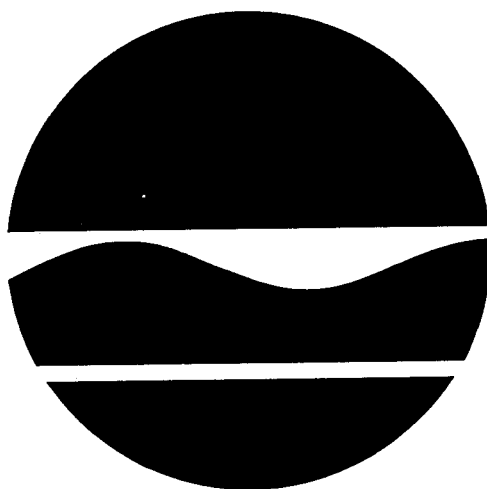


WESTCHESTER COLPROVIA CORPORATION

Bedford, Westchester County, New York
Site No. 3-60-018

PROPOSED REMEDIAL ACTION PLAN

February 1999



Prepared by:

Division of Environmental Remediation
New York State Department of Environmental Conservation

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Westchester Colprovia Corporation
Bedford, Westchester County, New York
Site No. 3-60-018
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SECTION 1: PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) is proposing a remedy for the Westchester Colprovia Site. As more fully described in Sections 3 and 4 of this document, solvents used in the former shop and laboratory resulted in the disposal of a number of hazardous wastes, including trichloroethene, 1,1,1-trichloroethane and tetrachloroethene, at the site. Some of these wastes were released or migrated from the site to adjacent areas such as the Colonial Sand and Gravel facility. These disposal activities resulted in a significant threat to the public health and/or environment associated with the impacts of contaminants to groundwater.

During the course of the investigation certain actions, known as Interim Remedial Measures (IRMs), were undertaken at the Westchester Colprovia Site in response to the threat identified above. IRMs are conducted at sites when a source of contamination or exposure pathway can be effectively addressed before completion of the investigation. The IRMs

undertaken at this site include a groundwater extraction and treatment system, a soil vapor extraction system and an air sparging system.

Based upon the success of the above IRMs, the findings of the investigation of this site indicate that the site no longer poses a significant threat to human health or the environment. Therefore No Further Action with continued groundwater monitoring is proposed as the remedy for this site. Groundwater samples would be collected from selected monitoring wells at the site and tested for site-related parameters. Biannual groundwater monitoring would continue for no less than two years to ensure continued effectiveness of the IRMs performed at the site. The groundwater quality data will be evaluated to determine the need for additional monitoring and reactivation of the IRMs. In addition, the NYSDEC also proposes to reclassify the site to a Class 4 site on the New York State Registry of Inactive Hazardous Waste Disposal Sites. A Class 4 site is a site that has been properly closed but requires continued operation, maintenance, and/or monitoring.

This Proposed Remedial Action Plan (PRAP) identifies the preferred remedy and discusses

the reasons for this preference. The NYSDEC will select a final remedy for the site only after careful consideration of all comments received during the public comment period.

The NYSDEC has issued this PRAP as a component of the citizen participation plan required pursuant to the New York State Environmental Conservation Law (ECL) and 6NYCRR Part 375. This document is a summary of the information that can be found in greater detail in the Site Investigation Reports available in the document repositories.

To better understand the site and the investigations conducted, the public is encouraged to review the project documents at the following repositories:

NYSDEC
21 South Putt Corners Road
New Paltz, NY 12561
(914) 256-3150
Hours: 8:30 am - 4:45 pm
Attention: Melissa Mastro

Bedford Hills Free Library
26 Main Street
Bedford Hills, NY 10507
(914) 666-6472
Hours: M,T,W 1:00 pm - 8:00 pm
Th, F 10:00 am - 5:30 pm
Sat 10:00 am - 1:00 pm

The NYSDEC seeks input from the community on all PRAPs. A public comment period has been set from **February 18, 1999 to March 20, 1999** to provide an opportunity for public participation in the remedy selection process for this site. A public

meeting is scheduled for **March 9, 1999** at 7:00 pm at the **Bedford Town Hall**.

At the meeting, the results of the site investigations will be presented along with a summary of the proposed remedy. After the presentation, a question and answer period will be held, during which you can submit verbal or written comments on the PRAP. Written comments may be sent to Ms. Melissa Mastro at the above address during the comment period.

The NYSDEC may modify the preferred alternative or select another alternative based on new information or public comment. Therefore, the public is encouraged to review and comment on the alternative identified here.

Comments will be summarized and responses provided in the Responsiveness Summary section of the Record of Decision. The Record of Decision is the NYSDEC's final selection of the remedy for this site.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Westchester Colprovia Corporation formerly owned and operated an asphalt production plant located on Harris Road in the Town of Bedford, Westchester County. This site is approximately 9.2 acres in size and is bordered on the southeast by a New York State Correctional Facility, on the southwest by Colonial Sand and Gravel and on the north by watershed property containing a small stream that feeds into the Muscoot Reservoir, owned by New York City. The operation at this site, which started in 1932, was originally leased from Worden Sand & Gravel and then

Colonial Sand and Gravel through the mid 1970's. At that time the land was purchased by Westchester Colprovia. The asphalt plant, former repair shop, laboratory and office were located on about 2 acres in the southwest corner of the property. Adjacent land to the southwest and west drops off steeply. Conversely, the land to the southeast rises sharply. This site has since been sold to O&G Industries and is now owned and operated by Peckham Materials.

General location and site location maps are attached as **Figures 1 and 2**.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Westchester Colprovia owned and operated an asphalt production plant at this site until 1987. Investigations at the site indicated solvents were disposed of in the area of the former shop and laboratory. Solvents were used on-site in laboratory testing of asphalt mix samples, and occasionally for cleaning parts or equipment in the repair shop. The shop was demolished by O&G Industries in 1989.

3.2: Remedial History

In 1986, Colonial Sand and Gravel, the adjacent property owners, conducted an investigation on their property. Trichloroethylene (TCE) was detected in the groundwater above groundwater standards in a monitoring well that was located adjacent to and downgradient of the Westchester Colprovia site. Based on the results of the Colonial Sand and Gravel investigation,

Westchester Colprovia retained a consultant and conducted several investigations on their property.

Three of the four investigations were conducted between 1987 and 1988. These investigations determined that the source of the TCE contamination was located on the Westchester Colprovia site. The results of the investigations were submitted to the NYSDEC for review.

In April 1987, ten soil samples were collected from three areas on the site where seven underground petroleum storage tanks had been previously removed. Sampling results confirmed that all contaminated soil had been removed.

In 1988, NYSDEC placed Westchester Colprovia on the New York State Registry of Inactive Hazardous Waste Disposal Sites as a Class 2.

In 1989, the NYSDEC signed a consent order with Westchester Colprovia for an Interim Remedial Measure (IRM) in order to mitigate the groundwater contamination. Two IRMs were completed. The first IRM consisted of a groundwater extraction and treatment system with an air stripper. The other IRM consisted of a soil vapor extraction system with an air sparging system.

In December 1990, four additional groundwater monitoring wells were installed to further define the extent of the contamination.

SECTION 4: SITE CONTAMINATION

To evaluate the contamination present at the site and to evaluate alternatives to address the significant threat to human health and the environment posed by the presence of hazardous waste, the potential responsible party (PRP) has conducted several investigations and completed two IRMs.

4.1: Summary of the Remedial Investigation

The purpose of the investigation was to define the nature and extent of any contamination resulting from previous activities at the site.

The investigation was conducted in several phases. The first phase was conducted between May 1987 and August 1987, the second phase was conducted in January 1988, the third phase was conducted in July 1988, and the fourth phase was conducted as part of the IRM in December 1990.

The investigations included the following activities:

- Installation of soil borings and monitoring wells for analysis of soils and groundwater as well as the physical properties of the soil and hydrogeologic conditions.
- Soil gas survey.

To determine which media (soil, groundwater, etc.) contain contamination at levels of concern, the analytical data obtained during the investigations were compared to environmental Standards, Criteria, and

Guidance values (SCGs). Groundwater, drinking water and surface water SCGs identified for the Westchester Colprovia Corporation site are based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of NYS Sanitary Code. For soils, NYSDEC TAGM 4046 provides soil cleanup objectives for the protection of groundwater, background conditions, and health-based exposure scenarios.

Based on the results of the investigations, in comparison to the SCGs and potential public health and environmental exposure routes, groundwater on the site required remediation. The nature and extent of contamination is summarized in Section 4.1.1. More complete information can be found in the Report of Site Investigations dated November 1987, the Report of Site Investigations dated May 1988 and the Report of Site Investigations dated July 1988.

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

4.1.1 Nature of Contamination:

As described in the three "Report of Site Investigation" reports, many soil, groundwater and soil gas samples were collected at the Site to characterize the nature and extent of contamination. The main category of contaminants which exceed their SCGs are volatile organic compounds (VOCs) in groundwater.

The volatile organic compounds of concern in groundwater are trichloroethene (TCE), 1,1,1-trichloroethane (TCA), tetrachloroethene (PCE), 1,2-dichloroethene (DCE), 1,1-dichloroethane (DCA), benzene and xylene. TCE, TCA, and PCE are degreasers and were commonly used to clean automotive, electronic and other metal parts coated with oils and/or tars. DCE and DCA are degradation products of the degreasers. Up to 1981, TCE was also used on site in laboratory tests of asphalt mixtures. Xylene and benzene are components of gasoline, which was also used on-site as a vehicle fuel.

4.1.2 Extent of Contamination

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

Groundwater

Fourteen monitoring wells were installed at the site. These wells and one on-site bedrock production well were sampled during and after the investigations. A total of 103 groundwater samples were collected. After the initial investigation, it was determined that volatile organic compounds were the contaminants of concern and therefore the subsequent samples were analyzed for volatile organic compounds only. The following is a list of the contaminants that were detected at concentrations exceeding the groundwater standards: 1,2-dichloroethene, 1,1,1-trichloroethane, trichloroethene, tetrachloroethene, benzene, xylene, 1,1-dichloroethane. One inorganic compound,

lead, was detected at levels that slightly exceeded groundwater standards in two groundwater samples collected during the first investigation.

The groundwater at the site has been monitored since 1987 and two distinct areas of contamination were discovered. During this time, two IRMs were completed in these areas and effectively reduced the concentration of the contaminants of concern. Additional information about the IRMs is included in Section 4.2. The effectiveness of the first IRM was determined through groundwater sampling at monitoring wells W-2, W-7, W-12 (MW-3), W-3, and W-4. Monitoring well MW-3, which was destroyed and replaced by W-12, is the monitoring well that historically contained the most significant amount of contamination. The contamination in this well has shown a decrease from 1987 to 1996 in TCE from 1570 ppb to 20 ppb; TCA has decreased from 210ppb to 3.7 ppb; DCE has decreased from 28 ppb to 1 ppb, and PCE has decreased from 14 ppb to 1.8 ppb. The effectiveness of the second IRM was determined through groundwater sampling at monitoring well W-5. W-5 contained a maximum concentration of 130 ppb of DCE in 1994 before the air sparging system was installed and decreased to 74 ppb in two years.

Bedrock was encountered at the site at depths ranging from 20 to 45 feet. No contaminants were detected in the bedrock production well, PM-1, at levels exceeding groundwater standards. Two contaminants were detected in two out of five groundwater samples collected from the bedrock production well at levels less than the groundwater standards. The groundwater sample collected in August 1994 contained 0.8 ppb of trichloroethene and the

groundwater sample collected in August 1995 contained 1 ppb of trichloroethene and 1.2 ppb of 1,1,1-trichloroethane. The groundwater standard for both of these contaminants is 5 ppb. No contaminants were present in the groundwater samples collected from the bedrock well in March 1995, February 1996 and May 1996.

The site investigations have determined the groundwater flow in the overburden to be in a north west direction. The water table on-site was encountered at depths ranging from 10 - 20 feet below the ground surface. Several downgradient groundwater monitoring wells were installed at the property line to determine the extent of the plume. Results from past sampling events have shown the plume of contamination is confined to the site, with the exception of the contamination in W-12 which is located on the Colonial Sand & Gravel property.

Table 2 shows the dates of the sampling events and respective contamination by well location. **Figure 3** shows the location of the wells.

Soil Gas

A soil gas survey was conducted at the site in July 1987. The purpose of this survey was to define the extent and areal distribution of the contamination in the subsurface. A total of 38 samples were collected and analyzed for TCE, TCA and PCE. The results indicated there were two areas of contamination at the site; the area between the office and the asphalt plant and the area near the shop. Additional monitoring wells and soil borings were completed in these areas to verify the results of the soil gas survey. Please refer to **Figure**

4 for the location of the soil gas sampling points that contained the highest concentrations of contaminants.

Soil

Fourteen subsurface soil samples were collected on this site. These samples were analyzed for volatile organic compounds. Results indicated the concentrations of volatile organic compounds were generally low and well below the clean-up objectives stated in TAGM 4046 with the exception of sample SBP-1, which is near the office. This sample contained 0.82 ppm of acetone, 1.1 ppm of 1,1,1 trichloroethane and 1.4 ppm of xylene at concentrations that slightly exceed the clean-up objectives of 0.2 ppm for acetone, 0.80 for 1,1,1-trichloroethane and 1.2 ppm for xylene. Please refer to **Figure 4** for the location of SBP-1.

4.2 Interim Remedial Measures:

Interim Remedial Measures (IRMs) are conducted at sites when a source of contamination or exposure pathway can be effectively addressed before completion of the investigations.

The investigations on-site identified two distinct areas, the former maintenance shop and the laboratory, contained significant volatile organic compound contamination in the groundwater. Two IRMs were implemented by the PRP to reduce the contamination in these two areas.

The locations of the two IRMs are referred to on **Figure 2** as "stripper" and "soil vapor system". **Table 3** contains groundwater data

for both of the affected areas before and after the IRMs were implemented.

A soil vapor extraction system was installed in January 1992 in the area of the Westchester Colprovia office and plant. The soil gas extraction system consisted of a perforated pipe that was installed as a soil vent and a vacuum was induced by a blower and attached to the vent. This system draws a mixture of air and contaminate vapor through the pore space in the soil. The mixture of air and contaminate vapors was passed through carbon canisters to remove the volatile organic compounds before being released into the atmosphere. The groundwater contamination was significantly reduced as noted earlier in Section 4.1.2.

In March 1995, an air sparging system was added to the soil vapor extraction system to increase the rate of contaminant removal from the groundwater in the vicinity of W-5. The air sparging system consisted of an air injection well that was located approximately six feet from monitoring well W-5 and driven to a depth of 46 feet below the ground surface. Air was injected into this well, moved upward towards the ground surface, through the groundwater, stripping the volatile organic compounds from the soil and groundwater. The air was then collected through the soil vapor extraction system that was installed in January 1992. This system was shut down in early 1997 after calculations indicated only 0.5 pounds of TCE remained in this area. Groundwater sampling data showed a decrease in W-5 of 130 ppb of DCE in 1994 to 74 ppb of DCE in 1996 confirming no significant source of contamination remained.

The second IRM, which consisted of a groundwater extraction and treatment system equipped with an air stripper, was installed in March 1992 in the vicinity of former MW-3. With this remediation technique, contaminated groundwater was pumped from the ground and circulated through a treatment system. The treatment system consisted of a multi-staged diffused bubble aeration system that brought the contaminated water into contact with air and stripped the volatiles from the water. The groundwater extraction and treatment system was shut down in December 1993. A total of 257,250 gallons of water was treated. Sampling shows a general decrease in contaminant concentrations since the system was shut down, indicating no significant source remains in this area.

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.

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

The only identified potential exposure pathway associated with this site is the ingestion of the

contaminated groundwater. This pathway has been eliminated with the completion of the public water supply system that serves the adjacent businesses and private residences, the completion of the IRMs on-site and the absence of contamination in the downgradient groundwater monitoring wells.

4.4 Summary of Environmental Exposure Pathways:

No environmental exposure pathways were identified. The contaminated on-site soil is below the ground surface at concentrations less than the clean-up objectives set forth in TAGM 4046. No contaminants were detected in the groundwater downgradient of the site with the exception of the Colonial Sand and Gravel property.

SECTION 5: ENFORCEMENT STATUS

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

The NYSDEC and the Westchester Colprovia Corporation entered into a Consent Order on July 26, 1989. The Order obligates the responsible parties to implement a field investigation and an interim remedial program. Upon issuance of the Record of Decision the NYSDEC will approach the PRPs to implement the selected remedy under an Order on Consent.

The following is the chronological enforcement history of this site.

<u>Date</u>	<u>Index No.</u>	<u>Subject of Order</u>
7/26/89	W3-0224-87-04	Investigation/IRM

SECTION 6: SUMMARY OF THE REMEDIAL GOALS AND SELECTED ACTION

The selected remedy for any site should, at a minimum, eliminate or mitigate all significant threats to the public health or the environment presented by the hazardous waste present at the site. The State believes that the remediation already completed at this site, which is described in section 4.2 Interim Remedial Measures, accomplishes this objective.

Based upon the results of the previous investigations and the IRMs that have been performed at the site, the NYSDEC is proposing no further action with continued groundwater monitoring as the preferred remedial alternative for the site. Groundwater samples would be collected from select monitoring wells at the site and tested for site-related parameters. Biannual groundwater monitoring would continue for no less than two years to ensure continued effectiveness of the IRMs performed at the site. These groundwater quality data will be evaluated to determine the need for additional monitoring and reactivation of the IRMs. The Department would also reclassify the site from a Class 2 to a Class 4 on the New York State Registry of Inactive Hazardous Waste Disposal Sites. A class 4 site is a site that has been properly closed but requires continued operation, maintenance, and/or monitoring.

**Table 1
Nature and Extent of Contamination**

MEDIA	CLASS	CONTAMINANT OF CONCERN	CONCENTRATION RANGE	FREQUENCY of EXCEEDING SCGs	SCG
Groundwater (ppb)	Volatile Organic Compounds (VOCs)	Trichloroethene	ND to 1,570	38 of 103	5
		1,1,1-Trichloroethane	ND to 220	22 of 103	5
		Tetrachloroethene	ND to 14	14 of 103	5
		1,2-Dichloroethene	ND to 200	13 of 103	5
		1,1-Dichloroethane	ND to 7.2	2 of 103	5
		Benzene	ND to 13	3 of 103	1
		Xylene	ND to 5.5	1 of 103	5
Soils (ppm)	Volatile Organic Compounds (VOCs)	Acetone	ND to 0.820	3 of 14	0.200
		1,1,1-Trichloroethane	ND to 1.100	1 of 14	0.800
		Xylene	ND to 1.400	1 of 14	1.200

Note: The concentrations reflect historically high values.

Table 2
Trends in Groundwater Contamination Concentrations (ppb)

W-1(14' to 24')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	ND	ND	-	-	-	-	-	-	-	-	-
TCA	ND	ND	-	-	-	-	-	-	-	-	-

Auger refusal at 19', roller bit to 24'

W-2 (5' to 15')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	34	68	-	7.3	-	ND	3	1.3	ND	-	1.1
TCA	ND	ND	ND	ND	-	ND	1.7	ND	0.5	-	8

MW-3 (replaced by W-12, a recovery well)

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	1570	880	200	200	58	61	65	35	33	-	20
TCA	3.8	ND	210	55	22	7	15	7.1	7.2	-	3.7
DCE	5.7	ND	23	28	1.2	ND	1.5	1.4	ND	-	1
PCE	7.6	9.9	7.6	14	3.9	4	3.4	1.8	2.6	-	1.8

MW-3 was screened from 9' to 29' but was destroyed and replaced w/ W-12 in 12/90
W-12 is screened from 20' to 40' in sand and gravel, auger refusal at 40'

W-3 Recovery Well (49' to 59')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	ND	350	-	230	51	64	24	32	32	-	14
TCA	ND	6.1	-	14	11	8	5.3	6.8	6.4	-	2.8
DCE	ND	7.3	-	3.4	9	ND	ND	1.8	1	-	ND

W-4 (26' to 36')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	ND	160	-	7.3	8.8	8	4.3	3	4.4	-	2.2
DCE	ND	200	-	1.9	8.4	ND	4.6	4.3	4.2	-	1.1

W-5 (29' to 44')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>3/95</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	-	ND	-	3.9	3.9	19	13	19	14	6.7	11	9.2
DCE	-	1.9	-	47	52	2	120	130	92	35	50	74
PCE	-	ND	-	5	2.7	13	7.2	13	12	ND	10	8.2
DCA	-	7.2	-	3	ND	ND	0.5	0.5	ND	ND	ND	1.5

W-7 (13' to 23')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	220	270	-	52	22	31	11	10	11	-	11
TCA	ND	1.4	-	44	15	9	5.3	4.5	4	-	2.4

W-8 (7' to 17')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	-	ND	-	-	-	-	-	-	-	-	-
TCA	-	ND	-	-	-	-	-	-	-	-	-

W-9 (47' to 57')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>
TCE	-	ND	-	ND
TCA	-	6	-	3.4

Well destroyed during construction in 1992.

W-10 (29' to 39')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	-	1.4	-	-	-	-	-	-	-	-	-
TCA	-	ND	-	-	-	-	-	-	-	-	-

W-11 (9' to 20')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	-	ND	-	-	-	-	-	-	-	-	-
TCA	-	ND	-	-	-	-	-	-	-	-	-

W-13 (17' to 40')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	-	-	-	ND	ND	ND	ND	ND	ND	-	ND
TCA	-	-	-	ND	ND	ND	ND	ND	ND	-	ND
PCE	-	-	-	1.6	1.3	ND	1.2	0.9	1.3	-	1.0

Auger refusal at 40'

W-14 (21' to 45')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	-	-	-	ND	ND	ND	ND	ND	ND	-	ND
TCA	-	-	-	ND	ND	ND	ND	ND	0.8	-	ND
PCE	-	-	-	ND	ND	ND	0.8	ND	0.8	-	ND

Auger refusal at 45'

W-15 (7' to 20')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	-	-	-	ND	ND	ND	ND	ND	ND	-	ND
TCA	-	-	-	ND	ND	ND	ND	ND	ND	-	ND
PCE	-	-	-	1.0	ND	ND	ND	ND	1.5	-	ND

PM-1 Bedrock

	<u>5/87</u>	<u>3/88</u>	<u>6/98</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>3/95</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	-	-	-	-	-	-	-	0.8	ND	1	ND	ND
TCA	-	-	-	-	-	-	-	ND	ND	1.2	ND	ND

ND: not detected

'-' : not analyzed

Table 3
Groundwater Contamination Concentrations Before and After IRMs (ppb)

Groundwater Extraction and Treatment System:

W-2 (5' to 15')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	34	68	-	7.3	-	ND	3	1.3	ND	-	1.1
TCA	ND	ND	ND	ND	-	ND	1.7	ND	0.5	-	8

MW-3 (replaced by W-12, a recovery well)

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	1570	880	200	200	58	61	65	35	33	-	20
TCA	3.8	ND	210	55	22	7	15	7.1	7.2	-	3.7
DCE	5.7	ND	23	28	1.2	ND	1.5	1.4	ND	-	1
PCE	7.6	9.9	7.6	14	3.9	4	3.4	1.8	2.6	-	1.8

MW-3 was screened from 9' to 29' but was destroyed and replaced w/ W-12 in 12/90
W-12 is screened from 20' to 40' in sand and gravel, auger refusal at 40'

W-3 Recovery Well (49' to 59')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	ND	350	-	230	51	64	24	32	32	-	14
TCA	ND	6.1	-	14	11	8	5.3	6.8	6.4	-	2.8
DCE	ND	7.3	-	3.4	9	ND	ND	1.8	1	-	ND

W-4 (26' to 36')

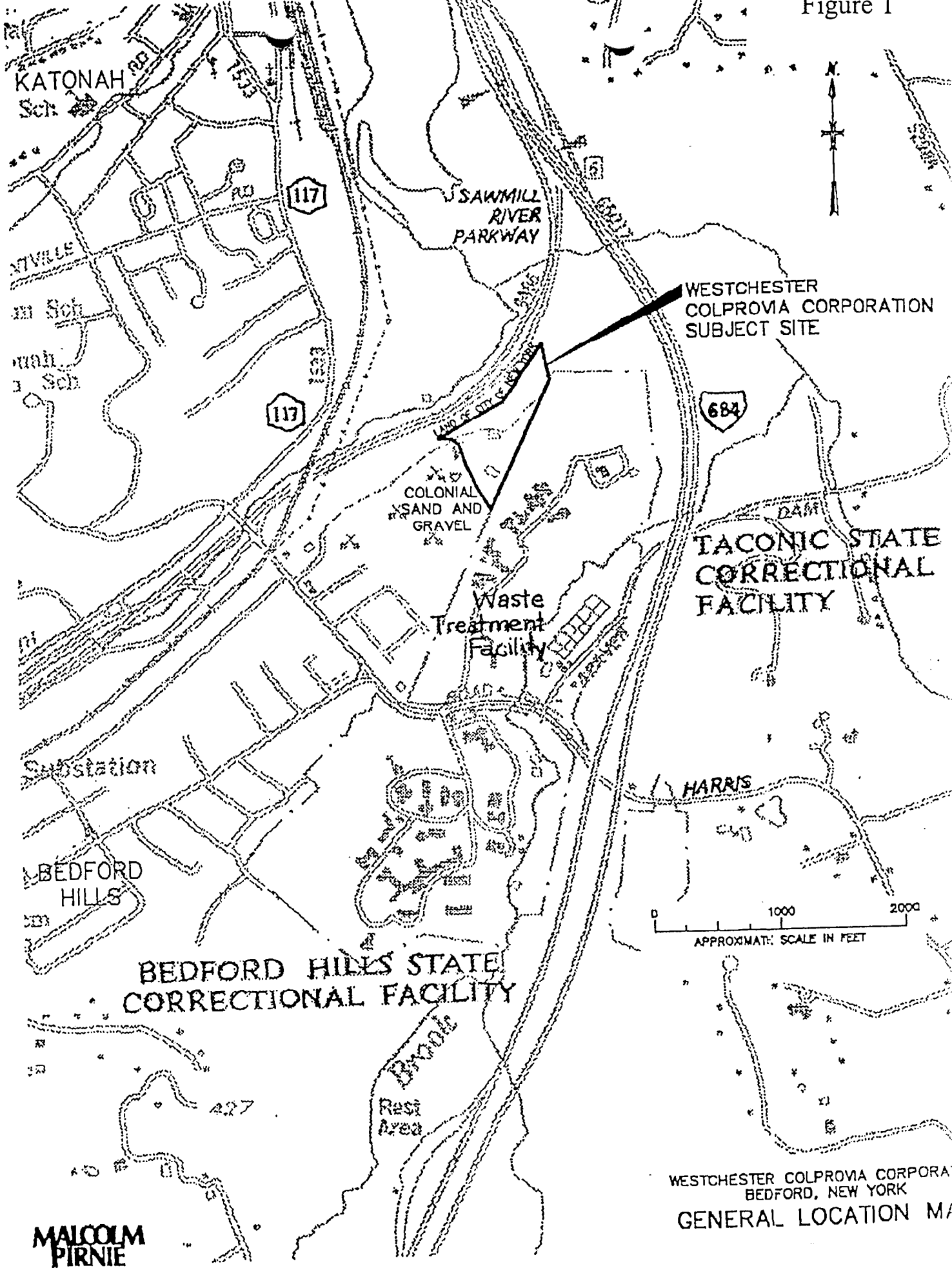
	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	ND	160	-	7.3	8.8	8	4.3	3	4.4	-	2.2
DCE	ND	200	-	1.9	8.4	ND	4.6	4.3	4.2	-	1.1

Soil Vapor Extraction and Air Sparging System:

W-5 (29' to 44')

	<u>5/87</u>	<u>3/88</u>	<u>6/89</u>	<u>1/91</u>	<u>6/92</u>	<u>7/93</u>	<u>4/94</u>	<u>8/94</u>	<u>3/95</u>	<u>8/95</u>	<u>2/96</u>	<u>5/96</u>
TCE	-	ND	-	3.9	3.9	19	13	19	14	6.7	11	9.2
DCE	-	1.9	-	47	52	2	120	130	92	35	50	74
PCE	-	ND	-	5	2.7	13	7.2	13	12	ND	10	8.2
DCA	-	7.2	-	3	ND	ND	0.5	0.5	ND	ND	ND	1.5

Figure 1

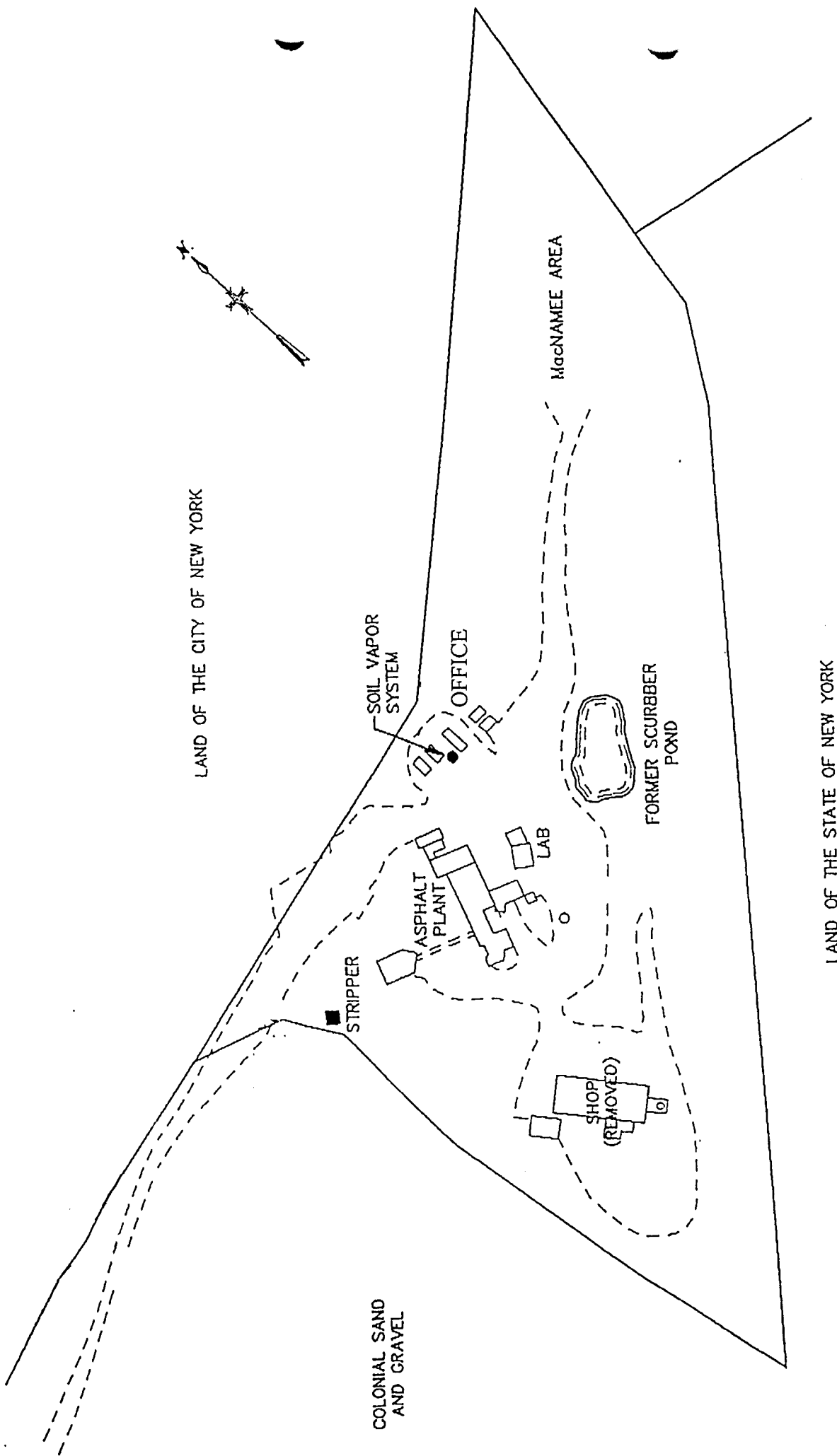


WESTCHESTER COLPROVA CORPORATION
 BEDFORD, NEW YORK
 GENERAL LOCATION MAP

MALCOLM
 PIRNIE

Figure 2

WESTCHESTER COLPROVIA CORPORATION
BEDFORD, NEW YORK



LEGEND

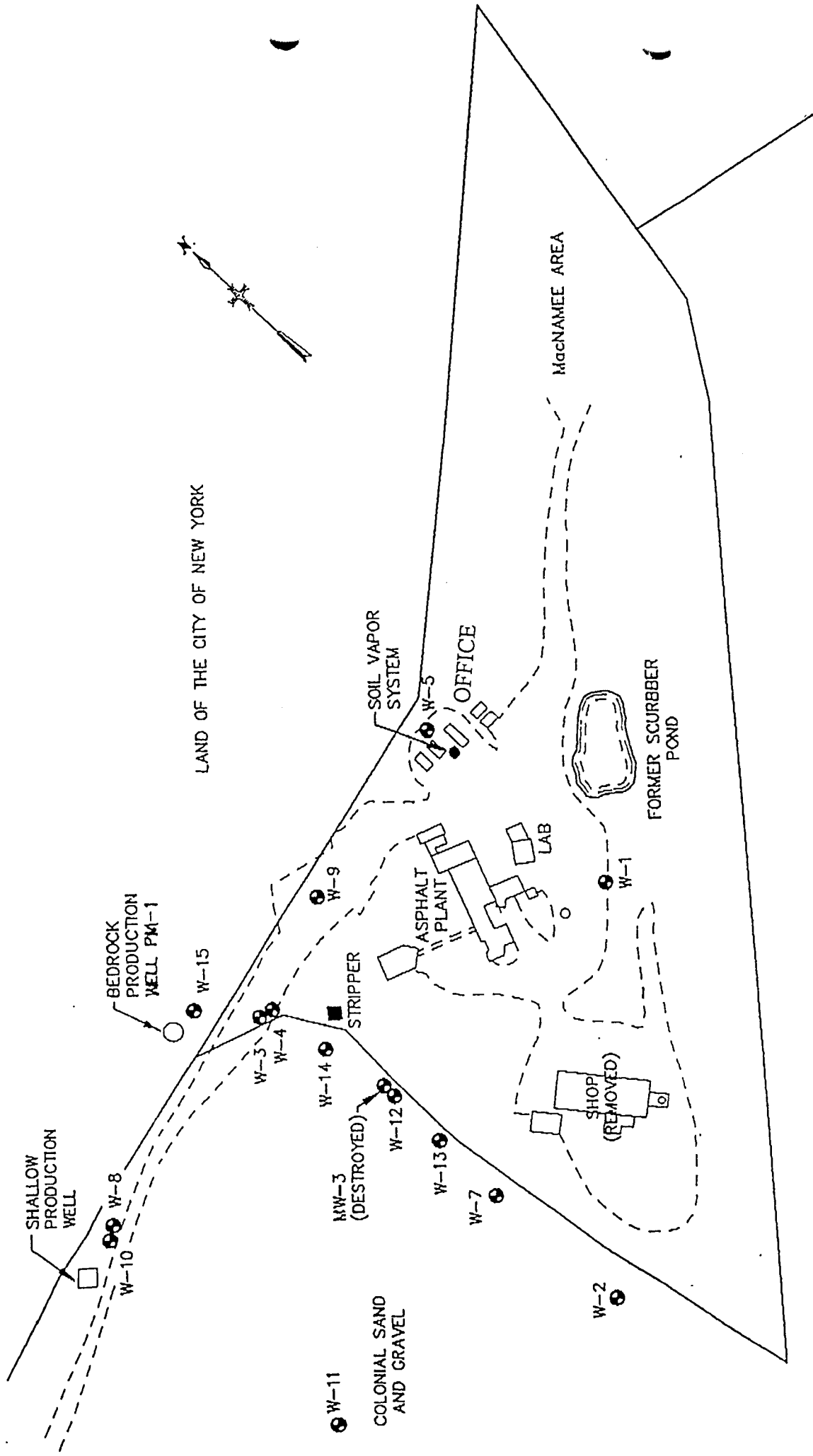
--- PAVED AREA/ROADS

0 100
SCALE IN FEET



Figure 3

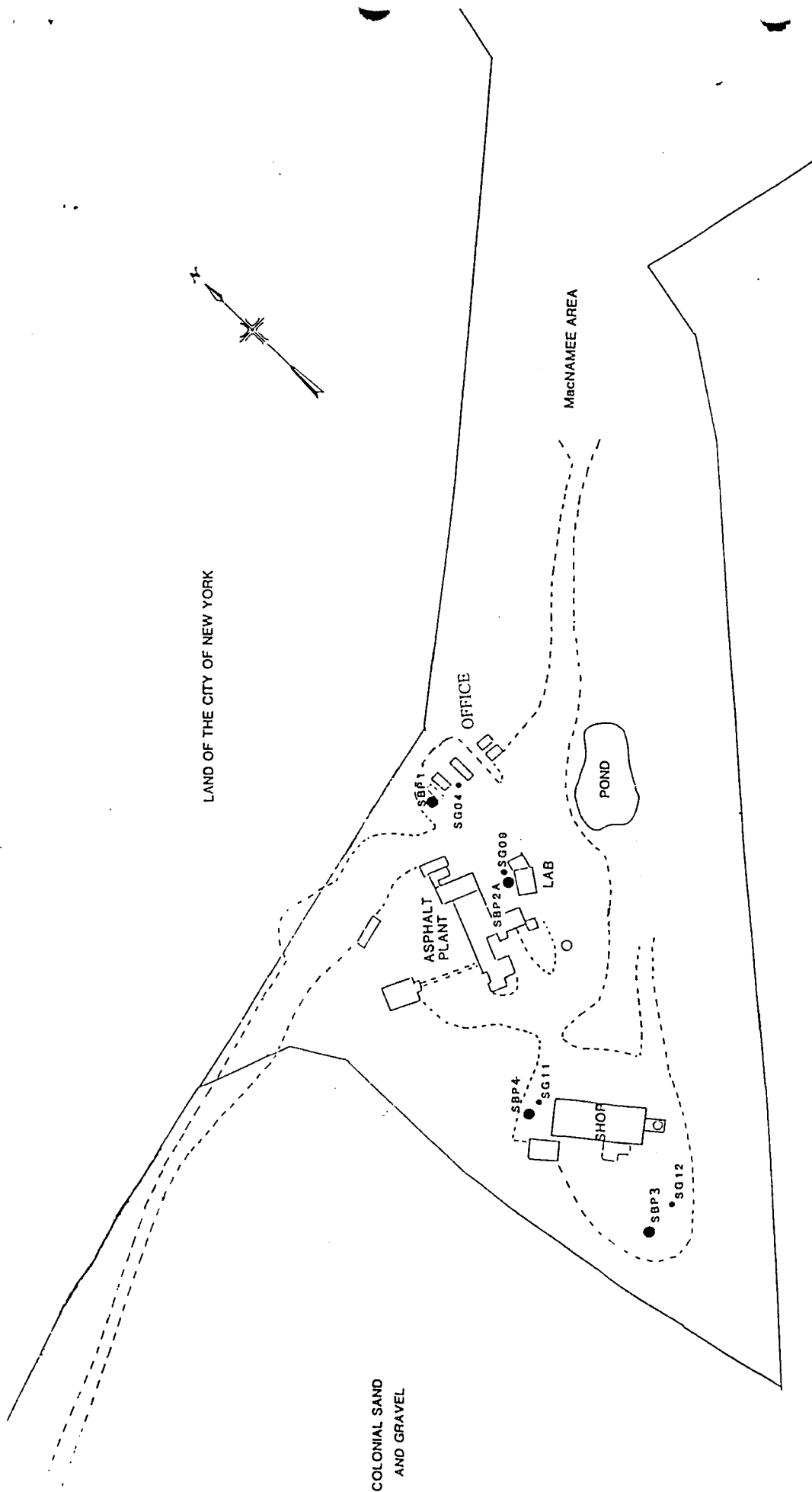
WESTCHESTER COLPROVA CORPORATION
BEDFORD, NEW YORK
WELL LOCATION MAP



- LEGEND**
- MONITORING WELL LOCATION
 - PAVED AREA/ROADS

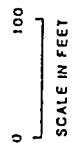
MALCOLM

Figure 4



LEGEND

- ● MONITORING WELL LOCATION
- SOIL BORING LOCATION
- SOIL GAS SAMPLING LOCATION



LAND OF THE STATE OF NEW YORK

WESTCHESTER COLPROVIA CORPORATION
BEDFORD, NEW YORK

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Toxic Substance Assessment
2 University Place - Room 240
Albany, New York 12203
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