ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE I INVESTIGATION

Air Techniques, Inc. Site No. 130040
Town of Oyster Bay Nassau County

DATE: December 1989

Prepared for:

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233
Thomas C. Jorling, *Commissioner*

Division of Hazardous Waste Remediation
Michael J. O'Toole, Jr., P.E., *Director*

By:

Lawler, Matusky & Skelly Engineers

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES IN THE STATE OF NEW YORK PHASE I INVESTIGATIONS

AIR TECHNIQUES, INC.
Town of Oyster Bay
Nassau County
Site No. 130040

Prepared For:

DIVISION OF HAZARDOUS WASTE REMEDIATION
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road
Albany, New York 12233-7010

Prepared By:

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Pearl River, New York 10965

December 1989

LMSE-89/0551&576/021

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CHAPTER 1

EXECUTIVE SUMMARY

Air Techniques, Inc., located in unincorporated Hicksville, Town of Oyster Bay, Nassau County, New York (Figure 1-1), has been a manufacturer of dental equipment since 1979. The site is located in a densely populated section of Long Island. Surrounding the site are commercial/industrial buildings to the north and south. A playground and small pond are located in Cantiague Park, approximately 1000 ft east of the site. Residential buildings are directly west of the site.

On 28 December 1986, while excavating for an addition on the east wall of the Air Techniques building, construction personnel discovered four buried drums. The company contacted the Nassau County Department of Health (NCDOH). Mr. Allan Fitzgerald of NCDOH gave the contractors permission to remove the drums and surrounding soil. Subsequently, 12 to 14 additional drums were excavated on 7 January 1987. Twelve to 14 more were found on 16 March 1987 and excavated 5 ft from the original drum location. These drums and surrounding soil were also removed. Twenty-eight to 32 drums in all were excavated. Samples collected by NCDOH, the New York State Department of Environmental Conservation (NYSDEC), and ERM-Northeast (environmental consultants hired by Air Techniques) revealed various volatile organics, metals, and PCBs. The waste removal company, Chemical Management Corporation of Farmingdale, New York, removed both sets of drums and surrounding soil.

Lawler, Matusky & Skelly Engineers (LMS) inspected the site on 2 February 1989 as part of a Phase I investigation (Figure 1-2 and Photos 1-1 to 1-3). The addition was built, and there was no sign of an environmental hazard.

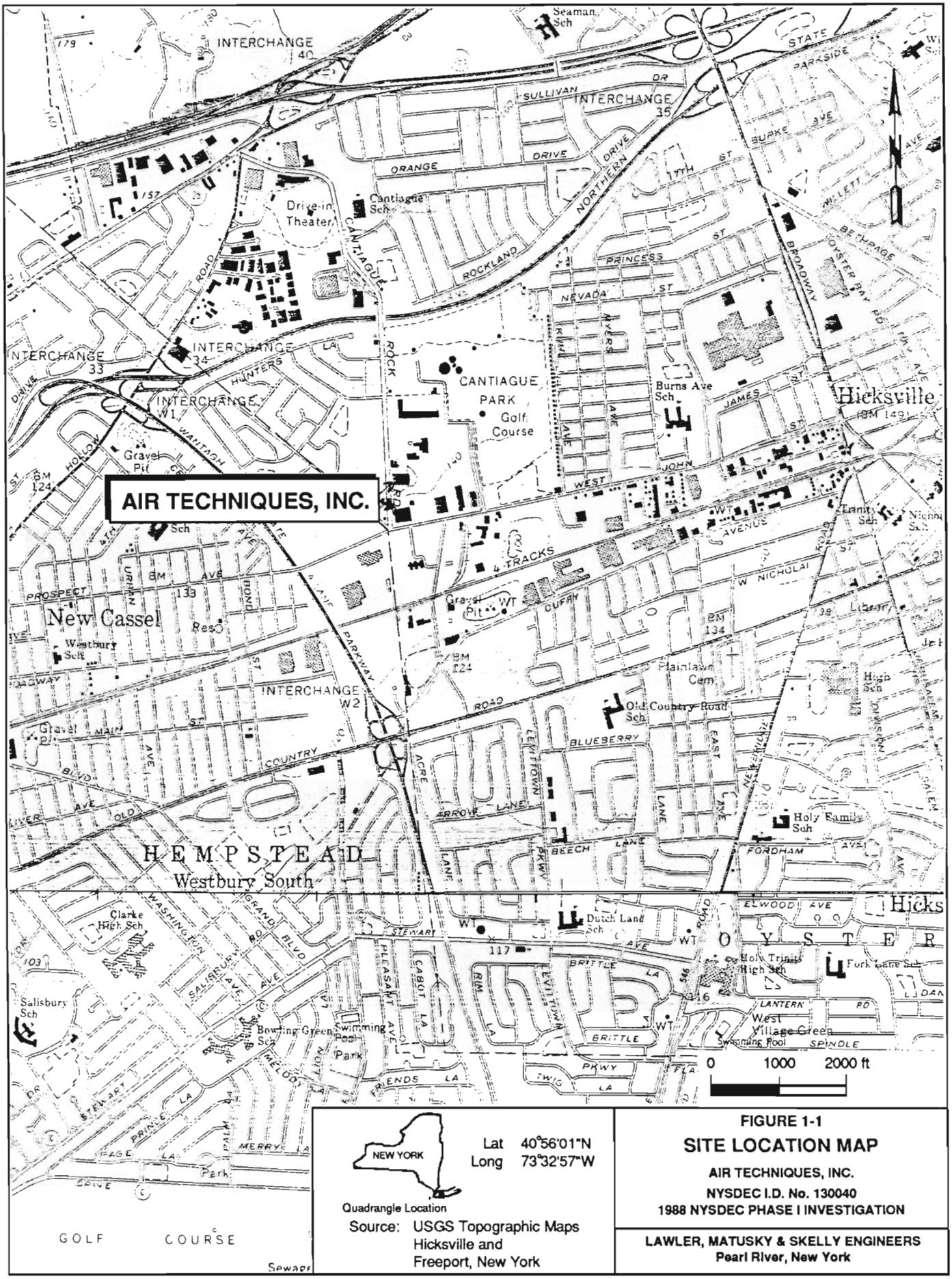
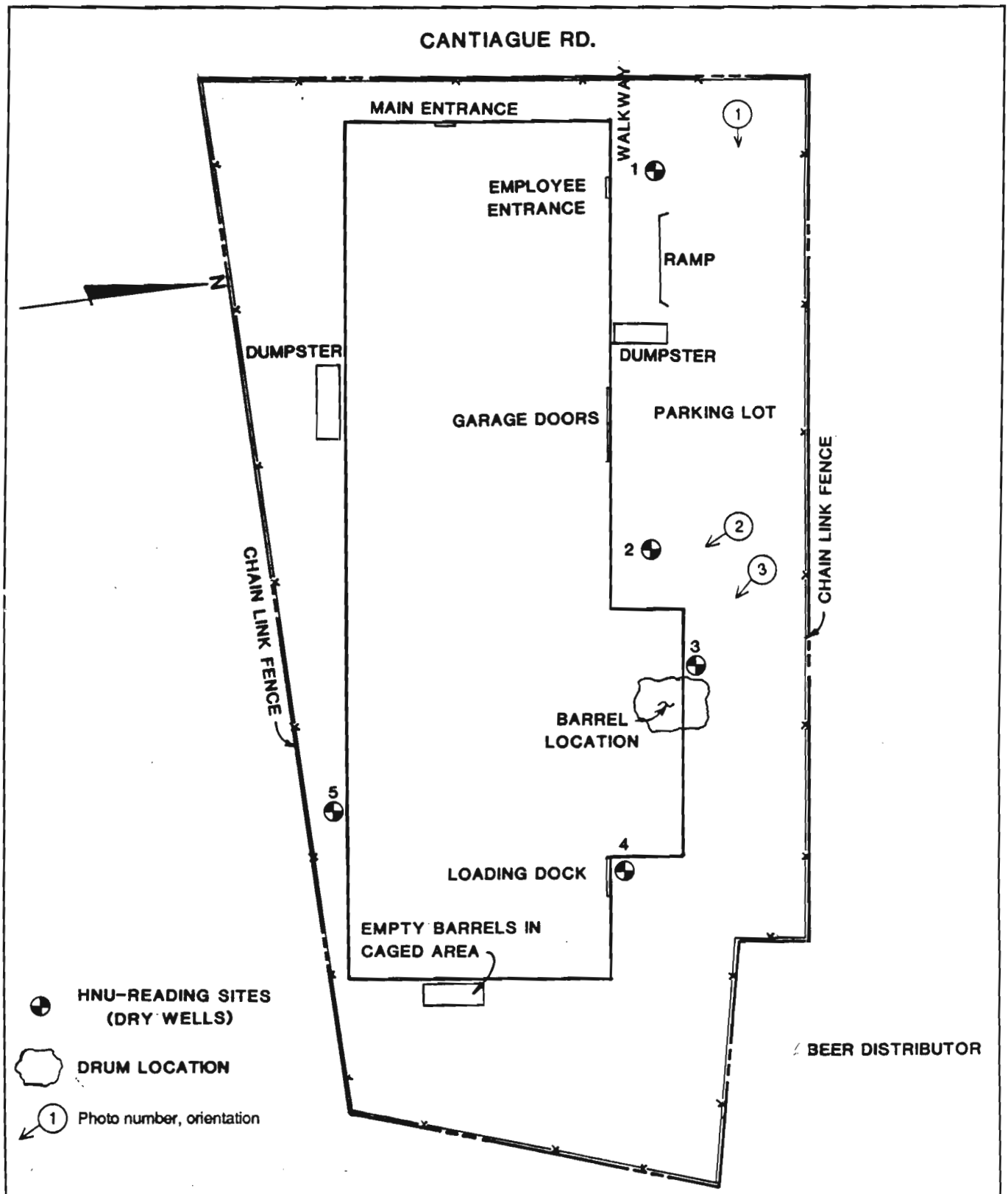


FIGURE 1-1

SITE LOCATION MAP

AIR TECHNIQUES, INC.
NYSDEC I.D. No. 130040
1988 NYSDEC PHASE I INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York



Approximate Scale: 1" = 80'

1988 NYSDEC PHASE I INVESTIGATION	FIGURE 1-2 SITE SKETCH - 2 February 1989
LAWLER, MATUSKY & SKELLY ENGINEERS Pearl River, New York	Air Techniques, Inc. NYSDEC I.D. No. 130040

PHOTO 1-1 - Air Techniques, Inc. Looking east at building's northern edge (at right in photo) and property line (chain link fence on left).

PHOTO 1-2 - Air Techniques, Inc. Looking southeast at building addition. The drums were excavated from area just beyond left side of photo.

PHOTO 1-3 - Air Techniques, Inc. Looking southeast at building addition overlaying area where drums were discovered and excavated.

During the Phase I effort, information on the site was compiled from Federal, state, county, and municipal offices as well as private concerns. General information on the area was obtained from the LMS library, an inspection of the site, and interviews with personnel associated or acquainted with the site's history and/or operations. All of the material collected was reviewed to prepare this report, which provides a history, preliminary assessment, and preliminary score of the site based on the U.S. Environmental Protection Agency's (EPA) Hazard Ranking System (HRS).

EPA uses the HRS to apply uniform technical judgment in evaluating the relative hazards presented by the sites being considered for Federal Superfund remediation. HRS addresses only relative hazard. It does not assess the feasibility, desirability, or degree of cleanup required, and does not address all potential environmental or health impacts.

Under the HRS three numerical scores are computed for each site to express the relative risk or danger from the site, taking into account the population at risk; the hazardous potential of substances found at the site; the potential for contamination of drinking water supplies, for direct human contact, and for destruction of sensitive ecological systems; and other appropriate factors. The three scores are:

- S_M, reflecting the potential for harm to humans or the environment from migration of a hazardous substance from the facility by groundwater (S_{GW}), surface water (S_{SW}), or air (S_A). It is a composite of separate scores for each of the three routes.

- S_{FE}, reflecting the potential for harm from substances that can explode or cause fires.

- S_{DC}, reflecting the potential for harm from direct contact with hazardous substances at the facility.

Fire and explosion (S_{FE}) and direct contact (S_{DC}) are also scored numerically, but are not considered in the final HRS score.

Based on preliminary information gathered from this investigation, the Air Techniques site was scored as follows:

$S_M = 28.29$ ($S_{GW} = 48.72$; $S_{SW} = 4.78$
$S_A = 0$)

S_{FE} = not scored $S_{DC} = 0.00$

At the time the drums were discovered, NCDOH sampled only the liquid in the drums and surrounding soil. The following recommendations would assist in developing a more accurate HRS S_M score and assess environmental site conditions:

- Groundwater sampling and analysis
- Nearby surface water sampling and analysis

Although no groundwater samples were collected and limited soil samples were analyzed, there is evidence of a potential risk to the environment. It is recommended that NYSDEC begin a Phase II investigation with, at a minimum:

- A review of data from the nearby General Instrument Superfund site, to be used if applicable, as well as the entire additional study conducted by ERM
- A soil gas survey to define any contaminant plume present on- or off-site.
- Drilling of upgradient and downgradient wells and collection of water samples to define any plume
- Sampling of nearby surface water to determine whether upwelling is occurring
- A full data package for all samples collected during various drum removals; collection of addi-

tional soil boring samples to be analyzed for full Target Compound List (TCL) priority pollutants

CHAPTER 2

PURPOSE

The Air Techniques, Inc., site is listed in NYSDEC's Inactive Hazardous Waste Disposal Site Registry as a Class 2a site. This is a temporary classification indicating the inadequacy of data and information to properly assign the site to one of five other active classes or to delist the site.

A Phase I site investigation is intended to provide (1) a preliminary assessment of hazardous substances present at the site, pollutant migration pathways, and the population or resources that might be affected by pollutants from the site; (2) observations of past disposal practices; and (3) information on those responsible for the wastes at the site.

The objectives of this Phase I investigation were to:

- Review appropriate agency files to determine site history and collect and summarize pertinent analytical data.
- Inspect the site for existing conditions and any visible signs of environmental damage.
- Complete a preliminary HRS score.
- Prepare a summary report.

This information is used to determine whether there is a threat to the environment; where appropriate, further actions or investigations are recommended.

CHAPTER 3

SCOPE OF WORK

Files from appropriate agencies were reviewed to collect information about the site. Table 3-1 lists the agency and site contacts.

LMS conducted a site inspection on 2 February 1989 to document existing environmental conditions, prepare a site sketch, and investigate the existence and possible migration pathways of contaminants at the site. The weather during the site inspection was sunny and clear, with gusty winds. The temperature was 52°F. No snow or ice was observed. Air monitoring was performed during the site inspection with an HNU photoionization detector (PID) and an explosimeter (Exotox 40). No unusual odors were detected at the site. Table 3-2 summarizes the monitoring results. Figure 1-2 shows the sampling locations.

TABLE 3-1

SITE CONTACTS

Air Techniques, Inc. NYSDEC I.D. No. 130040

CONTACT	RESULT
EPA Region II 26 Federal Plaza New York, NY 10278 Permits Administration Branch Michael Sorrano 212-264-9880	No file
Site Investigation Section Jeffrey Gaal 212-264-6668	No file
Edison, NJ 08837 Sandy Hansen 201-906-6808	No file
NYSDEC Central Office 50 Wolf Road Albany, NY 12233 Michael Komoroske 518-457-0639	File reviewed
NYSDEC Region 1 SUNY Campus Building 40 Stony Brook, NY 11794 Anthony Candella 516-751-7900	File reviewed
Nassau County Health Department 240 Old Country Road Mineola, NY 11501 Joe Schecter 516-535-2406	File reviewed
Air Techniques, Inc. 70 Cantiague Rock Road Hicksville, NY 11802 Harry Nagel 516-433-7676	Site contact present during inspection and provided site history.

TABLE 3-2

LMS SITE INSPECTION AIR QUALITY DATA

Air Techniques, Inc. NYSDEC I.D. No. 130040

TIME	LOCATION	METER	MEASUREMENT
0940	Parking lot south of building Drywell 1	HNU Exotox	HNU - 0.2 ppm O_2 - 20.2% LEL - 0.0 ppm H_2S - 0.0 ppm
0945	Drywell on left side of building Drywell 2	HNU Exotox	HNU - 0.2 ppm O_2 - 20.9% LEL - 0.0 ppm H_2S - 0.0 ppm
0946	Buried drum site	HNU Exotox	HNU - 0.2 ppm O_2 - 20.9% LEL - 0.0 ppm H_2S - 0.0 ppm
0947	Drywell 3	HNU Exotox	HNU - 0.2 ppm O_2 - 20.9% LEL - 0.0 ppm H_2S - 0.0 ppm
0955	North side of building Drywell 5	HNU Exotox	HNU - 0.2 ppm O_2 - 20.9% LEL - 0.0 ppm H_2S - 0.0 ppm

HNU - Photoionization detector.
O_2 - Oxygen.
LEL - Lower explosive limit (EXP on meter).
H_2S - Hydrogen sulfide (TOX on meter).

CHAPTER 4

SITE ASSESSMENT

4.1 SITE HISTORY

The Air Techniques, Inc., site is located in unincorporated Hicksville, Town of Oyster Bay, Nassau County, New York. It is approximately 5 acres in size, and is bordered by commercial and industrial buildings. A manufacturer of dental equipment, Air Techniques has been in existence since 1979. Sylvania Corporation, which developed the property in 1957 and manufactured uranium rods, sold the property to Dewiant Co. in 1972. What Dewiant manufactured is unknown. Dewiant sold the property to Air Techniques in 1979 (Ref. 1, Appendix A).

On 28 December 1986, while excavating a foundation for an addition to the existing building, construction personnel discovered buried 55-gal drums. Air Techniques notified NCDOH, which notified NYSDEC. Mr. Allan Fitzgerald of NCDOH gave permission for the excavation to continue. Four drums were excavated at that time. On 7 January 1987 12 to 14 more drums were excavated. An additional 12 to 14 were excavated on 16 March (Ref. 2, pp. 2-2 and 2-3, Appendix A). Twenty-eight to 32 drums in all were excavated at the site.

ERM-Northeast, consultants for Air Techniques, Inc., conducted a geophysical survey to determine whether there were additional buried drums (Ref. 2, pp. 4-4 and 4-5, Appendix A). Two anomalous areas were identified, and additional investigations were proposed. The report detailing the additional investigation was not identified during the Phase I file reviews, only a data table (see Section 4.4).

quickly. Some small streams flow southward north of the site area, but they disappear when they reach the outwash plain. The amount of infiltration is limited by urban development.

4.2.2 Environmental Setting

Air Techniques is located in a densely populated section of Hicksville. The site is on Cantiague Rock Road, which runs north and south and is lined with commercial and industrial buildings. Cantiague Park is approximately 1000 ft east and features a small pond and playground.

West John Street lies to the south, the Northern State Parkway to the north. West John Street runs east and west and is mostly commercial and industrial.

West of the site are Barry and Laura drives, which are residential streets. The Long Island Railroad is located approximately 1000 ft to the south. There are no wetlands within 3 miles of the site.

4.3 SITE HYDROGEOLOGY

4.3.1 Soils

The soils in the area of the Air Techniques site are classified as Haven-Variant association soils (Ref. 4, Appendix A). These soils are deep and well drained and are characteristic of the nearly level glacial outwash plain. They develop under prairie or grassland conditions. The upper soils of the Haven-Variant association (0 to 25 in.) are moderately permeable (0.6 to 2.0 in./hr) loam or silty loam. The subsoils (25 to 27 in.) are gravelly sandy loam or gravelly loamy sand with rapid permeability (>6.0 in./hr). The loamy material is underlain by stratified sand and gravel with

highly permeable, stratified, fine-to-coarse sand and gravel with some clay and silt lenses. It is approximately 220 ft thick and unconformably overlies the bedrock surface.

4.3.2.2 Bedrock. The depth to bedrock under the Air Techniques' site is approximately 1000 ft. The bedrock surface slopes very gently (50 ft per mile) to the southeast. Bedrock on Long Island is composed of Precambrian crystalline, metamorphic, and igneous rocks, primarily biotite- and muscovite-schist, gneiss, and granite. The upper part of the bedrock is a weathered zone of unknown thickness. Although it contains some water-bearing joints and fractures, the bedrock forms a relatively impermeable boundary at the base of the Raritan Formation (Ref. 3, Appendix A).

4.3.3 Groundwater

Groundwater consists of the Pleistocene and Cretaceous sedimentary sequences (Ref. 5, Appendix A). The upper limit of the combined aquifers is the water table; the lower boundary, the Precambrian bedrock surface. The water table in the vicinity slopes generally southward from a local high near Jericho, about 2 miles north of the site. The water table elevation under the site, based on nearby observation wells, is about 75 to 80 ft above mean sea level, at a depth of about 60 ft below the surface.

The principal aquifer on Long Island comprises the Pleistocene sediments below the water table and the Magothy Formation. The lower limit of the principal aquifer is the upper surface of the Raritan Clay member. This aquifer is generally unconfined, with an overall moderate permeability. Degree of confinement increases with depth because of stratification and the presence of discontinuous silt and clay lenses. The greatest permeability is in the Pleistocene deposits and in the basal 100 to 150 ft of the Magothy.

were detected (Table 4-1). The volatile organic analyses (Table 4-1) show tetrachloroethylene (3600 to 2,600,000 ppb) and trichloroethylene (180 to 780 ppb) as the two principal contaminants. The waste also contains lesser amounts of cis- and trans- 1,2-dichloroethylene (ND to 93 ppb), 1,1,1-trichloroethane (ND to 3 ppb), benzene (ND to 5 ppb), toluene (7 to 81 ppb), xylene (ND to 12 ppb), and ethylbenzene (ND to 4 ppb). The total metals analyses detected arsenic (24,000 and 36,000 ppb), cadmium (6 and 14 ppb), (total) chromium (2800 and 4000 ppb), lead (ND and 40 ppb), selenium (43 and 45 ppb), and silver (170 and 190 ppb). One total metals analysis was not identified in the file reviews.

4.4.2 Soil Quality Data

Soil samples were collected from the drum excavation area and soil borings.

Soil from the initial drum excavation area was collected and analyzed by NCHD on 7 January 1987 (Ref. 8, pp. 1-5, Appendix A) and by NYSDEC on 18 March 1987 (Ref. 8, pp. 6-14, Appendix A). The data (Table 4-2) show tetrachloroethylene (960 to 11,000 ppb) and chloroform (36 ppb). One semivolatile compound, bis(2-ethylhexyl) phthalate, was detected, but its concentration was too low to be reported accurately. Tentatively identified compounds total 160,890 ppb. No pesticides/PCBs were detected. Various total metals were detected in the samples analyzed for metals. Cyanide and pH were also analyzed for. Cyanide was detected (at 1000 ppb). pH did not exceed normal soil variation levels. EP toxicity results did not violate their respective standards.

ERM-Northeast installed five test borings at the site (exact locations unknown). Soil samples were collected at various depths for analysis (Ref. 9, Appendix A). A test pit sample was also col-

TABLE 4-2 (Page 1 of 2)

JANUARY/MARCH SOIL QUALITY DATA

Air Techniques, Inc. NYSDEC I.D. No. 130040

LOCATION LAB I.D. No. AGENCY	6-8 FT BELOW GRADE 870019 NCHD	12-14 FT BELOW GRADE 870020(?) NCHD	DRUM EXCAVATION 17031301 NYSDEC	DRUM EXCAVATION 17031302 NYSDEC
VOLATILE ORGANICS		NAI		NAI
Tetrachloroethylene	11,000		960	
Chloroform	ND		36	
TIC	NAI		ND	
SEMIVOLATILE ORGANICS	NAI	NAI		NAI
Bis(2-ethylhexyl)phthalate			390 J	
TICs				
Unknowns			29,230 J	
Unknown hydrocarbons			7,400 J	
Aldol condensation product			120,000 JB	
4-Methyloctane			3,200 J	
Trichloro methyl propanol isomer			670 JB	
PESTICIDES/PCBs	NAI	NAI	ND	NAI
TOTAL METALS	NAI	NAI		
Tin			8,700 N	ND N
Aluminum			9,450,000 N	9,080,000 N
Barium			43,000	130,000
Calcium			4,500,000	21,300,000
Chromium			13,000	15,000
Copper			120,000(?)	24,000
Iron			12,300,000 N	12,700 E (?)
Magnesium			3,050,000 N	12,600,000 E
Manganese			140,000	128,000

lected for analysis. Those results (Table 4-3) show tetrachloroethylene (110 to 7,800,000 ppb), trans-1,2-dichloroethylene (ND to 1100 ppb), 1,1,1-trichloroethane (ND to 290 ppb), trichloroethylene (ND to 270,000 ppb), and xylene (ND to 410 ppb). Several total metals were detected: barium (1100 to 16,000 ppb), cadmium (ND to 2600 ppb), total chromium (2400 to 120,000 ppb), lead (15,000 to 99,000 ppb), mercury (ND to 210 ppb), and silver (310 to 7900 ppb). No pesticides were detected in any sample. One PCB aroclor (1254) was detected. Concentrations varied from ND to 14,800 ppb.

CHAPTER 5

PRELIMINARY APPLICATION OF THE HAZARD RANKING SYSTEM

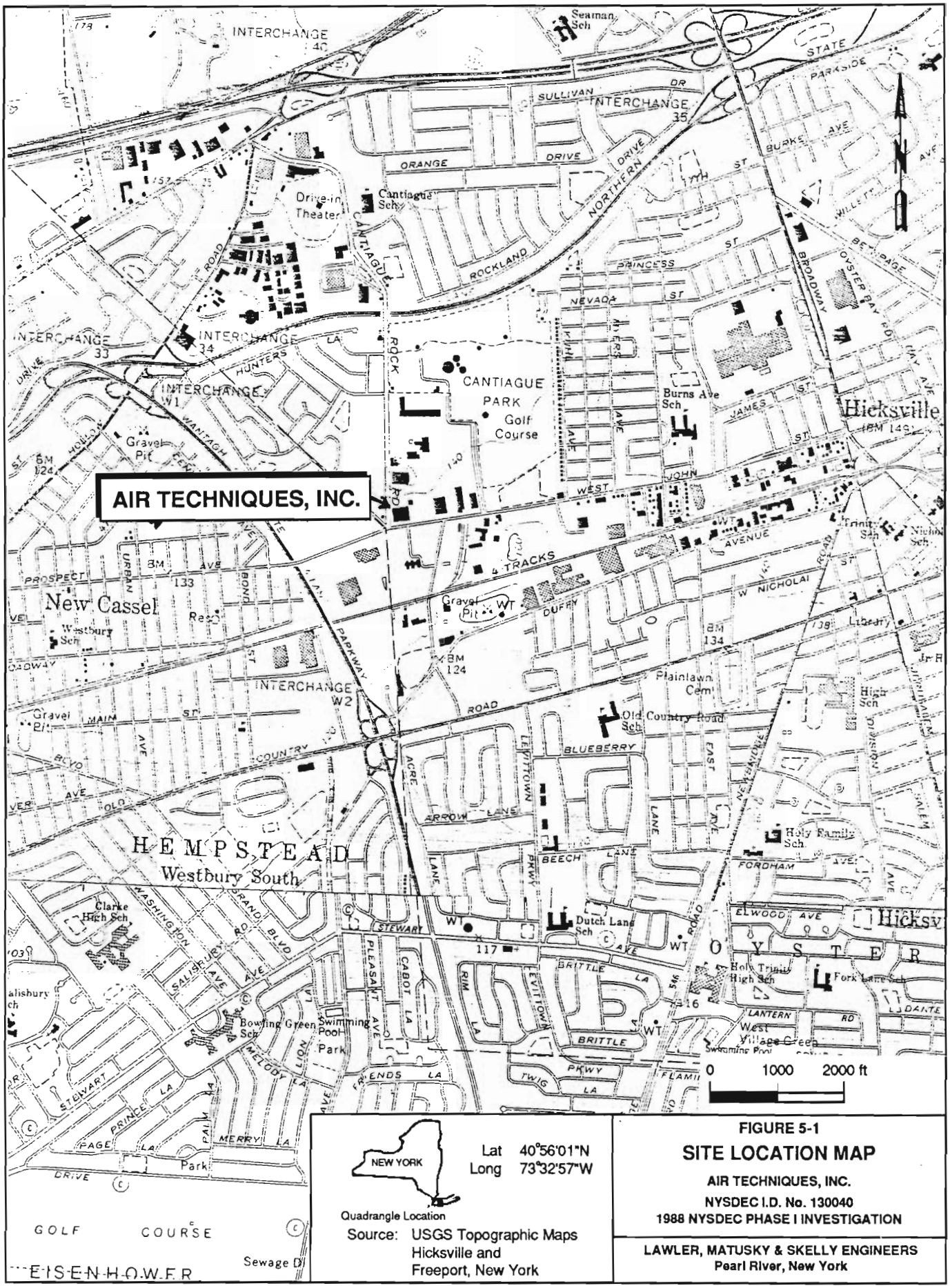
5.1 NARRATIVE SUMMARY

The Air Techniques, Inc., site is located on Cantiague Rock Road in unincorporated Hicksville, Town of Oyster Bay, Nassau County, New York. Air Techniques has been manufacturing dental equipment since 1979.

On 28 December 1986, while excavating for a foundation for an addition to the existing building, construction personnel discovered buried 55-gal drums. In all, between 28 and 32 drums were discovered, excavated, and placed in a lined dumpster along with the surrounding soil. Drums and soil were then removed by Chemical Management Corporation. According to NCHD, NYSDEC, and ERM-Northeast analyses, the drums and soil contain various volatile organics, metals, and PCBs.

The addition was built after laying three 6-mil polyethylene sheets where the drums had been excavated. The site is located in a densely populated urban area. All residents within 3 miles use municipal water. No legal action has occurred to date. The drum excavation and removal costs were approximately $30,000.

5.2 LOCATION MAP



Quadrangle Location

Lat 40°56'01"N
Long 73°32'57"W

Source: USGS Topographic Maps
Hicksville and
Freeport, New York

FIGURE 5-1

SITE LOCATION MAP

AIR TECHNIQUES, INC.

NYSDEC I.D. No. 130040

1988 NYSDEC PHASE I INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

5.3 HRS WORKSHEETS

HRS COVER SHEET

Facility Name: Air Techniques, Inc.

Location: Town of Oyster Bay, Nassau County, New York

EPA Region: I

Person(s) in charge of the facility: Harry Nagel, Air Techniques, Inc.
70 Cantiague Rock Road
Hicksville, NY
516/433-7676

Name of Reviewer: Troy Goodman Date: 9 March 1989

General description of the facility:
(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action; etc.)

Air Techniques, Inc. is a facility for production of dental products. On 28 December 1986, while excavating a foundation to make an addition to the building, buried drums were discovered. Between 28 and 32 drums were excavated and removed from the site. Drums and soils were excavated and the addition was built to existing structure. The soil and waste contained various organic compounds, metals, and PCBs. No groundwater or surface water was sampled. The site is located in a densly populated area of Nassau County, Long Island.

Scores: S_M= 28.29 (S_{GW}= 48.72 S_{SW}= 4.78 S_A= 0)

S_{FE}=not scored

S_{DC}= 0

GROUNDWATER ROUTE WORK SHEET

	RATING FACTOR	ASSIGNED VALUE (circle one)	MULTIPLIER	SCORE	MAXIMUM SCORE	REFERENCE (section)
1	OBSERVED RELEASE	(0) 45	1	0	45	3.1
	If observed release is given a score of 45, proceed to line 4					
	If observed release is given a score of 0, proceed to line 2					
2	ROUTE CHARACTERISTICS					3.2
	Depth of Aquifer of Concern	0 1 (2) 3	2	4	6	
	Net Precipitation	0 1 (2) 3	1	2	3	
	Permeability of the Unsaturated Zone	0 (1) 2 3	1	1	3	
	Physical State	0 1 2 (3)	1	3	3	
	Total Route Characteristics Score			10	15	
3	CONTAINMENT	0 1 2 (3)	1	3	3	3.3
4	WASTE CHARACTERISTICS					3.4
	Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
	Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8	
	Total Waste Characteristics Score			19	26	
5	TARGETS					3.5
	Groundwater Use	0 1 2 (3)	3	9	9	
	Distance to Nearest Well/Population Served	0 4 6 8 10 12 16 18 20 24 30 32 35 (40)	1	40	40	
	Total Targets Score			49	49	
6	If line 1 is 45, multiply 1 X 4 X 5			27,930	57,330	
	If line 1 is 0, multiply 2 X 3 X 4 X 5					
7	Divide line 6 by 57,330 and multiply by 100			S_{GW} = 48.72		

SURFACE WATER ROUTE WORK SHEET

	RATING FACTOR	ASSIGNED VALUE (circle one)	MULTIPLIER	SCORE	MAXIMUM SCORE	REFERENCE (section)
1	OBSERVED RELEASE	(0) 45	1	0	45	4.1
	If observed release is given a value of 45, proceed to line 4					
	If observed release is given a value of 0, proceed to line 2					
2	ROUTE CHARACTERISTICS					4.2
	Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
	1-yr 24-hr Rainfall	0 1 (2) 3	1	2	3	
	Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
	Physical State	0 1 2 (3)	1	3	3	
	Total Route Characteristics Score			9	15	
3	CONTAINMENT	0 1 2 (3)	1	3	3	4.3
4	WASTE CHARACTERISTICS					4.4
	Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
	Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8	
	Total Waste Characteristics Score			19	26	
5	TARGETS					4.5
	Surface Water Use	0 1 (2) 3	3	6	9	
	Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
	Population Served/ Distance to Water Intake Downstream	(0) 4 6 8 10 / 12 16 18 20 / 24 30 32 35 40	1	0	40	
	Total Targets Score			6	55	
6	If line 1 is 45, multiply 1 X 4 X 5 If line 1 is 0, multiply 2 X 3 X 4 X 5			3,078	64,350	
7	Divide line 6 by 64,350 and multiply by 100		S_{sw} =	4.78		

AIR ROUTE WORK SHEET

	RATING FACTOR	ASSIGNED VALUE (circle one)	MULTIPLIER	SCORE	MAXIMUM SCORE	REFERENCE (section)
1	OBSERVED RELEASE	(0) 45	1	0	45	5.1
	DATE AND LOCATION:					
	SAMPLING PROTOCOL:					
	If line 1 is 0, then Sa = 0. Enter on line 5					
	If line 1 is 45, then proceed to line 2					
2	WASTE CHARACTERISTICS					5.2
	Reactivity and Incompatibility	0 1 (2) 3	1	2	3	
	Toxicity	0 1 2 (3)	3	9	9	
	Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8	
	Total Waste Characteristics Score			12	20	
3	TARGETS					5.3
	Population Within 4-Mile Radius	0 9 12 15 18 / 21 (24) 27 30	1	24	30	
	Distance to Sensitive Environment	(0) 1 2 3	2	0	6	
	Land Use	0 1 2 (3)	1	3	3	
	Total Targets Score			27	39	
4	Multiply 1 X 2 X 3			0	35,100	
5	Divide line 4 by 35,100 and multiply by 100		S_A =	0		

WORKSHEET FOR COMPUTING S_M

	S	S^2
GROUNDWATER ROUTE SCORE (S_{GW})	48.72	2373.64
SURFACE WATER ROUTE SCORE (S_{SW})	4.78	22.85
AIR ROUTE SCORE (S_A)	0	0
$S^2_{GW} + S^2_{SW} + S^2_A$		2396.49
$\sqrt{S^2_{GW} + S^2_{SW} + S^2_A}$		48.95
$\sqrt{S^2_{GW} + S^2_{SW} + S^2_A} / 1.73$ (S_M)		28.29

FIRE AND EXPLOSION WORK SHEET

	RATING FACTOR	ASSIGNED VALUE (circle one)	MULTIPLIER	SCORE	MAXIMUM SCORE	REFERENCE (section)
1	CONTAINMENT	(1) 3	1	1	3	7.1
2	WASTE CHARACTERISTICS					7.2
	Direct Evidence	(0) 3	1	0	3	
	Ignitability	(0) 1 2 3	1	0	3	
	Reactivity	(0) 1 2 3	1	0	3	
	Incompatibility	(0) 1 2 3	1	0	3	
	Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8	
	Total Waste Characteristics Score			1	20	
3	TARGETS					7.3
	Distance to Nearest Population	0 1 2 3 4 (5)	1	5	5	
	Distance to Nearest Building	0 1 2 (3)	1	3	3	
	Distance to Sensitive Environment	(0) 1 2 3	1	0	3	
	Land Use	0 1 2 (3)	1	3	3	
	Population Within 2-Mile Radius	0 1 2 3 4 (5)	1	5	5	
	Buildings Within 2-Mile Radius	0 1 2 3 4 (5)	1	5	5	
	Total Targets Score			21	24	
4	Multiply [1] X [2] X [3]			--	1,440	
5	Divide line [4] by 1,440 and multiply by 100		S_{FE} =	not scored		

DIRECT CONTACT WORK SHEET

	RATING FACTOR	ASSIGNED VALUE (circle one)	MULTIPLIER	SCORE	MAXIMUM SCORE	REFERENCE (section)
1	OBSERVED INCIDENT	(0) 45	1	0	45	8.1
	If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2	ACCESSIBILITY	(0) 1 2 3	1	0	3	8.2
3	CONTAINMENT	0 (15)	1	15	15	8.3
4	WASTE CHARACTERISTICS TOXICITY	0 1 2 (3)	5	15	15	8.4
5	TARGETS					8.5
	Population Within a 1-Mile Radius	0 1 2 3 4 (5)	4	20	20	
	Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
	Total Targets Score			20	32	
6	If line 1 is 45, multiply 1 X 4 X 5 If line 1 is 0, multiply 2 X 3 X 4 X 5			0	21,600	
7	Divide line 6 by 21,600 and multiply by 100		S_{DC} =	0		

5.4 HRS DOCUMENTATION RECORDS

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: Air Techniques, Inc.

LOCATION: Town of Oyster Bay, Nassau County, New York

DATE SCORED: 8 March 1989

PERSON SCORING: Troy Goodman

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

NYSDEC Region I, Stony Brook, NY

Nassau County Department of Health, Mineola, NY

Harry Nagel, Manager/Manufacturing Engineer, Air Techniques, Inc.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

S_{FE} - No direct field evidence exists. A state or local fire marshal has not certified the site a fire or explosion threat.

COMMENTS OR QUALIFICATIONS:

GROUNDWATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

According to available information, groundwater has not been sampled.

Rationale for attributing the contaminants to the facility:

N/A

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

The Upper Pleistocene aquifer is the first aquifer encountered below grade, but is not used as drinking water. The Magothy aquifer beneath it, however, is used for drinking water. There is no known continuous confining layer between the two aquifers. Therefore, for HRS scoring purposes, these units are considered to be one hydrogeologic unit.
Ref. 1

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

60 ft
Ref. 1

Depth from the ground surface to the lowest point of waste disposal/storage:

17 ft

Depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern (subtract the above figures):

43 ft. In the 21 to 75 ft category.
Assigned Value = 2

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

44 in.
Ref. 2

Mean annual lake or seasonal evaporation (list months for seasonal):

30 in.
Ref. 3

Net precipitation (subtract the above figures):

14 in.
Assigned Value = 2

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Haven-Variant Association - moderately permeable loam or silty loam.
Ref. 4

Permeability associated with soil type:

10^{-5} - 10^{-7} cm/sec
Assigned Value = 1

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Liquid
Ref. 5
Assigned Value = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Containers leaking and no liner or incompatible liner.
Ref. 5

Method with highest score:

As above
Assigned Value = 3

* * *

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Compounds	T/P Matrix Value	Reference
Tetrachloroethylene	18	6, p. 3
Trichloroethylene	12	6, p. 3
Cadmium	18	6, p. 11
Chromium (Total)	18	6, p. 11
Lead	18	6, p. 11
Mercury	18	7, p. 4
Silver	18	6, p. 7
Zinc	18	7, p. 11
PCBs	18	
Aroclor 1254	18	8

Compound with highest score:

All
Assigned Value = 18

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (give a reasonable estimate even if quantity is above maximum):

28 to 32 drums

Basis of estimating and/or computing waste quantity:

28 to 32 drums were excavated from the site. In the 1 to 40 drum category.
Ref. 5
Assigned Value = 1

* * *

5 TARGETS

Groundwater Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Drinking water. No municipal water from alternate sources available.
Refs. 9 and 10
Assigned Value = 3

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

0.25 miles NE. In the less than 2000 ft category.
Ref. 10
Assigned Value = 4

Distance to above well or building:

As above

Population Served by Groundwater Wells Within a 3-Mile Radius

Identified water supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

Well	Population Served
Bowling Green Water District	12,000
Hicksville Water District	58,000
Jericho Water District	64,000
Old Westbury Village	3,100
Westbury Water District	20,050
Total	157,150

Ref. 11

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

3710
Land is irrigated by groundwater.
Ref. 12

Total population served by groundwater within a 3-mile radius:

160,860. In the greater than 10,000 category.
Assigned Value = 5
Matrix Value = 40

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

According to available data, surface water has not been sampled.

Rationale for attributing the contaminants to the facility:

N/A

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Slope is relatively flat, 0-3%.
Ref. 13
Assigned Value = 0

Name/description of nearest downslope surface water:

Unnamed body of water located north of Old Country Road and south of site about 3000 ft (0.57 miles).
Ref. 13

Average slope of terrain between facility and above-cited surface water body in percent:

0.6% slope
Assigned Value = 0
Matrix Value: 0

Is the facility located either totally or partially in surface water?

No
Ref. 13

Is the facility completely surrounded by areas of higher elevation?

No
Ref. 13

1-Year 24-Hour Rainfall in Inches

2.75 in. In the 2.1 to 3.0 category.
Ref. 2
Assigned Value = 2

Distance to Nearest Downslope Surface Water

3000 ft. In the 1000 ft to 1 mile category.
Ref. 14
Assigned Value = 2

Physical State of Waste

Liquid
Ref. 5
Assigned Value = 3

* * *

3 CONTAINMENT

Method(s) of waste or leachate containment evaluated:

The waste was buried between 3 and 6 ft below grade.
Containers were leaking, with no containment structures or diversion.
Assigned Value = 3
Piles covered, waste unconsolidated, diversion or containment systems not adequate.
Assigned Value = 1

Method with highest score:

Containers were leaking, with no containment structures or diversion.
Refs. 5 and 9
Assigned Value = 3

* * *

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Compounds	T/P Matrix Value	Reference
Tetrachloroethylene	18	6, p. 3
Trichloroethylene	12	6, p. 3
Cadmium	18	6, p. 11
Chromium (Total)	18	6, p. 11
Lead	18	6, p. 11
Mercury	18	7, p. 4
Silver	18	6, p. 7
Zinc	18	7, p. 11
PCBs	18	
Aroclor 1254	18	8

Compound with highest score:

All
Assigned Value = 18

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (give a reasonable estimate even if quantity is above maximum):

28 to 32 drums

Basis of estimating and/or computing waste quantity:

28 to 32 drums were excavated from the site.
In the 1 to 40 drum category.
Ref. 5
Assigned Value = 1

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

No downstream surface water use is listed. However, a nearby pond may be used for recreational purposes.
Ref. 15
Assigned Value = 2

Is there tidal influence?

No
Ref. 13

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Greater than 2 miles.
Ref. 14
Assigned Value = 0

Distance to 5-acre (minimum) freshwater wetland, if 1 mile or less:

Greater than 1 mile.
Ref. 14
Assigned Value = 0

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

The New York State-endangered plant *Agalinis acuta* is found within 1 mile of the site. As, the last reported sighting was in 1919, in an area that is now urbanized, it is unlikely still to be present. However, the plant does not have Federal endangered legal status.
Ref. 16
Assigned Value = 0

Population Served by Surface Water

Location(s) of water supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

No known intakes, and population served by surface water is zero.
Ref. 11
Assigned Value = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

No land irrigated with surface water.
Ref. 12

Total population served:

Zero
Assigned Value = 0

Name/description of nearest of above water bodies:

None

Distance to above-cited intakes, measured in stream miles:

No intakes

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

No analytical data available at time drums were discovered or excavated. LMS site visit on 2 February 1989 detected no change above background.
Assigned Value = 0
$S_A = 0$

Date and location of detection of contaminants:

N/A

Methods used to detect the contaminants:

N/A

Rationale for attributing the contaminants to the site:

N/A

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Trans-1,2 dichloroethylene
Ref. 8
Assigned Value = 2

Most incompatible pair of compounds:

None
Refs. 9 and 17
Assigned Value = 0

Toxicity

Most toxic compound:

Trichloroethylene, metals, or PCBs.
Ref. 9
Assigned Value = 3

Hazardous Waste Quantity

Total quantity of hazardous waste:

28 to 32 drums

Basis of estimating and/or computing waste quantity:

28 to 32 drums were excavated from the site.
In the 1 to 40 drum category.
Ref. 5
Assigned Value = 1

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi	0 to 1 mi	0 to 1/2 mi	0 to 1/4 mi
Pop. = 203,182	Pop. = 24,096	Pop. = 3184	Pop. = 8
Value = 21	Value = 24	Value = 24	Value = 18

Ref. 18
Assigned Value = 24

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Greater than 2 miles.
Ref. 14
Assigned Value = 0

Distance to 5-acre (minimum) freshwater wetland, if 1 mile or less:

Greater than 1 mile.
Ref. 14
Assigned Value = 0

Distance to critical habitat of an endangered species, if 1 mile or less:

The New York State-endangered plant Agalinis acuta is found within 1 mile of the site. As the last reported sighting was in 1919, in an area that is now urbanized, it is unlikely still to be present. However, this plant does not have Federal endangered legal status.
Ref. 16
Assigned Value = 0

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Adjacent to site. In the less than 0.25 mile category.
Ref. 13
Assigned Value = 3

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Eisenhower Memorial Park is just inside the 2 mile limit to the south of the site.
Ref. 14
Assigned Value = 1

Distance to residential area, if 2 miles or less:

0.2 miles north. In the less than 0.25 mile category.
Refs. 13 and 14
Assigned Value = 0

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Greater than 1 mile
Ref. 14
Assigned Value = 0

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Unknown

Is a historic or landmark site (National Register of Historic Places and National Natural Landmarks) within view of the site?

No
Review of National Register (New York section).

FIRE AND EXPLOSION

1 CONTAINMENT

Hazardous substances present:

There is no fire or explosion threat, based on field observations. A state or local fire marshal has not certified the site as a fire or explosion threat. Therefore, this section not scored.

Type of containment, if applicable:

Drums have been removed.
Ref. 5
Assigned Value = 1

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

No instrument reading
Assigned Value = 0

Ignitability

Compound used:

Tetrachloroethylene
Ref. 17. However, the drums were removed. Therefore:
Assigned Value = 0

Reactivity

Most reactive compound:

The drums were removed. Therefore, no reactive compounds remain in the drum excavation area. So:
Assigned Value = 0

Incompatibility

Most incompatible pair of compounds:

The drums were removed. Therefore, no incompatible compounds remain.
Assigned Value = 0

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

28 to 32 drums

Basis of estimating and/or computing waste quantity:

28 to 32 drums were excavated from the site. In the 1 to 40 drum category.
Ref. 5
Assigned Value = 1

* * *

3 TARGETS

Distance to Nearest Population

On-site. In the 0 to 50 ft category.
Refs. 13 and 14
Assigned Value = 5

Distance to Nearest Building

Building overlies excavated area. In the 0 to 50 ft category.
Ref. 13
Assigned Value = 3

Distance to Sensitive Environment

Distance to wetlands:

Greater than 100 ft
Ref. 14
Assigned Value = 0

Distance to critical habitat:

The New York State-endangered plant Agalinis acata is found within 0.5 miles of the site. As the last reported sighting was in 1919, in an area that is now urbanized, it is unlikely still to be present. However, this plant does not have Federal endangered legal status.
Ref. 16
Assigned Value = 0

Land Use

Distance to commercial/industrial area, if 1 mile or less:

The site is used for commercial/industrial purposes. In the less than 0.25 mile category.
Ref. 13
Assigned Value = 3

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Eisenhower Memorial Park is just within the 2 mile limit to the south of the site.
Ref. 14
Assigned Value = 1

Distance to residential area, if 2 miles or less:

0.2 miles north. In the less than 0.25 mile category.
Refs. 13 and 14
Assigned Value = 3

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Greater than 1 mile
Ref. 14
Assigned Value = 0

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Unknown.

Is a historic or landmark site (National Register of Historic Places and National Natural Landmarks) within view of the site?

No
Review of National Register (New York section)

Population Within 2-Mile Radius

71,809. In the greater than 10,000 category.
Ref. 18
Assigned Value = 5

Buildings Within 2-Mile Radius

18,897. In the greater than 2600 category.
Ref. 18
Assigned Value = 5

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

The drummed waste was removed. There is no possibility of a direct contact hazard and there have been no reported incidents.
Assigned Value = 0

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

The drummed waste was removed and the building completed. Therefore, a barrier exists between the drum excavation area and the surface.
Ref. 13
Assigned Value = 0

* * *

3 CONTAINMENT

Type of containment, if applicable:

The drums were both sealed and unsealed.
Ref. 5
Assigned Value = 15

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Compounds	Toxicity Value	Reference
Tetrachloroethylene	3	6, p. 3
Trichloroethylene	3	6, p. 3
Cadmium	3	6, p. 11
Chromium (Total)	3	6, p. 11
Lead	3	6, p. 11
Mercury	3	7, p. 4
Silver	3	6, p. 7
Zinc	3	7, p. 11
PCBs	3	
Aroclor 1254	3	8

Compound with highest score:

All
Ref. 9
Assigned Value = 3

* * *

3 TARGETS

Population Within One-Mile Radius

24,098. In the greater than 10,000 category.
Ref. 18
Assigned Value = 5

Distance to Critical Habitat (of endangered species)

The New York State-endangered plant Agalinus acuta is found within 0.5 miles of the site. As the last reported sighting was in 1919, in an area that is now heavily urbanized, it is unlikely still to be present. However, this plant does not have Federal endangered legal status.
Ref. 16
Assigned Value = 0

5.5 HRS REFERENCES

HRS REFERENCES

[1] Isbister, J. 1966. Geology and hydrology of northeastern Nassau County, Long Island, New York. Geological Survey Water-Supply Paper 1825. U.S. Government Printing Office, Washington, DC, pp. 39-42.

[2] U.S. Department of Commerce. 1963. Rainfall frequency atlas of the United States. Technical Paper No. 40. Prepared for U.S. Department of Agriculture, Soil Conservation Service.

[3] U.S. Department of Commerce. 1979. Climatic atlas of the United States. National Climatic Center, Asheville, NC.

[4] Soil Conservation Service. 1976. General soil map, Nassau County, NY. Prepared for Suffolk County Soil and Water Conservation District, July 1976, p. 51 (Ref. 4, Appendix A, this report).

[5] ERM-Northeast. 1987. Site investigation (Ref. 2, Appendix A, this report).

[6] 1987 analytical data (Ref. 7, Appendix A, this report).

[7] January/March 1987 soil quality data (Ref. 8, Appendix A, this report).

[8] ERM soil sample analytical data (Ref. 9, Appendix A, this report).

[9] U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. 1982. Uncontrolled hazardous waste site ranking system - a users manual.

[10] Conversation with Hicksville water supply supervisor (Ref. 6, Appendix A, this report).

[11] New York State Department of Health, Division of Environmental Protection. 1982. New York State atlas of community water system sources. pp. 76 - 77.

[12] Conversation with Nassau County Cooperative Extension.

[13] Lawler, Matusky & Skelly Engineers. Site visit 2 February 1987 (Chapter 3, this report).

[14] U.S. Department of Interior. 1952. Hicksville quadrangle, NY. 7.5-minute series, topographic geological survey (Figure 5-1, this report).

HRS REFERENCES CITED
(Continued)

[15] 6 NYCRR Part 885.

[16] New York State Department of Environmental Conservation. Significant Habitat Unit file review.

[17] Sax, N.I., R.J. Lewis, Sr. 1989. Dangerous Properties of Industrial Materials, 7th ed. New York: Van Nostrand Rheinhold, pp. 50, 3191-3192, 3287, 3329-3330.

[18] House count.

REFERENCE 1

Geology and Hydrology of Northeastern Nassau County Long Island, New York

By JOHN ISBISTER

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1825

Prepared in cooperation with the Nassau County Department of Public Works and the New York State Water Resources Commission

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1966

With the exception of Cedar Swamp Creek, all the north-flowing streams of the area drain watersheds which are under virtually natural conditions. An estimate of the amount of direct runoff to the north can be obtained by analysis of the daily-discharge hydrographs of the gaged streams. The hydrograph for Mill Neck Creek at Mill Neck is representative of flow under natural conditions because its watershed includes mostly large estates, which have few buildings and paved areas. Direct runoff varies according to the amount and intensity of the precipitation and ranges from about 1 to 9 percent of the total annual discharge. The mean annual direct runoff is estimated to be 4 percent of the annual discharge of Mill Neck Creek.

Cedar Swamp Creek at Glen Cove drains an area extensively developed by man. Storm sewers in the city of Glen Cove empty into the lower reaches of this stream. The discharge is very flashy and responds to precipitation more quickly and with greater magnitude than does the discharge of Mill Neck Creek. Estimated direct runoff ranges from 2 to 16 percent of the annual discharge. The estimated mean annual rate of direct runoff is 7 percent of the annual total discharge of Cedar Swamp Creek.

The combined topographic drainage area of 10 north-flowing streams which were gaged or measured (table 9) is about 37 square miles. The combined average discharge includes about 0.8 mgd of direct runoff, or about 0.02 mgd per sq mi. A 9-square-mile area, which was not gaged, is assumed to possess characteristics of infiltration similar to those of the gaged area. Therefore, direct runoff in the 46-square-mile area of northeastern Nassau County drained by north-flowing streams averages about 1 mgd during a normal year. (See table 11.)

GROUND WATER

GENERAL PRINCIPLES

The unconsolidated deposits contain a zone of aeration and an underlying zone of saturation. The zone of aeration is the unsaturated zone between the land surface and the water table. The water table is the upper limit of the unconfined ground water. The zone of aeration contains some soil water, intermediate vadose water, and capillary fringe water (Meinzer, 1923, p. 29–39), none of which is available to wells. The zone of aeration also contains water moving down to the water table by gravity. Soil water is discharged by evaporation and plant use; intermediate vadose water is held between the belt of soil water and the capillary fringe by molecular attraction. Water in the capillary fringe is drawn upward from the zone of saturation or is held against the pull of gravity just above that zone

by capillary action. Intergranular spaces in the zone of aeration are saturated only intermittently as water moves downward through it to replenish the ground water. Intergranular spaces in the deposits in the zone of saturation are continuously saturated with ground water.

The ground-water reservoir in northeastern Nassau County is composed of saturated beds of unconsolidated sediments. Igneous and metamorphic basement rocks, which have a relatively low permeability, form the lower boundary of the reservoir. Perched water is held temporarily in zones of saturation above the main water table in deposits underlain by clay and till north of the Ronkonkoma terminal moraine and by Cretaceous silts and clays elsewhere.

The entire ground-water reservoir is a single hydraulic system in which the more permeable zones, which yield usable amounts of water to wells or springs are termed aquifers, and the less permeable zones, which retard the movement of ground water, are termed aquicludes. The boundaries of hydraulic units may coincide with geologic contacts or may cut across them so that an aquifer or aquiclude may be composed of a part of a geologic formation, an entire formation, several formations, or parts of several formations.

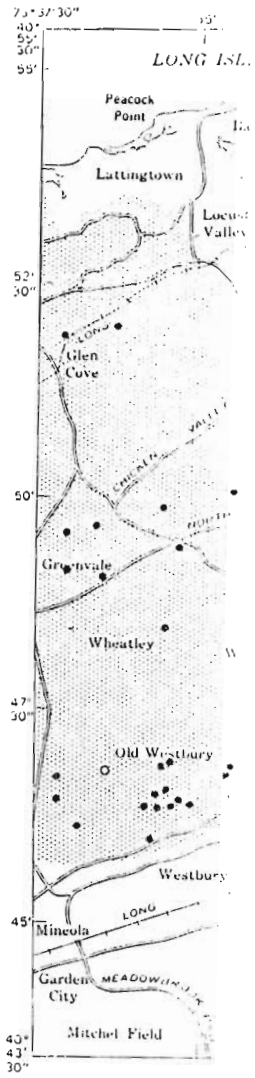
The ground-water reservoir of northeastern Nassau County contains two main aquifers. The principal aquifer is the shallower of the two and includes all the permeable deposits between the water table and the top of the clay member of the Raritan Formation, except that locally the upper surface of the Gardiners Clay constitutes the lower limit of the principal aquifer. The deep confined aquifer occurs between the lower surface of the Raritan clay member or Gardiners Clay and the bedrock.

Ground water moves from points of higher head towards points of lower head at rates which vary directly with the hydraulic gradient and the permeability of the deposits.

PERCHED WATER

Perched ground water occurs in northeastern Nassau County in temporary zones of saturation above and separated from the main zone of saturation. These perched water bodies are generally discontinuous and of small areal extent. North of and in the Ronkonkoma terminal moraine, perched ground water is found at varying depths underlain by beds and lenses of till and clay. In the Bethpage and Woodbury areas perched water occurs above beds of Cretaceous clay and silt. Locations of perched surface and ground water, including those reported by Veatch (1906, pl. 12), are shown on figure 7.

An example of perched water is shown by the data for observation wells N6665 and N6666, approximately 2,700 feet north of North



FIGUI

Hempstead Turnpi
vale (pl. 1). Well
land surface on Ma
etrated about 8 fee
mean sea level, whi
of nearby Cedar S

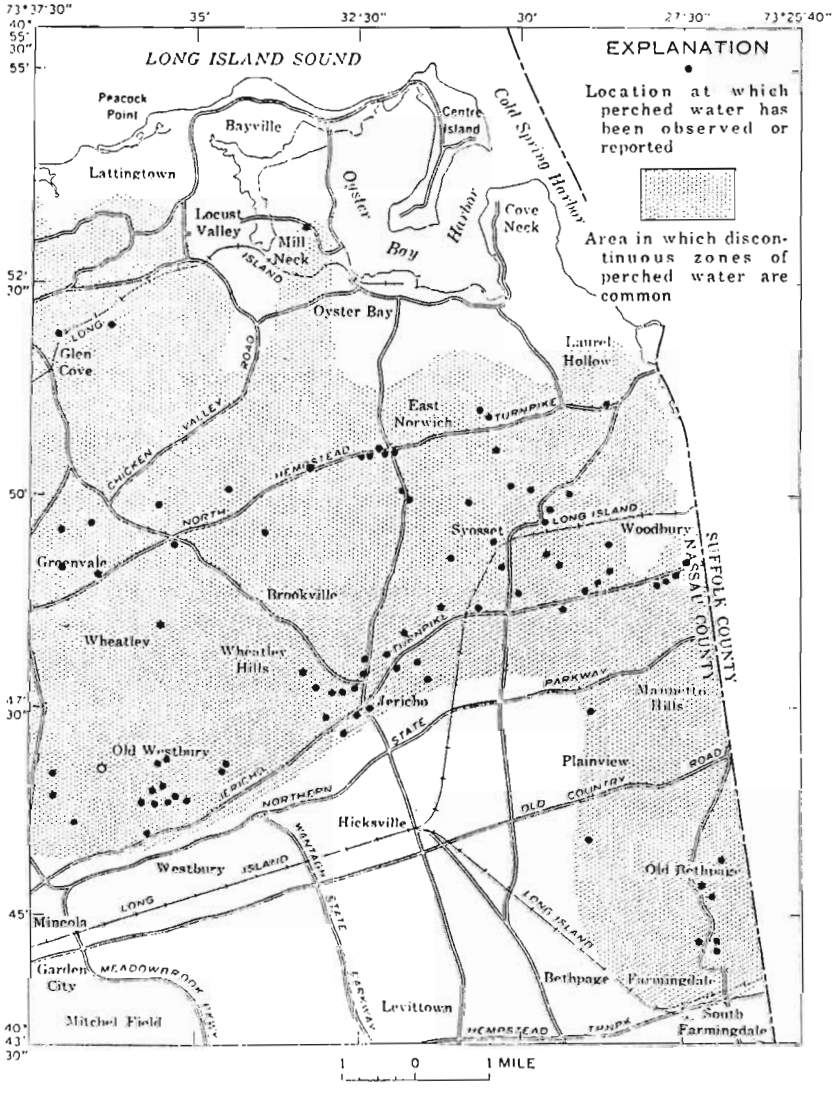


FIGURE 7.—Areal extent of perched water zones.

Hempstead Turnpike and 10 feet west of Cedar Swamp Creek, Greenvale (pl. 1). Well N6665 was driven to a depth of 28.6 feet below the land surface on March 17, 1959. A perched zone of saturation was penetrated about 8 feet below land surface at an altitude of 89 feet above mean sea level, which is the approximate altitude of the water surface of nearby Cedar Swamp Creek. The well driving was more difficult

between depths of 12 to 16 feet below land surface, which suggests the presence of a harder and less permeable zone. Beneath the zone of hard driving, all the water ran out of the well into an unsaturated zone. Water entered the well again when the screen was at a depth of about 20 feet below the land surface. The water level eventually stabilized on March 19 at a depth of 21 feet below land surface or 76 feet above sea level, which was the altitude of the main water table at that time. Well N6666, 1 foot east of well N6665, was driven to a depth of 12.3 feet below the land surface and was terminated in the perched water body. The water level in this well ranged from 89 to 92 feet above mean sea level between March 1959 and January 1961.

Perched water bodies are not used for supply in the report area because the water is especially susceptible to surface contamination, and more reliable and adequate supplies are available at greater depth from the main ground-water reservoir. Dewatering of perched water bodies is commonly necessary during road building and the excavation of large foundations in many parts of the area.

PRINCIPAL AQUIFER

The principal aquifer includes beds of Late Cretaceous and Pleistocene age. The upper limit of the aquifer is the water table, and the clay member of the Raritan Formation forms the relatively impermeable lower boundary in most of the area. The Gardiners and other Pleistocene clays constitute the lower boundary in some deep buried valleys near the north shore. Water occurs in the aquifer both under confined (artesian) conditions and unconfined (water-table) conditions. The upper part of the aquifer contains water under unconfined conditions. The degree of confinement increases with depth and results from stratification and the presence of numerous discontinuous lenses of silt and clay primarily in the Magothy(?) Formation. Individually these lenses do not constitute distinct confining units, but their combined influence through a considerable thickness of formation significantly impedes the vertical movement of ground water.

Although individual wells are screened at nearly all depths in the principal aquifer, two zones are generally more productive than others because of their relatively high permeability. The upper zone is the saturated part of the upper Pleistocene deposits. It ranges in thickness from a few feet to about 200 feet in some of the buried valleys (pl. 3). Some wells screened in the upper Pleistocene deposits yield more than 1,000 gpm and have specific capacities up to 68 gpm per foot of drawdown. The lower zone is the basal 100 to 150 feet of the Magothy(?) Formation. Wells in the basal zone yield water at rates as high as 1,400 gpm, and have specific capacities of 15 to 30 gpm per foot of drawdown.

PRI

Wells screened in locally
Magothy(?) Formation rare
capacities are generally less

NATURAL RE

The principal aquifer is
downward through the zone
it reaches the water table.
about 45 inches a year, but as
it is lost by evapotranspiratic
replenishes the ground-water
mgd per sq mi. The effective
sau County is about 109 squa
charge to the shallow uncon
may be added by influent stre

Infiltration rates are rela
plain where the loamy soil is
deposits. On and north of th
tion is impeded by extensive
land surface. The permeabi
in lithology. It may range
the till is chiefly clay and si
per day per square foot wh
estimates based on values de
the U.S. Geological Survey (

Infiltration and recharge
season. Although precipit
throughout the year, net re
early spring when plant acti
mer and fall, growing plants
if any recharge occurs. Dir
the winter in the relatively b

STORM-W

In densely populated and
water is a problem because
greatly reduced by the works
program for storm-water con
Board of Supervisors autho
charge basins. These basins
and were intended to encour

REFERENCE 2

(11)

U.S. DEPARTMENT OF COMMERCE
LUTHER H. HODGES, Secretary

WEATHER BUREAU
F. W. REICHELDERFER, Chief

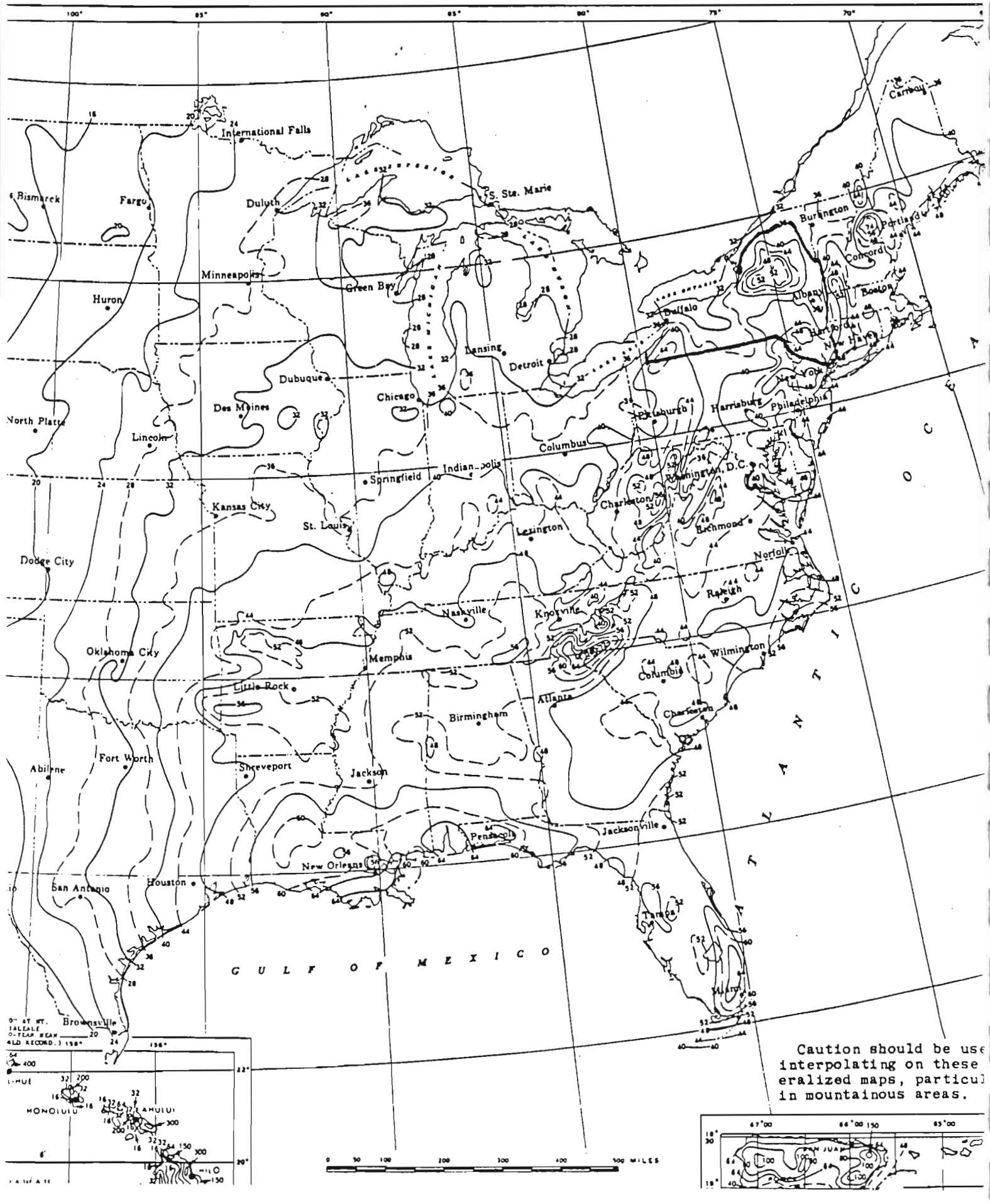
TECHNICAL PAPER NO. 40

RAINFALL FREQUENCY ATLAS OF THE UNITED STATES

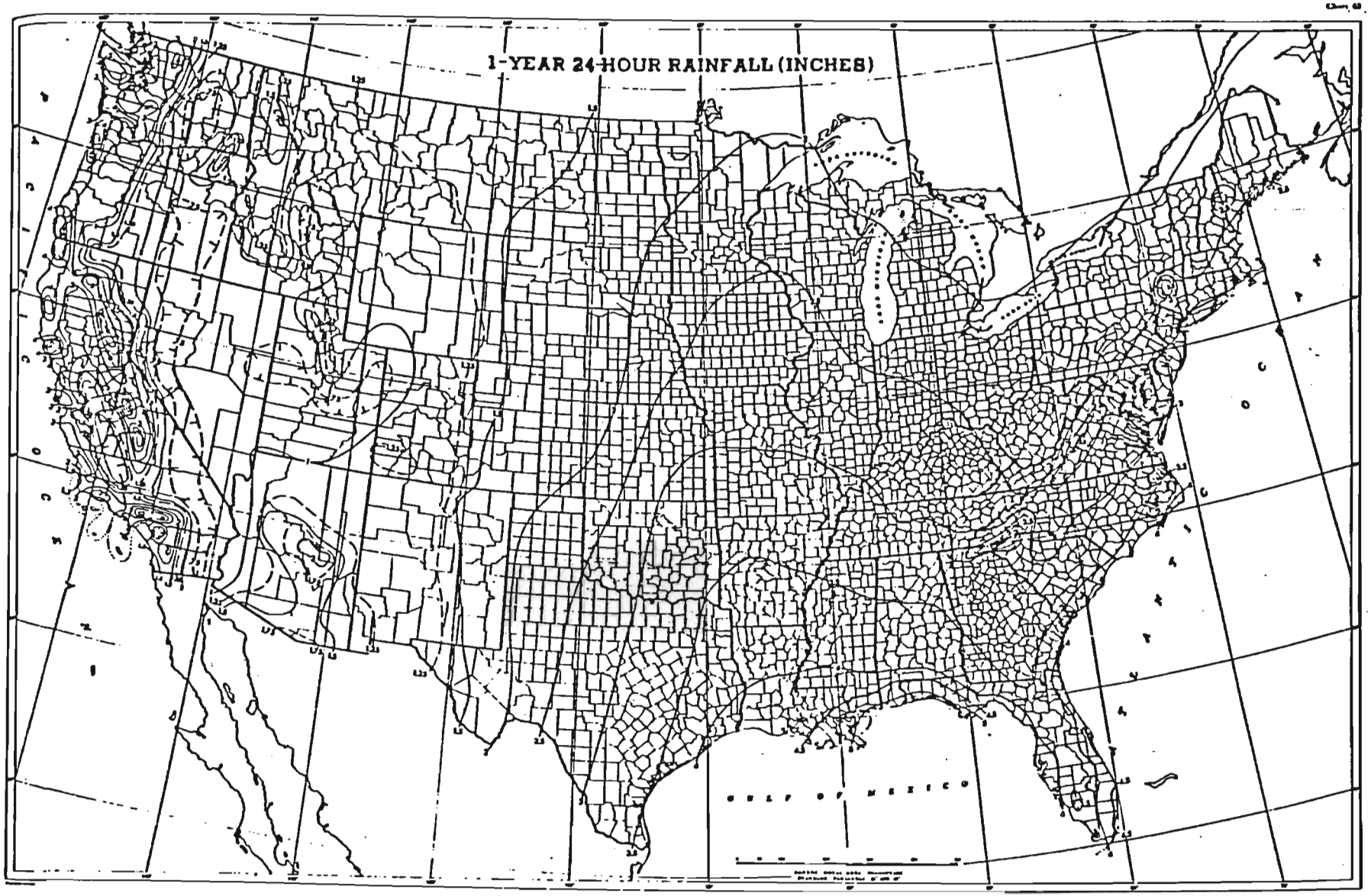
for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years

Prepared by
DAVID M. HERSHFIELD
Cooperative Studies Section, Hydrologic Services Division
for
Engineering Division, Soil Conservation Service
U.S. Department of Agriculture

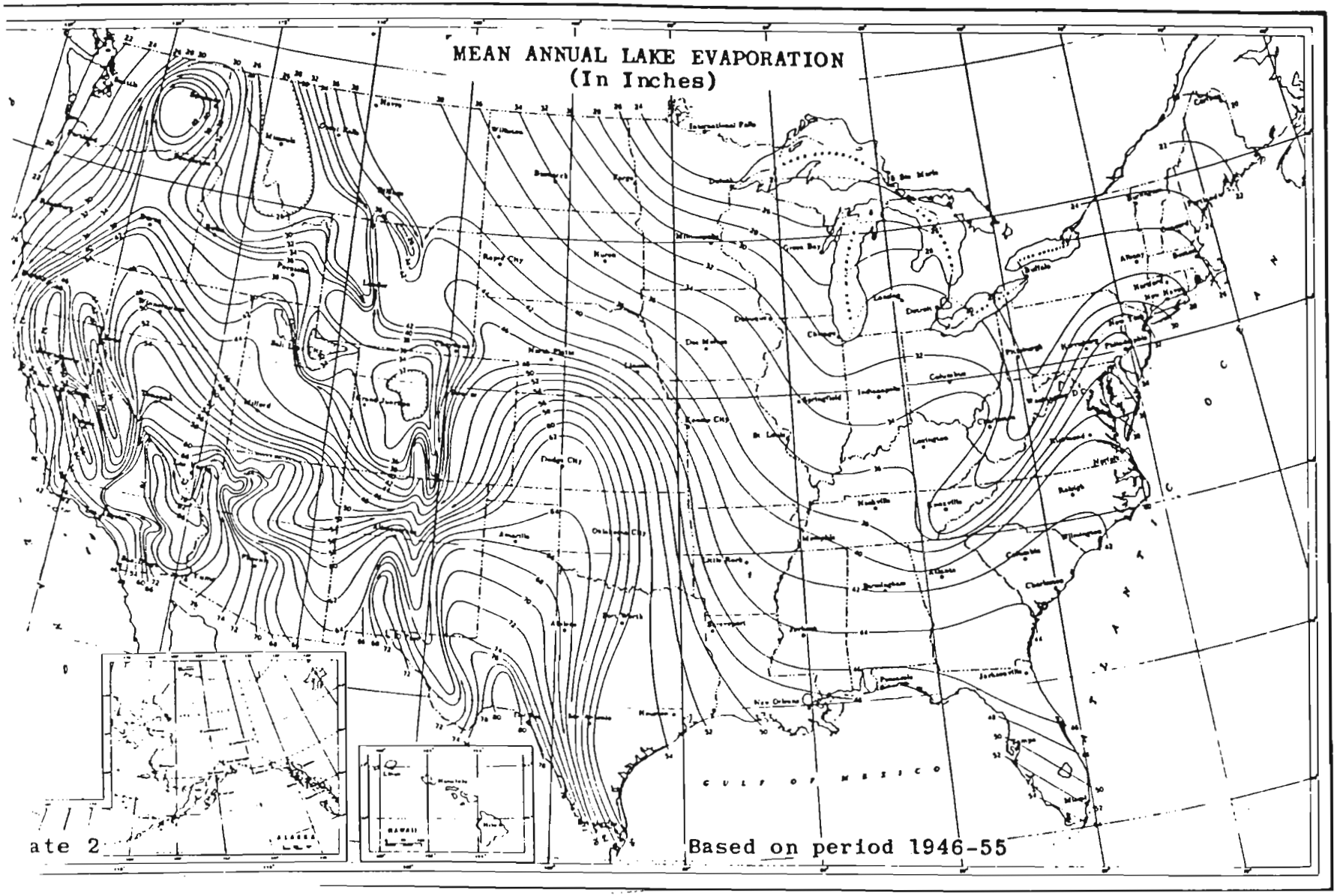
ANNUAL TOTAL PRECIPITATION (Inches)



Caution should be use
interpolating on these
eralized maps, particul
in mountainous areas.



REFERENCE 3



Source: Climatic Atlas of the United States, U.S. Department of Commerce National Climatic Center, Ashville, N.C. 1979

REFERENCE 9

United States Environmental Protection Agency

Office of Solid Waste and Emergency Response

EPA

DIRECTIVE NUMBER: 9355.0-3

TITLE: Uncontrolled Hazardous Waste Site Ranking System - A Users Manual

APPROVAL DATE: 07/16/82

EFFECTIVE DATE: 07/16/82

ORIGINATING OFFICE: OERR/OPM

☒ **FINAL**

☐ **DRAFT**

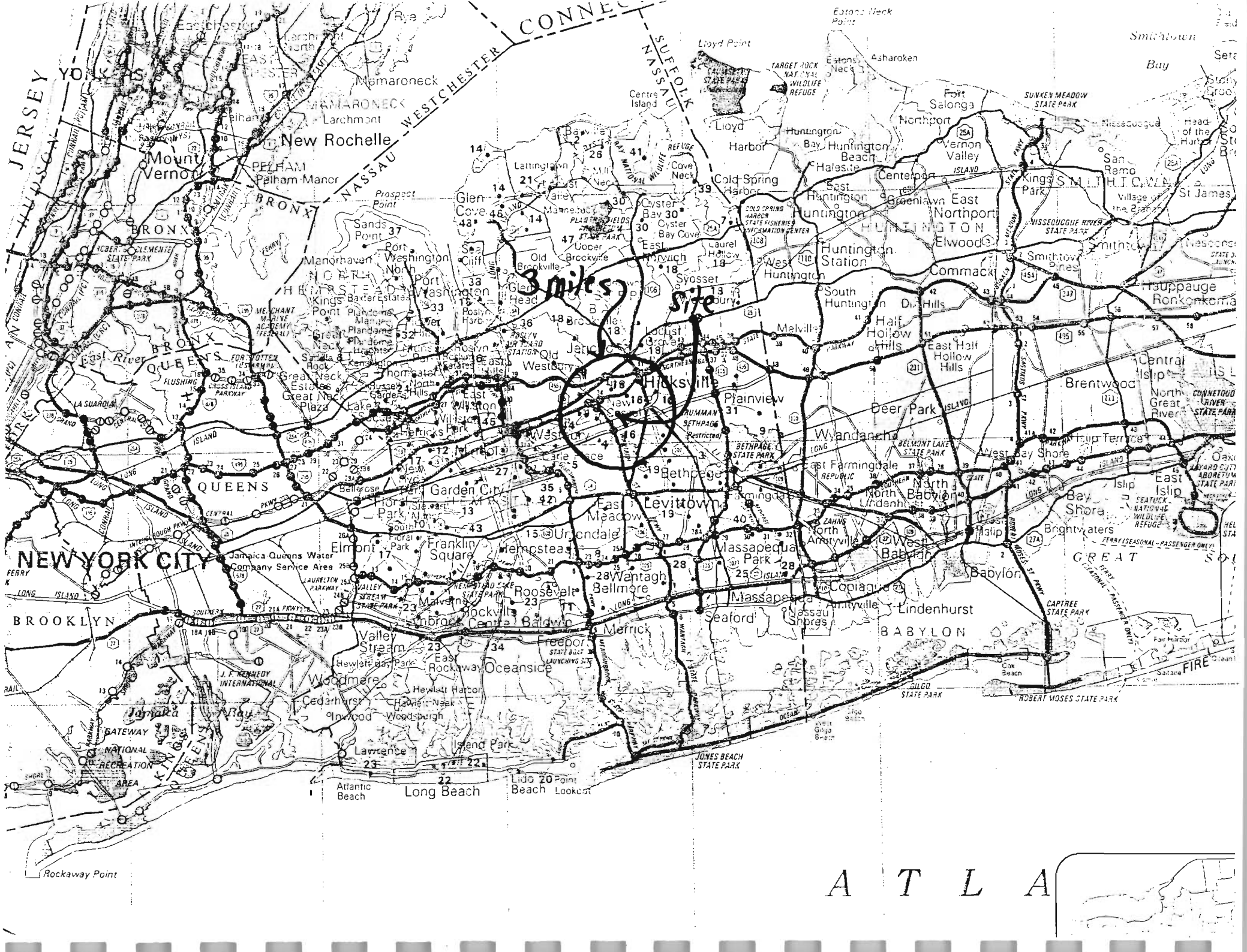
STATUS:

REFERENCE (other documents):

REFERENCE 11

New York State Atlas of Community Water System Sources 1982

NEW YORK STATE DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF PUBLIC WATER SUPPLY PROTECTION


3 Miles
Site
NEW YORK CITY
BROOKLYN
QUEENS
BRONX
NASSAU
SUFFOLK
WESTCHESTER
CONNECTICUT
JERSEY
Mount Vernon
New Rochelle
Hicksville
Levittown
Bethpage
Plainview
Huntington
Smithtown
Commack
Brentwood
Deer Park
Babylon
Massapequa
Freeport
Oceanside
Long Beach
Rockaway Point
Jamaica Bay
Lloyd Harbor
Cold Spring Harbor
Oyster Bay
Glen Cove
Great Neck
Garden City
Hempstead
Valley Stream
Lawrence
Island Park
Atlantic Beach
Lido Beach
Point Lookout
Jones Beach State Park
Robert Moses State Park
Fire Island
Target Rock National Wildlife Refuge
Sunken Meadow State Park
Bethpage State Park
Belmont Lake State Park
Caleb Smith State Park
Nissequogue River State Park
Seatuck National Wildlife Refuge
Captree State Park
Gilgo State Park
Connetquot River State Park
Oakdale
Bay Shore
Islip
Central Islip
Hauppauge
Ronkonkoma
St James
Kings Park
Northport
Huntington Station
Half Hollow Hills
Wyandanch
West Babylon
Lindenhurst
Amityville
Copiague
Seaford
Merrick
Baldwin
Uniondale
Elmont
Floral Park
Franklin Square
Roosevelt
Wantagh
Bellmore
Massapequa Park
North Babylon
Islip Terrace
East Islip
Brightwaters
Great South Bay
Jamaica Queens Water Company Service Area
Gateway National Recreation Area
J. F. Kennedy International
Throgs Neck Bridge
Whitestone Bridge
Cross Island Parkway
Grand Central Parkway
Long Island Expressway
Northern State Parkway
Southern State Parkway
Meadowbrook State Parkway
Wantagh State Parkway
Sagtikos State Parkway
Robert Moses Causeway
Ferry (seasonal – passenger only)
ATLA

NASSAU COUNTY

ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
Municipal Community			
1	Albertson Water District	13500.	Wells
2	Bayville Village	7500.	Wells
3	Bethpage Water District	32000.	Wells
4	Bowling Green Water District	12000.	Wells
5	Carle Place Water District	11000.	Wells
6	Citizens Water Supply Company	30000.	Wells
7	Deforest Drive Association	25.	Wells
8	East Meadow Water District	52000.	Wells
9	Farmingdale Village	7946.	Wells
10	Franklin Square Water District	20000.	Wells
11	Freeport Village	38272.	Wells
12	Garden City Park Water District	22576.	Wells
13	Garden City Village	22927.	Wells
14	Glen Cove City	24518.	Wells
15	Hempstead Village	40094.	Wells
16	Hicksville Water District	58000	Wells
17	Jamaica Water Supply Company	128933.	Wells
18	Jericho Water District	6000.	Wells
19	Levittown Water District	50000.	Wells
20	Lido-Point Lookout Water District	10000.	Wells
21	Locust Valley Water District	8500.	Wells
22	Long Beach City	34073.	Wells
23	Long Island Water Corporation	258736.	Wells
24	Manhasset-Lakeville Water District	44730.	Wells
25	Massapequa Water District	52000.	Wells
26	Mill Neck Estates Water Supply	240.	Wells
27	Mineola Village	20600.	Wells
28	New York Water Service	172180.	Wells
29	Old Westbury Village	3100.	Wells
30	Oyster Bay Water District	10225.	Wells
31	Plainview Water District	40000.	Wells
32	Plandome Village	2616.	Wells
33	Port Washington Water District	35000.	Wells
34	Rockville Centre Village	25405.	Wells
35	Roosevelt Field Water District	1640.	Wells
36	Roslyn Water District	27500.	Wells
37	Sands Point Village	3002.	Wells
38	Sea Cliff Water Company	17850.	Wells
39	Sel-Bra Acres Water Supply	80.	Wells
40	South Farmingdale Water District	49900.	Wells
41	Split Rock Water Supply	25.	Wells
42	Uniondale Water District	25000.	Wells
43	West Hempstead-Hempstead Garden Water District	32000.	Wells
44	Westbury Water District	20050.	Wells
45	Williston Park Village	8216.	Wells
Non Municipal Community			
46	Community Hospital at Glen Cove	1350.	Wells
47	Planting Fields Arboretum	90.	Wells
48	Stuart, Walker, Zimmer Water Supply	41.	Wells

NEW YORK CITY WATER SUPPLY

The majority of New York City residents receive their drinking water from the New York City Aqueduct System. Only a portion of the borough of Queens is supplied by a separate ground-water system, the Jamaica Water Supply.

The New York City Aqueduct System consists of the Croton, Delaware, and Catskill branches. It is supplied by reservoirs and lakes in Westchester, Putnam, Ulster, Schoharie, Delaware, and Sullivan Counties. The reservoirs and lakes supplying the respective aqueduct branches are designated in those counties.

CROTON SYSTEM - The Croton supply is the oldest system which has a safe yield of about 240 MGD*. The Croton System embodies 12 reservoirs and 4 controlled lakes, situated in Westchester and Putnam Counties, which impound about 35 billion gallons of water from 375 square miles of the Croton River drainage area. The principal structures in the present Croton System are the New Croton Dam and the New Croton Aqueduct which supplemented the Old Croton Aqueduct now out of service. Croton water is delivered via the New Croton Aqueduct to the Jerome Park Reservoir in the Bronx and then via aqueduct and conduits to the Central Park Reservoir in Manhattan. The delivery capacity of the Aqueduct from the New Croton Reservoir to the Jerome Park Reservoir is 275 MGD.

CATSKILL SYSTEM - The Catskill supply is the second major system which has a safe yield of about 170 MGD. Its principal structures are the Schoharie, Ashokan, Kensico, and Hill View Reservoirs.

The Ashokan Reservoir impounds 128 billion gallons of available storage, at Elevation 590 in the West Basin and at Elevation 587 in the East Basin, from 257 square miles of drainage area in the Catskill Mountains west of Kingston. The Ashokan Reservoir feeds directly into the Catskill Aqueduct.

The Schoharie Reservoir, placed in service in 1924, impounds 19.6 billion gallons of available storage, at Elevation 1130, from 314 square miles of drainage area.

The Catskill Aqueduct is 92 miles long overall, extending 75 miles from the Ashokan Reservoir to the upstream influent chamber of the Kensico Reservoir, with a 2 mile by-pass, then continuing 15 miles from the Kensico Reservoir effluent chamber to the Hill View Distributing Reservoir in Yonkers.

The Kensico Reservoir was originally constructed as an equalizing basin on the Catskill Aqueduct. The reservoir, having a safe yield of 5 MGD from its own drainage area, is formed by the Kensico Dam.

DELAWARE SYSTEM - The Delaware supply is the latest system which has a safe yield of about 580 MGD. The supply from the Delaware watershed, which is stored in the Neversink, Pepacton, and Cannonsville Reservoirs, has a safe yield of about 480 MGD. The Rondout Reservoir, serving as a collecting reservoir for these three reservoirs, has a safe yield of about 100 MGD from its own drainage area of 95 square miles which is part of the Hudson watershed. This reservoir impounds 50 billion gallons of available storage at the flow line, Elevation 840.

The Delaware Aqueduct is a pressure tunnel deep in bed rock for its entire length of 85 miles.

JAMAICA WATER SUPPLY - The Jamaica Queens Water Company serves the Jamaica section of the borough of Queens. This system utilizes 76 wells located in 46 separate well fields. A map depicting the Jamaica Queens service area is included on Page 77.

* Millions of Gallons per Day

REFERENCE 12

Lawler, Matusky & Skelly Engineers
Environmental Science & Engineering Consultants
One Blue Hill Plaza
Pearl River, New York 10965

MEMORANDUM OF CONVERSATION

JOB _____ JOB No. 576-021

DATE 3 October 1989 TIME 14:50

THE WRITER SPOKE TO:

M Nassau Co. Cooperative Extension OF Plainview, NY
Mr. Herman 516/454-0900

CONCERNING: Irrigation of golf courses within 3 miles of the site.

AND DECIDED: Groundwater is used to irrigate the golf courses. They grow no cash crops.

CC: _____ SIGNED: Mark J. Corrigan

CC: _____ SIGNED: _____

REFERENCE 15

PART 885

NASSAU COUNTY WATERS

(Statutory authority: Environmental Conservation Law, § 17-0301)

Historical Note

Part (§§ 885.1-885.9) readopted by order filed Sept. 21, 1978; amd. filed June 20, 1988 eff. 30 days after filing. Amended statutory authority.

Section 885.1 Adopting order. (a) Pursuant to article 12 of the Public Health Law, the Water Resources Commission, after proper study and following public hearings conducted by the commission, held on due notice, hereby adopts and assigns the following classifications and standards of quality and purity to all surface waters within the designated drainage basin of Nassau County as hereinafter described.

(b) This adoption and assignment of standards of quality and purity to the above designated waters shall be effective November 12, 1965.

885.2 Designated waters. The designated waters are located within the designated drainage basin of Nassau County outlined on Map 1, section 885.7, *infra*.

Historical Note

Sec. amd. filed June 20, 1988 eff. 30 days after filing.

885.3 Definitions. The several terms, words or phrases hereinafter mentioned shall be construed as follows:

(a) *Item No.* In Table I an item number is assigned consecutively to each specifically designated waters.

(b) *Waters index number* as appearing in Table I shall mean that number or abbreviation assigned to any designated waters or portion thereof for the purpose of identification.

(1) The numbering or index system used to identify specific waters of New York State was adapted from that used by the New York State Conservation Department in its biological survey series of reports on watersheds of the State. The primary waters of a drainage area, such as a river, large lake, bay or sound is usually referred to by name or an abbreviation. Tributaries of primary river waters are consecutively numbered progressing upstream from the mouth. Tributaries of primary lake, bay or sound waters are consecutively numbered in a clockwise order from a defined point, usually the outlet of the primary waters. Subtributaries are numbered as encountered along the tributary proceeding from its mouth to the source, and in like manner all of its other stream courses are so numbered. Ponds and lakes are numbered in the order they are encountered within the system. Tributaries of such lakes and ponds are numbered consecutively as they enter, progressing clockwise around the lake or pond from its outlet or mouth. The numbers assigned to such lakes and ponds are prefixed by the letter P. When isolated lakes and ponds are referenced by a waters index number, it it merely for convenience of their identification and location within a subdrainage basin, and it is not necessarily indicative of their being tributary to any waters to which no surface connection is shown on the reference maps.

REFERENCE 17

DANGEROUS PROPERTIES of INDUSTRIAL MATERIALS

Seventh Edition

N. Irving Sax
Richard J. Lewis, Sr.

TOXICITY DATA:	CODEN:
ipr-mus LD50:2 g/kg	EJTXAZ 7,247,74
ihl-frg LCLo:117 mg/m^3/1H	AISFAR 15,1,37
orl-rat LD50:770 mg/kg	ARSIM* 20,10,66

Reported in EPA TSCA Inventory. Community Right To Know List.

OSHA PEL: TWA 200 ppm
ACGIH TLV: TWA 200 ppm; STEL 250 ppm

THR: Poison by inhalation. Moderately toxic by ingestion and other routes. When heated to decomposition it emits highly toxic fumes of Cl^-. See also ACETYLENE COMPOUNDS; and CHLORINATED HYDROCARBONS, ALIPHATIC.

ACK000 ***HR: 2***

trans-ACETYLENE DICHLORIDE

CAS: 156-60-5 NIOSH: KV 9400000
mf: $C_2H_2Cl_2$ mw: 96.94

PROP: Colorless liquid, pleasant odor. Mp: −50°, bp: 48°, flash p: 36°F, autoign temp: 860°F, lel: 9.7%, uel: 12.8%, d: 1.2743 @ 25°/4°, vap press: 400 mm @ 30.8°, vap d: 3.34.

SYNS:
trans-DICHLOROETHYLENE
RCRA WASTE NUMBER U079
trans-1,2-DICHLOROETHYLENE

TOXICITY DATA:	CODEN:
mma-smc 80 mmol/L	TCMUD8 4,365,84
orl-mus LD50:2122 mg/kg	DCTODJ 8,373,85
ihl-hmn TCLo:4800 mg/m^3/10M:CNS	AHBAAM 116,131,36
ipr-rat LD50:7536 mg/kg	TXCYAC 7(2),141,77
ihl-mus LCLo:75000 mg/m^3/2H	AHBAAM 116,131,36
ipr-mus LD50:4019 mg/kg	TXCYAC 7,141,77
ihl-cat LCLo:43000 mg/m^3/6H	AHBAAM 116,131,36

Reported in EPA TSCA Inventory.

THR: Mildly toxic by inhalation and other routes. Human systemic effects by inhalation: sleep, hallucinations and distorted perceptions. Mutagenic data. Exposure to high vapor concentration can cause nausea, vomiting, weakness, tremor and cramps. Recovery is usually prompt following removal from exposure. Dermatitis may result from defatting action on skin. Dangerous fire hazard when exposed to heat, flame or oxidizers. Moderate explosion hazard in the form of vapor when exposed to flame. When heated to decomposition it emits toxic fumes of Cl^-. See also CHLORIDES; CHLORINATED HYDROCARBONS, ALIPHATIC; and ACETYLENE COMPOUNDS. To fight fire use water, foam, CO_2, dry chemical.

ACK250 ***HR: 3***

ACETYLENE TETRABROMIDE

CAS: 79-27-6 NIOSH: KI 8225000
DOT: 2504
mf: $C_2H_2Br_4$ mw: 345.68

PROP: Colorless to yellow liquid. Bp: 151° @ 54 mm, fp: −1°, d: 2.9638 @ 20°/4°, autoign temp: 635°F.

SYNS:
ACETYLENE TETRABROMIDE (ACGIH, DOT)
MUTHMANN'S LIQUID
TBE
1,1,2,2-TETRABROMAETHAN (GERMAN)
TETRABROMOACETYLENE
1,1,2,2-TETRABROMOETANO (ITALIAN)
S-TETRABROMOETHANE
1,1,2,2-TETRABROMOETHANE
1,1,2,2-TETRABROOMETHAAN (DUTCH)

TOXICITY DATA:	CODEN:
skn-rbt 500 mg/24H MOD	AIHAAP 24,28,63
eye-rbt 100 mg MLD	AIHAAP 24,28,63
dnr-esc 10 µL/disc	MUREAV 41,61,76
orl-rat LD50:1100 mg/kg	85GMAT -,107,82
ihl-rat LC50:549 mg/m^3/4H	85GMAT -,107,82
orl-mus LD50:269 mg/kg	85GMAT -,107,82
skn-rat LD50:5250 mg/kg	85GMAT -,107,82
orl-gpg LD50:400 mg/kg	AIHAAP 30,251,69
skn-mus TDLo:130 g/kg/74W-I:NEO	JJIND8 63,1433,79
orl-rbt LD50:400 mg/kg	AMIHBC 2,407,50

Reported in EPA TSCA Inventory. EPA Genetic Toxicology Program.

OSHA PEL: TWA 1 ppm
ACGIH TLV: TWA 1 ppm
DFG MAK: 1 ppm (14 mg/m^3)

DOT Classification: ORM-A, Label: None

THR: Poison by inhalation and ingestion. An experimental neoplastigen. Mutagenic data. It is an eye and skin irritant and a narcotic. When heated it emits highly toxic fumes of carbonyl bromide and Br^-. See also ACETYLENE COMPOUNDS and BROMIDES.

ACK500 ***HR: 3***

ACETYLENE TETRACHLORIDE

CAS: 79-34-5 NIOSH: KI 8575000
DOT: 1702
mf: $C_2H_2Cl_4$ mw: 167.84

PROP: Heavy, colorless, mobile liquid; chloroform-like odor. Mp: −43.8°, bp: 146.4°, d: 1.600 @ 20°/4°.

SYNS:
BONOFORM
CELLON
1,1,2,2-CZTEROCHLOROETAN (POLISH)
1,1-DICHLORO-2,2-DICHLOROETHANE
NCI-C03554
RCRA WASTE NUMBER U209
TCE
TETRACHLORETHANE
1,1,2,2-TETRACHLOROETHANE (ACGIH, DOT)
1,1,2,2-TETRACHLOORETHAAN (DUTCH)
1,1,2,2-TETRACHLORAETHAN (GERMAN)
1,1,2,2-TETRACHLORETHANE (FRENCH)
sym-TETRACHLOROETHANE
1,1,2,2-TETRACHLOROETHANE
1,1,2,2-TETRACLOROETANO (ITALIAN)
TETRACHLORURE D'ACETYLENE (FRENCH)
WESTRON

PROP: Liquid. D: 1.588 @ 20/4°, bp: 129-130°. Sol in water; misc in alc, ether.

SYNS:
NCI-C52459 RCRA WASTE NUMBER U208

TOXICITY DATA:	CODEN:
skn-rbt 500 mg/24H	AMPMAR 35,593,74
eye-rbt 100 mg SEV	AMPMAR 35,593,74
orl-mus TDLo:129 g/kg/2Y-I: CAR	NTPTR* NTP-TR-237,82
orl-mus TD:258 g/kg/2Y-I:CAR	NTPTR* NTP-TR-237,82

IARC Cancer Review: Animal Limited Evidence IMEMDT 41,87,86. NTP Carcinogenesis Bioassay (gavage); Clear Evidence: mouse NTPTR* NTP-TR-237,82; (gavage); No Evidence: rat NTPTR* NTP-TR-237,82. Reported in EPA TSCA Inventory.

THR: An experimental carcinogen. A skin and severe eye irritant. Incompatible with dinitrogen tetraoxide; 2,4-dinitrophenyl disulfide; potassium; potassium hydroxide; nitrogen tetroxide; sodium; sodium potassium alloy. When heated to decomposition it emits very toxic fumes of Cl^-. For further information, see Vol. 4, No. 3 of *DPIM Report*.

TBQ250 *HR: 3*

1,1,2,2-TETRACHLOROETHYLENE

CAS: 127-18-4 NIOSH: KX 3850000
DOT: 1897
mf: C_2Cl_4 mw: 165.82

PROP: Colorless liquid; chloroform-like odor. Mp: −23.35°, bp: 121.20°, d: 1.6311 @ 15°/4°, vap press: 15.8 mm @ 22°, vap d: 5.83.

SYNS:
ANKILOSTIN
ANTISOL 1
CARBON BICHLORIDE
CARBON DICHLORIDE
CZTEROCHLOROETYLEN (POLISH)
DIDAKENE
DOW-PER
ENT 1,860
ETHYLENE TETRACHLORIDE
FEDAL-UN
NCI-C04580
NEMA
PERAWIN
PERCHLOORETHYLEEN, PER (DUTCH)
PERCHLOR
PERCHLORAETHYLEN, PER (GERMAN)
PERCHLORETHYLENE
PERCHLORETHYLENE, PER (FRENCH)
PERCHLOROETHYLENE (ACGIH, DOT)
PERCLENE
PERCLOROETILENE (ITALIAN)
PERCOSOLVE
PERK
PERKLONE
PERSEC
RCRA WASTE NUMBER U210
TETLEN
TETRACAP
TETRACHLOORETHEEN (DUTCH)
TETRACHLORAETHEN (GERMAN)
TETRACHLOROETHENE
TETRACHLOROETHYLENE (DOT)
TETRACLOROETENE (ITALIAN)
TETRALENO
TETRALEX
TETRAVEC
TETROGUER
TETROPIL

TOXICITY DATA:	CODEN:
skn-rbt 810 mg/24H SEV	JETOAS 9,171,76
eye-rbt 162 mg MLD	JETOAS 9,171,76
mmo-sat 50 µL/plate	NIOSH* 5AUG77
mma-sat 200 µL/plate	NIOSH* 5AUG77
dns-hmn:lng 100 mg/L	NTIS** PB82-185075
otr-rat:emb 97 µmol/L	ITCSAF 14,290,78
ihl-rat TCLo:1000 ppm/24H (14D pre/1-22D preg):TER	APTOD9 19,A21,80
ihl-rat TCLo:900 ppm/7H (7-13D preg):REP	TJADAB 19,41A,79
ihl-mus TCLo:300 ppm/7H (6-15D preg):TER	TXAPA9 32,84,75
orl-mus TDLo:195 g/kg/50W-I: CAR	NCITR* NCI-CG-TR-13,77
orl-mus TD :240 g/kg/62W-I: CAR	NCITR* NCI-CG-TR-13,77
ihl-hmn TCLo:96 ppm/7H: PNS,EYE,CNS	NTIS** PB257-185
ihl-man TCLo:280 ppm/2H: EYE,CNS	AMIHBC 5,566,52
ihl-man TCLo:600 ppm/10M: EYE,CNS	AMIHBC 5,566,52
ihl-man LDLo:2857 mg/kg: CNS,PUL	MLDCAS 5,152,72
orl-rat LD50:8850 mg/kg	NPIRI* 1,96,74
ihl-rat LCLo:4000 ppm/4H	JOCMA7 4,262,62
orl-mus LD50:8100 mg/kg	NTIS** PB257-185
ihl-mus LC50:5200 ppm/4H	APTOA6 9,303,53
ipr-mus LD50:4700 mg/kg	NTIS** PB257-185
orl-dog LDLo:4000 mg/kg	AJHYA2 9,430,29
ipr-dog LD50:2100 mg/kg	TXAPA9 10,119,67
ivn-dog LDLo:85 mg/kg	QJPPAL 7,205,34
orl-cat LDLo:4000 mg/kg	AJHYA2 9,430,29
orl-rbt LDLo:5000 mg/kg	AJHYA2 9,430,29
scu-rbt LDLo:2200 mg/kg	QJPPAL 7,205,34

IARC Cancer Review: Animal Limited Evidence IMEMDT 20,491,79. NCI Carcinogenesis Bioassay (gavage); Clear Evidence: mouse NCITR* NCI-CG-TR-13,77; (inhalation); Clear Evidence: mouse, rat NTPTR* NTP-TR-311,86; (gavage); Inadequate Studies: rat NCITR* NCI-CG-TR-13,77. Reported in EPA TSCA Inventory. EPA Genetic Toxicology Program. Community Right To Know List.

OSHA PEL: TWA 100 ppm; CL 200 ppm; Pk 300ppm, 5M/3H
ACGIH TLV: TWA 50 ppm (skin); STEL 200 ppm
DFG MAK: 50 ppm (345 mg/m^3); BAT: blood 100 µg/L
NIOSH REL: (Tetrachloroethylene) Minimize workplace exposure.

DOT Classification: Poison B; Label: St. Andrews Cross; ORM-A; Label: None

THR: Experimental poison by intravenous route. Moderately toxic to humans by inhalation with the following effects: local anesthetic, conjunctiva irritation, general anesthesia, hallucinations, distorted perceptions, coma and pulmonary changes. Moderately experimentally toxic by ingestion, inhalation, intraperitoneal and subcutaneous routes. An experimental carcinogen and teratogen. Experimental reproductive effects. Human mutagenic data. An

eye and severe skin irritant. The liquid can cause injuries to the eyes; however, with proper precautions it can be handled safely. The symptoms of acute intoxication from this material are the result of its effects upon the nervous system. Can cause dermatitis, particularly after repeated or prolonged contact with the skin. Irritates the gastrointestinal tract upon ingestion. It may be handled in the presence or absence of air, water, and light with any of the common construction materials at temperatures up to 140°C. This material is extremely stable and resists hydrolysis. A common air contaminant. Reacts violently under the proper conditions with Ba; Be; Li; N_2O_4; metals; NaOH. When heated to decomposition it emits highly toxic fumes of Cl^-. Used in commercial dry cleaning and as a degreasing solvent. See also CHLORINATED HYDROCARBONS, ALIPHATIC. For further information, see Perchloroethylene, Vol. 1, No. 2 of *DPIM Report*.

TBQ255 ***HR: 2***

TETRACHLOROETHYLENE CARBONATE

CAS: 22432-68-4

mf: $C_3Cl_4O_3$ mw: 225.84

THR: Reacts with tributylamine to form the toxic phosgene gas. When heated to decomposition it emits toxic fumes of Cl^-.

TBQ275 ***HR: 3***

TETRACHLOROETHYLENE OXIDE

CAS: 16650-10-5 NIOSH: KI 8760000

mf: C_2Cl_4O mw: 181.82

SYNS:

EPOXYPERCHLOROVINYL
PCEO
TETRACHLOROEPOXYETHANE

TOXICITY DATA:	CODEN:
otr-ham:emb 4300 µmol/L	JJIND8 69,531,82
skn-mus TDLo:300 mg/kg/66W-I:CAR	CNREA8 43,159,83
scu-mus TDLo:20 mg/kg/70W-I:ETA	CNREA8 43,159,83

THR: An experimental carcinogen and tumorigen. Mutagenic data. When heated to decomposition it emits toxic fumes of Cl^-.

TBQ300 ***HR: 3***

2,3,4,5-TETRACHLOROHEXATRIENE

NIOSH: MP 5425500

mf: $C_6H_4Cl_4$ mw: 217.90

TOXICITY DATA:	CODEN:
orl-rat LD50:370 mg/kg	85GMAT -,108,82
ihl-rat LCLo:670 mg/m^3/2H	85GMAT -,108,82
orl-mus LD50:290 mg/kg	85GMAT -,108,82
ihl-mus LCLo:190 mg/m^3/2H	85GMAT -,108,82

THR: Poison by inhalation and ingestion. When heated to decomposition it emits toxic fumes of Cl^-. See also CHLORINATED HYDROCARBONS, ALIPHATIC.

TBQ500 ***HR: 3***

TETRACHLOROHYDROQUINONE

CAS: 87-87-6 NIOSH: MX 7700000

mf: $C_6H_2Cl_4O_2$ mw: 247.88

SYNS: USAF DO-62

TOXICITY DATA:	CODEN:
dnd-omi 100 µmol/L	MUREAV 145,71,85
dnd-mam:lym 50 mmol/L	MUREAV 145,71,85
orl-mus LD50:500 mg/kg	ARTODN 40,63,78
ipr-mus LD50:25 mg/kg	NTIS** AD277-689

Reported in EPA TSCA Inventory.

THR: Poison by intraperitoneal route. Moderately toxic by ingestion. Mutagenic data. When heated to decomposition it emits toxic fumes of Cl^-.

TBQ750 ***HR: 3***

TETRACHLOROISOPHTHALONITRILE

CAS: 1897-45-6 NIOSH: NT 2600000

mf: $C_8Cl_4N_2$ mw: 265.90

SYNS:

BRAVO
BRAVO 6F
BRAVO-W-75
CHLOROALONIL
CHLOROTHALONIL
CHLORTHALONIL (GERMAN)
DAC 2797
DACONIL
DACONIL 2787 FLOWABLE FUNGICIDE
DACOSOIL
1,3-DICYANOTETRACHLOROBENZENE
EXOTHERM
EXOTHERM TERMIL
FORTURF
NCI-C00102
NOPCOCIDE
SWEEP
TCIN
m-TCPN
TERMIL
2,4,5,6-TETRACHLORO-3-CYANOBENZONITRILE
m-TETRACHLOROPHTHALONITRILE
TPN (pesticide)

TOXICITY DATA:	CODEN:
orl-rat TDLo:142 g/kg/80W-C:CAR	NCITR* NCI-CG-TR-41,78
orl-rat LD50:10 mg/kg	85ARAE 4,75,76
orl-mus LD50:6 g/kg	INHEAO 4,11,66
ipr-mus LD50:2500 mg/kg	INHEAO 4,11,66

IARC Cancer Review: Animal Limited Evidence IMEMDT 30,319,83. NCI Carcinogenesis Bioassay (feed); Clear Evidence: rat NCITR* NCI-CG-TR-41,78. Cyanide and its compounds are on the Community Right To Know List. Reported in EPA TSCA Inventory. EPA Genetic Toxicology Program.

THR: Moderately toxic by intraperitoneal route. Mildly toxic by ingestion. An experimental carcinogen. When heated to decomposition it emits very toxic fumes of Cl^-, NO_x, and CN^-. Used as a fungicide. See also NITRILES.

TBR000 ***HR: 3***

TETRACHLORONAPHTHALENE

CAS: 1335-88-2 NIOSH: QK 3700000

mf: $C_{10}H_4Cl_4$ mw: 265.94

TOXICITY DATA:	CODEN:
skn-rbt 10 mg/24H open	AMIHBC 10,61,54
skn-rbt 625 mg open SEV	UCDS** 1/19/72
eye-rbt 50 µg open SEV	AMIHBC 10,61,54
orl-rat LD50:1280 mg/kg	AMIHBC 10,61,54
ihl-rat LCLo:500 ppm/4H	UCDS** 1/19/72
skn-rbt LD50:680 mg/kg	AMIHBC 10,61,54

Reported in EPA TSCA Inventory.

DOT Classification: Flammable Liquid; Label: Flammable Liquid, Corrosive

THR: Moderately toxic by ingestion, inhalation and skin contact. A severe eye and skin irritant. A corrosive irritant to skin, eyes and mucous membranes. A very dangerous fire hazard when exposed to heat or flame. Reacts violently with water; moist air or steam to produce toxic and corrosive fumes. When heated to decomposition it emits toxic fumes of Cl^-. See also CHLOROSILANES.

TIO000 ***HR: 2***

2,2,2-TRICHLORO-1-ETHOXYETHANOL

CAS: 515-83-3 NIOSH: KM 4725000

mf: $C_4H_7Cl_3O_2$ mw: 193.46

PROP: Crystals. D: 1.143, mp: 47.5°, bp: 116°. Less sol in water than chloral hydrate; sol in organic solvents.

SYNS:

CHLORAL ALCOHOLATE
CHLORAL ETHYLALCOHOLATE
CHLORAL, ETHYL HEMIACETAL
TRICHLOROACETALDEHYDE MONOETHYLACETAL

TOXICITY DATA:	CODEN:
orl-rat LD50:880 mg/kg	JPETAB 78,340,43
orl-dog LDLo:1200 mg/kg	JPETAB 78,340,43
orl-cat LDLo:500 mg/kg	JPETAB 78,340,43
orl-rbt LDLo:1100 mg/kg	JPETAB 78,340,43

Reported in EPA TSCA Inventory.

THR: Moderately toxic by ingestion. When heated to decomposition it emits toxic fumes of Cl^-. See also ALDEHYDES.

TIO500 ***HR: 3***

TRICHLOROETHYL CARBAMATE

CAS: 107-69-7 NIOSH: FD 1750000

mf: $C_3H_4Cl_3NO_2$ mw: 192.43

SYNS:

CARBAMIC ACID, 2,2,2-TRICHLOROETHYL ESTER
2,2,2-TRICHLOROETHANOL CARBAMATE
VOLUNTAL

TOXICITY DATA:	CODEN:
ipr-mus TDLo:3250 mg/kg/13W-I:NEO	JNCIAM 8,99,47
orl-mus LDLo:750 mg/kg	LDTU** -,-,31
ipr-mus LD50:500 mg/kg	JNCIAM 8,99,47

THR: Moderately toxic by ingestion and intraperitoneal routes. An experimental neoplastigen. When heated to decomposition it emits very toxic fumes of Cl^- and NO_x. See also ESTERS and CARBAMATES.

TIO750 ***HR: 3***

TRICHLOROETHYLENE

CAS: 79-01-6 NIOSH: KX 4550000

DOT: 1710

mf: C_2HCl_3 mw: 131.38

PROP: Mobile liquid; characteristic odor of chloroform. D: 1.4649 @ 20°/4°, bp: 86.7°, flash p: 89.6°F, lel: 12.5%, uel: 90% @ > 30°, mp: −73°, fp: −86.8°, autoign temp: 788°F, vap press: 100 mm @ 32°, vap d: 4.53.

SYNS:

ACETYLENE TRICHLORIDE
ALGYLEN
ANAMENTH
BENZINOL
BLACOSOLV
CECOLENE
1-CHLORO-2,2-DICHLOROETHYLENE
CHLORYLEA
CHORYLEN
CIRCOSOLV
CRAWHASPOL
DENSINFLUAT
1,1-DICHLORO-2-CHLOROETHYLENE
DOW-TRI
DUKERON
ETHINYL TRICHLORIDE
ETHYLENE TRICHLORIDE
FLECK-FLIP
FLUATE
GERMALGENE
LANADIN
LETHURIN
NARCOGEN
NARKOSOID
NCI-CO4546
NIALK
PERM-A-CHLOR
PETZINOL
RCRA WASTE NUMBER U228
THRETHYLENE
TRIAD
TRIASOL
TRICHLOORETHEEN (DUTCH)
TRICHLOORETHYLEEN, TRI (DUTCH)
TRICHLORAETHEN (GERMAN)
TRICHLORAETHYLEN, TRI (GERMAN)
TRICHLORAN
TRICHLORETHENE (FRENCH)
TRICHLORETHYLENE, TRI (FRENCH)
TRICHLOROETHENE
1,2,2-TRICHLOROETHYLENE
TRI-CLENE
TRICLORETENE (ITALIAN)
TRICLOROETILENE (ITALIAN)
TRIELINA (ITALIAN)
TRILENE
TRIMAR
TRI-PLUS
VESTROL
VITRAN
WESTROSOL

TOXICITY DATA:	CODEN:
skn-rbt 500 mg/24H SEV	28ZPAK -,28,72
eye-rbt 20 mg/24H MOD	28ZPAK -,28,72
mmo-asn 2500 ppm	MUREAV 155,105,85
sln-asn 17500 ppm	MUREAV 155,105,85
dns-rat:lvr 2800 µmol/L	CRNGDP 5,1629,84
otr-mus:emb 20 mg/L	CALEDQ 28,85,85
otr-ham:emb 5 mg/L	CRNGDP 4,291,83
orl-rat TDLo:2688 mg/kg (1-22D preg/21D post):REP	TOXID9 4,179,84
ihl-rat TCLo:1800 ppm/24H (1-2D preg):TER	APTOD9 19,A22,80
ihl-rat TCLo:100 ppm/4H (8-21D preg):TER	BJANAD 54,337,82
ihl-rat TCLo:150 ppm/7H/2Y-I:CAR	INHEAO 21,243,83
orl-mus TDLo:455 g/kg/78W-I:CAR	NCITR* NCI-CG-TR-2,76

ihl-mus TCLo:150 ppm/7H/2Y-I:CAR	INHEAD 21,243,83
ihl-ham TCLo:100 ppm/6H/77W-I:ETA	ARTODN 43,237,80
orl-mus TD :912 g/kg/78W-I:CAR	NCITR* NCI-CG-TR-2,76
ihl-mus TC:500 ppm/6H/77W-I:ETA	ARTODN 43,237,80
ihl-mus TC:150 ppm/7H/2Y-I:CAR	INHEAO 21,243,83
orl-man TDLo:2143 mg/kg:GIT	34ZIAG -,602,69
ihl-hmn TCLo:6900 mg/m^3/10M:CNS	AHBAAM 116,131,36
ihl-hmn TCLo:160 ppm/83M:CNS	AIHAAP 23,167,62
ihl-hmn TDLo:812 mg/kg:CNS,GIT,LIV	BMJOAE 2,689,45
ihl-man TCLo:110 ppm/8H:EYE,CNS	BJIMAG 28,293,71
orl-hmn LDLo:7 g/kg	ARTODN 35,295,76
ihl-man LCLo:2900 ppm	NZMJAX 50,119,51
orl-rat LC50:3670 mg/kg	28ZPAK -,28,72
ihl-rat LCLo:8000 ppm/4H	AIHAAP 30,470,69
orl-mus LD50:2402 mg/kg	NTIS** AD-A080-636
ihl-mus LC50:8450 ppm/4H	APTOA6 9,303,53
ipr-mus LD50:3000 mg/kg	EJTXAZ 7,247,74
ivn-mus LD50:34 mg/kg	CBCCT* 6,141,54
ipr-dog LD50:1900 mg/kg	TXAPA9 10,119,67
scu-dog LDLo:150 mg/kg	HBTXAC 5,76,59
ivn-dog LDLo:150 mg/kg	QJPPAL 7,205,34
orl-cat LDLo:5864 mg/kg	NBTXAC 5,76,59
ihl-cat LCLo:32500 mg/m^3/2H	AMBAAM 116,131,36
orl-rbt LDLo:7330 mg/kg	HBTXAC 5,76,59
scu-rbt LDLo:1800 mg/kg	QJPPAL 7,205,34
ihl-gpg LCLo:37200 ppm/40M	HBTXAC 5,76,59

IARC Cancer Review: Animal Limited Evidence IMEMDT 20,545,79; Human Inadequate Evidence IMEMDT 20,-545,79; Animal Sufficient Evidence IMEMDT 11,263,76. NCI Carcinogenesis Bioassay (gavage); No Evidence: rat NCITR* NCI-CG-TR-2,76; (gavage); Clear Evidence: mouse NCITR* NCI-CG-TR-2,76. Community Right To Know List. Reported in EPA TSCA Inventory. EPA Genetic Toxicology Program.

OSHA PEL: TWA 100 ppm; Cl 1200; Pk 300/5M/2H

ACGIH TLV: TWA 50 ppm; STEL 200 ppm; BEI: trichloroethanol in urine end of shift 320 mg/g creatinine, trichloroethylene in end-exhaled air prior to shift and end of work week 0.5 ppm

DFG MAK: 50 ppm (260 mg/m^3); BAT: blood end of work week and end of shift 500 μg/dl

NIOSH REL: (Trichloroethylene) TWA 250 ppm; (Waste Anesthetic Gases) CL 2 ppm/1H

DOT Classification: ORM-A; Label: None; Poison B; Label: St. Andrews Cross

THR: Experimental poison by intravenous and subcutaneous routes. Moderately toxic experimentally by ingestion and intraperitoneal routes. Mildly toxic to humans by ingestion and inhalation. Mildly toxic experimentally by inhalation. An experimental carcinogen, tumorigen and teratogen. Human systemic effects by ingestion and inhalation: eye effects, somnolence, hallucinations or distorted perceptions, gastrointestinal changes and jaundice. Experimental reproductive effects. Human mutagenic data. An eye and severe skin irritant. Inhalation of high concentrations causes narcosis and anesthesia. A form of addiction has been observed in exposed workers. Prolonged inhalation of moderate concentrations causes headache and drowsiness. Fatalities following severe, acute exposure have been attributed to ventricular fibrillation resulting in cardiac failure. There is damage to liver and other organs from chronic exposure. A common air contaminant.

A very dangerous fire hazard when exposed to heat or flame. Explosive in the form of vapor when exposed to heat or flame. High concentrations of trichloroethylene vapor in high-temperature air can be made to burn mildly if plied with a strong flame. Though such a condition is difficult to produce, flames or arcs should not be used in closed equipment which contains any solvent residue or vapor. Reacts with alkali; epoxides [e.g., 1-chloro-2,3-epoxypropane; 1,4-butanediol mono-2,3-epoxypropylether; 1,4-butanediol di-2,3-epoxypropylether; 2,2-bis((4(2′,3′-epoxypropoxy)phenyl)propane] to form the spontaneously flammable gas dichloroacetylene. Can react violently with Al; Ba; N_2O_4; Li; Mg; liquid O_2; O_3; KOH; KNO_3; Na; NaOH; Ti. Reacts with water under heat and pressure to form HCl gas. When heated to decomposition it emits toxic fumes of Cl^-. Used as a vapor degreaser and in dry cleaning. See also CHLORINATED HYDROCARBONS, ALIPHATIC. For further information, see Vol. 3, No. 1 of *DPIM Report*.

TIP000 ***HR: 2***

α-TRICHLOROETHYLIDENE GLYCEROL

NIOSH: JI 3380000

mf: $C_5H_7Cl_3O_3$ mw: 221.47

SYN: α-2-(TRICHLOROMETHYL)-1,3-DIOXOLANE-4-METHANOL

TOXICITY DATA:	CODEN:
ipr-mus LD50:920 mg/kg	JPETAB 81,72,44
ivn-mus LD50:520 mg/kg	JPETAB 81,72,44

THR: Moderately toxic by intraperitoneal and intravenous routes. When heated to decomposition it emits toxic fumes of Cl^-.

TIP250 ***HR: 2***

β-TRICHLOROETHYLIDENE GLYCEROL

NIOSH: JI 3440000

mf: $C_5H_7Cl_3O_3$ mw: 221.47

SYN: β-2-(TRICHLOROMETHYL)-1,3-DIOXOLANE-4-METHANOL

TOXICITY DATA:	CODEN:
ipr-mus LD50:959 mg/kg	JPETAB 81,72,44
ivn-mus LD50:518 mg/kg	JPETAB 81,72,44

TGK750 ***HR: 3***

TOLUENE

CAS: 108-88-3 NIOSH: XS 5250000

mf: C_7H_8 mw: 92.15

DOT: 1294

PROP: Colorless liquid; benzol-like odor. Mp: −95 to −94.5°, bp: 110.4°, flash p: 40°F (CC), ulc: 75-80, lel: 1.27%, uel: 7%, d: 0.866 @ 20°/4°, autoign temp: 996°F, vap press: 36.7 mm @ 30°, vap d: 3.14. Insol in water; sol in acetone; misc in absolute alc, ether, chloroform.

SYNS:

ANTISAL 1a
METHACIDE
METHYLBENZENE
METHYLBENZOL
NCI-C07272
PHENYLMETHANE
RCRA WASTE NUMBER U220
TOLUEEN (DUTCH)
TOLUEN (CZECH)
TOLUOL
TOLUOL (DOT)
TOLUOLO (ITALIAN)
TOLU-SOL

TOXICITY DATA:	CODEN:
eye-hmn 300 ppm	JIHTAB 25,282,43
skn-rbt 435 mg MLD	UCDS** 7/23/70
skn-rbt 500 MOD	FCTOD7 20,563,82
eye-rbt 870 µg MLD	UCDS** 7/23/70
eye-rbt 2 mg/24H SEV	28ZPAK -,23,72
eye-rbt 100 mg/30S rns MLD	FCTOD7 20,573,82
oms-grh-ihl 562 mg/L	MUREAV 113,467,83
dns-rat:lvr 30 umol/L	SinJF# 26OCT82
cyt-rat-ihl 5400 µg/m³/16W-I	GTPZAB 25(7),33,81
cyt-rat-scu 12 g/kg/12D-I	GTPZAB 17(3),24,73
mnt-mus-orl 200 mg/kg	MUREAV 147,294,85
mnt-mus-ipr 433 µg/kg/24H	ARTODN 58,106,85
ihl-rat TCLo:1500 mg/m³/24H (1-8D preg):TER	TXCYAC 11,55,78
orl-mus TDLo:9 g/kg (6-15D preg):TER	TJADAB 19,41A,79
ihl-hmn TCLo:200 ppm: BRN,CNS,BLD	JAMAAP 123,1106,43
ihl-man TCLo:100 ppm: CNS	WEHRBJ 9,131,72
orl-rat LD50:5000 mg/kg	AMIHAB 19,403,59
ihl-rat LCLo:4000 ppm/4H	AIHAAP 30,470,69
ipr-rat LDLo:800 mg/kg	TXAPA9 1,156,59
ivn-rat LD50:1960 mg/kg	MELAAD 54,486,63
unr-rat LD50:6900 mg/kg	GISAAA 45(12),64,80
ihl-mus LC50:5320 ppm/8H	JIHTAB 25,366,43
ipr-mus LD50:1120 µg/kg	AGGHAR 18,109,60
unr-mus LD50:2000 mg/kg	GISAAA 45(12),64,80
skn-rbt LD50:12124 mg/kg	AIHAAP 30,470,69
ihl-gpg LCLo:1600 ppm	JIDHAN 10,261,28
scu-frg LDLo:920 mg/kg	AEPPAE 130,250,28

Community Right To Know List. Reported in EPA TSCA Inventory. EPA Genetic Toxicology Program.

OSHA PEL: TWA 200 ppm; CL 300; Pk 500/10M

ACGIH TLV: TWA 100 ppm; STEL 150 ppm; BEI: toluene in venous blood end of shift 1 mg/L

DFG MAK: 100 ppm (375 mg/m³); BAT: blood end of shift 340 µg/dl

NIOSH REL: (Toluene) TWA 100 ppm; CL 200 ppm/10M

DOT Classification: Flammable Liquid; Label: Flammable Liquid

THR: Poison by intraperitoneal route. Moderately toxic by intravenous, subcutaneous and possibly other routes. Mildly toxic by inhalation. An experimental teratogen. Human systemic effects by inhalation: CNS recording changes, hallucinations or distorted perceptions, motor activity changes, antipsychotic, psychophysiological test changes and bone marrow changes. Experimental reproductive effects. Mutagenic data. A human eye irritant. An experimental skin and severe eye irritant.

Toluene is derived from coal tar, and commercial grades usually contain small amounts of benzene as an impurity. Inhalation of 200 ppm of toluene for 8 hours may cause impairment of coordination and reaction time; with higher concentrations (up to 800 ppm) these effects are increased and are observed in a shorter time. In the few cases of acute toluene poisoning reported, the effect has been that of a narcotic, the workman passing through a stage of intoxication into one of coma. Recovery following removal from exposure has been the rule. An occasional report of chronic poisoning describes an anemia and leucopenia, with biopsy showing a bone marrow hypoplasia. These effects, however, are less common in people working with toluene, and they are not as severe. At 200-500 ppm, headache, nausea, eye irritation, loss of appetite, a bad taste, lassitude, impairment of coordination and reaction time are reported, but are not usually accompanied by any laboratory or physical findings of significance. With higher concentrations, the above complaints are increased and in addition, anemia, leukopenia and enlarged liver may be found in rare cases. A common air contaminant.

A very dangerous fire hazard when exposed to heat, flame or oxidizers. Explosive in the form of vapor when exposed to heat or flame. Explosive reaction with 1,3-dichloro-5,5-dimethyl-2,4-imidazolididione; dinitrogen tetraoxide; concentrated nitric acid; H_2SO_4 + HNO_3; N_2O_4; $AgClO_4$; BrF_3; UF_6. Forms an explosive mixture with tetranitromethane. Can react vigorously with oxidizing materials. To fight fire, use foam, CO_2, dry chemical. When heated to decomposition it emits acrid smoke and irritating fumes. For further information, see Vol. 7, No. 5 of *DPIM Report*.

TGL500 ***HR: 3***

TOLUENEDIAMINE

CAS: 25376-45-8 NIOSH: XS 9445000

mf: $C_7H_{10}N_2$ mw: 122.19

DOT: 1709

SYNS:

ar-METHYLBENZENEDIAMINE
DIAMINOTOLUENE
METHYLPHENYLENEDIAMINE
TOLYLENEDIAMINE

Community Right To Know List. Reported in EPA TSCA Inventory.

REFERENCE 18

HRS REFERENCE 18

HOUSE COUNT

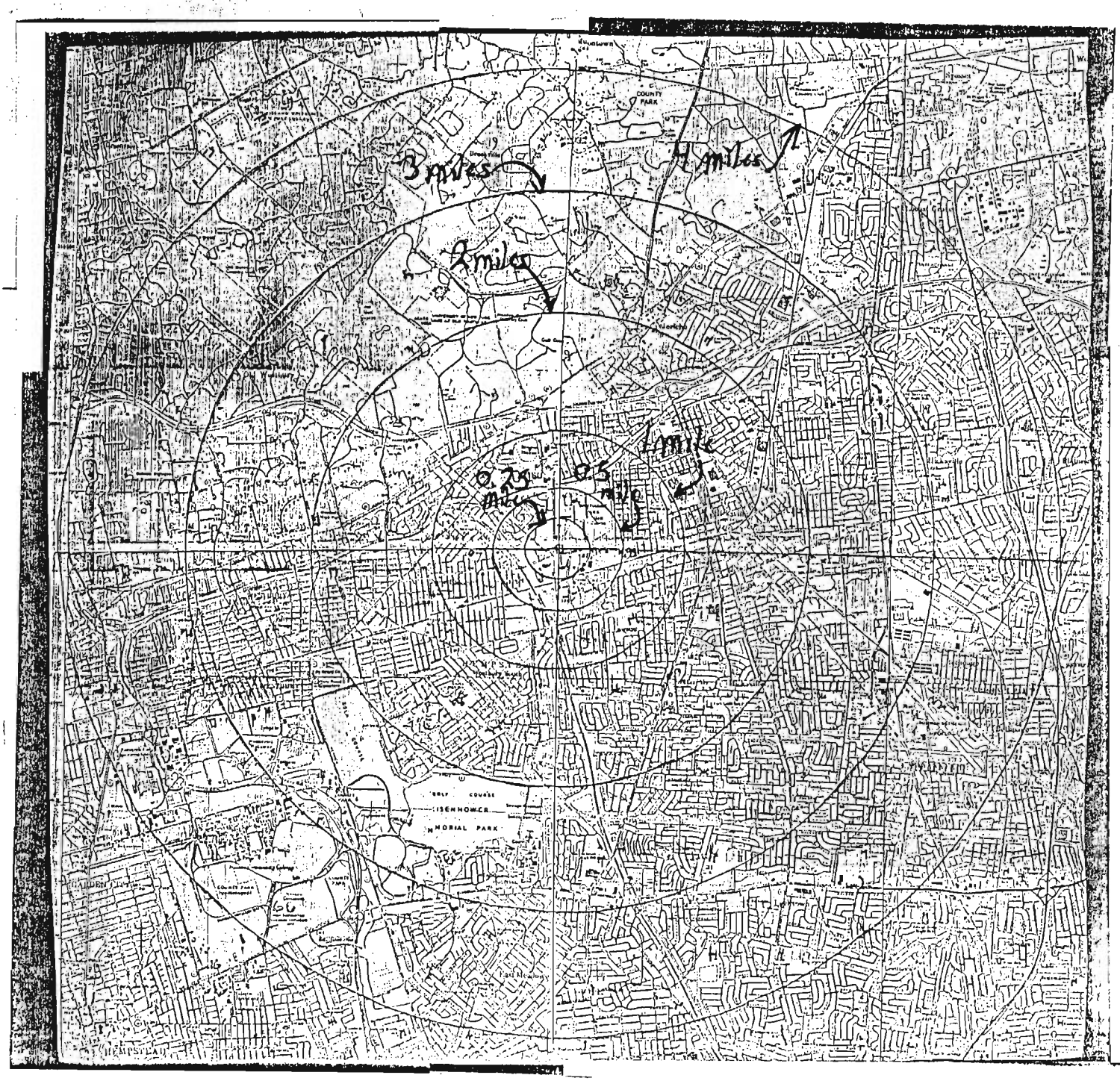
RADIUS (miles)	QUADRANT[a] NE	SE	SW	NW	Total
0-0.25	2	0	0	0	2
0.25-0.5	84	42	308	402	836
0.5-1	1680	1484	1596	743	5,503
1-2	3738	4270	4002	546	12,556
2-3	4368	4536	3850	854	13,608
3-4	6280	8286	3920	2478	20,964

TOTAL RADIUS (miles)	QUADRANT NE	SE	SW	NW	Total	Population Total (x3.8)
0-0.25	2	0	0	0	2	8
0-0.5	86	42	308	402	838	3184
0-1	1766	1526	1904	1145	6341	24,096
0-2	5504	5796	5906	1691	18,897	71,809
0-3	9872	10,332	9756	2545	32,505	123,519
0-4	16,152	18,618	13,676	5023	53,469	203,182

[a]Most of the area is heavily urbanized. For house counting purposes, each block is estimated to contain 30 houses.

House count from the following USGS Topographic Maps:

Amityville (1979)
Freeport (1975)
Hicksville (1967)
Huntington (1979)


3 miles
4 miles
2 miles
1 mile
0.25 mile
0.5 mile
GOLF COURSE
EISENHOWER
MEMORIAL PARK

5.6 EPA POTENTIAL HAZARDOUS WASTE SITE, SITE INSPECTION REPORT (FORM 2070-13)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D0043835081

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Air Techniques, Inc.	70 Cantiague Rock Road				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG. DIST.**
Hicksville,	NY	11802	Nassau	059	04

09 COORDINATES LATITUDE 40 46 01 .N | LONGITUDE 73 32 57 .W

10 TYPE OF OWNERSHIP (Check one)
■ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
1 / 2 / 89 (MONTH DAY YEAR)	■ ACTIVE ☐ INACTIVE	1979 (BEGINNING YEAR) Present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ■ F. STATE CONTRACTOR LMS Engineers (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
Troy Goodman	Technical Aide	LMS Engineers	(914) 735-8300
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO
Edward Hastings	Coordinator of Hazardous Waste	LMS Engineers	(914) 735-8300
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Harry Nagel	Mgr. Mfg. Eng.	70 Cantiague Rock Rd.	(516) 433-7676
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	0900	Sunny-Gusty winds 52°F

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Michael Komoroske	NYSDEC/DHWR/BHSC	(516) 457-0639

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Edward A. Maikish		LMS Engineers	914 735-8300	3 / 10 / 89 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D0043835081

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)
- ☐ A SOLID
- ☐ B POWDER, FINES
- ☐ C SLUDGE
- ☐ D OTHER (Specify)
- ☐ E SLURRY
- ■ F LIQUID
- ☐ G GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)
- TONS
- CUBIC YARDS
- NO OF DRUMS: 28-32

03 WASTE CHARACTERISTICS (Check all that apply)
- ■ A TOXIC
- ☐ B CORROSIVE
- ☐ C RADIOACTIVE
- ☐ D PERSISTENT
- ☐ E SOLUBLE
- ☐ F INFECTIOUS
- ☐ G FLAMMABLE
- ☐ H IGNITABLE
- ☐ I HIGHLY VOLATILE
- ☐ J EXPLOSIVE
- ☐ K REACTIVE
- ☐ L INCOMPATIBLE
- ☐ M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	28-32		unable to differentiate waste
SOL	SOLVENTS	28-32	55 gal drums	" " " "
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	28-32		

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	trans1,2 Dichloroethylene	156-60-5	unknown	up to 93	ppb
"	tetrachloroethylene	127-18-4	"	up to 2600000	"
"	trichloroethylene	79-01-6	"	up to 780	"
"	1,1,1 trichloroethane	71-55-6	"	3	"
"	ethylbenzene	100-41-4	"	4	"
MES	chromium	7400-47-3	"	4	ppm
"	lead	7439-92-1	"	0.04	"
"	silver	7440-22-4	"	0.19	"
OCC	benzene	71-43-2	"	up to 5	ppb
"	toluene	108-88-3	"	up to 81	"
"	xylene	1330-20-7	"	12	"
MES	arsenic	7440-38-2	"	36	ppm
"	selenium	7782-49-2	"	0.04	"
OCC	Aroclor 1254	11097-69-1	"	up to 14,800	ppb

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS	N/A		FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis reports)

Nassau County Department of Health

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D0043835081

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 160,860
02 ☐ OBSERVED (DATE _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Groundwater was not sampled, but soil samples show contamination.

01 ☐ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No history.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No air contamination per LMS site visit on 2 February 1989.

01 ☐ D. FIRE EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Buried waste removed.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Buried waste removed.

01 ☐ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 0.25 (Acres)
02 ■ OBSERVED (DATE 1/7/87) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Nassau County Department of Health on 7 January 1987 collected samples that contained solvents, metals, organic, and inorganic contaminants.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 157,150
02 ☐ OBSERVED (DATE _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Groundwater was never sampled but soil samples show contamination.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No history.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No history.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D0043835081

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No. history.

01 ☐ K DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

No history.

01 ☐ L CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No history.

01 ☐ M UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

No history.

01 ☐ N DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No history.

01 ☐ O CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No history.

01 ☐ P ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

28-32 55-gallon drums were buried sometime prior to 26 December 1986.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 160,860

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Harry Nagel, Mgr./Mfg. Engineer Air Techniques, Inc.
Nassau County Department of Health

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D0043835081

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
■ H. LOCAL (Specify)	00138	7/1/87	7/1/92	Nassau County/Hazardous Material Storage
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)
- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ■ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER
- ■ A. BUILDINGS ON SITE

06 AREA OF SITE
2.5 (Acres)

07 COMMENTS

Nineteen (19) 55 gallon drums is the average amount of waste generated in one year. However, these wastes are not related to the previously excavated buried waste.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

■ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC

Waste was removed.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ■ NO

02 COMMENTS

Buried waste has been removed. Building and pavement covers former excavation.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Nassau County Department of Health
Harry Nagel - Air Techniques, Inc.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D0043835081

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A ☐	B ■
NON-COMMUNITY	C ☐	D ☐

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ■	B ☐	C ☐
D ☐	E ☐	F. ☐

03 DISTANCE TO SITE
A. 0.25 (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

■ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 160,860
03 DISTANCE TO NEAREST DRINKING WATER WELL: unknown (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
60 (ft)	south	≤ 60 (ft)	_____ (gpd)	■ YES ☐ NO

09 DESCRIPTION OF WELLS (including useage, depth, and location relative to population and buildings)
Population receives water from Hicksville Water District. All monitoring wells flow into a central location and then gets distributed.

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS	☐ YES ☐ NO	COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one) Recreation is suspected.

■ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
unnamed pond located in Cantiague Park	☐	0.25 (mi)
_____	☐	_____ (mi)
_____	☐	_____ (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 24,096 NO. OF PERSONS	B. 71,809 NO. OF PERSONS	C. 123,519 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: 0.0 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 18,897

04 DISTANCE TO NEAREST OFF-SITE BUILDING: 0.009 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

Site is located in a densly populated area of Long Island.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE: NY | 02 SITE NUMBER: D0043835081

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A 10^{-6} – 10^{-8} cm/sec ☐ B 10^{-4} – 10^{-6} cm/sec ☐ C 10^{-4} – 10^{-3} cm/sec ■ D GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A IMPERMEABLE (Less than 10^{-6} cm/sec) ■ B RELATIVELY IMPERMEABLE (10^{-4} – 10^{-6} cm/sec) ☐ C RELATIVELY PERMEABLE (10^{-2} – 10^{-4} cm/sec) ☐ D VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
800 (ft)	12 (ft)	unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
14 (in)	2.75 (in)	Ø-3 %	south	0.6 %

09 FLOOD POTENTIAL

SITE IS IN unknown YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A >2 (mi)	B >1 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

a (mi)

ENDANGERED SPECIES

13 LAND USE IN VICINITY

DISTANCE TO

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A Ø.Ø (mi)	B 0.2 (mi)	C. (mi)	D >1 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site is located in an urban area of Long Island. The land is flat with no appreciable hills in the area.

a

New York State endangered species 0.5 miles to the southwest. The last sighting was in 1919 in a heavily urbanized area. The plant does not have Federal legal status.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

LMS site visit
Climate Atlas of United States 1979, U.S. Department of Commerce
Rainfall Frequency Atlas - Technical Paper #40, Dept. of Commerce, Washington, DC
Nassau County General Soil Map. U.S. Soil Conservation.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D0043835081

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION	17	Nassau County Dept. of Health, NYSDEC,	15 Jan '87
OTHER	3	and ERM-Northeast	15 Jan '87

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Air Quality	HNU and EXTOX meter revealed no unusual levels at the site.

IV. PHOTOGRAPHS AND MAPS

01 TYPE ■ GROUND □ AERIAL

02 IN CUSTODY OF LMS Engineers
(Name of organization or individual)

03 MAPS ■ YES □ NO

04 LOCATION OF MAPS Air Techniques/LMS Engineers

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Nassau County Department of Health
NYSDEC
ERM-Northeast
LMS site visit

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D0043835081

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Air Techniques, Inc.		70 Cantiague Rock Road		Hicksville	NY	11802

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Dewait Co.		unknown		unknown	unkn	unknown
Sylvania Corporation		unknown		unknown	unkn	unknown

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Harry Nagel - Manager/Manufacturing Engineer, Air Techniques, Inc.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D0043835081

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER	04 SIC CODE
Air Techniques, Inc.		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE
70 Cantiague Rock Road	Hicksville	NY	11802

08 YEARS OF OPERATION	09 NAME OF OWNER
10	Air Techniques, Inc.

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE	14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER	04 SIC CODE
Sylvania Corp		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
1957-1972	Sylvania

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE	14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
DeWiant Co.		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
1972-1979	DeWiant Co.

10 NAME	11 D+B NUMBER	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE	14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE	14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Harry Nagel - Manager/Manufacturing Engineer, Air Techniques, Inc.
ERM-Northeast 1987, proposed work plan for a subsurface investigation.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D0043835081

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Air Techniques, Inc.	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
70 Cantiague Rock Road	

05 CITY	06 STATE	07 ZIP CODE
Hicksville	NY	11802

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Sylvania Corp.[a]			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
DeWiant Co.[a]			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Harry Nagel - Manager/Manufacturing Engineer, Air Techniques, Inc.

[a]Unknown which disposed of the material.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D0043835081

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ■ E. CONTAMINATED SOIL REMOVED — 02 DATE 1/7/87 — 03 AGENCY Nassau Co. DOH
04 DESCRIPTION

Nassau County Department of Health oversaw soil excavation by Chemical Management Corp.

01 ■ F. WASTE REPACKAGED — 02 DATE 1/7/87 — 03 AGENCY Nassau Co. DOH
04 DESCRIPTION

Drums and soil disposed in a lined dumpster.

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

No history.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D0043835081

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No history.

01 ☐ S CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No history.

01 ☐ T BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No history.

01 ☐ U GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No history.

01 ☐ V BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No history.

01 ☐ W GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No history.

01 ☐ X FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No history.

01 ☐ Y LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No history.

01 ☐ Z AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No history.

01 ☐ 1 ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No history.

01 ☐ 2 POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No history.

01 ■ 3 OTHER REMEDIAL ACTIVITIES — 02 DATE unknown — 03 AGENCY Air Techniques, Inc.
04 DESCRIPTION
After drums and soil were excavated 3 layers of 6 mil polyethalene were layed along the foundation.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analyses, reports)

Harry Nagel - Manager/Manufacturing Engineer, Air Techniques, Inc.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION

01 STATE: NY | 02 SITE NUMBER: D0043835081

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☐ NO

02 DESCRIPTION OF FEDERAL STATE LOCAL REGULATORY/ENFORCEMENT ACTION

Unknown.

SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

EPA FORM 2070-13 (7-81)

CHAPTER 6

DATA ADEQUACY, CONCLUSIONS, AND RECOMMENDATIONS

6.1 DATA ADEQUACY

Although the soil beneath and around the drums was saturated with hazardous waste, whether groundwater was affected is unknown. Some soil samples were collected and analyzed. The following information would be useful to complete the HRS score:

- Groundwater sampling and analysis
- Nearby surface water sampling and analysis
- Off-site soil analysis to compare with existing on-site values

Prior remedial activities consisted of drum and soil excavation. Chemical Management Corporation charged $30,000 to haul contaminated soil and drums (Ref. 1, Appendix A).

6.2 CONCLUSIONS AND RECOMMENDATIONS

6.2.1 Conclusions

All analytical data indicate soil contamination caused by the 28 to 32 buried 55-gal drums. Drums (some in sound shape, others broken or in pieces) and soil were found to contain various volatile organics, metals, and PCBs. Any soil or groundwater contaminant plume that might be present was not defined.

Since high contamination levels were found in the soil, the groundwater may also be contaminated. The area soil permeability is high (10^{-3} to 10^{-5} cm/sec), which would add to the possibility of contamination as groundwater is located 60 ft below grade.

6.2.2 Recommendations

Although no groundwater samples were collected and limited soil samples were analyzed, there is enough evidence to determine that a potential risk to the environment may exist. It is recommended that NYSDEC initiate a Phase II investigation. The following are minimum recommendations:

- A soil gas survey should be conducted to help define the extent of any contaminant plume on- or off-site.
- The permeability of the unsaturated zone is high, liquid was found in some drums, and contaminated soil was excavated. This could result in groundwater contamination. Therefore, upgradient and downgradient wells should be installed and sampled to determine whether a contaminant plume exists.
- Nearby surface water should be sampled to determine whether upwelling is occurring.
- Data from the nearby Superfund site at General Instruments should be reviewed and used if applicable. The additional study conducted by ERM should be located and reviewed.
- Full data packages for all samples must be compiled and reviewed as some data appear to be missing. If the data are incomplete, additional soil boring samples should be collected and analyzed for the full Target Compound List constituents.

APPENDIX A

REFERENCES AND DATA SOURCES

APPENDIX A

REFERENCES AND DATA SOURCES

[1] Interview with Mr. Harry Nagel, Air Techniques, Inc.

[2] ERM-Northeast, Inc. June 1987: Proposed work plan for a subsurface investigation. Prepared for Air Techniques, Inc.

[3] Isbister, J. 1966. Geology and hydrology of northeastern Nassau County, Long Island, New York. Geological Survey Water-Supply Paper 1825.

[4] General soil map and interpretations. 1976. Prepared by Suffolk County Soil and Water Conservation District.

[5] Cohen, P., O.L. Franke, and B.L. Foxworthy. 1968. An Atlas of Long Island's Water Resources. Prepared by U.S. Geological Survey. New York Water Resources Commission Bulletin 62.

[6] Conversation with supervisor, Hicksville Water District.

[7] January 1987 drum waste sample analytical data.

[8] January/March 1987 soil quality data.

[9] June/July 1987 soil quality data.

REFERENCE 1

INTERVIEW/QUESTIONNAIRE

Site: Air Techniques, Inc.

Date: 2/2/89

NYSDEC ID NO.

Interviewer: T. Goodman

Address: Air Techniques, Inc.
70 Cantiague Rock Road
P.O. Box 870
Hicksville, NY 11802

Interview Type: personal

Interviewee: Mr. Harry Nagel

Phone No. (516) 433-7676

Affiliation: Manager

Description and History of Site:

1. What is the current owner's name and address? How long? What was the property's intended use?

2. Who is the current operator of the area in question?

3. Who were the previous owners and/or operators (names, addresses and dates of ownership) during the time environmental problems occurred?

4. What type of site? (landfill, open dump, lagoon, treatment pond, structure, etc.) Dates of activity.

5. Where is site located? Describe surrounding area, refer to roads, streams, railroads, shopping centers, etc., include brief sketch map of site.

6. Has the site topography changed? What is site like now? Were there any buildings added, torn down, still there? Are there any underground tanks? Where? Have any land, buildings and/or underground tanks been filled? When/where? Size of site.

7. Have there been any wells on the site? Are they still in use? When were they built? By whom? When filled? Which wells are closest to the site? Is there a water supply in area?

8. Were there any catastrophes such as fire, flood, or building collapse? What happened afterwards? Where did debris go? Were there any environmental effects after the catastrophe?

9. What event caused this site to be the subject of an environmental investigation? Complaints, releases, etc.? When?

Site Operations:

10. What process, function, or activity occurred at the site? What are the beginning and ending dates?

11. What chemicals were used at site? Amounts. How were these chemicals used at the site? How were they stored?

12. What wastes were produced at the site? What was done with wastes? Were they stored? Where?

13. What residential, commercial or industrial wastes were carried to and disposed of at the site?

Site Problems:

14. When did the site first start having problems? What types of problems?

15. What was done about the problems? Have they been resolved? Which ones were corrected? Which ones have not been corrected?

16. Were there inspections of the site? By whom?

17. What regulatory agencies have contacted you or the company (in question) (NYSDEC, Health Dept., etc.)?

18. Were there any soil, water, waste or air sampling analyses or reports? If yes, when and report reference?

Unresolved Questions and Follow-up:

19. Questions by site representative/interviewee.
Answers by LMS/interviewer.

20. Questions by LMS/interviewer.
Answers by site representative/interviewee.

21. Unresolved questions by either party.

1. Air Techniques, Inc.; 10 yrs; G.T. Sylvania developed property in 1957 and was used for manufacturing uranium rods.

2. Air Techniques, Inc.

3. G.T. Sylvania (1957-1972) Dewiant Co. (1972-1979) Air Techniques (1979-present). Environmental problems occurred during Air Techniques' were ownership.

4. Site is a structure.

5. Site is located off Cantiague Rock Road. Along road manufacturers exist as well as beer distributors.

6. Site topography has changed only in that an addition was added (this is when drums were found). No underground tanks.

7. No wells on-site (only dry wells).

8. No.

9. While excavating for addition, several drums (30-40) were found.

10. Air Techniques uses site for manufacturing dental equipment. Sylvania used site for manufacturing uranium rods (1957-1972). Unknown what Dewiant Co. manufactured (1972-1979).

11. Paints and oil used at site (100 gallons/week). Oil is used for lubrication, paint for painting. Stored in drums in one section of building.

12. See #11.

13. None.

14. While excavating for addition, drums were found (Dec.'87).

15. Drums were removed and soil around drums and below drums was excavated.

16. Alex Moshie, NYSDEC, and someone from Nassau County DOH.

17. NYSDEC and Nassau County DOH.

18. Yes, ERM Northeast June 1987.

Harry Nagel declined to sign report. He felt it was unnecessary since he would be receiving final report.

1. (a) Air Techniques, Inc. (c) ~ 10 years (d) G.T. Sylvania developed property in 1957 and was used for manufacturing Uranium Rods
2. Air Techniques, Inc.
3. G.T. Sylvania (1957 - 1972) Dewaid Co. (1972 - 1979) Air Techniques (1979 - present). Environmental problem occured while Air Techniques was owners
4. site is a structure
5. site is located off of Cantiague Rock Rd. along road, manufactor exist as well as bee distributor
6. site topography has changed in only that an addition was added (this is when drums were found) NO underground tanks
7. no wells on site (only dry wells)
8. no
9. While excavating for addition several drums (~30-40) were found
10. Air Techniques uses site for manufacturing Dental equipment. Sylvania used site for manufacturing Uranium Rods (1957 - 1972). Unknown what Dewaid manufactured (1972 - 1979).
11. paints and oil used at site < 100 gallons/week. Oil is used for lubrication print for painting Stored in drums in ~~same~~ me section of building
12. see # 11
13. none
14. While excavating for addition, drums were found (Dec. '84).
15. Drums were removed and soil around drums and below drums were excavated
16. Alex Yoshie NYSDEC - and someone from Nassau County D.O.H.
17. NYSDEC and Nassau County DOH
18. yes - ERM Northeast June 1987.

Harry Nagel declined to sign report - he felt it was unnecessary since he would be receiving final report.

Troy Goodman
2.3.89

1. Air Techniques Inc. ~ 10 year @ G.T. Sylvania developed property in 1957 and was used for manufacturing Uranium Rods. @
2. Air Techniques, Inc.
3. G.T. Sylvania (1957-1972) Dewaid Co. (1972-1979) Air Techniques (1979-present). Environmental problem created while Air Techniques was owners
4. site is a structure
5. site is located off of Carlisle Road Rd., along road, manufactures dental as well as been distributors
6. site typography has changed in only that an addition was added (No is when drums were found) No. underground tanks
7. no wells on site (only dry wells)
8. no
9. While excavating for addition several drums (~30-40) were found
10. Air Techniques uses site for manufacturing Dental equipment Sylvania used site for manufacturing Uranium Rods (1957-1979). Unknown what Dewaid manufactured (1972-1979).
11. private and oil used at site < 100 gallon/week Oil is used for lubrication fluid for painting Stored in drums in the center of building fire proof storage room
12. see # 11
13. None
14. While excavating for addition, drums were found (Dec. '87)
15. Drums were removed and soil around drums and below drums were excavated
16. Rep Nyskis NYSDEC - and someone from Nassau County D.O.H.
17. NYSDEC and Nassau County DOH
18. yes - ERM Northeast June 1987

Harry Nagel declined to sign report - stated it was unnecessary since he would be receiving final report.

Tony Goodman 2.3.89

H. Nagel

Lawler, Matusky & Skelly Engineers
Environmental Science & Engineering Consultants
One Blue Hill Plaza
Pearl River, New York 10965

MEMORANDUM OF CONVERSATION

6 of 6

JOB Air Techniques, Inc JOB No. 576-021

DATE 13 March 89 TIME 1430

THE WRITER SPOKE TO:

Mr. Mr. Harry Nagel OF Air Techniques, Inc

BY TELEPHONE / AT Bluehill

CONCERNING: address of hauling company and cost of clean-up.

AND DECIDED: - drums were removed by Chemical Management Corporation 340 Eastern Parkway, Farmingdale New York 11735 Att: Mr. Jack M. Libel

- cost of clean-up $30,000.

CC:

SIGNED: Troy Goodman

REFERENCE 2

PROPOSED WORK PLAN
FOR A SUBSURFACE INVESTIGATION
AIR TECHNIQUES, INC.
HICKSVILLE, NEW YORK

ERM-Northeast

ERM-Northeast

PROPOSED WORK PLAN
FOR A SUBSURFACE INVESTIGATION
AIR TECHNIQUES, INC.
HICKSVILLE, NEW YORK

JUNE 1987

PREPARED FOR:

AIR TECHNIQUES, INC.
HICKSVILLE, NEW YORK

PREPARED BY:

ERM NORTHEAST, INC.
88 SUNNYSIDE BOULEVARD
PLAINVIEW, NEW YORK 11803

1.0 INTRODUCTION

During the construction of a building addition, Air Techniques, Inc. (ATI) of Hicksville, New York, encountered a cache of buried drums inside the foundation wall. (Air Techniques, Inc. is a tenant at the site which is owned by AT Realty, Co.) Following notification of the Nassau County Department of Health (NCDH) and the New York State Department of Environmental Conservation (NYSDEC), approximately 30 drums and surrounding soil were removed by ATI. Soil and drum samples collected by NCDH and NYSDEC have shown tetrachloroethylene and arsenic to be present. Several environmental concerns still exist at the site including, 1) are additional buried drums present 2) was all the contaminated soil surrounding the drums removed during the previous drum excavation program, and 3) has ground water been contaminated through leakage of material from the drums. ERM-Northeast was retained by ATI to conduct a subsurface investigation at the site to resolve these issues. This document presents a proposed work plan that describes the investigatory procedures that will be implemented. This report is organized as follows:

2.0 CHRONOLOGICAL SUMMARY OF EVENTS

Sylvania Corporation originally developed the property in 1957. A storm water recharge basin was constructed east of this structure at the same time. In 1959, an addition was built to the east of the original structure. Sylvania sold the property in 1972 to the Dewiant Co., from which Air Techniques, Inc. acquired the property in 1979. In 1986, Air Techniques acquired a landlocked portion of property on their eastern boundary, from Nassau County. In 1986, the company began constructing an addition east of their existing facility. Figure 1 (in rear pocket) shows the site property lines, original and additional building areas.

CHRONOLOGY OF EVENTS

The following is a chronology of events associated with the discovery of buried drums at the site. This summary is based on conversations with Harry Nagel and Frank Bader, of Air Techniques, Inc., Robert Becherer of NYSDEC, Edward Epstein, Project Construction Manager; and letters and laboratory data from the NCDH and NYSDEC.

- December 28, 1986 - Construction personnel discovered buried drums while excavating through the paved parking lot for the foundation. Air Techniques contacted NCDH who notified NYSDEC. Mr. Allan Fitzgerald (NCDH) responded to the site and gave contractor permission to proceed because the barrels were found on the interior of the foundation line. Four drums are removed.

- The Sylvania Corporation had previously manufactured uranium rods. NYSDEC checked the sit for radiation with negative results.

- January 7, 1987 - 12 to 14 drums and contaminated soil were removed by a crane and placed in a lined dumpster. Samples from the drums were taken by NCDH at this time. The area of excavation measures 12 feet square and 7 feet deep.

- February 11, 1987 - Mr. L. Sama, NCDH notified Mr. A Candela of NYSDEC via letter of sampling results showing tetrachloroethylene and arsenic in the drums.

- March 16, 1987 - NCDH supervised removal of 12-14 additional drums of which many were badly crushed, in pieces and empty.

These drums were found 5-6 feet from the original drums and at a similar depth.

- March 17, 1987 - NYSDEC took two samples from the floor of excavation which now measures approximately 20 feet square and 12 feet deep.

- April 1, 1987 - In an effort to determine the origin of the drums, Air Techniques asked Stauffer Chemical Company (whose name was discovered on one or more drums) to check their records for past shipments to Air Techniques' address dating back to 1957.

- April 20, 2987 - Stauffer Chemical Company informed Air Techniques that the sample did not appear to be a Stauffer Chemical Company Product and records do not show any prior shipments.

- June 11, 1987 - Air Techniques informs NYSDEC of intent to dispose of existing buried drums through Chemical Management, Corp.

- June 11, 1987 - Air Techniques retains ERM-Northeast, Inc.

- June 15, 1987 - ERM-Northeast, Inc. conducts geophysical survey.

3.0 GEOPHYSICAL SURVEY

On June 15, 1987, a magnetometer survey of the site was undertaken to determine the presence of additional buried drums. A Dowty RFL Industries Incorporated Model DM22 Differential Magnetometer capable of measuring vertical magnetic fields ranging from +10 gamma to 100,000 gamma was used in the survey (The Earths' Magnetic Field Intensity varies around the world. In the northern United States, the vertical and horizontal gamma intensity is approximately 53,000 and 15,000 units, respectively.) The instrument senses a disturbance in the earths' magnetic field from metallic objects, such as buried drums.

As shown on Figure 1, the entire inside area of the new building addition was surveyed, except for a portion of the excavated sump area. Also, an area extending 40 feet north of the buried drum area and outside of the new addition was surveyed.

The geophysical survey indicates two anomalous areas within the new building area. Anomalous area "A" adjoins the excavated drum area and is approximately 16 feet square. Readings varied above normal vertical magnetic field background (53,000 gamma) to

60,000 to 62,000 gamma. Anomalous area "B" yielded a gamma reading of 56,000 to 59,000 gamma. These readings should be considered moderately strong to strong and indicative of buried metallic objects such as drums. Based on these results, both areas are concluded to require additional investigation.

4.2 Backhoe Pit Investigation

To investigate the two anomalous shown on Figure 1, backhoe pits will be excavated. The pits will extend over the entire area of each anomaly and will extend down to approximately 10 feet. An ERM hydrogeologist will supervise the excavation of each pit. If drums are encountered they will be carefully removed and placed in a lined dumpster. Any contaminated soil will also be removed at the same time. If necessary, post excavation soil samples will be collected to verify that all contaminated materials have been removed.

4.3 Potential Ground Water Impacts

The depth to the water table at the Air Techniques site is over 60 feet. The direction of flow is approximately south-southwest. ERM proposes to defer the installation of a ground water monitoring well pending the soil boring results. Based on the number of drums found and the consistency of the materials, it is considered unlikely that enough liquid would be present to infiltrate down to the water table through 60 feet of unsaturated zone deposits. If the soil borings indicate contaminated soils extend to the water table, a monitoring well will be installed directly downgradient of the former drum area on the south side

of the building addition. If the borings, however, indicate clean soils below the former drums area, ERM believes the installation of a monitoring well would not be justified.

REFERENCE 3

Geology and Hydrology of Northeastern Nassau County Long Island, New York

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1825

Prepared in cooperation with the Nassau County Department of Public Works and the New York State Water Resources Commission

ment of Public Works, and Arthur H. Johnson, Associate Hydraulic Engineer, New York State Water Resources Commission (formerly New York State Water Power and Control Commission), for their generous and continued support of the investigation. The present report includes data collected by U.S. Geological Survey personnel and cooperating agencies during the course of many years. Published and unpublished information was used freely in an effort to solve the complex geologic and hydrologic problems of the report area. The work of earlier investigators is acknowledged.

WELL-NUMBERING SYSTEM AND MAP COORDINATES

Well numbers on Long Island are assigned in sequence by the New York State Water Resources Commission as information is obtained and have no bearing on location. The well numbers are preceded by a letter designating the county in which the well is located; thus, Q1293 refers to a well in Queens County, whereas N1293 is in Nassau County. As an aid in locating wells, the map area (well-location map, pl. 1) has been subdivided into 2½-minute rectangles, which are designated by number and letter in the indexed margins. The coordinates, given in all major tables of the report, designate the rectangle in which the well is located and indicate distances of the well in miles, first north, then west, from the southeast corner of that rectangle. Geologic and hydrologic data for wells shown on plate 1, but not published in this report, are available for consultation in the files of the Geological Survey office at Mineola, N.Y.

GEOGRAPHY

TOPOGRAPHY AND DRAINAGE

Long Island lies entirely within the Coastal Plain province of the northeastern United States. The area of investigation, on western Long Island, may be subdivided into three morphologic units; from north to south (1) the headlands, including Great Neck and Manhasset Neck, (2) the Harbor Hill terminal moraine, and (3) the glacial-outwash plain. (See pl. 8.) The headlands rise abruptly from Long Island Sound and its bays to rather uniform altitudes of 80 to 100 feet near their northern tips. Southward, the headlands, which are mantled thinly by glacial till, become increasingly irregular, being dissected by small streams discharging into the bays, to the east and west. Individual hills rise to altitudes above 200 feet. Within the project area, the headlands are indented by three major bays, Hempstead Harbor, Manhasset Bay, and Little Neck Bay. These bays have a general north-south orientation and are 3 to 5 miles in length. The Harbor Hill terminal moraine, consisting of a series of coalescing irregular hills, forms a pronounced ridge, trending to the northeast,

that rises 80 to 150 feet above the headlands. The highest altitudes in western Long Island are along this ridge, Harbor Hill itself rising to 368 feet above sea level. The glacial outwash plain of sand and gravel abuts the moraine and slopes southward from an altitude of about 140 feet at the southern edge of the moraine to about 80 feet in Garden City; thence, its gentle southward slope is continued to the shore areas of southern Nassau County at gradients of about 20 feet per mile.

There are no large streams in the area. Small streams, sustained by local ground-water discharge, flow predominantly to the north and west at average rates of 0.25 to 3.0 cfs (cubic feet per second). An exception is Cedar Swamp Creek, which flows into Hempstead Harbor near Glen Cove at average discharge rates of more than 7 cfs. Most of its drainage area, however, lies beyond the eastern limit of the area. Nearly all streams are small in relation to the valleys they occupy. The oversized valleys originated in Pleistocene time, when continental ice masses and associated melt water modified the pattern of stream-flow into the Atlantic Ocean and the depression of Long Island Sound.

CLIMATE

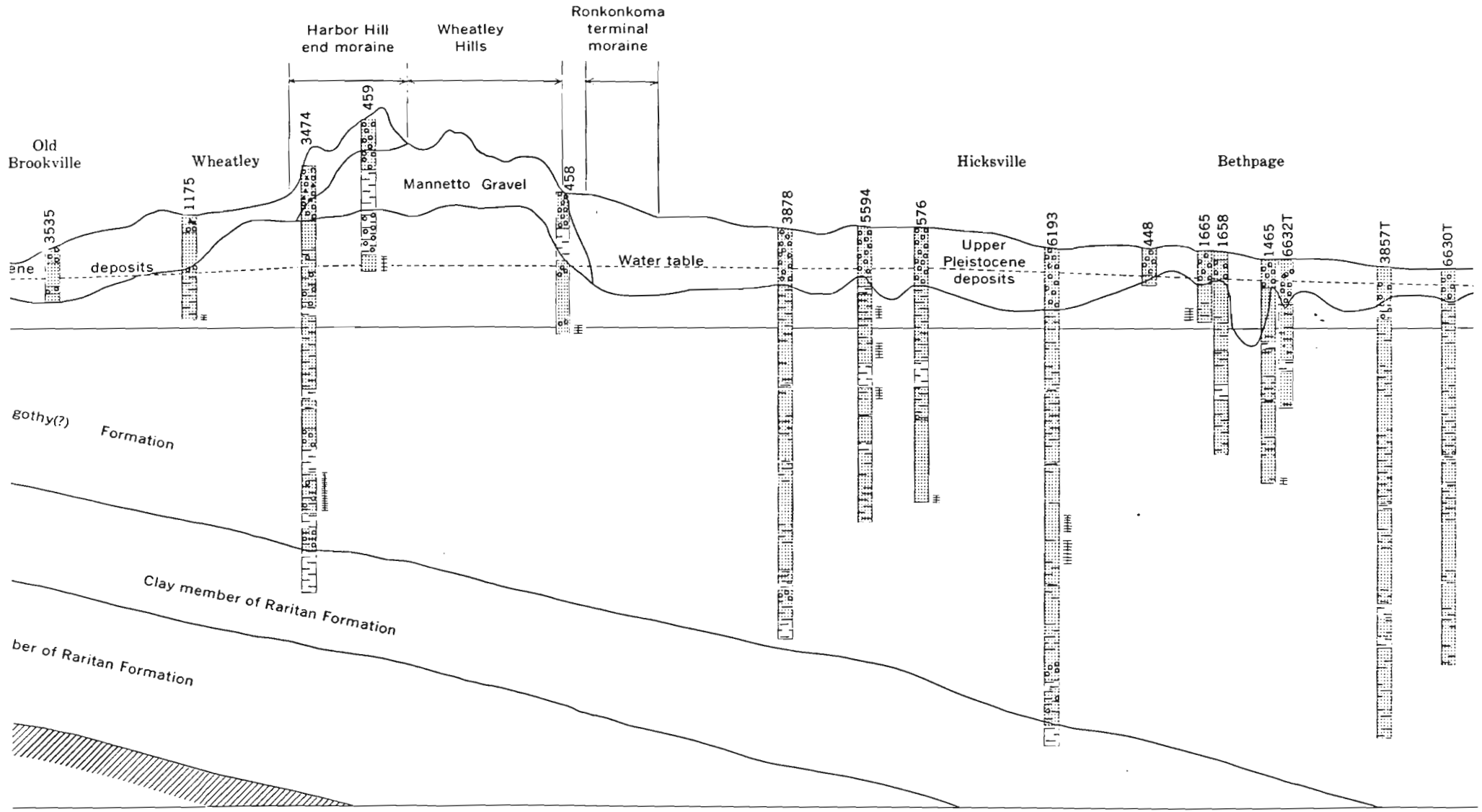
The climate of Long Island, in contrast to other localities within the State of New York, is tempered by its low altitudes and proximity to the ocean. Precipitation is distributed fairly evenly throughout the year, amounting to an annual average of 44.20 inches for 1938–39 to 1957–58 at Mineola, in Nassau County. At that station, a low of 32.60 inches was reported for 1946–47, whereas in 1957–58 a high of 57.64 inches was recorded. Local variations in precipitation are shown in figure 2, in which annual precipitation at two stations in Nassau County (Manhasset and Mineola, N.Y.) is compared with records for New York City, for the period 1938–39 to 1957–58. Annual precipitation rates shown in the diagram are computed for the water year, October 1 to September 30.

Figure 3 shows monthly average precipitation and temperatures at The Battery, New York City, N.Y., based on long term records by the U.S. Weather Bureau. Precipitation reaches a maximum during August at The Battery and also in Nassau County. Monthly average precipitation ranges from 3 to more than 4½ inches at most stations in Nassau County.

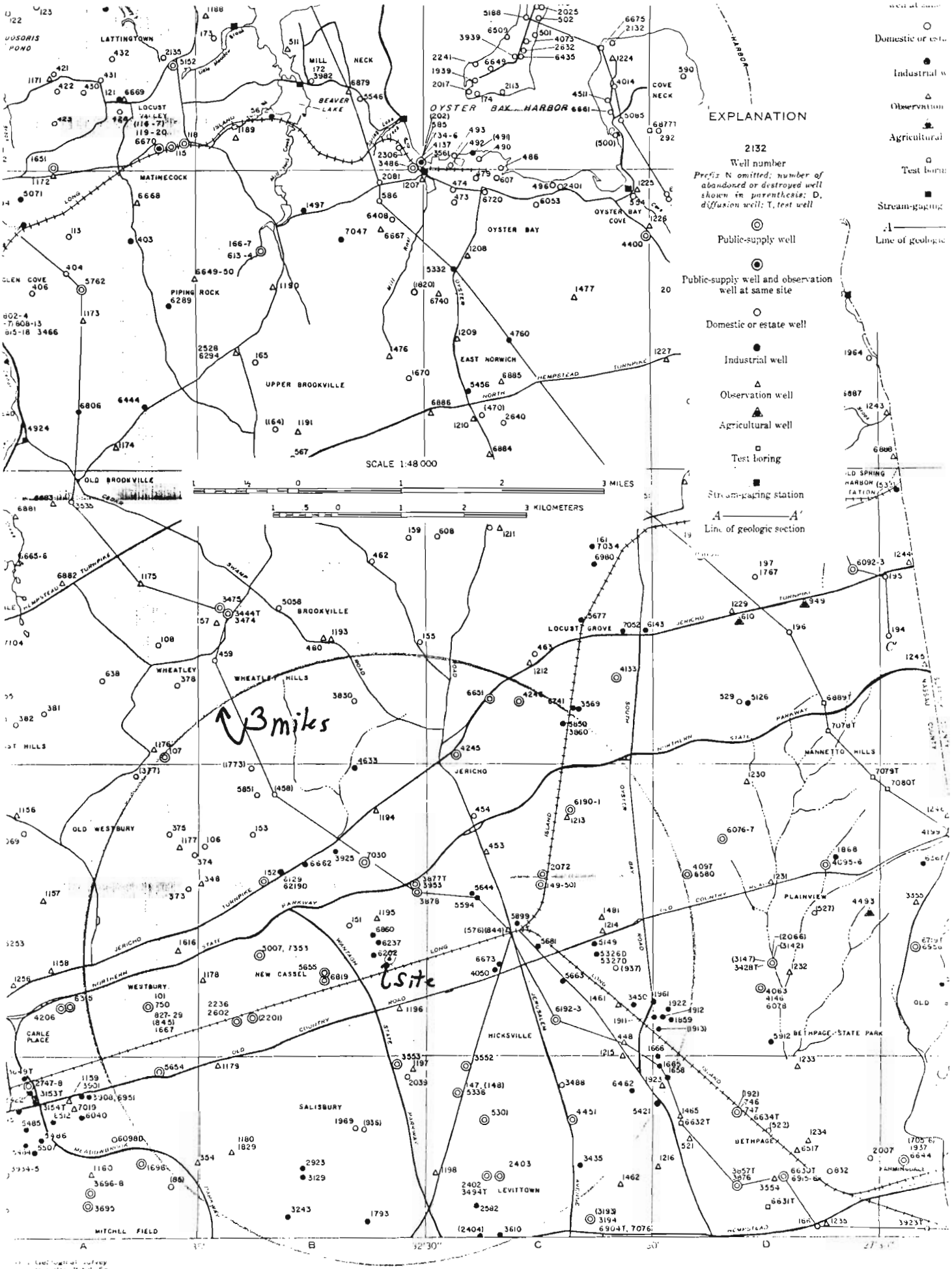
The annual average temperature in New York City is 52.7°F (1872–1957, U.S. Weather Bureau). Average temperatures for January and July are 31.8°F and 74.6°F, respectively. (See fig. 3.) In New York City and on Long Island temperatures are rarely below 0° or higher than 95°F. The frost-free season has an average length of about 190 days, the average date of the last and first killing frost being

PREPARED IN COOPERATION WITH THE

NASSAU COUNTY DEPARTMENT OF PUBLIC WORKS AND THE
NEW YORK STATE WATER RESOURCES COMMISSION

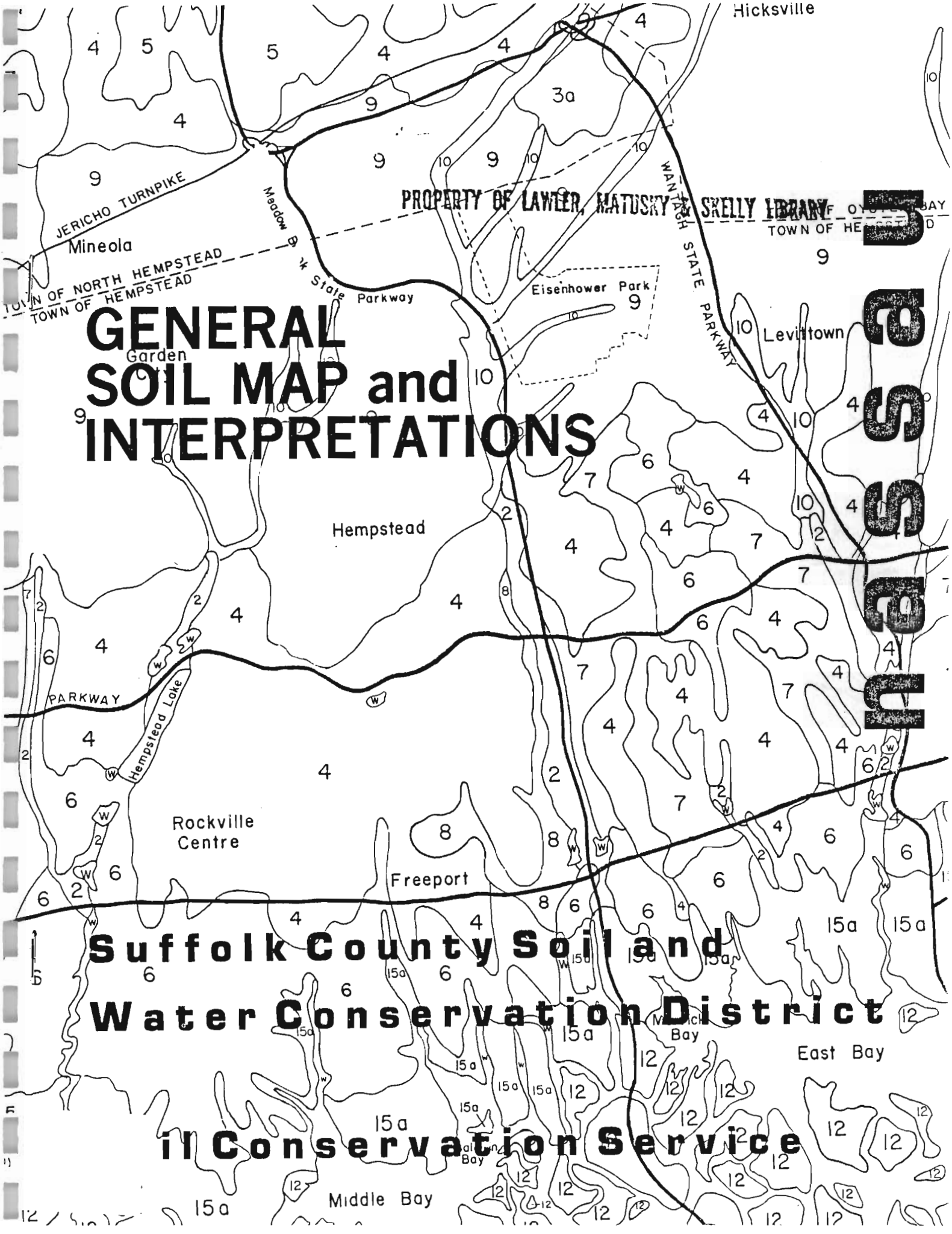


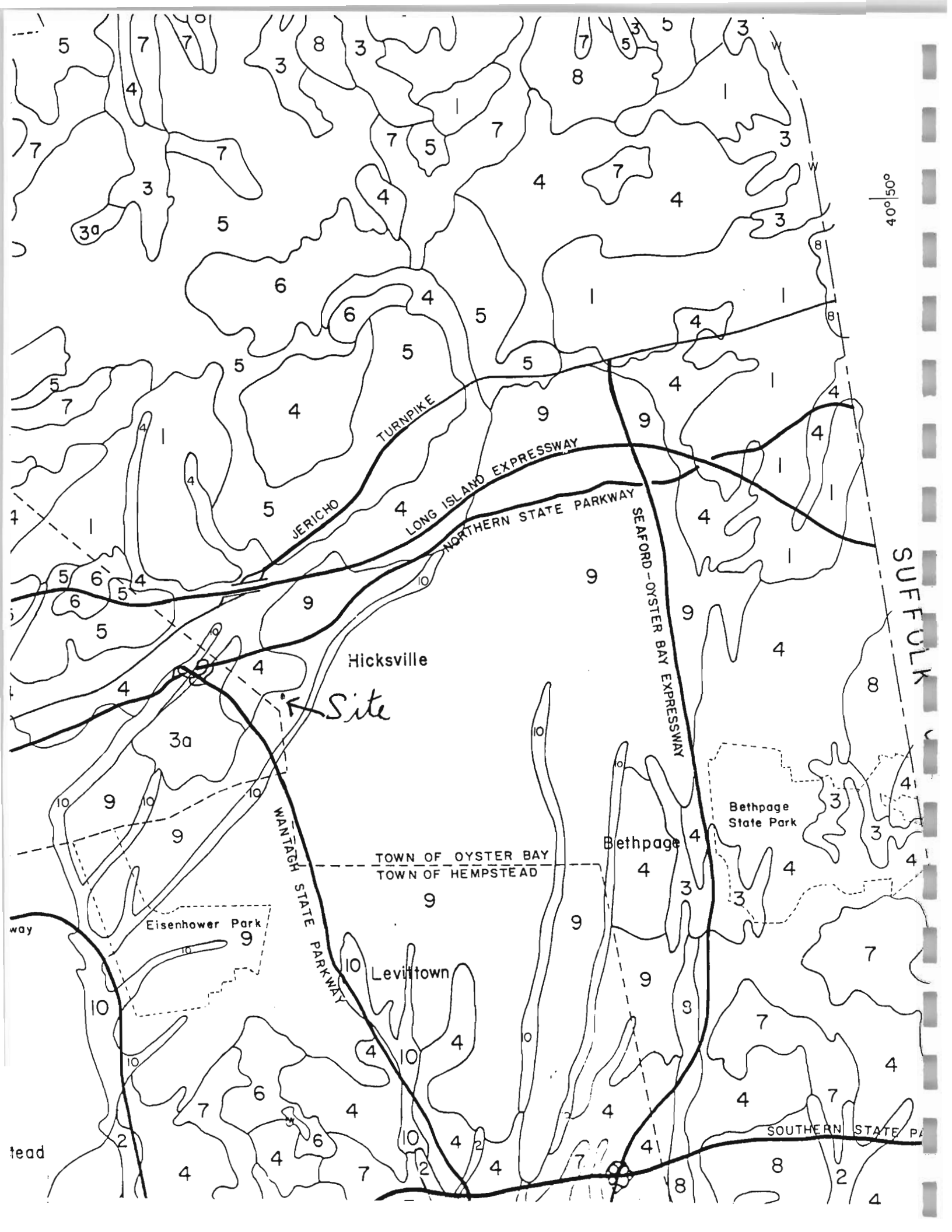
ISLAND SOUND NEAR DOSORIS POND TO NASSAU COUNTY LINE AT SOUTH FARMINGDAL



AP SHOWING LOCATION OF WELLS, TEST BORINGS, STREAM-GAGING STATIONS, AN
OF GEOLOGIC SECTIONS IN NORTHEASTERN NASSAU COUNTY, LONG ISLAND, NEW
SCALE 1:48 000

REFERENCE 4




TURNPIKE
JERICHO
LONG ISLAND EXPRESSWAY
NORTHERN STATE PARKWAY
SEAFORD-OYSTER BAY EXPRESSWAY
WANTAGH STATE PARKWAY
Hicksville
Site
Bethpage
Bethpage State Park
Eisenhower Park
Levittown
TOWN OF OYSTER BAY
TOWN OF HEMPSTEAD
SOUTHERN STATE PA
SUFFOLK
40°50°

SOIL ASSOCIATIONS

1.	Montauk association	– Deep, rolling, well drained, moderately coarse textured soils with a fragipan, on moraenes
2.	Berryland – Wareham association	– Deep, nearly level, very poorly drained to somewhat poorly drained, coarse textured soils in low areas on terraces
3.	Carver – Plymouth association	– Deep, hilly, excessively drained, coarse texture soils, on moraines
3a.	Carver – Plymouth association	– Deep, undulating, excessively drained, coarse textured soils, on moraines
4.	Haven – Riverhead association	– Deep, nearly level, well drained, medium textur and moderately coarse textured soils, on outwas plains
5.	Haven–Riverhead–Montauk association	– Deep, undulating, well drained, medium textured and moderately coarse textured soils, on morain
6.	Plymouth association	– Deep, nearly level, excessively drained, coarse textured soils, on moraines and outwash plains
7.	Riverhead – Haven association	– Deep, gently sloping, well drained, moderately coarse textured and medium textured soils on moraines and outwash plains
8.	Riverhead – Plymouth association	– Deep, gently sloping, well drained to excessive drained, moderately coarse textured and coarse textured soils on moraines and outwash plains
9.	Haven Variant association	– Deep, nearly level, well drained, medium textur soils on outwash plains
10.	Hoosic Variant association	– Deep, nearly level, well drained, medium textur very gravelly soils, on outwash plains
11.	Palms association	– Deep, level, very poorly drained, organic soils in depressional areas, on moraines
12.	Westbrook association	– Deep, level, tidal marsh areas along shorelines and in shallow inland waterways
13.	Beaches and Dunes land association	– Beaches and sand dunes of the shore lines and the barrier beach
15.	Udorthents association	– paved and unpaved areas in the uplands that hav been extensively graded
15a.	Udipsamments association	– paved and unpaved areas along the shorelines th have been extensively graded or filled with san and gravelly material

W – Water bodies

REFERENCE 5

New York Water Resources Commission Bulletin 62

AN ATLAS OF
LONG ISLAND'S WATER RESOURCES

By
Philip Cohen, O.L. Franke, and B.L. Foxworthy, Hydrologists,
United States Geological Survey

Prepared by the U.S. Geological Survey in cooperation with the
New York State Water Resources Commission

Published by the
STATE OF NEW YORK
1968

HOW AND WHERE THE WATER IS FOUND

As shown in the accompanying diagram (pl. 2C), Long Island is underlain by consolidated bedrock, which in turn is overlain by a wedge-shaped mass of unconsolidated rock materials. The top of the bedrock, which is at or near land surface in the northwest part of the island, dips toward the southeast to a depth of about 2,000 feet in south-central Suffolk County.[1] The consolidated bedrock is dense and does not store or transmit appreciable amounts of water.

The materials that overlie the bedrock and constitute Long Island's ground-water reservoir are unconsolidated deposits of gravel, sand, silt, and clay and mixtures thereof. These materials can be classified into several hydrogeologic units on the basis of hydraulic properties, relative position, composition, geologic age, and other characteristics. The more important water-producing units in the ground-water reservoir are termed aquifers. Pertinent characteristics of the major units of the ground-water reservoir are summarized in the following table:

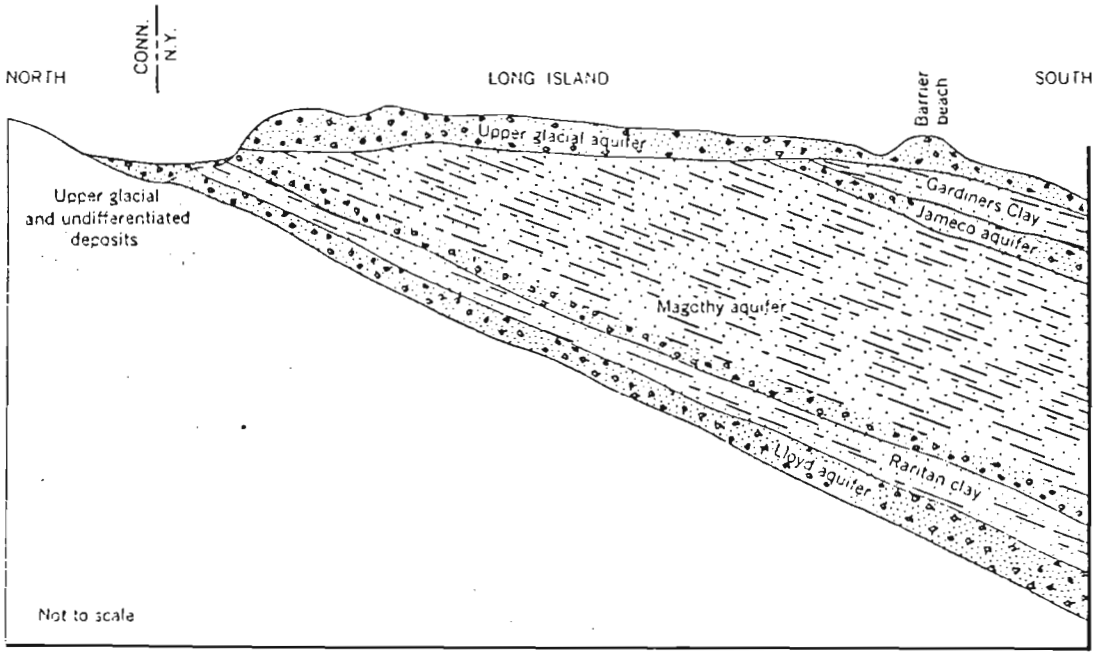
[1] The actual dip of the upper bedrock surface is slightly less than one degree to the southeast. The much greater apparent inclination of the bedrock surface and Magothy aquifer that is shown on plate 2C is due to the very great exaggeration of the vertical scale in this cross-section.

Hydrogeologic unit	Geologic name [2]	Approximate maximum thickness (feet)	Water-bearing character
Upper glacial aquifer	Upper Pleistocene deposits	400	Mainly sand and gravel of moderate to high permeability; also includes clayey deposits of glacial till of low permeability.[3]
Gardiners Clay	Gardiners Clay	150	Clay, silty clay, and a little fine sand of low to very low permeability.
Jameco aquifer	Jameco Gravel	200	Mainly medium to coarse sand of moderate to high permeability.
Magothy aquifer	Magothy(?) Formation	1000	Coarse to fine sand of moderate permeability; locally contains gravel of high permeability, and abundant silt and clay of low to very low permeability.
Raritan clay	Clay member of the Raritan Formation	300	Clay of very low permeability; some silt and fine sand of low permeability.
Lloyd aquifer	Lloyd Sand Member of the Raritan Formation	300	Sand and gravel of moderate permeability; some clayey material of low permeability.

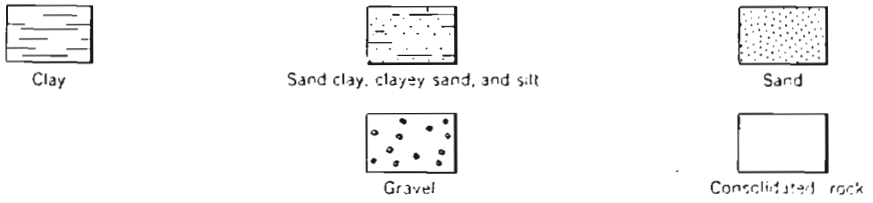
[2] Names are those used in reports by the Geological Survey. Perlmutter and Todd (1965, p. 9) proposed that the Magothy(?) Formation be divided into the Monmouth Group and the Matawan Group and Magothy Formation undifferentiated.

[3] Permeability denotes how readily water can move through porous material.

PLATE 2C
MAJOR HYDROGEOLOGIC UNITS OF
THE GROUND-WATER RESERVOIR OF
LONG ISLAND, NEW YORK



EXPLANATION



HOW AND WHERE THE WATER IS FOUND

Below a certain level underground (called the "water table") the open spaces or pore spaces between the particles of clay, silt, sand, and gravel are completely filled with water under atmospheric or greater pressure (pl. 2D). This part of the earth is the "zone of saturation", and the water contained therein is called ground water. In this atlas, the terms "zone of saturation" and "ground-water reservoir" are used interchangeably.

The pore spaces of the material between the water table and the land surface are filled with a mixture of air, liquid water, and water vapor and other gases. This part of the earth is called the zone of aeration, and the water contained therein is called vadose water. Hydrologists commonly refer to the vadose water in the soil zone just below the land surface as soil water; water in the layer immediately above the water table commonly is called capillary water. One of the major differences between ground water and vadose water is that ground water will flow into a well under the force of gravity and vadose water will not.

The aquifers on Long Island contain ground water under two distinctly different conditions—water table and artesian. Ground water under water-table conditions sometimes is referred to as unconfined ground water, and the aquifers in which it occurs commonly are called unconfined aquifers. Similarly, artesian ground water and the aquifers in which it occurs commonly are referred to as confined ground water and confined aquifers, respectively.

Ground water in the uppermost part of the zone of saturation (mainly in the upper glacial aquifer, but locally also in the Magothy aquifer) is under water-table conditions. Throughout most of Long Island, the hydraulic head in the unconfined aquifers (shown by the altitude of the water level in wells tapping only those aquifers) is at or near the altitude at which the ground water is first found.

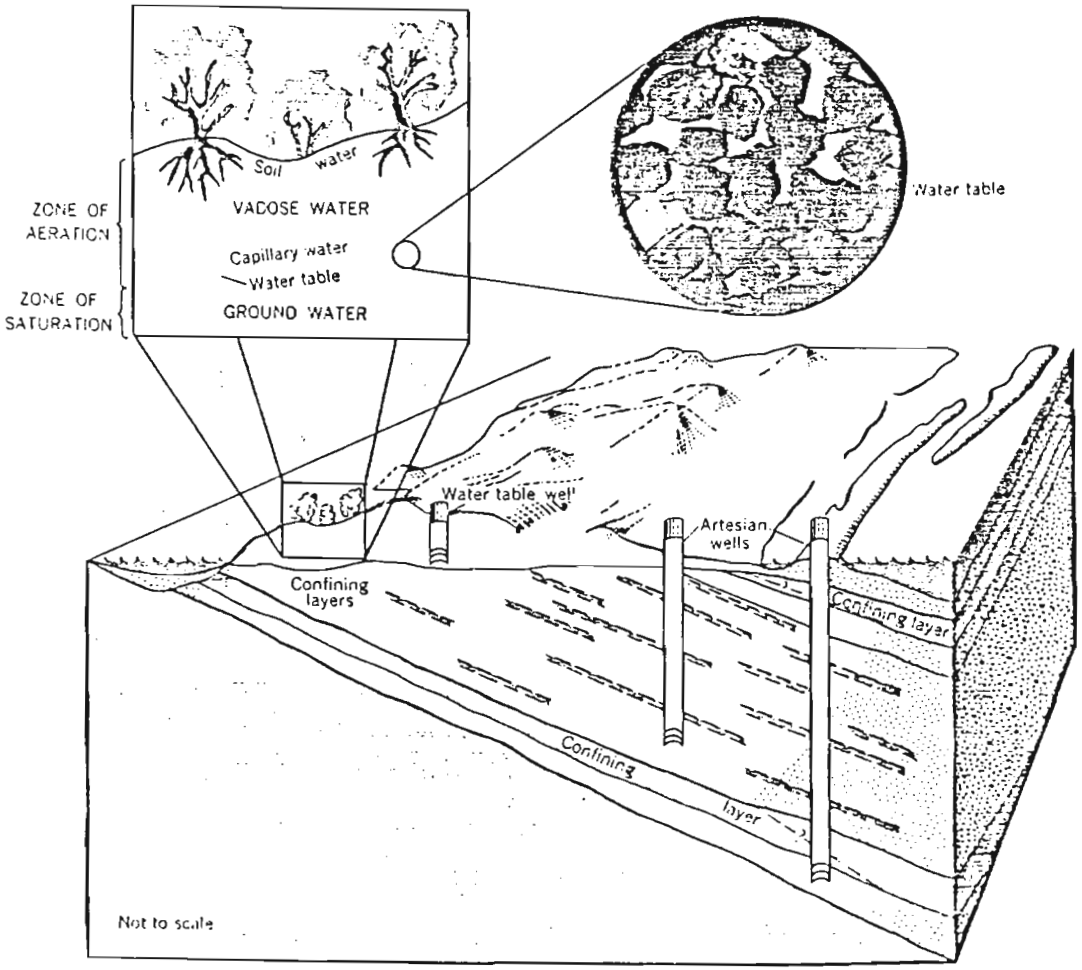
Artesian conditions predominate in most of the other parts of the ground-water reservoir of Long Island, where the saturated deposits are overlain and confined by silty and clayey layers of low permeability. The hydraulic head in the confined aquifers ranges from several feet below the water table to nearly 20 feet above it. At places along the north and south shores and the barrier beaches, the artesian pressure in the Lloyd aquifer is high enough so that the hydraulic head is above land surface, causing some wells that penetrate that aquifer to flow.

In addition to the Raritan clay, the other major well-defined confining layer in the ground-water reservoir of Long Island is the Gardiners Clay. This unit locally confines water in the Jameco aquifer and in the Magothy aquifer in the areas in which it occurs near the north and south shores. Numerous clayey and silty layers in the Magothy aquifer and clay beds in the upper glacial aquifer also are important confining layers. Throughout most of Long Island, where the Gardiners Clay is missing, the clayey and silty layers within the Magothy aquifer function as confining layers. Normally, the degree of confinement in the Magothy aquifer increases with depth as more and more clayey layers intervene between the deep zone and the water table.

Although the confining layers are of sufficiently low permeability to restrict the flow of water through them, they are not completely impermeable. Therefore, there is at least slight hydraulic continuity between the more permeable layers that are separated by confining layers. In other words, at many places on Long Island, ground water flows slowly

through confining layers from one more permeable layer to another. Moreover, locally some of the confining layers have been breached by ancient erosional channels, which were later backfilled with material of moderate to high permeability. In such areas, moderately large amounts of water may flow vertically.

Water-table aquifers and artesian aquifers differ markedly in their response to pumping. Water pumped from a water-table aquifer is derived mainly by gravity drainage of the aquifer materials near the pumping well as the water table is lowered. In an artesian aquifer, on the other hand, as the hydraulic head is lowered because of pumping, water is released from storage mainly by compression of the aquifer and expansion of the water. As a result, the amount of water released from a water-table aquifer per unit decline in head per unit area commonly is hundreds of times greater than the amount released from an artesian aquifer. Accordingly, hydraulic head effects, such as the lowering of water levels near a pumping well, ordinarily occur much sooner and are of a much greater magnitude in artesian aquifers than in water-table aquifers.



The water-level contours on the accompanying map (pl. 2E) show the altitude of the top of the unconfined fresh ground-water body beneath the land surface of Long Island. The surface defined by these contours roughly conforms to the land-surface topography—that is, the water table generally is at the highest altitude beneath the hills formed by the terminal moraines, and decreases in altitude as the land surface slopes away from the hills toward the sea. At the shorelines, the water table is at or near sea level.

The water table in 1965 was characterized by two prominent highs—one in Nassau County that had a maximum altitude of somewhat more than 80 feet, and the other in Suffolk County that had a maximum altitude of about 60 feet. These highs in the water table are natural features in the sense that their altitude and location have been only slightly affected by the activities of man. Other noteworthy features in 1965 were the two depressions in the water table, one in central Queens County and the other in northwestern Kings County. The upper surface of the fresh ground-water body in both those depressions was below sea level. These depressions are mainly related to the activities of man (p. 82).

Sufficient data are not available to prepare maps of all of Long Island showing the piezometric (hydraulic-head) surfaces for the artesian aquifers underlying the island. However, such maps have been prepared for Nassau and Queens Counties, and presently are being readied for publication. These maps and data available for other parts of Long Island show that the piezometric surfaces have the same general shapes as the water table. However, along the east-west axis of the island, the piezometric surfaces are at altitudes somewhat lower than the water table (usually not more than several feet); whereas, near the coast, the piezometric surfaces are at altitudes somewhat higher than the water table.

Knowledge of the shape and altitude of the water table is useful in many ways. For example, in most places the depth below land surface at which ground water will first be found can be determined by subtracting the altitude of the water table from the altitude of the land surface. In addition, inasmuch as ground water flows in a direction at right angles to the contours (from areas of higher to areas of lower water-table altitude), the horizontal component of the direction of ground-water movement can be deduced from the water-level contours.

REFERENCE 6

Lawler, Matusky & Skelly Engineers
Environmental Science & Engineering Consultants
One Blue Hill Plaza
Pearl River, New York 10965

MEMORANDUM OF CONVERSATION

JOB Air Techniques, Inc JOB No. 576-021

DATE 7 MARCH 89 TIME 0900

THE WRITER SPOKE TO:

~~M~~ Supervisor OF Hicksville Water District

BY TELEPHONE / AT LMS

CONCERNING: Hicksville Water Supply

AND DECIDED: population (48,000-50,100) all drawn from municipal wells that draw from Magothy aquifer. There are no known private wells. Closest municipal well is located just east of Bethpage Park.

CC:

SIGNED: Jay Goodman

REFERENCE 7

1 of 11

LABORATORY WORKSHEET

CHEMICAL EXAMINATION FOR TRACE ORGANIC CONSTITUENTS IN WATER, HAZARDOUS WASTES AND SOLID WASTES

Division of Laboratories and Research

- Nassau County Department of Health

1 ☐ Routine
2 ☐ Resample
3 ☑ Special
4 ☐ Complaint
5 ☐ Other

No. 870016 D

Field No. UN-3

N No. (Public Water Supply Only)

Source Information (Please Print)

Premises: AIR TECHNIQUES
Address: 70 CANTIAGUE ROAD
Town: HICKSVILLE
Collection Point: drum in dumpster
Sampler: [illegible]

	Month	Day	Year
Date Collected	1	7	87
Date Received	1	7	87
Date Reported			8
Collection Time	11 : 45 AM		
Collected By:	U. Nigro		

Sampler's Comments:
- sample on ice
- sample of drum in dumpster, material a white paste
- solvent odor

Bureau
1 ☑ Land Resources Management
2 ☐ Public Water Supply
3 ☐ Water Pollution Control
4 ☐ Environmental Sanitation
9 ☐ Other (specify)

SAMPLE TYPE

AQUEOUS				NON-AQUEOUS	
1	Community Well	6	Surface Water	1	Soil
2	Non-Community Well	7	Waste Water	2	Sludge
3	Private Well	8	Industrial Effluent	3	Waste Solvent
4	Monitoring Well	9	Raw Supply Water	4	Oil
5	Drinking Water	10	Distribution Water	5	Other (specify)

ANALYSIS TYPE

A	Purgeable halogenated hydrocarbons
B	Purgeable halogenated hydrocarbons - gases
C	Purgeable nonhalogenated hydrocarbons
D	Other (specify)

Examiner's Comments:

BY RECORD
...se and Research
...partment of Health

1 ☐ Routine
2 ☐ Resample
3 ☑ Special
4 ☐ Complaint
5 ☐ Other

Lab. No. 2011 870016

Field No. UN-3

...(Please Print)
. Technigen
. Contiague Rock Rd
Hicksville

...Location recovered drum in dumpster.

Collection Date 1-7-87

Collection Time 11:45 am

No. of Containers 1

Type of Containers glass

Method of Preservation ICE

...Comments
...ge drum
...ntained a white paste; solvent odor

Collection Procedure

Method of Transportation to Laboratory Van

...TAINER DISTRIBUTION

Clean sampling containers designated by field number UN-3 have been issued for collection of the sample identified on this form.

	Relinquished by:		Received by:	
...ted Name	Esther Cannella	Date 1/7/87	Printed Name Vincent P. Nigro	Date 1-7-87
...ature X	Esther Cannella	Time 10:25 am	Signature X Vincent P. Nigro	Time 10:25 am
...ose of Transfer	collection			

	Relinquished by:		Received by:	
...CUSTODY TRANSFER 1				
...ted Name	Vincent P. Nigro	Date 1-7-87	Printed Name ANDREW LICHTMAN	Date 1-7-87
...ature X	Vincent P. Nigro	Time 3:05pm	Signature X Andrew Lichtman MD	Time 15:00
...pose of Transfer	analysis			
...CUSTODY TRANSFER 2				
...ted Name		Date	Printed Name	Date
...ature X		Time	Signature X	Time
...ose of Transfer				
...CUSTODY TRANSFER 3				
...ted Name		Date	Printed Name	Date
...ature X		Time	Signature X	Time
...ose of Transfer				
...CUSTODY TRANSFER 4				
...ted Name		Date	Printed Name	Date
...ature X		Time	Signature X	Time
...ose of Transfer				

...mments:

NASSAU COUNTY DEPARTMENT OF HEALTH
DIVISION OF LABORATORIES AND RESEARCH
ENVIRONMENTAL HEALTH LABORATORIES

TRACE ORGANICS

Access Number: 870016
Source: AIR TECHNIQUES, CANTIAGUE PK RD., HICKSVILLE
Matrix: SOIL
Site: DRUM IN DUMPSTER
Date Sampled: 01/07/87
Date of Report: 01/15/87

VOLATILE HALOGENATED	MRC (ng/g)		RESULT (ng/g)
TRICHLOROFLUOROMETHANE	NA		NA
METHYLENE CHLORIDE 1,1,2-TRICHLOROTRIFLUOROETHANE 1,1-DICHLOROETHYLENE	225	<	225
c & t-1,2-DICHLOROETHYLENE	100	<	100
1,1-DICHLOROETHANE	150	<	150
CHLOROFORM	25	<	25
1,1,1-TRICHLOROETHANE	50	<	50
CARBON TETRACHLORIDE	25	<	25
TRICHLOROETHYLENE	25		780
BROMODICHLOROMETHANE	50	<	50
c-1,3-DICHLOROPROPENE DIBROMOCHLOROMETHANE	75	<	75
1,1,2-TRICHLOROETHANE	100	<	100
1,2-DIBROMOETHANE	NA		NA
TETRACHLOROETHYLENE	25		2600000
BROMOFORM	7500	<	7500

VOLATILE AROMATICS	MRC (ng/g)		RESULT (ng/g)
BENZENE	75	<	75
TOLUENE	75		81
CHLOROBENZENE	100	<	100
ETHYLBENZENE	75	<	75
XYLENE (o,m,p)	100	<	100
DICHLOROBENZENE (o,m,p)	800	<	800

MRC - MINIMUM REPORTABLE CONCENTRATION NA - NOT ANALYZED
NR - NO RESULT DUE TO TECHNICAL REASONS - RESAMPLE SUGGESTED
PPB: AIR - nl/l WATER - ug/l SOIL - ng/g

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LABORATORY WORKSHEET

CHEMICAL EXAMINATION FOR TRACE ORGANIC CONSTITUENTS IN WATER, HAZARDOUS WASTES AND SOLID WASTES

Division of Laboratories and Research

Nassau County Department of Health

1 ☐ Routine
2 ☐ Resample
3 ☑ Special
4 ☐ Complaint
5 ☐ Other

Lab. No. 870017 D

Field No. VN-4

N No. (Public Water Supply Only)

Source Information (Please Print)

Premises: H I R Technologies

Address: 70 GANFIA Ave EXT RT

Town: Hicksville LI

Collection Point: Liquid in drum in dumpster

Well No.

	Month	Day	Year
Date Collected	1	7	87
Date Received	1	7	87
Date Reported			8
Collection Time	11 : 50 am		
Collected By:	V. Nesci		

Sampler's Comments:

- sample on ice
- liquid sampled from recovered drum in dumpster
- cloudy white liquid
- solvent odor

Bureau

1 ☑ Land Resources Management
2 ☐ Public Water Supply
3 ☐ Water Pollution Control
4 ☐ Environmental Sanitation
9 ☐ Other (specify)

SAMPLE TYPE

AQUEOUS				NON-AQUEOUS	
1	Community Well	6	Surface Water	1	Soil
2	Non-Community Well	7	Waste Water	2	Sludge
3	Private Well	8	Industrial Effluent	3	Waste Solvent
4	Monitoring Well	9	Raw Supply Water	4	Oil
5	Drinking Water	10	Distribution Water	5	Other (specify)

ANALYSIS TYPE

A	Purgeable halogenated hydrocarbons
B	Purgeable halogenated hydrocarbons - gases
C	Purgeable nonhalogenated hydrocarbons
D	Other (specify)

Examiner's Comments:

)T RECORD

:ories and Research

:partment of Health

1 ☐ Routine
2 ☐ Resample
3 ☑ Special
4 ☐ Complaint
5 ☐ Other

Lab. No. 870017

Field No. VN-4 5 of 5

(Please Print)
Tir Technician
70 Cantiague Rd
Hicksville

Collection Date 1-7-87

Collection Time 11:50 am

No. of Containers 1 - glass vial w/ seal

Type of Containers

Method of Preservation ICE

Collection Procedure

Method of Transportation to Laboratory
Van

n Point Location liquid in drum in dumpster

er's Comments
- white cloudy liquid w/a solvent oder.

AINER DISTRIBUTION

Clean sampling containers designated by field number VN-4 have been issued for collection of the sample identified on this form.

	Relinquished by:		Received by:	
d Name	Esther Cannella	Date 1/7/87	Printed Name Vincent P. Nisivoccia	Date 1-7-87
ture X	Esther Cannella	Time 10:35 am	Signature X Vincent P. Nisivoccia	Time 10:35
se of Transfer	collection			

DY TRANSFER 1

	Relinquished by:		Received by:	
d Name	Vincent P. Nisivoccia	Date 1-7-87	Printed Name Andrew Lichtman PhD	Date 1-7-87
re X	Vincent P. Nisivoccia	Time 3:05pm	Signature X ANDREW LICHTMAN	Time 15:00
se of Transfer	analysis			

DY TRANSFER 2

	Relinquished by:		Received by:	
d Name		Date	Printed Name	Date
re X		Time	Signature X	Time
of Transfer				

DY TRANSFER 3

	Relinquished by:		Received by:	
Name		Date	Printed Name	Date
re X		Time	Signature X	Time
of Transfer				

DY TRANSFER 4

	Relinquished by:		Received by:	
Name		Date	Printed Name	Date
re X		Time	Signature X	Time
of Transfer				

ES:

7/83

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NASSAU COUNTY DEPARTMENT OF HEALTH
DIVISION OF LABORATORIES AND RESEARCH
ENVIRONMENTAL HEALTH LABORATORIES

TRACE ORGANICS

Access Number: 870017
Source: AIR TECHNIQUES, CANTIAGUE PK RD., HICKSVILLE
Matrix: WATER
Site: LIQUID IN DRUM IN DUMPSTER
Date Sampled: 01/07/87
Date of Report: 01/15/87

VOLATILE HALOGENATED	MRC (ug/l)		RESULT (ug/l)
TRICHLOROFLUOROMETHANE	NA		NA
METHYLENE CHLORIDE			
1,1,2-TRICHLOROTRIFLUOROETHANE	9	<	9
1,1-DICHLOROETHYLENE			
c & t-1,2-DICHLOROETHYLENE	4		34
1,1-DICHLOROETHANE	6	<	6
CHLOROFORM	1	<	1
1,1,1-TRICHLOROETHANE	2		2
CARBON TETRACHLORIDE	1	<	1
TRICHLOROETHYLENE	1		180
BROMODICHLOROMETHANE	2	<	2
c-1,3-DICHLOROPROPENE			
DIBROMOCHLOROMETHANE	3	<	3
1,1,2-TRICHLOROETHANE	4	<	4
1,2-DIBROMOETHANE	NA		NA
TETRACHLOROETHYLENE	1		33000
BROMOFORM	3000	<	3000

VOLATILE AROMATICS	MRC (ug/l)		RESULT (ug/l)
BENZENE	3		5
TOLUENE	3		7
CHLOROBENZENE	40	<	40
ETHYLBENZENE	30	<	30
XYLENE (o,m,p)	40	<	40
DICHLOROBENZENE (o,m,p)	32	<	32

MRC - MINIMUM REPORTABLE CONCENTRATION NA - NOT ANALYZED
NR - NO RESULT DUE TO TECHNICAL REASONS - RESAMPLE SUGGESTED
PPB: AIR - nl/l WATER - ug/l SOIL - ng/g

7 of 11

B

LABORATORY REPORT

CHEMICAL EXAMINATION OF INDUSTRIAL AND HAZARDOUS WASTES

Division of Laboratories and Research

Nassau County Department of Health

1 ☐ Routine
2 ☐ Resample
3 ☐ Special
4 ☐ Complaint
5 ☐ Other

Lab. No. 121

Field No. VN-4

Source Information (Please Print)

Premises Air Techniques

Address 70 Cantiague Rock Rd

Town Hicksville

Collection Point liquid in drum in dumpster

	Month	Day	Year
Date Collected	1	7	87
Date Received	JAN 07 1987		8
Date Reported			8

Collection Time 11 : 50 am

Collected By: V-Nigro

Sampler's Comments:

- white cloudy liquid w/ solvent odor

- EP Toxicity

Bureau:
1 ☑ Land Resources Management
9 ☐ Other (specify)

Sample Type:
A ☑ Water
B ☐ Soil
C ☐ Sludge
D ☐ Waste Solvent
E ☐ Oil
F ☐ Other

CHEMICAL EXAMINATION

Check	Metals		Result	Check	Non-Metals		Result
1	Aluminum	mg/l		15	Chloride	mg/l	
2	Arsenic	mg/l	24.0	16	Cyanide	mg/l	
3	Barium	mg/l	<0.2	17	Fluoride	mg/l	
4	Cadmium	mg/l	0.014	18	MBAS	mg/l	
5	Chromium, Total	mg/l	2.8	19	pH		
6	Copper	mg/l		20	Phenols	mg/l	
7	Iron, Total	mg/l		21	Solids, Suspended	mg/l	
8	Lead	mg/l	<0.01	22	Solids, Total Diss.	mg/l	
9	Manganese	mg/l		23	Sulfate	mg/l	
10	Mercury	mg/l	interference	24	Ammonia nitrogen	mg/l	
11	Nickel	mg/l		25	Kjeldahl nitrogen	mg/l	
12	Selenium	mg/l	0.043	26	Nitrite nitrogen	mg/l	
13	Silver	mg/l	0.17	27	Nitrate nitrogen	mg/l	
14	Zinc	mg/l		28	Total Phos.	mg/l	

SPECIAL ANALYSIS

Check	Constituent		Result
29	Chromium hex.	mg/l	
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			

Examiner's Comments Sample in acid ~~[illegible]~~ bottle, metals run on filtered sample - digested

NO E.P. TOXICITY

FEB 03 1987

LABORATORY WORKSHEET

CHEMICAL EXAMINATION FOR TRACE ORGANIC CONSTITUENTS IN WATER, HAZARDOUS WASTES AND SOLID WASTES

Division of Laboratories and Research

Nassau County Department of Health

1 ☐ Routine
2 ☐ Resample
3 ☐ Special
4 ☐ Complaint
5 ☐ Other

Lab. No. 870018 D

8 of 11

Field No. UN-5

N No. (Public Water Supply Only)

Source Information (Please Print)

Premises	A-1 Rechwire Stairs -
Address	70 Cantiague Rock Rd
Town	Hicksville
Collection Point	Buried drum Well No.
	below soil - 4-1 Quad

	Month	Day	Year
Date Collected	1	7	87
Date Received	1	7	87
Date Reported			8
Collection Time	12:05 pm.		
Collected By:	U. Rivera		

Sampler's Comments:

- sample oily
- amber colored liquid in drum.
- drum appox 3 feet below surface.

Bureau

1 ☑ Land Resources Management
2 ☐ Public Water Supply
3 ☐ Water Pollution Control
4 ☐ Environmental Sanitation
9 ☐ Other (specify)

SAMPLE TYPE

AQUEOUS				NON-AQUEOUS	
1	Community Well	6	Surface Water	1	Soil
2	Non-Community Well	7	Waste Water	2	Sludge
3	Private Well	8	Industrial Effluent	3	Waste Solvent
4	Monitoring Well	9	Raw Supply Water	4	Oil
5	Drinking Water	10	Distribution Water	5	Other (specify)

ANALYSIS TYPE

A	Purgeable halogenated hydrocarbons
B	Purgeable halogenated hydrocarbons - gases
C	Purgeable nonhalogenated hydrocarbons
D	Other (specify)

Examiner's Comments:

STODY RECORD

boratories and Research

ky Department of Health

1 ☐ Routine
2 ☐ Resample
3 ☑ Special
4 ☐ Complaint
5 ☐ Other

Lab. No. 870018

Field No. UN-5 9 of 11

formation (Please Print)

Hi Techniques

70 Centigrade Rd 120

Hicksville

ection Point Location drum 3' below soil surface

- liquid in drum

mpler's Comments

- liquid amber colored

- sample on ice.

Collection Date 1-7-87

Collection Time 12:05 pm

No. of Containers 1

Type of Containers glass

Method of Preservation ice

Collection Procedure

Method of Transportation to Laboratory

van

ONTAINER DISTRIBUTION

Clean sampling containers designated by field number UN-5 have been issued for collection of the sample identified on this form.

	Relinquished by:		Received by:	
Printed Name	Esther Camella	Date 1/7/87	Printed Name Vincent P. Nigro	Date 1-7-87
Signature X	Esther Camella	Time 10:56 am	Signature X Vincent P. Nigro	Time 10 am

Purpose of Transfer collection

CUSTODY TRANSFER 1	Relinquished by:		Received by:	
Printed Name	Vincent P. Nigro	Date 1-7-87	Printed Name ANDREW LICHTMAN	Date 1-7-87
Signature X	Vincent P. Nigro	Time 3:05pm	Signature X Andrew Lichtman PhD	Time 15 pm

Purpose of Transfer analysis

CUSTODY TRANSFER 2	Relinquished by:		Received by:	
Printed Name		Date	Printed Name	Date
Signature X		Time	Signature X	Time

Purpose of Transfer

CUSTODY TRANSFER 3	Relinquished by:		Received by:	
Printed Name		Date	Printed Name	Date
Signature X		Time	Signature X	Time

Purpose of Transfer

CUSTODY TRANSFER 4	Relinquished by:		Received by:	
Printed Name		Date	Printed Name	Date
Signature X		Time	Signature X	Time

Purpose of Transfer

Comments:

NASSAU COUNTY DEPARTMENT OF HEALTH
DIVISION OF LABORATORIES AND RESEARCH
ENVIRONMENTAL HEALTH LABORATORIES

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TRACE ORGANICS

Access Number: 870018
Source: AIR TECHNIQUES, CANTIAGUE PK RD., HICKSVILLE
Matrix: WATER
Site: BURRIED DRUM BELOW SOIL - LIQUID
Date Sampled: 01/07/87
Date of Report: 01/15/87

VOLATILE HALOGENATED	MRC (ug/l)		RESULT (ug/l)
TRICHLOROFLUOROMETHANE	NA		NA
METHYLENE CHLORIDE 1,1,2-TRICHLOROTRIFLUOROETHANE 1,1-DICHLOROETHYLENE	9	<	9
c & t-1,2-DICHLOROETHYLENE	4		93
1,1-DICHLOROETHANE	6	<	6
CHLOROFORM	1	<	1
1,1,1-TRICHLOROETHANE	2		3
CARBON TETRACHLORIDE	1	<	1
TRICHLOROETHYLENE	1		230
BROMODICHLOROMETHANE	2	<	2
c-1,3-DICHLOROPROPENE DIBROMOCHLOROMETHANE	3	<	3
1,1,2-TRICHLOROETHANE	4	<	4
1,2-DIBROMOETHANE	NA		NA
TETRACHLOROETHYLENE	1		3600
BROMOFORM	30	<	30

VOLATILE AROMATICS	MRC (ug/l)		RESULT (ug/l)
BENZENE	3		3
TOLUENE	3		6
CHLOROBENZENE	4	<	4
ETHYLBENZENE	3		4
XYLENE (o,m,p)	4		12
DICHLOROBENZENE (o,m,p)	32	<	32

MRC - MINIMUM REPORTABLE CONCENTRATION NA - NOT ANALYZED
NR - NO RESULT DUE TO TECHNICAL REASONS - RESAMPLE SUGGESTED
PPB: AIR - nl/l WATER - ug/l SOIL - ng/g

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B

LABORATORY REPORT

CHEMICAL EXAMINATION OF INDUSTRIAL AND HAZARDOUS WASTES

Division of Laboratories and Research

Nassau County Department of Health

1 ☐ Routine
2 ☐ Resample
3 ☑ Special
4 ☐ Complaint
5 ☐ Other

Lab. No. 122

Field No. VW-5

Source Information (Please Print)

Premises: Air Techniques

Address: 70 Cantiague Rk Rd.

Town: Hicksville

Collection Point: drum 3' below soil surface - liquid in drum

Sampler's Comments: - EP Toxicity

	Month	Day	Year
Date Collected	1	7	87
Date Received	1		8
Date Reported			8

Collection Time: 12:05 pm

Collected By: V. Nigro

Bureau:
1 ☑ Land Resources Management
9 ☐ Other (specify)

Sample Type:
A ☑ Water
B ☐ Soil
C ☐ Sludge
D ☐ Waste Solvent
E ☐ Oil
F ☐ Other

CHEMICAL EXAMINATION

Check	Metals		Result	Check	Non-Metals		Result
1	Aluminum	mg/l		15	Chloride	mg/l	
2	Arsenic	mg/l	36.0	16	Cyanide	mg/l	
3	Barium	mg/l	<0.2	17	Fluoride	mg/l	
4	Cadmium	mg/l	0.006	18	MBAS	mg/l	
5	Chromium, Total	mg/l	4.0	19	pH		
6	Copper	mg/l		20	Phenols	mg/l	
7	Iron, Total	mg/l		21	Solids, Suspended	mg/l	
8	Lead	mg/l	0.04	22	Solids, Total Diss.	mg/l	
9	Manganese	mg/l		23	Sulfate	mg/l	
10	Mercury	mg/l	interference	24	Ammonia nitrogen	mg/l	
11	Nickel	mg/l		25	Kjeldahl nitrogen	mg/l	
12	Selenium	mg/l	0.045	26	Nitrite nitrogen	mg/l	
13	Silver	mg/l	0.19	27	Nitrate nitrogen	mg/l	
14	Zinc	mg/l		28	Total Phos.	mg/l	

SPECIAL ANALYSIS

Check	Constituent		Result
29	Chromium hex.	mg/l	
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			

Examiner's Comments: Sample in acid [illegible] for bottle, metals run on filtered sample - digested

NO EP TOXICITY

FEB 0 3 1987

REFERENCE 8

LABORATORY WORKSHEET

CHEMICAL EXAMINATION FOR TRACE ORGANIC CONSTITUENTS IN WATER, HAZARDOUS WASTES AND SOLID WASTES

Division of Laboratories and Research

Nassau County Department of Health

1 ☐ Routine
2 ☐ Resample
3 ☑ Special
4 ☐ Complaint
5 ☐ Other

Lab No. 1 of 14
870019

Field No. VN-6

N No. (Public Water Supply Only)

Source Information (Please Print)

Premises	Fair Technique
Address	70 Cantiague Rock Rd
Town	Hicksville
Collection Point	Spigot 6-8 FT Well No.
	below surface - Via outside

Sampler's Comments:
- sample on ice
- Dup no odor
- 1st year of bldg.

	Month	Day	Year
Date Collected	1	7	87
Date Received	1	7	87
Date Reported			8
Collection Time	12:15 pm		
Collected By:	[illegible]		

Bureau
1 ☑ Land Resources Management
2 ☐ Public Water Supply
3 ☐ Water Pollution Control
4 ☐ Environmental Sanitation
9 ☐ Other (specify)

SAMPLE TYPE

	AQUEOUS				NON-AQUEOUS
1	Community Well	6	Surface Water	1	Soil
2	Non-Community Well	7	Waste Water	2	Sludge
3	Private Well	8	Industrial Effluent	3	Waste Solvent
4	Monitoring Well	9	Raw Supply Water	4	Oil
5	Drinking Water	10	Distribution Water	5	Other (specify)

ANALYSIS TYPE

A	Purgeable halogenated hydrocarbons
B	Purgeable halogenated hydrocarbons - gases
C	Purgeable nonhalogenated hydrocarbons
D	Other (specify)

Examiner's Comments:

DY RECORD
ratories and Research
Department of Health

1 ☐ Routine
2 ☐ Resample
3 ☒ Special
4 ☐ Complaint
5 ☐ Other

Lab. No. 870019

Field No. UN-G 2 of 4

ation (Please Print)
Air Techniques
70 Cantiague Rock Rd.
Hicksville

Collection Date 1-7-87

Collection Time 12:15pm

No. of Containers 1

ion Point Location soil 6-8 Ft. below surface
vacant lot rear of bldg.

Type of Containers 1-40 ml glass

Method of Preservation ice

pler's Comments
sample on ice
soil no odor

Collection Procedure

Method of Transportation to Laboratory
Car

NTAINER DISTRIBUTION

Clean sampling containers designated by field number UN-G have been issued for collection of the sample identified on this form.

	Relinquished by:		Received by:	
ted Name	Esther Cannella	Date 1/7/87	Printed Name Vincent P. Nicosia	Date 1-7-87
nature X	Esther Cannella	Time 10:55am	Signature X Vincent P. Nicosia	Time 10:55am
pose of Transfer	collection			

STODY TRANSFER 1

	Relinquished by:		Received by:	
ted Name	Vincent P. Nicosia	Date 1/7/87	Printed Name ANDREW LICHTMAN	Date 1-7-87
nature X	Vincent P. Nicosia	Time 3:45pm	Signature X Andrew Lichtman PhD	Time 15:00
pose of Transfer	analysis			

STODY TRANSFER 2

	Relinquished by:		Received by:	
ted Name		Date	Printed Name	Date
nature X		Time	Signature X	Time
pose of Transfer				

STODY TRANSFER 3

	Relinquished by:		Received by:	
ted Name		Date	Printed Name	Date
nature X		Time	Signature X	Time
pose of Transfer				

STODY TRANSFER 4

	Relinquished by:		Received by:	
ted Name		Date	Printed Name	Date
nature X		Time	Signature X	Time
pose of Transfer				

NASSAU COUNTY DEPARTMENT OF HEALTH
DIVISION OF LABORATORIES AND RESEARCH
ENVIRONMENTAL HEALTH LABORATORIES

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TRACE ORGANICS

Access Number: 870019
Source: AIR TECHNIQUES, CANTIAGUE PK RD., HICKSVILLE
Matrix: SOIL
Site: SOIL, 6-8 FT BELOW SURFACE, VACANT LOT;
Date Sampled: 01/07/87
Date of Report: 01/15/87

VOLATILE HALOGENATED	MRC (ng/g)		RESULT (ng/g)
TRICHLOROFLUOROMETHANE	NA		NA
METHYLENE CHLORIDE 1,1,2-TRICHLOROTRIFLUOROETHANE 1,1-DICHLOROETHYLENE	225	<	225
c & t-1,2-DICHLOROETHYLENE	100	<	100
1,1-DICHLOROETHANE	150	<	150
CHLOROFORM	25	<	25
1,1,1-TRICHLOROETHANE	50	<	50
CARBON TETRACHLORIDE	25	<	25
TRICHLOROETHYLENE	25	<	25
BROMODICHLOROMETHANE	50	<	50
c-1,3-DICHLOROPROPENE DIBROMOCHLOROMETHANE	75	<	75
1,1,2-TRICHLOROETHANE	100	<	100
1,2-DIBROMOETHANE	NA		NA
TETRACHLOROETHYLENE	25		11000
BROMOFORM	75	<	75

VOLATILE AROMATICS	MRC (ng/g)		RESULT (ng/g)
BENZENE	75	<	75
TOLUENE	75	<	75
CHLOROBENZENE	100	<	100
ETHYLBENZENE	75	<	75
XYLENE (o,m,p)	100	<	100
DICHLOROBENZENE (o,m,p)	800	<	800

MRC - MINIMUM REPORTABLE CONCENTRATION NA - NOT ANALYZED
NR - NO RESULT DUE TO TECHNICAL REASONS - RESAMPLE SUGGESTED
PPB: AIR - nl/l WATER - ug/l SOIL - ng/g

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B

LABORATORY REPORT

CHEMICAL EXAMINATION OF INDUSTRIAL AND HAZARDOUS WASTES

Division of Laboratories and Research

Nassau County Department of Health

1 ☐ Routine
2 ☐ Resample
3 ☑ Special
4 ☐ Complaint
5 ☐ Other

Lab. No. 123

Field No. VN-6

Source Information (Please Print)

Premises Air Techniques

Address 70 Cantiague Rk Rd

Town Hicksville

Collection Point soil 6-8 ft below surface - vacant lot rear of bldg

Sampler's Comments:

-EP Toxicity

	Month	Day	Year
Date Collected	1	7	87
Date Received		JAN 07 1987	
Date Reported			8

Collection Time 12 : 15 pm

Collected By: V. N. S.

Bureau:
1 ☑ Land Resources Management
9 ☐ Other (specify)

Sample Type:
A ☐ Water
B ☑ Soil
C ☐ Sludge
D ☐ Waste Solvent
E ☐ Oil
F ☐ Other

CHEMICAL EXAMINATION

Check	Metals		Result	Check	Non-Metals		Result
1	Aluminum	mg/l		15	Chloride	mg/l	
2	Arsenic	mg/l	<0.005	16	Cyanide	mg/l	
3	Barium	mg/l	<0.2	17	Fluoride	mg/l	
4	Cadmium	mg/l	0.001	18	MBAS	mg/l	
5	Chromium, Total	mg/l	<0.01	19	pH		
6	Copper	mg/l		20	Phenols	mg/l	
7	Iron, Total	mg/l		21	Solids, Suspended	mg/l	
8	Lead	mg/l	<0.01	22	Solids, Total Diss.	mg/l	
9	Manganese	mg/l		23	Sulfate	mg/l	
10	Mercury	mg/l	0.0043	24	Ammonia nitrogen	mg/l	
11	Nickel	mg/l		25	Kjeldahl nitrogen	mg/l	
12	Selenium	mg/l	<0.005	26	Nitrite nitrogen	mg/l	
13	Silver	mg/l	<0.05	27	Nitrate nitrogen	mg/l	
14	Zinc	mg/l		28	Total Phos.	mg/l	

SPECIAL ANALYSIS

Check	Constituent		Result
29	Chromium hex.	mg/l	
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			

Examiner's Comments

FEB 03 1987

LABORATORY REPORT

CHEMICAL EXAMINATION OF INDUSTRIAL AND HAZARDOUS WASTES

Division of Laboratories and Research

Nassau County Department of Health

1 ☐ Routine
2 ☐ Resample
3 ☑ Special
4 ☐ Complaint
5 ☐ Other

5 of 14

Lab. No. 124

B

Field No. UN-7

Source Information (Please Print)

Premises: Air Technique

Address: 70 Cantiague Rock Rd

Town: Hicksville

Collection Point: Soil 12-14 ft. below surface - vacant lot rear of bldg

Sampler's Comments:

- EP Toxicity

	Month	Day	Year
Date Collected	1	7	87
Date Received	JAN	07	1987
Date Reported			8
Collection Time	12:40 pm		
Collected By:	U. Nizza		

Bureau :
1 ☑ Land Resources Management
9 ☐ Other (specify)

Sample Type:
A ☐ Water
B ☑ Soil
C ☐ Sludge
D ☐ Waste Solvent
E ☐ Oil
F ☐ Other

CHEMICAL EXAMINATION

Check	Metals		Result	Check	Non-Metals		Result
1	Aluminum	mg/l		15	Chloride	mg/l	
(2)	Arsenic	mg/l	<0.005	16	Cyanide	mg/l	
(3)	Barium	mg/l	<0.2	17	Fluoride	mg/l	
(4)	Cadmium	mg/l	<0.001	18	MBAS	mg/l	
(5)	Chromium, Total	mg/l	<0.01	19	pH		
6	Copper	mg/l		20	Phenols	mg/l	
7	Iron, Total	mg/l		21	Solids, Suspended	mg/l	
(8)	Lead	mg/l	<0.01	22	Solids, Total Diss.	mg/l	
9	Manganese	mg/l		23	Sulfate	mg/l	
(10)	Mercury	mg/l	<0.0005	24	Ammonia nitrogen	mg/l	
11	Nickel	mg/l		25	Kjeldahl nitrogen	mg/l	
(12)	Selenium	mg/l	<0.005	26	Nitrite nitrogen	mg/l	
(13)	Silver	mg/l	<0.05	27	Nitrate nitrogen	mg/l	
14	Zinc	mg/l		28	Total Phos.	mg/l	

SPECIAL ANALYSIS

Check	Constituent		Result
29	Chromium hex.	mg/l	
30			
31			
32			
33			
34			
35			
36			
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41			
42			

Examiner's Comments

FEB 03 1987

00-17-115 (Rev.)
Formerly CA-4

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

jr AF, LS
MH AF

TRANSMITTAL SLIP

File: Air Techniques

TO: L Sama

FROM: P. Moskie

DATE: 5/7/87

RE: "Air Techniques", sampling results

This is test results of 2 soil samples from the pit where many drums have been found.

FOR ACTION AS INDICATED:

- ☐ Please Handle
- ☐ Prepare Reply
- ☐ Prepare Reply for _____ Signature
- ☒ Information
- ☐ Approval
- ☐ Prepare final/draft in _____ Copies
- ☐ Comments
- ☐ Signature
- ☐ File
- ☐ Return to me
- ☐ _____
- ☐ _____

soil

6/19

Sample Number:
R186-010-01

Organics Analysis Data Sheet
(Page 1)

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Laboratory Name: NUS CORPORATION
Lab Sample ID No: 17031301
Sample Matrix: Soil
Data Release Authorized By:
Case No: NYSDEC
QC Report No:
Contract No:
Date Sample Received: 03/18/87

Volatile Compounds
Concentration: Low
Date Extracted/Prepared: 03/24/87
Date Analysed: 03/24/87
Conc/Dil Factor: 5.0 pH 8
Percent Moisture: 10
Percent Moisture (Not Decanted): NR

CAS Number		ug/kg	CAS Number		ug/kg
74-87-3	Chloromethane	56 u	78-87-5	1,2-Dichloropropane	28 u
74-83-9	Bromomethane	56 u	10061-02-6	Trans-1,3-Dichloropropene	28 u
75-01-4	Vinyl Chloride	56 u	79-01-6	Trichloroethene	28 u
75-00-3	Chloroethane	56 u	124-48-1	Dibromochloromethane	28 u
75-09-2	Methylene Chloride	82 B	79-00-5	1,1,2-Trichloroethane	28 u
67-64-1	Acetone	130 B	71-43-2	Benzene	28 u
75-15-0	Carbon Disulfide	28 u	10061-01-5	cis-1,3-Dichloropropene	28 u
75-35-4	1,1-Dichloroethene	28 u	110-75-8	2-Chloroethylvinylether	56 u
75-34-3	1,1-Dichloroethane	28 u	75-25-2	Bromoform	28 u
156-60-5	Trans-1,2-Dichloroethene	28 u	108-10-1	4-Methyl-2-Pentanone	56 u
67-66-3	Chloroform	36	591-78-6	2-Hexanone	56 u
107-06-2	1,2-Dichloroethane	28 u	127-18-4	Tetrachloroethene	960
78-93-3	2-Butanone	56 u	79-34-5	1,1,2,2-Tetrachloroethane	28 u
71-55-6	1,1,1-Trichloroethane	28 u	108-88-3	Toluene	28 u
56-23-5	Carbon Tetrachloride	28 u	108-90-7	Chlorobenzene	28 u
108-05-4	Vinyl Acetate	56 u	100-41-4	Ethylbenzene	28 u
75-27-4	Bromodichloromethane	28 u	100-42-5	Styrene	28 u
				Total Xylenes	28 u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value — If the result is a value greater than or equal to the detection limit, report the value.

U — Indicates compound was analysed for but not detected. Report the minimum detection limit for the sample with the U(e.g., 10U)based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g 10J) If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C — This flag applies to pesticide parameters wh the identification has been confirmed by GC/ Single component pesticides)=10ng/ul in the final extract should be confirmed by GC/MS.

B — This flag is used when the analyte is found blank as well as a sample. It indicates pos probable blank contamination and warns the user to take the appropriate action.

Other — Other specific flags and footnotes may be required to properly define the results. If they must be fully described and such descr attached to the data summary report.

S — Spiked Compound

NR — No value reqcired

Laboratory Name: NUS CORPORATION
Case No: NYSDEC

Sample Number: R186-010-01

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low
Date Extracted/Prepared: 03/20/87
Date Analyzed: 03/24/87
Conc/Dil Factor: 4.0
Percent Moisture (Decanted): 18

GPC Cleanup: NO
Separatory Funnel Extraction: NO
Continuous Liquid-Liquid Extraction: NO

CAS Number		ug/kg	CAS Number		ug/kg
108-95-2	Phenol	1452 U	83-32-9	Acenaphthene	1452 U
111-44-4	bis(2-Chloroethyl)Ether	1452 U	51-28-5	2,4-Dinitrophenol	7040 U
95-57-8	2-Chlorophenol	1452 U	100-02-7	4-Nitrophenol	7040 U
541-73-1	1,3-Dichlorobenzene	1452 U	132-64-9	Dibenzofuran	1452 U
106-46-7	1,4-Dichlorobenzene	1452 U	121-14-2	2,4-Dinitrotoluene	1452 U
100-51-6	Benzyl Alcohol	1452 U	606-20-2	2,6-Dinitrotoluene	1452 U
95-50-1	1,2-Dichlorobenzene	1452 U	84-66-2	Diethylphthalate	1452 U
95-48-7	2-Methylphenol	1452 U	7005-72-3	4-Chlorophenyl-phenylether	1452 U
39638-32-9	bis(2-chloroisopropyl)Ether	1452 U	86-73-7	Fluorene	1452 U
106-44-5	4-Methylphenol	1452 U	100-01-6	4-Nitroaniline	7040 U
621-64-7	N-Nitroso-Di-n-Propylamine	1452 U	534-52-1	4,6-Dinitro-2-Methylphenol	7040 U
67-72-1	Hexachloroethane	1452 U	86-30-6	N-Nitrosodiphenylamine(1)	1452 U
98-95-3	Nitrobenzene	1452 U	101-55-3	4-Bromophenyl-phenylether	1452 U
78-59-1	Isophorone	1452 U	118-74-1	Hexachlorobenzene	1452 U
88-75-5	2-Nitrophenol	1452 U	87-86-5	Pentachlorophenol	7040 U
105-67-9	2,4-Dimethylphenol	1452 U	85-01-8	Phenanthrene	1452 U
65-85-0	Benzoic Acid	7040 U	120-12-7	Anthracene	1452 U
111-91-1	bis(2-Chloroethoxy)Methane	1452 U	84-74-2	Di-n-Butylphthalate	1452 U
120-83-2	2,4-Dichlorophenol	1452 U	206-44-0	Fluoranthene	1452 U
120-82-1	1,2,4-Trichlorobenzene	1452 U	129-00-0	Pyrene	1452 U
91-20-3	Naphthalene	1452 U	85-68-7	Butylbenzylphthalate	1452 U
106-47-8	4-Chloroaniline	1452 U	91-94-1	3,3'-Dichlorobenzidine	2904 U
87-68-3	Hexachlorobutadiene	1452 U	56-55-3	Benzo (a)Anthracene	1452 U
59-50-7	4-Chloro-3-Methylphenol	1452 U	117-81-7	bis(2-Ethylhexyl)Phthalate	370 J
91-57-6	2-Methylnaphthalene	1452 U	218-01-9	Chrysene	1452 U
77-47-4	Hexachlorocyclopentadiene	1452 U	117-84-0	Di-n-Octyl Phthalate	1452 U
88-06-2	2,4,6-Trichlorophenol	1452 U	205-99-2	Benzo(b)Fluoranthene	1452 U
95-95-4	2,4,5-Trichlorophenol	7040 U	207-08-9	Benzo(k)Fluoranthene	1452 U
91-58-7	2-Chloronaphthalene	1452 U	50-32-8	Benzo(a)Pyrene	1452 U
88-74-4	2-Nitroaniline	7040 U	193-39-5	Indeno(1,2,3-cd)Pyrene	1452 U
131-11-3	Dimethyl Phthalate	1452 U	53-70-3	Dibenz(a,h)Anthracene	1452 U
208-96-8	Acenaphthylene	1452 U	191-24-2	Benzo(g,h,i)Perylene	1452 U
99-09-2	3-Nitroaniline	7040 U			

(1)-Cannot be separated from diphenylamine

Laboratory Name: NUS CORPORATION
Case No: NYSDEC

Sample Number:
R186-010-01

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low
Date Extracted/Prepared: 03/20/87
Date Analysed: 04/02/87
Conc/Dil Factor: 10
Percent Moisture (Decanted): 10

GPC Cleanup: NO
Separatory Funnel Extraction: NO
Continuous Liquid-Liquid Extraction: NO

CAS Number		ug/kg	
319-84-6	Alpha-BHC	88.0	U
319-85-7	Beta-BHC	88.0	U
319-86-8	Delta-BHC	88.0	U
58-89-9	Gamma-BHC(Lindane)	88.0	U
76-44-8	Heptachlor	88.0	U
309-00-2	Aldrin	88.0	U
1024-57-3	Heptachlor Epoxide	88.0	U
959-98-8	Endosulfan I	88.0	U
60-57-1	Dieldrin	176.0	U
72-55-9	4,4`-DDE	176.0	U
72-20-8	Endrin	176.0	U
33213-65-9	Endosulfan II	176.0	U
72-54-8	4,4`-DDD	176.0	U
1031-07-8	Endosulfan Sulfate	176.0	U
50-29-3	4,4`-DDT	176.0	U
72-43-5	Methoxychlor	880.0	U
53494-70-5	Endrin Ketone	176.0	U
57-74-9	Chlordane	880.0	U
8001-35-2	Toxaphene	1760.0	U
12674-11-2	Aroclor-1016	880.0	U
11104-28-2	Aroclor-1221	880.0	U
11141-16-5	Aroclor-1232	880.0	U
53469-21-9	Aroclor-1242	880.0	U
12672-29-6	Aroclor-1248	880.0	U
11097-69-1	Aroclor-1254	2200	
11096-82-5	Aroclor-1260	1760.0	U

Vi = Volume of extract injected (ul)
Vs = Volume of water extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Vs or Ws 27 Vt 20000 Vi 4

Laboratory Name: NUS CORPORATION
Case No.: NYSDEC

Sample Number:
R186-010-01

Organics Analysis Data Sheet
(Page 4)

10 of 14

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	Scan Number	Estimated concentration ug/kg
1.		NO VOA COMPOUND FOUND			
2.		UNKNOWN	BNA	251	7100 J
3.		ALDOL CONDENSATION PRODUCT	BNA	275	120000 J,B
4.		UNKNOWN (HYDROCARBON: MW=128)	BNA	279	2900 J
5.	2216-34-4	OCTANE, 4-METHYL-	BNA	287	3200 J
6.		UNKNOWN (HYDROCARBON: MW=128)	BNA	293	4500 J,B
7.		UNKNOWN	BNA	332	1300 J,B
8.		UNKNOWN	BNA	346	810 J
9.		UNKNOWN (MW=112)	BNA	362	860 J
10.		TRICHLOROMETHYLPROPANOL ISOMER	BNA	390	670 J,B
11.		UNKNOWN	BNA	407	700 J
12.		UNKNOWN	BNA	461	1100 J
13.		UNKNOWN	BNA	1649	4600 J
14.		UNKNOWN	BNA	1713	1100 J
15.		UNKNOWN	BNA	1779	870 J
16.		UNKNOWN	BNA	1787	1900 J
17.		UNKNOWN	BNA	1798	1900 J
18.		UNKNOWN	BNA	1860	2100 J
19.		UNKNOWN	BNA	1909	990 J
20.		UNKNOWN	BNA	1918	1100 J
21.		UNKNOWN	BNA	1930	1500 J
22.		UNKNOWN	BNA	1953	1300 J
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

NUS CORPORATION

Laboratory Services Group
5350 Campbells Run Road
Pittsburgh, PA 15205

REMIT TO:
Park West Two
Cliff Mine Road
Pittsburgh, PA 15275

412-788-1080

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11 of 14

[illegible]

TEST	DETERMINATION	RESULTS	UNITS
[illegible]	VOL - Semi volatile analysis		
[illegible]	VOL - Soil BNA Extraction		
[illegible]	[illegible]		
[illegible]	VOL - Volatile Organic Analysis		
[illegible]	VOL - Pesticides/PCB		
[illegible]	CLP - Cyanide	1	[illegible]
[illegible]	% Moisture	[illegible]	
[illegible]	pH for VOL Organics	8.5	
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	CLP - Barium (Ba)	47	[illegible]
[illegible]	CLP - Beryllium (Be)	[illegible]	[illegible]
[illegible]	CLP - Calcium (Ca)	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	CLP - Potassium (K)	[illegible]	[illegible]
[illegible]	CLP - Silver (Ag)	[illegible]	[illegible]
[illegible]	CLP - Sodium (Na)	[illegible]	[illegible]
[illegible]	[illegible]		
[illegible]	CLP - Antimony (Sb)	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

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[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	CLP - Calcium (Ca)	[illegible]	[illegible]
[illegible]	CLP - Sodium (Na)	[illegible]	[illegible]
[illegible]	CLP - Potassium (K)	[illegible]	[illegible]
[illegible]	CLP - Acid Digestion Solids		

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SAMPLE IDENTIFICATION: R1GA-013-00

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Pittsburgh, PA 15205

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REFERENCE 9

ENVIRONMENTAL HEALTH Continuation Sheet Nassau County Health Department	Owner or Agent: AIR TECHNIQUES	Inspector
	Address: Hicksville	

DATE

COMMENTS

On 7/30/87 at 10:00 AM a meeting was held at this site to discuss the results of samples taken from soil borings.

Present at the meeting were:

Harry Nagel	-	Air Techniques
Frank Bader	-	Air Techniques
Ed Epstein	-	Air Techniques
Craig Werle	-	ERM-Northeast
Glenn Wygant	-	ERM-Northeast
Bob Becherer	-	NYSDEC
Alex Moshie	-	NYSDEC
Howard Schaefer	-	NCHD

Mr. Werle provided the sample results (attached) and reviewed the actions taken to date. A magnetometer survey of the area had been made. This survey identified two areas where drums were located. The drums were removed and samples taken. The location of these sites and the borings is indicated on the attached drawing.

The first sample (15-17 ft) from boring B-1 shows significant contamination. Other samples show markedly lower levels or no contamination. Since boring B-1 is located next to the wall of the new building ERM and the building supervisor, Ed Epstein, believe that any attempt to excavate the material would result in structural damage. Mr. Becherer pointed out that DEC had told Air Techniques to stop construction when the drums were first dis-discovered. Mr. Bader replied that if the excavation is deemed necessary he will have it done regardless of the effect on the building.

The remainder of the discussion dealt with the possibility of leaving the material in place. ERM will develop an estimate of the total quantity of perchloroethylene in the soil. Mr. Becherer will use this value to determine whether the soil must be removed or can remain in place. Options discussed included plastic liners, redirecting the stormwater flow, and chemical encapsulation.

The meeting adjourned at about 12:45 PM.

Howard Schaefer

ENVIRONMENTAL HEALTH
Continuation Sheet
Nassau County Health Department

Owner or Agent : AIR TECHNIQUES
Address: HICKSVILLE

Inspector

DATE	COMMENTS

On 7/30/87 at 10:30 AM a meeting was held at this site to discuss the result of samples taken from soil borings.

Present at the meeting were:

Harry Nagel - Air Techniques
Frank Bader - "
Ed Epstein - "
Craig Werle - ERM Northeast
Glenn Wygant - "
Bob Bechtel - NYSDEC
Alex Moskie - "
Howard Schaefer - NCHD

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NVIRONMENTAL
EALTH
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Nassau County Health Department

Owner or
Agent :
Address:

Inspector

DATE

COMMENTS

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Howard Schaffer

EH 109a 1/68
DH-1198. 9/71

TABLE 1
CHEMICAL ANALYSES OF SOIL SAMPLES
AIR TECHNIQUES, INC.
HICKSVILLE, NEW YORK

SAMPLE	B-1 15-17ft	B-1 25-27ft	B-1 35-37ft	B-2 15-17ft	B-2 25-27ft	B-3 15-17ft	B-3 25-27ft	B-3 35-37ft	B-4 15-17ft	B-4 25-27ft	B-5 15-17ft	B-5 25-27ft	TP-1 10ft
COLLECTION DATE	6/30/87	6/30/87	6/30/87	7/10/87	7/10/87	7/10/87	7/10/87	7/10/87	7/10/87	7/10/87	7/10/87	7/10/87	6/30/87
PERCENT SOLIDS	66	84	98	94	94	85	96	96	97	96	96	94	93
PURGEABLE ORGANICS, in ppm (of 33 compounds)													
Tetrachloroethylene	7800	1.6	0.036	0.110	BDL	0.0046	BDL	BDL	BDL	BDL	BDL	BDL	0.86
Trans-1,2-dichloroethylene	1.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,1-trichloroethane	0.29	BDL	BDL	0.021	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Trichloroethylene	270	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Xylenes	0.41	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
RCRA METALS, in ppm (all 8 compounds listed)	TOTAL EXTRACTION												
Arsenic	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
~~Beryllium~~ Barium	16	12	6.4	1.1	7.7	6.7	6.1	6.3	6.2	11	8.4	9.3	9.0
Cadmium	2.6	0.36	0.31	1.4	0.43	1.2	0.94	0.94	0.10	0.20	0.10	1.2	BDL
Chromium Total	120	22	13	8.6	4.4	2.4	6.1	12	5.6	12	11	14	8.7
Lead	99	29	15	32	23	34	39	52	29	34	24	40	17
Mercury	0.21	0.10	0.10	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Selenium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Silver	7.9	1.2	0.92	0.32	0.32	0.35	0.52	0.31	0.31	0.42	0.31	0.42	4.4
PESTICIDES/PCBs, in ppm (of 25 compounds)													
PCB-1254	14.17	14.8	0.16	1.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.77

APPENDIX B

UPDATED NYSDEC/DHWR

INACTIVE HAZARDOUS WASTE DISPOSAL REPORT

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION
INACTIVE HAZARDOUS WASTE DISPOSAL REPORT

CLASSIFICATION CODE: 2a REGION: 1 SITE CODE: 130040
EPA ID: New

NAME OF SITE: Air Techniques, Inc.
STREET ADDRESS: 70 Cantiague Rock Road
TOWN/CITY: Hicksville COUNTY: Nassau ZIP: 11802

SITE TYPE: Open Dump- Structure-X Lagoon- Landfill- Treatment Pond-
ESTIMATED SIZE: 5 Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME.....: Air Techniques, Inc.
CURRENT OWNER ADDRESS.....: 70 Cantiague Rock Road
OWNER(S) DURING USE.....: Air Techniques, Inc.
OPERATOR DURING USE.....: Air Techniques, Inc.
OPERATOR ADDRESS.....: 70 Cantiague Rock Road
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From Unknown To March 1987

SITE DESCRIPTION:

Between 28 and 32 drums were excavated at this site during the construction of an addition. Drum and soil samples show volatile organics. A Phase I has been completed. A Phase II is currently recommended.

HAZARDOUS WASTE DISPOSED: TYPE	Confirmed-X	Suspected- QUANTITY (units)
Tetrachloroethylene		Unknown
Trichloroethylene		Unknown
Cis- and Trans-1,2-dichloroethylene		Unknown
1,1,1-trichloroethane		Unknown
Benzene		Unknown
Toluene		Unknown
Xylene		Unknown
Ethylbenzene		Unknown
Chloroform		Unknown

SITE CODE: 130041

ANALYTICAL DATA AVAILABLE:
Air- Surface Water- Groundwater- Soil-X Sediment- None-

CONTRAVENTION OF STANDARDS:
Groundwater- Drinking Water- Surface Water- Air-

LEGAL ACTION: N/A

TYPE : State- Federal-
STATUS: Negotiation in Progress- Order Signed-

REMEDIAL ACTION:

Proposed- Under Design- In Progress- Completed-X

NATURE OF ACTION: Drums and surrounding soil were removed.

GEOTECHNICAL INFORMATION: None
SOIL TYPE: Haven-Variant
GROUNDWATER DEPTH: 60 ft

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Drums and surrounding soils were found to be contaminated with volatile organics, metals, and PCBs. Additional soil or groundwater contamination may exist as the extent and number of drums is not known.

ASSESSMENT OF HEALTH PROBLEMS:

Medium	Contaminants Available	Migration Potential	Potentially Exposed Population	Need for Investigation
Air	No	Unlikely	No	Low
Surface soil	Yes	Likely	No	Medium
Groundwater	Yes	Highly likely	Yes	High
Surface water	No	Unlikely	Yes	Medium

Health Department Site Inspection Date: 7 January 1987

MUNICIPAL WASTE ID: