



Division of Environmental Remediation

Environmental Restoration Record of Decision

**Richard L. Hanson, Jr. Fire Training Center
Town of Mohawk, Montgomery County
New York
Site Number B00138-4**

March 2003

DECLARATION STATEMENT ENVIRONMENTAL RESTORATION RECORD OF DECISION

Richard L. Hanson, Jr. Fire Training Center Environmental Restoration Site

Town of Mohawk, Montgomery County, New York Site No. B00138-4

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Richard L. Hanson, Jr. Fire Training Center 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 Richard L. Hanson, Jr. Fire Training Center 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 releases of hazardous substances and petroleum products from this site, if not addressed by implementing the response action selected in this ROD, presents a current or potential significant threat to public health and/or the environment.

Description of Selected Remedy

Based on the results of the Site Investigation/Remedial Alternatives Report (SI/RAR) for the Richard L. Hanson, Jr. Fire Training Center site and the criteria identified for evaluation of alternatives, the NYSDEC has selected excavation and off-site disposal of hazardous substances. The components of the remedy are as follows:

- 1) A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program.
- 2) Excavation of approximately 17,500 tons of soils contaminated above TAGM 4046 levels. For soils below the groundwater table, the saturated soils removed will be dewatered on a liner arranged

around a berm-sided collection area adjacent to the excavation. The groundwater will be treated and drained back into the excavation, as long as the treated water is within the established SCGs.

3) These contaminated soils will be characterized and will be transported off site to an appropriate disposal facility.

4) The site will be restored by grading, placement of topsoil, and seeding of excavated and/or filled areas.

5) An institutional control (deed restriction) will also be imposed in the form of existing use and development restrictions preventing the use of groundwater as a source of potable or process water without necessary water quality treatment as determined by the New York State Department of Health.

6) The property owner will complete and submit to the NYSDEC an annual certification until the NYSDEC notifies the property owner in writing that this certification is no longer needed. This submittal will contain certification that the deed restrictions put in place, pursuant to the Record of Decision, are still in place, have not been altered, and are still effective.

7) Since the remedy results in untreated hazardous substances remaining in the groundwater at the site, a long term groundwater monitoring program will be instituted. Monitoring wells around the site will be sampled semi-annually. This program will allow the effectiveness of the remedy to be monitored and will be a component of the operation, maintenance, and monitoring for the site.

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.

Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

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Environmental Restoration
RECORD OF DECISION

Richard L. Hanson, Jr. Fire Training Center Site
Town of Mohawk, Montgomery County, New York
Site No. B-00138-4
March 2003

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 has selected a remedy for the Richard L. Hanson, Jr. Fire Training Center Site. The presence of hazardous substances has created threats to human health and/or the environment that are addressed by this remedy.

The 1996 Clean Water/ Clean Air Bond Act provides funding to municipalities for the investigation and cleanup of brownfields. Under the Environmental Restoration (Brownfields) Program, the State provides grants to municipalities to reimburse up to 75 percent of eligible costs for site investigation and remediation activities. Once remediated the property can then be reused.

As more fully described in Sections 3 and 4 of this document, leaking underground storage tanks and possibly other spillage have resulted in the disposal of a number of hazardous substances, including petroleum and other fuels oils. These hazardous substances have contaminated the subsurface soils and groundwater at the site and have resulted in:

- C a threat to human health associated with the potential for exposure to contaminated groundwater.
- C an environmental threat associated with the impacts of contaminants to surrounding water bodies.

To eliminate or mitigate the threats, the NYSDEC has selected the following remedy:

- C Excavation and off-site disposal of soils contaminated with petroleum and semi-volatile organic compounds in the areas identified to contain such materials east of the Fire Training Center facility;
- C Dewatering and treatment of the contaminated groundwater that enters the excavation.
- C Imposition of institutional controls including deed restrictions related to the future use of the site.
- C Long term groundwater monitoring.

The selected remedy, discussed in detail in Section 8 of this document, is intended to attain the remediation goals discussed 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 County of Montgomery applied for a State assistance application for the Richard L. Hanson, Jr., Fire Training Center site. This Environmental Restoration Project was approved by the NYSDEC on October 25, 2001. This consists of 3.12 acres in the hamlet of Yosts and is located along State Route 5 about five miles west of the Village of Fonda. The total area of the County owned Richard L. Hanson, Jr., Fire Training Center is 12.7 acres, but only 3.12 acres of the property qualified for a Brownfields grant and is the subject of this PRAP. Figure 1A is a location map for the site and Figure 1B is a County tax map that shows the parcel owned by the County (parcel 19) and the portion of this parcel that is eligible for this PRAP.

This site was used by the New York Central & Hudson Railroad for gravel mining and as a railroad fueling area, and later by Gulf Oil and Peters Oil Co., Inc. as a truck and automotive/truck maintenance garage. Montgomery County took ownership of the site in 1970 and converted the property into a fire training center for local volunteer fire departments. The site history as well as the soil and groundwater contamination are discussed in three reports prepared by J. Kenneth Fraser and Associates and two previous reports prepared by Precision Environmental Services, Inc. that are discussed in Section 4.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

In 1891, the New York Central and Hudson River Railroad purchased this property. The site was reportedly used as a mining operation for sand and gravel fill for the construction of their railroad nearby. The railroad may have had a refueling station on this site as well.

A partial transfer of this property occurred on July 17, 1933 from the railroad to Montgomery County apparently to widen the highway right-of-way for Route 5 and Prame Road. The railroad sold the property to Arthur and Agnes Peters in 1940. On January 16, 1948, the property was transferred by Arthur and Agnes Peters to the Peters Oil Co., Inc. On July 9, 1948, the property was leased to the Gulf Oil Corporation which carried a 10 year lease.

Under ownership by the Peters and the lease to the Gulf Oil Corporation, the site was used as a fueling station, truck stop and a diner. Several underground storage tanks were installed during this period. On August 22, 1970, the property was transferred to Montgomery County. The County still maintains ownership of this property. The original use by the County was for highway truck storage and maintenance. The County had the Richard L. Hanson, Jr., Fire Training Center built on this site and the other buildings removed. Today it is still being used as a fire training facility.

3.2: Remedial History

During the time of ownership by Peters Oil Co., Inc. and the lease by Gulf Oil Corp., a number of petroleum bulk storage tanks were installed on site. These tanks included two 20,000 gallon petroleum and one 12,000 gallon petroleum above ground tanks. The underground storage tanks included one 500 gallon heating oil tank by the former maintenance garage and one 12,000 gallon solvent based liquid tank. Previous reports indicated that other petroleum tanks may have existed on this site. The County attempted to have all known tanks removed from the site. During the recent site investigation of November 2001, a 1,000-gallon petroleum tank (underground storage tank) was discovered which was thought to be a heating oil tank. This tank was removed from the site under this Brownfields program as an interim remedial measure (IRM).

From the known uses of the property, there were at least two known types of spills: petroleum based and solvent based. The solvent spill was determined to be caused while the County owned this property and this area, therefore, could not be included in the Brownfields grant. Of the 12.7 acres owned by the County, the area eligible for this Brownfields grant is 3.12 acres and will be used to address the areas of petroleum contamination caused by previous owners of this site. The cause of the petroleum based contamination was from leaking storage tanks and spillage over the years of operation of the fueling facilities. The remaining area owned by the County could be considered as a potential inactive hazardous waste site and investigated at a later date to determine if hazardous waste exists.

SECTION 4: SITE CONTAMINATION

To determine the nature and extent of any contamination by hazardous substances of this environmental restoration site, the County of Montgomery has recently completed a Site Investigation/Remedial Action Report (SI/RAR).

4.1: 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 began on November 13, 2001 and included soil borings and the installation of monitoring wells on site. Field work was completed in January 2002 when the field survey was completed. A report entitled "Site Investigation / Remedial Alternatives Report - Richard L. Hanson, Jr., Fire Training Center" dated August 9, 2002 has been prepared which describes the field activities and findings of the SI in detail.

The SI included the following activities:

- C Geophysical survey to locate possible underground storage tanks and buried drums;
- C Installation of soil borings and monitoring wells for analysis of soils and groundwater as well as physical properties of soil and hydrogeologic conditions;
- C Monitoring well sampling;
- C Surface soil sampling;
- C Fish and wildlife impact analysis to determine possible environmental impacts of contaminants;
- C Background soil sampling.

These investigation activities were conducted to determine which media (soil, groundwater, etc.) are contaminated at levels of concern. The SI analytical data was compared to environmental standards, criteria, and guidance values (SCGs). Groundwater, drinking water and surface water SCGs identified for the Richard L. Hanson, Jr., Fire Training Center 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 for the protection of groundwater, background conditions and health-based exposure scenarios. In addition, for soils, background concentration levels can be considered for certain categories of contaminants. Guidance values for evaluating contamination in surface water sediments are provided by the NYSDEC Technical Guidance for Screening Contaminated Sediments.

Based on the Site Investigation 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.

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

4.1.1: Site Geology and Hydrogeology

The overburden geology beneath the site consists of recent alluvial deposits, fluvial gravels and/or undifferentiated drift complex. The site's soils also consist of cut and fill soils. During the SI, the type of soils encountered were fine to medium sand with lesser occurrences of course sand, fine to course gravel, silt and clay. The silt and clay content increases with depth and is typically interbedded into discreet layers with the sands. These layers of overburden materials could be up to 30 feet thick.

The bedrock formations consist of limestone, dolostone, sandstone, and shale. Bedrock was not encountered during the subsurface investigation. The rocky cliffs located north of the site reveal bedrock outcrops of interbedded limestone and sandstone.

The unconfined groundwater gradient at this site indicates that a hydraulic divide occurs through the center of the site. This groundwater divide causes the predominant groundwater flow direction within the established contaminant plume to flow toward the south-southeast. The remainder of this overburden groundwater flows to the north. The depth to groundwater from the surface was shallow varying from 1 to 6 feet below ground level. The investigation was limited to the groundwater encountered in the overburden.

There are surface water resources located north and south of the site. To the north, there are three unnamed ponds within 300 feet of the site. The Mohawk River is approximately 1,350 feet south of the site and flows west to east.

4.1.2: Nature of Contamination

As described in the SI report, many surface and subsurface soil tests and groundwater tests were conducted to characterize the nature and extent of contamination that may be present at this site. The soil tests indicate that contamination occurred due to petroleum based products from the

former fueling station that existed at the site. The sources of this contamination are from: 1) leaks from the above and below ground petroleum storage tanks; 2) leaks from the associated distribution piping; 3) spills from vehicle and equipment maintenance; and 4) surface releases from spillage during fueling operations. Also, minor releases at the end of the culvert outlet that originates at the fire training tower indicate other releases of petroleum based products.

These releases resulted in several VOCs and SVOCs being detected during the course of the investigation. The groundwater beneath this site showed the presence of widespread VOC and SVOC contamination. Groundwater samples were taken from the monitoring wells that were installed at the same locations that the direct push soil boring samples were taken. In the course of this investigation and the previous spills investigation, a total of 26 monitoring wells were installed.

The groundwater sample results revealed 6 of 26 samples with six different VOC compounds and 4 of 26 samples with four different SVOC compounds. Since there are drinking water wells located near this site and widespread contamination was found, exposure to contaminants in groundwater is a concern. Also, since surface water exists north of this site, the possibility of groundwater contaminating this resource is a concern.

4.1.3: Extent of Contamination

Tables 1, 2 and 3 summarize the extent of contamination for the contaminants of concern in the soils and groundwater and compares the data with the SCGs for the site. The investigation was conducted from November 13, 2001 through December 3, 2001. An additional round of groundwater sampling was conducted on December 13, 2002. The following are the media which were investigated and a summary of the findings of the investigation.

Geophysical Survey

The geophysical survey was conducted on November 13 and 14, 2001 to locate possible underground storage tanks (USTs) and related piping at this site. Two complementary geophysical methods were used: a time domain electromagnetic induction survey and a ground penetrating radar (GPR) method. The electromagnetic survey detects and outlines areas containing buried metals. This instrument does not distinguish the type of metal found. The ground penetrating radar, conducted over the areas where the electromagnetic survey anomalies were found, better defined locations of underground buried objects.

During the geophysical survey, a 1,000-gallon UST was located that was not removed from the earlier cleanup operation. (An IIRM was done during this investigation to remove this tank as described in Section 4.2.) Also located were buried piping and underground utilities that may be related to the former USTs. Several areas of other buried objects were identified, but none indicated buried drums or other USTs. These other objects may have been construction debris or other buried metal objects.

Soil

Soil samples were collected from the 13 new monitoring well borings installed during this investigation and from 18 soil boring locations. This work was done from November 13-16, 2001. (Table 2 shows the results of these soil samples.) From these locations, 6 of the 30 subsurface soil samples showed levels of VOCs that were above the TAGM 4046 guidelines for recommended soil cleanup objectives. For SVOCs, of the 30 samples taken, five showed levels that were above TAGM 4046 guidelines. Table 2 shows the types of compounds found and the frequency of occurrence of the compound for both the VOCs and SVOCs. No PCB levels were found to be above the TAGM guideline levels. Figures 4 and 5 show the concentrations of the VOCs and SVOCs, respectively found in soils across the site. The concentrations shown on Table 2 and on Figures 4 and 5 are in parts per million (ppm).

The highest levels were found in the areas nearest Route 5 tending toward the south side of the site. These were the areas where the former USTs were located and the likely areas of the former fuel station. Soil samples were also collected from the excavation pit after the removal of the UST and from the two outfall locations that drain toward the ponds. The levels of VOCs and SVOCs found around the tank were also high, but only low levels of these compounds were found at the outfall locations.

Groundwater

A total of 13 monitoring wells were installed as part of this investigation and 13 monitoring wells existed from the previous spills investigation. These 26 wells were sampled on December 3, 2001 and analyzed for VOCs, SVOCs, and PCBs. For VOCs, of the 26 monitoring wells sampled, seven showed levels that were above the groundwater standard for benzene, toluene, ethylbenzene and xylenes (BTEX). For SVOCs, 6 of the 26 samples showed levels of SVOCs that were above the groundwater standard. One of the 26 wells showed a PCB level of 0.12 ppb that slightly exceeded the groundwater standard of 0.09 ppb. Table 1 shows the types of compounds and the frequency of occurrence of these compounds.

The corresponding maps on Figures 2 and 3 show the concentrations of VOCs and SVOCs, respectively in the groundwater. The highest groundwater contamination levels were found beneath the locations where the highest soil concentrations of similar compounds were found. As with the highest soil concentrations, these groundwater samples were found to contain VOCs and SVOCs in the areas nearest Route 5 tending toward the south side of the site. The groundwater flow direction of the overburden aquifer tends to slope to the south as well. As mentioned before, these were the areas where the USTs were previously located and the likely area of the former fuel station.

Prior to this investigation, the New York State Department of Health (NYSDOH) collected domestic water samples from three properties immediately adjacent to the site on July 12 and 20, 2001 and on August 2, 2001. None of these wells revealed the presence of VOCs; however, MTBE was found in one homeowner's well at 38 ppb that exceeded the groundwater standard of 10 ppb. Another homeowner's well had a result of 0.5 ppb.

An additional round of groundwater sampling was done on December 13, 2002. Ten monitoring wells were selected from around the perimeter of the site and two from the interior of the site. The two in the interior of the site were monitoring wells MW-5 and MW-13 which had the highest

detected VOC results from the initial round of sampling. These monitoring wells were sampled for VOCs as well as MTBE. None of these monitoring wells revealed the presence of MTBE contamination leading to the conclusion that the MTBE contamination at the homeowner's wells is from another source not related to the site. An additional investigation (not associated with this Brownfield's grant) may be done to identify the source of the MTBE contamination in the area.

Surface Water

Although no surface water samples were taken as part of this investigation from the ponds located north of the site, there were samples taken from the outfall locations that drain into the ponds. The two outfall drainage structures seem to come from the fire-training center and the fire tower and drain toward the ponds to the north. The results of these soil samples showed no levels of contaminants above TAGM 4046. This indicates that the site is not likely to cause any adverse impact to the ponds.

Air

Air sampling was performed to test the ambient air quality during the drilling activities. Also, Photo Ionization Detector (PID) readings were taken from the monitoring well holes. The recorded levels indicated that a potential exposure exists, as well as airborne migration during site activities that significantly disturb or expose subsurface soils.

4.2: 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. As mentioned previously, during the geophysical survey in November 2001, a 1,000-gallon UST was located southeast of the fire-training center. Figure 2 shows approximately where this tank was located. A week after this tank was located, the excavation, removal, and disposal of this tank took place. UST fluids and tank bottom sludge were removed by vacuum truck and properly disposed of off-site. Approximately 762 gallons of residual heating oil and/or contaminated water were removed from the UST. This UST was assumed to be from a heating oil storage tank that was not removed during the earlier removal operation.

The soils that were exposed around this tank were observed to be stained with oily material. Several small holes were observed in the tank from a visual inspection of the tank and an odor of petroleum was noticed. During this UST closure procedure, no additional releases occurred. Approximately, 25-30 cubic yards of petroleum contaminated soils were excavated from the tank grave and remain on-site covered by a plastic cover. Since the anticipated remedy across the whole site would likely involve contaminated soil removal above the Technical and Administrative Guidance Memorandum 4046 (TAGM 4046) levels, these soils were left on the site. They will be removed at a later date as part of the bigger removal operation. Three samples were taken from the sidewalls and below this tank during the IRM and the results are presented in Table 3. These results show that BTEX contamination remains and will be removed as part of the remedy of the site.

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 6 of the SI 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 the 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.

Pathways which are known to or may exist at this site include ingestion and inhalation. There is a possibility of an exposure via groundwater transport to domestic water supply wells and of vapor exposure to workers on-site during an excavation operation. No site related contaminant has currently effected the nearby homeowner's wells. The domestic well sampling that revealed MTBE in these wells appears to be from another source and is not related to present site contaminants. The potential exists for worker exposure during soil excavation or drilling operations at the site. In that case, dermal and respiratory protection would be used to maintain safe working conditions for the worker and the public would be kept a safe distance from work areas.

4.4: Summary of Environmental Exposure Pathways

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.

The Fish and Wildlife Impact Assessment, which is included as part of the SI, presents a detailed discussion of the potential impacts from the site to fish and wildlife resources. A separate document contains the results of this assessment. No known environmental exposure or ecological risks were identified by this site contamination, however, a potential pathway exists from the groundwater migrating to surface water near the site. The ponds that are located north of the site could receive contaminated groundwater over time. Presently, the northern-most wells around the site were all non detectable for all contaminants.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past owners and operators, waste generators, and haulers.

Legal action may be initiated at a future date by the State to recover State response costs should PRPs be identified. The County of Montgomery will assist the State in its' efforts by providing all information to the State which identifies PRPs. The County of Montgomery will also not enter into any agreement regarding response costs without the approval of the NYSDEC. Since this is a Brownfields grant, the County of Montgomery was eligible for only the areas of contamination on this site for which they were not responsible.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS AND THE PROPOSED USE OF THE SITE

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 the public health and to 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 Richard L. Hanson, Jr., Fire Training Center would be to continue the current use of the site as a fire training center.

The goals selected for this site are:

- *Reduce, control, or eliminate to the extent practicable the contamination present within the soils on site.*
- *Eliminate the threat to surface waters by eliminating any future contaminated surface run-off from the contaminated soils on site.*
- *Eliminate the potential for direct human or animal contact with the contaminated soils on site.*
- *Mitigate the impacts of contaminated groundwater to the environment.*
- *Provide for attainment of SCGs for groundwater quality at the limits of the area of concern (AOC), to the extent practicable.*

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy must be protective of human health and the environment, be cost effective and comply with other statutory requirements. Potential remedial alternatives for the Richard L. Hanson, Jr., Fire Training Center site were identified, screened and evaluated in a Remedial Alternatives

Report. This evaluation is presented in the report entitled *Site Investigation/Remedial Alternatives Report: Richard L. Hanson, Jr. - Fire Training Center* dated August 2002.

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 or procure contracts for design and construction.

7.1: Description of Remedial Alternatives

The potential remedies are intended to address the contaminated soils and groundwater at the site.

Alternative 1: No Action

The No Action alternative is typically evaluated as a procedural requirement and as a basis for comparison. It would require continued monitoring only, allowing the site to remain in an unremediated state. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Alternative 2: High Vacuum with Total Fluid Extraction (HV/TFE) coupled with Air Sparging (AS)

This remedy would be comprised of two phases. The HV/TFE phase would involve installing 4" or 6" well screens to the contaminated depth. The vapor and fluids would be extracted under vacuum through horizontal subsurface lines to a treatment unit. The treatment unit would be either an air stripper and/or activated carbon filtration. The AS phase would involve inducing air into the contaminated groundwater thereby treating both the soils and the groundwater.

Present Worth: \$ 1,124,252

Capital Cost: \$ 917,000

Annual O&M for Treatment Facility:

\$ 45,450

Annual Well Sampling Cost: \$ 12,000

Time to Implement 1 year

Duration for:

Operation Treatment Facility: 4 years

Monitoring of Wells: 5 years

Alternative 3: Bioremediation

This remedial technology would utilize a variety of technologies designed to enhance the subsurface environment by providing oxygen, water and nutrients to create conditions favorable for microbial population growth. The increased microbial population would in turn metabolize the hydrocarbons in the contaminated soils and break down this contamination. An Oxygen Releasing Compound (ORC) would be injected into the source area through the voids created by soil borings. The ORC will be released at a ratio of 3 parts oxygen to 1 part hydrocarbon over time to effectively mitigate the hydrocarbons in the subsurface soils. Multiple applications of the ORC may be required maintain this optimal ratio. This remedy will also require periodic groundwater monitoring to keep track of the progress of this remedial alternative.

Present Worth: \$ 1,944,580
Capital Cost: \$ 1,891,900
Annual O&M: \$ 12,000
Time to Implement 6 months-1 yr.
Duration of Operation 5 years

Alternative 4: Soil Excavation and Disposal

Soil excavation is a frequently used remedy for petroleum contaminated sites. This method would remove soils contaminated above established SCG levels and transport this material off-site to a permitted disposal facility. Water encountered during construction would be treated to remove contamination during the dewatering process.

Present Worth: \$ 1,049,680
Capital Cost: \$ 997,000
Annual O&M: \$ 12,000
Time to Implement 6 months
Duration of Operation 1 year

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 environmental restoration project sites in New York State (6 NYCCR 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 Remedial Alternatives Report.

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.

With Alternative 1, the no action alternative, the problems with the site would continue to persist. Nothing would be gained toward achieving compliance with SCGs under this alternative.

Alternatives 2 and 3, HV/TFE and bioremediation, respectively, could achieve the soil cleanup goals over a five year time period, but it would be difficult to determine exactly how long. Future rounds of subsurface soils boring samples would need to be done to assure that TAGM 4046 cleanup levels are met.

Alternative 4, the excavation and removal alternative, would assure compliance with the TAGM 4046 goals since the source would be excavated and removed off site for permanent disposal. Confirmatory sampling would assure that the removal operation is effective.

All three alternatives will have an O&M program associated with them involving sampling the monitoring wells to determine the long term effectiveness of the remedy. Alternative 2 is the only

remedy that directly addresses the groundwater as part of the remedy. Alternative 4, in the process of dewatering the soils, will treat groundwater to a degree, but the primary intent is to remove the water from saturated soils prior to off-site disposal. In all these cases, the monitoring wells would have to be sampled to determine trends in contaminant concentration levels. If contaminated soils were sufficiently removed, these trends should decline.

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 clearly would provide no protection to the human health and the environment.

Alternative 2, HV/TFE, would provide some protection to human health and the environment since the process would substantially reduce the contaminate mass within three to five years. Minor concentrations (within SCGs) of hydrocarbon vapors might be released to the atmosphere during these operations. Over time, the groundwater contaminant concentrations would return to levels within SCGs.

Alternative 3, bioremediation, would also provide protection to human health and the environment. This process takes place in-situ and exposure to workers or the public would be very limited. The by-products of this process would only water and carbon dioxide, thus eliminating most residual public health and environmental risks that were possible under Alternative 2.

Alternative 4, excavation and removal, would provide the best protection to the public health and the environment. Excavation of petroleum contaminated soils would result in an immediate removal of risks posed by exposure to contaminated soils. The resulting source removal would eliminate the contamination source to the underlying groundwater and thus the groundwater contamination would start to decrease. The site will be secured during excavation and removal action to prevent the public from having access to contaminated soils. Clean backfill would be used to fill the voids created by the excavation when all the contaminated soils above SCG levels were removed.

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.

Alternative 1 clearly would provide no protection to the human health and the environment.

With Alternative 2, HV/TFE, workers would be exposed to contaminated soils during the drilling and trenching phase of the system installation. The air discharges could potentially present an exposure to workers or the community, but these gases would be continually monitored and corrective action taken if a problem occurs. The ground work and remedial facilities construction would be expected to be completed in one construction season. After four years of operation, the majority of the contaminants would be removed. After that, monitoring at the site would continue for five more years.

Alternative 3, bioremediation, would reduce the hydrocarbons in the subsurface soils with optimal site conditions. The duration would be typically 3 to 5 years. The potential exists for continued contaminant migration through the groundwater during the remediation. This situation could be rectified if a downgradient ORC barrier is installed, however, that would add considerable costs to this remedy.

Alternative 4, excavation and removal, would provide the fastest remedy as this can be completed in one construction season. During the excavation, exposure would be possible to workers and the public and proper safety barriers and worker protection would be considered before commencing any work. The airway around the work site as well in the excavation void would be continually monitored to determine proper worker and community protection.

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 1 clearly would provide no protection to the human health and the environment.

With Alternative 2, HV/TFE, the complete remediation would take from 3 to 5 years. This alternative has been effective at removing VOCs at sites with similar contamination, but is not effective at removing residual SVOCs. The SVOCs would represent a risk after this remedial technology is complete. Groundwater monitoring would need to be continued after this system removes the contaminants found in the soils.

Alternative 3, bioremediation, would reduce hydrocarbon contamination from the source area to levels below TAGM cleanup objectives. The time frame for this technology is at least 5 years making this the longest of the remedial technologies. Groundwater monitoring would need to be continued after this system removes the contaminants found in the soils.

Alternative 4, excavation and removal, would provide the most permanent solution to this problem since the source would be removed from this site. Some low levels of contamination (below TAGM 4046 guidelines) are expected to remain on the site and would be degraded by natural attenuation. As with the other three remedies, continued groundwater monitoring would need to be done to show that the plume is stable and ground water contamination is diminished.

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

Alternative 1 clearly would provide no protection to the human health and the environment.

Alternative 2, HV/TFE, would remove the hydrocarbons in the soils and would provide treatment of groundwater. The volume of contamination found in these two media types would be reduced over time.

Alternative 3, bioremediation, would metabolize the hydrocarbon contaminants within the source area to concentrations below TAGM levels. Since this technology completely destroys these

hydrocarbons, the volume and toxicity is diminished. The mobility in the groundwater would not be addressed unless a down gradient ORC barrier is installed.

Alternative 4, excavation and removal, would significantly reduce the volume of contaminated soils at this site. The mobility in the soils would also be reduced and eliminated at concentrations above TAGM 4046 levels. Toxicity would be reduced or eliminated when the contaminated soils are treated at an approved disposal facility and the contaminants are physically removed from the soils.

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..

Based on site geology, Alternative 2, HV/TFE, is a technology that could be implemented. Also, this site is open and does not receive much traffic. These conditions would also make it possible to install this remedy.

Alternative 3, bioremediation, may not work well at this site since there is a heterogeneity of soils and high concentration of SVOCs. This technology would make it difficult to use this site when the remedy is on going as well.

Alternative 4, excavation and removal, is a feasible technology to perform at this site. Several treatment and disposal facilities are located within reasonable trucking distance from this site. Parts of the site would not be usable during construction, but the duration of the project would be short term.

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 4.

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.

Alternative 2, HV/TFE, would involve installing approximately 100 wells as part of the process and various other remedial equipment. The capital cost for this remedy is \$917,000. There would be a high O&M cost of \$45,450 per year to run this treatment facility for four years. After that, groundwater monitoring would be done for five additional years to determine the effectiveness of the treatment facility for an additional cost of \$12,000 per year. The present worth of this alternative is \$1,124,252. The cost of this technology is second highest of the three.

Alternative 3, bioremediation, has been estimated to be the most expensive of the remedies. The capital cost is \$1,891,900 and the annual O&M cost of \$12,000 per year, the present worth of this alternative is \$1,944,580. This technology involves installing 600 soil borings to inject the ORC into the subsurface soils.

Alternative 4, excavation and removal, is the least expensive of the remedies. The capital cost is \$997,000 and the annual O&M cost of \$12,000 per year, the present worth of this alternative is \$1,049,680. This technology will remove approximately 17,500 tons of soils from the site for disposal at a permitted disposal facility.

8. Community Acceptance - Concerns of the community regarding the SI/RAR reports and the PRAP have been evaluated. The responsiveness summary (Appendix A) presents the public comments received and the manner in which the Department will address the concerns raised. *No significant public comments were received.*

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based on the Administrative Record (Appendix B) and the discussion presented below, the NYSDEC has selected Alternative 4 - Soil Excavation and Disposal as the remedy for this site. The elements of this remedy are described at the end of this section.

The selected remedy is based on the results of the SI and the evaluation of alternatives presented in the RAR. With the exception of the No Action alternative, each of the alternatives would comply with the threshold criteria. In addition, all three alternatives are similar with respect to the majority of the balancing criteria.

Alternatives 2 (HV/TFE) and 3 (bioremediation) are the highest cost remedies. Alternative 4 (excavation and removal) is the lowest cost remedy. Alternative 4 can be implemented immediately and since it physically removes the source of the contamination from this site, an immediate reduction in groundwater contaminants should result. Alternative 2 is the only alternative that directly treats groundwater, but the other alternatives indirectly address groundwater by source removal. The groundwater levels will be monitored under all these alternatives to determine that the concentration values decline over time.

Also, both Alternatives 2 and 3 will require an evaluation of the remedies as the systems are implemented to determine if they are working properly. A pilot test was recommended by the consultant for these alternatives. Alternative 4 would provide for the removal of the source materials from the ground, allowing a visual and analytical inspection to ensure that all of the soil contaminants in excess of TAGM 4046 guidelines are removed and properly disposed of at a permitted disposal facility.

The estimated present worth cost to implement the remedy is \$1,049,680. The cost to construct the remedy is estimated to be \$997,000 and the estimated average annual operation and maintenance cost for 5 years is \$12,000.

The elements of the selected remedy are as follows:

- 1) A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program.
- 2) Excavation of approximately 17,500 tons of soils contaminated above TAGM 4046 levels. For soils below the groundwater table, the saturated soils removed will be dewatered on a liner arranged

around a berm-sided collection area adjacent to the excavation. The groundwater will be treated and drained back into the excavation, as long as the treated water is within the established SCGs.

3) These contaminated soils will be characterized and will be transported off site to an appropriate disposal facility.

4) The site will be restored by grading, placement of topsoil, and seeding of excavated and/or filled areas.

5) An institutional control (deed restriction) will also be imposed in the form of existing use and development restrictions preventing the use of groundwater as a source of potable or process water without necessary water quality treatment as determined by the New York State Department of Health.

6) The property owner will complete and submit to the NYSDEC an annual certification until the NYSDEC notifies the property owner in writing that this certification is no longer needed. This submittal will contain certification that the deed restrictions put in place, pursuant to the Record of Decision, are still in place, have not been altered, and are still effective.

7) Since the remedy results in untreated hazardous substances remaining in the groundwater at the site, a long term groundwater monitoring program will be instituted. Monitoring wells around the site will be sampled semi-annually. This program will allow the effectiveness of the remedy to be monitored and will be a component of the operation, maintenance, and monitoring for the site.

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the Richard L. Hanson, Jr. Fire Training Center site name environmental restoration 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 established.
- Fact sheets were sent out to on January 15, 2003 to adjacent property owners and public officials.
- A public meeting was held on January 27, 2003 to present and receive comment on the PRAP.
- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

No significant public comments were received.

Table 1
Nature and Extent of Groundwater Contamination

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppb)	FREQUENCY of Exceeding SCGs or Background	SCG/ Bkgd. (ppb)
Groundwater	Volatile Organic Compounds (VOCs)	Methylene Chloride	ND (5) to 45	6 of 26	5
		Benzene	ND (5) to 970	5 of 26	1
		Toluene	ND (5) to 100	6 of 26	5
		Ethylbenzene	ND (5) to 530	6 of 26	5
		m,p-Xylenes	ND (5) to 330	6 of 26	5
		o-Xylene	ND (5) to 320	6 of 26	5
Groundwater	Semivolatile Organic Compounds (SVOCs)	Naphthalene	ND (10) to 160	6 of 26	10
		2-Methylnaphthalene	ND (10) to 180	5 of 26	50
		Phenanthrene	ND (10) to 56	1 of 26	50
Groundwater	Polychlorinated biphenyls (PCBs)	Aroclor-1260	ND (0.066) to 0.12	1 of 26	0.09
Groundwater	Other	MTBE	ND	0 of 12	10*

Notes:

* The New York State Part 5 drinking water standard for MTBE is 50 ppb.

All the concentrations listed in this table are individual results and the frequency of occurrence for the specific contaminant. The corresponding Figures 2 and 3 show the total concentrations for VOCs and SVOCs at specific sampling points.

Table 2
Nature and Extent of Soil Contamination Across Site

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of Exceeding SCGs or Background	SCG/ Bkgd. (ppm)
Soils	Volatile Organic Compounds (VOCs)	Benzene	ND to 15.0	4 of 30	0.06
		Toluene	ND to 7.8	3 of 30	1.5
		Ethylbenzene	ND to 52.0	5 of 30	5.5
		m,p-Xylenes	ND to 220.0	6 of 30	1.2
		o-Xylenes	ND to 8.3	4 of 30	1.2
Soils	Semi-Volatile Organic Compounds (SVOCs)	Naphthalene	ND to 62.0	4 of 30	13.0
		2-Methylnaphthalene	ND to 130.0	3 of 30	36.4
		Benzo(a)pyrene	ND to 64.0	1 of 30	0.061
Soils	Polychlorinated biphenyls (PCBs)	Any Aroclor	ND	0 of 26	1.0

Notes:

All the concentrations listed in this table are individual results and the frequency of occurrence for the specific contaminant. The corresponding Figures 4 and 5 show the total concentrations for VOCs and SVOCs at specific sampling points.

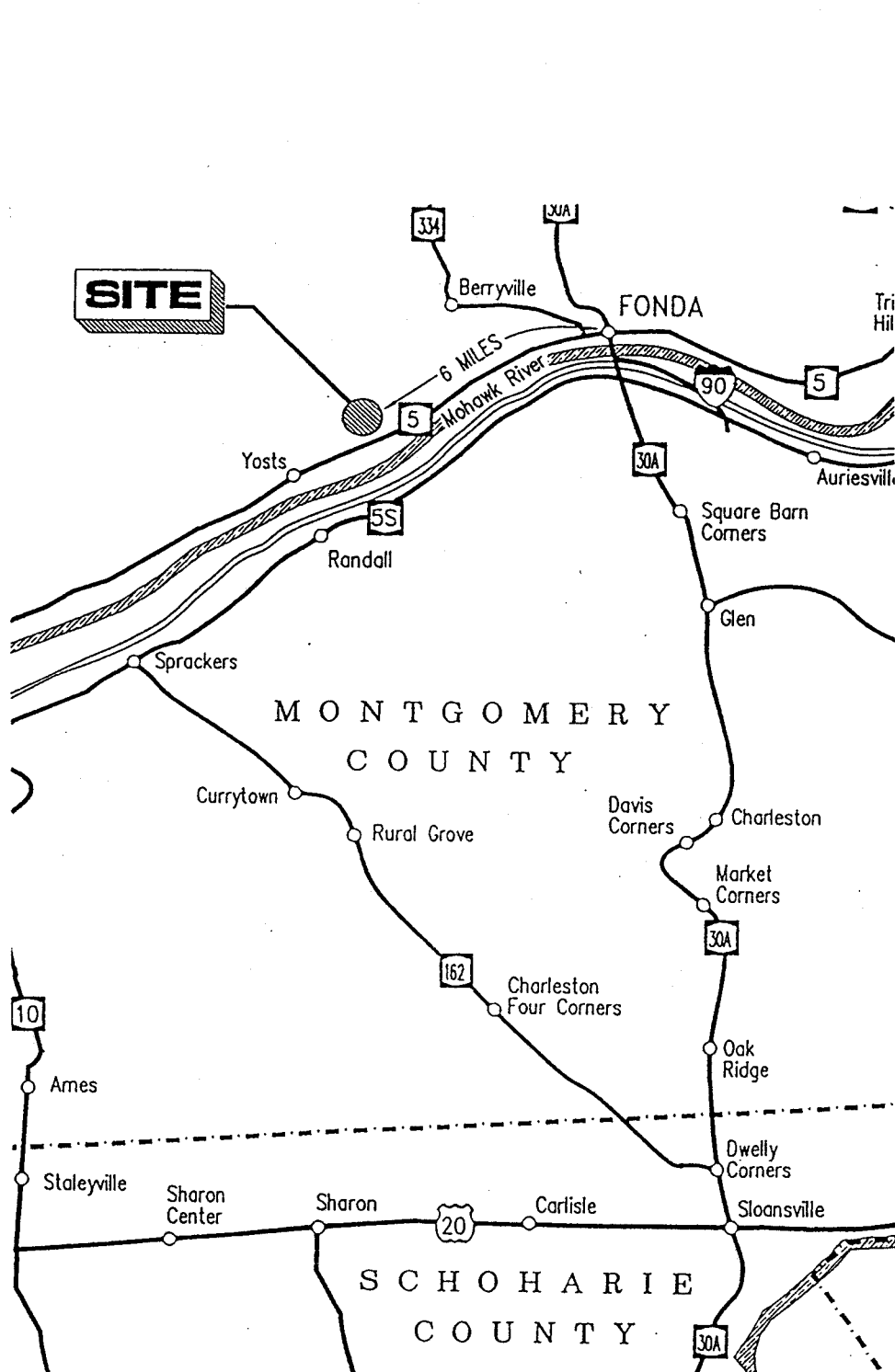
Table 3
Nature and Extent of Soil Contamination from Tank Excavation (B-1, SW-1&2, and SW-3-4)

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of Exceeding SCGs or Background	SCG/ Bkgd. (ppm)
Soils	Volatile Organic Compounds (VOCs)	Benzene	ND	0 of 3	0.06
		Toluene	ND	0 of 3	1.5
		Ethylbenzene	ND to 7.5	1 of 3	5.5
		m,p-Xylenes	ND to 20.0	2 of 3	1.2
		o-Xylenes	ND to 1.6	1 of 3	1.2
Soils	Semi-Volatile Organic Compounds (SVOCs)	Naphthalene	ND to 50.0	2 of 3	13.0
		2-Methylnaphthalene	0.092 to 130.0	2 of 3	50.0
		Benzo(a)pyrene	ND to 0.045	0 of 3	0.061

Table 4
Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual O&M	Total Present Worth
No Action	\$0	\$0	\$0
HV/TFE/AS	\$917,000	** (4 years treatment facility operation at \$45,450/year and then 5 years of sampling the monitoring wells at: \$12,000/year)	\$1,124,252
Bioremediation	\$1,891,900	** 5 years of sampling of the monitoring wells at: \$12,000/year	\$1,944,580
Excavation/Dewatering	\$997,000	** 5 years of sampling of the monitoring wells at: \$12,000/year	\$1,049,680

** Assumes a 4.5% interest rate in determining the present worth of the annual O&M costs.



N

Source: Fraser & Associates 10/96 Report.

PRECISION ENVIRONMENTAL SERVICES, INC.	Date: 7-1998	Project No: MC/HFTA/PES
Site Location Map	Scale: NA	Figure 1A
	Drawn By: NA	

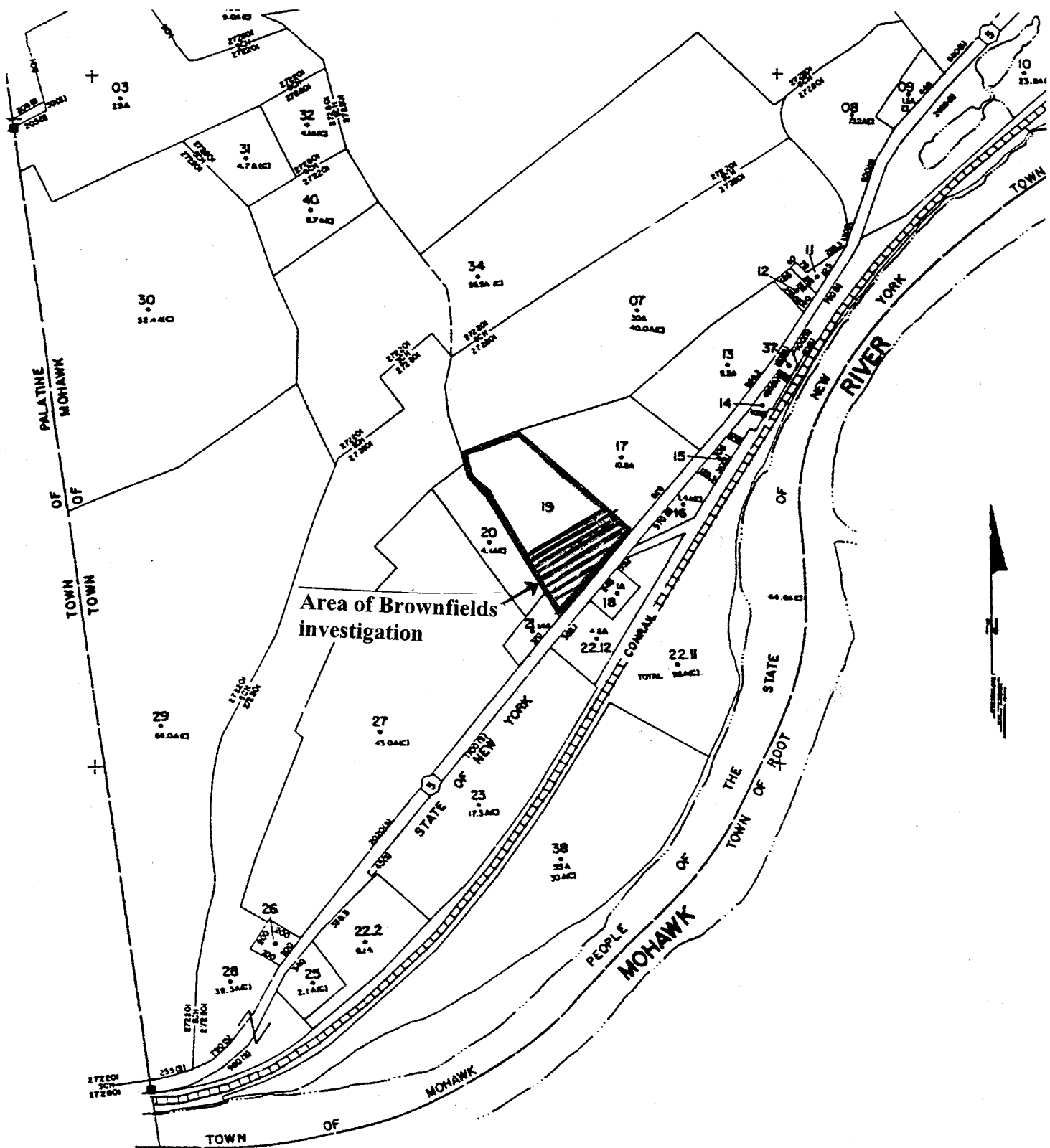
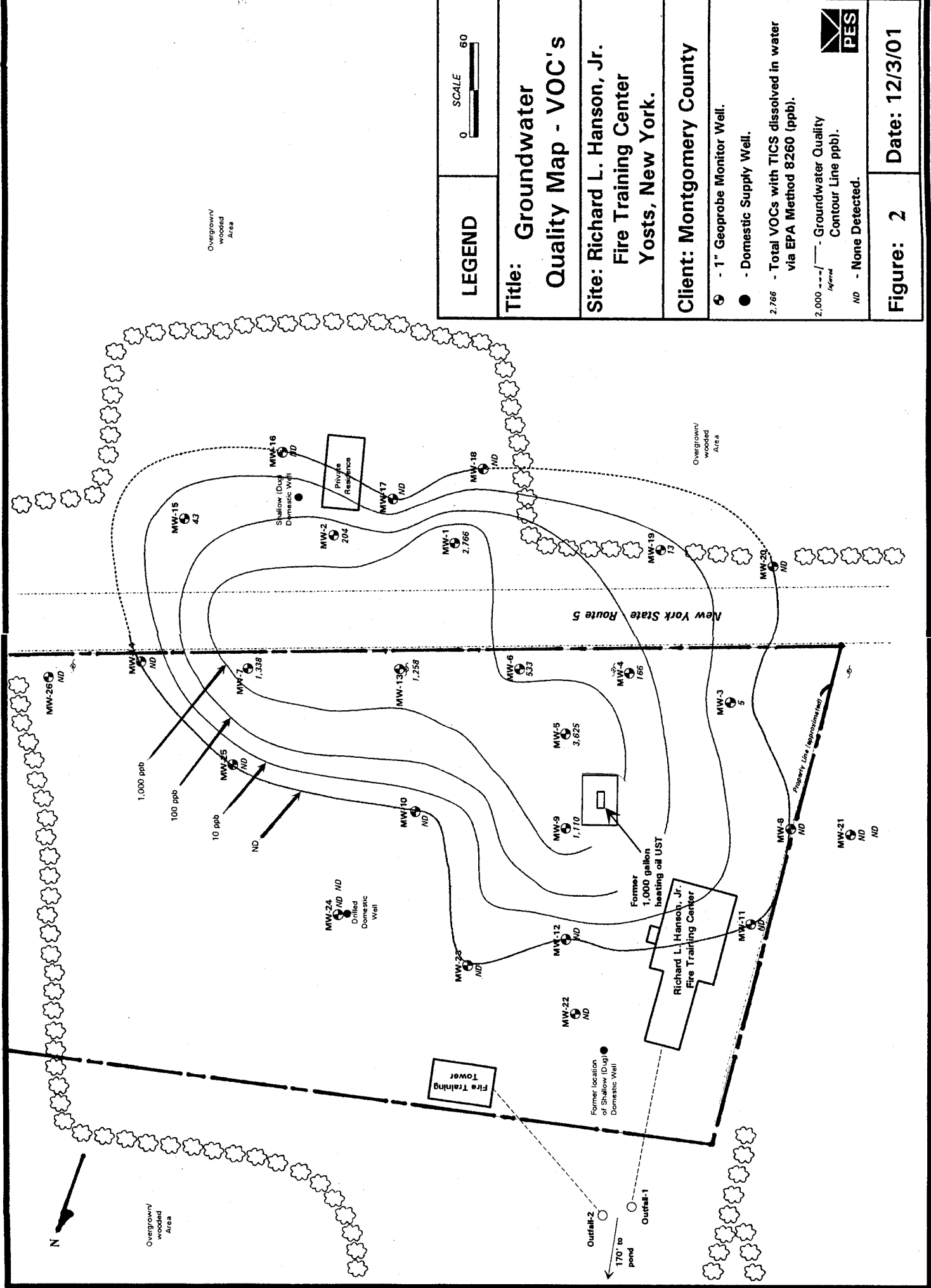
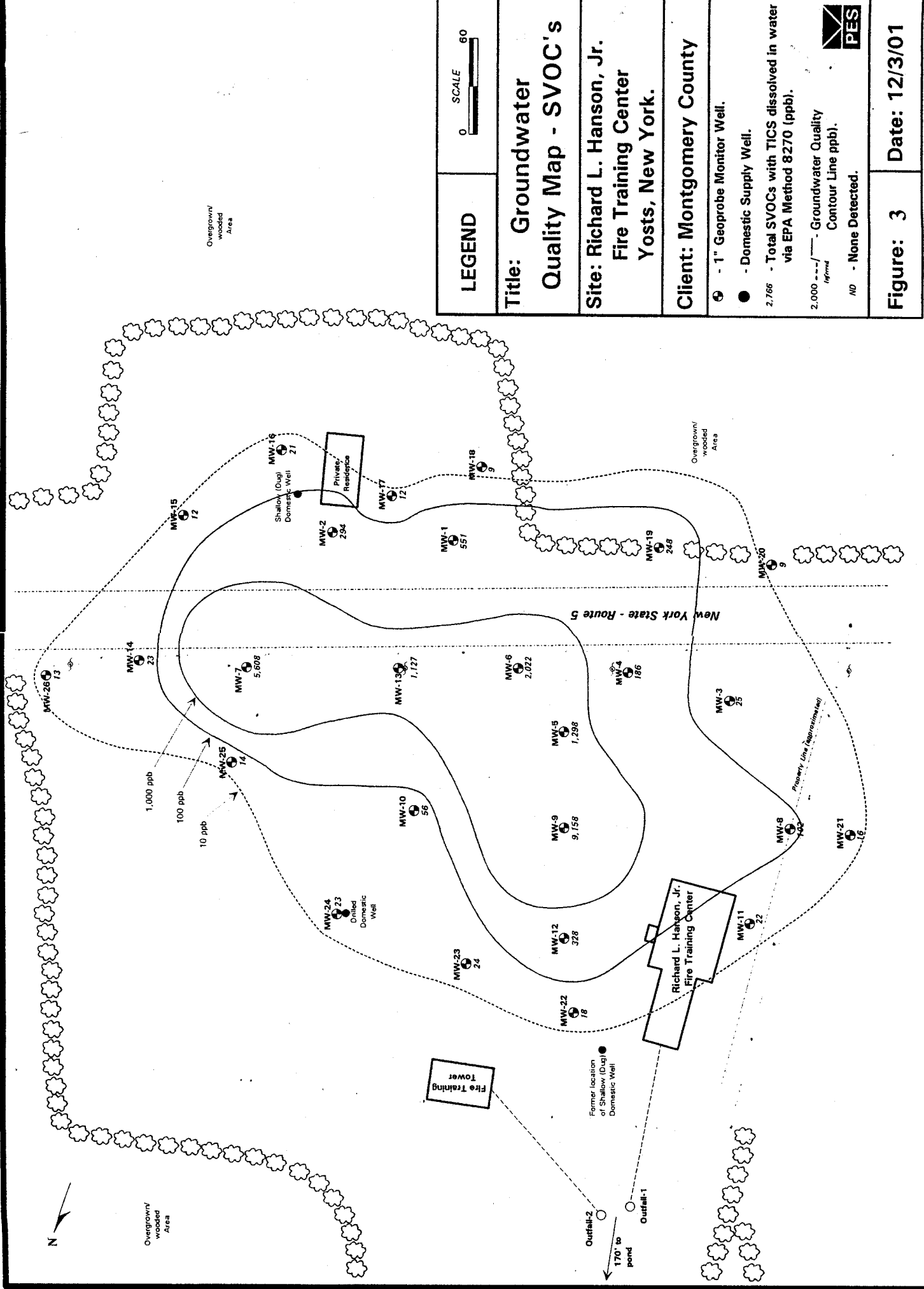
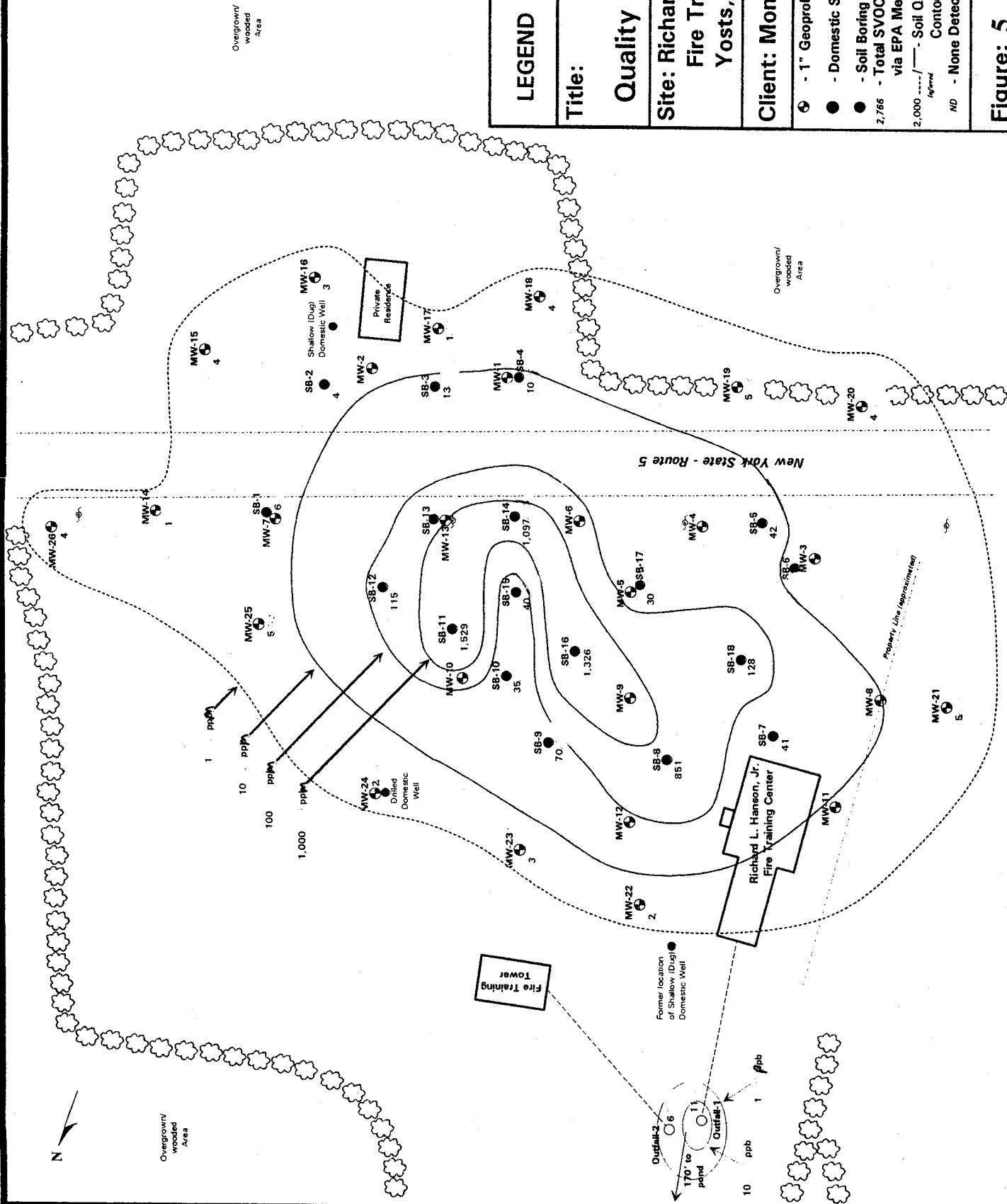


Figure 1B







APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

**Richard L. Hanson, Jr., Fire Training Center Environmental Restoration SiteTown of
Mohawk, Montgomery County, New York
Site No. B-00138-4**

The Proposed Remedial Action Plan (PRAP) for the Richard L. Hanson, Jr., Fire Training Center 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 January 15, 2003. The PRAP outlined the remedial measure proposed for the contaminated soils and groundwater at the Richard L. Hanson, Jr., Fire Training Center Site Name 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 January 27, 2003, 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 1, 2003.

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: I received a letter indicating that my drinking water has MTBE in it. Does this mean that my water is not safe to drink?

RESPONSE 1: A letter was sent by the NYS Department of Health indicating that the contaminant MTBE was detected in a water sample. However, the concentration was too low for the laboratory instrumentation to quantify. The actual concentration of MTBE in the sample was below 0.5 ppb. The NYS Department of Health Public Drinking Water Supply Standard (Part 5-1) for this compound is 50 ppb. Based on the reported level of MTBE, no adverse health impacts are anticipated from consumption of water from this supply.

COMMENT 2: MTBE contamination was found in a residential drinking water well. What affect will this have on property value?

RESPONSE 2: Based on the reported level of MTBE, no restrictions on water use or treatment are required. As noted in Response #1, the concentration of MTBE reported is very low and should not have a negative bearing on the property value.

COMMENT 3: Children consumed water from the residential well that contains these levels of MTBE that are below the NYS Part 5 drinking water standard. Will they experience adverse health affects?

RESPONSE 3: As stated in Response #1, we do not anticipate adverse health affects from consuming water with the reported level of MTBE. It should also be noted that no other volatile organic chemicals associated with groundwater contamination on the Fire Training Center site were reported in any private drinking water wells sampled near the site.

COMMENT 4: Will my property be impacted by the excavation to remove the contaminated soils at the fire training center? How close to the tree lines will the excavation take place?

RESPONSE 4: The excavation will be centered in the area to the south of the fire training tower and to the east of the fire training center classroom. It will extend eastward to a location about 20 feet from MW-7 as indicated in Figure 4 in the ROD and on the back page of the fact sheet. The exact area to be excavated will be determined after a more detailed Remedial Design is performed. No excavation is anticipated off the property owned by the County. Adjacent property owners should not experience any adverse impacts except for the noise associated with the excavation operation. There will be no excavation near the tree line located to the north end of the property owned by the County. In addition, a community air monitoring program (CAMP) will be employed. The CAMP provides guidelines for monitoring of potential airborne contaminant releases from the site.

COMMENT 5: How deep will soil excavation be?

RESPONSE 5: Contaminated soils will be removed across the site that exceed a soil cleanup guidance level as established by NYSDEC guidelines. For each specific chemical, a different cleanup level has been established. Field analysis of site soils during removal will be conducted to determine the specific depth of soils to remove. It is anticipated that soils will be removed down to groundwater and possibly further if the soils are still above the soil cleanup guidance levels. In the area determined to contain soils above soil cleanup guidance levels, the depth to groundwater varies from 4.5 to 5.5 feet below ground level. See Figure 4. Assuming that most excavation will not be below the groundwater level, this will be the approximate depth of excavation.

COMMENT 6: What do the contour lines on the site map mean?

RESPONSE 6: There are four maps that show contour lines that represent areas of equal concentration - two for the groundwater and two for the soils. Figure 2 shows the groundwater quality map for total volatile organic contaminants (VOCs). Total VOCs represent the addition of each individual volatile organic contaminant detected at a specific location. Figure 3, is a similar representation for semi-volatile organic contaminants (SVOCs). The lines drawn are areas where the same concentration exists. The outermost ring (largest ring) in each case shows where the contamination was not detected and the innermost ring (smallest ring) shows the area of highest concentration. Some interpolation was done in drawing these lines from a limited set of discrete sampling points. Figures 4 and 5 show similar contour lines for soils data for VOCs and SVOCs. From Figure 4, the approximate area to be excavated was drawn on the map and the 10 ppm contour circle was used for the boundary of this area. Soils above this level will likely exceed the soil cleanup guidance level and will require off site removal.

COMMENT 7: Why wasn't the area to the north of the County property and off site investigated?

RESPONSE 7: This Environmental Restoration Program investigation was conducted on that part of the County owned property that was eligible for the grant. The eligible area was only 3.12 acres and included only those areas where petroleum contamination was found. This included the fire training tower and the fire training classroom. The area to the north was not eligible for this grant, but was investigated to determine if off-site impacts occurred. The horizontal extent of the contamination was about 80 feet south of the fire training tower. The County also did a previous removal operation and a separate investigation in the northern part of their property. This area was found to be free of contamination.

COMMENT 8: Why are we requiring the County to remove these soils?

RESPONSE 8: These contaminated soils are the source of the petroleum contamination and pose a threat to groundwater. The groundwater contamination could continue to spread as long as this source of contamination exists. Removal of these soils will prevent the further degradation of groundwater quality.

COMMENT 9: What investigations or activities took place at the site between 1996 and 1999? What year was contamination identified on the site?

RESPONSE 9: Between 1996 and 1999, Montgomery County conducted two limited investigations on this property. First in 1996, the County hired J. Kenneth Fraser and Associates, PE, LS, LA, P.C. Consulting Engineers to conduct a limited investigation as a result of oil contaminated soils being discovered. Fraser Engineers was initially hired for redevelopment plans for the Fire Training Center and discovered contaminated soils during an excavation. This discovery prompted a NYSDEC oil spill report and initiated a Stipulation Agreement for the County to conduct a more intensive investigation. (Further details are presented in the report entitled, *Environmental Site Assessment for the Richard L. Hansen Fire Training Center*, October 1996, prepared by: J. Kenneth Fraser and Associates, PE, LS, LA, P.C. Consulting Engineers.)

The County then hired Precision Environmental Services, Inc. in June of 1998 to conduct a limited supplementary subsurface investigation. This report was conducted as a petroleum spill investigation and reviewed by the NYSDEC Spills program. It documented that soil and groundwater exceeded NYSDEC standards and guidance values in a defined area located south of the fire training tower building. This report also indicated that additional investigation was needed in the easterly direction to define the area impacted by petroleum contamination. This report was completed in September of 1998. (Further details on this investigation are presented in the report entitled, *Site Investigation Richard L. Hanson, Jr., Fire Training Center*, 1998, prepared by: Precision Environmental Services, Inc.) In April of 1999 the County applied for an Environmental Restoration Program grant under the Clean Water/Clean Air Bond Act which began the process of this investigation.

Contamination, therefore, was reported to be on this site since 1996 when Fraser Engineers conducted the initial investigation.

COMMENT 10: Is the previous owner (Gulf Oil) responsible for any of the cost associated with investigation and clean up of the site?

RESPONSE 10: The State will seek cost recovery from all known potentially responsible parties including Gulf Oil.

COMMENT 11: When will construction activities begin?

RESPONSE 11: The County can begin the process of applying for another Environmental Restoration Program grant for a remediation contract. The first step in this process is a remedial design and construction document preparation. This will take a year or more so any field work will take place after that.

No written comments were received during the comment period.

APPENDIX B

Administrative Record

Administrative Record

Richard L. Hanson, Jr., Fire Training Center Site Site No. B00138-4

Proposed Remedial Action Plan for the Richard L. Hanson, Jr., Fire Training Center site, dated January 2003, prepared by the NYSDEC.

- 1.) "Proposed Remedial Action Plan -
Richard L. Hanson, Jr., Fire Training Center Site -
Environmental Restoration Project"
Dated: January 2003
Prepared by: NYSDEC
- 2.) "Fact Sheet - Remedial Action Proposed for Richard L. Hanson, Jr., Fire Training Center Site"
Dated: January 2003
Prepared by: NYSDEC
- 3.) "Ground Water Sampling Results from 12/13/2002"
Dated: December 13, 2002
Prepared by: NYSDEC
- 4.) "Site Investigation / Remedial Alternatives Report -
Richard L. Hanson, Jr., Fire Training Center"
Dated: November 7, 2002
Prepared by: Precision Environmental Services, Inc. (Ballston Spa, NY)
- 5.) "Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites (FWIA) - Step 1 -
Hanson Fire Training Center"
Dated: February 27, 2002
Prepared by: North Country Ecological Services (Gloversville, NY)
- 1)
- 6.) "Citizen Participation Plan for Richard L. Hanson Fire Training Center Site"
Dated: February 2002
Prepared by: Hennessy Engineering & Consulting
- 7.) "Geophysical Survey - Richard L. Hanson, Jr., Fire Training Center "
Montgomery County
Dated: December 2001
Prepared by: Hager-Richter Geoscience, Inc. (Salem, NH)
- 8.) "Site Investigation / Remedial Alternative Report (SI/RAR) Proposal (Workplan)
Richard L. Hanson, Jr., Fire Training Center "
Dated: October 31, 2000
Prepared by: Precision Environmental Services, Inc. (Ballston Spa, NY)

- 9.) "Site Investigation
Richard L. Hanson, Jr., Fire Training Center "
Dated: 1998
Prepared by: Precision Environmental Services, Inc. (Ballston Spa, NY)
- 10.) "Environmental Site Assessment for the Richard L. Hansen Fire Training Center"
Dated: October 1996
Prepared by: J. Kenneth Fraser and Associates, PE, LS, LA, P.C. Consulting Engineers
(Rensselaer, NY)