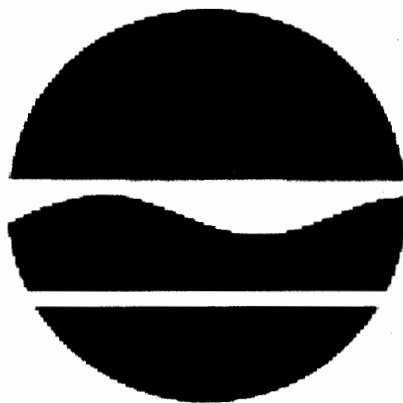


**Monitoring Plan
Mahopac Business District Wells
Putnam County
NYSDEC Site # 3-40-013**



**625 Broadway
Albany, NY 12233-7013
518-402-9812**

Date: December 3, 2004

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Back Cover

Electronic Files on CD

1.0 Site Summary

Background Information

The Mahopac business district wells site is located at the intersection of Routes 6 and 6N in the Village of Mahopac, Putnam County. The site includes small retail and service businesses, offices, and residential apartments on private wells drawing water from the local bedrock water bearing zone. In most cases, one well services a number of apartments or businesses.

Contamination of groundwater was discovered following a gasoline spill at the former U.S. gas station, currently Carland Auto, during the Fall of 1978. Wells were sampled at this time to determine if gasoline constituents had entered the groundwater. It was discovered that these samples indicated the presence of tetrochloroethane and trichloroethene.

In 1983 NYSDEC completed a Phase I investigation. The investigation displayed that the site shows a potential for harm to human health and the environment from groundwater or surface water migration. The site was nominated for the USEPA National Priorities List for federal lead action. USEPA had declined and referred the site back to New York State for action. NYSDEC selected the site for a Remedial Investigation / Feasibility Study (RI/FS) as a first step towards corrective action under the State Superfund Program.

Remedy

According to the Record of Decision (ROD) issued in August of 1990, the remedy shall include the following. 1) Provide individual carbon treatment units at affected wells. 2) Provide alternative water supply from Lake Mahopac. 3) Remove contaminated sanitary sewer sediments. 4) Review sanitary sewer evaluation survey and proposed work to determine if any additional work is necessary. 5) Long-term groundwater monitoring. 6) Consideration of pump and treat systems on new or existing wells to contain the plume after a new water supply is installed.

2.0 Monitoring Requirements and Results

Groundwater Monitoring Requirements

Current monitoring contract is to include 2 rounds of sampling to determine if the site is eligible to be delisted. It is expected that PCE will continue naturally attenuate over time. The Department will recommend that the site be delisted if future sampling events remain consistent with the recent data. Sampling was conducted in 12/98, 2/99, 6/99, 10/99, 3/02, and 7/04. Sampling needs to be done quarterly for the next two years to determine if the site can be delisted. The last time that the site was sampled was in July 2004.

Table 1. Mahopac Business District Wells Quarterly Groundwater Monitoring Requirements			
Monitoring Well	Contaminants-of-Concern	Water Quality Criteria (ppb)	Detection Limit (ppb)
All Monitoring Wells	Tetrochloroethane	5	0.5
	Trichloroethene	5	0.5

1-NYSDEC. Division of Water Technical and Operational Guidance Series (1,1,1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. 1998

Groundwater Monitoring Results

The data show that contaminants-of-concern are present in the monitoring wells above the minimum groundwater standards. Samples were collected and analyzed in 4/1999, 7/2001, and 12/2002. The chart below shows the downward trend of the groundwater contamination as a result of soil excavation and groundwater treatment, and in one case, the standard appears to be achieved. It also appears that at this point, a detection limit of 0.5 ppb should be used.

Table 2- Groundwater Monitoring Data Summary for Mahopac Business District Wells				
Contaminant of Concern	Groundwater Standard	Monitoring Date		
		12/09/98	10/28/99	3/27/02
Tetrochloroethane	5	14 ppb	15 ppb	8 ppb
Trichloroethene	5	10 ppb (U) **	10 ppb (U)	0.4 ppb (J)

* Data for down-gradient Monitoring Well 6S represents the average conditions at the site.

** See Quality Assurance Key on the following page.

Bold = Groundwater contaminant levels are below the groundwater standard.

Shaded = Groundwater contaminant levels show a decreasing trend.

Quality Assurance Key:

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example, if the sample quantitation limit is 10 µg/L, but a concentration of 3 µg/L is calculated, report it as 3J. The sample quantitation limit must be adjusted for dilution as discussed for the U flag.

U - Indicates compound was analyzed for but not detected. This is with the detection limit set at the groundwater standard for the contaminant. The sample quantitation limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if the sample final volume is the Protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, The reported limit is 100 U.

Discharge Monitoring Requirements

Data not available.

Discharge Monitoring Results

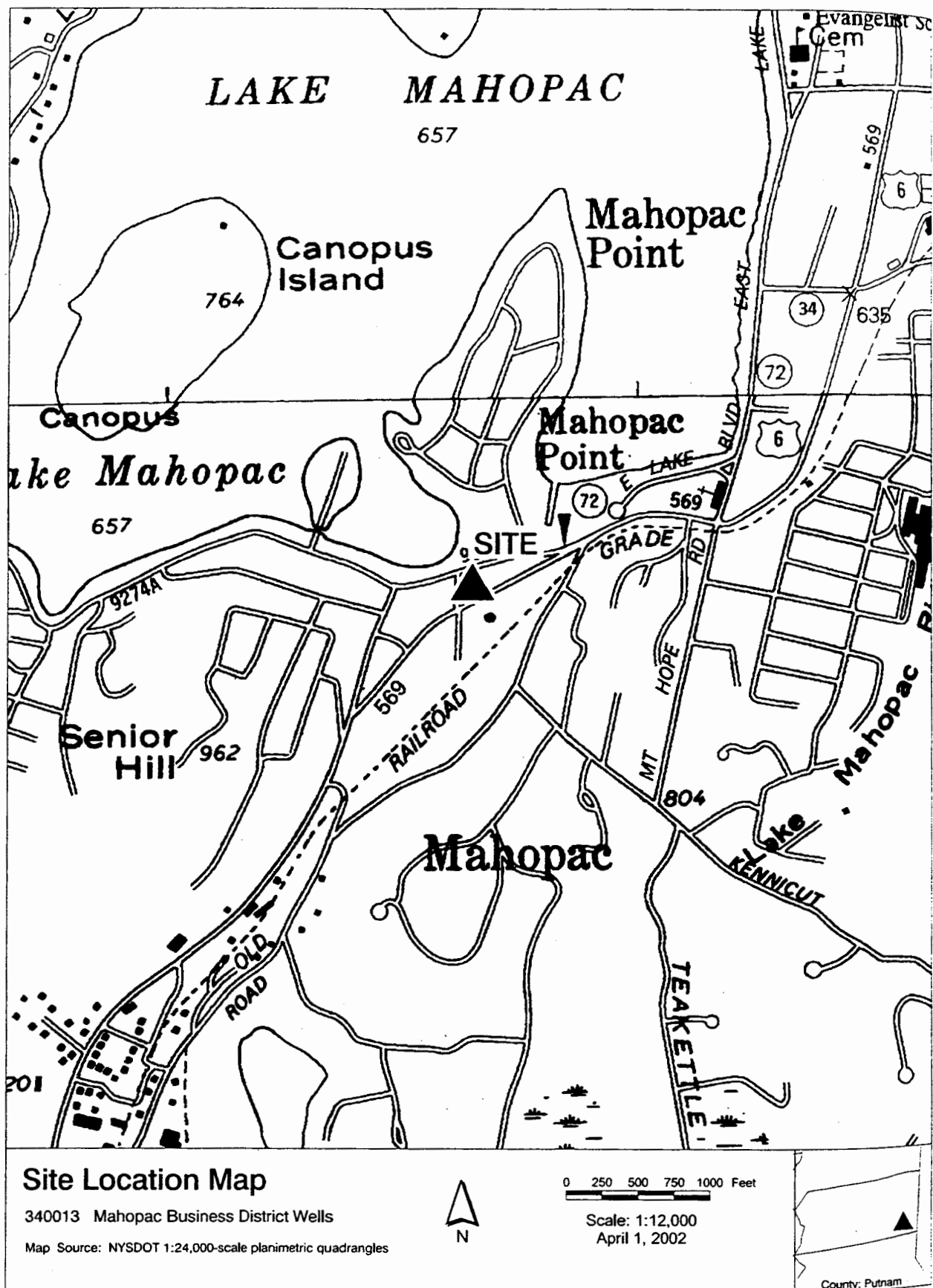
Data not available.

Section 3.0 - Site and Wells: Maps and Plans

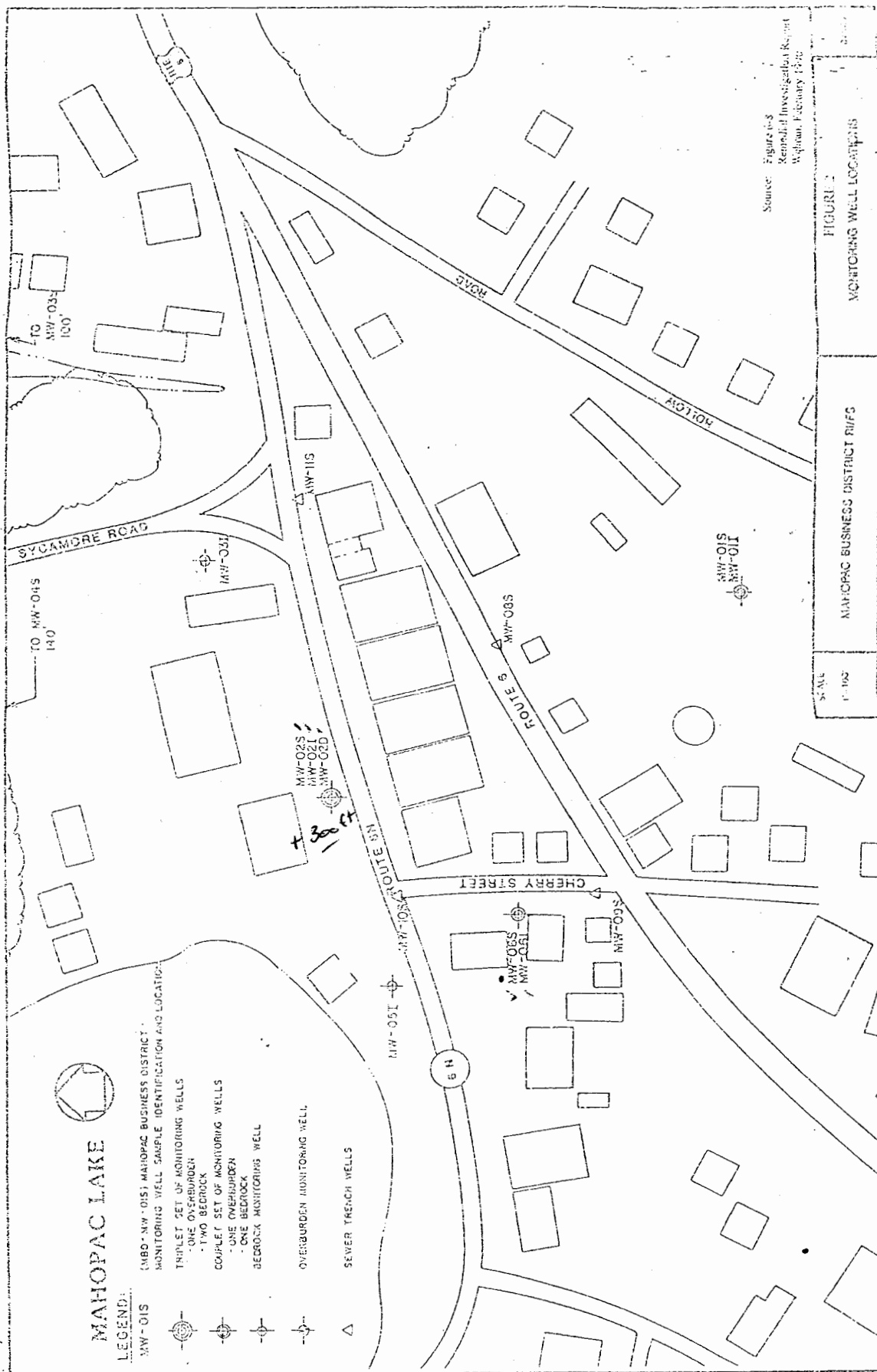
Site Location Map.....3-1

Monitoring Well Locations.....3-2

Detailed Site Plan.....3-3



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Section 4.0 Monitoring Well Data

No well data has been discovered for the site. Once data is available it will be inserted into the plan. I have looked in the project files, on microfilm, and the project managers files and found no well data.

Section 5.0 - Health and Safety Plan

Site Safety Plan.....5-1

Hospital Location Map.....5-5

SITE SAFETY PLAN

T&A Code 1676

Sample ID Nos. _____ - _____ - _____ - [01-__]

Site Name: Mahopac Business District Wells

Site Address: Intersection of Route 6 and 6N in the
Village of Mahopac

County: Putnam Region: 3

Registry Status: ☒ existing site

☐ "P" site

☐ not listed

☐ "Brownfields" site

Site ID No.: 3-40-013

"P" Site ID No.: _____

Site ID No.: _____

Regional contact: RAM Pengad.n

Phone No.: 845-256-3146

Plan prepared by: Bill Peters Wm Peters Date: 12-13-04

Approved by:

• Section Representative

• Section Chief:

Date: _____

Date: 12/13/04

Proposed date of sampling/investigation: General, For Otm Purposes

BACKGROUND INFORMATION

Information sources for background review:

- ☒ Routine O&M Sampling - Last sampled on: ?
- ☐ Phase I/Phase II Investigation: Date: _____
- ☐ Preliminary Site Assessment: Date: _____
- ☐ EPA/NUS Investigation Report: Date: _____
- ☐ RI/FS Reports: Date: _____
- ☐ Registry/File Review
- ☐ Other Reports/Studies: Date: _____ Type: _____

Site Status:

- ☐ Active ☒ Inactive ☐ Abandoned ☐ Unknown

Are there any unusual features on the site that may be of concern?

- ☐ Yes [describe below] ☒ No

Brief site history and description:

See Registry Page Attached.

Wastes of concern:

Tetrachloro ethylene

Trichloro ethene

Waste characteristics:

☐ Corrosive

☐ Reactive

☐ Toxic

☐ Ignitable

☒ Volatile

☐ Unknown

Overall hazard levels anticipated on-site:

☐ High

☐ Moderate

☒ Low

☐ None

☐ Unknown

Slip/trip hazards:

☒ Yes

☐ No

Describe: Routine

Overall hazard assessment:

Low - Slip/Trip hazards, Back injury for lifting pumps.

ON-SITE ACTIVITIES

Has this site been sampled and/or investigated before?

☒ Yes ☐ No

Has the site perimeter been identified?

☒ Yes ☐ No ☐ Unknown

Is the site fenced?

☐ Yes ☒ No ☐ Unknown

Is a site map/sketch available?

☒ Yes ☐ No [if yes, attach]

Have areas of contamination been identified?

☒ Yes ☐ No

Will air quality monitoring be done on-site?

☒ Yes ☒ No

Is sampling planned at this site?

☒ Yes ☐ No

Parameters to be analyzed for

If yes: ☐ soil/sediment

☒ surface water

☒ groundwater

☐ waste product

PE, TCE

List the proposed on-site activities:

1. Low Km Sampling
2. _____
3. _____
4. _____
5. _____
6. _____

Will respiratory protection be required?

☐ Yes ☒ No

Level of respiratory protection anticipated.

- Level B [SCBA or supplied airline] ☐
- Level C [Air purifying respirator] ☐
- Level D [No external respiratory protection] ☒

Are Modifications to respiratory protection anticipated?

☐ Yes ☒ No

Describe: _____

Air quality monitoring equipment to be used (describe)

- ☐ Photo ionization detector: _____
- ☐ Flame ionization detector: _____
- ☐ Explosimeter/O₂ meter: _____
- ☐ Other equipment: _____

List of personnel anticipated to be on-site

	<u>Name</u>	<u>Representing [DEC, DOH, etc.]/phone no.</u>
1.	<u>Carl Hoffman</u>	<u>518-402-7812</u>
2.	<u>Will Wellins</u>	<u>518-402-7812</u>
3.	<u>George Monahan</u>	<u>518-402-7812</u>
4.	<u>Tony Stilesken</u>	<u>518-402-9553</u>
5.	<u>Burt Pine</u>	<u>518-402-9553</u>
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____

Emergency Planning

Is 911 Emergency service available for the County
that the site is located in?

☒ Yes

☐ No

Hospital: Putnam Hospital Center
101 clock tower commons, Brewster, NY

Phone No. (518) 278-4068

Ambulance: 911

Phone No. () 911

Police: 911

Phone No. () 911

Other Emergency:

911

Phone No. () 911

DEC, DOH, County and/or Municipal Contacts

<u>Name</u>	<u>Phone Number</u>
• <u>Carl Hoffman</u>	<u>(518) 402-9812</u>
• <u>Bill Peters</u>	<u>(518) 402-9812</u>
• <u>Jerry Riden</u>	<u>(518) 402-9812</u>
• _____	<u>() _____</u>

Hospital Route Information

- Attach a map that shows the site location and a nearby hospital. Highlight the best route to the hospital.

Optional written directions:

Attached.

[Yahoo!](#) [My Yahoo!](#) [Mail](#)

YAHOO! LOCAL **Sign In**
 Maps New User? [Sign Up](#)

Search the web [More](#)

Starting from: **A** Route 6n At Route 6, Mahopac, NY 10541

Arriving at: **B** Putnam Hospital Ctr 101 Clock Tower Commons, Brewster, NY 10509-4055 (845) 278-4068

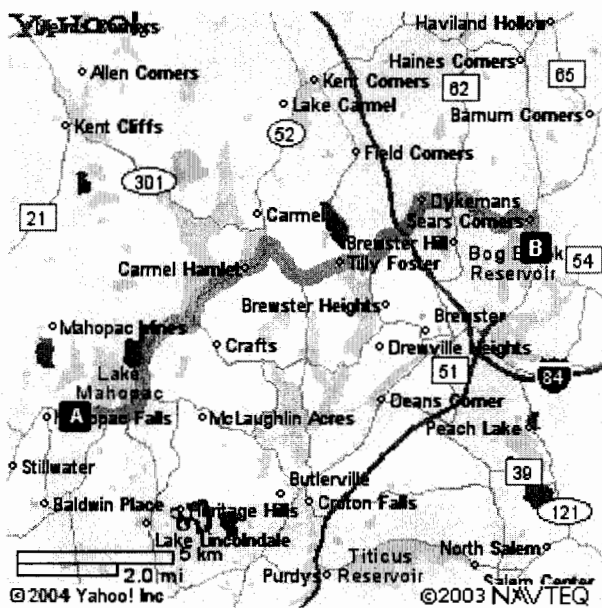
Distance: 13.5 miles Approximate Travel Time: 25 mins

Your Directions

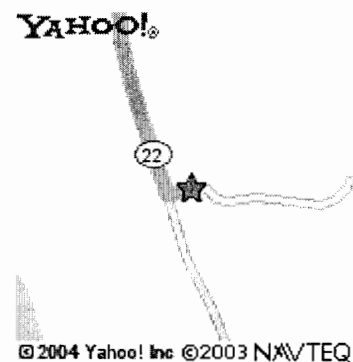
1.	Start on RT-6N (at ROUTE 6N & ROUTE 6 in MAHOPAC) going towards COLONIAL TER - go 1.0 mi
2.	Bear L on US-6 - go 7.5 mi
3.	Turn L on RT-312 - go 4.4 mi
4.	Turn R on RT-22 - go 0.6 mi
5.	Turn L on CLOCK TOWER COMMONS - go < 0.1 mi
6.	Arrive at 101 CLOCK TOWER COMMONS, BREWSTER , on the L

When using any driving directions or map, it's a good idea to do a reality check and make sure the road still exists, watch out for construction, and follow all traffic safety precautions. This is only to be used as an aid in planning.

Your Full Route



Your Destination

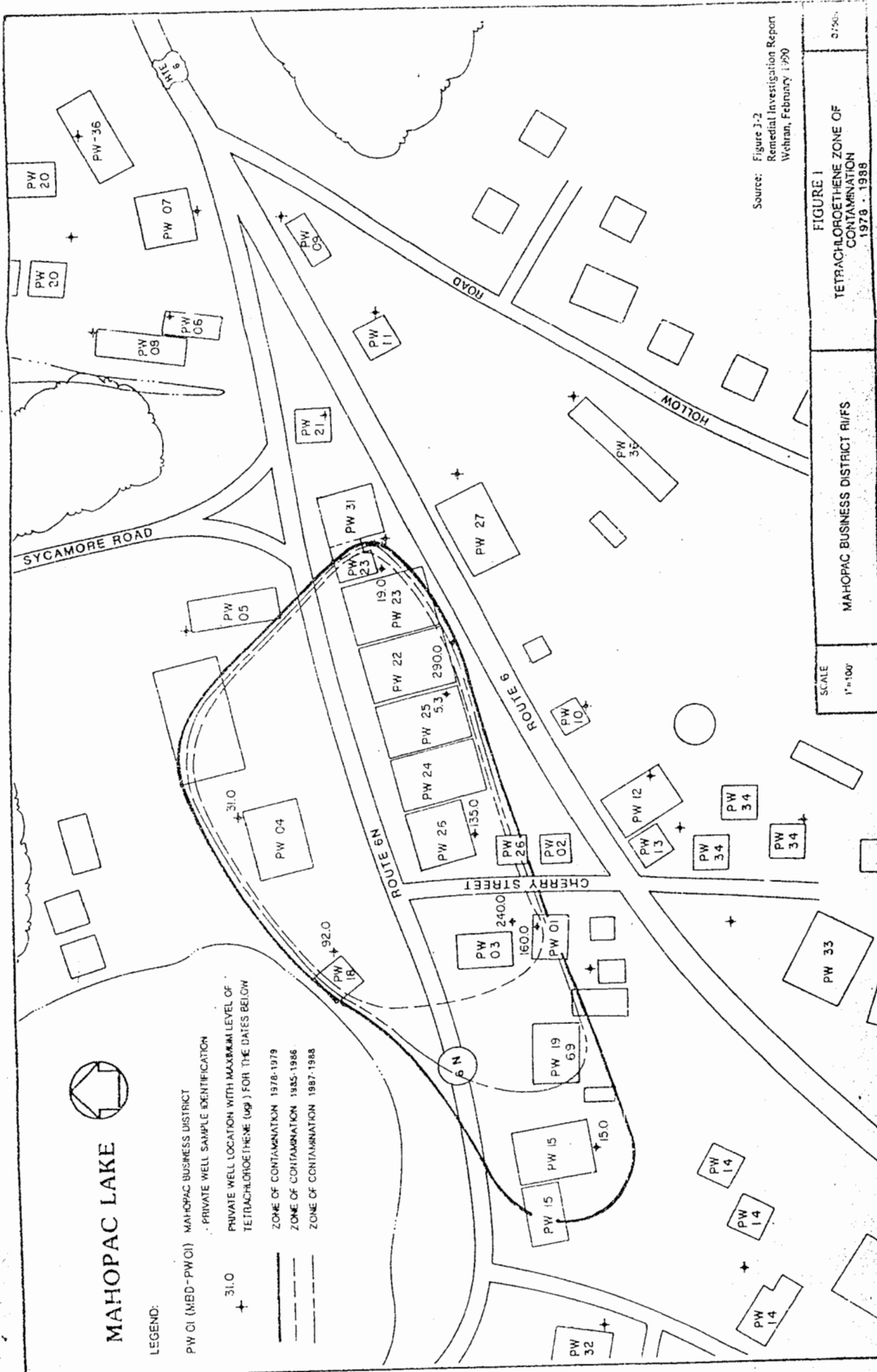


Address:
 Putnam Hospital Ctr 101 Clock Tower Commons
 Brewster, NY 10509-4055

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Section 6.0 - Treatment System Diagrams

Contaminated Plume Map.....6-1



Source: Figure 3-2
Remedial Investigation Report
Whelan, February 1990

FIGURE 1
TETRACHLOROETHENE ZONE OF
CONTAMINATION
1978 - 1988

MAHOPAC BUSINESS DISTRICT RI/FS

SCALE
1" = 100'