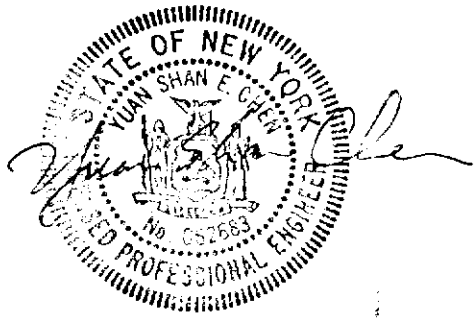
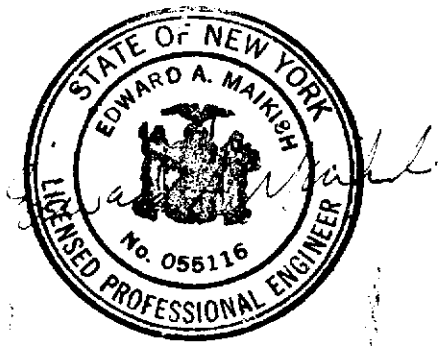
ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES IN THE STATE OF NEW YORK PHASE I INVESTIGATIONS

Smithtown Landfill Site
Town of Smithtown, Suffolk County
NYSDEC I.D. No. 152043

Prepared for

DIVISION OF HAZARDOUS WASTE REMEDIATION
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road
Albany, New York 12233-0001





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1. EXECUTIVE SUMMARY

The Smithtown landfill (NYSDEC I.D. # 152043 and EPA I.D. # D980762611) is located in the Hamplet of Kings Park, Suffolk County, New York (Figures 1-1 and 1-2). The site, comprising 29.09 acres, is located on the northside of Old Northport Road approximately 350 ft west of the intersection of Old Northport Road and Indian Head Road. The site was leased from Izzo Brothers and operated as a municipal landfill by the Town of Smithtown, from 1970 to 1979. The landfilling was discontinued in 1979, when landfilling began on Smithtown Municipal Services Facility (MSF) Landfill, which is located at the intersection of Old Commack Road and Old Northport Road approximately 0.75 miles west of Smithtown Landfill (Figure 1-1).

During the operation, household wastes of all types were delivered to this site. There is no indication that hazardous waste has been disposed of at the Smithtown landfill site. In the summer of 1971, representatives of the Urban Science and Engineering Department of the State University of New York at Stony Brook conducted a three month study of solid waste disposal within the town of Smithtown (Appendix C). As reported in their study, the composition of solid waste is given in Table 1-1.

The landfill does not have a liner nor a leachate collection system. The landfill has had problems with methane gas migration

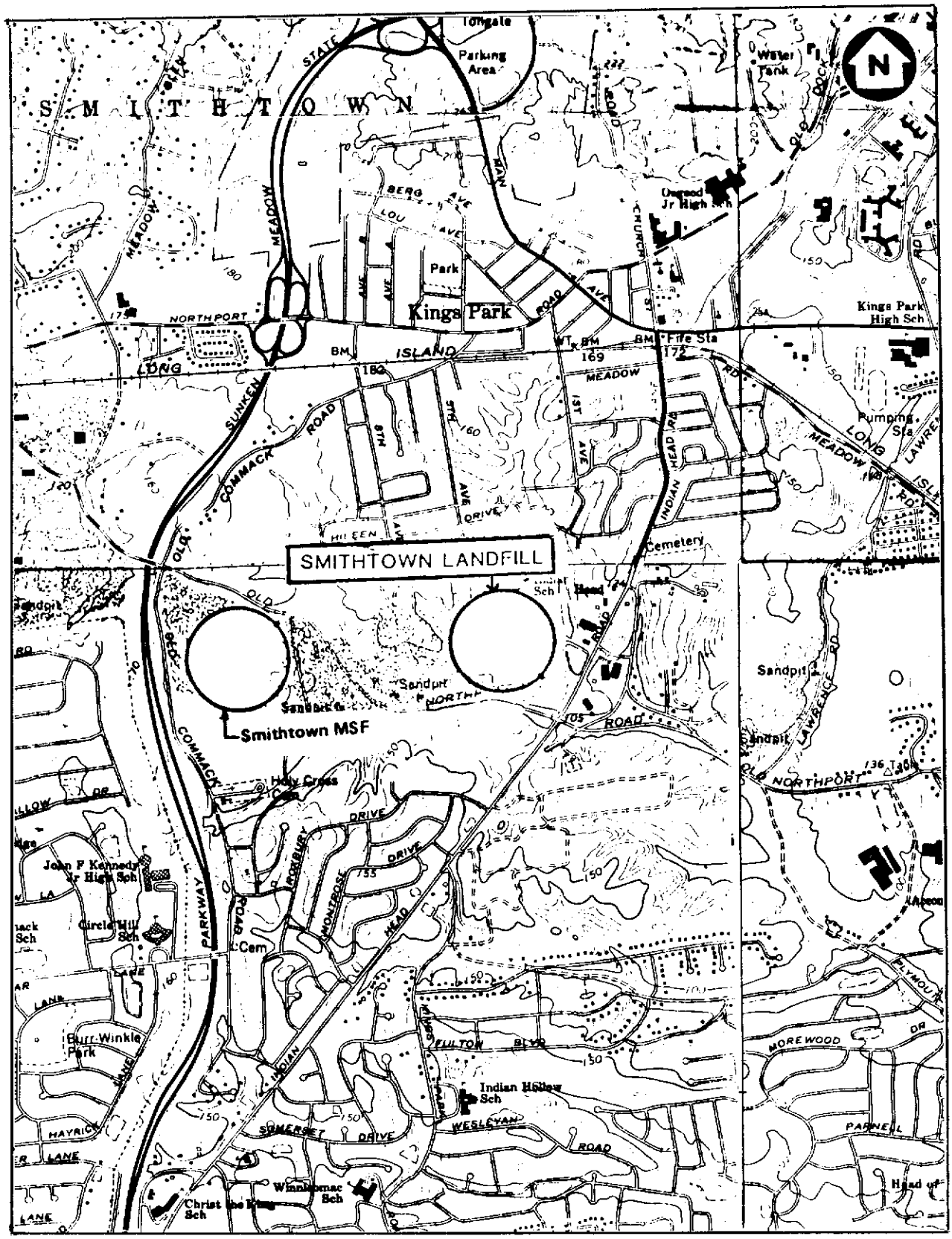


Figure 1-1
SMITHTOWN LANDFILL
Smithtown, NY

SOURCE: USGS Quadrangle Maps, 1967
SCALE: 1 inch = 2000 ft

SITE COORDINATES:
Longitude: 73 15' 50"
Latitude: 40 52' 00"

Northport, Greenlawn, Central Islip and Saint James Quadrangles

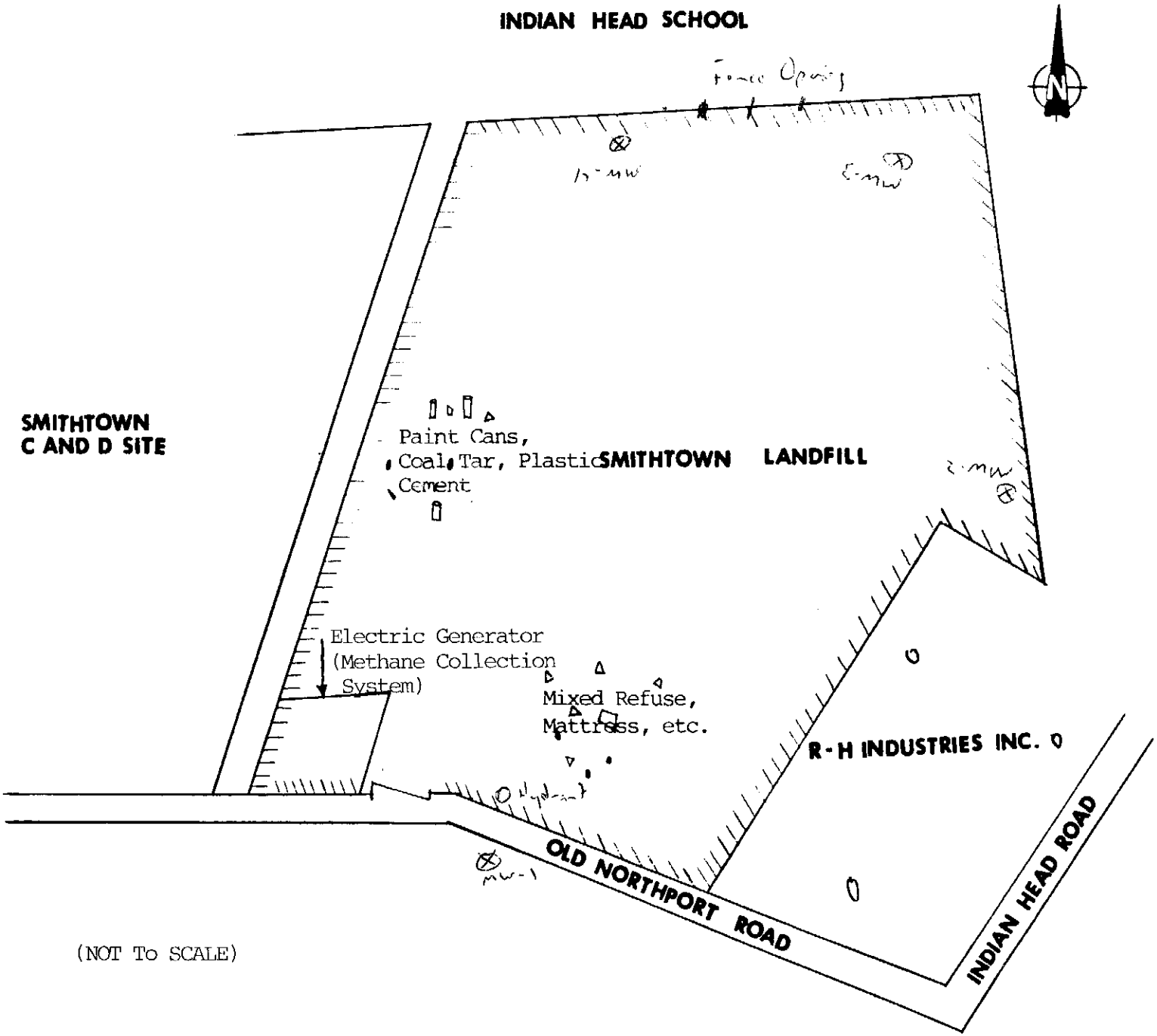


FIGURE 1-2. SITE SKETCH. SMITHTOWN LANDFILL

but in 1983 a methane collection system was installed which converts methane to electricity that is purchased by the Smithtown Landgas Company.

Table 1-1: Composition of Solid Waste
(Appendix C reference 3)

Category	Percent by Weight
Glass	9.3
Metal	6.5
Newspaper	11.7
Grass and Vegetables	11.7
Wood	3.4
Cardboard	11.6
Plastic, Rubber, Leather, Cloth	3.8
Paper (unsalvageable)	27.4
Kitchen Waste	10.4
Miscellaneous	4.2

A preliminary application of the Hazard Ranking System (HRS) was completed to quantify risks associated with the site. A detailed environmental site assessment to fully evaluate the site was not conducted. A preliminary HRS score was completed on the basis of the available data. It should be noted that without a full environmental assessment, an unrealistically low HRS score may result.

Under the HRS, three numerical scores are computed to express the site's relative risk or damage to the population and the environment. The three scores are described below:

- S_M reflects the potential for harm to humans or the

environment from migration of a hazardous substance away from the facility via groundwater, surface water, or air. It is a composite of separate scores for each of the three routes (S_{gw} = groundwater route score, S_{sw} = surface water route score, and S_a = air route score).

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

- S_{DC} reflects the potential for harm from direct contact with hazardous substances at the facility (i.e., no migration need be involved).

The preliminary HRS score was:

S_M = Not Scored (S_{gw} = Not Scored; S_{sw} = 0; S_a = 0)

S_{FE} = Not Scored

S_{DC} = 0

Due to the lack of onsite groundwater monitoring data, HRS scoring was not conducted for groundwater route. Additional groundwater analytical data is required to complete the scoring. Fire and explosion score was not completed because the site was not declared a fire/explosion threat by the Code Enforcement Bureau Director.

2. PURPOSE

Under contract to Lawler, Matusky and Skelly Engineers, which is in turn under contract to the New York State Department of Environmental Conservation (NYSDEC) Superfund Program, YEC, Inc. conducted this Phase I investigation at the Smithtown Landfill site. The purpose of this investigation was to provide a preliminary evaluation of the potential hazardous waste present at the site, to estimate the potential pollutant migration pathways leading off site, and to determine natural resources or extent of the human population that might be affected by the pollutants. The evaluation includes preparation of a narrative site description, initial characterization of the hazardous substances on site, and calculation of a preliminary HRS score. This assessment will be used to determine what additional actions, if any, should be conducted at this site.

3. SCOPE OF WORK

The Phase I effort involved the following tasks:

- A review of available information from state, county, federal and municipal files;
- Interviews with individuals knowledgeable about the site; and
- Physical inspection of the site that included review of USGS 7.5-minute topographic maps. No samples were collected, although real time air monitoring during the site inspection was performed using an HNu photoionization organic vapor detector and no readings above background were noted.

Photographs were taken during the site inspection on September 28, 1988 and are included in Appendix A. All observations were recorded in a field book and are reported in the United States Environmental Protection Agency (USEPA) Site Inspection Report form 2070-13 as presented in Section 5.5 of this report.

Table 3-1 lists the information sources contacted for the Phase I investigation.

Table 3-1

SOURCES CONTACTED FOR THE NYSDEC PHASE I

INVESTIGATION AT THE SMITHTOWN LANDFILL SITE

Agencies Contacted

U.S. Environmental Protection Agency, Region II
26 Federal Plaza, Room 900
New York, New York 10278
(212) 264 6696
Contact: Ben Conetta
Date: 9/6/88
Information Gathered: File search for the site.

New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation
50 Wolf Road
Albany, New York 12233-0001
(518) 457 0639
Contact: Mike Komoroske
Date: 8/8/88
Information Gathered: File search for the site.

New York State Department of Environmental Conservation
Region 1
Division of Solid Waste
SUNY Campus - Building 40
Stony Brook, New York 11794
(516) 751 7900
Contact: Anthony Candela
Date: 8/25/88
Information Gathered: File Search for the Site.

Suffolk County Soil & Water Conservation District
164 Old Country Road
Peconic Plaza
Riverhead, New York 11901
(516) 727 2315
Contact: Stanley Pauzer
Date: 8/1/88
Information Gathered: Soil Survey of Suffolk County, New York.

Table 3.1 (Cont.)

Suffolk County Department of Health Services
Bureau of Drinking Water
225 Rabro Drive East
Hauppauge, NY 11788
(516) 348 2900
Contact: Dennis Moran, P.E.
Date: 9/12/88
Information Gathered: Public Water Supplies and Groundwater Monitoring Information.

Suffolk County Department of Health Services
Hazardous Materials Management
15 Horseblock Place
Farmingville, NY 11738
(516) 451 4647
Contact: Otto Reneberg
Date: 9/12/88
Information Gathered: File Search for the Site.

Long Island Regional Planning Board
H.Lee Dennison Office Building
Veterans Memorial Highway
Hauppauge, New York 11787
(516) 360 5191
Contact: Roy Fedelem
Date: 9/12/88
Information Gathered: Population Estimates for Suffolk County.

State of New York Department of Health
Bureau of Public Water Supply Protection
Corning Tower
The Governor Nelson A. Rockefeller Empire State Plaza
Albany, New York 12237
(518) 458 6731
Contact: James R. Covey, P.E.
Date: 9/15/88
Information Gathered: Community Water Supply Atlas.

US Department of Agriculture
Soil Conservation Service
Peconic Plaza
164 Old Country Road
Riverhead, NY 11901
Contact: Allan S. Connell
Date: 9/9/88
Information Gathered: Refused to give information as their policy is not to give information to private consultants.

Table 3.1 (cont.)

New York State Department of Environmental Conservation
Region 1
Building 40 - SUNY Campus
Stony Brook, New York 11794
(516) 751 7900
Contact: Michael S. Scheibel
Date: 9/14/88
Information Gathered: Critical Habitat of Endangered Species and Plant Species.

Cornell Cooperative Extension - Suffolk County
246 Griffing Avenue
Riverhead, New York 11901
(516) 727 7850
Contact: Dan Fricke
Date: 9/9/88
Information Gathered: Farmland/Agriculture Land and Surface Water Bodies.

New York State Department of Environmental Conservation
Region 1
Building 40 - SUNY Campus
Stony Brook, New York 11794
(516) 751 7900
Contact: Paul Carella
Date: 9/14/88
Information Gathered: NYSDEC Freshwater Wetlands within 3-mile radius of the site.

Department of Fire Prevention
99 West Main Street
Smithtown, NY 11787
(516) 360 7539
Contact: Al Anderson
Date: 9/7/88
Information Gathered: The site was not declared as threat of fire and/or explosion.

Suffolk County Water Authority
Oakdale
Long Island, NY 11769
Contact: E.J.Rosavitch, P.E.
Date: 10/19/88
Information Gathered: Population served by Suffolk County Water Authority wells within 3-mile radius of the site.

Table 3.1 (cont.)

INTERVIEWS

Contact: Alexander Izzo
Addresss: 106 Fourth Street
Glen Cove, New York 11542
(516) 671 2144
Date: 9/28/88
Information Gathered: Site History.

Contact: Neal Izzo
Addresss: P.O.Box 345
Forrest Pond Road
Glen Head, New York 11545
Date: 9/28/88
Information Gathered: Site History.

Contact: Francis J. Mooney
Addresss: Town Engineer
Town of Smithtown
124 W.Main Street
Smithtown, New York 11787
(516) 360 7550
Date: 9/28/88
Information Gathered: Site Interview.

4. SITE ASSESSMENT

4.1 SITE HISTORY

The Smithtown Landfill Site (NYSDEC I.D.# 152043 and EPA I.D.# D980762611) is located in the Hamlet of Kings Park. The site is a 29.09 acre landfill situated at the intersection of Old Northport Road and Indian Head Road in Kings Park, Suffolk County, New York. The Town of Smithtown leased the property from Izzo Brothers for the purpose of landfilling their solid wastes and other municipal wastes in 1970. The landfilling was discontinued in July 1979.

In September 1980, the New York State Department of Environmental Conservation initiated a legal case against the Town of Smithtown for violations regarding odor control, final cover application, leachate ponding, methane gas and groundwater monitoring and ground cover crop (Appendix C). The data collected in October 1982 by the Suffolk County Department of Health Services indicated that methane was migrating onto the Indian Head Elementary School property, which is located to the north of the site (Appendix C). In 1983, a methane collection system which converts methane to electricity was installed and is operated by the Smithtown Landgas Company under state permit.

There is no indication that hazardous waste has been disposed of at the Smithtown landfill site. However, Suffolk County Department of Health Services believe that, as with all the

western Suffolk landfills, industrial wastes were disposed of there.

In 1983, NUS Corporation, a U.S. EPA contractor, conducted a preliminary investigation at the Smithtown landfill site. NUS corporation reported that through the alleged acceptance of unknown waste materials in the past, it is possible that hazardous materials do exist in the landfill which have not been completely leached. NUS corporation recommended monitoring downgradient water supply sources for contaminants.

4.2 SITE TOPOGRAPHY

The Smithtown landfill is located approximately 3 miles from the Long Island Sound at an elevation of approximately 150 ft above mean sea level (MSL) as shown on the USGS 7.5-Minute Quadrangle. The site is located at the intersection of Old Northport Road and Indian Head Road. The regional slope of terrain in the vicinity of the site is less than 8%. Drainage across the study area is generally toward the northeasterly direction and, ultimately to the Nissequogue River.

The area is characterized by very hilly and irregular topography. Land surface elevations average about 150 ft above mean sea level (MSL) in the immediate vicinity of the Smithtown Landfill. To the north, west, and south, as one approaches the Harbor Hill and Ronkonkoma terminal moraines, elevations average

over 200 ft above MSL. The land surface drops off to the east and reaches sea level at Nissequogue River.

4.2.1 Soils

The soil types at Smithtown landfill site are classified as Carver and Plymouth sands. Slopes of these soils are often found in areas of 0 to 3 percent slopes (Ref.3). The mapping unit consists of areas of Carver sand, Plymouth sand or both. These soils are not well suited to the crops commonly grown in the county. Most areas in the western part of the county and near the shores of the eastern part of the county are used for housing development. This series has a permeability greater than 6.3 inches per hour.

4.2.2 Surface Water

The Nissequogue River is approximately 2.5 miles northeast of the Smithtown landfill site. The river is used for recreation. There are a number of ponds located at the southeast of the site including New Mill Pond, Vail Pond, Webster Pond and Willow Pond, all of which are part of the Nissequogue River system (Ref.13). In Suffolk County, surface water is not used for drinking water purposes (Ref.13).

4.2.3 Land Use

The site, which is located in northern Smithtown in Suffolk county is within a mixed residential, commercial and industrial district. There is heavy industry located to the east side of the site and a medium density residential subdivision approximately 1/4 mile south of the site. The major commercial district of Smithtown is approximately 4 miles south of site. There are no prime farm lands within a 3 mile radius of the landfill. The total population within a 3 mile radius of the site is approximately 89,357 persons (Ref. 8).

4.2.4 Critical & Sensitive Habitats

There is no critical and sensitive habitat in the vicinity of the landfill (Ref. 12).

4.3 SITE HYDROLOGY

4.3.1 Regional Geology

The regional geology consists of a thick sequence of southeast-sloping, unconsolidated, deltaic/alluvial sediments, resting unconformably on dense, crystalline bedrock. The sediments are effectively covered by recent glacial moraine and outwash deposits. In general, the sediments are comprised of porous, water-saturated, sand and gravel beds, that are somewhat clayey and silty, with numerous interbedded and discontinuous

layers (Table 4-1). All gradations from one type of material to another are represented in the strata.

4.3.2 Site Geology and Hydrogeology

A profile of the hydrogeologic formations underlying the Smithtown area is shown in Figure 4-1. The bedrock basement is the oldest geologic unit and consists mainly of gneiss and schist of low hydraulic conductivity. The Raritan Formation lies directly on top of the bedrock and is the earliest of the upper cretaceous deposits. It consists of a lower Lloyd Sand member and an upper Clay member. The Lloyd Sand member (Lloyd aquifer) generally consists of beds of fine to coarse, sand and gravel, commonly in a clayed matrix, with some interbedded layers of solid and silty clay. The Clay member consists of solid and silty clay with a few layers of sand. Groundwater contained within the sediments is strongly confined under artesian conditions by the overlying, relatively impermeable clay member.

The Magothy Formation (Magothy aquifer) is the most important water supply source in the Smithtown area. Its lower boundary generally corresponds to the upper surface of the Raritan Formation. The sediments in this formation are mostly silty, fine to medium sand, with interbedded gravel and clay layers. The lower 50 - 200 feet of the formation commonly contain abundant gravel. Groundwater contained within the upper portion of the formation exists under unconfined, water table conditions. The

Table 4-1: Summary of Deposits underlying the Smithtown Area

—Summary of the stratigraphy and water-bearing properties of the deposits underlying the Huntington-Smithtown area, Suffolk County, N.Y.

System	Series	Stratigraphic unit	Thickness (feet)	Character of deposits	Water-bearing properties
Quaternary	Recent	Recent deposits Artificial fill, marsh deposits, beach deposits, and surficial soil.	0–20±	Sand, gravel, silt, and clay; organic mud, peat, loam, and shells. Colors are brown, yellow and gray.	Sandy and gravelly beach deposits may locally yield small supplies of fresh to brackish water to wells. Marine silt and clay in north-shore harbors retard salt-water encroachment and confine underlying aquifers.
	Pleistocene	Upper Pleistocene deposits.	0–300±	Till composed of unassorted clay, sand, and boulders as ground moraine in area north of Harbor Hill terminal moraine and possibly as buried ground moraine of the Ronkonkoma ice. Outwash deposits of brown well-stratified sand and gravel—predominantly quartzose but containing biotite and other dark minerals and igneous and metamorphic rock fragments—including advance outwash, channel and valley-fill, and outwash-plain deposits. Ice-contact deposits of crudely stratified sand and gravel and isolated masses of till in the Ronkonkoma and Harbor Hill terminal moraines. Glaciolacustrine deposits of brown and gray silt and clay interstratified with outwash deposits in buried valleys.	Till, relatively impermeable; commonly causes perched-water bodies to form locally and impedes recharge from precipitation. Outwash and ice-contact deposits are moderately to highly permeable. Wells screened in outwash deposits generally at depths of less than 250 ft yield as much as 1,700 gpm. Specific capacities of public-supply wells range from 22 to 222 gpm per ft of drawdown. Water is generally fresh and unconfined. Chief source of water for domestic, public-supply, industrial, and irrigation wells in project area. Glaciolacustrine deposits of silt and clay are relatively impermeable and locally retard movement of water between adjacent water-bearing beds in Pleistocene and Cretaceous deposits.
		----Unconformity?----			
		Pleistocene deposits undifferentiated.	0–400±	Sand, gravel, clay, and silt. Lignite present in some silt or clay layers. Colors are brown and gray. These deposits are present in deep buried valleys and may include equivalents of the Gardiners clay and the Jamaica gravel found elsewhere on Long Island. This unit may include some Pliocene(?) deposits, but evidence is scanty.	Coarser sand and gravel beds are permeable and would presumably yield moderate to large supplies to properly constructed wells. One well, S16,137, screened in these deposits yields 1,400 gpm, and has a specific capacity of 46 gpm per ft of drawdown. Silt and clay beds confine water in adjacent water-bearing beds.
		----Unconformity?----			
Tertiary(?)	Pliocene(?)	Manetto gravel	0–300±	Stratified sand and gravel and scattered clay lenses; unit is predominantly quartzose; igneous and metamorphic rock fragments are scarce. Colors are pale to yellowish brown. Caps hills in western part of Huntington and locally present in buried valleys.	Deposits are moderately to highly permeable but generally lie above the zone of saturation. Locally, water supplies for domestic use are obtained from these deposits, such as at wells S4, S208 and S927. No large public-supply or industrial wells were screened in these deposits in 1960.
		----Unconformity----			
Cretaceous	Upper Cretaceous	Magothy(?) formation	0–800±	Sand, clayey, with silt, clay, and some gravel. Colors are white, gray, brown, yellow, and red. The upper part of the formation commonly includes interbedded clay, fine to medium sand, silt, and some lignite; the lower part is largely coarse sand, gravel, and some clay.	Generally ranges from moderately to highly permeable. The lower part of the formation is more permeable than the upper part. Several public-supply wells screened in the basal zone have yields ranging from 1,000 to 1,400 gpm and specific capacities from 30 to 80 gpm per ft of drawdown. Water is generally of excellent quality. Second most important source of water to wells. Unconfined conditions are common in uppermost part of formation, but confined conditions prevail in the lower part; some wells flow.
		----Unconformity----			
		Raritan formation — Clay member	0(?)–188±	Clay and silt, and a few layers of sand. Lignite and pyrite concretions are common. Colors are mostly gray, white, and red.	Relatively impermeable. Acts as a confining bed, which retards but does not prevent movement of water between the Magothy(?) formation and the Lloyd sand member.
		Raritan formation — Lloyd sand member	200–265±	Sand, fine to coarse, and gravel, mixed with some clay and some layers of silt and clay. Colors are white to pale yellow.	Moderately permeable. Not extensively developed. Several public-supply and industrial wells yield as much as 250 gpm in northern Huntington, but potential yields from properly constructed wells are much greater. Water is confined and some wells flow. Water is generally of excellent quality, but on Eaton Neck it is brackish.
		----Unconformity----			
Precambrian to lower Paleozoic		Bedrock		Crystalline metamorphic and igneous rocks.	Relatively impermeable. Forms the floor of the groundwater reservoir.

SOURCE: Lubke (1964)

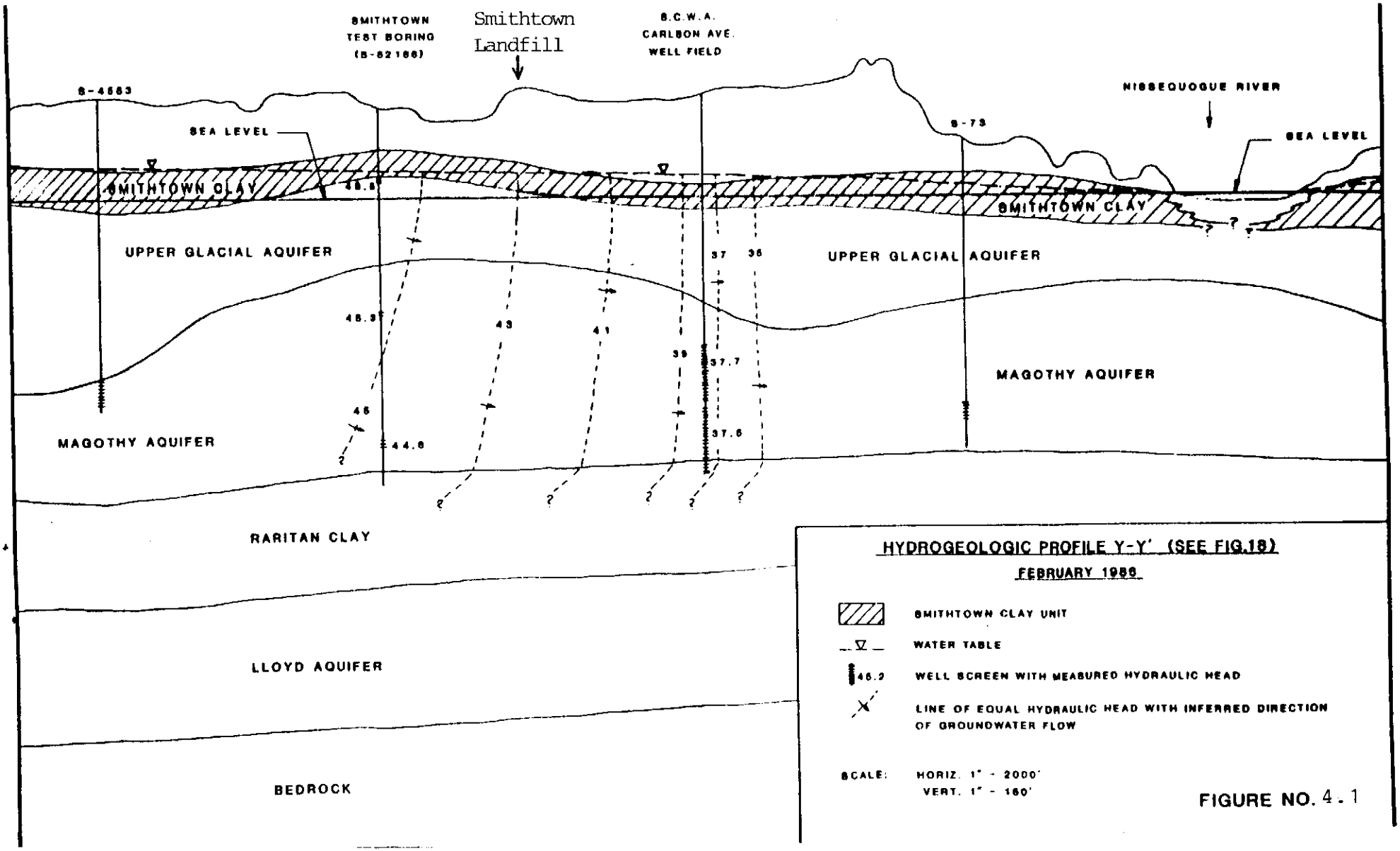


FIGURE NO. 4.1

REF: Velzy Associates (1986)

upper surface of the formation is highly irregular due to extensive erosion which occured during pre-glacial times by streams draining the land surface.

Lying atop of this eroded surface and comprising the remainder of the land mass are Upper Glacial Deposits consist of undifferentiated, pre-, intra-, and post- glacial sands, gravels and clays. These sediments contain mostly interbedded fine to often very coarse sand and gravel with some thick marine and glacial silt and clay layers. The sediments are generally very porous and permeable and are also an important water supply source for the Smithtown area. Groundwater generally exists under unconfined, water table conditions. Locally, however, artesian conditions prevail beneath the numerous and often quite extensive clay units.

4.3.3 Hydraulic Connection

The direction and magnitude of vertical hydraulic gradients with an aquifer can be evaluated by comparing the piezometric head (water elevation in a well) between monitoring wells in the same cluster. Where the piezometric head is greater in a shallow well of a cluster, a vertical downward component to the flow of the groundwater is suggested. In the opposite case, where the piezometric head is significantly higher in the deeper well of a cluster, there is an upward component to groundwater movement from the deeper regions towards the surface.

Velzy Associates (Ref. 2) has conducted a field investigation program for Smithtown MSF landfill including the installation of a deep well cluster. Screened depths and measured potentiometric surface elevations (heads) of these wells are presented in Table 4-2. The location of each monitoring well is shown in Figure 4-3. Three Suffolk County Department of Health Services (SCDHS) permanent observation wells are located in this area. These wells are relatively shallow and are screened in a zone of the upper glacial aquifer where groundwater exists under unconfined, water table conditions. Details of these wells are also presented in Table 4-2 and locations are shown in Figure 4-2.

The Suffolk County Water Authority (Ref.2) maintains and operates public supply wells within the town of Smithtown. Three well fields are located within 2 miles of the Smithtown landfill and include the King Park Road, Lawrence Road and Carlson Avenue stations (Figure 4-2). These wells are screened in the Magothy Formation.

Velzy Associates (Ref. 2) concluded that based on the potentiometric surface measurements recorded in February 1986, groundwater recharge takes place at the Smithtown landfill site and at the Lawrence Road and Kings Park Road well field. Data for the Carlson Avenue well field, located about 0.5 mile from the site in the direction of groundwater flow, indicate horizontal flow and thus the limit of the recharge area, Zone I -

TABLE 4-2
RECORDED HEADS IN THE VICINITY OF THE TOWN OF SMITHTOWN MSF LANDFILL
FEBRUARY, 1986

Source : Hydrologic Investigations, Kings Park Area (1986). Velzy Associates, p.45.

NYSDEC WELL NUMBER		OWNER	DATE OF MEASUREMENT	SCREENED FROM/TO (mean sea level)	MEASURED HEAD (mean sea level)
S-74868		Smithtown	2/27/86	26/16	44.57
S-74869		"	"	45/35	44.68
S-74870		"	"	44/34	44.68
S-74872		"	"	25/5	46.09
S-82188	Shallow	"	2/21/86	40/30	46.63
	Middle	"	"	-190/-200	45.61
	Deep	"	"	-405/-415	45.01
S-15923		S.C.W.A.	"	?/-110	44.44
S-33006		"	"	-188/-351	42.26
S-53361		"	"	-285/-366	44.24
S-16129		"	2/25/86	-252/-382	37.64
S-64062		"	"	-351/-466	37.30
S-24545		"	"	-282/-350	36.02
S-66758		"	"	-333/-424	35.10
S-45402		S.C.D.H.S.	2/27/86	13/3	42.24
S-46964		"	"	33/23	41.14
S-46965		"	"	24/14	43.99

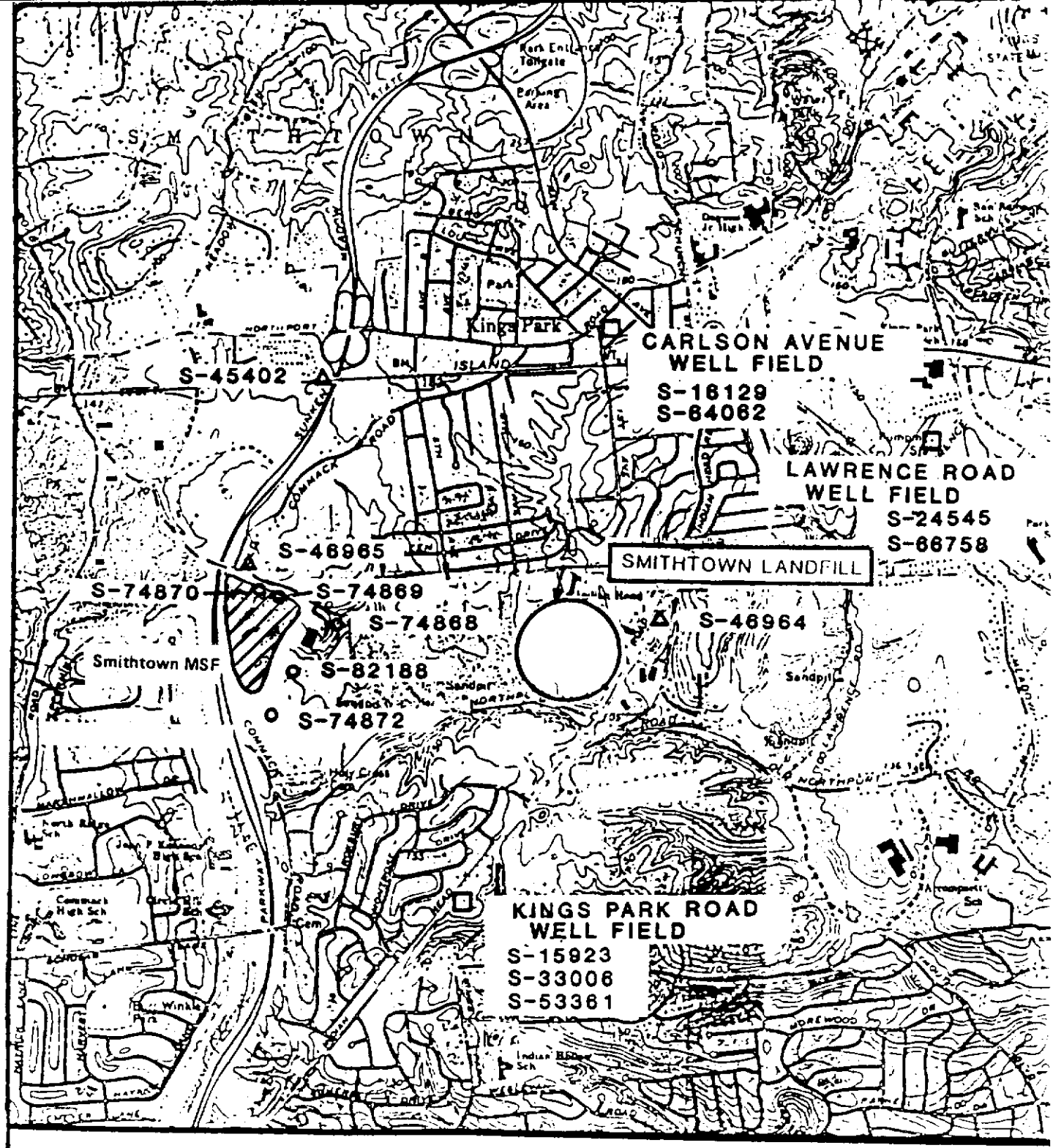


FIGURE 4 - 2
LOCATION MAP OF WELLS AND WELL CLUSTERS IN THE VICINITY OF THE TOWN OF SMITHTOWN LANDFILL

SOURCE: Velzey Associates, 1986, p.46.

- O Town of Smithtown Observation Wells
- △ Suffolk County Dept. of Health Services Shallow Observation Wells
- □ Suffolk County Water Authority Public Supply Well Fields

hydrogeologic boundary. This watertable groundwater flow regime occurs beneath the Smithtown clay unit which separates the landfill from the confined aquifer system. As such, the deeper Magothy Formation is not directly affected by the recharge at the Smithtown landfill site.

4.4 SITE CONTAMINATION

No soil or groundwater sampling programs have been previously conducted at this site. An air quality survey was conducted by YEC, Inc., using an HNu photoionizer, during YEC's site inspection on September 28, 1988. No readings above background were noted. Air quality measurements using an HNu were also obtained during an April 1983 site inspection by NUS Corporation, an EPA Contractor . At that time, no readings above background were reported. Currently, no analytical data are available for on-site groundwater/soil.

In July 1980, the Suffolk County Department of Health Services collected groundwater samples around the Smithtown landfill and Smithtown MSF landfill in a total of nine wells and reported the following (Ref. 5):

* Five contained traces of volatile organics other than vinyl chloride; none exceeded volatile organic standards.
* Two exceeded the nitrate standard.
* Five exceeded secondary standards that cause aesthetic

problems.

* none showed traces of heavy metals.

In July 1981, the Suffolk County Department of Health Services surveyed and found that methane gas was migrating onto the Indian Head School property which confirmed the findings of the survey performed in 1980. Subsequently, a methane gas collection and recovery system was installed on-site to generate electricity.

In September, 1978, the Suffolk County Department of Health Services conducted a groundwater sampling and analysis program of private drinking water wells around the Smithtown landfill. Samples obtained from private wells one mile away showed a maximum of 6 ppb trichloroethane, 9 ppb tetrachloroethylene, and up to 1900 ppm chloride (Ref. 5). But the contaminants have not been specifically traced to this site.

5. PRELIMINARY APPLICATION OF THE HRS

5.1 NARRATIVE SUMMARY

The Smithtown landfill (NYSDEC I.D.# 152043 and EPA I.D.# D980762611) is a 29.09 acre landfill situated at the intersection of Old Northport Road and Indian Head Road in the Hamlet of Kings Park, Suffolk County, New York (Figure 5-1). The site was leased from Izzo Brothers and operated by the Town of Smithtown since 1970. The landfilling was discontinued in July 1979 when the landfilling began on Smithtown Municipal Services (MSF) landfill.

Household wastes of all types were accepted in this site. There is no indication that hazardous waste has been disposed of at this site. The landfill has neither a liner nor a leachate collection system. The landfill has had problems with methane gas migration but in 1983, a gas collection system was installed. The gas is converted into electricity and sold to Smithtown Landgas Company.

No sampling programs other than on-site real-time instrumentation monitoring of air quality have been previously conducted at this site. Although samples collected from nearby private wells indicated low levels of volatile organics, the contaminants have not been specifically associated with this site.

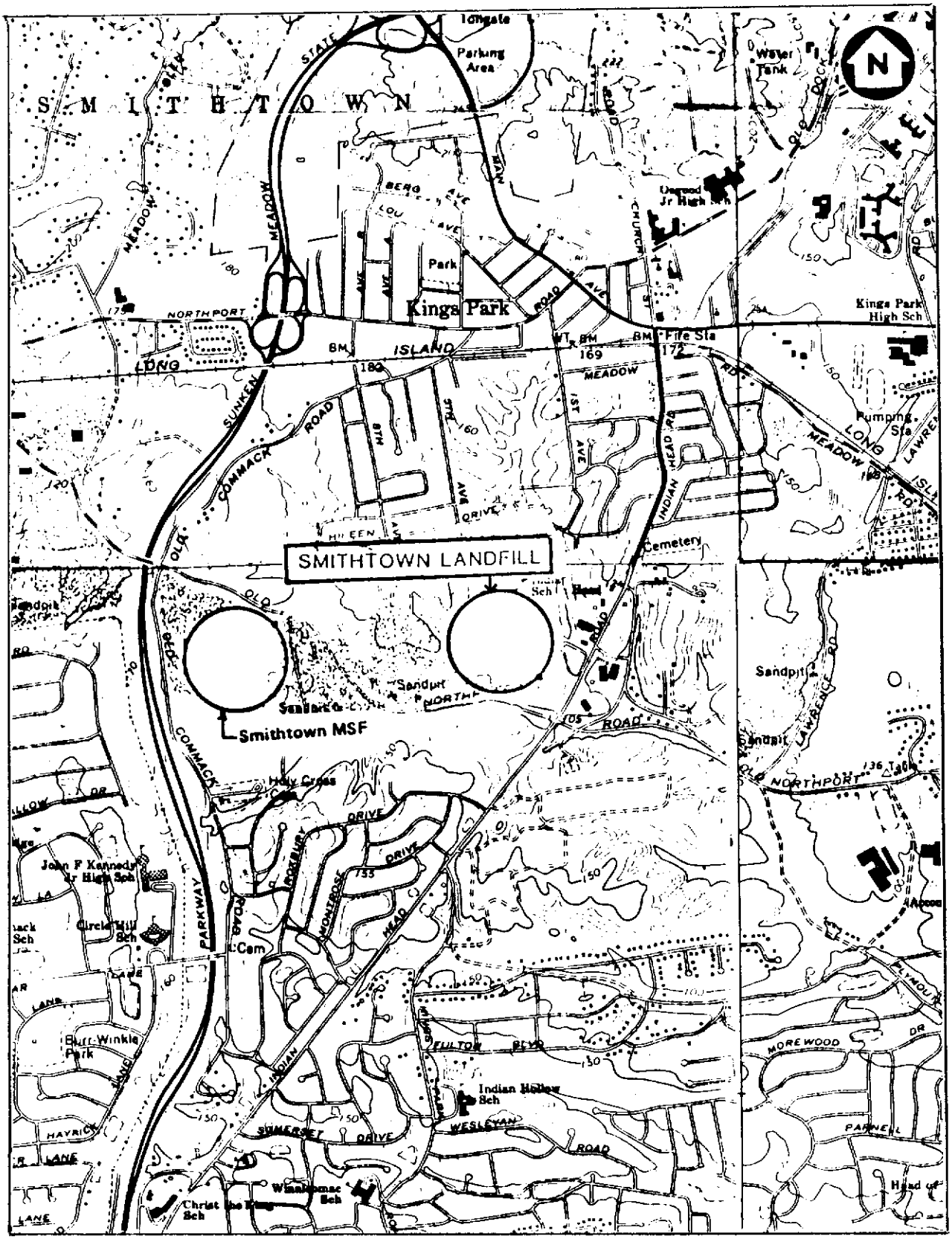


FIGURE 5-1

SMITHTOWN LANDFILL
Smithtown, NY

SOURCE: USGS Quadrangle Maps, 1967
SCALE: 1 inch = 2000 ft

SITE COORDINATES:
Longitude: 73 15' 50"
Latitude: 40 52' 00"

Northport, Greenlawn, Central Islip and Saint James Quadrangles

FIGURE 1

HRS COVER SHEET

Facility Name: Smithtown Landfill (old)

Location: Town of Smithtown, Suffolk County, New York.

EPA Region: Region II

Person(s) In Charge of Facility: Town of Smithtown

124 W.Main Street

Smithtown, NY 11787

Name of Reviewer: Ariamalar Selvakumar **Date:** 10/4/88

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 Smithtown landfill is located in the Hamlet of Kings Park, Suffolk County, New York. The site, Comprising 29.09 acres, is located on the north side of Old Northport Road approximately 350 feet west of the intersection of Old North Port Road and Indian Head Road. The site was leased from IZZo Brothers and operated by Town of Smithtown for disposing household wastes from 1970 to 1979. The landfill has no liner. The landfill has had problems with methane migration but later collection systems were installed. There is no indication that hazardous waste has been disposed of at the site. The landfill is covered with 3 to 6 feet thick soil. The average slope of the facility is 1 to 2 percent. The site is partially fenced.

Scores: S_M = NS (S_{gw} = NS S_{sw} = 0 S_a = 0)

S_{FE} = not scored.

S_{DC} = 0 NS = Not Scored

Ground Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref (Sect
[1] Observed Release	(0) 45	1	0	45	3.

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					3.3
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	1	3	
Total Route Characteristics Score			10	15	
[3] Containment	0 1 2 (3)	1	3	3	3.3
[4] Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 18	1	–	18	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1	–	8	
Total Waste Characteristics Score			NS	26	
[5] Targets					3.5
Ground Water Use	0 1 2 (3)	3	9	9	
Distance to Nearest Well/Population Served	0 4 6 8 10 12 16 18 20 24 30 32 35 (40)	1	40	40	
Total Targets Score			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]			–	57.330	
[7] Divide line [6] by 57.330 and multiply by 100			S_{gw} = Not Scored		

Surface Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	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	0	6	
Physical State	0 (1) 2 3	1	1	3	
Total Route Characteristics Score			3	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		

SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max Score	Ref (Section)
1 Observed Release	(0) 45	1	0	45	5.1

Date and Location:

Sampling Protocol:

If line 1 is 0, 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	0	8	
	Total Waste Characteristics Score		0	20	
3 Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 / 21 (24) 27 30	1	24	30	
Distance to Sensitive Environment	(0) 1 2 3	2	0	6	
Land Use	0 1 2 (3)	1	3	3	
	Total Targets Score		27	39	
4 Multiply 1 x 2 x 3			0	35,100	
5 Divide line 4 by 35,100 and multiply by 100		S_a = 0			

AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	Not Scored	-
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		-
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		-
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		-

WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet NOT SCORED

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} = Not scored		

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	0	15	8.3
4 Waste Characteristics Toxicity	(0) 1 2 3	5	0	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 3 4 (5)	4	20	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			20	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	21,600	
7 Divide line 6 by 21,600 and multiply by 100	S_{DC} =		0		

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 80 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: Smithtown Landfill

Location: Town of Smithtown, Suffolk County, New York.

Date Scored: 10/7/1988

Person Scoring: Ari Selvakumar

Primary Source(s) of Information (e.g., EPA region, state, FIT, etc.):

NYSDEC Head Quarters files
NYSDEC Region I files
USEPA Region II files
Site Interviews
Site Inspection
Suffolk County Department of Health Services files

Factors Not Scored Due to Insufficient Information:

Fire and explosion score not completed because the site was not declared a fire/explosion threat by the Code Enforcement Bureau Director. Ref. No. 15

Comments or Qualifications:

Due to lack of on-site groundwater monitoring data, hazard ranking score was not computed for groundwater route.

GROUNDWATER ROUTE

1. OBSERVED RELEASE

Contaminants detected (3 maximum):

No contaminants detected. Insufficient data available.

Rationale for attributing the contaminants to the facility:

N/A
Assigned value = 0
Ref. No. 1

* * *

2. ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

Upper Glacial Deposits underlain by the Magothy Formation.
Ref.2, P.#29

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

45 feet.
Ref. 2, p. #53

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

Unknown.
Assigned value = 2

Net Precipitation

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

44 inches.
Ref.1, P. # 2

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

30 inches.
Ref. 1, P. #3

Net precipitation (subtract the above figures):

14 inches.
Assigned value = 2

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Carver and Plymouth sand, 0 to 3 percent slope.

Ref. 3 , P. # 4

Permeability associated with soil type:

Greater than 4.45×10^{-3} cm/sec.

Ref.3, P.#6 Assigned value = 3

Physical State

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

Sanitary refuse and household wastes.

Ref.4 , P. # 2

Assigned value = 1

* * *

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

No hydraulic barrier exists between the bottom of the landfill and the water table.

Ref. 4, P.#2

Method with highest score:

There is no liner.

Assigned value = 3

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

None.

Compound with highest score:

N/A.

Hazardous Waste Quantity

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

Unknown.

Basis of estimating and/or computing waste quantity:

Not scored; insufficient data.

* * *

5. TARGETS

Groundwater Use

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

Drinking water from public and private wells used by residents, commercials and industry.
Ref. 5, P.#6 and Ref.6, P.#2
Assigned value = 3

Distance to Nearest Well

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

Private well located on Old Northport Road.
Ref. 5, P.#2

Distance to above well or building:

Approximately 500 feet.
Ref.5 , P.#2
Assigned Value = 4

Population Served by Groundwater Wells Within a 3-Mile Radius

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

Suffolk County Water Authority wells (Carlson Av., Kings Park Rd. and Lawrence Rd.), Kings Park Psychiatric Center wells and a number of private wells are within a 3-mile radius.
Ref.5, P.#2; Ref.6, P.#3 and Ref.7, P.#3

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 140 acres of land are used for agricultural purposes.
Ref. 6, P.#4

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

Suffolk County Water Authority	48,000	Ref.9 , P.#1
Kings Park Psychiatric Center	3,100	Ref.7, P.#3
Irrigation	210	
Total Population	51,310	

Assigned value = 5
Combined Score = 40

SURFACE WATER ROUTE

1. OBSERVED RELEASE

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

No data available.

Rationale for attributing the contaminants to the facility:

N/A.
Assigned value = 0

* * *

2. ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

1 - 2 percent.
Ref.4, P.#2

Name/description of nearest downslope surface water:

Nissequogue River.
Ref.10, P.#1 and Ref.13, P.#2

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

1.1 percent.
Ref.10, P.#1
Assigned value = 0

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

No.
Ref. No. 11

Is the facility completely surrounded by areas of higher elevation?

No.
Ref.11

1-Year 24-Hour Rainfall in Inches

2.8 inches. Ref.1, P.#4
Assigned value = 2

Distance to Nearest Downslope Surface Water

2.5 miles.
Ref. 10, P.#1
Assigned value = 0

Physical State of Waste

Sanitary refuse and household wastes.
Ref.4, P.#2
Assigned value = 1

* * *

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Landfill has about 3 to 6 feet cover.
Ref. 4, P. # 2

Method with highest score:

Landfill is adequately covered.
Ref. 4, P.#2 and Ref.11, P.#2
Assigned value = 0

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

None.

Compound with highest score:

None.
Assigned value = 0

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.

Basis of estimating and/or computing waste quantity:

Unknown.
Assigned value = 0

* * *

5. TARGETS

Surface Water Use

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

Recreation; Nissequogue River.
Ref.6, P.#5
Assigned value = 2

Is there tidal influence?

No.
Ref.10, P.#1

Distance to a Sensitive Environment

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

None. Ref.10, P.#1
Assigned value = 0

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

There are freshwater wetlands within 3-mile radius of the site but acreages have not been calculated. Ref. 14, P.#2

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

None.
Ref. 12, P.#2 Assigned value = 0

Population Served by Surface Water

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

None.
Ref.6, P.#5 and Ref.13, P.#2

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 groundwater from wells.
Ref.6. P.#5 and Ref. 13, P.#2

Total population served:

Zero.

Name/description of nearest of above water bodies:

N/A.

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

N/A.
Assigned value = 0

AIR ROUTE

1. OBSERVED RELEASE

Contaminants detected:

No contaminants detected.
Ref. 11, P.#2

Date and location of detection of contaminants:

N/A.

Methods used to detect the contaminants:

Photoionization (HNu) Monitor.
Ref. 11, P.#2

Rationale for attributing the contaminants to the site:

N/A.
Assigned value = 0

* * *

2. WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

N/A

Most incompatible pair of compounds:

N/A

Toxicity

Most toxic compound:

N/A
Assigned value = 0

Hazardous Waste Quantity

Total quantity of hazardous waste:

N/A

Basis of estimating and/or computing waste quantity:

N/A
Assigned value = 0

* * *

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

10,725 Ref. 8, P.#2
Assigned value = 24

Distance to a Sensitive Environment

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

None. Ref. 10, P.#1
Assigned value = 0

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

There are freshwater wetlands within 3-mile radius of the site but acreages have not been calculated.
Ref. 14, P.#2

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

None. Ref.12, P. 2
Assigned value = 0

Land Use

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

There is heavy industry adjacent to the site.
Ref. 11, P.#2
Assigned value = 3

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

1.1 miles. Ref.10, P.# 1
Assigned value = 1

Distance to residential area, if 2 miles or less:

0.25 miles. Ref. 10, P.#1
Assigned value = 3

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

1.5 miles Ref.13, P.#2
Assigned value = 0

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

1.5 miles. Ref. 13, P.#2
Assigned value = 1

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

No.

Assigned value = 3

FIRE AND EXPLOSION

1. CONTAINMENT

Hazardous substances present:

Methane.
Ref.5, p.#10

Type of containment, if applicable

Landfill is capped and methane is collected and used to generate electricity.
Ref.4, p.#2 and Ref.11, P.#2
Assigned value = 1

• • •

2. WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

N/A
Assigned value = 0

Ignitability

Compound used:

Methane.
Assigned value = 3

Reactivity

Most reactive compound:

N/A.
Assigned value = 0

Incompatibility

Most incompatible pair of compounds:

N/A.
Assigned value = 0

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Unknown.

Basis of estimating and/or computing waste quantity:

N/A.
Assigned value = 0

• • •

3. TARGETS

Distance to Nearest Population

0.25 mile.
Ref. 10, P.#1
Assigned value = 3

Distance to Nearest Building

Adjacent.
Ref. 11 P.# 2
Assigned value = 3

Distance to a Sensitive Environment

Distance to wetlands:

None.
Ref. 10, p.#1

Distance to critical habitat:

None.
Ref. 12, P.#2
Assigned value = 0

Land Use

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

There is heavy industry adjacent to the site.
Ref. 11, P.#2
Assigned value = 3

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

1.1 miles. Ref. 10, P.#1
Assigned value = 1

Distance to residential area, if 2 miles or less:

0.25 miles. Ref. 10, P.#1
Assigned value = 3

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

1.5 miles. Ref. 13, P.# 2
Assigned value = 0

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

1.5 miles. Ref. 13, P.#2
Assigned value = 1

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

No.
Assigned value = 0 Assigned value for land use = 3

Population Within 2-Mile Radius

47,947. Ref. 8, P.#3
Assigned value = 5

Buildings Within 2-Mile Radius

1000 Ref. 11
Assigned value = 4

DIRECT CONTACT

1. OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident on record.
Ref.4, P.# 2
Assigned value = 0

* * *

2. ACCESSIBILITY

Describe type of barrier(s):

a fence partially surrounding the facility.
Ref. 11, P. #2
Assigned value = 3

* * *

3. CONTAINMENT

Type of containment, if applicable:

Landfill is covered with 3 to 6 feet thick soil.
Ref.4, P.#2
Assigned value = 0

* * *

4. WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

N/A.
Assigned value = 0

Compound with highest score:

N/A.

* * *

5. TARGETS

Population Within One-mile Radius

10,725. Ref.8, P.#2
Assigned value = 5

Distance to Critical Habitat (of endangered species)

None. Ref. 12, P.#2
Assigned value = 0

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the References
1	Uncontrolled Hazardous Waste Site Ranking System: A Users Manual, August, 1982. Document Location: YEC, Inc., Valley Cottage, New York.
2	Velzy Associates, 1986, Hydrogeologic Investigations in Kings Park Area, Town of Smithtown, Suffolk County, New York. Document Location: Velzy Associates, Long Island, New York.
3	US Department of Agriculture Soil Conservation Service, Soil Survey of Suffolk County, New York, 1975. Document Location: Suffolk County Soil and Water Conservation District, Riverhead, New York.
4	Mooney, J. Francis, 1988, Town Engineer, Town of Smithtown, New York. Personal Communication.
5	Suffolk County Department of Health Services, Files. Document Location: Suffolk County Department of Health Services, Hauppauge, New York.
6	EA Science and Technology, 1987, Phase I Investigation Smithtown MSF. Document Location: New York State Department of Environmental Conservation, Region I, New York.
7	New York State Department of Health, 1982, New York State Atlas of Community Water Systems Source. Document Location: New York State Department of Health, Albany, New York.
8	Long Island Regional Planning Board, 1982, Population - 1980. Document Location: Long Island Regional Planning Board, Hauppauge, New York.

REFERENCES

Reference Number	Description of the References
9	Rosavitch, E.J., 1988, Suffolk County Water Authority, New York, Communication regarding the population served by groundwater within 3-mile radius of the site. Document Location: YEC, Inc., Valley Cottage, New York.
10	USGS 7.5- minute Series (Topographic) Quadrangle, Northport, Central Islip, Saint James and Greenlawn, New York, 1969. Document Location: YEC, Inc., Valley Cottage, New York.
11	Site Inspection by YEC, Inc., 1988. Document Location: YEC, Inc., Valley Cottage, New York.
12	Scheibel, S. Michael, 1988, New York State Department of Environmental Conservation, Region 1, New York, Communication Regarding Critical Habitat of Endangered Species or Plant Species of Concern in the Vicinity of Smithtown Landfill Site. Document Location: YEC, Inc., Valley Cottage, New York.
13	Sanok, J. William, 1988, Cooperative Extension Agent, Cornell Cooperative Extension, Riverhead, New York, Communication regarding Farmland, Agriculture Land and Surface Water Bodies. Document Location: YEC, Inc., Valley Cottage, New York.
14	Shea, E. Martin, 1988, New York State Department of Environmental Conservation, Region 1, New York, Communication regarding NYSDEC Regulated Freshwater Wetlands within 3-mile radius of the Smithtown Landfill Site. Document Location: YEC, Inc., Valley Cottage, New York.
15	Valentine, John, 1988, Code Enforcement Bureau, Town of Smithtown, Smithtown, New York, Communication regarding whether the site is declared as a threat of fire and/or explosion. Document Location: YEC, Inc., Valley Cottage, New York.

REFERENCE NO. 1

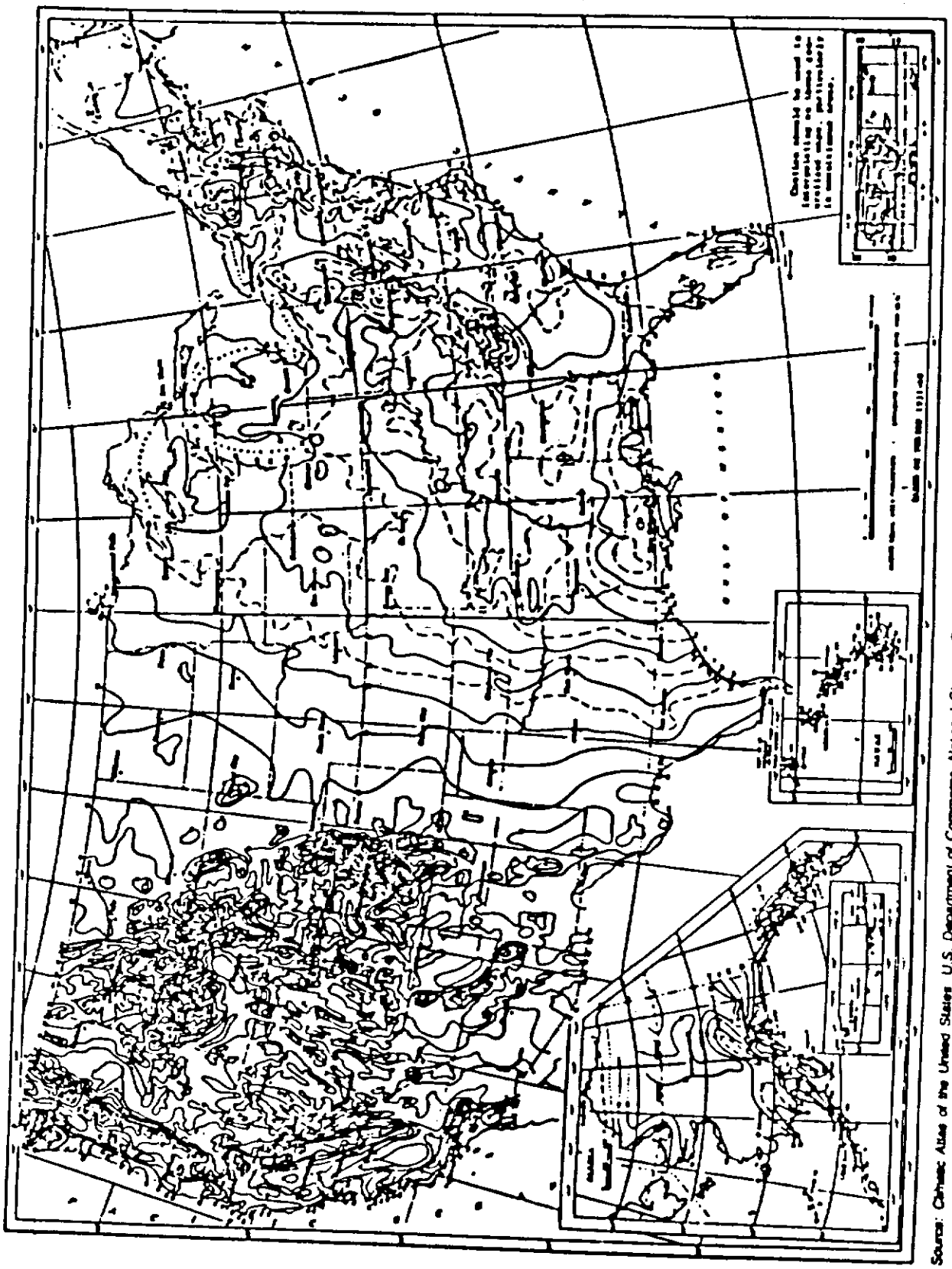
Uncontrolled Hazardous Waste Site Ranking System

A Users Manual
(HW-10)

Originally Published in
the July 16, 1982, *Federal Register*

United States
Environmental Protection
Agency

1984



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

FIGURE 5
NORMAL ANNUAL TOTAL PRECIPITATION
(INCHES)

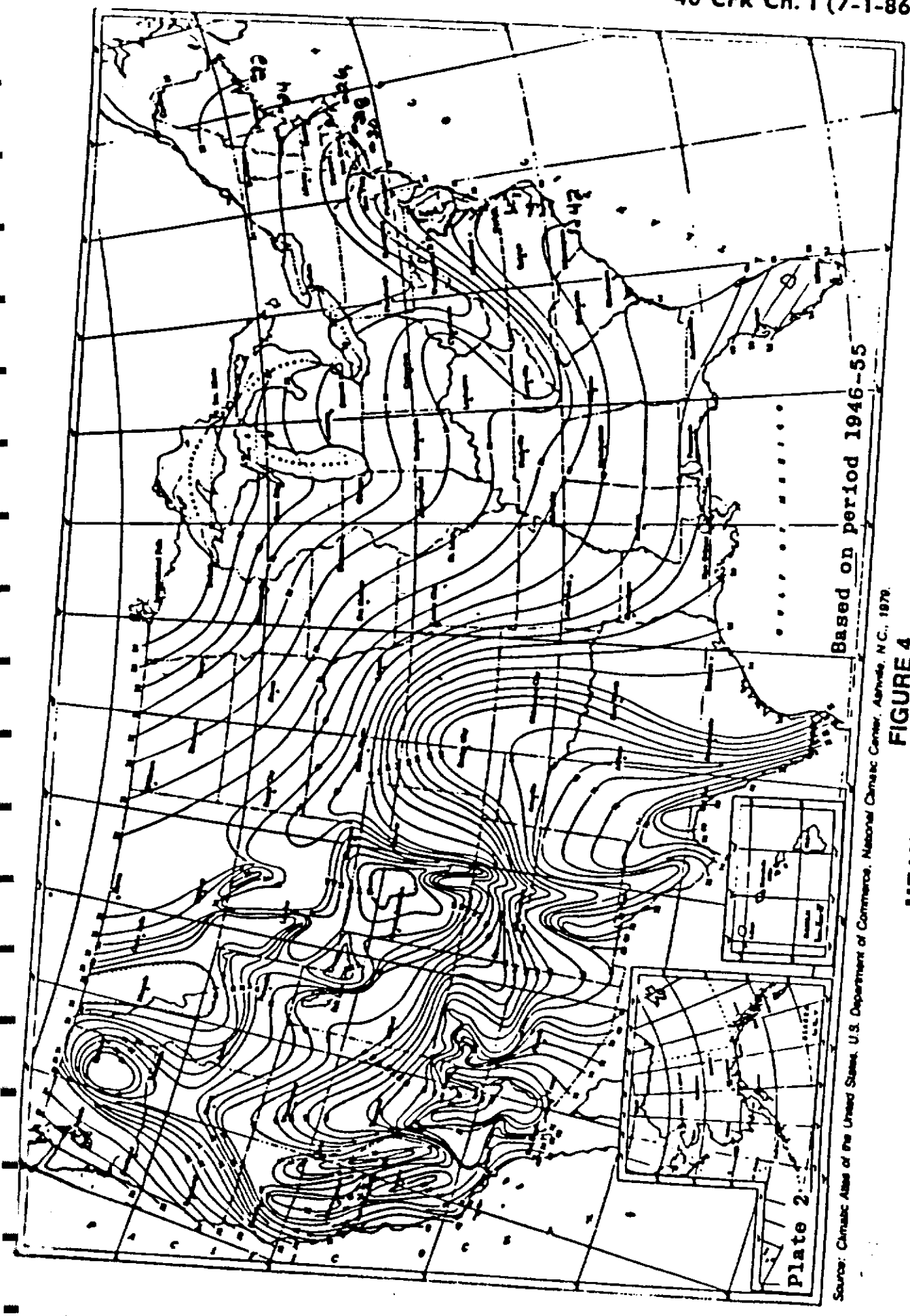
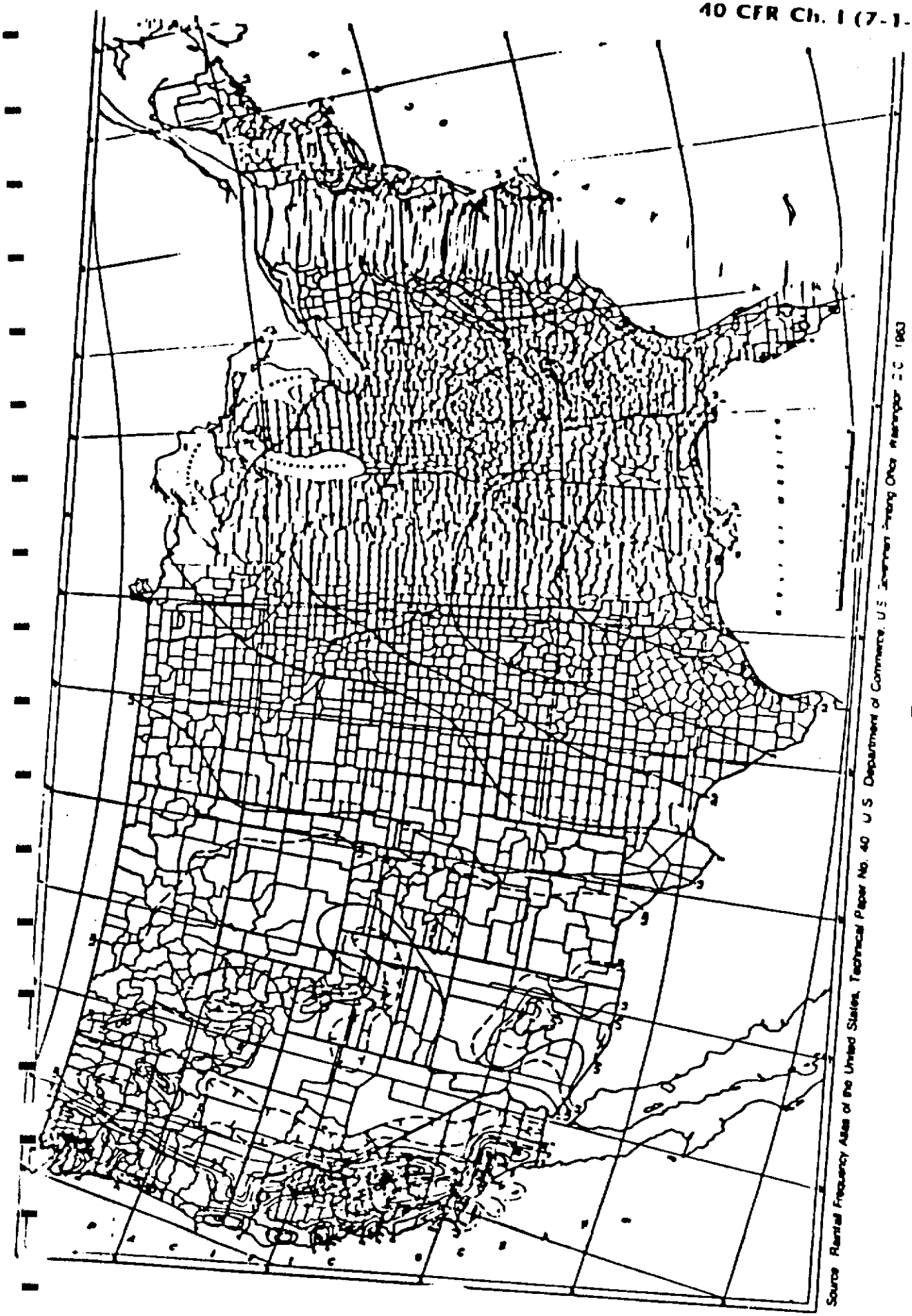


FIGURE 4
MEAN ANNUAL LAKE EVAPORATION
(IN INCHES)



Source: Rainfall Frequency Atlas of the United States, Technical Paper No. 40, U.S. Department of Commerce, U.S. Weather Bureau, Washington, D.C., 1963

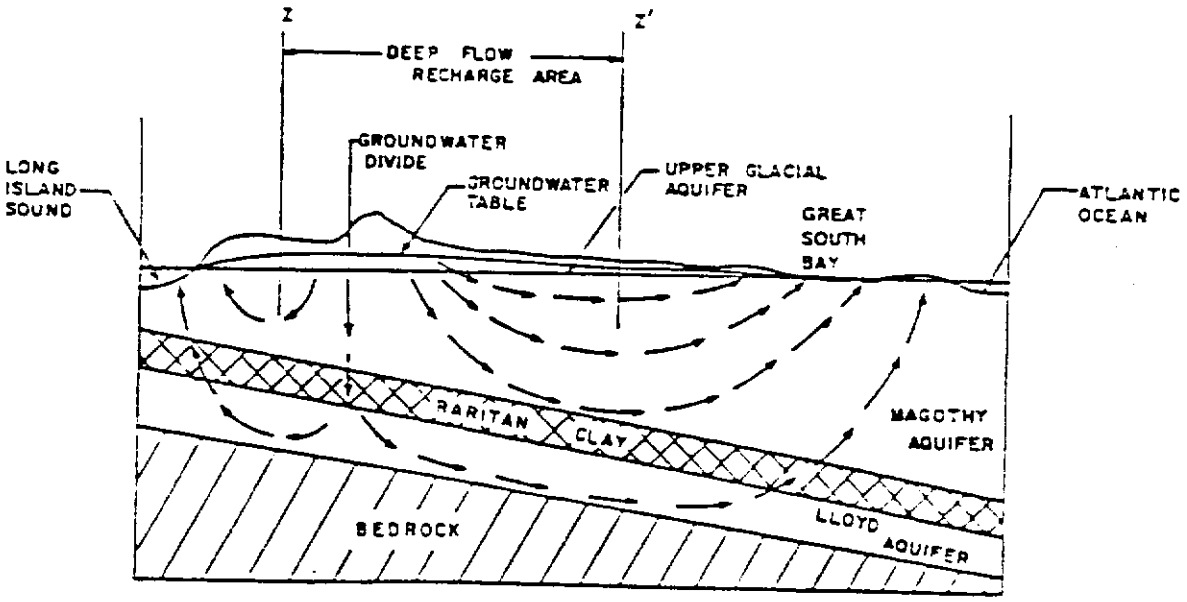
FIGURE 8
1-YEAR 24-HOUR RAINFALL
(INCHES)

REFERENCE NO. 2

TOWN OF SMITHTOWN

SUFFOLK COUNTY, NEW YORK

HYDROGEOLOGIC INVESTIGATIONS



KINGS PARK AREA
AND
MSF LANDFILL

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HYDROGEOLOGIC INVESTIGATIONS

KINGS PARK AREA

TOWN OF SMITHTOWN

SUFFOLK COUNTY, NEW YORK

APRIL 1986

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SECTION I

SECTION 1

SUMMARY AND CONCLUSIONS

1.0 SUMMARY

1. The hydrogeological investigations was initiated to establish the geology and groundwater flow patterns beneath the Smithtown MSF landfill and the site's proximity to the hydrogeologic Zone I boundary as defined in the 208 Study.

   To accomplish these objectives, a deep well cluster approximately 625 feet deep was drilled to the Raritan formation. In addition, information was obtained on other wells in the area and three well fields owned and operated by the Suffolk County Water Authority (SCWA).

2. The drilling program confirmed the existence of the Smithtown Clay unit having a thickness of approximately 35 feet at the site and located just beneath the existing MSF Landfill.

   This semi-impermeable barrier in addition to the composite double liner system of the landfill provides maximum protection to the deep flow region of this portion of the Town.

3. Based upon analysis of data collected under this program and prior reports, the Smithtown Clay unit appears to be continuous between the MSF landfill site and the limits of the deep flow recharge area as defined by the 208 Study. This continuous clay unit impedes direct recharge of the deep flow system at the landfill and in the local area.

4. At the MSF landfill site the upper surface of the Magothy formation was confirmed to be at approximately elevation -90 feet relative to MSL. The depth of the clay member of the Raritan Formation was at elevation -490 feet and was identified as an apparent transition zone boundary containing both Magothy and Raritan Formation material.

5. At the MSF Landfill site there is an apparent downward vertical flow component as established through potentiometric head measurements taken at the well cluster in February 1986.

In measurements obtained at the Suffolk County Water Authority Carlson Avenue well field, potentiometric elevations in shallow and deep wells were identical thus signifying its location at the boundary of the deep flow recharge area. This SCWA site is located

approximately 1.5 miles from the MSF Landfill in the apparent direction of groundwater flow. The Lawrence and Kings Park Road well sites indicated higher potentiometric elevations in the shallow wells signifying a downward flow component thus located within the deep flow recharge area.

6. Based upon data collected under these investigations, it would appear that the limit of the Zone I boundary area, as defined in the 208 Study, is reasonably accurate.

1.1 CONCLUSIONS

1. Based upon field investigations conducted in February 1986, the MSF landfill site appears to be within the deep flow recharge area as defined under the 208 Study. However, due to the areal extent and thickness of the Smithtown Clay in the study area, the impact of the landfill site is minimal relative to recharge of the deep flow zone.

Hydrogeology of the study area is complex due to the Smithtown Clay unit thus the accepted concepts relative to deep flow recharge not directly apply to the study area and specifically the MSF landfill site.

2. The deep flow region below the Smithtown Clay unit from the MSF landfill site to present Zone I-Hydrogeologic Boundary line appears to be a flow transition zone.

3. The potentiometric head relationship at the site involving the clay unit/water table surface is complex. A one (1) foot upward flow differential was measured between the top and bottom of the Smithtown Clay unit. Locally this would indicate a vertical flow direction from under the clay member.

SECTION II

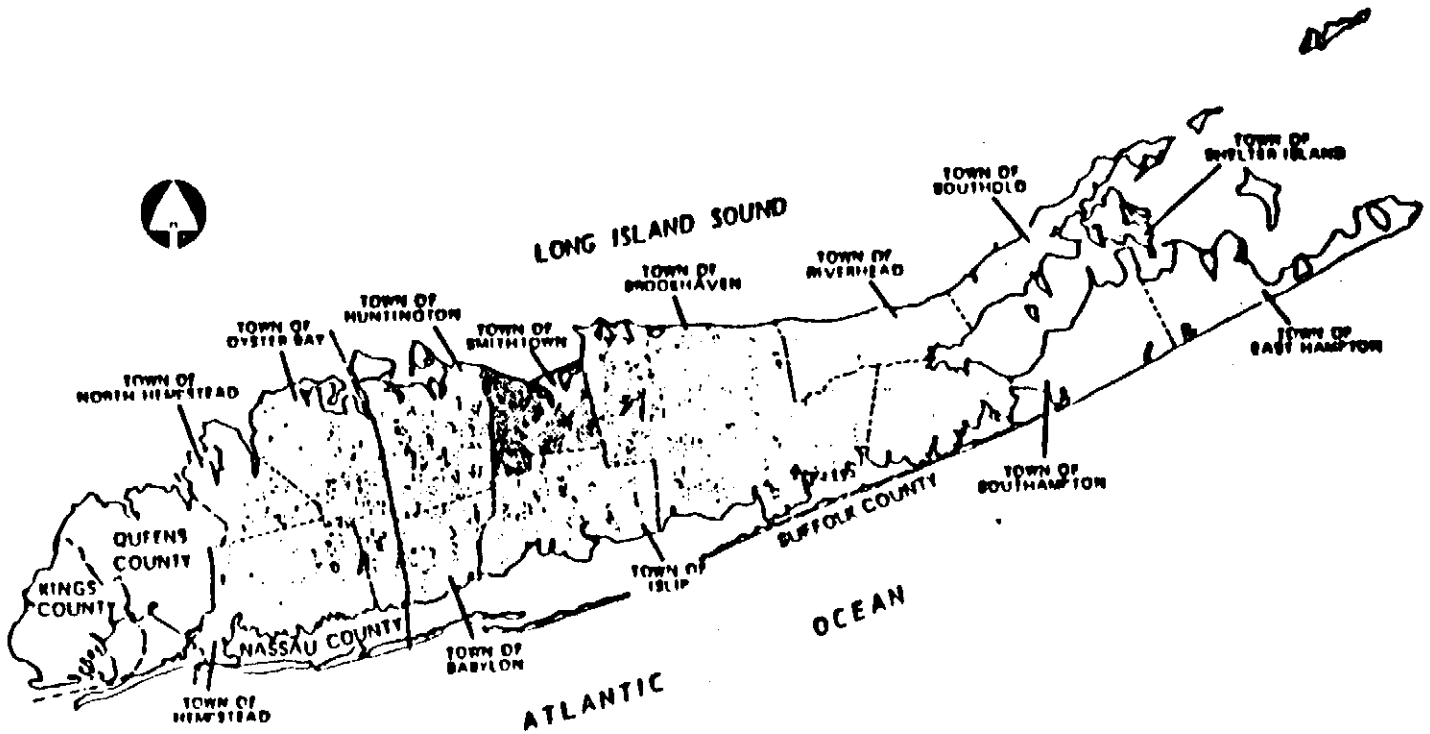
SECTION 2.0

INTRODUCTION

2.1 LOCATION AND DESCRIPTION OF STUDY AREA

The Town of Smithtown is situated in the northwesterly portion of Suffolk County and comprises an area of 53.3 square miles (34,017 acres). The Town is bounded on the north by Smithtown Bay, on the east by the Town of Brookhaven, on the south by the Town of Islip and to the west by the Town of Huntington. A location plan of the regional area is included as Figure 1. The Town includes the Incorporated Villages of Head of the Harbor, Nissequogue and The Branch and unincorporated areas of Commack, Fort Salonga, Hauppauge, Kings Park, Lake Ronkonkoma, Nesconset, St. James and the Hamlet of Smithtown.

Smithtown achieved its greatest period of growth during the fifties and sixties. The population of the Town doubled in the fifties and again in the sixties but the increase during the seventies was modest at approximately two (2%) percent. The decline in growth between 1970 and until the recent economic upturn is attributed to young adults moving out, declining birth rate and very little new home construction.



TOWN OF SMITHTOWN

LOCATION PLAN

FIGURE 1

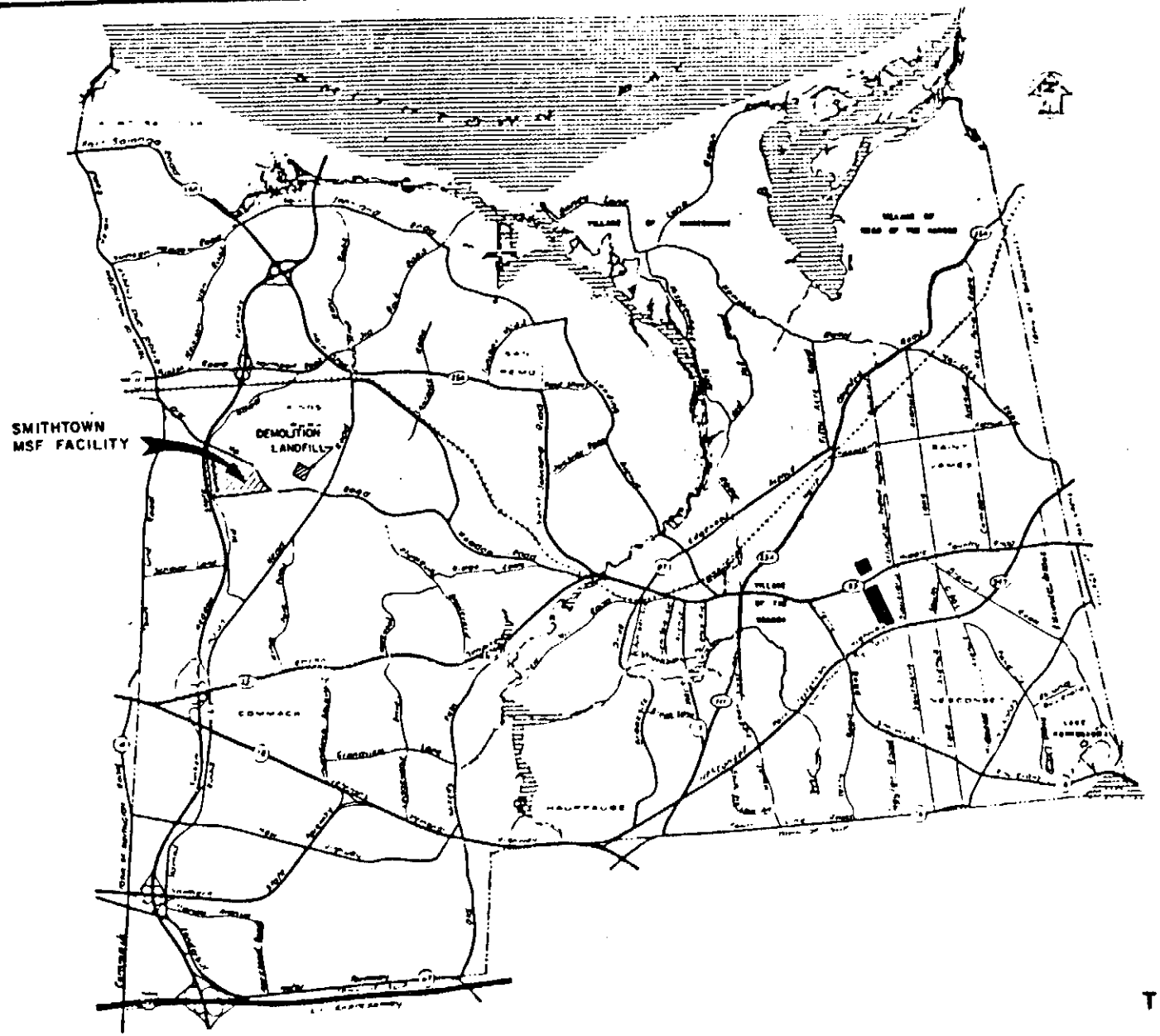
The population for the Town of Smithtown in 1980, based on U.S. Census data, was 116,663. Saturation population based on existing zoning ordinances for the Town and its Incorporated Villages for the year 2020 is projected to be about 142,900 persons.

2.2 MUNICIPAL SERVICES FACILITY AND LANDFILL

The Town's Municipal Services Facility (MSF) including landfill encompasses approximately 86 acres in the southeast corner of the intersection of Old Northport Road and Old Commack Road in Kings Park, Figure 2. Approximately 70 acres of the site is designated landfill area with the remaining 16 acres used for buffer zones, process building, administration building and parking, gate house, recharge basin and access roads. The Municipal Services Facility Site Plan is shown on Figure 3.

2.2.1 Processing Building

Construction on the solid waste management facility started in 1975 under Environmental Facility bond Act Resource Recovery Project 1-MSWRR-001Q. The processing building is approximately 200' x 300' (60,000 SF) and incorporates resource techniques to remove salvageable solid waste materials and a high density hydraulic press to bale all of



TOWN OF SMITHTOWN

LANDFILL LOCATIONS

FIGURE 2

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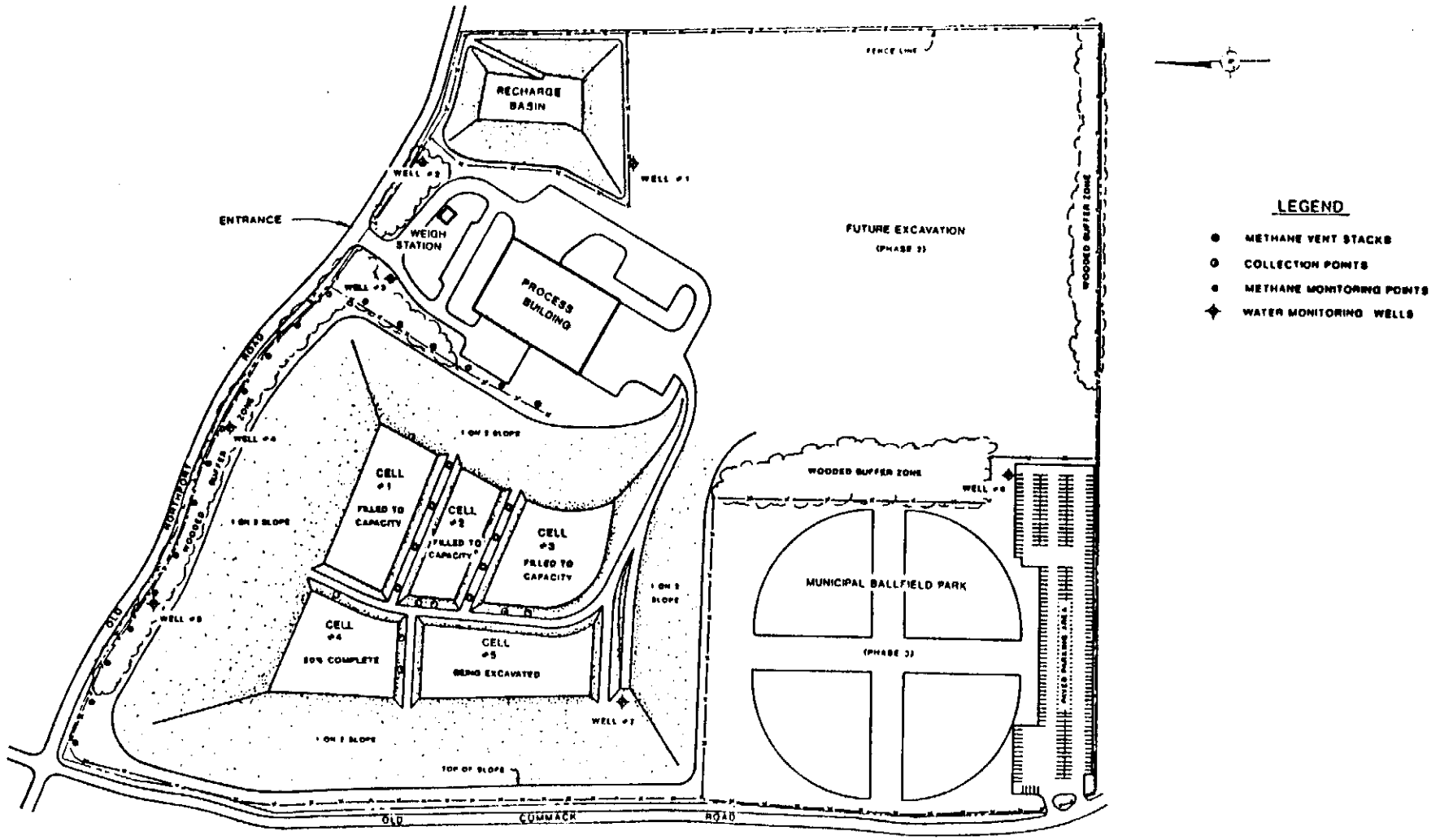


SITE PLAN

SMITHTOWN MUNICIPAL SERVICES FACILITY

FIGURE 3

the remaining un-salvageable solid waste material. The Town ceased operation of the baler in September 1983 after four (4) years of service due to mechanical failures. The building was closed in May 1984.

2.2.2 Landfill Area

Landfilling of solid waste began in June 1979 for baleable and unbaleable material. However, since the baler operation ceased in September 1983, only conventional landfilling is being performed at this site. The 70 acres of this site designated as landfill area was developed to proceed in three (3) phases. Phase I (23.5 acres) is the current landfilling area and has been further segmented into five (5) separate operational cells, see Figure 3.

Composite Double Liner System

This Phase I area is constructed with a flexible membrane liner (FML) Composite Double Liner system. The flexible membrane liner (FML)/composite double liner system consists of a primary leachate collection and removal system, a top FML (primary) liner, a secondary leachate collection system, and a bottom composite FML (secondary) liner. This system complies with current design guidelines, is state-of-the-art technology for landfill liners and provides maximum protection to human health and the environment.

The function of the primary leachate collection and removal system is to minimize the head (depth) of leachate on top of the primary liner during the landfill operations period and to remove liquids through the post-closure period. The primary liner has been designed to prevent migration of waste liquid constituents during operations and the post-closure period to minimize infiltration of any constituent into the liner itself.

Leachate collection is by a six (6) inch perforated polyvinyl chloride (PVC) pipe system which flows to a precast concrete sump for removal from the landfill. Leachate is pumped from the collection sump into trucks by an independent contractor and disposed of at the Suffolk County Kings Park Wastewater Treatment Plant.

The secondary leachate detection system between the two FML liners is provided to rapidly detect, collect, and remove liquids entering the system for disposal through the post-closure monitoring period. The secondary (bottom) liner consists of two components that is intended to function as one system, hence, the term "composite" liner. The upper component of the secondary liner is designed to prevent the migration of any constituent of the waste liquid during the facility operation, including post-closure period.

This design methodology is effective in preventing virtually all percolation of leachate into the groundwater because the combination of the two components in the secondary liner system will provide for virtually complete removal of waste or leachate by the leachate collection system if a leak were to occur in the primary liner system.

An added barrier and protection to the groundwater system is the 35 feet of Smithtown Clay unit immediately beneath the MSF landfill site.

No hazardous, toxic, radioactive, explosive, or biologically unacceptable waste material is accepted at the MSF landfill site.

2.2.3 Useful Landfill Life

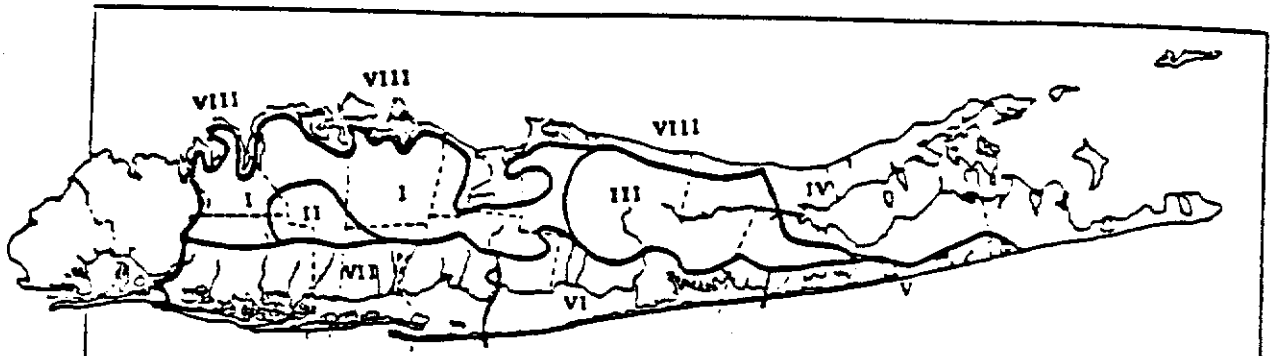
Under present operational conditions, landfilling of raw refuse, the remaining life of the Town of Smithtown MSF Landfill (Phased I, II and III) is approximately 28 years. Based upon population projections presented in the Town's Phase I Solid Waste Management Plan, the MSF landfill could serve the Town to the year 2013. The useful landfill life could increase significantly if the site were used in conjunction with a Town Resource Recovery Facility for the disposal of ash residue, unprocessible materials and system bypass.

2.3 PURPOSE AND SCOPE OF INVESTIGATIONS

The United States Environmental Protection Agency (EPA) has designated Long Island as a sole source aquifer region. This designation is a product of the Long Island Comprehensive Waste Treatment Management Plan of 1978 (i.e., the 208 Study) which study was prepared pursuant to Section 208 of the Federal Water Pollution Control Act. Sensitive deep flow recharge areas within the counties of Nassau and Suffolk have been defined by the plan as Hydrogeologic Zones I, II and III. The approximate location of these zones and typical groundwater flow patterns are shown on Figure 4.

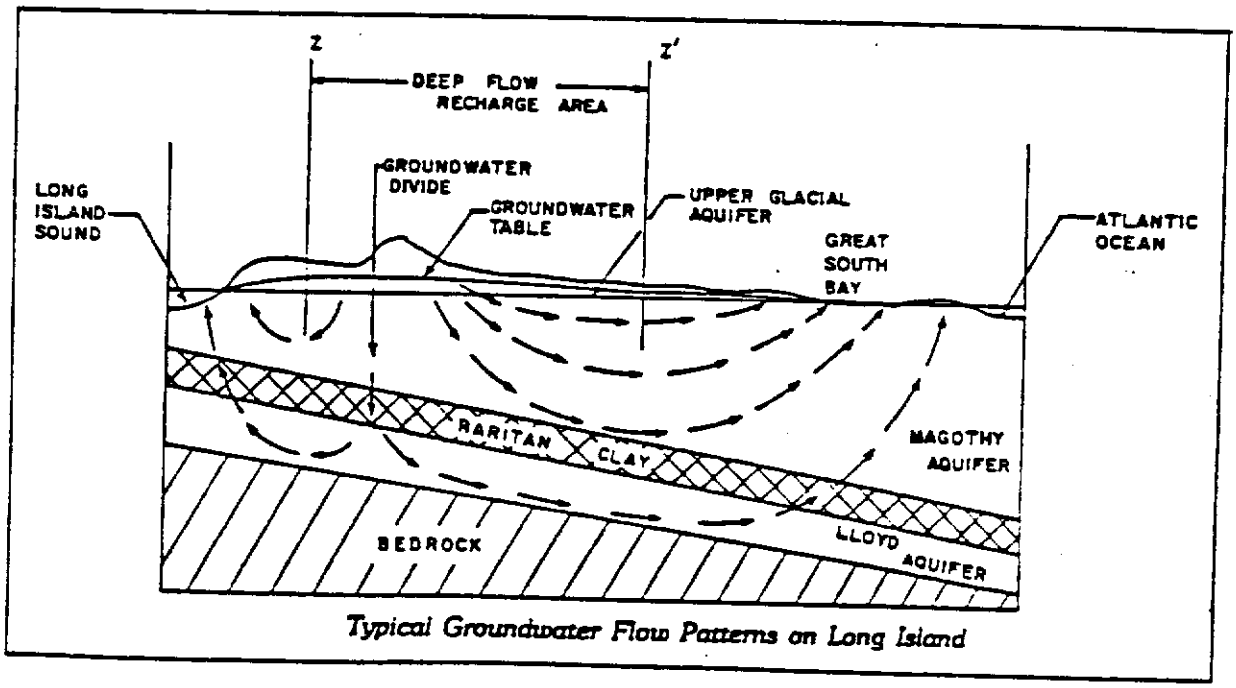
The Long Island Landfill Bill was signed into law on June 21, 1983 and has an effective date of December 18, 1983. The purpose of this legislation was to phase out the landfilling of raw municipal refuse as a primary solid waste disposal practice in Nassau and Suffolk Counties and to have resource recovery facilities replace the landfilling no later than December 18, 1990.

New York State Department of Environmental Conservation (NYSDEC) has determined that the Smithtown MSF landfill is within the sensitive deep flow recharge area, Hydrogeologic Zone I, and must be phased out of operation by December 18,



Hydrogeologic Zones in the Nassau-Suffolk 208 Study Area

FIGURE O



Typical Groundwater Flow Patterns on Long Island

FIGURE P

SOURCE - DRAFT - LONG ISLAND GROUNDWATER MANAGEMENT PROGRAM
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

HYDROGEOLOGIC ZONES IN THE SMITHTOWN (LANDFILLS) AREA.
FIGURE 4

1990. The site is situated about 7500 feet (1.4 miles) southwesterly of the defined 208 line in the groundwater flow direction.

The location of the Smithtown landfill within the Zone I area has significant implications for the Town of Smithtown in its ability to include the existing site in the development of a long term solid waste management plan. The forced closure of the landfill would most probably require the Town to site and construct a new landfill, and/or be faced with the inability to dispose of its municipal solid waste without implementation of a Resource Recovery Program.

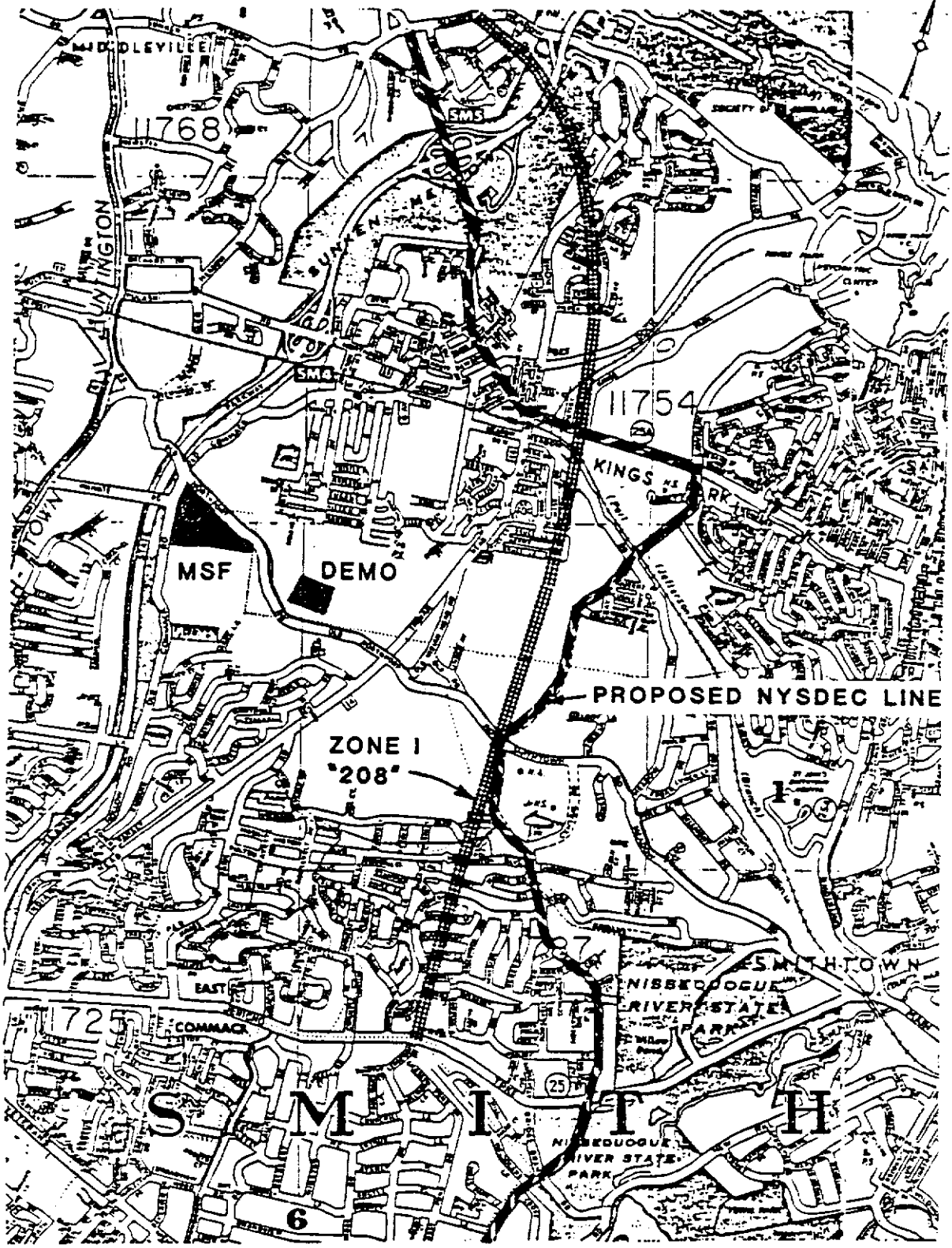
The Town's Phase I - Solid Waste Management Plan projected the useful life of the MSF site to be approximately 28 years when landfilling raw municipal refuse and demolition materials. If closed by December 18, 1990, 24 years of useful life at the existing site would be unavailable for disposal of municipal refuse without implementation of a resource recovery facility. Notwithstanding, the Town would still require an active landfill for the ash disposal, landfilling of bypass and for disposal of unprocessable materials.

Hydrogeologic zone boundaries established through the 208 Study used available data and information. Although several

reports were published at that time which described the Huntington-Smithtown hydrogeology, they did not have sufficient hydrogeologic data to accurately describe the presently used Zone I boundary or its proposed modification by the NYSDEC, Figure 5. The relative lack of data coupled with the complexity of the Smithtown geology raises questions as to the exactness of this boundary line and its use in planning or implementation efforts.

The principle and subordinate objectives of the project include:

- o Verification that the existing Smithtown Landfill site is within/without the deep flow recharge area and the significance of its location relative to the Zone 1 hydrogeologic boundary.
- o To supplement geological information in the vicinity of the Smithtown Landfill and expand upon the existing data base for this complex flow regime area.
- o Develop hydrogeologic information that will be of assistance to Federal, State and local agencies for water resources planning and implementation of the NYSDEC Long Island Groundwater Management Program.
- o To supplement the groundwater monitoring wells in the vicinity of the Smithtown Landfill and other private landfill sites.



PROPOSED MODIFICATION TO HYDROGEOLOGIC ZONE BOUNDARIES IN THE VICINITY OF TOWN OF SMITHTOWN LANDFILL SITES

FIGURE 5

- To compile information on existing wells, geology and other groundwater information in the Kings Park area.

2.4 REGIONAL AND LOCAL PHYSIOGRAPHY AND GEOLOGY

The area in general is characterized by very hilly and irregular topography. Land surface elevations average about 150 feet above mean sea level (MSL) in the immediate vicinity of the Smithtown MSF complex. To the north, west, and south, as one approaches the Harbor Hill and Ronkonkoma terminal moraines, elevations average over 200 feet above MSL and exceed 300 feet above MSL southwest of the site near Dix Hills. The land surface drops off to the east and reaches sea level at the Nissequogue River.

The geology consists of a thick sequence of southeast-sloping, unconsolidated deltaic/alluvial sediments resting uncomfortably on dense, crystalline bedrock. The sediments are effectively covered by recent glacial moraine and outwash deposits. In general, the sediments are comprised of porous, water-saturated, sand and gravel beds, somewhat clayey and silty, with numerous interbedded and discontinuous clay layers (Table 1). All gradations from one type of material to another are represented in the strata. A summary of the hydrogeologic formations underlying the Smithtown area follows and is shown

—*Summary of the stratigraphy and water-bearing properties of the deposits underlying the Huntington-Smithtown area, Suffo County, N.Y.*

System	Series	Stratigraphic unit	Thickness (feet)	Character of deposits	Water-bearing properties
Quaternary	Recent	Recent deposits Artificial fill, marsh deposits, beach deposits, and surficial soil.	0–20±	Sand, gravel, silt, and clay; organic mud, peat, loam, and shells. Colors are brown, yellow and gray.	Sandy and gravelly beach deposits may locally yield sm supplies of fresh to brackish water to wells. Marine s and clay in north-shore harbors retard salt-water e croachment and confine underlying aquifers.
	Pleistocene	Upper Pleistocene deposits.	0–300±	Till composed of unassorted clay, sand, and boulders as ground moraine in area north of Harbor Hill terminal moraine and possibly as buried ground moraine of the Ronkonkoma ice. Outwash deposits of brown well-stratified sand and gravel—predominantly quartzose but containing biotite and other dark minerals and igneous and metamorphic rock fragments—including advance outwash, channel and valley-fill, and outwash-plain deposits. Ice-contact deposits of crudely stratified sand and gravel and isolated masses of till in the Ronkonkoma and Harbor Hill terminal moraines. Glaciolacustrine deposits of brown and gray silt and clay intercalated with outwash deposits in buried valleys.	Till, relatively impermeable, commonly causes perche water bodies to form locally and impedes recharge fro precipitation. Outwash and ice-contact deposits are moderately to highl permeable. Wells screened in outwash deposits ge erally at depths of less than 250 ft yield as much as 1,7 gpm. Specific capacities of public-supply wells ran from 22 to 222 gpm per ft of drawdown. Water is ge erally fresh and unconfined. Chief source of water f domestic, public-supply, industrial, and irrigation we in project area. Glaciolacustrine deposits of silt and clay are relatively im permeable and locally retard movement of water betwe adjacent water-bearing beds in Pleistocene and Cret ceous deposits.
		----Unconformity?----			
		Pleistocene deposits undifferentiated.	0–400±	Sand, gravel, clay, and silt. Lignite present in some silt or clay layers. Colors are brown and gray. These deposits are present in deep buried valleys and may include equivalents of the Gardiners clay and the Jameco gravel found elsewhere on Long Island. This unit may include some Pliocene(?) deposits, but evidence is scanty.	Coarser sand and gravel beds are permeable and wou presumably yield moderate to large supplies to proper constructed wells. One well, S18,137, screened in the deposits yields 1,400 gpm, and has a specific capacity 46 gpm per ft of drawdown. Silt and clay beds confin water in adjacent water-bearing beds.
Tertiary(?)		----Unconformity?----			
	Pliocene(?)	Manetto gravel	0–300±	Stratified sand and gravel and scattered clay lenses; unit is predominantly quartzose; igneous and metamorphic rock fragments are scarce. Colors are pale to yellowish brown. Caps hills in western part of Huntington and locally present in buried valleys.	Deposits are moderately to highly permeable but ge erally lie above the zone of saturation. Locally, wate supplies for domestic use are obtained from these de posits, such as at wells S4, S208 and S977. No larg public-supply or industrial wells were screened in the deposits in 1960.
		---- Unconformity ----			
Cretaceous		Magothy(?) formation	0–800±	Sand, clayey, with silt, clay, and some gravel. Colors are white, gray, brown, yellow, and red. The upper part of the formation commonly includes interbedded clay, fine to medium sand, silt, and some lignite; the lower part is largely coarse sand, gravel, and some clay.	Generally ranges from moderately to highly permeabl The lower part of the formation is more permeable tha the upper part. Several public-supply wells screened i the basal zone have yields ranging from 1,000 to 1,800 gpm and specific capacities from 30 to 90 gpm per ft of draw down. Water is generally of excellent quality. Recog
	Upper Cretaceous				most important source of water is wells. Unconfined conditions are common in uppermost part of formation but confined conditions prevail in the lower part; some wells flow.
		---- Unconformity ----			
		Raritan formation — Clay member	0(?)–188±	Clay and silt, and a few layers of sand. Lignite and pyrite concretions are common. Colors are mostly gray, white, and red.	Relatively impermeable. Acts as a confining bed, which retards but does not prevent movement of water betwee the Magothy(?) formation and the Lloyd sand member
		Raritan formation — Lloyd sand member	200–265±	Sand, fine to coarse, and gravel, mixed with some clay and some layers of silt and clay. Colors are white to pale yellow.	Moderately permeable. Not extensively developed Several public-supply and industrial wells yield as much as 250 gpm in northern Huntington, but potential yield from properly constructed wells are much greater. Water is confined and some wells flow. Water is generally of excellent quality, but on Eaton Neck it is brackish.
		---- Unconformity ----			
Precambrian to lower Paleozoic		Bedrock		Crystalline metamorphic and igneous rocks.	Relatively impermeable. Forms the floor of the ground-water reservoir.

SOURCE: Lubke (1964)

TOWN OF SMITHTOWN
SMITHTOWN LANDFILL

SUMMARY OF DEPOSITS UNDERLYING THE SMITHTOWN AREA

TABLE NO. 1

Volzy ASSOCIATES

schematically in Figure 4. The reader is referred to the paper by Lubke (1964) for a more in-depth description.

The bedrock basement underlying the Smithtown area is the oldest geologic unit and consists mainly of gneiss and schist of low hydraulic conductivity. Its upper surface ranges in elevation from 650 feet below MSL in the northwest corner of the town to 1350 feet below MSL in the southeast near Lake Ronkonkoma.

The Raritan Formation lies directly on top of the bedrock and is the earliest of the upper Cretaceous deposits. It consists of a lower Lloyd Sand Member and an upper Clay member. The formation ranges from about 300 feet below MSL in the northwest to 800 feet below MSL near Lake Ronkonkoma. The Lloyd Sand Member (Lloyd Aquifer) generally consists of beds of fine to coarse sand and gravel, commonly in a clayey matrix, with some interbedded layers of solid and silty clay. The Clay member consists of solid and silty clay with few layers of sand. The hydraulic properties of the Lloyd Sand Member are generally quite good. Groundwater contained within the sediments is strongly confined under artesian conditions by the overlying, relatively impermeable Clay member.

The Magothy Formation (Magothy Aquifer) is in general the most important water supply source in the Smithtown area.

Its lower boundary generally corresponds to the upper surface of the Raritan Formation. The sediments are mostly silty, fine to medium sand with interbedded gravel and clay layers. The lower 50-200 feet of the deposit commonly contain abundant gravel. Groundwater contained within the upper portion of the formation generally exists under unconfined, water table conditions. With increasing depth, artesian conditions prevail as the numerous, interbedded clay layers become more effective in confining the water. The upper surface of the formation is highly irregular due to extensive erosion which occurred during pre-glacial times by streams draining the land surface.

Lying atop this eroded surface and comprising the remainder of the land mass are deposits of undifferentiated pre-, intra-, and post-glacial sands, gravels, and clays. Termed the Upper Pleistocene deposits (Upper Glacial Aquifer), these sediments contain mostly interbedded fine to often very coarse sand and gravel with some thick marine and glacial silt and clay layers. The sediments are generally very porous and permeable and are also an important water supply source for the Smithtown area. Groundwater generally exists under unconfined, water table conditions. Locally, however, artesian conditions prevail beneath the numerous and often quite extensive clay deposits.

2.5 PREVIOUS STUDIES

The U.S. Geological Survey, in cooperation with the Suffolk County Department of Health Services, Suffolk County Water Authority, and N.Y. State Department of Environmental Conservation, has published a number of reports on various aspects of Long Island's hydrogeology. The most extensive study devoted to the Town of Smithtown area was performed by Lubke (1964).

Groundwater flow studies were performed more recently by Jensen and Soren (1974), McClymonds and Franke (1972), Donaldson and Koszalka (1982), and Donaldson (1982). Krulikas, Koszalka, and Doriski (1983) presented an updated interpretation of the Matawan Group-Magothy Formation surface, and Krulikas and Koszalka (1983) investigated the areal extent of a significant glacial-age clay unit throughout the Smithtown-Brookhaven area. Hydrogeologic data from selected wells in the Smithtown area can be found in Jensen and Soren(1971) and Krulikas(1981).

In addition, the Town of Smithtown has installed a number of shallow permanent observation wells for the purposes of monitoring water table levels and groundwater quality in and around the MSF site.

Information from all previous studies was used to its maximum extent as background data and supplemental information and incorporated into these investigations.

SECTION III

SECTION 3.0

SITE INVESTIGATIONS

3.1 GENERAL

The primary objective of the site investigations was the installation of a deep well cluster for the purposes of evaluating head differentials beneath the Smithtown MSF Landfill site. Information from the program would provide verification that the existing MSF landfill site is within/without the deep flow recharge area and the significance of the site relative to the published 208 Study - Zone I hydrogeologic boundary.

A drilling program was designed to advance a 24 inch diameter borehole to the top of the Raritan Formation Clay member, estimated to be about 600 feet below grade surface (Jensen and Soren, 1974). Three, four (4) inch wells were installed in the borehole and screened at various depths. Each well was individually developed and static water levels were recorded.

The information gained from the well cluster is three-fold:

1) Potentiometric Surface - The potentiometric surface is the elevation (referred to mean sea level) to

which water will rise in a tightly cased well from a given screened interval in an aquifer. The water table is a particular potentiometric surface. Differential potentiometric surface elevations of wells in the cluster are head losses associated with vertical flow through the aquifer(s).

2) The relative component direction of groundwater flow--whether upwards, downwards, or horizontal--can be deduced from a comparison of the differential heads as measured in the cluster wells. Groundwater flows from regions of higher energy head, or fluid potential, to regions of lower energy head. A higher potentiometric surface elevation in the shallow well of a cluster than in the deeper well is indicative of a region of groundwater recharge, thus, downwards flow component. The reverse case of potentiometric surface elevations in the well cluster would indicate a upwards flow component, or an area of groundwater discharge. Identical potentiometric surface elevations for both deep and shallow wells would be associated with horizontal flow, neither recharge nor discharge.

3) Periodic potentiometric surface measurements in cluster wells can be used to determine seasonal or long term changes in contours of groundwater levels together with flow lines and, similarly, flow lines within the confined aquifer which are orthogonal to

contours of the potentiometric surface. This information can be used to better understand the groundwater flow region of the area and characterize the hydrogeological environment.

Supplemental information in the form of geologic corelog descriptions and static water level measurements of existing wells in the vicinity was compiled and evaluated in order to more definitively determine the surrounding subsurface hydrogeologic environment.

The literature and files of the NYSDEC and U.S. Geological Survey was researched to identify deep wells or combination of wells in the study area which could be considered as representative well "clusters" for measurement purposes. Due to the lack of deep wells accessible for such measurements and, at the same time, beyond the range of influence of major public supply pumping wells, additional well clusters could not be defined in the study area.

Static head measurements were obtained, however, directly from several Suffolk County Water Authority (SCWA) public supply deep well clusters during non-pumping conditions. The SCWA had been in the process of undertaking a pumping test program at its well fields throughout the County for evaluating the characteristics of individual wells and, in general, the overall efficiency of the system. Part of

this program entailed taking out of service the entire well field for several hours and allowing the system to achieve predevelopment or non-pumping conditions. It was through this cooperative effort that Velzy was able to obtain potentiometric surface measurements for the various SCWA deep wells in proximity to the Smithtown MSF site and in the vicinity of the 208 Study Zone I hydrogeologic boundary line.

3.2 DEEP WELL CLUSTER INSTALLATION

3.2.1 Drilling Phase

Drilling operations commenced on January 13, 1986, and were completed on January 24, 1986. The Reverse Rotary drilling method was employed. The work was performed by Delta Well, Ronkonkoma, New York. A final borehole depth of 620 feet below grade was recorded. This depth corresponds approximately to the top of the Clay member of the Raritan Formation.

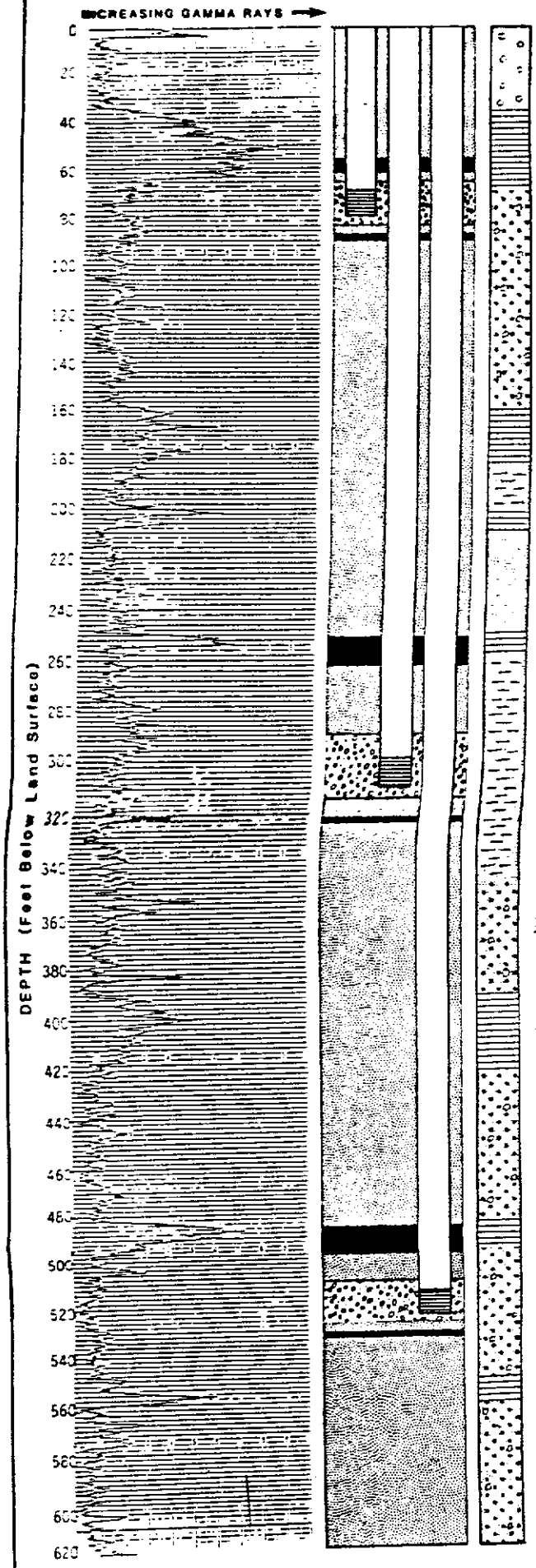
Split-spoon geologic core samples, approximately twelve (12) inches long each, were taken at twenty (20) foot intervals and at depths where a distinct change in lithology of the sediments occurred. In addition, discharge pit washings were continuously monitored. Laboratory analysis of the core samples was performed in

order to confirm field estimates of grain size ranges and percentages. Results are included in Appendix A. A copy of the geologic log for the borehole is shown in Figure 6.

Representatives of the U.S. Geological Survey and New York State Department of Environmental Conservation frequented the site to observe and collaborate with Velzy's geologist in identification of various strata penetrated.

Approximately 200 feet of Upper Pleistocene/Pliocene(?) deposits were penetrated as well as about 420 feet of Late Cretaceous deposits. Included in the Upper Pleistocene/ Pliocene(?) deposits was 35 feet of an extensive clay deposit identified as the Smithtown Clay, a major confining clay which was presumably deposited in an intramorainal lake.

Also observed in the Upper Pleistocene deposits about 90 feet below the Smithtown Clay and just above the Magothy Formation were significant clay lenses and intercalations which may be related to the Gardiner's Clay and/or Monmouth Greensand. These two formations have as yet to be identified definitively in the Smithtown area, but are quite extensive in southern Long Island. The lateral extent of this clayey material and its confining influence could not be fully confirmed given the existing lack of available deep well data on the area. In contrast, the



Elevation = 111.44 ft.

Sand - brown, fine to medium; gravel, coarse

Clay - gray and brown, silty; some gravel

Sand - brown, medium to coarse; clay streaks, gray and brown; gravel, fine to coarse

Clay - multicolored, silty; some sand and gravel layers

Sand - gray, fine to medium, clayey and silty; clay streaks, gray, sandy; some gravel

Clay - gray and brown, solid and sandy; some sand, medium

Sand - gray, fine to medium; some gravel, fine; some clay streaks, gray and brown, sandy and solid

Clay - gray and black, solid

Sand - gray, fine to medium, silty; clay streaks, white, gray, and brown, some gravel, fine

Sand - gray, medium to very coarse; gravel, fine; lignite; some clay streaks, gray

Clay - grey, and brown, silty and sandy, lignitic; some sand, medium to very coarse; some gravel, fine

Sand - gray, fine to very coarse; gravel, fine to medium; some sandy clay, gray and white

Clay - brown and gray, solid, lignitic; some sandy clay

Sand - gray, medium to very coarse; gravel, fine to coarse; some clay, gray, silty and sandy

Clay - brown, yellow and white, silty and sandy; some gravel, fine

Sand - gray, fine to very coarse; gravel, fine to medium; some silty clay, gray

LEGEND:
- Solid Bentonite Slurry with some Sand
- Gravel
- Sand

SMITHTOWN LANDFILL

GAMMA LOG, WELL CLUSTER SCHEMATIC & GEOLOGIC LOG OF SMITHTOWN DEEP WELL TEST BORING

JANUARY, 1988

FIGURE NO.6

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lateral extent of the Smithtown Clay is well known and was mapped by Krulikas and Koszalka (1983).

The Magothy Formation generally contained silty and clayey sand with interbedded layers of gravel. As is typical, it also contained some silty and sandy layers of clay, the lateral extent of which is unknown given the available well data. No clay layers exceeded a thickness of ten (10) feet and one thirty (30) foot thick layer of silty clay with sandy intercalations was observed approximately centered at the 400 foot depth. The lower Magothy Formation was typically very coarse-grained and gravelly.

No strata uniquely identifiable as the clay member of the Raritan Formation was penetrated. Instead, Raritan and Magothy Formation material was identified together in the same strata beyond the 600 foot depth. This situation would indicate an apparent transition zone between the formations and not a clear-cut boundary.

3.2.2 Geophysical Logging

Geophysical logs furnish continous records of subsurface conditions that can generally be correlated from one well to another. They also serve as valuable supplements to geologic logs. Upon completion of the drilling phase of this program, natural-gamma logging of the uncased borehole

was performed by representatives of the U.S. Geological Survey.

Because all subsurface materials emit natural-gamma radiation, a record of this constitutes a natural-gamma log. The radiation originates from unstable elements that occur to varying amounts in subsurface formations.

In general, the natural-gamma activity of clayey formations is significantly higher than that of quartz sands, etc. The most important application to groundwater hydrology is identification of lithology, particularly clayey sediments, which posses the highest gamma intensity. However, the emission of natural-gamma radiation and its intensity can also be used to identify differences between the types of materials associated with successive strata.

At the Smithtown site, the natural-gamma log in conjunction with geologic logs was used to establish lithology of the borehole and for establishing the most favorable placement for screen intervals of the well cluster.

Figure 6 shows the natural-gamma log of the uncased borehole sediments together with its geologic interpretation.

3.2.3 Well Screen Settings

Well screen settings were chosen on the basis of the natural-gamma log and geologic core sampling lithology results, as well as field observations of drilling rates. It was desired to place the screens in relatively permeable, sandy zones where the wells could be adequately developed and where measured potentiometric surfaces are more indicative of regional flow conditions.

Representatives of the New York State Department of Environmental Conservation and U.S. Geological Survey were also on site during the well screen setting phase of the project.

Well screens consist of ten (10) foot long, four (4) inch diameter, stainless steel, continuous slot No. 20 screens with four (4) inch diameter, Schedule 80, polyvinyl chloride (PVC) casings. Joining of casing lengths was accomplished using flush thread-type joints.

The upper screen was set below the Smithtown Clay in the Upper Pleistocene deposits. The remaining two screens were set in the Magothy Formation, the middle screen in the upper Magothy and the lower screen in the lower (basal) Magothy. Figure 6 shows a schematic of the borehole and placement of well screens.

In addition, a fourth length of PVC casing with a three (3) inch diameter, slotted, ten (10) foot long, PVC screen was set in the top of the Smithtown Clay. This was used to detect any perched water that may have been resting on top of the clay unit.

Each well screen setting consists of a gravel filter pack enveloping the well screen. A Bentonite clay pellet seal is placed above and below the filter pack to hydraulically isolate the screen settings and prevent a vertical flow of water through the annular space of the borehole to the screens. Fine sand "buffer" layers were emplaced between the filter packs and Bentonite seals to disallow migration of the Bentonite clay towards the well screen during well development. The remaining annular space was backfilled with a similar fine sand material.

3.2.4 Well Development

Each four (4) inch well was developed using the air-lift methodology. Pumping rates of about 10-15 gallons per minute (gpm) were maintained for a minimum of two (2) hours and until turbidity declined to acceptable levels and each well yielded clean, silt-free, formation water.

3.3 POTENTIOMETRIC SURFACE MEASUREMENTS

During an eight (8) day monitoring period in February, 1986, static potentiometric surface measurements were recorded for designated wells in the vicinity of the Smithtown MSF site. Background information, details of the wells and measured potentiometric surface elevation (heads) are presented in Table 2. The location of each monitoring location is shown in Figure 7.

3.3.1 Suffolk County Department of Health Services Wells

The Suffolk County Department of Health Services (S.C.D.H.S.) maintains an extensive network of observation wells throughout Suffolk County. Potentiometric surface measurements are compiled and detailed annual water table contour maps developed from this data.

Three (3) S.C.D.H.S. permanent observation wells are located in the study area. Potentiometric surfaces for these wells represent the water table at time of measurement. The wells are relatively shallow and are screened in a zone of the Upper Glacial Aquifer where groundwater exists under unconfined, water table conditions. Details of these wells are presented in Table 2 and location shown in Figure 7.

3.3.2 Suffolk County Water Authority Wells

The Suffolk County Water Authority (S.C.W.A.) maintains a number of operable public supply well fields within the Town of Smithtown. Three (3) S.C.W.A. well fields are located within two (2) miles of the Smithtown MSF site and include the Kings Park Road, Lawrence Road, and Carlson Avenue stations (Figure 7).

Through the cooperative effort with the S.C.W.A., static potentiometric surface measurements were recorded at each well field during non-pumping conditions.

The Kings Park Road wells were shut down for twenty-five (25) hours prior to the taking of measurements. The two (2) deeper wells recorded different potentiometric levels, yet, they are screened at about the same elevations thus should theoretically yield the same, or very similar, results. A number of factors could be responsible for this discrepancy. Averaging of the two potentiometric surface elevations was considered sufficient for the purposes of this report. This average value for the potentiometric surface elevation was 43.3 feet above MSL. The differential between the upper and lower screened zones is about 14.4 inches (1.2 feet) with the shallower well yielding the higher water surface elevation. This would

TABLE 2

RECORDED HEADS IN THE VICINITY OF THE TOWN OF SMITHTOWN MSF LANDFILL

FEBRUARY, 1986

NYSDEC WELL NUMBER		OWNER	DATE OF MEASUREMENT	SCREENED FROM/TO (mean sea level)	MEASURED HEAD (mean sea level)
S-74868		Smithtown	2/27/86	26/16	44.57
S-74869		"	"	45/35	44.68
S-74870		"	"	44/34	44.68
S-74872		"	"	25/5	46.09
S-82188	Shallow	"	2/21/86	40/30	46.63
	Middle	"	"	-190/-200	45.61
	Deep	"	"	-405/-415	45.01
S-15923		S.C.W.A.	"	?/-110	44.44
S-33006		"	"	-188/-351	42.26
S-53361		"	"	-285/-366	44.24
S-16129		"	2/25/86	-252/-382	37.64
S-64062		"	"	-351/-466	37.30
S-24545		"	"	-282/-350	36.02
S-66758		"	"	-333/-424	35.10
S-45402		S.C.D.H.S.	2/27/86	13/3	42.24
S-46964		"	"	33/23	41.14
S-46965		"	"	24/14	43.99

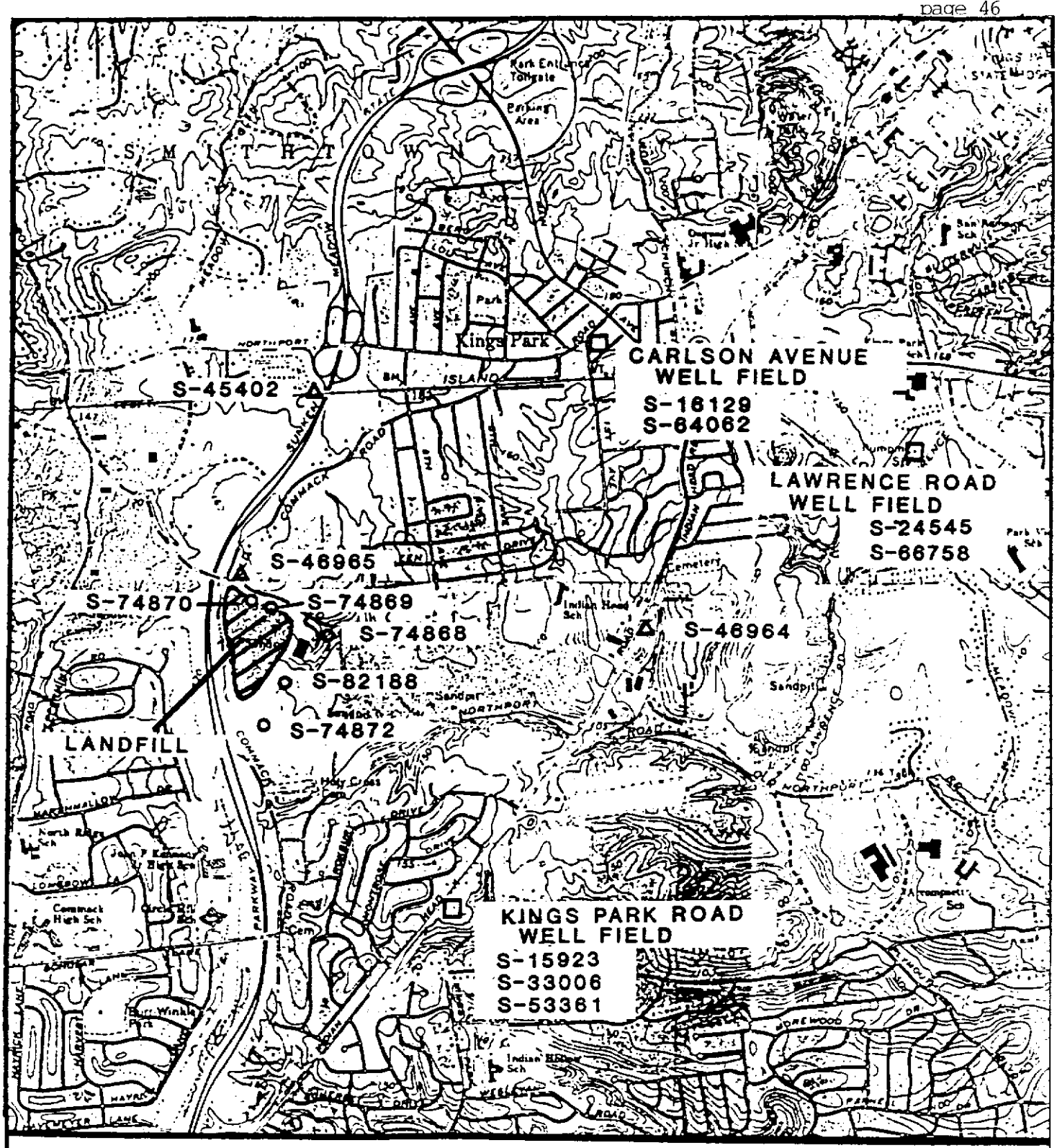

FIGURE 7
LOCATION MAP OF WELLS AND WELL CLUSTERS IN THE VICINITY OF THE TOWN OF SMITHTOWN LANDFILL

- ○ Town of Smithtown Observation Wells
- △ Suffolk County Dept. of Health Services Shallow Observation Wells
- □ Suffolk County Water Authority Public Supply Well Fields

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suggest that the Kings Park Road station is in a region of groundwater recharge, e.g. Zone I hydrogeologic area.

The Carlson Avenue and Lawrence Road well fields were both shut down for over two (2) hours. The differential potentiometric levels between the two well screens recorded at the Lawrence Road well field and between those at the Carlson Avenue well field were 9.6 inches (0.8 feet) and 2.4 inches (0.2 feet) respectively. The higher water surface elevation for both sites were recorded in the shallower wells. These results would indicate that these well fields should be at the limit of a deep flow recharge area, e.g. boundary of the Zone I hydrogeologic area. For the period of these measurements, this would tend to confirm the general location of the Zone I boundary as established by the 208 Study.

3.3.3 Town of Smithtown Observation Wells

Shallow Water Table Wells

In compliance with New York State Part 360 Solid Waste Management Facilities Guidelines, the Town of Smithtown has installed a series of shallow permanent observation wells in the vicinity of the MSF landfill. The purposes of these wells is to monitor water table elevations and groundwater quality. Measurements obtained from these observation

wells were used to supplement those recorded for the S.C.D.H.S. shallow wells.

Deep Well Cluster

This well (NYSDEC No. S-82188) was described fully in Section 3.2. At the time of measurements, the shallow (upper) well had a 12.2 inch (1.02 feet) differential in potentiometric surfaces than the intermediate or upper Magothy well. Similarly, the differential in potentiometric surface elevations between the intermediate and deep or lower (basal) Magothy well was 7.2 inches (0.6 feet) with the upper Magothy having the higher elevation.

Results of the potentiometric surface measurements indicate a total 19.4 inch (1.62 feet) downward differential between the Upper Pleistocene, just below the Smithtown Clay unit and the lower (basal) Magothy formations.

SECTION IV

SECTION 4.0

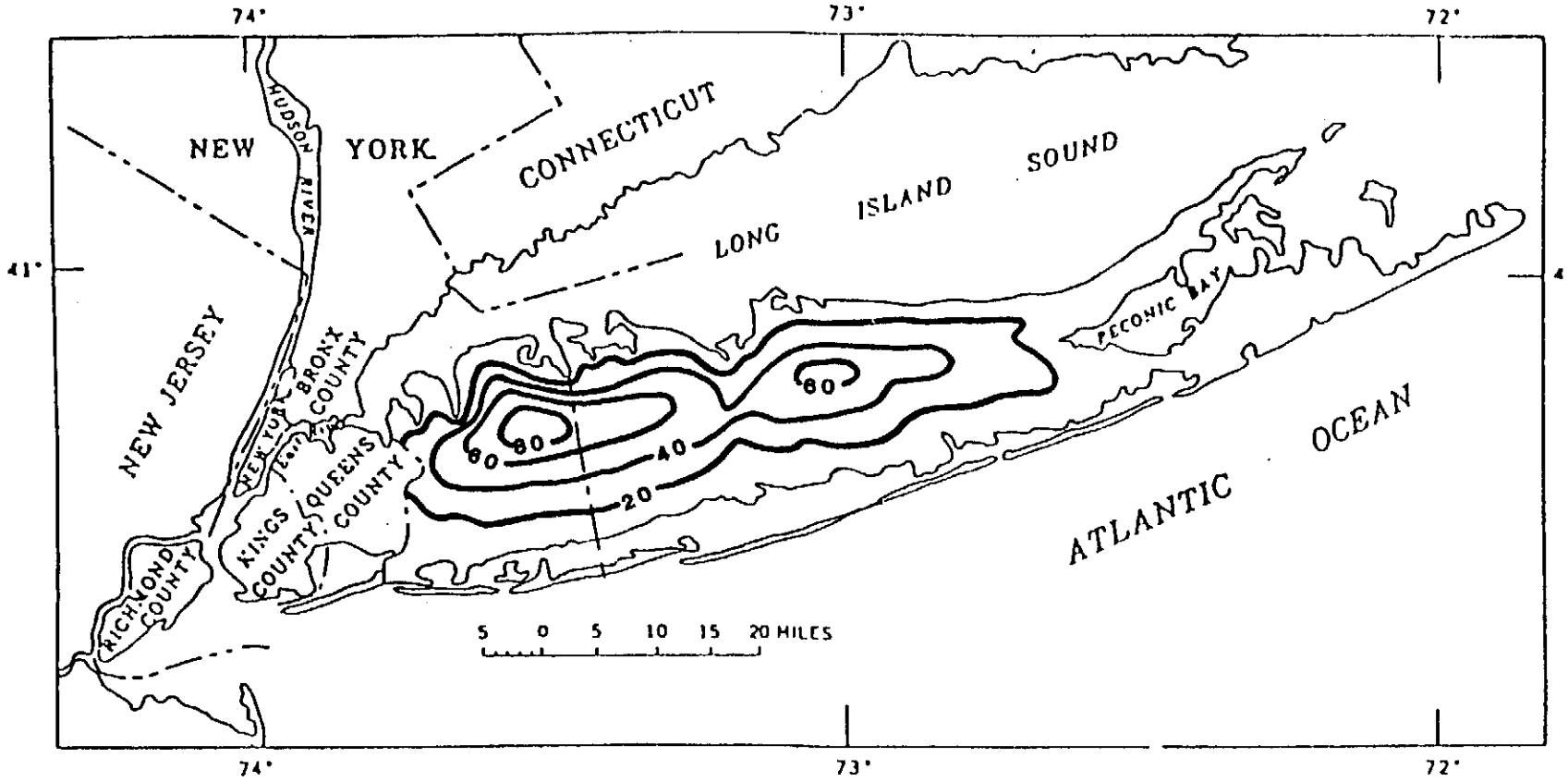
REGIONAL AND LOCAL HYDROGEOLOGY

4.1 CONTOURS ON THE WATER TABLE

4.1.1 General

Water table contour maps are prepared from potentiometric surface measurements of wells screened in the shallow, saturated zones of aquifers. The water table represents the boundary between saturated and unsaturated conditions and can be viewed as a subdued replica of the topography. Below the water table, the intergranular voids of the sediments are filled with water. The voids above the water table are only partially filled and act as the conduits for downward percolating precipitation which feeds the groundwater reservoir.

On Long Island, under natural conditions, the water table can be expected to fluctuate within a range of as much as ten (10) feet, according to long-term variations in precipitation and groundwater pumpage. This maximum fluctuation occurs at the groundwater divide. A generalized water table contour map for Long Island is included in Figure 8.



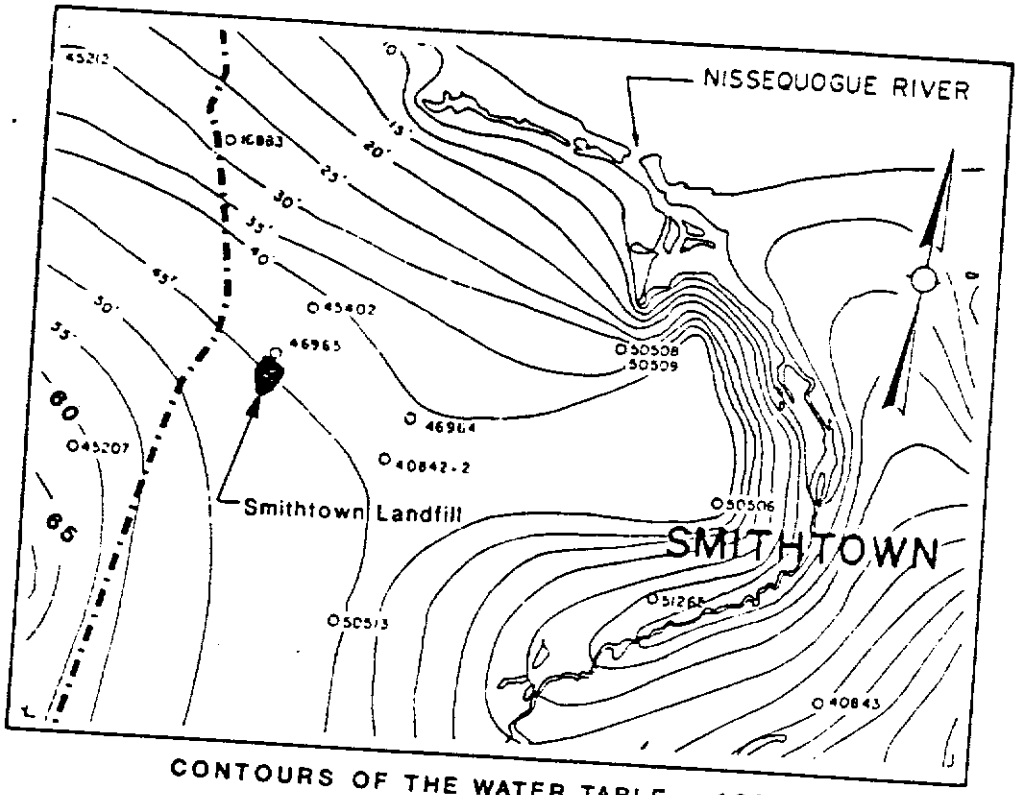
GENERALIZED WATER TABLE CONTOURS ON LONG ISLAND

FIGURE NO. 8

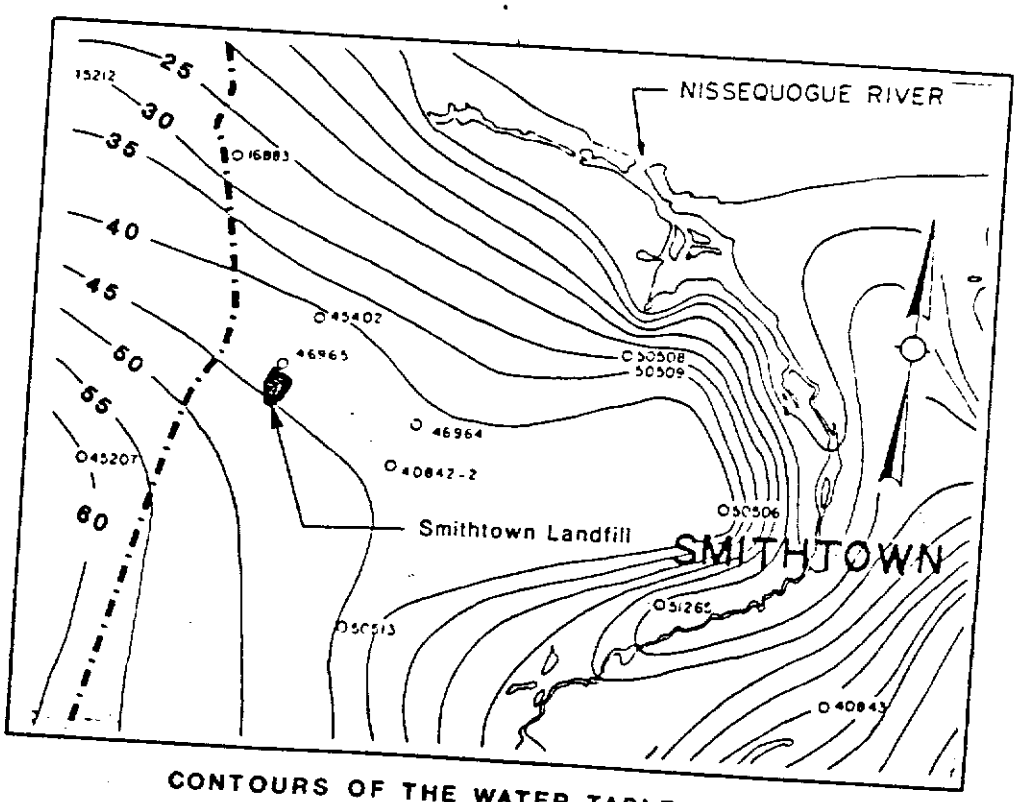
4.1.2 Regional Contours on the Water Table

Water table contour maps, for the years 1982 to 1985, prepared by the Suffolk County Department of Health Services are included in Figures 9 and 10. Characteristic features of the water table in the study area include a water table mound to the southwest (off the map) and a water table trough to the east and southeast. A water table mound, or local high point on the water table, exists to the southwest, corresponding to a topographic high on the Ronkonkoma terminal moraine in central Huntington. The edge is evidenced by the 60 and 65 foot contours in the lower left corner of the maps. The water table is relatively flat due east of the MSF site, and abruptly drops off towards the Nissoguogue River. A major trough, or low point, exists on the water table surface corresponding to the Nissoquogue River Valley.

Water Table maps of 1979 through 1985 indicate that the maximum annual elevation of the water table has fluctuated within a range of about seven (7) feet at the MSF site, from elevation 44 feet to 51 feet above MSL, during the seven (7) year period. Unlike other locations in the study area, there appears to be an adequate number of shallow observation wells (supplemented by the Town of Smithtown



CONTOURS OF THE WATER TABLE - 1982



CONTOURS OF THE WATER TABLE - 1983

TOWN OF SMITHTOWN
SMITHTOWN LANDFILL

GROUNDWATER CONTOURS
SMITHTOWN LANDFILL VICINITY

FIGURE NO. 9

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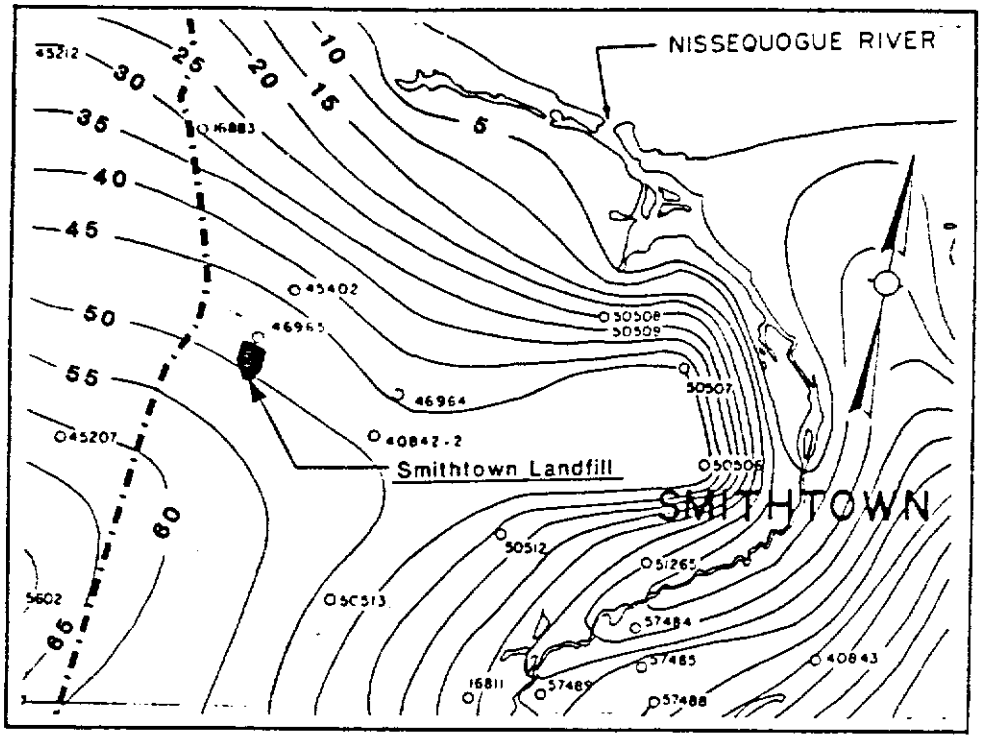
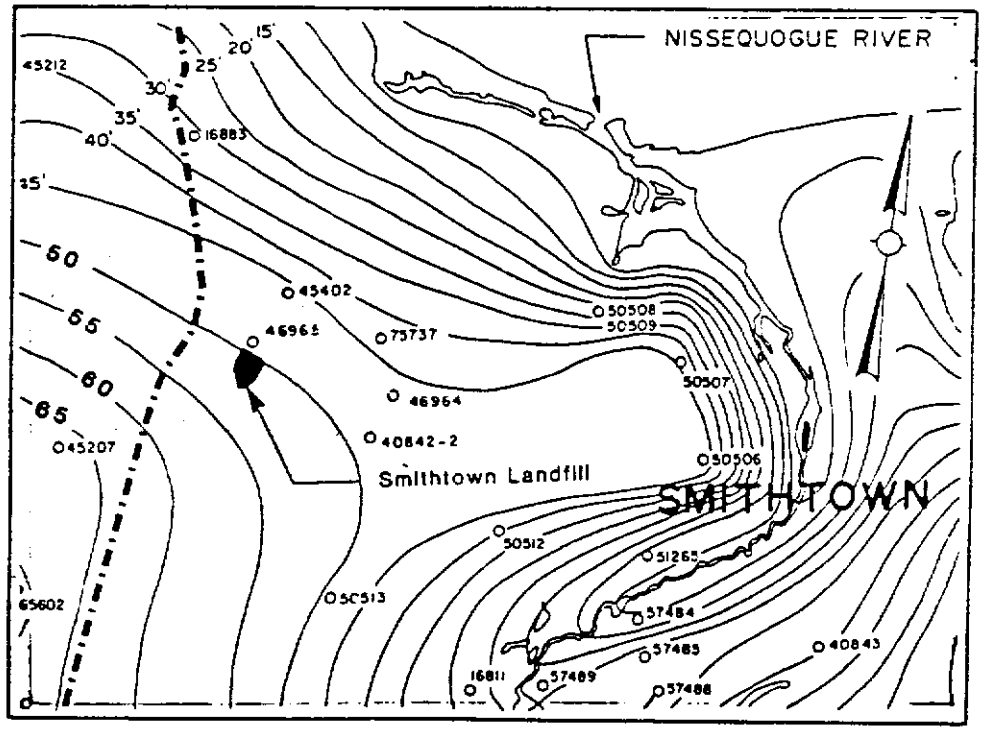


CONTOURS OF THE WATER TABLE - 1984



CONTOURS OF THE WATER TABLE - 1985

TOWN OF SMITHTOWN
SMITHTOWN LANDFILL

GROUNDWATER CONTOURS
SMITHTOWN LANDFILL VICINITY

FIGURE NO. 10

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shallow wells) for accurate water table contouring purposes near the MSF site.

During the February 1986 monitoring period, water levels in Well Nos. 46964, 46965, and 45402 were recorded. Well No. 40842-2 was damaged and unavailable for measurements. Well No. 75737 is a wastewater treatment plant well and is not considered suitable for regional contouring purposes.

4.1.3 Flow in Relation to Groundwater Contours

Generalized horizontal components of shallow groundwater flow can be deduced from water table contour maps. Because no flow crosses an impermeable boundary, flow lines must parallel it. Simlarly, if no flow crosses the water table of an unconfined aquifer, it becomes a boundary flow surface. Therefore, under steady-state conditions, the elevation of any point on the water table equals the energy head and, as a consequence, flow levels lie perpendicular to the water table contours. Therefore, groundwater flows from regions of higher energy head (contour elevation) to lower energy head and in the direction of greatest differential head.

Contour maps of the water table indicate a north-northeast flow direction reaching Smithtown Bay somewhere west of the

Nissequogue River outlet. This groundwater flow appears to have remained fairly constant over the past several years.

Contours of the water table for the immediate vicinity around the MSF site are shown in Figure 11. This water table map is based on potentiometric surface measurements recorded in late February, 1986. A water table elevation of about 46 feet above MSL is somewhat low for the MSF site average, corresponding to a deficit of precipitation during the previous fall and winter, as recorded at Nissequogue River State Park.

These updated contours are similar, if not identical, to S.C.D.H.S. contours for the years 1979 to 1985. They suggest a similar north-northeast flow path for shallow groundwater flow between the MSF site and Smithtown Bay.

4.2 EXTENT OF SMITHTOWN CLAY UNIT

4.2.1 Regional Correlations

The areal extent of the Smithtown Clay, a major confining clay unit, throughout the Smithtown area is well-documented (Krulikas and Koszalka, 1983). Figure 12 illustrates its general location, thickness, and inferred limit, as correlated from well records by the U.S. Geological Survey. Additional correlations were identified based on geologic

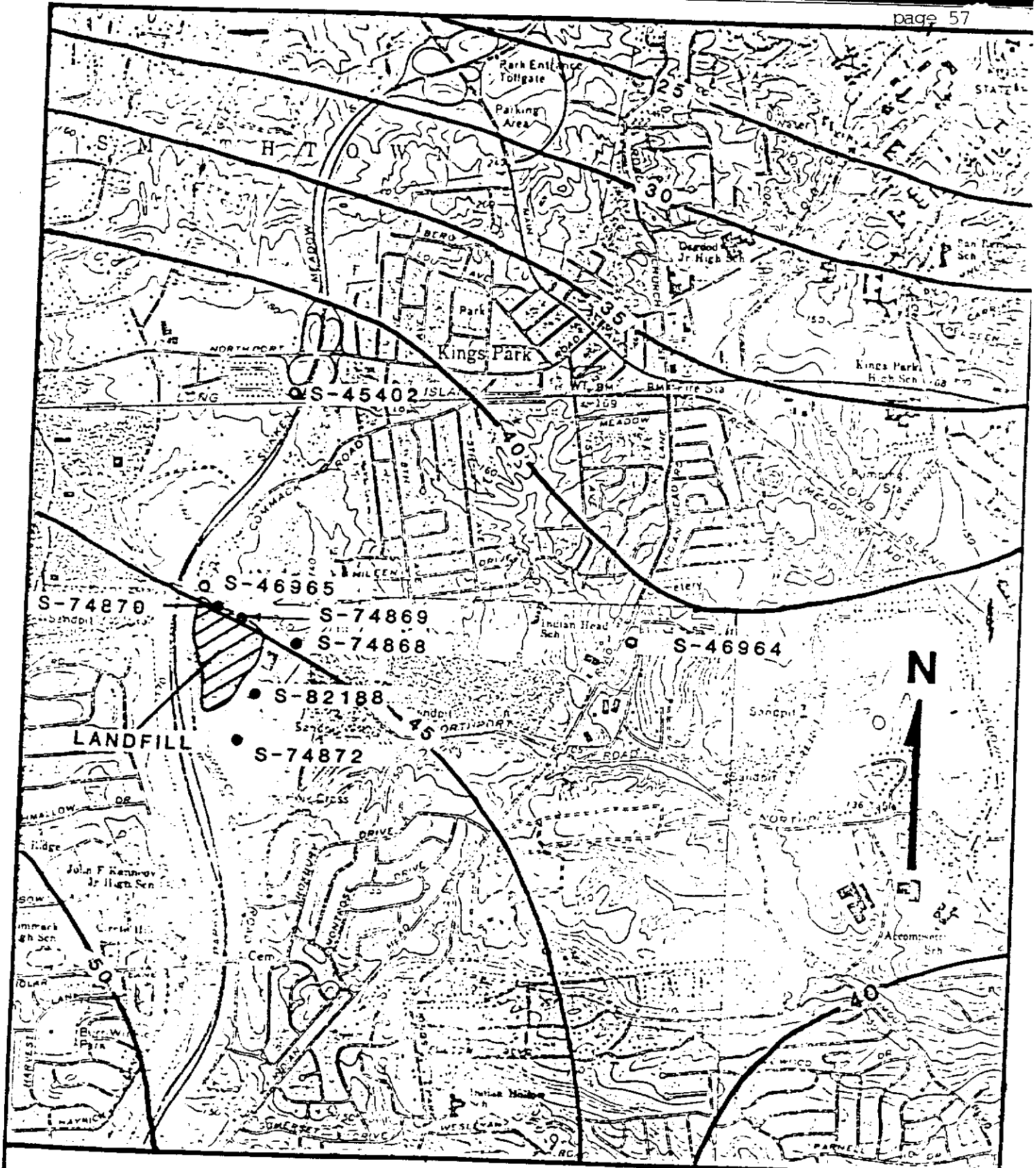

FIGURE 11
GROUNDWATER CONTOURS - SMITHTOWN LANDFILL VICINITY
FEBRUARY, 1986

—35— Approximate location of Water Table Contours. Datum is above mean sea level.

○ Suffolk County D.H.S. Water Table Observation Wells.

● Town of Smithtown Observation Wells

Scale: 1" = 2000'

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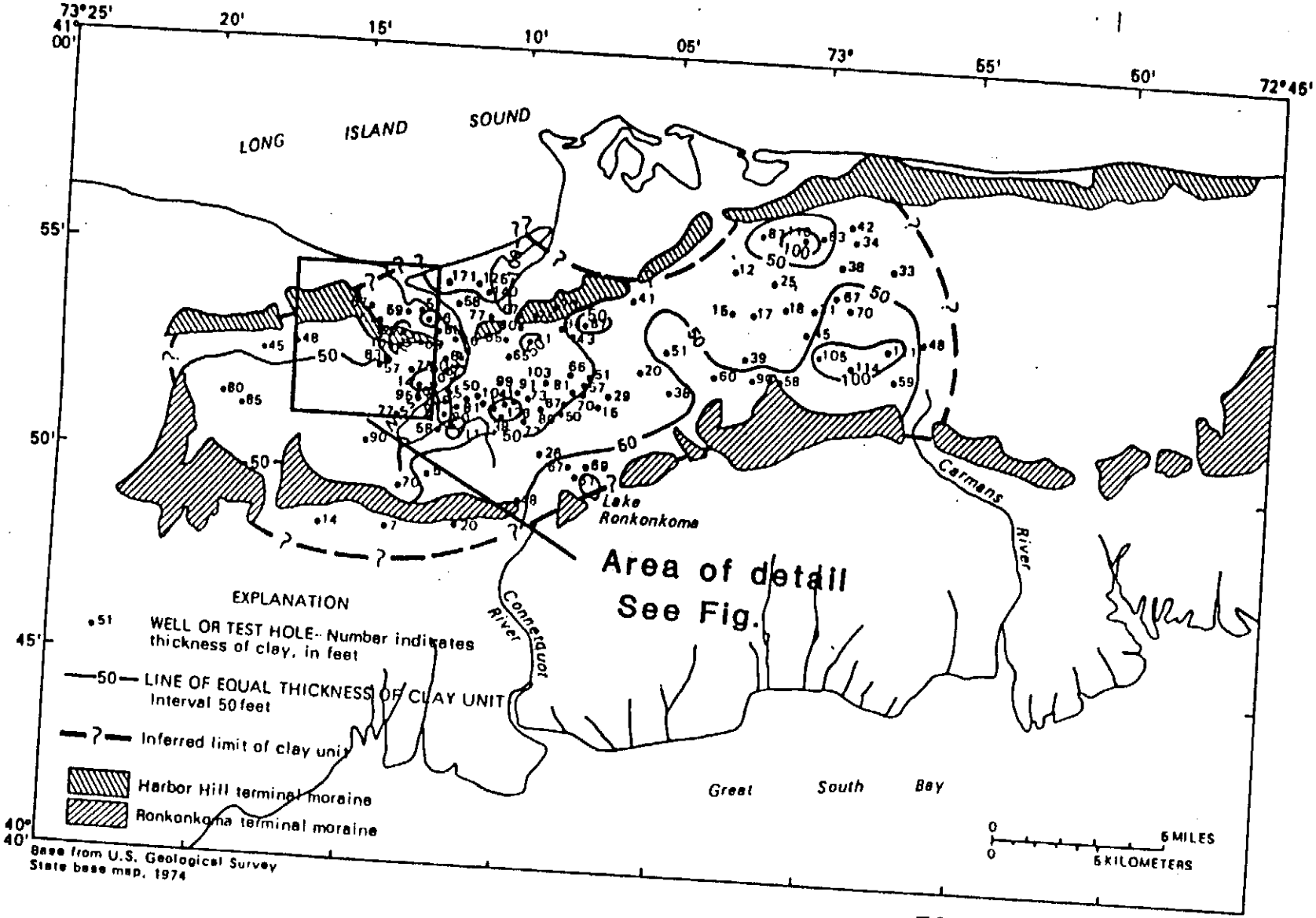

TOWN OF SMITHTOWN
SMITHTOWN LANDFILL

Source: Krulikas and Koszalka (1983)

THICKNESS OF SMITHTOWN CLAY UNIT
FIGURE NO.12

core log descriptions included in well records on file at the NYSDEC. Figure 13 presents the locations of the wells used for mapping the Smithtown clay and the estimated thickness of the clay unit in relation to the MSF landfill site.

4.2.2 Site Correlation

The upper surface of the Smithtown Clay beneath the MSF landfill was identified from core log descriptions of Town observation wells. During installation of the shallow water table wells at the site in 1983, drilling proceeded to or into the top of the clay unit. The depth at which clay was reached was recorded in the drilling report. This information, along with that supplied by the more recent deep well cluster, was used to contour the upper surface of the Smithtown clay beneath the MSF site in Figure 14.

The upper surface of the clay lies about 100 to 150 feet below land surface at the site and slopes off to the east-northeast, in the direction of shallow groundwater flow. The clay unit is approximately 35 feet thick at the deep well cluster.

Top of the Smithtown Clay unit lies at about the same elevation as the water table in the study area. The upper surface of the clay unit is generally quite irregular and

FIG. 13

LOCATION OF WELLS AND ESTIMATED THICKNESS OF SMITHTOWN CLAY - SMITHTOWN LANDFILL

(in feet)

○ 50	Smithtown Clay Unit Thickness Data From Available Well Reports
● 50	Smithtown Clay Unit Thickness From U.S.G.S. Report (Fig.)
-?-	Inferred Limit of Smithtown Clay
	Harbor Hill Terminal Moraine (Jensen Soren, 1974)

Scale: 1" = 2500'

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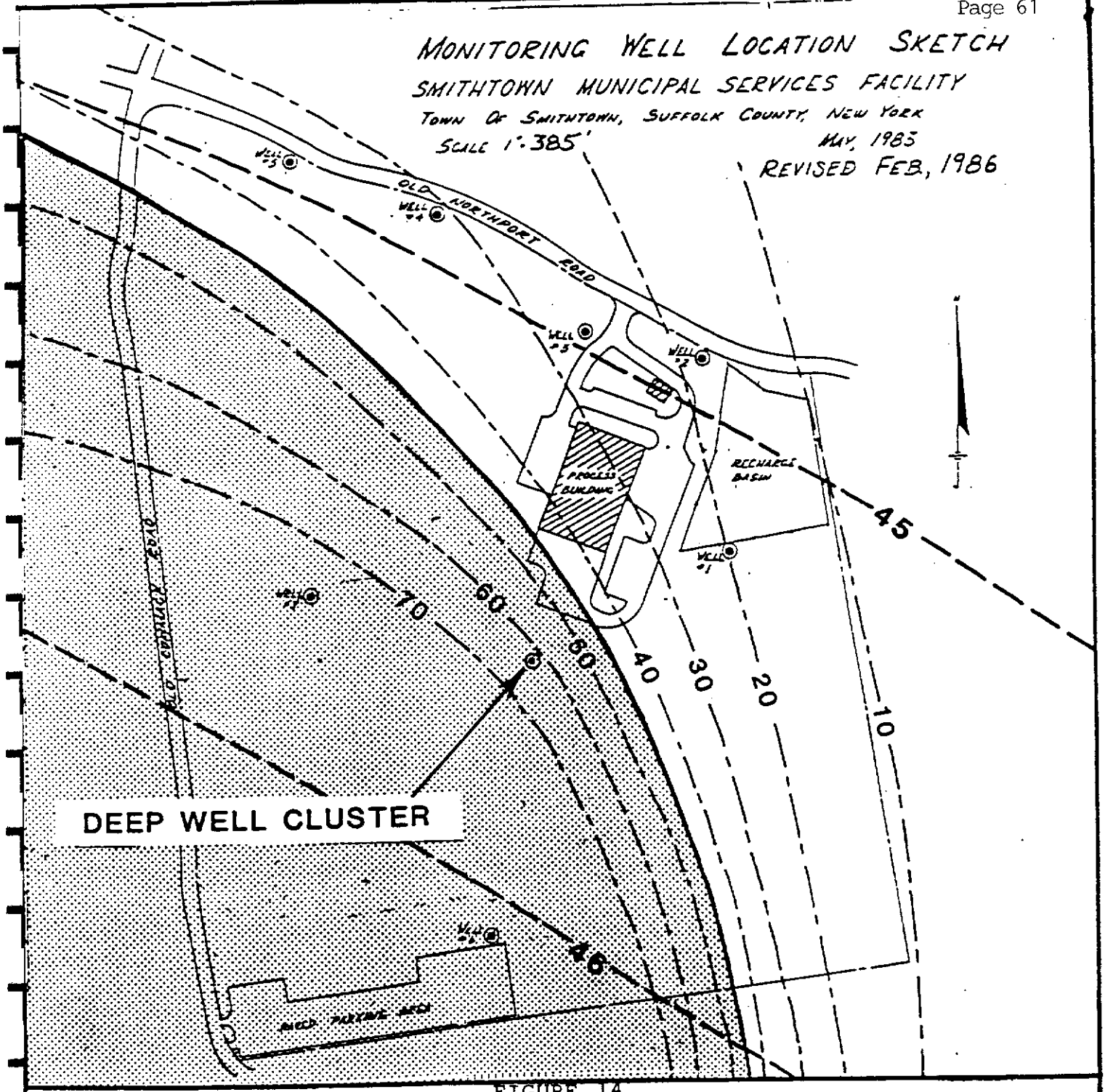


FIGURE 14

CONTOURS OF THE WATER TABLE AND UPPER SURFACE OF SMITHTOWN CLAY UNIT - SMITHTOWN LANDFILL VICINITY
FEBRUARY, 1986

45 — Approximate location of local water table contours

30 — Approximate location of contours on the upper surface of the Smithtown clay

Areas where the water table is located within the Smithtown clay. Otherwise, the water table is above the Smithtown clay.

Note: All datum is above mean sea level.

hilly due to erosional forces which acted prior tc deposition of the overlying sand and gravel layers. In contrast, the water table surface is fairly regular. As a result, in some areas the clay unit often includes the water table surface within its thickness; in other areas, the water table is located above the upper surface of the clay and appears to be the condition at the MSF site.

Drilling records during installation of the Town wells indicate that Well No. 6 (S-74872), an upgradient well, is screened within the clay unit and that the remaining wells are all screened above the clay unit. At the deep well cluster location drilled in February, the water table was within the clay at about 25 feet below the top of the clay unit.

Figure 14 presents the upper surface of the clay unit; water table contours; and, areas where the water table is located within and above the clay unit. The line separating the shaded from non-shaded area approximates the intersection of the water table with the upper surface of the clay unit.

4.3 POTENTIOMETRIC CONTOURS

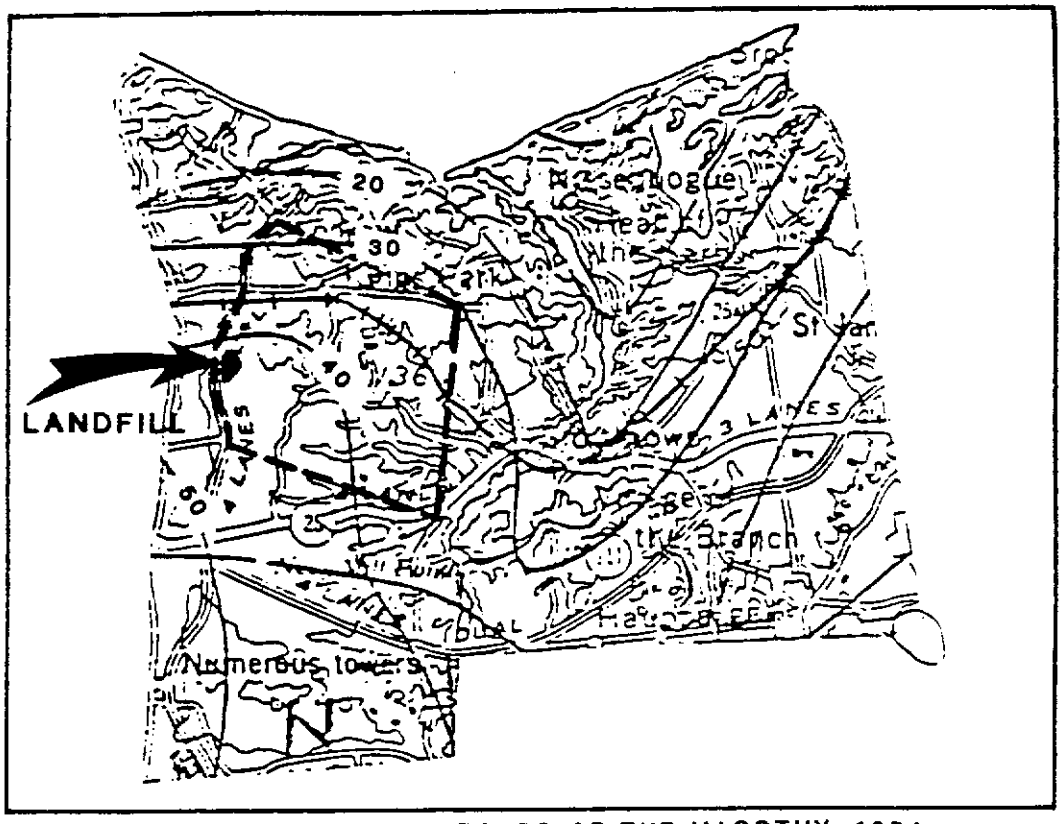
Potentiometric contour maps for Long Island have been published by the U.S. Geological Survey based on

measurements of wells screened in the Magothy Formation. Potentiometric contours on a map represent equipotential lines (equal head, or potential, of the formation water).

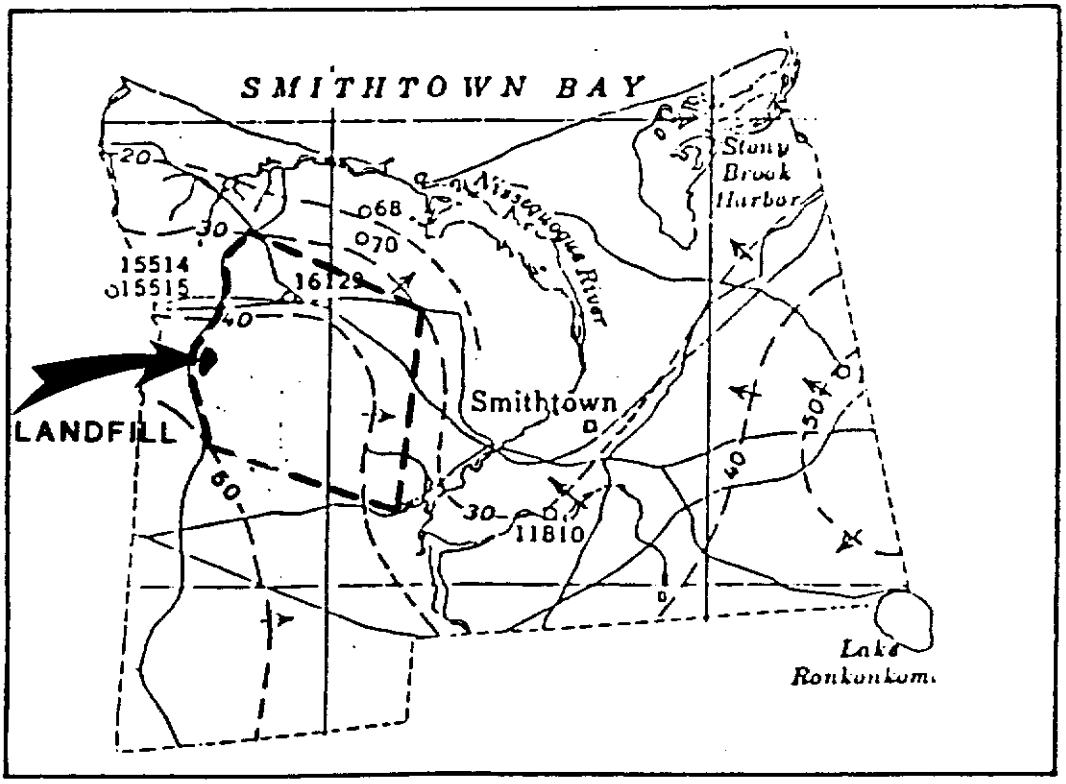
Potentiometric contour maps are analogous to water table contour maps. However, unlike water table contour maps, potentiometric contour maps are prepared for deep aquifer zones where the formation water exists under confined conditions. Similarly, flow lines within the confined aquifer are orthogonal to contours of the potentiometric surface.

Potentiometric contour maps for the Magothy Formation for the years 1959, 1971, and 1979 are shown on Figures 15 and 16. High and low points on the potentiometric surface can be seen southwest and east-southeast of the MSF site, respectively, corresponding to the same high and low points on the water table contour maps. A north-northeast horizontal direction of groundwater flow is suggested by these maps.

A modified potentiometric contour map for the immediate vicinity around the MSF site is presented Figure 17. These contours are developed from measurements taken in the Town of Smithtown and S.C.W.A. deep well clusters in February, 1986. Results are similar to those of previous years, as represented by the U.S.G.S. maps.



POTENTIOMETRIC CONTOURS OF THE MAGOTHY-1971
Source: Jensen and Soren (1974)



POTENTIOMETRIC CONTOURS OF THE MAGOTHY - 1959
Source: Lubke (1964)

TOWN OF SMITHTOWN
SMITHTOWN LANDFILL

POTENTIOMETRIC CONTOURS

FIGURE NO. 15

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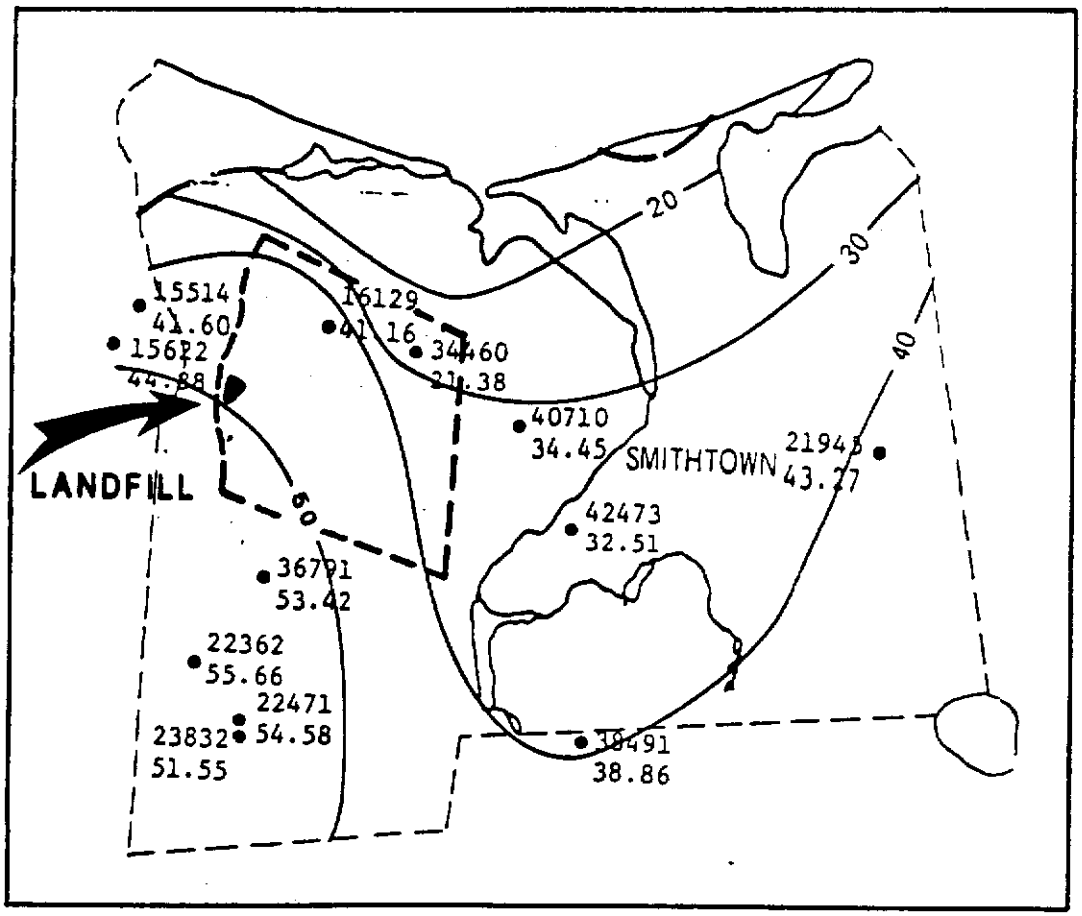

POTENTIOMETRIC CONTOURS OF THE MAGOTHY - 1979

Source: Donaldson and Koszalka (1982)

TOWN OF SMITHTOWN
SMITHTOWN LANDFILL

POTENTIOMETRIC CONTOURS

FIGURE NO. 16

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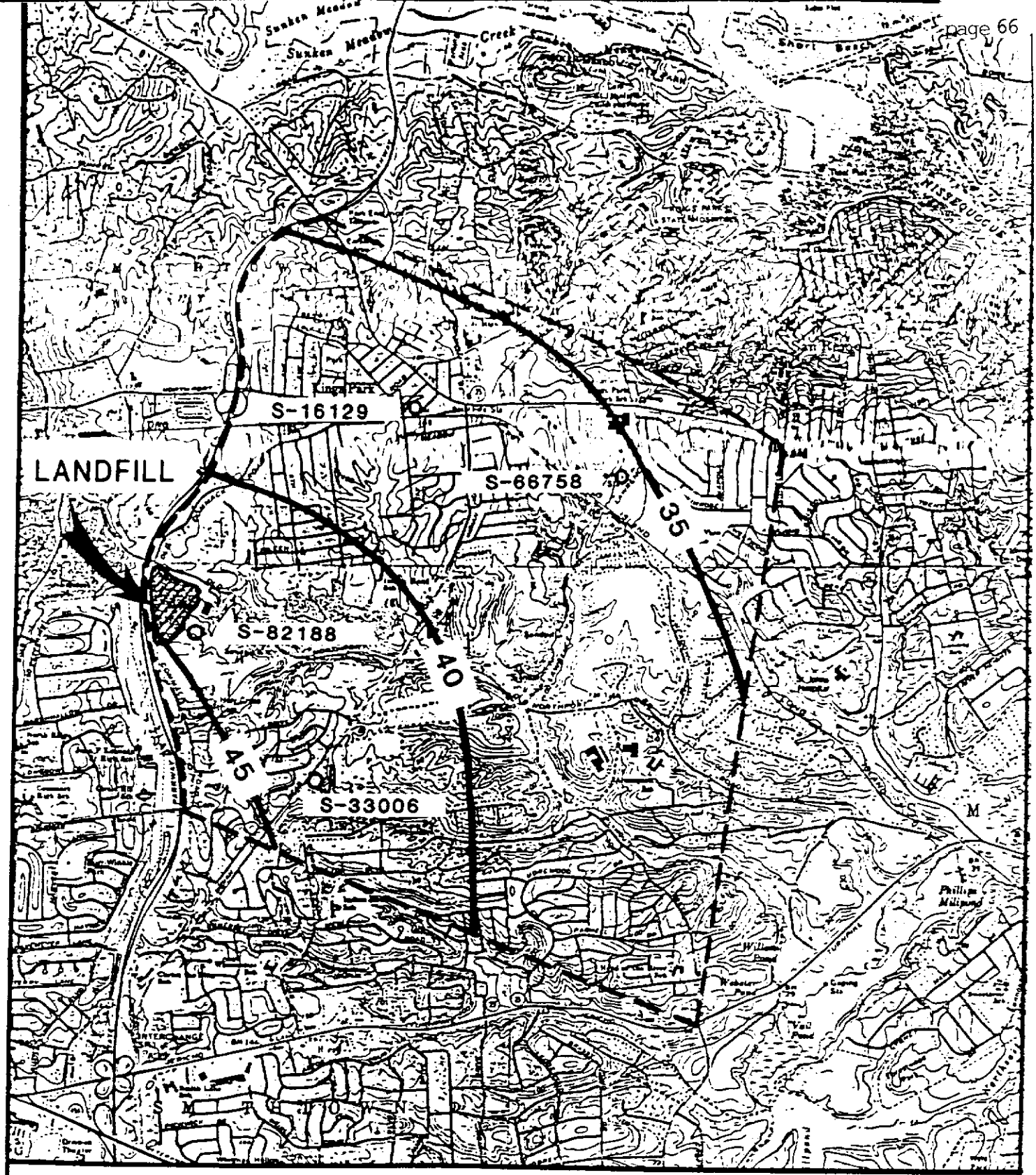

FIGURE 17

POTENTIOMETRIC CONTOURS OF THE MAGOTHY FORMATION
SMITHTOWN LANDFILL VICINITY

(SEE FIGURES 15 AND 16)
DATUM: MEAN SEA LEVEL

FIGURE NO.17

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4.4 HYDROLOGIC CROSS SECTIONS

To assess the significance of vertical flow gradients, potentiometric surface elevations were plotted on hydrologic cross sections (at the midpoint of the well screens) to determine lines of equal potentiometric head. The direction of vertical flow was determined by drawing a line perpendicular to the equal potential contour lines. Convex contours indicate regions of groundwater recharge, while concave contours are associated with groundwater discharge.

The location of hydrologic cross sections and wells used for its development are shown on Figure 18.

Hydrologic profile Y-Y' is in the direction of groundwater flow, Figure 19, while profile X-X' is perpendicular to the flow direction, Figure 20. Inferred direction of groundwater flow in the confined formation are shown by arrows plotted on the equal potential contour lines. The orthogonal flow net formed by flow and equipotential lines was not developed. Additional deep well clusters and potentiometric surface measurements within the study area would be required for development of flow nets.

Based on the potentiometric surface measurements recorded in February, 1986, and the hydrologic profiles, Figures 19 and 20, indicate groundwater recharge at the MSF site and at the Lawrence Road and Kings Park Road well fields. Data for the Carlson Avenue well field, located about 1.5 miles from the MSF site in the direction of groundwater flow, indicates horizontal flow and thus the limit of the recharge area, Zone I - hydrogeologic boundary. The Carlson Avenue field is located directly on the proposed NYSDEC modified 208 line. Groundwater flow beneath the MSF site appears to be in a transition zone approaching *horizontal flow at the Carlson Avenue station of the SCWA.*

It must be emphasized that the referenced groundwater flow regime occurs beneath the Smithtown Clay unit which separates the MSF landfill from the confined aquifer system. As such, the deeper Magothy formation is not directly affected by recharge at the MSF landfill site.

Based on results of this study, the Smithtown MSF landfill is located within the deep flow recharge area as defined in the 208 Study and Draft-Long Island Groundwater Management Program of the NYSDEC.

The deep groundwater flow regime in the vicinity of the MSF landfill is protected due to the geology of the area, e.g. presence of the Smithtown Clay unit. Furthermore, the

area between the landfill site and the Zone I - Hydrogeologic Boundary line in the direction of flow appears to be a transition zone thus recharge at the site has little or no impact on the flow system.

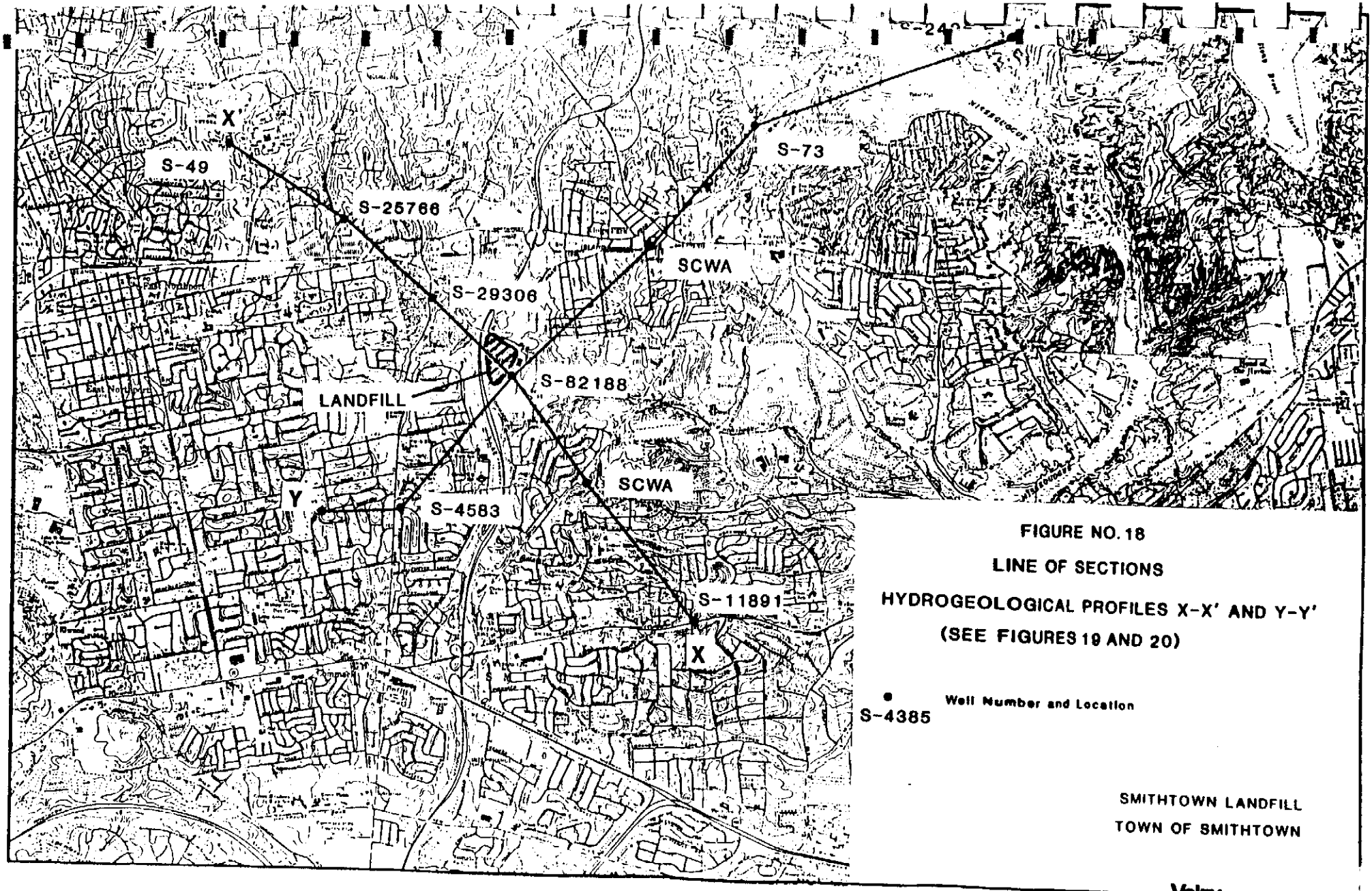


FIGURE NO. 18

LINE OF SECTIONS

HYDROGEOLOGICAL PROFILES X-X' AND Y-Y'

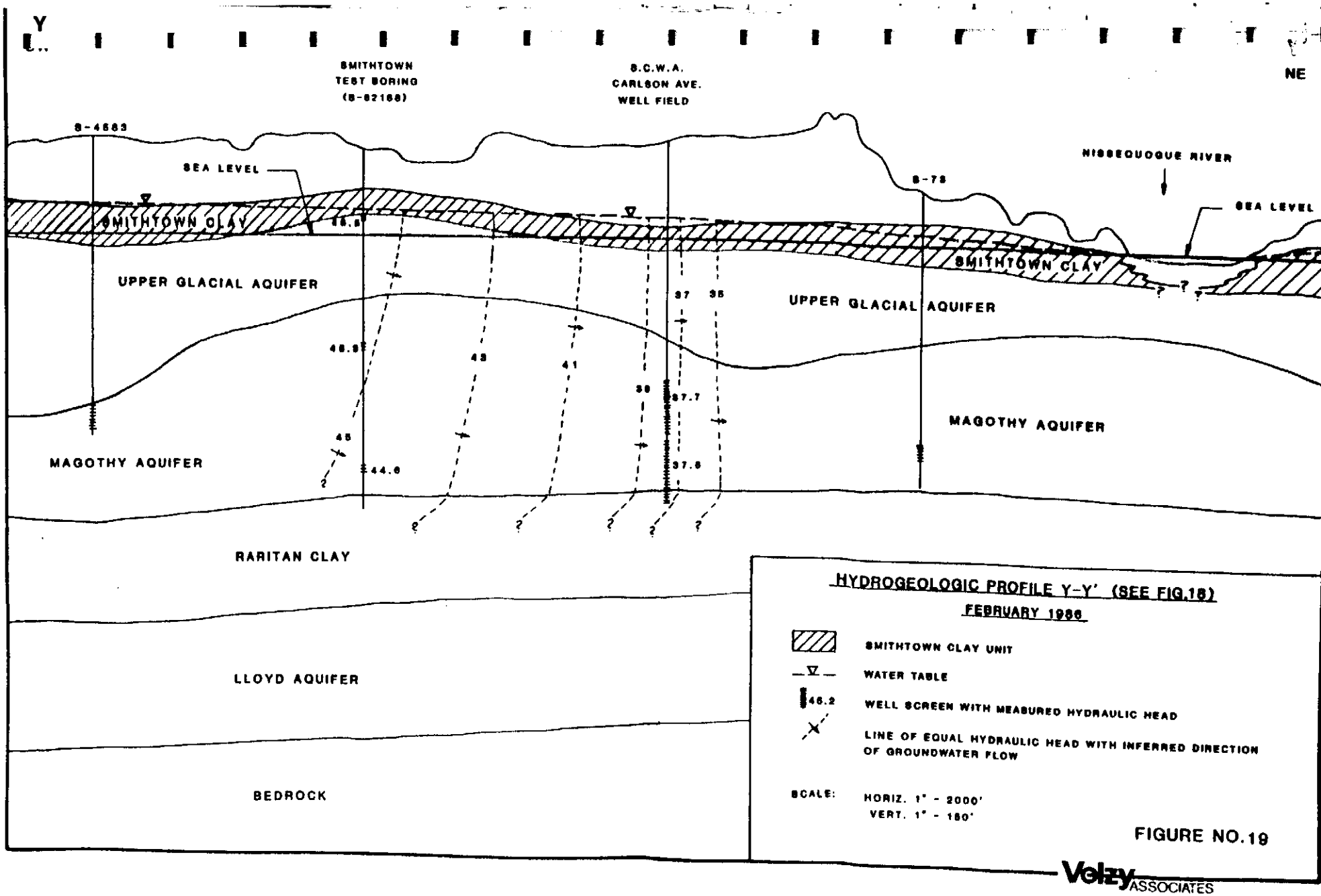
(SEE FIGURES 19 AND 20)

● S-4385 Well Number and Location

SMITHTOWN LANDFILL

TOWN OF SMITHTOWN

Volzy ASSOCIATES


Y
Y'
SMITHTOWN
TEST BORING
(S-82168)
S.C.W.A.
CARLSON AVE.
WELL FIELD
NE
S-4583
SEA LEVEL
SMITHTOWN CLAY
46.8
UPPER GLACIAL AQUIFER
MAGOTHY AQUIFER
48.8
45
44.6
43
41
39
37.7
37.8
37
35
S-73
NISSEQUOGUE RIVER
SEA LEVEL
SMITHTOWN CLAY
UPPER GLACIAL AQUIFER
MAGOTHY AQUIFER
RARITAN CLAY
LLOYD AQUIFER
BEDROCK
HYDROGEOLOGIC PROFILE Y-Y' (SEE FIG.18)
FEBRUARY 1986
SMITHTOWN CLAY UNIT
WATER TABLE
46.2
WELL SCREEN WITH MEASURED HYDRAULIC HEAD
LINE OF EQUAL HYDRAULIC HEAD WITH INFERRED DIRECTION OF GROUNDWATER FLOW
SCALE:
HORIZ. 1" - 2000'
VERT. 1" - 150'
FIGURE NO.19
Velzy ASSOCIATES

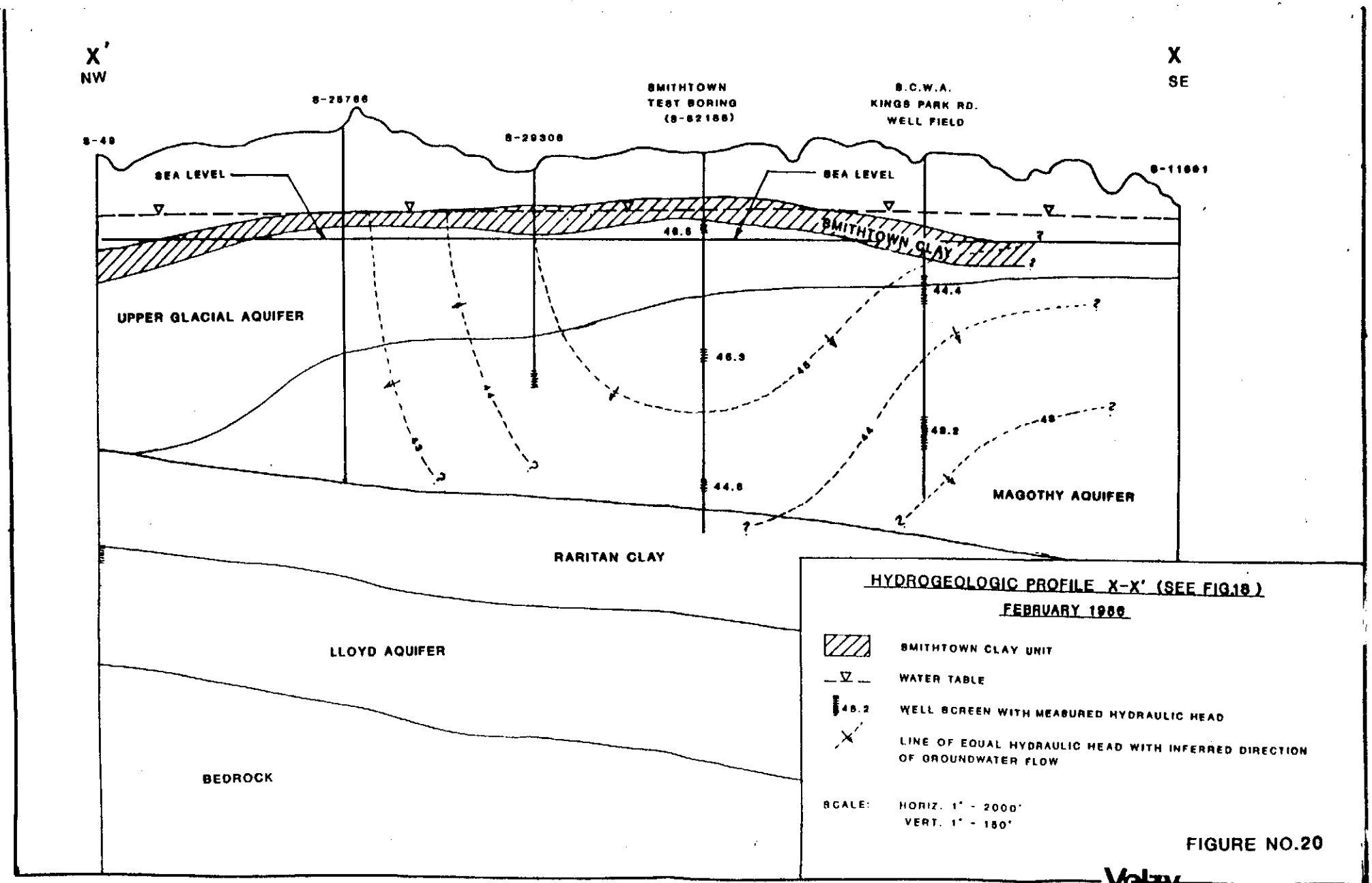


FIGURE NO.20

Velzy ASSOCIATES

REFERENCES

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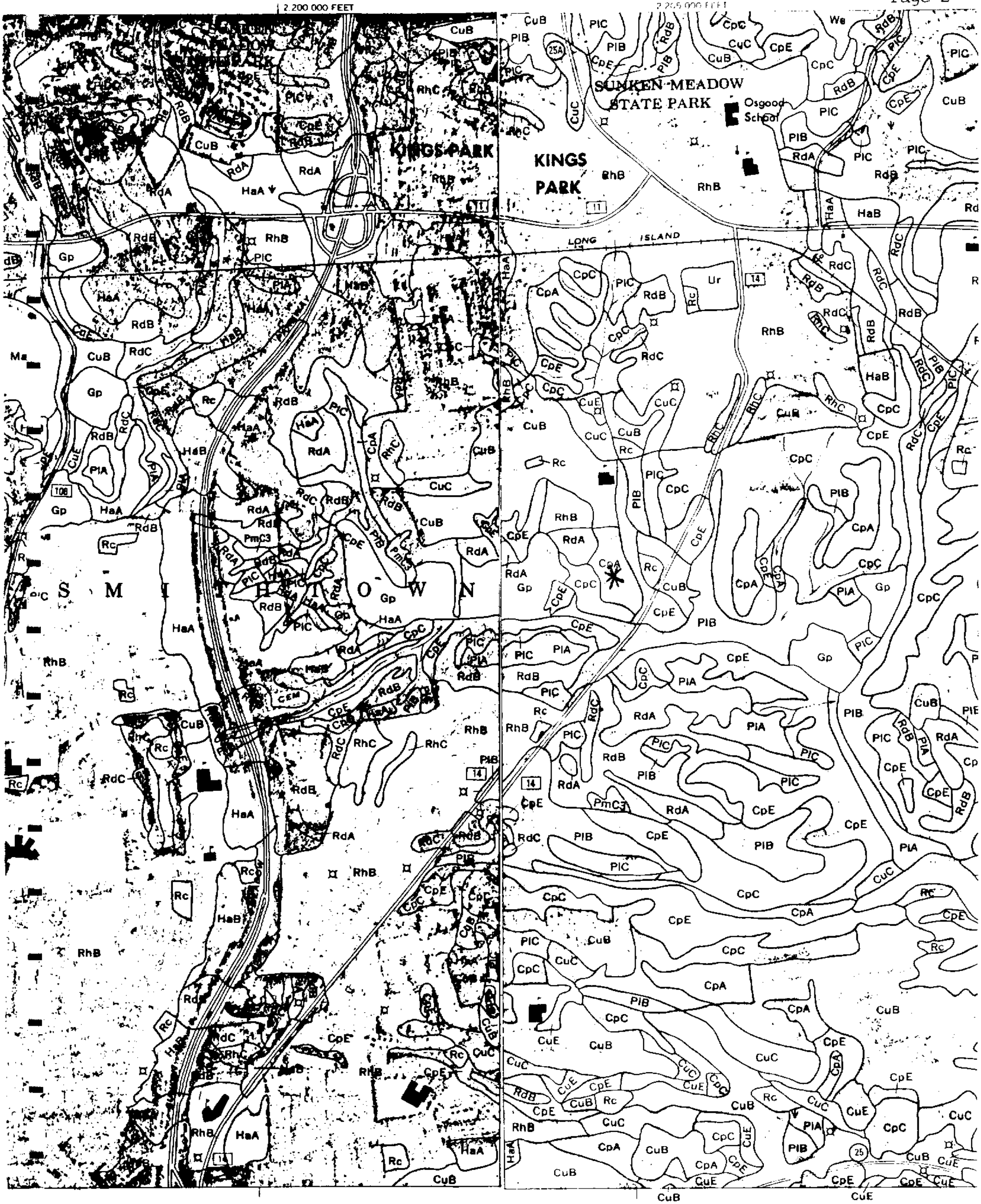
REFERENCE NO. 3

SOIL SURVEY OF

Suffolk County, New York

United States Department of Agriculture
Soil Conservation Service
in cooperation with
Cornell Agricultural Experiment Station


2 200 000 FEET
SUNKEN MEADOW
STATE PARK
Osgood
School
KINGS PARK
KINGS
PARK
LONG ISLAND
S M I T H T O W N
25A
11
14
108
25

ered by drainage, these soils can be used for crops. Reaction is strongly acid to medium acid in the surface layer and medium acid to slightly acid in the subsoil. Natural fertility is medium, which is somewhat higher than that of other soils in the county. The response of crops to lime and fertilizer is good. The root zone is 20 to 25 inches thick. Available moisture capacity is high in the lower part of the root zone.

Representative profile of Canadice silt loam, in a wooded area, between Franklin Avenue and the railroad tracks, one-half mile southwest of Greenport:

O1—4 to 3 inches, loose oak and beech leaves.
O2—3 inches to 0, black (10YR 2/1), partly decomposed organic matter; very heavily matted with roots.
A1—0 to 4 inches, dark-brown (10YR 3/3) silt loam; weak, medium, granular structure; friable; many roots; very strongly acid; clear, wavy boundary.
A21g—4 to 6 inches, gray or light-gray (10YR 6/1) silt loam; massive; slightly sticky; common roots; very strongly acid; clear, irregular boundary.
A22g—6 to 18 inches, gray or light-gray (10YR 6/1) loam; many, medium and coarse, faint, light yellowish-brown and yellowish-brown mottles; massive; sticky; common roots; strongly acid; clear, irregular boundary.
B21t—18 to 24 inches, gray or light-gray (10YR 6/1) clay loam; many, medium, prominent, dark yellowish-brown and strong-brown mottles; very weak, fine, blocky structure; sticky; a few patchy clay films; medium acid; clear, wavy boundary.
IIB22t—24 to 50 inches, reddish-brown (5YR 5/4) silty clay; a few, medium, prominent, gray mottles and a few, medium, distinct, strong-brown mottles; weak, medium, blocky structure; firm; sticky; a few roots; many reddish-gray (5YR 5/2) clay films on ped faces and in pores; a few streaks and pockets of gray sandy and gravelly material; a few black iron concretions; medium acid.

The solum is 40 to 50 inches thick. The content of coarse fragments in the solum is less than 5 percent. Reaction is very strongly acid to medium acid in the A horizon and in the upper part of the B horizon, and it is medium acid to slightly acid in the lower part of the B horizon.

The A1 horizon ranges from black (10YR 2/1) to dark brown (10YR 3/3). It has weak to moderate granular structure. Consistence is friable or very friable. In the A2 horizon color ranges from gray to light gray (10YR 6/1) or light brownish gray (10YR 6/2).

In the B21t horizon color ranges from dark grayish brown (10YR 4/2) to gray or light gray (10YR 6/1). Texture in this horizon ranges from clay loam to silty clay loam. In the IIB22t horizon color ranges from reddish brown (5YR 5/4) to weak red (2.5YR 4/2). Texture ranges from silty clay to silty clay loam.

Canadice soils are redder in the lower part of the B horizon and are more acid throughout the solum than the defined range for the series. These differences do not alter their usefulness or behavior.

Canadice soils are near Walpole and Raynham soils. Canadice soils are similar to those soils in drainage, but they have a higher content of clay and are redder in the lower part of the B horizon than Walpole and Raynham soils.

Canadice silt loam (Ca).—This is the only Canadice soil mapped in the county. It is mainly in one large continuous area near Greenport. Slope is 3 percent or less.

Included with this soil in mapping are small areas of moderately well drained, gently sloping soils that formed in the same kind of material as Canadice soil. Old clay pits are common because this soil provided an excellent source of clay for making bricks.

The hazard of erosion is slight on this soil. The soil must be artificially drained for successful production of commonly grown crops, but a lack of suitable outlets makes artificial drainage difficult. Because of wetness, most areas of this soil have been left as woodland. Capability unit IVw–2; woodland suitability group 5w1.

Carver Series

The Carver series consists of deep, excessively drained, coarse-textured soils. These soils are nearly level to steep and are throughout the county on rolling moraines and broad outwash plains. Slopes range from 0 to 35 percent. Native vegetation is white oak, black oak, scrub oak, and pitch pine.

In a representative profile a thin layer of leaf litter and partly decayed organic matter is on the surface. Below this is the surface layer of dark-gray sand about 3 inches thick. The subsurface layer is gray or light-gray loose sand to a depth of 8 inches. The subsoil is loose sand to a depth of about 22 inches. It is brown in the upper part and strong brown in the lower part. The substratum, to a depth of 60 inches, is loose sand that contains some gravel. It is light yellowish brown to brownish yellow to a depth of 31 inches. Below this, it is light yellowish brown.

Carver soils have very low available moisture capacity. Natural fertility is very low. The response of crops to applications of lime and fertilizer is fair. Permeability is rapid throughout. The root zone is mainly in the uppermost 30 to 40 inches.

Representative profile of Carver sand from an area of Carver and Plymouth sands, 0 to 3 percent slopes, 4.8 miles east of Riverhead on south side of State Route 24 in Southampton:

O1—2 inches to 1 inch, loose hardwood leaves.
O2—1 inch to 0, black mull; a few white sand grains.
A1—0 to 3 inches, dark-gray (10YR 4/1) medium and coarse sand; massive; loose; common roots; very strongly acid; clear, wavy boundary.
A2—3 to 8 inches, gray or light-gray (10YR 6/1) medium and coarse sand; single grain; loose; common roots; dark staining from charcoal left by forest fires; very strongly acid; abrupt, wavy boundary.
B21—8 to 14 inches, brown (7.5YR 5/4) coarse and medium sand; single grain; loose; common roots; very strongly acid; clear, irregular boundary.
B22—14 to 22 inches, strong-brown (7.5YR 5/6) coarse sand; massive to very weak, medium, subangular blocky structure; very friable to loose; common roots; some interfingering of dark-brown material; 5 percent rounded gravel in lower part; very strongly acid; clear, wavy boundary.
C1—22 to 31 inches, light yellowish-brown (10YR 6/4) to brownish-yellow (10YR 6/6) coarse sand; single grain; loose; a few roots; 5 percent rounded gravel; a few yellowish-brown spots; very strongly acid; gradual, wavy boundary.
C2—31 to 60 inches, light yellowish-brown (2.5Y 6/4) coarse sand and a few pebbles; single grain, loose; 10 percent fine gravel; very strongly acid.

The thickness of the solum ranges from 16 to 32 inches. The content of coarse fragments ranges from 0 to 15 percent in the solum and from 5 to 30 percent in the substratum. Reaction ranges from very strongly acid to strongly acid throughout. Texture of the solum ranges from fine sand to coarse sand, but it generally is medium and coarse sand. Consistence ranges from very friable to loose.

The A1 horizon ranges from black (10YR 2/1) to dark gray (10YR 4/1). It is massive or has weak, granular structure. The A2 horizon ranges from gray (10YR 5/1) to light brownish gray (10YR 6/2).

The B horizons range from brown (7.5YR 5/4) to brownish yellow (10YR 6/6). These horizons are single grain or massive to weak granular structure.

The C horizon ranges from yellowish brown (10YR 5/4) to yellow (2.5Y 7/6).

Carver soils are associated with Plymouth soils. Carver soils are similar to Plymouth soils; but they have a prominent A2 horizon, and the upper part of the B horizon is richer in iron and humus. Also associated with Carver soils are Deerfield soils that have a seasonal high water table within a depth of 18 to 24 inches.

Carver and Plymouth sands, 0 to 3 percent slopes (CpA).—These soils are mainly on outwash plains; however, they are also on some flatter hilltops and intervening draws on moraines. A small part of this mapping unit is slightly undulating. This unit can be made up entirely of Carver sand, entirely of Plymouth sand, or of a combination of the two soils.

The Carver soil in this mapping unit has the profile described as representative of the Carver series. The Plymouth soil has a profile similar to the one described as representative of the Plymouth series, except that its texture is sand throughout the profile, rather than loamy sand.

Included with these soils in mapping are small areas of Plymouth loamy sand and areas of loamy sands that have a profile similar to soils of the Carver series. Also included are soils that are like Carver soils that have dark iron and humus coatings on the sand grains in the upper part of the subsoil. Also included are small areas of Haven or Riverhead soils on moraines that have dense cover of vegetation and a complex topography.

The hazard of erosion is slight on the soils in this unit. These soils are droughty. Natural fertility is low.

These soils are not well suited to the crops commonly grown in the county. Because these soils tend to be droughty, lawns and shrub plantings are difficult to establish and maintain. Almost all of this unit has been left in woodland or in brush. Many areas previously cleared for farming are now idle. Most areas in the western part of the county and near the shores of the eastern part of the county are used for housing developments. Capability unit VIIs–1; woodland suitability group 5s1.

Carver and Plymouth sands, 3 to 15 percent slopes (CpC).—These soils are mainly on rolling moraines; however, they are also on the side slopes of many drainage channels on the outwash plains. Individual areas of this mapping unit are large on the rolling topography of the Ronkonkoma moraine, and in these areas slopes are complex. On the outwash plain, this unit is in long, narrow strips parallel to drainageways. This unit can be made up entirely of Carver sand, entirely of Plymouth sand, or of a combination of the two soils.

The Carver soil in this mapping unit has a profile similar to the profile described as representative of that series. The Plymouth soil in this unit has a profile similar to the profile described as representative of the Plymouth series, except that its texture is sand throughout the profile, rather than loamy sand.

Generally included with this unit in mapping are areas of Plymouth loamy sand or loamy coarse sand that are very close to sand in texture. Also included are small areas of Carver and Plymouth sands, 0 to 3 percent slopes. Small areas of these soils on moraines are as much as 25 percent gravel throughout, especially along the crests of low ridges. Also included are soils similar to this Carver soil that have dark iron and humus coatings on the sand grains in the upper part of the subsoil. In the bottom of many closed depressions, these soils have siltier accumulations from adjoining hillsides; and in some places silty lenses are deep into the substratum.

The hazard of erosion is slight to moderate on the soils in this unit. These soils are droughty, and natural fertility is low. In some places, slope is a limitation to use.

These soils are not well suited to crops commonly grown in the county. These sandy soils severely limit installation and maintenance of lawns and landscaping shrubs. Almost all of these soils are in woodland. Many areas in the western part of the county, particularly along the north shore, are used as homesites. Capability unit VIIs–1; woodland suitability group 5s1.

Carver and Plymouth sands, 15 to 35 percent slopes (CpE).—These soils are almost exclusively on moraines except for a few steep areas on side slopes along some of the more deeply cut drainage channels on outwash plains. On morainic landforms these areas are large, and slopes generally are complex, especially on the Ronkonkoma moraine. On the outwash plains the areas are in long, narrow strips parallel to the drainage channels. Some areas are made up entirely of Carver sand, others entirely of Plymouth sand, and still others of a combination of the two soils.

The Carver soil in this mapping unit has a profile similar to the profile described as representative of that series, except that the gravel content is greater, and gravel makes up as much as 15 percent, by volume, of the soil in some places. The Carver soil in this unit generally is a few inches thinner to the substratum than the soil described as representative. The Plymouth soil in this unit is similar to the soil described as representative of the Plymouth series, except that its texture is sand rather than loamy sand. Also, it has a higher content of gravel, and gravel makes up as much as 15 percent, by volume, of the soil in some places.

Included with these soils in mapping are small areas of loamy sand and small areas of Carver and Plymouth sands, 0 to 3 percent slopes, or 3 to 15 percent slopes. Also, on moraines, some areas of this unit contain as much as 30 percent gravel and a few cobblestones. Such areas generally are small and are in a mixed pattern with soils that contain less gravel. Also included are areas of Montauk loamy sand, sandy variant, 15 to 35 percent slopes, that have a weakly developed fragipan or a fragipan that is at a depth of more than about 4 feet. Also included are soils that are similar to Carver soils that have dark iron and humus coatings on the sand grains in the upper part of the subsoil. Also included are small areas of Haven and Riverhead soils that have slopes of more than 15 percent.

The hazard of erosion is moderate to severe on the soils in this unit. These soils are droughty, and natural fertility is low. Moderately steep to steep slopes are a limitation to use.

The soils of this unit are poorly suited to crops commonly grown in the county. Areas of these soils have not been cleared for farming. A few areas in the western

TABLE 5.—*Estimated engineering*

Not included in this table, because the characteristics are too variable to estimate, are the miscellaneous land types Bc, CuB, CuC, CuE, it is highly organic and is not suitable for engineering. An asterisk beside the series name in the first column indicates that at least and limitations, and for this reason it is necessary to follow carefully the instructions for referring to other series that appear in the

Soil series and map symbols	Depth to seasonal high water table	Depth from surface (typical profile)	Classification		
			USDA texture	Unified	AASHO
Atsion: At	*Feet* 1½–1½	*Inches* 0–27	Sand and loamy sand	SM, SP–SM	A–2–4
		27–56	Stratified sand and gravel or sand	SM, SP–SM, GP–GM, GP, GM, SP	A–1, A–3
Berryland: Bd	0–½	0–30	Sand and loamy sand	SM, SP–SM	A–2–4
		30–52	Sand or gravelly sand	SP–SM, SM, SP	A–3, A–1
Bridgehampton: BgA, BgB	>3	0–56	Silt loam and very fine sandy loam.	ML	A–4
		56–80	Fine gravel and sand	GP–GM, GM, SP–SM, SM, SW–SM	A–1
BhB, BhC	>3	0–48	Silt loam and very fine sandy loam.	ML	A–4
		48–61	Sandy loam or fine sandy loam, gravelly sandy loam.	SM	A–2–4, A–4, A–1
		61–81	Loamy sand or gravelly loamy sand.	SM, SP–SM	A–1, A–2–4
Canadice: Ca	½–1½	0–18	Silt loam or loam	ML, ML–CL	A–4
		18–50	Silty clay, silty clay loam, clay loam.	CL	A–6, A–7
*Carver: CpA, CpC, CpE. For Plymouth part, see the Plymouth series.	>4	0–22	Fine sand to coarse sand	SP–SM, SW–SM	A–3, A–1
		22–60	Coarse sand to gravelly sand	SP, SP–SM	A–3, A–1
Deerfield: De	1½–2	0–25	Sand to fine sand or loamy sand.	SM, SP–SM	A–3, A–1
		25–53	Sand to stratified sand and gravel.	SP, SP–SM	A–1, A–3
Haven:[2] HaA, HaB, HaC, He	>4	0–19	Loam, silt loam, and very fine sandy loam.	ML, ML–CL	A–4
		19–28	Silt loam, very fine sandy loam, and gravelly loam.	ML, SM	A–4, A–2–4 or A–1
		28–55	Gravelly sand, loamy sand, sandy loam, or stratified sand and gravel.	SM, SP, SP–SM or GP	A–1 or A–2–4
Montauk: MfA, MfB, MfC, MkA, MkB, MkC.	>2	0–27	Fine sandy loam, silt loam, loam, or sandy loam.	SM, ML	A–4, A–2–4
		27–40	Sandy loam, fine sandy loam, and loamy sand.	SM, SW–SM	A–2–4, A–4, A–1
		40–60	Loamy sand, gravelly loamy sand, sandy loam, and fine sandy loam.	SM, SP–SM	A–1, A–2–4
Montauk, sandy variants: MnA, MnB, MnC, MnE.	>4	0–24	Loamy sand or sand	SM, SP–SM	A–2–4, A–1
		24–60	Loamy sand and sand	SM, SP–SM	A–2–4, A–1
Plymouth: PlA, PlB, PlC, PmB3, PmC3	>4	0–27	Loamy sand, loamy fine sand, gravelly loamy sand, and sand.	SM, SP–SM	A–2–4, A–1
		27–58	Sand and gravel, coarse sand, and gravelly coarse sand.	SP, GP, SP–SM, GP–GM	A–1, A–3
PsA, PsB	>3	0–38	Loamy sand	SM	A–2–4
		38–64	Silt loam	ML	A–4
		64–80	Fine gravel and sand	GP–GM, GM, SP–SM, SM	A–1

See footnotes at end of table.

properties of the soils

Du, Es, Fd, Fs, Gp, Ma, Rc, Tm, and Ur and the graded soils Bm, MlB, MlC, RhB, and RhC. Muck (Mu) also is not included, beca one mapping unit in that series is made up of two or more kinds of soil. The soils in such mapping units may have different proper first column. Absence of data indicates that no estimate was made. >=greater than <=less than]

Coarse fraction more than 3 inches in diameter	Percentage less than 3 inches passing sieve—				Permeability	Available moisture capacity [1]	Reaction
	No. 4 (4.7 mm.)	No. 10 (2.0 mm.)	No. 40 (0.42 mm).	No. 200 (0.07 mm).			
Percent					*Inches per hour*	*Inches per inch of soil*	*pH value*
	95–100	90–100	50–75	10–30	>6. 3	0. 04–0. 08	4. 5–
	45–95	40–95	15–55	0–15	>6. 3	0. 02–0. 04	4. 5–
	85–100	80–100	50–75	10–30	>6. 3	0. 03–0. 08	4. 5–
	75–100	70–100	35–70	0–15	>6. 3		4. 5–
	95–100	90–100	90–100	60–95	0. 63–2. 0	0. 15–0. 20	4. 5–
	45–95	35–95	20–40	5–15	>6. 3		5. 1–
	95–100	90–100	90–100	60–95	0. 63–2. 0	0. 15–0. 20	4. 5–
0–5	70–95	60–95	40–75	20–40	< 0. 63		4. 5–
0–5	65–95	60–90	35–70	10–30	>6. 3		4. 5–
	100	100	85–100	65–85	0. 63–2. 0	0. 17–0. 20	5. 1–
	95–100	95–100	90–100	70–95	< 0. 20	0. 13–0. 17	5. 6–
	75–100	70–100	25–65	5–10	>6. 3	0. 03–0. 04	4. 5–
0–5	55–95	45–95	15–55	0–10	>6. 3	0. 02–0. 04	4. 5–
	95 100	90 100	45 70	5 25	>6. 3	0. 04 0. 06	4. 5
0 5	55 90	50 90	25 65	0 10	>6. 3	0. 02 0. 04	4. 5
	85 100	80 100	70 85	50 80	0 63 2 0	0 14 0 20	4. 5
0 3	60 80	55 75	45 70	25 55	>2 0	0 03 0 14	4. 5
0 3	45 95	30 95	5 75	0 30	>6. 3	0. 01 0. 04	4. 5
0 5	80 100	75 100	55 95	25 95	0 63 6 3	0 14 0 20	4 5
0 5	70 95	60 95	40 75	10 40	0 63	0 06 0 12	4 5
0 5	65 95	60 90	35 70	10 30	> 0. 63		4. 5
0–5	80–95	75–95	40–70	10–25	6. 3	0. 03–0. 07	4. 5–
0–5	65–95	60–90	30–70	5–25	0. 20–2. 0	0. 02–0. 07	4. 5–
0 5	75 95	70 95	35 70	5 25	>6. 3	0. 04 0. 08	4. 5
0–5	45–95	40–95	15–55	0–10	>6. 3	0. 02–0. 04	4. 5–
	90–100	85–100	50–75	15–30	>6. 3	0. 06–0. 08	4. 5–
	95–100	90–100	90–100	60–95	0. 63–2. 0		4. 5–
	45–95	35–95	20–40	5–15	>6. 3		5. 1–

REFERENCE NO. 4

YEC, INC.
Forest View Professional Building
10 Pine Crest Road
Valley Cottage, NY 10989
(914) 268-3203

9/29/88

Mr Francis J. Mooney
Town Engineer
124 W.Main Street
Smithtown, New York 11787

Dear Mr Mooney

The New York State Department of Environmental Conservation has required the subcontractor (YEC, Inc.) for the Phase I Investigations to document all reference material used in the reports. Enclosed please find a summary of our interview on an Interview Acknowledgement Form. Please read this summary and sign at the bottom to verify its accuracy. Write in any revisions or additions to this summary on the form, if necessary, and return as soon as possible in the self addressed envelope.

It was a pleasure talking with you. If you have any questions, please call this office at: (914) 268 3203.

Very truly yours

Ari Selvakumar
Staff Engineer
YEC, Inc.

INTERVIEW ACKNOWLEDGEMENT FORM

SITE NAME	: Smithtown Landfill	I.D. NUMBER	: 152043
PERSON CONTACTED	: Francis J. Mooney	DATE	: 9/28/1988
AFFILIATION	: Town Engineer	PHONE NUMBER	: (516) 360 7550
ADDRESS	: 124 W.Main Street, Smithtown New York 11787	CONTACT PERSON(S)	: Y.S.Ed. Chen, Ph.D.,P.E. Ari Selvakumar
TYPE OF CONTACT	: In Person		

INTERVIEW SUMMARY

The Smithtown Landfill site was leased from Izzo Brothers on the 10th of March, 1970 and was operated by Town of Smithtown from 1970 to 1979. The Landfilling was discontinued in 1979, when landfilling begun on a new landfill. The size of the site is 29.09 acres. The landfill accepted only household waste of all types. The landfill was capped with 3 to 6 feet thick soil. The average facility slope is 1 - 2%. There is a generator which converts methane into electricity. No hazardous substances are known to have been applied. There was no reported history of methane explosion.

ACKNOWLEDGEMENT

I have read the above transcript and I agree that it is an accurate summary of the information verbally conveyed to YEC, Inc. interviewer (as revised below, if necessary).

Revisions (please write in any corrections needed to above transcript)

Signature: Francis J. Mooney Date: Oct 3, 1988

YEC, Inc.

REFERENCE NO. 5

SMITHTOWN LANDFILL SURVEY

- Samples were collected around the older, closed site on Old Northport Road and the Balefill site located at the corner of Old Commack Road and Old Northport Road.

- Groundwater is generally north by northewast, with a more easterly component at the closed site.

- A total of nine wells were sampled:

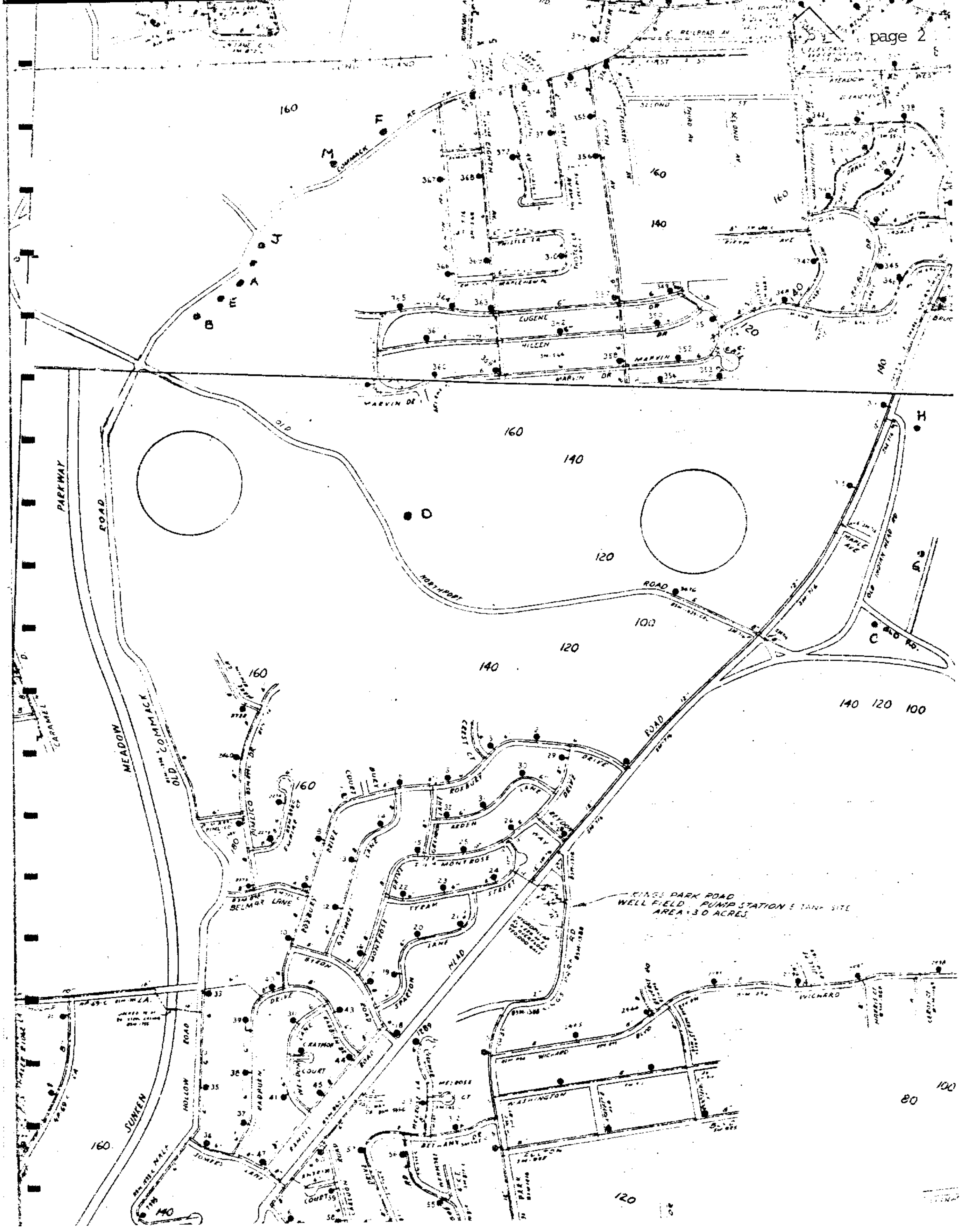
  . 5 contained traces of volatile organics other than vinyl chloride; none exceeded volatile organic standards.

  . 2 exceeded the nitrate standard.

  . 5 exceeded secondary standards that cause aesthetic problems.

  . None showed traces of heavy metals.

18 July, 1980


COMMACK RD
PARKWAY
MEADOW
OLD COMMACK
ROAD
OLD NORTHPORT ROAD
SUNKEN
HOLLOW ROAD
EUGENE
MARVIN DR
MARVIN DR
THISTLE LA
FIFTH AVE
SECOND ST
MAPLE AVE
OLD INDIAN HEAD RD
ROXBURY
ARDEN
MONTROSE
STREET
BYRON
BELMAR LANE
DRIVE
LANE
HEAD
KINGS PARK ROAD
WELL FIELD PUMP STATION & TANK SITE
AREA 3.0 ACRES
WICHARD
WASHINGTON
BETHANY
F
M
J
A
E
B
D
H
G
C
160
140
120
100
80

LANDFILL SURVEY

LOCATION SMITHTOWN

CIECWESZ
276 Old Commack Rd.
Kings Park
6/16
(A)

Vinyl Chloride (ppb)	- <1
Methylene Chloride (ppb)	- <1
1,1-Dichloro-ethylene (ppb)	- <1
1,1-Dichloro-thane (ppb)	- <1
trans-1,2-Dichloro-ethylene (ppb)	- <1
cis-1,2-Dichloro-ethylene (ppb)	- <1
Chloroform (ppb)	- <1
1,1,2-Trichlorotri-fluoroethane (ppb)	- <1
1,2-Dichloro-ethane (ppb)	- <1
1,1,1-Trichloro-ethane (ppb)	- <2
Carbon Tetra-chloride (ppb)	- <1
Bromodichloro-methane (ppb)	- <1
1,2-Dichloro-propane (ppb)	- <1
2,3-Dichloro-propene (ppb)	- <1
Trans-1,3-Dichloro-propene (ppb)	- <1
Trichloro-ethylene (ppb)	- <1
1,1,2-Trichloro-ethane (ppb)	- <1
Chlorodibromo-methane (ppb)	- <1
cis-1,3-Dichloro-propene (ppb)	- <1
Bromoform (ppb)	- <1
1,1,1,2-Tetra-chloroethane (ppb)	- <1
Tetrachloro-ethylene (ppb)	- <1
1,1,2,2-Tetra-chloroethane (ppb)	- <1

Free Ammonia (mg/l)	- 0.19
Nitrites + Nitrates (mg/l)	- 15.2
MBAS (mg/l)	- <0.1
pH	- 6.1
Spec. Cond. (umhos/cm)	- 220.
Chlorides (mg/l)	- 22.
Sulfates (mg/l)	- 9.
Iron (mg/l)	- 2.13
Manganese (mg/l)	- 0.32
Copper (mg/l)	- <0.1
Zinc (mg/l)	- 2.5
Sodium (mg/l)	- 19.2
T. Hardness (mg/l)	- 60.
T. Alkalinity (mg/l)	- 13.
Arsenic (mg/l)	-
Selenium (mg/l)	-
Cadmium (mg/l)	-
Silver (mg/l)	-
Lead (mg/l)	-
Chromium (mg/l)	-
Mercury (mg/l)	-
Fluoride (mg/l)	-
Barium (mg/l)	-
Phenol (mg/l)	-
Methane (ppb)	-
Free CO_2 (mg/l)	- 21.0

GORECKI
290 Old Commack Rd.
Kings Park
6/16
(B)

Vinyl Chloride (ppb)	- <1
Methylene Chloride (ppb)	- <1
1,1-Dichloro-ethylene (ppb)	- <1
1,1-Dichloro-thane (ppb)	- <1
trans-1,2-Dichloro-ethylene (ppb)	- <1
cis-1,2-Dichloro-ethylene (ppb)	- <1
Chloroform (ppb)	- <1
1,1,2-Trichlorotri-fluoroethane (ppb)	- <1
1,2-Dichloro-ethane (ppb)	- <1
1,1,1-Trichloro-ethane (ppb)	- <1
Carbon Tetra-chloride (ppb)	- <1
Bromodichloro-methane (ppb)	- <1
1,2-Dichloro-propane (ppb)	- <1
2,3-Dichloro-propene (ppb)	- <1
Trans-1,3-Dichloro-propene (ppb)	- <1
Trichloro-ethylene (ppb)	- <1
1,1,2-Trichloro-ethane (ppb)	- <1
Chlorodibromo-methane (ppb)	- <1
cis-1,3-Dichloro-propene (ppb)	- <1
Bromoform (ppb)	- <1
1,1,1,2-Tetra-chloroethane (ppb)	- <1
Tetrachloro-ethylene (ppb)	- <1
1,1,2,2-Tetra-chloroethane (ppb)	- <1

Free Ammonia (mg/l)	- 0.09
Nitrites + Nitrates (mg/l)	- 1.4
MBAS (mg/l)	- <0.1
pH	- 5.8
Spec. Cond. (umhos/cm)	- 350.
Chlorides (mg/l)	- 74.
Sulfates (mg/l)	- 19.
Iron (mg/l)	- 4.84
Manganese (mg/l)	- 0.11
Copper (mg/l)	- 0.24
Zinc (mg/l)	- <0.4
Sodium (mg/l)	- 36.4
T. Hardness (mg/l)	-
T. Alkalinity (mg/l)	-
Arsenic (mg/l)	-
Selenium (mg/l)	-
Cadmium (mg/l)	-
Silver (mg/l)	-
Lead (mg/l)	-
Chromium (mg/l)	-
Mercury (mg/l)	-
Fluoride (mg/l)	-
Barium (mg/l)	-
Phenol (mg/l)	-
Methane (ppb)	-
Free CO_2 (mg/l)	- 74.0

M. Farbman
Old Rd.
Kings Park
6/16
(C)

Vinyl Chloride (ppb)	- <1
Methylene Chloride (ppb)	- <1
1,1-Dichloro-ethylene (ppb)	- <1
1,1-Dichloro-thane (ppb)	- <1
trans-1,2-Dichloro-ethylene (ppb)	- <1
cis-1,2-Dichloro-ethylene (ppb)	-
Chloroform (ppb)	- 1
1,1,2-Trichlorotri-fluoroethane (ppb)	-
1,2-Dichloro-ethane (ppb)	- <1
1,1,1-Trichloro-ethane (ppb)	- <1
Carbon Tetra-chloride (ppb)	- <1
Bromodichloro-methane (ppb)	- 1
1,2-Dichloro-propane (ppb)	- <1
2,3-Dichloro-propene (ppb)	- <1
Trans-1,3-Dichloro-propene (ppb)	- <1
Trichloro-ethylene (ppb)	- <1
1,1,2-Trichloro-ethane (ppb)	-
Chlorodibromo-methane (ppb)	- 1
cis-1,3-Dichloro-propene (ppb)	-
Bromoform (ppb)	- <1
1,1,1,2-Tetra-chloroethane (ppb)	- <1
Tetrachloro-ethylene (ppb)	- <1
1,1,2,2-Tetra-chloroethane (ppb)	- <1

Free Ammonia (mg/l)	- <0.04
Nitrites + Nitrates (mg/l)	- 1.2
MBAS (mg/l)	- <0.1
pH	- 7.2
Spec. Cond. (umhos/cm)	- 66.
Chlorides (mg/l)	- 4.
Sulfates (mg/l)	- <4.
Iron (mg/l)	- 0.19
Manganese (mg/l)	- <0.05
Copper (mg/l)	- <0.1
Zinc (mg/l)	- <0.4
Sodium (mg/l)	- 4.4
T. Hardness (mg/l)	- 32.
T. Alkalinity (mg/l)	- 20.
Arsenic (mg/l)	-
Selenium (mg/l)	-
Cadmium (mg/l)	-
Silver (mg/l)	-
Lead (mg/l)	-
Chromium (mg/l)	-
Mercury (mg/l)	-
Fluoride (mg/l)	-
Barium (mg/l)	-
Phenol (mg/l)	-
Methane (ppb)	-
Free CO_2 (mg/l)	- 2.5

LANDFILL SURVEY

LOCATION SMITHTOWN

R. CAPORASO
18 LINDEN AVE.
KINGS PARK
6-16-80 (6)

Vinyl Chloride (ppb)	- <1
Methylene Chloride (ppb)	- <1
1,1-Dichloro-ethylene (ppb)	- 1
1,1-Dichloro-thane (ppb)	- <1
trans-1,2-Dichloro-ethylene (ppb)	- <1
cis-1,2-Dichloro-ethylene (ppb)	- <1
Chloroform (ppb)	- <1
1,1,2-Trichlorotri-fluoroethane (ppb)	- <1
1,2-Dichloro-ethane (ppb)	- <1
1,1,1-Trichloro-ethane (ppb)	- 1
Carbon Tetra-chloride (ppb)	- <1
Bromodichloro-methane (ppb)	- <1
1,2-Dichloro-propane (ppb)	- <1
2,3-Dichloro-propene (ppb)	- <1
Trans-1,3-Dichloro-propene (ppb)	- <1
Trichloro-ethylene (ppb)	- <1
1,1,2-Trichloro-ethane (ppb)	- <1
Chlorodibromo-methane (ppb)	- <1
cis-1,3-Dichloro-propene (ppb)	- <1
Bromoform (ppb)	- <1
1,1,1,2-Tetra-chloroethane (ppb)	- <1
Tetrachloro-ethylene (ppb)	- <1
1,1,2,2-Tetra-chloroethane (ppb)	- <1

Free Ammonia (mg/l)	- 0.04
Nitrites + Nitrates (mg/l)	- 1.9
MBAS (mg/l)	- <0.1
pH	- 5.4
Spec. Cond. (umhos/cm)	- 130.
Chlorides (mg/l)	- 30.
Sulfates (mg/l)	- <4.
Iron (mg/l)	- 0.12
Manganese (mg/l)	- <0.05
Copper (mg/l)	- 0.41
Zinc (mg/l)	- <0.4
Sodium (mg/l)	- 15.1
T. Hardness (mg/l)	- 44.
T. Alkalinity (mg/l)	- 8.
Arsenic (mg/l)	-
Selenium (mg/l)	-
Cadmium (mg/l)	-
Silver (mg/l)	-
Lead (mg/l)	-
Chromium (mg/l)	-
Mercury (mg/l)	-
Fluoride (mg/l)	-
Barium (mg/l)	-
Phenol (mg/l)	-
Methane (ppb)	-
Free CO_2 (mg/l)	- 64.6

W. Knoth
7 Lawrence Ave.
Kings Park
6-16-80 (7)

Vinyl Chloride (ppb)	- <1
Methylene Chloride (ppb)	- <1
1,1-Dichloro-ethylene (ppb)	- 10
1,1-Dichloro-thane (ppb)	- <1
trans-1,2-Dichloro-ethylene (ppb)	- <1
cis-1,2-Dichloro-ethylene (ppb)	- <1
Chloroform (ppb)	- <1
1,1,2-Trichlorotri-fluoroethane (ppb)	- <1
1,2-Dichloro-ethane (ppb)	- <1
1,1,1-Trichloro-ethane (ppb)	- <1
Carbon Tetra-chloride (ppb)	- <1
Bromodichloro-methane (ppb)	- <1
1,2-Dichloro-propane (ppb)	- <1
2,3-Dichloro-propene (ppb)	- <1
Trans-1,3-Dichloro-propene (ppb)	- <1
Trichloro-ethylene (ppb)	- <1
1,1,2-Trichloro-ethane (ppb)	- <1
Chlorodibromo-methane (ppb)	- <1
cis-1,3-Dichloro-propene (ppb)	- <1
Bromoform (ppb)	- <1
1,1,1,2-Tetra-chloroethane (ppb)	- <1
Tetrachloro-ethylene (ppb)	- 3
1,1,2,2-Tetra-chloroethane (ppb)	-

Free Ammonia (mg/l)	- <0.05
Nitrites + Nitrates (mg/l)	- 4.9
MBAS (mg/l)	- <0.1
pH	- 5.7
Spec. Cond. (umhos/cm)	- 210.
Chlorides (mg/l)	- 41.
Sulfates (mg/l)	- 4.
* Iron (mg/l)	- 0.69
Manganese (mg/l)	- <0.05
Copper (mg/l)	- 0.45
Zinc (mg/l)	- 0.8
Sodium (mg/l)	- 26.1
T. Hardness (mg/l)	- 48.
T. Alkalinity (mg/l)	- 16.
Arsenic (mg/l)	-
Selenium (mg/l)	-
Cadmium (mg/l)	-
Silver (mg/l)	-
Lead (mg/l)	-
Chromium (mg/l)	-
Mercury (mg/l)	-
Fluoride (mg/l)	-
Barium (mg/l)	-
Phenol (mg/l)	-
Methane (ppb)	-
Free CO_2 (mg/l)	- 64.8

Stanley Haazan
270 old Commack Rd.
Kings Park (5)
269-9693 6-16-80

Vinyl Chloride (ppb)	- <1
Methylene Chloride (ppb)	- <1
1,1-Dichloro-ethylene (ppb)	- <1
1,1-Dichloro-thane (ppb)	- <1
trans-1,2-Dichloro-ethylene (ppb)	- <1
cis-1,2-Dichloro-ethylene (ppb)	- <1
Chloroform (ppb)	- <1
1,1,2-Trichlorotri-fluoroethane (ppb)	- <1
1,2-Dichloro-ethane (ppb)	- <1
1,1,1-Trichloro-ethane (ppb)	- <1
Carbon Tetra-chloride (ppb)	- <1
Bromodichloro-methane (ppb)	- <1
1,2-Dichloro-propane (ppb)	- <1
2,3-Dichloro-propene (ppb)	- <1
Trans-1,3-Dichloro-propene (ppb)	- <1
Trichloro-ethylene (ppb)	- <1
1,1,2-Trichloro-ethane (ppb)	- <1
Chlorodibromo-methane (ppb)	- <1
cis-1,3-Dichloro-propene (ppb)	- <1
Bromoform (ppb)	- <1
1,1,1,2-Tetra-chloroethane (ppb)	- <1
Tetrachloro-ethylene (ppb)	- <1
1,1,2,2-Tetra-chloroethane (ppb)	- <1

Free Ammonia (mg/l)	- <0.04
Nitrites + Nitrates (mg/l)	- 0.7
MBAS (mg/l)	- <0.1
pH	- 6.2
Spec. Cond. (umhos/cm)	- 30.
Chlorides (mg/l)	- 6.
Sulfates (mg/l)	- <4.
Iron (mg/l)	- 0.27
Manganese (mg/l)	- <0.05
Copper (mg/l)	- <0.1
Zinc (mg/l)	- 0.9
Sodium (mg/l)	- 3.9
T. Hardness (mg/l)	- 20.
T. Alkalinity (mg/l)	- 5.
Arsenic (ug/L) ppb	- <20.
Selenium (ug/L) "	- <5.
Cadmium (ug/L) "	- <2.
Silver (ug/L) "	- <10.
Lead (ug/L) "	- <10.
Chromium (ug/L) "	- <10.
Mercury (ug/L) "	- <0.2
Fluoride (mg/l)	-
Barium (mg/l)	-
Phenol (mg/l)	-
Methane (ppb)	-
Free CO_2 (mg/l)	- 6.9

LANDFILL SURVEY

LOCATION SMITHTOWN

INDIAN HEAD SAND & GRAVEL
OLD NORTHPORT RD.
KINGS PARK
6/16
(D)

Vinyl Chloride (ppb)	– <1
Methylene Chloride (ppb)	– <1
1,1-Dichloro-ethylene (ppb)	– <1
1,1-Dichloro-thane (ppb)	– <1
trans-1,2-Dichloro-ethylene (ppb)	– <1
cis-1,2-Dichloro-ethylene (ppb)	– <1
Chloroform (ppb)	– <1
1,1,2-Trichlorotri-fluoroethane (ppb)	– <1
1,2-Dichloro-ethane (ppb)	– <1
1,1,1-Trichloro-ethane (ppb)	– <1
Carbon Tetra-chloride (ppb)	– <1
Bromodichloro-methane (ppb)	– <1
1,2-Dichloro-propane (ppb)	– <1
2,3-Dichloro-propene (ppb)	– <1
Trans-1,3-Dichloro-propene (ppb)	– <1
Trichloro-etnylene (ppb)	– <1
1,1,2-Trichloro-ethane (ppb)	– <1
Chlorodibromo-methane (ppb)	– <1
cis-1,3-Dichloro-propene (ppb)	– <1
Bromoform (ppb)	– <1
1,1,1,2-Tetra-chloroethane (ppb)	– <1
Tetrachloro-ethylene (ppb)	– 1
1,1,2,2-Tetra-chloroethane (ppb)	–

Free Ammonia (mg/l)	– <0.04
Nitrites + Nitrates (mg/l)	– 2.5
MBAS (mg/l)	– <0.1
pH	– 5.5
Spec. Cond. (umhos/cm)	– 137.
Chlorides (mg/l)	– 29.
Sulfates (mg/l)	– 12.
Iron (mg/l)	– 0.30
Manganese (mg/l)	– 0.15
Copper (mg/l)	– 0.86
Zinc (mg/l)	– <0.4
Sodium (mg/l)	– 10.9
T. Hardness (mg/l)	– 44.
T. Alkalinity (mg/l)	– 5.
Arsenic (mg/l) ppb	– <20.
Selenium (mg/l) "	– <5.
Cadmium (mg/l) "	– <2.
Silver (mg/l) "	– <10.
Lead (mg/l) "	– <10.
Chromium (mg/l) "	– <10.
Mercury (mg/l) "	–
Fluoride (mg/l)	–
Barium (mg/l)	–
Phenol (mg/l)	–
Methane (ppb)	–
Free CO_2 (mg/l)	– 32.1

PYE
284 OLD COMMACK RD.
KINGS PARK.
6/16
(E)

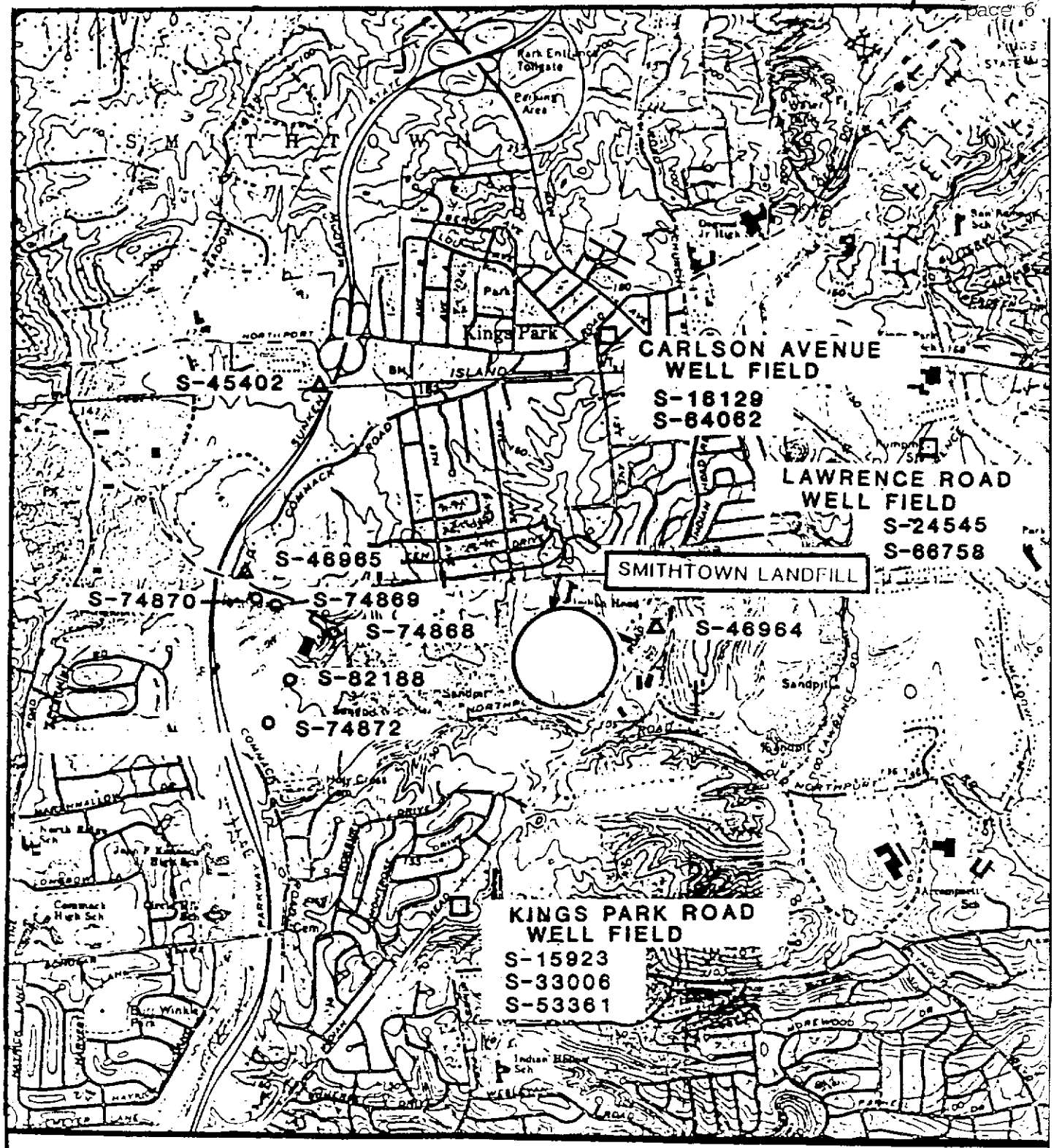
Vinyl Chloride (ppb)	– <1
Methylene Chloride (ppb)	– 1
1,1-Dichloro-ethylene (ppb)	– <1
1,1-Dichloro-thane (ppb)	– <1
trans-1,2-Dichloro-ethylene (ppb)	– <1
cis-1,2-Dichloro-ethylene (ppb)	– <1
Chloroform (ppb)	– <1
1,1,2-Trichlorotri-fluoroethane (ppb)	– <1
1,2-Dichloro-ethane (ppb)	– <1
1,1,1-Trichloro-ethane (ppb)	– <1
Carbon Tetra-chloride (ppb)	– <1
Bromodichloro-methane (ppb)	– <1
1,2-Dichloro-propane (ppb)	– <1
2,3-Dichloro-propene (ppb)	– <1
Trans-1,3-Dichloro-propene (ppb)	– <1
Trichloro-ethylene (ppb)	– <1
1,1,2-Trichloro-ethane (ppb)	– <1
Chlorodibromo-methane (ppb)	– <1
cis-1,3-Dichloro-propene (ppb)	– <1
Bromoform (ppb)	– <1
1,1,1,2-Tetra-chloroethane (ppb)	– <1
Tetrachloro-ethylene (ppb)	– <1
1,1,2,2-Tetra-chloroethane (ppb)	– <1

Free Ammonia (mg/l)	– 0.23
Nitrites + Nitrates (mg/l)	– 11.2
MBAS (mg/l)	– <0.1
pH	– 6.2
Spec. Cond. (umhos/cm)	– 148.
Chlorides (mg/l)	– 13.
Sulfates (mg/l)	– <4.
Iron (mg/l)	– 1.74
Manganese (mg/l)	– 0.10
Copper (mg/l)	– <0.1
Zinc (mg/l)	– 1.1
Sodium (mg/l)	– 10.8
T. Hardness (mg/l)	– 44.
T. Alkalinity (mg/l)	– 11.
Arsenic (mg/l) ppb	– <20.
Selenium (mg/l) "	– <5.
Cadmium (mg/l) "	– <2.
Silver (mg/l) "	– <10.
Lead (mg/l) "	– <10.
Chromium (mg/l) "	– <10.
Mercury (mg/l)	–
Fluoride (mg/l)	–
Barium (mg/l)	–
Phenol (mg/l)	–
Methane (ppb)	–
Free CO_2 (mg/l)	– 14.1

V. GORECKI
151 Old Commack Rd.
Kings Park
6/16
(F)

Vinyl Chloride (ppb)	– <1
Methylene Chloride (ppb)	– <1
1,1-Dichloro-ethylene (ppb)	– <1
1,1-Dichloro-thane (ppb)	– <1
trans-1,2-Dichloro-ethylene (ppb)	– <1
cis-1,2-Dichloro-ethylene (ppb)	– <1
Chloroform (ppb)	– <1
1,1,2-Trichlorotri-fluoroethane (ppb)	– <1
1,2-Dichloro-ethane (ppb)	– <1
1,1,1-Trichloro-ethane (ppb)	– <1
Carbon Tetra-chloride (ppb)	– <1
Bromodichloro-methane (ppb)	– <1
1,2-Dichloro-propane (ppb)	– <1
2,3-Dichloro-propene (ppb)	– <1
Trans-1,3-Dichloro-propene (ppb)	– <1
Trichloro-ethylene (ppb)	– <1
1,1,2-Trichloro-ethane (ppb)	– <1
Chlorodibromo-methane (ppb)	– <1
cis-1,3-Dichloro-propene (ppb)	– <1
Bromoform (ppb)	– <1
1,1,1,2-Tetra-chloroethane (ppb)	– <1
Tetrachloro-ethylene (ppb)	– <1
1,1,2,2-Tetra-chloroethane (ppb)	– <1

Free Ammonia (mg/l)	– 0.05
Nitrites + Nitrates (mg/l)	– <0.4
MBAS (mg/l)	– <0.1
pH	– 6.0
Spec. Cond. (umhos/cm)	– 123.
Chlorides (mg/l)	– 27.
Sulfates (mg/l)	– 8.
Iron (mg/l)	– 9.75
Manganese (mg/l)	– 0.20
Copper (mg/l)	– <0.10
Zinc (mg/l)	– 0.5
Sodium (mg/l)	– 15.1
T. Hardness (mg/l)	– 28.
T. Alkalinity (mg/l)	– 7.
Arsenic (mg/l)	–
Selenium (mg/l)	–
Cadmium (mg/l)	–
Silver (mg/l)	–
Lead (mg/l)	–
Chromium (mg/l)	–
Mercury (mg/l)	–
Fluoride (mg/l)	–
Barium (mg/l)	–
Phenol (mg/l)	–
Methane (ppb)	–
Free CO_2 (mg/l)	– 14.2



LOCATION MAP OF WELLS AND WELL CLUSTERS IN THE VICINITY OF THE TOWN OF SMITHTOWN LANDFILL

- o Town of Smithtown Observation Wells
- △ Suffolk County Dept. of Health Services Shallow Observation Wells
- □ Suffolk County Water Authority Public Supply Well Fields

Copies Solid Waste
Town of Smithtown
Kings Park
Landfill

COUNTY OF SUFFOLK

DEPARTMENT OF HEALTH SERVICES

July 20, 1981

Mr. Anthony Calligeros
Superintendent of Buildings
and Grounds
Kings Park Central School District
Kohr Road
Kings Park, NY 11754

Dear Mr. Calligeros:

As per your request in a recent conversation with Mr. James Maloney of my staff, personnel of the Suffolk County Department of Health Services performed a methane migration survey on the grounds of the Indian Head School in Kings Park.

The purpose of this survey was to determine whether decomposition gases were moving from the land previously used by the Town of Smithtown for the disposal of solid waste on to school property. This survey, which was performed on July 16, 1981, found that methane was indeed migrating on to school property in the area of the baseball field to a distance of one hundred feet from the fence line (see attached sketch). This newest survey confirms the findings of a previous survey performed in 1980.

Mr. Maloney notified both the Town of Smithtown and the New York State Department of Environmental Conservation representatives of the methanemigration problem in November of 1980. At that time, the Town was informed of the department's position that methane monitoring should be performed and that a report of such monitoring be provided to the New York State Department of Environmental Conservation on a monthly basis. The problem of methane migration and capping at this location is presently being addressed by the New York State Department of Environmental Conservation.

Continued . . .

225 RABRO DRIVE EAST • HAUPPAUGE, N.Y. 11787 • (516) 435-2917

If you are in need of more detailed information as to the state's actions, I suggest that you contact Mrs. Joan Scherb, Regional Attorney for the New York State Department of Environmental Conservation at phone number (516) 751-7900.

If you have any questions as to this survey and its implications, please feel free to contact either Mr. Maloney or myself at any time.

Very truly yours,

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

HWD:daf

Attachment

cc: Morris Bruckman, P.E., Regional Engineer, ENCON
Joan Scherb, Esq., Regional Attorney, ENCON
Patrick R. Vecchio, Supervisor, Town of Smithtown
Duane B. Rhodes, Sanitation Supervisor, Town of Smithtown
Donal A. Devine, Town Engineer, Town of Smithtown

Rcd 7/14/81 JCM SK

KINGS PARK CENTRAL SCHOOL DISTRICT
OFFICE OF THE DISTRICT PRINCIPAL
KOHR ROAD
KINGS PARK, NEW YORK 11754

DR. ROBERT B. CODY
DISTRICT PRINCIPAL

WALTER R. ARNOLD
ASSISTANT DISTRICT PRINCIPAL

ANTHONY CALLIGEROS
SUPERINTENDENT OF BUILDINGS & GROUNDS

July 9, 1981

Mr. James Maloney, Chief, Air Pollution
Suffolk County Department of Health Services
Solid Waste Section
65 Jetson Lane - Box G
Central Islip, N. Y. 11722

Dear Mr. Maloney:

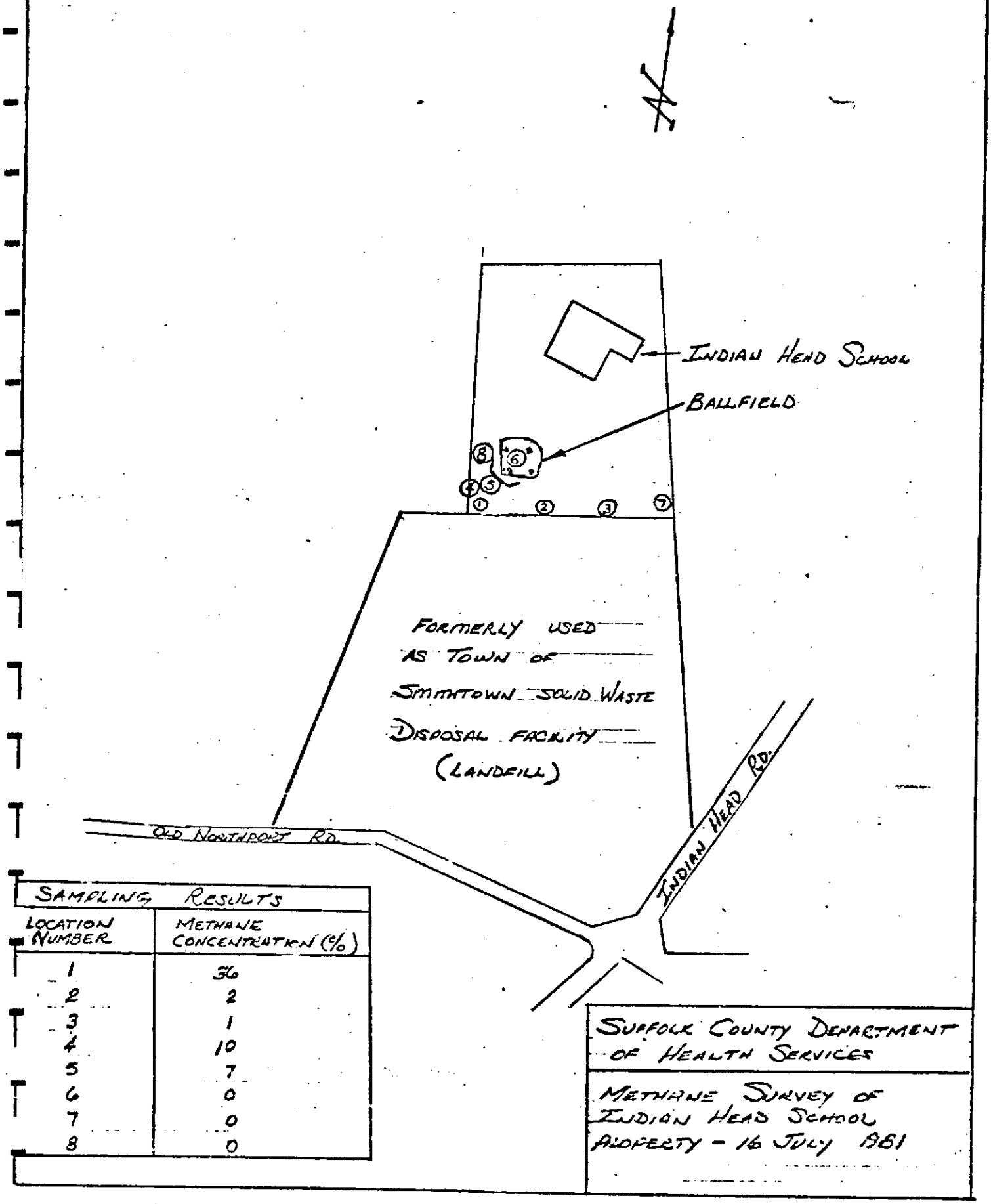
As per our telephone conversation today, I am formally requesting a survey of the Indian Head School property adjacent to the closed Smithtown Solid Waste Disposal Facility (Izzo property).

Very truly yours,

Anthony Calligeros

AC/gm

Anthony Calligeros
Supt. of Buildings & Grounds



SAMPLING RESULTS	
LOCATION NUMBER	METHANE CONCENTRATION (%)
1	36
2	2
3	1
4	10
5	7
6	0
7	0
8	0

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES

METHANE SURVEY OF INDIAN HEAD SCHOOL PROPERTY - 16 JULY 1981

COUNTY OF SUFFOLK

DEPARTMENT OF HEALTH SERVICES

MEMORANDUM

TO: JAMES C. MALONEY, P.E. DATE: 11/12/80

FROM: STEVEN KRAMER

RE: METHANE MIGRATION SURVEY, TOWN OF SMITHTOWN LANDFILL, IZZO PROPERTY, OLD NORTHPORT ROAD, KINGS PARK, NY

In response to your recent request concerning the generation of methane migration data at the above address, I submit to you the following data.

Landfilling at this parcel has been discontinued since the opening of Smithtown's new municipal solid waste facility and baling plant which occured during the Summer of 1979.

It is obvious, when reviewing the data collected along with a visual assessment of vegetation killed in the area adjacent to this old landfill, that methane production is quite high at this time. Methane migrated beyond site perimeters to the south, east and north sides of the landfill. The west side property is now being utilized as a demolition debris dump by the Town of Smithtown who has been granted an active permit to do so.

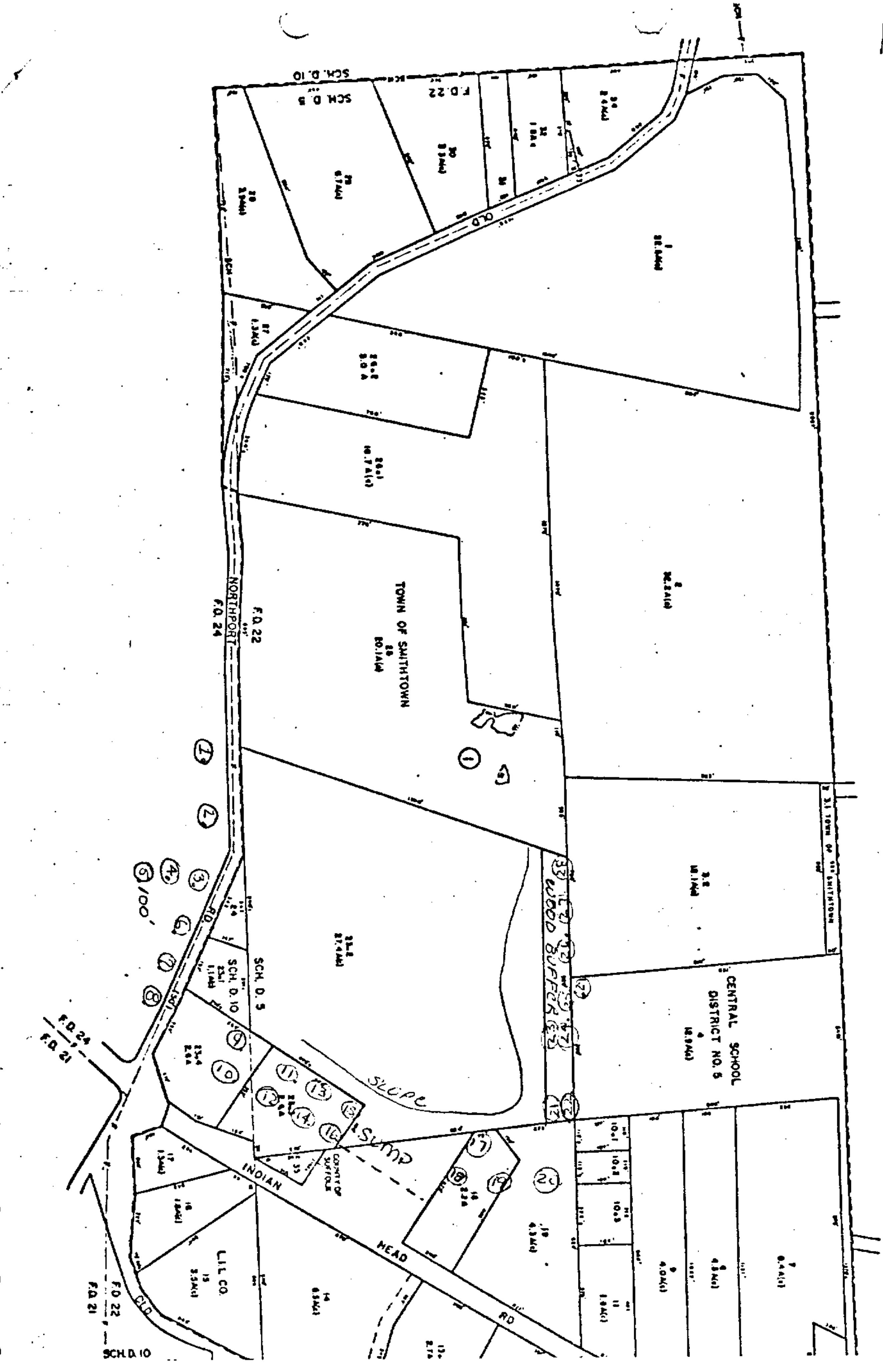
Methane production at this time is quite high with gas concentrations exceeding the reliability of our combustion gas meter. All properties which are at this time being impacted upon lie adjacent to the old landfill location and are undeveloped except for Indianhead School which is located to the north.

If you have any questions on this data, please feel free to contact me.

SJK:daf

cc: William C. Roberts, P.E.

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



NORTHPORT RD
OLD
F.D. 22
F.D. 24
F.D. 21
SCH. D. 10
SCH. D. 5
TOWN OF SMITHTOWN
CENTRAL SCHOOL DISTRICT NO. 5
WOOD BUFFER
SLOPE
SUMP
INDIAN HEAD RD
L.I.L. CO.
COUNTY OF SUFFOLK
100'

SMITH N LANDFILL (IZZO PROPERT

METHANE SURVEY

	e Sample Location/ Migration Direction		Concentration	Distance from Landfill Fence	
	South Side				
1.	S/S Old Northport Rd.	(T.P.#84)	0%	150' from fence	
2.	"	T.P.#83	0%	150' " "	
3		T.P.#82	75% gas	150' " "	
(4)	South	T.P.#82	36% gas	200' " "	
5.	"	T.P.#82	0%	250' " "	
6	"	T.P.#81	10%	150' " "	
(7)	"	T.P.#80	16%	150' " "	
8.	"	T.P.#79	0%	150' " "	
	East Side				
9.	W/S Indian Head Rd.		0%	50' from fence	from corner
10.	"		0%	75' " "	corner
11	"		30% G	50' " "	200'
12.	"		0%	75'	200'
13	"		73% G	30'	600'
14	"		14% G	50'	600'
15	"		68% G	50'	800'
16.	"		0%	75'	800'
(17)	"		79% G	20'	from N/S sump 100'
18	"		0%	25'	150'
19	"		22% G	100'	200'
20	"		39% G	100'	300'
	North Side				
21			81% G	50' from fence	at corner
22	"		0%	125'	" corner
(23)	"		79% G	30'	200' w/o corner
24	"		79% G	80'	200'
25	"		78% G	200'	"
26	"		80%	150'	400' w/o corner
(27)	"		80%	100'	500' w/o
(28)	"		80% G	10'	600' w/o corner
(29)	"		80% LEL	150' on Arrowhead School Property	500' w/o corner

Index

T.P. = Telephone Pole
(#) = Positive Methane

COUNTY OF SUFFOLK

DEPARTMENT OF HEALTH SERVICES

July 2, 1981

Ms. Barbara Mack
Assistant Director
Community Development
H. Lee Dennison Building
Hauppauge, New York 11788

Dear Ms. Mack:

I understand that the Town of Smithtown has applied for Federal Community Development funds for the installation of landfill ventings and a ground water testing facility. This project will provide two vents in the Smithtown landfill to prevent the horizontal movement of methane gas and its subsequent entry into the basements of nearby homes. In addition, a groundwater test well will be installed south of the landfill to detect any possible contamination of drinking water.

The Smithtown landfill creates a threat to the health and welfare of nearby residents because of the possibility of drinking water contamination and the possible accumulation of methane gas. An increased awareness of this critical situation has arisen within the last eighteen months. Continued use of the landfill can only exacerbate this threatening situation.

It is my opinion that the proposed Landfill Venting and Ground Water Testing project in Smithtown will be a help in controlling a serious problem.

Very truly yours,

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

AA/jhn

Rec'd 7/7/81
dg

225 RABRO DRIVE EAST • HAUPPAUGE, N.Y. 11787 • (516) 435-2917

Lab No.
Field No. [illegible]
Date. AUGUST
Time. 11:35
Col. By. DAN
(Name not initials)

Date Received in Lab
Public Water
Private Water
Other
Date Completed
Examined By

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
DIVISION OF MEDICAL LEGAL INVESTIGATIONS & FORENSIC SCIENCES
PUBLIC HEALTH LABORATORY

TRACE ORGANIC ANALYSIS OF WATER

Name BRONSTEIN (Owner or District)

Location 15 OLD RD KINGS PARK

Point of Collection OSY

Remarks:

COMPOUND	ppb
1,1,2 Trichloro 1,2,2 Trifluoroethane	
Chloroform	<5
1,1,1 Trichloroethane	<5
Carbon Tetrachloride	<3
1,1,2 Trichloroethylene	<2
Chlorodibromomethane	<5
Tetrachloroethylene	<3
Bromoform	9
Bromodichloromethane	<5
	<3

Date Received in Lab
Public Water
Private Water X
Other
Date Completed
Examined By

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
DIVISION OF MEDICAL LEGAL INVESTIGATIONS & FORENSIC SCIENCES
PUBLIC HEALTH LABORATORY

TRACE ORGANIC ANALYSIS OF WATER

Name C. Kocinski Owner or District

Location 293 Old Indian Head Rd

Point of Collection K.T. Kings Park

Remarks:

COMPOUND	ppb
1,1,2 Trichloro 1,2,2 Trifluoroethane	<5
Chloroform	<5
1,1,1 Trichloroethane	6
Carbon Tetrachloride	<2
1,1,2 Trichloroethylene	<5
Chlorodibromomethane	<3
Tetrachloroethylene	<2
Bromoform	<5
Bromodichloromethane	<3

Town Line Rd. - Kings Park
Land Fill "B"

Date	7/24/78 Matuz	7/24/78 Presti	7/24/78 Nosti			
Laboratory	150	168	180			
NH_4			<0.05			
NO_3	<0.4	<0.4	<0.4			
MBAS	0.1	0.2	<0.1			
pH	6.8	7.3	6.6			
Spec. Cond.	3100	3500	95			
Cl	510	330	6.0			
SO_4	<4.0	7.0	6.0			
Fe	0.77	0.41	0.13			
Mn	6.49	24.3	<0.05			
Cu	<0.10	<0.10	<0.10			
Zn	<0.4	0.8	0.5			
Na	390.0	290.0	5.6			
NO_2						
T. Hard.						
T. Alk.						
Ca						
Mg						
Free CO_2						
Turbidity						
Color						
Cd						
Ag						
Pb						
Cr						
CN						
F						
C.O.D.						
T. Solids						
Total PO_4						
Coliform	<1	<1	<1			

Letter

Town Line Rd - Bread & Cheese Hollow Rd
Land Fill B - Kings Park

Date	Powell 201 Brc -	Matuz 150	Presti 168					
Laboratory	20 Sep 78	20 Sep 78	20 Sep 78					
NH_4	0.22	interference						
NO_3	6.5	<0.4	<0.4					
MBAS	<0.1	0.2	0.2					
pH	6.1	6.8	7.0					
Spec. Cond.	400	2800	2800					
Cl	13.0	500.0	500.0					
SO_4	55.0	7.0	11.0					
Fe	0.35	0.87	1.44					
Mn	0.21	4.73	23.2					
Cu	0.13	<0.10	0.35					
Zn	3.9	0.4	4.0					
Na	15.9	362	257					
NO_2								
T. Hard.	124	1000	500					
T. Alk.	30	700	980					
Ca	60	300	300					
Mg	64	700	200					
Free CO_2								
Turbidity								
Color								
Cd	50 ft well							
Ag								
Pb								
Cr								
CN								
F								
C.O.D.								
T. Solids								
Total PO_4								
Coliform	<2.2	<2.2	<2.2					
Organics -	None.	None.	None.					

Old Northport Rd
Land Fill B - Kings Park

Date	Medlock 168
Laboratory	20 Sept 75
NH_4	0.15
NO_3	1.0
MBAS	< 0.1
pH	5.8
Spec. Cond.	2500
Cl	1900.0 ✓
SO_4	interference
Fe	4.06 ✓
Mn	0.18 ✓
Cu	< 0.1
Zn	1.0
Na	418
NO_2	
T. Hard.	248
T. Alk.	16
Ca	180
Mg	68
Free CO_2	
Turbidity	
Color	
Cd	
Ag	
Pb	Ft Well
Cr	
CN	
F	90
C.O.D.	
T. Solids	
Total PO_4	
Coliform	9.2
Organics	None

Meadow Glen Rd - Kings Park
Land Fill B

Date	Zimmerman 20 Sep 78	Ryan 20 Sep 78					
Laboratory	71	19					
NH_4	0.13	0.14					
NO_3	1.3	1.2					
MBAS	<0.1	<0.1					
pH	6.1	6.1					
Spec. Cond.	700	350					
Cl	200.0	44.0					
SO_4	7.0	28.0					
Fe	1.00	0.28					
Mn	0.11	0.05					
Cu	0.40	<0.10					
Zn	3.5	1.0					
Na	21.3	74.5					
NO_2							
T. Hard.	180	68					
T. Alk.	20	16					
Ca	118	38					
Mg	62.	30					
Free CO_2							
Turbidity							
Colcr							
Cd							
Ag							
Pb							
Cr							
CN							
F							
C.O.D.							
T. Solids							
Total PO_4							
Coliform	<2.2.	<2.2.					
Organics -		NONE.					
Lab		NYSDH.					

Letter

Yes

Date / Laboratory	20 Sep 78 Miller 7 Linden Ave.	20 Sep 78 Moeller 12 Linden
NH_4	0.10	0.06
NO_3	1.0	1.4
MBAS	<0.1	<0.1
pH	5.6	5.6
Spec. Cond.	250	167
Cl	47.0	36.0
SO_4	15.0	14.0
Fe	0.28	0.84
Mn	<0.05	<0.05
Cu	0.30	2.18
Zn	<0.4	0.5
Na	26.3	19.4
NO_2		
T. Hard.		
T. Alk.		
Ca		
Mg		
Free CO_2	well.	
Turbidity		123.
Color		
Cd	140 ft.	depth
Ag		
Pb		
Cr		
CN		
F		
C.O.D.		
T. Solids		
Total PO_4		
Coliform	<1	<1

Letter Yes

Kings Park Landfill: A- Survey

Date / Laboratory	20Sep78 Knot 7 Lawrence	20Sep78 Grossbary 329 Old Indian Head Rd	20Sep78 Weber 319 Old Indian Head Rd	20Sep78 Kocinski 293 Old Indian Head Rd	20Sep78 Bronstein 15 Old Rd.	20Sep78 Friedman 10 Old Rd
NH_4	0.07	0.06	0.15	0.09	0.14	0.04
NO_3	5.1	0.9	1.7	1.4	1.0	0.4
MBAS	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH	5.7	5.5	5.6	6.2	5.2	5.6
Spec. Cond.	165	300	204	180	450	350
Cl	30.0	77.0	55.0	25.0	113.0	86.0
SO_4	7.0	14.0	10.0	11.0	17.0	17.0
Fe	0.23	0.54	0.33	0.11	1.77	0.67
Mn	<0.05	<0.05	<0.05	0.06	<0.05	<0.05
Cu	0.47	0.45	0.20	0.21	<0.10	1.09
Zn	0.5	2.4	<0.4	13.0	1.0	<0.4
Na	24.7	41.7	30.5	13.0	54.1	42.5
NO_2						
T. Hard.		56			72	
T. Alk.		14			20	
Ca		12			44	
Mg		44			28	
Free CO_2						
Turbidity						
Color						
Cd				90 ft Well		
Ag						
Pb						
Cr						
CN						
F						
C.O.D.						
T. Solids						
Total PO_4						
Coliform	<1	<1	<1	<1	<1	<2.2
Organics -		None.		Yes	Yes	
Lab		SCHD		SCHD	SCHD	

Letter. Yes Yes.

Town Line Rd - E. Kings Park Land Fill "B"

Date	7/24/78 Matuz	7/24/78 Presti	7/24/78 Nasti				
Laboratory	150	168	180				
NH_4			<0.05				
NO_3	<0.4	<0.4	<0.4				
MBAS	0.1	0.2	<0.1				
pH	6.8	7.3	6.6				
Spec. Cond.	2,100	3500	95				
Cl	510	220	6.0				
SO_4	<4.0	7.0	6.0				
Fe	0.77	0.41	0.13				
Mn	6.49	24.3	<0.05				
Cu	<0.10	<0.10	<0.10				
Zn	<0.4	0.8	0.5				
Na	390.0	240.0	5.6				
NO_2							
T. Hard.							
T. Alk.							
Ca							
Mg							
Free CO_2							
Turbidity							
Color							
Cd							
Ag							
Pb							
Cr							
CN							
F							
C.O.D.							
T. Solids							
Total PO_4							
Coliform	<1	<1	<1				

Letter

REFERENCE NO. 6

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE 1 INVESTIGATION

Smithtown MSF

Site No. 152044

Town of Smithtown, Suffolk County

Final - June 1987

New York State
Department of
Environmental Conservation

50 Wolf Road, Albany, New York 12233
Henry G. Williams, Commissioner

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

Prepared by:

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

Method with highest score:

***

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Manganese and zinc.

Reference: 1.

Compound with highest score:

Manganese and zinc = 12.

References: 2 and 3.

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: Chapter 3.

Basis of estimating and/or computing waste quantity:

Minimum quantity assumed.

Assigned value = 1.

Reference: 2.

***

5 TARGETS

Ground Water Use

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

Drinking water with municipal water from alternate sources presently unavailable.

References: 4-8.

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 located on Old Commack Road.

References: 7, 8, and 10.

Distance to above well or building:

Approximately 1,775 ft from the most distant border of the closed cells.

Reference: 10.

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 (Smithtown Water District)	89,836
Greenlawn Water District	40,000
Northport VA Hospital	3,500
King's Park Psychiatric Center	3,100
Total	136,436

Appendix 1.3-5 provides a list of well fields and wells within a 3-mi radius of the site.

There are also a number of undetermined private wells within a 3-mi radius of the site.

References: 4-8 and 11.

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

Approximately 140 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: 12-16.

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

136,436.

References: 4-8, 11, and 16.

Assigned value = 5.

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.

Reference: Chapter 3.

Assigned value = 0.

Reference: 2.

Rationale for attributing the contaminants to the facility:

***

Toxicity and Persistence

Compound(s) evaluated

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. Willow Pond is part of Nissequogue River State Park.

Reference: 10.

Assigned value = 2.

Reference: 2.

Is there tidal influence?

No.

Reference: 10.

Distance to a Sensitive Environment

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

None.

Reference: 10.

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

None.

Reference: 10.

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

None.

Reference: 20.

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: 5, 12, and 13.

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.

Reference: 12-15.

Total population served:

Zero.

References: 5 and 12-15.

REFERENCE NO. 7

STATE OF NEW YORK
DEPARTMENT OF HEALTH
Corning Tower The Governor Nelson A. Rockefeller Empire State Plaza Albany, New York 12237

David Axelrod, M.D.
Commissioner

OFFICE OF PUBLIC HEALTH

Linda A. Randolph, M.D., M.P.H.
Director

William F. Leavy
Executive Deputy Director

September 15, 1988

Ms. Ari Selvakumar
Staff Engineer
YEC, Inc.
Forest View Professional Building
10 Pine Crest Road
Valley Cottage, NY 10989

Dear Ms. Selvakumar:

As we discussed on September 15, 1988, we no longer have copies of the "Atlas". However, I am enclosing a copy of the Suffolk County portion of the Atlas.

If you have any questions, give me a call at (518) 458-6731.

Sincerely,

James R. Covey

James R. Covey, P.E.
Associate Sanitary Engineer
Bureau of Public Water Supply Protection

Enclosure

cc: Mr. Burke

New York State Atlas of Community Water System Sources 1982

EW YORK STATE
EPARTMENT OF HEALTH

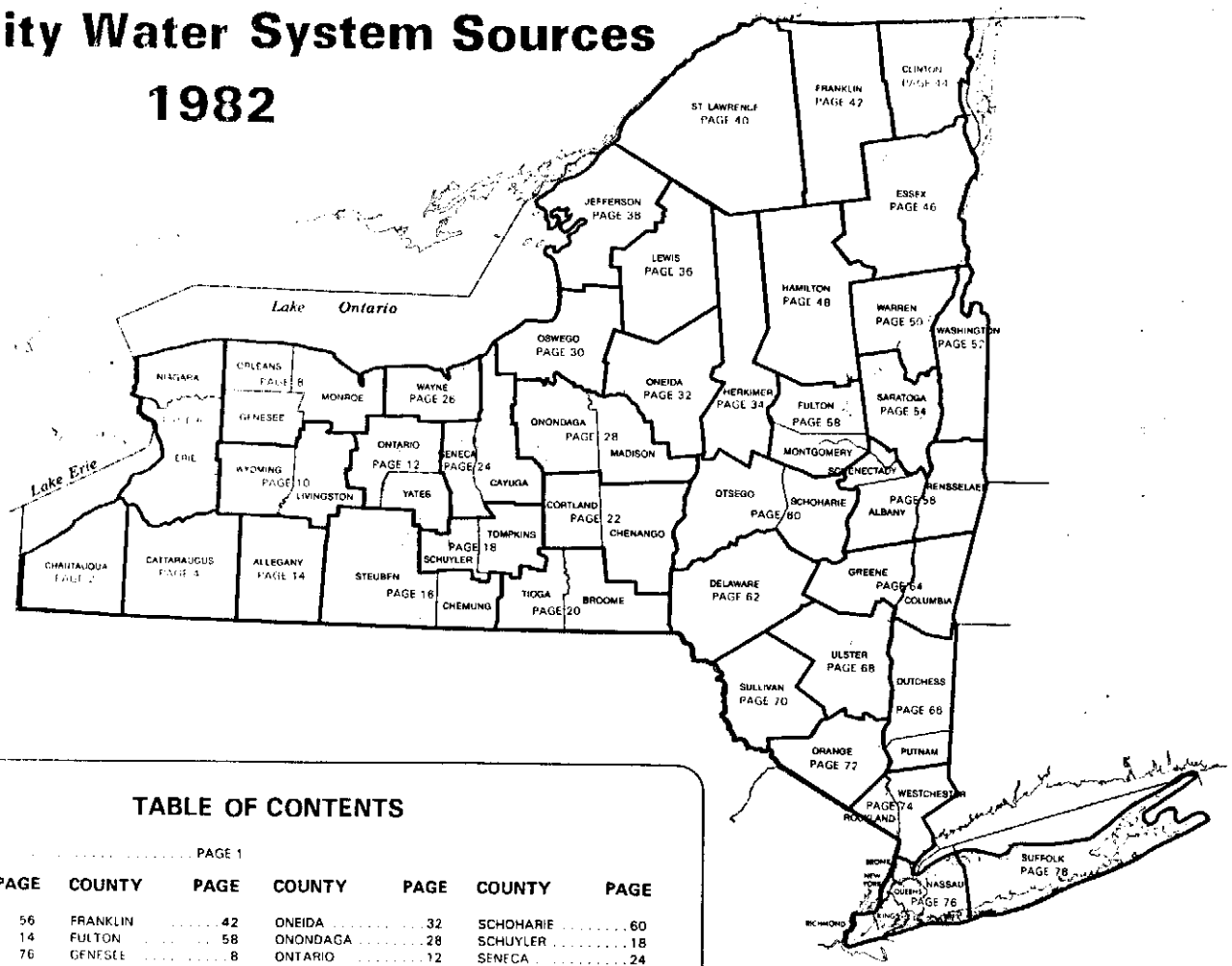


TABLE OF CONTENTS

LEGEND

BOUNDARIES AND PLACES

International
State
County
Town
Indian Reservation
City
Village
Unincorporated Place
Federal Reservation
Built-up Area (Over 25,000 population including any contiguous city or village)

CLASSIFICATION OF POPULATED PLACES

100,000 or more — YONKERS
50,000 to 100,000 — Levittown
12,500 to 50,000 — Poughkeepsie
2,500 to 12,500 — Hampton Bays
250 to 2,500 — Berne
250 or less

TRANSPORTATION

Highways
- Divided Highways (Under Construction)
  - Full Control of Access
  - Partial or No Control of Access
- Undivided Highway
- Interchange (Full / Partial)
- Touring Route (State, U.S., Interstate) or State Parkway
- Touring Route Markers: State, U.S., Interstate

Railroads
- Operating Line
- Service Discontinued
- Operator (DELAWARE AND HUDSON)
- Owner (If Other than Operator) (PENN CENTRAL)
- Company Having Trackage Rights (CONRAIL)

Airports (Open to the Public, Military)
- Runway under 4000'
- Runway over 4000'

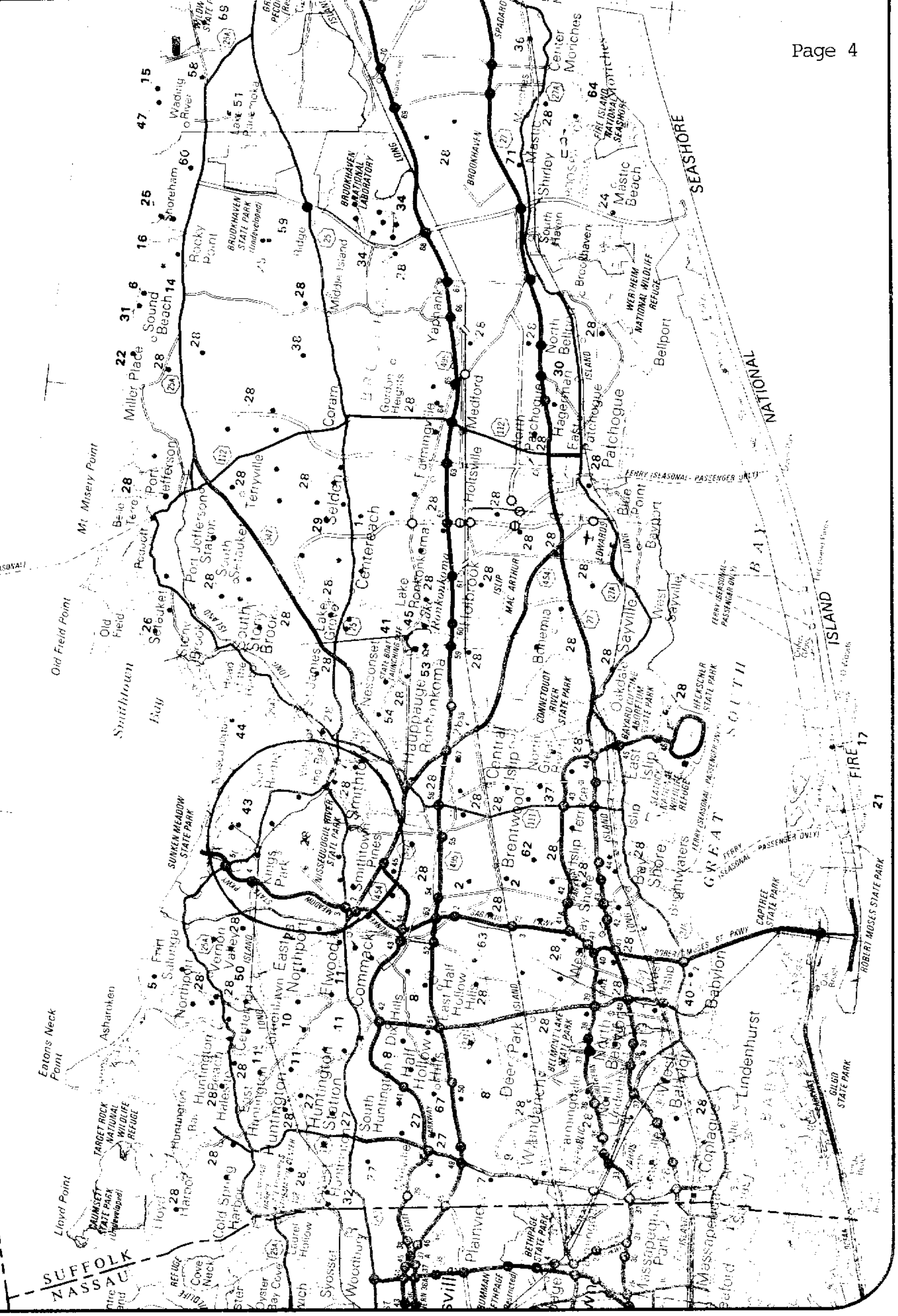
Rest Areas
- Food, Gas, Rest Rooms
- Rest Rooms
- Gas, Rest Rooms
- Parking Only

RECREATION FACILITIES

- State or National Recreation Area
- State Campground
- State Boat Launching Site
- State Canal Park
- State Fish Hatchery
- Other State Recreation Site

SUFFOLK COUNTY

ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
	Municipal Community		
1	Bevon Water Corporation.	1150.	.Wells
2	Brentwood Water District.	25812.	.Wells
3	Bridgehampton Water Company.	1916.	.Wells
4	Captain Kidd Water Company.	580.	.Wells
5	Crab Meadow Beach.	50.	.Wells
6	Culross Corporation (Culross Beach).	.104.	.Wells
7	Dering Harbor Village.	.130.	.Wells
8	Dix Hills Water District.	30000.	.Wells
9	East Farmingdale Water District.	7850.	.Wells
10	Fishers Island Water Works Corporation.	.250.	.Barlow, Middle Farms and Treasure Ponds, Wells
11	Greenlawn Water District.	40000.	.Wells
12	Greenport Village.	6851.	.Wells
13	Hampton Bays Water District.	9500.	.Wells
14	Hawthorne - Maple Civic Association.	50.	.Wells
15	Herod Point Association.	80.	.Wells
16	North Shores Water Company.	.5000.	.Wells
17	Ocean Beach Village.	.155.	.Wells
18	Reeves Beach Water Company.	650.	.Wells
19	Riverhead Water District.	.9300.	.Wells
20	Roanoke Water Corporation.	.201.	.Wells
21	Saltaire Village.	.35.	.Wells
22	Scott's Beach Water Company.	.342.	.Wells
23	Shelter Island Heights Association.	498.	.Wells
24	Shirley Water Works.	3400.	.Wells
25	Shorewood Water Corporation.	.10000.	.Wells
26	Soundview Association.	.236.	.Wells
27	South Huntington Water District.	.51260.	.Wells
28	Suffolk County Water Authority.	.900000.	.Wells
29	Sunhill Water Corporation.	3959.	.Wells
30	Swan Lake Water Corporation.	1485.	.Wells
31	Terrace-on-the-Sound.	400.	.Wells
32	Woodbury Triangle Corporation.	.800.	.Wells
	Non-Municipal Community		
33	Aquebogue Mobile Home Court.	.120.	.Wells
34	Brookhaven National Labs.	.3373.	.Wells
35	Calverton Hills Owners Association.	.897.	.Wells
36	Cedar Lodge Nursing Home.	100.	.Wells
37	Central Islip Psychiatric Center.	.4525.	.Wells
38	Crest Hall Health Related Facility.	120.	.Wells
39	East Quogue Mobile Estates.	160.	.Wells
40	Good Samaritan Hospital.	NA.	.Wells
41	Greis Mobile Park.	70.	.Wells
42	Hampton Gateway Apartments.	304.	.Wells
43	Kings Park Psychiatric Center.	3100.	.Wells
44	Knox School.	NA.	.Wells
45	Lake Hurst Lodge Adult Home.	57.	.Wells
46	Leier's Mobile Park.	.350.	.Wells
47	Little Flower Children's Services.	.150.	.Wells
48	Montauk Air Force Station.	10.	.Wells
49	Napeague Trailer Park.	78.	.Wells
50	Northport VA Hospital.	3000.	.Wells
51	Oak Park Trailer Park.	50.	.Wells
52	Oakland Ridge Mobile Park.	74.	.Wells
53	Park Lake Rest Home.	46.	.Wells
54	Peacock Alley.	35.	.Wells
55	Peconic River Trailer Park.	.90.	.Wells
56	Peconic View Adult Mobile Home Park.	70.	.Wells
57	Pinecrest Garden Apartments.	.392.	.Wells
58	Ramblewood Mobile Homes.	.210.	.Wells
59	Ridge Rest Home.	58.	.Wells
60	Rocky Point Family Housing.	.55.	.Wells
61	Rollin Mobile Homes.	.220.	.Wells
62	St Joseph Convent - Long Island University.	1177.	.Wells
63	Sam A Lewison Start Center.	.40.	.Wells
64	South Bay Adult Home.	.40.	.Wells
65	Southampton College.	1000.	.Wells
66	Speonk Mobile Home Park.	50.	.Wells
67	Suffolk Developmental Center.	.3500.	.Wells
68	Three Mile Harbor Trailer Park.	.40.	.Wells
69	Thurm's Mobile Estates.	450.	.Wells
70	USCG Station - Moriches.	23.	.Wells
71	Wes Dubicki Apartments.	.NA.	.Wells


LONG
SUFFOLK
NASSAU
GREAT SOUTH BAY
FIRE ISLAND NATIONAL SEASHORE
BROOKHAVEN NATIONAL LABORATORY
SUNKEN MEADOW STATE PARK
ROBERT MOSES STATE PARK
Smithtown
Huntington
Commack
Brentwood
Patchogue
Bellport
Babylon
Lindenhurst
Port Jefferson
Medford
Holbrook
Bay Shore
Islip
Sayville
Coram
Selden
Centereach
Hauppauge
Kings Park
Northport
Deer Park
FERRY (SEASONAL)

REFERENCE NO. 8

1988 POPULATION SURVEY

Current Population Estimates For Nassau and Suffolk Counties

Long Island Lighting Company

One Mile Radius of Smithtown Landfill @ Old Northport Rd x Indian Head Rd

Census Tract	1980 pop.	Place	1980 Place Pop.	% of Place	1988 Place Pop.	1 Mi. Radius Pop.
						1976
1351.04	205	Smithtown	30,906		31,956	233
1.03	40					
1.04 x 104	185					
1354.02	5004	Kings Park	16,131		16,445	5,101
[illegible]	232					
- 131	- 228					
- 132	- 0					
1355.01	255	Ft. Salonga	3,790		4,144	279
201	183					
202	58					
203	14					
1355.01	4,663	Commack				
101-105	506					
104	100					
106	10					
903	349					
			21,032			
1356.00		Commack			22,107	5,112
201	1497					
203,204	319					
904 905	508					
1351.03		Commack				
114 115	102					
903	1090					
					Total	10,725

2 mile radius of Smithtown Landfill

	% in mi	1980	1988 pop	1988 pop in 2 mi
Kings Park	80%		16,445	13,156
Ft. Salonga (S)	50%		4,144	2,072
KPPC	100%		2,463	2,463
Ft Salonga (H)	10%		6,437	644
E. North.		20,187	19,891	2,771
1117.03	40%	3,354		
1117.04	40%	3,675		
Commack (H)		13,697	13,231	2,301
1118.02	40%	3,556		
1118.03	30%	3,192		
Commack (S)		21,032	22,107	15,188
1351.01	90	4,628		
1351.02	100	4,534		
1351.03	100	4,510		
1352.01	90	2,480		
Smithtown		30,906	31,956	9,352
1349.06	20	5999		
1351.04	20	4504		
1352.04	20	4748		
		Total		47,947

3 mile radius of Smithtown Landfill

Place	% in 3 mi	1980		1988 pop in 3 mi
Kings Park	100			16,445
KPPC	100			2,463
Ft Salonga (S)	85		4,144	3,522
" " (H)	40		6,437	4,506
VA	100			654
E. North		20,187	19,891	8,250
1116.02	40	3,392		
1117.03	100	3,354		
1117.04	100	3,675		
Elwood		11,847	11,743	912
1118.01	15	6,136		
Commack (H)				
Total		13,697	13,231	11,088
-1121.03	-50	4,434		
Commack (S)				
Total		21,032	22,107	20,461
-1352.05	-25	6,251		
Smithtown				
Total		30,906	31,956	21,017
-		4718		
-		-		
		1,7		0932

REFERENCE NO. 9

SUFFOLK COUNTY WATER AUTHORITY

Administrative offices: Oakdale, Long Island, N.Y. 11769
Area 516-589-5200

November 1, 1988

Ms. Ari Selvakumar
Staff Engineer
YEC, Inc.
Forest View Professional Building
10 Pine Crest Road
Valley Cottage, New York 10989

Re: Your letters of September 20, October 6, and October 19, 1988.

Dear Ms. Selvakumar:

Please be advised that the Suffolk County Water Authority has twenty three active wells falling within the three mile radius around the Indian Head Road (Smithtown) landfill.

The distribution system of the Suffolk County Water Authority portion of the area in this three mile radius is completely integrated and therefore it cannot be determined as to exactly how many customers are served by these wells. Furthermore, some of the area is served by Smithtown Water District. However, it is estimated that approximately 48,000 people are served by the Authority at this time.

Information regarding contamination of Authority wells must be requested from the laboratory located at this address. Address your correspondence to Mr. Patrick J. Dugan, Chief Chemist. You will have to be more specific about what you mean by contamination.

The Authority keeps no file data on private wells. Therefore, their location and status is unknown.

The Authority has sixteen active wells within a three mile radius around the County Fire Training Area in Westhampton. It is estimated that approximately 6,000 people are served by these wells.

The Authority has three well fields within a three mile radius around the New York Pyrotechnic Products Company. It is estimated that approximately 19,000 people are served by the wells at these sites.

It should be noted that all Suffolk County Water Authority water is groundwater, supplied from wells.

If we can be of any further help, please advise.

Very truly yours,

E.J. Rosavitch, P.E.
Acting Chief Engineer

EJR:wlb

cc: P.J. Dugan
S.R. Dassler

REFERENCE NO. 10

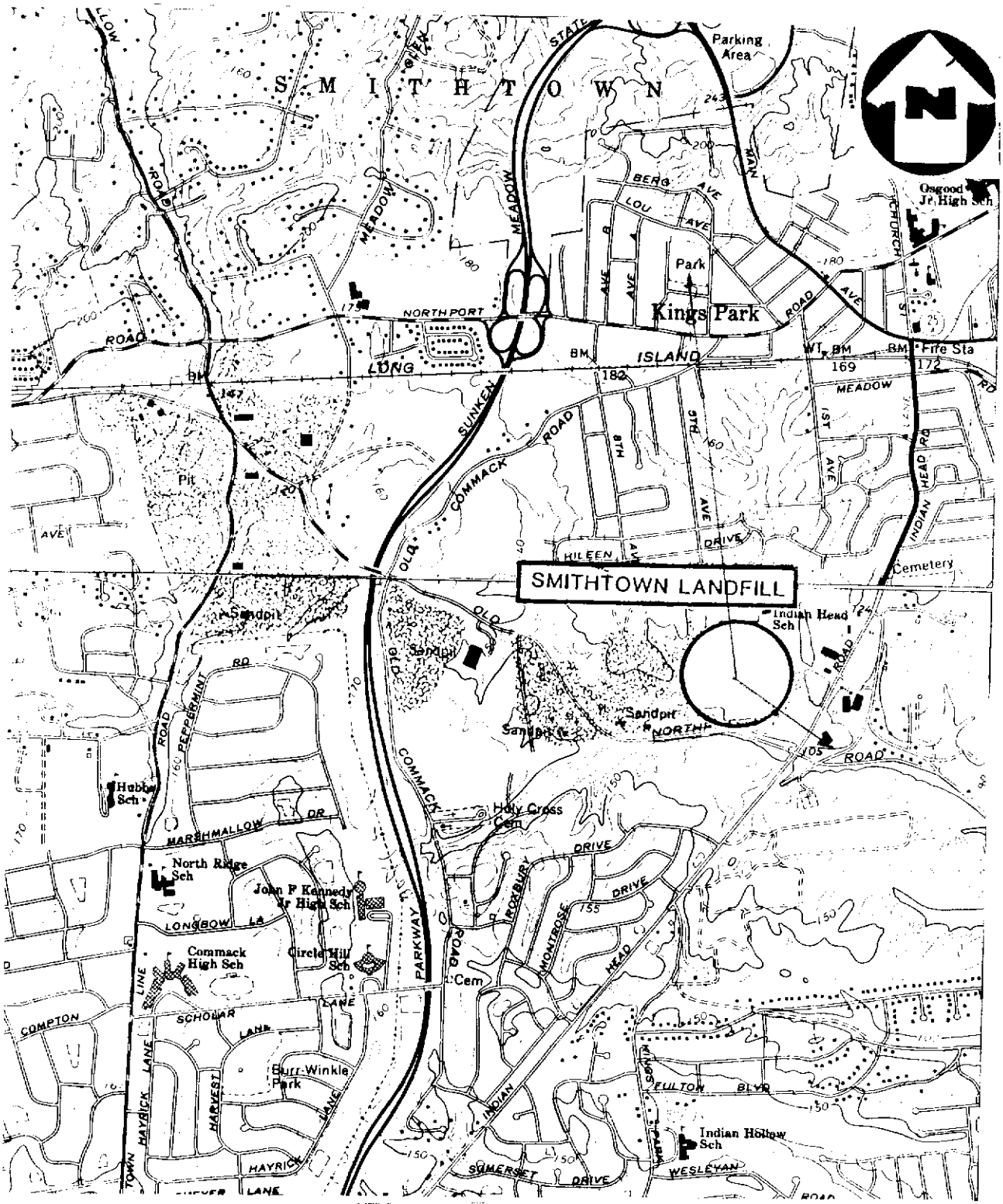


Figure 1-1.

SMITHTOWN LANDFILL

SMITHTOWN, NY

SITE LOCATION MAP

1000 0 1000 2000 ft

REFERENCE NO. 11

SITE INSPECTION REPORT

SITE NUMBER:	NY 152043
SITE NAME:	Smithtown Landfill
SITE LOCATION:	Kings Park, New York.
DATE OF INSPECTION:	9/28/88, High 70'S, Sunny, Wind North East.
SITE STATUS:	Inactive
YEARS OF OPERATION:	1970 - 1979
AGENCY PERFORMING INSPECTION:	YEC, Inc.
CHIEF INSPECTORS:	Ed Chen and Ari Selvakumar
SITE REPRESENTATIVES INTERVIEWED:	Alexander and Neal Izzo

The site inspection at the Smithtown landfill site included the following activities:

(1) Interviewing site representatives;

(2) Conducting ambient air monitoring on site by use of an HNu Photoionizer equipment;

(3) Conducting a visual inspection of overall site conditions; and

(4) Photodocumentation of the site.

At 10.00 AM, Ed Chen and Ari Selvakumar interviewed Mr Alexander Izzo and Mr Neal Izzo for the history of the site, operations, characteristics and disposal of wastes, regulatory agency enforcement actions, etc. Izzo Brothers told that they leased the property (Size = 29.09 acres) to the Town of Smithtown for the purpose of landfilling the household wastes from 1970 to

1979. They said that there used to be a gate in the front, but it was vandalized by local young people. Private homeowners dump bulk furnitures, mattresses, bottles, paint cans, etc. illegally even now. They also said that the site had problems with methane, but now it is collected and converted into electricity.

Then both of us toured around the landfill site. Some 5 gallon empty paint and solvent cans, crushed drums, mattresses, tires, metal pipes, bottles, bricks, wood, furniture, leaves, automobile parts, sink, bottles, paper, plastics, etc. were observed at the site. A small surface water ponding was also observed in an area of approximately 60 sq.ft. There are about 25 methane collection points which are connected to a gas generator near the front entrance along Old Northport Road. The site is generally covered by vegetation with depths ranging from 1/2 to 2 feet. The site is fenced in the south and partially fenced in the north and east. Smithtown Construction and Demolition site is in the west. R. H. Industries, Inc. (Floor Covering Contractor), Superior Ice Rink and Colonial Mechanical Air Condition and Heating are located in the east side of the site along Indian Head Road.

During the site inspection, no suspicious hazardous waste disposal areas or drums were detected. Photographs were taken at locations around the site (See Appendix A). In addition, air monitoring was conducted by use of an HNu Photoionizer unit around the perimeter of the Smithtown landfill site and no readings above background were noted.

REFERENCE NO. 12

YEC, INC.
Forest View Professional Building
10 Pine Crest Road
Valley Cottage, NY 10989
(914) 268-3203

September 14, 1988

Mr Michael Scheibec
New York State Department of
Environmental Conservation
Building 40
SUNY Campus
Stony Brook, NY 11794

Dear Mr Scheibec,

YEC, Inc. is under contract to New York State Department of Environmental Conservation Hazardous Waste Remediation to conduct a hazardous waste site phase I investigation at Smithtown landfill site in Kings Park, Suffolk County, New York (see attached Quandrangle map for site location). We need your assistance in providing information on any critical habitat of endangered species or plant species of concern within three miles radious of the site.

We appreciate if you could send the above information to us at your earliest convenience.

Thanking you.

Sincerely yours

ASelvakumar

Ari Selvakumar
Staff Engineer
YEC, Inc.

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

Thomas C. Jorling
Commissioner

October 4, 1988

Mr. Ari Selvakumar
YEC, Inc.
Forest View Professional Bldg.
10 Pine Crest Road
Valley Cottage, N.Y. 10989

Dear Mr. Selvakumar:

We have reviewed the Significant Habitat Program and the Natural Heritage Program files with respect to your request of 9/14/88, in reference to the Smithtown Landfill site, Kings Park, N.Y..

We did not identify any potential impacts on endangered, threatened, or special concern wildlife species, rare plant, animal or natural community occurrences, or other significant habitats.

The absence of data does not necessarily mean that rare or endangered elements, natural communities or other significant habitats do not exist on or adjacent to the proposed site, but rather that our files currently do not contain any information which indicates the presence of these. Our files are continually growing as new habitats and occurrences of rare species and communities are discovered. In most cases, site-specific or comprehensive surveys for plant and animal occurrences have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of species, habitats or communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

If this proposed project is still active one year from now, we recommend that you contact us again so that we can update this response.

If we can be of further assistance, please do not hesitate to contact us.

Sincerely,

Michael S. Scheibel
Senior Wildlife Biologist

MSS/sjmr

REFERENCE NO. 13

YEC, INC.
Forest View Professional Building
10 Pine Crest Road
Valley Cottage, NY 10989
(914) 268-3203

September 9, 1988.

Mr Dan Fricke
Suffolk County Cooperation
Extension Association
264 Griffing Avenue
Riverhead, NY 11901.

Dear Mr Fricke,

We are under contract to New York State Department of Environmental Conservation (NYSDEC) to conduct Phase I investigation on several hazardous waste inactive sites in Suffolk county. Smithtown Landfill (also known as IZZO Landfill) located at the intersection of Old Northport Road and Indian Head Road is one of those sites. We would very much appreciate if you give me information on the following:

1. Whether there are any farmland and /or agriculture land within three mile radious of the site.

2. If there is farm land, what is grown in that?

3. Whether groundwater is used for irrigation?

4. Whether there are any surface water bodies within three mile radious of the site.

5. How far is the nearest surface water (eg: NISSEQUOGUE River)?

6. Whether the surface water is used as a source of drinking water.

I am anxiously waiting to hear from you soon.

Thanking you.

Sincerely yours,

ASelvakumar

Ari Selvakumar
Staff Engineer
YEC, Inc.

Cornell Cooperative Extension

Suffolk County

Education Center
246 Griffing Avenue
Riverhead, NY 11901-3086
516-727-7850
FAX 516-727-7130

October 12, 1988

Ari Selvakumar
YEC, Inc.
Forest View Professional Building
10 Pine Crest Road
Valley Cottage, NY 10989

Dear Mr. Selvakumar:

Dan Fricke of our office forwarded your two letters to me for response. The following is information on each of the locations you identified.

A. Smithtown Landfill Site
1. The only active agricultural land near this site is Richter's Orchard which is approximately 1.5 miles northeast of the site. I have indicated the location on the map.
2. The major crop here is apples with some other minor crops such as pumpkins.
3. There is a limited amount of irrigation and the irrigation is from groundwater.
4. To the southeast of the site, is a number of ponds including New Mill Pond, Vail Pond, Webster Pond and Willow Pond. These are approximately 2.5 to 3 miles southeast of the site. These are all part of the Nissequogue River system.
5. To my knowledge none of this was used as a source of drinking water.

B. Suffolk County Airport Fire Training Area - Westhampton Beach
1. There is farmland to the north and to the west of this site.
2. The nearest farmland is about 1 to 2 miles northeast of the site. There is also another area approximately 2 miles west of the site where nursery stock is grown.
3. The area in Oakville is used to produce nursery stock, potatoes and mixed vegetables including cabbage, cauliflower, tomatoes, etc. The area west of the site is used to produce nursery stock including trees and shrubs.
4. Groundwater is used in both of these areas for irrigation for these crops.
5. There are a number of surface water bodies within 3 miles of this site. Just to the east is Quantuck Creek which is a saltwater tidal area. Just to the northeast is Old Ice Pond which is part of the Quogue Wildlife Refuge. To the west of the site is Aspatuck River which is also a tidal wetland area and just beyond that in Westhampton is Beaver Dam Pond at the junction of Old Country Road and Montauk Highway.
6. None of the bodies of water are used for drinking.

-more-

October 12, 1988

I hope that this satisfactorily answers your question. Much of the topography and soils of Long Island can be determined from the soil survey 1972 produced by USGS and is a great source of information particularly for distances, directions, and surface water.

Sincerely yours,

William J. Sanok

William J. Sanok
COOPERATIVE EXTENSION AGENT
Agricultural Program Leader

WJS:kn

REFERENCE NO. 14

YEC, INC.
Forest View Professional Building
10 Pine Crest Road
Valley Cottage, NY 10989
(914) 268-3203

September 14, 1988

Mr Paul Carella
New York State Department of
Environmental Conservation
Building 40
SUNY Campus
Stony Brook, NY 11794

Dear Mr Carella,

YEC, Inc. is under contract to New York State Department of Environmental Conservation Hazardous Waste Remediation to conduct a hazardous waste site phase I investigation at Smithtown landfill site in Kings Park, Suffolk County, New York (see attached Quandrangle map for site location). We need your assistance in providing information on any Federal regulated wet lands (names, sizes, location, composition) within three miles radious of the site.

We appreciate if you could send the above information to us at your earliest convenience.

Thanking you.

Sincerely yours

Aselvakumar
Ari Selvakumar
Staff Engineer
YEC, Inc.

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

Thomas C. Jorling
Commissioner

November 1, 1988

YEC Inc.
Forest View Professional Building
10 Pine Crest Road
Valley Cottage, NY 10989

Attention: Mr. Ari Selvakumar
Staff Engineer

Re: Hazardous Waste Site Phase I Investigated at
Smithtown Landfill Site in Kings Park

Dear Mr. Selvakumar:

I can only provide information on freshwater wetlands which are currently regulated by the NYSDEC pursuant to Article 24 of the NYS Environmental Conservation Law. For information on wetlands subject to regulation by the federal government, contact the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service.

NYSDEC regulated freshwater wetlands within a 3 mile radius of the Smithtown landfill site are listed below. Unfortunately, I can not provide you with copies of the tentative freshwater wetlands maps covering this area at this time, since these maps are currently at our Central Office in Albany. However, I have enclosed copies of the interim working maps to show you the approximate location of these wetlands. Acreages for these wetlands have not been calculated yet.

		Approximate % Covertypes				
FWW ID	Tentative Classification	Wet Meadow	Emergent Marsh	Deciduous Swamp	Shrub Swamp	Open Water
G-8	II		100%			
G-5	I	42.5%	42.5%			15%
G-4	II		20%			80%
G-6	II		50%			50%
G-7	II		100%			

FWW ID	Tentative Classification	Approximate % Covertypes Wet Meadow	Emergent Marsh	Deciduous Swamp	Shrub Swamp	Open Water
N-9	II			10%	10%	80%
N-10	II			7.5%	7.5%	85%
N-12	II					90%
N-11	II			5%		95%
N-2	II			-	-	-
SJ-15	I			100%		
SJ-16	I		25%	30%		45%
SJ-17	II			10%		90%
SJ-18	II			10%		90%
SJ-19	-					95%
SJ-20	II		40%	10%		50%
SJ-12	II			20%		80%
SJ-14	II		70%	20%	10%	
C-1	I		10%	50%		40%
C-7	II			100%		

For information regarding DEC regulated tidal wetlands, please contact the Department's Bureau of Marine Habitat Protection at this regional office.

If you have any questions, I can be reached at (516) 751-7900 ext. 374.

Sincerely,

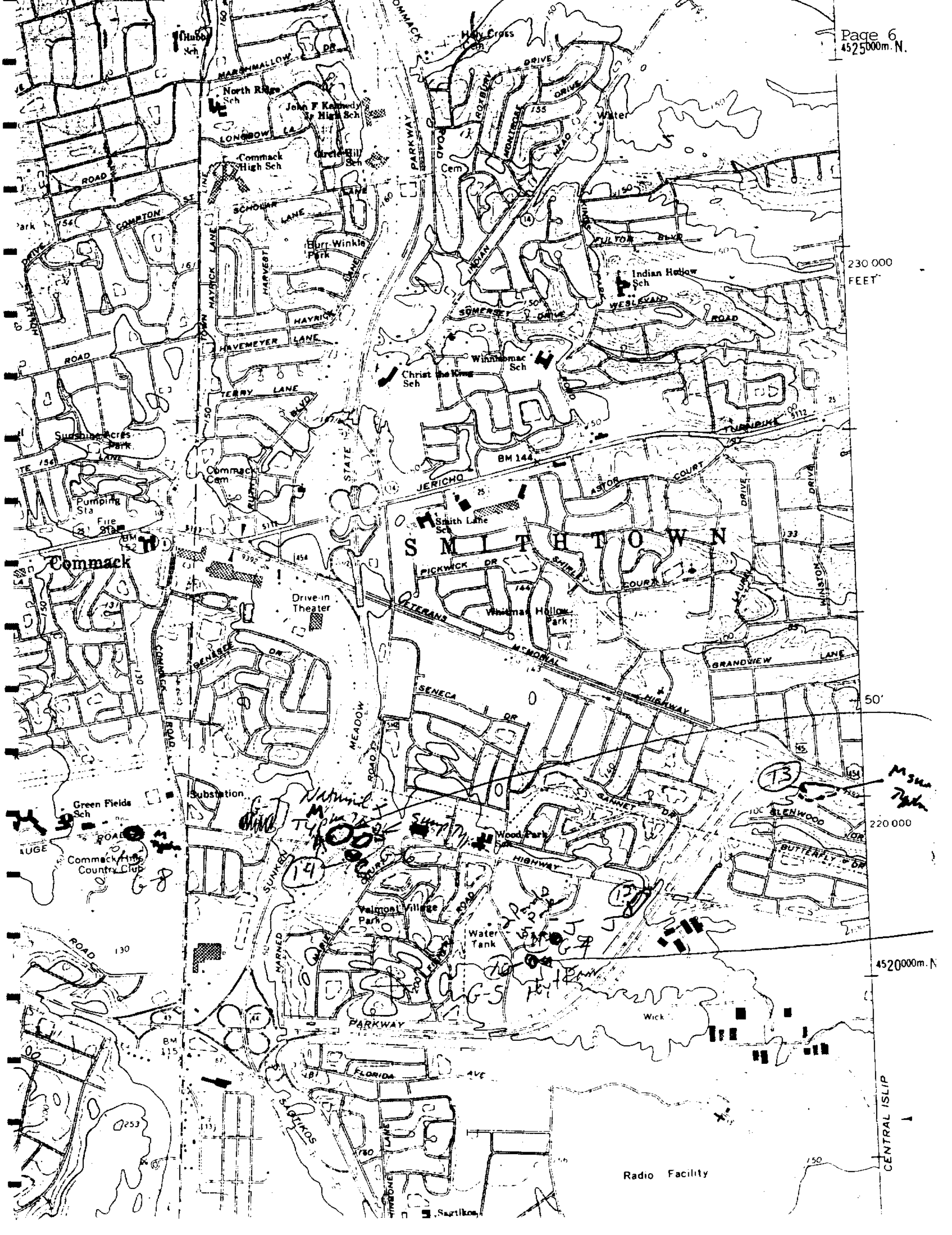
Martin E. Shea

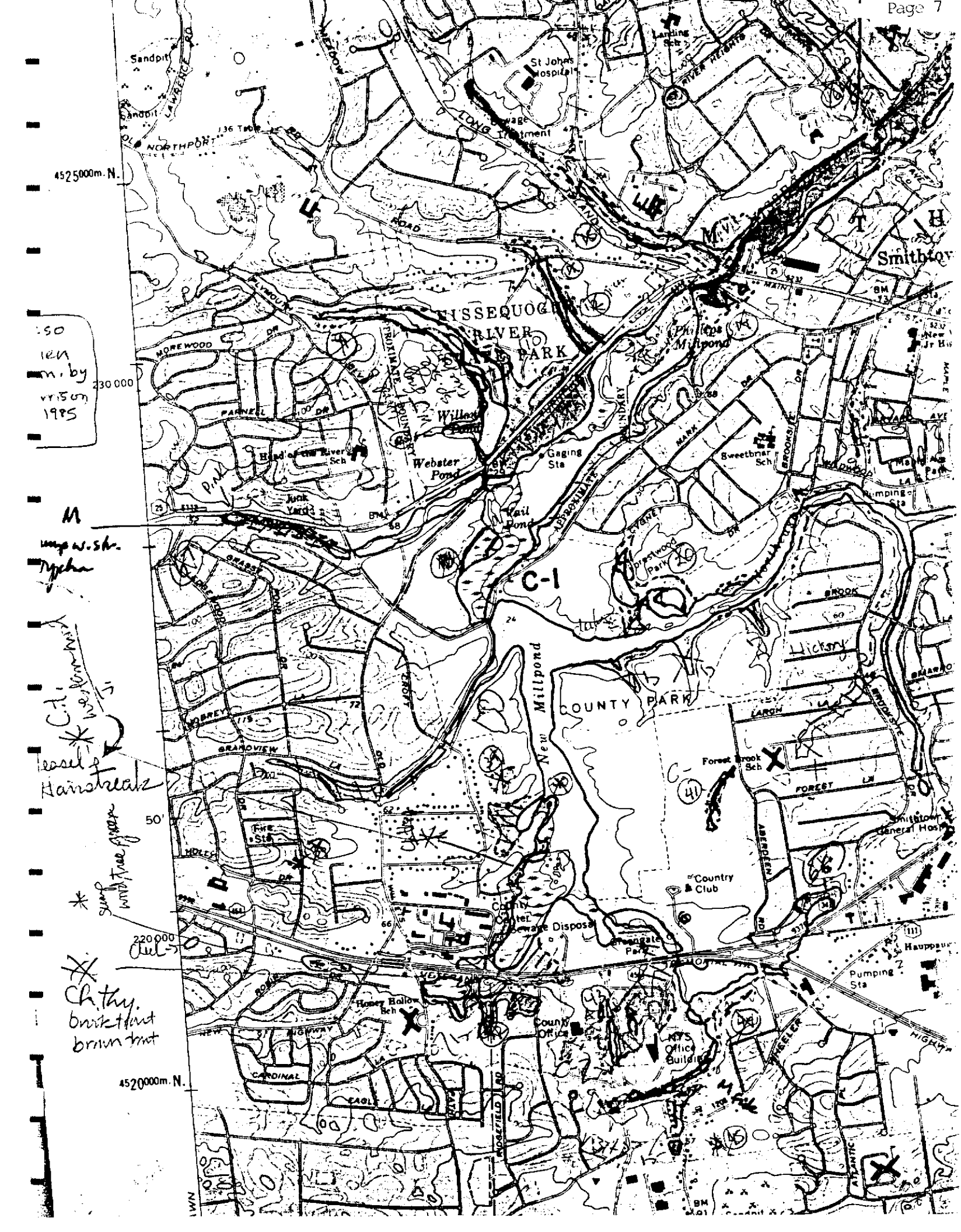
Martin E. Shea
Fish and Wildlife Technician

MES:ki


260 000
APPROX
BDY
Bob J. plants in ◻ pond A:820-6
aleurvas
A:820-7-15
N-2
Fresh Pond
Callahans Beach
Tidal Flat
55′
GOLF COURSE
SUNKEN MEADOW STATE PARK
APPROX
4530000m. N.
250 000
Creek
Fort Salonga
SALONGA
BREAD AND CHEESE
HOLLOW
ROAD
Middleville
N-10
N-12
PARKWAY
STATE
Park Entrance Tollgate
Parking Area
S M I T H T O W N
BERG AVE
LOU AVE
MEADOW
SUNKEN
Osgood Jr High Sch
Park
Kings Park
Water
ROAD
LONG ISLAND
Fire Sta
Junk Yard
240 000
SUNKEN
8TH
5TH
1ST AVE
INDIAN HEAD RD

Prepared and published in 1975 by the New York State Department


4525000m. N.
Holy Cross Cem
North Ridge Sch
John F Kennedy Jr High Sch
Commack High Sch
Circle Hill Sch
Burr-Winkle Park
Indian Hollow Sch
Winnecomac Sch
Christ the King Sch
Sunshine Acres Park
Commack Cem
Pumping Sta
Fire Sta
Commack
Smith Lane Sch
S M I T H T O W N
Drive-in Theater
Whitman Hollow Park
Green Fields Sch
Substation
Commack Hills Country Club
Wood Park Sch
Valmont Village Park
Water Tank
Wick
Radio Facility
Sagtikos
230 000 FEET
220 000
50'
4520000m. N
CENTRAL ISLIP
MARSHMALLOW DR
LONGBOW LA
SCHOLAR LANE
HARVEST LANE
HAYRICK LANE
HAVEMEYER LANE
TERRY LANE
COMPTON ST
JERICHO TURNPIKE
BM 144
VETERANS MEMORIAL HIGHWAY
PICKWICK DR
GENESEE DR
SENECA DR
GANNET DR
GLENWOOD
BUTTERFLY DR
BRANDYWINE LANE
ASTOR COURT
SOMERSET DRIVE
WESLEYAN ROAD
FULTON BLVD
MONTROSE DRIVE
INDIAN HEAD
SAGTIKOS PARKWAY
SUNKEN MEADOW PARKWAY
COMMACK ROAD
FLORIDA AVE
HARNED ROAD
PARKWAY
T3
14
12
10
G-5
G-7
G-8
Natural
M Tyler


4525000m. N.
4520000m. N.
230 000
220 000
Sandpit
NORTHPORT
St Johns Hospital
Landing Sch
LONG ISLAND
ROAD
MAIN
Smithtown
NISSEQUOGUE RIVER PARK
Phillips Millpond
Webster Pond
Head of the River Sch
Gaging Sta
Sweetbriar Sch
Mark
Junk Yard
Mail Pond
C-1
Hickory
COUNTY PARK
New Millpond
Forest Brook Sch
FOREST LN
Country Club
Fire Sta
Honey Hollow Sch
County Center
Pumping Sta
NYS Office Building
CARDINAL
EAGLE
HIGHWAY
MORELAND
PARNELL
GRANDVIEW
ABERDEEN
BROOK
LARCH
Pumping Sta

REFERENCE NO. 15

YEC, INC.
Forest View Professional Building
10 Pine Crest Road
Valley Cottage, NY 10989
(914) 268-3203

September 7, 1988.

Mr Al Anderson
Chief Fire Inspector
Department of Fire Prevention
99 West Main Street
Smithtown, NY 11787

Dear Mr Anderson,

We are under contract to NYS Department of Environmental Conservation (NYDEC) Hazardous Waste Remediation Division to conduct Phase I investigation on several hazardous waste sites in Suffolk County. Smithtown Landfill (also known as Izzo Landfill) which is an inactive landfill, located in Old Northport Road is one of those sites. I would like to know whether this site is declared as threat of fire and/or explosion by you.

Thanking you.

Sincerely yours

A Selvakumar

Ari selvakumar
Staff Engineer
YEC, Inc.

TOWN OF SMITHTOWN

TOWN SUPERVISOR
PATRICK R. VECCHIO
BUREAU DIRECTOR
JOHN VALENTINE

CODE ENFORCEMENT BUREAU
65 MAPLE AVENUE
SMITHTOWN, N.Y. 11787
(516) 360-7553

November 1, 1988

YEC, Incorporated
Forest View Professional Building
10 Pine Crest Road
Valley Cottage, New York 10989

Dear Mr. Chen:

In reference to subject property, Smithtown Landfill (also known as Izzo Landfill) at this time this piece of land does not have any potential for an explosive or fire hazard situation, as per an inspection made by the Fire Marshal's Office.

Sincerely,

John Valentine
Bureau Director

JV:bs

cc: Frank Mooney, Town Engineer
Sandra Berman, Town Attorney

V88-0601

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

EPA

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980762611

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Smithtown Landfill (old)	Old Indian Head Road				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Kings Park	NY	11754	Suffolk	103	02

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
40 52 00.0	73 15 50.0	☐ 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
9 / 28 / 88 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	1970 (BEGINNING YEAR) 1979 (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 YEC, Inc. (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Y.S.Ed. Chen Ph.D.,P.E.	Principal	YEC, Inc.	(914) 268 3203
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
A. Selvakumar	Staff Engineer	YEC, Inc.	(914) 268 3203
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
			( )
Francis J. Mooney	Town Engineer	124 W.Main Street,	(516) 360 7550
		Smithtown, NY 11787.	( )
Alexander Izzo	Owner	106 Fourth Street, Glen Cove, NY 11542.	516 671 2144 ( )
Neal Izzo	Owner	P.O.Box 345, Forrest Pond Road, Glen Head, NY 11545.	( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	10.00 A.M.	Sunny, 76 F, Wind, North east

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
		( )

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ariamalar Selvakumar		YEC, Inc.	914 268 3203	9/28/88 (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	D980762611

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS
CUBIC YARDS: Unknown
NO. OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			No waste types other than
SOL	SOLVENTS			sanitary refuse and household
PSD	PESTICIDES			wastes are known to have been
OCC	OTHER ORGANIC CHEMICALS			applied in the landfill.
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

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
	No hazardous substances				
	are known to have been				
	applied to the landfill.				
	No analytical data are				
	available for evaluation				
	of soil/groundwater				
	contamination.				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS	Not applicable		FDS		
FDS			FDS		
FDS			FDS		

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

Site Inspection, Interview with Mr. Francis J. Mooney, Town Engineer, Smithtown.

EPA FORM 2070-13(7-81)

EPA

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

I. IDENTIFICATION	
01 STATE: NY	02 SITE NUMBER: D980762611

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE: 1978) — [ ] POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 89,357
04 NARRATIVE DESCRIPTION

Samples obtained from private wells one mile away show a maximum of 6 ppb trichloroethane, 9 ppb tetrachloroethylene, and up to 1900 ppm chloride. The contaminants have not been specifically traced to this site.

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

There is no viable overland route from the site to surface water due to several roads which intersect the pathway.

01 [X] C. CONTAMINATION OF AIR — 02 [ ] OBSERVED (DATE: 1979) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

The landfill has had problems with methane generation. The Suffolk County Health Department found traces of methane at Indian Head School Ball field north of site. The landfill was regraded and methane collection system was installed.

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

Code Enforcement Bureau Director did not declare the site as a fire or explosion threat. Therefore, there is no known potential for fire/explosive conditions.

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

None reported.

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

None reported.

01 [X] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE:) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 89,357
04 NARRATIVE DESCRIPTION

limited to the population served by groundwater from the aquifer of concern within a 3-mile radius of the site.

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

No reported history.

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

The Suffolk County Department of Health measured traces of methane in a ball field of Indian Head School 250 feet from the landfill in 1981. Subsequently, a methane gas collection and recovery system was installed on-site to generate electricity.

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D980762611

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

None reported.

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

None reported.

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

None reported.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoffs/Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 89,357 — 04 NARRATIVE DESCRIPTION

The landfill is unlined.

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

Buildings adjacent to the site have been impacted due to methane generated at the landfill.

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

None reported.

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

The landfill is partially fenced, however local home owners dump residential wastes illegally. Old, empty, crushed drums were noted on the landfill.

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

Unknown.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 89,357

IV. COMMENTS

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

Site inspection/interviews, NUS report, Suffolk County Department of Health Services file.

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980762611

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ 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	29.09	acres
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

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

05 OTHER

- ☐ A. BUILDINGS ON SITE

1

06 AREA OF SITE

29.09 (Acres)

07 COMMENTS

The Smithtown Landfill accepted household wastes and sanitary refuse. Town of Smithtown leased the property from Izzo Brothers and operated from 1970 to 1979.

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.

No hydraulic barrier exists between the bottom of the landfill and the water table. The fill comes to approximately 8 feet above groundwater.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

The landfill is partially surrounded by a chain link fence.

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

Site inspection, interview with Mr. Francis Mooney, Town Engineer, Smithtown.

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE: NY | 02 SITE NUMBER: D980762611

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

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

02 STATUS

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

03 DISTANCE TO SITE

A. 0.1 (mi)

B. 0.25 (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: 89,357

03 DISTANCE TO NEAREST DRINKING WATER WELL: +/- 0.1 (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
45 (ft)	NE	45 (ft)	(gpd)	☒ YES ☐ NO

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

The area is served by public wells. There are 12 major public supply wells within three miles of the site.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Site recharges local aquifers which eventually enter the Long Island Sound	☐ 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
Nissequogue River	☐	2.5 (mi)
Long Island Sound	☐	3.0 (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. 10,725 NO. OF PERSONS	B. 47,947 NO. OF PERSONS	C. 89,357 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: 0.25 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
1000	adjacent (mi)

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

The site is located in Northern Smithtown in Suffolk County. There is heavy industry adjacent to the site and medium density residential subdivision approximately 1/4 mile south of the site. The major commercial district of Smithtown is approximately 4-miles south of the site.

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D980762611

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)
☐ A. 10^{-6} - 10^{-8} cm/sec ☐ B. 10^{-4} - 10^{-6} cm/sec ☐ C. 10^{-4} - 10^{-3} cm/sec ☒ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)
☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE (10^{-4} - 10^{-6} cm/sec) ☐ C. RELATIVELY PERMEABLE (10^{-3} - 10^{-4} cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-3} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
1000 (ft)	unknown (ft)	unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
23 (in)	2.8 (in)	highly variable %	variable	0 - 8 %

09 FLOOD POTENTIAL
SITE IS IN 50 YEAR FLOODPLAIN

10
☒ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. 5 (mi)	B. (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	AG LAND
A. Adjacent (mi)	B. 0.25 (mi)	C. 1.5 (mi)	D. 1.5 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located approximately 3 miles from the Long Island Sound at an elevation of approximately 150 feet above mean sea level. Thesite is surrounded by rolling hills with a regional slope of terrain to the east approximately 8%. Soils in this region are sandy and well drained.

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

Site Inspection, NUS report, USGS Quadrangle map, NYSDEC, Soil Survey of Suffolk County.

EPA FORM 2070-13(7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980762611

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER		No samples taken.	
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Air Quality	Photoionizer (HNu) did not detect contamination above background levels.

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF YEC, Inc. (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS YEC, Inc., Valley Cottage, New York.

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None.

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

Site Inspection.

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	D980762611

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
Alexander Izzo	

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

05 CITY	06 STATE	07 ZIP CODE
Glen Cove	NY	11542

01 NAME	02 D+B NUMBER
Neal Izzo	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
P.O.Box 345, Forrest Pond Road	

05 CITY	06 STATE	07 ZIP CODE
Glen Head	NY	11545

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

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

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

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)

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980762611

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
No current operator			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**12 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**13 SIC CODE**
05 CITY	**06 STATE** / **07 ZIP CODE**	**14 CITY**	**15 STATE** / **16 ZIP CODE**
08 YEARS OF OPERATION	**09 NAME OF OWNER**		

OPERATOR'S PARENT COMPANY (If applicable)

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

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
Town of Smithtown			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**12 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**13 SIC CODE**
124 W.Main Street			
05 CITY	**06 STATE** / **07 ZIP CODE**	**14 CITY**	**15 STATE** / **16 ZIP CODE**
Smithtown	NY / 11754		
08 YEARS OF OPERATION	**09 NAME OF OWNER DURING THIS PERIOD**		
9	Izzo Brothers		
01 NAME	**02 D+B NUMBER**	**10 NAME**	**11 D+B NUMBER**
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**12 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**13 SIC CODE**
05 CITY	**06 STATE** / **07 ZIP CODE**	**14 CITY**	**15 STATE** / **16 ZIP CODE**
08 YEARS OF OPERATION	**09 NAME OF OWNER DURING THIS PERIOD**		
01 NAME	**02 D+B NUMBER**	**10 NAME**	**11 D+B NUMBER**
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**12 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**13 SIC CODE**
05 CITY	**06 STATE** / **07 ZIP CODE**	**14 CITY**	**15 STATE** / **16 ZIP CODE**
08 YEARS OF OPERATION	**09 NAME OF OWNER DURING THIS PERIOD**		

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

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980762611

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
None	
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
Unknown			
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)

Site Inspection

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980762611

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not Applicable

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D980762611

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED
04 DESCRIPTION: Not applicable
02 DATE: _____ 03 AGENCY: _____

01 ☐ S. CAPPING/COVERING
04 DESCRIPTION: Not applicable
02 DATE: _____ 03 AGENCY: _____

01 ☐ T. BULK TANKAGE REPAIRED
04 DESCRIPTION: Not applicable
02 DATE: _____ 03 AGENCY: _____

01 ☐ U. GROUT CURTAIN CONSTRUCTED
04 DESCRIPTION: Not applicable
02 DATE: _____ 03 AGENCY: _____

01 ☐ V. BOTTOM SEALED
04 DESCRIPTION: Not applicable
02 DATE: _____ 03 AGENCY: _____

01 ☒ W. GAS CONTROL
04 DESCRIPTION: Methane was vented through removal of top soil and placement of a berm.
02 DATE: 1979 03 AGENCY: Town of Smithtown

01 ☐ X. FIRE CONTROL
04 DESCRIPTION: Not applicable
02 DATE: _____ 03 AGENCY: _____

01 ☐ Y. LEACHATE TREATMENT
04 DESCRIPTION: Not applicable
02 DATE: _____ 03 AGENCY: _____

01 ☐ Z. AREA EVACUATED
04 DESCRIPTION: The Indian Head School was closed due to methane migration.
02 DATE: 1978 03 AGENCY: Town of Smithtown

01 ☐ 1. ACCESS TO SITE RESTRICTED
04 DESCRIPTION: Not applicable
02 DATE: _____ 03 AGENCY: _____

01 ☐ 2. POPULATION RELOCATED
04 DESCRIPTION: Not applicable
02 DATE: _____ 03 AGENCY: _____

01 ☐ 3. OTHER REMEDIAL ACTIVITIES
04 DESCRIPTION: None
02 DATE: _____ 03 AGENCY: _____

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

EPA FORM 2070-13 (7-81)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART II - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 State	02 Site Number
NY	D980762611

II. ENFORCEMENT INFORMATION

01 Past Regulatory/Enforcement Action |X| Yes | | No

02 Description of Federal, State, Local Regulatory/Enforcement Action

In September, 1980 New York State Department of Environmental Conservation initiated a legal case against the Town of Smithtown for violating odor control, final cover application, leachate ponding, methane gas generation, and ground cover crop.

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

YSDEC Files.

6 ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

The available data are considered insufficient to prepare a final HRS score for the Smithtown landfill site. There is no data on groundwater quality, either downgradient or upgradient of the landfill site. In addition, no soil samples have been analyzed for potential contaminants. In order to prepare a final HRS score for this site, analytical data for upgradient and downgradient groundwater and on-site soils will be necessary. Therefore, the following recommendations are made:

1. Install groundwater wells (both upgradient and downgradient) and subsequently collect and analyze groundwater samples;

2. Collect and analyze on-site soil samples; and

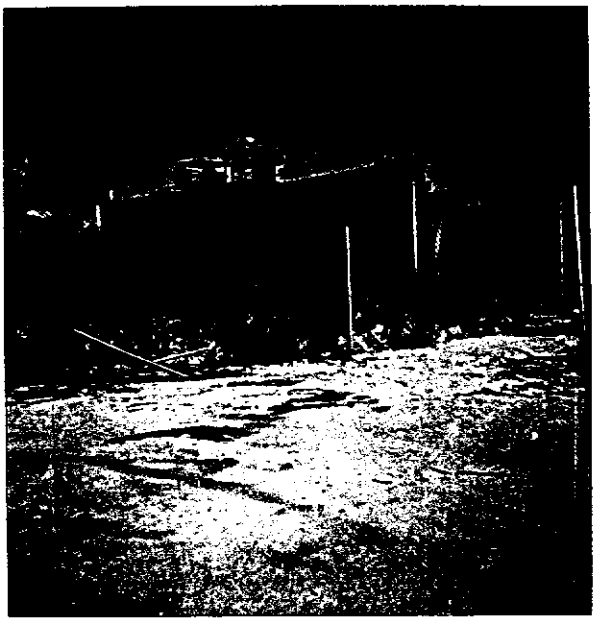
3. Monitoring potential methane migration.

Samples should be analyzed for heavy metals and Hazardous Substance List (HSL) organic compounds.

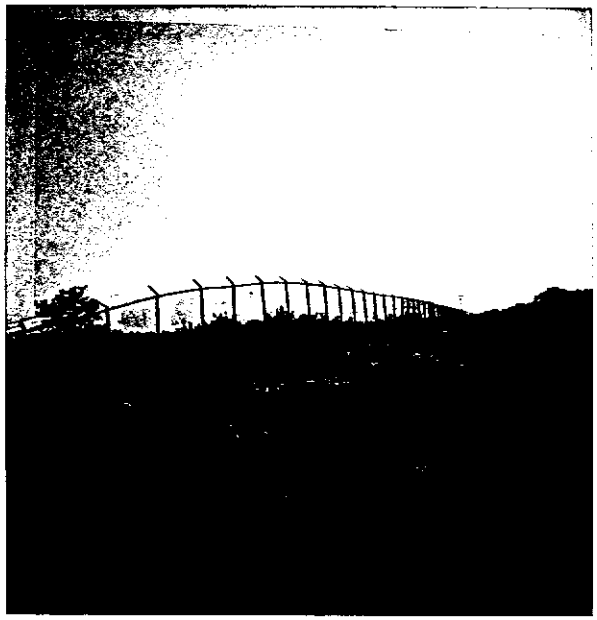
APPENDIX A

PHOTOGRAPHIC RECORD

SMITHTOWN LANDFILL, KINGS PARK, NEW YORK



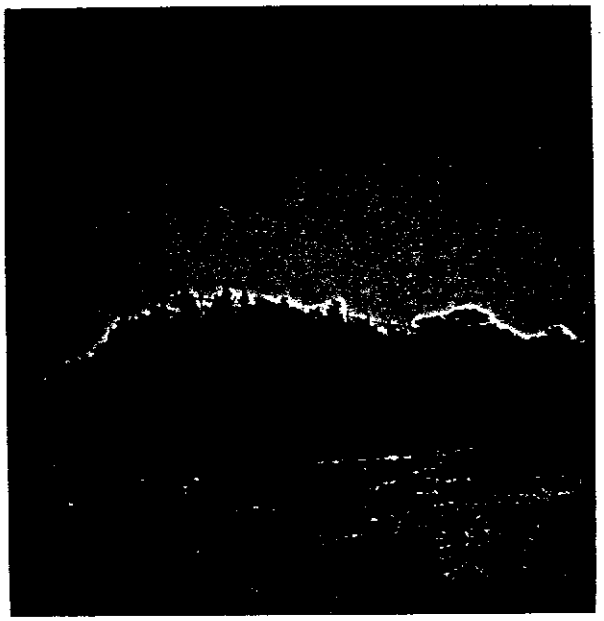
1.View of the entrance to the site off of Old Northport Road. Front Gate is removed. Facing North



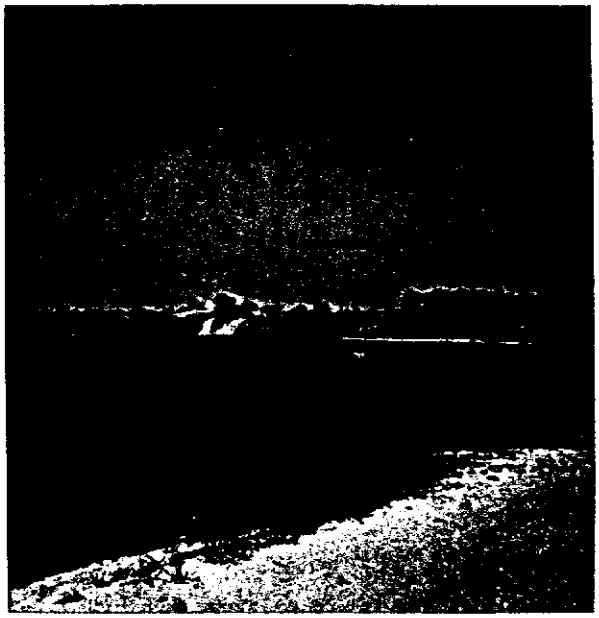
2. Southern view of the site. Fence mark property boundary.

3. A pile of refuse in the south central portion of the site.

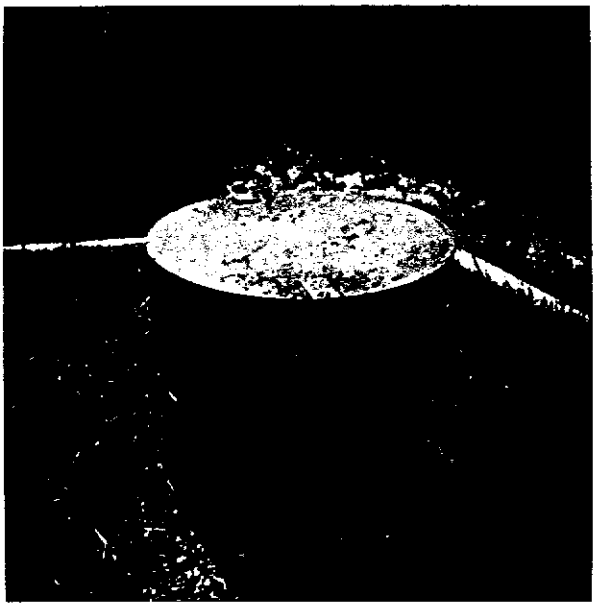
4. A view of methane gas generator. in the southwest corner of the site.



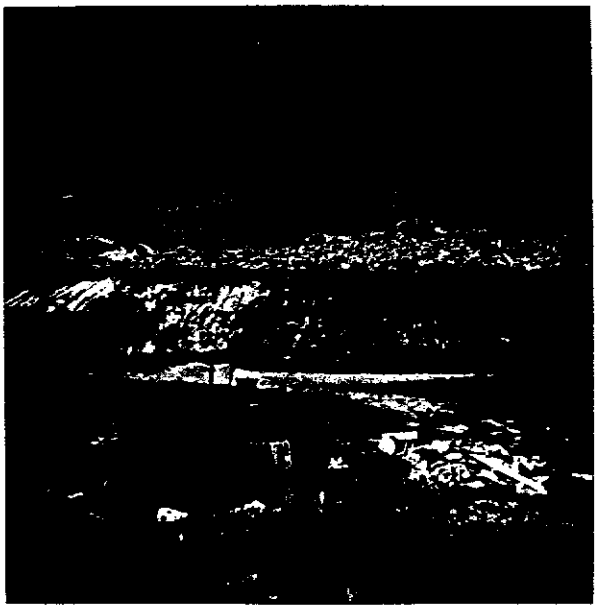
5.--Northern Boundary of the site. Behind the fence is the Indian Head School Ball Field.



6. View of Indian Head School. (Facing North)

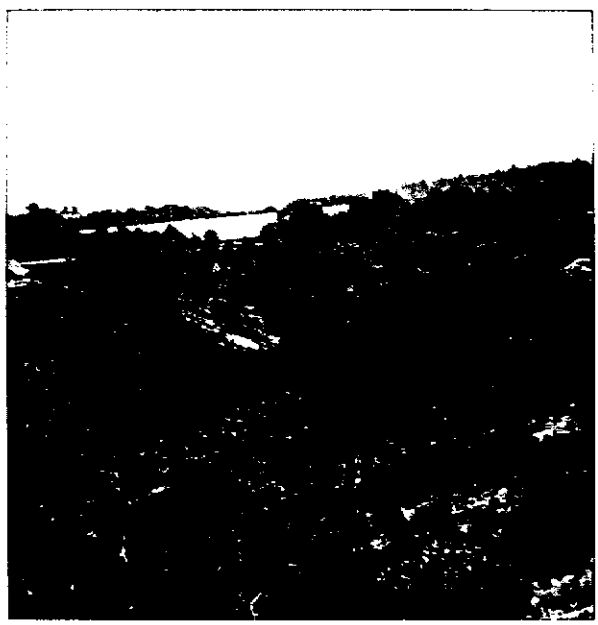


7. Photo of Methane collection system. located in the southwest corner of the site.



8. Miscellaneous refuse in the south west corner of the landfill site.

9. View of R.H. Industries, Inc. Floor Covering Contractor in the eastern side of the site.



10. Eastern boundary of the site.

APPENDIX B

UPDATED NYSDEC INACTIVE HAZARDOUS WASTE DISPOSAL SITE REGISTRY FORM

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:** 152043

Name of Site: Smithtown Landfill **Region:** 1

Street Address: Old Northport Road

Town/City: Kings Park, Smithtown **County:** Suffolk

Name of Current Owner of Site: (1) Alexander Izzo; (2) Neal Izzo

Address of Current Owner of Site: (1) 106 Fourth Street, Glen Cove, NY 11542
(2) 345 Forrest Pond Road, Glen Head, NY 11545

Type of Site: [ ] Open Dump [ ] Structure [ ] Lagoon
[X] Landfill [ ] Treatment Pond

Estimated Size: 29.09 acre(s)

Site Description:

The Smithtown landfill site is located on the north side of Old Northport Road approximately 350 feet west of the intersection of Old Northport Road and Indian Head Road. The site was leased from Izzo Brothers and operated as a municipal landfill by the Town of Smithtown from 1970 to 1979. The landfilling was discontinued in 1979, when the landfilling begun on a new landfill. Household wastes of all types were delivered to this site. The landfill neither has a liner nor a leachate collection system.

Hazardous Waste Disposed: [ ] Confirmed [X] Suspected

Type and Quantity of Hazardous Wastes Disposed:

Type	Quantity (Pounds, Drums, Tons, Gallons)
Unknown	

Time Period Site was Used for Hazardous Waste Disposal:

_____, 1970 To _____ July , 1979

Owner(s) During Period of Use: Izzo Brothers

Site Operator During Period of Use: Town of Smithtown

Address of Site Operator: 124 W.Main Street, Smithtown, NY 11787

Analytical Data Available: [ ] Air [ ] Surface Water [ ] Groundwater
[ ] Soil [ ] Sediment [X] None

Contravention of Standards: [X] Groundwater [X] Drinking Water
[ ] Surface Water [ ] Air

Soil Type: Riverhead and Haven soils, 0 to 8 percent.

Depth to Groundwater Table: 45 feet

Legal Action: Type: None [ ] State [ ] Federal

Status: [ ] In Progress [ ] Completed

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

Nature of Action: _____

Assessment of Environmental Problems:

Unknown

Assessment of Health Problems:

Unknown

Person(s) Completing This Form:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION		NEW YORK STATE DEPARTMENT OF HEALTH	
Name:	_____	Name:	_____
Title:	_____	Title:	_____
Name:	_____	Name:	_____
Title:	_____	Title:	_____
Date:	_____	Date:	_____

APPENDIX C

PHOTOCOPIED REFERENCES

REFERENCES

1 New York State Department of Environmental Conservation, Region 1, Files. Document Location: NYSDEC, Region 1, New York.

2 NUS Corporation, 1983, Potential Hazardous Waste Site Preliminary Assessment. Document Location: USEPA Region II Office, New York, New York.

3 Town of Smithtown, 1973, Multi-Town Waste Management District Committee Inventory. Document Location: Town of Smithtown, New York.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

LEGAL CASE STATUS SYSTEM

CASE INITIATION FORM

(Please PRINT)

CASE NUMBER _____ PROGRAM SOLID WASTE | CODE

CASE NAME: LEGAL CITATION _____

T O W N O F S M I T H T O W N

ADDRESS:

9 9 W E S T M A I N S T R E E T

CITY: ZIP:

S M I T H T O W N N E W Y O R K 11787

COUNTY: SUFFOLK | SWIS CODE

DATE CASE INITIATED: 9 | 2 | 80 (MO | DAY | YEAR)

REFERRED BY: Morris Bruckman

Morris Bruckman, P.E.
Sr. Sanitary Engineer

DESCRIPTION OF CASE:

ENDORSED BY: _____

Albert Machlin, P.E.
Regional Engineer for
Environmental Quality

APPROVED BY: _____

Donald J. Middleton
Regional Director

OTHER COMMENTS:

13-14-6(3/78)

DATA SUPPORTING REQUEST FOR LEGAL ACTION

DATE: September 2, 1980
FIRM: Town of Smithtown
RESPONSIBLE OFFICER: Supervisor Patrick R. Vecchio
ADDRESS: 99 West Main Street
Smithtown, New York 11787

1. Specific violations: Part 360.8(a)8 odors not controlled 8/12/80; 360.8b(1 vii(e) final cover not applied 10/1/79 through 8/12/80; 360.8b viii not graded to prevent ponding 10/1/79 through 8/12/81; 360.8(b) ix ground cover crop not provided 4/15/80 through 8/12/80; 360.8b(1)(vi) decomposition gases create hazard 8/12/8

2. Background information:
Landfilling at this site was discontinued on approximately July 1, 1979 when landfilling was begun on a new landfill.
The Town has further failed to provide plans for groundwater monitoring, leachate collection and treatment, and methane monitoring.
Copy of inspection memo, dated 8/25/80 is attached.

3. Facts describing respondent's cooperation or lack thereof The Town has refused to comply with the State requirements for proper closure of the landfill on the grounds that they no longer have control of the property. This contention may have been earlier concealed by the Town, which had filed a final use plan without consulting the owners.

4. Other proceedings, if any involving respondent

5. Recommendations:
Compliance Conference: XXXXXX Hearing _____ Priority _____
Fine $ 746,000 Performance Bond $ _____
Other Penalty $1000/day / violation ~~subsequent to 8/12/80.~~
Consent Order Terms:
Town to take immediate steps to provide impermeable cap, proper drainage, groundwater monitoring, methane venting and monitoring, odor control.

6. Other Comments: I recommend that owners be invited to the conference:
Neal Izzo
345 Forest Pond Rd.
Glen Head, NY 11545

Alexander Izzo
106 Fourth St.
Glen Cove, NY 11545

MB/ef
Attd.-
cc: D. Mafrici
J. Maloney

New York State Department of Environmental Conservation

MEMORANDUM

TO: Morris Bruckman

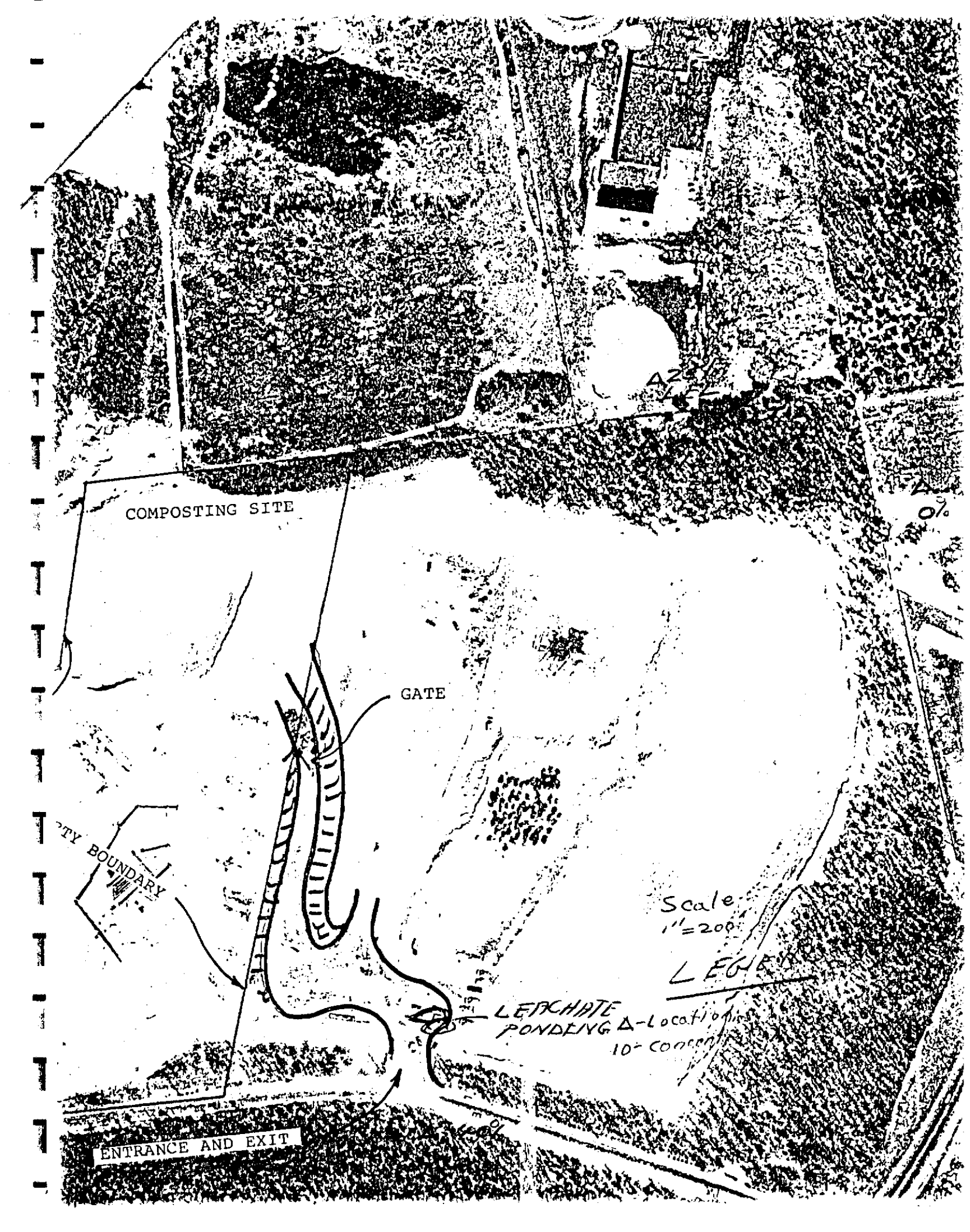
FROM: ~~Paul~~ Lappano PL

SUBJECT: Town of Smithtown - Closed Landfill in Kings Park

DATE: August 25, 1980

On August 12, 1980, I inspected the closed landfill. Ponding of leachate (vertified by a conductivity reading of 4000 microhms) was visible and odorific at the top of slope on the South side of the landfill near Old Northport Road. Methane gas was also dectected off site at concentration ranging from 25% LEL to 40% gas. Location as shown on attached map.

PL/jf
Attachment


COMPOSTING SITE
GATE
PROPERTY BOUNDARY
Scale
1"=200'
LEGEND
LEACHATE PONDING
ENTRANCE AND EXIT

Smithtown Old Landfill
Kings Park
9/2/00

Leachate
Observed

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of the Alleged Violation of Articles 27 and 71 of the New York State Environmental Conservation Law and 6 NYCRR Part 360.8b, subdivision 1, by

TOWN OF SMITHTOWN and
ALEXANDER IZZO and NEAL IZZO

(Suffolk County) Respondents

NOTICE OF HEARING

Complaint Attached

FILE NO. 1-0801

PLEASE TAKE NOTICE THAT, pursuant to the above-captioned sections of the New York State Environmental Conservation Law, I shall convene a public hearing at the following time and place:

Monday, March 8, 1982
at
two o'clock in the afternoon of that day

at the Region One offices of this Department in Building 40 on the State University Campus at Stony Brook, New York, and thereafter on such other day or days as the Hearing Officer may fix, in order to consider certain charges that you have violated Articles 27 and 71 of the New York State Environmental Law and the rules and regulations adopted thereto, as specified in the Complaint hereto annexed, and to consider further, why an order should not be issued against you to cease and desist forthwith from such violations of law, and further, to consider assessment of whatever penalties the circumstances may warrant and further, to consider any other or additional remedial action which may be appropriate.

PLEASE TAKE FURTHER NOTICE THAT, a violation of Article 27 of the New York State Environmental Conservation Law is punishable by a civil penalty not to exceed Two Thousand Five Hundred ($2,500) Dollars for each such violation and an additional penalty of not more than One Thousand ($1,000) Dollars for each day during which such violation continues, as described under Section 71-2703 of the New York State Environmental Conservation Law.

PLEASE BE ADVISED THAT, you may file a wirtten answer to the charges of the violations alleged within twenty (20) days of receipt of the Complaint, but no later than five (5) days before the date of hearing, whichever is shorter; that you may appear at the hearing with or without counsel; that all witnesses will testify under oath and a stenographic record of the proceeding will be made; that you may request issuance of subpoenas to compel attendance of witnesses and cross-examine witnesses and examine evidence produced against you.

PLEASE BE FURTHER ADVISED THAT, whether or not you appear, the hearing will be convened at the stated time and place, and should the violation of law

aforesaid be established, an Order may be issued against you, including an assessment of penalties; you may waive your right to a public hearing in this matter and agree to the issuance of an Order on Consent.

Dated: Albany, New York
10 February 1982

ROBERT F. FLACKE
Commissioner of Environmental Conservation

By _____
JOAN B. SCHERB, Regional Attorney
and Commissioner's Designee for
Notices of Hearing

To: Town of Smithtown
99 West Main Street
Smithtown, New York 11787
Att: Hon. Patrick Vecchio
&
Mr. Alexander Izzo
106 Fourth Street
Glen Cove, New York 11542
&
Mr. Neal Izzo
Post Office Box 345
Forrest Pond Road
Glen Head, New York 11545

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of the Alleged Violation of Articles 27 and 71 of the New York State Environmental Conservation Law and 6 NYCRR Part 360.8b, subdivision 1, by

TOWN OF SMITHTOWN, and
ALEXANDER IZZO and NEAL IZZO

(Suffolk County) Respondents

VERIFICATION

FILE NO. 1-0339

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

JOAN B. SCHERB, being duly sworn, deposes and says that deponent is a Regional Attorney in the Counsel's office in the New York State Department of Environmental Conservation, the governmental agency named in the within proceeding; that the deponent has read the foregoing Notice of Hearing and knows the content thereof; that the same is true to deponent's own knowledge except as to those matters alleged upon information and belief; and as to those matters, deponent believes them to be true.

This verification is being made by deponent because Complainant is a Department of the State of New York. Deponent is an officer thereof, to wit, a Regional Attorney. The grounds of deponent's belief as to all matters not stated upon deponent's own knowledge are as follows: from written reports received from the Environmental Quality Unit Regional Offices and from reports of the Suffolk County Department of Health Services.

JOAN B. SCHERB
Regional Attorney

Sworn to before me this
10th day of Jan. 1982.

NOTARY PUBLIC

CAROLYN M. MILLER
NOTARY PUBLIC, State of New York
No. 52-4703584, Suffolk County
Commission Expires March 30, 1982

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of the Alleged Violation of Articles 27 and 71 of the New York State Environmental Conservation Law and 6 NYCRR Part 360.8b, subdivision 1, by

TOWN OF SMITHTOWN, and
ALEXANDER IZZO and NEAL IZZO

Suffolk County Respondents

COMPLAINT

FILE NO. 1-0801

The Department of Environmental Conservation of the State of New York, complaining of Respondents in the above entitled proceeding, alleges as follows:

FIRST: The Complainant is and has been a Department of the State of New York charged with jurisdiction over the prevention and abatement of pollution in the State of New York in the manner provided by Articles 27 and 71 of the Environmental Conservation Law and the rules and regulations adopted pursuant thereto.

SECOND: That on information and belief, Respondent, Town of Smithtown is a municipal corporation, having its principal office at 99 West Main Street Smithtown, New York.

THIRD: That on information and belief, Respondents, Alexander Izzo and Neal Izzo, are the owners of a parcel of vacant land, consisting of some 29 acres and situated at Kings Park in the Town of Smithtown and that they leased said 29 acres to the Town of Smithtown for the purpose of permitting the Town of Smithtown to landfill its solid waste.

FOURTH: That on information and belief, the Town of Smithtown leased the aforementioned parcel of vacant land consisting of some 29 acres, situated at Kings Park, Town of Smithtown, Suffolk County, State of New York for the purpose of landfilling their solid wastes and other municipal wastes from the 10th day of March, 1970 until sometime about July 1, 1979, when landfilling by the Town

of Smithtown was discontinued at this site.

FIFTH: That on information and belief, on or about July 1, 1979, the Town of Smithtown ceased operating at the aforementioned property.

SIXTH: That 6 NYCRR Part 360.8b subdivision 1(vii)(e) provides that final cover shall be applied in the following circumstances: (1) whenever an additional lift of solid waste is not to be applied within one year; (2) to any area of a landfill attaining final elevation, within 90 days after such elevation is attained; (3) to an entire landfill which is the subject of an application that is denied or a permit that terminates for any reason.

SEVENTH: That final cover is defined in Part 360.1(c)(13) as a compacted layer of cover material, at least 24 inches thick, that is placed on all surfaces of a landfill where no additional refuse will be deposited within one year. The upper six inches shall be soil of a composition suitable to sustain plant growth. The lower portion shall be a material which restricts infiltration to the equivalent of that achieved by 18 inches of soil at hydraulic conductivity (coefficient of permeability) of 10^{-5} cm/sec or less, graded at a minimum scope of two percent.

EIGHTH: That upon information and belief, the Town of Smithtown has violated Part 360.8b subdivision 1(vii)(e) in that they operated a landfill and have failed to provide an impermeable final cover as required under the aforementioned part.

NINTH: That 6 NYCRR Part 360.8b subdivision 1 (iii) provides for a minimum of three groundwater monitoring wells, or more as determined by the department, shall be provided at a new or modified facility, and at least two wells shall be located down-gradient from the solid waste fill area. Appropriately located, constructed and monitored wells offsite may be used to satisfy this requirement. Where determined by the department, monitoring wells may be required at facilities in existence on the effective date of this Part.

TENTH: That upon information and belief, the Town of Smithtown has violated Part 360.8b subdivision 1 (iii) in that they have operated the aforementioned landfill and have failed to install monitoring wells as required under the aforementioned part.

ELEVENTH: That 6 NYCRR Part 360.8b subdivision 1 (vi) provides that the decomposition gases generated within the sanitary landfill shall be controlled so that they will not create hazards to health, safety or property. This part also sets forth the concentration limitations for explosive gases generated by the facility.

TWELFTH: That upon information and belief, the Town of Smithtown has violated Part 360.8b subdivision 1(vi) in that they have operated a landfill and have failed to prevent the migration of methane gases generated within the facility beyond the property boundary at the lower explosive limits for gases.

THIRTEENTH: That on information and belief, Alexander Izzo and Neal Izzo have violated Part 360.8b, subdivision 1(vii)(e) in that they owned a landfill and have failed to provide an impermeable final cover as required under the aforementioned part.

FOURTEENTH: That on information and belief, Alexander Izzo and Neal Izzo have violated Part 360.8b, subdivision 1 (iii) in that they have owned the aforementioned landfill and have failed to install monitoring wells as is required under the aforementioned part.

FIFTEENTH: That on information and belief, Alexander Izzo and Neal Izzo have violated Part 360.8b, subdivision 1(vi) in that they have owned a landfill and have failed to prevent the migration of methane gases generated within the facility beyond the property boundary at the lower explosive limits for gases.

SIXTEENTH: That on information and belief, all of the aforementioned violations have continued since July 1, 1979.

WHEREFORE, Complainant demands a judgment against the Town of Smithtown and Alexander Izzo and Neal Izzo in the sum of Three Hundred Thousand ($300,000) Dollars and that they be required to close the landfill in the manner provided under 6 NYCRR Part 360.

JOAN B. SCHERB
Regional Attorney
New York State Department of
Environmental Conservation
Building 40 - S. U. N. Y.
Stony Brook, New York 11794

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

JCM
SK

Robert F. Flacke
Commissioner

February 25, 1980

Mr. Donal A.Devine, P.E.
Town of Smithtown
Town Engineer
Town Hall
99 West Main Street
Smithtown, New York 11787

Dear Mr. Devine:

On February 7, 1980, the Town of Smithtown, represented by the Town Supervisor, the Town Attorney, and yourself, met with representatives of the State to discuss the Town Landfills.

In regard to the Kings Park landfill, the Town stated that it should not be required to provide an impermeable cap for final cover, because:

1. Our requirement was not timely.

2. The lease having expired, the conditions of the lease would permit the Town to use only earth and seed for final cover, and prevent impermeable capping.

I told the Town that I would examine my files. I have done so, and find that the Town's statements are without merit because:

1. Final cover has not been placed. Furthermore, my comments dated October 12, 1978 to the Town of Smithtown, (addressed to Mr. Trent) in regard to their application for a permit to operate the Kings Park Sanitary Landfill, Project #52-S-12, included the following:

"There is no objection to the ultimate end use of the property as a parking lot. Final cover is required to be installed within

February 25, 1980

90 days of final elevation. The final cover specifications as shown in Drawing #L-10, indicate that the cover will allow leaching. Can you devise, either by suitable soils or liner, an impermeable cap, as well as a suitable drainage system?"

2.(a). "Par. 30 - The leasee represents and covenants that it will comply with all rules, regulations, orders and laws of any governmental authority having jurisdication over the demised premise and/or over the use of the demised premise for a solid waste garbage landfill area."

(b). "Attachment to An Application for Approval to Operate a Solid Waste Management Facility" (submitted by the Town) include a letter from Alexander and Neal Izzo (Owners of the property dated February 15, 1978 stating: ..."It is our further understanding that the application to be submitted by the Town of Smithtown shall be pursuant to the provisions contained in NYCRR - Part 3 -60."

(c). Part 360 states:

Part 360.8b xv "Additional requirements including but not limited to, leachate collection, impervious liner, and impervious caps may be required."

In the event that Alexander and Neal Izzo, the owners of the property, do not wish to allow the Town to cap the landfill, and wish to undertake the responsibility themselves, I suggest herewith that they contact our Regional Attorney.

The closing of the Kings Park landfill is long overdue. It is imperative that the Town proceed without delay to provide cover with a permeability of 10^{-5} or better.

Very truly yours,

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

MB/ef
cc: D. Middleton, P. Vecchio, M. Forte, N. Nosenchuck
J. Scherb, A. Machlin, D. Mafricci, J. Maloney,
A. Izzo, N. Izzo

360 Facility No. 52-S-12 Inactive Hazardous Waste Site No. [illegible]
Date of Next Inspection or Action _____ Reference No. [illegible]
Date of Last Inspection _____ Compliance Status _____
X Landfill __ Construction and Demolition Sites __ Other _____
Facility Name [illegible]
Facility Address [illegible]
Facility Owner(s) [illegible]
Mailing Address 79 W Main [illegible]
Telephone No. _____
Facility Contact _____ NYSDEC Contact _____
Site Description: Acres 17 Lined Area _____
[illegible]
Date Opened 1967 Date Closed [illegible]
Permit No. _____ Permit Issued _____ Permit Expired _____
Types of Wastes Accepted:

__ Brush	X Compost	__ Incineration Waste	__ Demolition
X Municipal	X Scavenger	__ Agricultural	__ Waste Oil
__ Sewage	__ Other _____		

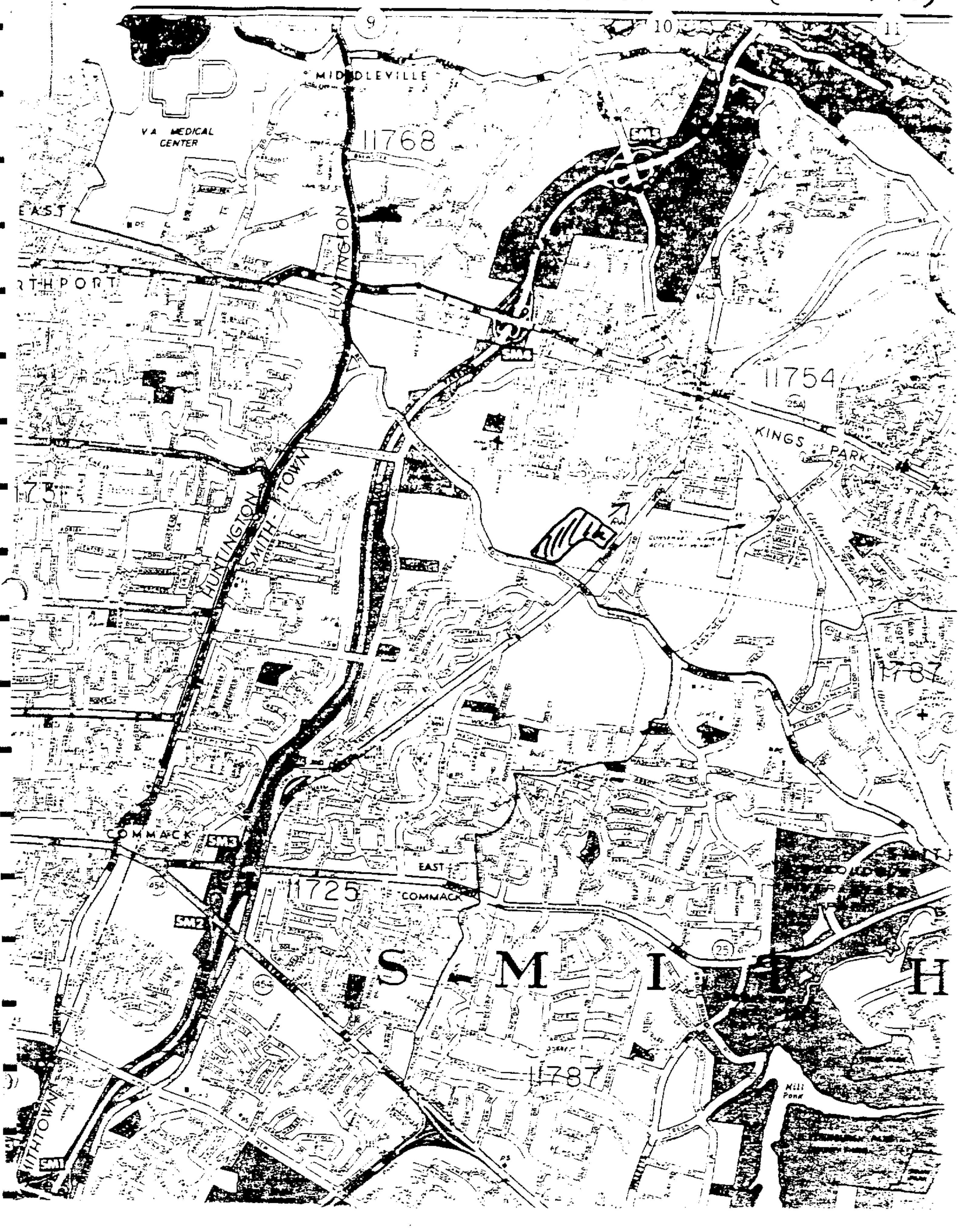
Consent Orders:

Date	Number	Active	Inactive	In Compliance? Yes	No	Unknown

Groundwater Monitoring System _____
Depth to Groundwater 45'
Direction of Groundwater Flow NE
Most Recent Groundwater Analysis _____

Methane/Odor Problems Detected 8-12-97 [illegible]
Methane Monitoring __ Venting X Recovery Notes [illegible]
Landgas Compan[illegible]
Leachate Problems [illegible]
Leachate Collection System? _____
Leachate Treatment? _____
Notes [illegible] Complaint [illegible]
[illegible]
[illegible]
NEEDS Capping

OLD SMITHTOWN (I220 SITE)




COMPOSTING SITE
GATE
TY BOUNDARY
Scale
1"=200
LEGEND
LEACHATE
PONDING A-Location
10-Concen
ENTRANCE AND EXIT

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Solid Waste

Scoring System to Select Sites to be Ranked for State Superfund

Name of Site Smithtown Landfill Inactive ☒ Active ☐

County Suffolk Private ☐ Public ☒

Address Old Northport Rd Kings Park Classification Code _____

Code Number _____ "Iezo Bros."

I. Type of Site

Open dump/unlined lagoon	(10)	
Structure	(8)	
Landfill	(6)	Score 6
No information/Unknown	(4)	

II. Hazardous Waste Disposal

Confirmed	(15)	
Suspected	(10)	
Unknown	(5)	Score 5

III. Type and Quantity of Waste

A. Type of Wastes

Halo-organics	(10)
Other organics	(5)
Inorganics	(3)
Unknown	(1)

B. Quantity of Waste/Year

Over 10 tons	(4 x type of waste)
1 to 10 tons	(3 x type of waste)
1 ton or less	(2 x type of waste)
Unknown	(1 x type of waste)

(1 ton = 1 cu. yd.)

$\frac{1}{A} \times \frac{1}{B} = \frac{1}{\text{Score}}$

IV. Environmental Problems

Groundwater contamination	(15)	
Surface Water/Wetland Contamination	(10)	
Air Contamination	(8)	
Possibility (½ above values)	7.5	Score 7.5

V. Public Health Problems

Known contamination of public water supply	(20)	
Known contamination of private water supply	(15)	
Potential contamination of public or private water supply	(10)	Score 10

MAXIMUM SCORE - 100

TOTAL SCORE 29.5

REGION 1.

1 TRANS. TYPE
1 ☐ Delete
2 ☒ Add

2 FACILITY NO. 7 | 8 DATE 13: 070887 | 14 TIME 17: 1300

20 CARD TYPE 21: 1 | 22 INSPECTOR'S NAME 36: RAYH ROMH | 37 | 38 REMARKS 72

20 CARD TYPE 21: 2 | 22–29: X | 30–33: X | 34–37 | 38–43 | 44–47: X | 48–50 | 51–53: X | 54–56: X | 57–58 | 59–61

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE

47-15-1 (9/83)

FACILITY INSPECTION REPORT

LEACHATE
1. Leachate is entering surface water.
2. Leachate is known to be contravening groundwater standards.
3. Waste is being placed into water.

BURNING
4. Refuse is burning without permit or not under permit conditions.
5. There is evidence of unapproved previous burning.

COVER
6. Previous days waste is not covered.
7. Refuse is protruding through daily, intermediate or final cover.
8. Intermediate or final cover is not in place or properly applied.

GRADING
9. Depressions, ponding, cracked cover, or slopes steeper than 1 on 3 exist.
10. Vegetative cover is missing or inadequate on completed areas.
11. Soil erosion or other drainage problems exist.

SEPARATION DISTANCES
12. Waste is closer than 50 feet to site boundaries.
13. Refuse is being placed less than 5 feet above groundwater or bedrock.
14. Waste is being placed too close to surface water

NUISANCE CONDITIONS
15. Odors are detectable off site.
16. Blowing dust or dirt is a nuisance.
17. Papers are uncontrolled or blowing off site.
18. Noise is a nuisance off site.

OPERATION CONTROL
19. Operation Permit conditions are being violated. (List conditions)
20. Waste is not sufficiently confined or controlled.
21. Refuse is spread in layers thicker than 2 feet.
22. Refuse is not compacted or compacted insufficiently.
23. The working face height is greater than 10 feet.
24. Equipment on the site is not adequate for proper operation.

SAFETY AND HEALTH
25. Salvaging is uncontrolled or is creating a safety hazard.
26. Rodents, insects, birds, or other vectors are not controlled.
27. Unsafe conditions or equipment exist. (List items)
28. Methane gas is known to be leaving the site.

ACCESS CONTROL
29. Access to the site is improper, unsafe, or inadequately controlled.
30. The site is open without an attendant.
31. Information about the site is not posted. (e.g., hours of operation)
32. Access to the operating area is poor or unsafe.

OTHER
33. Uncontrolled leachate is visible on, or near the site.
34. The quality of cover material is inadequate.
35. Slope of working face is steeper than 1 on 3.
36. Monitoring wells are not operative.
37. Unapproved wastes have been deposited since last inspection.
38. Operator is unfamiliar with site boundaries, operation plan or permit.
39. Land application of waste to frozen/snow covered ground or during periods of rain.
40. Soil pH is below 6.5.

FACILITY NAME: Smithtown Landfill (closed)

LOCATION: Intersection of Old Northport Rd & Ind. [illegible]

PERSONS INTERVIEWED AND TITLES: No one on site

SITE SKETCH/COMMENTS (additional sheets attached) ☐ Yes ☐ No

- front gate on Old Northport Rd [illegible]
- erosion of final cover [illegible] of front gate
- As this is a closed landfill, dumping is allowed, nevertheless the following items were noted as being illegally dumped there and must be removed to a landfill approved by this office: boat, car, truck [illegible], matteress, motor, bricks, [illegible] and demolition debris, [illegible], battery, paint and solvent cans, joint compound cans, brush, [illegible] plastics and a bathtub.

Paul M. Nott, P.S.W.E.
INSPECTOR'S SIGNATURE

REGIONAL OFFICE COPY

COUNTY OF SUFFOLK

DEPARTMENT OF HEALTH SERVICES

September 11, 1979

Duane B. Rhodes, Superintendent of Sanitation
Smithtown Town Hall
99 West Main Street
Smithtown, N. Y. 11787

Dear Mr. Rhodes:

During the month of August, I inspected the landfill facility on Old Northport Road in Smithtown. At the time of this inspection, I found this facility to be quite acceptable.

Thank you for your cooperation in this matter.

Very truly yours,

Steven J. Kramer
Air Pollution/Solid Waste Control

SJK:sp

cc.: Morris Bruckman, P. E.

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

COUNTY OF SUFFOLK

DEPARTMENT OF HEALTH SERVICES

TO: JAMES C. MALONEY, P. E. Date: November 5, 1979

FROM: STEVEN J. KRAMER

SUBJECT: Old Smithtown Landfill
Old Northport Road
Kings Park, N. Y.

- -

On October 31, 1979 while driving westbound on Old Northport Road, I noticed that the Town of Smithtown's old sanitary landfill facility, is again discharging leachate onto Old Deposit Road, as liquid runs westerly on the northside of the road and is entering the closest storm sewer.

While questioning Andrew Wolke, foreman of the Smithtown landfill, it was stated that the Town had only leased this property and in that they no longer pay rent on the property, on site entry would be a questionable situation. He offerred no statement of resolution, as to how this matter could be clearnd up.

SJK:sp

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

TO: Morris Bruckman, P. E. Date: November 26, 1979

FROM: Steven J. Kramer

SUBJECT: Old Smithtown Landfill

During the month of October, it was noted that the Old Smithtown landfill, located on Old Northport Road adjacent to Indian Head Road in Kings Park, is again discharging leachate onto Old Northport Road. The entire south end of this closed facility seems saturated with this material and it continues to seep onto Old Northport Road and run into the first available storm sewer.

I have notified Town of Smithtown officials concerning this situation and it has been indicated to me that this site was only leased by the Town and is owned by a private party.

Would you please make a determination as to the State's legal position concerning this violation and notify this office of your intentions.

SJK:sp

/

SUPER FUND SITE REPORT REVIEW COMMENTS

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES

HAZARDOUS MATERIALS MANAGEMENT SECTION

Site Name: Smithtown Landfill (Old) N.Y.I.D. # 152043

Report Type: I Contractor NUS EPA ✓ State ______

Date of Report 5/18/83 Date of Review 9/28/84 Reviewer [signature]

Comments: No groundwater study has yet been done of this landfill. As with all the western Suffolk landfills, it can be assumed that industrial wastes were disposed of here until recently since no controls existed and all types of waste were allowed. It is hoped that Superfund money can be used to define the leachate plume from the landfill and determine if it contains toxic constituents.

NUS CORPORATION

POTENTIAL HAZARDOUS WASTE SITE

EXECUTIVE SUMMARY

Preliminary Assessment

Smithtown Landfill (old)	New NYD 980765784
Site Name	**EPA Site ID Number**
Kings Park, New York	02-8304-03
Address	**TDD Number**

Date of Site Visit: 4/3/83

SITE DESCRIPTION

The former Smithtown Landfill is divided into 2 areas. Izzo Brothers, the newer one is 29 acres. The older one is 20 acres and is presently run by the township. The older landfill allegedly accepted cesspool scavenger waste and was operated since 1910. The newer landfill has a methane collection system which converts methane to electricity. Low levels of chlorinated solvents have been detected in drinking wells.

PRIORITY FOR FURTHER ACTION: High ___ Medium x Low ___

RECOMMENDATIONS

Monitor down gradient water supply sources for contaminants.

Prepared by: Michael Kramer of NUS Corporation   Date: 5/18/83

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	New

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Smithtown Landfill (old)	Old Indian Head Road

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Kings Park	NY	11754	Suffolk	103	02

09 COORDINATES LATITUDE	LONGITUDE
40°52'05.0" N	073°15'50.0" W

10 DIRECTIONS TO SITE (Starting from nearest public road)

Sunken Meadow Parkway north to Old Northport Road, Old North port Road east to Old Indian Head Road. Landfill is adjacent to Old Indian Head Road.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
Town of Smithtown	West Main Street

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Smithtown	NY	11754	(516) 360-7550

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

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) No notification on file.

☐ 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 DATE 4/3/83 (MONTH DAY YEAR)
☐ NO

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): NUS Corporation

02 SITE STATUS (Check one)	03 YEARS OF OPERATION		
☐ A. ACTIVE ☒ B. INACTIVE ☐ C. UNKNOWN	1910 (BEGINNING YEAR)	1977 (ENDING YEAR)	☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

No waste types other than sanitary refuse and cesspool scavenger wastes are known to have been applied on the landfill.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Through the alleged acceptance of unknown waste materials in the past, it is possible that hazardous materials do exist in the landfill which have not been completely leached.

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
Mark Haulenbeek	US EPA, Region II, Edison, NJ	(201) 321-6685

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Michael G. Kramer		NUS Corp.	(201) 225-6160	5/17/83 (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	New

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS _____

CUBIC YARDS 81,700

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			No waste types other than
SOL	SOLVENTS			sanitary refuse and cesspool
PSD	PESTICIDES			scavenger wastes are known to
OCC	OTHER ORGANIC CHEMICALS			have been applied to the
IOC	INORGANIC CHEMICALS			landfill.
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

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
	No hazardous substances		The landfill had two		
	are known to have been		90 ft. settling basins		
	applied to the landfill.		prior to leaching pits		
			for cesspool waste.		

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS	Not applicable.		FDS		
FDS			FDS		
FDS			FDS		

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

EPA FORM 2070-12 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	New

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

Samples obtained from private wells one mile away show a maximum of 6 ppb trichloroethane, 9 ppb tetrachlorethylene, and up to 1,900 ppm chloride. The contaminants have not been specifically traced to this site.

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

If the groundwater is contaminated, it could flow into local streams.

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

The landfill has had problems with methane generation. The Suffolk County Health Department found traces of methane at a school north of site. The landfill was regarded and vents were installed.

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

There exists a fire potential due to methane generation and collection on and near the landfill.

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

No potential exists.

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

No potential exists.

01 ☒ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 20,000 04 NARRATIVE DESCRIPTION

See "groundwater contamination."

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

No reported history.

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

The Suffolk County Department of Health measured traces of methane in a ballfield 250 feet from the landfill. Residences exist 400 feet from the landfill.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	New

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

No potential exists.

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

No potential exists.

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

No potential exists.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 20,000 — 04 NARRATIVE DESCRIPTION

The landfill is unlined.

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

Buildings adjacent to the site have been impacted due to methane generated at the landfill.

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

If storm sewers exist near the landfill, methane could infiltrate the sewers.

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

The landfill is secured with a chain link fence, however, they are accepting bulky residential wastes. Empty drums were noted on the landfill face. These drums appeared old and empty.

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

Through the alleged acceptance of unknown waste materials in the past, it is possible that hazardous materials do exist in the landfill which have not been completely leached.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 20,000

IV. COMMENTS

The total area in question is divided into two landfills. Izzo Brothers, the newer one is 29 acres. The older one was operated from 1910 and accepted cesspool scavenger waste. This landfill is 20 acres and is presently owned by the township.

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

Donald Devine - Township Engineer - NY DEC files
County of Suffolk files.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NEW

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
SMITHTOWN LANDFILL (old)	Old Indian Head Rd.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Kings Park	NY	11754	Suffolk	103	02

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
40° 52' 05.0" N	073° 15' 50.0" W	☐ 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
04 / 3 / 83 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	1910 (BEGINNING YEAR) / 1977 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☒ B. EPA CONTRACTOR NUS CORPORATION (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Michael G. Kramer	Environmental Scient.	NUS CORP.	(201) 225-6160
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Edward McTiernan	Ecologist	NUS CORP.	(201) 225-6160
Martin O'Neill	Ecologist	NUS CORP.	(201) 225-6160
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Donald Devine	Township Engineer	124 W. Main St. Smithtown, NY 11787	(516) 360-7550
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	2:00 pm	clear, 45°F, wind, west 10-20 mph

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Mark Haulenbeek	U.S.EPA, Region II, Edison, NJ	(201) 321-6685

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Michael G. Kramer		NUS CORP.	(201) 225-6160	04 / 21 / 83 (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	NEW

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

- TONS
- CUBIC YARDS: 81,700
- NO. OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			No waste types other than
OLW	OILY WASTE			sanitary refuse and cesspool
SOL	SOLVENTS			scavenger wastes are known
PSD	PESTICIDES			to have been applied on the
OCC	OTHER ORGANIC CHEMICALS			landfill.
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

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
	No hazardous substances		The landfill had		
	are known to have been		two 90 ft. settling basins		
	applied to the landfill.		prior to leaching pits for		
	See part 3 for more		cesspool waste		
	details.				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS	Not applicable		FDS		
FDS			FDS		

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

Site Inspection
Interview with Mr. Don Devine, Town of Smithtown, (516) 360-7550

EPA

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

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

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 20,000
04 NARRATIVE DESCRIPTION
Samples obtained from priva te wells one mile away show a maximum of 6 ppb trichloroethane, 9 ppb tetrachlorethylene, and up to 1,900 ppm chloride. The contaminants have not been specifically traced to this site.

01 [X] B. SURFACE WATER CONTAMINATION
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
If the groundwater is contaminated, it could flow into local streams.

01 [X] C. CONTAMINATION OF AIR
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
The landfill has had problems with methane generation. The Suffolk County Health Department found traces of methane at a school north of site. The landfill was regraded and vents were installed.

01 [X] D. FIRE/EXPLOSIVE CONDITIONS
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
There exists a fire potential due to methane generation and collection on and near the landfill.

01 [ ] E. DIRECT CONTACT
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
No potential exists.

01 [ ] F. CONTAMINATION OF SOIL
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres)
04 NARRATIVE DESCRIPTION
No potential exists.

01 [X] G. DRINKING WATER CONTAMINATION
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 20,000
04 NARRATIVE DESCRIPTION
See "groundwater contamination"

01 [ ] H. WORKER EXPOSURE/INJURY
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
No reported history.

01 [X] I. POPULATION EXPOSURE/INJURY
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
The Suffolk County Dept. of Health measured traces of methane in a ballfield 250 ft. from the landfill. Residences exist 400 ft. from the landfill.

EPA

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

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

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
No potential exists

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION *(Include name(s) of species)*
No potential exists

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
No potential exists

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES *(Spills/Runoff/Standing liquids, Leaking drums)* — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 20,000 — 04 NARRATIVE DESCRIPTION
The landfill is unlined.

01 ☒ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Buildings adjacent to the site have been impacted due to methane generated at the landfill.

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
If storm sewers exist near the landfill, methane could infiltrate the sewers.

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The landfill is secured with a chain link fence, however they are accepting bulky residential wastes. Empty drums were noted on the landfill face. These drums appeared old and empty.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
Through the alleged acceptance of unknown waste materials in the past, it is possible that hazardous materials do exist in the landfill.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 20,000

IV. COMMENTS
The total area in question is divided into two landfills. Izzo Brothers, the newer one is 29 acres. The older one was operated from 1910 and accepted cesspool scavenger waste. This landfill is 20 acres and is presently owned by the township.

V. SOURCES OF INFORMATION *(Cite specific references, e. g., state files, sample analysis, reports)*
Donald Devine - Township Engineer - NYDEC files
County of Suffolk files

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	

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-D-03	1/1/80	1/11/83	Brush and Demolition
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	49	acres
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

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

05 OTHER

☐ A. BUILDINGS ON SITE

2

06 AREA OF SITE

49 (Acres)

07 COMMENTS

Property owned by the Town of Smithtown is adjacent to property owned by the Izzo Bros. and was operated as one site until 1977. In 1977, the Izzo portion of the site was closed and the Town's landfill began accepting only bulk refuse and construction debris. The entire site is 49 acres.

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.

No hydraulic barrier exists between the bottom of the landfill and the water table. The fill comes to within approximately 8' of the ground water.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

The landfill is surrounded by a chain link fence.

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

Interview with Mr. Don Devine, Town of Smithtown (516) 360-7550

EPA

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

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

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

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

02 STATUS

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

03 DISTANCE TO SITE
A. 0.5 (mi)
B. 0.5 (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: 50,000

03 DISTANCE TO NEAREST DRINKING WATER WELL: ± 0.5 (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
45 (ft)	NE	8-10 (ft)	25,000 (gpd)	☒ YES ☐ NO

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

The area is served by a mix of public and private wells. There are 6 major public supply wells within two miles of the site.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Site recharges local aquifers which eventually enter the Long Island Sound.	☐ 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
Nissequogue River	☐	0.75 (mi)
Long Island Sound	☐	2.8 (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. 5,000 NO. OF PERSONS	B. 20,000 NO. OF PERSONS	C. 60,000 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: 0.25 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 1,000

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

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

The site is located in northern Smithtown in Suffolk County. There is heavy industry adjacent to the site and a medium density residential subdivision approximately 1/4 mile south of the site. The major commercial district of Smithtown is approximately 4 miles south of the site.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NEW

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

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

02 PERMEABILITY OF BEDROCK (Check one)

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

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
1,000 (ft)	Unknown (ft)	4-5 (est.)	.

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
23 (in)	2.8 (in)	highly variable %	Variable	0-10 %

09 FLOOD POTENTIAL

SITE IS IN 50 YEAR FLOODPLAIN

10

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

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. 5 (mi) OTHER: B. 0.75 (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	AG LAND
A. Adjacent (mi)	B. 0.25 (mi)	C. 4 (mi)	D. 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located approximately 3 miles from the Long Island Sound at an elevation of approximately 150' above mean sea level. Soils in this region are sandy and well drained. The terrain in vicinity of the site is rolling hills. Undeveloped areas near the site support a mixture of pines and oaks.

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

Site Inspection
Long Island 208 Study - Long Island Regional Planning Board, 1978
USGS 7.5' Topo Greenlawn, Northport

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	NEW

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER		No samples taken.	
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Air Quality	Photoionizer (HNu) did not detect contamination above background levels.

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [ ] AERIAL

02 IN CUSTODY OF Michael G.Kramer
(Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NUS CORP., Edison, NJ

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

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

Site Inspection

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NEW

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Town of Smithtown	Not applicable	W. Main Street	None	Smithtown	NY	11754

PARENT COMPANY (if applicable)

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

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

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

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

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

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

Site Inspection

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	NEW

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Town of Smithtown	Not applicable

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

05 CITY	06 STATE	07 ZIP CODE
Smithtown	NY	11754

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

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

14 CITY	15 STATE	16 ZIP CODE

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

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

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

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

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

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

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

14 CITY	15 STATE	16 ZIP CODE

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

Site Inspection

EPA

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

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

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
None	

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
Unknown			
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)

Site Inspection

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	NEW

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	New

II PAST RESPONSE ACTIVITIES *(Continued)*

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☒ W. GAS CONTROL — 02 DATE 1979 — 03 AGENCY Town of Smithtown
04 DESCRIPTION
Methane was vented through removal of top soil and placement of a berm

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ Z. AREA EVACUATED — 02 DATE 1978 — 03 AGENCY Town of Smithtown
04 DESCRIPTION
A public school near the site was closed due to methane migration.

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

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

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

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

No reported history

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

EPA FORM 2070-13 (7-81)

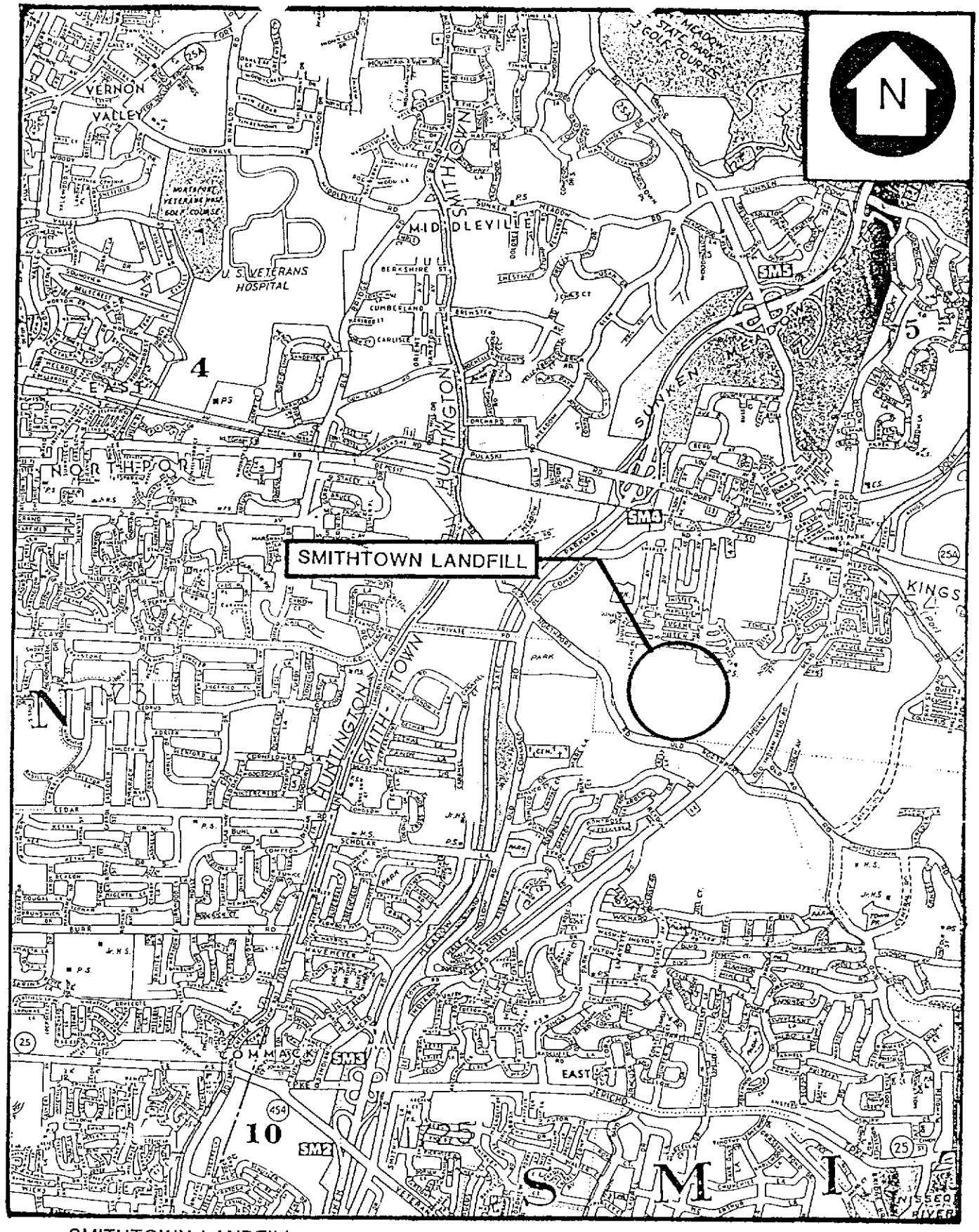
MAPS AND PHOTOS

Figure A-1 provides a Site Location Map.

Figure A-2 provides a Site Map.

Figure A-3 provides a Photo Location Map.

Exhibit A-1 provides photographs of the site.



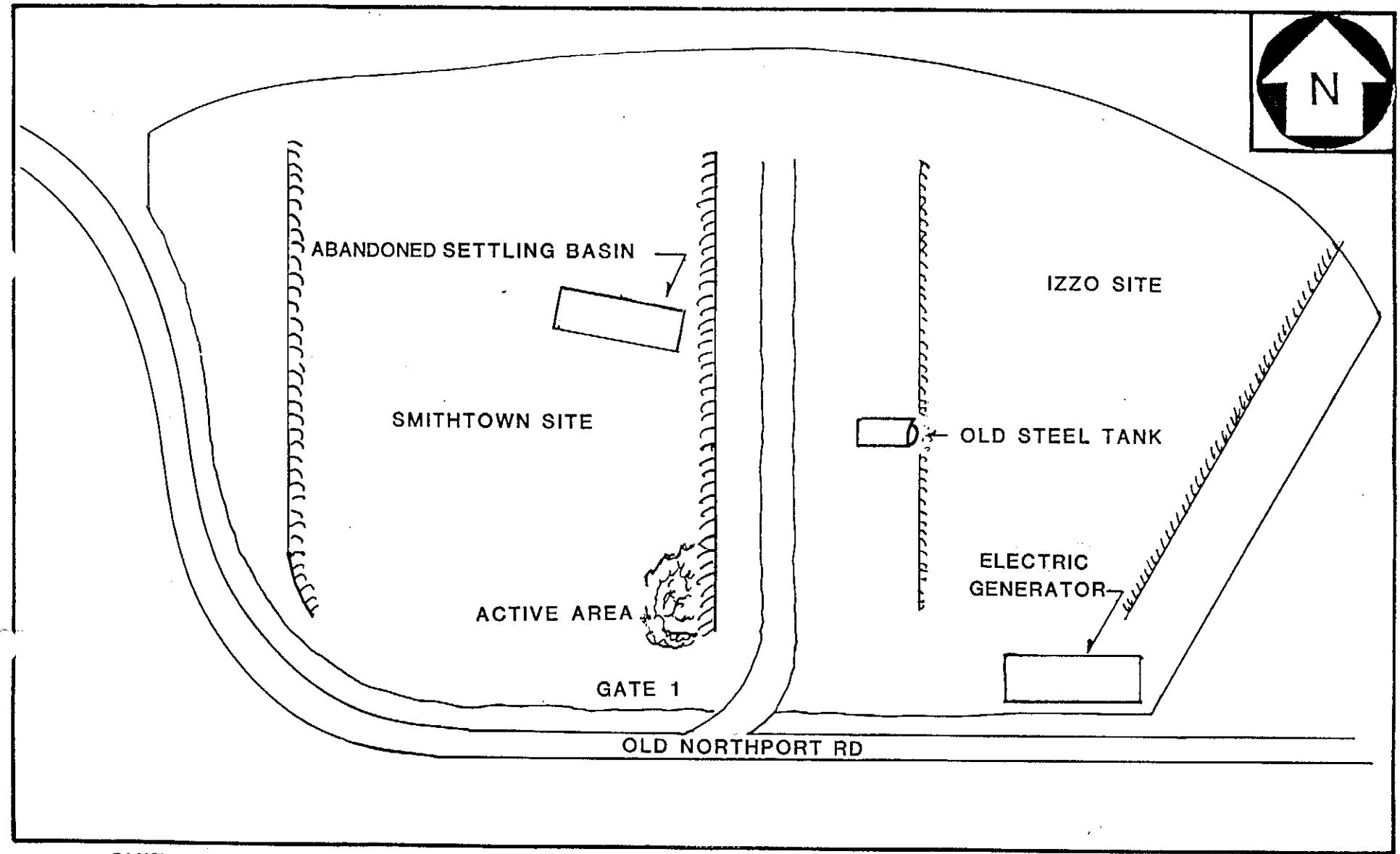
SMITHTOWN LANDFILL
SMITHTOWN, NY

SITE LOCATION MAP

1000 0 1000 2000 ft

FIGURE 1

NUS CORPORATION



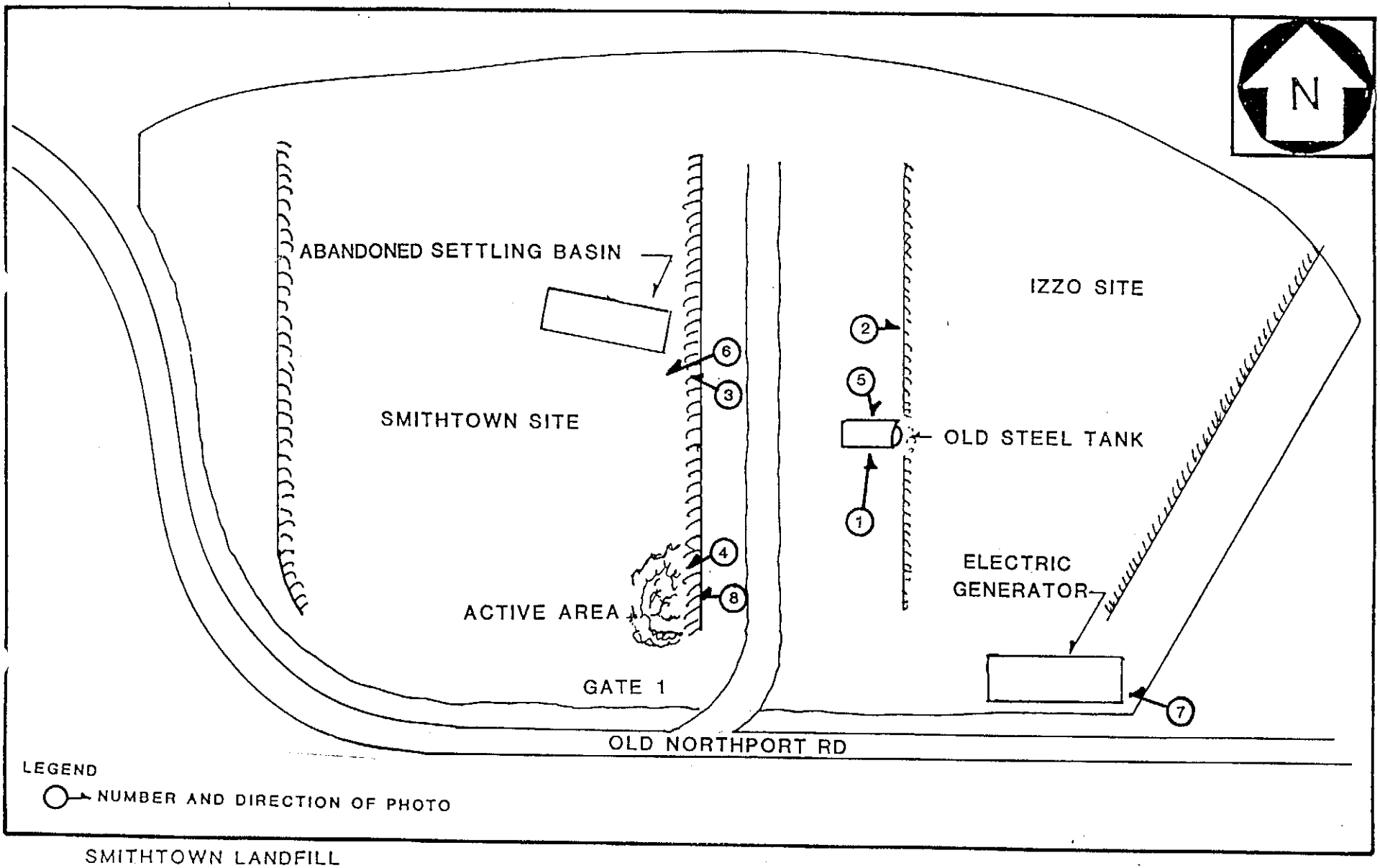
SMITHTOWN LANDFILL
KINGS PARK, N.Y.

SITE MAP

(NOT TO SCALE)

FIGURE 2

NUS CORPORATION



SMITHTOWN LANDFILL
KINGS PARK, N.Y.

PHOTO LOCATION MAP
(NOT TO SCALE)

FIGURE 3

NUS CORPORATION

EXHIBIT A-1

PHOTOGRAPH LOG

SMITHTOWN LANDFILL

1 - Placement of methane vents.

2 - Overview of landfill area looking east.

3 - Overview of landfill looking northwest. Abandoned setting basin is in foreground.

4 - Active face of landfill.

5 - Abandoned fuel tank in foreground. Methane generator in background.

6 - Overview of landfill looking west.

7 - Close-up of methane generator.

8 - Top of landfill face.

NUS CORPORATION

1 - Placement of methane vents.

2 - Overview of landfill area looking east.

SMITHTOWN LANDFILL, Kings Park, NY, April 3, 1983

dsl

NUS CORPORATION

3 - Overview of landfill looking northwest. Abandoned setting basin is in foreground.

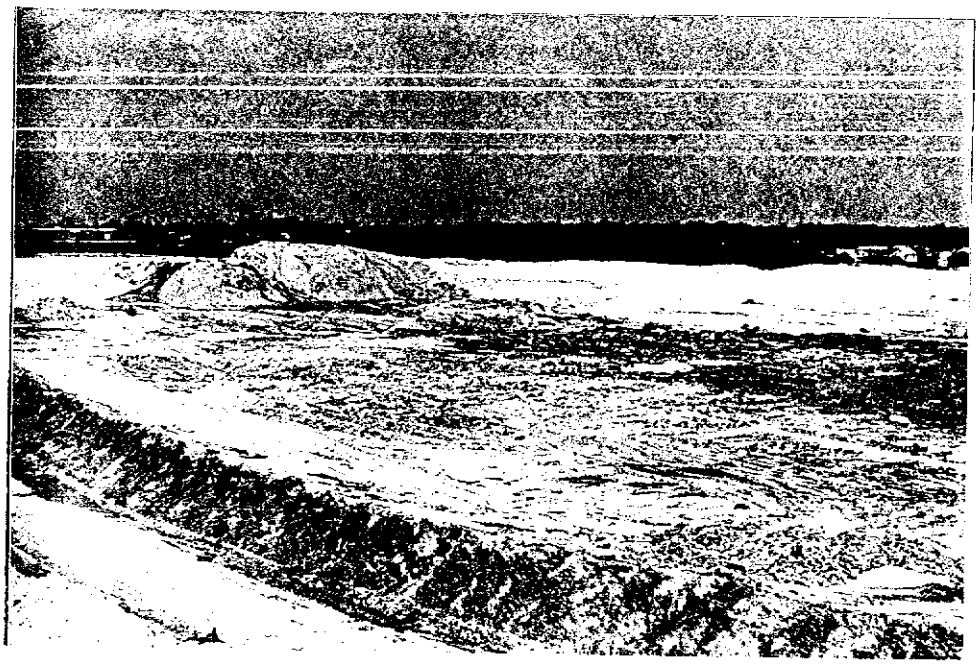
dsl

NUS CORPORATION

4 - Active face of landfill.

NUS CORPORATION

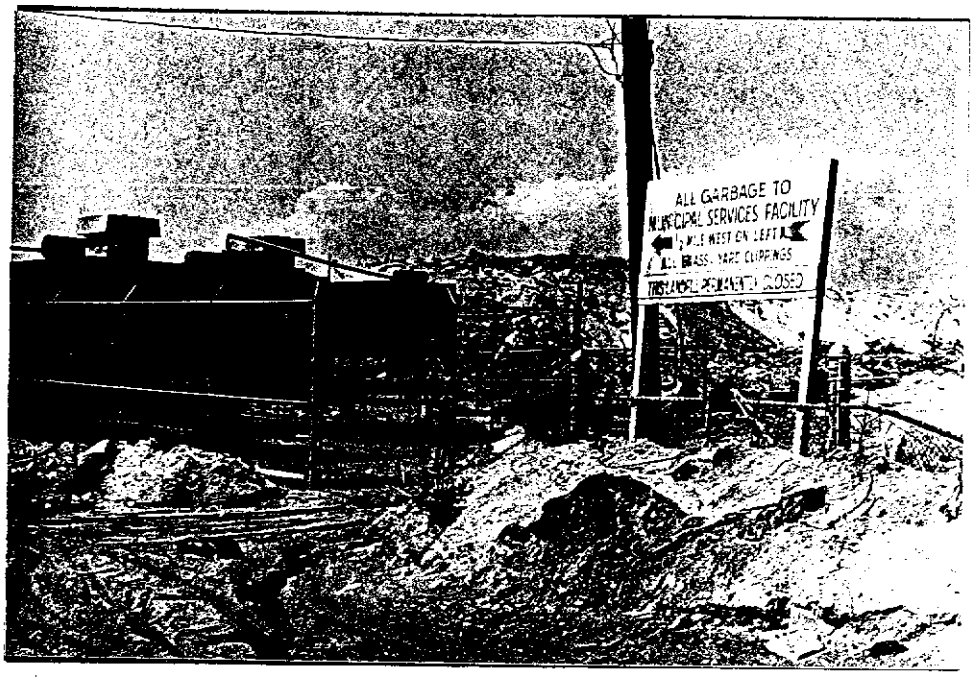
5 - Abandoned fuel tank in foreground. Methane generator in background.



6 - Overview of landfill looking west.

SMITHTOWN LANDFILL, Kings Park, NY, April 3, 1983

NUS CORPORATION



7 - Close-up of methane generator.

8 - Top of landfill face.

MULTI-TOWN WASTE MANAGEMENT DISTRICT COMMITTEE
INVENTORY
TOWN OF SMITHTOWN

TOWN OF SMITHTOWN

Paul J. Fitzpatrick, Supervisor

Donal A. Devine, Town Engineer

Duane B. Rhodes, Superintendent of Sanitation

Prepared: January 1973

MULTI-TOWN WASTE MANAGEMENT DISTRICT COMMITTEE

INVENTORY

TOWN OF SMITHTOWN

LANDFILL SITES

The Sanitation Department of the Town of Smithtown currently has four (4) landfill sites under its jurisdiction.

They are:

1) KINGS PARK SANITARY LANDFILL (EAST)
This landfill site, comprising 29.09 acres is located on the north side of Old Northport Road approximately 350 feet west of the intersection of Old Northport Road with Indian Head Road (C.R. 14).
See Illustration No. 1

2) KINGS PARK SANITARY LANDFILL (WEST)
This landfill site, comprising 20.12 acres is located on the north side of Old Northport Road approximately 1,250 feet west of the intersection of Old Northport Road with Indian Head Road (C.R. 14).
See Illustration No. 1

3) SMITHTOWN LANDFILL
This landfill, comprising 17.7 acres is located on the south side of Middle Country Road (State Route 25) immediately east of Prospect Avenue.
See Illustration No. 2

4) MONTCLAIR AVENUE
Montclair Avenue landfill, comprising approximately 29.5 acres is located on the west side of Montclair Avenue approximately 250 feet north of the intersection of Montclair Avenue with Middle Country Road (State Route 25).
See Illustration No. 3

MULTI-TOWN WASTE MANAGEMENT DISTRICT COMMITTEE
INVENTORY
TOWN OF SMITHTOWN

KINGS PARK SANITARY LANDFILL (EAST)

The Kings Park Sanitary Landfill (East) is located in the Hamlet of Kings Park. The site, comprising 29.09 acres, is located on the north side of Old Northport Road approximately 350 feet west of the intersection of Old Northport Road with Indian Head Road (C.R. 14). As of December 31, 1972, solid wastes have been deposited over approximately 6.7 acres of this site and to a height of approximately elevation 90. The remaining 22.39 acres have not yet been utilized for the storage of solid wastes.

Prior to the start of excavation operations, this site had an average elevation of 99 along it frontage on Old Northport Road and rose to an average height of approximately elevation 150 at its northerly boundary. During the month of February, 1971, test pits were dug to determine ground water level and water was found to exist at elevation 41.6. Approval was obtained from the Suffolk County Department of Health to excavate this site to elevation 48.0 which is approximately 6.8 feet above the ground water table.

Current plans permit placement of solid wastes to elevation 118 and this preliminary final grade provides the Town of Smithtown with 70 feet of usable depth. The Town has removed or is in the process of removing approximately 1,000,000 cubic yards of sand, gravel and hardpan from this site. Sufficient quantities of this material will be stored at the site to provide all of the cover material needed for this landfill operation.

Adjacent property is available for expansion of this site. An undeveloped parcel of 5.22 acres is contiguous with and southeast of the landfill, a 20.12 acre parcel immediately west and contiguous to this site is under the ownership of the Town of Smithtown, while open and undeveloped acreage amounting to more than 50 acres is contiguous to and north of the subject property. Immediately across Old Northport Road, approximately 170 acres of land remains undeveloped on the west side of Indian Head Road (C.R. 14) and an additional 120 acres of land remains undeveloped immediately to the southeast of the intersection of Old Northport Road and Indian Head Road (C.R. 14).

Solid waste of all types is delivered to this site. Approximately 69% of all refuse by weight is delivered to the landfill by commercial carters. The remaining solid wastes reach the landfill through the use of private automobiles, Highway Department vehicles, Parks Department vehicles and the delivery of large bulky items such as refrigerators, steel drums, broken concrete, highway clearing material and construction debris by specialized vehicles.

During the summer months of 1971, Representatives of the Urban Science and Engineering Department of the State University of New York at Stony Brook conducted a three (3) month study of solid waste disposal within the Town of Smithtown. Their report entitled "Solid Waste Management Study Town of Smithtown" was published in September of 1971 and copies of this report are on file with the Town Clerk of the Town of Smithtown. As reported in their study, the composition of solid waste is, as follows:

TABLE 1

CATEGORY	PERCENTAGE BY WEIGHT
Glass	9.3
Metal	6.5
Newspaper	11.7
Grass and Vegetables	11.7
Wood	3.4
Cardboard	11.6
Plastic, Rubber, Leather, Cloth	3.8
Paper (unsalvageable)	27.4
Kitchen Waste	10.4
Miscellaneous	4.2

Solid waste which is received at this landfill site is spread and compacted by large mobile machines utilizing the "AREA METHOD". The solid waste is spread in shallow lifts over a flat area which is large enough to grant mobility to both compacting equipment and delivery vehicles. The principal machinery utilized for compacting operations include the following:

a) Caterpillar 980 Traxcavator Front End Loader equipped with Cepeco Steel Wheels and a Balderson Blade;

b) Caterpillar 988 Front End Loader equipped with 7 yard bucket;

c) Caterpillar 980 Front End Loader equipped with pneumatic tires and bucket;

d) Caterpillar Front End Loader equipped with pneumatic tires and bucket;

e) Michigan 125 Front End Loader equipped with rubber tires and bucket.

f) Allis Chalmers HD-16 Bulldozer equipped with blade.

These machines are utilized to compact solid waste in place by travelling over it and, in addition, spread cover material over the solid waste and excavate sand, gravel and hardpan from the portions of the landfill site that are reserved for future storage of solid wastes.

Preliminary studies indicate that this landfill site will reach the preliminary final grades currently in effect by 1976. This end date is based on the assumption that conventional landfill compaction techniques will be continued and that the originally selected final grade of elevation 118 will be kept. The Town of Smithtown is currently studying the feasibility of acquiring a large Hydraulic Press so that high density compaction techniques can be utilized in the handling of solid wastes. In the event that a high density compaction approach is approved and a program implemented prior to 1976, the achievement of higher density will result in a longer life for the landfill. Further, as the original grades of this landfill site were as much as thirty (30) feet higher than the presently proposed final grade of elevation 118, a longer landfill life can be realized in the event that a higher final elevation is authorized by the Town Board. Whether or not the proposed final grades might be changed depends directly on the inter-relationship of the uses planned for this piece of property and the other undeveloped properties in the immediate vicinity. A comprehensive land use study would have to be undertaken for the immediate neighborhood before any knowledgeable decisions could be developed as to possible changes in the final grade.