13

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

PHASE I INVESTIGATIONS

SOUTHOLD LANDFILL
TOWN OF CUTCHOGUE
SUFFOLK COUNTY, NEW YORK
NYSDEC SITE NO. 152062

Prepared for:

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road, Albany, New York 12233

Henry G. Williams, Commissioner

Division of Solid and Hazardous Waste

Norman H. Nosenchuck, P.E.
Director

Prepared by:

WOODWARD-CLYDE CONSULTANTS, INC.
1250 Broadway, 15th Floor
New York, New York 10001

December 1985
82C4548-3

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EXECUTIVE SUMMARY

The Southold Landfill is located in the town of Cutchogue, Suffolk County, New York (Figure 1). The Southold Landfill is located in a predominately agricultural zone. The facility has been operating cantinuously at the North Road site since 1951.

This facility accepts municipal and domestic wastes, demolition and landscaping debris, and cesspool and septic tank wastes. Of major concern is the ground water. Some ground-water deterioration has already been noted within this area. Additional data is needed to determine the current status of the ground water quality there and in its vicinity.

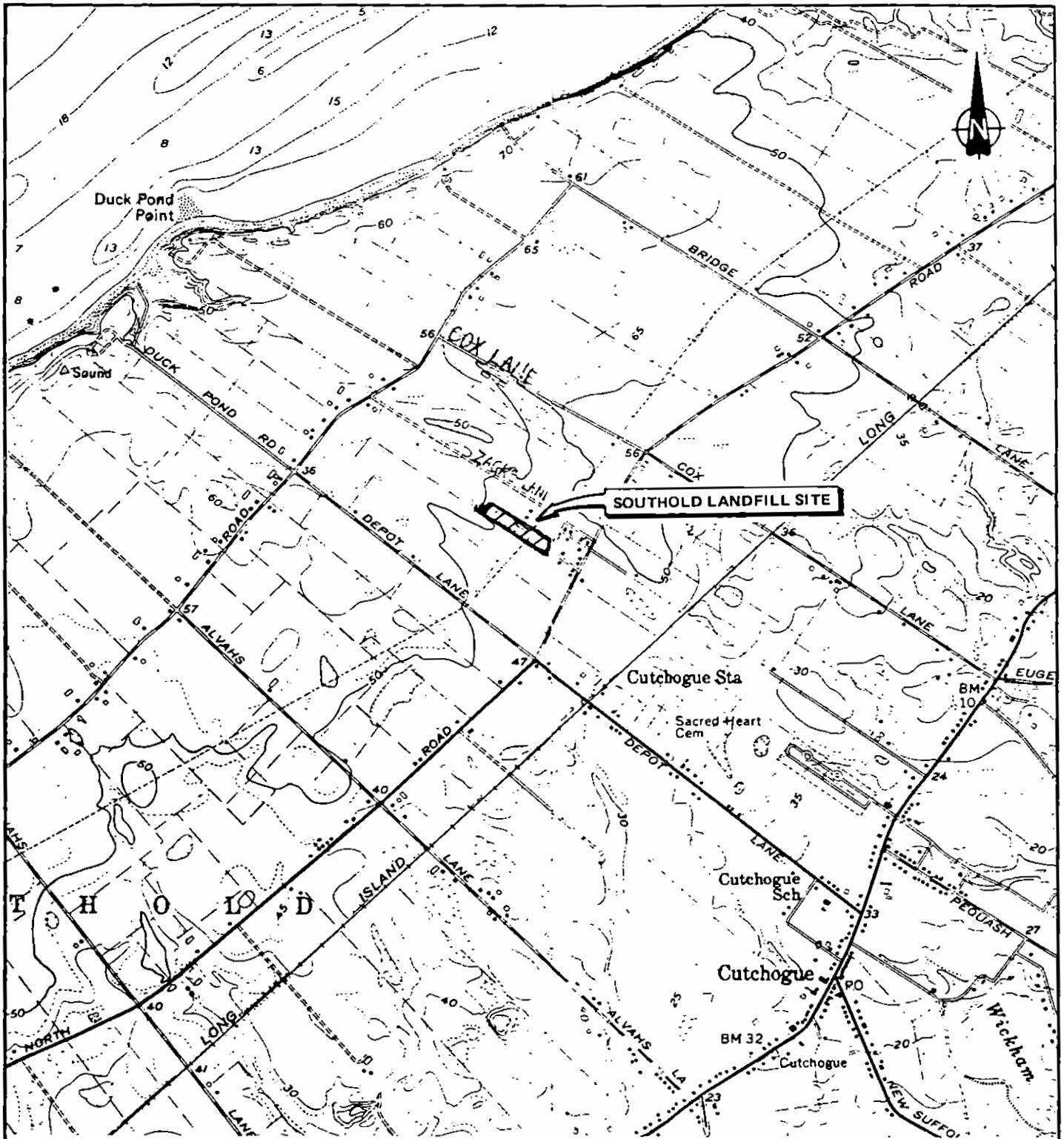
The Phase I effort for the Southold Landfill included: collection and review of existing data; preparation of a preliminary Hazard Ranking Score (HRS) for the site; conducting a site investigation/respansible parties interview; development of a preliminary hydrogeologic model; completion of required documentation; development of a work plan and estimated costs for further investigations at the site, and preparatian of a summary report.

The preliminary HRS scores developed for the Southhald Landfill (NYSDEC Site No. 152062) are as follows:

S_M = 37.99 (Sgw = 65.62 Ssw = 3.72 Sa = 0)
S_{FE} = N/A
SDC = 12.50

The data available were somewhat adequate to prepare a final HRS score, although information concerning the quantity of the waste was unknown. The existence of hazardous substances is verified by the presence of hazardous compounds within leachate emanating from the landfill.

The Phase II Work Plan developed for the Southold Landfill is specifically designed to address questions concerning soil, ground water and air quality so that a final HRS score and conceptual remedial designs and estimated costs can be developed. We have proposed a limited geophysical survey, the installation of four monitoring wells, ground water, leachate, and soil sampling and air monitoring. A detailed description of the work plan and estimated costs is provided in Section 6.0.



0 2000 4000 FT

SCALE

COORDINATES

LAT. 41° 01' 41"

LONG. 72° 30' 00"

MAP SOURCE:

USGS MAPS MATTITUCK HILLS AND SOUTHOLD QUADRANGLES NEW YORK–SUFFOLK CO. 7.5 MINUTE SERIES 1956

DEPARTMENT OF ENVIRONMENTAL CONSERVATION · NEW YORK STATE

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Approved

SOUTHOLD LANDFILL SITE
PHASE I INVESTIGATION
SITE LOCATION MAP

Prepared by
WOODWARD–CLYDE CONSULTANTS, INC.
CONSULTING ENGINEERS, GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS
NEW YORK, NEW YORK

DR. BY:	BTD	SCALE:	AS SHOWN	PROJ. NO.	82C4548-3
CK'D. BY:	DM	DATE:	23 JAN 1985	FIG. NO.	1

1.0
NARRATIVE SUMMARY

The Southold Landfill has been operating continuously since 1951 at North Road in Cutchogue, New York. The site is located in the northeast part of Long Island, in Suffolk County, and is about 50 feet above mean sea level (USGS, 1956). The entire site covers an area of 41 acres, however, the active landfill area is only 20 acres. The site is situated in a predominantly agricultural zone.

The Southold Landfill is owned and operated by the Town of Southold. This facility accepts municipal and domestic wastes, demolition and landscaping debris, and cesspool and septic tank wastes.

The Cutchogue Harbor and the Long Island Sound are within 3 miles of the site. No wetlands or critical wildlife habitats are located within this radius.

The potential exists for ground-water contamination, the sole source of drinking water in this area, by a suspected leachate plume emanating from the landfill and/or by agricultural practices in the area. Some ground-water deterioration has already been noted within this area (SCDHS, 1982; ERCO, 1981). Over 10,000 people within a 3-mile radius of the site rely on ground water as a source of drinking water.

The Order on Consent dated May 16, 1979, outlined landfill operation violations of part 360 of 6 NYCRR. On August 31, 1981, the landfill was classified as an open dump.

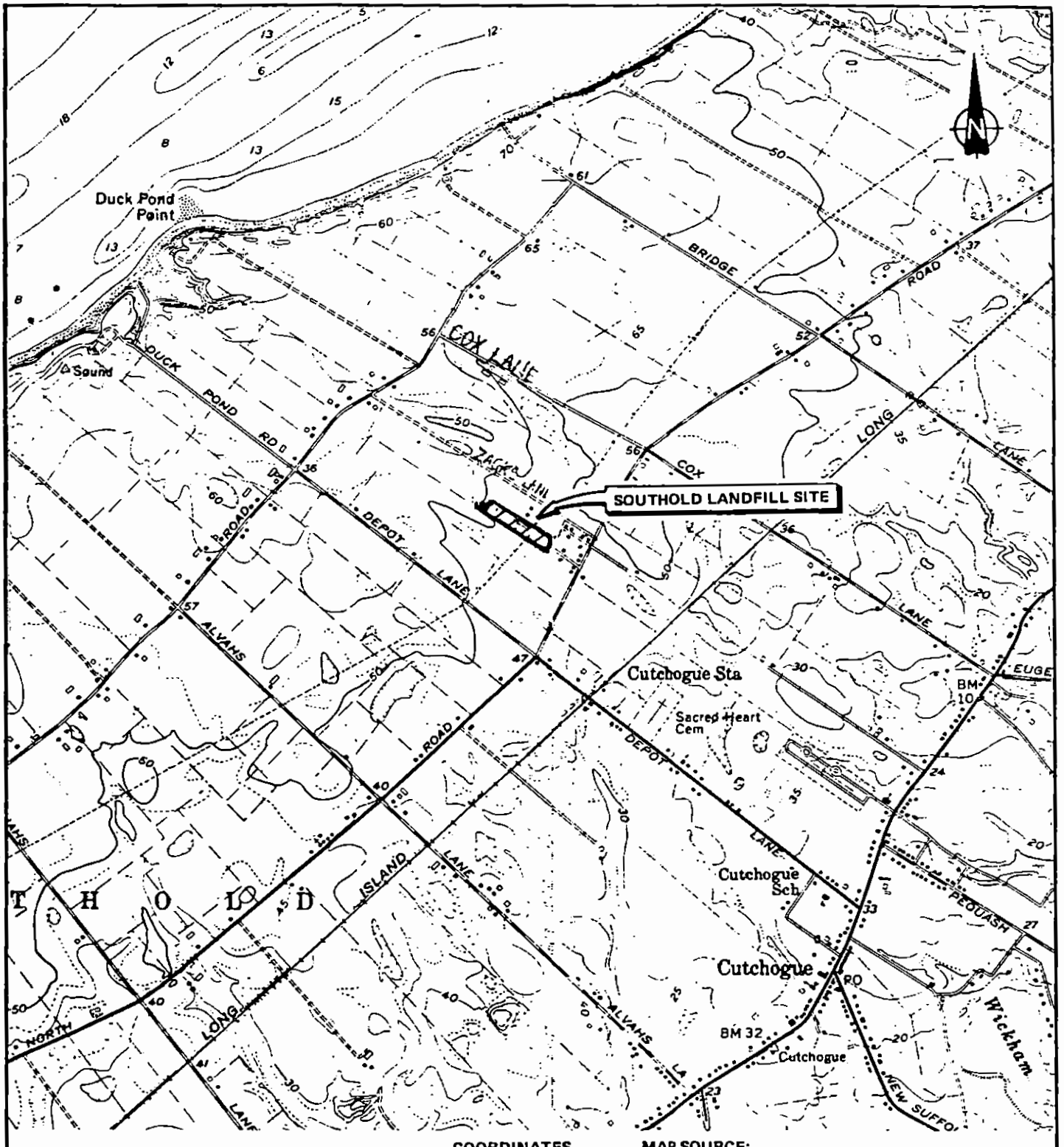
2.0
U.S. ENVIRONMENTAL PROTECTION AGENCY DOCUMENTATION

This section includes documentation records and work sheets required to develop Hazard Ranking System (HRS) scores. In addition, two EPA forms regarding site inspection and preliminary assessment have been completed and are included as required.

Documents included in this section are:

1. Preliminary Hazard Ranking System (HRS) Work Sheets
2. Documentation Records for HRS
3. EPA Form 2070-12 (Preliminary Assessment)
4. EPA Form 2070-13 (Site Inspection Report)

Forms were prepared as completely as possible using information available from private, county, state and federal agency sources. Values assigned to HRS rating factors are designated with a circle or a square reflecting complete or incomplete data, respectively. The Suffolk County Department of Health Services files and the Woodward-Clyde Consultants, Inc. Site Survey provided the most complete site specific data. Information provided in the Documentation Records for HRS are referenced and copies of most references are included in Appendix B. Agencies contacted for information on the site are listed in Table 1.



COORDINATES

LAT. 41° 01' 41"

LONG. 72° 30' 00"

MAP SOURCE:

USGS MAPS MATTITUCK HILLS AND SOUTHOLD QUADRANGLES NEW YORK–SUFFOLK CO. 7.5 MINUTE SERIES 1956

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SOUTHOLD LANDFILL SITE
PHASE I INVESTIGATION
SITE LOCATION MAP

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DR. BY:	BTD	SCALE:	AS SHOWN	PROJ. NO	82C4548-3
CK'D. BY:	DM	DATE:	23 JAN 1985	FIG NO.:	1

2.1 Preliminary Hazard Ranking System (HRS) Work Sheets

Facility name: Southold Landfill

Location: Cutchogue

EPA Region: II

Person(s) in charge of the facility: James R. Douglas, Sanitation Supervisor of Landfill

Name of Reviewer: Michael Akerbergs Date: April 5, 1985

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.)

The Southold Landfill has been operating continuously since 1951 at North Rd. in Cutchogue, New York. This facility accepts municipal and domestic wastes, demolition and landscaping debris, and cesspool and septic tank wastes. Of major concern is the ground water. Some ground water deterioration has already been noted within this area. Additional data is needed to determine the current status of the ground water quality there and in its vicinity.

Scores: S_M = 37.99 (S_{gw} = 65.62 S_{sw} = 3.72 S_a = 0)

S_{FE} = N/A

S_{DC} = 12.50

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 (45)	1	45	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 to Aquifer of Concern	0 1 2 3	2		6	
Net Precipitation	0 1 2 3	1		3	
Permeability of the Unsaturated Zone	0 1 2 3	1		3	
Physical State	0 1 2 3	1		3	
Total Route Characteristics Score				15	
3 Containment	0 1 2 3	1		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
Ground Water 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	35	40	
Total Targets Score			44	49	
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			39620	57,330	
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} = 65.62		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (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	2	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			7	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			2394	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{SW} = 3.72		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0)	45	1	0	45	5.1
Date and Location:						
Sampling Protocol:						
If line 1 is 0, then S_a = 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		3	
Toxicity	0 1 2 3		3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8		1		8	
	Total Waste Characteristics Score				20	
3 Targets						5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30		1		30	
Distance to Sensitive Environment	0 1 2 3		2		6	
Land Use	0 1 2 3		1		3	
	Total Targets Score				39	
4 Multiply 1 x 2 x 3					35,100	
5 Divide line 4 by 35,100 and multiply by 100			S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	65.67	4306.00
Surface Water Route Score (S_{sw})	.72	13.84
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		4319.84
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		65.73
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		37.99

FIGURE 10
WORKSHEET FOR COMPUTING S_M

N/A

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (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	1	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	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	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			2700	21,600	
7 Divide line 6 by 21,600 and multiply by 100			S_{DC} = 12.50		

FIGURE 12
DIRECT CONTACT WORK SHEET

2.2 Documentation Records for HRS

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 = 4,230 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: Southold Landfill

LOCATION: North Road, Cutchoque, New York

DATE SCORED: April 5, 1985

PERSON SCORING: Michael Akerbergs

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

Woodward-Clyde Consultants, Inc. (WCCI) Site Interview and Inspection, 12/18/84
Suffolk County Dept. of Health Services (SCDHS)

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

See Section 5.0 - Data Adequacy

COMMENTS OR QUALIFICATIONS:

GROUND WATER ROUTE

1. OBSERVED RELEASE

Contaminants detected (5 maximum):

PCB 1260
Iron
Manganese
Copper
Zinc
(Energy Resources Company, Inc. (ERCO), 1981).

Rationale for attributing the contaminants to the facility:

On site well tested in 1981 (ERCO, 1981).

* * *

2. ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

Upper Glacial aquifer - undifferentiated fill deposits (Jensen, H.M. and Soren, Jr. 1974). (Figures are located in Appendix B).

The Upper Glacial aquifer and the underlying Magothy aquifer are hydraulically connected (See Jensen and Soren figures located in Appendix B).

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

42-50 ft. (NYSDEC Region I well permits, 1984a).

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

20 ft.
Depth of landfill (WCCI site inspection, 1984).

Net Precipitation

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

46 inches (User's Manual)

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

29 inches (User's Manual)

Net precipitation (subtract the above figures):

17 inches

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Stratified fine to coarse sand and gravel (Jensen & Soren, 1974).

Permeability associated with soil type:

Greater than 10^{-3} cm/sec (User's Manual).

Physical State

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

Solid (1)
Sludge (3)
(WCCI site inspection, 1984).

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Unlined lagoons
Unlined landfill
(WCCI site inspection, 1984; Users Manual).

Method with highest score:

Unlined landfill (3)
(User's Manual)

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

PCB 1260 (18)
Iron (18)
Copper (18)
Manganese (18)
Zinc (18)
Each compound is rated (3) for toxicity and (3) for persistence.
(ERCO, 1981)

Compound with highest score:

All compounds have the same score (ERCO, 1981).

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):

Unknown. Scored as 1 based on existence of hazardous substances of unknown quantity.

Basis of estimating and/or computing waste quantity:

N/A

5. TARGETS

Ground Water Use

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

Domestic drinking water supply, and agricultural use (WCCI site inspection, 1984); NYS Department of Agriculture and Markets, 1984).

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:
Domestic well south of site (NYSDEC Region 1 Well Permits).
3 wells on site presumably not for potable use (WCCI site inspection, 1984).
Ground-water pumpage in area is mainly from the Upper Glacial aquifer (Jensen and Soren, 1974; see Appendix B).

Distance to above well or building:

Domestic well - 400 ft.
(NYSDEC Region I Well Permits; see Appendix B).
On site wells presumably not for potable use.
(WCCI site inspection, 1984)

Population Served by Ground Water 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:

Municipal water supply wells are located immediately outside of the 3-mile radius (NYS Atlas of Water System Sources, 1982). Although the wells are located outside the 3-mile radius, parts of the community served are located within the 3-mile radius. Drinking water within the 3-mile radius is supplied by the Captain Kidd Water Company, the Greenport Water District or private supply wells. (NYS Atlas of Water System Sources, 1982; NYSDEC Region I Well Permits). Estimated population within a 3-mile radius supplied by ground water is 4,952 people (Donnelly Marketing, 1984).

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):

Approximately 979 acres x 1.5 = 1,469 people estimated from USGS (topographic quad sheets: Southold, Mattituck and Mattituck Hills).

Total population served by ground water within a 3-mile radius:

Approximately 6,400 people.

SURFACE WATER ROUTE

1. OBSERVED RELEASE

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

None

Rationale for attributing the contaminants to the facility:

N/A

2. ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

3%
(WCCI site inspection, 1984).

Name/description of nearest downslope surface water:

Long Island Sound (USGS, Mattituck Hills Quad, 1956).

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

3% (WCCI site inspection, 1984; USGS, 1956).

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

No (WCCI site inspection, 1984; USGS, 1956).

Is the facility completely surrounded by areas of higher elevation?

No (WCCI site inspection, 1984; USGS, 1956).

1-Year 24-Hour Rainfall in Inches

2.7 inches (User's Manual)

Distance to Nearest Downslope Surface Water

6,000 feet (WCCI site inspection, 1984, USGS Southold Quad, 1956).

Physical State of Waste

See ground water route.

* * *

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Landfill
(WCC site inspection, 1984).

Method with highest score:

Landfill (3)
(User's Manual).

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

See ground water route.

Compound with highest score:

See ground water route.

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):

See ground water route.

Basis of estimating and/or computing waste quantity:

See ground water route.

* * *

5. TARGETS

Surface Water Use

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

Fishing, recreation (WCCI, site inspection, 1984).

Is there tidal influence?

No (USGS, 1956).

Distance to a Sensitive Environment

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

None (NYSDEC Region 1, 1985).

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

None (NYSDEC Region 1, 1985).

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

None (NYSDEC Division of Fish and Wildlife, 1984b).

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:

N/A (NYS Atlas of Community Water System Sources, 1982).

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

N/A

Total population served:

N/A

Name/description of nearest of above water bodies:

N/A

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

N/A

AIR ROUTE

1. OBSERVED RELEASE

Contaminants detected:

None

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:

N/A

Most incompatible pair of compounds:

N/A

Toxicity

Most toxic compound:

See ground water route.

Hazardous Waste Quantity

Total quantity of hazardous waste:

See ground water route.

Basis of estimating and/or computing waste quantity:

See ground water route.

* * *

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
8792	1143		

(Donnelley Marketing and USGS Mattituck Hills Quad, 1954).

Distance to a Sensitive Environment

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

None (NYSDEC Region 1, 1985).

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

None (NYSDEC Region 1, 1985).

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

None (NYSDEC Division of Fish and Wildlife, 1984b).

Land Use

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

N/A

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

N/A

Distance to residential area, if 2 miles or less:

300 ft (WCCI site inspection, 1984).

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

200 ft. (WCCI site inspection, 1984; NYS Department of Agriculture and Markets, 1984).

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

200 ft. (WCCI site inspection, 1984; NYS Department of Agriculture and Markets, 1984).

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

The Old House (NHL 10/15/66).
Fort Corchaug Site (NHL 1/18/74).
(NYS Office of Parks, Recreation and Historic Preservation, 1984).

FIRE AND EXPLOSION

1. CONTAINMENT

Hazardous substances present:

Methane
(WCCI site inspection, 1984; NYSDEC site inspection, Aug. 1980).

Type of containment, if applicable:

N/A

* * *

2. WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

OVA 2-30 ppm
(WCCI site inspection, 1984).

Ignitability

Compound used:

Methane (3)
(User's Manual)

Reactivity

Most reactive compound:

N/A

Incompatibility

Most incompatible pair of compounds:

N/A

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

See ground water route.

Basis of estimating and/or computing waste quantity:

See ground water route.

* * *

3. TARGETS

Distance to Nearest Population

300 ft. (WCCI site inspection, 1984).

Distance to Nearest Building

300 ft. (WCCI site inspection, 1984).

Distance to Sensitive Environment

Distance to wetlands:

None (NYSDEC Region 1, 1985).

Distance to critical habitat:

None (NYSDEC Division of Fish and Wildlife, 1984b).

Land Use

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

N/A

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

None (USGS, 1979).

Distance to residential area, if 2 miles or less:

300 ft. (WCCI site inspection, 1984).

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

See air route.

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

See air route.

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

See air route.

Population Within 2-Mile Radius

2175 (Donnelley Marketing, 1984).

Buildings Within 2- Mile Radius

851 (Donnelley Marketing, 1984).

DIRECT CONTACT

1. OBSERVED INCIDENT

Date, location, and pertinent details of incident:

N/A

* * *

2. ACCESSIBILITY

Describe type of barrier(s):

Security guard (10 hrs/day)
Fence
Controlled entry
Signs posted
(WCCI site inspection, 1984).

* * *

3. CONTAINMENT

Type of containment, if applicable:

Lagoons (15)

* * *

4. WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

See ground water route.

Compound with highest score:

See ground water route.

* * *

5. TARGETS

Population within one-mile radius

1143 (Donnelley Marketing, 1984).

Distance to critical habitat (of endangered species)

None (NYSDEC Region 1, 1984b).

2.3 EPA Form 2070-12 (Preliminary Assessment)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: Not Available

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Southhold Landfill	North Road				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Cutchogue	NY	11935	Suffolk		
09 COORDINATES LATITUDE: 41° 01' 41"	LONGITUDE: 72° 30' 00"				

10 DIRECTIONS TO SITE (Starting from nearest public road)
Route 25 East to Depot Lane. Left onto Depot Lane to North Rd. Right onto North Road, site is about 1000 ft. on the left.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)		
Town of Southhold	Main Road		
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 TELEPHONE NUMBER**
Southhold	NY	11958	(516) 734-7685
07 OPERATOR (If known and different from owner)	**08 STREET** (Business, mailing, residential)		
Town of Southhold Highway Dept.	Peconic Lane		
09 CITY	**10 STATE**	**11 ZIP CODE**	**12 TELEPHONE NUMBER**
Peconic	NY	11935	(516) 765-3140

13 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☒ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES ☐ NO DATE 12 18 84 (MONTH DAY YEAR)
BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☒ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____
CONTRACTOR NAME(S): Woodward-Clyde Consultants Inc.

02 SITE STATUS (Check one)
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
1951 (BEGINNING YEAR) | present (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Suspected leachate coming from domestic and agricultural wastes, demolition debris, and scavenger waste. Several soil borings indicated a distance of 1.5-3.0 ft. between placed refuse and ground water.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
A leachate plume emanating from landfill is suspected. This plume might contaminate existing domestic water supply wells located in the vicinity of the site.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)		03 TELEPHONE NUMBER
William Roberts	Suffolk Co. Dept. of Health		(516) 451-4627
04 PERSON RESPONSIBLE FOR ASSESSMENT	**05 AGENCY**	**06 ORGANIZATION**	**07 TELEPHONE NUMBER**	**08 DATE**
David Muccalo		Woodward-Clyde Consultants Inc.	(201) 785-0700 (212) 986-2998	02 12 85 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NIA

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [X] C. SLUDGE
- [ ] D. OTHER (Specify) _____
- [ ] E. SLURRY
- [X] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: unknown
- CUBIC YARDS: unknown
- NO. OF DRUMS: unknown

03 WASTE CHARACTERISTICS (Check all that apply)

- [X] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [X] D. PERSISTENT
- [X] 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	unknown	unknown	scavenger waste
(OLW)	OILY WASTE	unknown	55 gall drums	Liquid from Mattituck Airbase
SOL	SOLVENTS			
(PSD)	PESTICIDES	unknown	unknown	from agricultural waste
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
(MES)	HEAVY METALS	unknown	unknown	might be present in suspected leachate plume

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
	PCB 1260			0.4 ppb	
	Iron				
	Copper				
	Manganese				
	Zinc				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

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

WCCI site inspection, 1984.
Suffolk County Dept. of Health Services, Memo 12/11/81.
NYSDEC Letter to town of Southold dated 4/10/79.
ERCO, 1981

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	N/A

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1143 within 1 mile radius — 04 NARRATIVE DESCRIPTION
"Ground water monitoring to the southeast at a Suffolk Co. recharge basin has indicated contamination that may (or may not) be due to the landfill" (Suffolk Co. Dept. of Health Services, memo 11/82)

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

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

01 [X] D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1143 within 1 mile radius — 04 NARRATIVE DESCRIPTION
- methane in high concentrations migrating beyond site limits. (NYS DEC field inspections)
- high lifts of uncovered brush (NYSDEC field inspection 7/10/80)

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

01 [X] F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: Unknown (Acres) — 04 NARRATIVE DESCRIPTION
suspected leachate might be contaminating soil above ground water

01 [X] G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1143 within 1 mile radius — 04 NARRATIVE DESCRIPTION
"Ground water monitoring to the southeast ... has indicated contamination that may (or may not) be due to the landfill" (Suffolk Co. DHS memo 11/82)

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

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

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: N/A

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 [X] J. DAMAGE TO FLORA — 02 [X] OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Vegetation damage due to methane was noted 100' from landfill limits. (NYSDEC field inspections)

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

01 [X] L. CONTAMINATION OF FOOD CHAIN — 02 [X] OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Potato fields have been effected by methane (NYSDEC field inspections)

01 [X] M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 ☐ OBSERVED (DATE: _____) [X] POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1143 within 1 mile radius
04 NARRATIVE DESCRIPTION
Landfill and septic sludge lagoons are unlined.

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

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

01 [X] P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL [X] ALLEGED
04 NARRATIVE DESCRIPTION
Landfill accepted 55 gallon drums filled with liquid from Mattituck Airbase in leaching lagoons, as well as, industrial waste. (NYSDEC LETTER TO TOWN OF SOUTHOLD DATED 4/10/79)

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
Two truck loads of oil soaked earth entered the landfill (Suffolk C. DHS memo 11/14/80)

III. TOTAL POPULATION POTENTIALLY AFFECTED: 1143 within 1 mile radius

IV. COMMENTS
Suffolk Co. Dept. of Health Services reported major violations in many occasions, such as: (1) insufficient soil cover on main dumping area (2) evidence of rodent infestation (3) pooled water (4) blowing paper (5) insect infestation.

V. SOURCES OF INFORMATION (Cite specific references, e. g., state files, sample analysis, reports)
WCCI site inspection 1984
Suffolk Co. Dept. of Health Servs site inspections

EPA FORM 2070-12 (7-81)

2.4 EPA Form 2070-13 (Site Inspection Report)

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: Not Available

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Southhold Landfill	North Road				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Cutchogue	NY	11935	Suffolk		

09 COORDINATES: 41° 01' 41." LATITUDE; 72° 30' 00." LONGITUDE

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
12, 18, 84 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1951 (BEGINNING YEAR) – PRESENT (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____
☐ E. STATE ☒ F. STATE CONTRACTOR Woodward Clyde Consult Inc. ☐ G. OTHER _____

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
DAVID MUSCALO	Senior Staff Geologist	Woodward Clyde Consultants	(201) 785-0700

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
			( )
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
James R. Douglas	Sanitation Supervisor of L.F.	North Rd. Cutchogue, NY, 11935	(516) 734-7685
Edward J. Capobianco	Foreman	"	( ) "
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1.00 p.m.	Sunny, Warm

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
William Roberts	Suffolk Co. Dept. of Health	(516) 451-4627

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
David Muscalo		Woodward-Clyde Consultants, Inc.	201-785-0700 212-926-2878	02, 12, 85 (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	N/A

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [X] C. SLUDGE
- [ ] D. OTHER (Specify)
- [ ] E. SLURRY
- [X] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: Unknown
CUBIC YARDS: Unknown
NO. OF DRUMS: Unknown

03 WASTE CHARACTERISTICS (Check all that apply)

- [X] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [X] D. PERSISTENT
- [X] 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	Unknown	Unknown	Scavenger waste
(OLW)	OILY WASTE	Unknown	55gal drums	Liquid from Mattituck Airbase
SOL	SOLVENTS			
(PSD)	PESTICIDES	Unknown	Unknown	from agricultural waste
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
(MES)	HEAVY METALS	Unknown	Unknown	might be present in suspected leachate plume

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
	PCB 1260			0.4 ppb	
	Iron				
	Copper				
	Manganese				
	ZINC				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

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

WCCI site inspection, 1984
Suffolk County Dept. of Health Services, Memo 12/11/81.
NYSDEC letter to Town of Southold dated 4/10/79

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE: NY	02 SITE NUMBER: N/A

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1143 within 1 mile radius — 04 NARRATIVE DESCRIPTION

A leachate plume emanating from landfill is suspected (SCDHS memo 12/11/81)

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

N/A

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

N/A

01 [X] D. FIRE/EXPLOSIVE CONDITIONS — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1143 within 1 mile radius — 04 NARRATIVE DESCRIPTION

- methane in high concentrations migrating beyond site limits (NYSDEC field inspectors)
- High lifts of uncovered brush (NYSDEC field inspection 7/10/80)

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

N/A

01 [X] F. CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE _____) — [X] POTENTIAL — [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: unknown (Acres) — 04 NARRATIVE DESCRIPTION

suspected leachate might be contaminating soil above ground water

01 [X] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1143 within 1 mile radius — 04 NARRATIVE DESCRIPTION

A suspected leachate plume emanating from landfill might contaminate domestic water supplies in the vecinity of the site.

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

N/A

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

N/A

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: N/A

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 [X] J. DAMAGE TO FLORA — 02 [X] OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Vegetation damage due to methane was noted 100 ft. from landfill limits (NYSDEC field inspections)

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

01 [X] L. CONTAMINATION OF FOOD CHAIN — 02 [X] OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Potatoes fields affected by methane (NYSDEC field inspections)

01 [X] M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids/Leaking drums) — 02 ☐ OBSERVED (DATE: _____) [X] POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1143, within 1 mile radius
04 NARRATIVE DESCRIPTION
Landfill and septic sludge lagoons are unlined

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

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

01 [X] P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL [X] ALLEGED
04 NARRATIVE DESCRIPTION
Landfill accepted 55 gallon drums filled with liquid from Mattituck Airbase in leaching lagoons, as well as, industrial waste. (NYSDEC LETTER TO TOWN OF SOUTHOLD DATED 4/10/79)

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
Two truck loads of oil soaked earth entered the landfill (Suffolk Co. DHS memo 11/14/80)

III. TOTAL POPULATION POTENTIALLY AFFECTED: 1143 within 1 mile radius

IV. COMMENTS
Suffolk Co. Dept. of Health Services reported major violations in many occasions, such as: (1) insufficient soil cover on main dumping area (2) evidence of rodent infestation (3) pooled water (4) blowing paper (5) insect infestation.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analyses, reports)
WCCI site inspection
Suffolk Co. Dept. of Health Services site inspectors

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	N/A

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)	unknown	04/22/82		NYSDEC Solid Waste Disposal Permit
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

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

04 TREATMENT (Check all that apply)
- ☐ A. INCINERATION
- ☐ 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
41 (Acres)

07 COMMENTS The site accepts domestic and agricultural wastes, demolition debris and scavenger waste. The method of disposal consist of excavation, deposition and burial. The burial pits are ± 40 ft. deep.

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.

There is no liner under landfill or septic sludge lagoons. Several borings indicated a distance of 1.5 - 3.0 ft. between placed refuse and ground water.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS The site has: security guard (10 hrs/day), fence, controlled entry and signs posted.

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

WCCI site inspection 1984

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: N/A

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. 2.5 (mi)
B. Adjacent (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 10837 within a 3 mi. radius of site

03 DISTANCE TO NEAREST DRINKING WATER WELL Adjacent (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
42-50 to water table (ft)	NW	~42 (ft)	Unknown (gpd)	☒ YES ☐ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)
There are three wells on site. South and Southwest of site there are domestic supply wells that serve residents of this area.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: About 3000 ft. NW of site there is a recharge basin	☐ YES ☐ NO	COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☒ 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
Long Island Sound	☐	1.1 (mi)
East Creek	☐	1.0 (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	~~THREE (3)~~ Four (4) MILES OF SITE
A. 1143 NO. OF PERSONS	B. 2175 NO. OF PERSONS	C. 8792 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION
Adjacent (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE
104

04 DISTANCE TO NEAREST OFF-SITE BUILDING
Adjacent (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)
rural population

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	N/A

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	
750 (ft)	unknown (ft)	unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
17 (in)	2.7 (in)	0-3.0 %	NW	0-3.0 %

09 FLOOD POTENTIAL

SITE IS IN — YEAR FLOODPLAIN

10

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

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. — (mi) OTHER: B. — (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

— (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	AG LAND
A. 3.0 (mi)	B. Adjecent (mi)	C. Adjecent (mi)	D. Adjecent (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site is located in an area of glacial deposition.

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

WCCI site inspection 1984
USGS, 1956

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	N/A

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			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Air quality	Organic Vapor Analyzer (OVA) readings varied from 2ppm to 30 ppm (probably methane)

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF Woodward-Clyde Consultants Inc.
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS WCCI files

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

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

WCCI site inspection 1984

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	N/A

II. CURRENT OWNER(S)			**PARENT COMPANY** (If applicable)		
01 NAME Town of Southhold.		02 D+B NUMBER	08 NAME no information available		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.) Main Rd.		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY Southhold	06 STATE NY	07 ZIP CODE 11958	12 CITY	13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
III. PREVIOUS OWNER(S) (List most recent first)			**IV. REALTY OWNER(S)** (If applicable, list most recent first)		
01 NAME no information available		02 D+B NUMBER	01 NAME no information available		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
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)

WCCI site inspection, 1984

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	N/A

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Town of Southhold-Highway Dept.	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Peconic Lane	

05 CITY	06 STATE	07 ZIP CODE
Peconic	NY	11935

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
no information available	

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
no information available	

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
no information available	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

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

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

01 NAME	02 D+B NUMBER

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

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)

WCCI site inspection, 1984

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	N/A

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
N/A	

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

05 CITY	06 STATE	07 ZIP CODE

this is a municipal landfill that accepts refuse from residents of the Town of Southold

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
no information available			
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	

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
no information available			
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)

WCCI site inspection, 1984

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE: NY	02 SITE NUMBER: N/A

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: no information available (nia)

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

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

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

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: nia

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: nia

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

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

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

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

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

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

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

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

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

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

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

EPA FORM 2070-13 (7-81)

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	N/A

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
no information available (nia)

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
nia

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
nia

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
nia

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
nia

01 ☒ W. GAS CONTROL — 02 DATE 1983 — 03 AGENCY TOWN OF SOUTHOLD
04 DESCRIPTION use of venting trenches to prevent high concentrations of methane

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
nia

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
nia

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
nia

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
nia

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
nia

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
nia

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

WCCI site inspection, 1984
THE Suffolk Times, June 23, 1983

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: N/A

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

- Suffolk C. Dept. of Health Services requested NYSDEC LEGAL ACTION AGAINST THE TOWN OF SOUTHHOLD LANDFILL OWNERS DUE TO PERSISTENT VIOLATIONS TO PART 360 REGULATIONS IN THEIR LANDFILL OPERATIONS (SCDHS Memo 12/12/78).
- NYSDEC Regional Attorney Contacted town of Southhold (1/10/79).
- Order on Consent 5/16/1979
  violations of part 360 of 6 NYCRR
- the landfill was classified as an open dump on 8/31/81 because was found to be:
  - in non-compliance on safety (explosive gases beyond the property boundary), 40 CFR part 273.6.
  - in violation of NYS (6NYCRR Part 703) Ground Water standards
- On 1/5/82 the town of Southhold which was not get in compliance with the Order on Consent was contacted by NYSDEC to setup a compliance monitoring Cnference

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

SCDHS Memorandum 12/12/78.
NYSDEC LETTERS DATED 1/10/79 and 1/5/82 TO TOWN OF SOUTHHOLD

EPA FORM 2070-13 (7-81)

TABLE I

SOURCES OF INFORMATION

Data Gathered	Office/ Agency	Location	Contact Person	Date of Visit	Date of Phone Conversation	Telephone Number
Critical Habitats	NYSDEC Division of Fish & Wildlife Significant Habitats Unit	Wildlife Resources Center Delmar, NY 12054	Larry Brown	12-11-84	several, 12/84	(518) 439-7486
Site Specific Information	NYSDEC Division of Solid and Hazardous Waste, Bureau of Municipal Waste	3 Vatrano Road Albany, NY	Hans Dirzuweit Earl Barcomb	12-12-84- 12-14-84	several, 12/84	(518) 457-2051
Historic/ Landmark Sites	NYS Dept. of Parks, Recreation & Historic Preservation Division for Historic Preservation	Agency Bldg #1 Empire State Plaza Albany, NY 12238	Lenore Kuwick	12-12-84	various, 12/84	(518) 474-3176
Wetlands	NYSDEC Division of Fish & Wildlife, Habitat Inventory Unit	Albany, NY	Sharon O'Connor		12/84	(518) 457-3431
Freshwater & Coastal Wetlands in Nassau & Suffolk Counties	NYSDEC-Region I	Bldg #40 SUNY Stony Brook, NY 11794	Mike Fiscina		several, 12/84; 1/85	(516) 751-1389
Freshwater and Coastal Wetlands in Kings County	NYSDEC-Region II	2 World Trade Center Rm 6126 New York, NY 10047	Joe Pane		various, 12/84	(212) 488-2758
Freshwater and Coastal Wetlands in Albany and Rensselaer Counties	NYSDEC-Region IV	Rt. 10, Stamford, New York 12167	Maynard Vance		various, 12/84	(607) 652-7364
Site Specific Information	NYS Dept. of Health Division of Health Risk Control, Bureau of Toxic Substance Assessment	Corning Tower Bldg., ESP Albany, NY 12237	Ron Tramontano Steve Bates	12-12-84	various, 12/84	(518) 473-8427
Site Specific Information- Rensselaer County Sites	NYS Law Department	Justice Bldg.-Rm 245 Albany, NY 13224	Michael Moore	12-12-84	various 12/84; 2/85	(518) 474-1190
Agricultural/ Prime Agricultural Land in Production	NYS Dept. of Agriculture and Markets, Divison of Rural Affairs	State Campus Bldg. No. 8, Room 805 Albany, NY 12235	Louise Inglis	12-13-84	various, 12/84	(518) 457-2713
Water Resources	NYSDEC Division of Water Resources	50 Wolf Road Albany, NY 12233		12-14-84	various, 12/84	(518) 457-5668

TABLE I

SOURCES OF INFORMATION
(continued)

Data Gathered	Office/ Agency	Location	Contact Person	Date of Visit	Date of Phone Conversation	Telephone Number
Site Specific Information	NYSDEC Division of Solid & Hazardous Waste	50 Wolf Rd. Albany, NY 12233	Anita Grikstas	12-14-84		(518) 457-0639
Site Specific Information- Rensselaer County Sites	Rensselaer County Health Dept.	County Office Bldg. 1600 7th Ave. Troy, NY 12180	John Sheehan	12-27-84	several, 12/84; 2/85	(518) 270-2670
Site Specific Information- Albany County Sites	Albany County Health Dept.	South Ferry and Green Streets Albany, NY 12201	Cliff Forando Steve Lukowski Ben Pierson	12-28-84	several, 12/84	(518) 445-7835
Site Enforcement	NYSDEC Division of Environmental Enforcement	202 Mamaroneck Ave. White Plains, NY 10601	Mike Tone		several, 12/84; 1/85	(914) 761-6660
USEPA "ERRIS" Site Numbers	USEPA-Region II Hazardous Waste Site Branch	26 Federal Plaza New York, NY 10278	Carol Peterson Kathy Moyik		several, 12/84; 1/85	(212) 264-4197 (212) 264-8672
Site Specific Information- Albany and Rensselaer County Sites	NYSDEC-Region IV	2176 Guilderland Ave. Schenectady, NY 12306	George Elston Mike Styk		various, 12/84; 1/85	(518) 382-0680
Site Specific Information- Suffolk County Sites	Suffolk Co. Dept. of Health Services	15 Horse Block Pl. Farmingville, NY	Frank Randall Jim Pim Jim Maloney		various 11/84; 12/84	(516) 451-4633
Site Specific Information- Nassau County Sites	Nassau Co. Dept. of Health	240 Old Country Road Mineola, NY	Joe Schechter Larry Sang	12/13/84		(516) 535-2406
Water Supply in Suffolk Co.	Suffolk Co. Dept. of Health Services	225 Rabro Dr. East Hauppauge, NY 11788	Paul Ponturo Richard Meyer		12/7/84	(516) 348-2886
Site Specific Information- Kings County Sites	NYSDEC Region II	2 World Trade Center New York, NY	Armand DeAngelis Sal Ervolina	12/7/84	(212) 488-3862 12/26/84	
Site Specific Information- Kings County Sites	NYCDEP	2358 Municipal Bldg. New York, NY 10007	Tim Slouson Anthony Ianarelli Stacy Moriates Stan Cepenberg Kim Sparber		12/27/84 12/20/84 12/7/84 12/10/84 12/10/84	(212) 669-8934 (212) 669-8939 (212) 566-8977 (212) 566-2717 (212) 566-1647
Site Specific Information- NYSDEC Region I & II Sites	NYSDEC Region I	Building 40 SUNY at Stonybrook	Bob Schneck Bob Becherer	various 12/84		(515) 751-7900
Well Points NYSDEC Region I & II Sites	NYSDEC Region I Well Points	Building 40 SUNY at Stonybrook	Tony Candella	12/12/84		(516) 751-7900

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3.0
SITE DESCRIPTION

The Southold Landfill is located on North Road, Cutchogue, New York. The Southold Landfill is located in the northeast part of Long Island, in Suffolk County, and is about 50 feet above mean sea level (USGS, 1956). The site occupies an area of 41 acres, however, the active landfill area is only 20 acres (Figure 1). The site is situated in a predominantly agricultural area.

The topography of the site is generally flat with a borrow pit depression approximately 50 feet deep along its eastern margin. At its west margin, there are two depressions that comprise two septic sludge lagoons.

The area slopes downward gently (0-1.0%) from northwest to southeast towards Cutchogue Harbor located approximately 2.3 miles from the site and is part of the Great Peconic Bay.

Long Island Sound is located to the north, approximately one mile from the site.

The site is fenced in and has a security guard 10 hrs/day, controlled entry and signs posted. A guard shack, collection center and a storage building are located on site. There is a paved road along the southwestern edge of the landfill.

4.1 SITE AREA SURFACE FEATURES

The Southold Landfill site is located in an area that slopes downward gently (0-1.0%) from northwest to southeost towards Cutchogue Harbor, which is part of the Great Peconic Bay and is located approximately 2.3 miles from the site. Long Island Sound is located toward the north, approximately one (1) mile from the site.

No critical wildlife habitats are located within 3 miles. However the Old House and the Fort Corchaug Site are historic or landmark sites located within that distance.

The predominant land use in the site area is agricultural. Two cemeteries and one school are located within one mile of the site.

4.2 SITE HYDROGEOLOGY

4.2.1 Ground-Water Occurrence

The Southold Landfill is located in an area mantled with outwash deposits which overlie stratified sand with some gravel deposits. The borrow pit along the east side of the landfill shows a stratigraphic section of interbedded sand and gravel with dark beds of clayey silt. Ground water in this area occurs in lenses of variable thickness from a few feet up to several hundred feet (Franke and McClymonds, 1972). The thickness of these coarse grained deposits beneath the landfill is about 140 feet. The saturated part of these coarse grained deposits is approximately 85 feet and is known as the Upper Glacial aquifer. It is a water table aquifer and constitutes the only source of drinking water in this region. Below these deposits there is a clay layer approximately 50 feet thick which is believed to be quite extensive. Below this layer a second saturated coarse grained deposit approximately 50 feet is found (SCDHS Memorandum, 1981).

The water level in the vicinity of the site is between 42 and 50 feet below the ground surface. The movement of ground water in the Upper aquifer is in a northwest direction towards the Long Island Sound.

Since the surficial materials are in general very permeable, recharge to the ground water occurs by infiltration of rainfall through these materials.

4.2.2 Ground-Water Quality

The fresh ground water of Suffolk County is generally good. Less than 100 ppm of dissolved solids are typical. Ground-water quality in the proximity of the site is unknown. However, it probably has deteriorated due to a suspected leachate plume emanating from the Southold Landfill and/or due to the agricultural practices of the area. In 1981, one on site well was tested for pesticides (endrin, lindane, methoxychlor, toxaphene), herbicides (2, 4-D and silvex), trace metals and other parameters. The results showed that no pesticides or herbicides were present, metals were below maximum levels allowed in drinking water and only chloride (270 mg/l), color (30) and total dissolved solids (1500 mg/l) were in excess of the maximum values allowed. A pH of 6.4 and a conductivity of 2900 (umhos/cm) were measured. The concentration of PCB measured was 0.4 ppb (ERCO, 1981).

The water quality of the aquifer below the clay layer has been reported to be of satisfactory quality for drinking purposes (SCDHS, 1981). However, underneath this area the deep Magothy and the Lloyd aquifers are said to contain salty water (Franke and McClymonds, 1972).

4.2.3 Ground-Water Use

There is no public water supply available in the vicinity of the site. However, part of the area within a 3-mile radius of the site is served by public supply wells managed by the Captain Kidd Water Co. serving Mattituck, and the Greenport Water District serving Greenport Village. Private wells supply water used for drinking and farm irrigation. These wells tap only the Upper Glacial aquifer (Jensen and Soren, 1974).

Approximately 6,500 people within a 3-mile radius of the site rely on ground water as a source of drinking water.

4.3 PAST SAMPLING AND ANALYSIS

Past sampling and analysis included samples from wells located on site and within the general area of the site. See Section 4.2.2 Ground Water Quality for a description of analytical results.

The results of the analyses are included in Appendix B.

5.0
DATA ADEQUACY

The data were somewhat adequate for scoring the HRS work sheets. The one exception was the score for Hazardous Waste Quantity. The amount of hazardous substances is not known although its existence is verified by the presence of hazardous compounds within leachate emanating from the landfill. The factor is, therefore, scored a (1). The existence of leachate is supported by on-site well data which is the basis for arriving at a score of 45 for Observed Release. The Observed Release score together with the Targets score result in a relatively high Ground Water Route score.

The Surface Water Route score, on the other hand, is relatively low, due in large part to the very low Targets score. Again, the Hazardous Waste Quantity is scored a (1).

6.0
WORK PLAN

6.1 OBJECTIVES

The objective of this proposed work plan is to collect field information required to prepare a final HRS score and develop conceptual remedial designs and cost estimates. Since there is not much information about the hydrogeology and the ground-water quality at the landfill site, the work plan will address basic questions concerning the presence of site contamination and ground-water flow and quality. The presence of a suspected leachate plume emanating from the site and the proximity to agricultural lands in the area suggest that potential health hazards may exist.

The following work plan was developed under the assumption that existing wells on the site or in the site vicinity were not useable. In the event that sufficient data indicates that these wells have been installed properly and have been properly secured, the following work plan may be modified to include sampling of selected existing wells and possibly the installation of two or three new wells. The estimated time for drilling would subsequently be reduced. The remainder of the work plan shall remain the same.

6.2 FIELD INVESTIGATION PLAN

6.2.1 Preliminary Site Investigations

A preliminary site visit will be made to tentatively select the monitoring-well locations, to evaluate the means of drill rig access in each case, and to identify property owners if access is required off site. In addition, a thorough site reconnaissance will be performed, and a survey of volatile organic emissions will be conducted close to any exposed barrels, using an HNU meter, Model PI 101. It is estimated that 2 person-days will be required for this work.

6.2.2 Geophysical Studies

A geophysical survey utilizing the terrain conductivity technique will be performed at the site to aid in characterizing the hydrologic regime. This technique has been utilized successfully in locating subsurfce plumes of many different substances, including hydrocarbons and metals in landfill leachate. Measurements will be taken at various locations around the site to determine expected ranges of background or upgradient conductivity. Measurements will be taken across the dump site to identify anomalous conductivity distributions that may indicate buried metallic objects such as drums. The direction of ground-water flow is suspected to be in the northwest direction. Measurements will be taken at each one of the sides of the filled area to attempt to identify the presence and direction of movement of any existing plumes of contaminated ground water leaving the site and the quality of ground water flowing into the landfill area. Both the Geonics EM-31 and EM-34 conductivity meters will be used to perform the survey.

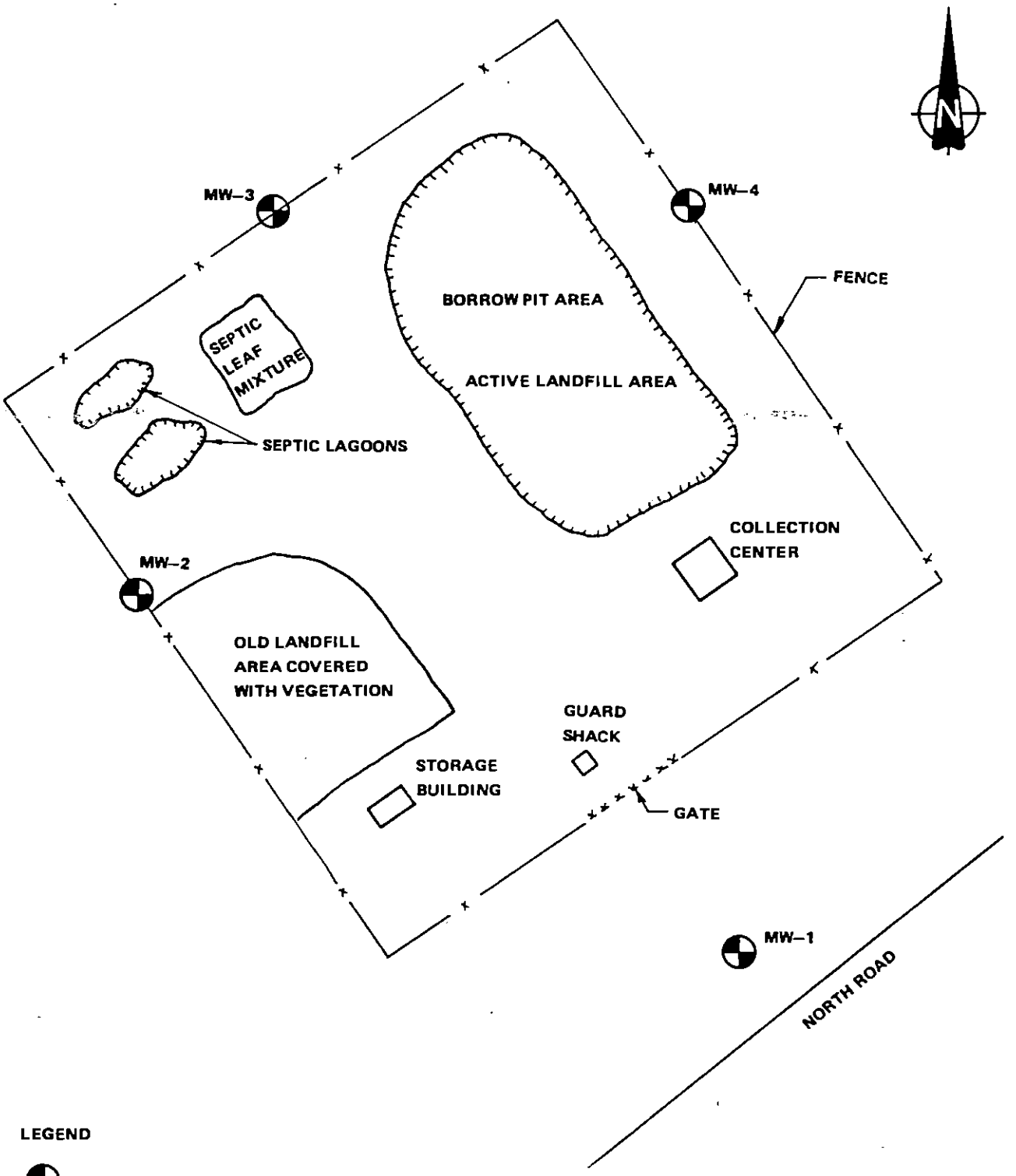
It is estimated that a two person team will require 4 days including travel time, to perform the conductivity survey, with readings taken for exploration depths of 8 and 46 feet at each measurement station. The data will be plotted on maps and contoured. These contour maps will provide the basis for defining the exact location of borings and ground-water monitoring wells.

6.2.3 Monitoring Wells

6.2.3.1 Installation. Monitoring wells will provide data pertinent to the chemistry, the stratigraphy and the ground-water regime at the site. It is recommended that 4 monitoring wells be installed at the approximate locations shown in Figure 2. Final well locations will be determined after the conductivity survey is completed.

One well (MW-1) will be installed at a presumed upgradient location, on the southeast side of the site. This well will provide background data on the ground water flowing into the area.

Wells MW-2 and MW-3 will be installed at downgradient locations and will provide water quality information on ground water leaving the site.



Prepared for
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road, Albany, New York 12233
Henry G. Williams, Commissioner

Division of Solid and Hazardous Waste
Norman H. Nosenchuck, P.E.
Director

Approved

LOCATION PLAN
FOR PROPOSED PHASE II INVESTIGATION
SOUTHOLD LANDFILL SITE

Prepared by:
WOODWARD–CLYDE CONSULTANTS, INC.
CONSULTING ENGINEERS, GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS
NEW YORK, NEW YORK

DR. BY:	BTD	SCALE:	NONE	PROJ NO.	82C4548-3
CK'D. BY:	LR	DATE:	20 MAR 1985	FIG NO.:	2

All monitoring wells will be installed so as to sample the upper 10 feet of ground water. The ground-water table in the vicinity of the site varies between 42 and 50 feet below the ground surface. It is estimated that total well depth will average 56 feet for all monitoring wells installed at the site.

Borings will be advanced through overburden by 4-inch I.D. hollow-stem augers or driven casing. Split-spoon samples will be obtained at 5 foot intervals. Blow counts will be recorded during each sampling. Soil samples will be classified in the field by a hydrogeologist using the Unified Soil Classification system. Selected samples will be sent to our geotechnical laboratory for grain-size analysis and Atterberg tests and soil-moisture determinations. Two samples from each newly installed well are expected to be collected for analysis. To maximize information on any volatile organic contaminants, headspace surveys will be conducted on soil samples using a portable HNU meter, Model PI 101. These data will be used to evaluate relative concentrations of organic contaminants in various stratigraphic horizons.

Slotted 2-inch I.D. PVC well screen will be installed over 10-foot intervals in each overburden well, with a riser casing of flush joint, threaded, 2-inch I.D. PVC pipe. Risers will extend at least 3 feet above the ground surface to prevent contamination by surface-water flooding. A gravel pack will be completed to approximately 2 feet above the top of the screen, where a 1-foot bentonite seal will be emplaced. To further assure that water samples will be representative of the screened interval, the remaining annular space will be grouted, and a protective steel casing will be installed. After installation, any wells completed in overburden will be developed by pumping, to remove any fine-grained material.

It is estimated that 15 workings days will be required to perform inspection during the drilling, well installation operations, and surveying well elevations, headspace analysis of soil samples, slug-type permeability testing in each well and plotting data.

6.2.3.2 Water Elevations. Ground-water depths will be measured at the time of well development and again at the time of sampling. Relative well elevations will be

surveyed by WCCI personnel or subcontractor. Water-level elevations will be plotted and used to develop contours of the ground-water table at the site. Based on this map, the direction(s) of ground-water flow will be derived.

Flow and gradient data will constitute fundamental input in quantifying site conditions and will be assessed together with the plume geometries inferred from geophysical survey data.

6.2.3.3 Aquifer Testing. "Slug"-type permeability tests will be conducted in each newly installed well to evaluate the permeability of materials spanning the screened interval. The method is a rapid means by which the in-situ permeability in the immediate vicinity of a monitoring well can be approximated. The test does not involve pumping of potentially contaminated water and results generally suffice for ground-water flow analysis.

6.2.4 Sampling and Analysis Plan

6.2.4.1 General Plan. The site-specific Quality Assurance/Quality Control (QA/QC) Plan will be developed by WCCI and approved by the NYSDEC prior to commencement of work.

6.2.4.2 Sampling Parameters. The laboratory analyses will focus on chemical screening techniques to determine the type and range of concentration and the migration of contaminants in ground water. The specific types of contaminants are unknown, but are suspected to include metals, volatile organics, pesticides and herbicides. The full prority pollutant analysis will be performed on one downgradient well sample, on one upgradient well sample, on one soil sample and on one leachate sample. The remaining samples will be analyzed for priority pollutant metals, volatile organics and water quality parameters. Samples will be collected from ground water, soils and leachate. Sample types and chemical parameters are summarized in Table 2.

6.2.4.3 Sampling Locations. One water sample and one soil sample from each of the four ground-water monitoring wells will be analyzed. Results from each pair

Table 2. PROPOSED CHEMICAL ANALYSES AT SOUTHOLD LANDFILL SITE

	ANALYSES				
Sample Type	Metals	Volatile Organics	Water Quality[1]	Full Priority Pollutant Analysis[2]	Remarks
Ground Water	X	X	X	X	One sample at each of 4 wells.
Soil	X	X		X	One sample from unsaturated zone at each of 4 wells.
Leachate				X	One sample only.
Air		X			Upwind and downwind locations using OVA or HNU.

1 Water Quality Parameters: TOC, Chloride, Color, Odor, Sulfate, TDS, Conductivity, pH.

2 Two ground water samples, one upgradient and one downgradient. One soil sample and one leachate sample.

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of analyses will be compared to evaluate any downard migration of contaminants through soil. Ground-water analysis will be evaluated in terms of other hydrogeologic data to evaluate the presence, distribution, and migration directions of any ground-water contamination.

Surface water samples will not be collected since the closest surface water is approximately 1.1 miles from the site.

Air samples will be analyzed using an HNU or an Organic Vapor Analyzer (OVA) at upwind and downwind locations. This survey will provide information concerning concentrations of volatile organics, if any, that are being released from the site. It is estimated that 4 person-days will be required to collect all required ground water and leachate samples.

6.3 HEALTH AND SAFETY PLAN

Health and safety apparel and equipment are expected to be required during the major field activities -- initial site investigation, geophysical studies, drilling and monitoring-well installation and water sampling. For the purpose of costing the investigation, Level D protection is assumed in each case. The health and safety precautions and procedures actually employed will conform to the generalized NYSDEC Health and Safety Plan, and will be developed by WCCI on a site-specific basis. Should protective levels higher than Level D be required for any activity, costs will be in accordance with the unit costs indicated in the attachment supplied to the NYSDEC April 1985.

6.4 REPORT PREPARATION

Report preparation will involve analysis of the data as well as preparation of the text. Included in this task are the compilation and organization of the data, editing of boring logs, reduction of hydrologic data, preparation of graphical representations, analysis and calculations, updating the HRS score for the site and report reproduction.

In addition, remedial concepts will be developed along with order-of-magnitude remedial costs.

6.5 COST ESTIMATE

Costs for Phase II work were developed based on NYSDEC Audit and Control Guidelines, using assumptions described in WCCI's cost propsoal submitted to NYSDEC on October 29, 1982, subsequent contract D000452 dated March 31, 1983, and the generic work plan developed by NYSDEC. Costs have been grouped by tosk, and estimates are presented in Table 2. Lump sum cost arrangements will be provided for Tasks 1, 2, 3, 6 and 7. For Tasks 4 and 5, Drilling/Well Installation and Sampling and Analysis respectively, lump sum cost arrangements will be provided with the exception of drilling and well installation subcontracted costs, and chemical analytical laboratory subcontracted casts. Analytical costs include trip and field blanks, spike and replicate samples and shuttle costs as required by the NYSDEC QA/QC Laboratory Protocol. The subcontracted cost items will be billed at cost plus five percent. Any activity that involves work or levels of effort beyond the scope of this work plan will be billed in accordance with the unit rates indicated in the attachment provided dated April 1985.

TABLE 3

ESTIMATED COSTS FOR PHASE II INVESTIGATION
SOUTHOLD LANDFILL

TASKS	LABOR				OTHER DIRECT COSTS								TOTAL
	Hours	Direct Cost	Overhead Cost	Total Cost	Consul-tants	Sub-Con-tractors	Travel & Subsis-tence	Health & Safety Gear & App. (1)	Special Testing	Special Equip-ment	Sample Shipment	Office Services (2)	
1. Work, Health & Safety and QA/QC Plans	75	1385	1593	2978			0	0		0		200	3178
2. Preliminary Investigations and Site Visit	24	441	507	948			134	140		275		0	1497
3. Geophysical Studies	96	1753	2016	3769			536	560		2200		0	7065
4. Drilling/Well Installation	120	2220	2553	4773		10642	1248	840	1592	2280	250	0	21625
5. Sampling and Analysis	70	1288	1481	2769		29960	402	420		1030	650	0	35231
6. Report Preparation	152	2860	3289	6149	1500		0	0		0		1517	9166
7. Project Management	82	2045	2352	4397			634	0		0		400	5431
TOTALS	619	11992	13791	25783	1500	40602	2954	1960	1592	5785	900	2117	83194
FEE				3867	75	2030							5973
TOTAL ESTIMATED COST				29651	1575	42632	2954	1960	1592	5785	900	2117	89166

(1) Level D protection assumed.
(2) Includes direct project office costs, reproduction and postage.

Appendix A

REFERENCES

Donnelly Marketing, 1984, American Profile Information Retrieval Sytem, based on 1980 Census data, Stamford, CT., (LOCATION: WCCI Files).

Energy Resources Company, Inc., 1981, Analyses Performed on Samples Collected During 1981.

Franke, O.L. and N.E. McClymonds, 1972, Summary of the Hydrologic Situation on Long Island, New York, as a Guide to Water-Management Alternatives, U.S. Geological Survey Professional Paper 627-F, Washington, D.C., (LOCATION: WCCI Files).

Jensen, H.M. and Soren, Julian, 1974, Hydrogeology of Suffolk County, Long Island, New York, U.S. Geological Survey, Hydrologic Investigations Atlas HA-501, Washington, D.C. (LOCATION: WCCI Files).

Miller, Jeff, 1983, The Suffolk Times: Methane Vents Seen Effective, (LOCATION: WCCI Files).

National Fire Protection Association, Inc., (NFPA), 1975, Hazardous Chemical Data, Boston, MA., (LOCATION: WCCI Files).

NYS Department of Agriculture and Markets, 1984, Agricultural District Maps, Division of Rural Affairs, (LOCATION: NYSDA&M, Albany Files).

New York State Department of Environmental Conservation, Division of Solid Waste Management, 1979-1980, Facility Inspection Reports, (LOCATION: WCCI Files).

New York State Department of Environmental Conservation, 1984a, Well Permits - Region I, (LOCATION: NYSDEC Region I Files).

New York State Department of Environmental Conservation, 1984b, Listings and Maps of Significant Habitats in Suffolk County, Division of Fish and Wildlife, Significant Habitats Unit, (LOCATION: NYSDEC/Albany Files).

New York State Department of Environmental Conservation, 1985, Wetlands in Nassau and Suffolk Counties, Information transmitted by Mike Fiscina, Superfund Sites Region I, (LOCATION: WCCI Files).

NYS Department of Health, 1982, NYS Atlas of Community Water System Sources.

NYS Parks and Recreation, 1984, Files of Suffolk County Historical Sites Listed on State and Federal Registers, Division for Historic Preservation, (LOCATION: NYSP&R/Albany Files).

Sax, N.I., 1979, Dangerous Properties of Industrial Materials, Van Nostrand Reinhold Company, New York, (LOCATION: WCCI Files).

Suffolk County Department of Health Services, 1980, Memorandum to James C. Maloney from Steven Kramer, Re: Landfilling of oil - soaked earth, (LOCATION: WCCI Files).

Suffolk County Department of Health Services, 1981, Memorandum to Aldo Andreoli from Joseph H. Baier, Re: Southold Incinerator Proposal, (LOCATION: WCCI Files).

Suffolk County Department of Health Services, 1982, Memorandum to Aldo Andreoli from James C. Maloney, Re: Southold Town Landfill, (LOCATION: WCCI Files).

Suffolk County Department of Health Services, 1984 Table sent by Richard Meyer to C. Motta of WCCI, Re: Water Supply Systems General Information 1982, (LOCATION: WCCI Files).

USEPA, 1982, Uncontrolled Hazardous Waste Site Ranking System, A User's Manual, Washington, D.C., (LOCATION: WCCI Files).

USEPA, 1982, Supplemental Instructions for the Hazard Ranking System, Washington, D.C., (LOCATION: WCCI Files).

USGS, 1956, Southold and Mattituck Hills, NY., 7.5 Minute Quadrangles, (LOCATION: WCCI Files).

Woodward-Clyde Consultants, Inc., 1984, Site Inspection Conducted by David Muscalo, Sr. Staff Geologist, on December 18, 1984, (LOCATION: WCCI Files).

Appendix B

WOODWARD-CLYDE CONSULTANTS
WASTE SITE INSPECTION REPORT

Name of Site: SOUTHHOLD L.F. County: SUFFOLK
Address: NORTH ROAD CUTCHOGUE, L.I., N.Y. 11935

Inspector: DAVID MUSCALD Time and Date of Inspection: 1:00 PM 12/18/84
Weather Conditions: SUNNY WARM

I. SITE DESCRIPTION

1. Type of Site:

- ___ 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

2. Buildings on Site? (yes)/no
If yes, describe:
GUARD SHACK
COLLECTION CENTER
STORAGE BLDG.

3. Area of Site: 41 ACRES landfill area approximately 20 acres

General Description:
Generally flat-lying with a borrow pit depression along eastern margin and two depressions (lagoons) along western margin - totally enclosed by fence - three small buildings on site

II. INTERVIEW RECORD

1. Name(s): JAMES R. DOUGLAS ; EDWARD J. CAPOBIANCO
2. Position(s): SANITATION SUPERVISOR OF L.F. ; FOREMAN
3. Telephone Number: (516) 734-7685

4. Name of Current Owner of Site: TOWN OF SOUTHHOLD
5. Address of Current Owner of Site: NORTH RD., CUTCHOGUE, NY 11935

6. Time Period Site Was Used for Hazardous Waste Disposal:

1951 To PRESENT

Is site (Active) Inactive at present?

Past Sampling Activities: (Air) (Ground Water) None
(Surface Water) (Soil)

Remedial Action: (Proposed) Under Design
In Progress Completed

Status of Legal Action: (State) Federal

Permits Issued: Federal Local Government SPDES SUFFOLK COUNTY
(Solid Waste) Mined Land Wetlands Other

II. INTERVIEW RECORD (continued)

Waste Characteristics: Residential, Commercial, Demolition, Agricultural and Scavenger.

Other Information: (site history, operator information, generator/transporter information, past response activities, legal actions, hazardous incidents, other information).

oil spill soil dumped – oiled soil removed and spread on road.

III. SURFACE WATER

1. Is there identifiable leachate? (yes)/no
   If yes, describe: pesticides & agricultural chemicals

2. Is site competely surrounded by higher ground:
   yes/(no)/uncertain from field observations

3. Appropriate distance to nearest observed downgradient body of
   Surface water: 6000
   Description: Long Island Sound
   Use: Recreation & shipping

4. Average slope of site: (3%) 5-8%
   3-5% >8%

5. On site ponding? (yes)/no
   If yes, describe: several small ponded area observed less than 3 ft in diameter

6. Average slope of terraine between site and nearest observed down slope surface water body: (3%) 5-8%
   3-5% 8%

7. In an area of flood plain? yes/(no)

III. SURFACE WATER (continued)

8. Damage to floral fauna from surface water? yes/(no)
If yes, describe: observed ~~apparently~~ apparently healthy Sea Gulls
Vegetation appears healthy

9. Surface Features (general topography, paving, structures, etc.):

Collection Center
guard shack
Equipment building

site generally flat-lying with a deep borrow pit along ~~east~~ side of land fill — borrow pit approximately 50 ft deep
paved road along southwestern edge of land fill

IV. GROUND WATER

1. On site wells? (yes)/none observed
   If yes:

   number 3 (water wells) 18 gas points 2 monitoring well
   location 1 up gradient & 1 dwn gradient
   description _____.

2. Observations concerning ground water

   none observed

3. Observations concerning stratigraphy

   50 ft stratigraphic section of borrow pit wall exposes interbedded gravel and sand beds with ~~on~~ two discontinuous lenses of clayey silt

4. Damage to flora/fauna from ground water? yes/(no)
   If yes, describe.

V. AIR

1. Evidence of air contaminants emitted from site:

Organic vapor analyzer readings varied from 2 ppm to 30 ppm (probably methane)

2. Rationale for attributing the contaminants to the site:

OVA Readings

VI. DEMOGRAPHY/LAND USE

1. Distance to nearest observed off-site building 300 ft
2. Distance to nearest observed residence 300 ft
3. Estimated number of households within a radius of 1/4 mile 13
4. Distance to nearest observed commercial/industrial land use Riverhead
   Description:
5. Distance to nearest observed agricultural lands 200 ft
   Description: farm land

6. Observed historic landmark sites? (yes)/no ~~Cocht~~ Cochtoque Historical Society
   If yes, describe, give approximate distance: 3 miles

7. Observed park/open space area? yes/(no)
   If yes, describe, give approximate distance:

8. Observed wetlands or low-lying area? yes/(no)
   If yes, describe, give approximate distance and area in acres:

9. Observed critical habitat or wildlife refuge? yes/(no)
   If yes, describe, give approximate distance:

10. General description of use of adjacent lands. agricultural

VII. WASTE CHARACTERISTICS

1. Physical State of Waste

Comments

- ___ solid, stable
- ✓ solid, unstable — no liner in land fill
- ___ powder, fines
- ✓ sludge
- ___ slurry
- ___ liquid
- ___ gas
- ___ other

2. Estimated quantity of waste: 40 ft deep 65 to 100 tons a day

3. Estimated quantity of waste that appears fully contained:
none

4. Odors? (Yes)/no
If yes, describe: garbage odor and septic odor

5. Observations concerning suspected waste materials
none observed

VIII. WASTE CONTAINMENT

1. Observed soil/rock material underlying site: sand + gravel
2 clay silt layers < 1 ft thick

natural/artificial/unknown permeability: low/moderate/high

2. Diversion system? yes/no
Description/condition:

3. Leachate collection system? yes/no
Description/condition:

4. Is there diking? yes/no; If yes, is it sound/unsound? one temporary dike 1 ft high along septic sludge-leaf burial area

5. If diking exists, does it have adequate freeboard? yes/no

6 If site has containers (i.e., 55-gallon drums): are they sealed and in sound condition or leaking? 275 gal oil drums—no longer accepted — those present will be removed

7. If waste is in piles,
   a. Are piles covered/uncovered?
   b. Is waste stabilized/unstabilized?

8. If waste is in a landfill:
   a. Is there potential for ponding on surface of landfill? yes
   b. Is there potential for erosion? along eastern margin
   c. Is there refuse visible at surface? yes
   d. If covered, is the cover seeded/vegetational cover? no

VIII. WASTE CONTAINMENT (continued)

9. Damage to flora/fauna from direct contact? yes (no)
If yes, describe:

10. Security

- 24-hour surveillance
- security guard 10 HRS/day
- complete barrier
- incomplete barrier
- no barriers
- controlled entry
- signs posted

11. Comments concerning waste containment: unlined landfill site surrounded by fence - no uncontrolled entry

IX. SITE INVESTIGATION FEASIBILITY

1. Accessible to vehicles? (yes)/no
   If no, why:

2. Accessible to drill rig? (yes)/no
   If no, why:

3. Nearest drilling water source: on site

4. Accessible to backhoe: (yes)/no
   If no, why

5. Geophysical Surveys:
   Accessible: (yes)/no
   Overhead interference no
   Surface interference probably
   Subsurface interference "

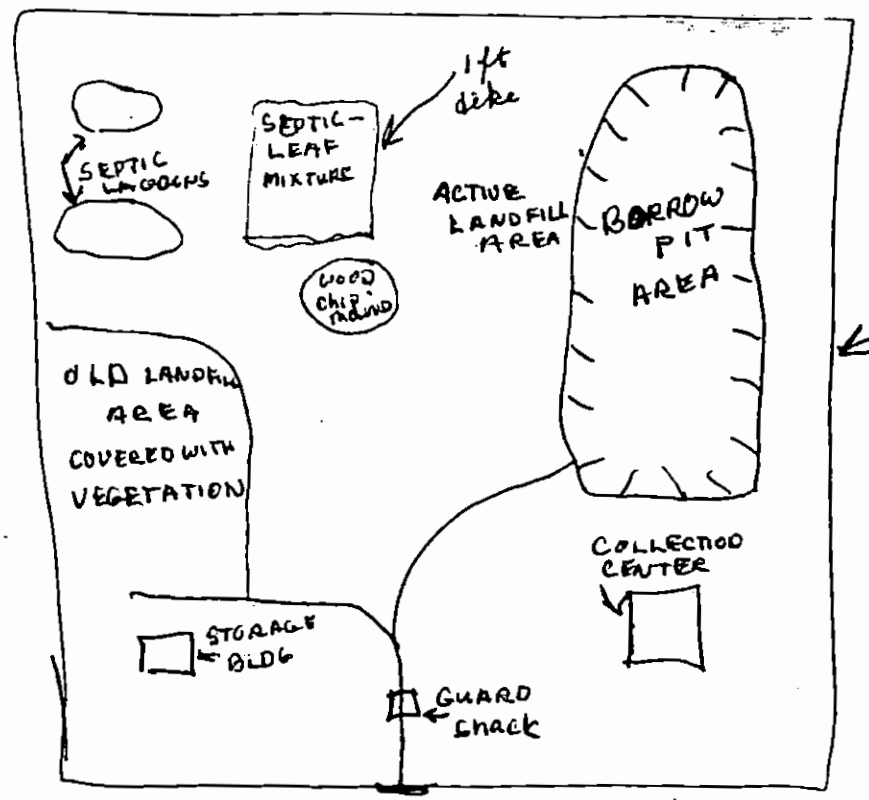
6. Accessibility of adjacent off-site lands: good — area surrounding site flat-lying

7. Comments

   none

X. SKETCHES, PHOTOGRPAHS

12 photographs



Proximity of Active Agricultural Land and Prime Farmland to Candidate Inactive Hazardous Waste Sites

Site 5 - Southold Landfill Source: NYSDAM

Site No.	Sheet No.	Criteria #1*	Criteria #2**	Comments
1	57 ≠	No	Yes	Prime farmland within 2 but not 1 mile
3	70 ≠	Yes	Yes	Prime farmland within 3/4 mile
* 5	8 & 17 ≠	Yes	Yes	Active prime farmland in Suffolk County Agricultural District #1 adjacent to site
6	40 ≠	No	No?	Mount Sinai area to N/E (Sheet 40) and area to east should be investigated - farmland is at the 2 mile range
8	64 & 65 ≠	No	No	
12	54 ≠	Yes	Yes	Nursery stock 700 ft. south; 40 acre vegetable farm is SW about 1.5 miles; within mile to the north
16	51 ≠	Yes	Yes	30 acre vegetable farm to the west; areas to the east
17	17 ≠	Yes	Yes	All farmland prime; horse farm adjacent to site to the west; also farmland within 3/4 mile to the North and Northeast
18	47 ≠	Yes	Yes	Prime farmland within 1.5 miles; vegetable farm within a mile at North Sea
23	✗	Yes	Yes	Active agricultural land within 1/4 mile, active prime farmland within 1/2 mile - site is adjacent to Rensselaer County Agricultural District #7
24	✗	Yes	Yes	Active prime farmland within 1/4 mile; site is adjacent to Rensselaer County Agricultural District #3.

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

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

≠ Soil survey of Suffolk County, USDA-SCS in cooperation with Cornell Agricultural Experiment Station issued 4/75--information obtained during telephone conversations with Suffolk County SWCD, and County USDA, Agricultural Stabilization and Conservation Service staff.

✗ - Not Applicable; soil survey mapping completed-awaiting publication--information obtained during telephone conversation with the USDA-SCS, District Conservationist with the Rensselaer County SWCD.

January 1985

AREA: 11 SITE-5

NUMBER	DESCRIPTION	POPULATION	HOUSEHOLDS
11.1	RING: 0.25 MILE(S)	0	0
11.2	RING: 0.50 MILE(S)	0	0
11.3	RING: 1.00 MILE(S)	1143	447
11.4	RING: 2.00 MILE(S)	2175	851
11.5	RING: 4.00 MILE(S)	8792	3385

AREA: 12 SITE-17

NUMBER	DESCRIPTION	POPULATION	HOUSEHOLDS
12.1	RING: 0.25 MILE(S)	0	0
12.2	RING: 0.50 MILE(S)	890	328
12.3	RING: 1.00 MILE(S)	1769	652
12.4	RING: 2.00 MILE(S)	4313	1596
12.5	RING: 4.00 MILE(S)	7999	3012

AREA: 13 SITE-18

NUMBER	DESCRIPTION	POPULATION	HOUSEHOLDS
13.1	RING: 0.25 MILE(S)	0	0
13.2	RING: 0.50 MILE(S)	1909	699
13.3	RING: 1.00 MILE(S)	1909	699
13.4	RING: 2.00 MILE(S)	2553	935
13.5	RING: 4.00 MILE(S)	9928	3902

AREA: 14 SITE-21

NUMBER	DESCRIPTION	POPULATION	HOUSEHOLDS
14.1	RING: 0.25 MILE(S)	315	96
14.2	RING: 0.50 MILE(S)	7154	2321
14.3	RING: 1.00 MILE(S)	59964	21029
14.4	RING: 2.00 MILE(S)	226125	86387
14.5	RING: 4.00 MILE(S)	1011543	401039

AREA: 15 SITE-24

NUMBER	DESCRIPTION	POPULATION	HOUSEHOLDS
15.1	RING: 0.25 MILE(S)	0	0
15.2	RING: 0.50 MILE(S)	0	0
15.3	RING: 1.00 MILE(S)	0	0
15.4	RING: 2.00 MILE(S)	0	0
15.5	RING: 4.00 MILE(S)	1218	412

16.05.28 >logout
2967.18 ARU'S, .26 CONNECT HRS
LOGGED OFF AT 16.06.01 ON 28DEC84

@

Southold Landfill *
41°01'41"
72°30'00"

Mattituck Airbase
40°59'19"
72°31'16"

Old North Sea Landfill
40°56'02"
72°23'53"

Rear of Birch Terrace
40°39'06"
74°01'07"

Eagle Bridge
42°56' 48"
73°24' 42"

Source: Donnelley Marketing, 1984 (1980 Census data)

See file for more detailed information regarding Significant Habitats and Reports. A topo map for each site is in the file and critical habitats are indicated.

1/3/89
LEW

Significant Habitats - Phase 1 Reports

REFERENCE: NYSDEC, 1984, Significant Habitat Reports and Maps in (applicable) County, Division of Fish and Wildlife, Significant Habitats Unit.

(applicable)
- Nassau
- Suffolk
- Kings
- Albany
- Rensselaer

Site Number	Report
1	None
2	30-20 Island Park
	-23 Cinder Island; No. Cinder Island, Gull Island
	-29 East Channel Island - subcolony 1 and 2; Garrett Marsh
	-30 Pearsalls Hassock
3	52-35- Manorville Hills* (just outside 1 mile radius - check map)
	37- Rock Hill - Radar Hill Pine Barrens
4	None
* 5 Southold L.F.	None
6	52-16 - Port Jefferson Harbor
7	None
8	None
9	52-6 Great South Bay

Site Number	Report
10	None
11	None
12	None
13	None
14	None
15	None
16	None
17	None
18	52-58 North Sea Harbor
19	None
20	None
21	None
22	None
23	None
24	42-1 Hoosic River & Associated Lowlands

New York State Department of Environmental Conservation
Building 40
State University of New York
Stony Brook, NY 11794
(516) 751-7900

Henry G. William
Commissioner

May 9, 1983

Mr. William Pell III, Supervisor
Town of Southold
Town Hall
Southold, NY 11971

RE: LANDFILL

Dear Supervisor Pell:

On Tuesday, May 26, the Solid Waste Unit met with Southold Councilman Frank Murphy, Highway Superintendent Ray Dean and Harold Dombeck of H2M Corporation.

The main element of the discussion was that the landfill was in poor condition and immediate action was needed to resolve the problems of ponding, gas migration, uncovered refuse, unorganized dumping and blowing paper.

The proposed septage composting project and the construction of a resident dumping transfer station were reviewed. These projects will necessitate more manpower and equipment.

We requested a methane monitoring system and more down gradient groundwater wells. If the Town expands its filling operations to the south or to the new area, a double liner and leachate collection system will be required. The feasibility of extending the fill vertically prior to capping to avoid the liner issue was discussed.

Enclosed is an outline detailing the elements of our discussion.

We feel the Board must make a strong commitment to sound landfilling practices and plan for the future considering the increasing population of the Town. The commitment should include an adequate and competent work force to control site access and to operate the site well on a daily basis to eliminate crash programs.

If we may be of any assistance by speaking to the Board, we will be glad to do so.

The landfill will be routinely inspected by this office and Suffolk Health. If conditions remain as they are, we will initiate legal action.

Thank you for your cooperation.

Very truly yours,

JAMES H. HEIL, P.E.
Regional Solid Waste Engineer

JHH:ebp
Enc.
cc: H. Berger
A. Machlin
J. Maloney
R. Dean

TOWN OF SOUTHOLD
LANDFILL PLAN

Immediately:

. Daily cover of refuse
. Clean up blowing papers
. Grade area to reduce ponding
. Remove rubble, scrap metal, shells, excess paper bales from site
. Complete the methane venting trench on the west and south perimeter
. Assign additional equipment/personnel to the landfill

By July 1:

. Sample groundwater monitoring wells

By August 1:

. Install three landfill gas monitoring probe clusters. Each cluster shall have three sampling points at varying depths. Two clusters shall be on west side of site between venting trench and property line. One cluster shall be on south side between venting trench and the property line.
. The Town shall institute a monthly program of monitoring gas probes for % methane.
. The Town shall install downgradient from the landfill beyond the existing monitoring wells a three well groundwater monitoring well cluster or other acceptable groundwater analysis program.

By August 31:

. The Town shall have the septage composting project in operation.
. The Town shall submit a plan indicating landfilling operations for the subsequent three year period. Any expansion of the landfill to the southeast in the current excavation area or expansion into adjacent properties will require the installation of a double liner and leachate collection system.

By September 30:

. The Town shall commence final grading, capping and closure as per the Town plan. NYSDEC shall provide technical assistance to the Town in the evaluation of the use of composted septage as part of the final capping material.

New York State Department of Environmental Conservation
Building 40
State University of New York
Stony Brook, New York 11794

Robert F. Flacke
Commissioner

JCM

January 31, 1983

Mr. William Pell III, Supervisor
Town of Southold
~~Town Hall~~
Main Road
Southold, NY 11971

Re: LANDFILL

Dear Supervisor Pell:

In conjunction with an inspection of the landfill (January 24, 1983), we have reviewed the Part 360 Compliance Report prepared for the Town by H2M Corporation (June 1981).

We request the following information:

1.	METHANE MONITORING	Location and depth of existing probes, type of monitoring equipment and monitoring data.
2.	GROUNDWATER MONITORING	Location and depth of wells installed following the compliance report and monitoring data since June 1981.
3.	CAPPING	The inspection indicated no progress in shaping the fill to achieve the design grades as shown on the H2M site plan of March 1981. Final capping as per Part 360 will be required.
4.	LINER	The unlined portion of the excavation should be brought to a bottom grade and lined as per the regional policy. The inspection indicated large amounts of uncovered refuse, blowing paper and debris around the employees shed.

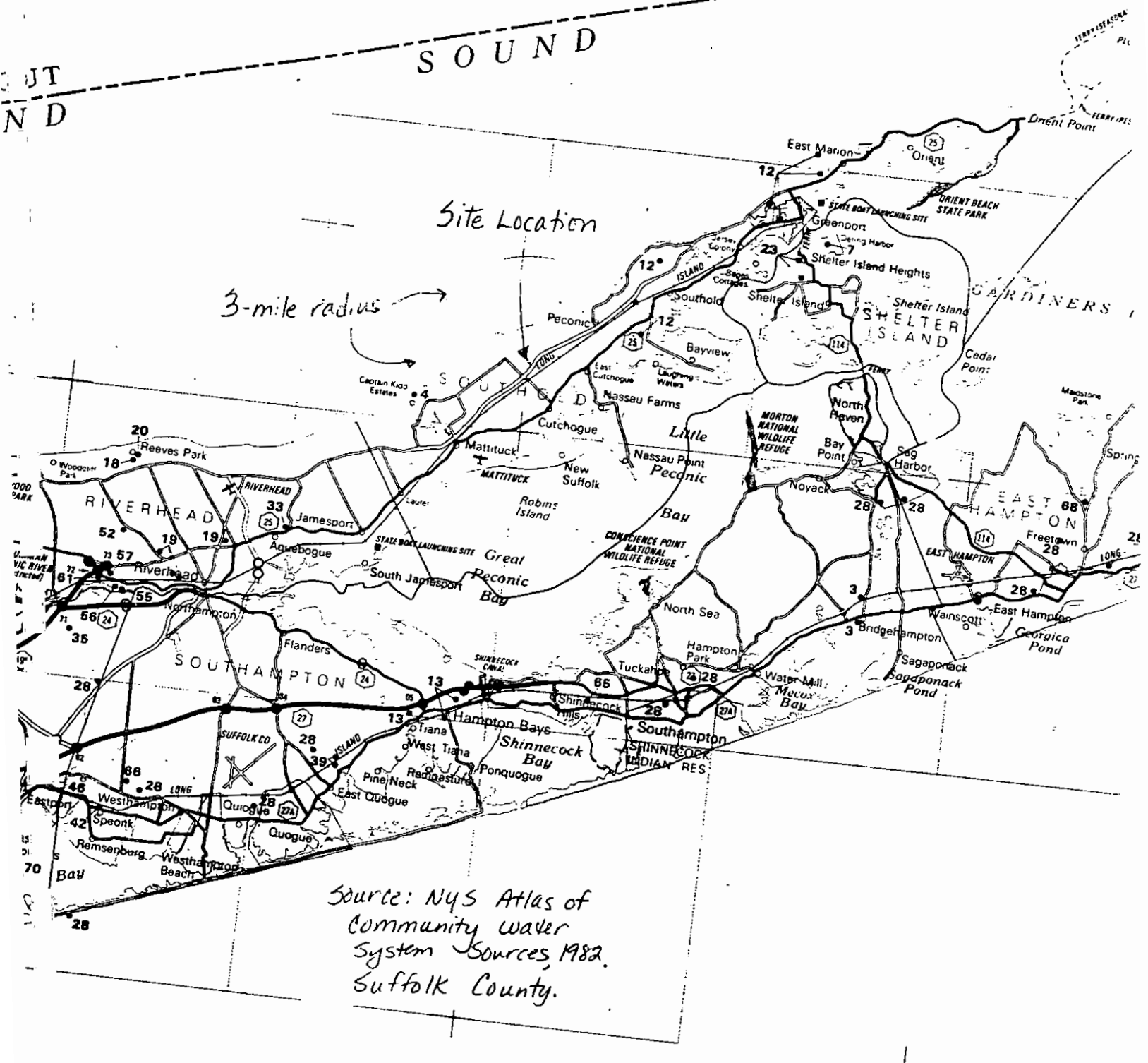
We would be glad to meet with you or Superintendent Dean to discuss the status of the operation.

Very truly yours,

JAMES H. HEIL
Regional Solid Waste Engineer

JHH:ebp
cc: A. Machlin
T. Sanford
J. Maloney

Southold Landfill



Source: NYS Atlas of Community Water System Sources, 1982. Suffolk County.

SCALE 1:250,000
0 5 MILES
NORTH

Source: NYS Atlas of Community Water System Sources, 1982. Suffolk County.

SUFFOLK COUNTY

ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
Municipal Community			
1	Bevon Water Corporation.	1150	.Wells
2	Brentwood Water District.	25812	.Wells
3	Bridgehampton Water Company.	1916	.Wells
4	Captain Kidd Water Company.	580	.Wells
5	Crab Meadow Beach.	50	.Wells
6	Culross Corporation (Culross Beach).	104	.Wells
7	Dering Harbor Village.	130	.Wells
8	Dix Hills Water District.	30000	.Wells
9	East Farmingdale Water District.	7850	.Wells
10	Fishers Island Water Works Corporation.	250	.Barlow, Middle Farms and Treasure Ponds, Wells
11	Greenlawn Water District.	40000	.Wells
12	Greenport Village.	6851	.Wells
13	Hampton Bays Water District.	9500	.Wells
14	Hawthorne - Maple Civic Association.	50	.Wells
15	Herod Point Association.	80	.Wells
16	North Shores Water Company.	5000	.Wells
17	Ocean Beach Village.	155	.Wells
18	Reeves Beach Water Company.	650	.Wells
19	Riverhead Water District.	9360	.Wells
20	Roanoke Water Corporation.	201	.Wells
21	Saltaire Village.	35	.Wells
22	Scott's Beach Water Company.	342	.Wells
23	Shelter Island Heights Association.	498	.Wells
24	Shirley Water Works.	3400	.Wells
25	Shorewood Water Corporation.	10000	.Wells
26	Soundview Association.	236	.Wells
27	South Huntington Water District.	51260	.Wells
28	Suffolk County Water Authority.	900000	.Wells
29	Sunhill Water Corporation.	3959	.Wells
30	Swan Lake Water Corporation.	1485	.Wells
31	Terrace-on-the-Sound.	400	.Wells
32	Woodbury Triangle Corporation.	800	.Wells
Non-Municipal Community			
33	Aquebogue Mobile Home Court.	120	.Wells
34	Brookhaven National Labs.	3373	.Wells
35	Calverton Hills Owners Association.	897	.Wells
36	Cedar Lodge Nursing Home.	100	.Wells
37	Central Islip Psychiatric Center.	4525	.Wells
38	Crest Hall Health Related Facility.	120	.Wells
39	East Quogue Mobile Estates.	160	.Wells
40	Good Samaritan Hospital.	NA.	.Wells
41	Greis Mobile Park.	70	.Wells
42	Hampton Gateway Apartments.	304	.Wells
43	Kings Park Psychiatric Center.	3100	.Wells
44	Knox School.	NA.	.Wells
45	Lake Hurst Lodge Adult Home.	57	.Wells
46	Leier's Mobile Park.	350	.Wells
47	Little Flower Children's Services.	150	.Wells
48	Montauk Air Force Station.	10	.Wells
49	Napeague Trailer Park.	78	.Wells
50	Northport VA Hospital.	3000	.Wells
51	Oak Park Trailer Park.	50	.Wells
52	Oakland Ridge Mobile Park.	74	.Wells
53	Park Lake Rest Home.	46	.Wells
54	Peacock Alley.	35	.Wells
55	Peconic River Trailer Park.	90	.Wells
56	Peconic View Adult Mobile Home Park.	70	.Wells
57	Pinecrest Garden Apartments.	392	.Wells
58	Ramblewood Mobile Homes.	210	.Wells
59	Ridge Rest Home.	58	.Wells
60	Rocky Point Family Housing.	55	.Wells
61	Rollin Mobile Homes.	220	.Wells
62	St Joseph Convent - Long Island University.	1177	.Wells
63	Sam A Lewison Start Center.	40	.Wells
64	South Bay Adult Home.	40	.Wells
65	Southampton College.	1000	.Wells
66	Speonk Mobile Home Park.	50	.Wells
67	Suffolk Developmental Center.	3500	.Wells
68	Three Mile Harbor Trailer Park.	40	.Wells
69	Thurm's Mobile Estates.	450	.Wells
70	USCG Station - Moriches.	23	.Wells
71	Wes Dubicki Apartments.	NA.	.Wells

COUNTY OF SUFFOLK

PETER F. COHALAN
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

DAVID HARRIS, M.D., M.P.H.
COMMISSIONER

MEMORANDUM

TO: ALDO ANDREOLI, P.E.

FROM: JAMES C. MALONEY, P.E.

DATE: AUGUST 11, 1982

SUBJECT: SOUTHOLD TOWN LANDFILL

I have drafted a letter which I feel is acceptable with regard to an extension to the Southold landfill. On the enclosed map, I have indicated the approximate boundaries of the planned acquisition in black. I have also indicated the location of the plot for which a well permit was denied in red.

Sy Robbins stated that a definite direction of plume movement from the existing landfill has not been determined. Groundwater monitoring to the southeast at a Suffolk County recharge basin (see map) has indicated contamination that may (or may not) be due to the landfill.

If plume movement is to the northeast, then the proposed addition would expand the plume impact area (should liners fail).

I feel that liners should be required where plume direction is not known or can change with time.

JCM/lst
Atts.

225 RABRO DRIVE EAST
HAUPPAUGE, N.Y. 11788
(516) 435-2917

COUNTY OF SUFFOLK

DEPARTMENT OF HEALTH SERVICES

DAVID HARRIS, M.D., M.P.H.
COMMISSIONER

May 20, 1982

Town Board
53095 Main Road
Southold, New York 11971

Gentlemen:

Re: Lot Located Town of Southold
Tax Map #96, Block #1, Parcel #6

A case was presented to the Board of Review on April 30, 1982 regarding the above property owned by Mrs. Pearl Taylor.

Mrs. Taylor was represented at the hearing by her niece, Mrs. Susan Mason of 1050 Main Street, Riverhead, New York. Mrs. Mason indicated that her aunt wishes to relocate on the plot in question to be close to her relatives, Mr. and Mrs. James Mason, who live on the neighboring property.

The applicant proposes an individual well; however, the property is only 8,300 square feet. Before our Board takes any further action on this parcel, we want to be sure that the Town is fully aware of the circumstances. A private well, as proposed, to serve this site is hampered by the fact that the Town landfill property is approximately 200 feet from this lot. There is a serious question as to the long-term quality of an individual well serving this property. Even if the water quality initially meets the standards, future treatment in order to maintain quality standards may be needed. Problems may also develop with further construction in this area due to the proximity of the landfill operation. Therefore, before our Board renders a determination, we would appreciate clarification on the following:

1. Are there any plans or does the Town anticipate any extension of public water mains to the residents within the area adjacent to the landfill, since water quality in this area has been demonstrated to be of questionable quality?

2. Are there any plans or are steps anticipated to acquire additional lands surrounding the landfill in order to insure a greater buffer area in order to mitigate surrounding homeowners from being impacted by the daily operation of the landfill?

In addition, we are forwarding for your review a copy of the survey which was made by the applicant, as well as a transcript of the hearing and a copy of Tax Map #96.

An early reply would be appreciated so that we can forward our determination to the applicant.

If needed, we would be pleased to discuss this case with you in greater detail.

Very truly yours,

Aldo Andreoli, P.E.
Chairman
Board of Review

AA/jhn
Attachments
cc: Mr. James Mason
Robert A. Villa, P.E.

COUNTY OF SUFFOLK

JVS ✓
SVK X

PETER F. COHALAN
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

DAVID HARRIS, M.D., M.P.H.
COMMISSIONER

March 4, 1982

Mr. David DeRidder
Associate Environmental Analyst
New York State Department of
Environmental Conservation
S. U. N. Y., Building #40, Room 219
Stony Brook, New York 11794

Dear Mr. DeRidder:

Re: Southold Town Municipal Solid Waste To Energy Facility

Mr. Davids has asked if I would respond to your letter of February 23 regarding the above.

Recognizing the experts available within your own department, I find it interesting that you would request this department to comment on the health implication of using treated sewage effluent in the proposed cooling tower. Nevertheless, I appreciate the opportunity to comment; however, before doing so, we would like to take advantage of your kind offer of sending to us the two volume report from the Environmental Protection Agency entitled, "Effects of Pathogenic and Toxic Materials Transported Via Cooling Device Drift".

I do wish you would give further consideration to an alternate, which was suggested in previous correspondence from this department, that is the use of groundwater instead of the sewage effluent.. In this particular case there seem to be some obvious advantages to do so, one of which would be the elimination of the costly transmission main from the sewage treatment plant to the proposed site. The second is that you would be using groundwater from the plume of the existing landfill. This water, since it is from the plume, has little value in meeting future water supply needs, but its quality would be far more attractive as a coolant than would be the average effluent from a wastewater treatment plant.

225 RABRO DRIVE EAST
HAUPPAUGE, N.Y. 11788
(516) 435-2917

We look forward to receiving further information.

Sincerely yours,

Aldo Andreoli

Aldo Andreoli, P.E.
Deputy Director
Division of Environmental Health

AA/jhn
cc: Albert Machlin, P.E.
H. W. Davids, P.E.
Honorable William R. Pell III
James Maloney, P.E.

 HOLZMACHER, McLENDON & MURRELL, P.C

MEMO TO: FILE (SOHT 82-01)

FROM: H. A. DOMBECK

DATE: JANUARY 28, 1982

SUBJECT: MEETING TO DISCUSS CONSENT ORDER WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

LOCATION: BUILDING 40, SUNY AT STONY BROOK
10:15 AM

PRESENT: H. A. DOMBECK, H2M
TONY DE COSTANZA, NYSDEC
MORRIS BRUCKMAN, NYSDEC
WILLIAM PELL, SUPERVISOR TOWN OF SOUTHOLD
LARRY MURDOCK, TOWN BOARD, TOWN OF SOUTHOLD
JOSEPH TOWNSEND, TOWN BOARD, TOWN OF SOUTHOLD
FRANK MURPHY, TOWN BOARD, TOWN OF SOUTHOLD
RAY DEAN, HIGHWAY SUPERINTENDENT, TOWN OF SOUTHOLD
ROBERT TASKER, TOWN OF SOUTHOLD ATTORNEY
JOHN NICKLES, TOWN BOARD, TOWN OF SOUTHOLD

ITEMS OF DISCUSSION:

1. M. Bruckman reported that Joan Scherb was out sick and could not attend.

2. M. Bruckman reported that Southold landfill has been declared an open dump in accordance with RCRA due to methane problem. Leachate is a State groundwater matter. If the off-site methane migration is alleviated, then the Town of Southold landfill will be removed from the open dump inventory.

3. H. Dombeck requested that a consent order be negotiated that would provide that NYSDEC remove Southold from the open dump inventory if Southold installs monitoring probes and installs a passive venting system or acquires additional property. Bruckman agreed that above items would be required for a consent order.

4. M. Bruckman reported that there appears to be a problem with the definition of landfill property versus town property. He called Albany to clarify this. He reported that if the Town purchases the land, or acquires the land in another manner such that access is limited, there are no structures, and the boundary is monitored, it will meet the requirements for ownership, and if no further migration occurs, that the landfill can be removed from the open dump inventory.

MEMO TO FILE (SOHT 82-01) CONTINUED...

5. M. Bruckman reported that passive venting is a trial and error procedure. At the Smithtown Montclair landfill, vents were installed 50' apart. He suggested that initially venting be installed at 100' center and if the problem is not resolved further vents be installed at 50' center.

6. M. Bruckman reported that he prefers two separate consent orders, one for open dump inventory and a second for leachate.

7. T. DeCostanza reported that listing on the open dump inventory opens the town to a citizen suit unless a consent order regulates the facility.

8. With regard to leachate Bruckman reported that they want a monitoring system installed. Dombeck advised that such a system exists, was installed by Suffolk County Department of Health Services and was reported in H2M's Part 360 Report. Bruckman reported that off-site leachate is not correctable. Dombeck stated that leachate has not yet left the landfill boundaries. Bruckman stated that additional wells may be required and he will confer with J. Baier of Suffolk County Department of Health Services to determine same.

9. M. Bruckman stated that he recognized that it is economically impossible to remove leachate pollution. All new areas at landfills require liners. Bruckman reported that Babylon has sought a variance from the liner policy. Bruckman advised Southold to wait approximately 1 month for the Babylon decision before determining if it will seek a variance.

10. M. Bruckman stated that if no interference with private wells are found that no off-site requirements would be placed on the Town for water supply. Dombeck reported no evidence of off-site private well contamination.

11. L. Murdock questioned whether ash is inert from a resource recovery facility. Bruckman stated that metals remain in the ash and that incineration concentrates the metals. Bruckman reported that a liner would be required for ash disposal.

MEMO TO FILE (SOHT 82-01) CONTINUED...

12. M. Bruckman stated that if the State upholds its liner policy in Babylon, he expects the continuation of the liner policy.

13. M. Bruckman requested sequential capping of the landfill.

14. M. Bruckman reported that he is understaffed, operates on a priority urgency and importance of the project basis.

15. H. Dombeck stated that the Town believed that it was not in non-compliance with its previous consent order and that the letter of January 5, 1982 from Joan Scherb was inappropriate as the Town was complying with its consent order. Bruckman agreed and said that the letter was in error and that the February 8th meeting should be considered a compliance monitoring conference.

16. Discussions ensued concerning the purchase of land or acquistion of development rights to alleviate methane migration. Bruckman reported that if the land is secured as a buffer, access be limited, no structures, and the boundary monitored, then it will considered satisfactory and in compliance.

17. M. Bruckman reported that the intent of RCRA is to alleviate the danger of explosion. Dombeck advised that the adjacent land is utilized solely for agriculture, it is not considered an explosive danger.

18. H. Dombeck requested the contents of the consent order. Bruckman stated that the State would consider removal from the open dump inventory if the Town installs a methane monitoring system, acquires additional property or installs a passive venting system. Bruckman reported that this should be completed no later than October 1984. T. DeConstanza reported that the next open dump inventory listing is September of 1982.

19. M. Bruckman requested that Southold send a letter with a copy to Joan Scherb outlining the Town's request for the consent order. In less than 30 days, the State will prepare the consent order and Bruckman suggested that the letter also request a postponement of the February 8th meeting until after the Babylon variance.

cc:

COUNTY OF SUFFOLK

PETER F. COHALAN
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

DAVID HARRIS, M.D., M.P.H.
COMMISSIONER

December 28, 1981

The Honorable A. Marshall Irving
Administrative Law Judge
New York State Department of
Environmental Conservation
Building 40
State University of New York
Stony Brook, NY 11794

Dear Judge Irving:

SUBJECT: SOUTHOLD TOWN MUNICIPAL SOLID WASTE TO ENERGY FACILITY

Enclosed please find comments from the Department of Health Services regarding the above project based on our review of the environmental impact statement submitted by the applicant. These comments may be received somewhat beyond the deadline, but I believe they impact the design, and some of the appurtenances, planned for the project.

The enclosed material contains two reviews: the first was performed by the staff of the Air Pollution Control Section, and the second was done by the Bureau of Water Resources. The air analysis presents some deficiencies within the EIS with regard to air pollution control and energy generation. Of primary concern is the conclusion reached that the evaporation rate from the plant would only necessitate cooling water slightly in excess of 17,000 gallons per day. This is a substantial reduction in the amount considered, utilizing a force main from the Greenport sewage treatment plant.

The Bureau of Water Resources has presented hydrogeological data and an analysis of the aquifer based on information on file with the Department of Health Services. It is concluded that the amount of water required for cooling as stated in the original application (150,000 gpd average) can be adequately supplied from the existing landfill facility without adversely affecting any adjacent areas. Further, adequate fresh water supply for sanitary purposes is available below a clay layer located on site.

225 RABRO DRIVE EAST
HAUPPAUGE, N.Y. 11788
(516) 435-2917

The above analyses and conclusions should impact the financial and technical aspects of the project, and it appears that the project should be further reviewed and possibly revised. Should you have any questions on the enclosed material, please do not hesitate to contact my office.

Very truly yours,

H. W. Davids, P.E.
Director
Division of Environmental Health

HWD/jb
Enclosures (2)

cc David Harris, M.D., M.P.H., Commissioner, SCDHS
Joseph H. Baier, P.E., SCDHS
James C. Maloney, P.E., SCDHS
Anthony S. Candela, P.E., NYSDEC (w/encls)
Hon. William R. Pell III, Supervisor,
Town of Southold (w/encls)

COUNTY OF SUFFOLK

PETER F. COHALAN
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

MEMORANDUM

TO: Aldo Andreoli, P.E. DATE: December 11, 1981

FROM: Joseph H. Baier, P.E.

SUBJECT: SOUTHOLD INCINERATOR PROPOSAL

During the past two years a considerable amount of groundwater and geological data have been accumulated by the department for the Southold Township area. In particular, an investigation of landfill plumes has started and also a study of aldicarb in groundwater around the landfill which are relevant to the proposal. The Bureau of Water Resources has reviewed the proposal--specifically on the potential of installing pumping wells at the incinerator site.

Proposal

To construct two wells: a 4-inch, 20 gpm well and an 8-inch 175 gpm well for sanitary use and cooling water pickup, respectively, at the Southold landfill.

175 gpm ≅ 252 000. GPD.

Hydrogeology

Beneath the landfill there appears to be approximately 85 ft.± of saturated water-table aquifer. This rests on a clay layer, which appears to be quite extensive in areal distribution and is approximately 50 ft. thick. Below the clay, at the landfill site, a second fresh water lens exists approximately 50 ft. thick.

Water Quantity

An analysis was made on the effect that this well would have on the water table in the surrounding area, and it was found to be minimal (1.0 ft.+ drawdown at landfill boundaries). The requested discharge is approximately one-third of that recommended by the Suffolk County Comprehensive Water Supply Study of 1970

65 JETSON LANE, P.O. BOX G
CENTRAL ISLIP, N.Y. 11722
(516) 234-2622

which limited pumpage to 0.75 MGD. From a water quantity standpoint, this well would not dramatically affect the water supply of the area.

Water Quality

Leachate plumes exist below landfills, including Southold. If the quench water well were placed on the landfill site and the well screen located within the plume, the pumping would help keep the contamination from moving any further downgradient and would begin removing the leachate which would be evaporated as quench water.

Water quality results from the fresh water lens below the clay layer indicate that water of satisfactory drinking quality is available in this zone.

Conclusions

The impact of the proposed wells to the area's groundwater resources does not appear to be significant. Water-table drawdowns are slight and will not adversely affect adjacent properties. The presence of the clay layer will preclude any upconing of salt water, and locating the quench water well in the plume will assist in cleaning up the groundwater contamination from the leachate plume. Should the facility move forward to design and construction, it is recommended that groundwater, on site, be used as the primary source of quench water, and that the 20 gpm well installed below the clay be used for sanitary purposes.

JHB/jb
cc: James Maloney, P.E.

MEMORANDUM

TO: THE FILE

FROM: STEVEN KRAMER

DATE: 10/30/81

RE: DRAFT ENVIRONMENTAL IMPACT STATEMENT - ENERGY DEVELOPMENT CORPORATION

I reviewed this impact statement on 10/19 and 10/20. In essence, the statement emphasizes the fact that only good can come from the installation of their process at Southold's Sound Avenue facility. The advantage of this proposed installation would rest specifically in the fact that the Town of Southold would utilize incineration in lieu of current land disposal practices. The incinerator facility would occupy six acres and will be supported by a seven acre lined landfill. This landfill and all associated costs will be assumed by the Town of Southold. My specific comments on this report are as follows:

I. Page 12

A. Cooling Water Option:

1. Utilization of wastewater from the Greenport STP. This option appears satisfactory although a piping system would have to be established to move this wastewater a distance of five to seven miles. The utilization of wastewater would have many benefits including the evaporation of same, therefore, eliminating the need for ocean disposal.

2. Utilization of water obtained from the Long Island Sound or Peconic Bay.

a. Obvious corrosive problems associated with saline would impact heavily on mechanical parts of the system.

b. Establishment of a new on-site well for cooling water purposes. Water quality underlying the existing Southold landfill is at least as corrosive as water obtained from Long Island Sound or Peconic Bay. Our experience with on-site wells is that it reacts heavily on machinery finishes thus discoloring and corroding external parts.

II. Page 30

A. Reference is made concerning the destruction of dioxin and non-criteria pollutants during high temperature incineration to efficiencies of 99.99%. I have been unable to find any reference to support this allegation.

WATER RESOURCES

There are no surface water bodies or surface water tributary systems within the immediate project vicinity. The project site is located approximately one mile from two estuarine systems. The Long Island Sound estuarine system lies approximately 4500 feet to the north of the project site. This system is of tremendous commerical, recreational, aesthetic, and historic value to the region. Approximately 7500 feet to the southeast of the project site is East Creek, which empties into the Cutchogue Harbor, part of the Great Peconic Bay. This estuary, like the Long Island Sound, is of inestimable value to the region.

Groundwater in the study area ranges in depth from 15 feet in the excavated portions of the project site to 50 feet on the higher undisturbed portion. This groundwater aquifer, the Upper Glacial, is the only available water supply for the area. The Magothy sands, which lie below the Glacial aquifer, are the primary source of potable water in the western portions of the County. In the study area, however, the Magothy aquifer is too salty to be used for this purpose. For this reason, the limited water supply is one of the primary limiting factors in determining the carrying capacity of the area for human use and habitation.

The importance of maintaining good groundwater quality on Long Island has been recognized by the U.S. Environmental Protection Agency, which has designated the aquifer system of Long Island as the principal source of drinking water under Section 1424 (e) of the Safe Drinking Water Act (P.L. 93-523). This designation protects the groundwater from contamination by any Federal action.

There is no public water supply available in the project region.

COUNTY OF SUFFOLK

PETER F. COHALAN
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

MEMORANDUM

TO: THE FILE

FROM: STEVEN KRAMER

DATE: 9/4/81

RE: RCRA CRITERIA (OPEN DUMP)

On 8/27/81 a meeting was held at Southold Town Hall to inform Southold Town officials of the findings concerning their compliance with RCRA (oepn dump) criteria. Of the eight categories within this criteria, Southold violated that criteria pertaining to methane migration.

Methane migration problems occur on the west and north side of this facility and is impacting on agricultural land currently used for potato cultivation.

Present at this meeting were the following persons: Tony DeCostanzo, D. Walterding (ENCON), Ray Dean and W. Pell representing the Town.

Mr. Dean, opon receipt of this information, explained that he would contact H2M in the near future so as to provide them with the job of solving this migration problem.

SK:daf

cc: W. Roberts, P.E.
J. Maloney, P.E.

65 JETSON LANE, P.O. BOX G
CENTRAL ISLIP, N.Y. 11722
(516) 234-2622

New York State Department of Environmental Conservation
BLDG.#40, SUNY
STONY BROOK, NEW YORK 11794
(516) 751-7900

Robert F. Flacke
Commissioner

August 31, 1981

RECEIVED

Mr. William R. Pell III
Supervisor
Town of Southold
Main Road
Southold, New York 11971

RE: CLASSIFICATION OF THE SOUTHOLD SOLID WASTE DISPOSAL FACILITY

Dear Mr. Pell:

In accordance with Public Law 94-580, entitled "Resource Conservation and Recovery Act of 1976," the Department of Environmental Conservation has completed the inventory of the Southold solid waste disposal facility.

Under Section 4005 of Public Law 94-580, States are required to conduct an inventory of all solid waste facilities and practices to determine if those facilities are open dumps or sanitary landfills. The USEPA Administrator and the Bureau of Census will publish an inventory of all disposal sites in the United States which are classified as open dumps.

The next submission date of open dump facilities to the Bureau of Census, for publication in the Federal Register on January 1, 1982, will be September 30, 1981. The criteria for the classification of the solid waste disposal facilities for which each site is inventoried include: (1) flood plains, (2) endangered species, (3) surface water, (4) ground water, (5) application to land use for the production of food-chain crops, (6) disease, (7) air, and (8) safety.

A due process meeting was held with you on August 27, 1981, to discuss the results of the open dump inventory for the Southold landfill.

The landfill was found to be in non-compliance on safety (explosive gases beyond the property boundary), 40 CFR Part 273.6.

The landfill was also found to be in violation of New York State (6NYCRR Paet 703), Groundwater Standards. Violation of RCRA groundwater standards (40 CFR Part 257.3-4) is still being investigated.

Based on the above non-compliance with the Federal criteria (published in the Federal Register, September 13, 1979, 40 CFR Part 257) the Southold Landfill has been classified as an open dump. The results of the inventory were discussed at the August 27, 1981 meeting, and our files are available for inspection by your staff.

Please contact me to arrange a meeting at which a consent order to upgrade or close the landfill will be discussed.

Very truly yours,

Morris Bruckman

Morris Bruckman, P.E.
Regional Solid Waste Engr.

MB/ef
cc: N. Nosenchuck
D. Middleton
J. Scherb
A. Machlin
D. Wolterding
J. Maloney
R. C. Dean-Supt.,TN. of Southold

FORM EPA [illegible]

EPA

OPEN DUMP INVENTORY REPORT

Section I - GENERAL INFORMATION

1. Date of determination Enter month, day and year	Month: 0 8 Day: 2 7 Year: 8 1
2a. Is this an update of a previous form? Mark (X) one	Yes: X No:
2b. Is this form being submitted to remove the facility from the open dump inventory? Mark (X) one	Yes: X No:
3. Facility Identification Number	State: 3 6 County: 1 0 3 Facility No.: 0 9 0 5 0
4. EPA Surface Impoundment Assessment No. If applicable	
5. State Facility Identification Number If applicable	5 2 S 1 7
6. Name of facility	S O U T H O L D L A N D F I L L
7. Facility location	N O R T H O F N O R T H R O A D B E T W E E N C O X A N D D E P O T L A N E S S O U T H O L D N Y 1 1 9 7 1 S U F F O L K
8. Coordinates of facility location	4 1 0 1 4 5 0 7 2 3 0 0 5
9. Other Regulatory Identification If applicable	
10. Land owner	T O W N O F S O U T H O L D M A I N S T R E E T S O U T H O L D N Y 1 1 9 7 1
11. Operator	

EPA Form [illegible]

ERCO | Energy Resources Co. Inc.

185 Alewife Brook Parkway
Cambridge, Massachusetts 02138
(617) 661-3111 TWX 710-320-0721

Washington, D.C.
Houston, Texas
Torrance, California
La Jolla, California

Walnut Creek, California
Paris, France
Zurich, Switzerland

August 13, 1981

Mr. Dennis Wolterding
New York DEC
Bureau of Waste Disposal
50 Wolf Road
Albany, NY 12233

Dear Mr. Wolterding:

Enclosed are the analytical results for the groundwater samples from the solid waste facilities on Long Island. The results include:

- o pesticides (endrin, lindane, methoxychlor, toxaphene)
- o herbicides (2,4-D and Silvex)
- o specified trace metals
- o specified "wet chemistry" parameters.

The following sampling codes were used:

N.Y. ID	ERCO Organic Lab ID	ERCO Trace Metal ID
→V. Presti	22-069	51-861
Lloyd Love	22-070	51-862
Lloyd Love (duplicate)	22-071	51-863
Well #53329 (Cutchogue)	22-072	51-864
Well #68916 (Southhold)	22-073	51-865
Well #30 (North Sea)	22-074	51-866
Well #48432 (North Sea)	22-075	51-867
Well #51172 (Shelter Island)	22-076	51-868
Graber Well	22-077	51-869

In addition to the pesticide compounds you requested to be analyzed, we also screen for PCBs in the same extract. Please note that PCBs were found in the following samples:

22-069 PCB 1254 at 0.1 ppb
22-073 PCB 1260 at 0.4 ppb
22-074 PCB 1260 at 3.0 ppb

If you have any questions about this report, please do not hesitate to call.

Sincerely,

Dallas Wait

A. Dallas Wait
Senior Organic Chemist

ADW/pc

July 29, 1981

Mr. Raymond C. Dean
Superintendent of Highways
Town of Southold
Feconic Lane
Feconic, N.Y. 11958

Dear Mr. Dean:

An inspection was conducted at your Cutchogue landfill on July 24, 1981. At that time, Mr. Steven Kramer of my staff performed a methane migration survey at said facility.

I would like to inform you that methane, in high concentrations, is migrating beyond site perimeters. Highest concentrations were noted in the potato field to the west and north of the facility; however, no methane was noted to be migrating in a southerly direction towards occupied homes. Please be advised that methane migration beyond site perimeters is a violation of 6NYCRR Part 360.8 (b) (1) (vi).

I would also like to call your attention to the fact that refuse is protruding throughout the facility and request that you increase the amount of cover currently being applied.

Thank you for your attention to this matter.

Very truly yours,

William C. Roberts, P.E., Chief
Bureau of Environmental
Pollution Control

WCR:SJK:ets

M E M O R A N D U M

TO: The File

FROM: Steven Kramer

DATE: 7/27/81

RE: METHANE MIGRATION SURVEY - SOUTHOLD LANDFILL

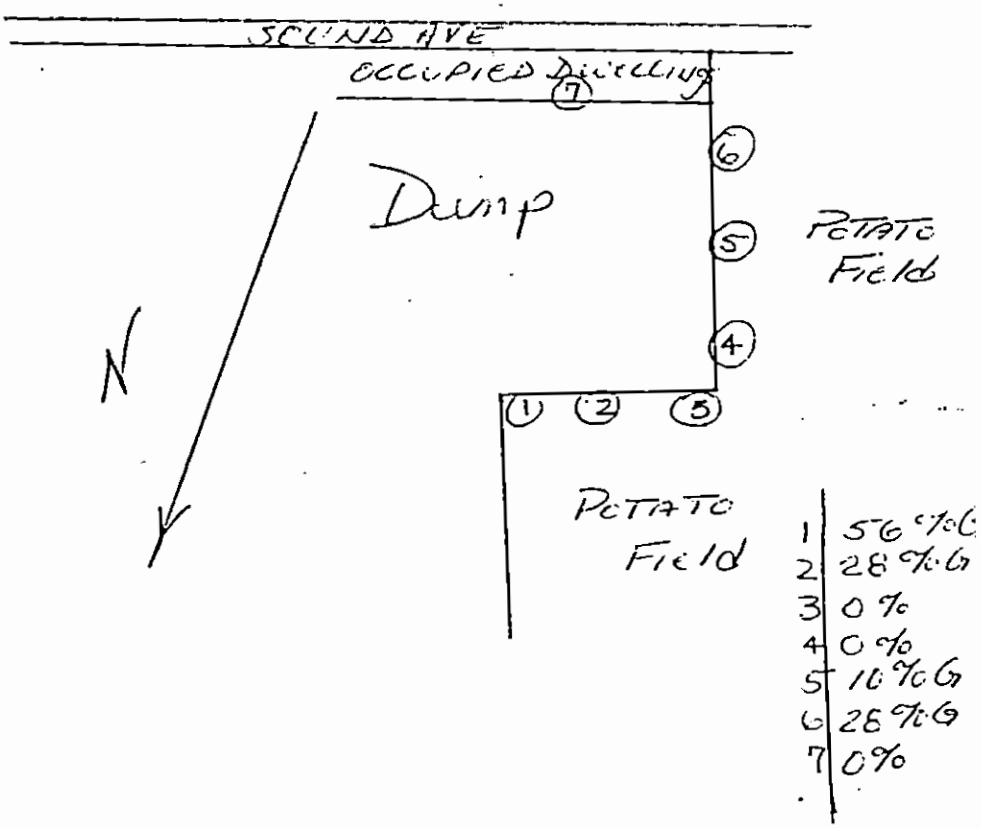
At the request of D. Woltenting of the NYSDEC, an updated methane migration survey was completed on 7/24/81. This survey confirms that methane migration in high concentrations exist beyond site perimeters on the west and north sides of this facility.

The areas of impact continue to be utilized for agricultural purposes. Vegetation damage was noted approximately 100' from landfill perimeters. This damage is reflected in the browning of potato plant foliage.

The occupied area to the south is closest to the old part of the facility and remains gas free.

SJK:daf

cc: J. Maloney, P.E.



ENERGY RESOURCES COMPANY INC.

Pesticide and Herbicide Analysis

Sample Level: 5/8.

Date Analysis Completed: 8/12/81

All Results In: µg/l (ppb)

Reported by: E.K.

Checked by:

Analyzed for:

Compounds	MCL	Det. Limit	22-069	22-070	22-071	22-072	22-073	22-074	22-075	22-076	22-(
endrin	0.2	0.02	ND	ND	ND	ND	ND	ND	ND	ND	N
lindane	4.0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	N
methoxychlor	100	10.0	ND	ND	ND	ND	ND	ND	ND	ND	N
toxaphene	5.0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	N
2,4-D	100	10.0	ND	ND	ND	ND	ND	ND	ND	ND	N
2,4,5-TP (Silvex)	10	10.0	ND	ND	ND	ND	ND	ND	ND	ND	N

MCL-Maximum Contaminant Level according to Interim Primary Drinking Water Regulations effective June 1977.

Comments:

ENERGY RESOURCES CO. INC

TRACE METAL ANALYSIS
- Report Sheet -
(µg/l)
10^{-3} mg/l

alyzed for: New York State DEC

RCO ID	ERCO ORGANIC ID	As	Ba	Cd	Cr	Cu	Iron Fe	Pb	Mn	Hg	Ni*	Se	Ag	Zn
-861	22-067	6	670	<0.5	13	2,400	580	<5	180	<0.1	280	<5	<0.5	24
-862	22-070	<5	<70	<0.5	<4	120	140	<5	15	<0.1	<5	<5	<0.5	32
-863	22-071	<5	<70	<0.5	<4	120	130	<5	19	<0.1	<5	<5	<0.5	32
-864	22-072	<5	80	<0.5	<4	150	420	<5	35	<0.1	<5	<5	<0.5	210
864 O Duplicate	22-072	<5	<70	<0.5	<4	150	420	<5	33	<0.1	<5	<5	<0.5	190
865	22-073	<5	<70	<0.5	<4	13	160	<5	40	<0.1	21	<5	<0.5	28

If customer has any questions regarding analysis, refer to sample in question by its ERCO ID#.
*no charge for Ni analysis

Sample Rcvd. 7/15/81 Reported by MAZ

Date Analysis Completed 8/3/81 Checked by ADW

ENERGY RESOURCES CO. INC

TRACE METAL ANALYSIS
- Report Sheet -
(µg/l)

yzed for: New York State DEC

O	ERCO ORGANIC ID	As	Ba	Cd	Cr	Cu	Fe	Pb	Mn	Hg	Ni	Se	Ag	Zn
66	22-074	<5	990	<0.5	<4	7	25,000	<5	8,100	<0.1	8	<5	<0.5	16
67	22-075	<5	<70	<0.5	<4	<5	1,700	<5	19	<0.1	<5	<5	<0.5	<8
68	22-076	<5	<70	<0.5	<4	<5	110	<5	11	<0.1	<5	<5	<0.5	12
68 Duplicate	22-076	<5	<70	<0.5	<4	<5	110	<5	11	<0.1	<5	<5	<0.5	12
69	22-077	<5	160	1.5	<4	<5	14,800	<5	7,100	<0.1	<5	<5	<0.5	100
Blank		<5	<70	<0.5	<4	<5	<20	<5	<10	<0.1	<5	<5	<0.5	<8

If customer has any questions regarding analysis, refer to sample in question by its ERCO ID#.

Sample Rcvd. 7/15/81 Reported by MAK

Date Analysis Completed 8/3/81 Checked by AOW

ENERGY RESOURCES CO. INC

WET CHEMISTRY ANALYSIS

- Report Sheet -

Analyzed for: New York State DEC

Parameter	22-069	22-070	22-071	22-072	22-073	22-074	22-075	22-076	22-077
(1) Total organic carbon (mg/l)	260	3.0	2.0	16	35	27	26	24	14
(2) Chloride (mg/l)	350	24	18	29	270	52	9.0	19	18
(3) Fluoride (mg/l)	0.22	<0.1	<0.1	<0.1	<0.1	0.2i	<0.1	<0.1	<0.1
(4) Color (platinum std. comp.)	220	<5	<5	<5	30	<5	5	<5	<5
(5) Odor (threshhold number)	3	1	0	0	1	1	0	0	0
(6) Sulfate as SO_4 (mg/l)	16	5.6	2.8	97	170	4.2	5.1	22	11
(7) Total dissolved solids (mg/l)	2600	65	68	260	1500	260	57	170	120
(8) Conductivity at 25°C (umhos/cm)	6500	110	98	450	2900	620	93	230	310
(9) pH	6.9	5.0	5.0	5.5	6.4	6.2	6.4	5.5	5.5

Sample Rcvd. 7/15/81 Date Analysis Completed 8/4/81

COUNTY OF SUFFOLK

DEPARTMENT OF HEALTH SERVICES

MEMORANDUM

TO: JAMES C. MALONEY, P.E. DATE:: 11/14/80

FROM: STEVEN KRAMER

RE: SOUTHOLD LANDFILL - LANDFILLING OF OIL-SOAKED EARTH

To keep you up-to-date on the developments concerning Southold Town's acceptance of oil soaked earth generated by a spill which occured at Goldsmith & Tuthills Tank Farm located at Flanders, New York, I have been informed by Judy Foster who inspected this facility on 11/10/80 that two truck loads of this material did enter the landfill as condoned by Ray Dean, Superintendent of Highways, Town of Southold.

There exists a question as to why the Town of Southampton's waste should end up in the Southold Landfill and why this waste was not transported to Brookhaven's Horseblock Road Facility.

I will keep you abreast of developments in this situation and have informed Mr. Robert Olsen of our request to be provided with his reports and documents relating to the spill and transportation of this material to Southold.

SJK:daf

65 JETSON LANE • HAUPPAUGE, NEW YORK 11787 • (516) 234-2622

COUNTY OF SUFFOLK

DEPARTMENT OF HEALTH SERVICES

MEMORANDUM -INTRAOFFICE

TO: JAMES C. MALONEY, P.E.

FROM: STEVEN KRAMER

DATE: 11/5/80

RE: LANDFILLING OF ASPHALT MIX AT SOUTHOLD LANDFILL

I have been informed by Mr. Robert Olsen of this department that the Town of Southold has agreed to accept a large quantity of asphalt mix at the landfill.

Mr. Olsen described this material as a liquid of varying viscosity from a near solid to liquid. This material will be generated by the demolition of a tank farm located on Mattituck Inlet, Mattituck, New York.

This section will have to respond to the Town of Southold concerning ultimate disposal of this material and our objection to its being buried at the landfill.

SJK:daf SK

cc: Morris Bruckman, P.E.

65 JETSON LANE • HAUPPAUGE, NEW YORK 11787 • (516) 234-2622

New York State Department of Environmental Conservation
BLDG.#40, SUNY
STONY BROOK, NEW YORK 11794
(516) 751-7900

Robert F. Flacke
Commissioner

August 11, 1980

Mr. Raymond C. Dean
Superintendent of Highways
Town of Southold
Peconic Lane
Peconic, New York 11958

RE: TOWN OF SOUTHOLD LANDFILL - APPLICATION NO.52-S-17
MEETING ON AUGUST 5, 1980

ATTENDEES: Paul Lappano
Steve Kramer
Ray Dean
Ray Jacobs
Brij Shrivastava

Dear Mr. Dean:

Our disussion at the referenced meeting centered around the possibility of a draft which could be used as conditions for a conditional permit.

Attached is such a draft, which members at the meeting seemed agreeable with.

The dates for submission are reasonable, which I feel can give ample time for their being met.

If this is acceptable, please let me know in writing by September 1, 1980.

As we discussed at the meeting, I could then file a negative declaration under SEQR, wait 30 days for a public comment period, and unless a hearing is necessary on technical grounds, a permit could be issued with the conditions to which we agreed.

As regards the exposed brush pile, this violation should be corrected as soon as possible to avoid a fire hazard.

If I may be of any assistance, please do not hesitate to contact me.

Very truly yours,

Paul Lappano,
Asst. Sanitary Engr.

PL/ef
Enc.-

cc: W. Bell - Supervisor
B. Shrivastava, H2M
S. Kramer, SCDHS
Town Board
D. Mafrici - Albany
J. Baier - SCDHS

DRAFT SCHEDULE

1. Submit report addressing all pertinent details for lining, capping, methane monitoring and venting, storm drainage, leachate collection and treatment with schedule for implementation by January 30, 1981.

2. Test all private wells as recommended in 12/11/79 letter and revise groundwater monitoring locations. Based on Suffolk County Dept. of Health Services well data and private well data. Submit schedule for implementation by October 30, 1980.

3. Submit Quarterly progress report beginning April 1981.

4. Begin Planting Plan as soon as possible.

PL/ef
8/11/80

SUFFOLK COUNTY

DEPARTMENT OF HEALTH SERVICES

INTEROFFICE MEMORANDUM

To: James C. Maloney, P. E. Date: August 8, 1980

From: Steven J. Kramer

Subject: Southold Landfill Hearing.

On August 5, 1980 a meeting was held of NYS DEC, Building 40, State University at Stony Brook to discuss a conditional operating permit for the Town of Southold Landfill, Sound Avenue, Cutchogue, New York.

Agreed to at this meeting was the following:

That by January 1st, 1981 the Town of Southold Consultant, H2M Corporation, would provide New York State DEC with reports, plans and dates with respect to:

1. Lining
2. Capping
3. Leachate collection and treatment
4. Storm drainage
5. Groundwater monitoring.

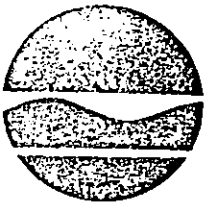
That by October 30, 1980 the Town will provide NYS DEC with test information concerning groundwater and well water quality in this area. Included will be a list of contaminants, the establishing of additional monitoring wells to insure that the above requirements will be adhered to, Mr. Lapano suggested that the Town provide NYS DEC with quarterly progress reports.

Also discussed at this meeting was the problem of blowing papers at this site. Mr. Dean agreed to convert a leaf sucker to the purpose of removing papers from fence lines on the perimeter of the landfill.

I questioned Mr. Dean concerning Shelter Island and his use of Southold Landfill sites in the near future. He indicated that he has not been contacted by Shelter Island Officials concerning this matter.

SJK:mew

New York State Department of Environmental Conservation
BLDG.#40, SUNY
STONY BROOK, NEW YORK 11794
(516) 751-7900



Robert F. Flacke
Commissioner

July 15, 1980

Mr. Raymond C. Dean
Supt. of Highways
Town of Southold
Peconic Lane
Peconic, New York 11958

RE: TOWN OF SOUTHOLD LANDFILL INSPECTION 7/10/80

Dear Mr. Dean:

On the above date I inspected your landfill.

An extremely high lift of approximately 30 feet of uncovered brush remains in the active mining area. This is unmanageable, unsafe and may prove to be a fire hazard. This should be covered and decreased to a lift of 10 feet as soon as possible.

Methane gas was also detected off the landfill site on the south side in amounts of 10% gas and offsite on the west side in amounts of 30% gas.

I have also noticed that your not making any attempt to stockpile the clay seam that you have encountered in the active mining area. It would be wise to take samples of this clay, and have it tested for permeability and grain size characteristics since it may be useful as, either a lining material, or a capping material.

In closing, I would like to state that the brush conditions should be corrected immediately and plans for the mitigation of methane migration should begin. I expect to see some improvements in a month, when I again re-inspect the site. Failure to correct these violations may result in legal action.

If you have any question, please do not hesitate to contact me.

Very truly yours,

Paul Lappano

Paul Lappano,
Asst. Sanitary Engr.

PL/ef

cc: Brij. M. Shrivastava - H2M
Steve Kramer - SCDHS
Dave Mafrici - Albany
Wm. Pell - Supv. -Town Board

New York State Department of Environmental Conservation
BLDG.#40, SUNY
STONY BROOK, NEW YORK 11794
(516) 751-7900

Peter A. A. Berle,
Commissioner

December 11, 1979

Mr. Brij M. Shrivastava
Project Manager
Holzmacher, McLendon and Murrell, P.C.
500 Broad Hollow Road
Melville, New York 11746

RE: TOWN OF SOUTHOLD APPLICATION #52-S-17

Dear Mr. Shrivastava:

As per our December 7, 1979 meeting, I would like to confirm the statements of our meeting as per the groundwater monitoring proposal in the June 1979, proposal.

The report states on pg. 4.26: "Existence of large amounts of soil underneath the Southold landfill provides an adequate buffer zone between the refuse fill and the groundwater, which presumably minimizes leachate collection or treatment system at present. Proper daily operation of the sanitary landfill controls leachate pollution." This is not the case in light of the 208 Study, Kimmel & Braids, 1975, Roberts & Sangrey, 1977, Suffolk County Dept. of Health Sayville Study, etc. It is also agreed that the 360 report is deficient as concerns preliminary monitoring is concerned.

Private wells should be tested, (see attached list of constituents to test for) as well as, irrigation wells in the N.W. direction. Also note page 7.1 of the report, which states a north easterly groundwater flow direction while Fig. 7-1 indicates a north westerly direction.

Once the testing information is gathered, perhaps a less costly monitoring system can be devised. If for example, the wells tested indicate leachate contamination, they will give a good picture as to extent of the plume. If leachate is not

December 11, 1979

present, perhaps they may be used as monitoring wells. Upon receipt of the analysis, a deep well will be needed (200' - 300').

Needless to say, the Suffolk County Dept. of Health, Joe Baier, and BobVilla will supply any additional information, i.e., previous testing results, that are available, and you should contact them directly.

As far as, offsite monitoring wells are concerned, and depending on what the private well testing shows, the Suffolk County Dept. of Health may be able to assist in the construction of wells.

Sincerely yours,

Paul Lappano

Paul Lappano,
Asst. Sanitary Engr.

PL/ef

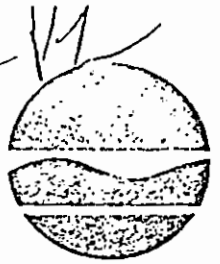
cc: J. Homan
R. Dean
J. Maloney
R. Villa
J. Baier

CONSTITUENTS TO BE TESTED FOR IN LANDFILL LEACHATE MONITORING WELLS

1. Alkalinity
2. Aluminum
3. Ammonia
4. Arsenic
5. BOD
6. Boron
7. Calcium
8. Chlorides
9. Chromium
10. Copper
11. Color
12. COD
13. Detergents
14. Florides
15. Hardness
16. Iron
17. Kjeldahl Nitrogen (Total)
18. Lead
19. Mangenese
20. Mercury
21. Nickel
22. Nitrate
23. Nitrite
24. Phenol
25. PH
26. Potassium
27. Phosphate
28. Sodium
29. Silver
30. Selenium
31. Specific Conductivity
32. Sulfate
33. Silicon
34. TOC
35. Total Solids
36. Zinc
37. Trace Organics:
    (a) Chloroform
    (b) Tetrachloroethylene
    (c) 1,1,1, Trichlorethane
    (d) Vinyl chloride
    (e) Carbon Tetrachloride
    (f) Trichloroethylene

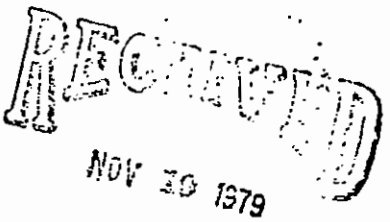
SK — VM
JCM —

New York State Department of Environmental Conservation
Building 40, SUNY, Stony Brook, N. Y. 11794
(516) 751-7900



Robert F. Flacke,
Commissioner

November 13, 1979



Mr. Brij Schrivastowa, P.E.
HOLZMACHER, McCLENDON & MURRELL, P.C.
Consulting Engineers
560 Broadhollow Road
Melville, New York 11747

Re: Town of Southold Application
52-S-17

Dear Mr. Schrivastowa:

As per our review of the June 1979 report, the following information must be submitted:

Page 3.9: Areas 2 and 3 should have groundwater depth determined by boring to demonstrate 5' separation for future landfill areas. The ". . . large amounts of soil underneath the Southold landfill . . ." as per 4.9.2, is not the case from borings supplied.

Page 3.15: While the Southold-Shelter Island 201 Study is proceeding and will eventually recommend the disposition of scavenger waste, the current lagooning must be carried out as per 6.1.b(3)(a), and (c) or (d), of the guidelines. In addition, more acceptable docking arrangements for dumping of waste should be constructed; i.e., concrete or macadam ramp. Schedules for lagoon operation—cleaning, filling, etc.—should be submitted.

Page 4.30: Methane monitoring to include placement of PVC wells for monitoring points. A recent inspection on 9/26/79 indicated methane readings of 20% gas along west property line. Submit location for PVC pipe location (i.e., structures, crop lands, roads). Also, venting structures should be placed as landfill is developed; i.e., PVC pipe, cast-concrete leaching or cesspool rings. Illustrate location and type of materials to be used.

Page 9.2E: Recommendations to control blowing paper are acceptable. These should be implemented since inspection reports indicate this is a continuous problem. Planting of wind screen is also acceptable.

Details for capping, lining, leachate treatment disposal, and storm drainage, as per 9/10/79 correspondence, should be submitted as part of the application.

Table 6-2 footnote (a) mentions ". . .environmental protection measures." Does this include liners and leachate treatment?

With regard to groundwater monitoring, I look forward to our 11/20/79 meeting at 10:00 a.m. to discuss particulars, as well as the recommendations in the report.

Sincerely yours,

Paul Lappano

Paul Lappano
Assistant Sanitary Engineer

PL:va
cc: Raymond C. Dean,
Superintendent of Highways
Philip Barbato
James Maloney
Joseph Baier

COUNTY OF SUFFOLK

DEPARTMENT OF HEALTH SERVICES

TO: Robert Olsen Date: October 26, 1979

FROM: Steven J. Kramer

SUBJECT: Southold Landfill

On October 18, 1979, I inspected the Southold landfill, with the intention of following up your indication that 55-gallon drums were in fact being stock piled at this facility. The only drums on site, were those located adjacent to the 275 gallon tank the Town utilizes for waste oil containment. The 55 gallon drums are used for overflow purposes. The location of these drums is immediately to the north of the shanty on premises.

Please advise me if we are not talking about the same thing. Thanks for your help.

SJK:sp

65 JETSON LANE • HAUPPAUGE, NEW YORK 11787 • (516) 234-2622

TO: Dennis Moran, Health Services Date: October 15, 1979

FROM: Steven J. Kramer

SUBJECT: Southold Landfill

Would you kindly test the wells located immediately south of the Southold landfill, located on Sound Avenue, Cutchogue, New York for possible contaminants of landfill origin and supply me with the results of this testing.

Thank you for your cooperation in this matter.

SJK:sp

New York State Department of Environmental Conservation
BLDG. #40, SUNY
STONY BROOK, NEW YORK 11794
(516) 751-7900

JCM ✓

SEP 17 1979

Peter A. A. Berle,
Commissioner

September 10, 1979

Mr. James Homan
Supervisor
Town of Southold
53095 Main Road
Southold, New York 11971

RE: TOWN OF SOUTHOLD LANDFILL
APPLICATION #52-3-17

Dear Mr. Homan:

Attached are copies of our Regional Solid Waste Policy (SWP), and Part 360 Leachate Attenuation and Liner Policy (P360L).

Current hydrogeological information locates the landfill in Zone IV, and condition two of the Solid Waste Policy applies. Thus, the approximately 14 acres remaining will require two liners and the entire landfill capped when completed as per condition four of the Solid Waste Policy.

Plans and specifications for lining, storm drainage, capping and leachate treatment as per P360L must be submitted as part of the application.

If I may be of any assistance, please do not hesitate to contact me or Paul Lappano.

Sincerely yours,

Morris Bruckman, P.E.
Regional Solid Waste Engr.

MB/ef
Attd.-
cc: D. Middleton
R. Dean
P. Mafrici
J. Maloney
B. Shivastava - H2M

SIC
JCM

COUNTY OF SUFFOLK

DEPARTMENT OF HEALTH SERVICES

August 13, 1979

Mr. Paul Lappano
Asst. Sanitary Engineer
New York State Department of
Environmental Conservation
Building 40
State University of New York
Stony Brook, NY 11794

Dear Mr. Lappano:

SUBJECT: TOWN OF SOUTHOLD LANDFILL

This is in response to your request for comments on the recently submitted Solid Waste Management Report for the Town of Southold. The monitoring proposed in the report basically complies with existing Part 360 of the State Environmental Code. However, because of the unique Long Island ground water situation and the fact that it is the sole source of drinking water for the County residents, a much more elaborate monitoring network is necessary to properly define areas of contamination.

A monitoring network of this type will be expensive to install and take time to complete. Before making specific recommendations with regard to this landfill, I believe it is in the interest of the residents of the Town of Southold that the following information be provided:

1. direction of ground water;

2. theoretical size of leachate plume;

3. location of any private and public supply wells that are downgradient of the landfill.

With the above information several cost-effective alternatives may then be open to the town:

a) provide public water;

b) utilize private wells for the monitoring system;

c) restrict development and use of ground water downgradient of the landfill;

d) determine water quality downgradient of the landfill by sampling public and private wells.

From an aerial of the Southold landfill and its theoretical leachate plume, it appears that only a few farm residents will be impacted by the plume. Sampling of their drinking water should commence as soon as possible to determine if contamination from the suspected leachate plume has occurred.

It may develop that no wells are affected, in which case the minimum Part 360 regulations could be considered. Conversely, private wells could be affected by leachate, and public supply would have to be provided. Regardless of the case, contamination of the water supply is taking place, and any protection of the water being consumed by the residents should be of the highest priority.

Some of the information mentioned above is already available at our office (nos. 1 and 2 above). I suggest that your office, the Town's consultant and my office meet to discuss the matter.

Very truly yours,

Joseph H. Baier, P.E., Chief
Fresh Water Monitoring Unit

JHB/jb
cc Mr. James Maloney
Mr. Robert Villa

TO: Paul Lappano, Asst. Sanitary Engineer July 24, 1979

FROM: James C. Maloney, P. E.

RE: Solid Waste Management Plan and Report
Town of Southold

I have reviewed the above referenced report. The document addresses all of the points necessary for compliance with requirements for a permit to operate a solid waste disposal facility.

There are a number of points and statements made in the report to which I take exception, or question. Of these points, five should be addressed:

1. Although a need for methane monitoring program was indicated, no such program was outlined within the report; at the least, a recommendation for methane monitor locations on the periphery of the landfill should have been made.

2. It was stated that it may be necessary to maintain gas venting structures for five years. Plans should be made to monitor methane migration for a period of longer than five years because certain studies have shown that methane can be generated for as long as fifty years.

3. It is a Part 360 requirement that refuse is not to be placed to a depth to which the separation distance between groundwater and the refuse is less than five feet. Soil borings A, B and C indicate that the greatest distance between placed refuse and groundwater is 3' and that the minimum distance was 1.5'. Care should be taken that refuse not be placed within 5' of the highest recorded groundwater elevation.

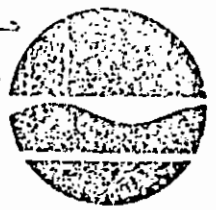
4. It is indicated on Page 7.1 that groundwater flows in a northeasterly direction. However, Figure #7-1 indicates that groundwater flow is in the northwesterly direction and places groundwater monitoring wells accordingly. Although I am sure this is an oversight, correction to the report should be made immediately.

The report has not yet been reviewed by Mr. Baier of this department for adequacy as to the number of monitoring wells and their location. His comments will be submitted separately.

JCM:ft

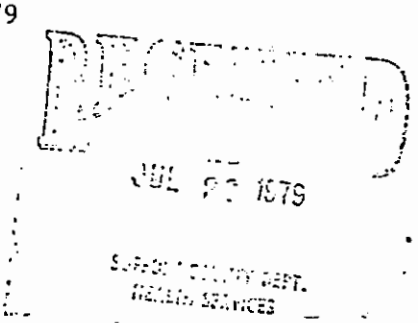
CC: H. W. Davids, P. E.
W. C. Roberts, P. E.
H. A. Dombeck, P.E., Vice President., H2M (Holzmacher, McLenden & Murrell)
500 Broad Hollow Road
Melville, NY 11747

New York State Department of Environmental Conservation
Building 40, SUNY, Stony Brook, N. Y. 11794
(516) 751-7900



Peter A. A. Berle,
Commissioner

July 20, 1979



Mr. Frank A. Kujawski, Jr.,
Chairman
Southold Town Conservation Advisory Council
Southold, New York 11971

Dear Mr. Kujawski:

Your letter of July 11, 1979 to Mr. R. Haje of this Department has been forwarded to this office for response.

Part 215 of Title 6 of the New York State Codes, Rules and Regulations prohibits open burning of rubbish generated by residential activities in any town with a total town population, including incorporated or unincorporated areas, of greater than 20,000. As the population of the Town of Southold is in excess of this number, the prohibition is applicable within the Town.

Subsection 215.3(a) of the same regulation, allows for the restricted burning of land clearing and/or demolition materials, provided that such burning is done in accordance with a permit issued by this Department, after written application. Since the Suffolk County Department of Health Services is an agent for this Department, anyone wishing to burn materials of this type should be directed to Mr. James Maloney of that agency for a permit application. Mr. Maloney's office is the sole agency within Suffolk County which has been delegated the authority to issue permits to conduct open burning in the County. This permit issuing authority cannot be delegated to the Southold Town Conservation Advisory Council, as you have requested.

If I may be of further assistance regarding this matter, please feel free to contact me.

Very truly yours,

Robert W. Schneck, P.E.
Senior Sanitary Engineer

RWS:va
cc: R. Capp
R. Haje
J. Maloney, SCDHS
65 Jetson Lane, Hauppauge, N.Y. 11787

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of the Alleged Violation of Part 360 of Title 6 of the Codes, Rules and Regulations of the State of New York, by	ORDER ON CONSENT
TOWN OF SOUTHOLD	FILE NO. 1-0369
(Suffolk County) Respondent.	

alleges that it

WHEREAS, the Department has documented various violations of Part 360 of 6 NYCRR; and

WHEREAS, the Respondent has waived its right to a public hearing in this matter in the manner provided by law, and having consented to the issuing and entering of this Order, agrees to be bound by the terms herein;

NOW, having considered this matter and being duly advised, it is

ORDERED, the Respondent shall strictly comply with the terms and conditions set forth in the compliance schedule, known as Schedule A, attached hereto and made a part hereof; and it is further

ORDERED, that with respect to the aforesaid violation, there is hereby imposed upon Respondent, a penalty in the sum of One Thousand ($1,000) Dollars, said fine to be suspended if Respondent complies strictly with the terms and conditions set forth in said Schedule A; and it is further

ORDERED, that whenever the Regional Engineer for Environmental Quality deems it necessary or desirable to inspect the premises of Respondent to verify progress in achieving compliance in connection herewith, he or his representative shall be allowed to go upon such premises at any reasonable hour and shall be given such assistance by Respondent as is necessary for the proper conduct of such an inspection; and it is further

ORDERED, that this Order shall be binding on Respondent, its successors and assigns and all persons, firms and corporations acting under or for it, including, but not limited to those who may carry on any or all of the operations now being conducted by Respondent, whether at the present location or at any other in this State; and it is further

ORDERED, that in those instances in which the Respondent desires that any of the provisions, terms and conditions of this

Order be changed, it shall make written application, setting forth the grounds for the relief sought to the Commissioner, c/o Joan B. Scherb, Regional Attorney, Building 40, State University of New York, Stony Brook, New York 11794; and it is further

ORDERED, that any change in this Order shall not be made or become effective, except as specifically set forth by written order of the Commissioner, such written order being made either upon written application of the Respondent or upon the Commissioner's own findings.

Dated: Albany, New York
5/16/1979

ROBERT F. FLACKE
Commissioner of Environmental Conservation

By _____
DONALD J. MIDDLETON
Regional Director

CONSENT BY RESPONDENT

Respondent acknowledges the authority and jurisdiction of the Commissioner of Environmental Conservation of the State of New York to issue the foregoing Order, waives public hearing or other proceedings in this matter, accepts the terms and conditions set forth in the Order and consents to the issuance thereof.

TOWN OF SOUTHOLD

By _____

STATE OF NEW YORK)
) ss.:
COUNTY OF SUFFOLK)

On the 8th day of MAY 1979, before me personally came Albert M. Martocchia to me known, who being duly sworn, deposed and said that he resides at Greenport, New York that he is the Supervisor of the Town of Southold and that he executed the foregoing consent for and on behalf of said Town, with full authority so to do.

To: Hon. A. Martocchia
Town of Southold
53095 Main Road
Southold, N.Y. 11971

_____
NOTARY PUBLIC

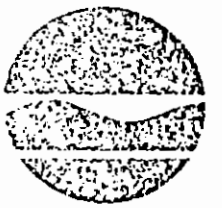
JUDITH T. TERRY
Notary Public, State of New York
No. 52-0541063 Suffolk County
Commission Expires March 30, 1981

SCHEDULE A
Compliance Schedule
for

TOWN OF SOUTHOLD

On or before May 7, 1979	Respondent shall make available 100 yd^3 as a cover stock pile on the landfilling area proper.
By July 10, 1979,	Respondent shall submit an Engineering Report to the Department, which addresses the question of the Part 360 requirements and how they are to be handled.
On September 10, 1979	A compliance monitoring conference will be held at the offices of the Department of Environmental Conservation to determine if the Town has met the terms and conditions of the Compliance Schedule, Schedule A.

New York State Department of Environmental Conservation
BLDG.#40, SUNY, STONY BROOK, NY 11794



Peter A. A. Berle,
Commissioner

March 22, 1978

Mr. Raymond Dean
Superintendent of Highways
Town of Southold
Main Road
Southold, New York
11971

RE: SOLID WASTE MANAGEMENT PERMIT
APPLICATION NO. 52-S-17

Dear Mr. Dean:

Although it is understood that the Town of Southold will submit a more detailed Solid Waste Facility plan conforming to the guidelines and until doing so, the application is incomplete, I feel it is appropriate to highlight what the final plan should contain.

1). A plan for monitoring groundwater, up and down gradient of the landfill. The monitoring should conform to Section 3.3 Criteria, and include baseline, and routine water sample analysis.

2). A detailed plan for methane monitoring and control.

3). A final site and land use plan reflecting the requirements of Sections 3.1.C and 3.2.C.

March 22, 1978

4). In regard to your application to operate, I have a specific question, regarding the impervious liner mentioned in Item 20. Is this liner natural or man-made? In either case describe the material in the liner.

Sincerely yours,

Paul Lappano

Paul Lappano
Asst. Sanitary Engr.

PL/ef

cc: ✓Paul Grosser, SCDH
Mr. John Towers, H2M

NOTICE OF INCOMPLETE APPLICATION

March 22, 1978

TO:

Mr. Raymond Dean
Superintendent of Highways
Town of Southold
Main Road
Southold, New York 11971

Permit Applied for: SOLID WASTE MANAGEMENT Location: SOUTHOLD

Application Number: 52-S-17
(Please refer to this number in all your correspondence.)

YOUR APPLICATION FOR THIS PERMIT IS INCOMPLETE.

☐ You failed to include with your application the full amount of the required fee. Please submit a check or money order in the amount of $_____ payable to the Department of Environmental Conservation.

☒ Please submit the following data:

SEE ATTACHED LETTER.

☐ It appears that other DEC permits may be required in connection with your proposed project. In order for a comprehensive review of all DEC permits for this project to be made, it is necessary for you to submit application(s) for the following permit(s):

If you have reason to request that all permits not be processed simultaneously, please notify the permit agent below to discuss the matter.

☐ It has been determined that your project is subject to Article 8 of the Environmental Conservation Law, the State Environmental Quality Review Act (SE Your application will be considered complete when

For further information, contact this office.

Permit Agent: PAUL LAPPANO Telephone Number: (516) 751-7900 X23

If you wish to withdraw your application rather than complete it, please notify the permit agent for r fund of application fee.

14-12-5(10/77)

To: Dave Wirenius
From: Bill Slade
Date: &/11/77
Subject: Southold Town Landfill

Enclosed herewith please find copies of all my correspondence with the Town of Southold concerning their landfill.

The following is a chronlogival reporting of events of therecent months.:

1) I conducted an inspection on 4/1/77. Piles of potatoes near the scavenger laggons were infested with flys. Also, the area near the north fence where shells were piled was also infested with flys.

2) I conducted an inspection on 5/20/77. The situation with theflys near the scavenger lagoons had deteriorated, even though the equipment with which to remedy the situation was sitting at the site--namely, a large payloader with landfill tires. I advised Mr. Dean on 5/23/77 that the situation should be corredted as soon as possible.

3) A reinspection on 5/27/77 showed no imptovement in the fly situation except that the potaotes, she;ls, and dead fish had been pushed around by the bulldozer. The odor at that time was incredible and very widespread. A telephone conference with Mr. Dean revealed that his machine was being overhauled in Harrison, NY and that his backup machine had a "blown" engine.

4) A reinspection of the premises by Bill Amberman the week of June 6 revealed no change in the situation.

5) I conducted an inspection on 6/16/77. The situation remained pretty much unchanged, except that the bulldozer had managed to compact some of the refuse near the scavenger pit.

6) A reinspection of the premises on 7/77/7 revealed that the situation had improved slightly. The area just east of the scavemnger pit had some cover on it, but the household area east of teh attendant's hut was still uncovered. In a telephone conference with Mr. Dean on that afternoon, I learned that the machine will be returned to them on July 15. Mr. Dean also promised to attempt to get some cover on that uncovered area during the week of 7/11/77.

December 22, 1976

The Honorable Albert M. Martocchia
Supervisor, Town of Southold
16 South Street
Greenport, NY 11944

Dear Mr. Martocchia:

I am in receipt of your letter of December 9, 1976 concerning approval of the cost to install methane monitoring wells ($50 per well) around the Southold landfill site.

As per the Holzmacher findings, we agree that a monitoring system is necessary. Such a program should commence with the installation of a gas well monitoring system and the subsequent monitoring of the wells on a routine basis.

At the present time, the Department of Environmental Control feels that a network of wells spaced approximately 300 ft. on center is a sufficient methane gas monitoring system. I have enclosed a map showing the tentative locations of 15 wells. The wells can be installed as soon as the town receives the materials (also enclosed please find a list of materials needed and suggested suppliers).

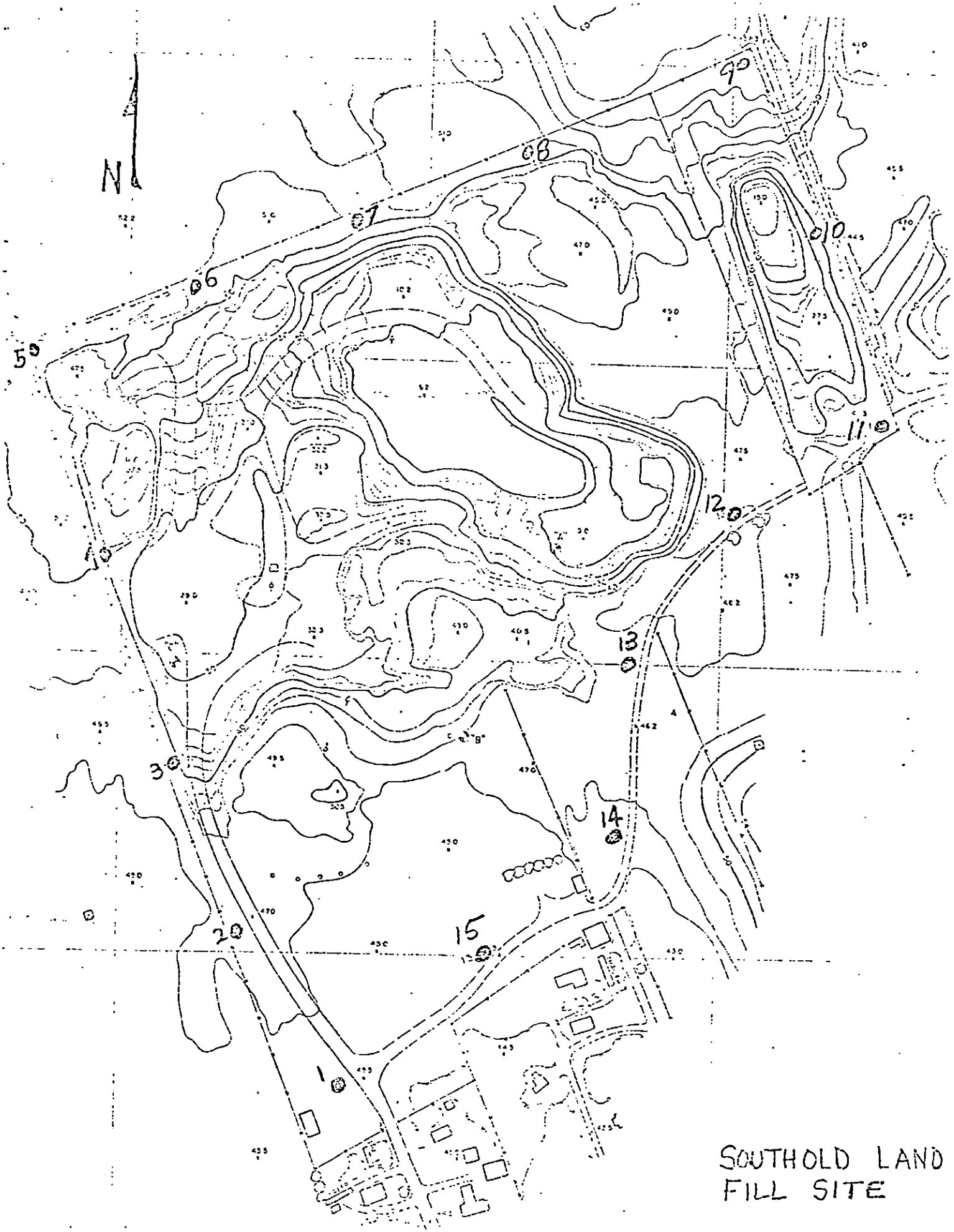
When the well installation is complete, a monitoring program must be instituted. To accomplish this, it is recommended that the town investigate using a methane gas detection meter. Further information on this meter can be obtained by calling Mr. John Soderberg (234-2622, Ext. 252) of this department's Air Pollution Control Section.

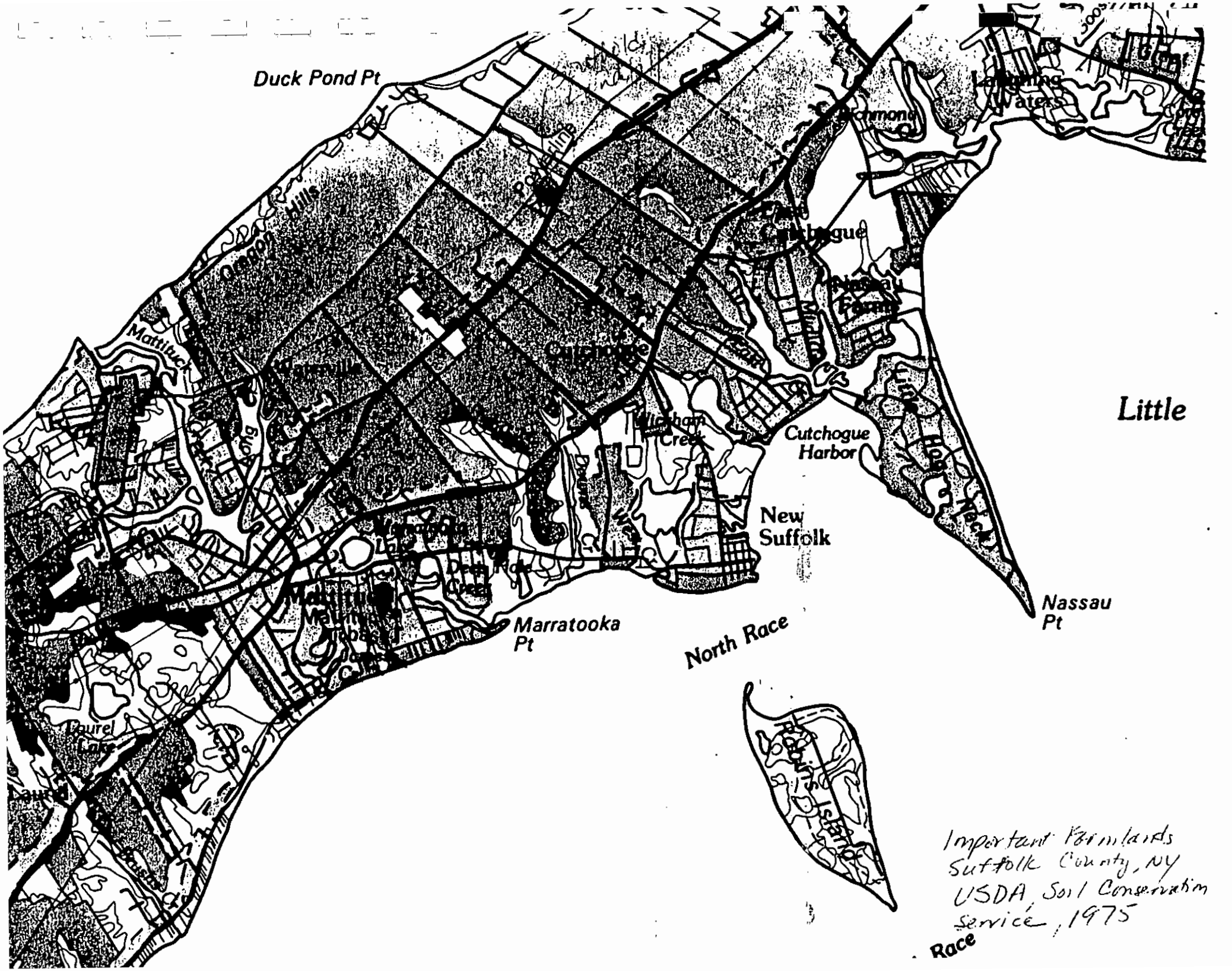
Please advise me as soon as you have the well materials on hand so we may commence with installation. If you require additional information, please contact me.

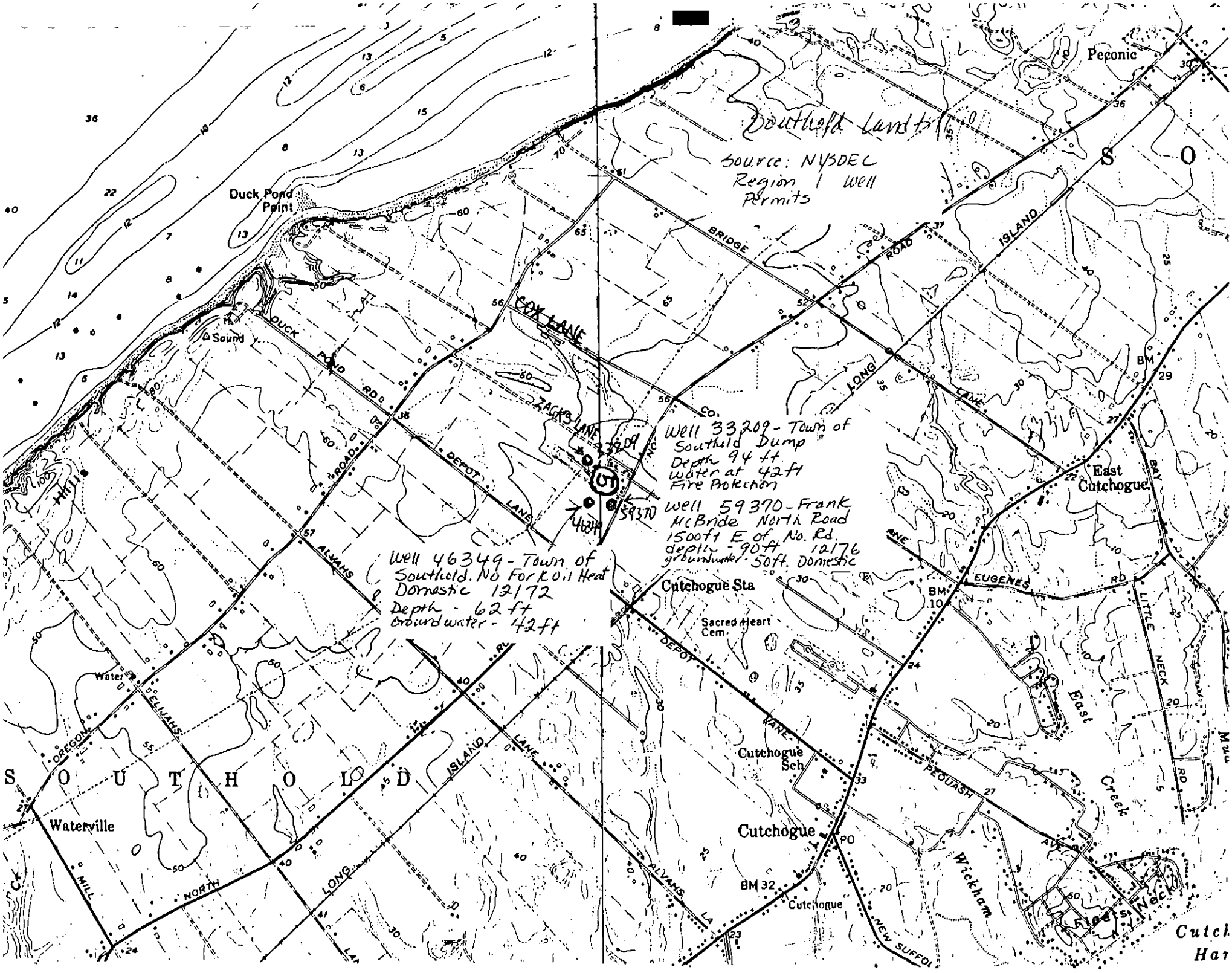
Very truly yours,

Richard Markel, P.E.
Asst. Sanitary Engineer

RM/jb
Enclosures (2)
cc Mr. Morris Bruckman, P.E., NYSDEC
Mr. John Soderberg, P.E., SCDEC

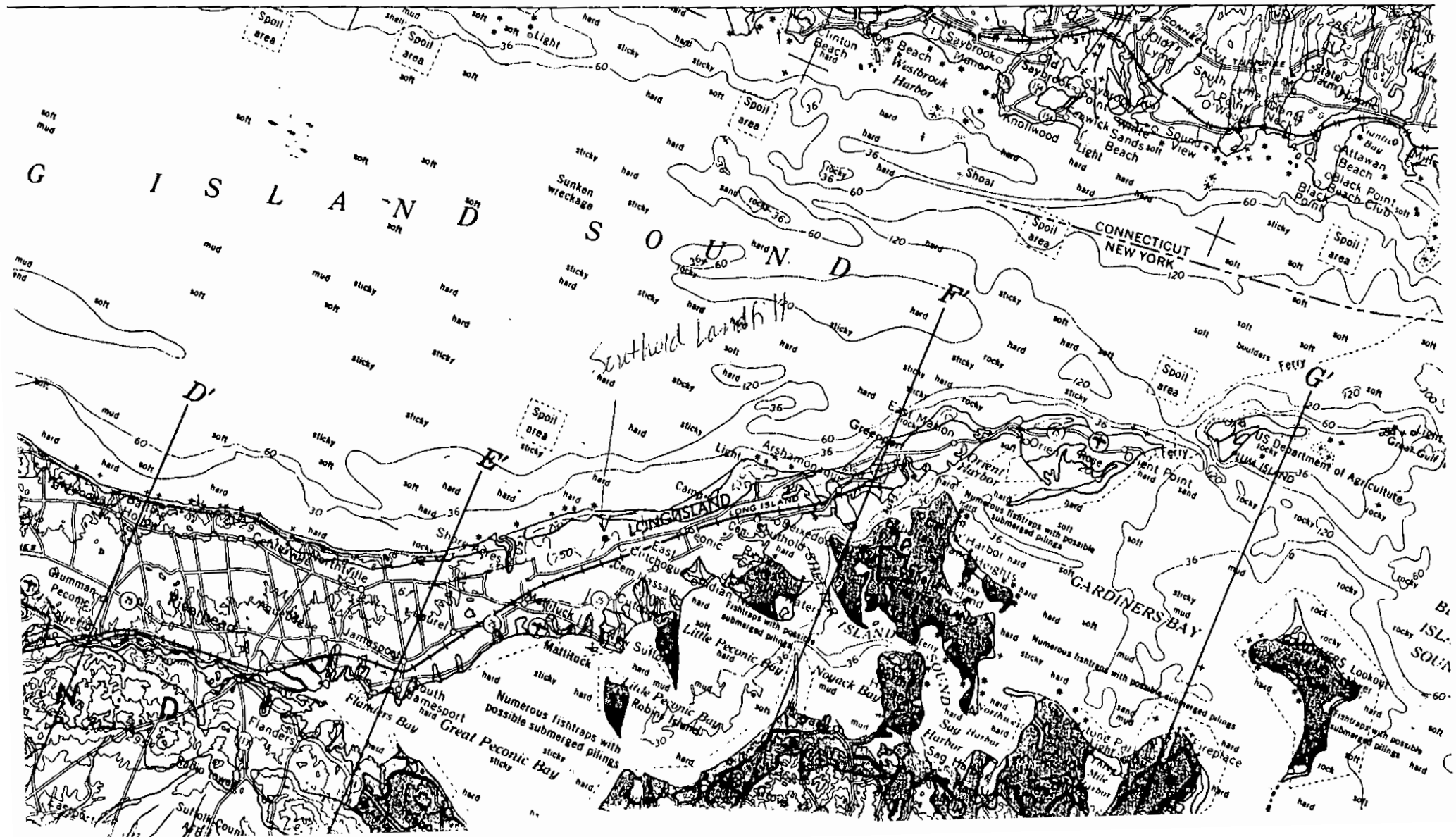

N
SOUTHOLD LAND
FILL SITE


Duck Pond Pt
Mattituck
Cutchogue
Cutchogue Harbor
New Suffolk
Little
Nassau Pt
Marratooka Pt
North Race
Race
Important Farmlands
Suffolk County, NY
USDA Soil Conservation Service, 1975


Southold Landfill
Source: NYSDEC
Region 1 well
Permits
Well 33209 - Town of
Southold Dump
Depth 94 ft
Water at 42ft
Fire Protection
Well 59370 - Frank
McBride North Road
1500ft E of No. Rd.
depth - 90ft 12176
groundwater 50ft. Domestic
Well 46349 - Town of
Southold. No For Oil Heat
Domestic 12172
Depth - 62 ft
Groundwater - 42ft
Duck Pond Point
Peconic
Sound
COX LANE
ZACKS LANE
DUCK POND RD
BRIDGE
ROAD
ISLAND
LONG
LANE
DEPOT
ALVAHS
EUGENES
RD
BAY
LANE
East Cutchogue
Cutchogue Sta
Sacred Heart Cem.
Cutchogue Sch
PEQUASH
AVE
Cutchogue
PO
BM 32
Cutchogue
BM 10
BM 29
Waterville
OREGON
ELIJAHS
MILL
NORTH
LONG
ISLAND
LANE
ALVAHS
LA
NEW SUFFOLK
Wickham
Creek
LITTLE NECK
RD
East Neck
S O U T H O L D

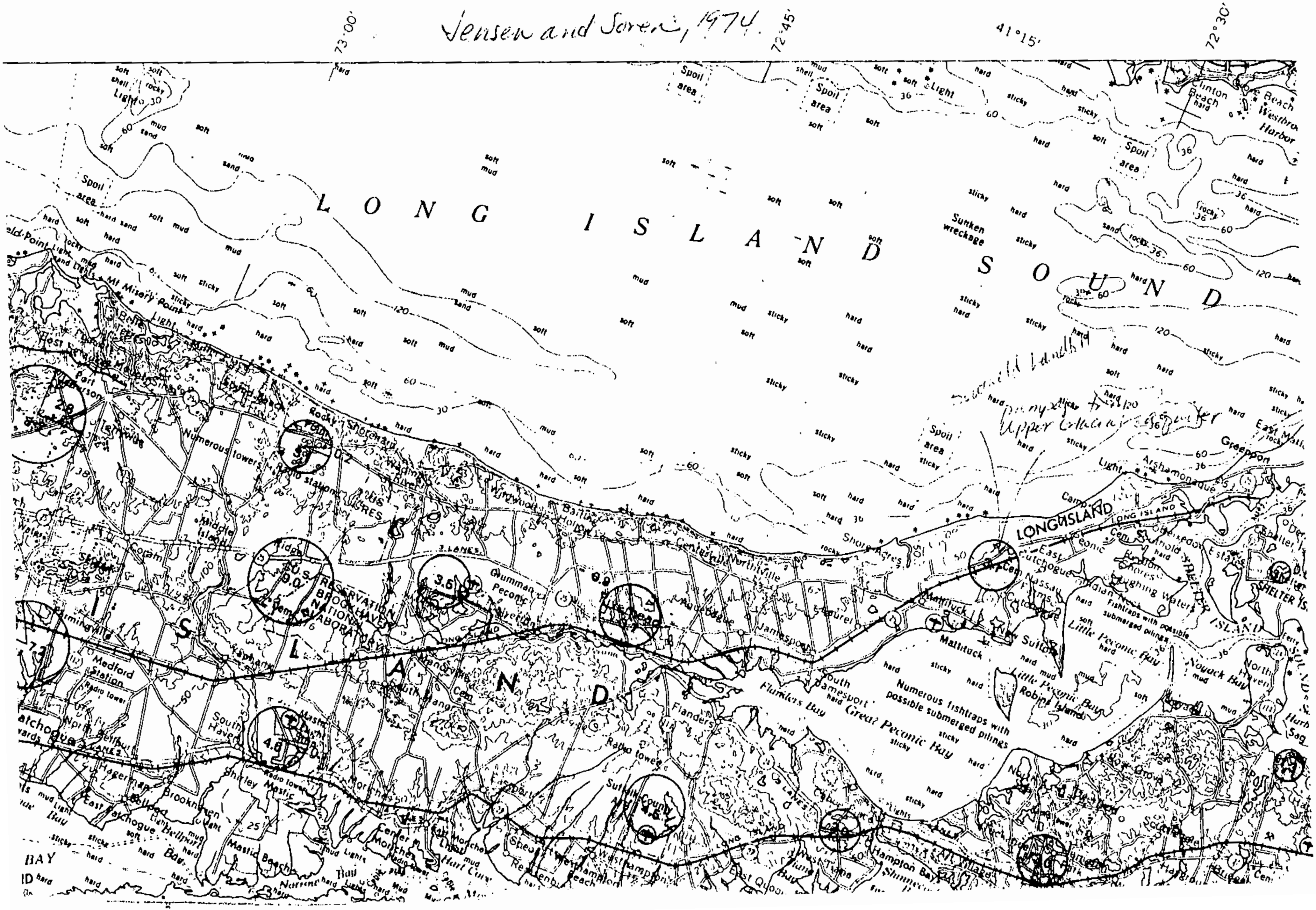
Prepared in cooperation with the
SUFFOLK COUNTY WATER AUTHORIT
and
SUFFOLK COUNTY DEPARTMENT OF ENVIRONMEN

Jensen and Scott, 1974



MAP SHOWING POTENTIOMETRIC SURFACE OF WATER IN THE LOWER PART OF THE MAGOTHY AQUIFER, SPRING 1971

Jensen and Soren, 1974.



RO WA PU GE

. Pumpage from Suffolk County's aquifers increased from about 40 mgd in 1950 to about 155 mgd in 1970, to supply a population that has been increasing rapidly since the end of World War II. The greatest increases in population and ground-water pumpage have been in the western part of the county. Before about 1960, wells tapping the upper glacial aquifer supplied nearly all the water used in Suffolk County. Since then, pumpage from the Magothy aquifer has increased, and in 1970, the wells tapping the Magothy aquifer supplied about one-third the water used. (See map showing areal distribution of major pumpage by aquifer 1970.)

CHANGES OF GROUND WATER IN STORAGE

An area of about 140 square miles in west-central Suffolk County is underlain by about 4.5 trillion gallons of fresh water (Soren, 1971a, p. 20). By extrapolation, the total fresh ground water beneath all the county is probably 4 to 5 times this volume.

Withdrawals of ground water have caused the water table in some parts of the county to decline as much as 25 feet from earliest known levels in 1903 (map showing net change in the position of the water table) and have probably caused a small regional but generally undetected landward advance of salty ground water. The decline of the water table reflects a loss of 60 to 80 billion gallons of fresh water from the ground-water reservoir between 1903 and 1971. However, this loss of ground water from storage is less than 1 percent of the total ground water in storage in Suffolk County.

SELECTED REFERENCES

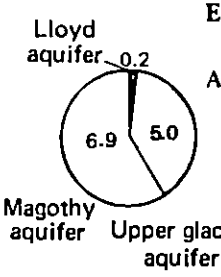
Cohen, Philip, Franke, O.L., and Foxworthy, B.L., 1968, An atlas of Long Island's water resources: New York Water Resources Comm.[1] Bull. 62, 117 p.

——— 1970, Water for the future of Long Island, New York: New York State Dept. Environmental Conserv. Water Resources Bull. 62A, 36 p.

Cohen, Philip, Franke, O.L., and McClymonds, N.E., 1969, Hydrologic effects of the 1962–66 drought on Long Island, New York: U.S. Geol. Survey Water-Supply Paper 1879-F, 18 p.

Cohen, Philip, Vaupel, D.E., and McClymonds, N.E., 1971, Detergents in the streamflow of Suffolk County, Long Island, New York, *in* Geological Survey Research, 1971: U.S. Geol. Survey Prof. Paper 750-C, p. C210–C214.

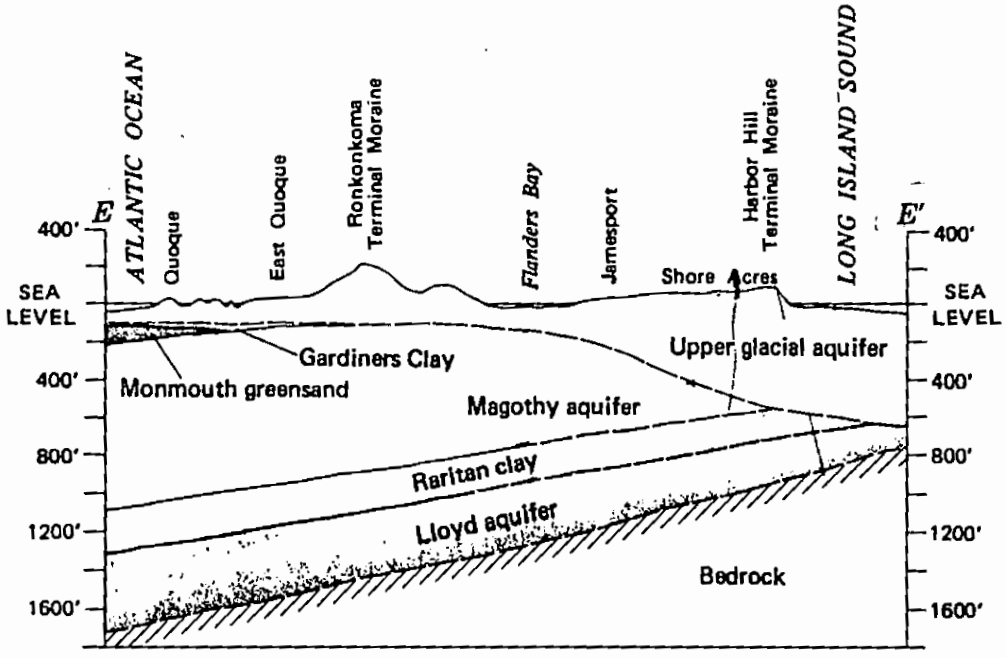
Collins, M.A., Gelhar, L.W., 1970, Ground-water hydrology of the Long Island aquifer system: Mass. Inst. Technology, Hydrodynamics Lab. Rept. no. 122, 185 p.

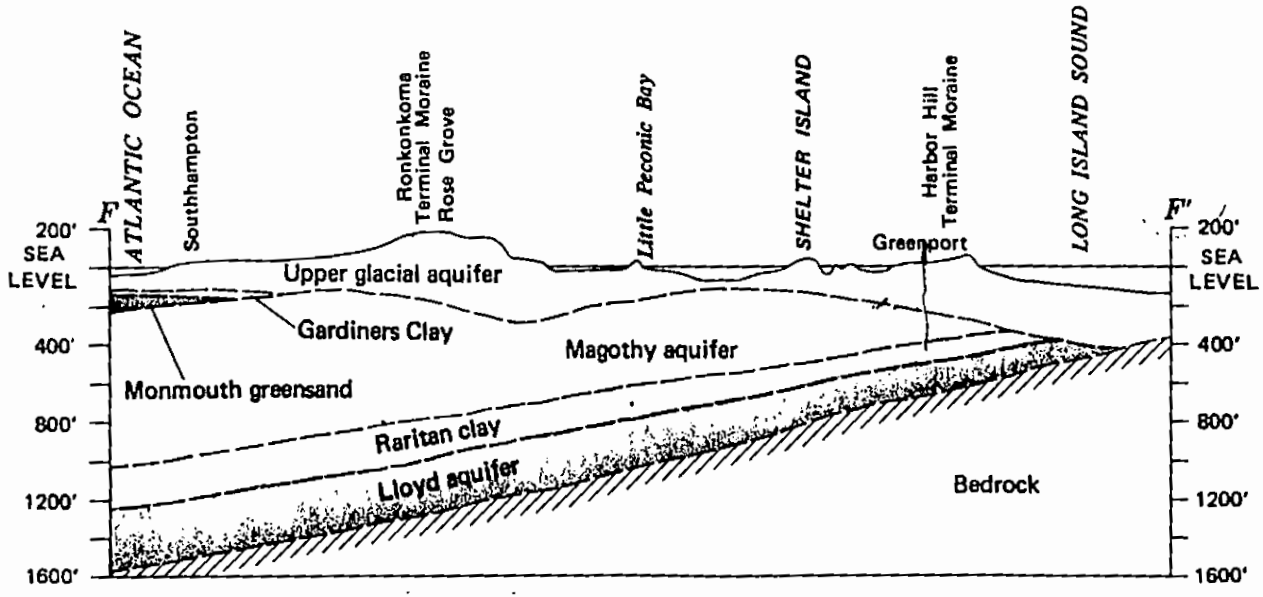


EXPLANATION

APPROXIMATE AREAL CENTER OF MAJOR GROUND-WATER PUMPING AND SOURCE AQUIFERS – Diameter of circle is proportional to pumpage; number is average daily pumpage, in million gallons per day

Isbister and Sirkin, 1974





HYDROGEOLOGIC UNITS AND STRATIGRAPHY

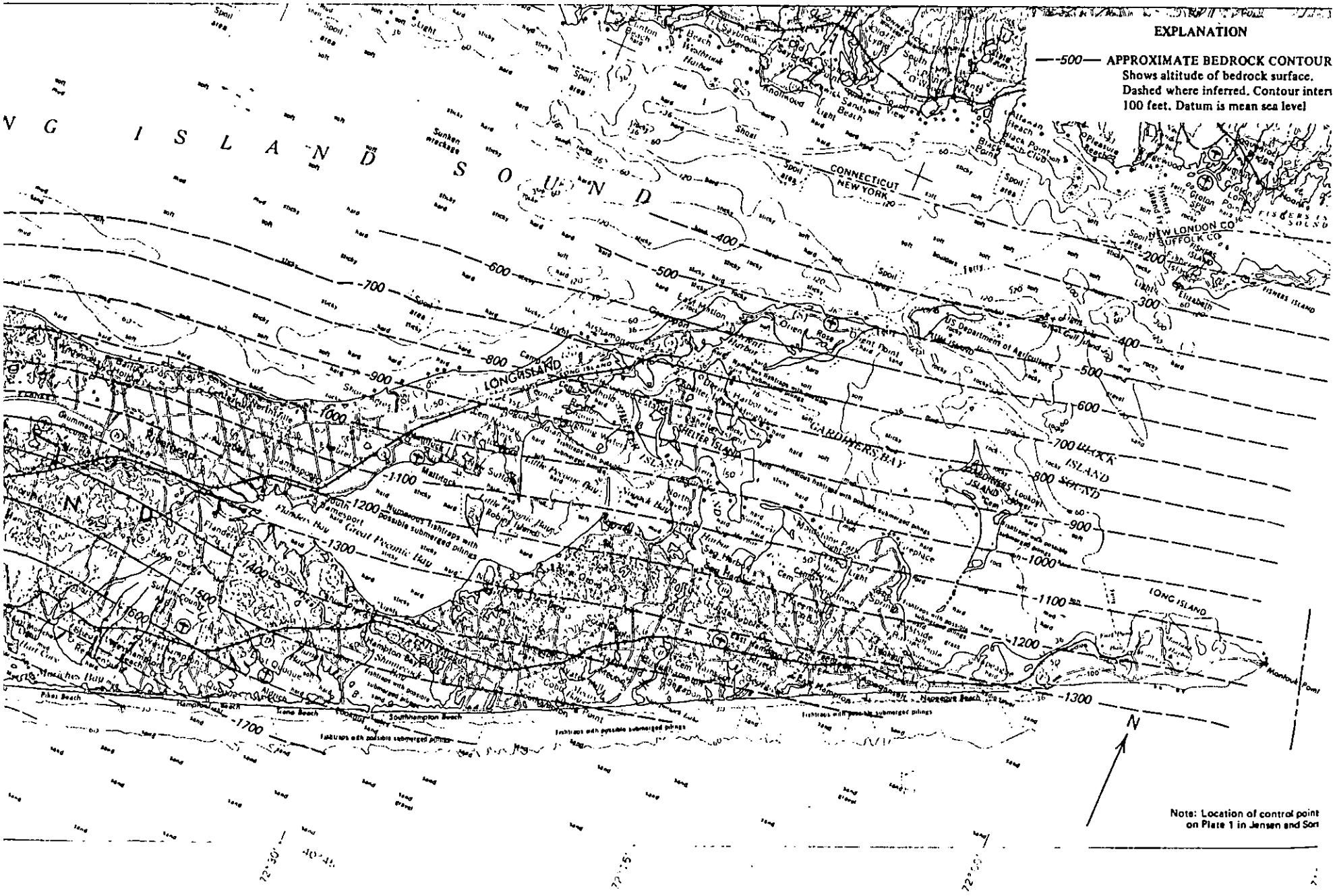
(Major water-bearing units are indicated by blue shading)

Jensen and Soren 1974

Geologic unit	Hydrogeologic unit[1]	Approximate thickness (feet)	Description and water-bearing properties
Shore, beach, salt-marsh deposits, and artificial fill	Upper glacial aquifer	0–60	Beach sand and gravel and dune sand, tan, brown, and white and black, brown, and gray bay-bottom deposits of clay and silt. Beach and dune deposits in shore areas contain thin lenses of fresh water underlain by salty ground water. Clay and silt in bay bottoms tend to confine water in underlying strata.
Till; includes terminal-, ground-, and ablation-moraine deposits		0–150	Clay, silt, sand, gravel, and boulders, tan, brown, and brownish-gray. Deposits are commonly unsorted and unstratified but can also include crudely to well sorted and stratified glacial drift. Deposits lie chiefly above water table and are not an important source of ground water. Hydraulic conductivity is very low to moderate. Clayey till causes local perched ground-water bodies.
Lacustrine and marine deposits		0–300	Lacustrine deposits consist chiefly of clay and silt, brown, brownish-gray, and gray. These beds occur at many places in the northern part of the county, chiefly in the Smithtown area where they have been referred to as the "Smithtown clay." Marine beds of gray-green clay and silt occur at shallow depths in shoreline areas. Hydraulic conductivity is generally very low. Not a source of ground water. Deposits serve chiefly to confine water in underlying strata.
Outwash deposits		0–350	Stratified fine to coarse sand and gravel, light- to dark-brown, tan, and yellowish-brown. Hydraulic conductivity of outwash is usually high, estimated to be as much as 200 feet per day. Wells screened in outwash deposits yield as much as 2,000 gallons per minute and have specific capacities that are usually more than 50 gallons per minute per foot of drawdown in the well. Deposits generally contain water under water-table conditions. The Mannetto Gravel of Pliocene(?) age (below) is included with these deposits because of lithologic resemblance and physical continuity. Mannetto beds lie above the water table and are not a source of water.
UNCONFORMITY			
Gardiners Clay	Gardiners Clay	0–75	Marine deposits of clay and silt with some interbedded sand and gravel, greenish-gray and gray. Deposits have low hydraulic conductivity and confine water in underlying strata. Unit occurs mainly along southshore area.
Mannetto Gravel	See "upper glacial aquifer, outwash deposits," above	0–125	See "outwash deposits," above.
Monmouth Group	Monmouth greensand[3]	0–200	Interbedded marine deposits of clay, silt, and sand, dark-greenish-gray, greenish-black, greenish, dark-gray, and black, containing much glauconite and lignite. Unit has low hydraulic conductivity and confines water in underlying Magothy aquifer in southshore area.
UNCONFORMITY			
Matawan Group-Magothy Formation undifferentiated	Magothy aquifer	0–1,000	Deposits consist of gray to white fine to coarse sand with interstitial clay, silt, and lignite, interbedded with lenses and thin to thick beds of light- to dark-gray clay, silt, and clayey and silty sand, and laminae and thin beds of lignite and pyrite. Basal 100 to 200 feet is generally composed of coarse sand and gravel beds. Commonly with much interstitial clay and silt, interbedded with strata similar to those in upper part. Hydraulic conductivity of unit varies widely but is estimated to average about 70 feet per day. Wells screened in the Magothy aquifer yield as much as 1,500 gallons per minute, and they have specific capacities that are usually less than 50 gallons per minute per foot of drawdown in the well. Water in the aquifer is poorly to well confined; confinement is greatest near south shore where unit is overlain by Monmouth greensand and Gardiners Clay.

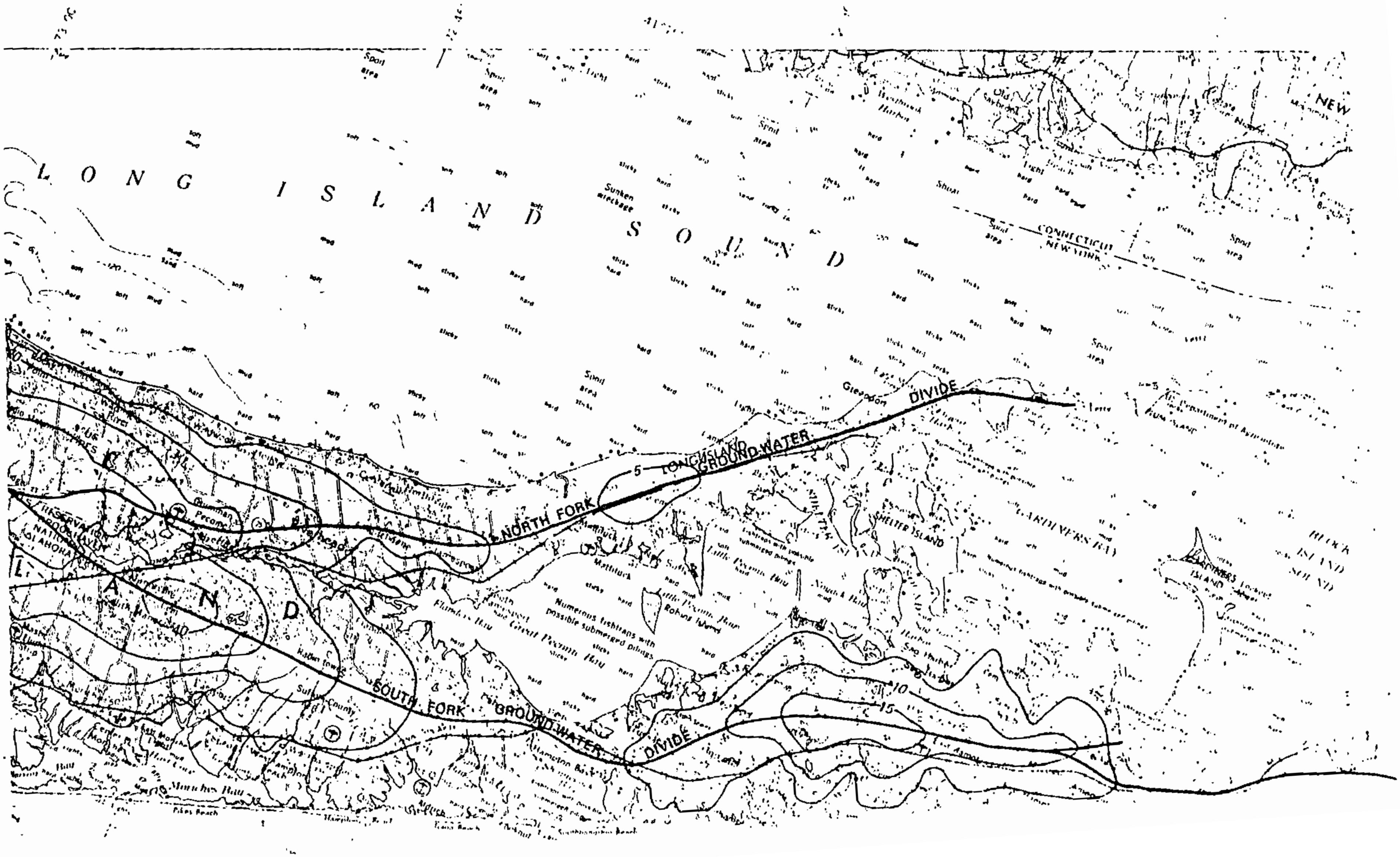
MAP SHOWING SURFICIAL GEOLOGY

(Adapted largely from Fuller, 191



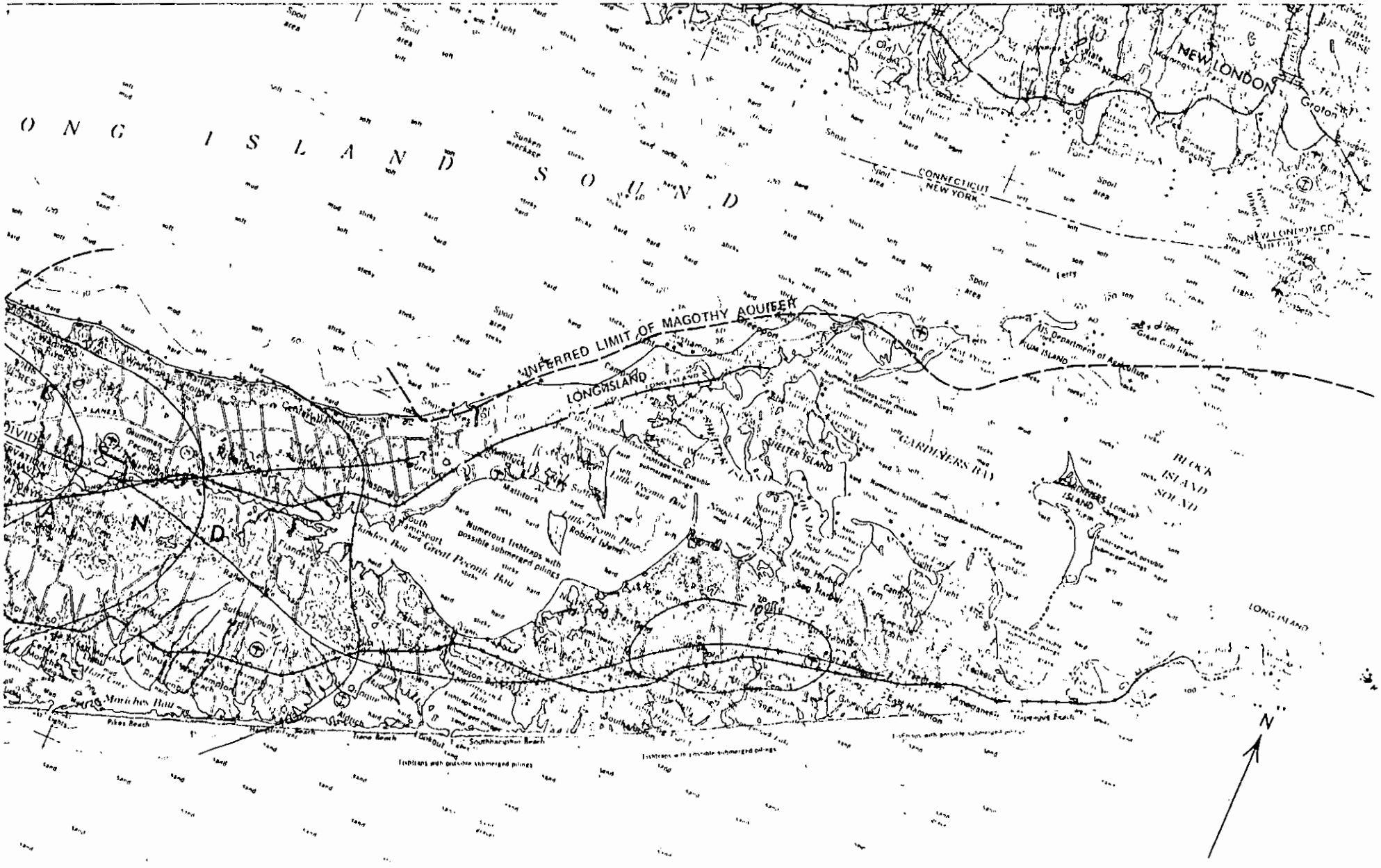
Note: Location of control point on Plate 1 in Jensen and Sor

MAP SHOWING CONFIGURATION OF THE BEDROCK SURFACE


LONG ISLAND SOUND
NORTH FORK GROUND-WATER DIVIDE
SOUTH FORK GROUND-WATER DIVIDE
SHELTER ISLAND
CONNECTICUT
NEW YORK
NEW
Sunken wreckage
Numerous fishtraps with possible submerged pilings
Great Peconic Bay
Little Peconic Bay
Robins Island

Hydrology by H.M. Jensen and Julian
(Adapted in part from Kimmel, 1971)

MAP SHOWING ALTITUDE OF WATER TABLE, SPRING 1971



underlain by terminal-moraine deposits, the depth to the water table is more than 50 feet, and in small areas the depth to the water table is more than 200 feet. Depths to the water table near the northern coast of the island generally are more than 20 feet, except adjacent to stream channels or in narrow bands near the shoreline.

GROUND-WATER RESERVOIR

HYDROLOGIC FEATURES OF THE GROUND-WATER RESERVOIR

The overall hydrogeologic setting of Long Island was described in considerable detail by Veatch (1906), Fuller (1914), and Suter, De Laguna, and Perlmutter (1949). The geology and related hydrology of several smaller areas of Long Island have been studied in greater detail by others, including De Laguna (1963), Isbister (1966), Lubke (1964), Lusczynski and Swarzenski (1966), Perlmutter and Geraghty (1963), Pluhowski and Kantrowitz (1964), and Swarzenski (1963).

Long Island is underlain by consolidated bedrock, which, in turn, is overlain by a wedge-shaped mass of unconsolidated rock materials (fig. 8).[1] These materials, which constitute Long Island's ground-water reservoir, consist primarily of a series of Pleistocene glacial deposits and Cretaceous fluvial or deltaic deposits composed of gravel, sand, silt, clay, and mixtures thereof. The Cretaceous deposits were eroded by

[1] The actual dip of the upper bedrock surface is slightly less than 1° to the southeast. The much greater inclination of the bedrock surface and the Magothy aquifer shown in figure 8 is due to the large vertical-scale exaggeration of this cross section.

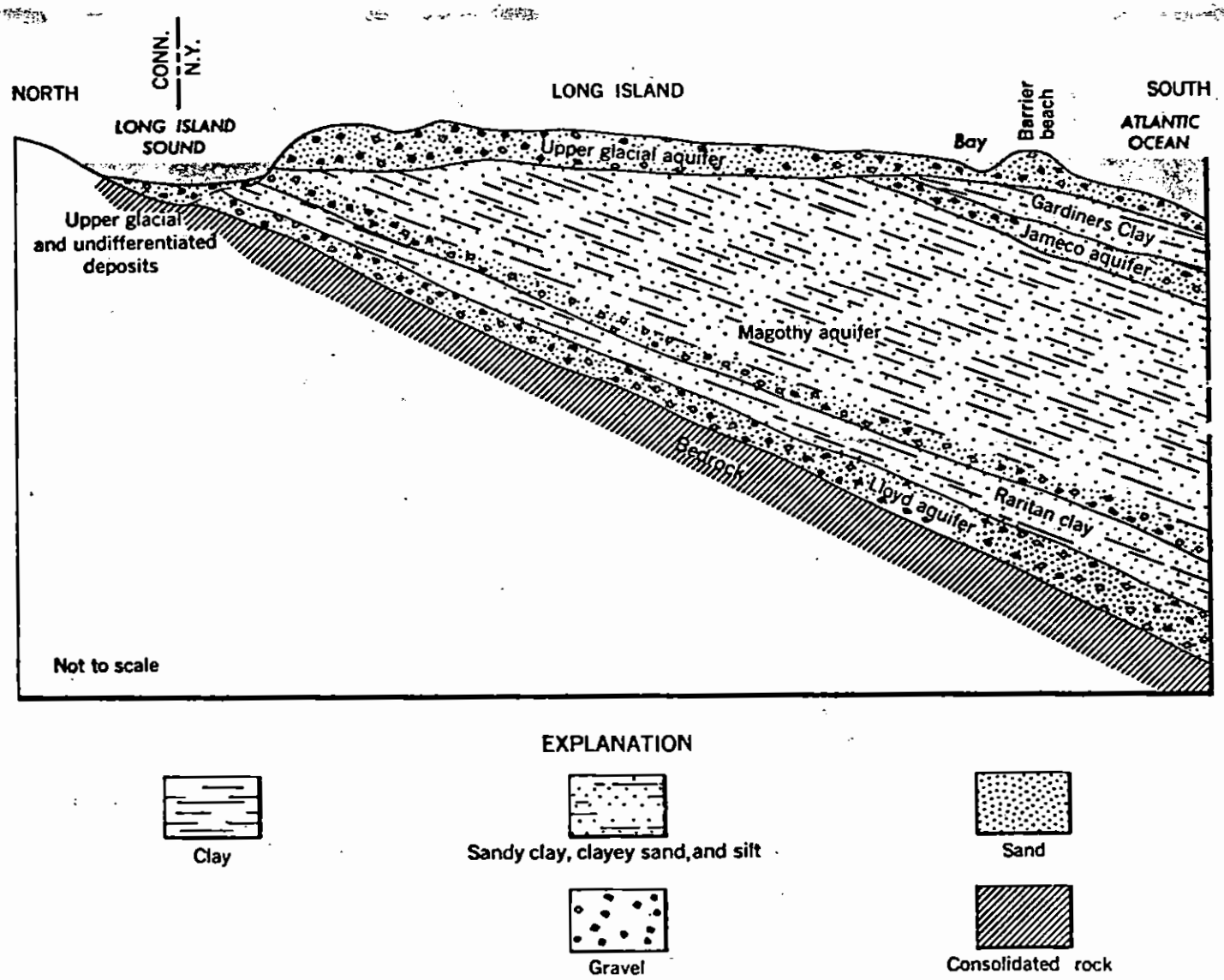


FIGURE 8.—Geologic features of the ground-water reservoir.

Franke and McClymonds, 1972

streams and glaciers so that the Pleistocene deposits e[illegible]n an irregular Cretaceous surface, and in places [illegible] Pleistocene deposits fill valleys cut by preglacial nd glacial streams. These valleys have been fairly [illegible]ll defined in Kings and Queens Counties and along [illegible] northern margin of the island eastward to the [illegible]ddle of Suffolk County. In eastern Suffolk County, owever, data on the contact between the Pleistocene [illegible] the Cretaceous are very sparse.

[illegible]e upper surface of the Cretaceous deposits is bove sea level in a large area in northern Nassau and [illegible]ern Suffolk Counties, and in all but a few small [illegible]s, the Pleistocene deposits cover the Cretaceous eposits throughout Long Island. Pertinent informa- [illegible] concerning the principal hydrogeologic units [illegible] in the ground-water reservoir are briefly sum- marized in table 2.

Ground water in the uppermost part of the zone f[illegible]turation on Long Island (mainly in the upper [illegible]al aquifer, but locally also in the Magothy quifer) is generally under water-table conditions. [illegible]sian conditions predominate in most of the other a[illegible] of the ground-water reservoir of Long Island, here the saturated deposits are overlain and confined [illegible]ilty and clayey layers of low hydraulic conduc- [illegible]y. The hydraulic head in the confined aquifers anges from several feet below the water table to [illegible]y 20 feet above it. At places along the north and [illegible] shores and on the barrier beaches, the head in [illegible]e Lloyd aquifer is high enough to cause some wells hich penetrate this aquifer to flow.

[illegible] addition to the Raritan clay, which confines water [illegible]e Lloyd aquifer, the other major well-defined onfining layer in the ground-water reservoir is the [illegible]liners Clay. This unit locally confines water in [illegible]ameco and Magothy aquifers. Numerous clayey nd silty layers in the Magothy aquifer and clay [illegible] in the glacial deposits also are significant con- [illegible]g layers. Normally, the degree of confinement in [illegible]e Magothy aquifer increases with depth as more [illegible] more clayey layers intervene between the deep [illegible] and the water table.

BOUNDARIES OF THE FRESH GROUND-WATER RESERVOIR

[illegible]e boundaries of the fresh ground-water reservoir [illegible]e the water table, the fresh-salt water interface, and [illegible]e bedrock surface. The estimated average position [illegible]e water table under natural conditions is shown [illegible]gure 9. The position of the contours is based on [illegible] map of the water table in Kings, Queens, and [illegible]au Counties in 1903 (prepared by Veatch in 1906), [illegible] on later water-table maps of Suffolk County. Major features of this map are the two areas of highest ground-water altitude (represented by closed 80-ft and 60-ft contours) which extend approximately westward in the north-central parts of Nassau and Suffolk Counties. Also noteworthy are the steep water-level gradients near the north shore of Long Island compared to the gradients near the south shore.

The water table, which is the upper boundary of the ground-water reservoir, is a dynamic (moveable) feature. Present information indicates that recharge to the water table occurs throughout virtually all of Long Island. Therefore, the water table is not, from the point of view of potential theory, a stream surface. It is instead a surface characterized by a constantly varying potential which is equal to the altitude of the water table at any point. Because the water table on Long Island is largely a recharging potential boundary of the ground-water reservior, streamlines flow perpendicularly from the water table into the ground-water reservoir. Locally, as near the shorelines where ground water is lost by evapotranspiration, the water table is a discharging potential boundary.

The ground-water reservoir is bordered laterally by a second moveable boundary—the fresh-salt water interface. The position of this interface (or these interfaces) is fairly accurately known only in southwestern Nassau and southeastern Queens Counties as a result of an intensive investigation by Lusczynski and Swarzenski (1966). A north-south cross section through the ground-water reservoir in this area (fig. 10) shows three separate salt-water wedges—a shallow wedge in the glacial aquifer and intermediate and deep wedges in the Magothy aquifer. Furthermore, a fourth wedge exists in the Lloyd aquifer somewhere seaward of the barrier beaches.

The occurrence of fresh ground water in the Lloyd aquifer below salty ground water in the lower part of the Magothy aquifer has never been adequately explained. However, this occurrence must be related in some way to the relatively impermeable Raritan clay overlying the Lloyd aquifer. At least four separate wedges of salty ground water with relative positions approximately as indicated in figure 10 probably occur for a considerable distance eastward from western Nassau County (on the order of tens of miles) along the south shore of Long Island.

Very scanty information indicates that the Lloyd aquifer and the deep Magothy aquifer contain salty ground water beneath the Forks of Long Island. The fresh ground water beneath the Forks occurs in a lens ranging in thickness from a few feet to several hundred feet.

Franke and McClymonds, 1972

TABLE 2.—*Summary of the rock units and their water-bearing properties, Long Island, N.Y.*

[After McClymonds and Franke, 1971]

System	Series	Geologic unit	Hydrogeologic unit	Approximate maximum thickness (feet)	Depth from land surface to top (feet)	Character of deposits	Water-bearing properties
Quaternary	Holocene	Artificial fill, salt marsh deposits, stream alluvium, and shoreline deposits.	Holocene deposits	50	0	Sand, gravel, clay, silt, organic mud, peat, loam, and shells. Colors are gray, brown, green, black, and yellow. Holocene artificial-fill deposits of gravel, sand, clay, and rubbish.	Permeable sandy beds beneath barrier beaches yield fresh water at shallow depths, brackish to salty water at greater depth. Clay and silt beneath bays retard salt-water encroachment and confine underlying aquifers. Stream-flood-plain and marsh deposits may yield small quantities of water, but are generally clayey or silty and much less permeable than underlying upper glacial aquifer.
	Pleistocene	Upper Pleistocene deposits	Upper glacial aquifer	600	0–50	Till (mostly along north shore and in moraines) composed of clay, sand, gravel, and boulders. Forms Harbor Hill and Ronkonkoma terminal moraines. Outwash deposits (mostly between and south of terminal moraines, but also interlayered with till) consist of quartzose sand, fine to very coarse, and gravel, pebble to boulder sized. Glaciolacustrine deposits (mostly in central and eastern Long Island) and marine clay (locally along south shore) consist of silt, clay, and some sand and gravel layers; includes "20-foot clay" in southern Nassau County and Queens County. Colors are mainly gray, brown, and yellow; silt and clay locally are grayish green. Contains shells and plant remains, generally in finer grained beds; also contains Foraminifera. Contains chlorite, biotite, muscovite, hornblende, olivine, and feldspar as accessory minerals; "20-foot clay" commonly contains glauconite.	Till is poorly permeable; commonly causes perched-water bodies and impedes downward percolation of water to underlying beds. Outwash deposits are moderately to highly permeable; specific capacities of wells tapping them range from about 10 to more than 200 gpm per foot of drawdown. Good to excellent infiltration characteristics. Glaciolacustrine and marine clay deposits are mostly poorly permeable, but locally have thin moderately permeable layers of sand and gravel; generally retard downward percolation of ground water. Contains fresh water, except near the shorelines. Till and marine deposits locally retard salt-water encroachment.
		—Unconformity?—					
		Gardiners Clay	Gardiners Clay	300	50–400	Clay, silt, and few layers of sand and gravel. Colors are grayish green and brown. Contains marine shells, Foraminifera, and lignite; also glauconite, locally. Altitude of top generally is 50–60 ft below mean sea level. Occurs in Kings and Queens Counties, southern Nassau County, and Suffolk County; similar clay occurs in buried valleys near north shore.	Poorly permeable; constitutes confining layer for underlying Jameco aquifer. Locally, sand layers yield small quantities of water.
		—Unconformity?—					
		Jameco Gravel	Jameco aquifer	200	50–550	Sand, fine to very coarse, and gravel to large-pebble size; few layers of clay and silt. Gravel is composed of crystalline and sedimentary rocks. Color is mostly dark brown. Contains chlorite, biotite, muscovite, hornblende, and feldspar as accessory minerals. Occurs in Kings and Queens Counties, and southern Nassau County; similar deposits occur in buried valleys near north shore.	Moderately to highly permeable; contains mostly fresh water, but brackish water and water with high iron content locally in southeastern Nassau County and southern Queens County. Specific capacities of wells in the Jameco range from about 20 to 150 gpm per foot of drawdown.
		—Unconformity—					
Tertiary(?)	Pliocene(?)	Mannetto Gravel	(Commonly included with upper glacial aquifer.)	300	0–120	Gravel, fine to coarse, and lenses of sand; scattered clay lenses. Colors are white, yellow, and brown. Occurs only near Nassau-Suffolk County border near center of island.	Highly permeable, but occurs mostly above water table. Excellent infiltration characteristics.
		—Unconformity—					
Cretaceous		Magothy Formation	Magothy aquifer	1,100	0–600	Sand, fine to medium, clayey in part; interbedded with lenses and layers of coarse sand and sandy and solid clay. Gravel is common in basal 50–200 ft. Sand and gravel are quartzose. Lignite, pyrite, and iron oxide concretions are common; muscovite, magnetite, rutile, and garnet are accessory minerals. Colors are gray, white, red, brown, and yellow.	Most layers are poorly to moderately permeable; some are highly permeable locally. Specific capacities of wells in the Magothy generally range from 1 to about 30 gpm per foot of drawdown, rarely are as much as 80 gpm per ft. Water is unconfined in uppermost parts, elsewhere is confined. Water is generally of excellent quality but has high iron content locally along north and south shores. Constitutes principal aquifer for public-supply wells in western Long Island, except Kings County where it is mostly absent. Has been invaded by salty-ground water locally in southwestern Nassau County and southern Queens County, and in small areas along north shore.

Franke and McClymonds, 1972

TABLE 2.—*Summary of the rock units and their water-bearing properties, Long Island, N.Y.*—Continued

lem	Series	Geologic unit	Hydrogeologic unit	Approximate maximum thickness (feet)	Depth from land surface to top (feet)	Character of deposits	Water-bearing properties
		Unconformity					
Cretaceous	Upper Cretaceous	Raritan Formation: Clay member	Raritan clay	300	70–1,500	Clay, solid and silty; few lenses and layers of sand; little gravel. Lignite and pyrite are common. Colors are gray, red, and white, commonly variegated.	Poorly to very poorly permeable; constitutes confining layer for underlying Lloyd aquifer. Very few wells produce appreciable water from these deposits.
		Raritan Formation: Lloyd Sand Member	Lloyd aquifer	500	200–1,800	Sand, fine to coarse, and gravel, commonly with clayey matrix; some lenses and layers of solid and silty clay; contains thin lignite layers and iron concretions locally. Locally, has gradational contact with overlying Raritan clay. Sand and most of gravel are quartzose. Colors are yellow, gray, and white; clay is red locally.	Poorly to moderately permeable. Specific capacities of wells in the Lloyd generally range from 1 to about 25 gpm per foot of drawdown, rarely are as much as 50 gpm per ft. Water is confined under artesian pressure by overlying Raritan clay; generally of excellent quality but has high iron content locally. Has been invaded by salty ground water locally in necks near north shore, where aquifer is mostly shallow and overlying clay discontinuous. Called deep confined aquifer in some earlier reports.
		Unconformity					
brian		Bedrock	Bedrock	.....	0–2,700	Crystalline metamorphic and igneous rocks; muscovite-biotite schist, gneiss, and granite. A soft clayey zone of weathered bedrock locally is more than 100 ft thick.	Poorly permeable to virtually impermeable; constitutes virtually the lower boundary of ground-water reservoir. Some hard, fresh water is contained in joints and fractures, but is impracticable to develop at most places; however, a few wells near the western edges of Queens and Kings Counties obtain water from the bedrock.

e fresh-salt water interface is not a sharp dary. The horizontal distance over which the ssolved-solids content of ground water changes completely fresh to completely salty is gen- y on the order of 2–3 thousand feet near the uth shore of Long Island. Over this distance, dissolved-solids content of the ground water ases at first gradually in the direction of the ity ground water and then more rapidly.

The fresh-salt water interface is a complex streamline surface, and fresh ground water discharging into the ocean and bays moves parallel to the interface and not across it. The hydrodynamics of a stable interface and, to an even greater degree, an unstable interface that changes position in response to changes in head within the ground-water reservoir, is complicated and beyond the scope of this report. (See Lusczynski, 1961; Cooper, 1964; and Kohout, 1964.)

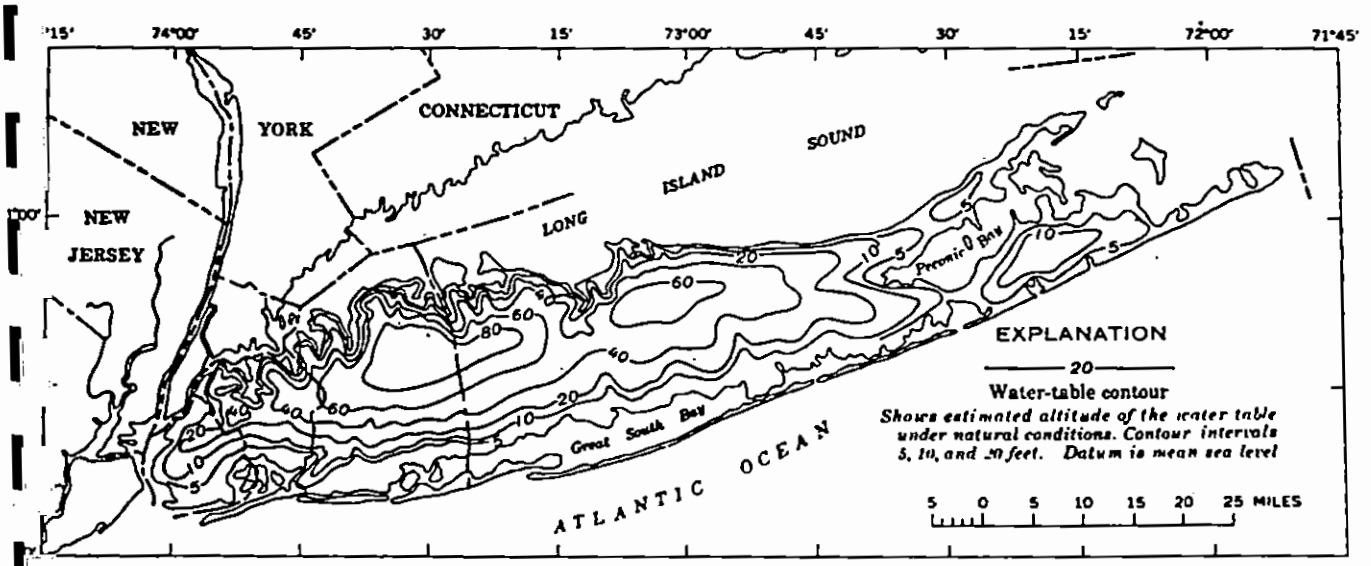


FIGURE 9.—Estimated average position of the water-table under natural conditions.

Franke and McClymonds, 1972.

Appendix C

47-15-11(2/80)

HAZARDOUS WASTE DISPOSAL SITES REPORT
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Code:

Site Code: 152062

Name of Site: Southold Landfill Region: 1

County: Suffolk Town/City Cutchogue

Street Address North Road

Status of Site Narrative: The Southold Landfill has been opeating continuously since 1951 at North Rd. in Cutchogue, NY. This facility accepts municipal and domestic wastes, demolition and landscaping debris, and cesspool and septic tank wastes. The Order on Consent dated May 16, 1979, established violations by the landfill operations of part 360 of 6 NYCRR. On August 31, 1981, the landfill was classified as an open dump because it was found to be: (a) in non-compliance on safety (explosive gases beyond the property boundary), 40 CFR part 273.6, and (b) in violation of NYS (6NYCRR Part 703) ground water standards. On January 5, 1982, the Town of Southold, which was not yet in compliance with the Order on Consent, was contacted by NYSDEC to set up a compliance monitoring conference.

Type of Site: Open Dump [X] Treatment Pond(s) [ ] Number of Ponds
Landfill [X] Lagoon(s) [X] Number of Lagoons
Structure [ ]

Estimated Size 41 Acres

Hazardous Wastes Disposed? Confirmed [ ] Suspected [X]

*Type and Quantity of Hazardous Wastes:

TYPE	QUANTITY (Pounds, drums, tons, gallons)
PCB 1260, Iron, Manganese,	Unknown
Chlorides, Copper and Zinc were	
detected in a well located on site.	

* Use additional sheets if more space is needed.

Name of Current Owner of Site: Town of Southold

Address of Current Owner of Site: Main Road, Southold, NY 11958

Time Period Site Was Used for Hazardous Waste Disposal:

_____, 19 51 To Present , 19 85

Is site Active [X] Inactive [ ]
(Site is inactive if hazardous wastes were disposed of at this site and site was closed prior to August 25, 1979)

Types of Samples: Air [ ] Groundwater [X] None [ ]
Surface Water [ ] Soil [ ]

Remedial Action: Proposed [ ] Under Design [ ]
In Progress [ ] Completed [ ]
Nature of Action:

Status of Legal Action: Order on Consent State [X] Federal [ ]

Permits Issued: Federal [ ] Local Government [ ] SPDES [ ]
Solid Waste [X] Mined Land [ ] Wetlands [ ] Other [ ]

Assessment of Environmental Problems:
Since PCB 1260, Iron, Manganese, Copper and Zinc were detected in an on site well, and also because some parameters such as chlorides (270 mg/1), color (30) and TDS (1500 mg/1) were in excess of the maximum values allowed; the potential exists for this contamination to reach drinking water supplies. TWo domestic wells are located approximately 400 ft. south of the site.

Assessment of Health Problems:
Potential for contamination of private drinking water wells located in the vicinity of the site.

Persons Completing this Form:

Luis Rivas _____

Woodward-Clyde Consultants , Inc. _____

April 5, 1985 _____

New York State Department of Environmental Conservation

Date _____

New York State Department of Health

_____

6/3/81
RPM:cl