL COUPLET
- B-6 — EXPLORATORY BORING
- FORMER UST LOCATION
- INFERRED EXTENT OF MTBE GROUNDWATER CONTAMINATION (>10 ug/l AND <2000 ug/l)
- INFERRED EXTENT OF MTBE GROUNDWATER CONTAMINATION (>2000 ug/l)

NOTES:

1. DATUM - VERTICAL: ASSUMED
2. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM A COMBINATION OF FIELD MEASUREMENTS, AVAILABLE MAPS, RECORDS AND INFORMATION PROVIDED BY THE OWNER, THEREFORE THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE ONLY. THERE ALSO MAY BE OTHER FACILITIES, STRUCTURES OR UTILITIES THE EXISTENCE OF WHICH IS PRESENTLY UNKNOWN.
3. MYERS & ASSOCIATES, 1999. SITE FEATURES MAPPING AND MONITORING WELL LOCATIONS.
4. TOPOGRAPHY FROM 1985, USGS MAPPING.

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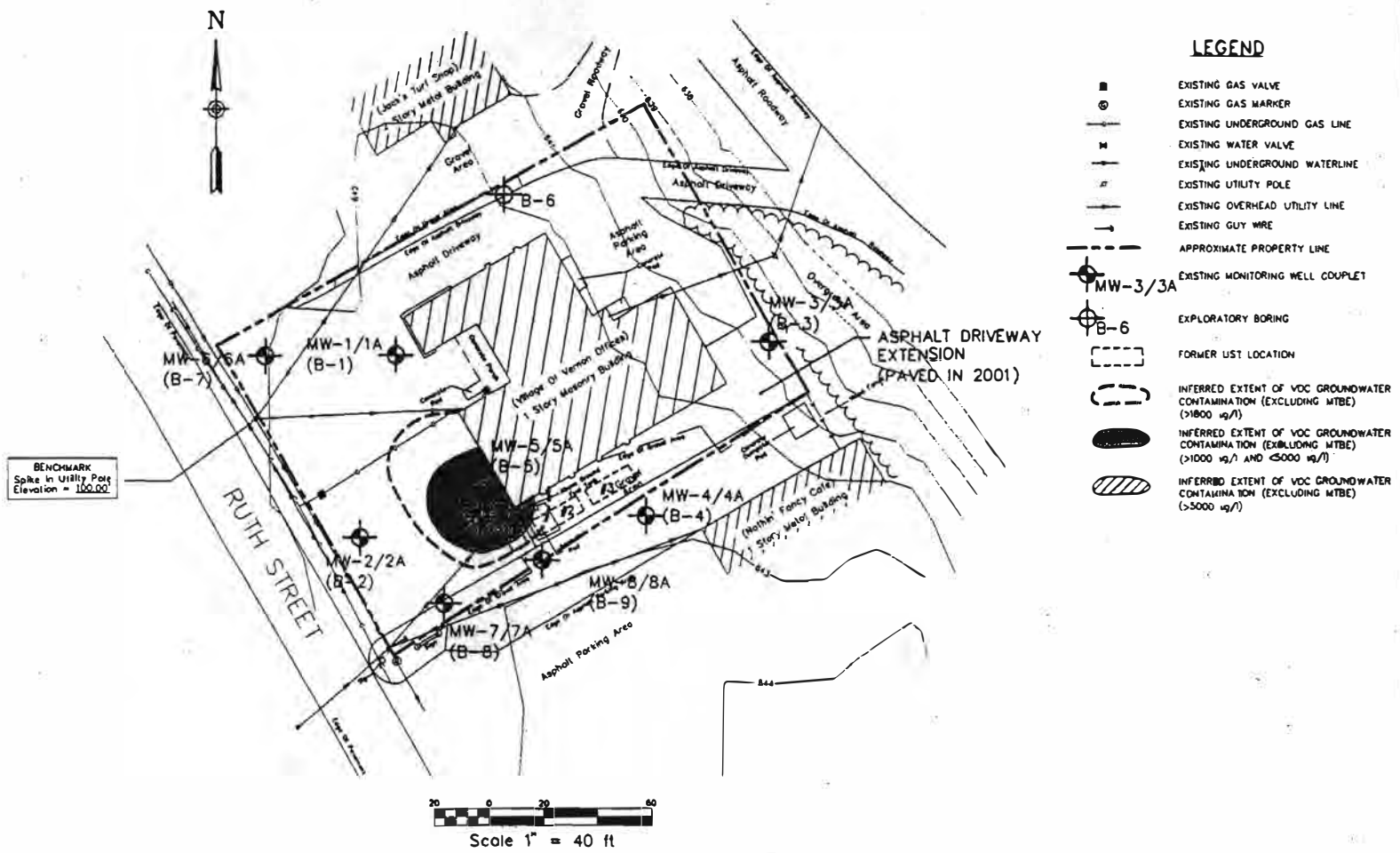
VILLAGE OF VERNON
ENVIRONMENTAL RESTORATION PROJECT

INFERRED EXTENT OF MTBE GROUNDWATER CONTAMINATION (SHALLOW GROUNDWATER)

VILLAGE OF VERNON — ONEIDA COUNTY, N.Y.

Figure- 4

Project No.
507.016



NOTES:

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3. MYERS & ASSOCIATES, 1999. SITE FEATURES MAPPING AND MONITORING WELL LOCATIONS.
4. TOPOGRAPHY FROM 1985, USGS MAPPING.

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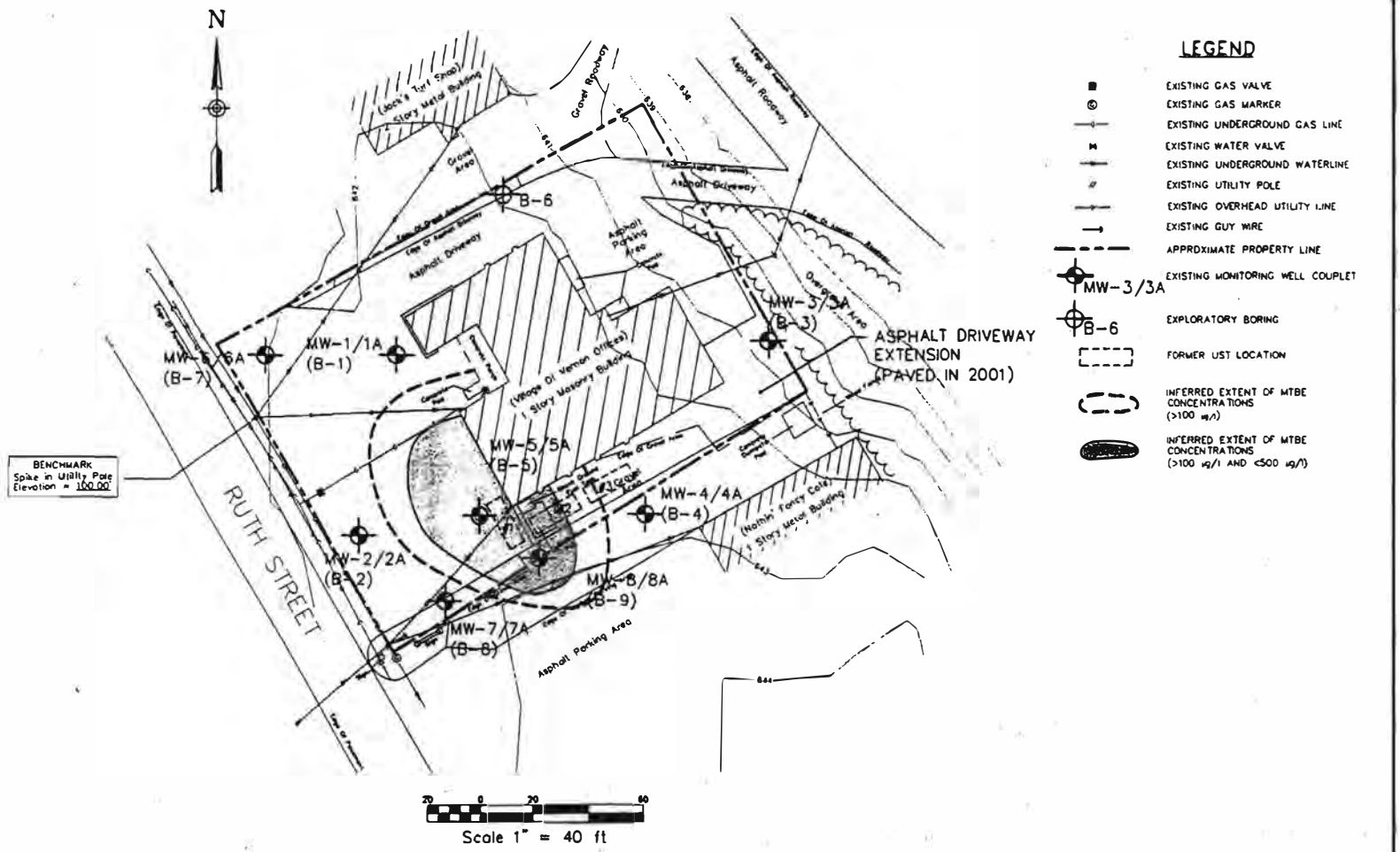
VILLAGE OF VERNON
ENVIRONMENTAL RESTORATION PROJECT

INFERRED EXTENT OF VOC GROUNDWATER CONTAMINATION EXCLUDING MTBE (SHALLOW GROUNDWATER)

VILLAGE OF VERNON ONEIDA COUNTY, N.Y.

Figure 5

Project No. 507.016



NOTES:

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2. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM A COMBINATION OF FIELD MEASUREMENTS, AVAILABLE MAPS, RECORDS AND INFORMATION PROVIDED BY THE OWNER. THEREFORE THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE ONLY. THERE ALSO MAY BE OTHER FACILITIES, STRUCTURES OR UTILITIES THE EXISTENCE OF WHICH IS PRESENTLY UNKNOWN.
3. MYERS & ASSOCIATES, 1999. SITE FEATURES MAPPING AND MONITORING WELL LOCATIONS.
4. TOPOGRAPHY FROM 1985, USGS MAPPING.

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Consulting Engineers
290 Elwood Davis Road / Box 3107, Syracuse, New York 13220

VILLAGE OF VERNON
ENVIRONMENTAL RESTORATION PROJECT

INFERRED EXTENT OF MTBE GROUNDWATER CONTAMINATION (DEEP WATER-BEARING MATERIALS)

VILLAGE OF VERNON ONEIDA COUNTY, N.Y.

Figure - 6

Project No. 507.016

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