
Decision Document

**Interim Remedial Measure
Marx Residence Site
Town of New Castle, Westchester Co., New York
I.D. Number 3-60-024**

April 1996

Division of Hazardous Waste Remediation
Bureau of Construction Services

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DECISION DOCUMENT

MARX RESIDENCE

Town of New Castle, Westchester, New York

Site No. 3-60-024

SECTION 1: SITE LOCATION AND DESCRIPTION

The Marx Residence site is listed on the New York State Registry of Inactive Hazardous Waste Disposal Sites as a class 2. A class 2 designation indicates that the site poses a potential threat to the environment and/or public health and action is required. The New York State Departments of Environmental Conservation (NYSDEC) and Health (NYSDOH) work together to implement remedial programs for sites listed on the registry.

As shown in Figure 1 (site location), the Marx Residence is located at 786 Armonk Road (Route 128) in the Town of New Castle. The site is approximately 1/8 mile north of Wampus Pond and private residences are located north and south along Rt. 128. The residences have private wells and septic systems.

The actual site is approximately four (4) acres with the contamination area being the front and side lawn where the septic system was located.

SECTION 2: SITE HISTORY

2.1: Operational/Disposal History

The Marx Residence is a private residence. During the period of September 1987 to September 1989 while the property owners were away, the tenants who were renting the house are alleged to have used the residence as a drug processing facility and to have disposed chlorinated solvents in the home's septic system. Sampling done by the Westchester County Health Department (WCHD) and the New York State Department of Health (NYSDOH) in 1989-1990 showed very high concentrations of PCE, TCE, cis 1-2 dichloroethene, toluene, acetone and MEK in the on-site ground water and on-site surface drainage. The groundwater at an adjacent property and a tributary to the nearby Wampus Pond also showed signs of contamination.

Based on data obtained from NYSDEC at the project's inception it appeared that trichloroethylene, tetrachloroethylene, 1,2-dichloroethylene, acetone, toluene, and methyl ethyl ketone were the most prominent chemicals of concern, although others had been detected at lower levels. These were

SECTION 2: SITE HISTORY

2.1: Operational/Disposal History (cont'd.)

1,1,1 trichloroethane, chlorobenzene, ethyl benzene, xylenes, methyl isobutyl ketone, methyl butyl ether, methylene chloride, benzene, hexachlorobutadiene, and naphthalene. A review of laboratory analytical results indicated the following potential source areas:

1. Septic Tank
2. Leach Field
3. Surface Drainage Area

The primary area of concern was the Marx Residence's sewage disposal area (SDA). This area reportedly received the majority of contaminants. In addition, an area adjacent to the SDA reportedly was used for surface disposal via a "sneak pipe" (Pipe allowing direct discharge from the septic tank).

One residence south of the site and two residences north of the site have tested positive for contamination in their water supply wells.

2.2: Remedial History

Under terms of a prior agreement for State Superfund Standby work, Metcalf & Eddy of New York, Inc. designed and performed construction management for an Interim Remedial Measure (IRM) at the Marx residence in Westchester County, New York. The objective of the IRM was to stop or slow down further migration of contaminants by removing the source of contamination.

The IRM work plan was approved September 12, 1990 and consisted of the following tasks:

- soil and soil gas sampling to determine the extent of contamination
- excavation and disposal of contaminated soil in and around the residence's sewage disposal area (SDA)
- replacement of the residence's SDA
- modification and upgrading of the existing Granular Activated Carbon (GAC) water supply treatment system at two residences
- installation of a GAC water supply treatment system at two additional residences
- soil gas testing in and around the basement of the Marx residence.
- installation of two activated carbon air filters in the basement of the Marx residence.

Seven soil borings and six sediment cores were taken during October 1990 for the soil sampling program. Samples were field screened, and appropriate samples were submitted for laboratory analysis. Boring samples and composites from the sewage disposal area (SDA) showed high levels of chlorinated solvents and ketones. Soil boring samples from outside the SDA also showed potentially significant levels

SECTION 2: SITE HISTORY

2.2: Remedial History **(cont'd.)**

of toluene. Three test pits were also excavated as part of this task to determine the conditions of subsurface soils. The sample locations are shown on Figure 2 and the analytical results are in Table No. 1.

In July 1991, excavation of the contaminated soil started. Prior to excavation, the existing septic tank and distribution boxes were exposed and pumped out by a licensed liquid waste handler contracted by the owner.

Excavation of contaminated soils in the existing SDA was completed using a track excavator in July 1991.

Transportation of excavated soils was performed using 30 c.y. closed tractor trailers. Wastes were disposed at the Model City Hazardous Waste Landfill. After installation of the new septic tanks, the excavated area was backfilled and restored.

The original volume of contaminated soil contracted for excavation and disposal removal amounted to 350 c.y. A field decision was made to increase the volume to be disposed to 500 c.y. of contaminated soil. The contaminated soil was excavated to the bedrock. The sample locations are shown in Figure 3 and results in Table 2.

Because of the high ground water conditions at the site, it was judged infeasible to replace the existing sewage disposal system (SDS) in kind at the same location. A replacement on-site sewage disposal system was designed by

a licensed professional engineer to meet state and local agency requirements for such a system. Information gathered during a topographic survey was used for design and installation of the replacement sewage system.

The construction task involved installation of a pump and force main to a new drainage field in the northeast portion of the property. This work involved excavation for, and installation of perforated pipe laterals in the new SDA, connecting piping from the sewage pump to the SDA distribution and junction boxes, and covering and backfilling as per specifications. Installation of the new SDS was completed in October 1991.

After inspecting and evaluating the adequacy of the existing GAC water filtration systems in the Marx Residence and a neighboring residence, a recommendation was made to upgrade the Marx system by increasing the GAC bed size, and adding a pre-filter chlorination system. Treatment systems were installed at two neighboring residences after the WCHD detected evidence of contamination in their water supply wells.

Follow-up soil gas testing in and around the basement of the Marx residence was performed in November 1991. Results indicated that the contamination had migrated under the entire eastern half of the basement.

Based on results of tests performed by the NYSDOH a consultant evaluated literature on several available air cleaning devices which could potentially

SECTION 2: SITE HISTORY

2.2: Remedial History (cont'd.)

remove the detected contaminants from the air inside the Marx residence. The consultant recommended use of two TIGG Odor Magnets and two such units were installed in the basement of the residence in December 1991.

Subsequent tests by NYSDOH in February 1992 reported a reduction in contaminant levels in the indoor air, however, the measured levels were still sufficiently high to require further remedial actions. Additional testing by the NYSDEC in April 1993 showed a dramatic reduction in the indoor air contaminants and long-term monitoring was recommended.

The final step in the IRM involved site restoration. This included repairs to the driveway, application of top soil to disturbed areas, and reseeding.

SECTION 3: CURRENT STATUS

The maintenance of the GAC systems continues on a quarterly basis. Water samples are taken before, between and after the filters. If breakthrough of contamination is indicated, the tanks are replaced. The residences with GAC systems are shown in Figure 4.

Quarterly indoor air monitoring has also been performed over the last year at the Marx residence. Sample results indicate that there is a need for continued monitoring.

SECTION 4: ENFORCEMENT STATUS

The NYSDEC signed a stipulation and agreement with the property owner to perform the necessary work on site.

Attempts to obtain funding from the property owner and the insurance company were not successful.

SECTION 5: SUMMARY OF THE IRM GOALS

The IRM goals are established under the guideline of meeting all standards, criteria and guidance (SCGs) and protecting human health and the environment. At a minimum, the remedy selected should eliminate or mitigate all significant threats to the public health and to the environment presented by the hazardous waste disposed at the site.

The overall objective of the IRM at the Marx Residence was to reduce the contamination in the sewage disposal area (SDA) to levels which are protective of human health and the environment and to remove the source that was contaminating the groundwater. In addition, the IRM restored the sewage disposal system and provided a water filter system to supply clean drinking water.

The original septic tank was in the area of confirmation sample No. 1 and confirmation sample No. 1 exceeded the clean up goals. Additional soil could not be removed in the area of sample No. 1 because of the close proximity to the

**SECTION 5: SUMMARY OF THE
IRM GOALS (cont'd).**

house foundation. Subsequent sampling under the floor slab indicated that the contamination had migrated under the basement.

Two Tigg Odor Magnet air purifiers were installed in the basement to eliminate or reduce the chance for indoor air contamination.

**SECTION 6: SUMMARY OF THE
DECISION**

NO FURTHER ACTION

The IRM conducted at the site accomplished the goal identified in Section 5. Consequently, further investigation and development and evaluation of alternatives are not being proposed for this site. This action recognizes the remediation of the site completed under the IRM has addressed the hazardous waste disposal and no further action is required. The NYSDOH concurs with the remedy and the continued operation and maintenance program.

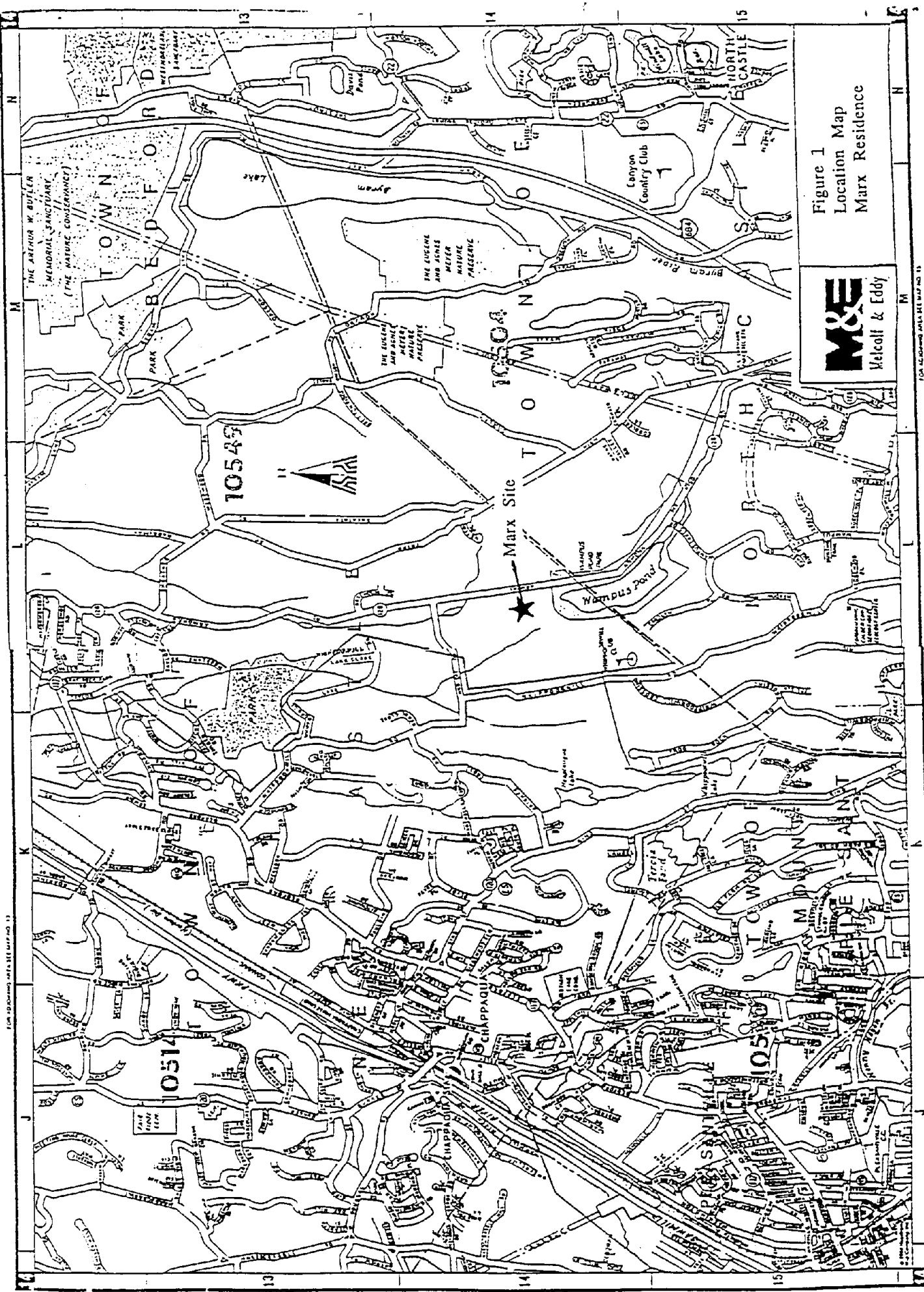


Figure 1
Location Map
Marx Residence



FOR RECORDING DATA SHEET MAP NO. 11

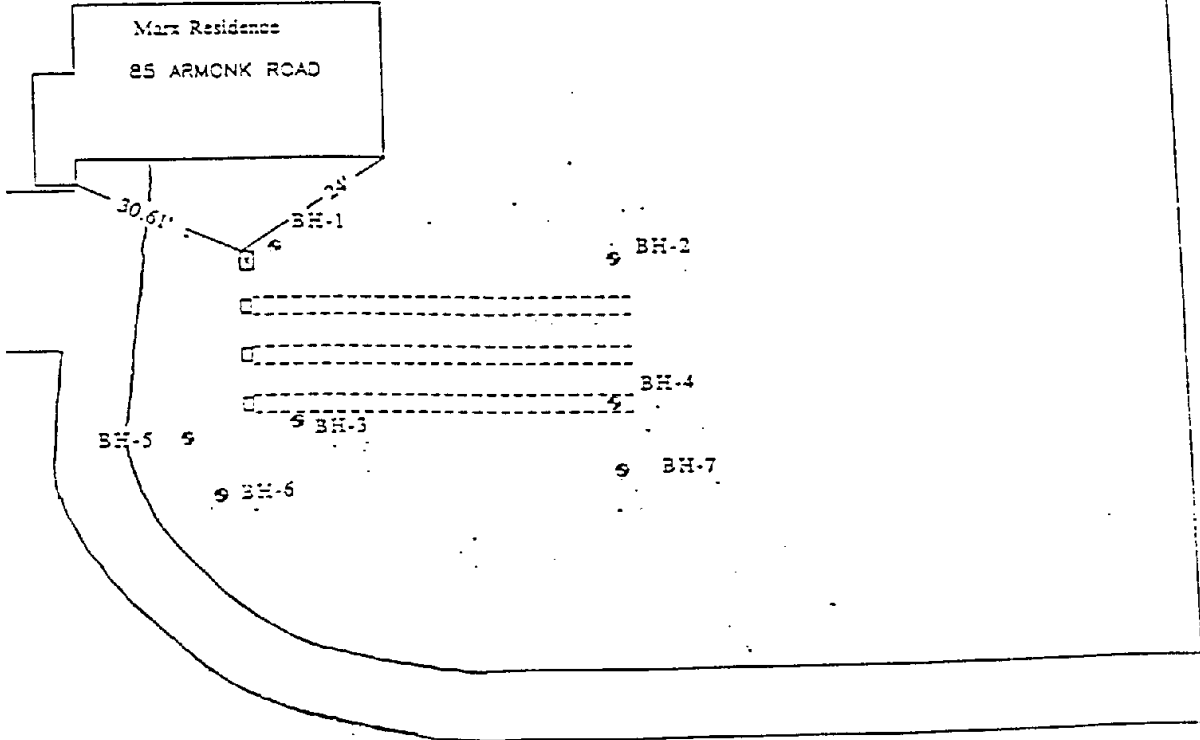
FOR RECORDING DATA SHEET MAP NO. 11

FOR RECORDING DATA SHEET MAP NO. 11

TABLE 1
SOIL SAMPLES
BEFORE REMEDIATION
(See Location on Figure 2)

Soil Samples DH 1-7 (PPM)

Acetone	0.01 - 1.6
Tetrachloethene	0.1 - 49
Trichlorethene	0.008 - 19
Toluene	0.18 - 0.65



RTE 128

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Note- BH designates soil boring


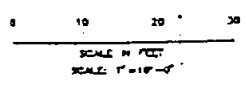
				 <p>SCALE IN FEET SCALE: 1" = 10'-0"</p>	<p>Figure NO. 2 Site Map- Sample Locations Marx Residence</p>
DATE	PROJECT NO.	CLIENT	DRAWN BY	CHECKED BY	

TABLE 2
CONFIRMATION SAMPLES (PPM)
AFTER REMEDIATION
(See Location on Figure 3)

COMPOUND	SAMPLE LOCATION						Cleanup Objective
	1	2	3	4	5	6	
Acetone	3.3	0.016	0.047	2.5	0.018	1.2	0.0011 - 0.11
Tetrachloethene	49.0	0.021	0.093	13.0	0.027	1.0	0.002 - 0.2
Trichlorethene	--	--	--	--	--	0.016	0.013 - 0.63
Toluene	5.1	--	0.024	0.092	--	0.19	0.015 - 1.5

Marx Residence
85 ARMONK ROAD

1

3

2

7

5

6

4

RTE 128

7A



METCALF & EDDY

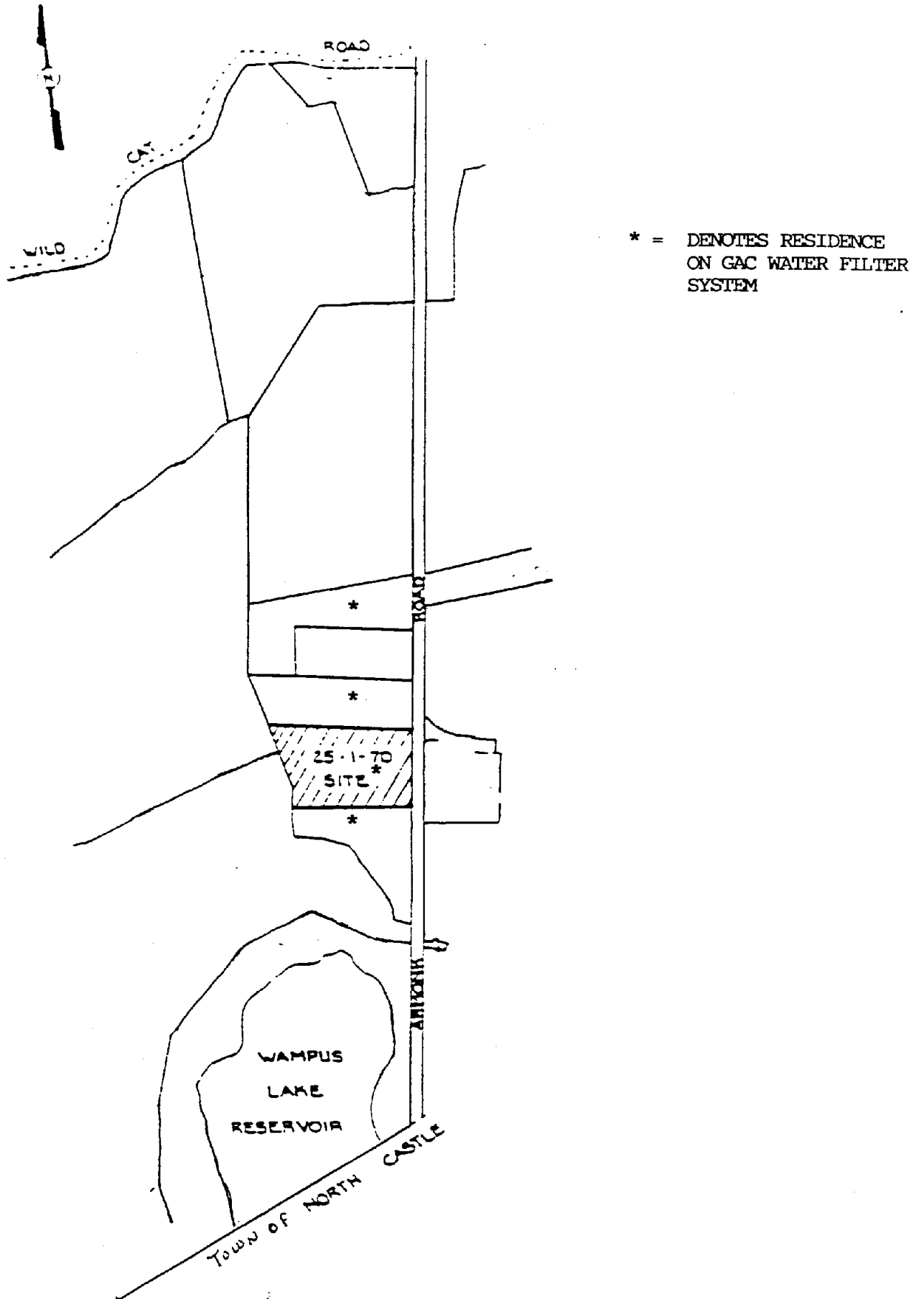
SCALE

0 10 20 30

SCALE IN FEET
SCALE 1"=10'-0"

Figure No. 3
Site Map-
Sample Locations
Marx Residence

FIGURE 4



A Sylvester



John P. Cahill
Commissioner

SEP 22 1997

This letter was sent to the people on the attached list.

Dear :

The Department of Environmental Conservation (DEC) maintains a Registry of sites where hazardous waste disposal has occurred. Property located at 85 Armonk Road in the Town of New Castle and County of Westchester and designated as Tax Map Number 025-01-7d was recently reclassified as a Class 4 in the Registry. The name and site I.D. number of this property as listed in the Registry is Site #360024, Marx Residence.

The Classification Code 4 means that the site is properly closed -- requires continued management.

We are sending this letter to you and others who own property near the site listed above, as well as the county and town clerks. We are notifying you about these activities at this site because we believe it is important to keep you informed.

If you currently are renting or leasing your property to someone else, please share this information with them. If you no longer own the property to which this letter was sent, please provide this information to the new owner and provide this office with the name and address of the new owner so that we can correct our records.

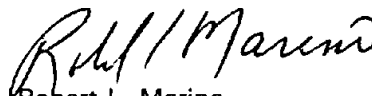
The reason for this recent classification decision is as follows:

- The contaminated septic system and soil have been removed and replaced. Quarterly water sampling and maintenance continues. Quarterly indoor air sampling will continue for one year.

If you would like additional information about this site or the inactive hazardous waste site remedial program, call:

DEC's Inactive Hazardous Waste Site Toll-Free Information Number 1-800-342-9296 or
New York State Health Department's Health Liaison Program (HeLP) 1-800-458-1158,
ext. 402.

Sincerely,



Robert L. Marino

Chief

Site Control Section

Bureau of Hazardous Site Control

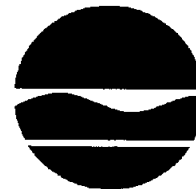
Division of Environmental Remediation

bcc: R. Marino
J. Swartwout
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A. Sylvester
A. Carlson
L. Ennist

AS/srh

A. Sylvester

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-7010



John P. Cahill
Commissioner

SEP - 4 1997

Max and Janis Marx
786 Armonk Road
Mt. Kisco, NY 10566

Dear Mr. and Mrs. Marx:

As mandated by Section 27-1305 of the Environmental Conservation Law (ECL), the New York State Department of Environmental Conservation (NYSDEC) must maintain a Registry of all inactive disposal sites suspected or known to contain hazardous waste. The ECL also mandates that this Department notify the owner of all or any part of each site or area included in the Registry of Inactive Hazardous Waste Disposal Sites as to changes in site classification.

Our records indicate that you are the owner or part owner of the site listed below. Therefore, this letter constitutes notification of change in the classification of such site in the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

DEC Site No.: 360024
Site Name: Marx Residence
Site Address: 85 Armonk Road, New Castle, NY 10566

Classification change from 2 to 4

The reason for the change is as follows:

- The contaminated septic system and soil have been removed and replaced. Quarterly water sampling and maintenance continues. Quarterly indoor air sampling will continue for one year.