ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE 1 INVESTIGATION
East Hampton Landfill
Site No. 152058
Town of East Hampton, Suffolk County
Final - June 1987

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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

Remediation

Prepared by:

EA SCIENCE AND TECHNOLOGY
A Division of EA Engineering, Science, and Technology, Inc.

EA REPORT DEC63A

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

EAST HAMPTON LANDFILL
TOWN OF EAST HAMPTON, SUFFOLK COUNTY
NEW YORK I.D. NO. 152058

Prepared for

Division of Solid and Hazardous Waste
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-0001

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A Division of EA Engineering, Science, and Technology, Inc.

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CONTENTS

	Page
1. EXECUTIVE SUMMARY	1-1
2. PURPOSE	2-1
3. SCOPE OF WORK	3-1
4. SITE ASSESSMENT	4-1
4.1 Site History	4-1
4.2 Site Topography	4-3
4.3 Site Hydrogeology	4-4
4.4 Site Contamination	4-7
5. NARRATIVE SUMMARY	5-1
6. ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS	6-1
6.1 Adequacy of Existing Data	6-1
6.2 Recommendations	6-1
6.3 Phase II Work Plan	6-1
APPENDIX 1	
APPENDIX 2	

1. EXECUTIVE SUMMARY

The East Hampton Landfill (New York I.D. No. 152058, EPA I.D. No. D097531990) is an active municipal landfill located in the Town of East Hampton, Suffolk County, New York (Figures 1-1 and 1-2, Photos 1-1 through 1-8). The property is owned and operated exclusively by the Town of East Hampton.

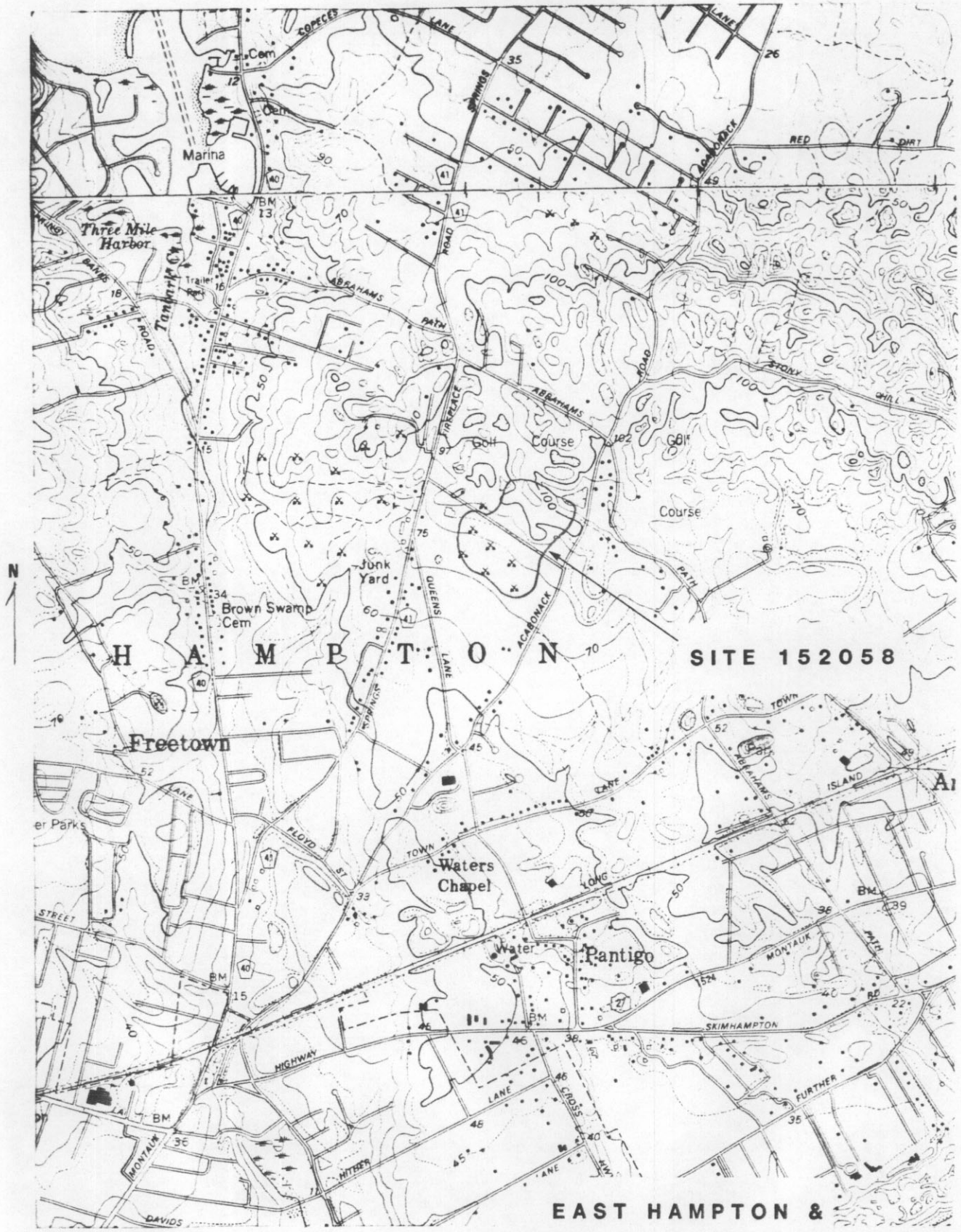
The landfill, established in the early 1960s on vacant land owned by the Town of East Hampton, has accepted municipal, commercial, light industrial garbage, and septage. The site is approximately 45 acres in size and is divided into separate disposal areas for use by the Town residents and commercial haulers, and for the disposal of metal debris and of brush. The approximate 5-acre area used by commercial haulers was built two years ago and is the only portion of the landfill that is lined. Large concrete rings have been placed in the landfill to aid in leachate collection. There are septage pits onsite that accept septage waste from local haulers. These are to be closed when construction of the Town sewage treatment plant is complete. Sludge from a pit was sampled in 1982 and analysis indicated contamination by methylene chloride, toluene, and phenol.

The preliminary HRS scores for this site are as follows: Migration Score (S_M) = 23.12 (S_{gw} = 40.00, S_{sw} = 0, S_a = 0), Fire and Explosion Score (S_{FE}) = N/A, and Direct Contact Score (S_{DC}) = 25.00. There are insufficient data available to prepare a final HRS score for this site. In order to prepare a final HRS score for this site, analytical data regarding the HSL quality of the ground water, air, and leachate will be necessary, thus requiring performance of a Phase II investigation. The proposed Phase II study would include the

installation of six test borings/observation wells, and the collection and analysis of ground-water, air, and leachate samples. If contaminant releases are confirmed, the maximum attainable S_M is 36.42. The estimated total cost to complete a Phase II investigation of the East Hampton Landfill site is $159,615.

Site Coordinates:
Latitude: 40°59'10"
Longitude: 72°10'05"

EAST HAMPTON LANDFILL


N
H A M P T O N
SITE 152058
Freetown
Junk Yard
Brown Swamp Cem
Three Mile Harbor
Marina
Golf Course
Golf Course
Waters Chapel
Water
Pantigo
Cem
Cem
BM
BM
BM
BM
ABRAHAMS PATH
ABRAHAMS PATH
ACABONACK
QUEENS
LANE
FLOYD
TOWN
LONG
HIGHWAY
MONTAUK
SKIMHAMPTON
FURTHER
CROSS
LANE
STREET
ISLAND
RED DIRT
STONY
TOWN
DAVIDS
LANE
LANE
LANE

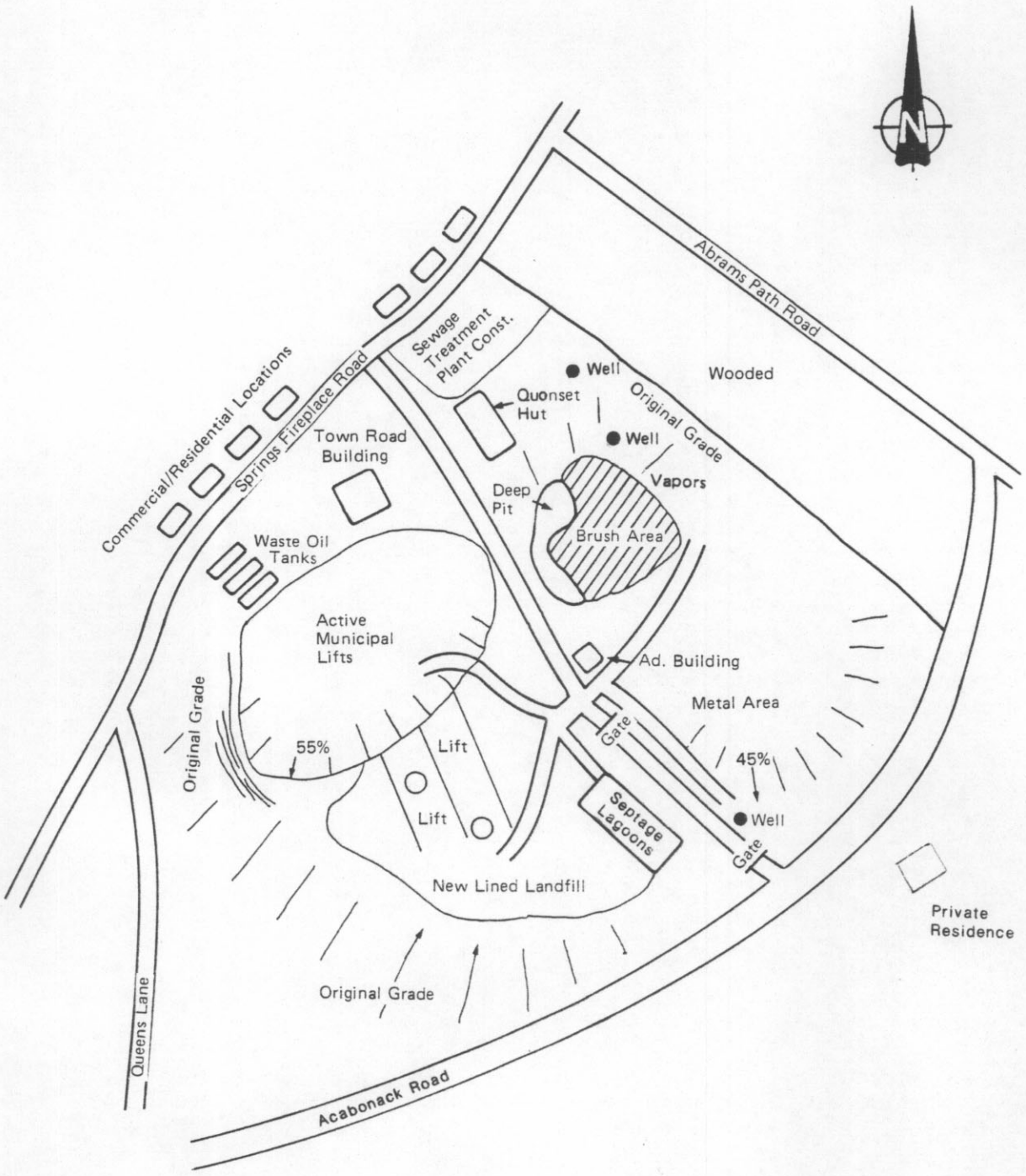
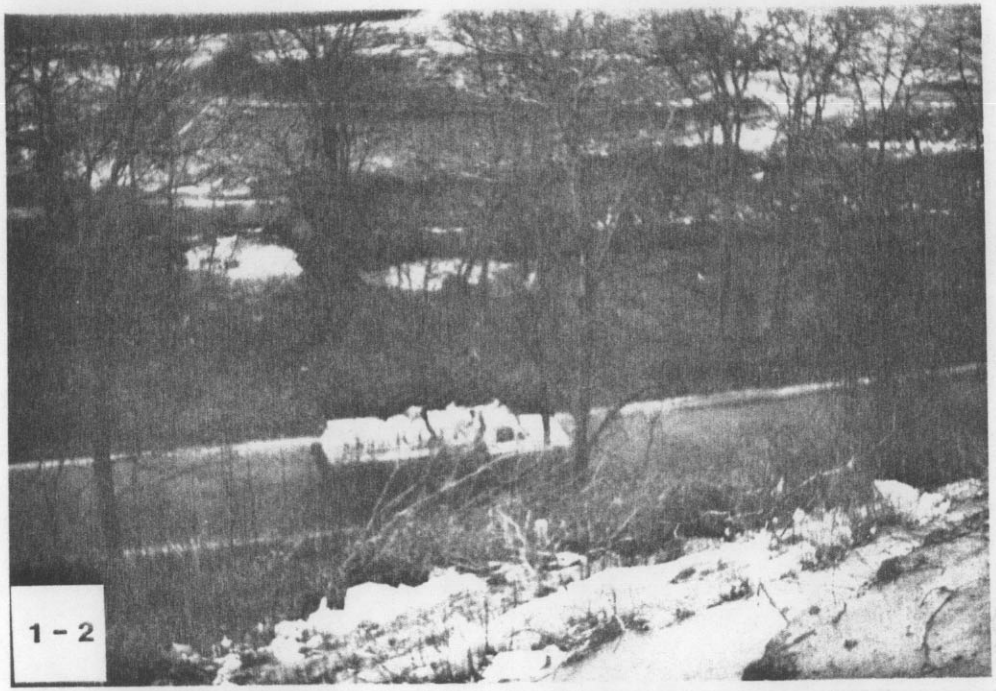
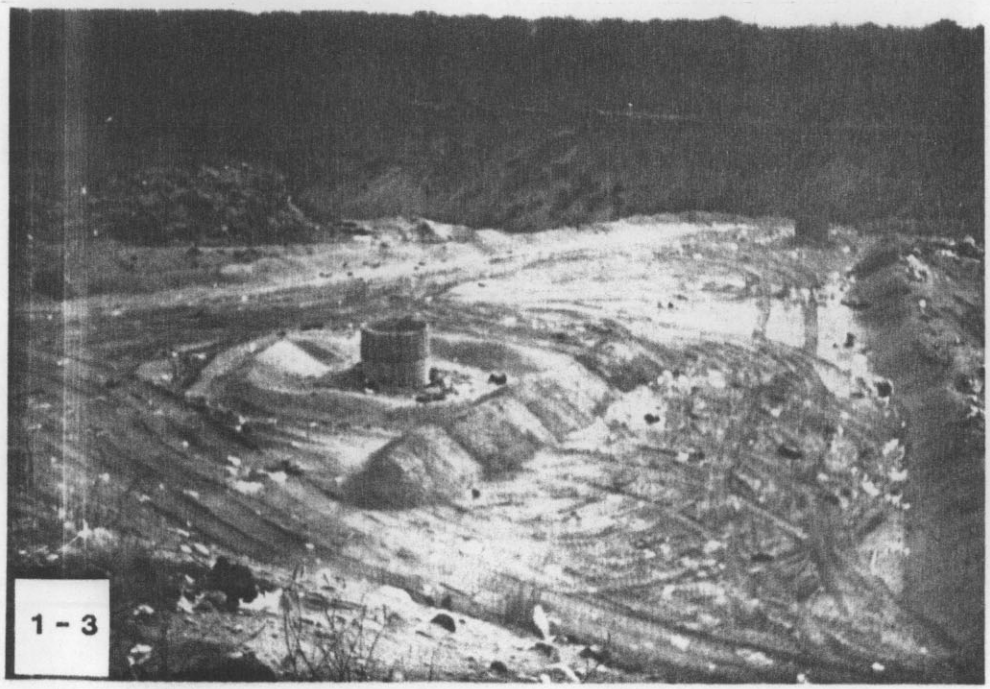
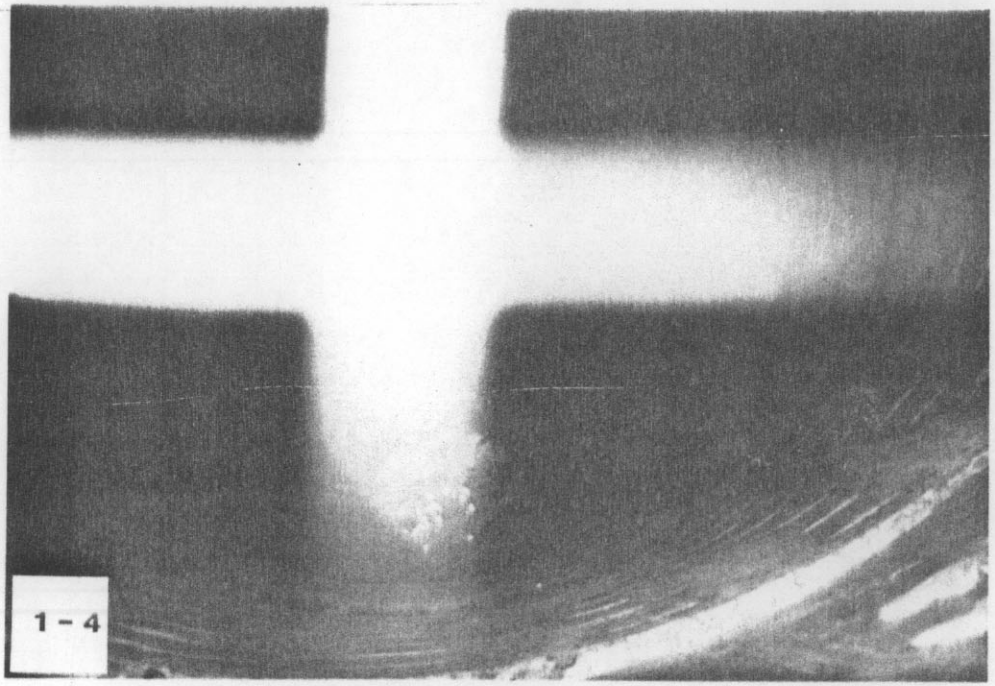


Figure 1-2. Site sketch. East Hampton Landfill, 21 January 1986. (Not to scale.)


NOTICE
1 - 1

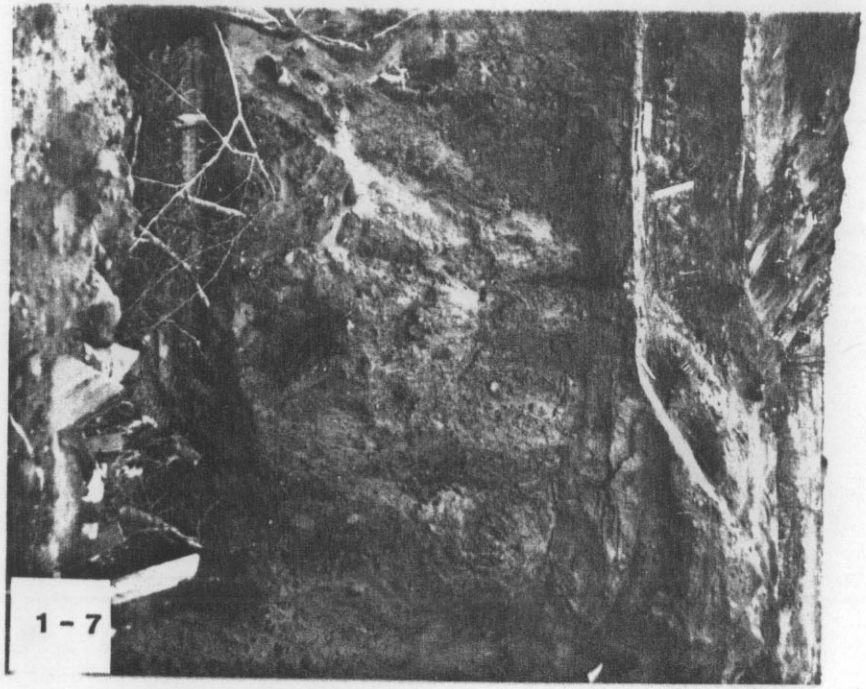

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1 - 7


1 - 8

PHOTO LOG - EAST HAMPTON LANDFILL

Photo	Description
1-1	Facing northwest this is the entrance to the landfill on Acabonack Road. The gate is locked at night, limiting vehicular access.
1-2	Standing on top of the metal debris pile and facing westward, this is a view of the septage lagoon and the active municipal lifts.
1-3	This is a view of the new, lined landfill, facing southwest. The concrete rings are part of the leachate collection system. A good soil profile is seen in the background, which also indicates the original grade of the ground surface.
1-4	This is a close-up of the leachate collecting in the concrete rings. There is a sheen on top of the liquid which was emphasized by throwing a rock down into the leachate immediately before shooting this photo.
1-5	Facing northwest, this is a view of the western edge of the active municipal lifts and the surrounding topography.
1-6	Standing on top of the metal debis pile and facing northwest, this is a view of the active municipal lifts.
1-7	This is a close-up soil profile taken in the deep pit in the northern section of the landfill. Though mostly sand, there are local clay lenses throughout the landfill area.
1-8	This is a view facing southwest towards the brush pile. The acrid vapors smelled during site inspection are seen rising above the tires in the photo.

2. PURPOSE

The East Hampton Landfill site was listed in the New York State Registry of Inactive Hazardous Wastes Sites because it is an active municipal landfill suspected of having received hazardous wastes.

The goal of the Phase I investigation of this site was to: (1) obtain available records on the site history from state, federal, county, and local agencies; (2) obtain information on site topography, geology, local surface water and ground-water use, previous contamination assessments, and local demographics; (3) interview site owners, operators, and other groups or individuals knowledgeable of site operations; (4) conduct a site inspection to observe current conditions; and (5) prepare a Phase I report. The Phase I report includes a preliminary Hazard Ranking Score (HRS), an assessment of the available information, and a recommended work plan for Phase II studies.

3. SCOPE OF WORK

The Phase I investigation of the East Hampton Landfill Site involved a site inspection by EA Science and Technology, as well as record searches and interviews. The following agencies or individuals were contacted:

Contact	Information Received
Mr. Gene Garypie Assistant Foreman Town of East Hampton Landfill 159 Pantigo Road East Hampton, New York 11937 (516) 324-2199	Site interview
Mr. Larry Penny Director, Natural Resources Town of East Hampton 159 Pantigo Road East Hampton, New York 11937 (516) 267-8462	Analytical data/site history
Mr. Anthony Candela, P.E. Senior Sanitary Engineer New York State Department of Environmental Conservation Division of Solid Waste SUNY Campus - Building 40 Stony Brook, New York 11794 (516) 751-7900	Site file
Mr. James H. Pim, P.E. Suffolk County Department of Health Services Hazardous Materials Management 15 Horseblock Place Farmingville, New York 11738 (516) 451-4634	Interview and site file

Contact	Information Received
Mr. Steve Carey/Mr. Dennis Moran Suffolk County Department of Health Services Bureau of Water Resources 225 Rabro Drive East Hauppauge, New York 11788 (516) 348-2893	Ground-water use; public water supplies and ground-water monitoring information
Mr. Dan Fricke Suffolk County Cooperative Extension Association 264 Griffing Avenue Riverhead, New York 11901 (516) 727-7850	Ground-water and surface water use for irrigation
Mr. William Schickler/Mr. Robert Bowen Suffolk County Water Authority Sunrise Highway and Pond Road Oakdale, New York 11769 (516) 589-5200	Public water supply and distribution
Mr. Doug Pica New York State Department of Environmental Conservation Division of Water SUNY Campus - Building 40 Stony Brook, New York 11794 (516) 751-7900	Ground-water use for irrigation
Mr. Allan S. Connell District Conservationist U.S. Department of Agriculture Soil Conservation Survey 127 East Main Street Riverhead, New York 11901	Ground-water use for irrigation
Mr. David DiSunno Chief Fire Inspector Town of East Hampton 159 Pantigo Road East Hampton, New York 11937 (516) 267-8585	Information regarding the threat of fire and/or explosion at the site
Mr. Kevin Walter, P.E. New York State Department of Environmental Conservation Division of Hazardous Waste Enforcement 50 Wolf Road Albany, New York 12233-0001 (518) 457-4346	No file/information

Contact	Information Received
Mr. John Iannotti, P.E. New York State Department of Environmental Conservation Bureau of Remedial Action 50 Wolf Road Albany, New York 12233-0001 (518) 457-5637	No file/information
Mr. Earl Barcomb, P.E. New York State Department of Environmental Conservation Bureau of Municipal Waste Landfill Operations Section Vatrano Road Albany, New York 12205 (518) 457-2051	Site file
Mr. Peter Skinner, P.E. New York State Attorney General's Office Room 221 Justice Building Albany, New York 12224 (518) 474-2432	No file/information
Mr. Ron Tramontano/Mr. Charlie Hudson New York State Department of Health Bureau of Toxic Substances Assessment Nelson A. Rockefeller Empire State Plaza Corning Tower Building, Room 342 Albany, New York 12237 (518) 473-8427	Site file
Mr. James Covey, P.E. New York State Department of Health Nelson A. Rockefeller Empire State Plaza Corning Tower Building Albany, New York 12237 (518) 473-4637	Community Water Supply Atlas
Mr. Rocky Paggione, P.E./ Mr. Louis A. Evans, Atty. New York State Department of Environmental Conservation Division of Environmental Enforcement 202 Mamaroneck Avenue White Plains, New York 10601-5381 (914) 761-6660	No file/information

Contact	Information Received
Mr. Marsden Chen, P.E. New York State Department of Environmental Conservation Bureau of Site Control 50 Wolf Road Albany, New York 12233-0001 (518) 457-0639	Registry form, NUS report
Mr. John W. Ozard Senior Wildlife Biologist New York State Department of Environmental Conservation Wildlife Resources Center Significant Habitat Unit Delmar, New York 12054 (518) 439-7486	Significant habitats
Mr. Perry Katz U.S. Environmental Protection Agency Region II Room 757 26 Federal Plaza New York, New York 10278 (212) 264-4595	No additional information

4. SITE ASSESSMENT - EAST HAMPTON LANDFILL

4.1 SITE HISTORY

The East Hampton Landfill is an active municipal landfill located approximately 1.9 mi northeast of the Village of East Hampton in the Town of East Hampton, Suffolk County, New York. The landfill is situated between Acabonack Road and Springs Fireplace Road on a 60-acre parcel of property owned by the Town of East Hampton (Appendixes 1.1-1 and 1.1-2). The Town of East Hampton established the landfill in the early 1960s on approximately 27 acres of undeveloped property (Appendixes 1.1-3 and 1.1-4). Currently, the landfill covers approximately 45 acres (EA Site Inspection).

The property has been landfilled by the trench method, with waste materials compacted in 2-ft lifts and 1-ft cover applied at the end of each day (Appendix 1.1-1). Local residents have dumped enough garbage to create a substantial lift in the northwest corner of the property (Appendix 1.1-3). Just south of this mound is an approximate 5-acre area where commercial haulers dump waste material. This portion of the landfill was constructed 2 years ago in 1984. Prior to use, a plastic liner was placed on virgin ground and covered by 4-5 ft of sand. The sand sloped radially inward and concrete rings were installed strategically to aid in leachate collection (Appendix 1.1-3).

In 1983, the U.S. EPA Federal Investigative Team investigated the East Hampton Landfill site. Recommendations in their report consisted of installing three additional monitoring wells to augment the one existing monitoring well (Appendix 1.1-5).

In 1983, the New York State Department of Environmental Conservation (NYSDEC) issued the Town of East Hampton its latest permit to operate the solid waste management facility on Acabonack Road. The permit, valid until July 1986, was contingent on several special conditions. The Town of East Hampton was told to routinely remove leachate off the liner, moniter decomposition gas at the landfill perimeter, construct two additional monitoring wells, and sample all the wells on a quarterly basis (Appendix 1.1-6).

During EA's site inspection, 21 January 1986, three ground-water monitoring wells were observed at the site (Figure 1-2). A fourth well was at one time located where the new sewage treatment plant is being built. An engineer from the NYSDEC Region 1 Division of Solid Waste indicates that he does not believe the three existing wells at the East Hampton Landfill are strategically placed to define a leachate plume (Appendix 1.1-7). As a result, the NYSDEC is about to issue the Town of East Hampton a consent order to install three additional monitoring wells.

In March 1982, Suffolk County Department of Health Services (SCDHS) sampled the sludge in the unlined septage lagoon and found high levels of methylene chloride (Appendixes 1.1-8 and 1.1-9).

4.2 SITE TOPOGRAPHY

The East Hampton Landfill is an active municipal landfill located at an elevation of approximately 100 ft above MSL between Acabonack and Springs Fireplace Road in the Town of East Hampton, Suffolk County, New York (Appendix 1.2-1). The property is located on a topographically high point of a glacial moraine deposit that is a primary source of drinking water to the neighboring community (Appendix 1.2-2). The 60-acre parcel originally sloped gently to the southwest, but today the sides of the various refuse lifts slope in different directions up to 55 percent (EA Site Inspection, 21 January 1986).

The landfill proper can be divided into four distinct disposal areas (Figure 1-2). The residential garbage is landfilled in the northwest section of the property. Commercial haulers bring waste material to a 5-acre lined parcel southeast of the residential mound. The access road separates these areas from the metal and brush piles. Scrap metal and other large metal debris are deposited in the southeast section of the landfill. There is a large brush pile located just north of this area. There are several buildings on the property including an administration building, Town Road building, and Quonset hut for machine storage. There are three waste oil tanks in the northwest section of the property and the Town is constructing a sewage treatment plant in the northernmost part of the property. The septage lagoons located just northwest of the entrance off Acabonack Road will be closed upon completion of the treatment plant (EA Site Inspection, 21 January 1986).

The closest surface water downgradient of the East Hampton Landfill is the Atlantic Ocean. The approximate 2-mi overland route, however, is intersected by several roads and the Long Island Railroad (Appendix 1.2-1). The nearest commercial establishment is approximately 500 ft west of the landfill and the nearest residence lies approximately 400 ft to the east (EA Site Inspection 21 January 1986). The homes in the immediate vicinity of the landfill are all on private wells (Suffolk County Water Authority 1986).

4.3 SITE HYDROGEOLOGY

The site is directly underlain by Pleistocene Age glacial deposits. This deposit is then in turn underlain by Cretaceous Age Magothy Formation, the Clay Member and Lloyd Sand Member of the Raritan Formation and finally by Precambrian Age gneiss and schist bedrock (Appendix 1.3-1). The ground surface elevation at the site ranges from approximately 75 ft above MSL in the southern portion to about 100 ft above MSL in the northern portion. In the vicinity of the site the Pleistocene deposits are estimated to be 375-400 ft thick (ground surface elevation and Appendix 1.3-2); and comprised of layers of sand and gravel (Appendix 1.3-3). The surficial stratigraphy observed at the site appears to be sand with lenses of silt/clay (Photograph 1-7). Appendix 1.3-4 provides the logs of two municipal wells located near the site and indicates the stratigraphy penetrated to depths of approximately 250 ft below grade: Well S-66733 (243-ft total borehole depth) located approximately 1.2 mi south of the site and Well S-49422 (148-ft total borehole depth) located approximately 2.9 mi southwest of the site. Three monitoring wells were observed

onsite during EA's site reconnaissance, however no boring logs or well diagrams could be located as a result of EA's record search. These three wells are completed with screw on caps and not secured with locks, as observed during EA's 21 January 1986 site reconnaissance (Appendix 1.3-5).

The Magothy Formation is estimated to be 500 ft in thickness in the vicinity of the site (Appendix 1.3-2). The upper surface of this deposit is dissected by channels as deep as 300-500 ft below sea level in western Long Island. Similar channels may exist beneath eastern Long Island. Therefore, accurate prediction of formation thickness between control points (boreholes) is difficult. The Magothy, and probably other younger Cretaceous Age deposits present, contain permeable zones partly separated by lenticular beds of silt, sandy clay, and clay (Appendix 1.3-1).

Jensen and Soren (Appendix 1.3-2) estimate that in the vicinity of the site the Clay Member of the Raritan Formation is 200 ft in thickness and the Lloyd Sand Member is 300 ft in thickness. Because the existing wells are completed in the overlying deposits, no detailed descriptions of the Raritan Formation were found in the literature for the site vicinity.

Water pumped from aquifers underlying Suffolk County is the sole source of water for public supply, agriculture, and industry (Appendix 1.3-2). The glacial and Magothy aquifers act as a single hydrologic unit, and are the only aquifers reportedly developed within 3 mi of the site. Therefore, both the glacial and Magothy aquifers are designated as the aquifer of concern.

Recharge to the upper glacial aquifer is derived entirely from precipitation. The average annual precipitation in the area is 48 in., of which 12 in. is estimated to infiltrate to the water table (Appendix 1.3-1). The remainder of the precipitation is returned to the atmosphere by evaporation and transpiration, except for a small amount of runoff to streams. Recharge to the Magothy aquifer is derived entirely from the downward movement of water from the overlying glacial aquifer.

Based upon the March 1985 ground-water table contour map (Suffolk County Department of Health Services), the depth to ground water is estimated to be approximately 65-90 ft below ground surface, respectively, in the south to north portions of the site. This compares well with a depth to water of 88.8 ft measured in the monitoring well located just north of the "Brush Area" during EA's site reconnaissance (Appendix 1.3-5 and Figure 1-2). The site appears to be located on a ground-water divide and, therefore, the regional ground-water natural (unaffected by pumping) flow direction may be toward the north, east, or south. Within 3 mi of the site, the aquifer of concern has been reportedly developed by four Suffolk County Water Authority well fields, the Three Mile Harbor Trailer Park well, and numerous private wells. Appendix 1.3-4 provides a list of the municipal wells located within 3 mi of the site. The developed area within 3 mi of the site is served by the Suffolk County Water Authority and numerous private wells.

4.4 SITE CONTAMINATION

Waste Types and Quantities

The East Hampton landfill accepts solid waste and septic sludge from Town residents and local haulers, and has been in operation since the early 1960s (Appendix 1.1-3). The Town knowingly accepts municipal, commercial, and light industrial garbage (Appendix 1.1-3).

In March 1982, SCDHS sampled the sludge from the septage pit and analyzed the sample for priority pollutants (Appendix 1.1-8). Methylene chloride, toluene, and phenol were detected at levels of 42,000 ppb, 250 ppb, and 39 ppb, respectively (Appendix 1.1-8). The pits will be closed upon completion of the new sewage treatment plant at the north end of the site (EA Site Inspection, 21 January 1986). There is no record of further sampling of the sludge.

Ground Water

Volumetric Techniques, LTD., Bayport, New York, has compiled analytical data for the Town of East Hampton over the period of May 1983-April 1986; a total of 15 ground-water samples have been analyzed (Appendix 1.4-1). The analytical data indicate that phenol (0.05-0.2 mg/liter) and iron (1.49-9.44 mg/liter) have occasionally exceeded NYS Class GA Ground-water Standards; however, there are no ambient data available at present for comparison.

Surface Water

No data available.

Soil

No data available.

Air

During the EA Site Inspection on 21 January 1986, there were vapors seen emanating from the edge of the brush pile in the northern portion of the landfill. While the background organic vapor reading was 1 ppm, the Photovac TIP read 42 ppm over the vapor. Downwind of the vapor, approximately 20 ft from the source, the TIP registered 7 ppm (Appendix 1.4-1). The vapors had a very bitter odor and although the Photovac TIP cannot fingerprint the gases, they could not have been methane, as this photoionizing device does not register methane.

EAST HAMPTON LANDFILL
TOWN OF EAST HAMPTON, SUFFOLK COUNTY

The East Hampton Landfill is an active municipal landfill located in the Town of East Hampton, Suffolk County, New York. The Town of East Hampton, owner and operator of the disposal site, began operations during the early 1960s. The property is landfilled by the trench method, with waste materials compacted in 2-ft lifts and a 1-ft cover applied at the end of each day. Currently, the landfill accepts solid waste and septage sludge from town residents and local haulers. The property is divided into several sections according to waste type. The septage is dumped into an unlined lagoon near the eastern entrance of the landfill. Brush material and heavy metal debris are deposited in two separate piles in the north-northeastern sections of the property. Local residents dump in the southwestern section and commercial haulers bring refuse to a new, 5-acre lined portion in the southeast corner of the property. As part of their permit to operate a solid waste management facility, the Town of East Hampton installed a ground-water monitoring system in the 1980s. NYSDEC Region 1 officials feel that the ground-water monitoring wells are not properly positioned to define any leachate plumes. In 1982, Suffolk County Department of Health Services sampled the sludge from the septage lagoon and found high levels of methylene chloride. The septage lagoons are due to be closed upon completion of the sewage treatment plant in 1986.

Site Coordinates:
Latitude: 40°59'10"
Longitude: 72°10'05"

EAST HAMPTON LANDFILL



EAST HAMPTON &

GARDINERS ISLAND WEST QUADS.

Scale = 1:24,000

Facility name: East Hampton Landfill

Location: Town of East Hampton, New York

EPA Region: II

Person(s) in charge of the facility: Town of East Hampton/Owner-Operator

Name of Reviewer: EA Science and Technology Date: 24 June 1986

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 site is an approximate 45-acre landfill located between Acabonack Road and Springs Fireplace Road, approximately 1.9 mi northeast of the Village of East Hampton. The site accepts solid waste and septage sludge from Town residents and local haulers. The septage sludge was analyzed in 1982 and found to contain methylene chloride, toluene, and phenol. Ground-water analytical data exist, however, upgradient data are not available for comparison.

Scores: S_M =23.18 S_{gw} =40.00 S_{sw} = 0 S_a = 0

S_{FE} = N/A

S_{DC} = 25.00 Maximum S_M =36.42

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)	Maximum Possible
1 Observed Release	(0) 45	1	0	45	3.1	45
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	4	6		
Net Precipitation	0 1 (2) 3	1	2	3		
Permeability of the Unsaturated Zone	0 1 2 (3)	1	3	3		
Physical State	0 1 2 (3)	1	3	3		
Total Route Characteristics Score			12	15		
3 Containment	0 1 2 (3)	1	3	3	3.3	
4 Waste Characteristics					3.4	
Toxicity/Persistence	0 3 6 9 (12) 15 18	1	12	18		
Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8		
Total Waste Characteristics Score			13	26		13
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	40	40		
Total Targets Score			49	49		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			22,932	57,330		28,665
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} = 40.00				50.00

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	0	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	(0) 3 6 9 12 15 18	1	0	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			0	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			0	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} =	0		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max Score	Ref. Section	Maximum Possible
1 Observed Release	(0) 45	1	0	45	5.1	45
Date and Location:	emanating from brush pile, 21 January 1986					
Sampling Protocol:	Upwind and downwind readings taken with photoionizing device.					
If line 1 is 0, the 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	0	3		
Toxicity	(0) 1 2 3	3	0	9		
Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8		
	Total Waste Characteristics Score		1	20		13
3 Targets					5.3	
Population Within 4-Mile Radius	0 9 12 15 (18) 21 24 27 30	1	18	30		
Distance to Sensitive Environment	0 (1) 2 3	2	2	6		
Land Use	0 1 2 (3)	1	3	3		
	Total Targets Score		23	39		23
4 Multiply 1 x 2 x 3			0	35.100		13,455
5 Divide line 4 by 35.100 and multiply by 100		S_a =	0			38.33

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	40.00	1,600
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		1,600
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		40
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		23.12

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Maximum S_M=36.42

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	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} = N/A			

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	3	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	8	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			8	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			5,400	21.600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} =	25.00		

FIGURE 12
DIRECT CONTACT WORK SHEET

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: 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. Include the location of the document.

FACILITY NAME: East Hampton Landfill

LOCATION: Town of East Hampton, Suffolk County, New York

DATE SCORED: 24 June 1986

PERSON SCORING: EA Science and Technology

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

NYSDEC Region 1 files
Suffolk County Department of Health Services
EA Site Inspection, 21 January 1986
Town of East Hampton

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Observed release to ground water
Air route: waste characteristics

COMMENTS OR QUALIFICATIONS:

Ambient ground-water quality data are unavailable. The ground-water route is scored on the basis of confirmed contamination in an onsite septage pit.
No viable overland surface water route for runoff exists.
The air route is scored on the basis of field measurements taken during EA's site reconnaissance.
The local fire marshal does not consider the site to be an imminent fire or explosion threat.
Direct contact scored on the basis of contaminated septage pits being accessible to the public during daily operations.

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

Iron and phenol were detected in samples collected from onsite wells.

Reference: 1

Rationale for attributing the contaminants to the facility:

No background data are available; therefore, no release can be attributed to the facility.

Assigned value = 0. Reference: 2.

***

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

The Pleistocene Age Upper Glacial deposits and the Cretaceous Age Magothy Formation. References 3 and 4.

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

65 feet. References: 5 and 6.

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

Depth of the septage pit is 10 ft. Reference: 7.

Depth to aquifer of concern is 55 ft.

Assigned value = 2. Reference: 2.

Net Precipitation

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

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

Net precipitation (subtract the above figures):

Ground-water recharge = 12 in. Reference: 3.

Assigned value = 2. Reference: 2.

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Sand and gravel.

References: 1 and 27.

Permeability associated with soil type:

$>10^{-3}$ cm/sec.

Assigned value = 3. Reference: 2.

Physical State

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

Liquid: septage wastes. Reference: 7.

Assigned value = 3. Reference: 2

***

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Landfill: septage wastes are deposited in unlined pits.

References: 8 and 9.

Method with highest score:

No liner, no leachate collection system.

Assigned value = 3. Reference: 2.

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Methylene chloride, toluene, phenol. Reference: 10.

Compound with highest score:

Methylene chloride and phenol = 12. References: 2 and 26.

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. Reference: 7.

Basis of estimating and/or computing waste quantity:

Minimum quantity assumed.

Assigned value = 1. Reference: 2.

***

3 TARGETS

Ground Water Use

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

Drinking water; no alternate supply available.

References: 11, 12, 13, and 14.

Assigned value = 3. Reference: 2.

Distance to Nearest Well

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

Private residence not served by municipal supply located to the east along Acabonack Road.

References: 9 and 14.

Distance to above well or building:

Approximately 700 ft. (Measured from the septage pits, the location of documentated contamination.) References: 9, 14, and 15.

Assigned value = 4. Reference: 2.

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:

Community supplies:	Population:
Suffolk County Water Authority (East Hampton section of the East Hampton Water District (Appendix 1.3-6)	34,774 (9,151 services x 3.8)
Three Mile Harbor Trailer Park	40
Total	34,814

The number of private wells within a 3-mi radius of the site is unknown.

References: 11, 12, 13, 14, and 16.

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 1,400 acres of land are used for agricultural purposes within a 3-mi radius of the site. However, irrigation wells on agricultural land in Suffolk County are not registered by any regulatory agency, so there are no lists or descriptions of the locations of these wells. References: 17, 18, 19, 20, and 21.

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

34,814. Assigned value = 5. Combined assigned value = 40.

Reference: 2.

SURFACE WATER ROUTE

1 OBSERVED RELEASE

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

No data available.

Assigned value = 0. Reference: 2.

Rationale for attributing the contaminants to the facility:

***

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Facility is a closed basin (septage pit).

Reference: 9.

Name/description of nearest downslope surface water:

Atlantic Ocean.

Reference: 15.

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

<3 percent slope.

References: 9 and 15.

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

No.

Reference: 9.

Is the facility completely surrounded by areas of higher elevation?

Yes.

Reference: 9.

Assigned value = 0. Reference: 2.

1-Year, 24-Hour Rainfall in Inches

2.5 in. Assigned value = 2.

Reference: 2.

Distance to Nearest Downslope Surface Water

2 miles. Reference: 15.

Assigned value = 1. Reference: 2.

Physical State of Waste

Liquid: septage wastes.

Assigned value = 3. References: 2 and 7.

***

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Wastes are in a septage pit (adequate freeboard). In addition, intervening terrain to the Atlantic Ocean is transected by the Long Island Railroad and several highways which act as barriers to surface runoff.

References: 3, 6, and 9.

Method with highest score:

Intervening terrain precludes runoff to surface water.

Assigned value = 0. Reference: 2.

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Containment = 0, thus waste characteristics are not evaluated.

Assigned value = 0. Reference: 2.

Compound with highest score:

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):

Basis of estimating and/or computing waste quantity:

***

5 TARGETS

Surface Water Use

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

Recreational. Reference: 28.

Assigned value = 2. Reference: 2.

Is there tidal influence?

Yes.

Reference: 15.

Distance to a Sensitive Environment

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

None via overland route.

Reference: 15.

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

None via overland route.

Reference: 15.

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

None.

Reference: 24.

Assigned value = 0. Reference: 2.

Population Served by Surface Water

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

None.

References: 11 and 12.

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

None. The major source of irrigation water in Suffolk County is ground water from wells. Generally, surface water is not utilized for this purpose.

References: 18 and 19.

Total population served:

Zero. References: 11, 12, 18, and 19.

Assigned value = 0. Reference: 2.

Name/description of nearest of above waterbodies:

N/A.

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

N/A.

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

Total volatile compounds measured using a Photovac TIP.

Date and location of detection of contaminants

During EA's 21 January 1986 site inspection, vapors were detected emanating from the northern edge of the brush pile. Reference: 22.

Methods used to detect the contaminants:

The Photovac TIP, a photoionization detection device, was used to determine the concentration of organics in the vicinity of the vapors. Measurements were taken directly above the vapors, and upwind and downwind of the vapors in the breathing zone.

Rationale for attributing the contaminants to the site:

The Photovac TIP reading taken directly above the vapors was 45 ppm. The upwind measurement was 1 ppm; while the reading approximately 20 ft downwind of vapors was 7 ppm. However, insufficient evidence to score a release. Reference: 22.

Assigned value: 0. Reference: 2.

***

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Unknown. Total volatile compounds were measured. References: 9 and 22.

Most incompatible pair of compounds:

Unknown. Total volatile compounds were measured. References 9 and 22.

Assigned value = 0. Reference: 2.

Toxicity

Most toxic compound:

Unknown. Total volatile compounds were measured. References: 9 and 22.

Assigned value = 0. Reference: 2.

Hazardous Waste Quantity

Total quantity of hazardous waste:

Unknown. A minimum quantity is assumed.

Basis of estimating and/or computing waste quantity:

A volatizing source releasing vapors having an acrid odor and registering 45 ppm on the Photovac TIP was identified during EA's site inspection. Reference: 22.

Assigned value = 1. Reference: 2.

***

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

223. Estimated 6.5 percent of Amagansett (2,333) and 2 percent of Springs (3,542). Reference: 23.

Assigned value = 18. Reference: 2.

Distance to a Sensitive Environment

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

Three Mile Harbor, approximately 1.4 mi. Reference: 6.

Assigned value = 1. Reference: 2.

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

None. Reference: 6.

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

None within 1 mi. Reference: 24.

Land Use

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

Approximately 1,500 ft. References: 6 and 9.

Reference: 2.

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

None. Reference: 6.

Distance to residential area, if 2 miles or less:

Approximately 1,000 ft. References: 6 and 9.

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

N/A

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

Approximately 1,800 ft. Reference: 17.

Is a historic or landmark site (national register or historic places and national natural landmarks) within the view of the site?

No. Reference: 9

Assigned value = 3. Reference: 2.

FIRE AND EXPLOSION

The local fire marshal has not certified that the site presents a significant fire or explosion threat (Reference: 25). There are no analytical data available in any of the agency files examined (Chapter 3).

1 CONTAINMENT

Hazardous Substances Present:

Type of Containment, if Applicable:

***

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

***

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

***

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

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

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

Distance to residential area, if 2 miles or less:

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:

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

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident on record. Reference: Chapter 3.

Assigned value = 0. Reference: 2.

***

2 ACCESSIBILITY

Describe type of barrier(s):

The site is fenced and the gates are locked at night, however, people have unlimited access all day. Reference: 9.

Assigned value = 3. Reference: 2.

***

3 CONTAINMENT

Type of containment, if applicable:

Contents of the septage pit have been sampled and the presence of methylene chloride, toluene, and phenol confirmed. There is no containment of the pits. References: 9 and 10.

Assigned value = 15. Reference: 2.

***

4 WASTE CHARACTERISTICS

<u>Toxicity</u>

Compounds evaluated:

Methylene chloride, toluene, and phenol.

Reference: 10.

Compound with highest score:

Phenol = 3. References: 2 and 26.

***

5 TARGETS

Population Within 1-Mile Radius

964. Estimated 25 percent of the population of Amagansett (2,333), 10 percent of Springs (3,542), and 1 percent of Northwest Harbor (2,661).

Reference: 23.

Assigned value = 2. Reference 2.

Distance to Critical Habitat (of Endangered Species)

None within 1 mi. Reference 24.

Assigned value = 0. Reference: 2.

DOCUMENTATION RECORDS REFERENCES

1. Volumetric Techniques, LTD. 1983-1986. Analytical data from ground-water monitoring wells located at the East Hampton Landfill. Compiled for the Town of East Hampton. (Appendix 1.4-1.)

2. U.S. Environmental Protection Agency. 1984. Uncontrolled Hazardous Waste Site Ranking System. A Users Manual (HW-10). Originally published in the 16 July 1982 Federal Register.

3. Perlmutter, N.M. and F.A. Deluca. 1963. Availability of Fresh Ground Water Montauk Point Area Suffolk County Long Island, New York. Geological Survey Water-Supply Paper 1613-B. (Appendix 1.3-1.)

4. Jensen, H.M. and J. Soren. 1974. Hydrogeology of Suffolk County Long Island, New York. USGS Hydrologic Investigations Atlas HA-501. (Appendix 1.3-2.)

5. Suffolk County Department of Health Services. 1985. Contour Map of the Water Table and Location of Observation Wells in Suffolk County, New York.

6. New York State Department of Transportation. 1981. 7.5-Minute Series. East Hampton and Gardiners Island West Quads. (Figure 1-2.)

7. Garypie, G. 1986. Assistant Landfill Foreman, Town of East Hampton. Personal Communication. 21 January and 4 August.

8. Letter dated 27 February 1978 from L. Cantwell, Councilman, Town of East Hampton to M. Bruchman, NYSDEC, regarding landfill operating permits. (Appendix 1.1-1.)

9. EA Site Inspection. 21 January 1986.

10. Suffolk County Department of Health Services (SCDHS). 1982. Analytical data for Field Sample R-053-03. (Appendix 1.1-9.)

11. SCDHS. Supply and Monitoring Well Location Maps. Water Resources Divison.

12. New York State Department of Health (NYSDOH). 1982. New York State Atlas of Community Water System Sources.

13. NYSDOH. 1984. Inventory-Community Water Systems.

14. Suffolk County Water Authority (SCWA). 1985. Distribution System Plates: 25N, 26N, 24M, 25M, and 26M. (See Appendix 1.5-1.)

15. USGS. 1956. 7.5-Minute Topographic Series: East Hampton Quad. (Appendix 1.2-1.)

16. Cameron. 1986. Customer Service Representative, Suffolk County Water Authority. Personal Communication. 23 June. (Appendix 1.5-2.)

DOCUMENTATION RECORDS REFERENCES (Cont.)

17. Long Island Regional Planning Board. 1982. Land Use 1981, Quantification and Analysis of Land Use for Nassau and Suffolk Counties. Plates 17, 18, and 19.

18. Letter from A. Connell, District Conservationist, U.S.D.A. Soil Conservation Service, to Mr. W. Going, EA Science and Technology, regarding irrigation in Suffolk County. Dated 13 March 1986. (Appendix 1.5-3.)

19. Fricke, D. 1986. Suffolk County Cooperative Extension Association. Personal Communication. 7 April. (Appendix 1.5-4.)

20. Carey, S. 1986. Ground Water Section, Suffolk County Department of Health Services. Personal Communication. 7 April. (Appendix 1.5-5.)

21. Pica. D. 1986. Water Unit, Region 1, NYSDEC. Personal Communication. 7 April. (Appendix 1.5-6.)

22. EA Site Inspection. 1986. Air Sampling. 21 January. (Appendix 1.4-2.)

23. Long Island Regional Planning Board. 1985. Population Survey 1985. Current Population Estimates for Nassau and Suffolk Counties. Hauppauge, L.I., N.Y.

24. Ozard, J.W. 1986. Sr. Wildlife Biologist, New York State Department of Environmental Conservation Wildlife Resources Center, Significant Habitat Unit. Personal Communication. 26 February. (Appendix 1.5-7.)

25. DiSunno, D. 1986. Chief Fire Inspector, Town of East Hampton. Personal Communication. 8 July. (Appendix 1.5-8.)

26. Sax, N. Irving. 1979. Dangerous Properties of Industrial Materials. Van Nostrand Reinhold Company, New York.

27. Holzmacher, McLendon, and Murrell, PC. 1975. Study of Leachate at Landfill Sites. (Appendix 1.3-3.)

28. Colvin, G. 1986. Director, Div. Marine Resources, New York State Department of Environmental Conservation. Personal Communication. 2 September. (Appendix 1.5-9.)

United States
Environmental Protection
Agency

Office of Emergency and
Remedial Response
Washington, DC 20460

EPA Form 2070-12
July, 1981

East Hampton Landfill

EPA

Potential Hazardous Waste Site

Preliminary Assessment

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D097531990

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
East Hampton Landfill	Acabonack Road

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Springs (Town of East Hampton)	NY	11937	Suffolk		

09 COORDINATES LATITUDE	LONGITUDE
40° 59' 10"	72° 10' 05"

10 DIRECTIONS TO SITE (Starting from nearest public road)

Site is located on the west side of Acabonack Road about ¼ of a mile south of the intersection of Acabonack Road and Abrahams Path in the Hamlet of Springs.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
Town of East Hampton	159 Pantigo Road

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
East Hampton	NY	11937	(516) 324-2199

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
Same as above	

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
			( )

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 1/21/86 (MONTH DAY YEAR)

BY (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☒ D. OTHER CONTRACTOR

☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)

CONTRACTOR NAME(S): EA Science and Technology

02 SITE STATUS (Check one)	03 YEARS OF OPERATION
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN	early 1960s (BEGINNING YEAR) present (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

The landfill accepts mixed municipal refuse and septage from the Town of East Hampton (quantities unknown).

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Possible ground-water contamination. High levels of methylene chloride were found in the septage sludge lagoon in 1982.

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
Rebecca Ligotino	EA Science and Technology	(914) 692-6706

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Stephen Barry		EA	(914) 692-6706	3 26 86 (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	D097531990

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
- [ ] F. LIQUID
- [ ] G. GAS

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

- TONS
- CUBIC YARDS Unknown
- NO. OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

- [X] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [X] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [X] 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		Septage
OLW	OILY WASTE			
SOL	SOLVENTS	Unknown		Septage
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown		Septage

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
OCC	Methylene chloride	75-09-2	SI	42.0	mg/liter
SOL	Toluene	108-88-3	SI	Unknown	
MES	Copper	7440-50-8	SI	Unknown	
MES	Zinc	7440-66-6	SI	Unknown	

V. FEEDSTOCKS (See Appendix for CAS Numbers) Not applicable

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)

EA site inspection and interview, 21 January 1986.
New York State Department of Environmental Conservation Bureau of Hazardous Site Control files.
Suffolk County Department of Health Services files.

United States
Environmental Protection
Agency

Office of Emergency and
Remedial Response
Washington, DC 20460

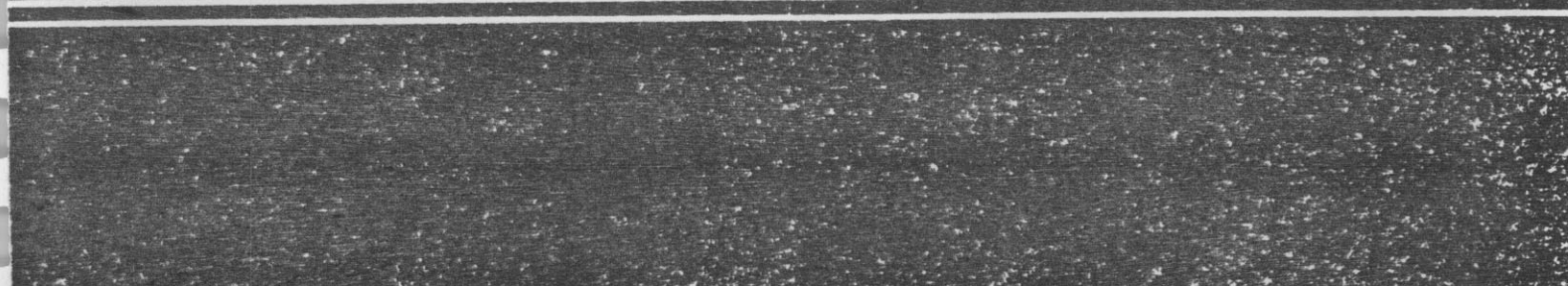
EPA Form 2070-13
July, 1981

East Hampton Landfill

EPA

Potential Hazardous Waste Site

Site Inspection Report



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

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D097531990

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
East Hampton Landfill	Acabonack Road				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Springs (Town of East Hampton)	NY	11937	Suffolk		

09 COORDINATES LATITUDE 40 59 10.- LONGITUDE 72 10 05.-

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
01 / 21 / 86 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	Early 60s (BEGINNING YEAR) | Present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☒ F. STATE CONTRACTOR EA Science & Tech. (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
William Going	Environmental Scientist	EA	(914) 692-6706
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
Ellen Bidwell	Geologist	EA	(914) 692-6706
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Gene Garypie	Asst. Foreman	Town of East Hampton LF	(516 324-2199
		159 Pantigo Road	( )
		East Hampton, NY 11937	( )
Larry Penny	Director	Town of East Hampton LF	( ) 516 267-8462
	Natural	159 Pantigo Road	( )
	Resources	East Hampton, NY 11937	( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	0900	Partly Cloudy, Approximately 40 degrees, no snow

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Rebecca Ligotino	EA Science and Technology	(914) 692-6706

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ellen Bidwell		EA	(914) 692-6706	04 / 15 / 86 (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	D097531990

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:

NO. OF DRUMS:

Sludge

03 WASTE CHARACTERISTICS (Check all that apply)

- [X] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [X] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [X] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
(SLU)	SLUDGE	Unknown		
OLW	OILY WASTE			
SOL	SOLVENTS	Unknown		
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	Unknown		SCDHS has sampled the sludge in
IOC	INORGANIC CHEMICALS			the septage pit and analytical
ACD	ACIDS			data indicates contamination
BAS	BASES			with dichloromethane, toluene,
MES	HEAVY METALS			and phenol.

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
OCC	methylene chloride	75-09-2	LF	42,000	ppb
SOL	toluene	108-83-3	LF	250	ppb
SOL	Phenol	108-95-2	LF	39	ppb

V. FEEDSTOCKS (See Appendix for CAS Numbers) Not applicable

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)

Appendixes 1.1-3 and 1.1-8.

EPA

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

I. IDENTIFICATION	
01 STATE: NY	02 SITE NUMBER: D097531990

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 34,814
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Ground water in the aquifer of concern is the source for 4 SCWA well fields, a trailer park, and an undetermined number of private residences.

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

No viable overland route to surface water.

01 ☒ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: Unknown
02 ☒ OBSERVED (DATE: 21 Jan 86) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Vapor rising from one small portion of the landfill was seen during the EA's site inspection. The vapor had a strong acrid odor and was picked up by the photoionization detection device.

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

No imminent threat.

01 ☒ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 964
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

964 people live within a 1-mile radius of the landfill.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: Unknown
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

SCDHS personnel collected samples from the unlined septage pit which confirmed contamination by methylene chloride, toluene, and phenol.

01 ☒ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 34,814
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Limited to the population served by ground water from the aquifer of concern within a three mile radius of the site.

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

None known

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

None known

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D097531990

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

None known

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

None known

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

None known

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

The septage pit is unlined and contains standing liquid. The contents of the pit were sampled and found to contain methylene chloride, toluene, and phenol.

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

None known.

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

No potential.

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

None reported.

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: 34,814

IV. COMMENTS

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

EA Site Inspection 21 January 1986
References 6, 9-16, and 22.
Chief Fire Inspector, Town of East Hampton.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D097531990

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)	52-5-05	7/1/83	7/1/86	Permit to operate a solid
☐ H. LOCAL (Specify)				waste facility
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

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

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER _____ (Specify)

05 OTHER

- ☒ A. BUILDINGS ON SITE

06 AREA OF SITE

45 (Acres)

07 COMMENTS

The landfill proper is divided into four disposal areas. Residential garbage is placed in the NW section of the landfill. Commercial haulers deposit waste in a 5-acre lined parcel SE of the residential mound. Scrap metal and large metal debris are deposited in the SE section, and a large brush pile is located N of this area. Septage lagoons are located just NW of the Acabonack Road entrance.

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.

Of the 45-acre landfill only 5 are lined and have a leachate collection system. Septage pits are unlined.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

Septage pit is not covered or fenced off and people have access to entire landfill during the day.

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

EA Site Inspection, 21 January 1986
Appendixes 1.1-3 and 1.1-4.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D097531990

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☒
NON-COMMUNITY	C. ☐	D. ☒

02 STATUS Unknown

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

03 DISTANCE TO SITE

A. appr. 1.0 (mi)
B. 0.13 (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 34,814

03 DISTANCE TO NEAREST DRINKING WATER WELL 0.13 (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
65 (ft)	N, E, or S	65 (ft)	unknown (gpd)	☒ YES ☐ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

The Suffolk County Water Authority has 4 well fields within a 3-mile radius of the site. The wells pull water from the Upper Glacial and Magothy aquifiers. There is also a trailer park approximately 1 mile northeast of the site with a community well. The rest of the area is served by private wells. (Appendixes 1.5-1 and 1.5-2)

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: The 45-acre site is located at a high point of a glacial moraine	☐ 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
	☐	(mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 964 NO. OF PERSONS	B. 3,776 NO. OF PERSONS	C. 6,998 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

0.13 mi

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

04 DISTANCE TO NEAREST OFF-SITE BUILDING

0.13 (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)

The Town of East Hampton is a rural resort community located on the South Shore of Eastern Long Island. There are a growing number of permanent residents but generally the area is sparsely populated except for the summer months.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D097531990

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) Unknown

☐ 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
1300 (ft)	unknown (ft)	unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
12 (in)	2.5 (in)	3-8 %	SE	<3 %

09 FLOOD POTENTIAL

SITE IS IN N/A 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. 1.4 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (mi)

ENDANGERED SPECIES: none

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.28 (mi)	B. 0.13 (mi)	C. _____ (mi)	D. 0.34 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The 45-acre site lies on top of a glacial moraine. The site is highly modified by man but originally gently sloped 3-8% to the southeast, along with the surrounding topography.

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

EA Site Inspection, 21 January 1986
References: 3-6, 11-13, 16, 23, 24, and 28.
USGS. 1973. Map of Flood-prone Areas. East Hampton Quad.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D097531990

II. SAMPLES TAKEN None

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
Slope	Estimated with Suunto clinometer.
Total volatile-organics	Measured with Photovac TIP. Appendix 1.4-2 gives sampling specifics.

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☒ AERIAL

02 IN CUSTODY OF EA Science and Technology
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS EA Science and Technology

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

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

EA Site Inspection, 21 January 1986

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	D097531990

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
Town of East Hampton	

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

05 CITY	06 STATE	07 ZIP CODE
East Hampton	NY	11937

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

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 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 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 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 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 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

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

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 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

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

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 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

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

Appendixes 1.1-2 and 1.1-3.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D097531990

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER	04 SIC CODE
Town of East Hampton		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE
159 Pantigo Road	East Hampton	NY	11937

08 YEARS OF OPERATION	09 NAME OF OWNER
1960s - present	Same

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER	13 SIC CODE

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	14 CITY	15 STATE	16 ZIP CODE

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

01 NAME	02 D+B NUMBER	04 SIC CODE

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

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER	13 SIC CODE

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

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

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER	13 SIC CODE

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

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

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER	13 SIC CODE

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	14 CITY	15 STATE	16 ZIP CODE

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

Appendixes 1.1-2 and 1.1-3

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D097531990

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Residents of the Town of East	Hampton		

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

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)

Appendix 1.1-3

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D097531990

II. PAST RESPONSE ACTIVITIES None

01 ☐ A. WATER SUPPLY CLOSED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ D. SPILLED MATERIAL REMOVED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ F. WASTE REPACKAGED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ H. ON SITE BURIAL 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ L. ENCAPSULATION 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ N. CUTOFF WALLS 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION	02 DATE	03 AGENCY

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D097531990

II PAST RESPONSE ACTIVITIES *(Continued)* None

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

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

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

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

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

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

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

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

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

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

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

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

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

Chapter 3.

EPA

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

I. IDENTIFICATION	
01 STATE: NY	02 SITE NUMBER: D097531990

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

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

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

Chapter 3.

6. ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

6.1 ADEQUACY OF EXISTING DATA

The available data are considered insufficient to prepare a final HRS score for this site. Analysis of sludge from the septage pit detected methylene chloride, toluene, and phenol. Air and leachate quality data and full HSL quality data for the ground water and upgradient data are lacking.

6.2 RECOMMENDATIONS

In order to prepare a final HRS score for this site, analytical data regarding the HSL quality of the ground water, air, and leachate will be necessary, thus requiring performance of a Phase II investigation. The proposed Phase II study would include the installation of six test borings/observation wells, and the collection and analysis of ground-water, air, and leachate samples.

6.3 PHASE II WORK PLAN

6.3.1 Task 1 - Mobilization and Site Reconnaissance

Project mobilization includes review of the Phase I report and updating the site data base with any new information made available since completion of the Phase I report. Based on that review, a draft scope of work for this site will

be agreed to and a project schedule developed. At this time, a draft Quality Assurance/Quality Control (QA/QC) document will be prepared in accordance with the most up-to-date NYSDEC guidelines.

Site reconnaissance will be performed to examine general site access for Phase II studies. Site reconnaissance will familiarize key project personnel with the site, enable the project geologists to evaluate potential boring/well locations, and enable the project Health and Safety Officer to develop specific health and safety requirements for the field activities. Emergency, fire, and hospital services will be identified. Standard practice during site reconnaissance is an air survey with a photoionization detector (HNU or similar instrument). The air survey would be performed around the site perimeter and throughout the site for safety purposes. Detection of releases to air during site reconnaissance may warrant further confirmation studies. Based on the Phase I study, it is expected that field activities will require only Level D health and safety protective measures.

6.3.2 Task 2 - Geophysics

Multidepth EM and earth resistivity surveying will be performed around the site area perimeter to evaluate the potential presence of ground-water contaminant plumes and stratigraphic conditions. The number of stations and value of depth settings will be determined on the basis of field conditions. Results of the geophysics will be used to refine the specifications for locations, depths, and number of observation wells to be installed.

6.3.3 Task 3 - Preparation of Final Sampling Plan

All data collected during Tasks 1 and 2 will be evaluated to finalize sampling and boring/well locations. The final sampling plan will be developed and submitted to NYSDEC for approval. The plan will include final sampling locations, boring and well specifications, and reference pertinent portions of the QA/QC Plan. A final budget will be developed to complete the drilling and sampling program.

6.3.4 Task 4 - Test Borings and Observation Wells

Because there are hundreds of feet of unconsolidated sediment underlying the site, EA recommends that the subsurface investigation be confined, at this time, to the shallow glacial aquifer to confirm and fully characterize the ground-water contamination. Although there are three onsite monitoring wells, they are all located generally downgradient of the landfill/dump areas, no construction details are available, and their integrity for sampling is questionable because they are completed with only screw on caps (not secured by locks). Based upon currently available information, EA recommends the installation of six test borings/observation wells. This work would be performed under the fulltime supervision of a geologist. It is anticipated that the hollow-stem auger or rotary wash drilling method will be used. Prior to the drilling of each boring/well, and at the completion of the last boring/well, the drilling equipment which comes in contact with subsurface materials will be steam-cleaned, as well as the split-spoon sampler after obtaining each sample. Soil sampling will be performed using a split-spoon sampler at approximately 5-ft intervals and at detected major stratigraphic changes. An

HNU, or similar instrument, would be used to monitor the potential organic vapors emitted during drilling operations and from each soil sample. Samples of major soil/unconsolidated sediments will be collected for grain-size and/or Atterburg Limits analysis.

It is anticipated that the wells to be installed at this site will be completed in the unconsolidated sediment, approximately 10-20 ft below the ground-water table. Standard construction of such a well would include 10-20 ft of 2-in. diameter threaded-joint PVC screen and an appropriate length of PVC riser with a bottom plug cap, sand pack, bentonite seal, and protective surficial steel casing with a locking cap.

Upon completion and development of the wells by air surging/pumping, the vertical elevation of the upper rim of each well casing and the horizontal location will be surveyed in order to aid in evaluation of the ground-water flow direction. Depending upon the yield of each Phase II well, a short-term, low-yield pumping test will be performed in each well.

For cost estimating purposes, it is assumed that:

a. The depth of two of the six monitoring wells will be 85 ft below ground surface. The depth of each of the remaining four monitoring wells will be 110 ft below grade.

b. The six wells will require 35 days to install, develop, and test.

c. All drill sites are accessible by truck-mounted drilling rigs as determined by the driller.

d. There are no excessive amounts of cobbles/boulders which would increase drilling time.

e. Steam-cleaning of drilling/sampling equipment will be performed at each boring/well location. The fluids will be discharged to ground surface.

f. All drill cuttings, fluids, and development water will be left on, or discharged to, the ground surface in the immediate area of the activity.

g. That permission from appropriate land owners to drill borings/wells on their property will be a simple process (expedited by the NYSDEC, if necessary) so that delays during field operations are not incurred.

6.3.5 Task 5 - Sampling

All sampling and analysis will be conducted in accordance with the project QA/QC Plan. The analytical program for every water and sediment sample will include the 130 organic and 25 inorganic parameters listed in Statement of Work No. 784, New York State Department of Environmental Conservation Superfund and Contract Laboratory Protocol, January 1985. Also, all additional non-priority pollutant GC/MS major peaks will be identified and quantified. Major peaks

will be considered as those whose area is 10 percent or greater than the calibrating standard(s). Based upon the currently available information, collection and analysis of the following numbers and types of samples is recommended:

6 Ground-water samples (one from each Phase II well).

1 Leachate sample (composite from the new, lined landfill area).

2 Air samples (one from ambient conditions and one of the vapors observed in the "Brush Area" (Figure 1-2).

6.3.6 Task 6 - Contamination Assessment

EA will evaluate the data obtained during the records search and field investigation: prepare final HRS scores and documentation forms; complete EPA Form 2070-13; summarize site history, site characteristics, available sampling and analysis data; and determine the adequacy of the existing data to confirm release, and if there is a population at risk.

6.3.7 Task 7 - Remedial Cost Estimate

EA will evaluate remedial alternatives for the site and develop a list of potential options given the information available on the nature and extent of contamination. Approximate cost estimates for the selected potential remedial options will be computed. This work is not intended to be, or a substitute for, a formal cost effectiveness analysis of potential remedial actions.

6.3.8 Task 8 - Final Phase II Report

In accordance with current (January 1985) NYSDEC guidelines, the Phase II report will include:

a. The results of the Phase II investigation, complete with boring logs, photos, and sketches developed as part of the Phase II field work.

b. Final HRS scores with detailed documentation.

c. Selected potential remedial alternatives and associated cost estimates.

In addition to the final Phase II report, the following raw data and resulting reduction would be provided to NYSDEC:

a. geophysical
b. well logs
c. all sampling forms and data
d. all analytical data
e. chain-of-custody forms
f. other pertinent collected information.

6.3.9 Task 9 - Project Management/Quality Assurance

A Project Manager will be responsible for the supervision, direction, and review of the project activities on a day-to-day basis. A Quality Assurance

Officer will ensure that the QA/QC Program protocols are maintained and that the resultant analytical data are accurate.

6.4 PHASE II COST ESTIMATE

Based on the scope of work and assumptions described above, the estimated costs to complete the Phase II investigation of the East Hampton Landfill site are as follows:

Consultant Costs (including labor, direct costs, fee)	$59,800
Drilling Contractor	81,365
Laboratory	18,450
Total	$159,615

Appendix 1.1-1
Source: NYSDEC Bureau of Landfills
p.1 of 4

TOWN OF EAST HAMPTON

159 Pantigo Road
East Hampton, New York 11937

OFFICE OF THE
COUNCILMEN
LARRY CANTWELL

324-2620
324-2629
267-6511

February 27, 1978

Mr. Morris Bruckman
New York State Department of Environmental Conservation
Building 40 State University of New York
Stony Brook, New York 11790

Re: Landfill Operating Permits

Dear Mr. Bruckman:

Enclosed please find the following documents and plans in support of the Town of East Hampton application for "Solid Waste Management Facility Operating Permit":

1. Application for Approval to Operate a Solid Waste Management Facility, Form 47-19-4
2. Town of East Hampton Landfill Operations Summary
3. New York State DEC Project Permit Requirement Questionnaire
4. Facility maps.

We have included the three (3) Town landfill sites in one application since the total volumnes handled are relatively small, the sites are all operated in the same manner, and are all under the direction of one Landfill Supervisor.

We also enclose a Town Voucher to be signed and returned for payment of the permit fee.

If there are any questions regarding this matter, please contact Mr. George Michos, Greenman-Pedersen, Associates, the Town Consulting Engineer.

Very truly yours,

Larry Cantwell

Larry Cantwell
Councilman

LC/il
Encs.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

APPLICATION FOR APPROVAL TO OPERATE A SOLID WASTE MANAGEMENT FACILITY

See Letter from NYDEC Bureau of Landfills

SEE APPLICATION INSTRUCTIONS ON REVERSE SIDE

FOR STATE USE ONLY 1274

PROJECT NO. 52-S-03

DATE RECEIVED 2/28/78

DEPARTMENT ACTION ☐ Approved ☐ Disapproved

DATE

1. OWNER'S NAME	2. ADDRESS (Street, City, State, Zip Code)	3. Telephone No.
Town of East Hampton	159 Pantigo Road, East Hampton, NY 11937	(516)-324-4140
4. OPERATOR'S NAME	**5. ADDRESS (Street, City, State, Zip Code)**	**6. Telephone No.**
Same	Same	Same
7. ENGINEER'S NAME	**8. ADDRESS (Street, City, State, Zip Code)**	**9. Telephone No.**
Greenman-Pedersen, Associates P.C.	100 West Main Street, Babylon, NY 11702	(516)-587-5060
10. ON-SITE SUPERVISOR	**11. ADDRESS (Street, City, State, Zip Code)**	**12. Telephone No.**
Thomas Bennett	159 Pantigo Road, East Hampton NY 11937	(516)-324-2620

13. HAS THE INDIVIDUAL NAMED IN ITEM 10 ATTENDED A DEPARTMENT SPONSORED OR APPROVED TRAINING COURSE?

☒ Yes — Date: 1976 — Course Title: Landfill Operations — Location: DEC Stony Brook ☐ No

14. PROJECT/FACILITY NAME	15. COUNTY IN WHICH FACILITY IS LOCATED	16. ENVIRONMENTAL CONSERVATION REGION
See Attached Sheet	Suffolk	1

17. TYPE OF PROJECT FACILITIES: ☐ Composting ☐ Transfer ☐ Shredding ☐ Baling ☒ Sanitary Landfill ☐ Incineration ☐ Pyrolysis ☐ Resource Recovery-Energy ☐ Resource Recovery-Materials ☐ Other

18. HAS THIS DEPARTMENT EVER APPROVED PLANS AND SPECIFICATIONS AND/OR ENGINEERING REPORTS FOR THIS FACILITY? ☐ Yes Date ☒ No

19. LIST WASTES NOT ACCEPTED

Any material transported from outside the Town of East Hampton limits. Construction and demolition materials are not accepted at the Fireplace Road or Montauk sites.

20. BRIEFLY DESCRIBE OPERATION

A. Fireplace Road Site: Personnel include a landfill foreman, heavy equipment operator and 2 laborers. A 5 cubic yard front end loader and a 4 cubic yard front end loader are used to compact and cover deposited materials. The 4 cubic yard loader is shared with the Bull Path site. The trench method is used for disposal with cell depths of 1-21 with 1 foot of granular cover deposited at the end of each days operation. A septic sludge drying pond is also located at this site.

B. Montauk Site: Personnel include a heavy equipment operator and 1 laborer. A 6 cubic yard front end loader is sued to compact and cover deposited materials. The landfilling procedure is the same as in the Fireplace Road Site noted above.

Received from
NYDEC Bureau of Landfills

21. IF FACILITY IS A SANITARY LANDFILL, PROVIDE THE FOLLOWING INFORMATION:

a. Total useable area: (Acres) (See Attached) Initially _____ Currently _____

b. Distance to nearest offsite, downgradient, water supply well (See Attached) _____ Feet

c. No. of groundwater monitoring wells Upgradient _____ Downgradient 3

22. INDICATE WHICH ATTACHMENTS, IF ANY, ARE INCLUDED WITH THIS APPLICATION:

☐ Form 47-19-2 or SW-7 ☒ Operations Plan & Report ☐ USGS Topographic Map ☐ Record Forms ☒ Other Facility Map
☐ Construction Certificate ☐ Boring Logs ☐ Water Sample Analysis ☐ None

23. CERTIFICATION:

I hereby affirm under penalty of perjury that information provided on this form and attached statements and exhibits is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

2/28/78 (Date) — Larry Cantwell Councilman (Signature and Title)

CENTRAL OFFICE COPY

47-19-1 (6/77)

Form 47-19-4 (Continued)

ITEM 14

A. Fireplace Road Landfill
B. Montauk Landfill
C. Bull Path Construction and Demolition Debris Site

ITEM 20

C. Bull Path Site: Personnel include a heavy equipment operator and one laborer. The 4 cubic yard front end loader from Fireplace Road is used on a part time basis to compact and cover deposited materials. The landfilling procedure is the same as in the Fireplace Road site noted above.

ITEM 21

A. Total Useable Area (Acres)

SITE	INITIALLY	CURRENTLY
Fireplace Road	60	27
Montauk	30	16
Bull Path	16	4

B. Distance to Nearest Downgradient Water Supply Well

Fireplace Road	600 Feet
Montauk	1,000 Feet
Bull Path	200 Feet

C. Number of Groundwater Monitoring Wells

Ungradient	None
Downgradient	2 @ Montauk
	1 @ Fireplace Road *

*Water supply well on site used for samples.

TOWN OF EAST HAMPTON LANDFILL OPERATIONS SUMMARY

1. Description of Solid Wastes

Solid wastes consist of ordinary household waste materials, leaves, brush and construction debris, and septic sludge. Total annual solid waste production is estimated at approximately 29,000 tons per year (79.45 T/Day). Industrial activity in the Town is low with approximately 100 tons annual solid waste production. Land clearing wastes represent 25 percent of the total production or 72 50 tons annually. Septic sludge is deposited at the Fireplace Road and Montauk sites in drying lagoons at the rate of approximately 2 million gallons per year.

2. Operating Hours and Personnel

The landfill sites are operated seven days per week, except for legal holidays. During the summer season, May - October, the hours are 7:30 AM to 5:30 PM, and during the winter months 8:30 AM to 4:30 PM. At the Fireplace Road site the equipment operator, and two laborers supervise dumping, sequence landfill operations, direct traffic and keep records. The Montauk and Bull Path sites utilize one equipment operator and one laborer for these tasks.

3. Equipment

The Fireplace Road site uses one 5 cubic yard and one 4 cubic yard front end loader for excavation, compaction and covering operations. The 4 cubic yard loader is used part time at the Bull Path site for these operations. The Montauk site uses a 6 cubic yard front end loader for all operations.

Each site has a portable control building which is located adjacent to the operating excavation and the Fireplace Road and Montauk site have equipment storage buildings. The Montauk and Fireplace Road sites also have separate salvage areas with containers for metals, glass, and paper deposit.

4. Operating Procedures

The trench method of landfilling is used at all three sites with waste materials compacted in 2 foot lifts with 1 foot of cover applied at the end of each days operation. Trenches are filled to an elevation approximating the original ground level with 3 feet of final cover applied to the finished areas. All finished areas are seeded with wildflower and tree seeds and allowed to return to a natural state.

Septic sludge is deposited in the drying lagoons and the lagoon areas are covered over when filled with the dried sludge.

Appendix 1.1-2
Source: NYSDEC - Bureau of Landfills

-2 (5/77)
erly SW-7

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

APPLICATION FOR APPROVAL TO CONSTRUCT A SOLID WASTE MANAGEMENT FACILITY

Received from NYSDEC Bureau of Landfills

PROJECT NO.	DATE RECEIVED
52-S-05	2/19/79
DEPARTMENT ACTION ☐ Approved ☐ Disapproved	DATE

SEE APPLICATION INSTRUCTIONS ON REVERSE SIDE

1. OWNER'S NAME Town of East Hampton	2. ADDRESS (Street, City, State, Zip Code) 159 Pantigo Road, East Hampton, NY 11937	3. Telephone No. (516) 324-2620
4. OPERATOR'S NAME Thomas Bennett, Foreman	5. ADDRESS (Street, City, State, Zip Code) 159 Pantigo Road, East Hampton, NY 11937	6. Telephone No. (516) 324-2620
7a. ENGINEER'S NAME Greenman-Pedersen, Associates, PC	8. ADDRESS (Street, City, State, Zip Code) 100 West Main Street, Babylon, NY 11702	9. Telephone No. (516) 587-5060

7b. ENGINEER'S N.Y.S. LICENSE NO.
30488

10. TYPE OF PROJECT FACILITIES:
☐ Composting ☐ Transfer ☐ Shredding ☐ Baling ☒ Sanitary Landfill ☐ Incineration
☐ Pyrolysis ☐ Resource Recovery-Energy ☐ Resource Recovery-Materials ☐ Other

11. Briefly describe the project including the basic process and major components:
Fireplace Road Landfill - The Town landfill at Fireplace Road is the main facility in the western half of the Town and receives approximately 18,000 TYP soild waste.

12. Describe location of facility. (Attach a USGS Topographic Map showing the exact location of the facility)
The landfill is located east of Springs-Fireplace Road adjacent to the Town Highway Department approximately 1.9 miles north of East Hampton Village.

13. County in which facility is located:
Suffolk

14. Environmental Conservation Region in which facility is located:
1

15.

Municipalities Served by Facility	County	No. of Municipalities
Town of East Hampton, western section Village of East Hampton	Suffolk	2

Logged in 3/7/79

16. Describe briefly how the proposed facility relates to the Comprehensive Solid Waste Management Plan for the Municipality. Explain any deviation from that Plan.
The Fireplace Road Landfill was evaluated in the Town Comprehensive Plan and is in conformance with that plan.

17. If the facility is other than a sanitary landfill, describe the residues in terms of quantities and types. Also indicate the methods and locations of residue disposal or, if recyclable, indicate markets:
N/A

18. If the facility is a sanitary landfill, provide the following information:
a. Total useable area – 60 Acres
b. Distance to nearest surface water – 4,000 Feet
c. Depth to nearest ground water – 55 Feet
d. Depth to nearest rock – N/A Feet
e. Distance to nearest airport – 4.4 miles
f. Expected life of site – 25 years
g. Is site on a flood plain? ☐ Yes _____ Year Flood ☒ No
h. Predominant type of soil on site: Ma, MnB, RdB (Use Unified Soil Classification System)

19. Anticipated construction starting and completion dates
From: N/A To:

20. Estimated Population Served
Current: 11,000 Design: 16,000

21. Estimated Cost
Initial: N/A Annual:

22. Estimated Daily Tonnages of Solid Waste
Current: 50 Design: 70

23. Operating Hours per Day
8 - 8:00 AM - 4:30 PM

24. Are attached plans and specifications in substantial conformance with "Content Guidelines for Plans and Specifications"? ☒ Yes ☐ No

25. CERTIFICATION:
I hereby affirm under penalty of perjury that information provided on this form and attached statements and exhibits is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

8/23/79
Date

Larry Cantwell Councilman
Signature and Title

CENTRAL OFFICE COPY

RECEIVED JUN 18 1986

Appendix 1.1-3

INTERVIEW ACKNOWLEDGEMENT FORM

Site Name: East Hampton Landfill

I.D. Number: 152058

Person Contacted: Gene Garypie

Date: 21 January 1986

Title: Assistant Foreman

Affiliation: Town of East Hampton

Phone No.: (516) 324-2199

Address: Town of East Hampton Landfill
Panpigo Road
East Hampton, New York 11937

Persons Making Contact:
EA Representatives:

Type of Contact: In person

Ellen Bidwell
William Going

Interview Summary:

The Town of East Hampton Landfill, established on land owned by the Town of East Hampton, has been in operation since the early 1960s. The landfill accepts municipal, commercial, light industrial garbage, and septage from the Town of East Hampton.

A large mound has been created by garbage that local residents bring in. Just south of the mound is an approximate 5-acre area that accepts garbage from commercial haulers. This portion was built two years ago, in 1984, and a plastic liner was placed on virgin ground and covered by 4-5 feet of sand. This sand sloped radially inward and a leachate collection system was installed. Mr. Garypie did not know whether the leachate was ever sampled.

There are 4 or 5 monitoring wells on or directly adjacent to the landfill site. Mr. Garypie indicated that these wells were sampled at least twice a year. The area surrounding the landfill does have access to a community water supply as Mr. Garypie pointed out a fire hydrant adjacent to the landfill. He did not know if the local residents were hooked up to the Town wells or drawing from private wells.

Mr. Garypie told us that to the best of his knowledge, he had never seen nor heard of the disposal of toxic or hazardous waste in the East Hampton Landfill.

Acknowledgement:

I have read the above transcript and I agree that it is an accurate summary of the information verbally conveyed to EA Science and Technology interviewers, or as I have revised below, is an accurate account.

Revisions (please write in corrections to above transcript):

Signature: Eugene H Garypie Jr Date: Jan. 18, 1986

Appendix 1.1-4

Received from:
Suffolk Co. Dept. of
Health

p.1 of 4

ENGINEERING REPORT

TO

THE TOWN OF EAST HAMPTON

SUFFOLK COUNTY, NEW YORK

ON

SANITARY LANDFILL DISPOSAL OF REFUSE

AND

SANITARY DISPOSAL OF SEPTIC TANK SLUDGE

Lockwood, Kessler & Bartlett, Inc.
Consulting Engineers
Syosset, New York

p.2-1c

LOCKWOOD, KESSLER & BARTLETT, INC.

CONSULTING ENGINEERS

ONE AERIAL WAY, SYOSSET, NEW YORK

WELLS 8-0600

SAN JUAN, PUERTO RICO

WASHINGTON, D. C.

September 25th, 1961

William P. Bain, Supervisor
Town of East Hampton
Long Island, New York

Dear Mr. Bain:

The following report for the landfill project on Accabonac Road, is forwarded for your consideration.

In establishing the basis for the projections, we have anticipated the expected growth of your community. In addition, we have made recommendations for the proper operation of the project, which we feel will assist you in gaining additional public support for your efforts to economically solve the refuse and septic-tank sludge disposal problem, while maintaining property values.

Please extend our appreciation to the public officials who assisted us in our field investigations.

Sincerely,

LOCKWOOD, KESSLER & BARTLETT, INC.

John W. Towers

John W. Towers
Chief Sanitary Engineer

JWT/ib

INTRODUCTION

The Town of East Hampton, Suffolk County, fully aware of the deficiencies of present facilities for the sanitary disposal of refuse and septic tank sludge, desires to provide modern methods of refuse and sewerage disposal on a 27.3 acre site in conformance with sanitary engineering practices which minimize nuisances and hazards to public health and safety. This site is located 1.9 miles NE of the center of the Village of East Hampton, along the west side of Accabonac Road (Fig. 1).

PRESENT REFUSE DISPOSAL

Sanitary disposal of refuse is presently accomplished by dumping into the Town Dump, an abandoned sand and gravel pit, located about 2.4 miles NE of the Village of East Hampton, on the west side of Accabonac Road. About 50% of the garbage is dumped by private collectors; the remainder is carried by individuals in private vehicles. All categories of refuse are dumped over the embankment, and a hired bulldozer covers the top layer with earth at intervals, leaving the face exposed. Public health and public safety hazards are evidenced by rodents, seagulls and recurrent fires; public nuisances are created by smoke and odors. Supervision is present at the site, but there is no control over dumping undesirable refuse such as tree stumps, large dead animals and automobile parts. The Town Dump serves the Town of East Hampton with the exception of the Village of East Hampton and the Montauk area east of Napeague Harbor, which utilize their own disposal facilities.

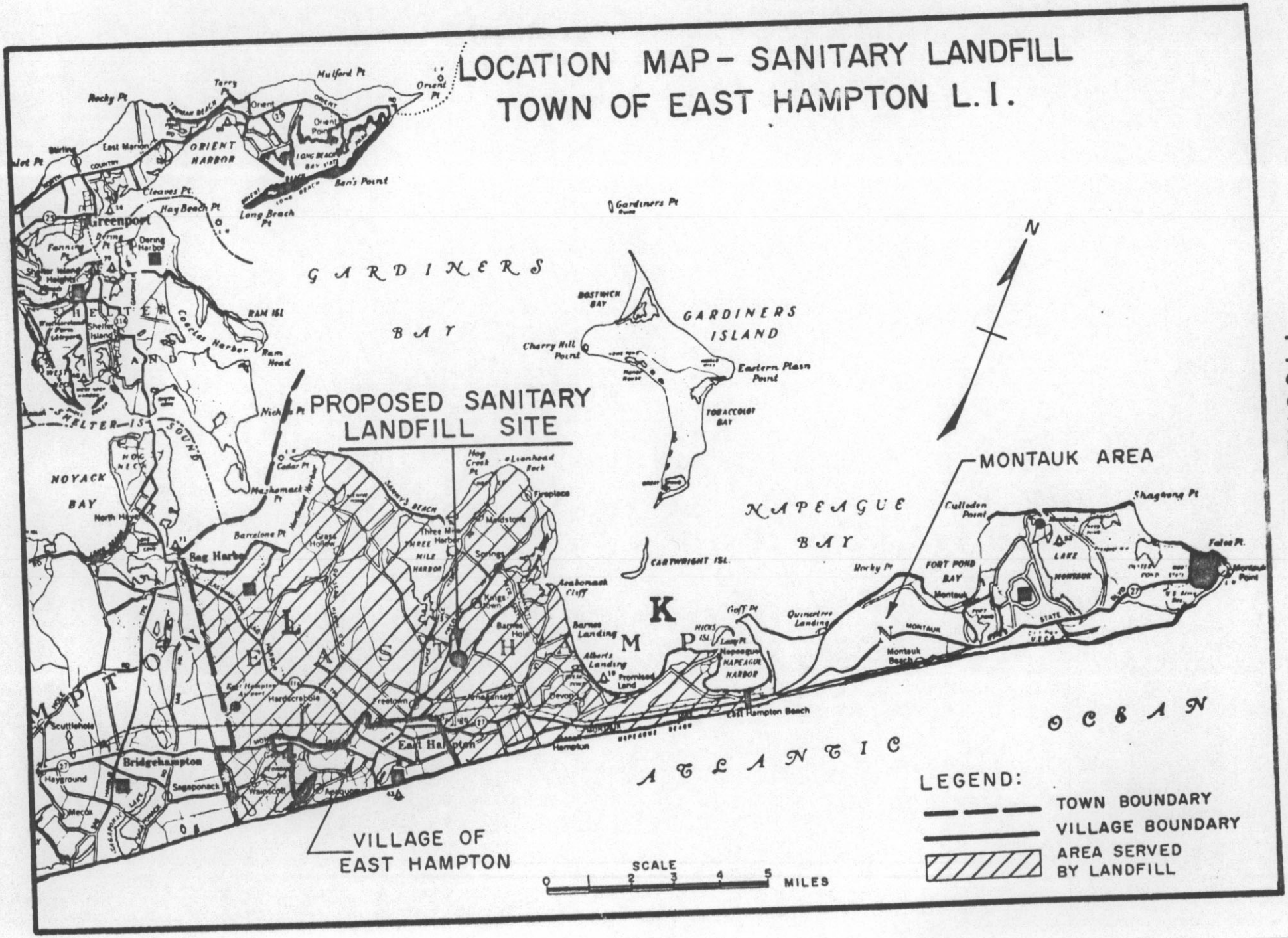

LOCATION MAP- SANITARY LANDFILL
TOWN OF EAST HAMPTON L.I.
PROPOSED SANITARY LANDFILL SITE
MONTAUK AREA
VILLAGE OF EAST HAMPTON
GARDINERS BAY
GARDINERS ISLAND
NAPEAGUE BAY
NOYAC BAY
SHELTER ISLAND SOUND
ATLANTIC OCEAN
Orient Pt
Greenport
Sag Harbor
Bridgehampton
East Hampton
Montauk Point
Gardiners Pt
Cherry Hill Point
Eastern Plain Point
Tobaccolot Bay
Cartwright Isl.
Napeague Harbor
Promised Land
Culloden Point
Shagwong Pt
Fort Pond Bay
Lake Montauk
Montauk Beach
East Hampton Beach
Hayground
Scuttlehole
Sagaponack
Amagansett
Wainscott
Mecox
Devon
Freetown
Hardscrabble
Three Mile Harbor
Barnes Landing
Albert's Landing
Acabonack Cliff
Barcelona Pt
Cedar Pt
Hashamack Pt
Ram Head
Coecles Harbor
Ram Isl
Nicholl Pt
Hog Neck
Hog Creek Pt
Lionhead Park
Fireplace
Meadstone
Springs
Kings Town
Bostwick Bay
Clieaves Pt.
Hay Beach Pt
Long Beach Pt
Bam's Point
Mulford Pt
Terry Pt
Rocky Pt
Stirling
East Marion
Orient Harbor
Orient Point
Dering Harbor
Fanning Pt
Dering Pt
Shelter Island Heights
Wades Island
Fishers Island
Gull Pond
Lake Montauk
Fales Pt
Rocky Pt
Quinnetrre Landing
Goff Pt
Hicks Isl
Long Pt
Napeague Harbor
Montauk
Montauk Point
N
SCALE
0 1 2 3 4 5 MILES
LEGEND:
TOWN BOUNDARY
VILLAGE BOUNDARY
AREA SERVED BY LANDFILL

FIGURE I

PRESENT SEPTIC TANK SLUDGE DISPOSAL

Septic tank sludge within the Town of East Hampton is presently collected by private contractors and dumped on the exposed surface of lands which the contractors rent or purchase in outlying uninhabited areas. Standard practice by contractors is to scarify the surface after it dries, for better leaching of subsequent deposits. This system presents a health hazard in that the proximity of ground water acquifers may not be investigated prior to leasing or buying the land, and the residue of solids on the surface is an optimum breeding environment for flies and other insects.

PROPOSED SANITARY DISPOSAL OF REFUSE AND SEPTIC TANK SLUDGE

It is recommended that the sanitary landfill method be applied to the 27.3 acre site for the disposal of refuse, and that drying basins be constructed for septic tank sludge on a portion of the site, with staged disposal of sewerage solids within the sanitary landfill.

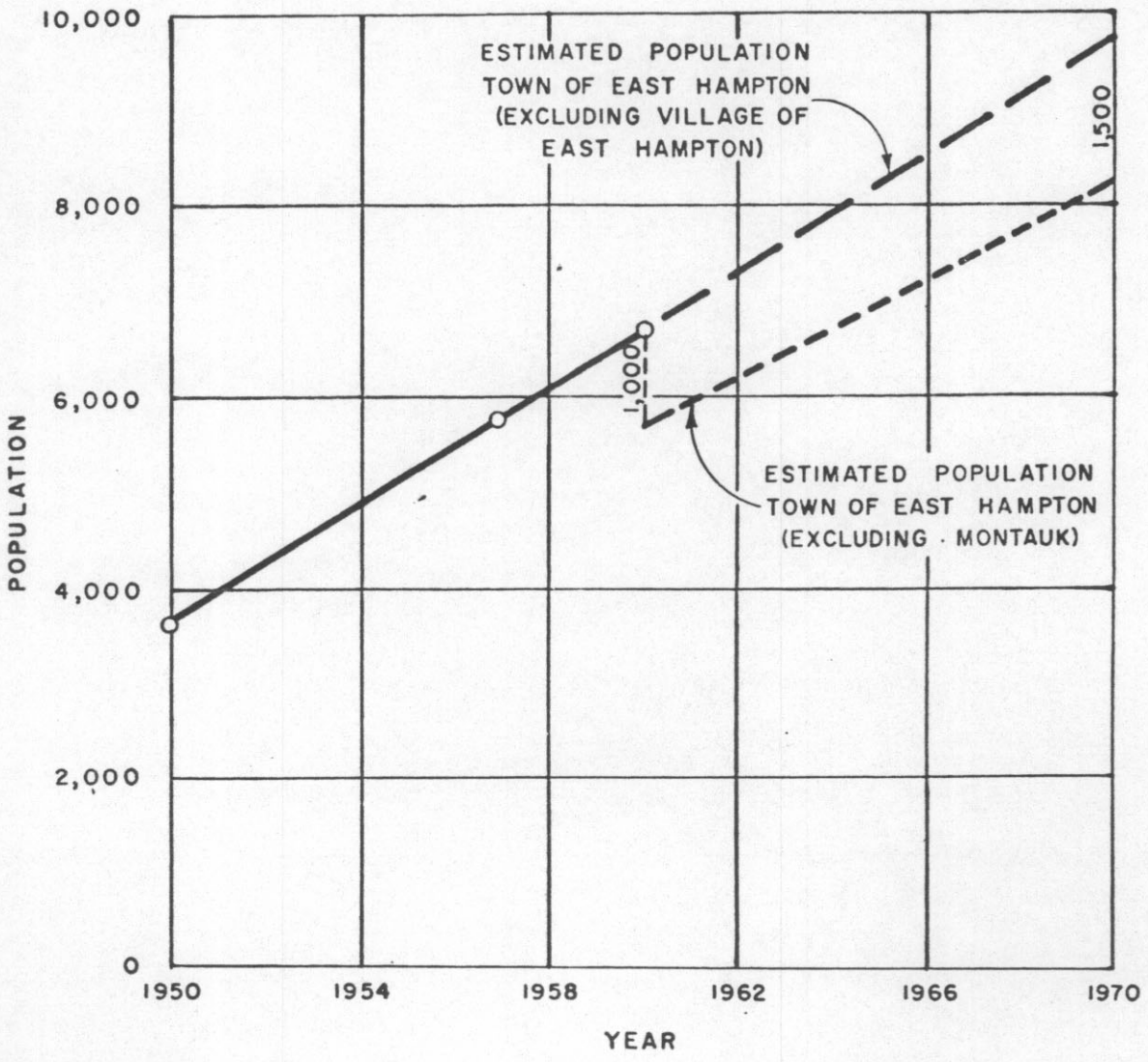
Sanitary landfill is a method of disposing refuse on land without creating nuisances or hazards to public health and safety, by utilizing the principles of engineering to confine the refuse to the smallest practical area, to reduce it to the smallest practical volume, and to cover it with a layer of earth at the conclusion of each day's operation. There are three methods in general use today - the trench method, the ramp or progressive slope method, and the area method:

A. In the trench method, a trench is dug on one side of the area. The refuse is then dumped into the trench starting at one end, is compacted,

FIGURE 2

POPULATION OF UNINCORPORATED AREA

TOWN OF EAST HAMPTON



SOURCES: U.S. CENSUS, L.I.L.CO. &
"PROJECTION OF A METROPOLIS - TECHNICAL SUPPLEMENT, 1961"

Appendix 1.1-5

N.Y. Dept. of Health
Bureau of Toxic Substances

NUS CORPORATION

POTENTIAL HAZARDOUS WASTE SITE

EXECUTIVE SUMMARY

East Hampton Landfill
Site Name

NY New Site
EPA Site ID Number

Springs-Fireplace Road
East Hampton, NY
Address

02-8303-17
TDD Number

Date of Site Visit: May 27, 1983

SITE DESCRIPTION

The 60 acre landfill accepts municipal refuse, landscaping debris, bulky items, and septic tank sludge. The site is divided into separate areas for the disposal of the items mentioned above. Two unlined septic tank sludge lagoons are located on-site. There is one groundwater monitoring well on-site, eventually there will be three more. Approximately five acres of the site are lined with PVC material.

PRIORITY FOR FURTHER ACTION: High___ Medium X Low___

RECOMMENDATIONS

Install three groundwater monitoring wells to complete monitoring network. Monitor groundwater on and around the site.

Prepared by: Martin O'Neill
of NUS Corporation

Date: June 8, 1983

Appendix 1.1-6

Received from
NYDEC Bureau of Landfills

52 S 05
p 1 of 3

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Building 40, State University of New York
Stony Brook, New York 11794

516-751-7900

September 1, 1983

Randall Parsons, Chairman
Sanitation Department
East Hampton Town Hall
159 Pantigo Raod
East Hampton, NY 11937

Re: Part 360 Permit to Construct and Operate a Sanitary Landfill - Facility I. D. No. 52-S-05
UPA No. 10-83-1001

Dear Mr. Parsons:

In conformance with the requirements of the State Uniform Procedures Act (Article 70, ECL) and its implementing Regulations (6NYCRR Part 621) we are enclosing your permit. Please read all conditions carefully. If you are unable to comply with any conditions, please contact the Regional Regulatory Affairs Office, NYS Department of Environmental Conservation, State University of New York at Stony Brook, Building 40, Stony Brook, New York 11794.

Also enclosed is a permit sign which you are to conspicuously post at the project site, protected from the weather.

Very truly yours,

Daniel J. Larkin
Regional Permit Administrator

DJL:ll

Encls.

cc: M. O'Toole, BMW
J. Maloney, SCDHS
J. Heil
File

RECEIVED
SEP - 2 1983

RECEIVED
SEP 12 1983

Bureau of Municipal Waste
Division of Solid Waste

NEW YORK STATE DEPARTMENT OF

PERMIT

Under the Environmental Conservation Law, Article 27, Title 7, Part 360

52-8-05

EXPIRATION DATE 7/1/86 P.293

PERMIT NO. 10-63-1001

☒ CONSTRUCTION
☒ OPERATION

☒ INITIAL ISSUE
☐ RENEWAL

☐ REISSUANCE
☐ MODIFICATION

PERMIT ISSUED TO
Town of East Hampton

ADDRESS OF PERMITTEE
159 Pantigo Road
East Hampton, NY 11937

TELEPHONE NO.

LOCATION OF PROJECT
Town East Hampton 5/96

County Suffolk

Environmental Conservation Regional Office
Region 1 Stony Brook

ON-SITE SUPERVISOR
T. Bennett

DESCRIPTION OF PROJECT
Fireplace Road Landfill

10-63-1001

GENERAL CONDITIONS

1. The permittee shall file in the office of the Environmental Conservation Region specified above, a notice on intention to commence work at least 48 hours in advance of the time of commencement and shall also notify said office promptly in writing of the completion of the work.
2. The permitted work shall be subject to inspection by an authorized representative of the Department of Environmental Conservation who may order the work suspended if the public interest so requires.
3. As a condition of the issuance of this permit, the applicant has accepted expressly, by the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.
4. All work carried out under this permit shall conform to the approved plans and specifications. Any amendments must be approved by the Department of Environmental Conservation prior to their implementation.
5. The permittee is responsible for obtaining any other permits, approvals, easements and rights-of-way which may be required for this project.
6. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with Part 360 and the special conditions. Any variances granted by the Department of Environmental Conservation to Part 360 must be in writing and attached hereto.

SPECIAL CONDITIONS

1. Daily intermediate and final cover shall be provided.
2. Leachate shall be routinely removed off liner and taken to an approved facility for treatment and disposal.
3. Construction of two (2) additional groundwater monitoring wells within one (1) year from Permit date.
4. Groundwater monitoring wells shall be sampled quarterly with analytical results to be submitted to NYSDEC.
5. Monitoring for decomposition gases shall be performed monthly at landfill perimeter.

Fireplace Road

Fireplace Road Landfill East Hampton

ISSUE DATE 7/1/83

ISSUING OFFICER Daniel J. Larkin, Regional Permit Administrator

SIGNATURE X

OFFICE COPY

J. Heil

NOTICE OF PERMIT

for:

[XXXX]	CONSTRUCTION	[XXXX]	INITIAL ISSUE	[ ]	REISSUANCE
[XXXX]	OPERATION	[ ]	RENEWAL	[ ]	MODIFICATION

has been issued to: Town of East Hampton

address: 159 Pantigo Road, East Hampton, NY 11937

for a project described as: Fireplace Road Landfill

under the Environmental Conservation Law,
Article 27, Title 7, Part 360 [Solid Waste Management Facilities]

NOTE:

- This Notice of Permit must be posted on the project site in such a manner that it is protected from weather and is in a location readily visible to the public.
- A copy of the Permit with the general and special conditions noted thereon will be shown to anyone upon request.

Daniel J. Larkin

Issuing Officer — Daniel J. Larkin, Regional Permit Administrator

NYSDEC, Building 40, S UNY, Stony Brook, NY 11794

Address

New York State Department of Environmental Conservation

10-83-1001	7/1/83	7/1/86
52-S-05		
Permit No.	Issue Date	Expiration Date

P. 3 of 3

Appendix 1.1-7

EA SCIENCE AND TECHNOLOGY
A Division of EA Engineering, Science, and Technology, Inc.

COMMUNICATIONS RECORD FORM

Distribution: ( ) File 152058, ( ) _____
( ) _____, ( ) _____
( ) **Author**

Person Contacted: John Conover **Date:** 6/24/86

Phone Number: (516) 751-7900 **Title:** Sanitary Engineer

Affiliation: NYSDEC Region 1 **Type of Contact:** Phone

Address: Division of Solid Waste
Suny Campus - Bldg 40
Stony Brook, Ny 11794

Person Making Contact: E. Bidwell

Communications Summary: Mr. Conover and I discussed the groundwater analyses of the East Hampton landfill. Mr. Conover recollected only 3 wells at the sight, and believed that groundwater flow was to the NNW. He did ask me, however, to check that with a water table map. Mr. Conover indicated to me that he believed the 3 wells at the East Hampton landfill were improperly placed, and possibly missing the leachate plume. He said that the DEC was about to issue the Town of East Hampton a Consent order to install three more wells.

(see over for additional space)

Signature: Ellen Bidwell

Appendix 1.1-8

EA SCIENCE AND TECHNOLOGY
A Division of EA Engineering, Science, and Technology, Inc.

p.1-12

COMMUNICATIONS RECORD FORM

Distribution: ( ) File 152058, ( ) _____
( ) _____, ( ) _____
( ) Author

Person Contacted: James H. Pim, P.E. Date: 12/10/86

Phone Number: (516) 451-4634 Title: A

Affiliation: SCDHS Hazardous Materials Management Type of Contact: In person

Address: 15 Horseblock Place Person Making Contact: Going / Higgins
Farmingville, NY 11738

Communications Summary: Re: East Hampton Landfill

Mr. Pim provided the attached pages as the information he had to provide regarding this site.

(see over for additional space)

Signature: Rebecca J. Higgins

1/2.

p.2012

SUPER FUND SITE REPORT REVIEW COMMENTS

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES

HAZARDOUS MATERIALS MANAGEMENT SECTION

Site Name: East Hampton Landfill N.Y.I.D. # 152058

Report Type: I Contractor NUS EPA ✓ State ____

Date of Report 6/8/83 Date of Review 9/24/84 Reviewer J. Pine

Comments: This site should be investigated more thoroughly. High levels of methylene chloride (42 mg/l) were found in the septage sludge lagoon in 1982 as well as toluene, copper and zinc. The surrounding area is rural agricultural land and the dump should be checked for the presence of agricultural chemicals such as DDT, arsenic and other pesticides. The leachate plume should be defined and water quality determined with several observation wells.

Appendix 1.1-9
Source: SCDHS

CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUST

DATE P. 183 file

FIELD NO. R-053-03 LAB NO. _____ COMPLETED _____

NAME OR FIRM Town of EAST HAMPTON SCAVENGER LAGOON

ADDRESS OR LOCATION ACABONIC Rd EAST HAMPTON

POINT OF COLLECTION Primary Pool

REMARKS/INSTRUCTIONS _____

TEST for:

129 Priority Pollutants (NO PESTICIDES)

METHOD OF PRESERVATION ☐ HNO_3 TO pH <2 ☐ COOL 4° C

CUSTODY OF SAMPLE

DURING TRANSPORT OF THE SAMPLE FROM SAMPLING SITE TO LABORATORY, THE CHAIN OF CUSTODY MUST BE UNBROKEN. GENERALLY THIS WILL REQUIRE THAT THE SAMPLE BE DELIVERED BY THE SAMPLE COLLECTOR OR HIS DESIGNATED REPRESENTATIVE WHO WILL SIGN FOR THE RECEIPT, INTEGRITY AND TRANSFER OF THE SAMPLE DURING SHIPMENT.

	NAME	AFFILIATION	DATE - TIME	TO	DATE - TIME
1. COLLECTED BY	Steven Kimmel	SCDHS	3/30/82		10:30
2. POSSESSION BY	Steven Kramer	SCDHS	3/30/82 10:30		
3. POSSESSION BY					
4. RECEIVED LAB BY					
5. POSSESSION BY					

ENERGY RESOURCES CO. INC.
SUMMARY OF ORGANIC PRIORITY POLLUTANT ANALYSIS

NT New York DEC

I.D. R-053-03

I.D. 22-251

DATE SAMPLE RECEIVED 3/31/82

DATE ANALYSIS COMPLETED 5/3/82

ACID COMPOUNDS	ug/l
2,4,6-trichlorophenol	ND
p-chloro-m-cresol	ND
2-chlorophenol	ND
2,4-dichlorophenol	ND
2,4-dimethylphenol	ND
2-nitrophenol	ND
4-nitrophenol	ND
2,4-dinitrophenol	ND
4,6-dinitro-o-cresol	ND
pentachlorophenol	ND
phenol	39

BASE/NEUTRAL COMPOUNDS	
acenaphthene	ND
benzidine	ND
1,2,4-trichlorobenzene	ND
hexachlorobenzene	ND
hexachloroethane	ND
bis(2-chloroethyl)ether	ND
2-chloronaphthalene	ND
1,2-dichlorobenzene	ND
1,3-dichlorobenzene	ND
1,4-dichlorobenzene	ND
3,3-dichlorobenzidine	ND
2,4-dinitrotoluene	ND
2,6-dinitrotoluene	ND
1,2-diphenylhydrazine	ND
fluoranthene	*
4-chlorophenyl phenyl ether	ND

BASE NEUTRAL COMPOUNDS		ug/l
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl)ether	ND
43B	bis(2-chloroethoxy)methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis(2-ethylhexyl)phthalate	*
67B	butyl benzyl phthalate	*
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	*
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	*
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	*
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	*
129B	2,3,7,8-tetrachlorodibenzo-p-dioxin	ND

ND = Not detected
NA = Not applicable
* = 1-9 ug/l

Reported by: C. Ladyzen

p.3-13

Energy Resources Co., Inc.
Summary of Volatile Priority Pollutant Analysis

Client: New York DEC
Client I.D.: R-053-03
ERCO I.D.: 22-251

Date Received: 3/31/82
Date Completed: 4/27/82

Volatile Compounds	ug/l
acrolein	ND
acrylonitrile	ND
benzene	ND
carbon tetrachloride	ND
chlorobenzene	ND
1,2-dichloroethane	ND
1,1,1-trichloroethane	ND
1,1-dichloroethane	ND
1,1,2-trichloroethane	ND
1,1,2,2-tetrachloroethane	ND
chloroethane	ND
bis(chloromethyl)ether	ND
2-chloroethylvinyl ether	ND
chloroform	ND
1,1-dichloroethylene	ND
1,2-trans-dichloroethylene	ND
1,2-dichloropropane	ND
1,3-dichloropropylene	ND
ethylbenzene	ND
methylene chloride	42000
methyl chloride	ND
methyl bromide	ND
bromoform	ND
dichlorobromomethane	ND
trichlorofluoromethane	ND
dichlorodifluoromethane	ND
chlorodibromomethane	ND
tetrachloroethylene	ND
toluene	250
trichloroethylene	ND
	ND

Reported by: C. Rodger


NW/4 EAST HAMPTON 15' QUADRANGLE
Appendix 1.2-1
Source: EA Site Inspection, 21 January 1986
FIREPLACE 3.6 MI.
KINGSTOWN 0.7 MI
MAIDSTONE PARK 2.7 MI
2 510 000 FEET
Threemile Harbor
ABRAHAMS ROAD
STONEY HILL
Stoney Lookout Tower
FRESH POND RD
EAST HAMPTON L.F.
SEPTAGE PIT
Brown Swamp Cem
SPRINGS-FIREPLACE ROAD
TOWN
Oak Grove Cem
Amagansett
East End Cem
Water
Gravel Pit
Waters Chapel
LONG
Pantigo
HIGHWAY
SKIMHAMPTON ROAD
MONTAUK
BLUFF
Beach
LANE
HITHER
MIDDLE
FURTHER
Maidstone
Club
EAST HAMPTON, N. Y.
NW/4 EAST HAMPTON 15' QUADRANGLE
N4052.5—W7207.5/7.5
1956
SCALE 1:24 000
1 MILE
7000 FEET
1 KILOMETER

Appendix 1.3-1
1 of 7

Availability of Fresh Ground Water Montauk Point Area Suffolk County Long Island, New York

By NATHANIEL M. PERLMUTTER *and* FRANK A. DELUCA

RELATION OF SALT WATER TO FRESH GROUND WATER

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1613-B

Prepared in cooperation with the U.S. Air Force



UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1963

hirteen observation wells, 2 inches in diameter and ranging in
th from about 70 to 150 feet, were installed at nine sites (test well
bols, pl. 1). At four of these sites, pairs of shallow and deep
s were installed to observe heads at different depths in fresh and
water. The wells were developed and pumped by compressed
with a gasoline-driven jet pump.

Vater from four of the observation wells was analyzed for chemical
ent. About 100 analyses were made of the chloride content of
er from the observation wells and pumping wells in the report
. A water-level measurement program, begun immediately after
construction of the observation wells, was continued through Sep-
ber 1961. Water-stage recorders were installed on several wells
periods ranging from a few days to several weeks. The altitude
neasuring points on observation wells were related to mean sea
l by spirit leveling, and a water-level contour map (pl. 1) was
pared.

hirty-four active and abandoned wells were inventoried (table 3),
a brief examination was made of the surficial geology, particu-
y of the exposures in cliffs along the south shore.

PREVIOUS INVESTIGATIONS

The surficial geology of the Montauk Point area has been described
efly by Fuller (1914) in a report, which contains a geologic map
Long Island and a few sketches of outcrops at Montauk Point. As
t of another island-wide study of the ground-water resources,
ter, deLaguna, and Perlmutter (1949) prepared contour maps
owing the depth to the Cretaceous deposits and bedrock beneath
ng Island, including the Montauk area. A report by Perlmutter
d Crandell (1959, p. 1064) presents generalized sections of the
uthshore beaches of Long Island, which suggest the presence of salt
ater in the deep aquifers beneath Montauk Point. However, no de-
iled study of the water resources of the area had been made prior
the present investigation.

ACKNOWLEDGMENTS

The writers acknowledge the cooperation of the U.S. Army Corps
Engineers, who supplied large-scale maps and other engineering
ata on former Camp Hero; the New York State Water Resources
ommission, which provided records of existing wells; land owners
ho gave permission to enter their property to measure and install
bservation wells; and several well drilling firms which provided ad-
ice in planning the construction of the observation wells. The close
ooperation of military and civilian personnel at both the Suffolk

County Air Force Base, Westhampton, N.Y., and the Montauk Air Force Station expedited the drilling of the test wells and the collection of hydrologic data.

GEOLOGY

The Montauk Point area is underlain by crystalline bedrock of Precambrian age upon which rest, in succession, unconsolidated deposits of Cretaceus, Pleistocene, and Recent age. As the bedrock and the Cretaceous formations are believed to contain salt water and are not penetrated by any wells in or near the project area, only a brief description of them, condensed from Suter, deLaguna, and Perlmutter (1949, p. 13–46 and pls. 10, 13), is given.

PRECAMBRIAN BEDROCK

The bedrock probably consists of gneiss and schist. Its surface is about 1,000 to 1,300 feet below sea level and slopes southeastward about 80 feet per mile. Very salty water is probably contained in openings along joints and other fractures in the rock. Because the bedrock has low permeability and contains only salty water, it is not considered an aquifer.

CRETACEOUS FORMATIONS

Immediately above the bedrock is the Raritan formation, which is about 300 to 400 feet thick. The Raritan is divided into a lower unit called the Lloyd Sand Member and an upper unit called the clay member. The Lloyd Sand Member is an artesian aquifer that contains fresh water in the western part of Long Island, but at Montauk Point it probably contains salty water only. The overlying clay member confines the water in the Lloyd.

The Raritan Formation is overlain by undifferentiated deposits of Cretaceous age that include the Magothy and probably several younger Cretaceous formations (Perlmutter and Crandall, 1959). These deposits contain permeable zones partly separated by lenticular beds of silt, sandy clay, and clay. The permeable zones probably could yield as much as 1,000 gpm to individual large wells, but the water is believed to be nearly as salty as the ocean. The Cretaceous surface in western Long Island is dissected by channels as deep as 300 to 500 feet below sea level. Similar deep channels probably exist beneath parts of the Montauk Point area, but the data are scanty as the deepest test well in the report area is terminated in glacial deposits at a depth of 130 feet below sea level.

PLEISTOCENE DEPOSITS

GENERAL CHARACTER AND STRATIGRAPHY

The Pleistocene deposits of Long Island are end products of the advance and melting of several ice sheets during the Pleistocene Epoch. Because of the complex geologic history of these deposits, which are important sources of ground water, a summary of the general character of glacial deposits and of the sequence of glacial units in Long Island is given below, followed by a description of the strata in the Montauk Point area.

Glacial deposits may be divided into two principal types: (1) till and (2) stratified drift. Till is predominantly composed of unsorted or poorly sorted deposits of boulders, gravel, sand, silt, and clay, dropped directly from melting ice. Till deposited as an irregular surficial mantle is called ground moraine. A ridge composed chiefly of till and marking the former front of an ice sheet is called an end moraine. Stratified drift is deposited by meltwater streams as outwash deposits, in lakes as glaciolacustrine deposits, and in the sea as glaciomarine deposits. Stratified drift is generally distinctly bedded and well graded, owing to the sorting action of the water from which it is deposited. The beds may range in texture from gravel to clay size, depending on the velocity of the water and the size of the source material. A detailed account of the origin and nature of glacial deposits is given in Flint (1957).

The lowermost formation of Pleistocene age on Long Island is the Jameco Gravel, a coarse-grained outwash deposit. Above the Jameco is the Gardiners Clay, a fossiliferous marine interglacial formation composed chiefly of beds of silt and clay. The beds above the Gardiners Clay consist of several sequences of outwash and till. Fuller (1914, p. 114–157) divided these units into the Jacob Sand and the Manhasset Formation. He subdivided the Manhasset Formation into two outwash members separated by a till member called the Montauk Till, after the type area at Montauk Point. According to Fuller, erosion of the Manhasset Formation was followed by deposition of more outwash and till during the last, or Wisconsin Stage of glaciation. The uppermost deposits of till were laid down as part of the Ronkonkoma end moraine, which forms the surface of most of the Montauk Point area.

Because of the difficulty in recognizing discrete units of till and outwash in many well logs and outcrops, the Geological Survey generally uses the informal name upper Pleistocene deposits for glacial deposits of post-Gardiners age. Although Fuller believed that the post-Gardiners deposits were partly Illinoian and partly Wisconsin in age, later workers, including Wells (1934, p. 121–122), and Mac-

Clintock and Richards (1936, p. 332), have suggested that they were laid down entirely during the Wisconsin Stage.

PLEISTOCENE STRATIGRAPHY OF THE MONTAUK POINT AREA

Because the evidence from generalized well logs and well samples was scanty and because not enough time was available to make a detailed examination of the lithology and structural features of the outcrops along the south shore, the glacial deposits in the report area were not correlated specifically with known Pleistocene formations but have been broadly divided into (1) a lower unit of stratified drift and (2) an upper unit consisting of undifferentiated deposits of till and stratified drift (pl. 2).

LOWER UNIT OF STRATIFIED DRIFT

The lower unit of stratified drift is composed chiefly of nonmarine grayish-brown medium to coarse sand and gravel and some thin lenses of clay and silt. It does not crop out, hence is known entirely from well logs and a few samples. A sample from a depth of 120–126 feet below land surface at well S17231 (pl. 1) consists chiefly of angular to subangular clear and iron-stained quartz (about 80 percent) and miscellaneous grains (about 20 percent), which include granite, gneiss, schist, and the minerals garnet, biotite, chlorite, and hornblende, and other dark minerals. Because of their high permeability, thickness, and extensive distribution, the beds of the lower unit comprise the principal aquifer in the report area (see "Ground Water").

UNDIFFERENTIATED DEPOSITS OF TILL AND STRATIFIED DRIFT

Immediately above the lower unit of stratified drift is an undifferentiated unit of varied lithology composed of interbedded deposits of till and stratified drift about 30 to 100 feet thick (see diagonally ruled area on pl. 2). Although not clearly discernible in plate 2, a study of the well logs and outcrops suggests that, in general, the lower 20 to 40 feet of the undifferentiated deposits consists of interbedded gray and brown clay, laminated green and gray silt and clay, and some thin lenses of fine brown sand (figs. 2, 3, pl. 2). Samples of micaceous silt from depths of 55–75 feet below land surface, near S19849, consisted chiefly of quartz, biotite, and muscovite. No forams or diatoms were found in the material. The middle part of the undifferentiated deposits is probably composed largely of gray and brown compact clayey and gravelly till, which grades laterally into fine-grained stratified drift in some places. Immediately above the compact till is generally stratified drift, which ranges in thickness from a featheredge to about 30 feet and is composed chiefly of beds and lenses of brown and gray silt, fine to medium sand, and clayey

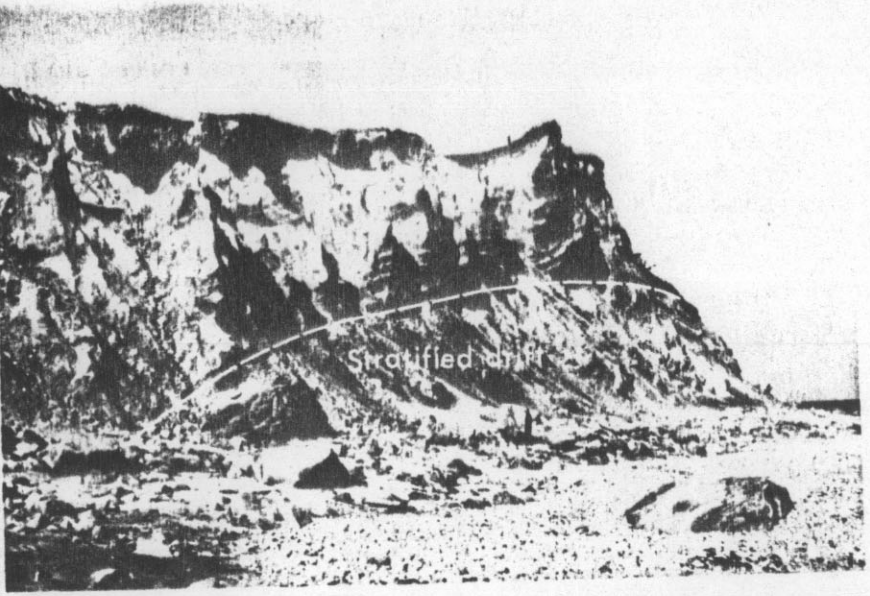


FIGURE 2.—Outcrop showing till above stratified drift composed chiefly of interbedded silt and clay, south side of Montauk Air Force Station. (Photograph by U.S. Geological Survey.)

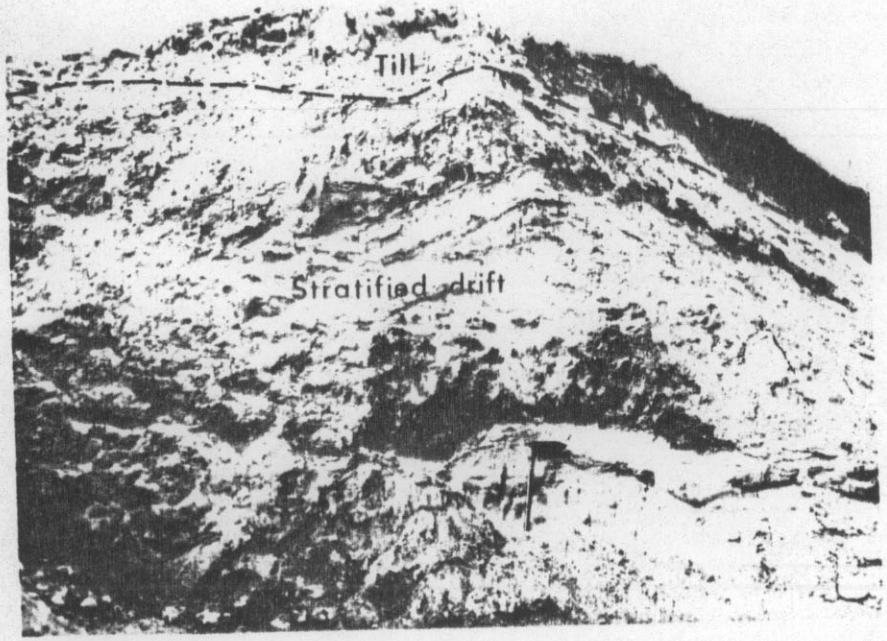


FIGURE 3.—Close-up view of till and underlying stratified drift composed chiefly of silt

sand (fig. 4 and pl. 2). The uppermost part of the undifferentiated unit is generally a loose brown clayey till, about 5 to 20 feet thick, which contains some boulders. In some outcrops the intervening stratified drift is missing, and the upper till apparently rests directly on the lower till.

The till sheets and stratified drift, which crop out and are penetrated by wells in the report area, are probably correlative mostly with the upper Pleistocene deposits of western Long Island, but conceivably older Pleistocene units such as the Gardiners Clay and Jameco Gravel also may be present. Lohman (1939, p. 231–232) reports an assemblage of marine, brackish-water and fresh-water species of Pleistocene diatoms in a greenish-gray clay, reported to be the Gardiners, collected at an outcrop about half to three-quarters of a mile west of Montauk Lighthouse (pl. 1). The assemblage represents climatic conditions similar to or warmer than those of the present, which suggests an interglacial stage. As most of the species are living at present in the same region, Lohman concluded that the stage could not be named with the data on hand. It is not certain whether the clay examined by Lohman is correlative with the Gardiners Clay or "20-foot" clay found in western Long Island or neither. Additional field examination of the outcrops and more detailed laboratory study of samples are required before more specific correlations of the beds can be made.

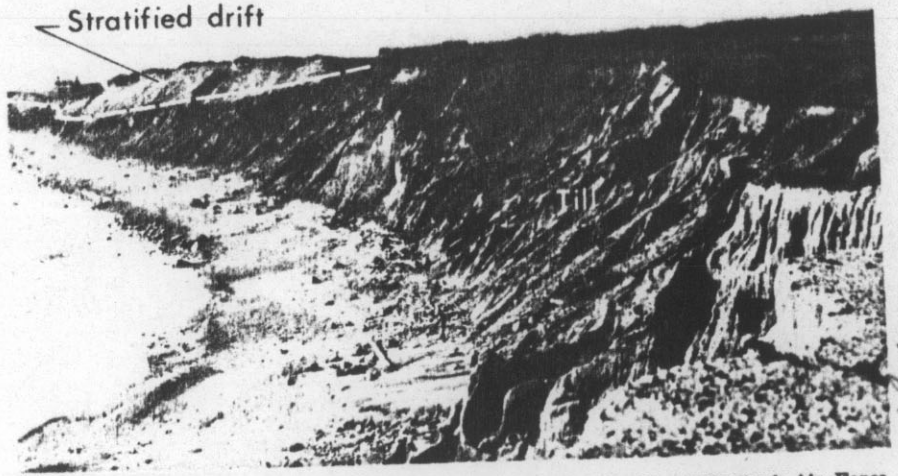


FIGURE 4.—Outcrop showing stratified drift above till, south side of Montauk Air Force Station. (Photograph by U.S. Geological Survey.)

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RECENT DEPOSITS

Thin deposits of sand, gravel, and boulders deposited in Recent time are distributed along the narrow beaches of Montauk Point. Large boulders and cobbles are most common on the southern and eastern shores (figs. 2 and 3). Sand and swamp deposits are more common along the low-lying north shore. Reddish lenses of garnet and ilmenite-rich sand can be seen in many places in beach deposits bordering the bluffs. The Recent deposits are uninmportant as aquifers because of their thinness, small intake area, and proximity to sea water.

GROUND WATER

SOURCE AND OCCURRENCE

The source of all fresh ground water in the report area is precipitation on the land surface, which averages about 48 inches annually. If all the precipitation were available for ground-water recharge, it would be equivalent to 2.3 million gallons per day per square mile. However, part is lost by direct evaporation from the soil and plants and from ponds and swamps that occupy numerous kettle holes; part is transpired by numerous trees and other forms of vegetation; part runs off to the sea in several small streams (pl. 1) whose discharge reaches a peak during and immediately after heavy precipitation; part is lost by seepage from cliffs along the south shore; and part percolates downward to replenish the ground-water reservoir.

Although no detailed studies have been made, general comparison of conditions at Montauk Point with those in western Long Island suggests that about 25 percent of the precipitation (12 inches, or about 570,000 gpd per sq mi) reaches the water table during a year of average precipitation. During years of above- or below-average precipitation, ground-water recharge is proportionately greater or lesser than average.

After seeping through the soil zone the water percolates downward through the pore spaces in the sand, gravel, silt, and clay to the main zone of saturation in the lower part of the undifferentiated deposits of till and stratified drift (pl. 2). The upper surface of the zone of saturation is called the water table. Scattered perched water bodies are found above the main water table, owing to lenses and beds of silt and clay, which retard downward movement of water. Some water in the upper part of the main zone of saturation moves to discharge areas at the shoreline, and some percolates slowly downward through confining beds of till, silt, and clay to the underlying principal aquifer. Water in the principal aquifer is under artesian pressure owing to the relatively low permeability of the overlying beds. The imaginary surface to which water in wells tapping the principal aquifier rises is

called the piezometric surface (pl. 1). Except for withdrawals through wells, most water in the principal aquifer discharges to the sea by upward seepage at and near the shoreline.

WATER IN THE UNDIFFERENTIATED DEPOSITS OF TILL AND STRATIFIED DRIFT

Undifferentiated deposits of till and stratified drift form the upper unit shown on plate 2. Owing to the poor sorting and clay content of the till and to the predominance of silt and sandy clay in the stratified part of the unit, the undifferentiated deposits probably cannot yield substantial amounts of water to individual wells in most parts of the area. Some water occurs in the undifferentiated deposits as perched water bodies above the main water table, and some is contained in minor permeable zones below the water table. The lower part of the undifferentiated unit consists chiefly of saturated deposits of till, silt, and clay, which serve mainly as confining beds for the underlying principal aquifer.

PERCHED WATER BODIES

Perched water bodies are generally small isolated bodies of water temporarily stored above the main water table in scattered lenses of permeable material underlain by clay and silt. During the drilling of most of the observation wells and during the foundation test borings for several structures at the Montauk Air Force Station, water was reported at depths ranging from about 5 to 25 feet below land surface, or about 35 to 100 feet above sea level. These altitudes, which are as much as 40 to 95 feet above the water level in the principal aquifer (pl. 1), are a strong indication of the existence of perched water bodies as they are too high to represent the main water table.

The fact that perched water is common was verified further by the history of test well S19486 in the northeast corner of the U.S. Military Reservation (pl. 1). Land surface at the well is about 70 feet above sea level. During the drilling of the auger hole for the well, the material from 0–8 feet was reported as dry; 8–16 feet as moist; and at 16 feet as a perched water zone of unknown thickness. A well driven in the auger hole to a depth of 65 feet below land surface remained dry for several months. To determine whether the well was plugged, it was filled with water, which seeped out through the screen in a few days. In March 1961 the well was driven about 12 feet deeper and penetrated the main zone of saturation between about 68 and 70 feet below land surface.

Perched water bodies may yield sufficient water for intermittent domestic use, but they generally are not dependable if large amounts are required for long periods. During months of low precipitation, wells tapping perched water-bearing zones may go dry, owing to the

rge declines in water level in short periods of time, which are char-cteristic of these zones. An example of the large fluctuations which ay be expected in perched water tables is given by the record of a est boring for a building near well S19495 in the center of the Mon-auk Air Force Station. When the boring was completed at a depth f 30 feet on November 22, 1955, the water level was 10 feet below and surface (about 50 feet above sea level). The water level de-lined during the next several days and by November 26 it was 23 feet elow the land surface, a decline of 13 feet.

MINOR WATER-BEARING ZONES

Scattered minor water-bearing zones occur below the main water able in lenses of sand and gravel in the undifferentiated deposits of till and stratified drift. The location, thickness, extent, and continuity of these zones in most of the area is not apparent from present data. The upper limit of these zones is the main water table; the lower limit is unknown. As nearly all the wells terminate in the underlying principal aquifer, the altitude and configuration of the water table can only be estimated. Scanty data from test holes, drilled with a power auger, suggest that it may be as high as 10 to 17 feet above sea level in the central part of the area, about 16 feet above sea level in the southwestern part (S19500, table 3), and about at sea level at the shoreline. The water table is mainly in beds of silt, clay, and till, which are not suitable for development of large supplies.

In some shallow minor water-bearing zones, the water is under watertable, or unconfined, conditions; but at greater depths where these zones are overlain by thick beds of silt and clay, the water may be confined. Indirect evidence of the low yield of the minor water-bearing zones is the fact that all the active wells, including those constructed for domestic use, were drilled through these zones and completed in the principal aquifer. Two wells, S19500 and S1202, originally completed in the shallow beds were abandoned and replaced by wells screened in the principal aquifer. However, as the data are scanty and to make the maximum use of all available supplies, all future wells should be logged carefully and samples should be taken at 5-foot intervals to evaluate further the possible existence of productive zones at shallow depths.

CONFINING BEDS

The data shown on plate 2, and records of other wells not on the line of these sections, indicate that the lower part of the undifferentiated deposits consists chiefly of beds of silt, clay, sandy clay, and possibly some deposits of till. At several wells (for example, S17231, pl. 2) the confining beds are at least 20 to 30 feet thick, and at one

place they are about 65 feet thick (S1245, pl. 2). The effectiveness of these confining beds is confirmed hydraulically by the differences in head between the water table and the piezometric surface of the principal aquifer, which are estimated to be as much as 8 to 12 feet in the central part of the area. At well S19500 (26 feet deep) in the southwestern part of the area, the water table is about 16 feet above sea level, or about 13 feet above the piezometric surface (pl. 1). The barometric effects and the distinct tidal effects shown by the hydrographs (figs. 5 and 6) of wells which are as much as 0.4 mile from the shore and screened in the principal aquifer, is additional evidence of the wide extent and low permeability of the confining beds.

WATER IN THE LOWER UNIT OF STRATIFIED DRIFT

PRINCIPAL AQUIFER

The principal aquifer is in the lower unit of stratified drift shown in plate 2. The upper limit of the aquifer, which is the bottom of the overlying confining beds, ranges in altitude from about sea level to 40 feet below sea level. The lower limit, for purposes of this report, is set at the top of the zone of diffusion between fresh and salty water, which ranges in altitude from about sea level to 130 feet below sea level. The principal aquifer consists chiefly of beds of medium to very coarse sand and gravel, about 10 to 80 feet thick. Scattered thin lenses of silt and silty clay are interbedded in some places with the more permeable beds.

Water in the principal aquifer is replenished by slow downward leakage from the overlying confining beds. The amount and rate of leakage per unit area of confining beds probably is small owing to their low permeability; however, the leakage over a large area may be substantial. Water in the principal aquifer is under artesian pressure, but the head is not sufficient to cause wells to flow. The depth to the static water level in existing wells ranges from about 13 to 70 feet below land surface (table 3). The depth to water is greatest in the center of the area where the altitude of the land surface is highest, and is least at the shoreline.

The principal aquifer is the only source of fresh water tapped by active wells. Wells 8 to 10 inches in diameter and finished with screens 10 to 20 feet long yield as much as 150 gpm. Reported specific capacities of wells range from 4 to 11 gpm per foot of drawdown. The history of pumping at Montauk Air Force Station suggests that sustained pumping at rates of 50 gpm or more will probably induce salt-water encroachment laterally or from below in most of the area.

PIEZOMETRIC SURFACE

The imaginary surface to which water in wells tapping the principal aquifer will rise is called the piezometric surface. The piezometric surface responds to changes in pressure in the aquifer caused by tidal and barometric fluctuations and by variations in natural recharge and discharge, and pumping. Plate 1 shows contours on the piezometric surface for April 12, 1961. The surface generally mirrors the shape and, in a very subdued manner, the topographic profile of the Montauk peninsula, except for the cone of depression formed around the pumping wells at the Montauk Air Force Station. The cone was roughly circular and had a diameter of about 0.5 mile in 1961. Its diameter and depth varies with the duration and rate of pumping, as well as with changes in natural recharge and discharge. The maximum depth of the cone is unknown as no readings were obtained in the main supply well S17231.

The contours shown on plate 1 are based on the measurements of water levels made chiefly on April 12, 1961. The measurements were adjusted to a common tidal stage. A few, made on April 7 and 8, were adjusted by comparison of regional water-level trends, to conform with the April 12 measurements. The highest known points on the piezometric surface of April 12 were about 3.5 feet above sea level at well S19484 at the north side of the Montauk Air Force Station and at well S2150 in the western part of the project area. The lowest measured altitude was about 1.3 feet above sea level in well S3599 near Montauk Lighthouse. The altitude in the center of the cone of depression was not determined but probably was as low as several feet below sea level.

MOVEMENT OF FRESH WATER

The following description of movement of water applies chiefly to water in the principal aquifer as few or no data were collected on flow in the shallow minor water-bearing zones in the upper part of the main zone of saturation.

In general, ground water moves from points of high head to points of low head (that is, from areas of recharge to areas of discharge). Before the start of pumping at the Montauk Air Force Station, ground water in the principal aquifer probably moved radially away from a mound on the piezometric surface near the center of the Montauk Air Force Station. The mound may have been as much as 7 feet above sea level, according to estimates from drillers' records. As a result of relatively heavy intermittent pumping, a cone of depression has formed around supply well S17231 (pl. 1) at the Air Force Station. The arrows oriented perpendicular to the piezometric contours show the horizontal component of movement of the water

and indicate that a part of the flow which formerly discharged to the sea now moves inland toward the center of the cone of depression.

Plate 2 illustrates the pattern of movement in the vertical section. The arrows show that during pumping some fresh water and salt water move radially toward the screen of supply well S17231. The remainder of the fresh water moves toward discharge areas at and near the shoreline. Some mixes with salt water to form the zone of diffusion and ultimately discharges to the sea. (See "Salt-water encroachment.") The hydraulic gradient under which the fresh water is moving probably ranges from about 2 to 10 feet per mile in most of the area, but near pumping wells it is higher.

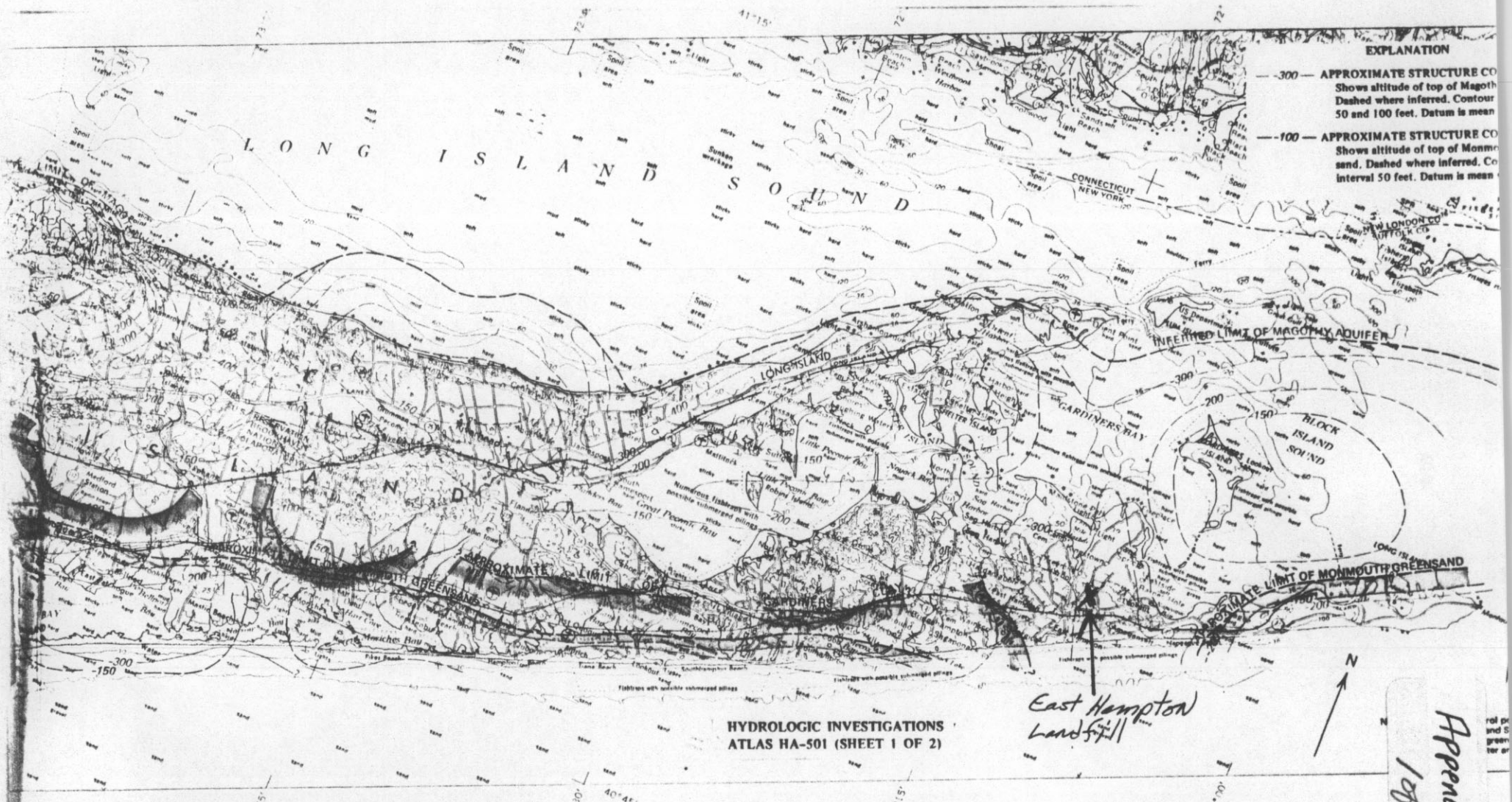
Measurements in the observation wells and continuous records from waterstage recorders show that the artesian heads in the principal aquifer are constantly changing, owing to tidal, barometric, and pumping effects. Although the altitude of the piezometric surface fluctuated a foot or two during the period of record, the shape remained about the same, and consequently the general pattern of movement of fresh water was approximately as shown on plates 1 and 2.

FLUCTUATIONS OF WATER LEVELS

Fluctuations of water levels in wells are the result of changes in the balance between recharge and discharge in aquifers. Analysis of both short- and long-term fluctuations provides important data on the hydraulic characteristics of an aquifer. For example, the altitude and character of the fluctuations of water levels in wells screened at different depths give evidence of hydraulic interconnection or of separation between aquifers and indicate whether the water in the aquifer is confined or unconfined.

SHORT-TERM FLUCTUATIONS

Minor and recurring fluctuations of water levels in the principal aquifer in the report area, are caused by transient influences such as changes in barometric pressure and oceanic tides. A rise in barometric pressure causes water levels in wells to decline; a decline in pressure causes water levels to rise. Tidal effects produced by the pull of the moon and the sun on the oceans cause pressure changes in both the fresh and salty ground-water bodies as illustrated by the water-level fluctuations shown on the hydrographs in figures 5 and 6. The magnitude of the fluctuations is due partly to the tidal efficiency and partly to the barometric efficiency of the well, which are related to the degree of confinement of the aquifer. Tidal effects diminish with increased distance from the shoreline. The hydrographs show typical pairs of high and low water levels in fresh-water wells produced chiefly by daily tidal changes in the Atlantic Ocean and Block Island



HYDROLOGIC INVESTIGATIONS
ATLAS HA-501 (SHEET 1 OF 2)

MAP SHOWING ALTITUDE OF TOP OF MAGOTHY AQUIFER AND MONMOUTH GREENSAND AND APPROXIMATE LIMIT OF THE GARDINERS CLAY

SCALE 1:250 000

5 0 5 10 15 20 25 MILES

5 0 5 10 15 20 25 30 35 KILOMETERS

CONTOUR INTERVALS 25, 50, AND 100 FEET
DATUM IS MEAN SEA LEVEL

Prepared in cooperation with the
SUFFOLK COUNTY WATER AUTHORITY
and
SUFFOLK COUNTY DEPARTMENT OF ENVIRONMENTAL CONTROL

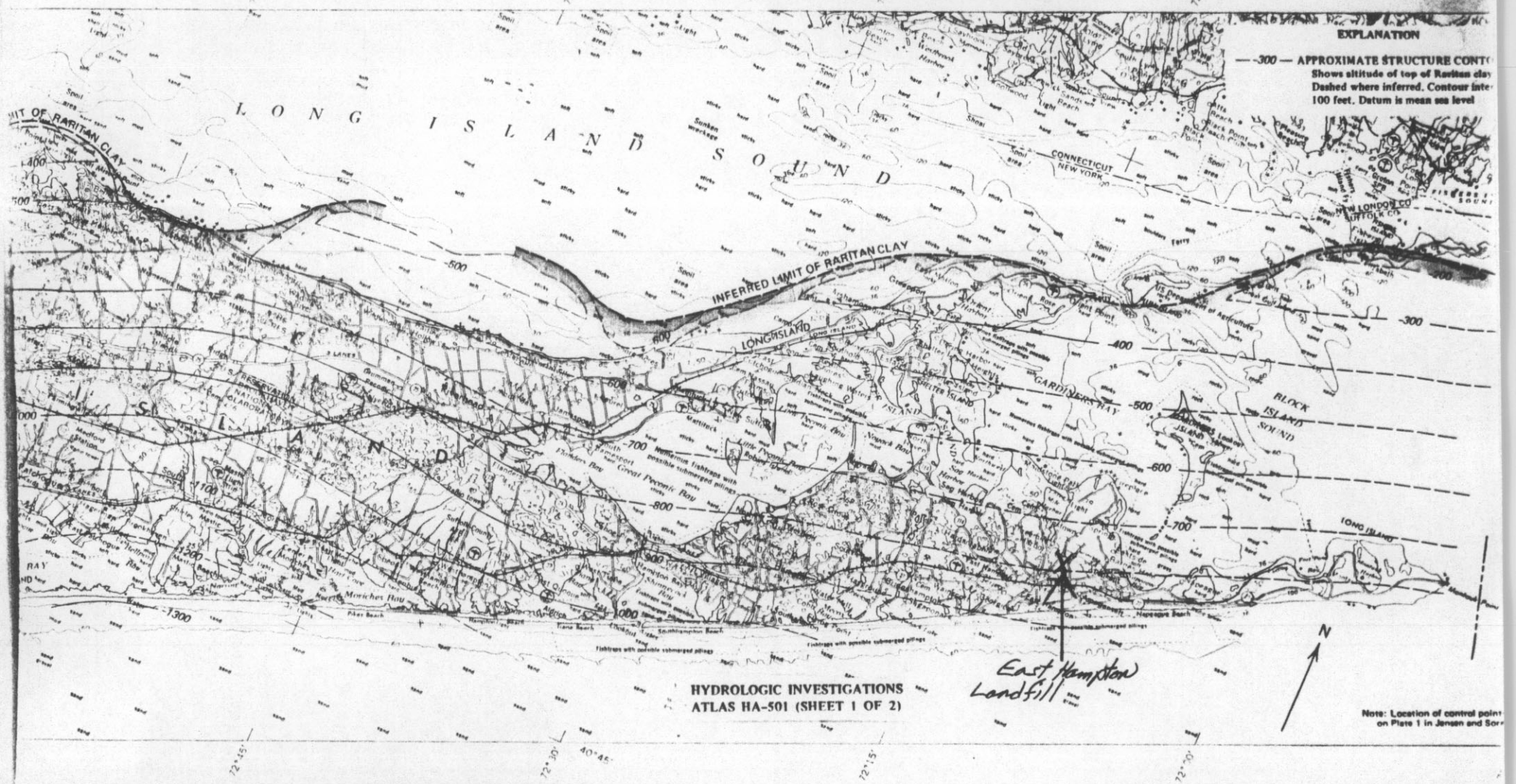
HYDROGEOLOGY OF SUFFOLK, COUNTY, LONG ISLAND, NEW YORK

By

H. M. Jensen and Julian Soren

1974

Appendix 1.3-2
1 of 5



HYDROLOGIC INVESTIGATIONS
ATLAS HA-501 (SHEET 1 OF 2)

Note: Location of control points on Plate 1 in Jensen and Soren

MAP SHOWING ALTITUDE OF TOP OF RARITAN CLAY

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and
SUFFOLK COUNTY DEPARTMENT OF ENVIRONMENTAL CONTROL

SCALE 1:250 000

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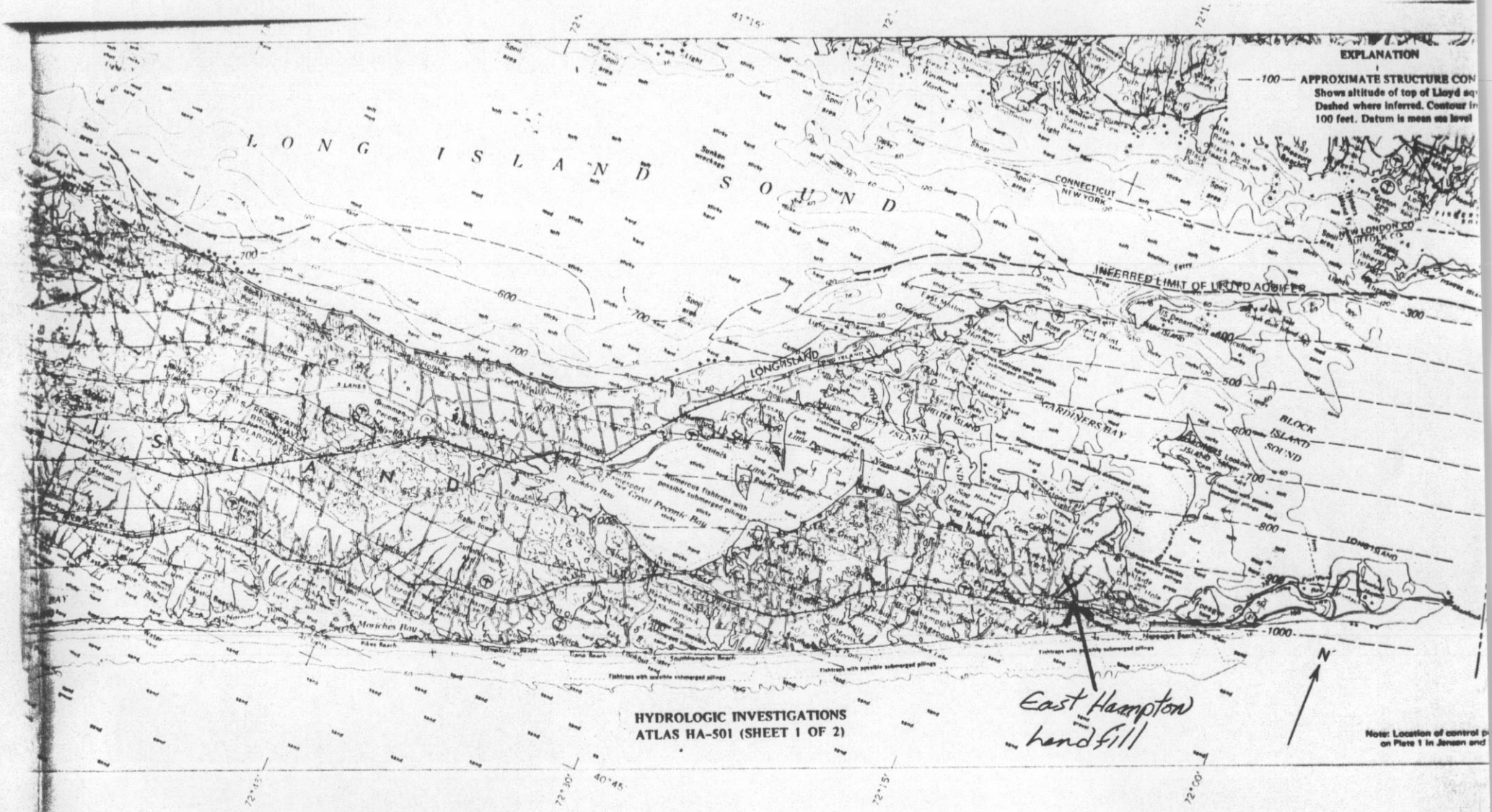
CONTOUR INTERVALS 25, 50, AND 100 FEET
DATUM IS MEAN SEA LEVEL

HYDROGEOLOGY OF SUFFOLK, COUNTY, LONG ISLAND, NEW YORK

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MAP SHOWING ALTITUDE OF TOP OF LLOYD AQUIFER

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and
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SCALE 1:250 000

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5 0 5 10 15 20 25 30 35 KILOMETERS

CONTOUR INTERVALS 25, 50, AND 100 FEET
DATUM IS MEAN SEA LEVEL

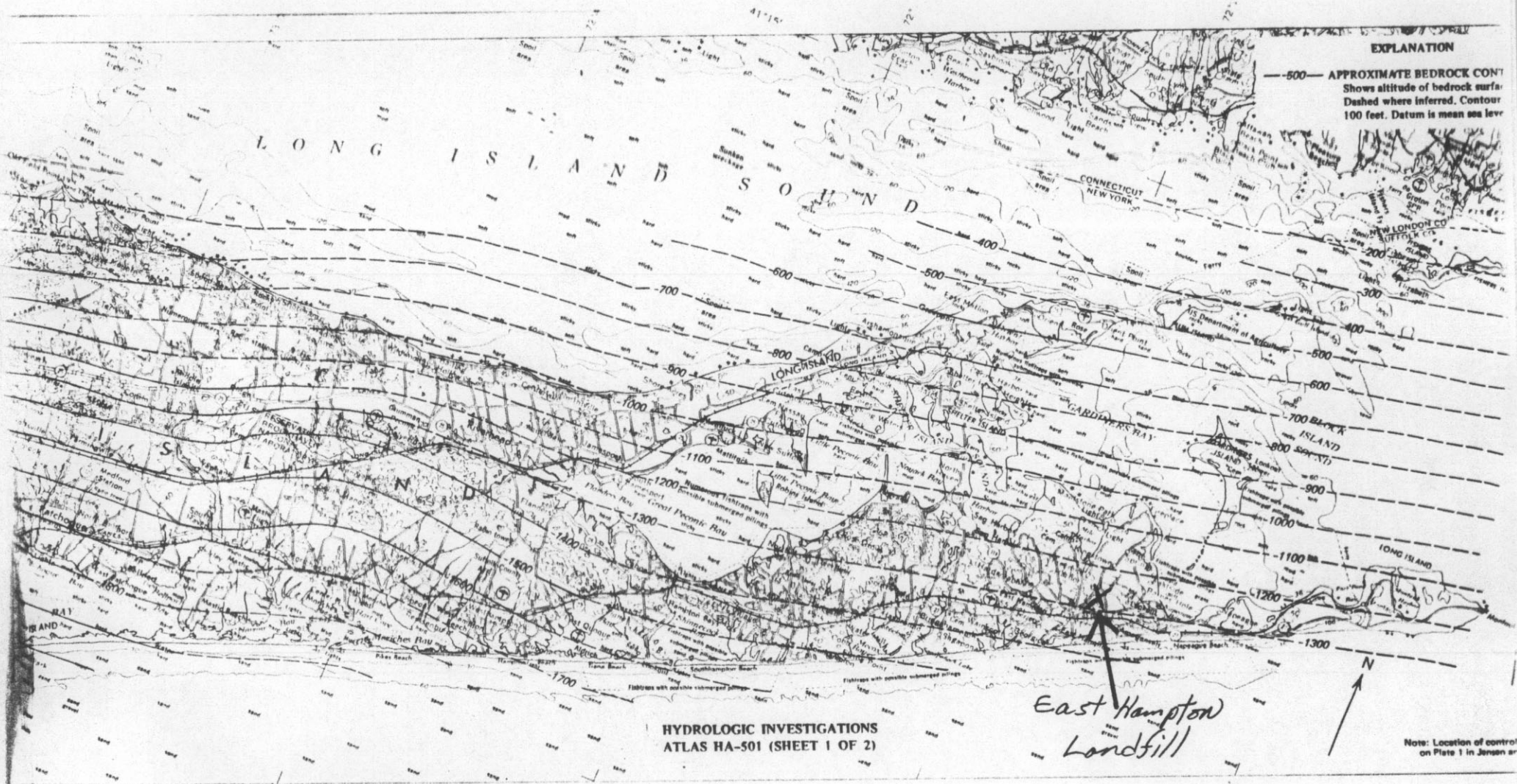
395

HYDROGEOLOGY OF SUFFOLK, COUNTY, LONG ISLAND, NEW YORK

By

H. M. Jensen and Julian Soren

1974



MAP SHOWING CONFIGURATION OF THE BEDROCK SURFACE

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SUFFOLK COUNTY WATER AUTHORITY
and
SUFFOLK COUNTY DEPARTMENT OF ENVIRONMENTAL CONTROL

SCALE 1:250 000

5 0 5 10 15 20 25 MILES

5 0 5 10 15 20 25 30 35 KILOMETERS

CONTOUR INTERVALS 25, 50, AND 100 FEET
DATUM IS MEAN SEA LEVEL

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INTRODUCTION

WATER NEEDS OF SUFFOLK COUNTY

Water pumped from aquifers underlying Suffolk County (index map) is the sole source of water used for public supply, agriculture, and industry. The county's population grew from less than 200,000 in 1940 to 1.1 million in 1970. Most of the growth occurred after 1950. Ground-water pumpage increased from 40 mgd (million gallons per day) in 1950 to 155 mgd in 1970 (New York State Department of Environmental Conservation, written commun., June 1, 1971). The projected ground-water use for an anticipated population of 2 million in the county by 1990 is 300 mgd (New York State Conservation Department, 1970, p. 26–27).



INDEX MAP SHOWING LOCATION (SHADED) OF SUFFOLK COUNTY

PURPOSE AND SCOPE

The large and growing demand for ground water in Suffolk County has created a need for a detailed knowledge of the geometry and the hydrologic characteristics of the ground-water reservoir. Mapping of subsurface geology and hydraulic heads in the aquifers are important prerequisites to obtaining this information. Maps of the subsurface geologic units of Long Island were first shown in a report by Suter and others (1949, pls. VIII to XXI). But those maps were highly generalized, because there were few data on deep borings and wells in the county when the report was prepared. Since 1949, additional data from many deep borings and wells in the county have been collected.

In 1968, as part of a continuing cooperative program of water-resources studies with the Suffolk County Water Authority and Suffolk County Department of Environmental Control, the U.S. Geological Survey began an updating of the hydrogeologic and hydrologic maps of all the county. The basic data in Jensen and Soren (1971), the first product of the program, are the basis for the hydrologic maps in this report.

ACKNOWLEDGMENTS

The authors appreciate the cooperation of well-drilling companies, their employees, and the many officials of public and private water companies who furnished geologic and hydrologic data for use in this report.

GEOLOGIC AND HYDROGEOLOGIC UNITS

Pleistocene glacial drift generally mantles the county's surface. Pleistocene deposits overlie unconsolidated deposits of Late Cretaceous age. The Cretaceous strata lie on a peneplain that was developed on Precambrian(?) crystalline rocks.

Major landforms include ridges, valleys, and plains. These landforms are roughly oriented in belts parallel to the county's length. The northern and the central parts are traversed by irregular sandy and gravelly ridges of terminal moraine. The crest of the northern ridge ranges in height from 100 to 300 feet above sea level and the crest of the central ridge from 150 to 400 feet. The highest altitudes in the inter-ridge area range from 100 to 200 feet. Irregular plains and rolling hills, formed from sandy and gravelly ground moraine and outwash deposits of sand and gravel lie in the area between the ridges. An outwash plain slopes at a near-uniform gradient from the southern base of the central ridge, which is about 100 feet above sea level, southward to Great South Bay and the ocean. Along the north shore, steep bluffs as high as 100 feet and generally narrow sandy and gravelly beaches face Long Island Sound. The barrier-bar system at the southernmost side of the county is composed of sandy beach and dune deposits. The highest altitudes of the barrier bars generally range from 10 to 45 feet.

The ground-water reservoir system of Suffolk County is composed of hydrogeologic units that include lenses and layers of clay, silt, clayey and silty sand, sand, and gravel. A hydrogeologic unit consists of a geologic unit or a group of contiguous geologic units classified by hydraulic characteristics. These units include aquifers, which are principal water sources, and confining layers, which separate the aquifers. The aquifers are, from the land surface downward, the upper glacial aquifer, the Magothy aquifer, and the Lloyd aquifer. The major areal confining layers are, in descending order, the Gardiners Clay, the Monmouth greensand, and the Raritan clay. The base of the ground-water reservoir is the crystalline bedrock. Characteristics of the geologic and the hydrogeologic units are summarized in the table, and the following data of hydrologic significance are shown on the maps: base of ground-water reservoir, altitudes of aquifers, altitudes and limits of confining layers, and distribution of surficial deposits. The hydrogeologic sections show the vertical relations of the units to each other.

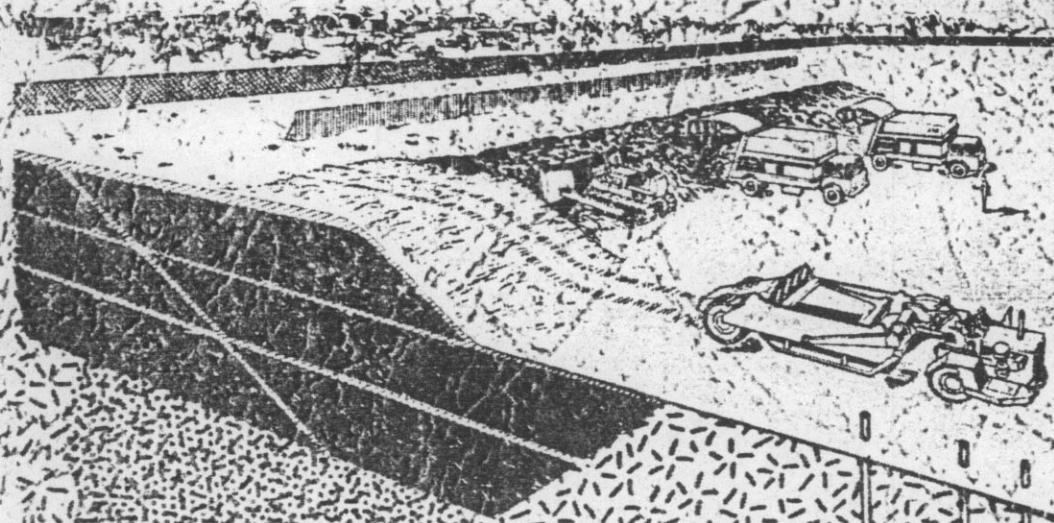
The sharp angular shapes of some of the contours reflect the fact that in places the contours are drawn on stratigraphic tops of the hydrogeologic units and in places the contours are drawn on erosional surfaces. The sharp angles result from the juncture of a stratigraphic top and an eroded surface.

Appendix 1.3-3
1 of 8

DEPARTMENT OF ENVIRONMENTAL CONTRC

SUFFOLK COUNTY, NEW YORK

JOHN M. FLYNN, P.E., COMMISSIONER



STUDY OF LEACHATE AT LANDFILL SITES 1975

VOLUME I

HOLZMACHER, McLENDON and MURRELL, P.C.

approximately 375,000 tons of refuse will be deposited here in the year of 1974 (D. Baker, 1974, oral comm.), bringing the total accumulation of refuse and cover to about 4,000 cubic yards. Because the landfill is lined, no leachate is expected to migrate from its confines. The life expectancy of the landfill is 20 years.

Holtsville Site:

The Holtsville landfill occupies 15 acres of land south of Blue Point Road and east of Buckley Road, and was closed in the spring of 1974 after being in operation for approximately 15 years. Bulky materials were deposited along with normal refuse. It is estimated that 282,500 cubic yards of refuse and cover material lies within the landfill. The Town of Brookhaven is regrading the Holtsville site into a recreational area.

TOWN OF EAST HAMPTON

Acabonack Road Site:

The Acabonack Road landfill is situated on 40 acres of land northeast of the Village of East Hampton between Acabonack Road and Spring Fireplace Road. It is owned and operated by the Town of East Hampton. Facilities for incineration are not available at the site. Scavenger wastes are deposited directly on the ground. Scrap metal and oversized materials are deposited at designated areas in the landfill site. An estimated 75,000 tons of refuse is deposited each year (Comm., Bennett, 1974). Daily tonnage

increases significantly during the summer months. Based on data derived from the core borings, it is estimated that 65,000 cubic yards of refuse and cover material lies beneath the landfill's surface.

Hither Hills Site:

The Hither Hills landfill site is owned and operated by the Town of East Hampton. It is located one and one-half miles east of the eastern boundary of Hither Hills State Park, and just north of Montauk Highway. There are no incineration facilities at the site or in the Town of East Hampton. Scavenger wastes are deposited in pits at the site. The site accepts household garbage, wood, scrap metal and construction wastes.

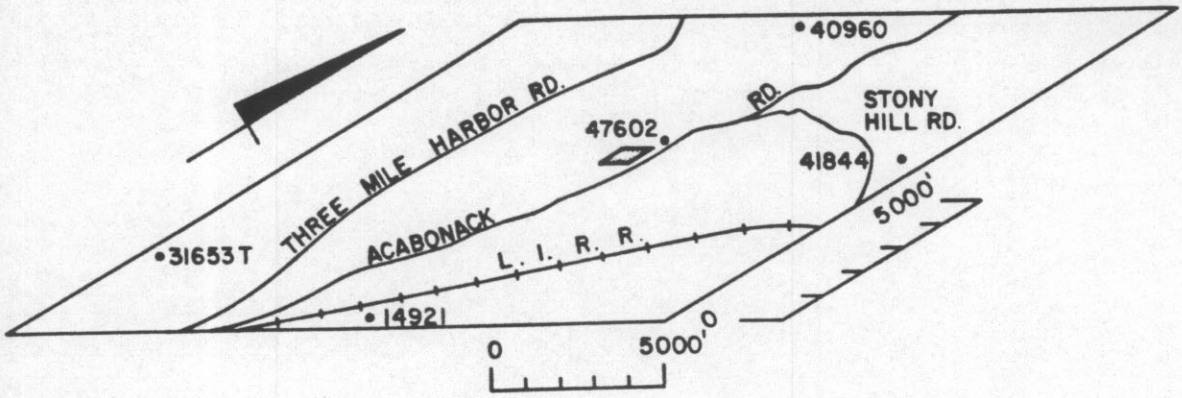
An estimated 27,500 tons of refuse is deposited during the months of September to May. From June to August, when the local population approximately doubles, the amount of refuse deposited is 18,000 tons (Comm. Bennett, 1974). An estimated 70,000 cubic yards of refuse and cover material lies beneath the surface of the landfill at the end of the year 1974.

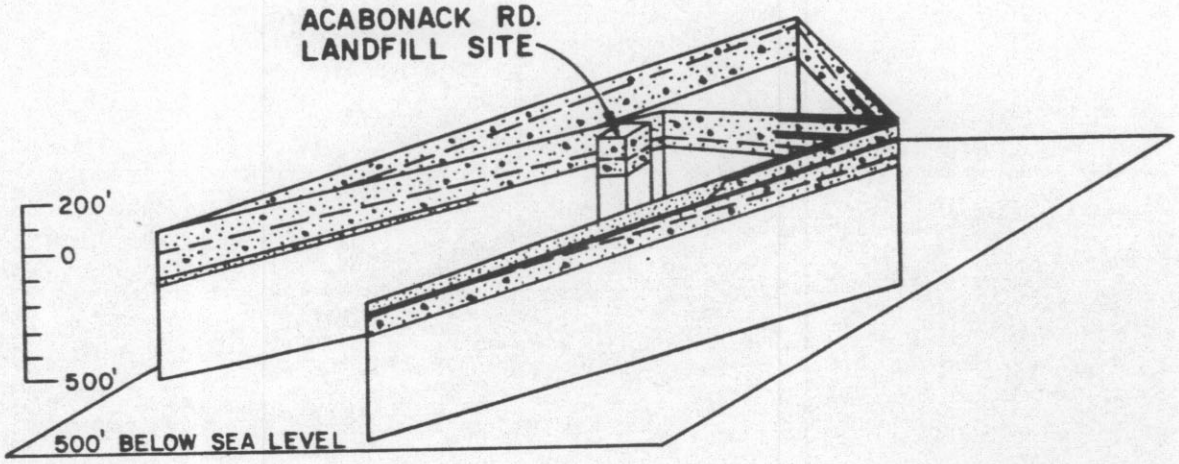
TOWN OF HUNTINGTON

East Northport Site:

The Town of Huntington owns and operates one sanitary landfill near the Village of East Northport. It is located just west of Townline Road and south of Deposit Road. The landfill was opened in the early 1930's. In 1955 the first

FIGURE Ic





GEOLOGIC FENCE DIAGRAM FOR ACABONACK RD. SITE

TOWN OF EAST HAMPTON

SUFFOLK COUNTY DEPARTMENT OF ENVIRONMENTAL CONTROL

STUDY OF LEACHATE AT LANDFILL SITES

SC 73-3

TOWN OF EAST HAMPTON

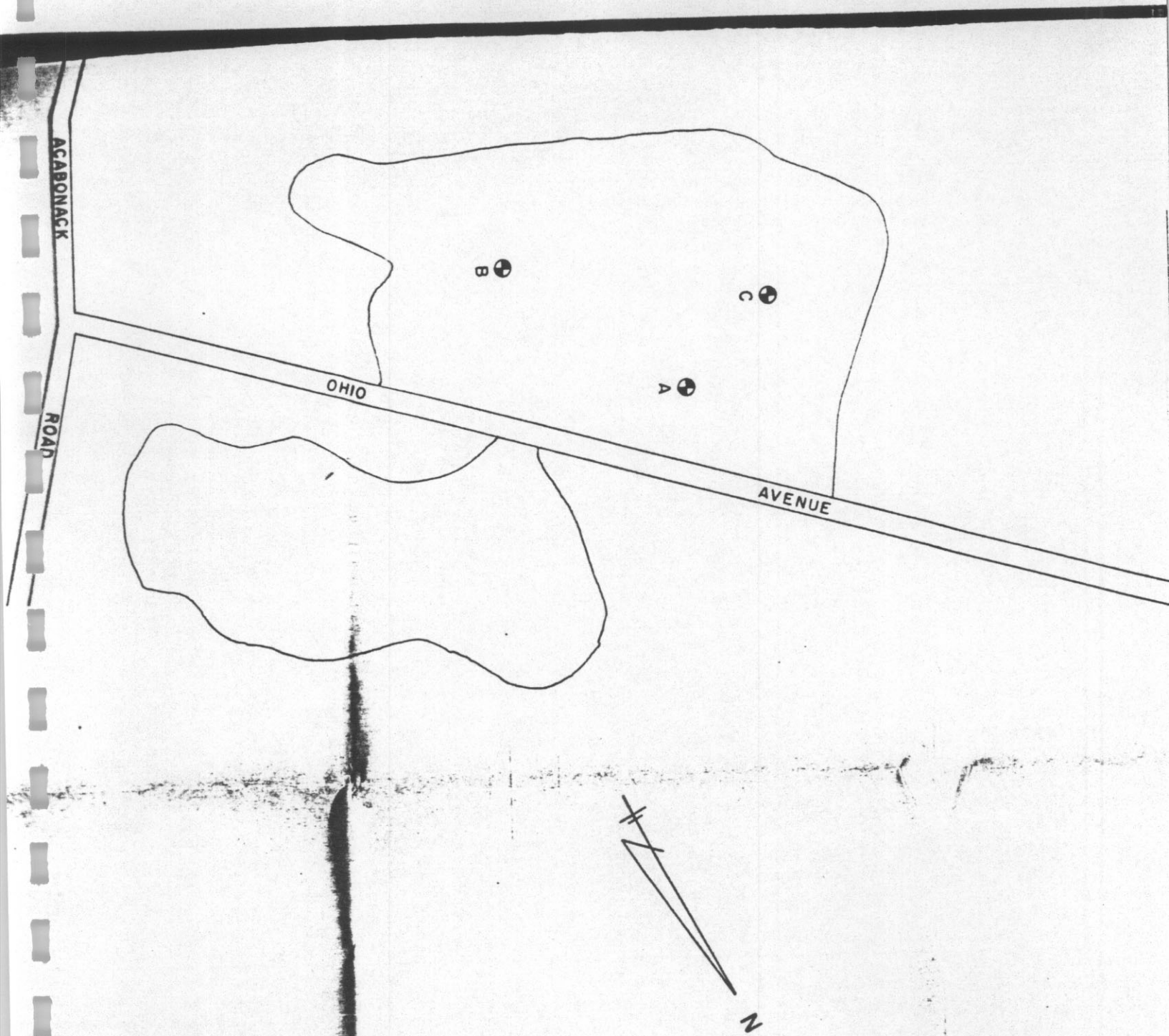
Acabonack Road Landfill Site:

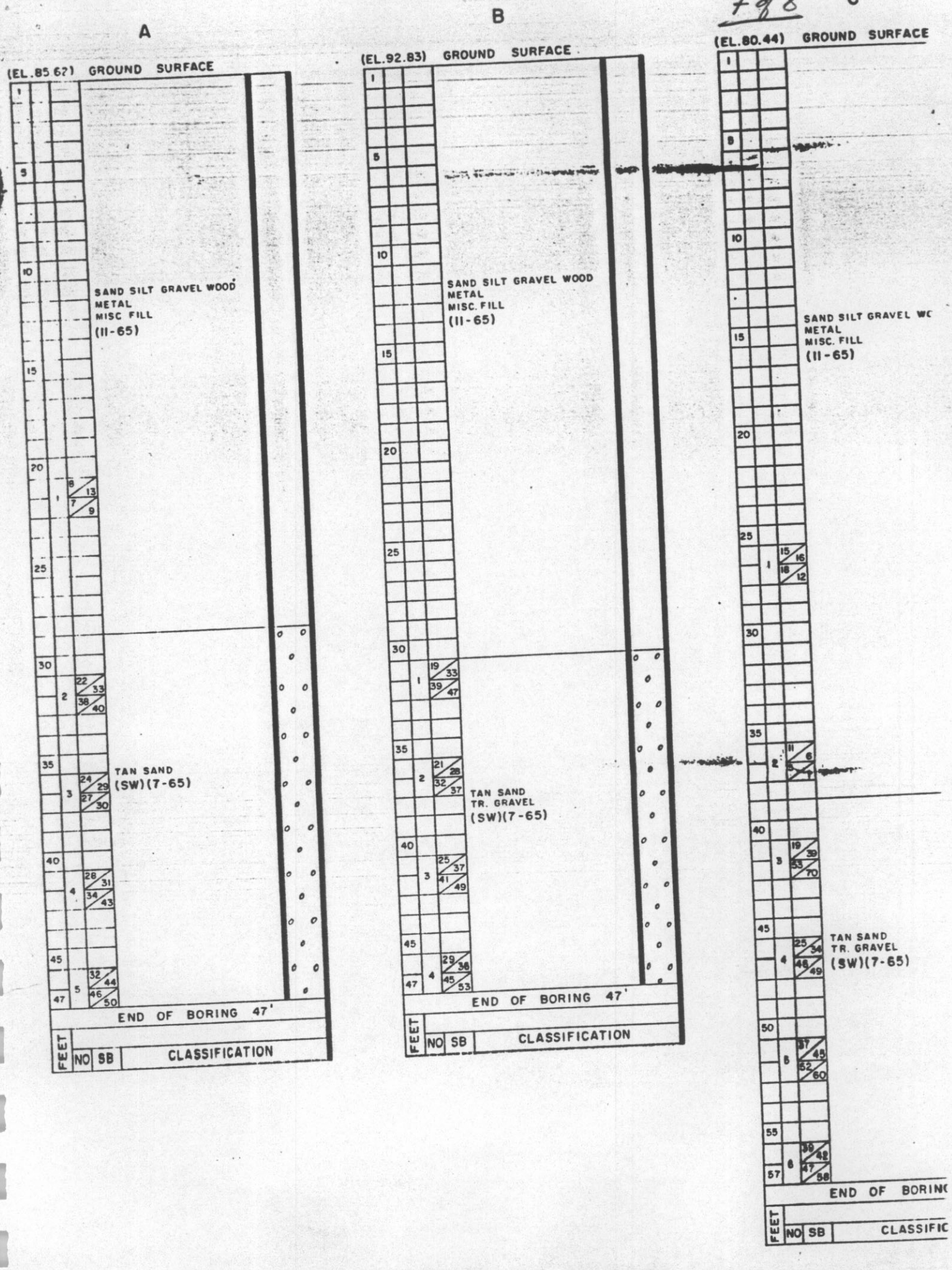
The Acabonack Road (Town of East Hampton) landfill site is located in eastern Suffolk County, on the South Fork of Long Island. The site is situated along the southern edge of the Ronkonkoma moraine and is underlain, to a depth of 100 feet below sea level, by layers of sand and gravel (Figure 1c).

The surface of the ground-water table is 15 feet above mean sea level. Test borings have placed the base of the landfill at least 15 feet above the surface of the ground-water table (Plate 4c). The direction of ground-water flow was not determined because the landfill site is situated close to the ground-water divide, making any determination difficult without actual ground-water level measurements in the immediate vicinity.

Hither Hills Landfill Site:

The Hither Hills (Town of East Hampton) landfill site is located in eastern Suffolk County on the South Fork of Long Island. The landfill is situated on a hilly region belonging to the physiographic feature known as the Ronkonkoma moraine. A minimum of 175 feet of well sorted sands and gravels underlies the landfill site (Figure 1d). Test borings penetrated well sorted tan and brown sands at the base of the landfill (Plate 4d).


ACABONACK
ROAD
OHIO
AVENUE
B
C
A
N


A
(EL.85 62) GROUND SURFACE
SAND SILT GRAVEL WOOD
METAL
MISC FILL
(11-65)
TAN SAND
(SW)(7-65)
END OF BORING 47'
FEET
NO
SB
CLASSIFICATION
B
(EL.92.83) GROUND SURFACE
SAND SILT GRAVEL WOOD
METAL
MISC. FILL
(11-65)
TAN SAND
TR. GRAVEL
(SW)(7-65)
END OF BORING 47'
FEET
NO
SB
CLASSIFICATION
798
C
(EL.80.44) GROUND SURFACE
SAND SILT GRAVEL WC
METAL
MISC. FILL
(11-65)
TAN SAND
TR. GRAVEL
(SW)(7-65)
END OF BORING
FEET
NO
SB
CLASSIFIC

8/8

TERMS

COMPACTION RELATED TO SPOON BLOWS PER FOOT (N)

SAND		SILT & CLAY	
LOOSE	15 OR LESS	VERY SOFT	PUSH TO 3
MED. COMPACT	16 TO 30	SOFT	4 TO 12
COMPACT	30 TO 50	STIFF	12 TO 35
VERY COMPACT	50 OR MORE	HARD	35 OR MORE

SYMBOL	STANDARD PENETRATION TEST
N	2" O.D SPLIT SPOON (I.D = $1\frac{3}{8}$") 24" LONG 140 LB HAMMER 30 INCH FALL
EXAMPLE  N=17 BLOWS PER FOOT	SPOON BLOW COUNT IS GENERALLY SHOWN IN 6" INCREMENTS FOR A 2'-0" DRIVE. TO OBTAIN BLOWS PER FOOT (N) USE THE 2ND & 3RD 6" INCREMENT.

UNIFIED SOIL CLASSIFICATION

GROUP SYMBOLS	TYPICAL NAMES AND SOIL SYMBOLS
GW	WELL GRADED GRAVELS, GRAVEL SAND MIXTURES, LITTLE OR NO FINES
GP	POORLY GRADED GRAVELS OR GRAVEL SAND MIXTURE, LITTLE OR NO FINES
GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURE
GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURE
SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES
SM	SILTY SANDS, SAND - SILT MIXTURES
SC	CLAYEY SANDS, SAND - CLAY MIXTURES
ML	INORGANIC SILTS, VERY FINE SANDS, CLAYEY SILTS, SLIGHT PLASTICITY
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS
OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS

ALLOWABLE SOIL BEARING PRESSURES, NEW YORK CITY BUILDING CODE C26-1103

CLASS OF MATERIAL	DESCRIPTION	ALLOWABLE BEARING TONS/SQ FT
1 - 65	HARD SOUND ROCK	60
2 - 65	MEDIUM HARD ROCK	40
3 - 65	INTERMEDIATE ROCK	20
4 - 65	SOFT ROCK	8
5 - 65	HARDPAN	8-12
6 - 65	GRAVEL AND GRAVEL SOILS (SOIL GROUPS GW, PG, GM, & GC AND SOILS OF SOIL GROUPS SW SP AND SM CONTAINING MORE THAN 10% OF MATERIAL RETAINED ON A NO. 4 SIEVE).	4-10
7 - 65	SANDS (OTHER THAN FINE SANDS) (SOIL GROUPS SW, SP & SM BUT CONTAINING NOT MORE THAN 10% OF MATERIAL RETAINED ON A NO. 4 SIEVE	3-6
8 - 65	FINE SAND	2-4
9 - 65	CLAYS AND CLAY SOILS (SOIL GROUPS SC, CL & CH)	
	HARD	(5 MAX)
	MEDIUM	(2 MAX)
	SOFT	BY TEST
10 - 65	SILTS AND SILT SOILS (SOIL GROUPS ML & MH)	
	DENSE	3
	MEDIUM	1.5
	LOOSE	BY TEST
11 - 65	NOMINALLY UNSATISFACTORY BEARING MATERIALS	BY TEST

	ROTARY CASING	X-HEAVY CASING	SPOON
SIZES, INCHES	2.5		2.0
HAMMER WEIGHT, LBS.	—		140
HAMMER FALL, INCHES	—		30

CB CASING BLOWS PER 1 FOOT DRIVE
SB SPOON BLOWS PER 6 INCH DRIVE
P PUSHED BY WEIGHT OF HAMMER
UD UNDISTURBED SOIL SAMPLE
NO SAMPLE NUMBER
C - COARSE M - MEDIUM F - FINE

"THE SOIL PROFILES DEPICTED ON THIS DRAWING ARE NOT INTENDED TO CONSTITUTE A REPRESENTATION OF SUB-SOIL CONDITIONS TO ANYONE OTHER THAN OUR CLIENT, WHO HAS PAID FOR THESE TESTS"

HOLZMACHER, McLENDON & MURRELL, P.C.
CONSULTING ENGINEERS
500 BROAD HOLLOW RD.
MELVILLE, N.Y.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Suffolk County | WSA-C844 | Appendix 1.345-66733 Well No.

COMPLETION REPORT – LONG ISLAND WELL 1065

OWNER: Suffolk County Water Authority

ADDRESS: Pond Road, Sakdale, L.I.

LOCATION OF WELL: Spring Close Hwy E. Hampton, N.Y.

DEPTH OF WELL BELOW SURFACE: 245' - 1½" ft.

DEPTH TO GROUND WATER FROM SURFACE: 33' 5" - 3" ft.

CASINGS

DIAMETER				LENGTH			
16"	in.	10"	in.	195'	ft.	55'	ft.
	in.		in.		ft.		ft.

SEALING: 50' Cement Grout

CASINGS REMOVED: None

SCREENS

MAKE: Cook 316 SS

OPENINGS: #45 Slot

DIAMETER				LENGTH			
10"	in.	I.D.	in.	40'	ft.		ft.
	in.		in.		ft.		ft.

DEPTH TO TOP FROM TOP OF CASING (Slot): 201'

PUMPING TEST

DATE: 6/29/79

TEST OR PERMANENT PUMP? Test

DURATION OF TEST: days | 8 hours

MAXIMUM DISCHARGE: 700 gallons per min.

STATIC LEVEL PRIOR TO TEST: 37' ft. in. below top of casing

LEVEL DURING MAXIMUM PUMPING: 50' ft. in. below top of casing

MAXIMUM DRAWDOWN: 13' ft.

Approximate time of return to normal level after cessation of pumping: hrs. 5 min.

PUMP INSTALLED

TYPE	MAKE	MODEL NO.
Dist	By Layne Others	3,4 [illegible]
MOTIVE POWER: c e.	MAKE: U S	H.P.: 50

CAPACITY: 700 g.p.m. against ft. of discharge head

NUMBER BOWLS OR STAGES: 4 | 210 ft. of total head

DROP LINE	SUCTION LINE
DIAMETER: 3 in.	DIAMETER: 8 in.
LENGTH: 29'-10" ft.	LENGTH: 9'-11" ft.

METHOD OF DRILLING: ☒ rotary ☐ cable tool ☐ other Reverse

USE OF WATER: Public Supply

WORK STARTED: 4/3/79 5/12 81

COMPLETED: 7/9/79 5/14 81

DATE: 8/2/79 5/12 81

DRILLER: Layne-N.Y. Co. Inc. Strata Well Corp.

LICENSE NO.: 1000

*NOTE: Show log of well - materials encountered, with depth below ground surface, water bearing beds and water levels in each, casings, screens, pump, additional pumping tests and other matters of interest. Describe repair job. See Instructions as to Well Drillers' Licenses and Reports. Pages 5 - 7.

* LOG

Ground Surface

El. _____ ft. above se

A / V _____ ft.

TOP OF WELL

SEE ATTACHED

RECEIVED

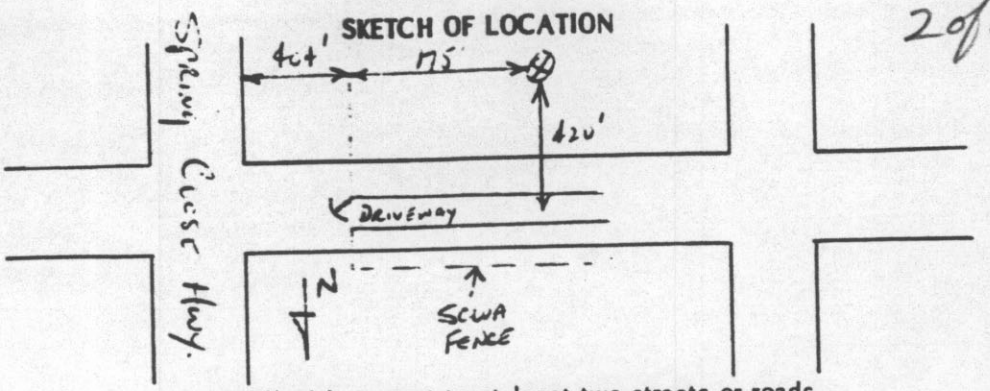
AUG

REGUL...

Pump set 243 subm. 4.1 hp Drilled 253 5/12/81

ORIGINAL – Environmental Conservation Copy

SKETCH OF LOCATION



Locate well with respect to at least two streets or roads, showing distance from corner and front of lot.

Show North Point

Check the Town in which the project is located:

Nassau County:

- ☐ Hempstead
- ☐ North Hempstead
- ☐ Oyster Bay

Suffolk County:

- ☐ Babylon
- ☐ Huntington
- ☐ Shelter Island
- ☐ Southold
- ☐ Brookhaven
- ☐ Islip
- ☐ Smithtown
- ☒ East Hampton
- ☐ Riverhead
- ☐ Southampton

STRATA WELL CORP.

2 Beech St.
ISLIP, N. Y. 11751
Phone 516 581-7100

WELL LOG

NAME SUFFOLK COUNTY WATER AUTHORITY

LOCATION Spring Close Highway - East Hampton W.R.C. WELL NO. S-66733

REFERENCE PT. Grade S. W. L. 37'

DATE STARTED April 3, 1979 COMPLETED July 9, 1979 DRILLER Butler/Rybak

SAMPLE					Formation	Thickness	Depth	Remarks
or F	No.	Actual Depth	Lgth	Blows				
					Top Soil	1	1	
					Grey Clay, Loam	6	7	
					Coarse brown sand and stones	113	120	
					Fine brown sand, mica	10	130	
					Fine to coarse brown sand, and grits & hardpan	20	150	
					Fine to med. brown sand, mica & some grits	25	175	
					Silty sand	11	186	
					Fine to med. brown sand	6	192	
					Fine to med. sand and stones	38	230	
					Fine redish sand and lg. stones	10	240	
					Fine brown sand, mica & stones	1	241	
					Fine brown sand, mica, w/lyrs. of gr. cl. & some lig.	8	249	
					Fine to med. grey sand	2	251	
					Dark clay grey	75	326	
					Fine to coarse gr. sand, mica & grits	117	443	
					Fine to coarse gr. & brown sand, grits, gravel (up to 2") & stones	47	490	
					Fine to med. brown sand & mica	33	523	
					Fine to med. gr. sand	20	543	
					Med. to coarse gr. sand, stones	20	563	
					Fine to silty gr. sand, lignite, grey clay, pyrite	43	606	
					Very fine to coarse gr. sand, grits, mica lig. & bits of clay	9	615	
					Fine to coarse gr. sand, grits, mica & clay	18	633	
					Solid sandy grey clay	2	635	
					Very fine grey sand, grits, mica & thin lyrs. of clay	4	639	
					Solid grey sandy clay	40	679	
					Grey sand, gravel, small stones	11	690	
					Clay, lignite, gravel, grey sand	4	694	
					Grey sand, gravel, stones	1	695	
					Grey sandy clay & stones w/lyrs. of sand & grits			

RECEIVED
AUG 6 1979
N. Y. S. D. E. C.
REGULATORY AFFAIRS, REGION I

4 of 5

ORIGINAL—TO COMMISSION

Well No. S-49422 (on preliminary report)

County Suffolk

WSR C259

State of New York
Department of Conservation
Division of Water Resources

LOG

Ground Surf., El. ..... ft. above s

Bridgehampton Rd.

COMPLETION REPORT—LONG ISLAND WELL

D.E.C. ..... ft.
REGION 1
ENVIRONMENTAL
Top of Well
MAR 1 1974
RECEIVED

Owner Suffolk County Water Authority

Address Sunrise Highway Oakdale, N.Y.

Location of well Montauk Highway Buckskill Road Easthampton, N.Y.

Depth of well below surface 148 ft. 11 1/4" 125 feet

Depth to ground water from surface 35 ft. 2½" 29' 2 3/4" feet

CASINGS:

Diameter	16 in.	in.	in.	in.
Length	ft.	ft.	ft.	ft.

Sealing Lead Packer

Casings removed

SCREENS: Make Johnson Openings

Diameter	10 in.	in.	in.	in.
Length	30 ft.	ft.	ft.	ft.

Depth to top from top of casing 111 ft. 5½" ft.

PUMPING TEST: Date Test or permanent pump?

Duration of Test days hours

Maximum Discharge 700 gallons per minute

Static level prior to test 35 ft 2½" in. below top of casing

Level during Max. Pumping 56 ft in. below top of casing

Maximum Drawdown 21 ft.

Approx. time of return to normal level after cessation of pumping hours minutes

PUMP INSTALLED:

Type DWT Make none Layne Model No. RKAL

Motive power Elec Make U.S. H.P. 50

Capacity 700 g.p.m. against @ 222 TDH ft. of discharge head

No. bowls or stages 4 ft. of total head

Pump data Submitted 7/15/75 O.T.

DROP LINE:		SUCTION LINE:	
Diameter	8 in.	10	in.
Length	80 ft.	9'9¼"	ft.

Method of Drilling (Rotary, cable tool, etc.)

Use of Water Public Water Supply

Work started 1/28/74 Completed 1/29/74

Date 2/1/74 7/15/75 Driller East Coast Well Drilling Supply Co Layne NY

License No. 52

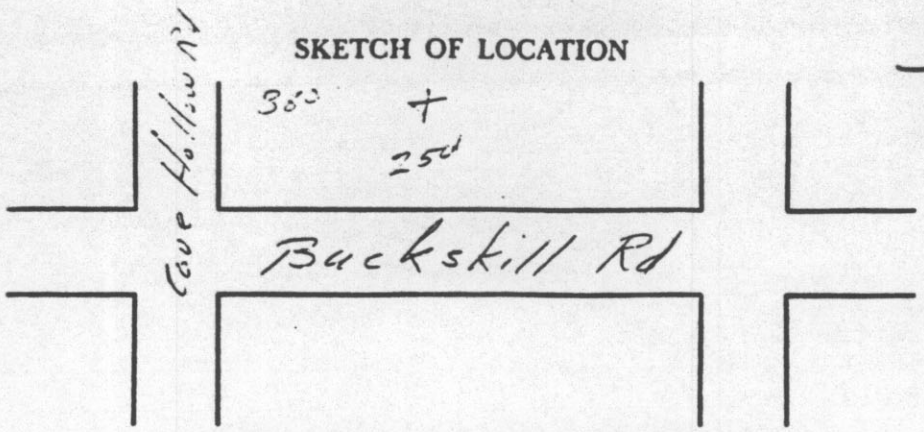
5

NOTE: Show log of well—materials encountered, with depth below ground surface, water bearing beds and water levels in each, casings, screens, pump, additional pumping tests and other matters of interest. Describe repair job.

SKETCH OF LOCATION

595

Bridgehampton Rd
S-49422



Locate well with respect to at least two streets or roads, showing distance from corner and front of lot.

Show North Point

2' - 3' Coarse to fine tan sand
3' - 10' brown clay
10' - 16' coarse to fine tan sand with brown clay
16' - 26' coarse to fine tan sand with grits and gravel
26' - 36' " " " " " " " " "
36' - 46' " " " " " " " " "
46' - 56' " " " " " " " " "
56' - 66' " " " " " " " " "
66' - 76' " " " " " " " " "
76' - 86' " " " " " " " " "
86' - 96' " " " " sand
96' - 106' " " " " " " " " "
106' - 114' coarse to fine tan sand
114' - 124' " " " " " "
124' - 126' " " " " " with gravel
126' - 132' coarse to fine tan sand with grits
132' - 136' fine brown sand
136' - 138' coarse to fine tan sand with grits & gravel
138' - 144½' fine brown sand with brown clay
144½ - 146' coarse to fine tan sand with grits & gravel
146' - 149' brown sand with brown clay
149' - 161' brown clay

Appendix 1.3-5
p 1 of 8

PHASE I - SITE INSPECTION FORM

1. IDENTIFICATION

East Hampton LANDFILL
Site Name

Suffolk
County

NY Number

Region 1
NYSDEC Region

2. LOCATION

Acabonack Road
Street/Route No.

East Hampton
Town

City

Village

3. INSPECTION

January 21, 1986
Date of Inspection

0900 hrs
Time of Inspection

Partly cloudy, ~40° no snow
Weather Conditions and Snow Cover

EA Inspectors (Name)	Title	Phone Number
B. Gavis		
E. Bidwell		

Other Inspectors (Name)	Affiliation	Phone Number

Site Reps. Interviewed	Affiliation	Phone Number
Gene Gargiulo		516-324-2199

4. SITE DESCIPTION

4.1 Disposal History

Early '60's ; dug pits in sandy soil and filled w trash covered w sand ; septage, wastes in unlined pits ; brush debris and metal debris also ; a new 5 acre lined pit dug several (2) yrs ago. leachate collection systems are in place ; they do have liquid leachate in them ;

4.2 Storage/Disposal (Check all that apply)

		Amount	Unit of Measure
__	A. Surface Impoundment		
__	B. Piles		
__	C. Drums, Above Ground		
__	D. Tank, Above Ground		
__	E. Tank, Below Ground		
✓	F. Landfill		
__	G. Landfarm		
__	H. Open Dump		
__	I. Spill		
__	J. Well Field		
__	K. Other _____		

4.3 Treatment (Check all that apply)

__	A. Incineration	__	E. Waste Oil Processing
__	B. Underground Injection	__	F. Solvent Recovery
__	C. Chemical/Physical	✓	G. Other Recycling/Recovery waste oils.
__	D. Biological	__	H. Other _____

4.4 Waste Type (Circle category)

Category	Substance Name	Gross Amount	Unit of Measure	Physical State	Ref.
SLU	Sludge				
OLW	Oily Waste				
SOL	Solvents				
PSD	Pesticides				
OCC	Other Organic Chemicals				
IOC	Inorganic Chemicals				
ACD	Acids				
BAS	Bases				
MES	Heavy Metals				
(MUN)	Municipal Wastes				
(SEP)	Septage				
(OTH)	Other trash, metal				

4.5 **Hazardous Substances**

Category	Substance Name	Storage/Disposal Method	Ref.
	unknown		

References (Ref.)
1.
2.
3.
4.

4.6 Containment of Wastes (describe)

none except in 5 acre limed area

4.7 Accessibility of Public to Wastes (describe)

limited access at night; free access to all waste daytime

5. ENVIRONMENTAL MEASUREMENTS (DURING INSPECTION)

5.1 HNU/OVA Readings (Note locations on site sketch)

Location	Value (ppm)	Classification
Background	0.0	
NNE well (brush)	12.5	
vapors brush pile	42+	
vapors "	30+	
entrance gate	1.0	
breathing zone above well	7.0	

Method/Instrument: Photovac TIP

5.2 **Site Slope (percent)**

Read from highest disposal area surface to edge of disposal area. If disposal area is within enclosed basin, report as zero.	Reading (Percent)
	0-5% top of extn lift
	~5% faces of extn lift to base
	0% Acaboman Rd E-W
	0% intervening to LF.
Average	

5.3 Prevailing Direction of Site Slope toward East and ENE ~5-7%

5.4 Distance to Nearest Downslope Surface Waters (from edge of disposal area)

Name/Description	Distance	Units	Permanent/Intermittent
unnamed ponds (2)	1/2	mile	permanent

5.5 Intervening Terrain Slope to Nearest Downslope Waters (from edge of disposal area)

Name/Description	Reading (Percent)
unnamed ponds (2)	varies 10% and gently rolling hills to across Fairplain Rd.

5.6 Distance to Nearest Downslope Wetlands (5-acre minimum)

Size (Acres)	Distance	Units

more

5.7 Distance to Critical Habitat (endangered species)

Name/Location	Distance	Units

?

5.8 Site Geology (Describe from visual observations)

Overburden (soils) sand to some clay loose (2-8' thick)
Bedrock ?
Depth to Rock

5.9 **Distance to Nearest Potable Wells (Identify on topographic map)**

Type (Private/Community/Municipal)	Distance	Units
private	< 1/4	mile
community		mile

5.10 Distance to Nearest Offsite Building

adjacent to 300 ft ~~miles~~.

6. LAND USE

6.1 Distance to Nearest:

Residential Area	adjacent ~~miles~~	300 ft
Commercial/Industrial	adjacent ~~miles~~	175 ft
Recreational Use	_____	miles
Forest	adjacent ~~miles~~	
Wildlife Reserve	_____	miles
Historic/Landmark Site	_____	miles
Prime Agricultural Land	_____	miles
Agricultural Land	_____	miles

7. SITE EVALUATION

7.1 Landfills/Open Dumps/Piles (Use N/A if not applicable)

Adequacy of Cover: _____

Adequacy of Runoff Diversion: None

Potential/Observed Ponding: Small puddles on top of L.F.

Waste Piles Stabilized/Unstabilized: _____

Permeability/Compatibility of Liner: PVC liner w/ 5-4' of sand on top

Observed Seeps: _____

Adequacy of Leachate Collection: Stacked cesspools with L.F. sloping to them

688

Adequacy of Run-On Controls: None

7.2 Surface Impoundments

Adequacy of Diking/Diversion Structures: None

Adequacy of Freeboard: _____

Potential/Observed Leaking: _____

Permeability/Compatibility of Liner: _____

Adequacy of Run-On Control: _____

Adequacy of Leachate Collection System: _____

7.3 Containers

Number and Type of Containers Observed: N/A

Container Condition: _____

Observed Leaking (during inspection): _____

Evidence of Previous Ground Spills: _____

Evidence of Underground Tank Leaking: _____

Adequacy of Containment/Diversion Structures: _____

8. MONITORING/OBSERVATION WELLS

8.1 Number of Onsite Wells: 3 that we could see
Diameter and Materials: 4" ϕ

8.2 Number of Offsite Wells: _____
Diameter and Materials: _____

8.3 Well Identification and Inspection (Include on site sketch)

Well No.	Location/ Gradient	Total Depth	Screen Interval	Top of Water		Water Level (ft)(a) Stickup	=	Depth to Water
					-		=	
					-		=	
					-		=	
					-		=	
					-		=	
					-		=	
					-		=	
					-		=	
					-		=	

(a) Measurements taken during site inspection to accuracy of 0.01 ft.

8.4 Water Level Instrument/Method:

Johnson water marker "Vapor Well" DTW = 88.8'

8.5 Condition of Wells/Seals:

No locks only screw on caps

8.6 Well Records

Wells Installed by (Driller):
Installed for:
Tested by (lab):
Data Obtained by EA (yes/no):
Boring Logs Obtained by EA (yes/no):

8.7 Headspace HNU/OVA Readings

Well No.	Reading (ppm)	Classification
Background		
6.6	12.5	Vapor Well

898

9. COMMENTS AND INTERVIEW NOTES (IDENTIFY SOURCES)

WORKSHEET: COMMUNITY WATER SUPPLIES WITHIN A 3-mi RADIUS OF THE EAST HAMPTON LANDFILL SITE

Community Water Supply	Water District	Well Field	Well	Depth (ft)	Aquifer
SCWA	East Hampton	Cross Hwy	1S-30227	151	Glacial
			2S-30228	152	Glacial
		Springs Close Hwy.	1S-14921	125	Glacial
			2S-66733	243	Glacial
		Bridgehampton Rd	2S-02405	86	Glacial
			3S-02415	121	Glacial
			4S-49422	148	Glacial
			5S-73332	184	Glacial
		Oakview Hwy	1S-07570	162	Glacial
			2S-31653	466	Magothy
Three Mile Harbor Trailer Park	—	—	—	Unknown	Unknown

Sources:

SCDHS Water Resources Division. Supply and Monitoring Well Location Maps.

SCWA. 1984. Well Descriptions.

SCWA. 1985. Distribution System Plates. 25N, 26N, 24M, 25M, 26M.

SCWA. 1986. Active Services Estimates and Service Area Map.

NYSDOH. 1982. New York State Atlas of Community Water System Sources.

Appendix 1.4-1
Sources:
Town of East Hampton
NYSDOH - Bureau of Toxic Substances

VOLUMETRIC TECHNIQUES, LTD.
317 BERNICE DRIVE
BAYPORT, NEW YORK 11705
516-472-4848

SANDER R. STERNIG
DIRECTOR OF LABORATORIES

SAMPLED BY Don Roberts
DATE:
COLLECTED 4/23/86
RECEIVED 4/23/86
COMPLETED 5/23/86
REPORTED BY

TO:
Town of East Hampton
159 Pantiago Road
East Hampton, New York 11937

SAMPLE: Quonset

SAMPLE No. 86042304

PARAMETERS	RESULTS
pH	5.60
	ppm (mg/l)*
BOD	15.0 mg/l
Total Dissolved Solids	88
Total Coliform	<2.2 mpn
Sodium	7.919
Barium	<0.01
Aluminum	<0.01
Cadmium	<0.01
Chromium Total	<0.01
Copper	<0.05
Iron	0.01
Nickel	<0.01
Lead	<0.01
Silver	0.06

PARAMETERS	RESULTS ppm (mg/l)*
Zinc	<0.01
Manganese	0.01
Arsenic	<0.01
Selenium	<0.01
Mercury	<0.001
Detergent	<0.01
Sulfate	12
Chloride	21.27
Phosphate	1.8
Specific Gravity	1.01
Hardness	27 mg/l $CaCO_3$
Phenol	<0.001
Color	<1 Unit
Calcium	5.2
Acidity	480.0 mg/l $CaCO_3$
Alkalinity	81.89 mg/l $CaCO_3$

*Unless otherwise noted

Comments:

p.20/15

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317 BERNICE DRIVE
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516-472-4848

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DATE:
COLLECTED 4/23/86
RECEIVED 4/23/86
COMPLETED 5/23/86
REPORTED BY

SANDER R. STERNIG
DIRECTOR OF LABORATORIES

TO:
Town of East Hampton
159 Pantiago Road
East Hampton, New York 11937

SAMPLE:	SAMPLE No.
East End - Main	86042305

PARAMETERS	RESULTS
pH	6.70
	ppm (mg/l)*
BOD	3.75 mg/l
Total Dissolved Solids	84
Total Coliform	<2.2 mpn
Sodium	6.804
Barium	<0.01
Aluminum	<0.01
Cadmium	0.02
Chromium Total	<0.01
Copper	<0.05
Iron	0.08
Nickel	0.01
Lead	<0.01
Silver	<0.01

PARAMETERS	RESULTS ppm (mg/l)*
Zinc	0.02
Manganese	0.308
Arsenic	<0.01
Selenium	<0.01
Mercury	<0.001
Detergent	<0.01
Sulfate	9
Chloride	17.73
Phosphate	1.9
Specific Gravity	1.00
Hardness	15 mg/l $CaCO_3$
Phenol	0.01
Color	<1 Unit
Calcium	3.9
Acidity	360.0 mg/l $CaCO_3$
Alkalinity	16.38 mg/l $CaCO_3$

*Unless otherwise noted

Comments:

8.3-15

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TO:
Town of East Hampton
159 Pantiago Road
East Hampton, New York 11937

SAMPLE: Accabonac Quonset Hut

SAMPLE No. 85032706

PARAMETERS	RESULTS
pH	6.7
	ppm (mg/l)*
BOD	6.0 mg/l
Total Dissolved Solids	81.0
Total Coliform	<2.2mpn 0/5
Acidity	470.0, mg/l Ca Co_3
Barium	<0.2
Sulfate	13.0
Aluminum	<0.2
Cadmium	<0.01
Chromium Total	<0.01
Copper	<0.05
Iron	0.18
Nickel	<0.01
Lead	<0.01

PARAMETERS	RESULTS ppm (mg/l)*
Silver	<0.01
Zinc	<0.05
Manganese	0.02
Arsenic	<0.01
Selenium	<0.01
Mercury	<0.001
Detergent	<0.01
Sodium	15.0
Chloride	11.01
Specific Gravity	1.00
Hardness	24 mg/l Ca C
Phenol	<0.001
Color	0 Units
Alkalinity	28.0 mg/l Ca
Calcium	3.06

*Unless otherwise noted

Comments:

p. 4 1.5

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TO:
Town of East Hampton
159 Pantiago Road
East Hampton, New York 11937

SAMPLE: Accobrae Limbs-Stumps

SAMPLE No. 85032705

PARAMETERS	RESULTS
pH	7.65
	ppm (mg/l)*
BOD	3.0 mg/l
Total Dissolved Solids	116.0
Total Coliform	<2.2mpn 0/5
Acidity	424.0 mg/l Ca Co_3
Barium	<0.2
Sulfate	2.0
Aluminum	<0.2
Cadmium	<0.01
Chromium Total	<0.01
Copper	<0.05
Iron	<0.06
Nickel	<0.01
Lead	<0.01

PARAMETERS	RESULTS ppm (mg/l)*
Silver	<0.01
Zinc	<0.05
Manganese	0.02
Arsenic	<0.01
Selenium	<0.01
Mercury	<0.001
Detergent	<0.01
Sodium	14.1
Chloride	15.31
Specific Gravity	1.00
Hardness	32 mg/l $CaCo_3$
Phenol	<0.001
Color	0 Units
Alkalinity	32.5 mg/l CaC
Calcium	3.58

*Unless otherwise noted

Comments:

p.50/15

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TO:
Town of East Hampton
159 Pantiago Road
East Hampton, New York 11937

SAMPLE:	SAMPLE No.
Accabonac South-East Gate	85032707

PARAMETERS	RESULTS
pH	7.1
	ppm (mg/l)*
BOD	9.0 mg/l
Total Dissolved Solids	35.0
Total Coliform	<2.2mpn 0/5
Acidity	392.0 mg/l Ca Co_3
Barium	<0.2
Sulfate	<0.01
Aluminum	<0.2
Cadmium	<0.01
Chromium Total	<0.01
Copper	<0.01
Iron	0.29
Nickel	<0.01
Lead	<0.01

PARAMETERS	RESULTS ppm (mg/l)*
Silver	<0.01
Zinc	<0.05
Manganese	0.27
Arsenic	<0.01
Selenium	<0.01
Mercury	<0.001
Detergent	<0.01
Sodium	17.9
Chloride	11.48
Specific Gravity	1.00
Hardness	24 mg/l $CaCo_3$
Phenol	0.1
Color	15 Units
Alkalinity	16.0 mg/l CaC
Calcium	2.91

*Unless otherwise noted

Comments:

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DATE:
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COMPLETED 10/29/84
REPORTED BY

TO:
Town of East Hampton
159 Pantigo Road
East Hampton, N.Y. 11937

Attn: ~~Randal Parsons~~ Hugh King

SAMPLE: West Off Main Road #2 SPRINGS-FIREPLACE (SEWAGE PLANT) Accabonac

SAMPLE No. 84092623

PARAMETERS	RESULTS
pH	6.1
	ppm (mg/l)*
Total Coliform	<2.2mpn 0/5
Phenol	0.05
Sulfate	<0.01
Chloride	12.14
Detergent	<0.01
BOD	**
Sodium	24.20
Color	5 Units
Manganese	0.01
Calcium	3.02
Barium	<0.2
Arsenic	<0.01
Selenium	<0.01

PARAMETERS	RESULTS ppm (mg/l)*
Zinc	<0.05
Lead	<0.01
Mercury	<0.001
Aluminum	<0.2
Specific Gravity	1.000
Acidity	48 mg/l CaCo3
Alkalinity	20 mg/l CaCo3
Hardness	20 mg/l CaCo3
Cadmium	<0.01
Chromium Total	<0.01
Copper	<0.05
Iron	<0.06
Nickel	<0.01
Silver	<0.01
Total Dissolved Solids	66.0

*Unless otherwise noted

**Due to delay in approval of Analysis, Sample could not be run for BOD.

Comments:

p. 70/15

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DIRECTOR OF LABORATORIES

TO:
Town of East Hampton
159 Pantigo Road
East Hampton, N.Y. 11937

Attn: ~~Randal Parsons~~ Hugh King

SAMPLE: #3 Quonsett Hut Geobiosc

SAMPLE No. 84092622

PARAMETERS	RESULTS
pH	5.7
	ppm (mg/l)*
Total Coliform	<2.2mpn 0/5
Phenol	<0.001
Sulfate	14.0
Chloride	9.71
Detergent	<0.01
BOD	**
Sodium	20.10
Color	5 Units
Manganese	0.01
Calcium	5.27
Barium	<0.2
Arsenic	<0.01
Selenium	<0.01

PARAMETERS	RESULTS ppm (mg/l)*
Zinc	<0.05
Lead	<0.01
Mercury	<0.001
Aluminum	<0.2
Specific Gravity	1.000
Acidity	168 mg/l CaCo3
Alkalinity	30 mg/l CaCo3
Hardness	36 mg/l CaCo3
Cadmium	<0.01
Chromium Total	<0.01
Copper	<0.05
Iron	<0.06
Nickel	<0.01
Silver	<0.01
Total Dissolved Solid	78.0

*Unless otherwise noted

**Due to delay in approval of Analysis, Sample could not be run for BOD.

Comments:

[illegible] TECHNIQUES, LTD.
[illegible] DRIVE
BAYPORT, NEW YORK 11705
516-472-4848

SANDER R. STERNIG
DIRECTOR OF LABORATORIES

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REPORTED BY

TO:
Town of East Hampton
159 Pantigo Road
East Hampton, N.Y. 11937

Attn: ~~Randal Parsons~~ Hugh King

SAMPLE: Limbs-Stumps Wood #4 Accabonac

SAMPLE No. 84092624

PARAMETERS	RESULTS
pH	5.6
	ppm (mg/l)*
Total Coliform	<2.2mpn 0/5
Phenol	<0.001
Sulfate	1.0
Chloride	15.05
Detergent	<0.01
BOD	**
Sodium	24.60
Color	5 Units
Manganese	0.02
Calcium	5.82
Barium	<0.2
Arsenic	<0.01
Selenium	<0.01

PARAMETERS	RESULTS ppm (mg/l)*
Zinc	0.05
Lead	0.01
Mercury	<0.001
Aluminum	<0.2
Specific Gravity	1.000
Acidity	30 mg/l CaCo3
Alkalinity	34 mg/l CaCo3
Hardness	40 mg/l CaCo3
Cadmium	<0.01
Chromium Total	<0.01
Copper	<0.05
Iron	<0.06
Nickel	<0.01
Silver	<0.01
Total Dissolved Solids	79.0

*Unless otherwise noted

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Comments:

p.9 of 15

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4" PVC

TO:
Town of East Hampton
159 Pantigo Road
East Hampton, N.Y. 11937

Attn: ~~Randal Parsons~~ Hugh King

SAMPLE: South East Gate #1 Accabonac

SAMPLE No. 84092621

PARAMETERS	RESULTS
pH	6.7
	ppm (mg/l)*
Total Coliform	<2.2mpn 0/5
Phenol	<0.001
Sulfate	16.0
Chloride	9.71
Detergent	<0.01
BOD	**
Sodium	20.40
Color	80 Units
Manganese	0.22
Calcium	3.77
Barium	<0.2
Arsenic	<0.01
Selenium	<0.01

PARAMETERS	RESULTS ppm (mg/l)*
Zinc	<0.05
Lead	<0.01
Mercury	<0.001
Aluminum	<0.2
Specific Gravity	1.000
Acidity	24 mg/l CaCo3
Alkalinity	24 mg/l CaCo3
Hardness	20 mg/l CaCo3
Cadmium	<0.01
Chromium Total	<0.01
Copper	<0.05
Iron	5.11
Nickel	<0.01
Silver	<0.01
Total Dissolved Solids	111.0

*Unless otherwise noted

**Due to delay in approval of Analysis, Sample could not be run for BOD

Comments:

11-15-84

p.100/15

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SANDER R. STERNIG
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DATE:
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COMPLETED 6/1/84
REPORTED BY

TO. Town of East Hampton
159 Pantigo Road
East Hampton, N.Y. 11937

Att: Randall Parsons

SAMPLE: Accabonac West Well off Main Street

SAMPLE No. 84043013

PARAMETERS	RESULTS
pH	6.7
	ppm (mg/l)*
Cadmium	<0.01
Chromium Total	<0.01
Copper	<0.05
Iron	<0.06
Nickel	0.02
Silver	<0.01
Zinc	<0.05
Lead	<0.01
Sulfate	2.0
Color Units	5
Phenol	0.1
Chloride	13.30
Detergent	<0.01

PARAMETERS	RESULTS ppm (mg/l)*
Specific Gravity	1.000
Total Dissolved Solids	967.0
Manganese	0.02
Sodium	17.8
Aluminum	<0.2
Acidity	10.0mg/l CaCc
Alkalinity	20.0mg/l CaCc
Hardness	28.0mg/l CaCc
Barium	<0.2
Calcium	3.03
Arsenic	<0.01
Selinium	<0.01
BOD mg/l	7.36
Mercury	<0.001

*Unless otherwise noted

Comments:

p.11 of 15

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SANDER R. STERNIG
DIRECTOR OF LABORATORIES

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DATE:
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COMPLETED 6/1/84
REPORTED BY

TO:
Town of East Hampton
159 Pantigo Road
East Hampton, N.Y. 11937

Att; Randall Parsons

SAMPLE: Quonsett Hut Decabmac

SAMPLE No. 84043010

PARAMETERS	RESULTS
pH	6.41
	ppm (mg/l)*
Cadmium	< 0.01
Chromium Total	< 0.01
Copper	< 0.05
Iron	0.64
Nickel	< 0.01
Silver	< 0.01
Zinc	< 0.05
Lead	< 0.01
Sulfate	3.0
Color Units	5
Phenol	< 0.001
Chloride	9.03
Detergent	< 0.01

PARAMETERS	RESULTS ppm (mg/l)*
Specific Gravity	1.000
Total Dissolved Solids	76.0
Manganese	0.01
Sodium	17.3
Aluminum	< 0.2
Acidity	10.0 mg/lCaCo
Alkalinity	20.0 mg/lCaCo
Hardness	74.0 mg/lCaCo
Barium	<0.2
Calcium	4.56
Arsenic	< 0.01
Selinium	< 0.01
BOD mg/l	6.57
Mercury	< 0.001

*Unless otherwise noted

Comments:

p.12 of 15

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SANDER R. STERNIG
DIRECTOR OF LABORATORIES

TO: Town of East Hampton
159 Pantigo Road
East Hampton, N.Y. 11937

Att: Randall Parsons

SAMPLE: Southeast Accabonac

SAMPLE No. 84043012

PARAMETERS	RESULTS
pH	6.32
	ppm (mg/l)*
Cadmium	< 0.01
Chromium Total	< 0.01
Copper	< 0.05
Iron	0.13
Nickel	0.01
Silver	< 0.01
Zinc	< 0.05
Lead	< 0.01
Sulfate	< 0.01
Color Units	5
Phenol	< 0.001
BOD mg/l	6.365
Chloride	17.10

PARAMETERS	RESULTS ppm (mg/l)*
Specific Gravity	1.000
Total Dissolved Solids	88.0
Manganese	0.03
Sodium	26.1
Aluminum	< 0.2
Acidity	20.0mg/l CaCo
Alkalinity	35.0mg/l CaCo
Hardness	56.0mg/l CaCo
Barium	<0.2
Calcium	5.52
Arsenic	<0.01
Selinium	<0.01
Detergent	< 0.01
Mercury	< 0.001

*Unless otherwise noted

Comments:

p. 13 of 15

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TO: Town of East Hampton
159 Pantigo Road
East Hampton, N.Y. 11937
Att: Randall Parsons

SAMPLE: South Gate ACCEPTABLE

SAMPLE No. 8404304

PARAMETERS	RESULTS
pH	7.29
	ppm (mg/l)*
Cadmium	< 0.01
Chromium Total	< 0.01
Copper	< 0.05
Iron	0.14
Nickel	< 0.01
Silver	< 0.01
Zinc	< 0.05
Lead	< 0.01
Sulfate	7.50
Color Units	10
Phenol	0.2
BOD mg/l	11.62
Chloride	10.45

PARAMETERS	RESULTS ppm (mg/l)*
Detergent	0.77
Specific Gravity	1.000
Total Dissolved Solids	110.0
Manganese	0.29
Sodium	15.9
Aluminum	< 0.2
Acidity	10.0mg/l CaCc
Alkalinity	55.0mg/l CaCc
Hardness	70.0mg/l CaCc
Barium	< 0.2
Calcium	8.02
Arsenic	< 0.01
Selinium	< 0.01
Mercury	< 0.001

*Unless otherwise noted

Comments:

p.14 of 15

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DATE:
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SANDER R. STERNIG
DIRECTOR OF LABORATORIES

TO East Hampton Main Dump
Randall T Parsons
Town of East Hampton
159 Pantigo Rd..
East Hampton, N.Y. 11937

SAMPLE: East Hampton Main Dump — Decobrace East Gate

SAMPLE No. 83092606

PARAMETERS	RESULTS
pH	6.04
	ppm (mg/l)*
Color Units	5
Total Dissolved Solids	77.0
Phenol	0.01
Total Coliform	<2.2 0/5
Sulfate	5.0
Detergent	0.39
Chloride	15.8
Specific Gravity	1.000.
Cadmium	0.01
Chromium Total	<0.01
Copper	0.06
Iron	1.49
Nickel	.041

PARAMETERS	RESULTS ppm (mg/l)*
Sodium	9.46
Silver	<0.01
Zinc	<0.05
Lead	0.01
Arsenic	0.02
Selinium	<0.01
Manganese	0.12
Chemical Oxygen Demand	25.0
BOD	85.715
Alkalinity	100.0mg/lCaCO
Acidity	20.0mg/lCaCO3
Hardness	92.0mg/lCaCO3
Barium	0.06
Calcium	13.2
Aluminum	0.42

*Unless otherwise noted

Comments:

p.15 of 15

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SAMPLED BY Don Roberts
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REPORTED BY

TO: Randall T. Parsons
Town of East Hampton
159 Pantigo Road
East Hampton, NY 11937

SAMPLE:	SAMPLE No.
Accabonac East Hampton East Gate	83052308

PARAMETERS	RESULTS
pH	6.75
	ppm (mg/l)*
Specific Gravity	0.995
Total Dissolved Solids	102.0
Chloride	12.07
Barium	0.23
Color Units	160
Sodium	80.2
Selenium	<0.01
Arsenic	<0.01
Manganese	0.52
Cadmium	<0.01
Chromium Total	<0.01
Copper	<0.05
Iron	9.44

PARAMETERS	RESULTS ppm (mg/l)*
Calcium	11.31
Chemical Oxygen Demand	10.0
Nickel	<0.01
Silver	0.01
Zinc	<0.05
Lead	0.02
Phenol	<0.001
Total Coliform	<2.2 0/5
Hardness mg/l CaCO3	96.0
Alkalinity mg/l CaCO3	31.0
Acidity mg/l CaCO3	10.0
Sulfate	0.1
Detergent	0.76
Aluminum	0.31
BOD	122.0

*Unless otherwise noted

Comments:

Appendix 1.4-2

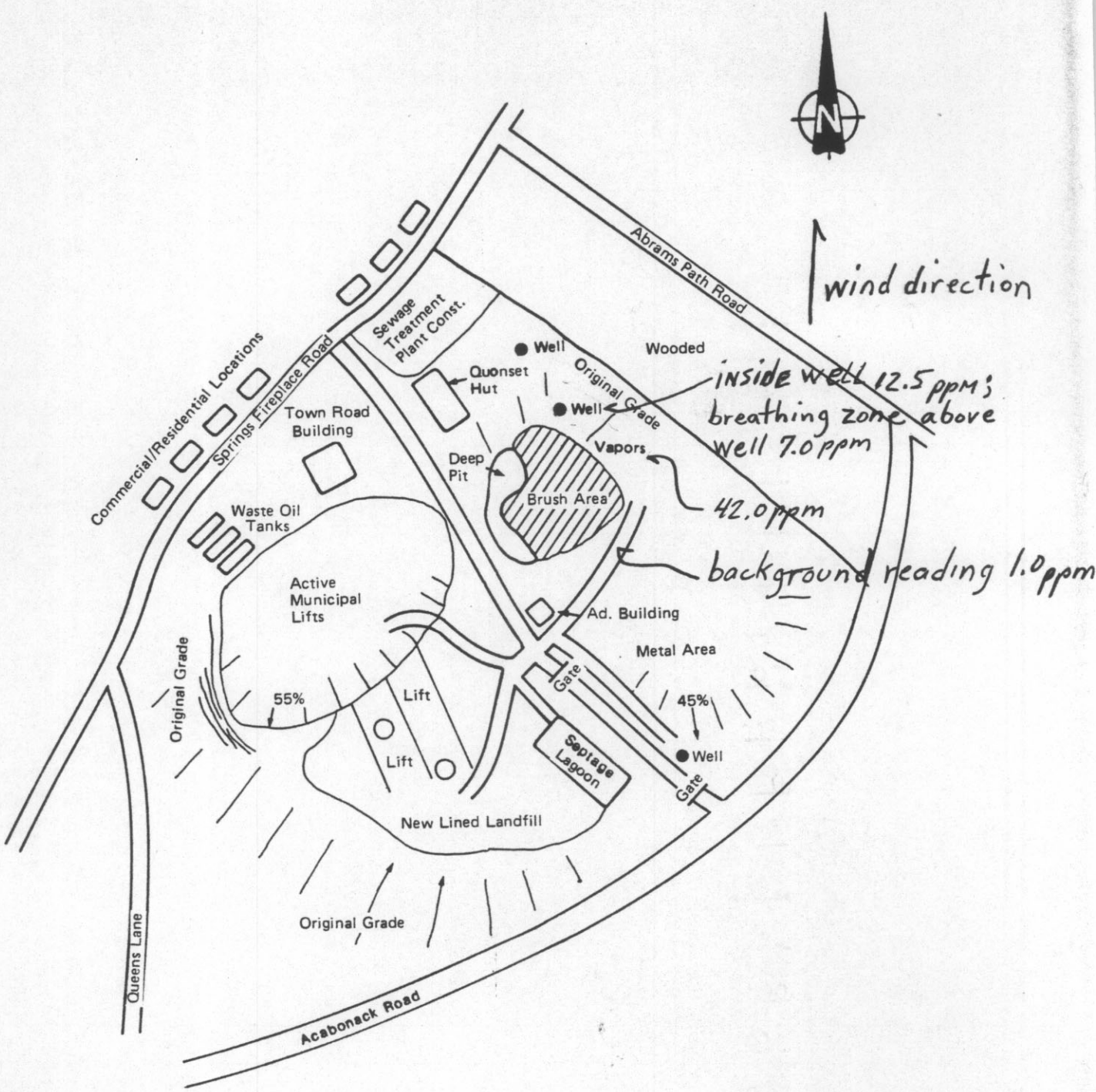
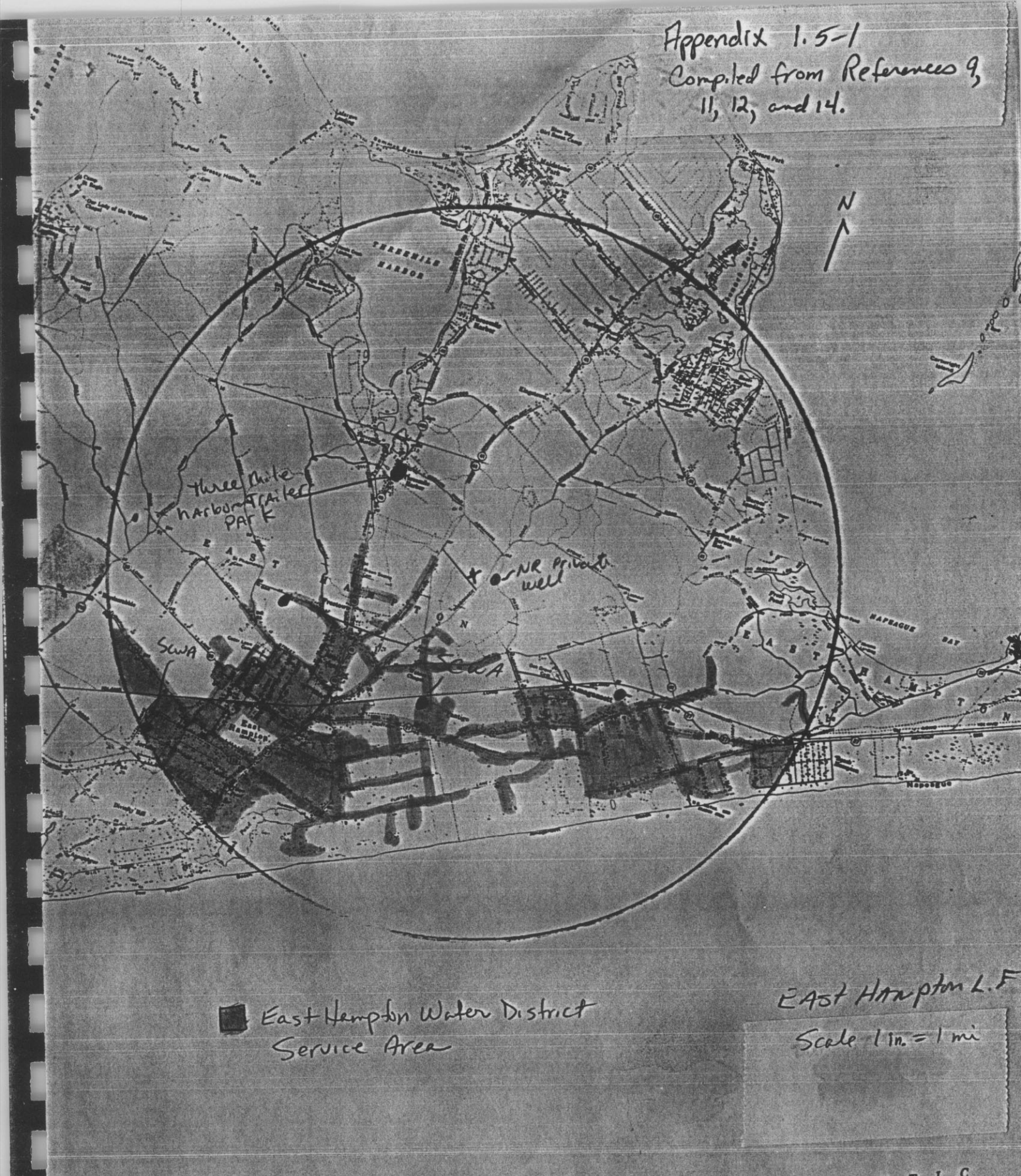


Figure 1-2. Site sketch. East Hampton Landfill, 21 January 1986. (Not to scale.)

Air Sampling Specifics.


Appendix 1.5-1
Compiled from References 9, 11, 12, and 14.
N
Three Mile Harbour Trailer Park
SNR Private well
SCWA
EAST HAMPTON
HAPPAUGE BAY
EAST HAMPTON
Napeague
East Hampton Water District Service Area
EAST Hampton L.F
Scale 1 in. = 1 mi
ATLANTIC

Appendix 1.5-2

EA SCIENCE AND TECHNOLOGY
A Division of EA Engineering, Science, and Technology, Inc.

COMMUNICATIONS RECORD FORM

Distribution: ( ) Montauk L.F., ( ) _____
( ) E. Hampton LF, ( ) _____
( ) **Author**

Person Contacted: Mrs. Cameron **Date:** 23 June 1986

Phone Number: (516) 324-0959 **Title:** Customer Service Representative

Affiliation: Suffolk County Water Auth. **Type of Contact:** Telephone

Address: _____ **Person Making Contact:** E. Bidwell

_____

Communications Summary: Mrs. Cameron indicated that the East Hampton Water District actually consists of two distinct districts. The Montauk section has 1,690 services and uses water taken only from its portion of the district. The East Hampton section has 9,151 services and uses water taken only from its portion of the district.

(see over for additional space)

Signature: Evan Bidwell

Appendix 1.5-3

RECEIVED MAR - 1986

United States Department of Agriculture

Soil Conservation Service

127 East Main Street
Riverhead, New York 11901

March 13, 1986

Mr. William L. Going, Manager
Environmental Assessment Studies
EA Science and Technology
R.D. 2, Box 91
Middletown, New York 10940

Dear Mr. Going:

This office has not compiled any information on the number of acres irrigated based on specific locations in Suffolk County. The 1982 Census of Agriculture estimates that 23,232 acres are irrigated on 500 farms, however, the specific locations of this acreage is not readily available.

The major source of irrigation water in Suffolk County is groundwater through wells. There are literally thousands of wells scattered throughout the county. To locate wells within a three mile radius of the inactive hazardous waste sites would be an impossible task.

Just to inventory the irrigated acres in proximity to these sites would be very time consuming. I do not have the manpower nor the time at present to accomplish such a task.

I would be more than willing to provide you with access to our aerial photographs, soil maps, topographic surveys and other technical information which might be helpful to you in making this inventory.

If you have any questions or I may be of further assistance, call me at 516-727-2315.

Sincerely,

Allan S. Connell

Allan S. Connell,
District Conservationist

3/28/86 Mr. Connell says that the 23,232 ac/500 farms represent the vast majority ... up to 90% ... for Suffolk Co. and that I can assume all irrigate ... so I will convert ag. land value data (land use) to irrigated acres.

EA SCIENCE AND TECHNOLOGY
A Division of EA Engineering, Science, and Technology, Inc.

COMMUNICATIONS RECORD FORM

Distribution: ( ) Suffolk Co. General, ( ) _____
( ) _____, ( ) _____
( ) Author

Person Contacted: Mr. Dan Fricke Date: 4-1-86

Phone Number: 516 727 7850 Title: Coop Ext. Ag. Agent

Affiliation: Suffolk Co. Coop Ext. Assn. Type of Contact: Phone

Address: 264 Griffing Ave. Riverhead NY Person Making Contact: Bond

Communications Summary: I asked Dan question about irrigation practices in Suffolk Co. i.e. could Coop Ext. identify sources of irrigation water (wells + surface) and tell me for all irrigated ~~acreage~~ acreage.... which was in food production or dairy farms?

He said that all irrigation wells were supposed to be registered with the State and that perhaps SCDHS had the maps to indicate location and number (#).
→ (Joe Bair?) or (Steve Carey)

* He said there was no surface water used for irrigation on the Island.

He said that once we had located all the wells within required distance of sites; we would have to talk to Coop Ext about each well to find out about the use of the land; very time consuming process.

(see over for additional space)

Signature: William J. Gong

Appendix 1.5-5

EA SCIENCE AND TECHNOLOGY
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COMMUNICATIONS RECORD FORM

Distribution: ( ) Suffolk Co. General Files ( ) _____, ( ) _____
( ) Author

Person Contacted: Steve Carey Date: 4-7-86

Phone Number: 516 3482893 Title: Chief

Affiliation: SCDHS Groundwater Section Type of Contact: Phone

Address: 225 Rabro Dr. Hauppauge, NY Person Making Contact: Bud Going

Communications Summary: I asked him questions about sources of irrigation water for farm land in food production ---

Steve said wells greater than 45 gpm were registered by NYSDEC Reg 1, except that farms were mostly exempted.

He suggested I contact Doug Pica NYSDEC for information.

(see over for additional space)

Signature: William Going

Appendix 1.5-6

EA SCIENCE AND TECHNOLOGY
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COMMUNICATIONS RECORD FORM

Distribution: ( ) Suffolk Co. General Files) _____
( ) _____, ( ) _____
( ) Author

Person Contacted: Mr. Doug Pica Date: 4-7-86

Phone Number: 516 751-7900 Title: _____

Affiliation: NYSDEC Reg 1 Water Unit Type of Contact: Phone

Address: Stonybrook NY Person Making Contact: Bud Gorny

Communications Summary: I asked questions about irrigation practices on Long Island and about regulations of wells (irrigation supply).

Doug said DEC regulated wells that supplied irrigation water to golf courses but did not regulate any farm supply wells because they are exempted from regulation. He therefore has no info on farmland irrigation sources.

(see over for additional space)

Signature: William Gorny

Appendix 1.5-7

EA SCIENCE AND TECHNOLOGY
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COMMUNICATIONS RECORD FORM

Distribution: ( ) DEC63A, ( ) _____
( ) _____, ( ) _____
( ) Author

Person Contacted: John Ozard Date: 3-6-86

Phone Number: 5184397486 Title: Sr. Wildlife Biologist

Affiliation: NYS DEC Type of Contact: Phone

Address: Delmar NY Person Making Contact: W. Going

Communications Summary: Called John for clarification of the letter, dated 26 February 1986, regarding "significant habitats" ...

Q. Don't see any reference to federally listed threatened or Endangered spp. on any of the 42 site location maps you sent both w your letter ... does this mean there is no habitat of concern for these spp? A. yes ... there is no critical habitat for (Federal spp) at any of the sites being examined.

Q. Are all the wetlands on LI in the vicinity of our sites (refer to location maps) "coastal" wetlands? A. Yes. They all have varying amount of salt being that near the Sound or the Ocean, to be considered coastal wetlands ... also refer to the ("Natural Heritage") wetlands marked in blue.

(see over for additional space)

Signature: William Going

EA SCIENCE AND TECHNOLOGY
A Division of EA Engineering, Science, and Technology, Inc.

COMMUNICATIONS RECORD FORM

Distribution: (✓) N45OEC63A file . ( ) _____
( ) _____ . ( ) _____
( ) Author

Person Contacted: Mr. David DiSunno Date: 4/22/86 and 7/8/86

Phone Number: 516 267 8585 Title: Chief Fire Inspector

Affiliation: Town of East Hampton Type of Contact: Phone

Address: 159 Pantigo Rd Person Making Contact: Going
East Hampton NY 11937

Communications Summary: I called Mr. DiSunno and asked him if any of the following sites (facilities) represent an imminent threat to the public of fire or explosion hazard:

East Hampton Landfill (Acabonack Rd)
Bull Path Landfill (Stephen Hands Path)
Montauk Landfill (Montauk Hwy)
Old Orchard Landfill (Old Country Rd)

He indicated that none of these sites represent an imminent threat from fire or explosion.

(see over for additional space)

Signature: William Going

EA SCIENCE AND TECHNOLOGY
A Division of EA Engineering, Science, and Technology, Inc.

COMMUNICATIONS RECORD FORM

Distribution: ( ) DEC 63: Phase I Report Files
( ) _____ ( ) _____
( ) Author

Person Contacted: Mr. Gordon Colvin Date: Sept 2, 1986

Phone Number: (516) 751-7900 Title: Director, Div. of Marine Resources

Affiliation: NYSDEC Region I Type of Contact: Phone

Address: Stony Brook NY Person Making Contact: W. Gonyo

Communications Summary: I explained our Phase I effort; that some of these sites were out on Long Island; that some of these sites were within ~ 2 miles of marine waters; and that EA had to be able to indicate in the HRS score system whether a site was near a coastal water body which was a recreational resource.

Mr. Colvin said that EA could consider the Atlantic Ocean, Long Island Sound, all large bays, sounds and inlets, and most of the small bays and tidal creeks to be recreational resources because of either: fishing or shellfishing, boating, swimming, and/or other primary and secondary contact recreation. He would be welcomed to call the office to discuss particular small, unnamed tidal creeks if we thought it necessary.

(see over for additional space)

Signature: Wilson Gonyo

(47-15-11 (10/83)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DIVISION OF SOLID AND HAZARDOUS WASTE

INACTIVE HAZARDOUS WASTE DISPOSAL SITE REPORT

PRIORITY CODE: _____ SITE CODE: 152058

NAME OF SITE: East Hampton Landfill REGION: I

STREET ADDRESS: Acabonack Road

TOWN/CITY: Town of East Hampton COUNTY: Suffolk

NAME OF CURRENT OWNER OF SITE: Town of East Hampton

ADDRESS OF CURRENT OWNER OF SITE: 159 Pantigo Road

TYPE OF SITE: OPEN DUMP ☐ STRUCTURE ☐ LAGOON ☐

LANDFILL [X] TREATMENT POND ☐

ESTIMATED SIZE: 45 ACRES

SITE DESCRIPTION:

The site is an approximate 45-acre municipal landfill that accepts solid waste and septage sludge from Town residents and local haulers.

Separate areas of the landfill are used for disposal of residential garbage, commercial garbage, metal debris, and brush. The 5-acre area used by commercial haulers is the only portion of the landfill lined.

The septage sludge from the pit onsite has been sampled and found to be contaminated with methylene chloride, toluene, and phenol.

HAZARDOUS WASTE DISPOSED: CONFIRMED [X] SUSPECTED ☐

TYPE AND QUANTITY OF HAZARDOUS WASTES DISPOSED:

TYPE	QUANTITY (POUNDS, DRUMS, TONS, GALLONS)
Methylene chloride	Unknown
Toluene	Unknown
Phenol	Unknown

TIME PERIOD SITE WAS USED FOR HAZARDOUS WASTE DISPOSAL:

_____, 19 ___ TO _____, 19 ___

OWNER(S) DURING PERIOD OF USE: Town of East Hampton

SITE OPERATOR DURING PERIOD OF USE: Town of East Hampton

ADDRESS OF SITE OPERATOR: 159 Pantigo Road, East Hampton, NY 11937

ANALYTICAL DATA AVAILABLE: AIR ☐ SURFACE WATER ☐ GROUNDWATER ☐
SOIL ☐ SEDIMENT ☒ NONE ☐

CONTRAVENTION OF STANDARDS: GROUNDWATER ☐ DRINKING WATER ☐
SURFACE WATER ☐ AIR ☐

SOIL TYPE: Sand and gravel

DEPTH TO GROUNDWATER TABLE: 65 ft

LEGAL ACTION: TYPE: _____ STATE ☐ FEDERAL ☐
STATUS: IN PROGRESS ☐ COMPLETED ☐
REMEDIAL ACTION: PROPOSED ☐ UNDER DESIGN ☐
IN PROGRESS ☐ COMPLETED ☐

NATURE OF ACTION: _____

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Potential ground-water contamination.

ASSESSMENT OF HEALTH PROBLEMS:

PERSON(S) COMPLETING THIS FORM:

FOR NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NAME EA Science and Technology
TITLE _____
NAME _____
TITLE _____
DATE: 24 June 1986

NEW YORK STATE DEPARTMENT OF HEALTH

NAME _____
TITLE _____
NAME _____
TITLE _____
DATE: _____