ENGINEERING INVESTIGATION OF INACTIVE HAZARDOUS WASTE SITES

- PHASE II INVESTIGATIONS -

Smithtown Landfill
Site No: 152043
Town of Smithtown, Suffolk County
Final - April 1992

Prepared for:
New York State
Department of
Environmental Conservation

50 Wolf Road, Albany, New York 12233-7010
Thomas C. Jorling, Commissioner

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

Prepared by:

ROUX ASSOCIATES, INC.
775 Park Avenue
Huntington, New York 11743

Subcontractor to:
Gibbs & Hill, Inc.
New York, New York

ROUX

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1.0 EXECUTIVE SUMMARY

Roux Associates, Inc. (Roux Associates) was subcontracted by Gibbs & Hill Inc. to conduct a Phase II investigation at the Smithtown Landfill site (ID No. 152043) for the New York State Department of Environmental Conservation (NYSDEC). A Phase II Work Plan Update prepared by Roux Associates was submitted to the NYSDEC in September of 1990, and approved. This report presents the results of the Phase II investigation.

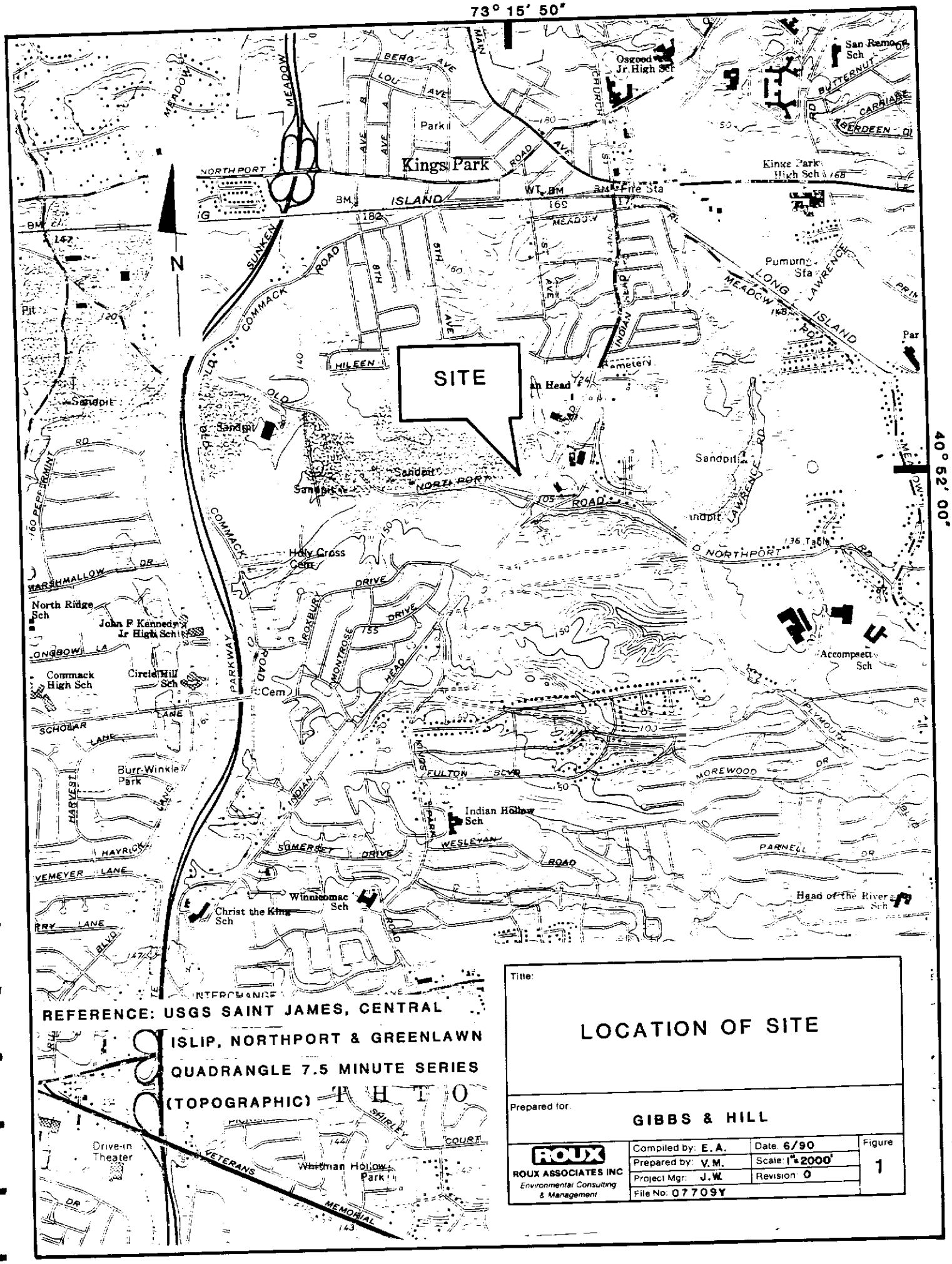
The Smithtown Landfill (Site), located in the Town of Smithtown, Suffolk County, New York (Figure 1) is currently owned by Neil and Alexander Izzo (Izzo Brothers) of Glen Cove, New York. The Site consists of a 22.0 acre plot which was leased from the Izzo Brothers by the Town of Smithtown beginning on March 10, 1970 until the landfill closed in July of 1979, for the purpose of landfilling the town's municipal wastes.

In 1980 the NYSDEC, as a result of violations regarding odor control, final cover application, leachate ponding, methane gas and ground-water monitoring, initiated a legal action against the Izzo Brothers and the Town of Smithtown.

Suffolk County Department of Health Services (SCDHS) inspections in 1981 revealed elevated levels of methane migrating from the Site to adjacent properties. A methane collection system was installed in 1983 to convert the methane into electricity, but was later dismantled due to operating and permitting problems. Later surveys of methane levels have shown that a problem still exists at the Site and the NYSDEC has required notification of local property owners affected by the methane and implementation of corrective actions to alleviate the problem.

A Phase I investigation of the Site, conducted by YEC, Inc., subconsultant to Lauter, Matusky & Skelly Engineers, in 1989, was unable to make any final conclusions on possible Site contamination.

A Phase II investigation of the Site was performed by Roux Associates to collect physical and analytical data so the Site can be classified for possible further action by the NYSDEC. Field investigations included a site reconnaissance, an air monitoring survey, a soil gas survey, a limited geophysical survey, installation of four ground-water monitoring wells, the collection of soil samples for physical analysis, and the collection of ground-water samples.



Title:

LOCATION OF SITE

Prepared for:

GIBBS & HILL

ROUX ASSOCIATES INC Environmental Consulting & Management	Compiled by: E. A.	Date: 6/90	Figure 1
	Prepared by: V. M.	Scale: 1" = 2000'	
	Project Mgr: J. W.	Revision: 0	
	File No: 07709Y		

Ground water was analyzed to determine the occurrence and define the extent of possible contamination at the Site.

The soil gas survey detected small concentrations of 1,1,1-trichloroethane and tetrachloroethylene in a limited number of samples taken in the northern portion of the Site. The presence of methane was observed in all of the samples taken at the Site, but its concentration could not be determined. The survey was aborted for health and safety reasons due to the sustained occurrence of readings exceeding 20 percent of the Lower Explosive Limit.

Metals and some volatile and semi-volatile compounds were detected in ground-water samples taken from the Site. However, these detections are not considered significant and may be attributed to conditions normally associated with sanitary landfills.

The final Hazard Ranking System (HRS) scores for the Smithtown Landfill Site based upon the Phase II investigation have been calculated as follow (see Section 5):

Sm = 0
Sgw = 0
Ssw = 0
Sa = 0
Sfe = Not Scored
Sdc = 0

Professional engineering review of this report has been furnished by Remedial Engineering, P.C., Huntington, New York.

2.0 PURPOSE

The objective of a New York State Superfund Phase II investigation of an inactive hazardous waste site is to determine if contaminants are present at a site and if they are leaving the Site with a resulting impact on human population and/or the environment.

At the Smithtown Landfill Site, the objective of the investigation was to collect the information required to develop final HRS scores and to classify the Site for further action. This included collecting the field data necessary to identify the occurrence and characteristics of contamination and determine if a release of contaminants from the Site has occurred. These data were used to determine if any imminent and/or significant environmental hazard exists. These objectives were accomplished through the installation of ground-water monitoring wells and the sampling and analysis of ground water, soil, and soil gas.

3.0 SCOPE OF WORK

A Phase II investigation was performed at the Site by Roux Associates in order to characterize the subsurface conditions at the Site (i.e. soil, soil gas, stratigraphy, ground-water flow, and ground-water quality) and to identify the nature and extent of possible soil and ground-water contamination. A Work Plan Update was submitted by Roux Associates to define the scope of drilling and sampling at the Site. The Phase II investigation also included an in-depth search and review of relevant literature and historical data, which are provided in Appendix A.

3.1 Introduction

The field investigation was conducted by Roux Associates between May 1990 and April 1991, and included a site reconnaissance, air survey, a limited geophysical survey, soil gas survey, the installation of four monitoring wells, and soil and ground-water sampling and analysis.

3.2 Air Survey

An air monitoring survey was conducted at the Site on May 25, 1990 to determine the quality of air in and around the perimeter of the Site and to delineate the source of any airborne contaminants.

Four instruments were utilized in this survey. These included a Model OVA128 Century Organic Vapor Analyzer (OVA), a 580A portable Organic Vapor Meter (OVM), a RM-750 Micro-Roentgen Radiation Monitor (Radiometer), and a Gastech Model 6X-82 Personal Three-Way Gas Alarm (Tri-Gas Meter).

In accordance with the Site Health and Safety Plan contained in the Roux Associates' Phase II Work Plan Update, all four of the above mentioned instruments were used to monitor the air in the working zone during site activities.

3.3 Geophysical Survey

A limited geophysical survey was conducted at the Site on June 21, 1990 at the proposed well locations, using a Schonstedt Model 64A-52 Flux gate Magnetometer to detect buried ferromagnetic objects which might be encountered during drilling activities. There were no

major magnetometer responses at any of the well locations proposed by NYSDEC, however some locations contained small discrete areas of response probably due to small near-surface ferromagnetic objects. Field procedures and results of the survey were submitted as part of the Phase II Work Plan Update.

3.4 Soil Gas Survey

A soil gas survey was conducted at the Site on May 10 and 11, 1990 by LGI, a division of Layne GeoSciences, Inc. (LGI) with project oversight provided by Roux Associates. The purpose of the survey was to find regions within the site that contained volatile organic compounds and identify their boundaries. The information obtained was used to relocate the proposed monitoring wells to maximize the effectiveness of the ground-water investigation program. The new locations were included in the updated work plan. This survey, however, was not completed because of health and safety concerns due to high readings above 20 percent of the lower explosive limit (LEL).

All procedures and analytical results are included in Appendix B.

3.5 Soil Sampling

Soil sampling at the Site included the collection of split-spoon samples for geologic logging, field screening for potential contamination, and grain size analysis.

Split-spoon samples were collected for geological analysis every five feet from the land surface to the bottom of the borings drilled for monitoring wells as described in Appendix C. Each sample was field screened with the OVM for the presence of organic vapors immediately upon its removal from the split spoon. All OVM readings were zero. Geologic logs are presented in Appendix D.

Four soil samples were collected between November 13 and December 17, 1990 from the screen zone of each of the monitoring wells, and chain of custody documentation was maintained for each sample (Appendix E). Grain size analyses were performed on these samples to confirm the pre-selected screen slot size (.010 slot based on Long Island soils being primarily sand and gravel) and to characterize the aquifer materials at the water table.

These analyses are included in Appendix F. The purpose of properly sizing the screen slot is to minimize suspended solids in the ground-water sample.

3.6 Monitoring Well Installation

Four monitoring wells were installed between November 13 and December 19, 1990 at the locations shown in Figure 2 by Marine Pollution Control, Calverton, New York under the supervision of a hydrogeologist from Roux Associates. Monitoring well installation procedures are described in Appendix C. Monitoring well construction details are presented in Table 1, and well construction diagrams and geologic logs are given in Appendix D.

3.7 Ground-Water Sampling and Analysis

Four ground-water samples and one duplicate, as well as a Matrix Spike/Matrix Spike Duplicate (MS/MSD), were collected on December 27, 1990 following the Procedures outlined in Appendix C.

The samples were analyzed for Target Compound List (TCL) metals, volatiles, semi-volatiles and pesticides/PCBs. H2M Laboratories, Melville, New York performed the analyses in accordance with the January 1990 NYSDEC Analytical Services Protocols (ASP). Data Validation Services of Riparius, New York prepared the data validation. The data usability study was conducted by Chemworld Environmental, Inc. The analytical results are discussed in Section 4.5.

3.8 Aquifer Testing

The hydraulic characteristics of the aquifer were determined through the performance of slug tests. Rising head slug tests were conducted on monitoring wells MW-1 through MW-4 to determine the hydraulic characteristics of the materials surrounding the well screens. The results are discussed in detail in Section 4.4.

Water levels in the ground-water monitoring wells were measured to determine the direction of flow of ground water at the Site. Water-level measurements collected on December 21 and December 27, 1990 are presented in Table 2 and are discussed in detail in Section 4.4.

3.9 Contacts and Information Provided

Contacted Agency or Individual	Information Provided
Tony Candela New York State Department of Environmental Conservation Division of Hazardous Waste Remediation SUNY Campus - Building 40 Stony Brook, New York 11794	Site file. (Reference 2)
Otto Renenberg Suffolk County Department of Health Services Hazardous Materials Management 15 Horseblock Place Farmingville, New York 11738	No new information.
Martin Trent Suffolk County Department of Health Services Bureau of Water Resources 225 Rabro Drive East Hauppauge, New York 11788	Well sampling results. (Reference 6)
Suffolk County Water Authority Sunrise Highway and Pond Road Oakdale, New York 11769	No new information.
Al Anderson Chief Fire Inspector Town of Smithtown 99 West Main Street Smithtown, New York 11787	Site inspection report. (Reference 4)
New York State Department of Environmental Conservation Division of Environmental Enforcement 50 Wolf Road Albany, New York 12233-0001	No new information.
Tom Reynolds New York State Department of Environmental Conservation Bureau of Municipal Wastes Section of Landfill Operations 50 Wolf Road Albany, New York 12233	No new information.

Contacted Agency or Individual	Information Provided
New York State Department of Health Bureau of Public Water Supply Protection Nelson A. Rockefeller Empire State Plaza Corning Tower Building Albany, New York 12237	No new information
Sandy Foose U.S. Environmental Protection Agency Region II Edison, NY 08837	No new information.
Joe Crua New York State Department of Health Bureau of Environmental Exposure Investigation 2 University Place Albany, New York 12203	Site file. (Reference 5)
Larry Alden New York State Department of Environmental Conservation Division of Hazardous Waste Remediation 50 Wolf Road Albany, New York 12233-0001	No new information
Suffolk County Soil & Water Conservation District 164 Old Country Road Peconic Plaza Riverhead, New York 11901	No new information.
Peter Lambert Long Island Regional Planning Board H.Lee Dennison Office Building Veterans Memorial Highway Hauppauge, New York 11787	No new information.
U.S. Department of Agriculture Soil Conservation Service Peconic Plaza 164 Old Country Road Riverhead, New York 11901	Could not be contacted. No forwarding address.
Michael S. Scheibel New York State Department of Environmental Conservation Region 1 Building 40-SUNY Campus Stony Brook, New York 11794	No information.

Contacted Agency or Individual	Information Provided
Bill Sanok Cornell Cooperative Extension Suffolk County 246 Griffing Avenue Riverhead, New York 11901	No information.
Michael S. Fishman New York State Department of Environmental Conservation Region 1 Building 40-SUNY Campus Stony Brook, New York 11794	No new information.
Alexander Izzo 106 Fourth Street Glen Cove, New York 11542	Phone interview. (Reference 1)
Francis J. Mooney Town Engineer Town of Smithtown 124 W. Main Street Smithtown, New York 11787	No new information.

4.0 SITE ASSESSMENT

4.1 History

The Site is the location of the Old Smithtown Landfill (Smithtown Landfill), and consists of an ~22.0 acre plot which was leased by the Town of Smithtown from the Izzo Brothers from March 10, 1970 until July of 1979 for the purpose of landfilling the town's municipal and other solid wastes. When the landfill was closed it was capped with 3 to 6 feet of soil and graded to a 1 to 2 percent slope (Reference 1).

The NYSDEC initiated a legal action against the Town of Smithtown and the Izzo Brothers in September of 1980 for violations regarding odor control, leachate ponding, methane gas, ground-water monitoring, final cover application, and ground cover crop (Reference 2). The SCDHS conducted methane surveys on July 16, 1981 and September 13, 1982 at the Site to determine if methane gas was migrating onto the property where the Indian Head Elementary School was located. The survey showed that this in fact was occurring (Reference 3).

In response to the methane problem, a methane collection system which converts methane gas into electricity was installed in 1983 pursuant to a royalty agreement between the Izzo Brothers and Wehran Energy Corporation. The royalty agreement was canceled several years ago based upon default of the provisions contained in the royalty agreement, and the operation was, at that time, discontinued (Reference 4). The system was subsequently dismantled because methane levels were too low to generate electricity, and the Izzo Brothers did not have a permit to operate the system (Reference 5).

During the soil gas survey conducted for the NYSDEC Phase II investigation for the Site it was discovered that the methane was at dangerous levels. On May 22, 1990 the NYSDEC checked the nearest building (R.H. Industries, Inc.) to the Site. No methane was found within the building, however, high levels were found in the soil at the property line between the building and the landfill. On May 30, 1990 the other buildings adjacent to the site were also inspected for methane levels. Methane was not detected in any of these buildings either (Reference 6).

The methane problem at the Site was discussed in a meeting between the NYSDEC and Town of Smithtown officials with the Izzo Brothers and their attorney, J. Milfred Hull, on June 6, 1990. At this meeting it was decided what actions should be taken to alleviate the methane problem: 1) since the Town of Smithtown is responsible for any methane leaving the site, they will conduct daily monitoring on the eastern and northern sides of the site every 100 feet as well as in the three buildings adjacent to the site; 2)the Town of Smithtown will install venting fans on the existing manifold/wells; 3)the Izzo Brothers should contact local commercial property owners to install methane alarms in their buildings and to replace the venting fans installed by the town with a methane collection generator, or to install the generator and leave the venting fans in place; 4)the Town of Smithtown will install a perimeter monitoring system; and 5) if the venting fans placed on the manifold/wells are not adequate to lower the methane levels, then the town will install a perimeter venting system (Reference 5).

Fire Marshal Al Anderson from the Town of Smithtown's Code Enforcement Bureau conducted an inspection of the Site on June 7, 1990 to determine if a threat of fire and/or explosion existed at the Site. Mr. Anderson concluded that a threat of fire and/or explosion did exist at the site due to the elevated methane levels recorded at the Site. This however, is the by-product of organic refuse materials that have been deposited at the Site and is not a result of buried hazardous materials (Section 5, Reference 15).

The SCDHS conducted sampling of private wells located near the Site on June 11, 1980, January 29, 1987 and June 1, 1989. The results of these sampling events can be found in Reference 7.

4.2 Topography

The Site is located in the north-central portion of Long Island in Suffolk County, New York at approximately 120 feet above mean sea level. The Site is located in an industrial area with a closed landfill to the west, a wooded area to the south, an abandoned school and sand mine to the north, and commercial development to the east. The regional terrain slopes gently at approximately 1 to 2 percent to the south-east towards a tributary of Willow Pond and the Nissequogue River approximately 8,300 feet away (Section 5, Reference 3 and Section 5, Reference 10).

4.3 Air Survey

An air monitoring survey was conducted at the Site on May 25, 1990 to determine the quality of air on and around the Site and to delineate any sources of any airborne contaminants.

A perimeter survey of the Site was conducted utilizing an OVA, OVM, Tri-Gas Meter, and a Radiometer. The readings on all four instruments and wind direction were recorded as they occurred.

Throughout the entire survey, readings were registered on the OVA. The OVA is the only meter of the four used which is capable of detecting and measuring methane emissions. No readings were recorded on the OVM or tri-gas meter, and only background levels between 9-10 microroentgens per hour (ur/hr) which is considered natural background radiation were registered on the radiometer.

The survey of the perimeter began at the northwest corner of the Site and ran clockwise along the borders of the Site. A wind blowing to the east was recorded throughout, and no readings were observed along the northern border of the Site. Along the eastern border, OVA readings ranged from 1-10 parts per million (ppm) depending on the intensity of the wind. The southern border also had readings ranging from 0-10 ppm with a majority of the readings within the 4-6 ppm range. Finally, along the westernmost border, readings again ranged from 0-10 ppm throughout until the wind direction changed to a southerly direction resulting in no readings (Figure 3).

After completion of a perimeter survey, a survey of the interior portion of the Site was conducted. This was conducted along three paths parallel to the eastern and western borders of the Site. The first path was through the center of the Site from north to south with a westerly wind direction and registered readings on the OVA ranging from 0-10 ppm. The second path went from south to north approximately 250 feet west of the easternmost border and also ranged from 0-10 ppm with occasional readings peaking the OVA (over 10,000 ppm). The final path went from north to south 250 feet east of the westernmost border and no readings were observed with a steady westerly wind.

The high readings which peaked the OVA can be attributed to the locations directly downwind from the methane venting pots located on site.

During drilling operations, the four above-mentioned instruments were used to continuously monitor any emissions emanating from the boreholes. No significant readings were recorded during the drilling activities except for methane venting from the boreholes.

4.4 Hydrology

Ground water in the area occurs in the wedge-shape accumulation of unconsolidated sediments of Pleistocene and Upper Cretaceous age which are approximately 1100 feet in thickness in the vicinity of the Site. This ground water is part of the Nassau/Suffolk Aquifer System which is a sole source aquifer. The basal bedrock on which these sediments lie is of Precambrian age and consist of schists and gneisses which outcrop in western Queens County and dip southeast an average of about 65 feet per mile, or slightly less than one degree, to an estimated depth of about 2000 feet in the south-central Suffolk County. The surface of the bedrock is approximately 1000 feet below mean sea level in the vicinity of the Site (Reference 8).

The Cretaceous fluvial and deltaic deposits rest directly upon the clay-like weathered surface of Precambrian bedrock, and are divided into the Raritan Formation and the overlying Magothy Formation. The Raritan Formation is composed of a lower sand member (Lloyd Sand Aquifer) and a clay member, both of which are widely distributed on Long Island. The top of the Lloyd Sand in Suffolk County ranges from 200-1700 feet below sea level, and its thickness ranges from 150 feet in the northwestern part of Suffolk County to over 300 feet in the southeastern part of the county (Reference 8).

The Raritan clay member serves to confine water in the underlying Lloyd aquifer and retards but does not prevent flow between the Lloyd and the overlying Magothy aquifer. The top of the Raritan clay in Suffolk County ranges from 100-1400 feet below sea level trending northwest to southeast, respectively, and its thickness ranges from 100-300 feet, following the same trend (Reference 8).

The Magothy Formation consists of a great thickness of alternating fine sands, clays, silts, and some coarse beds of sand and gravel. The top of the formation ranges from 300 feet above to 250 feet below sea level, and ranges in thickness from 330-1000 feet in Suffolk County (Reference 8).

The Pleistocene glacial deposits which constitute the Upper Glacial aquifer unconformably overlie an irregular Magothy surface eroded and scoured by glacial contact. A deep well in the vicinity of the Site indicates that the glacial deposits extend to a depth of 75 feet below the National Geodetic Vertical Datum of 1929 (roughly correlative to mean sea level), thus placing the Magothy-Glacial interface at approximately 175 feet below land surface elevation at the Site (Reference 8).

Water-level measurements taken at the Site on December 21 and December 27, 1990 (Table 2) indicate a depth to water of approximately 78 feet below land surface and a ground-water flow direction to the northeast toward the Long Island Sound (Figure 4).

Samples were taken from the screened zone of each well and analyzed for grain size. The results indicate the screened zones for each well are primarily composed of sand with traces of gravel and silt. Results of the grain size analysis tests are presented in Appendix F.

One rising head slug test was conducted in each of the four monitoring wells installed at the Smithtown Landfill Site. The slug tests were performed in accordance with Roux Associates Standard Operating Procedures (SOPs). For this investigation, the purpose of conducting slug tests was to estimate the hydraulic conductivity of the unconfined aquifer, without having to perform a constant-rate (pumping) test. During each slug test, time versus drawdown data were measured and continually recorded using a HERMIT™ SE2000 Environmental Data Logger, In Situ Inc., Laramie, Wyoming.

Each of the four monitoring wells installed at the Smithtown Landfill Site has a casing diameter of 2 inches, with a borehole diameter of 10 inches. Since the borehole diameter is large in relation to the well diameter, a substantial amount of drawdown was needed to successfully stress the aquifer during a slug test. Due to the negligible maximum drawdown value (y_0) obtained during each slug test (Appendix G), it appears that the aquifer was not

affected by the stress (i.e., drawdown) and that all drawdown measured took place within the gravel pack of each well. Thus any attempt to analyze the slug test data would yield hydraulic conductivity data characteristics of the gravel pack and not the aquifer formation.

According to published data, the average hydraulic conductivity of the upper glacial aquifer in northwestern Suffolk County is 187 feet per day (ft/d) or 1,400 gallons per day per foot squared (gpd/ft^2) (Reference 9), while the average for the entire upper glacial aquifer is 270 ft/d, or 2,020 gpd/ft^2 (Reference 10).

The average transmissivity value (T) for the upper glacial aquifer in northwestern Suffolk County is 30,750 square feet per day (ft^2/d) or 230,000 gallons per day per foot (gpd/ft), while the average T value for the entire upper glacial aquifer on Long Island is 26,740 ft^2/d or 200,000 gpd/ft (Reference 9).

4.5 Ground-Water and Soil Quality

Throughout the entire investigation there has been no evidence or documentation of hazardous waste disposal found to have occurred at the Site. The only suspicion of this occurring is through the alleged acceptance of unknown waste materials in the past, it is possible that hazardous materials do exist in the landfill.

The soil gas survey consisted of 18 soil gas samples taken at the points shown on Figure 5. The results of sampling, locations and concentration of detected compounds can be found in Appendix B.

A total of 16 samples were taken at the northern edge of the Site (with SL16 being resampled on the second day of sampling) until operations were suspended due to high Lower Explosive Limit (LEL) readings recorded at the sampling holes (over 20% of the LEL limit which had been established by LGI). It was then decided that samples be taken at a perimeter location to determine if sampling could continue. This sampling location (SL17) also recorded a high LEL reading (50% to 80% of the LEL) so it was decided that too great of a hazard for fire or explosion existed to continue with the survey.

The survey did not reveal any large plumes of contamination which should be monitored, but did reveal small concentrations of 1,1,1-trichloroethane and one trace detection of tetrachloroethylene at the Site. However, due to the small area where the sampling was conducted, no pattern for these contaminants could be determined. Also, not enough data could be collected to reach any conclusions regarding these detections. Since these contaminants have not been found in ground-water samples taken at the Site, it appears to only be a contaminant in the soils at this time. Methane was detected in all of the samples and accounted for the high LEL readings, but could not be quantified since a standard was not available. The methane represents a potential health and safety hazard at the Site. The concentrations of the compounds detected can be found in Table 3.

Five ground-water samples were collected from the four monitoring wells located on the Site (MW-1 through MW-4). Sample MW-1A was a blind duplicate of MW-4. A summary of the analytical results can be found in Table 4, compared to the standards given in 6 NYCRR 703 tables (Appendix H).

Two volatile organic compounds were detected in the sampling round. Benzene was detected below the contract required detection limit in monitoring well MW-4 at 4 micrograms per liter (μg/l). Chlorobenzene was detected below the contract required detection limit in monitoring well MW-3 at 3 μg/l and above the Federal and New York State standard of 5 μg/l in well MW-4 at 14 μg/l. Several tentatively identified compounds (TICs) were also detected in monitoring well MW-4, and estimated concentrations for these compounds are presented in Table 4.

Three semi-volatile compounds were detected in samples taken from the Site. Bis (2-ethylhexyl) phthalate was detected at concentrations above the Federal and New York State standard of 4.2 μg/l in Monitoring Well MW-4, and the bailer blank. Phthalates are common plasticizers in PVC. However, according to the data usability report, it was determined that this detection is probably real since the associated method blank did not exhibit any contamination. This detection is not considered significant since it is found below the Contract Required Quantitation Limit. It is also a common laboratory contaminant, which would explain the bailer blank contamination. 1,4-Dichlorobenzene was detected in monitoring well MW-4 above the standard of 4.7 μg/l at 12 μg/l. Naphthalene

was detected below the detection limit at 2 μg/l in monitoring well MW-4, but was not detected in the duplicate sample from the same well (MW-1A). Several TICs were also detected in monitoring well MW-4, and estimated concentrations for these compounds are presented in Table 4.

Several metals were detected in the samples taken during the sampling round (unfiltered samples). Barium was detected above the standard of 1,000 μg/l in monitoring well MW-4 at 1,020 μg/l. It was also detected above the contract required detection limit in monitoring well MW-3 at 205 μg/l. Monitoring wells MW-1 and MW-2 also had detections of 67.5 μg/l and 119 μg/l, respectively, but these were below the detection limit. Lead was detected in all of the wells sampled except for MW-1, the upgradient well. Lead was found to be above the NYCRR Part 703 ground water standard of 25 μg/l in monitoring wells MW-2 and MW-4 at 30.6 μg/l and 58.7 μg/l, respectively. It was also detected below the standard but above the detection limit in monitoring well MW-3 at 19.4 μg/l. Copper was detected at 361 μg/l in MW-4, above the 200 μg/l New York State standard.

Aluminum, calcium, iron, magnesium, manganese, potassium, and sodium (all of which are common elements in ground water) showed high concentrations, with both iron and manganese exceeding ground-water standards.

The frequency and consistency with which metals were detected above and below the ground-water standards can be attributed to a number of factors. The ground water at the Site has a slightly lower than normal pH. This slightly acidic condition could result in dissolving out of metals into the ground water more readily than under balanced pH conditions. Also, the high level of suspended solids can account for the high concentration of metals also. These metal constituents may be attributed to materials that were permitted to be disposed at the landfill and are not solely indicative of hazardous waste disposal.

As a result of elevated levels of suspended solids found in each of the monitoring wells, it was determined that the samples should be filtered and reanalyzed for metals. This was done to determine if the high levels of suspended solids that were observed in each of the samples could have contributed to the concentrations reported. Of all of the metals

mentioned above only manganese and copper were still detected above the standard after filtering of the samples.

It should also be noted that ground-water samples taken from MW-4 demonstrated some unusual characteristics. Ground water taken from here had a yellowish tint and felt unusually warm to the touch, as well as having a sour smell to it. The reasons for these characteristics could not be determined.

4.6 Conclusions

In reviewing the ground-water data, it is apparent that the contaminant concentrations are not great enough in the downgradient wells (MW-2 through MW-4) compared to the upgradient well (MW-1) to score an observed release for the HRS. Also the detections noted for the volatile and semi-volatile compounds are mostly limited to one well (MW-4) and do not appear to be a problem Site-wide and are not high enough to indicate disposal of hazardous waste. The data usability report determined that the phenolic compounds data was not usable. However, these are not considered compounds of concern and are not considered significant.

These concentrations may be attributed to the old C&D Landfill located to the west of the Site. This Site had two settling basins which were used for cesspool wastes. The former location of these settling basins is upgradient of MW-4 and may be the reason why the concentrations are higher here than at any other wells at the Site.

Belated laboratory filtering and re-analysis for metals showed an appreciable reduction in concentrations, even though the suspended solids had been in contact with the sample preservative for an extended period. Therefore, it is recommended that a second sampling round for metals be conducted, and filtering conducted at once to obtain results more representative of actual metals concentrations in the ground water. A further reduction in concentrations would be expected.

In regard to the results from the soil gas survey, the small detections of 1,1,1-trichloroethane and tetrachloroethylene are considered to be presently restricted to the soils. However, these contaminants may eventually leach to the water table and may become ground-water contaminants. As a result, continued monitoring of the ground water is advised.

4.7 Site Assessment References

1) YEC Inc., September 28, 1988, Interview with Francis J. Mooney, Town of Smithtown Engineer.

2) NYSDEC, September, 1980 legal action complaint against the Town of Smithtown and the Izzo Brothers.

3) SCDHS, July 20, 1981, Methane survey of Smithtown Landfill.

4) Arnesen, E., June 7, 1990, Phone interview with Alexander Izzo.

5) NYSDEC, June 6, 1990, Site meeting between NYSDEC, Town of Smithtown officials, Izzo Brothers, and J. Milfred Hull.

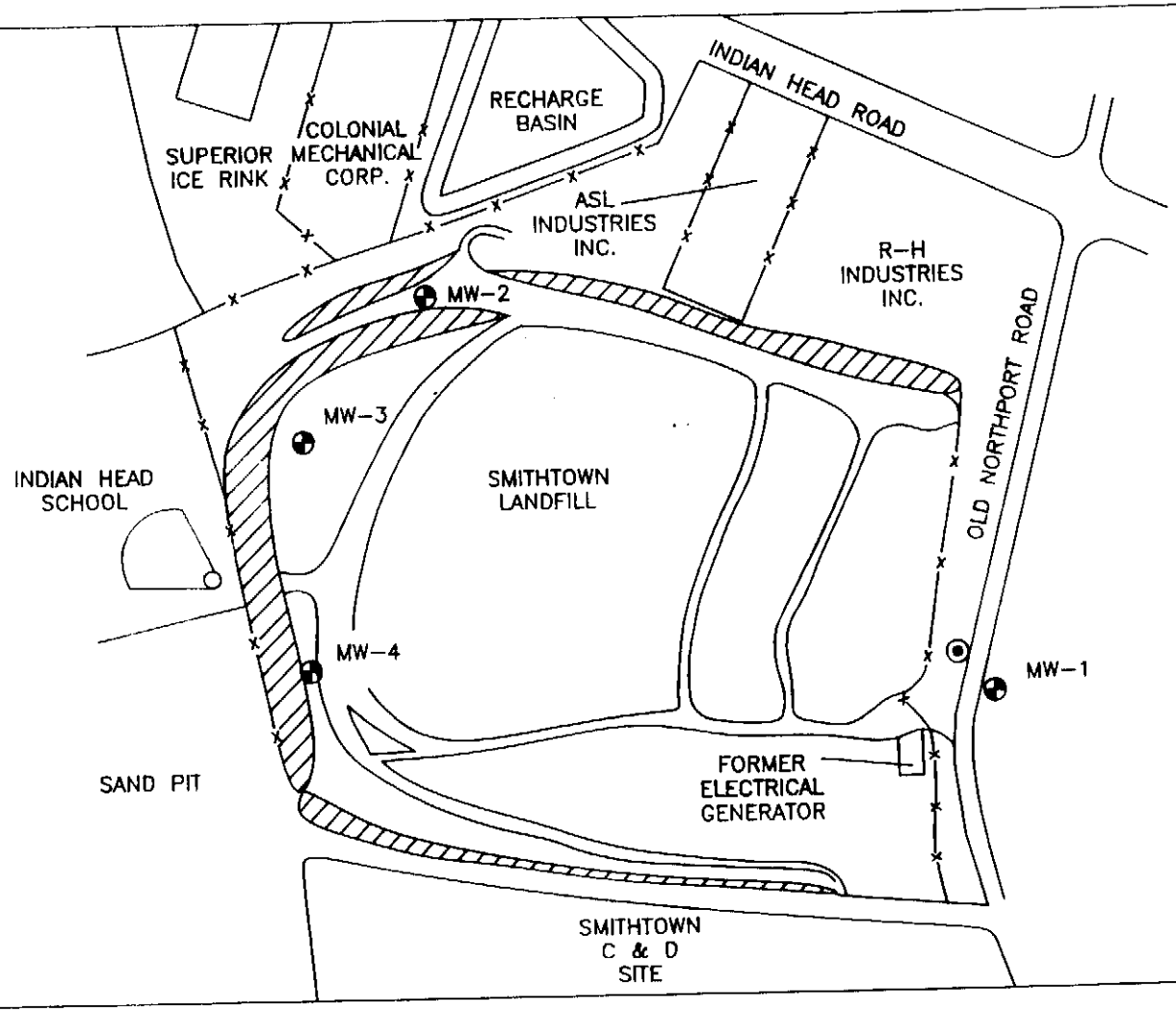
6) NYSDEC, May 22, 1990, Memo for file on LEL measurements at Site and nearest building.

7) SCDHS, June 12,1990, Results of private well sampling in vicinity of the Site.

8) Lubke, E.R. 1964. Hydrology of the Huntington-Smithtown area, Suffolk County, New York, USGS Water Supply Paper 1669-D (Roux Associates, Inc. files).

9) McClymonds, N.R. and O.L. Franke, 1972. Water Transmitting Properties of Aquifers on Long Island, New York. United States Geological Survey, Professional Paper 627-E (Roux Associates, Inc. files).

10) Franke, O.L. and P. Cohen, 1972. United States Geological Survey, Professional Paper 800-C, pp. 271-272 (Roux Associates, Inc. files).



EXPLANATION

MW-1 ⊕ EXISTING MONITORING WELL LOCATION AND DESIGNATION

⊙ HYDRANT LOCATION

SLOPED PORTION OF SITE

FENCE LINE

SITE ROADWAYS

0 200 400 FT.

Title:

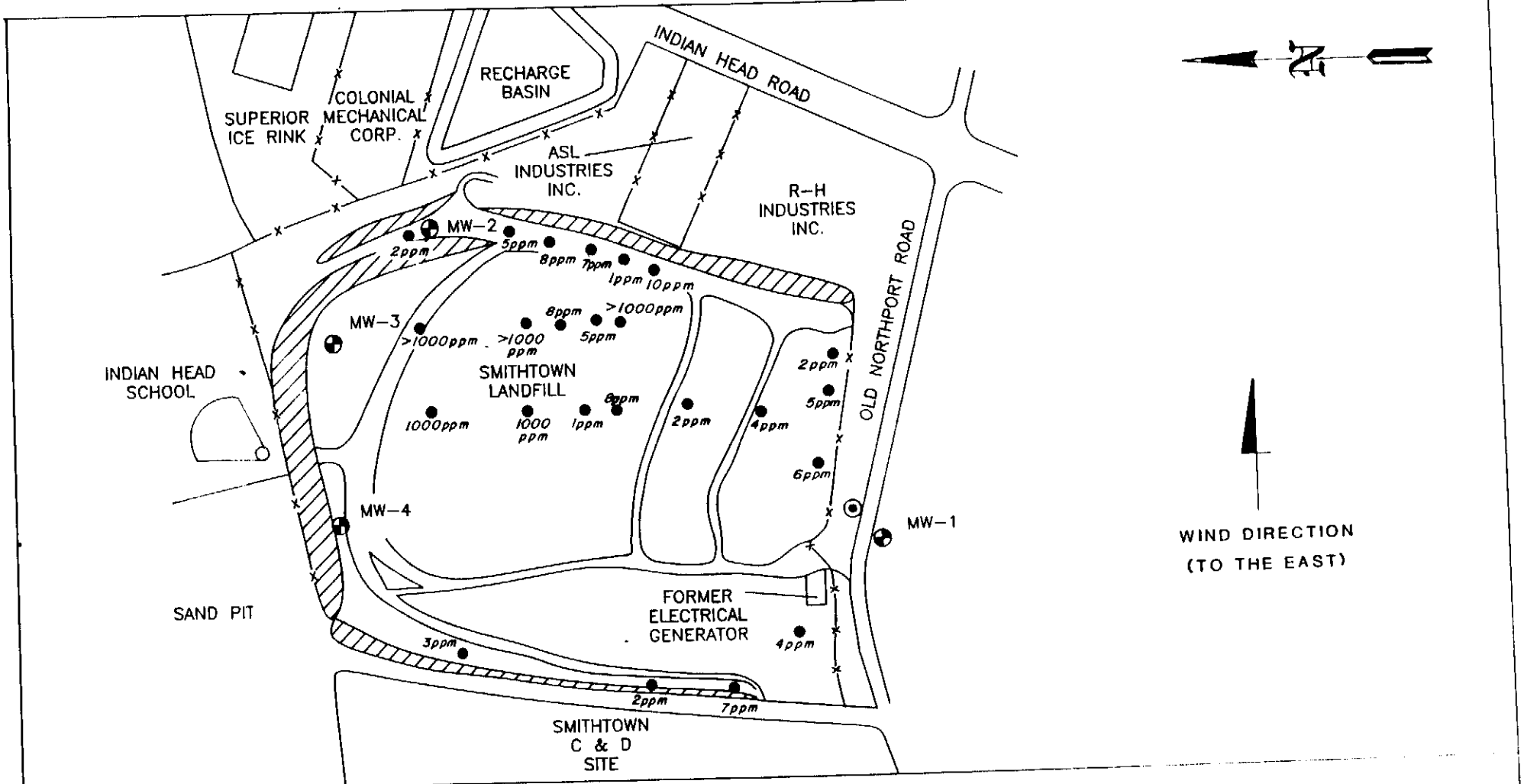
SMITHTOWN LANDFILL
SITE MAP

Prepared for

GIBBS & HILL

ROUX ASSOCIATES INC
Environmental Consulting & Management

Compiled by E.A.	Date: 7/90	Figure 2
Prepared by: C.L.	Scale: SHOWN	
Project Mgr: J.W.	Revision: 0	
File No: 07709BM		



EXPLANATION

MW-1 — MONITORING WELL LOCATION AND DESIGNATION

HYDRANT LOCATION

SLOPED PORTION OF SITE

FENCE LINE

SITE ROADWAYS

8ppm — AIR MONITORING DETECTION POINT OVA READINGS

0 200 400 FT.

Title

SMITHTOWN LANDFILL
AIR MONITORING DETECTIONS
MAY 25, 1990

Prepared for

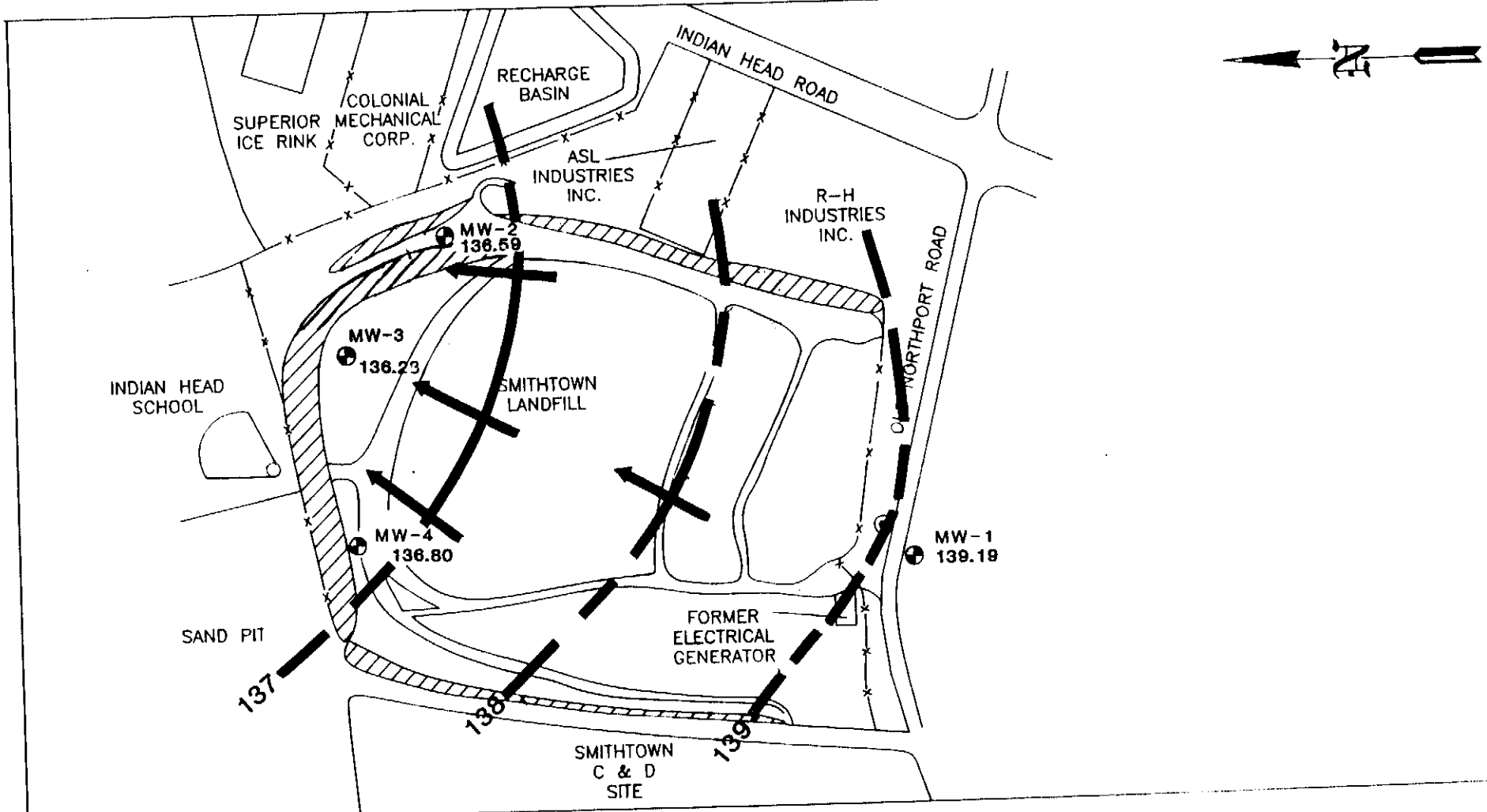
GIBBS & HILL

ROUX ASSOCIATES INC
Environmental Consulting & Management

Compiled by E.A.
Prepared by C.L.
Project Mgr. J.W.
File No. 07709BM

Date 7/90
Scale SHOWN
Revision 0

3



EXPLANATION

MW-1 — **MONITORING WELL LOCATION AND DESIGNATION**

HYDRANT LOCATION

SLOPED PORTION OF SITE

FENCE LINE

SITE ROADWAYS

134 — LINE OF EQUAL GROUND-WATER ELEVATION

DIRECTION OF GROUND-WATER FLOW

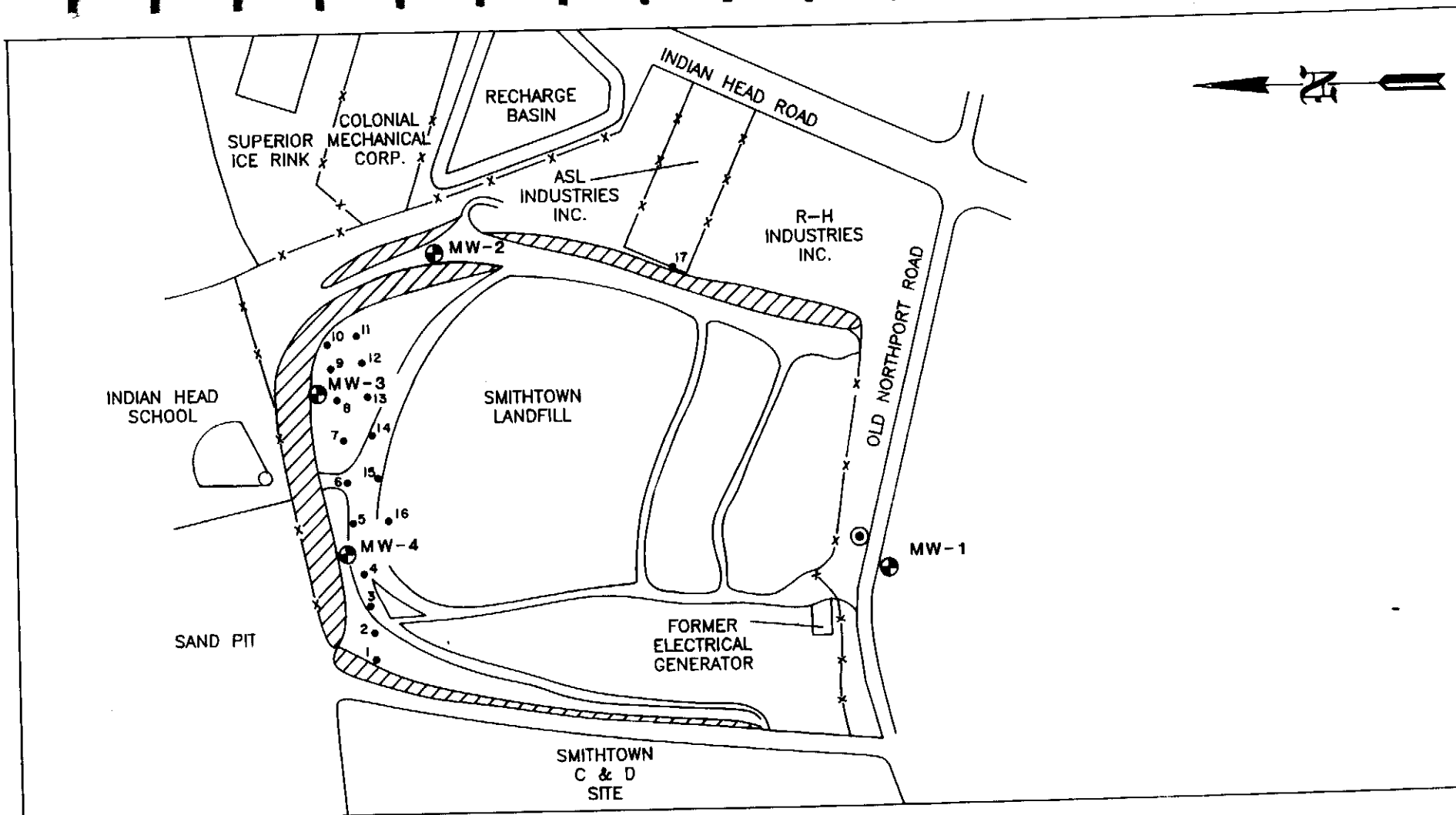
0 200 400 FT.

Title: **SMITHTOWN LANDFILL ELEVATION OF GROUND WATER DECEMBER 27, 1990**

Prepared for: **GIBBS & HILL**

ROUX ASSOCIATES INC
Environmental Consulting & Management

Compiled by E.A.	Date 5/91	Figure 4
Prepared by C.L.	Scale SHOWN	
Project Mgr: J.W.	Revision 0	
File No. 07709BM		



EXPLANATION

MW-1 ⊕ MONITORING WELL LOCATION AND DESIGNATION

⊙ HYDRANT LOCATION

SLOPED PORTION OF SITE

FENCE LINE

SITE ROADWAYS

9• SOIL GAS SAMPLING POINTS

0 200 400 FT.

Title:

SMITHTOWN LANDFILL
SOIL GAS SURVEY SAMPLING POINTS

MAY 10 AND 11, 1990

Prepared for

GIBBS & HILL

ROUX ASSOCIATES INC
Environmental Consulting & Management

Compiled by: E.A.	Date: 7/90	Figure
Prepared by C.L.	Scale SHOWN	5
Project Mgr J.W.	Revision 0	
File No. 07709BM		

Table 1. Monitoring Well Construction Details, Smithtown Landfill, Smithtown, New York.

Well Number	Bottom of Boring (ft below land surface)	Screened Zone (ft below land surface)	Elevation of Measuring Point* (ft relative to a commom datum)	Height of Measuring Point (ft)**	Land Surface Elevation (ft relative to a commom datum)	Well Diameter (inches)
MW-1	55.00	42.58 - 52.58	183.86	2.06	181.80	2
MW-2	90.00	78.75 - 88.75	219.40	2.20	217.20	2
MW-3	90.00	75.48 - 85.48	213.40	3.68***	209.72***	2
MW-4	85.00	73.57 - 83.57	216.10	2.70	213.40	2

* - Measuring point of all monitoring wells is the top of the PVC casing.
** - Measurement from land surface to measuring point.
*** - Based on field measurement.

NOTE: All measurements are taken from a common datum in an arbitrary system.

Table 2. Water Level Measurements Taken on December 21, and December 27, 1990, Smithtown Landfill, Smithtown, New York.

Well Number	Elevation of Measuring Point (ft relative to a common datum)	December 21, 1990		December 27, 1990		
		Depth to Water (ft below measuring point)	Elevation of Water Table (ft relative to a common datum)	Depth to Water (ft below measuring point)	Elevation of Water Table (ft relative to a common datum)	Change (ft) Dec. 21-27
MW-1	183.86	44.50	139.36	44.67	139.19	-0.17
MW-2	219.40	82.75	136.65	82.81	136.59	-0.06
MW-3	213.40	77.29	136.11	77.12	136.28	+0.17
MW-4	216.10	78.11	137.99	79.30	136.80	-1.19

NOTE: All elevations are taken from a common datum in an arbitrary system.

Table 3. Summary of Soil Gas Survey Data Collected on May 10 and 11, 1990, Smithtown Landfill, Smithtown, New York.

Sample I.D.	Sample Depth (ft)	Concentrations (ppm)		
		1,1,1-Trichloroethane	Tetrachloroethylene	Methane
SL1	9	ND	ND	I
SL2	9	TR	ND	I
SL3	9	ND	TR	I
SL4	6	TR	ND	I
SL5	9	1	ND	I
SL6	9	0.79	ND	I
SL7	9	1	ND	I
SL8	9	1	ND	I
SL9	9	0.9	ND	I
SL10	9	1	ND	I
SL11	9	0.74	ND	I
SL12	9	1	ND	I
SL13	9	0.71	ND	I
SL14	9	0.78	ND	I
SL15	8	0.76	ND	I
SL16	9	0.74	ND	I
SL16a	9	0.73	ND	I
SL17	*	*	*	I

ND - Not detected
TR - Trace
I - Identified but could not be quantified - no standard available.
* - Sample not taken but hole scanned for methane which was identified.

Table 4. Summary of Ground-Water Analytical Data Sampled on December 27, 1990, Smithtown Landfill, Smithtown, New York.

Well Designation: (All sample concentrations in ug/L)	MW-1	MW-2	MW-3	MW-4	MW-1A*	6 NYCRR 703 Ground-Water Standard
VOLATILE ORGANIC COMPOUNDS***						
Benzene	ND	ND	ND	4.0 J	4.0 J	BDL
Chlorobenzene	ND	ND	3 J	14	14	5
Tentatively Identified Compounds**						
Silanol, trimethyl	ND	ND	ND	ND	7	
Furan, tetrahydro	ND	ND	ND	10	10	
Unknown	ND	ND	ND	6	ND	
SEMIVOLATILE ORGANIC COMPOUNDS***						
bis (2-Ethylhexyl) phthalate	69 U	8 U	11 U	9 J	4 J	4.2
1,4-Dichlorobenzene	ND	ND	ND	12	12	4.7
Naphthalene	ND	ND	ND	2 J	ND	50
Tentatively Identified Compounds**						
Unknown	ND	ND	ND	30	27	
Phosphoric acid, diethyl est	ND	ND	ND	ND	11	
Bicyclo (2.2.1) heptan-2-one,1	ND	ND	ND	70	60	
Unknown	ND	ND	ND	10	11	
Dimethyl ethyl phenol isomer	ND	ND	ND	10	ND	
Unknown	ND	ND	ND	9	11	
Benzamide,N,N-diethyl-3-methyl	ND	ND	ND	30	20	
Unknown	ND	ND	ND	20	49	
Unknown	ND	ND	ND	70	130	
Thiocyanic acid, 4-hydroxyph	ND	ND	ND	60	ND	
Unknown	ND	ND	ND	70	64	
Unknown	ND	ND	ND	80	31	
Unknown	ND	ND	ND	50	16	
Unknown	ND	ND	ND	9	44	
Unknown	ND	ND	ND	20	16	
Ethanol,2-butoxy-, phosphate	ND	ND	ND	10	9	
Unknown	ND	ND	ND	20	24	
Unknown	ND	ND	ND	9	ND	
Unknown	ND	ND	ND	20	ND	
Unknown	ND	ND	ND	10	ND	
Unknown	ND	ND	ND	30	ND	
PESTICIDES and PCBS	ND	ND	ND	ND	ND	

* - Duplicate of MW-4
** - Estimated concentration
*** - Compounds not detected are not listed.
ND - Not detected
B - Found in Bailer Blank
J - Estimated value due to derivation in quality control limits.
U - Not detected; qualified through associated method blank.
NS - No standard
BDL - Below detection limit

Table 4. Summary of Ground-Water Analytical Data Sampled on December 27, 1990, Smithtown Landfill, Smithtown, New York.

Well Designation:	MW-1	MW-2	MW-3	MW-4	MW-1A*	6 NYCRR 703 Ground-Water Standard (unless otherwise noted)
(All sample concentrations in ug/L)						
UNFILTERED METALS* **						
Aluminum	1060	22900	36700	5630	7330	NS
Arsenic	13.7 J	UJ	4.8 J	16.5 J	17.3 J	25
Barium	67.5 B	119 B	205	1020	785	1000
Beryllium	ND	2.5 B	3.6 B	ND	1.2 B	NS
Calcium	16500	15600	13300	19000	16900	NS
Chromium	ND	14.7	25.2	20.4	28.7	50
Cobalt	7.2 B	64.8	113	26.8 B	22.4 B	NS
Copper	3.7 B	354 J	52.1	361 J	738 J	200 (1)
Iron	58100	20600	47200	24100	25000	300
Lead	ND	30.6	19.4	58.7	140	25
Magnesium	3080 B	3710 B	3960 B	40000	40100	NS
Manganese	13700	34600	41300	3810	2940	300
Nickel	67.6	194	207	111	125	NS
Potassium	2520 J	4070 J	6460 J	270000 J	324000 J	NS
Sodium	21900 J	3200 J	15500 J	358000 J	379000 J	NS
Thallium	ND	ND	ND	1.1 B	ND	NS
Vanadium	ND	12.2 B	45.9 B	5.5 B	ND	NS
Zinc	38.9 U	132	125 J	110 J	152 J	300 (1)
FILTERED METALS* **						
Aluminum	ND	ND	211	68 J	ND	NS
Arsenic	7.6 J	ND	ND	8.2 J	6.2 J	25
Barium	205	197 J	247	614	618	1000
Cadmium	ND	ND	ND	4.9 J	ND	10
Calcium	17600	14100	14000	6670	6750	NS
Chromium	ND	ND	ND	ND	10.0	50
Cobalt	ND	44.2 J	81.9	26.7 J	18.2 J	NS
Copper	13.9 J	70.2	22.1 J	385	336	200 (1)
Iron	5520	27.1 J	192	390	492	300
Lead	2.8 J	ND	ND	1.0 J	5.0	25
Magnesium	3100 J	2400 J	2190 J	36200	36200	NS
Manganese	13300	32000	37400	1080	1240	300
Nickel	44.7	144	154	101	109	NS
Potassium	3080	2810 J	4350 J	316000	315000	NS
Sodium	24100	4330 J	15700	350000	351000	NS
Zinc	60	90	80	80	60	300 (1)
PHYSICAL PARAMETERS						
COD (mg/L)	20	20	50	530	520	
Specific Conductance (umhos)	365	212	306	5000	4820	
pH (units)	6.2	6.0	6.0	7.1	7.1	
Suspended Solids (mg/L)	228	1710	2460	670	797	
Total Dissolved Solids (mg/L)	245	117	227	2120	2100	

* - Duplicate of MW-4
** - Estimated concentration
*** - Compounds not detected are not listed.
ND - Not detected
B - Found in Bailer Blank
J - Estimated value due to derivation in quality control limits.
U - Not detected; qualified through associated method blank.
UJ - Not detected; estimated value due to derivation in quality control limits.
NS - No standard
BDL - Below detection limit
(1) - 10 NYCRR 170
NOTE: Metal samples were filtered and re-analyzed.

5.0 FINAL APPLICATION OF HAZARD RANKING SYSTEM

5.1 Introduction

The Hazard Ranking System has been applied incorporating the new data obtained during the Phase II investigation. The final scores calculated are:

Sm = 0

Sgw = 0

Ssw = 0

Sa = 0

Sfe = Not Scored

Sdc = 0

The purpose of the HRS scoring is to rank the Site in comparison to other New York State Superfund sites, on a list of priorities, and/or to classify the Site (i.e., delist).

5.2 HRS Work Sheets

Facility name: Smithtown Landfill (Izzo Landfill) NYSDEC ID 152043

Location: Old Northport Road, Town of Smithtown, New York

EPA Region: II

Person(s) in charge of the facility: Alexander Izzo

106 Fourth Street

Glen Cove, New York 11542

Name of Reviewer: Eric Arnesen **Date:** 6/91

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.)

Landfill covers an area of ~22.0 acres and operated from 1970 to 1979. Accepted all types of household and scavenger wastes. Currently it is not in use and has been capped. The landfill contents are generating methane which is being emitted.

Scores: $S_M = 0$ ($S_{GW} = 0$ $S_{SW} = 0$ $S_A = 0$)

S_{FE} = Not Scored

$S_{DC} = 0$

Ground Water Route Work Sheet						
	Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1	Observed Release	(0) 45	1	0	45	3.1
	If observed release is given a score of 45, proceed to line 4 . If observed release is given a score of 0, proceed to line 2 .					
2	Route Characteristics					3.2
	Depth to Aquifer	0 1 2 (3)	2	6	6	
	Concern					
	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	0	3	
		Total Route Characteristics Score		11	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	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					3.5
	Ground Water Use	0 1 2 (3)	3	9		
	Distance to Nearest Well/Population Served	0 4 6 8 10 12 16 18 20 24 30 32 35 (40)	1	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			0	57,330	
7	Divide line 6 by 57,330 and multiply by 100		S_{GW} =	0		

Surface Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a score of 45, proceed to line 4 . If observed release is given a score of 0, proceed to line 2 .					
2 Route Characteristics					
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	4.2
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 (1) 2 3	2	2	6	
Physical State	(0) 1 2 3	1	0	3	
	Total Route Characteristics Score		4	15	
3 Containment	(0) 1 2 3	1	0	3	4.3
4 Waste Characteristics					
Toxicity/Persistence	(0) 3 6 9 12 15 18	1	0	18	4.4
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
	Total Waste Characteristics Score		0	26	
5 Targets					
Surface Water Use	0 1 (2) 3	3	6	9	4.5
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		

Air Route Work Sheet

	Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1	Observed Release	(0) 45	1	0	45	5.1
	Date and Location:					
	Sampling Protocol:					
	If line 1 is 0, 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	0 1 2 3 4 5 6 7 8	1	0	8	
	Quantity					
		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		

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_a)	0	0
$S^2gw + S^2sw + S^2a$	--	0
$\sqrt{S^2gw+S^2sw+S^2a}$	--	0
$\sqrt{S^2gw+S^2sw+S^2a}$ / 1.73 = S_M	--	0

S_{FE} is scored only if a Fire Marshal has certified the site as a threat of fire or explosion due to hazardous wastes at the Site. Since this is not true, S_{FE} is not scored.

Fire and Explosion Work Sheet

	Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1	Containment	1 3	1		3	7.1
2	Waste Characteristics					7.2
	Direct Evidence	0 3	1		3	
	Ignitibility	0 1 2 3	1		3	
	Reactivity	0 1 2 3	1		3	
	Incompatibility	0 1 2 3	1		3	
	Hazardous Waste	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	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			

Direct Contact Work Sheet

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(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 Population Within a 1-Mile Radius	0 1 2 3 4 (5)	4	20	20	8.5
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
	Total Targets Score		20	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	21,600	
7 Divide line 6 by 21,600 and multiply by 100	S_{DC}=		0		

5.3 Documentation Records for Hazard Ranking System

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible, summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: Smithtown Landfill

LOCATION: Old Northport Road, Smithtown, New York

DATE SCORED: June, 1991

PERSON SCORING: Eric Arnesen

PRIMARY SOURCE(S) OF INFORMATION: Roux Associates, Inc.- Phase II Work Plan Update, Velzy Associates Site Inspection Report, and YEC, Inc. - Phase I Report.

GROUND WATER ROUTE

1. OBSERVED RELEASE

Contaminants detected (5 maximum):

Some low-level contaminants have been detected but are typical landfill constituents and are not indicative of hazardous waste disposal.
None Assigned value = 0

Rationale for attributing the contaminants to the facility:

N/A

2. ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

Upper Glacial and Magothy aquifers. Both of these are hydraulically connected (Reference 1).

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

75 feet (Geologic Logs, Appendix D)

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

Depth of Landfill

Approximately 65 feet (Reference 2)
Assigned value = 3

Net Precipitation

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

45 inches average annual (HRS User's Manual).

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

30 inches average annual (HRS User's Manual).

Net precipitation (subtract the above figures):

15 inches (based upon above numbers). Assigned value = 2.

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Sand and gravel (Geologic Logs, Appendix D, and Geotechnical Testing Report for Smithtown Landfill, Appendix G).

Permeability associated with soil type:

Moderate to high (HRS Users Manual).
Greater than 10^{-3} cm/sec.
Assigned value = 3

Physical State

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

Physical state cannot be determined since there is no documented evidence of any hazardous waste deposited at the site and the analytical data results show no release of contaminants attributed to hazardous waste from the Site.

Assigned value = 0

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Landfill, no liner (Reference 2)

Method with highest score:

Landfill, no liner. Assigned value = 3.

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

None. Assigned value = 0

Unknown. There is no documentation of hazardous waste disposal at the site. The analytical data collected for the Phase II investigation has shown no release of hazardous substances attributable to hazardous waste disposal has occurred.

Compound with highest score:

N/A

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. There is no documentation of hazardous waste disposal at the site. The analytical data collected for the Phase II investigation has shown no release of hazardous substances attributable to hazardous waste disposal has occurred.
Assigned value = 0

Basis of estimating and/or computing waste quantity:

N/A

5. TARGETS

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

The Upper Glacial and Magothy aquifers are designated sole source aquifers (Reference 4). Domestic and commercial/industrial uses.
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 to the west of the site on Old Northport Road (Reference 5).

Distance to above well or buildings:

Approximately 500 feet (Reference 5). Assigned value = 4.

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:

	Population	
Suffolk County Water Authority	48,000	(Reference 6)
Kings Park Psychiatric Center	3,100	(Reference 7)

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

Irrigation	140 acres x 1.5 =	210	(Reference 8)

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

None Assigned value = 0

Rationale for attributing the contaminants to the facility:

N/A

2. ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility and intervening terrain in percent:

1-2% (Reference 3)

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

No (Reference 10)

Is the facility completely surrounded by areas of higher elevation?

No (Reference 10)

1-Year, 24-Hour Rainfall in Inches

2.8 inches (HRS User's Manual) Assigned value = 2

Distance to Nearest Downslope Surface Water

8,300 feet (Reference 10) Assigned value = 1

Name/description of nearest downslope surface water:

Tributary to the Nissequogue River
Reference 9.
Assigned value = 0

Physical State of Waste

Physical state cannot be determined since there is no documented evidence of any hazardous substances being deposited at the Site and the analytical data has shown no release of hazardous substances has occurred.

Assigned Value = 0

3. CONTAINMENT

Method(s) of waste or leachate containment evaluated:

Cover and slope.

Method with highest score:

Landfill has about 3 to 6 feet of cover, and is flat (Reference 3).
Assigned Value = 0.

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Unknown. There is no documentation of hazardous waste disposal at the site. The analytical data collected for the Phase II investigation has shown no release of hazardous substances attributable to hazardous waste disposal has occurred.

Assigned value = 0

Compound with highest score:

N/A

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. There is no documentation of hazardous waste disposal at the site. The analytical data collected for the Phase II investigation has shown no release of hazardous substances attributable to hazardous waste disposal has occurred.

Basis of estimating and/or computing waste quantity:

N/A
Assigned score = 0

5. TARGETS

Surface Water Use

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

Nissequogue River, New Mill Pond, Millers Pond, Gibbs Pond, Spectacle Pond, Lake Ronkonkoma and Stony Brook Harbor. Use - recreation.
Reference 9 and Reference 10.
Assigned value = 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.
Assigned value = 0

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

None
Reference 10.
Assigned value = 0

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

None.
Reference 11.
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.
Reference 9.
Assigned value = 0

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

N/A

Total population served:

N/A

Name/description of nearest of above water bodies:

N/A

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

N/A

AIR ROUTE

1. OBSERVED RELEASE

Contaminants detected:

No contaminants detected except methane, which is not considered a hazardous waste.
Reference 12.

Date and location of detection of contaminants:

N/A

Methods used to detect the contaminants:

Photoionization (OVM) monitor, Flame Ionization Monitor (OVA), Radiometer, and Tri-Gas Meter.
Reference 12.

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
Unknown. There is no documentation of hazardous waste disposal at the site. The analytical data collected for the Phase II investigation has shown no release of hazardous substances attributable to hazardous waste disposal has occurred.
Assigned Value = 0

Toxicity

Most toxic compound:

None
Unknown. There is no documentation of hazardous waste disposal at the site. The analytical data collected for the Phase II investigation has shown no release of hazardous substances attributable to hazardous waste disposal has occurred.
Assigned Value = 0

Hazardous Waste Quantity

Total quantity of hazardous waste: N/A

Unknown. There is no documentation of hazardous waste disposal at the site. The analytical data collected for the Phase II investigation has shown no release of hazardous substances attributable to hazardous waste disposal has occurred.

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 ½ mi 0 to ¼ mi

10,725 (Reference 13)
Assigned Value = 24

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland:

None. Reference 10.
Assigned Value = 0

Distance to a 5-acre (minimum) freshwater wetland:

None. Reference 10.
Assigned Value = 0

Distance to critical habitat of an endangered species: N/A

None. Reference 11.
Assigned Value = 0

Land Use

Distance to commercial/industrial area:

There is heavy industry adjacent to the site.
Reference 12.
Assigned Value = 3

Distance to national or state park, forest, wildlife reserve:

Sunken Meadow State Park
1.1 miles. Reference 10.
Assigned Value = 1

Distance to residential area:

0.25 miles. Reference 10.
Assigned Value = 2

Distance to agricultural land in production within past 5 years:

1.5 miles Reference 14
Assigned value = 0

Distance to prime agricultural land in production within past 5 years:

1.5 miles. Reference 14.
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

Land use is given a score of 3 since distance to an industrial/commercial area results in the highest score.

FIRE AND EXPLOSION

The Town of Smithtown Fire Marshal has certified the Site as a threat of fire or explosion due to methane gas emanating from the landfill (Reference 15). The Site will not be scored since this is a result of decomposition of solid waste and not the result of hazardous waste disposal. Also, no field observation has documented a fire and explosion threat due to the presence of hazardous waste.

1. CONTAINMENT

Hazardous substances present:

Type of containment, if applicable:

2. WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitibility

Compound used:

Reactivity

Incompatibility

Incompatible pair of compounds:

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

4. TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

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

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

Distance to residential area, if 2 miles or less:

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

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

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

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1. OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident on record.
Reference 3.
Assigned value = 0

2. ACCESSIBILITY

Describe type of barrier(s):

A fence partially surrounding the facility.
Reference 16.
Assigned value = 3

3 CONTAINMENT

Type of Containment:

Landfill is covered with 3 to 6 feet of soil (Reference 3).
Assigned value = 0

4. WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Unknown. There is no documentation of hazardous waste disposal at the site. The analytical data collected for the Phase II investigation has shown no release of hazardous substances attributable to hazardous waste disposal has occurred.
Assigned value = 0

Compound with highest score:

N/A

5. TARGETS

Population within one-mile radius

10,725 (Reference 13)
Assigned value = 5

Distance to critical habitat (of endangered species)

None. Reference 11
Assigned value = 0

5.4 HRS Documentation References

(1) Lubke, E.R., 1964. Hydrogeology of the Huntington-Smithtown Area, Suffolk County, New York. USGS Water Supply Paper 1669-D. (Location: Roux Associates, Inc. Files)

(2) New York State Department of Health. Human Exposure Potential Ranking Model Inspection Form. (Location: NYSDOH Files)

(3) Mooney, F.J., 1988. Interview record with Ari Selvakumar of YEC, Inc. Consultants, September 28, 1988. (Attached, taken from YEC, Inc. Phase I report.)

(4) USEPA, 1990. Fact Sheet, Sole-Source Aquifers in Region II. (Attached, from Roux Associates, Inc. files.)

(5) Suffolk County Department of Health Services, Smithtown Landfill Ground-Water Survey, July 18, 1980. (Attached, taken from YEC, Inc. Phase I report.)

(6) Rosavitch, E.J., 1988. Suffolk County Water Authority, New York, Communication with Ari Selvakumar of YEC, Inc. consultants regarding the population served by groundwater within three-mile radius of site. (Attached, taken from YEC, Inc. Phase I report.)

(7) New York State Department of Health, 1982. New York State Atlas of Community Water System Sources. (Attached, from Roux Associates, Inc. files.)

(8) EA Science and Technology, 1987. Phase I Investigation Smithtown MSF targets section of Ground Water route section of HRS Scoring Sheet. (Attached, from NYSDEC Region I files.)

(9) NUS Corporation, April 3, 1983. Potential Hazardous Waste Site Preliminary Assessment (Attached, from USEPA Region II files.)

(10) NYSDEC, 1990. Preliminary Freshwater Wetlands Map (Located in NYSDEC Region I files.)

(11) Scheibel, Michael S., 1990. Letter to Eric Arnesen of Roux Associates, Inc., June 28, 1990 (attached).

(12) Roux Associates, Inc., 1990. Phase II Work Plan Update, Appendix B, Site Reconnaissance, May 25, 1990 and June 21, 1990 (Attached, from Roux Associates, Inc. files.)

(13) Long Island Lighting Company, 1988. Population Survey (Attached, from YEC, Inc. Phase I report.)

(14) Sanok, William, 1990. Cornell Cooperative Extension, New York, Communication with Eric Arnesen of Roux Associates, Inc. regarding agricultural lands within three miles of the site. (Attached, from Roux Associates, Inc. files.)

(15) Valentine, John, 1990. Town of Smithtown Code Enforcements Bureau, Communication with Eric Arnesen of Roux Associates, Inc., Fire Inspector's report on Smithtown Landfill. (Attached, from Roux Associates, Inc. files.)

(16) YEC, Inc. Site Inspection, September 28, 1988. (Attached, from YEC, Inc. Phase I report.)

REFERENCE 1

Lubke, E.R., 1964. Hydrogeology of the Huntington-Smithtown Area, Suffolk County, New York. USGS Water Supply Paper 1669-D.

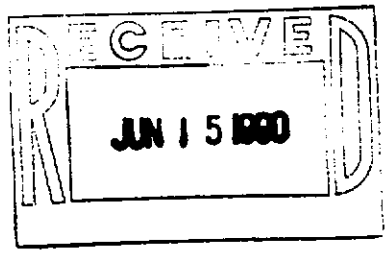
REFERENCE 2

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

June 12, 1990



Eric Arnesen
Roux Associates Inc.
The Huntington Atrium
775 Park Avenue, Suite 255
Huntington, New York 11743

RE: Smithtown Landfill/152043 and
Star Sand and Gravel/152097
Smithtown, Suffolk County

Dear Mr. Arnesen:

As per your request enclosed are the NYSDOH Hazardous Waste Site Summary and the NYSDOH Human Exposure Potential Ranking Model (HEPRM) Inspection Form for the Smithtown Landfill. The information contained in these documents was collected for use in the NYSDOH HEPRM model.

I hope this information will be helpful to you in the performance of the Phase II Investigation. However, please be aware that these documents are in draft form and should not be copied. In regards to the Star Sand and Gravel site, our files contain only the Phase II Investigation work plan which you would not be in need of for obvious reasons.

Sincerely,

Joseph P. Crua
Program Research Specialist II
Bureau of Environmental Exposure
Investigation

lk/01570064

cc: Mr. Tramontano
Mr. Bates
Mr. Pim
Mr. Swartwout
Mr. Candella
Ms. Watkins

REFERENCE 3

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

ASelvakumar

Ari Selvakumar
Staff Engineer
YEC, Inc.

INTERVIEW ACKNOWLEDGEMENT FORM

SITE NAME	: Smithtown Landfill	I.D. NUMBER	: 152043
		DATE	: 9/28/1988
PERSON CONTACTED	: Francis J. Mooney		
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., 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).

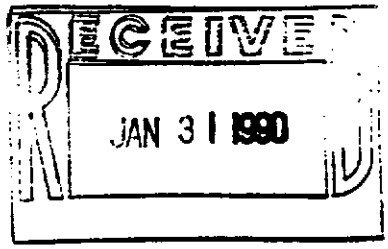
Revisions (please write in any corrections needed to above transcript)

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

YEC, Inc.

REFERENCE 4

Reference #



FACT SHEET

SOLE SOURCE AQUIFERS IN REGION II

Sole Source Aquifer Name	State	Citation	Publication Date
Brooklyn/Queens Aquifer System	NY	49 FR 2950	January 24, 1984
Buried Valley Aquifer System	NJ	45 FR 30537	May 8, 1980
Cattaraugus Creek Aquifer System	NY	52 FR 36100	September 25,1987
Clinton Street-Ballpark Aquifer System	NY	50 FR 2025	January 14, 1985
Cortland-Homer-Preble Aquifer System	NY	53 FR 22045	June 13, 1988
Highlands Aquifer System	NJ/NY	52 FR 37213	October 5, 1987
Nassau/Suffolk Aquifer System	NY	43 FR 26611	June 21, 1978
New Jersey Coastal Plain Aquifer System	NJ	53 FR 23791	June 24, 1988
Northwest New Jersey Fifteen Basin Aquifer System	NJ/NY	53 FR 23685	June 23, 1988
Ridgewood Area Aquifer System	NJ/NY	49 FR 2943	January 24, 1984
Schenectady/Niskayuna Aquifer System	NY	50 FR 2022	January 14, 1985
Upper Rockaway River Basin Aquifer System	NJ	49 FR 2946	January 24, 1984

FOR MORE INFORMATION CONTACT

U.S. ENVIRONMENTAL PROTECTION AGENCY
JOHN MALLECK, CHIEF
OFFICE OF GROUND WATER MANAGEMENT
ROOM 842 - 26 FEDERAL PLAZA
NEW YORK, N.Y. 10278
212-264-5635

REFERENCE 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.

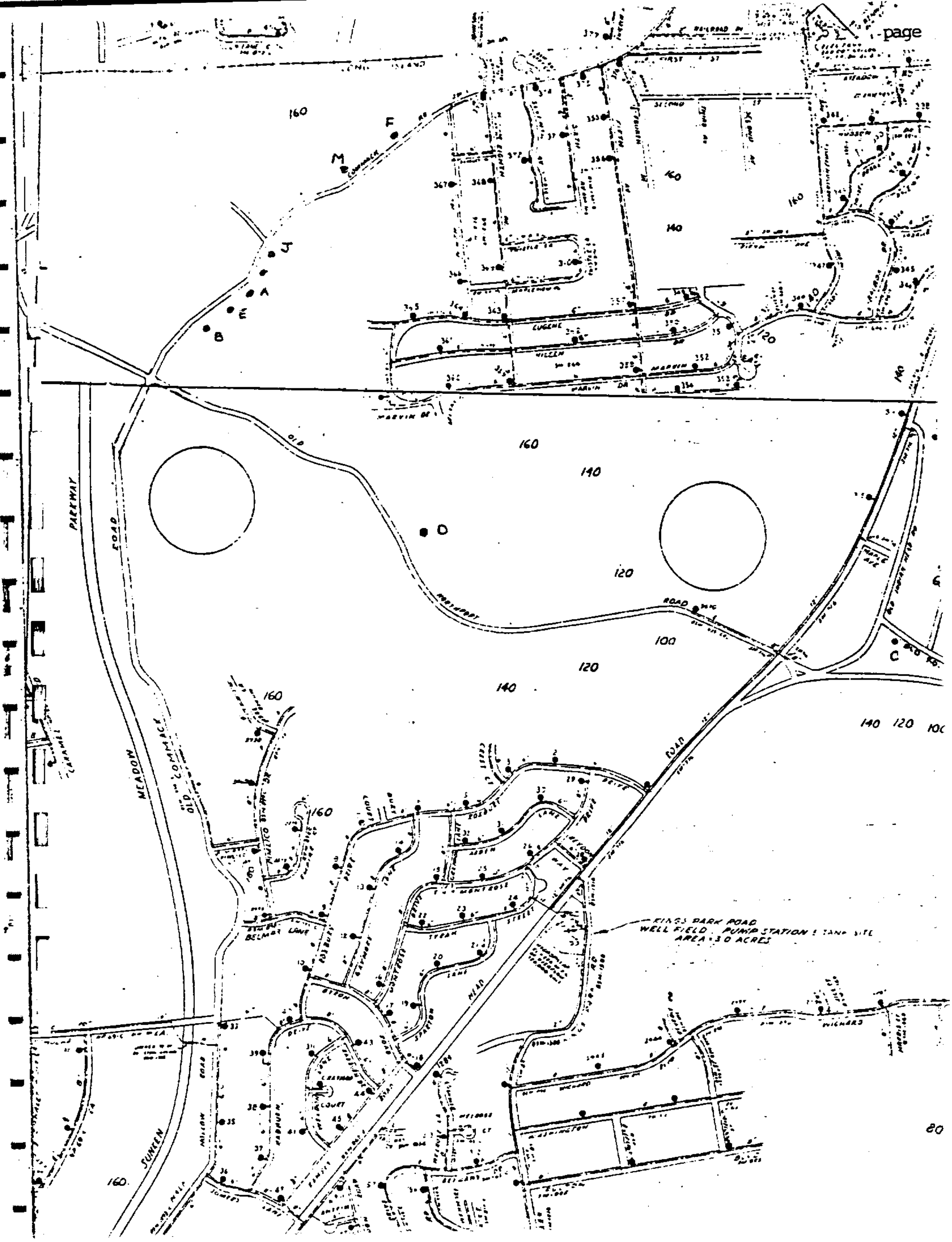
  . 2 exceeded the nitrate standard.

  . 5 exceeded secondary standards that cause aesthetic problems.

  . None showed traces of heavy metals.

18 July, 1980

page


KINGS PARK ROAD
WELL FIELD PUMP STATION & TANK SITE
AREA 3.0 ACRES
SUNKEN MEADOW PARKWAY
OLD COMMACK ROAD
OLD NORTHPORT ROAD
EUGENE
MARVIN DR
MONTROSE
BELMAR LANE
BYRON
COMMACK RD
160
140
120
100
80
M
F
J
A
E
B
D
C
G

LANDFILL SURVEY

LOCATION SMITHTOWN

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

Vinyl Chloride (ppb)	- <1
Methylene Chloride (ppb)	- <1
1,1-Dichloroethylene (ppb)	- <1
1,1-Dichloroethane (ppb)	- <1
trans-1,2-Dichloroethylene (ppb)	- <1
cis-1,2-Dichloroethylene (ppb)	- <1
Chloroform (ppb)	- <1
1,1,2-Trichlorotrifluoroethane (ppb)	- <1
1,2-Dichloroethane (ppb)	- <1
1,1,1-Trichloroethane (ppb)	- <2
Carbon Tetrachloride (ppb)	- <1
Bromodichloromethane (ppb)	- <1
1,2-Dichloropropane (ppb)	- <1
2,3-Dichloropropene (ppb)	- <1
Trans-1,3-Dichloropropene (ppb)	- <1
Trichloroethylene (ppb)	- <1
1,1,2-Trichloroethane (ppb)	- <1
Chlorodibromomethane (ppb)	- <1
cis-1,3-Dichloropropene (ppb)	- <1
Bromoform (ppb)	- <1
1,1,1,2-Tetrachloroethane (ppb)	- <1
Tetrachloroethylene (ppb)	- <1
1,1,2,2-Tetrachloroethane (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-Dichloroethylene (ppb)	- <1
1,1-Dichloroethane (ppb)	- <1
trans-1,2-Dichloroethylene (ppb)	- <1
cis-1,2-Dichloroethylene (ppb)	- <1
Chloroform (ppb)	- <1
1,1,2-Trichlorotrifluoroethane (ppb)	- <1
1,2-Dichloroethane (ppb)	- <1
1,1,1-Trichloroethane (ppb)	- <1
Carbon Tetrachloride (ppb)	- <1
Bromodichloromethane (ppb)	- <1
1,2-Dichloropropane (ppb)	- <1
2,3-Dichloropropene (ppb)	- <1
Trans-1,3-Dichloropropene (ppb)	- <1
Trichloroethylene (ppb)	- <1
1,1,2-Trichloroethane (ppb)	- <1
Chlorodibromomethane (ppb)	- <1
cis-1,3-Dichloropropene (ppb)	- <1
Bromoform (ppb)	- <1
1,1,1,2-Tetrachloroethane (ppb)	- <1
Tetrachloroethylene (ppb)	- <1
1,1,2,2-Tetrachloroethane (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)	- 36.9
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-Dichloroethylene (ppb)	- <1
1,1-Dichloroethane (ppb)	- <1
trans-1,2-Dichloroethylene (ppb)	- <1
cis-1,2-Dichloroethylene (ppb)	-
Chloroform (ppb)	- 1
1,1,2-Trichlorotrifluoroethane (ppb)	-
1,2-Dichloroethane (ppb)	- <1
1,1,1-Trichloroethane (ppb)	- <1
Carbon Tetrachloride (ppb)	- <1
Bromodichloromethane (ppb)	- 1
1,2-Dichloropropane (ppb)	- <1
2,3-Dichloropropene (ppb)	- <1
Trans-1,3-Dichloropropene (ppb)	- <1
Trichloroethylene (ppb)	- <1
1,1,2-Trichloroethane (ppb)	-
Chlorodibromomethane (ppb)	- 1
cis-1,3-Dichloropropene (ppb)	-
Bromoform (ppb)	- <1
1,1,1,2-Tetrachloroethane (ppb)	- <1
Tetrachloroethylene (ppb)	- <1
1,1,2,2-Tetrachloroethane (ppb)	- <1

Free Ammonia (mg/l)	- <0.0
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

INDIAN HEAD SAND & GRAVEL
Old Northport Rd.
Kings Park
6/16
(D)

Vinyl Chloride (ppb)	<1
Methylene Chloride (ppb)	<1
1,1-Dichloroethylene (ppb)	<1
1,1-Dichloroethane (ppb)	<1
trans-1,2-Dichloroethylene (ppb)	<1
cis-1,2-Dichloroethylene (ppb)	<1
Chloroform (ppb)	<1
1,1,2-Trichlorotrifluoroethane (ppb)	<1
1,2-Dichloroethane (ppb)	<1
1,1,1-Trichloroethane (ppb)	<1
Carbon Tetrachloride (ppb)	<1
Bromodichloromethane (ppb)	<1
1,2-Dichloropropane (ppb)	<1
2,3-Dichloropropene (ppb)	<1
Trans-1,3-Dichloropropene (ppb)	<1
Trichloroethylene (ppb)	<1
1,1,2-Trichloroethane (ppb)	<1
Chlorodibromomethane (ppb)	<1
cis-1,3-Dichloropropene (ppb)	<1
Bromoform (ppb)	<1
1,1,1,2-Tetrachloroethane (ppb)	<1
Tetrachloroethylene (ppb)	1
1,1,2,2-Tetrachloroethane (ppb)	—

Free Ammonia (mg/l)	<0.09
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 (ppb)	<20.
Selenium	<5.
Cadmium	<2.
Silver	<10.
Lead	<10.
Chromium	<10.
Mercury	—
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-Dichloroethylene (ppb)	<1
1,1-Dichloroethane (ppb)	<1
trans-1,2-Dichloroethylene (ppb)	<1
cis-1,2-Dichloroethylene (ppb)	<1
Chloroform (ppb)	<1
1,1,2-Trichlorotrifluoroethane (ppb)	<1
1,2-Dichloroethane (ppb)	<1
1,1,1-Trichloroethane (ppb)	<1
Carbon Tetrachloride (ppb)	<1
Bromodichloromethane (ppb)	<1
1,2-Dichloropropane (ppb)	<1
2,3-Dichloropropene (ppb)	<1
Trans-1,3-Dichloropropene (ppb)	<1
Trichloroethylene (ppb)	<1
1,1,2-Trichloroethane (ppb)	<1
Chlorodibromomethane (ppb)	<1
cis-1,3-Dichloropropene (ppb)	<1
Bromoform (ppb)	<1
1,1,1,2-Tetrachloroethane (ppb)	<1
Tetrachloroethylene (ppb)	<1
1,1,2,2-Tetrachloroethane (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 (ppb)	<20.
Selenium	<5.
Cadmium	<2.
Silver	<10.
Lead	<10.
Chromium	<10.
Mercury (mg/l)	—
Fluoride (mg/l)	—
Barium (mg/l)	—
Phenol (mg/l)	—
Methane (ppb)	—
Free CO_2 (mg/l)	14.1

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

Vinyl Chloride (ppb)	<1
Methylene Chloride (ppb)	<1
1,1-Dichloroethylene (ppb)	<1
1,1-Dichloroethane (ppb)	<1
trans-1,2-Dichloroethylene (ppb)	<1
cis-1,2-Dichloroethylene (ppb)	<1
Chloroform (ppb)	<1
1,1,2-Trichlorotrifluoroethane (ppb)	<1
1,2-Dichloroethane (ppb)	<1
1,1,1-Trichloroethane (ppb)	<1
Carbon Tetrachloride (ppb)	<1
Bromodichloromethane (ppb)	<1
1,2-Dichloropropane (ppb)	<1
2,3-Dichloropropene (ppb)	<1
Trans-1,3-Dichloropropene (ppb)	<1
Trichloroethylene (ppb)	<1
1,1,2-Trichloroethane (ppb)	<1
Chlorodibromomethane (ppb)	<1
cis-1,3-Dichloropropene (ppb)	<1
Bromoform (ppb)	<1
1,1,1,2-Tetrachloroethane (ppb)	<1
Tetrachloroethylene (ppb)	<1
1,1,2,2-Tetrachloroethane (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)	0.2
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

LANDFILL SURVEY

LOCATION SMITHTOWN

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

Vinyl Chloride (ppb)	- <1
Methylene Chloride (ppb)	- <1
1,1-Dichloroethylene (ppb)	- 1
1,1-Dichloroethane (ppb)	- <1
trans-1,2-Dichloroethylene (ppb)	- <1
cis-1,2-Dichloroethylene (ppb)	- <1
Chloroform (ppb)	- <1
1,1,2-Trichlorotrifluoroethane (ppb)	- <1
1,2-Dichloroethane (ppb)	- <1
1,1,1-Trichloroethane (ppb)	- 1
Carbon Tetrachloride (ppb)	- <1
Bromodichloromethane (ppb)	- <1
1,2-Dichloropropane (ppb)	- <1
2,3-Dichloropropene (ppb)	- <1
Trans-1,3-Dichloropropene (ppb)	- <1
Trichloroethylene (ppb)	- <1
1,1,2-Trichloroethane (ppb)	- <1
Chlorodibromomethane (ppb)	- <1
cis-1,3-Dichloropropene (ppb)	- <1
Bromoform (ppb)	- <1
1,1,1,2-Tetrachloroethane (ppb)	- <1
Tetrachloroethylene (ppb)	- <1
1,1,2,2-Tetrachloroethane (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 (H)
6-16-80

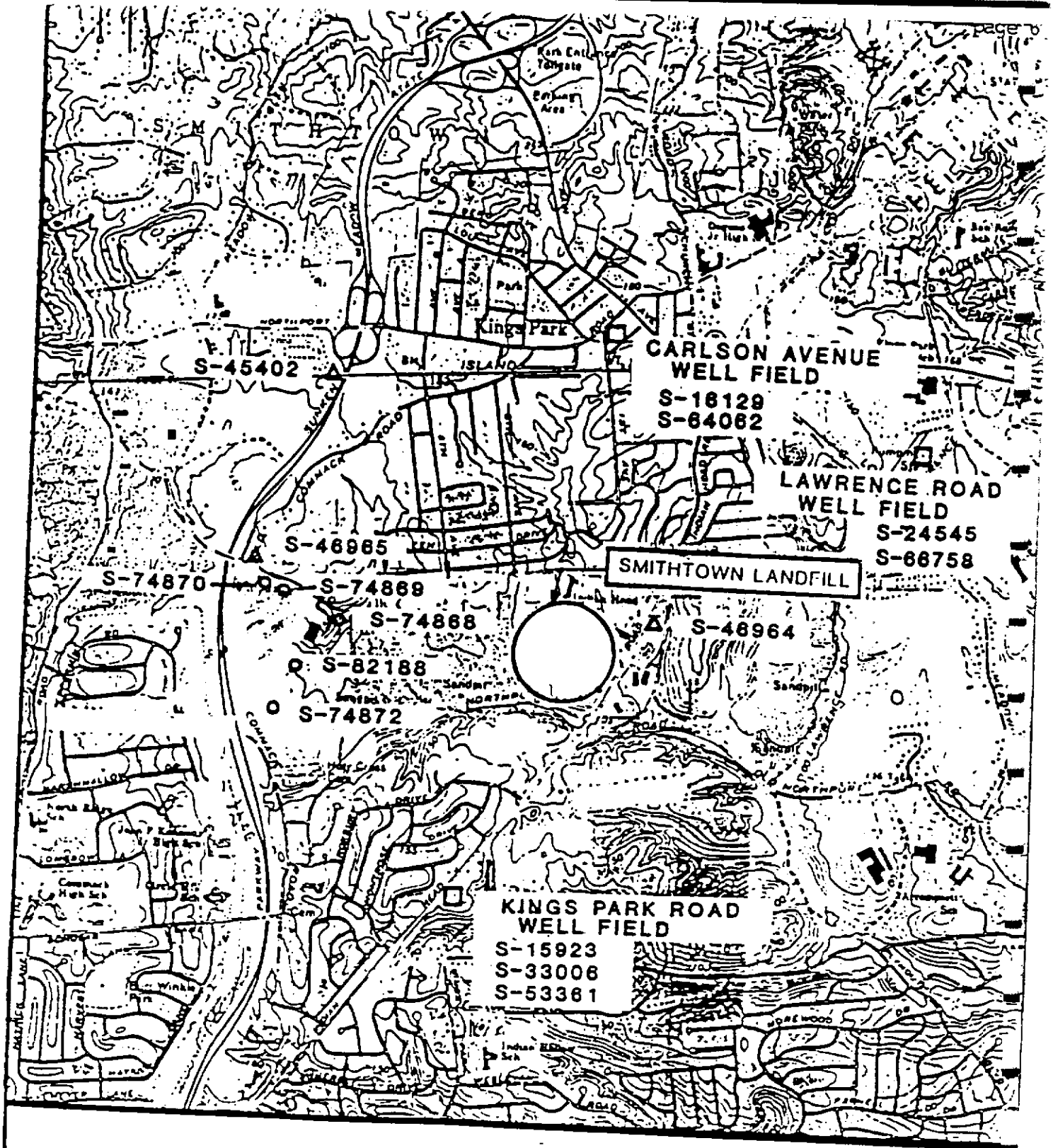
Vinyl Chloride (ppb)	- <1
Methylene Chloride (ppb)	- <1
1,1-Dichloroethylene (ppb)	- 10
1,1-Dichloroethane (ppb)	- <1
trans-1,2-Dichloroethylene (ppb)	- <1
cis-1,2-Dichloroethylene (ppb)	- <1
Chloroform (pob)	- <1
1,1,2-Trichlorotrifluoroethane (ppb)	- <1
1,2-Dichloroethane (ppb)	- <1
1,1,1-Trichloroethane (ppb)	- <1
Carbon Tetrachloride (ppb)	- <1
Bromodichloromethane (ppb)	- <1
1,2-Dichloropropane (ppb)	- <1
2,3-Dichloropropene (ppb)	- <1
Trans-1,3-Dichloropropene (ppb)	- <1
Trichloroethylene (ppb)	- <1
1,1,2-Trichloroethane (ppb)	- <1
Chlorodibromomethane (ppb)	- <1
cis-1,3-Dichloropropene (ppb)	- <1
Bromoform (ppb)	- <1
1,1,1,2-Tetrachloroethane (ppb)	- <1
Tetrachloroethylene (ppb)	- 3
1,1,2,2-Tetrachloroethane (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 Hagzan
270 old Commack Rd.
Kings Park (J)
269-9693 6-16-80

Vinyl Chloride (ppb)	- <1
Methylene Chloride (ppb)	- <1
1,1-Dichloroethylene (ppb)	- <1
1,1-Dichloroethane (ppb)	- <1
trans-1,2-Dichloroethylene (ppb)	- <1
cis-1,2-Dichloroethylene (ppb)	- <1
Chloroform (ppb)	- <1
1,1,2-Trichlorotrifluoroethane (ppb)	- <1
1,2-Dichloroethane (ppb)	- <1
1,1,1-Trichloroethane (ppb)	- <1
Carbon Tetrachloride (ppb)	- <1
Bromodichloromethane (ppb)	- <1
1,2-Dichloropropane (ppb)	- <1
2,3-Dichloropropene (ppb)	- <1
Trans-1,3-Dichloropropene (ppb)	- <1
Trichloroethylene (ppb)	- <1
1,1,2-Trichloroethane (ppb)	- <1
Chlorodibromomethane (ppb)	- <1
cis-1,3-Dichloropropene (ppb)	- <1
Bromoform (ppb)	- <1
1,1,1,2-Tetrachloroethane (ppb)	- <1
Tetrachloroethylene (ppb)	- <1
1,1,2,2-Tetrachloroethane (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 (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) "	- <0.2
Fluoride (mg/l)	-
Barium (mg/l)	-
Phenol (mg/l)	-
Methane (ppb)	-
Free CO_2 (mg/l)	- 6.9



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

cc: files Solid 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 . . .

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:

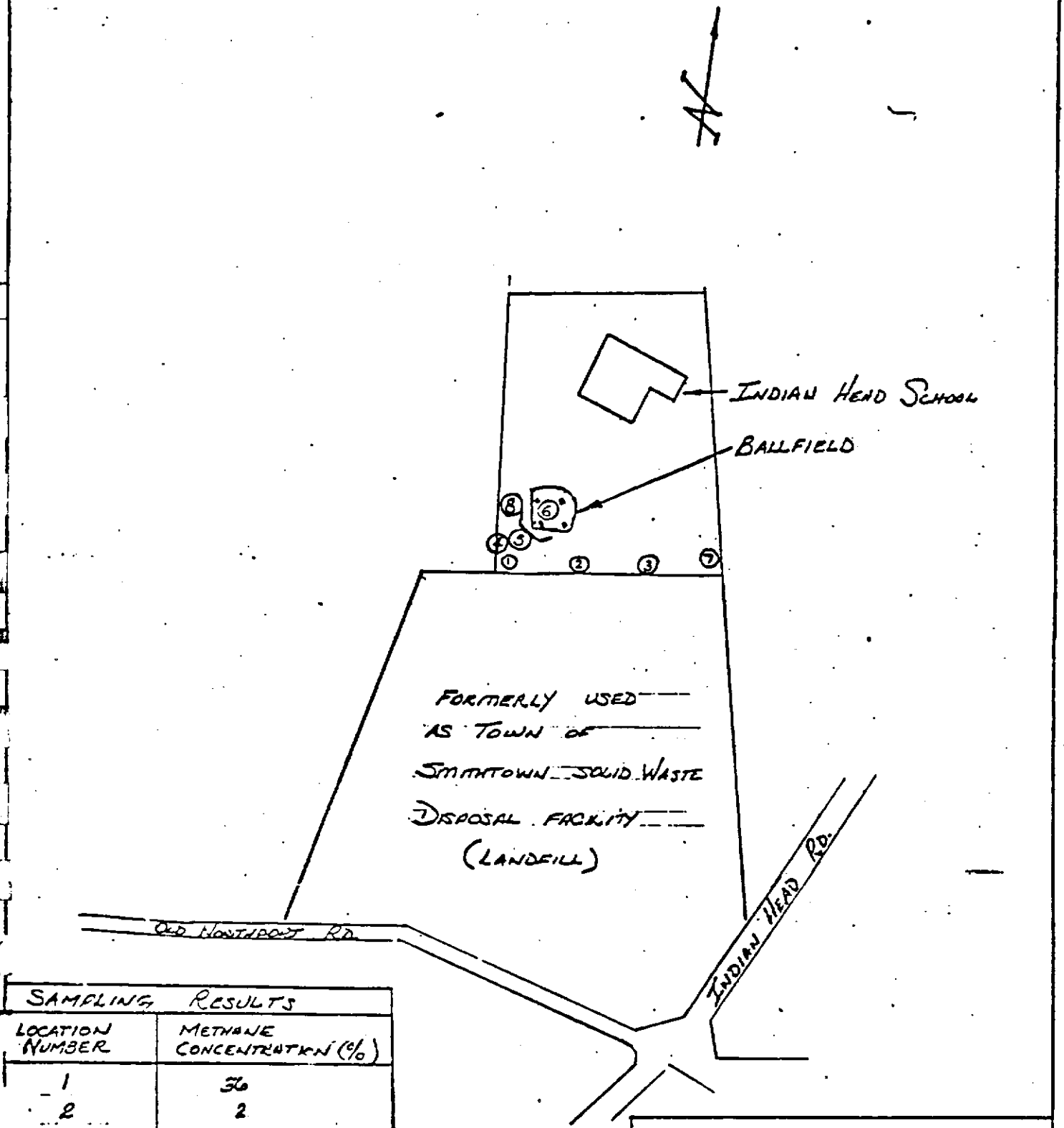
As per our telephone conversation today, I am formally requesting a survey of the Indian Head School property adjacent to the closed Smithtown Solid Waste Disposal Facility (Izzo property).

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 81

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.

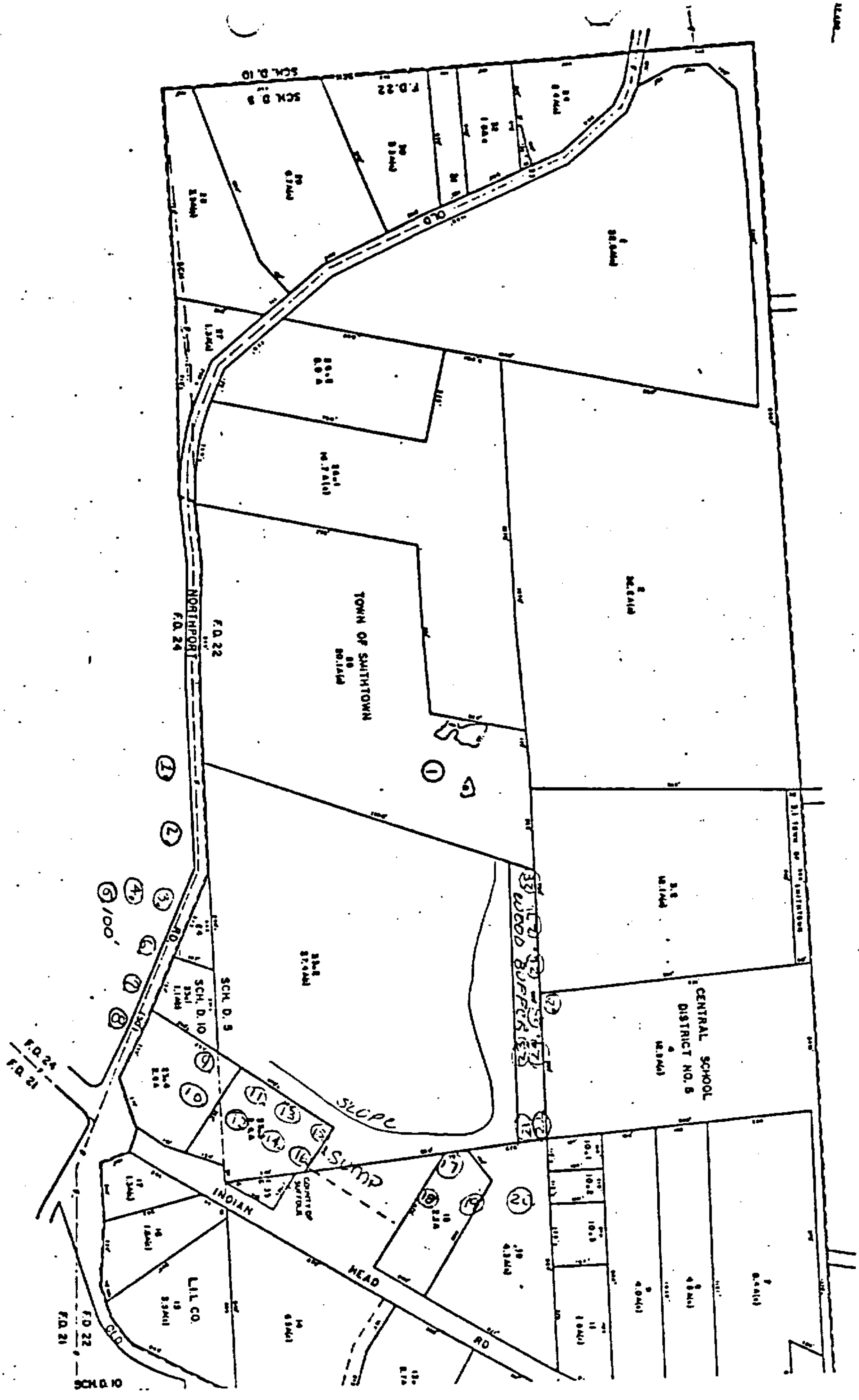
Methane production at this time is quite high with gas concentrations exceeding the reliability of our combustion gas meter. All properties which are at this time being impacted upon lie adjacent to the old landfill location and are undeveloped except for Indianhead School which is located to the north.

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


TOWN OF SMITHTOWN
NORTHPORT RD
OLD
F.D. 22
F.D. 24
F.D. 21
SCH. D. 10
SCH. D. 5
CENTRAL SCHOOL DISTRICT NO. 6
INDIAN HEAD RD
L.I.L. CO.
WOOD BUFFER
SLOPE
SUMP
COUNTY OF SUFFOLK
100'

SMITH N LANDFILL (IZZO PROPERT

METHANE SURVEY

	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' " "	
	"	T.P.#81	10%	150' " "	
	"	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
	"		30% G	50' " "	200'
12.	"		0%	75'	200'
	"		73% G	30'	600'
	"		14% G	50'	600'
15.	"		68% G	50'	800'
	"		0%	75'	800'
					from N/S
17.	"		79% G	20'	sump 100'
	"		0%	25'	150'
	"		22% G	100'	200'
20.	"		39% G	100'	300'
	North Side				at
22	"		81% G	50' from fence	corner
23	"		0%	125'	" corner
			79% G	30'	200' w/o corner
24	"		79% G	80'	200'
25	"		78% G	200'	"
	"		80%	150'	400' w/o corner
27	"		80%	100'	500' w/o
	"		80% G	10'	600' w/o corner
29	"		80% LEL	150' on	500' w/o corner
				Arrowhead School Property	

Index

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

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

Field No. [illegible]
Date. AUG 84
Time. 1:25
Col. By. [illegible]
(Name not initials)

Date Received in Lab [illegible]
Public Water
Private Water [illegible]
Other
Date Completed
Examined By [illegible]

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 OST

Remarks:

COMPOUND	ppb	
1,1,2 Trichloro 1,2,2 Trifluoroethane		
Chloroform	<5	1
1,1,1 Trichloroethane	<5	1
Carbon Tetrachloride	<3	2
1,1,2 Trichloroethylene	<2	4
Chlorodibromomethane	<5	
Tetrachloroethylene	<3	
Bromoform	9	
Bromodichloromethane	<5	
	<3	

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

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_2	<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	770	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_3						
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 [illegible]
Land Fill B — Kings Park

Date	Powell 201 Brc-	Matuz 150	Presti 168
Laboratory	20Sep78	20Sep78	20Sep75
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			
Ag			
Pb			
Cr			
CN			
F			
C.O.D.			
T. Solids			
Total PO_4			
Coliform	<2.2	<2.2	<2.2
Organics -	None.	None.	None.

#7 Well

50

Old North port Rd
Land Fill B - Kings Park

Date	Medlock 168
Laboratory	30 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	
Cr	
CN	
F	9.0 Ft well
C.O.D.	
T. Solids	
Total PO_4	
Coliform	9.2
Organics	None

Meadow Glen Rd. - Kings Park
Land Fill B

Date / Laboratory	Zimmerman 20 Sep 78 71	Ryan 20 Sep 78 19					
NH_4	0.13	0.19					
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							
Color							
Cd							
Ag							
Pb							
Cr							
CN							
F							
C.O.D.							
T. Solids							
Total PO_4							
Coliform	<2.2	<2.2					
Organics - Lab.		NONE NYSHD.					

Letter Yes

Date / Laboratory	20 Sep 78 Miller 7 Linden Ave.	20 Sep 75 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	4 all.	123.					
Turbidity							
Color	4 part	depth					
Cd							
Ag							
Pb							
Cr							
CN							
F							
C.O.D.							
T. Solids							
Total PO_4							
Coliform	<1	<1					

Lattm Yrs

Date / Laboratory	20Sep78 Knot 7 Lawrence	20Sep78 Grossbaey 329 Old Indian Head Rd	20Sep78 Weeber 319 Old Indian Head Rd	20Sep78 Kocinski 243 Old Indian Head Rd	20Sep78 Bronstein 15 Old Rd	20Sep78 Findsman 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	0.9
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	1.74	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						
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		[redacted] SCHD		SC[redacted] HD.	[redacted] SHD	
Letter	Yes	Yes.				

90 ft well

Town ... Land Fill "B"

Date	7/24/74 Matu=	7/24/74 Presti	7/24/74 Nasti			
Laboratory	150	168	180			
NH_4			<0.05			
NO_2	<0.4	<0.4	<0.4			
MBAS	0.1	0.3	<0.1			
pH	6.8	7.3	6.6			
Spec. Cond.	2100	3500	95			
Cl	510	270	6.0			
SO_4	<4.0	7.0	6.0			
Fe	0.77	0.41	0.13			
Mn	6.49	14.3	<0.05			
Cu	<0.10	<0.10	<0.10			
Zn	<0.4	0.8	0.5			
Na	390.0	290.0	5.6			
NO_3						
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 6

SUFFOLK COUNTY WATER AUTHORITY

Administrative offices: Oakdale, Long Island, N.Y. 1176
Area 516-589-520

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

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

EJR:wlb

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

REFERENCE 7

New York State Atlas of Community Water System Sources

1982

NEW YORK STATE
DEPARTMENT OF HEALTH

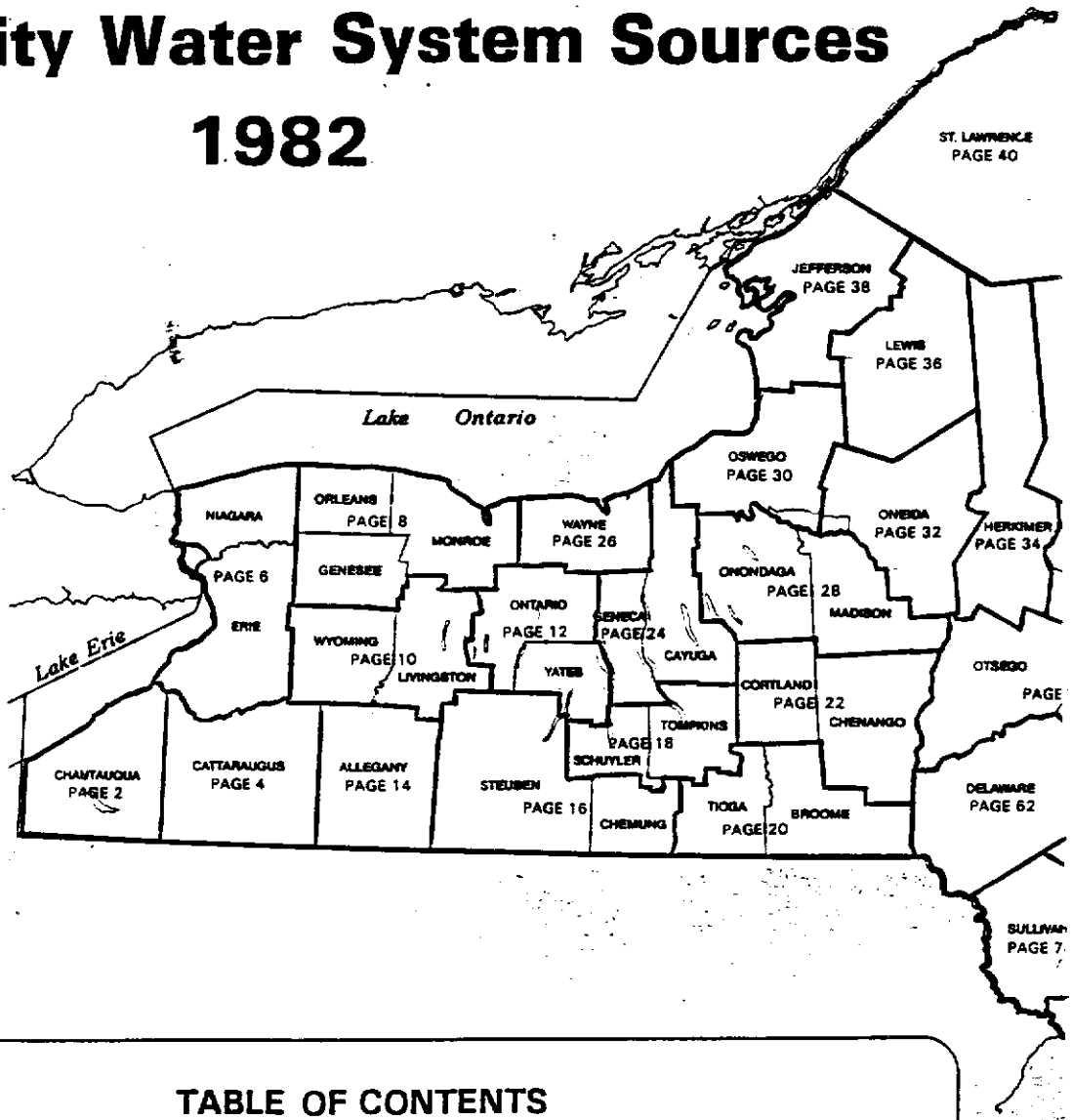


TABLE OF CONTENTS

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

REFERENCE 8

(Located in Roux Associates, Inc. Files)

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

REFERENCE 9

(Located in Roux Associates, Inc. Files)

NUS CORPORATION

POTENTIAL HAZARDOUS WASTE SITE

PRELIMINARY ASSESSMENT

Smithtown Landfill (old) Site Name	New EPA Site ID Number
Kings Park, New York Address	02-8304-03 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

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" W	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)

☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) No notification on file. ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☒ YES ☐ NO DATE 4/3/83 (MONTH DAY YEAR)

BY (Check all that apply)

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

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

CONTRACTOR NAME(S): NUS Corporation

02 SITE STATUS (Check one)

☐ A. ACTIVE ☒ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION

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)

- ☒ 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			
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
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
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
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

If the groundwater is contaminated, it could flow into local streams.

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

There exists a fire potential due to methane generation and collection on and near the landfill.

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

No potential exists.

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

No potential exists.

01 ☒ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 20,000
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

See "groundwater contamination."

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

No reported history.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
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: 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 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 N 40° 52' 05.0" | LONGITUDE W 073° 15' 50.0"

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

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
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)

- [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
- [ ] 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	02 SITE NUMBER
NY	

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 20,000
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [X] ALLEGED
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
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

If the groundwater is contaminated, it could flow into local streams.

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

There exists a fire potential due to methane generation and collection on and near the landfill.

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

No potential exists.

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

No potential exists.

01 [X] G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 20,000
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

See "groundwater contamination"

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

No reported history.

01 [X] I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
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	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 names(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 cess-pool 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

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	02 SITE NUMBER
NY	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: NY | 02 SITE NUMBER: 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	OTHER
A. 5 (mi)	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	AGRICULTURAL LANDS: 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 ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF Michael G.Kramer
(Name of organization or individual)

03 MAPS ☒ 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
Town of Smithtown	Not applicable

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
W. Main Street	None

05 CITY	06 STATE	07 ZIP CODE
Smithtown	NY	11754

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

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 (blank, four entries)

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 (blank, three entries)

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 (blank, three entries)

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	02 SITE NUMBER
NY	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: NY | 02 SITE NUMBER: New

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: A public school near the site 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

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)*

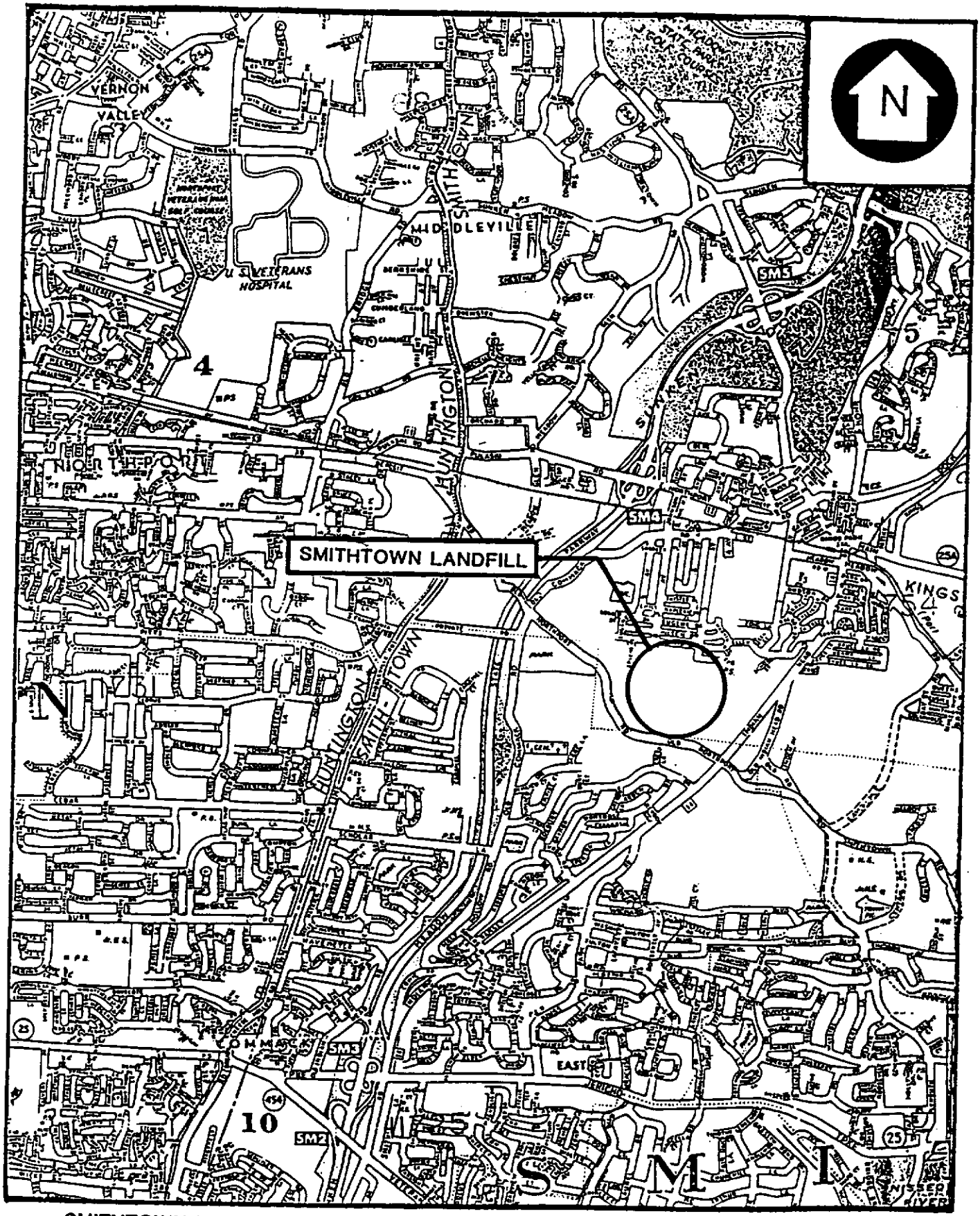
MAPS AND PHOTOS

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.



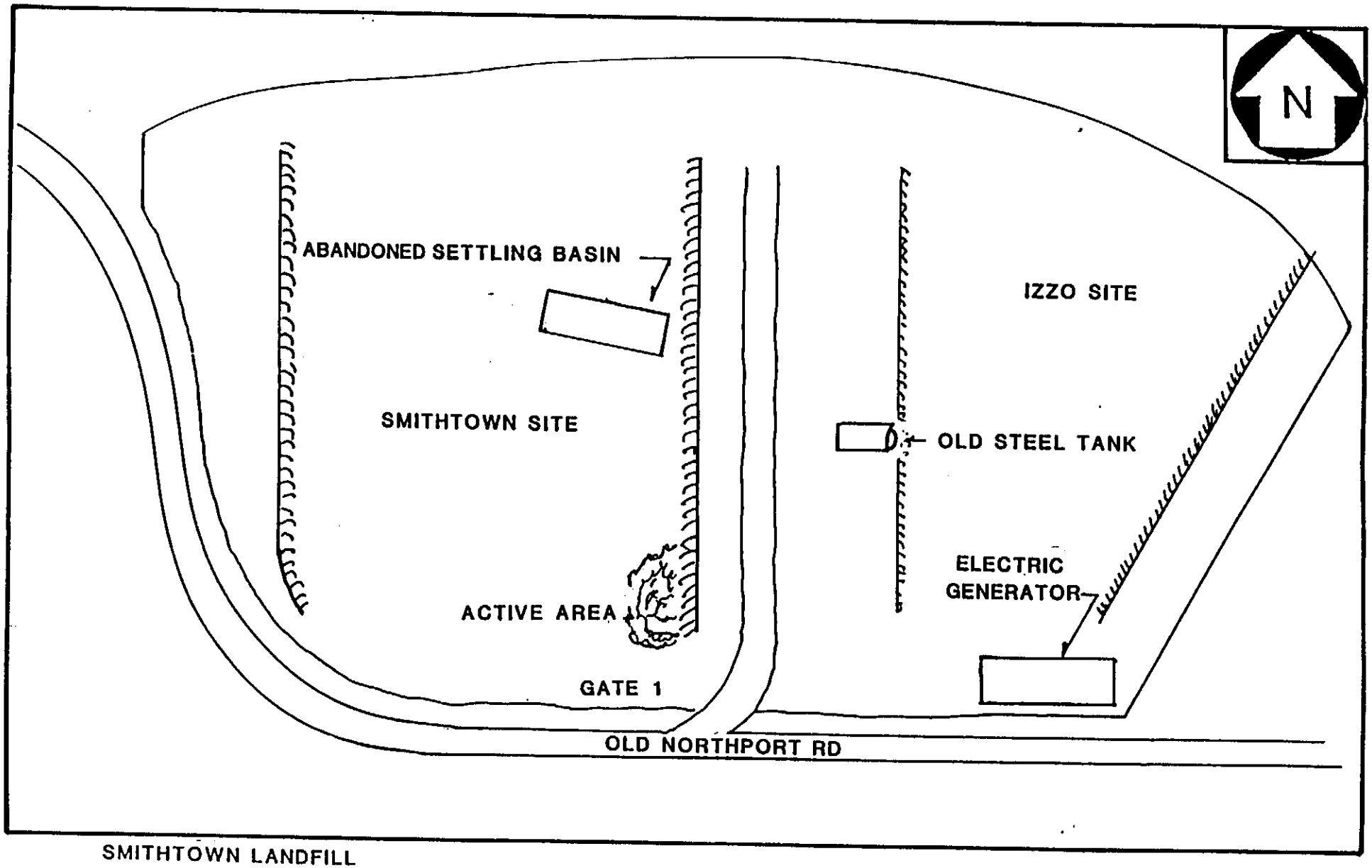
SMITHTOWN LANDFILL
SMITHTOWN, NY

SITE LOCATION MAP

1000 0 1000 2000 ft

FIGURE 1

NUS CORPORATION

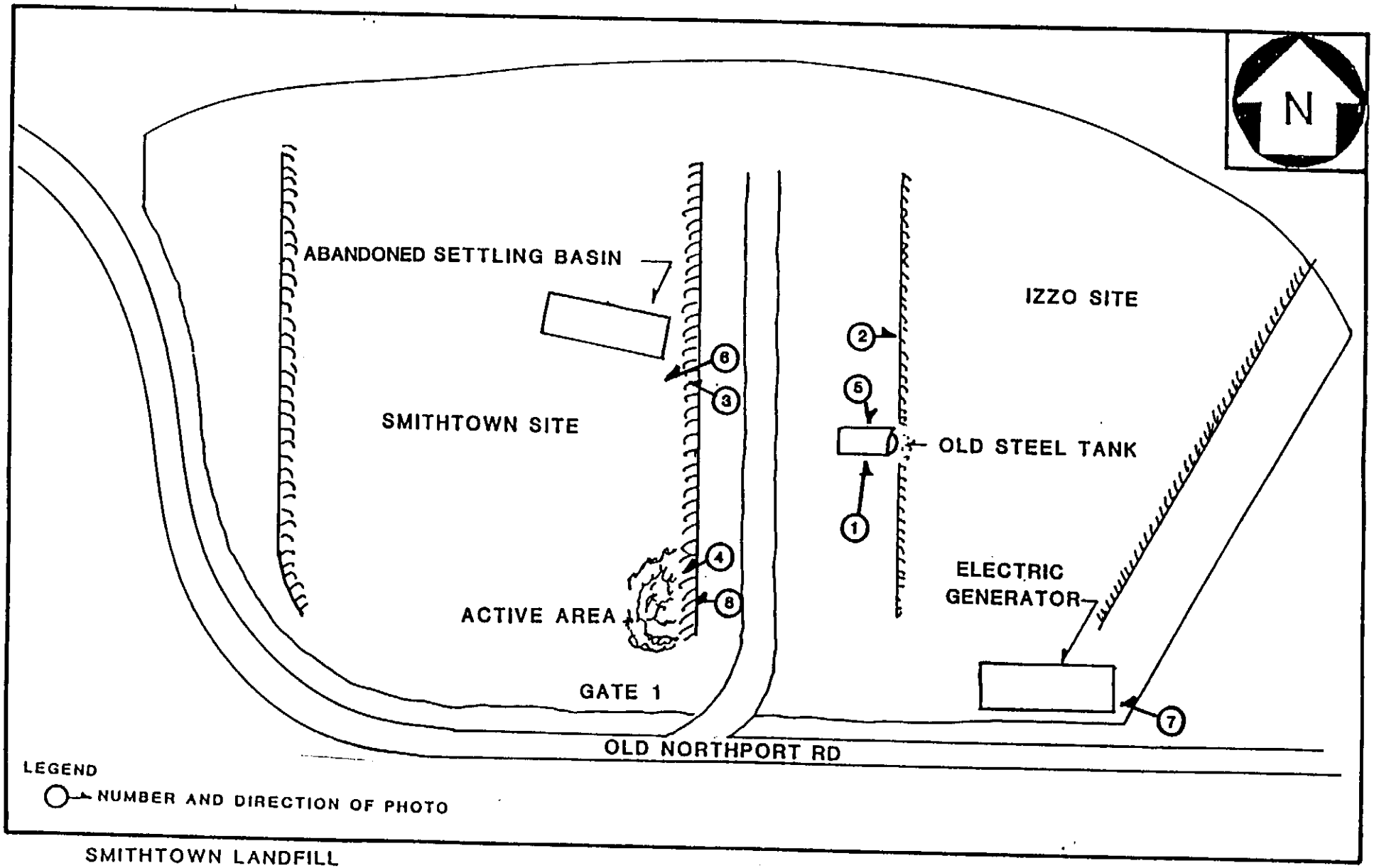


SMITHTOWN LANDFILL
KINGS PARK, N.Y.

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.

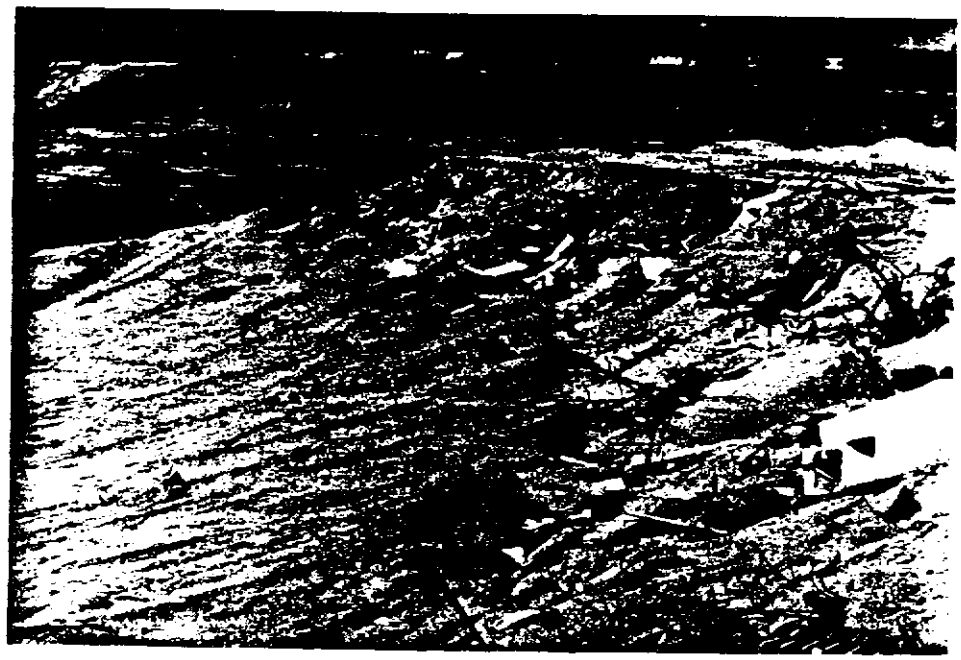
NUS CORPORATION

1 - Placement of methane vents.

2 - Overview of landfill area looking east.

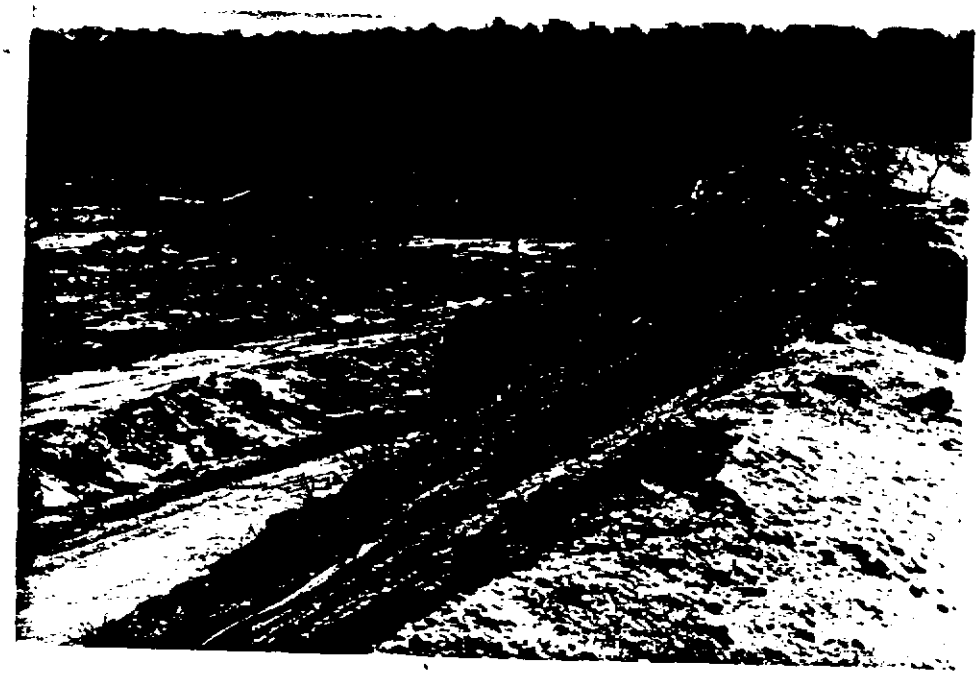
SMITHTOWN LANDFILL, Kings Park, NY, April 3, 1983

NUS CORPORATION



3 - Overview of landfill looking northwest. Abandoned setting basin is in foreground.

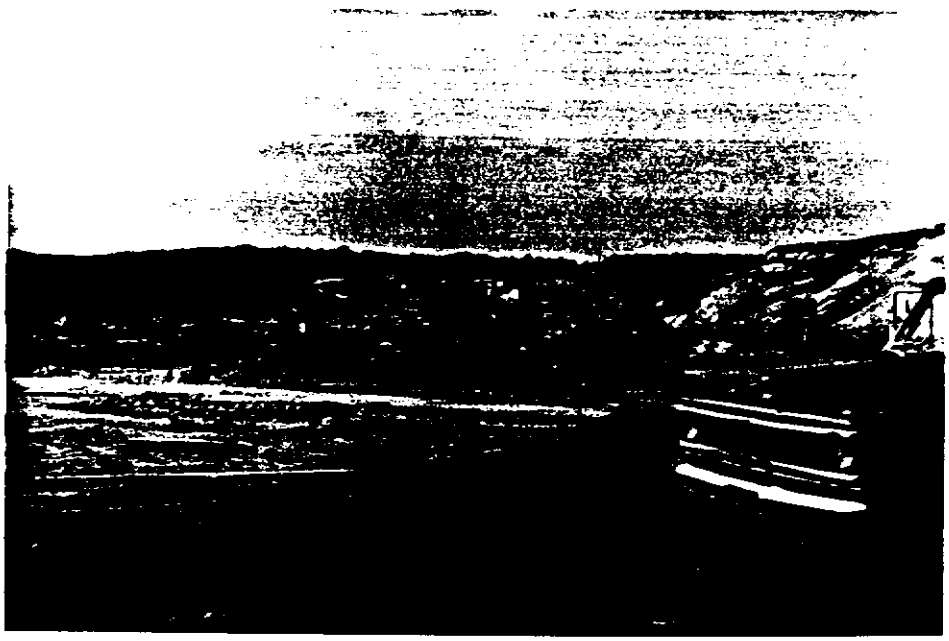
4 - Active face of landfill.



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.

SMITHTOWN LANDFILL, Kings Park, NY, April 3, 1983

ds

REFERENCE 10

(Located in NYSDEC Region I Files)

REFERENCE 11

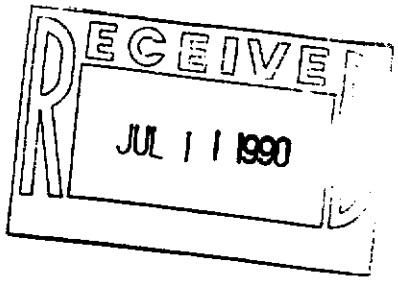
(Located in Roux Associates, Inc. Files)

New York State Department of Environmental Conservation
Region 1 Headquarters
SUNY, Building 40, Stony Brook, NY 11794

(516) 751-7900 EXT.248

Thomas C. Jorling
Commissioner

Eric Arnesen
Roux Associates Inc.
The Huntington Atrium
775 Park Avenue Suite 255
Huntington, NY 11743



June 28, 1990

Re: New York State Phase II Investigation Smithtown Landfill
Site #152043 and Star Sand and Gravel Corp. Site #152097
Smithtown, NY

Dear Mr. Arnesen;

We have reviewed the Significant Habitat Program and Natural Heritage Program files with respect to your request of 06/04/90 regarding the above referenced property.

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

NODATA.DOC

REFERENCE 12

(Located in Roux Associates, Inc. Files)

Site Reconnaissance Report
Smithtown Landfill Site
NYSDEC Site #152043

Date: May 25, 1990
June 21, 1990

Present: Eric Arnesen - Roux Associates, Inc.
Eric Jorgensen - Roux Associates, Inc.

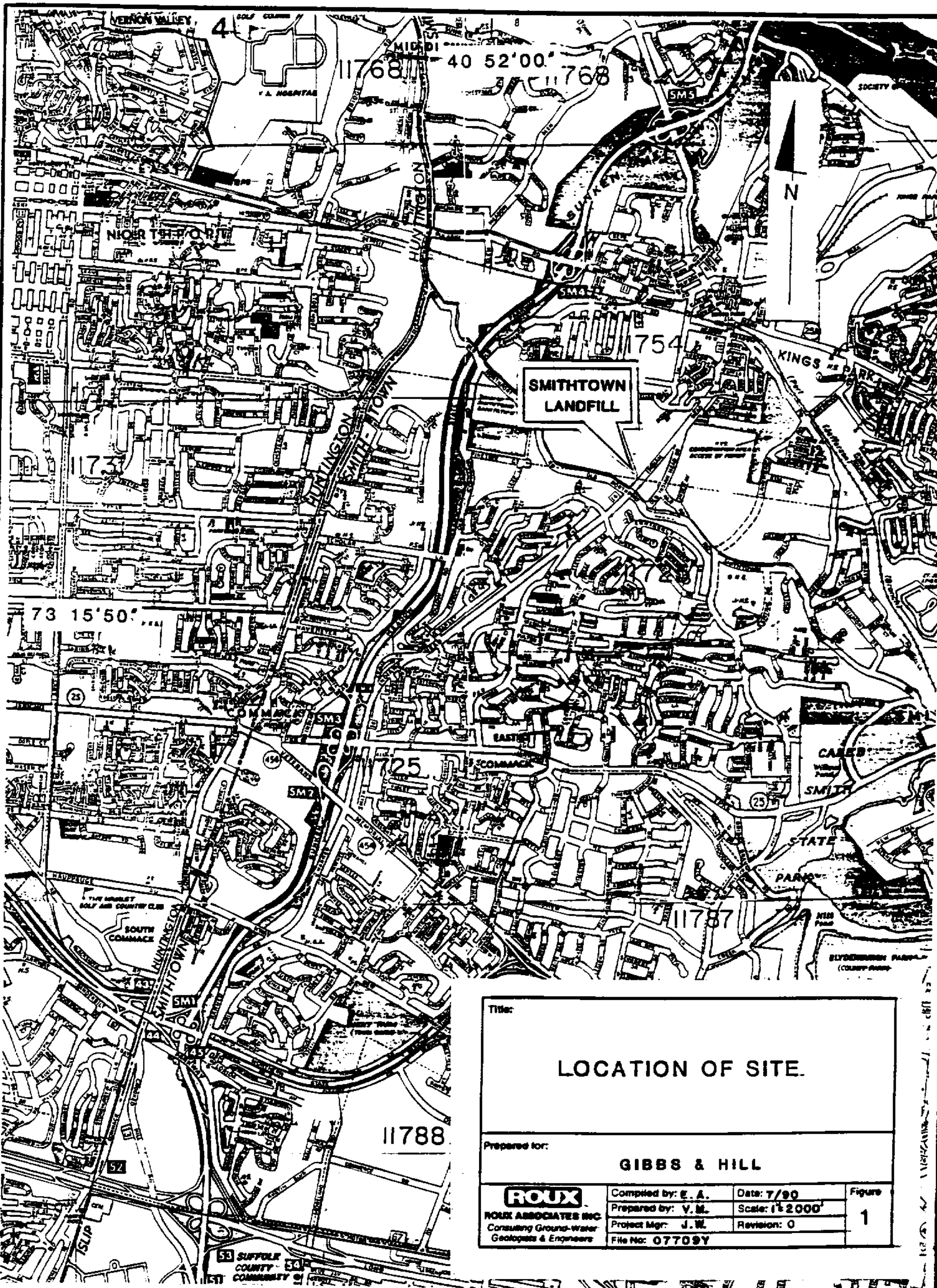
Contact Person: Alexander Izzo
106 Fourth Street
Glen Cove, NY 11542
(516) 671-2144

General Site Access

From Exit 52 of the Long Island Expressway (LIE), proceed north on Commack Road approximately 3 miles to the intersection of Commack Road and Jericho Turnpike. Turn right onto Jericho Turnpike and proceed east approximately 0.75 mile to the intersection of Jericho Turnpike and Indian Head Road. Turn left onto Indian Head Road and proceed north approximately 2.5 miles to the intersection of Old Northport Road and Indian Head Road. Turn left onto Old Northport Road and proceed west approximately 0.4 mile. On your right is the gate and entrance to the Old Smithtown Landfill facility. Figure 1 shows the site location and access route from the Long Island Expressway.

Site Changes Since DEC Site Reconnaissance

A site investigation was conducted by the New York State Department of Environmental Conservation (NYSDEC) on March 29, 1990 and the sketch map from the original work plan, Figure 2, is a result of that visit. Roux Associates' visit to the site revealed no changes in the site since the NYSDEC visit, except for the installation of methane monitoring vents installed along the northern and eastern boundaries of the site. Also, a more accurate site map has been generated (Figure 3) using aerial photographs and field measurements. All site boundaries and terrain remains the same. The landfill is no longer being used by the Town of Smithtown or anyone else.



Title:

LOCATION OF SITE

Prepared for:

GIBBS & HILL

ROUX ASSOCIATES INC. Consulting Ground-Water Geologists & Engineers	Compiled by: E. A.	Date: 7/90	Figure 1
	Prepared by: V. M.	Scale: 1"=2000'	
	Project Mgr: J. W.	Revision: 0	
	File No: 07709Y		

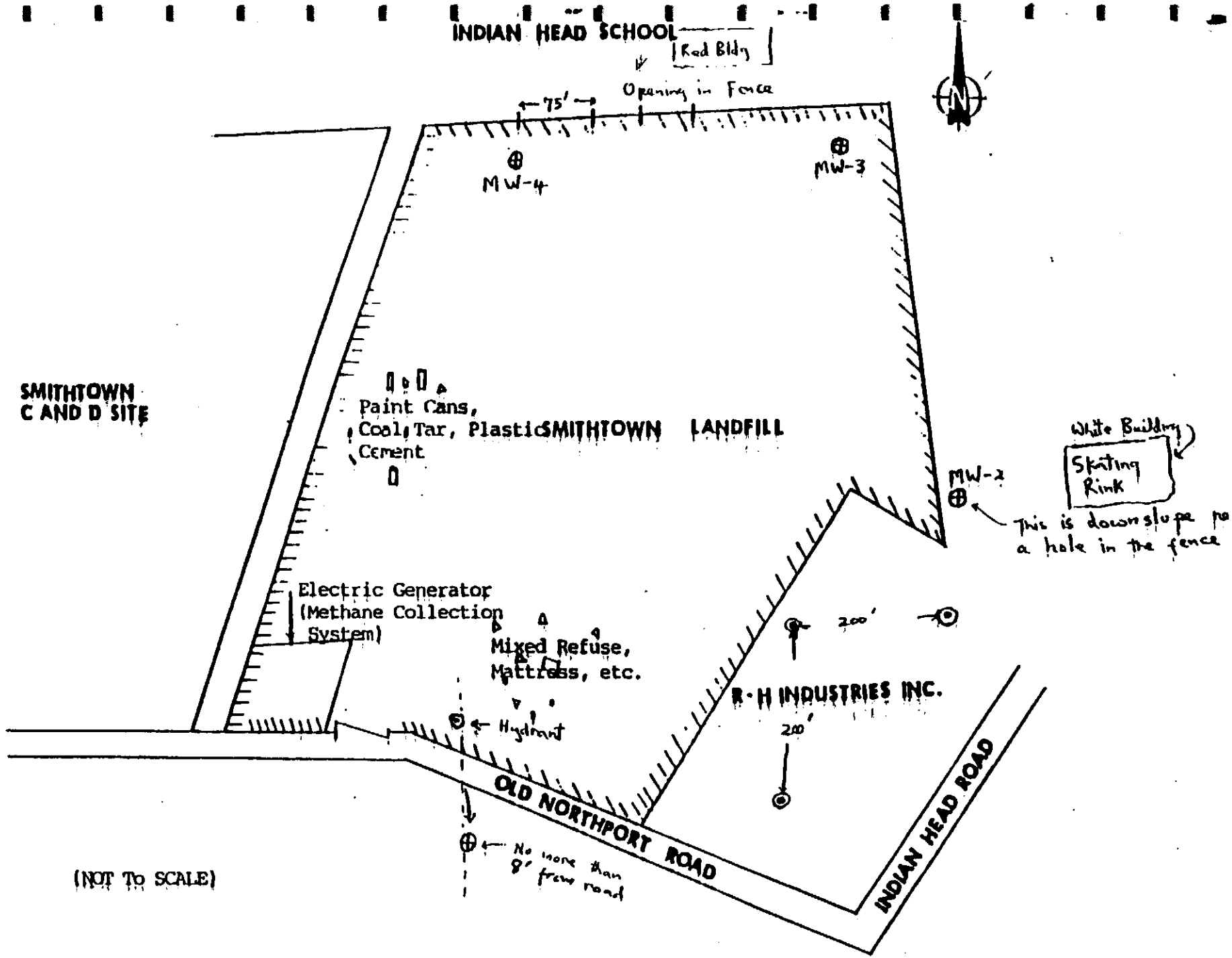
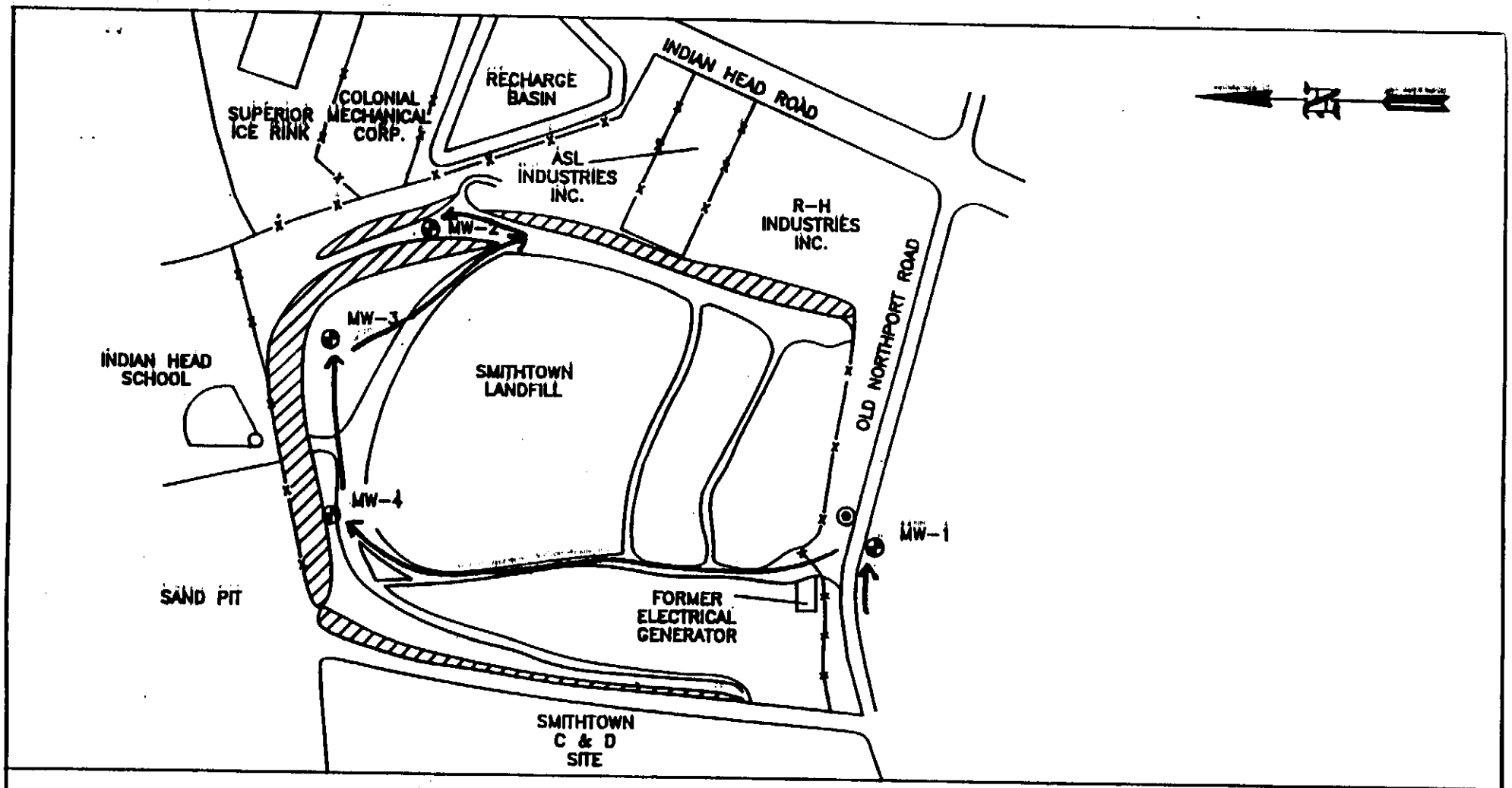


FIGURE 2: SITE SKETCH, SMITHTOWN LANDFILL

⊕ Monitoring Well locations ⊕ These wells no longer exist



EXPLANATION

MW-1 PROPOSED MONITORING WELL LOCATION AND DESIGNATION

HYDRANT LOCATION

SLOPED PORTION OF SITE

FENCE LINE

SITE ROADWAYS

DRILL RIG ACCESS ROUTES

0 200 400 FT.

Title:

SMITHTOWN LANDFILL SITE MAP

Prepared for:

GIBBS & HILL

ROUX ASSOCIATES INC
Consulting Ground-Water Geologists & Engineers

Compiled by: E.A.	Date: 7/90	Figure 3
Prepared by: C.L.	Scale: SHOWN	
Project Mgr: J.W.	Revision: 0	
File No: 07709BM		

Air Monitoring

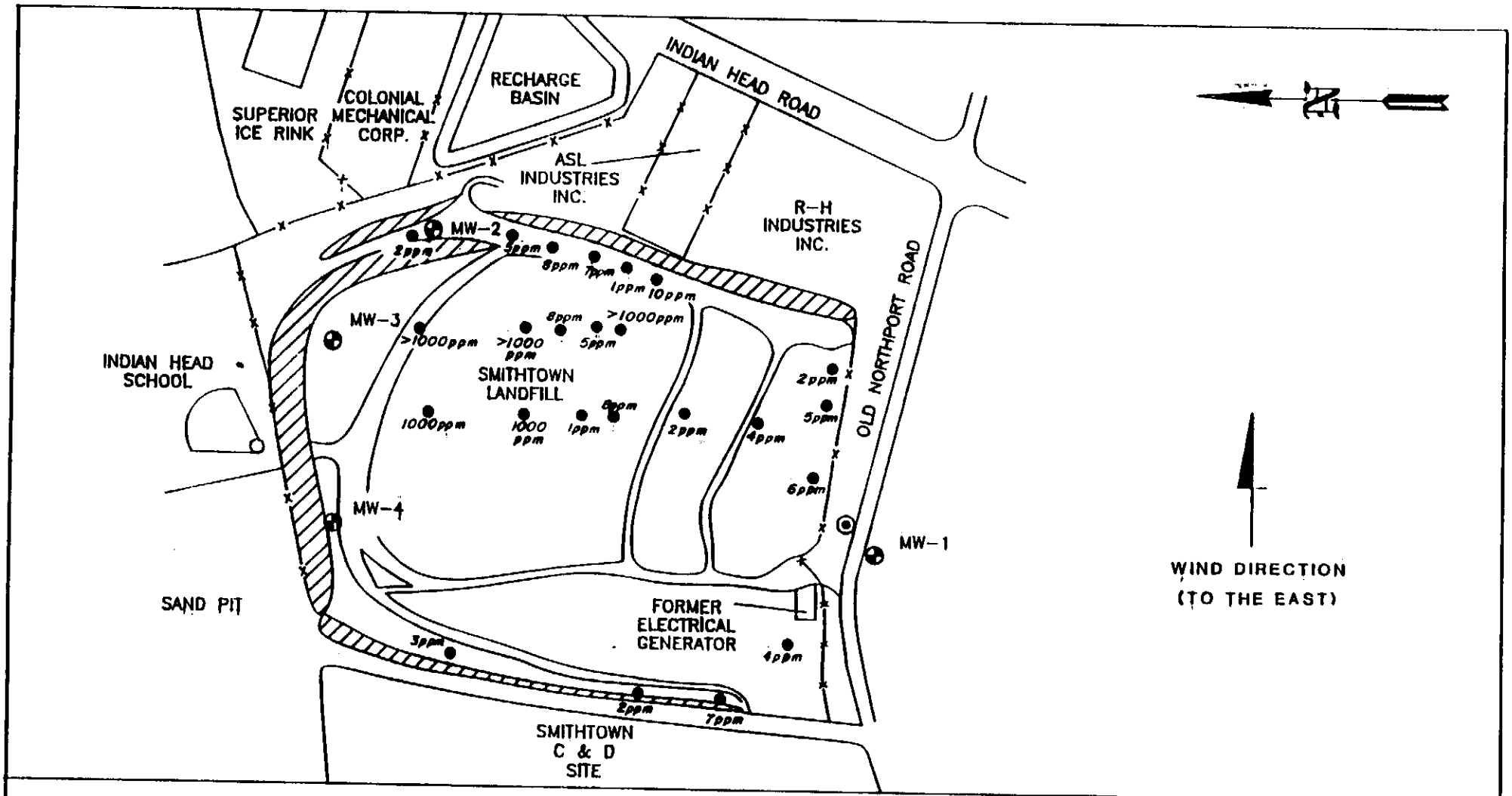
An air monitoring survey was conducted at the Smithtown Landfill site on May 25, 1990 to determine the quality of air in and around the site and to delineate the source of any airborne contaminants.

Four instruments were utilized in this survey. These included the Model OVA 128 Century Organic Vapor Analyzer (OVA), the 580A portable Organic Vapor Meter (OVM), the RM-750 Micro-Roentgen Radiation Monitor (Radiometer), and the Gastech Model 6X-82 Personal Three-Way Gas Alarm (Tri-Gas Meter). The OVA and OVM were used to monitor volatile organic vapor (VOC) concentrations. The radiometer was used to monitor any excessive radiation above background levels and the tri-gas meter was used to measure the Lower Explosive Limit (LEL) of any explosive gases on site to determine the potential for fire or explosion.

A perimeter survey of the site was done and readings of all four instruments and wind direction were recorded as they occurred. Throughout the entire survey readings were only registered on the OVA. No readings were recorded on the OVM or tri-gas meter and only background levels between 9-10 microroentgens per hour (ur/hr) which is considered natural background radiation were registered on the radiometer.

The survey of the perimeter began at the northwest corner of the site and ran clockwise along the borders of the site. A westerly wind was recorded throughout and no readings were observed along the northern border of the site. Along the eastern border readings ranged from 1-10 parts per million (ppm) depending on intensity of the wind. The southern border also had readings ranging from 0-10 ppm with a majority within the 4-6 ppm range. Finally, along the westernmost border, readings again ranged from 0-10 ppm throughout until the wind direction changed to a southerly direction resulting in no readings (Figure 4).

After completion of a perimeter survey, a survey of the interior portion of the site was then conducted. This was conducted along three paths parallel to the eastern and western borders of the site. The first pass was through the center of the site from north to south with a westerly wind direction registered readings on the OVA ranging from 0-10 ppm. The



EXPLANATION

MW-1 PROPOSED MONITORING WELL LOCATION AND DESIGNATION

HYDRANT LOCATION

SLOPED PORTION OF SITE

FENCE LINE

SITE ROADWAYS

AIR MONITORING DETECTION POINT (IN PPM)

0 200 400 FT.

Title:

SMITHTOWN LANDFILL AIR MONITORING DETECTIONS MAY 10-11, 1990

Prepared for

GIBBS & HILL

ROUX ASSOCIATES INC
Consulting Ground-Water Geologists & Engineers

Compiled by	E.A.	Date	7/90
Prepared by	C.L.	Scale	SHOWN
Project Mgr	J.W.	Revision	0
File No	07709BM		

Figure 4

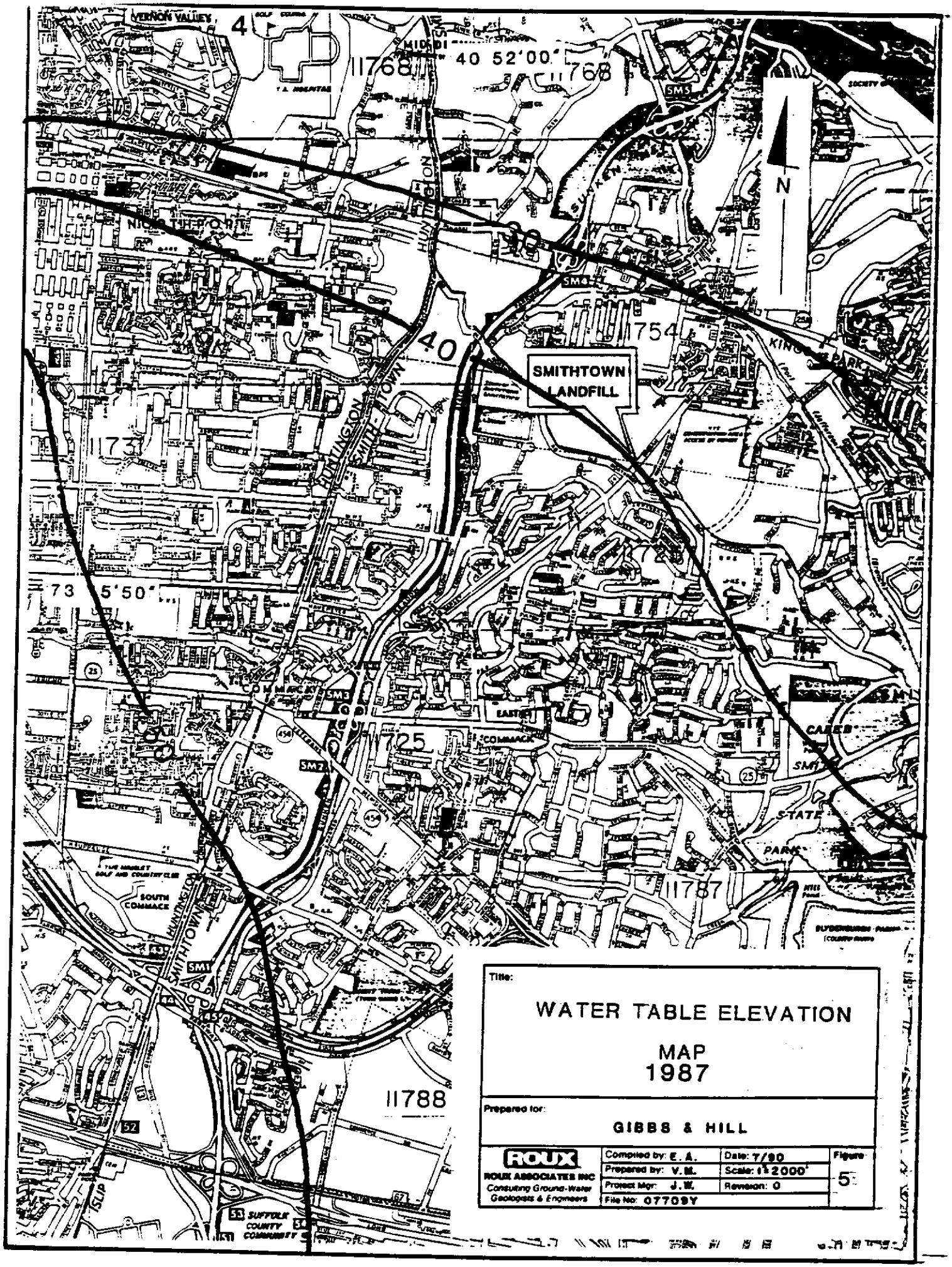
second pass went from south to north approximately 250 feet west of the easternmost border also ranged from 0-10 ppm with occasional readings peaking the OVA (over 1,000 ppm). The final pass went from north to south 250 feet east of the western border and no readings were observed with a steady westerly wind.

The high readings which peaked the OVA can be attributed to the locations directly downgradient from the methane venting pots located on site. Direct readings from these vents also peaked the OVA.

Recommended Relocation of Monitoring Wells

MW-1 - It is recommended that this well be relocated approximately 20 feet to the west and approximately 15 feet off of the road (see Figure 3) from the originally proposed location of this well. The original location was directly below overhead wires and in very rough terrain. The new location will allow the drill rig to be at a safer distance from all overhead wires and in smoother terrain. However, if the terrain is still too rough for drill rig access, a bulldozer will be utilized to smooth the terrain.

MW-2 - It is recommended that this well be relocated to the north-northwest approximately 100 feet (see Figure 3) and at an elevation 10-20 feet higher than the originally proposed well location. The original well location was totally inaccessible to the drill rig equipment due to natural barriers. Also, the original well location would have monitored only an elevated portion of the landfill used for truck access and not the actual landfill area. The new location will monitor ground-water flow from the actual landfill area. Ground-water flow direction (N-NE) was determined from USGS Water Resources Investigation Report, 85-4321 (Doriski, 1986) and 86-4189 (Doriski, 1987). Figure 5 shows regional water table elevation in 1984.



Title:

WATER TABLE ELEVATION

MAP
1987

Prepared for:

GIBBS & HILL

ROUX ASSOCIATES INC Consulting Ground-Water Geologists & Engineers	Compiled by: E. A.	Date: 7/90	Figure: 5
	Prepared by: V. M.	Scale: 1" = 2000'	
	Project Mgr: J. W.	Revision: 0	
	File No: 07709Y		

Magnetometer Survey

A Magnetometer Survey was conducted at the Smithtown Landfill site on June 21, 1990 at the proposed well locations to detect buried ferromagnetic objects which might be encountered during drilling activities.

The Schonstedt Model GA-52B flux-gate magnetometer which was used provides a continuous audio signal which increases from the idling frequency of 40 Hz as surface and/or subsurface ferromagnetic material is approached.

The well locations are designated in the Phase II Work Plan furnished by the NYSDEC. At each proposed well location, an area of approximately 400 square feet was screened in detail with the magnetometer. If no detections of ferromagnetic material were made within the survey area, the location center was marked with a red spray paint indicating the proposed well number. If detections were made, the surrounding area was screened until a clear location was found. Before leaving the location, two distances from the location center to permanent site reference points were made and recorded to the nearest foot in case the point indicator becomes obliterated.

The proposed well locations shown on Figure 3 are individually shown in detail, with respect to site reference points on Figures 6 and 7.

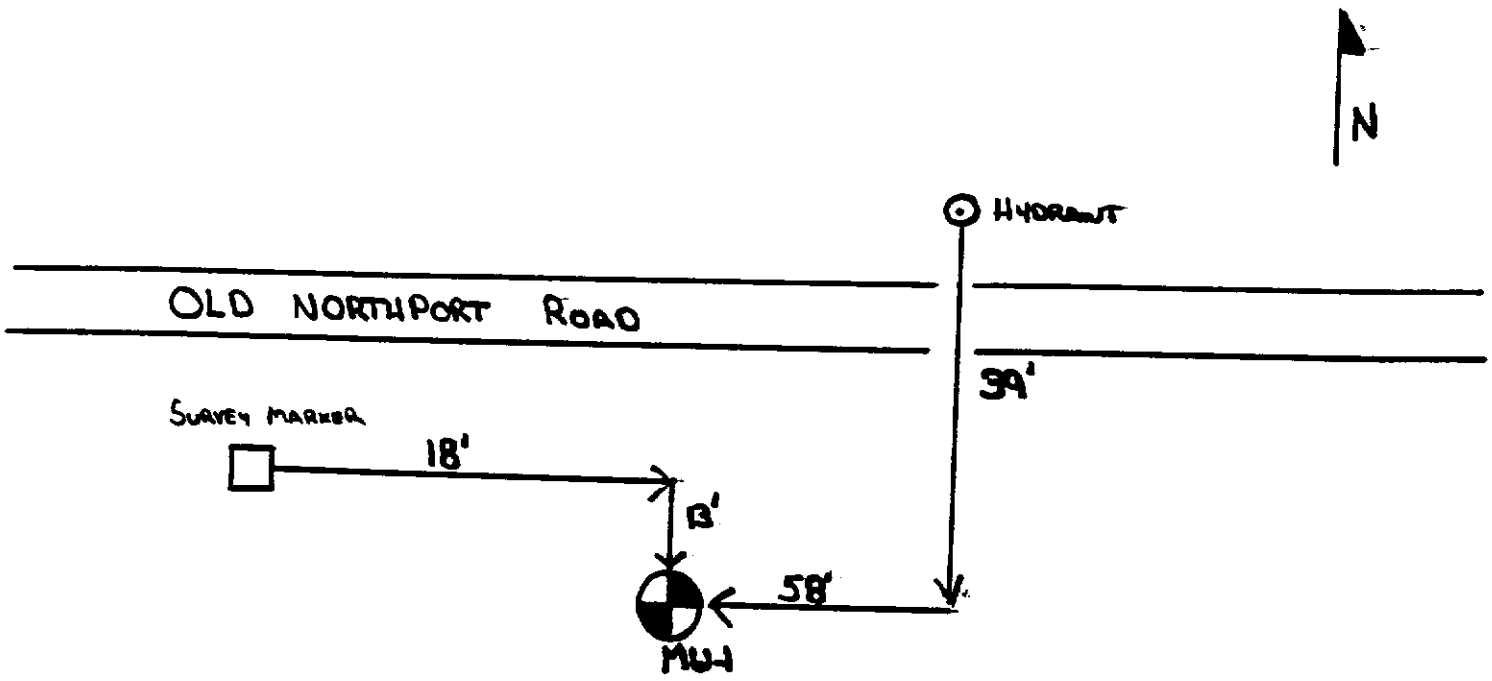
Some of the locations contained small discreet areas of response probably due to small near surface objects. There were no indications of large buried objects at any of the locations which might interfere with drilling activities.

Drilling Rig Access to Well Locations

The access routes to each hole is shown on the new site map, Figure 3.

LOCATION OF MW-1

-NTS-



SMITHTOWN LANDFILL

LOCATION OF MW-2

-NTS-

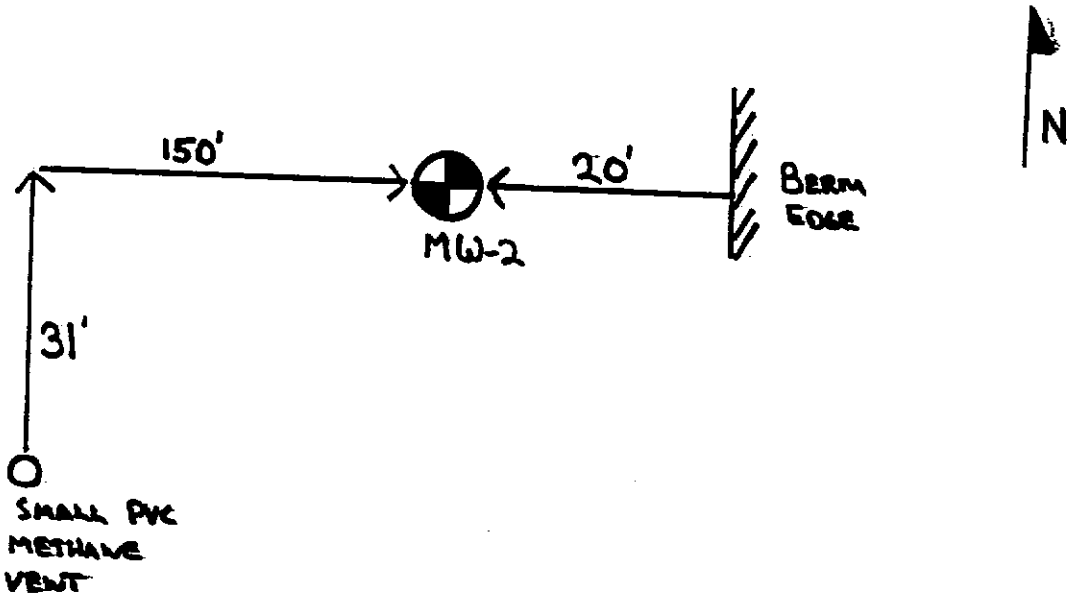


FIGURE 6

SMITHTOWN LANDFILL

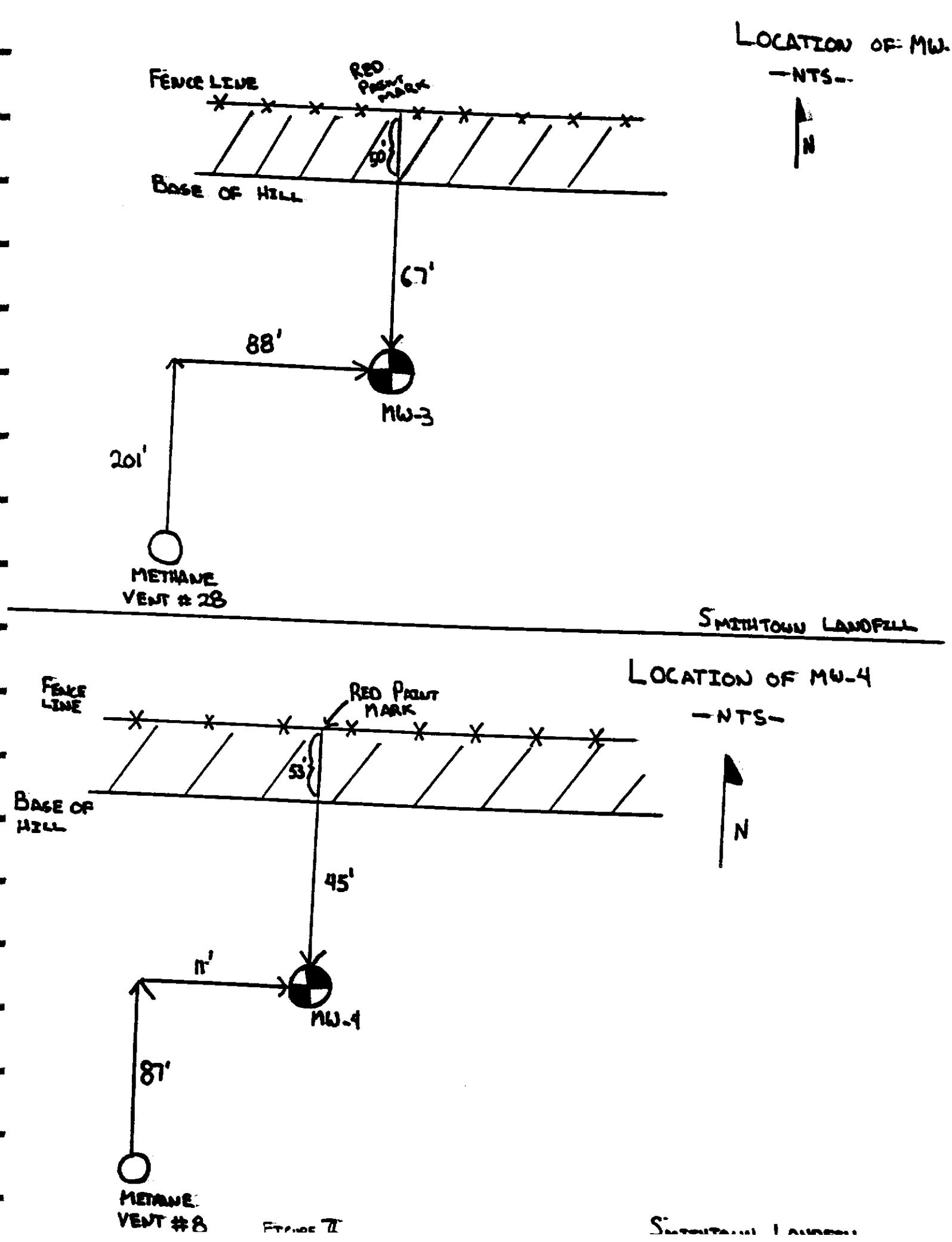


FIGURE II

SMITHTOWN LANDFILL

Usable Potable Water Source

Location: Hydrant is marked on the site map, Figure 3.

Contact: Suffolk County Water Authority
401 East Jericho Turnpike
Smithtown, New York 11787

(516) 979-8460

REFERENCE 13

(Located in Roux Associates, Inc. Files)

1988 POPULATION SURVEY

Current Population Estimates For Nassau and Suffolk Counties

Long Island Lighting Company

One Mile Radius of Smithtown Land Pt @ Old Northport & Indian Head Rd

Census Tract	1980 pop.	Place	1970 Place pop.	% of Place	1986 Place pop.	1 Mi. Radius 1980
1351.04						
123	225	Smithtown	30,906		31,956	223
1/2 x 104	40					
	185					
1347.02	5004	Kings Park	16,131		16,445	5,101
131	5232					
- 131	- 228					
- 132	- 0					
1347.01	255	Ft. Salonga	3,790		4,144	279
201	183					
202	58					
203	14					
1351.01	4,863	Commack	21,032		22,107	5,112
102-105	506					
109	100					
110	91					
903	349					
1351.02		Commack				
201	1697	"				
203,204	319					
904 905	608					
1351.03		Commack				
114 x 115	102					
1/2 903	1090					

2 mile radius of Smithtown Landfill

	% in 2 mi.	1980 pop	1988 pop	1988 pop in 2 mi.
Kings Park	80%	16,445	16,445	13,156
Ft. Salonga (S)	50%	4,144	4,144	2,072
KPPC	100%	2,463	2,463	2,463
Ft Salonga (H)	10%	6,437	6,437	644
E. North.		20,187	19,891	2,771
1117.03	40%	3,354		
1117.04	40%	3,675		
Commack (H)		13,687	13,231	2,301
1118.02	40%	3,556		
1118.03	30%	3,192		
Commack (S)		21,032	22,107	15,188
1251.01	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		

3 mile radius of Smithtown Landfill

Place	% in 3 mi	1980	1988	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	8,286
1116.02	40	3,342		
1117.03	100	3,354		
1117.04	100	3,675		
Elwood		11,847	11,743	912
1118.01	15	6,136		
Commack (H)				
Total		13,687	13,231	11,088
-1121.03	-50	4,434		
Commack (S)				
Total		21,032	22,107	20,464
-1352.05	-25	6,251		
Smithtown				
Total		30,906	31,956	21,017
-1349.06	-40	4718		

REFERENCE 14

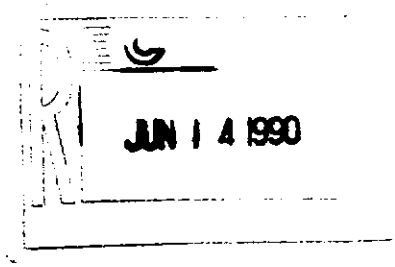
Cornell Cooperative Extension

Suffolk County

Education Center
246 Griffing Avenue
Riverhead, NY 11901-3086

516-727-7850
FAX 516-727-7130

June 12, 1990



Mr. Eric Arnesen
Roux Associates, Inc.
The Huntington Atrium
775 Park Avenue
Suite 255
Huntington, NY 11743

Dear Mr. Arnesen:

In response to your request for agricultural sites in the area of the Smithtown Landfill, I can give you the following information.

There were several farms operated in the East Northport area. Most of these were phased out and the land developed over the past 15 years. Another major farm was at the intersection of East Northport Road and the Sagtikos Parkway. However, this farm was last used about 6 or 7 years ago.

The only remaining agricultural operation that I am familiar with at this point is Richters Orchard, which is located northwest of the two sites identified on your map. The approximate distance is two miles northwest of the Smithtown Landfill site. This orchard is operated by Louis Amsler with a major crop of apples, and is located north of the Long Island Railroad in East Northport.

If you have any further questions concerning these sites, please do not hesitate to contact me.

Sincerely,

William J. Sanok

William J. Sanok
COOPERATIVE EXTENSION AGENT
Agricultural Program Leader

WJS:kn

REFERENCE 15

TOWN OF SMITHTOWN

(516) 360-7553

CODE ENFORCEMENT BUREAU
JOHN VALENTINE
DIRECTOR

65 MAPLE AVENUE
SMITHTOWN, NEW YORK 11787

SUPERVISOR
PATRICK R. VECCHIO

TOWN COUNCIL
EUGENE A. CANNATARO
BRADLEY L. HARRIS
MICHAEL J. FITZPATRICK
JANE E. CONWAY

June 18, 1990

Mr. Eric Arnesen, Staff Hydrogeologist
Roux Associates, Inc.
The Huntington Atrium
775 Park Avenue
Suite 255
Huntington, New York 11743

Dear Mr. Arnesen:

As per your letter of June 1, 1990, please find attached the Fire Inspector Reports on both the Izzo Landfill and Star Sand and Gravel sites.

Fire Marshal Al Anderson has prepared these reports and if you have any further questions, please do not hesitate to contact him directly.

Very truly yours,

John Valentine
Bureau Director

JV:mdg
attachment
cc: Lieutenant Richard McKay
Fire Marshal Al Anderson
Investigator Bernie Kaplan

V90-0258

CASE NO. 90-402

FIRE INSPECTION REPORT
TOWN OF SMITHTOWN
CODE ENFORCEMENT BUREAU
FIRE MARSHAL DIVISION

65 Maple Avenue
Smithtown, New York 11787
(516) 360-7553

NAME Izzo Landfill (Old Smithtown Landfill) PHONE

ADDRESS Old Northport Road, Kings Park

PERMIT NO. OTHER Information Request

Inspection was performed and THE FOLLOWING HAS BEEN DETERMINED:

Section 42 Lot 21 Block 23.1,23.5,24.

Mr. Arnesen:

In regard to request on information on above location it is the opinion of the Fire Marshal that this site is a threat to fire and/or explosion. The following has been found to exist:

1. Methane gas reading in site was 34% of L.E.L.
2. Methane gas reading on east and north property line (see attached list).
3. Unknown what is buried at this site.

- ☐ Left on Job
- ☐ Hand Delivered
- ☐ Mailed
- ☐ Other (Explain)

You are hereby notified to remedy the conditions as stated above, and if you have any questions regarding this matter contact THE FIRE MARSHAL DIVISION of the CODE ENFORCEMENT BUREAU at 360-7553.

FIRE MARSHAL Al Anderson SHD 39 DATE 6/14/90

RECEIVED BY TITLE DATE

THIS CASE IS

Cleared by: Corrected ☐ Unfounded ☐ Summons ☐ Other ☐

Reviewed By

SE301

Date : 6/7/90.
Time : 10:45 A.M.
Place : Smithtown old landfill (Izzo property).

Jhon conover — NYS DEC
Rasheed Carter — NYS DEC
Amit Patel — NYS DEC
Jhon Trent — Town of Smithtown.

Town of Smithtown Fire Department.
& Mr. patrick Izzo (owner) visited betwe
10:45 AM to 11:00 AM.

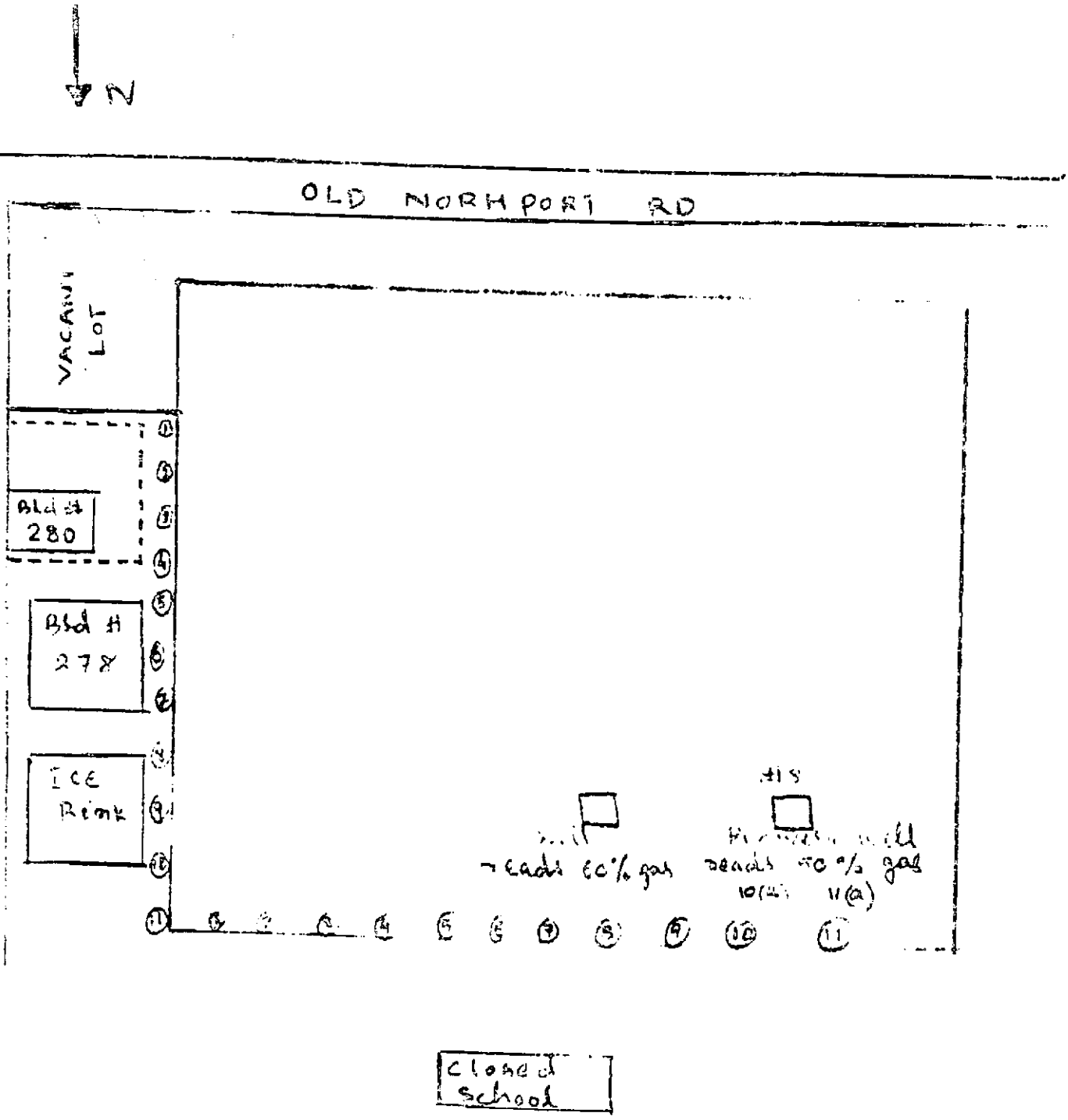
Readings taken near the east property l
at the toe of the slope, every 100 ft.

By A. Patel

1. 10 % Gas
2. 14 % Gas
3. 0 LEL
4. 70 % LEL
5. 16 % Gas
6. 28 % LEL
7. 16 % Gas
8. 13 % Gas
9. 50 % LEL
10. 26 % LEL
11. 0 LEL

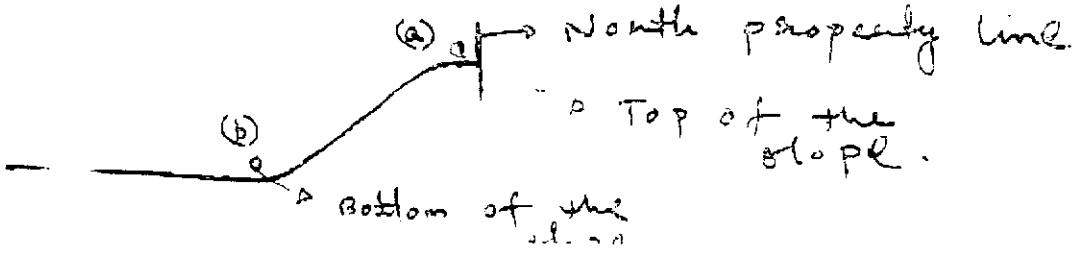
By Jhon Trent.

10 % Gas.
6 % Gas.
0 LEL
40 % LEL
10 % Gas.
20 % LEL
11 % Gas.
11 % Gas.
6 % Gas.
38 % LEL
0 LEL


N
OLD NORMPORT RD
VACANT LOT
Bldg #280
Bldg # 278
ICE Rink
Closed School

Readings taken at the North property l
ween 100 ft apart.

	By R. Cartez	By J. Faut.
①	39 % Gas	19 % Gas.
②	60 % LEL	56 % LEL
)	0 LEL	0 LEL.
)	0 LEL	0 LEL
)	0 LEL	0 LEL (Between the school & the
)	0 LEL	0 LEL (")
)	0 LEL	0 LEL
)	0 LEL	0 LEL.
)	0 LEL	0 LEL
⑨	ⓐ 0 LEL (Top of the slope)	0 LEL.
	ⓑ 13 % Gas (Bottom of the slope).	
)	ⓐ 0 LEL (Top of the slope)	0 LEL
	ⓑ 15 % Gas (Bottom of the slope).	



REFERENCE 16

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.

APPENDIX A

Site Assessment References

Site Assessment References

1) YEC Inc., September 28, 1988, Interview with Francis J. Mooney, Town of Smithtown Engineer.

2) NYSDEC, September, 1980 legal action complaint against the Town of Smithtown and the Izzo Brothers.

3) SCDHS, July 20, 1981, Methane survey of Smithtown Landfill.

4) Arnesen, E., June 7, 1990, Phone interview with Alexander Izzo.

5) NYSDEC, June 6, 1990, Site meeting between NYSDEC, Town of Smithtown officials, Izzo Brothers, and J. Milfred Hull.

6) NYSDEC, May 22, 1990, Memo for file on LEL measurements at Site and nearest building.

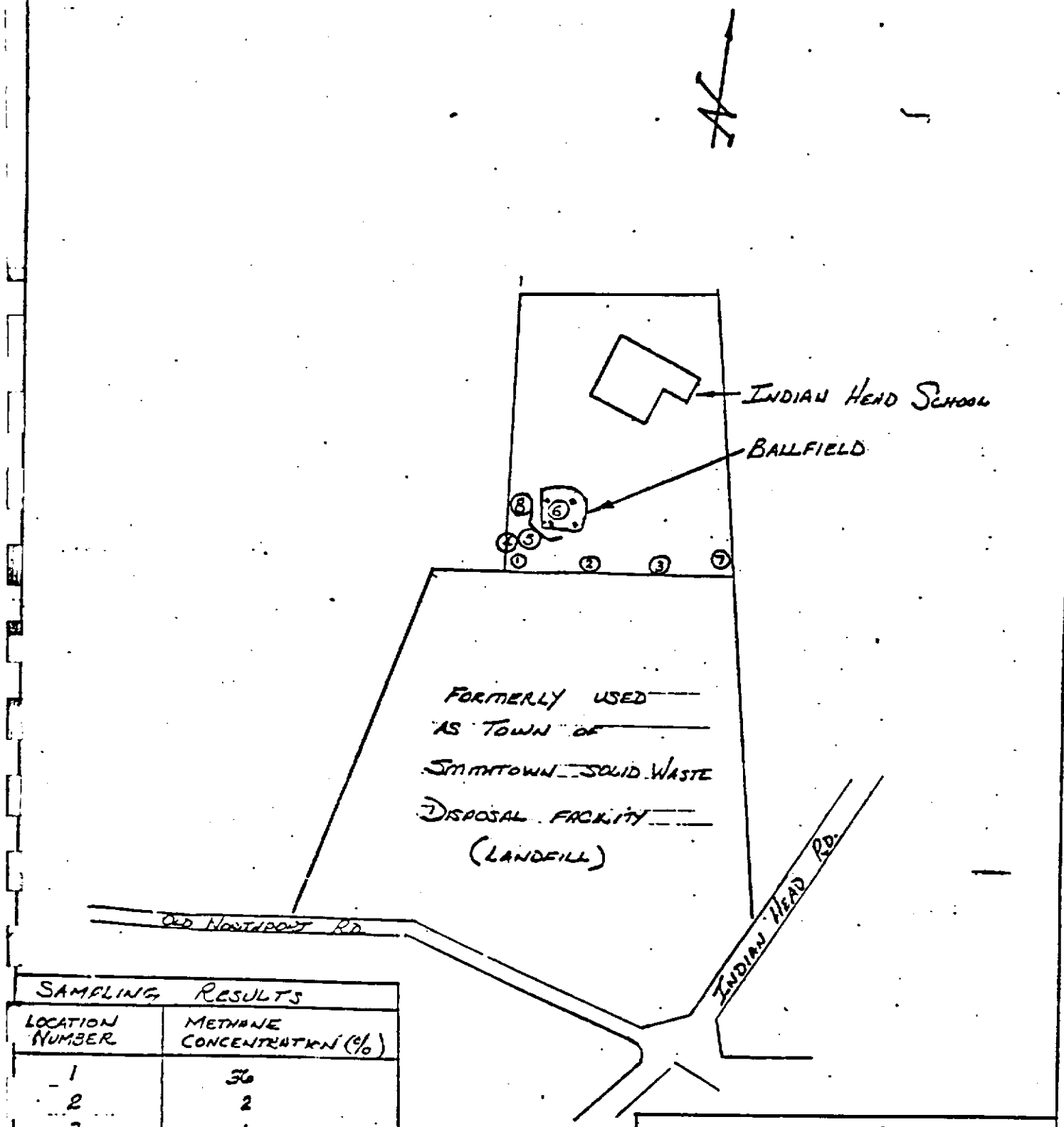
7) SCDHS, June 12,1990, Results of private well sampling in vicinity of the Site.

8) Lubke, E.R. 1964. Hydrology of the Huntington-Smithtown area, Suffolk County, New York, USGS Water Supply Paper 1669-D (Roux Associates, Inc. files).

9) McClymonds, N.R. and O.L. Franke, 1972. Water Transmitting Properties of Aquifers on Long Island, New York. United States Geological Survey, Professional Paper 627-E (Roux Associates, Inc. files).

10) Franke, O.L. and P. Cohen, 1972. United States Geological Survey, Professional Paper 800-C, pp. 271-272 (Roux Associates, Inc. files).

REFERENCE 1



SAMPLING RESULTS	
LOCATION NUMBER	METHANE CONCENTRATION (%)
1	56
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 81

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., 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 3

Page 1

cc: files Solid 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

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

REFERENCE 2

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

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

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. 52-4603507, 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

REFERENCE 4

LAW OFFICES
J. MILFRED HULL, P. C.
8 MANOR ROAD
SMITHTOWN, NEW YORK 11787

P.O. BOX 623
516 265-0200

FAX 516 265-0118

J. MILFRED HULL

DONNA LIUCCI
LEGAL ASSISTANT

July 16, 1990

Roux Associates Inc.
The Huntington Atrium
775 Park Avenue, Suite 255
Huntington, NY 11743

Attention: Mr. Eric Arnesen
Staff Hydrogeologist

Re: Alexander Izzo

Dear Mr. Arnesen:

With reference to your letter dated June 26, 1990 addressed to my client, Alexander Izzo, please find enclosed your Interview Acknowledgement Form which he has signed and dated on July 13, 1990.

Very truly yours,

J. Milfred Hull

JMH/tr

Enclosure

cc: Mr. Alexander Izzo

INTERVIEW ACKNOWLEDGEMENT FORM

SITE NAME: Smithtown Landfill Site

I.D. NUMBER: 152043

PERSON CONTACTED: Alexander Izzo

DATE: June 7, 1990

PHONE NUMBER: (516)671-2144

AFFILIATION: Izzo Brothers

ADDRESS: 106 Fourth Street
Glen Cove, New York 11542

TYPE OF CONTACT: Telephone

CONTACT PERSON(S): Eric Arnesen
Roux Associates, Inc.

INTERVIEW SUMMARY:

~~Mr. Izzo said that no additional work had been done at the Site, only the installation and~~ operation of the methane generator system. He told me that ~~the system~~ was dismantled in 1989 due to business problems with ~~Smithtown~~ Landgas Company. Mr. Izzo said they are presently ~~looking for a new~~ company to utilize the methane for generating electricity (~~had a meeting with a company yesterday~~).

ACKNOWLEDGEMENT

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

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

After the Town of Smithtown discontinued using the concerned premises for a landfill site, a methane gas recovery system was installed upon the concerned site pursuant to a royalty agreement with Wehran Energy Corp. The royalty agreement was cancelled several years ago based upon a default of the provisions contained in the royalty agreement and the operation was, at that time, discontinued.

Signature: [signature]

Date: 7/13/90

Doc #GH07709Y.1.8

REFERENCE 5

Attendance List

Meeting re: Smithtown old L/f 6/6/90

ANIT PATEL	NYSDEC	751-2617
Alexander Izzo	property owner	671 2144
NEAL Izzo	" "	671 1620
John Conoven	NYSDEC	751-2617
FRANCIS J. MOONEY	TOWN OF SMITHTOWN	360-7550
MILFRED HUGL	ATTY	265-0200
Allen E. Huggins	Atty - Town of Smithtown	360-7570
STANLEY EARKINS	NYSDOC - SR. SANITARY ENG.	751-4117
Gerald P Brezna	NYSDEC - Stony Brook	"

Mooney wants to hook up a pump by June 13th

If methane is high enough, then a generator could replace the fan but fan could stay

Frank will put in a monitoring system on perimeter. If existing system doesn't work, need perimeter venting system

. . 100 Pagan meeting re methane

Mr. Will - 122 lawyer

Generator was taken away because

the methane ~~given~~ was not enough

to generate, and Wehren did not have a permit

Mr. Mooney - Town could put a pumps to existing piping

Town is responsible for methane leaving site

Jerry - I have to go to site w/ Towns
show where monitored
outside + inside buildings at [illegible]

Town should monitor daily

Mooney - accept monitoring

Town will do daily monitoring
submit weekly -
status of extraction system

1. 1 ce park 2 commercial buildings
East side
N. side
every 100 feet

220 should notify comm owners to install methane alarm

Town will put a fan on wells

1. Town to do [illegible] monitoring of E + W sides, + 3 building "every 100 feet" 2+ floating

2. Town to hook up fan to existing manifold / wells

3. Izzo's might replace fan w/ generator or fan might stay

4) Town will install perimeter monitoring systems - specs - stan will decide

5. If fan + existing manifold / wells not adequate, town will install perimeter ~~mont~~ venting system

To be apprised 6/13/90

Frank -
capped w Sandy / loam / topsoil

REFERENCE 6

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233

Thomas C. Jorling
Commissioner

October 23, 1991

Mr. Eric Arnesen
Roux Associates
Huntington Atrium
775 Park Avenue
Suite 255
Huntington, New York 11743

Dear Mr. Arnesen:

Re: Draft Final Phase II Report
Smithtown Landfill, ID #152043

I am returning the Smithtown Landfill report, with my comments, for final correction. Once you have received the data validation letter and have made the noted corrections, please send thirteen copies of the report and five copies of the Supporting Documentation. All final copies should be stamped by a licensed Professional Engineer.

If you have any questions or comments, please call me at (518) 457-0639.

Sincerely,

Lawrence J. Alden, P.E.
Environmental Engineer 2
Eastern Investigation Section
Bureau of Hazardous Site Control
Division of Hazardous Waste Remediation

Enclosure

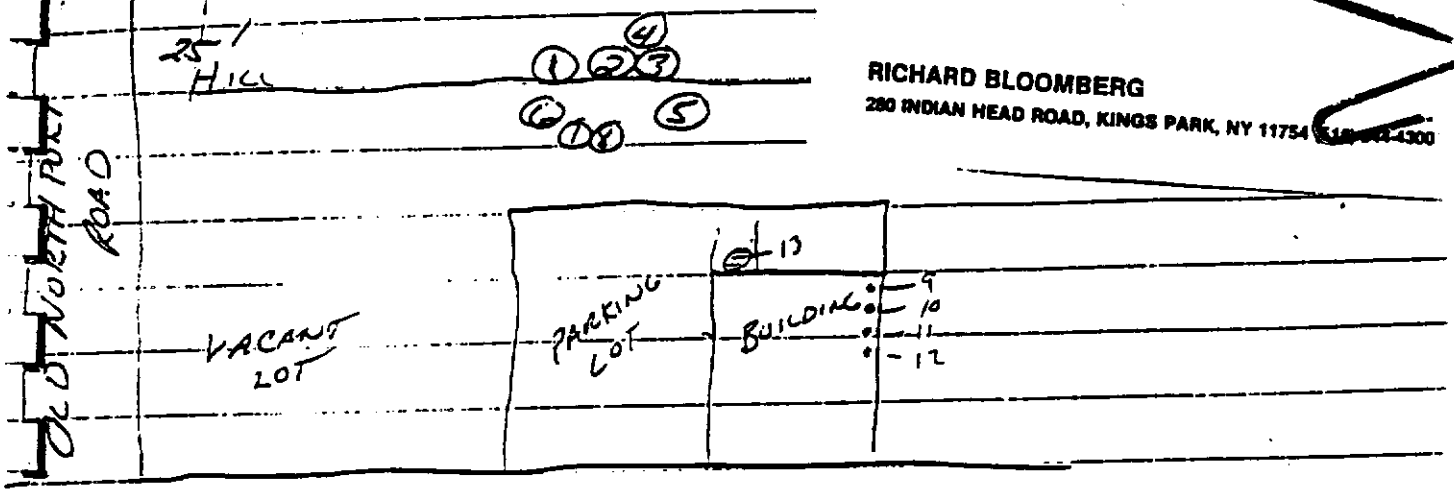
cc: N. Hinsey

5/11

R.H. Industries, Inc.

FLOOR COVERING CONTRACTORS

RICHARD BLOOMBERG
280 INDIAN HEAD ROAD, KINGS PARK, NY 11754 [redacted]



INDIAN HEAD ROAD

7:55 PM

① 8% LEL PENTANE VOID (NOT ECHO)

①	20% LEL	PENTANE HEXANE 10	9	4 %	2 % LEL
②	40% LEL	22% LEL HEXANE	10	4 %	2
③	20% LEL	10 %	11	3 %	1.5
④	15% LEL	7.5%	12	4 %	2
⑤	10% LEL	5%	13	4 %	2
⑥	40-100% LEL	MOTOR SWINGING 22-62%			
⑦	40-100% LEL	" "			
⑧	40-100% LEL	" "			

DIFFUSORS UNDER BUILDING

Re: Iszo Property

5/29/90 5/30

As per your request, I visited the following buildings near the Iszo landfill today and tested for methane:

1) P & H industries, # 280 Indian Head Road, east of landfill, no methane found throughout the office + warehouse (entire building)

2) Colonial Mechanical Corp, # 278 Indian Head Rd, east of landfill, no methane found in the offices + shop area (entire building)

3) Indian Head School, north of landfill, no methane found, ~~on~~ air taken inside 1 door, 2 windows, + 1 vent

The Superior Ice Rink on Indian Road, N of Colonial Manufacturing + NE of the landfill, was closed.

cc Tony, Paul, Stan

Mary
Lori

5/22/90

A closed landfill in Smithtown has methane problems. The property is owned by the 1220 brothers but was leased to the town 1970-79 for garbage disposal. Until recently, there was a methane extraction system in use & a generator to burn the methane. The generator is no longer there & the methane is no longer being removed. Because of this, the methane is now at dangerous levels.

The town was contacted but has refused to do anything because they do not own the property.

The county health dept has been contacted & they will check nearby buildings for methane.

Our people have checked the nearest building (a factory). No methane was found inside the building but high levels were found in the soil at the property line between the factory & the landfill.

Jerry Brezner said we should notify the property owners (Mr & Mr Izzo) because of the dangers. Mr. Berger is also concerned about this.

Lori was too busy today to work on this she said to ask you.

Please check this letter, make any changes - Please see me or Tony Candela with any questions.

Thanks

John Conover

P.S. We became aware of this situation during a Phase I site investigation

REFERENCE 7

COUNTY OF SUFFOLK

PATRICK G. HALPIN
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

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

June 12, 1990

JUN 14 1990

Mr. Eric Arnesen
Staff Hydrogeologist
Roux Associates Inc.
THe Huntington Atrium
775 Park Ave. - Suite 255
Huntington, NY 11743

Dear Mr. Arnesen:

Enclosed per your request is private well sampling data from the vicinity of Star Sand & Gravel and the former Smithtown landfill.

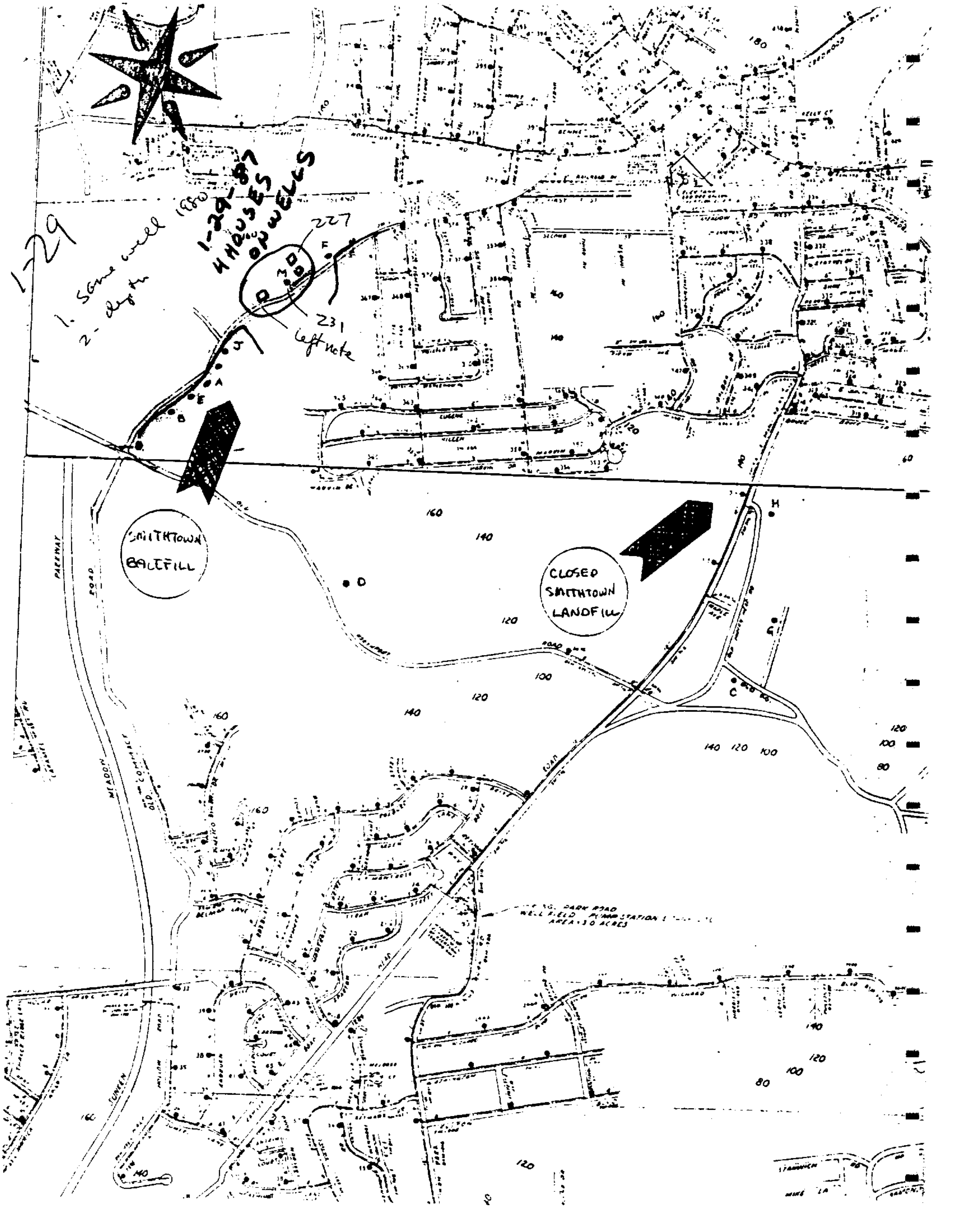
Should you have any questions on the data, feel free to contact this office.

Very truly yours,

Martin Trent
Associate Public Health Sanitarian
Bureau of Drinking Water

MT/jdm
Enc.

BUREAU OF DRINKING WATER
225 RABRO DRIVE EAST
HAUPPAUGE, NEW YORK 11788
(516) 348-2776


1-29
1. Same well 1980
2- depth
1-29-87
4 HOUSES ON WELLS
227
231
left note
SMITHTOWN BALEFILL
CLOSED SMITHTOWN LANDFILL
PARKWAY
MEADOW
SUNKEN
OLD COMMACK
160
140
120
100
80
60
AREA 3.0 ACRES

6/11/80

LANDFILL SURVEY

LOCATION HUNTINGTON

GORMLEY
159 Old Northport Rd. MRS
Kings Park
AN-9-6399

Vinyl Chloride (ppb)	-ND
Methylene Chloride (ppb)	-
1,1-Dichloroethylene (ppb)	-
1,1-Dichloroethane (ppb)	-
trans-1,2-Dichloroethylene (ppb)	-
cis-1,2-Dichloroethylene (ppb)	-
Chloroform (ppb)	-ND
1,1,2-Trichlorotrifluoroethane (ppb)	-
1,2-Dichloroethane (ppb)	-
1,1,1-Trichloroethane (ppb)	-ND
Carbon Tetrachloride (ppb)	-ND
Bromodichloromethane (ppb)	-ND
1,2-Dichloropropane (ppb)	-
2,3-Dichloropropene (ppb)	-
Trans-1,3-Dichloropropene (ppb)	-
Trichloroethylene (ppb)	-ND
1,1,2-Trichloroethane (ppb)	-ND
Chlorodibromomethane (ppb)	-ND
cis-1,3-Dichloropropene (ppb)	-
Bromoform (ppb)	-ND
1,1,1,2-Tetrachloroethane (ppb)	-
Tetrachloroethylene (ppb)	-ND
1,1,2,2-Tetrachloroethane (ppb)	-

Free Ammonia (mg/l)	- <0.04
Nitrites + Nitrates (mg/l)	- 0.5
MBAS (mg/l)	- <0.1
pH	- 6.9
Spec. Cond. (umhos/cm)	- 183.
Chlorides (mg/l)	- 36.
Sulfates (mg/l)	- 5.
Iron (mg/l)	- 0.56
Manganese (mg/l)	- 0.05
Copper (mg/l)	- <0.10
Zinc (mg/l)	- 6.2
Sodium (mg/l)	- 13.9
T. Hardness (mg/l)	- 64.
T. Alkalinity (mg/l)	- 22.
Arsenic (mg/l)	-
Selenium (mg/l)	-
Cadmium (mg/l)	- <.002
Silver (mg/l)	-
Lead (mg/l)	- .010
Chromium (mg/l)	-
Mercury (mg/l)	-
Fluoride (mg/l)	-
Barium (mg/l)	-
Phenol (mg/l)	-
Methane (ppb)	-2
Free CO_2 (mg/l)	- 17.8

Lloyd Love
231 Old Commack Rd.
Kings Park
269-0733

Vinyl Chloride (ppb)	-ND
Methylene Chloride (ppb)	-
1,1-Dichloroethylene (ppb)	-
1,1-Dichloroethane (ppb)	-
trans-1,2-Dichloroethylene (ppb)	-
cis-1,2-Dichloroethylene (ppb)	-
Chloroform (ppb)	-ND
1,1,2-Trichlorotrifluoroethane (ppb)	-
1,2-Dichloroethane (ppb)	-
1,1,1-Trichloroethane (ppb)	-<1
Carbon Tetrachloride (ppb)	-ND
Bromodichloromethane (ppb)	-ND
1,2-Dichloropropane (ppb)	-
2,3-Dichloropropene (ppb)	-
Trans-1,3-Dichloropropene (ppb)	-
Trichloroethylene (ppb)	-ND
1,1,2-Trichloroethane (ppb)	-ND
Chlorodibromomethane (ppb)	-ND
cis-1,3-Dichloropropene (ppb)	-
Bromoform (ppb)	-ND
1,1,1,2-Tetrachloroethane (ppb)	-
Tetrachloroethylene (ppb)	-ND
1,1,2,2-Tetrachloroethane (ppb)	-

Free Ammonia (mg/l)	- <0.04
Nitrites + Nitrates (mg/l)	- <0.4
MBAS (mg/l)	- <0.1
pH	- 5.9
Spec. Cond. (umhos/cm)	- 110.
Chlorides (mg/l)	- 25.
Sulfates (mg/l)	- 4.
Iron (mg/l)	- 2.17
Manganese (mg/l)	- 0.08
Copper (mg/l)	- 0.28
Zinc (mg/l)	- 0.5
Sodium (mg/l)	- 11.0
T. Hardness (mg/l)	- 32.
T. Alkalinity (mg/l)	- 10.
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)	-2
Free CO_2 (mg/l)	-25.5

A. TAYLAN
589 Pulaski Rd.
Huntington

Vinyl Chloride (ppb)	- <1
Methylene Chloride (ppb)	- <1
1,1-Dichloroethylene (ppb)	- <1
1,1-Dichloroethane (ppb)	- <1
trans-1,2-Dichloroethylene (ppb)	- <1
cis-1,2-Dichloroethylene (ppb)	- <1
Chloroform (ppb)	- <1
1,1,2-Trichlorotrifluoroethane (ppb)	- <1
1,2-Dichloroethane (ppb)	- <1
1,1,1-Trichloroethane (ppb)	- <1
Carbon Tetrachloride (ppb)	- <1
Bromodichloromethane (ppb)	- <1
1,2-Dichloropropene (ppb)	- <1
2,3-Dichloropropene (ppb)	- <1
Trans-1,3-Dichloropropene (ppb)	- <1
Trichloroethylene (ppb)	- <1
1,1,2-Trichloroethane (ppb)	- <1
Chlorodibromomethane (ppb)	- <1
cis-1,3-Dichloropropene (ppb)	- <1
Bromoform (ppb)	- <1
1,1,1,2-Tetrachloroethane (ppb)	- <1
Tetrachloroethylene (ppb)	- <1
1,1,2,2-Tetrachloroethane (ppb)	- <1

Free Ammonia (mg/l)	- 0.14
Nitrites + Nitrates (mg/l)	- 2.5
MBAS (mg/l)	- <0.1
pH	- 6.1
Spec. Cond. (umhos/cm)	- 340.
Chlorides (mg/l)	- 55.
Sulfates (mg/l)	- 35.
Iron (mg/l)	- 0.46
Manganese (mg/l)	- <0.05
Copper (mg/l)	- <0.1
Zinc (mg/l)	- 8.6
Sodium (mg/l)	- 27.2
T. Hardness (mg/l)	- 112.
T. Alkalinity (mg/l)	- 40.
Arsenic (mg/l) ppb	- <20.
Selenium (mg/l) "	- 5.8
Cadmium (mg/l) "	- <2.
Silver (mg/l) "	- <10.
Lead (mg/l) "	- <10.
Chromium (mg/l) "	- <10.
Mercury (mg/l) "	- <0.2
Fluoride (mg/l)	-
Barium (mg/l)	- <0.4
Phenol (mg/l)	-
Methane (ppb)	-
Free CO_2 (mg/l)	-69.5

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES - WATER ANALYSIS

NAME: D Fichtel
ADDRESS: 227 Old Commack Rd, Smithtown
SAMPLE DATE: 6-1-89

	Result	Standard
total coliform ...	<2.2	<2.2/100 ml
specific cond. ...	28	- umhos/cm
pH	6.0	-
nitrate	<0.2	10.0 mg/l
free ammonia	<0.02	- mg/l
chloride	6.	250. mg/l
sulfate	<4.	250. mg/l
iron	0.26	0.3 mg/l*
manganese	<0.05	0.3 mg/l*
copper	0.11	1.0 mg/l
sodium	4.0	- mg/l+
zinc	<0.4	5.0 mg/l
cadmium	<2.	10. ppb
lead	9.	50. ppb
MBAS-detergents .	<0.1	- mg/l

* Iron & manganese combined should not exceed 0.5 milligrams per liter.
+ Moderately restricted sodium diet should not exceed 270 mg/l. Severely restricted sodium diet should not exceed 20 mg/l.

	Result	
vinyl chloride	<0.5	(2)
methylene chloride	<0.5	
1,1 dichloroethane	<0.5	
trans dichloroethylene .	<0.5	
chloroform	<0.5	(100)
1,2 dichloroethane	<0.5	
1,1,1 trichloroethane ..	<0.5	
carbon tetrachloride ...	<0.5	
1 bromo 2 chloroethane .	<0.5	
1,2 dichloropropane	<0.5	
1,1,2 trichloroethylene	<0.5	
chlorodibromomethane ...	<0.5	(100)
1,2 dibromoethane	<0.02	(0.1)
2 bromo 1 chloropropane	<0.5	
bromoform	<0.5	(100)
tetrachloroethylene	<0.5	
cis dichloroethylene ...	<0.5	
freon 113	<0.5	
dibromomethane	<0.5	
1,1 dichloroethylene ...	<0.5	
bromodichloromethane ...	<0.5	(100)
2,3 dichloropropene	<0.5	
cis dichloropropene	<0.5	
trans dichloropropene ..	<0.5	
1,1,2 trichloroethane ..	<0.5	
1,1,1,2 tetrachlo'ethane	<0.5	
s-tetrachloroethane	<0.5	
1,2,3 trichloropropane .	<0.5	
2,2 dichloropropane	<0.5	
1,3 dichloropropane	<0.5	
2 chloroethylvinylether	<0.5	

	Result
benzene	<0.5
toluene	<0.5
chlorobenzene	<1
ethylbenzene	<0.5
o-xylene	<0.5
m-xylene	<0.5
p-xylene	<0.5
total xylene	-
o-chlorotoluene	<0.5
m-chlorotoluene	<0.5
p-chlorotoluene	<0.5
total chlorotoluene	-
1,3,5 trimethylbenzene	<0.5
1,2,4 trimethylbenzene	<0.5
m,p-dichlorobenzene	<1
o-dichlorobenzene	<1
p-diethylbenzene	<0.5
1,2,4,5 tetramethylbenzene ..	<0.5
1,2,4 trichlorobenzene	<1
1,2,3 trichlorobenzene	<1
ethenylbenzene (styrene)	<1
1 methylethylbenzene (cumene)	<0.5
n-propylbenzene	<0.5
tert-butylbenzene	<0.5
sec-butylbenzene	<0.5
isopropyltoluene (p-cymene) .	<0.5
n-butylbenzene	<0.5
hexachlorobutadiene	<1
1,2 dibromo 3-chloropropane .	<0.02

NOTE: < symbol means "less than" indicating no detection

Generic drinking water limits for volatile organic and hydrocarbon compounds are 5 parts per billion each. Limits established for individual compounds and trihalomethanes are noted in parentheses().

[redacted] 43

REQUEST FOR WELL WATER ANALYSIS

Return to:
[redacted]k County Department of Health Services
Bureau of Drinking Water
225 Rabro Drive, Hauppauge, N.Y. 11788

SURVEY

Applicant: please print clearly or type.

(3) KRICH
Last Name

(2) LU
First Name

(4) 227
House Number

(9) OLD COMMACK RD.
Street

(8) KINGS PARK
Community

(23) 544-9164
Telephone (Home) — (Business)

(31) —
Well Depth

(44) —
Water Treatment or Filter Type

Mailing address - if different

W-2a
Fe 0.4

Physician's name & address

Are you enclosing a doctor's request? ..... ___ YES ___ NO

Is only a pesticide sample, i.e. Temik, requested? ___ YES ___ NO

Is your name or house number visible from the street? ___ YES ___ NO

Is an outside tap available for sampling? ..... ___ YES ___ NO

TAX MAP LOCATION
(from your tax bill)

(14) District ___
(13) Section ___
(16) Block ___
(17) Lot ___

Please include directions to your home from the nearest cross street on the reverse.

Reason for request? ___

Signature

FOR OFFICIAL USE ONLY

(7) Township Code - -
___ TEH ___ THU ___ TBA ___ TBR
___ TRI ___ TSH ___ TIS ___ TOS
___ TSI X TSM

(20) X PRIV ___ NCOM ___ COMM

(51) Sample Date 1-29-87
(54) Sample Tap X Kit ___ Bth ___ OT
Other ___

(50*51) Resample Date ___
(50*54) Resample Tap ___
Resample Type ___

Remarks APT. IN BACK
LANDLORD
TOM NOVOTNEY-586-4613

Sample Type X Bact ___ Part Chem
Organic ___ Large X Small ___ NYS
Pest ___ Other ___

VERYZER
Sanitarian

WELL VERY CLOSE TO CESSPOOL

LAB. No. 8700566
FIELD No. 1643
DATE: 1-29-81
TIME: AM
COL. BY: WEBSTER
(NAME, NOT INITIALS)

SUFFOLK COUNTY
DEPARTMENT OF HEALTH SERVICES

PUBLIC HEALTH LABORATORY

Date Received in LAB. JAN 29 1981
PUBLIC WATER
PRIVATE WATER X
SWIMMING POOL
BEACH
SEWAGE
OTHER

Routine X Re-Sample

BACTERIOLOGICAL EXAMINATION OF WATER

NAME LU KRICH OWNER or DISTRICT

LOCATION 227 OLD COMMACK Rd, KINGS PARK

WATER SUPPLY SAMPLE DATA

POINT OF COLLECTION: K.T.
TAP FLAMED: YES X NO
Chlorine Residual:
If sample is from WELL, IS SANITARY SURVEY Satisfactory?
Unsatisfactory? (Explain)

SEWAGE PLANT SAMPLE DATA

Point of Collection
Holding time before dechlorination
Chlorine residual Rate of Flow (MGD)

SWIMMING POOL SAMPLE DATA

Chlorine Residual:
pH Is the bottom of Pool clearly visible at the deepest end:? YES NO

BEACH or STREAM SAMPLE DATA

WEATHER (Circle) FAIR CLOUDY RAIN
Weather Prev. 24 Hrs. Fair Cloudy Rain
Depth of Water at Point of Collection
Where along beach?
Position of Tide

REMARKS:

LAB USE ONLY

STANDARD PLATE COUNT/ml (24 HRS. 35°C)

MOST PROBABLE NUMBER/100 ml

Total Coliform:
Fecal Coliform:

MEMBRANE FILTER

Total Coliform/100ml < 2.2
Fecal Coliform/100ml
Fecal Strep/100ml

PHL - 2 Rev. 3/80

DIRECTOR: Carl H. Hauss

0187510

Lab No. _____
Field No. 1643
Date: 1-29-87
Time: AM
Col. By: VERYZER
(Name not initials)

Date Received in Lab JAN 29 1987
Public Water _____
Private Water X
Other _____
Date Completed JAN 30 1987
Examined By [signature]

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
PUBLIC HEALTH LABORATORY
CHEMICAL EXAMINATION OF WATER

Name LU KRICH
Owner or District _____
Location 227 OLD COMMACK Rd., KINGS PARK
Point of Collection K.T.
Remarks:

(1) Results Reported as Micrograms Per Liter.

Partial X Complete ☐ Metals Only ☐

	Spec. Cond. µmhos/cm	25	84	T. Alkalinity (mg/l $CaCO_3$)		81	MBAS (mg/l)	
73	pH	5.9	82	T. Hardness (mg/l $CaCO_3$)		88	Total Hyd P (mg/l)	
	Nitrites + Nitrates (mg/l N)	<.02	83	Ca Hardness (mg/l $CaCO_3$)		90	Fluoride (mg/l F)	
76	Free Ammonia (mg/l N)	<.005		Mg Hardness (mg/l $CaCO_3$)		77	Nitrites (mg/l N)	
	Chlorides (mg/l Cl)	5						
	Sulfates (mg/l SO_4)	<4	120	Arsenic (1)				
100	Iron (mg/l Fe)	0.40	125	Selenium (1)				
	Manganese (mg/l Mn)	<.005	122	Cadmium (1)				
102	Copper (mg/l Cu)	<.010	123	Lead (1)				
	Sodium (mg/l Na)	43	126	Silver (1)				
09	Zinc (mg/l Zn)	<.04	104	Chromium (1)				
			124	Mercury (1)				
			121	Barium (mg/l Ba)				

Director [signature] H. Hauss

Form No. PHL-1

Lab No. TO- 187569
Field No. 1643
Date 1-29-87
Time AM
Col. By KRAYZER

Rec'd at Lab 1/29/87
Public Water
Private Water X
Other
Date Completed 2-[illegible]-87
Examined By [illegible]

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

TRACE ORGANIC ANALYSIS OF WATER

Name LU KRICH Owner or District

Location 227 OLD COMMACK RD, KINGS PARK

Point of Collection K.T.

Remarks: SMALL BOTTLES

Compound	ppb	Compound	ppb
306 vinyl chloride	<1	250 benzene	<1
305 methylene chloride	<1	251 toluene	<1
290 bromochloromethane	~	258 chlorobenzene	<1
323 1,1 dichloroethane	<1	259 ethylbenzene	<1
309 trans dichloroethylene	<1	254 o-xylene	<1
300 chloroform	<1	252 m-xylene	<1
324 1,2 dichloroethane	<1	253 p-xylene	<1
321 1,1,1 trichloroethane	<1	255 total xylenes	~
304 carbon tetrachloride	<1	257 bromobenzene	~
294 1 bromo 2 chloroethane	<1	266 o-chlorotoluene	<1
405 1,2 dichloropropane	<1	267 m-chlorotoluene	<1
310 1,1,2 trichloroethylene	<1	268 p-chlorotoluene	<1
303 chlorodibromomethane	<1	265 total chlorotoluene	~
293 1,2 dibromoethane	<1	419 1,3,5 trimethylbenzene	<1
420 2 bromo 1 chloropropane	<1	418 1,2,4 trimethylbenzene	<1
301 bromoform	<1	415 m,p-dichlorobenzene	<2
311 tetrachloroethylene	<1	412 o-dichlorobenzene	<2
308 cis dichloroethylene	<1	432 p-diethylbenzene	<1
320 freon 113	<1	435 1,2,4,5 tetramethylbenz'	<1
292 dibromomethane	<1	437 1,2,4 trichlorobenzene	<2
307 1,1 dichloroethylene	<1	438 1,2,3 trichlorobenzene	<2
302 bromodichloromethane	<1	409 1,1,1,2 tetrachl'oethane	<1
406 2,3 dichloropropene	<1	430 1,2,2,3 tetrachl'propane	~
407 cis dichloropropene	<1	295 s-tetrachloroethane	~
408 trans dichloropropene	<1	431 1,1,1,2 tetrachl'propane	~
322 1,1,2 trichloroethane	<1	433 1,2,3 trichloropropane	<1

REQUEST FOR WELL WATER ANALYSIS

[redacted]

Return to:
[redacted] County Department of Health Services
Bureau of Drinking Water
225 Rabro Drive, Hauppauge, N.Y. 11788

SURVEY

Applicant: please print clearly or type.

(3) LOVE
Last Name

(2) MRS LLOYD
First Name

(4) 231
House Number

(9) OLD COMMACK Rd
Street

(8) KINGS PARK
Community

(23) 269-0733
Telephone (Home) (Business)

(31) ? NO CHANGE LATER
Well Depth

(44)
Water Treatment or Filter Type

Mailing address - if different
W-18

Physician's name & address

Are you enclosing a doctor's request? ..... ___ YES ___ NO

Is only a pesticide sample, i.e. Temik, requested? ___ YES ___ NO

Is your name or house number visible from the street? ___ YES ___ NO

Is an outside tap available for sampling? ..... ___ YES ___ NO

TAX MAP LOCATION
(from your tax bill)

(14) District
(13) Section
(16) Block
(17) Lot

Please include directions to your home from the nearest cross street on the reverse.

Reason for request?

Signature

FOR OFFICIAL USE ONLY

(7) Township Code:
___ TEH ___ THU ___ TBA ___ TBR
___ TRI ___ TSH ___ TIS ___ TOS
___ TSI X TSM

(20) X PRIV ___ NCOM ___ COMM

(51) Sample Date 1-29-87

(54) Sample Tap X Kit ___ Bth ___ OT
Other

(50*51) Resample Date
(50*54) Resample Tap
Resample Type

Remarks HOUSE WAS JUST SOLD

Sample Type X Bact X Part Chem
Organic ___ Large X Small ___ NYS
Pest ___ Other

VERYZER
Sanitarian

LAB. No. 870056
FIELD No. 1641
DATE: 1-29-87
TIME: AM
COL. BY: VERYLOR
(NAME, NOT INITIALS)

SUFFOLK COUNTY
DEPARTMENT OF HEALTH SERVICES

PUBLIC HEALTH LABORATORY

Date Received in LAB. JAN 29 1987
PUBLIC WATER
PRIVATE WATER X
SWIMMING POOL
BEACH
SEWAGE
OTHER

BACTERIOLOGICAL EXAMINATION OF WATER

Routine X Re-Sample

NAME MRS. LLOYD LOUE OWNER or DISTRICT

LOCATION 231 OLD COMMACK Rd, KINGS PARK

WATER SUPPLY SAMPLE DATA

POINT OF COLLECTION: K.T.
TAP FLAMED: YES X NO
Chlorine Residual:
If sample is from WELL, IS SANITARY SURVEY Satisfactory?
Unsatisfactory? (Explain)

SEWAGE PLANT SAMPLE DATA

Point of Collection
Holding time before dechlorination
Chlorine residual Rate of Flow (MGD)

SWIMMING POOL SAMPLE DATA

Chlorine Residual:
pH Is the bottom of Pool clearly visible at the deepest end:? YES NO

BEACH or STREAM SAMPLE DATA

WEATHER (Circle) FAIR CLOUDY RAIN
Weather Prev. 24 Hrs. Fair Cloudy Rain
Depth of Water at Point of Collection
Where along beach?
Position of Tide

REMARKS:

LAB USE ONLY

STANDARD PLATE COUNT/ml (24 HRS. 35°C)

MOST PROBABLE NUMBER/100 ml	MEMBRANE FILTER
Total Coliform:	Total Coliform/100ml < 2.2
Fecal Coliform:	Fecal Coliform/100ml
	Fecal Strep/100ml

'HL - 2 Rev. 3/80

DIRECTOR: Carl H. Hauss

Lab No. 0187508

Field No. 1641

Date: 1-29-87

Time: AM

Col. By: VERYZER
(Name not initials)

Date Received in Lab JAN 29 1987

Public Water

Private Water X

Other

Date Completed JAN 30 1987

Examined By [signature]

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
PUBLIC HEALTH LABORATORY
CHEMICAL EXAMINATION OF WATER

Name MRS. LLOYd LOVE

Owner or District

Location 231 OLd COMMACK Rd, KINGS PARK

Point of Collection K.T.

Remarks:

(1) Results Reported as Micrograms Per Liter.

Partial X Complete ☐ Metals Only ☐

Test	Result	No.	Test	Result	No.	Test	Result
Spec. Cond. μmhos/cm	30	84	T. Alkalinity (mg/l $CaCO_3$)		81	MBAS (mg/l)	
pH	6.0	82	T. Hardness (mg/l $CaCO_3$)		88	Total Hyd P (mg/l)	
Nitrites + Nitrates (mg/l N)	<0.2	83	Ca Hardness (mg/l $CaCO_3$)		90	Fluoride (mg/l F)	
Free Ammonia (mg/l N)	<0.02		Mg Hardness (mg/l $CaCO_3$)		77	Nitrites (mg/l N)	
Chlorides (mg/l Cl)	5						
Sulfates (mg/l SO_4)	<4	120	Arsenic (1)				
Iron (mg/l Fe)	0.13	125	Selenium (1)				
Manganese (mg/l Mn)	<0.05	122	Cadmium (1)				
Copper (mg/l Cu)	0.10	123	Lead (1)				
Sodium (mg/l Na)	4.2	126	Silver (1)				
Zinc (mg/l Zn)	0.9	104	Chromium (1)				
		124	Mercury (1)				
		121	Barium (mg/l Ba)				

Director [signature]

Form No. PHL-1

18-306..9/86cs

1.20

Lab No. TO-187567
Field No. 1641
Date 1-29-87
Time AM
Col. By VERBYZER

Rec'd at Lab 1/29/87
Public Water
Private Water X
Other
Date Completed 1-[illegible]-87
Examined By [illegible]

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

TRACE ORGANIC ANALYSIS OF WATER

Name MRS. LLOYD LOVE Owner or District

Location 231 OLD COMMACK RD, KINGS PARK

Point of Collection K.T.

Remarks: SMALL BOTTLES

	Compound	ppb		Compound	ppb
306	vinyl chloride	<1	250	benzene	<1
305	methylene chloride	<1	251	toluene	<1
290	bromochloromethane	-	258	chlorobenzene	<1
323	1,1 dichloroethane	<1	259	ethylbenzene	<1
309	trans dichloroethylene	<1	254	o-xylene	<1
300	chloroform	<1	252	m-xylene	<1
324	1,2 dichloroethane	<1	253	p-xylene	-
321	1,1,1 trichloroethane	<1	255	total xylenes	-
304	carbon tetrachloride	<1	257	bromobenzene	-
294	1 bromo 2 chloroethane	<1	266	o-chlorotoluene	-
405	1,2 dichloropropane	<1	267	m-chlorotoluene	<1
310	1,1,2 trichloroethylene	<1	268	p-chlorotoluene	<1
303	chlorodibromomethane	<1	265	total chlorotoluene	-
293	1,2 dibromoethane	<1	419	1,3,5 trimethylbenzene	<1
420	2 bromo 1 chloropropane	<1	418	1,2,4 trimethylbenzene	<1
301	bromoform	<1	415	m,p-dichlorobenzene	<2
311	tetrachloroethylene	<1	412	o-dichlorobenzene	<3
308	cis dichloroethylene	<1	432	p-diethylbenzene	<1
320	freon 113	<1	435	1,2,4,5 tetramethylbenz'	<1
292	dibromomethane	<1	437	1,2,4 trichlorobenzene	<3
307	1,1 dichloroethylene	<1	438	1,2,3 trichlorobenzene	<3
302	bromodichloromethane	<1	409	1,1,1,2 tetrachl'oethane	<1
406	2,3 dichloropropene	<1	430	1,2,2,3 tetrachl'propane	-
407	cis dichloropropene	<1	295	s-tetrachloroethane	<1
408	trans dichloropropene	<1	431	1,1,1,2 tetrachl'propane	-
322	1,1,2 trichloroethane	<1	433	1,2,3 trichloropropane	<1

18-1284..8/85

1642

REQUEST FOR WELL WATER ANALYSIS

Return to:
Suffolk County Department of Health Services
Bureau of Drinking Water
225 Rabro Drive, Hauppauge, N.Y. 11788

SURVEY

Applicant: please print clearly or type.

(3) LAUDERDALE
Last Name

(2) CHARLES
First Name

(4) 227
House Number

(9) OLD COMMACK RD.
Street

(8) KINGS PARK
Community Zip Code

(23) 269-4869
Telephone (Home) (Business)

(31) _____
Well Depth

(44) _____
Water Treatment or Filter Type

TAX MAP LOCATION
(from your tax bill)

(14) District _____
(13) Section _____
(16) Block _____
(17) Lot _____

Mailing address - if different
P.O. BOX 523
KINGS PK.

Physician's name & address
N-2a
Fe 0.51

Are you enclosing a doctor's request? ..... ___ YES ___ NO

Is only a pesticide sample, i.e. Temik, requested? ___ YES ___ NO

Is your name or house number visible from the street? ___ YES ___ NO

Is an outside tap available for sampling? ..... ___ YES ___ NO

Please include directions to your home from the nearest cross street on the reverse.

Reason for request? _____

_____
Signature

FOR OFFICIAL USE ONLY

(7) Township Code - - ___ TBA ___ TBR
___ TEH ___ THU ___ TIS ___ TOS
___ TRI ___ TSH ___ TSI X TSM

(20) X PRIV ___ NCOM ___ COMM

(51) Sample Date 1-29-87
(54) Sample Tap X Kit ___ Bth ___ OT
Other _____

(50*51) Resample Date _____
(50*54) Resample Tap _____
Resample Type _____

Remarks FRONT HOUSE

Sample Type X Bact X Part Chem
Organic ___ Large X Small ___ NYS
Pest ___ Other _____

VERYZER
Sanitarian

8700565

LAB. No.
FIELD No. 1642
DATE: 1-29-87
TIME: AM
COL. BY: VERYZER
(NAME, NOT INITIALS)

SUFFOLK COUNTY
DEPARTMENT OF HEALTH SERVICES

PUBLIC HEALTH LABORATORY

JAN 29 1987

Date Received in LAB.
PUBLIC WATER
PRIVATE WATER X
SWIMMING POOL
BEACH
SEWAGE
OTHER

Routine X Re-Sample

BACTERIOLOGICAL EXAMINATION OF WATER

NAME CHARLES LAUDERDALE OWNER or DISTRICT

LOCATION 227 OLD COMMACK Rd, KINGS PARK

WATER SUPPLY SAMPLE DATA

POINT OF COLLECTION: K.T.
TAP FLAMED: YES X NO
Chlorine Residual:
If sample is from WELL, IS SANITARY SURVEY Satisfactory?
Unsatisfactory? (Explain)

SEWAGE PLANT SAMPLE DATA

Point of Collection
Holding time before dechlorination
Chloring residual Rate of Flow (MGD)

SWIMMING POOL SAMPLE DATA

Chlorine Residual:
pH Is the bottom of Pool clearly visible at the deepest end:? YES NO

BEACH or STREAM SAMPLE DATA

WEATHER (Circle) FAIR CLOUDY RAIN
Weather Prev. 24 Hrs. Fair Cloudy Rain
Depth of Water at Point of Collection
Where along beach?
Position of Tide

REMARKS:

LAB USE ONLY

STANDARD PLATE COUNT/ml (24 HRS. 35°C)

MOST PROBABLE NUMBER/100 ml

Total Coliform:
Fecal Coliform:

MEMBRANE FILTER

Total Coliform/100ml <2.2
Fecal Coliform/100ml
Fecal Strep/100ml

DIRECTOR: Carl H. Hauss

PHL - 2 Rev. 3/80

Lab No. 0187509
Field No. 1642
Date: 1-29-87
Time: AM
Col. By: VERYZER
(Name not initials)

Date Received in Lab JAN 29 1987
Public Water
Private Water X
Other
Date Completed JAN 30 1987
Examined By [signature]

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
PUBLIC HEALTH LABORATORY
CHEMICAL EXAMINATION OF WATER

Name CHARLES LAUERDALE
Owner or District
Location 227 OLD COMMACK Rd., KINGS PARK
Point of Collection K.T.

Remarks:

(1) Results Reported as Micrograms Per Liter.

Partial X Complete ☐ Metals Only ☐

75	Spec. Cond. µmhos/cm	26	84	T. Alkalinity (mg/l $CaCO_3$)		81	MBAS (mg/l)	
73	pH	5.8	82	T. Hardness (mg/l $CaCO_3$)		88	Total Hyd P (mg/l)	
78	Nitrites + Nitrates (mg/l N)	<0.2	83	Ca Hardness (mg/l $CaCO_3$)		90	Fluoride (mg/l F)	
76	Free Ammonia (mg/l N)	<0.02		Mg Hardness (mg/l $CaCO_3$)		77	Nitrites (mg/l N)	
80	Chlorides (mg/l Cl)	5						
87	Sulfates (mg/l SO_4)	<4	120	Arsenic (1)				
100	Iron (mg/l Fe)	0.51	125	Selenium (1)				
101	Manganese (mg/l Mn)	<0.005	122	Cadmium (1)				
102	Copper (mg/l Cu)	<0.10	123	Lead (1)				
106	Sodium (mg/l Na)	3.8	126	Silver (1)				
103	Zinc (mg/l Zn)	<0.4	104	Chromium (1)				
			124	Mercury (1)				
			121	Barium (mg/l Ba)				

Director Carl H. Hanse

Form No. PHL-1

18-308_8/88cs

Lab No. TO-187568
Field No. 1642
Date 1-29-87
Time AM
Col. By VERYZER

Rec'd at Lab 1/29/87
Public Water
Private Water X
Other
Date Completed 1-2-87
Examined By [illegible]

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

TRACE ORGANIC ANALYSIS OF WATER

Name CHARLES LAUDERDALE Owner or District

Location 227 OLD COMMACK RD, KINGS PK.

Point of Collection K.T.

Remarks: SMALL BOTTLES

Compound	ppb	Compound	ppb
306 vinyl chloride	<1	250 benzene	<1
305 methylene chloride	<1	251 toluene	<1
290 bromochloromethane	—	258 chlorobenzene	<1
323 1,1 dichloroethane	<1	259 ethylbenzene	<1
309 trans dichloroethylene	<1	254 o-xylene	<1
300 chloroform	<1	252 m-xylene	<1
324 1,2 dichloroethane	<1	253 p-xylene	<1
321 1,1,1 trichloroethane	<1	255 total xylenes	—
304 carbon tetrachloride	<1	257 bromobenzene	—
294 1 bromo 2 chloroethane	<1	266 o-chlorotoluene	<1
405 1,2 dichloropropane	<1	267 m-chlorotoluene	<1
310 1,1,2 trichloroethylene	<1	268 p-chlorotoluene	<1
303 chlorodibromomethane	<1	265 total chlorotoluene	—
293 1,2 dibromoethane	<1	419 1,3,5 trimethylbenzene	<1
420 2 bromo 1 chloropropane	<1	418 1,2,4 trimethylbenzene	<1
301 bromoform	<1	415 m,p-dichlorobenzene	<2
311 tetrachloroethylene	<1	412 o-dichlorobenzene	<1
308 cis dichloroethylene	<1	432 p-diethylbenzene	<1
320 freon 113	<1	435 1,2,4,5 tetramethylbenz'	<1
292 dibromomethane	<1	437 1,2,4 trichlorobenzene	<1
307 1,1 dichloroethylene	<1	438 1,2,3 trichlorobenzene	<1
302 bromodichloromethane	<1	409 1,1,1,2 tetrachl'oethane	<1
406 2,3 dichloropropene	<1	430 1,2,2,3 tetrachl'propane	<1
407 cis dichloropropene	<1	295 s-tetrachloroethane	<1
408 trans dichloropropene	<1	431 1,1,1,2 tetrachl'propane	—
322 1,1,2 trichloroethane	<1	433 1,2,3 trichloropropane	<1

REFERENCE 8

(Located in Roux Associates, Inc. Files)

REFERENCE 9

(Located in Roux Associates, Inc. Files)

REFERENCE 10

(Located in Roux Associates, Inc. Files)

APPENDIX B

Results of Soil Gas Survey

Soil Gas Survey

A soil gas survey was conducted at the Smithtown Landfill site on May 10 and 11, 1990 by LGI, a division of Layne GeoSciences, Inc. with project oversight provided by Roux Associates, Inc. This information has been used to determine if proposed well locations should be relocated at the site to maximize the effectiveness of the ground-water investigation program and to identify any contaminants which may exist in the groundwater underlying the site. The survey did not reveal any large plume of contamination which should be monitored, but did reveal health and safety hazards which may exist on the site.

LGI used a mobile laboratory to conduct the survey. All procedures and data can be found in LGI's report to Gibbs & Hill, Inc. as Attachment 1 to this appendix.

A total of 16 samples were taken at the northern edge of the site until operations were suspended due to high Lower Explosion Limit (LEL) readings for methane recorded at the sampling holes (over the 20% of the LEL limit which had been established by LGI). It was then decided that samples be taken at the perimeter locations to determine if sampling could continue. These sampling holes also recorded high LEL readings (50 to 80% of the LEL) so it was decided that too great of a hazard for fire or explosion existed to continue with the survey.

APPENDIX C

Section 1 - Spilt Spoon Sampling and Monitoring Well Installation

Section 2 - Monitoring Well Sampling

METHODS OF INVESTIGATION

The investigation consisted of a detailed subsurface study directed at identifying the nature and extent of any ground-water and soil contaminated at the Site.

The investigation was composed of a multi-task study as follows:

- Soil sampling
- Monitoring well installation
- Ground-water sampling

All monitoring wells were installed by Marine Pollution Control, Inc. of Calverton, New York under the supervision of a hydrogeologist from Roux Associates, Inc. A truck mounted hollow stem auger rig was used to install the wells. Split-spoon core barrel samplers were used to collect samples continuously (every five feet) from land surface to the bottom of the boring.

The split-spoon samples were collected ahead of the auger flights in undisturbed sediments using a standard 140 lb. hammer with a 30 inch fall. The number of blows required to drive the sampler each six inches was noted and logged in the field book.

The split-spoon sampler was opened on clean plastic sheeting, and samples were immediately placed in glass mason jars by a hydrogeologist and logged in detail, paying particular attention to the presence of contamination (odor, texture, staining, etc.). Detailed geologic logs are given in Appendix D. In addition to logging the split-spoon samples, the soil sample was field screened using an organic vapor meter (OVM - Model 580A) and recorded.

As part of the health and safety plan, ambient air quality in the breathing zone was monitored throughout the drilling program using a portable organic vapor meter (OVM), portable organic vapor analyzer (OVA), tri-gas meter, and radiometer. All readings were recorded in the Site field book.

After a sample was collected, the bore hole was advanced five feet with power driven, 6¼ inch diameter, hollow stem auger flight and the next sample collected. To prevent dilution of any contaminants that might be present, water was not normally used in the hole during drilling. Water was only used in the hole when running sand was encountered and had to be washed out so that the well could be set at the desired depth.

Cross-contamination of sediments within the boring was minimized as samples were collected ahead of the auger flights. In addition, several split-spoon samplers were used and each sampler used was decontaminated by means of a steam cleaner.

Clean plastic sheeting was spread out on the ground in the work area and all drilling equipment including augers, rods, and any other tools and equipment used for drilling were placed on wooden pallets.

To prevent cross-contamination between boreholes, all appropriate drilling equipment, including the drilling rig, was steam cleaned before moving to the next well location.

Section 1 - Split Spoon Sampling and Monitoring Well Installation

MONITORING WELL INSTALLATION

Upon completion of the soil boring, a 10-foot long, 2-inch diameter, Schedule 40 PVC (polyvinyl chloride), 0.010 slotted section and appropriate length of blank PVC riser pipe were installed in the annular space of the hollow stem auger. Prior to installation of the well, all well materials (screen, riser, and caps) were steam cleaned, and all personnel handling the materials wore clean rubber gloves to minimize cross contamination. A suitable sized graded sand (No. 1) was then used to pack the annular space at least 2 to 3 feet above the screen zone.

A two-foot thick bentonite pellet seal was emplaced. A continuous flow of water was poured slowly onto the pellets for 60 minutes to allow for hydration.

The remaining open portion of the annulus was filled with a cement-based grout slurry, which was pumped into the annulus through a tremie pipe.

Pumping of the grout continued to within three feet of land surface. A protective 6-inch steel casing with a locking cover was cemented into place over the PVC casing. The steel casings extend approximately three feet below land surface and stick up approximately two feet above land surface.

Section 2 - Monitoring Well Sampling

MONITORING WELL SAMPLING

Monitoring Wells MW-1 through MW-4 were sampled on December 27, 1990. Prior to sampling, water-level measurements were recorded to the nearest hundredth of a foot (Table 2). Each well was sampled immediately after it was purged.

Prior to purging, the seal-of-custody on the laboratory-provided, pre-labeled sample bottle was cut to facilitate prompt sampling. The field parameters (conductivity, pH, temperature, and turbidity) were measured and sampling would then commence when they reached equilibrium and when the turbidity was below 50 nephelometric turbidity units (NTUs). The wells were purged using a Geoguard air surge pump with a new air filter and were purged until four well volumes were removed from each well.

Sampling for each well was done with disposable, dedicated bailers which were suspended in the wells after use. All sampling personnel wore a clean set of disposable vinyl gloves for each well.

The following sample bottles were collected for each well:

	Preservative
2-40 ml vials	--
1-1000 ml plastic	HNO_3
2-1000 ml plastic	NaO_4
2-1000 ml plastic	--
3-liter glass	--

A duplicate sample (labeled MW-1A) was collected for MW-4. A matrix spike/matrix spike duplicate (MS/MSD) sample was taken at well MW-3. The lab was supplied a bailer from the lot of bailers (lot #7) used in the investigation to be analyzed as a field blank, so no field blanks were taken in the field. A trip blank was analyzed for volatile organics.

All samples were placed on ice and hand delivered to H2M Laboratory the day after collection (approximately 23 hours after the first sample was taken). Chain of custody documentation is provided in Appendix E. All disposable sampling equipment (gloves, rope) was properly discarded upon completion of sampling.

WELL SAMPLING DATA FORM

CLIENT	Gibbs & Hill
PROJECT NO.	07709Y
LOCATION	Smithtown Landfill

WELL NUMBER	MW-1	TYPE OF WELL	Monitoring Well
DATE	12/27/90	STORAGE TANK	
WEATHER	Cold & Cloudy 28°F	TIME OF START	9:35 AM
SAMPLED BY	Eric Arnesen	TIME OF FINISH	10:05 AM

DEPTH TO BOTTOM OF WELL	52.58	FT.
DEPTH TO WATER	44.67	FT.
WATER COLUMN	7.91	FT.
VOLUME OF WATER IN WELL	1.15	GAL.
VOLUME OF WATER TO REMOVE	4.60	GAL.
VOLUME REMOVED	~11.00	GAL.

RATE OF PURGE	~1 gal/min
METHOD OF PURGE	Bladder pump

PHYSICAL APPEARANCE/COMMENTS

Water initially clear but became more turbid as sampling progressed

FIELD MEASUREMENTS

TIME	pH	COND	TEMP	TURB	Eh	O^2
9:40 AM	7.22	497	-	off scale	-	-
9:46 AM	7.03	500	-	off scale	-	-
9:50 AM	6.39	506	-	off scale	-	-
9:52 AM	6.40	516	-	off scale	-	-
10:00 AM	6.38	512	-	60 NTU	-	-
10:05 AM	-	-	-	39 NTU	-	-

TYPES OF SAMPLES COLLECTED

TCL Metals
TCL Volatiles
TCL Semi-Volatiles
TCL Pesticides/PCBs
Full TCL - pH, Specific Conductance, COD
TDS, TSS

LABORATORY NAME AND LOCATION

H2M Laboratories
Melville, New York

WELL SAMPLING DATA FORM

CLIENT	Gibbs & Hill
PROJECT NO.	07709Y
LOCATION	Smithtown Landfill

WELL NUMBER	MW-2	TYPE OF WELL	Monitoring Well
DATE	12/27/90	STORAGE TANK	
WEATHER	Cold & Cloudy 28°F	TIME OF START	11:10 AM
SAMPLED BY	Eric Arnesen	TIME OF FINISH	11:20 AM

DEPTH TO BOTTOM OF WELL	89.45	FT.
DEPTH TO WATER	82.81	FT.
WATER COLUMN	6.64	FT.
VOLUME OF WATER IN WELL	.97	GAL.
VOLUME OF WATER TO REMOVE	3.88	GAL.
VOLUME REMOVED	~7.0	GAL.

RATE OF PURGE	~1 gpm
METHOD OF PURGE	Bladder pump

PHYSICAL APPEARANCE/COMMENTS

Initially clear but became more turbid as sampling progressed. MS/MSD sample taken here.

FIELD MEASUREMENTS

TIME	pH	COND	TEMP	TURB	Eh	O^2
11:10 AM	6.31	256	-	off scale	-	-
11:15 AM	6.23	246	-	off scale	-	-
11:20 AM	6.30	241	-	18 NTU	-	-

TYPES OF SAMPLES COLLECTED

TCL Metals
TCL Volatiles
TCL Semi-Volatiles
TCL - Pesticides/PCBs
Full TCL - pH, specific conductance, COD, TDS, TSS

LABORATORY NAME AND LOCATION

H2M Laboratories
Melville, New York

WELL SAMPLING DATA FORM

CLIENT	Gibbs & Hill
PROJECT NO.	07709Y
LOCATION	Smithtown Landfill

WELL NUMBER	MW-3	TYPE OF WELL	Monitoring Well
DATE	12/27/90	STORAGE TANK	
WEATHER	Cold & Cloudy 28°F	TIME OF START	1:10 PM
SAMPLED BY	Eric Arnesen	TIME OF FINISH	1:41 PM

DEPTH TO BOTTOM OF WELL	85.29	FT.
DEPTH TO WATER	77.12	FT.
WATER COLUMN	8.17	FT.
VOLUME OF WATER IN WELL	1.19	GAL.
VOLUME OF WATER TO REMOVE	4.76	GAL.
VOLUME REMOVED	~15.50	GAL.

RATE OF PURGE	~ 1 gpm
METHOD OF PURGE	Bladder pump

PHYSICAL APPEARANCE/COMMENTS

Water initially clear, then became more turbid as sampling progressed.

FIELD MEASUREMENTS

TIME	pH	COND	TEMP	TURB	Eh	O^2
1:10 PM	6.14	317	-	off scale	-	-
1:15 PM	6.00	327	-	off scale	-	-
1:20 PM	6.00	332	-	off scale	-	-
1:25 PM	6.00	335	-	off sclae	-	-
1:32 PM	-	-	-	81 NTU	-	-
1:36 PM	-	-	-	73 NTU	-	-
1:41 PM	-	-	-	40 NTU	-	-

TYPES OF SAMPLES COLLECTED

TCL Metals
TCL Volatiles
TCL Semi-Volatiles
TCL Pesticides/PCB's
Full TCL - pH, specific conductance, COD, TDS, TSS

LABORATORY NAME AND LOCATION

H2M Laboratories
Melville, New York

WELL SAMPLING DATA FORM

CLIENT	Gibbs & Hill
PROJECT NO.	07709Y
LOCATION	Smithtown Landfill

WELL NUMBER	MW-4	TYPE OF WELL	Monitoring Well
DATE	12/27/90	STORAGE TANK	
WEATHER	Cold & Clear 28°F	TIME OF START	2:50 PM
SAMPLED BY	Eric Arnesen	TIME OF FINISH	3:30 PM

DEPTH TO BOTTOM OF WELL	85.82	FT.
DEPTH TO WATER	79.30	FT.
WATER COLUMN	6.52	FT.
VOLUME OF WATER IN WELL	0.95	GAL.
VOLUME OF WATER TO REMOVE	3.80	GAL.
VOLUME REMOVED	~16.00	GAL.

RATE OF PURGE	~ 1 gpm
METHOD OF PURGE	Bladder pump

PHYSICAL APPEARANCE/COMMENTS

Clear at first, then became more turbid as sampling progressed. Water had a yellow tint with a sour smell, also felt unusually warm. Duplicate sample taken here.

FIELD MEASUREMENTS

TIME	pH	COND	TEMP	TURB	Eh	O^2
3:50 PM	7.09	5436	-	2 NTU	-	-
3:56 PM	7.09	5570	-	-	-	-

TYPES OF SAMPLES COLLECTED

TCL Metals
TCL Volatiles
TCL Pesticides/PCB's
Full TCL - pH, specific conductance, COD, TDS, TSS

LABORATORY NAME AND LOCATION

H2M Laboratories
Melville, New York

APPENDIX D

Geologic Logs and
Well Construction Diagrams

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES, INC.

GEOLOGIC LOG

Study No. 07709Y Date 12/17/90
Project Smithtown Landfill
Client Gibbs & Hill, Inc.
Page 1 of 2
Logged By Eric Arnesen
Well No. MW-1
Location Smithtown, New York
M.P. Elevation 183.86
Drilling Started 9:50 am Ended N/R
Driller Marine Pollution Control Don Klaus
Type of Rig Hollow Stem Auger

WELL DATA

Hole Diam. (in.) 10
Final Depth (ft.) 55
Casing Diam. (in.) 2
Casing Length (ft.) 44.64
Screen Setting (ft.) 42.58-52.58
Screen Slot & Type .010 PVC
Well Status Monitoring

G-W READINGS (1)

Date	DTW MP (2)	Elev. W.S
12/20/90		
BD	44.29	
AD	44.50	
12/27/90	44.67	

SAMPLER

Type Split Spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Waterra pump and Geoguard pump ~300 gallons removed.

PID (ppm)	SAMPLE No.	Rec.	Depth	Blows 6	Strata Change & Gen. Desc.	Depth (ft)	SAMPLE DESCRIPTION
0	1		0-2'		SAND	0	Not sampled. Due to check for gas line.
0	2	1.0	5-10	51 Total		5	Top 0.5': Coarse brown SAND. Bottom 0.5': Coarse white SAND trace gravel.
0	3	1.7	10-12	6, 8, 10, 11		10	All coarse white SAND trace gravel.
0	4	1.5	15-17	3, 7, 10, 14	SAND & GRAVEL	15	Top 1.0': All coarse white SAND trace gravel. Bottom 0.5': Very coarse white SAND and gravel.
0	5	0.3	20-22	3, 9, 11, 14		20	All very coarse white SAND and gravel.
0	6	1.7	25-27	5, 10, 13, 17		25	All white coarse SAND and gravel.
0	7	1.7	30-32	5, 8, 12, 13		30	All very coarse white SAND and gravel.
0	8	1.6	35-37'	3, 6, 13, 16		35	Brown coarse SAND, trace gravel.

REMARKS (1) in feet relative to a common datum
(2) from top of PVC casing

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES, INC.

GEOLOGIC LOG

Study No. 07709Y Date 12/17/90
Project Smithtown Landfill
Client Gibbs & Hill, Inc.
Page 2 of 2
Logged By Eric Arnesen
Well No. MW-1
Location Smithtown, New York
M.P. Elevation 183.86
Drilling Started 9:50 am Ended N/R
Driller Marine Pollution Control Don Klaus
Type of Rig Hollow Stem Auger

WELL DATA

Hole Diam. (in.) 10
Final Depth (ft.) 55
Casing Diam. (in.) 2
Casing Length (ft.) 44.64
Screen Setting (ft.) 42.58-52.58
Screen Slot & Type .010 PVC
Well Status Monitoring

G-W READINGS (1)

Date	DTW MP (2)	Elev. W.S
12/20/90		
BD	44.29	
AD	44.50	
12/27/90	44.67	

SAMPLER

Type Split Spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Waterra pump and Geoguard pump ~300 gallons removed.

PID (ppm)	SAMPLE No.	Rec.	Depth	Blows 6	Strata Change & Gen. Desc.	Depth (ft)	SAMPLE DESCRIPTION
0	9	1.0	40-42	11, 14, 8, 11		40	Top 0.3': Brown coarse SAND trace gravel. Bottom 0.7': Medium tan SAND trace gravel.
0	10	1.0	45-47	6, 8, 8, 11		45	Medium brown SAND trace gravel some silt, wet.
						50	
0	11	2.0	53-55	4, 6, 8, 9		55	All brown medium to fine SAND with silty and trace gravel.
						60	
						65	
						70	
						75	

REMARKS (1) in feet relative to a common datum
(2) from top of PVC casing

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES, INC.

GEOLOGIC LOG

Study No. 07709Y Date 12/13/90
Project Smithtown Landfill
Client Gibbs & Hill, Inc.
Page 1 of 3
Logged By Eric Arnesen
Well No. MW-2
Location Smithtown, New York
M.P. Elevation 219.40
Drilling Started 9:20 am Ended N/R
Driller Marine Pollution Control Don Klaus
Type of Rig Hollow Stem Auger

WELL DATA

Hole Diam. (in.) 10
Final Depth (ft.) 90
Casing Diam. (in.) 2
Casing Length (ft.) 80.95
Screen Setting (ft.) 78.75-88.75
Screen Slot & Type .010 PVC
Well Status Monitoring

G-W READINGS (1)

Date	DTW MP (2)	Elev. W.S
12/19/90	82.75	
12/21/90		
BD	82.75	
AD	82.75	
12/27/90	82.81	

SAMPLER

Type Split Spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Waterra pump at ~5 gpm ~200 gallons removed.

PID (ppm)	SAMPLE No.	Rec.	Depth	Blows 6	Strata Change & Gen. Desc.	Depth (ft)	SAMPLE DESCRIPTION
0	1		0-2	from cuttings	SAND	0	All brown medium coarse SAND and gravel.
0	2	1.0	5-7	3, 5, 5, 6		5	Top 0.3': Dark brown medium SAND trace gravel. Bottom 0.7': Light brown medium SAND.
0	3	1.2	10-12	3, 8, 6, 5		10	Top 0.3': Brown medium SAND. Middle 0.5': Coarse white SAND. Bottom 0.4': Very coarse SAND and gravel.
0	4	1.0	15-17	8, 5, 7, 10		15	All coarse white SAND trace gravel.
0	5	1.8	20-22	3, 8, 11, 15		20	All coarse white SAND trace gravel.
0	6	1.0	25-27	4, 8, 13, 20		25	All very coarse white SAND trace gravel.
0	7	1.0	30-32	3, 5, 13, 15		30	Top 0.5': All very coarse white SAND trace gravel. Bottom 0.5': Coarse white SAND.
0	8	1.7	35-37	3, 9, 10, 12		35	All coarse white SAND trace gravel.

REMARKS (1) in feet relative to a common datum
(2) from top of PVC casing

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES, INC.

GEOLOGIC LOG

Study No. 07709Y Date 12/13/90
Project Smithtown Landfill
Client Gibbs & Hill, Inc.
Page 2 of 3
Logged By Eric Arnesen
Well No. MW-2
Location Smithtown, New York
M.P. Elevation 219.40
Drilling Started 9:20 am Ended N/R
Driller Marine Pollution Control Don Klaus
Type of Rig Hollow Stem Auger

WELL DATA

Hole Diam. (in.) 10
Final Depth (ft.) 90
Casing Diam. (in.) 2
Casing Length (ft.) 80.95
Screen Setting (ft.) 78.75-88.75
Screen Slot & Type .010 PVC
Well Status Monitoring

G-W READINGS (1)

Date	DTW MP (2)	Elev. W.S
12/19/90	82.75	
12/21/90		
BD	82.75	
AD	82.75	
12/27/90	82.81	

SAMPLER

Type Split Spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Waterra pump at ~5 gpm ~200 gallons removed.

PID (ppm)	SAMPLE No.	Rec.	Depth	Blows 6	Strata Change & Gen. Desc.	Depth (ft)	SAMPLE DESCRIPTION
0	9	1.0	40-42	8, 10, 11, 15		40	All coarse white SAND some gravel.
0	10	0.8	45-47	3, 6, 8, 15		45	All coarse white SAND.
0	11	NR	50-52	5, 10, 12, 16		50	Began hitting large rock obstruction. Tried again and could not get any recovery, so moved on.
0	12	NR	55-57	97 Total		55	Began hitting large rock obstruction. Tried again and could not get any recovery, so moved on.
0	13	0.2	60-62	4, 8, 15, 21		60	Beginning to break up rock. All brown coarse SAND trace gravel and broken rock.
0	14	1.0	65-67	2, 8, 10, 18		65	Beginning to break up rock. All brown coarse SAND trace gravel and broken rock.
0	15	0.2	70-72	4, 12, 15, 41		70	Mix of coarse SAND, gravel, and fractured rock.
0	16	0.3	75-77	10, 20, 30, 38		75	Coarse orange SAND, trace gravel and fractured rock.

REMARKS (1) in feet relative to a common datum
(2) from top of PVC casing

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES, INC.

GEOLOGIC LOG

Study No. 07709Y Date 12/13/90
Project Smithtown Landfill
Client Gibbs & Hill, Inc.
Page 3 of 3
Logged By Eric Arnesen
Well No. MW-2
Location Smithtown, New York
M.P. Elevation 219.40
Drilling Started 9:20 am Ended N/R
Driller Marine Pollution Control Don Klaus
Type of Rig Hollow Stem Auger

WELL DATA

Hole Diam. (in.) 10
Final Depth (ft.) 90
Casing Diam. (in.) 2
Casing Length (ft.) 80.95
Screen Setting (ft.) 78.75-88.75
Screen Slot & Type .010 PVC
Well Status Monitoring

G-W READINGS (1)

Date	DTW MP (2)	Elev. W.S
12/19/90	82.75	
12/21/90		
BD	82.75	
AD	82.75	
12/27/90	82.81	

SAMPLER

Type Split Spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Waterra pump at ~5 gpm ~200 gallons removed.

PID (ppm)	SAMPLE No.	Rec.	Depth	Blows 6	Strata Change & Gen. Desc.	Depth (ft)	SAMPLE DESCRIPTION
0	17	0.5	80-82	4, 10, 23, 56		80	Very coarse brown SAND and trace gravel.
0	18	1.0	85-87	5, 4, 7, 10		85	Very coarse brown SAND and gravel.
0	19	1.0	90-92	10, 4, 3, 2		90	Very coarse brown SAND and gravel.
						95	
						100	
						105	
						110	
						115	

REMARKS (1) in feet relative to a common datum
(2) from top of PVC casing

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES, INC.

GEOLOGIC LOG

Study No. 07709Y Date 12/7,12/12/90
Project Smithtown Landfill
Client Gibbs & Hill, Inc.
Page 1 of 3
Logged By Eric Arnesen
Well No. MW-3
Location Smithtown, New York
M.P. Elevation 213.40
Drilling Started 10:10 Ended N/R
Driller Marine Pollution Control Don Klaus
Type of Rig Hollow Stem Auger

WELL DATA

Hole Diam. (in.) 10
Final Depth (ft.) 90
Casing Diam. (in.) 2
Casing Length (ft.) 81.18
Screen Setting (ft.) 75.48-85.48
Screen Slot & Type .010 PVC
Well Status Monitoring

G-W READINGS (1)

Date	DTW MP (2)	Elev. W.S
12/13/90	85.48	
12/21/90		
BD	77.31	
AD	77.29	
12/27/90	77.12	

SAMPLER

Type Split Spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Waterra pump not used, geoguard only at ~1 gpm ~180 gallons removed

PID (ppm)	SAMPLE No.	Rec.	Depth	Blows 6	Strata Change & Gen. Desc.	Depth (ft)	SAMPLE DESCRIPTION
0	1	1.5	0-2	52 Total	SAND	0	Top 0.7': Brown medium SAND trace gravel. Bottom 0.8': White medium SAND trace gravel.
0	2	1.0	5-7	6, 10, 8, 7		5	Top 0.7': Brown medium SAND trace gravel. Bottom 0.3': Coarse white SAND.
0	3	1.0	10-12	6, 5, 7, 5		10	All white medium SAND.
0	4	1.2	15-17	3, 6, 8, 6		15	Top 1.0': Brown medium SAND trace gravel. Bottom 0.2': White medium SAND.
0	5	1.0	20-22	5, 12, 9, 10		20	Top 0.5': Brown medium SAND, trace gravel, some organic material. Bottom 0.5': White medium to coarse SAND trace gravel.
0	6	1.0	25-27	6, 8, 14, 11		25	All coarse white SAND and gravel.
0	7	1.0	30-32	5, 8, 15, 17		30	Coarse white SAND trace gravel.
0	8	1.0	35-37	9, 21, 22, 29		35	Brown coarse SAND trace gravel.

REMARKS (1) in feet relative to a common datum
(2) from top of PVC casing

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES, INC.

GEOLOGIC LOG

Study No. 07709Y Date 12/7,12/12/90
Project Smithtown Landfill
Client Gibbs & Hill, Inc.
Page 2 of 3
Logged By Eric Arnesen
Well No. MW-3
Location Smithtown, New York
M.P. Elevation 213.40
Drilling Started 10:10 Ended N/R
Driller Marine Pollution Control Don Klaus
Type of Rig Hollow Stem Auger

WELL DATA

Hole Diam. (in.) 10
Final Depth (ft.) 90
Casing Diam. (in.) 2
Casing Length (ft.) 81.18
Screen Setting (ft.) 75.48-85.48
Screen Slot & Type .010 PVC
Well Status Monitoring

G-W READINGS (1)

Date	DTW MP (2)	Elev. W.S
12/13/90	85.48	
12/21/90		
BD	77.31	
AD	77.29	
12/27/90	77.12	

SAMPLER

Type Split Spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Waterra pump not used, geoguard only at ~1 gpm ~180 gallons removed

PID (ppm)	SAMPLE No.	Rec.	Depth	Blows 6	Strata Change & Gen. Desc.	Depth (ft)	SAMPLE DESCRIPTION
0	9	1.0	40-42	11, 22, 22, 23	GRAVEL	40	Top 0.4': Brown medium SAND trace gravel. Middle 0.3': Fine white SAND. Bottom 0.3': Coarse gravel.
0	10	0.8	45-47	29, 23, 18, 21		45	Top 0.2': White coarse gravel and fine SAND. Bottom 0.6': Orange medium SAND and gravel.
0	11	1.0	50-52	15, 24, 38, 37		50	Top 0.8': Coarse orange SAND and gravel. Bottom 0.2': Dark brown fine SAND.
0	12	0	55-57	13, 25, 100/4		55	Not enough of sample to log.
0	13	0.8	60-62	WR, 5, 22, 26	SAND	60	Coarse orange SAND trace gravel.
0	14	1.0	65-67	13, 44, 33, 65		65	All orange medium SAND trace gravel.
0	15	1.0	70-72	7, 17, 55, 90		70	Orange, white, brown banded medium SAND trace gravel.
0	16	2.0	75-77	6, 21, 35, 48		75	Orange coarse SAND, wet.

REMARKS (1) in feet relative to a common datum
(2) from top of PVC casing

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES, INC.

GEOLOGIC LOG

Study No. 07709Y Date 12/7,12/12/90
Project Smithtown Landfill
Client Gibbs & Hill, Inc.
Page 3 of 3
Logged By Eric Arnesen
Well No. MW-3
Location Smithtown, New York
M.P. Elevation 213.40
Drilling Started 10:10 Ended N/R
Driller Marine Pollution Control Don Klaus
Type of Rig Hollow Stem Auger

WELL DATA

Hole Diam. (in.) 10
Final Depth (ft.) 90
Casing Diam. (in.) 2
Casing Length (ft.) 81.18
Screen Setting (ft.) 75.48-85.48
Screen Slot & Type .010 PVC
Well Status Monitoring

G-W READINGS (1)

Date	DTW MP (2)	Elev. W.S
12/13/90	85.48	
12/21/90		
BD	77.31	
AD	77.29	
12/27/90	77.12	

SAMPLER

Type Split Spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Waterra pump not used, geoguard only at ~1 gpm ~180 gallons removed

PID (ppm)	SAMPLE No.	Rec.	Depth	Blows 6	Strata Change & Gen. Desc.	Depth (ft)	SAMPLE DESCRIPTION
0	17	1.0	80-82	5, 9, 7, 11		80	Top 0.5': Orange coarse SAND trace gravel. Bottom 0.5': Light brown coarse SAND trace gravel, wet, sample taken here.
0	18	0.5	85-87	4, 6, 9, 9		85	Very coarse brown SAND.
						90	
						95	
						100	
						105	
						110	
						115	

REMARKS (1) in feet relative to a common datum
(2) from top of PVC casing

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES, INC.

GEOLOGIC LOG

Study No. 07709Y Date 11/13, 12/5/90
Project Smithtown Landfill
Client Gibbs & Hill, Inc.
Page 1 of 3
Logged By Eric Arnesen
Well No. MW-4
Location Smithtown, New York
M.P. Elevation 216.10
Drilling Started 12:30 11/13 Ended 2:30 12/5
Driller Marine Pollution Control Joe Kaufman
Type of Rig Hollow Stem Auger

WELL DATA

Hole Diam. (in.) 10
Final Depth (ft.) 85
Casing Diam. (in.) 2
Casing Length (ft.) 76.27
Screen Setting (ft.) 73.57-83.57
Screen Slot & Type .010 PVC
Well Status Monitoring

G-W READINGS (1)

Date	DTW MP (2)	Elev. W.S
12/13/90	79.78	
12/21/90		
BD	78.11	
AD	79.54	
12/27/90	79.30	

SAMPLER

Type Split Spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Waterra and Geoguard pump at 4.5 gpm for 2 3/4 hours ~800 gallons removed

PID (ppm)	SAMPLE No.	Rec.	Depth	Blows 6	Strata Change & Gen. Desc.	Depth (ft)	SAMPLE DESCRIPTION
0	1	2.0	0-2	4, 7, 6, 12	SAND	0	Top 1.0': Medium brown SAND and organic material. Bottom 1.0': White medium SAND trace.
0	2	2.0	5-7	2, 2, 4, 9		5	Top 1.3': Brown coarse SAND, trace gravel. Middle 0.2': Tan coarse SAND. Bottom 0.5': White medium SAND, trace gravel.
0	3	1.5	10-12	3, 4, 5, 9		10	Top 0.5': Brown medium SAND. Bottom 1.0': Coarse white SAND.
0	4	1.5	15-17	2, 3, 5, 6		15	All white coarse SAND.
0	5	1.5	20-22	5, 9, 11, 14		20	All white coarse SAND.
0	6	1.8	25-27	2, 4, 9, 14		25	All very coarse white SAND and gravel.
0	7	1.0	30-32	5, 7, 6, 8		30	All white medium SAND and trace gravel.
0	8	1.6	35-37	7, 4, 10, 10		35	Top 0.7': White coarse SAND trace gravel. Middle 0.3': White fine SAND. Bottom 0.3': White coarse SAND, trace gravel.

REMARKS (1) in feet relative to a common datum
(2) from top of PVC casing

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES, INC.

GEOLOGIC LOG

Study No. 07709Y Date 11/13, 12/5/90
Project Smithtown Landfill
Client Gibbs & Hill, Inc.
Page 2 of 3
Logged By Eric Arnesen
Well No. MW-4
Location Smithtown, New York
M.P. Elevation 216.10
Drilling Started 12:30 11/13 Ended 2:30 12/5
Driller Marine Pollution Control Joe Kaufman
Type of Rig Hollow Stem Auger

WELL DATA

Hole Diam. (in.) 10
Final Depth (ft.) 83.57
Casing Diam. (in.) 2
Casing Length (ft.) 76.27
Screen Setting (ft.) 73.57-83.57
Screen Slot & Type .010 PVC
Well Status Monitoring

G-W READINGS (1)

Date	DTW MP (2)	Elev. W.S.
12/13/90	79.78	
12/21/90		
BD	78.11	
AD	79.54	
12/27/90	79.30	

SAMPLER

Type Split Spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Waterra and Geoguard pump at 4.5 gpm for 2 3/4 hours ~800 gallons removed

PID (ppm)	SAMPLE No.	Rec.	Depth	Blows 6	Strata Change & Gen. Desc.	Depth (ft)	SAMPLE DESCRIPTION
0	9	1.0	40-42	2, 14, 6, 23		40	All brown coarse SAND, trace gravel.
0	10	2.0	45-47	4, 15, 15, 23		45	Top 1.3': Dark brown medium SAND. Bottom 0.7': White coarse SAND and gravel.
0	11	1.5	50-52	14, 13, 16, 21		50	Top 0.5': Coarse brown SAND, trace gravel. Bottom 1.0': Medium brown with bands of black and orange SAND.
0	12	1.8	55-57	6, 9, 20, 30		55	All orange brown medium SAND, trace gravel.
0	13	1.8	60-62	7, 11, 16, 31		60	Orange brown medium SAND with brown bands.
0	14	1.8	65-67	5, 12, 18, 20		65	Orange brown medium SAND, trace gravel.
0	15	1.8	70-72	7, 15, 20, 31		70	All orange brown and white medium SAND with brown bands.
0	16	1.8	75-77	Not Recorded		75	Top 0.4': Light brown medium SAND. Middle 0.8': Orange medium SAND, trace gravel. Bottom 0.6': Gravely white and orange medium SAND, wet.

REMARKS (1) in feet relative to a common datum
(2) from top of PVC casing

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES, INC.

GEOLOGIC LOG

Study No. 07709Y Date 11/13, 12/5/90
Project Smithtown Landfill
Client Gibbs & Hill, Inc.
Page 3 of 3
Logged By Eric Arnesen
Well No. MW-4
Location Smithtown, New York
M.P. Elevation 216.10
Drilling Started 12:30 11/13 Ended 2:30 12/5
Driller Marine Pollution Control Joe Kaufman
Type of Rig Hollow Stem Auger

WELL DATA

Hole Diam. (in.) 10
Final Depth (ft.) 85
Casing Diam. (in.) 2
Casing Length (ft.) 76.27
Screen Setting (ft.) 73.57-83.57
Screen Slot & Type .010 PVC
Well Status Monitoring

G-W READINGS (1)

Date	DTW MP (2)	Elev. W.S.
12/13/90	79.78	
12/21/90		
BD	78.11	
AD	79.54	
12/27/90	79.30	

SAMPLER

Type Split Spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Waterra and Geoguard pump at 4.5 gpm for 2 3/4 hours ~800 gallons removed

PID (ppm)	SAMPLE No.	Rec.	Depth	Blows 6	Strata Change & Gen. Desc.	Depth (ft)	SAMPLE DESCRIPTION
0	17	2.0	80-82	8, 10, 14, 15		80	Bottom 0.4': Fine SAND and gravel. Top 1.6': Fine brown SAND, wet.
0	18	2.0	85-87	5, 9, 7, 8		85	Top 0.3': Brown medium SAND. Bottom 1.7': Coarse SAND and gravel, wet. Sample taken here.
						90	
						95	
						100	
						105	
						110	
						115	

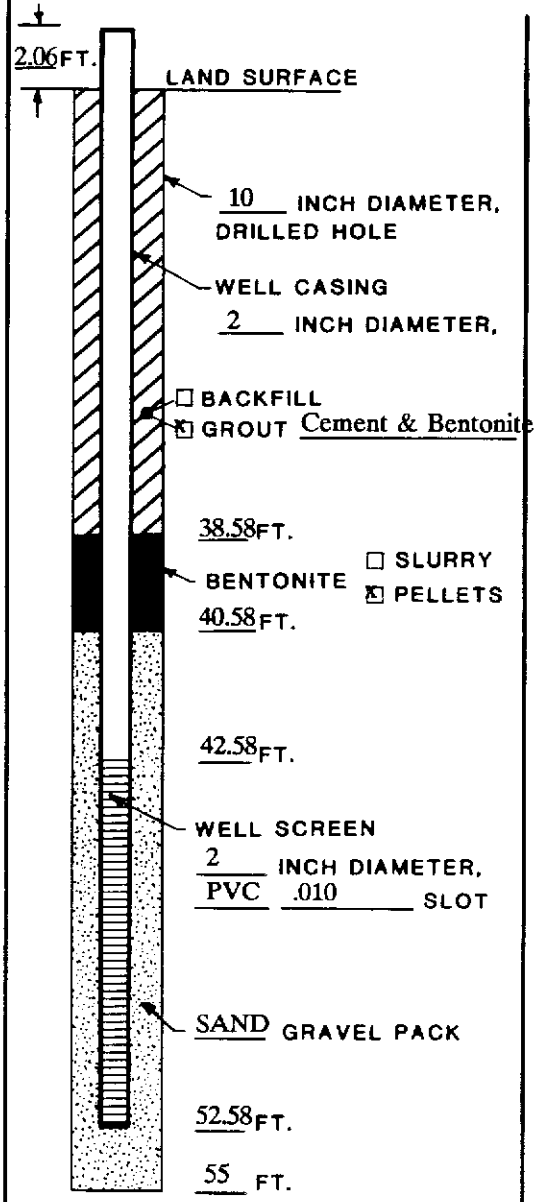
REMARKS (1) in feet relative to a common datum
(2) from top of PVC casing

ROUX

Consulting Ground-Water Geologists

ROUX ASSOCIATES INC

MONITORING WELL CONSTRUCTION LOG



NOTE:
ALL DEPTHS IN FEET
BELOW LAND SURFACE

PROJECT NAME Smithtown Landfill NUMBER 07709Y

WELL NO. MW-1 PERMIT NO.

TOWN/CITY Smithtown

COUNTY Suffolk STATE New York

LAND-SURFACE ELEVATION

AND DATUM 181.80 FEET ☒ SURVEYED

Arbitrary ☐ ESTIMATED

INSTALLATION DATE(S) 12/17/90 - 12/18/90

DRILLING METHOD Hollow Stem Auger

DRILLING CONTRACTOR Marine Pollution Control

DRILLING FLUID None

DEVELOPMENT TECHNIQUE(S) AND DATE(S)

Waterra Pump and Geoguard Pump

12/20/90 & 12/21/90

FLUID LOSS DURING DRILLING NONE GALLONS

WATER REMOVED DURING DEVELOPMENT ~300 GALLONS

STATIC DEPTH TO WATER 44.50 FEET BELOW M.P.

PUMPING DEPTH TO WATER N/D FEET BELOW M.P.

PUMPING DURATION 4 HOURS

YIELD N/D GPM DATE 12/20&12/21

SPECIFIC CAPACITY N/D GPM/FT.

WELL PURPOSE Monitoring

REMARKS Water clear got it down to 39 NTU on 12/27/90 for purging.
N/D - Not determined

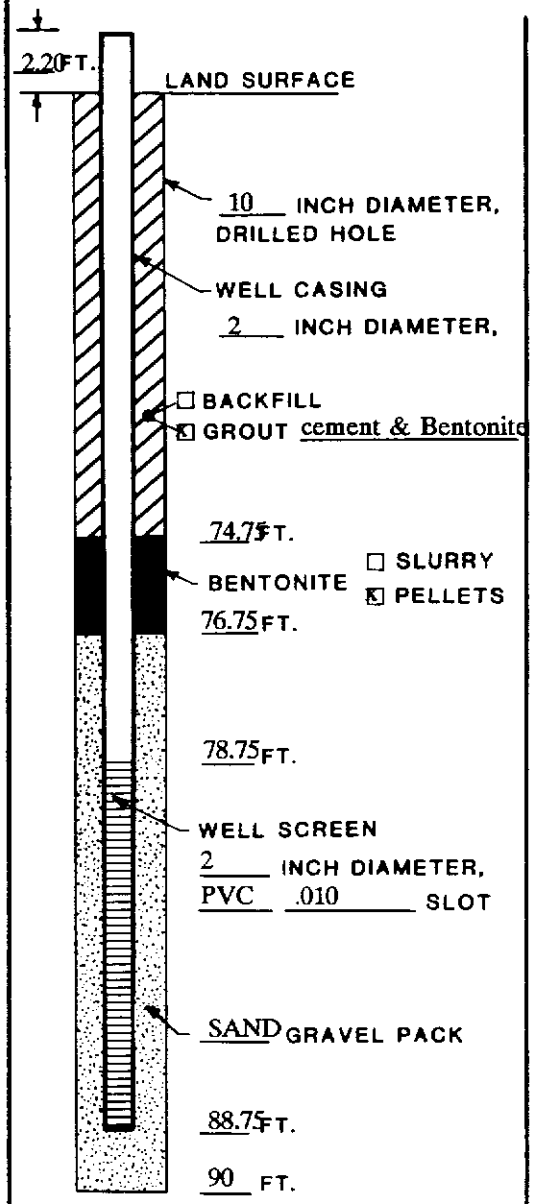
HYDROGEOLOGIST Eric Arnesen

ROUX

Consulting Ground-Water Geologists

ROUX ASSOCIATES INC

MONITORING WELL CONSTRUCTION LOG



NOTE:
ALL DEPTHS IN FEET
BELOW LAND SURFACE

PROJECT NAME Smithtown Landfill NUMBER 07709Y

WELL NO. MW-2 PERMIT NO.

TOWN/CITY Smithtown

COUNTY Suffolk STATE New York

LAND-SURFACE ELEVATION
AND DATUM 217.20 FEET ☒ SURVEYED
Arbitrary ☐ ESTIMATED

INSTALLATION DATE(S) 12/12/90

DRILLING METHOD Hollow Stem Auger

DRILLING CONTRACTOR Marine Pollution Control

DRILLING FLUID None

DEVELOPMENT TECHNIQUE(S) AND DATE(S)
Waterra Pump 12/21/90

FLUID LOSS DURING DRILLING NONE GALLONS

WATER REMOVED DURING DEVELOPMENT ~200 GALLONS

STATIC DEPTH TO WATER 82.75 FEET BELOW M.P.

PUMPING DEPTH TO WATER N/D FEET BELOW M.P.

PUMPING DURATION 4/6 HOURS

YIELD N/D GPM 5 DATE 12/21/90

SPECIFIC CAPACITY N/D GPM/FT.

WELL PURPOSE Monitoring

REMARKS Water slightly turbid. But was able to get 18 NTU when purged for sampling.
N/D - Not Determined

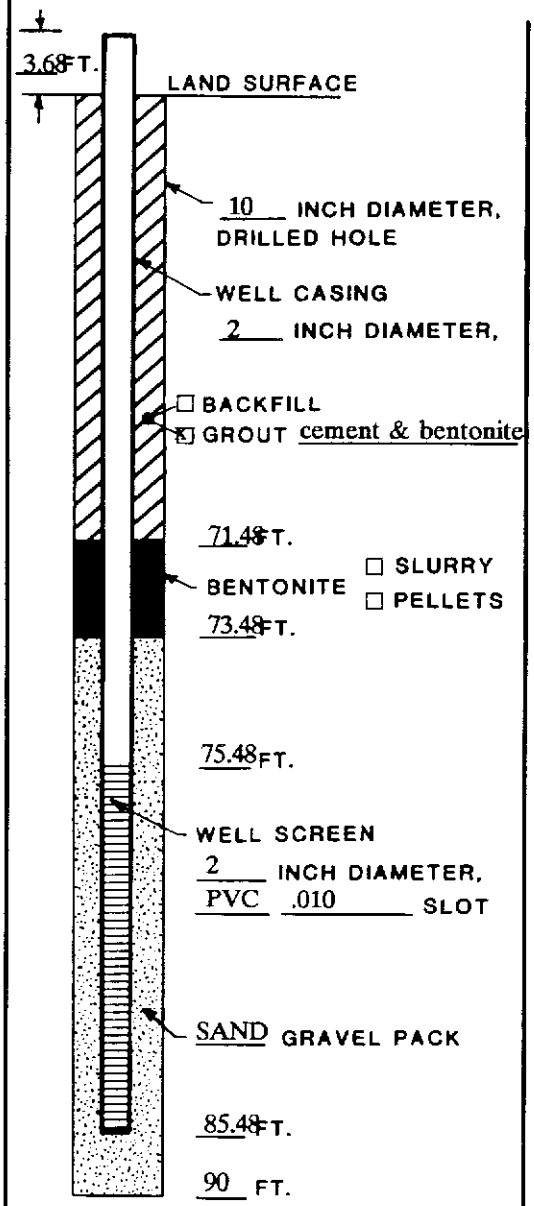
HYDROGEOLOGIST Eric Arnesen

ROUX

Consulting Ground-Water Geologists

ROUX ASSOCIATES INC

MONITORING WELL CONSTRUCTION LOG



NOTE:
ALL DEPTHS IN FEET
BELOW LAND SURFACE

PROJECT NAME Smithtown Landfill NUMBER 07709Y

WELL NO. MW-3 PERMIT NO. _____

TOWN/CITY Smithtown

COUNTY Suffolk STATE New York

LAND-SURFACE ELEVATION

AND DATUM 209.12 FEET ☒ SURVEYED

Arbitrary ☐ ESTIMATED

INSTALLATION DATE(S) 12/7/90 & 12/12/90

DRILLING METHOD Hollow Stem Auger

DRILLING CONTRACTOR Marine Pollution Control

DRILLING FLUID None

DEVELOPMENT TECHNIQUE(S) AND DATE(S)

Waterra Pump and Geoguard Air Surge Pump

12/20/90 & 12/21/90

FLUID LOSS DURING DRILLING NONE GALLONS

WATER REMOVED DURING DEVELOPMENT ~180 GALLONS

STATIC DEPTH TO WATER 77.29 FEET BELOW M.P.

PUMPING DEPTH TO WATER N/D FEET BELOW M.P.

PUMPING DURATION 2 1/6 HOURS

YIELD N/D GPM 1 DATE 12/21/90

SPECIFIC CAPACITY N/D GPM/FT.

WELL PURPOSE Monitoring

REMARKS Water very clear. 40 NTU recorded on 12/27/90
N/D - Not Determined

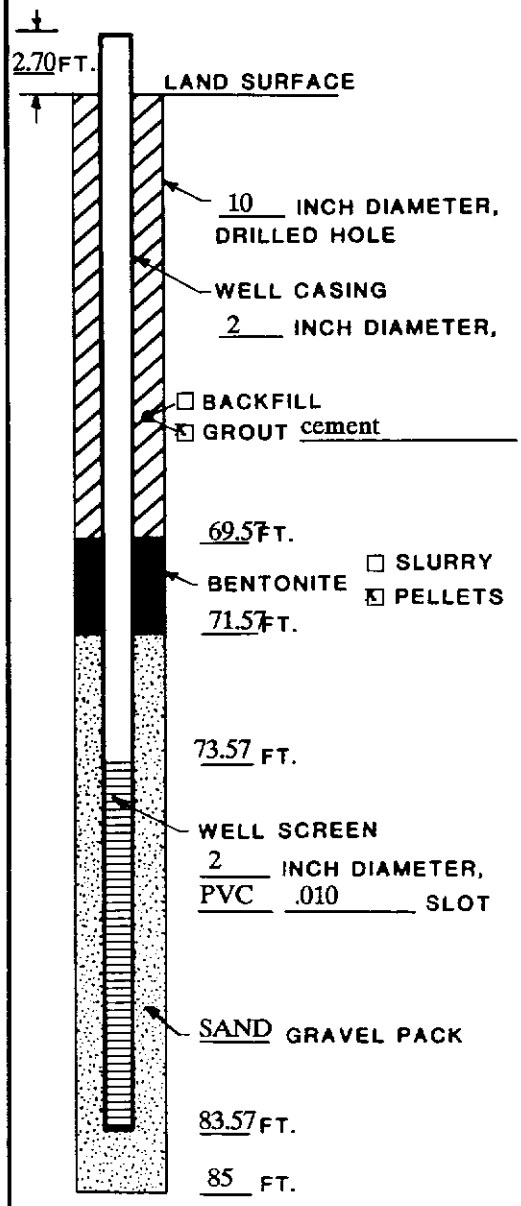
HYDROGEOLOGIST Eric Arnesen

ROUX

Consulting Ground-Water Geologists

ROUX ASSOCIATES INC

MONITORING WELL CONSTRUCTION LOG



NOTE:
ALL DEPTHS IN FEET
BELOW LAND SURFACE

PROJECT NAME Smithtown Landfill NUMBER 07709Y

WELL NO. MW-4 PERMIT NO.

TOWN/CITY Smithtown

COUNTY Suffolk STATE New York

LAND-SURFACE ELEVATION

AND DATUM 213.40 FEET ☒ SURVEYED

Arbitrary ☐ ESTIMATED

INSTALLATION DATE(S) 11/13/90 & 12/5/90

DRILLING METHOD Hollow Stem Auger

DRILLING CONTRACTOR Marine Pollution Control

DRILLING FLUID None

DEVELOPMENT TECHNIQUE(S) AND DATE(S)

Waterra Pump

12/21/90

FLUID LOSS DURING DRILLING NONE GALLONS

WATER REMOVED DURING DEVELOPMENT ~800 GALLONS

STATIC DEPTH TO WATER 78.11 FEET BELOW M.P.

PUMPING DEPTH TO WATER N/D FEET BELOW M.P.

PUMPING DURATION 2 3/4 HOURS

YIELD N/D GPM 4.5 DATE 12/21/90

SPECIFIC CAPACITY N/D GPM/FT.

WELL PURPOSE Monitoring

REMARKS Water has strong odor, unusually high temperature, yellowish tint, and foamy. High conductivity of 5030. 2 NTU recorded on 12/27/90
N/D - Not Determined

HYDROGEOLOGIST Eric Arnesen

APPENDIX E

Chain of Custody Documentation

SMITHTOWN LANDFILL

GROUNDWATER

BAILER LOT #7

H2M LABS, INC. I.D. #1520043

Environmental and Industrial Analytical Laboratory
575 Broad Hollow Road, Melville, N.Y. 11747-5076
(516) 694-3040
FAX: 516-694-4122

PROJ. NO.	PROJECT NAME
077094	SMITHTOWN LANDFILL (GIBBS + HILL)

SAMPLERS: (Signature) Eric Amen

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	TOTAL NO. OF CONTAINERS	1000 ml Plastic w/ HNO3	1000 ml Plastic w/ NaOH	1000 ml Plastic unpres.	40 ml VIAL	40 ml vial w/ 0.008% Na2S2O3	liter glass unpres.			REMARKS
															Full TCL - PH COND. COD - TDS - SS - DIS - FILTER.
MW-2	12/27/90	1135				20	2	3	4	4		7			MS/MSD
MW-1	12/27/90	1020				10	1	2	2	2		3			
MW-1A	12/27/90	1530				10	1	2	2	2		3			
MW-3	12/27/90	1415				10	1	2	2	2		3			
MW-4	12/27/90	1600				10	1	2	2	2		3			
	12/26/90				TRIP BLANK	2					2				

Relinquished by: (Signature)	Date	time	Received by: (Signature)	Relinquished by: (Signature)	Date	time	Received by: (Signature)
[signature]	12/26/90	0900	Eric Amen				
Eric Amen	12/28/90	9:50 AM					

Relinquished by: (Signature)	Date	time	Received for Laboratory by: (Signature)	Date	time	Remarks
			[signature]	12/28/90	9:50 AM	

ROUX

CHAIN OF CUSTODY

№ 00222 Y

ROUX ASSOCIATES INC
Consulting Ground-Water Geologists & Engineers
775 PARK AVENUE, SUITE 255
HUNTINGTON, NEW YORK 11743
(516) 673-7200 FAX. (516) 673-7216

PROJECT NAME: SMITHTOWN LANDFILL (GIBBS + HILL)
PROJECT NUMBER: 077094
PROJECT LOCATION: SMITHTOWN, N.Y.
SAMPLER(S): ERIC ARNESEN

ANALYSES — PAGE OF

SAMPLE DESIGNATION/LOCATION	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	TCL METALS	TCL VOLATILES	TCL SEMI-VOLATILES	TCL PESTICIDES / PCB's	FULL TCL + PH, SPECIFIC CONDUCTANCE, COD, TDS, TSS	TOTAL BOTTLES	NOTES
MW-1	12/27/90	1020	6.5 GW*	X	X	X	X	X	10	
MW-1A	12/27/90	1530	GW	X	X	X	X	X	10	
MW-2	12/27/90	1135	GW	X	X	X	X	X	20	MS/MSD
MW-3	12/27/90	1415	GW	X	X	X	X	X	10	
MW-4	12/27/90	1500	GW	X	X	X	X	X	10	
TRIP BLANK	12/26/90		ORG FREE H2O		X				2	

RELINQUISHED BY: (SAMPLER'S SIGNATURE) FOR	DATE	TIME	SEAL INTACT Y OR N	RECEIVED BY: (SIGNATURE) FOR	DATE	TIME	SEAL INTACT Y OR N
Eric Arnesen Roux Assoc.	12/28/90	9:50AM			12/28/90	7:50 PM	
RELINQUISHED BY: (SIGNATURE) FOR	DATE	TIME	SEAL INTACT Y OR N	RECEIVED BY: (SIGNATURE) FOR	DATE	TIME	SEAL INTACT Y OR N
RELINQUISHED BY: (SIGNATURE) FOR	DATE	TIME	SEAL INTACT Y OR N	RECEIVED BY: (SIGNATURE) FOR	DATE	TIME	SEAL INTACT Y OR N

DELIVERY METHOD: HAND DELIVERED

ANALYTICAL LABORATORY: H2M

COMMENTS: BAILER LOT #7

*GW - GROUND WATER

LETTER OF TRANSMITTAL

ROUX

CONSULTING GROUND-WATER
GEOLOGISTS AND ENGINEERS

ROUX ASSOCIATES INC.

THE HUNTINGTON ATRIUM
775 PARK AVENUE SUITE 255
HUNTINGTON, NEW YORK 11743
• (516) 673-7200 • FAX (516) 673-7216

TO JORGEN F. CHRISTIANSEN P.E.

DATE 12/26/90

SUBJECT GIBBS + HILL AND DEC HAZARDOUS WASTE SITE AT SMITHTOWN LANDFILL

THE FOLLOWING ITEMS ARE

☑ ENCLOSED ☐ REQUESTED ☐ SENT SEPARATELY VIA _____

NO. OF COPIES	DESCRIPTION
	A TOTAL OF 4 SAMPLES (ONE FROM EACH WELL BORING)
	ARE ENCLOSED FOR SIEVE ANALYSIS OR COMBINE
	SIEVE AND HYDROMETER TEST IF APPLICABLE OR ATTERBERG
	LIMITS TEST IF APPLICABLE. NONE OF THE SAMPLES
	ARE CONTAMINATED.

THE ABOVE ITEMS ARE SUBMITTED

☐ AT YOUR REQUEST ☐ FOR YOUR REVIEW ☐ FOR YOUR SIGNATURE
☐ FOR YOUR FILES ☐ FOR YOUR ACTION ☐ FOR YOUR INFORMATION

COMMENTS IF YOU HAVE ANY QUESTIONS PLEASE CALL NORMAN HINEY OF GIBBS + HILL AT (212) 216-7839.
WELL BORINGS 1-4

BY [signature]

APPENDIX F

Aquifer Testing Data

REDUCED INPUT DATA FILE FOR AQTESOLV™
MONITORING WELL MW-1

Slug Test Analysis for MW-1

y_0 = 1.847
R_e = 0.238
r_w = 0.417
b = 159.1
screen length = 10
static height of water in well = 11.71

Time (min)	Drawdown (ft)	Weighting Factor
0	1.312	0
0.0083	1.491	0
0.0166	1.847	1
0.025	0.985	1
0.0333	0.994	1
0.0416	0.887	1
0.05	0.758	1
0.0583	0.664	1
0.0666	0.582	1
0.075	0.512	1
0.0833	0.459	1
0.1	0.368	1
0.1166	0.302	1
0.1333	0.248	1
0.15	0.204	1
0.1666	0.176	1
0.1833	0.154	1
0.2	0.138	1
0.2166	0.122	1
0.2333	0.113	1
0.25	0.107	1
0.2666	0.094	1
0.2833	0.091	1
0.3	0.088	1
0.3166	0.084	1
0.3333	0.078	1

REDUCED INPUT DATA FILE FOR AQTESOLV™
MONITORING WELL MW-1

Time (min)	Drawdown (ft)	Weighting Factor
0.4166	0.066	1
0.5	0.056	1
0.5833	0.053	1
0.6666	0.05	1
0.75	0.04	1
0.8333	0.037	1
0.9166	0.034	1
1	0.031	1
1.0833	0.031	1
1.1666	0.028	1
1.25	0.028	1
1.3333	0.025	1
1.4166	0.022	1
1.5	0.018	1
1.5833	0.015	1
1.6666	0.018	1
1.75	0.015	1
1.8333	0.012	1
1.9166	0.012	1
2	0.012	1
2.5	0.006	1
3	0.003	1

REDUCED INPUT DATA FILE FOR AQTESOLV™
MONITORING WELL MW-2

Slug Test Analysis for MW-2

y_0 = 0.607
R_e = 0.238
r_w = 0.417
b = 120.04
screen length = 10
static height of water in well = 8.79

Time (min)	Drawdown (ft)	Weighting Factor
0.0166	0.607	1
0.025	0.405	1
0.0333	0.295	1
0.0416	0.22	1
0.05	0.166	1
0.0583	0.132	1
0.0666	0.103	1
0.075	0.084	1
0.0833	0.069	1
0.1	0.05	1
0.1166	0.037	1
0.1333	0.028	1
0.15	0.022	1
0.1666	0.018	1
0.1833	0.012	1
0.2	0.015	1
0.2166	0.009	1
0.2333	0.012	1
0.25	0.009	1
0.2666	0.009	1
0.2833	0.006	0
0.3	0.009	1
0.3166	0.006	1
0.3333	0.006	1
0.4166	0.009	0
0.5	0.006	1
0.5833	0.006	1

REDUCED INPUT DATA FILE FOR AQTESOLV™
MONITORING WELL MW-2

Time (min)	Drawdown (ft)	Weighting Factor
0.6666	0.006	1
0.75	0.003	0
0.8333	0.006	1
0.9166	0.006	1
1	0.006	1
1.0833	0.006	1
1.1666	0.006	1
1.25	0.003	1
1.3333	0.003	1
1.4166	0.006	0
1.5	0.003	1
1.5833	0.006	0
1.6666	0.003	1
1.75	0.003	1
1.8333	0.003	1
1.9166	0.003	1
2	0.006	0
2.5	0.003	1

REDUCED INPUT DATA FILE FOR AQTESOLV™
MONITORING WELL MW-3

Slug Test Analysis for MW-3

y_0 = 1.23
R_c = 0.238
r_w = 0.417
b = 127.1
screen length = 10
static height of water in well = 12.56

Time (min)	Drawdown (ft)	Weighting Factor
0	1.23	1
0.0083	0.528	0
0.0166	0.761	1
0.025	0.415	1
0.0333	0.229	1
0.0416	0.135	1
0.05	0.1	1
0.0583	0.081	1
0.0666	0.062	1
0.075	0.056	1
0.0833	0.059	1
0.1	0.037	1
0.1166	0.031	1
0.1333	0.025	1
0.15	0.022	1
0.1666	0.018	1
0.1833	0.015	1
0.2	0.018	1
0.2166	0.015	1
0.2333	0.009	1
0.2666	0.003	1

REDUCED INPUT DATA FILE FOR AQTESOLV™
MONITORING WELL MW-4

Slug Test Analysis for MW-4

y_0 = 0.465
R_e = 0.238
r_w = 0.417
b = 123.56
screen length = 10
static height of water in well = 7.13

Time (min)	Drawdown (ft)	Weighting Factor
0	0.465	1
0.0083	0.428	1
0.0166	0.21	1
0.025	0.119	1
0.0333	0.097	1
0.0416	0.084	1
0.05	0.072	1
0.0583	0.062	1
0.0666	0.053	1
0.075	0.047	1
0.0833	0.047	1
0.1	0.04	1
0.1166	0.037	1
0.1333	0.034	1
0.15	0.031	1
0.1666	0.031	1
0.1833	0.028	0
0.2	0.031	1
0.2166	0.025	1
0.2333	0.028	0
0.25	0.025	1
0.2666	0.025	1
0.2833	0.025	1
0.3	0.022	1
0.3166	0.022	1
0.3333	0.022	1
0.4166	0.018	1

REDUCED INPUT DATA FILE FOR AQTESOLV™
MONITORING WELL MW-4

Time (min)	Drawdown (ft)	Weighting Factor
0.5	0.015	1
0.5833	0.015	1
0.6666	0.015	1
0.75	0.015	1
0.8333	0.015	1
0.9166	0.015	1
1	0.015	1
1.0833	0.015	1
1.1666	0.015	1
1.25	0.015	1

REDUCED INPUT DATA FILE FOR AQTESOLV™
MONITORING WELL MW-4

Slug Test Analysis for MW-4

y_0 = 0.465
R_e = 0.238
r_w = 0.417
b = 123.56
screen length = 10
static height of water in well = 7.13

Time (min)	Drawdown (ft)	Weighting Factor
0	0.465	1
0.0083	0.428	1
0.0166	0.21	1
0.025	0.119	1
0.0333	0.097	1
0.0416	0.084	1
0.05	0.072	1
0.0583	0.062	1
0.0666	0.053	1
0.075	0.047	1
0.0833	0.047	1
0.1	0.04	1
0.1166	0.037	1
0.1333	0.034	1
0.15	0.031	1
0.1666	0.031	1
0.1833	0.028	0
0.2	0.031	1
0.2166	0.025	1
0.2333	0.028	0
0.25	0.025	1
0.2666	0.025	1
0.2833	0.025	1
0.3	0.022	1
0.3166	0.022	1
0.3333	0.022	1

REDUCED INPUT DATA FILE FOR AQTESOLV™
MONITORING WELL MW-4

Time (min)	Drawdown (ft)	Weighting Factor
0.4166	0.018	1
0.5	0.015	1
0.5833	0.015	1
0.6666	0.015	1
0.75	0.015	1
0.8333	0.015	1
0.9166	0.015	1
1	0.015	1
1.0833	0.015	1
1.1666	0.015	1
1.25	0.015	1

APPENDIX G

Federal and State Water Standards
and Goals

FEDERAL AND STATE STANDARDS AND GOALS

NOTES TO REGULATIONS

[A] Environmental Protection Agency National Primary Drinking Water Regulations (as of 7/17/89)

Applied to results of all water sample analyses.

[B] Chapter 1 of Title 10 of the Official Compilation of Codes, Rules and Regulations of the State of New York, Part 5, Drinking Water Supplies, Subpart 5-1, Public Water Supplies (as of 11/28/88)

Applied to results of drinking water sample analyses.

[C] Chapter 10 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, Division of Water Resources, Article 2, Part 702, Appendix 31, Ambient Water Quality Standards - "The standards adopted herein relate to the condition of waters as affected by the discharge of sewage, industrial wastes or other wastes." (as of 7/5/85)

For sources of water for drinking, culinary or food processing purposes and human life protection, unless otherwise noted.

Applied to results of surface water sample analyses for surface water that is not a source of drinking water.

[D] Chapter 10 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, Division of Water Resources, Article 2, Part 703.5(a)(2) and (3), Classes and quality standards for groundwaters - "The purpose of these classes, quality standards, and effluent standards and/or limitations is to prevent pollution of groundwaters and to protect the groundwaters for use as a potable water." (as of 7/5/85)

Applied to results of all groundwater sample analyses regardless of groundwater use.

[E] Environmental Protection Agency National Secondary Drinking Water Regulations (as of 9/26/88)

Applied to results of all water sample analyses.

[F] Source: "Review of In-Place Treatment Techniques for Contaminated Surface Soils," Volume 2, EPA-540/2-84-0036, November 1984, except as noted.

Applied to results of soil sample analyses.

[G] Chapter 360 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, Solid Waste Management Facilities, Section 360-4.4(a), "Sewage sludge and septage destined for land application" (as of 12/31/88)

Applied to results of soil and sediment sample analyses.

FEDERAL AND STATE WATER STANDARDS AND GOALS

TCL VOLATILE ORGANICS

CAS Number	Compound	Contract Detection Limit [ug/l]	[A] EPA 40CFR141 MCL* [ug/l]	[A] EPA 40CFR141 MCLG** [ug/l]	[B] 10 NYCRR Subpart 5.1 MCL* [ug/l]	[C] 6 NYCRR 702 Standard [ug/l]	[D] 6 NYCRR 703 Standard [ug/l]
74-87-3	Chloromethane	10			5	50	5
74-83-9	Bromomethane	10			5	50	5
75-01-4	Vinyl Chloride	10	2	0	2	50	2
75-00-3	Chloroethane	10			5	50	5
75-09-2	Methylene Chloride	5			5	50	5
67-64-1	Acetone	10			50	50	50
75-15-0	Carbon Disulfide	5			50	50	50
75-35-4	1,1-Dichloroethene	5	7	7	5	50	5
75-34-3	1,1-Dichloroethane	5			5	50	5
540-59-0	1,2-Dichloroethene (total)	5			5	50	5
67-66-3	Chloroform	5	[1]		[2]	0.2	[2]
107-06-2	1,2-Dichloroethane	5	5	0	5	0.8	5
78-93-3	2-Butanone	10			50	50	50
71-55-6	1,1,1-Trichloroethane	5	200	200	5	50	5
56-23-5	Carbon Tetrachloride	5	5	0	5	50	5
108-05-4	Vinyl Acetate	10			50	50	50
75-27-4	Bromodichloromethane	5	[1]		[2]	50	[2]
78-87-5	1,2-Dichloropropane	5			5	0.6	5
10061-01-5	cis-1,3-Dichloropropene	5			5	50	5
79-01-6	Trichloroethene	5	5	0	5	50	5
124-48-1	Dibromochloromethane	5	[1]		[2]	50	[2]
79-00-5	1,1,2-Trichloroethane	5			5	50	5
71-43-2	Benzene	5	5	0	5	50	ND[4]
10061-02-6	trans-1,3-Dichloropropene	5			5	50	5
75-25-2	Bromoform	5	[1]		[2]	50	[2]
108-10-1	4-Methyl-2-pentanone	10			5	50	5
591-78-6	2-Hexanone	10			5	50	5
127-18-4	Tetrachloroethene	5			5	50	5
79-34-5	1,1,2,2-Tetrachloroethane	5			5	50	5
108-88-3	Toluene	5			5	50	5
108-90-7	Chlorobenzene	5			5	20[3]	5
100-41-4	Ethylbenzene	5			5	50	5
100-42-5	Styrene	5			5	50	5
1330-20-7	Xylene (total)	5			5	50	5

[1] 100 ug/l for the total of these four compounds for community water systems serving greater than 10,000 persons and which add a disinfectant (oxidant) to the water.

[2] 100 ug/l for the total of these four compounds for community water systems.

[3] Sources of water for drinking, culinary or food processing purposes - aquatic life protection: 5 ug/l. Primary contact recreation: 5 ug/l.

[4] Not detectable by tests or analytical determinations referenced in 6 NYCRR 703.4.

* Maximum Contaminant Level - "maximum permissible level of a contaminant in water which is delivered to the free flowing outlet of the ultimate user of a public water system."

** Maximum Contaminant Level Goal - "nonenforceable health goal."

FEDERAL AND STATE WATER STANDARDS AND GOALS

TCL SEMI-VOLATILE ORGANICS

CAS Number	Compound	Contract Detection Limit [ug/l]	[A] EPA 40CFR141 MCL* [ug/l]	[A] EPA 40CFR141 MCLG** [ug/l]	[B] 10 NYCRR Subpart 5.1 MCL* [ug/l]	[C] 6 NYCRR 702 Standard [ug/l]	[D] 6 NYCRR 703 Standard [ug/l]
108-95-2	Phenol	10			50	1	50
111-44-4	bis(2-Chloroethyl)ether	10			50	50	1
95-57-8	2-Chlorophenol	10			50	50	50
541-73-1	1,3-Dichlorobenzene	10			5	20[1]	5
106-46-7	1,4-Dichlorobenzene	10	75	75	5	30[1]	4.7
100-51-6	Benzyl alcohol	10			50	50	50
95-50-1	1,2-Dichlorobenzene	10			5	50[1]	4.7
95-48-7	2-Methylphenol	10			50	50	50
39638-32-9	bis(2-Chloroisopropyl)ether	10			50	50	50
106-44-5	4-Methylphenol	10			50	50	50
621-64-7	N-Nitroso-di-n-propylamine	10			50	50	50
67-72-1	Hexachloroethane	10			50	50	50
98-95-3	Nitrobenzene	10			50	30	50
78-59-1	Isophorone	10			50	50	50
88-75-5	2-Nitrophenol	10			50	50	50
105-67-9	2,4-Dimethylphenol	10			50	50	50
65-85-0	Benzoic acid	50			50	50	50
111-91-1	bis(2-Chloroethoxy)methane	10			50	50	50
120-83-2	2,4-Dichlorophenol	10			50	50	50
120-82-1	1,2,4-Trichlorobenzene	10			50	0.3	50
91-20-3	Naphthalene	10			5	10[1]	5
106-47-8	4-Chloroaniline	10			50	10	50
87-68-3	Hexachlorobutadiene	10			50	50	50
59-50-7	4-Chloro-3-methylphenol	10			5	0.5	5
91-57-6	2-Methylnaphthalene	10			50	50	50
77-47-4	Hexachlorocyclopentadiene	10			50	50	50
88-06-2	2,4,6-Trichlorophenol	10			50	1[2]	50
95-95-4	2,4,5-Trichlorophenol	50			50	50	50
91-58-7	2-Chloronaphthalene	10			50	50	50
88-74-4	2-Nitroaniline	50			50	10	50
131-11-3	Dimethylphthalate	10			50	50	50
208-96-8	Acenaphthylene	10			50	50	50
606-20-2	2,6-Dinitrotoluene	10			50	50	50

[1] Sources of water for drinking, culinary or food processing purposes - equatic life protection: 5 ug/l; primary contact recreation: 5 ug/l

[2] Sources of water for drinking, culinary or food processing purposes - aquatic life protection: 0.45 ug/l; primary contact recreation: 0.45 ug/l

[3] Sources of water for drinking, culinary or food processing purposes - aquatic life protection: 0.4 ug/l; primary contact recreation: 0.4 ug/l

* Maximum Contaminant Level - "maximum permissible level of a contaminant in water which is delivered to the free flowing outlet of the ultimate user of a public water system."

** Maximum Contaminant Level Goal - "nonenforceable health goal."

FEDERAL AND STATE WATER STANDARDS AND GOALS

TCL SEMI-VOLATILE ORGANICS

CAS Number	Compound	Contract Detection Limit [ug/l]	[A] EPA 40CFR141 MCL* [ug/l]	[A] EPA 40CFR141 MCLG** [ug/l]	[B] 10 NYCRR Subpart 5.1 MCL* [ug/l]	[C] 6 NYCRR 702 Standard [ug/l]	[D] 6 NYCRR 703 Standard [ug/l]
99-09-2	3-Nitroaniline	50			50	50	50
83-32-9	Acenaphthene	10			50	20	50
51-28-5	2,4-Dinitrophenol	50			50	50	50
100-02-7	4-Nitrophenol	50			50	50	50
132-64-9	Dibenzofuran	10			50	50	50
121-14-2	2,4-Dinitrotoluene	10			50	50	50
84-66-2	Diethylphthalate	10			50	50	50
7005-72-3	4-Chlorophenyl-phenylether	10			50	50	50
86-73-7	Fluorene	10			50	50	50
100-01-6	4-Nitroaniline	50			50	50	50
534-52-1	4,6-Dinitro-2-methylphenol	50			50	50	50
86-30-6	N-Nitroso-diphenylamine	10			50	50	50
101-55-3	4-Bromophenyl-phenylether	10			50	50	50
118-74-1	Hexachlorobenzene	10			50	50	50
87-86-5	Pentachlorophenol	50			50	50	0.35
85-01-8	Phenanthrene	10			50	1[3]	21
120-12-7	Anthracene	10			50	50	50
84-74-2	Di-n-butylphthalate	10			50	50	50
206-44-0	Fluoranthene	10			50	50	50
129-00-0	Pyrene	10			50	50	50
85-68-7	Butylbenzylphthalate	10			50	50	50
91-94-1	3,3'-Dichlorobenzidine	20			50	50	50
56-55-3	Benzo(a)anthracene	10			50	50	50
218-01-9	Chrysene	10			50	50	50
117-81-7	bis(2-Ethylhexyl)phthalate	10			50	50	50
117-84-0	Di-n-octylphthalate	10			50	0.6	4.2
205-99-2	Benzo(b)fluoranthene	10			50	50	50
207-08-9	Benzo(k)fluoranthene	10			50	50	50
50-32-8	Benzo(a)pyrene	10			50	50	50
193-39-5	Indeno(1,2,3-cd)pyrene	10			50	50	50
53-70-3	Dibenzo(a,h)anthracene	10			50	50	50
191-24-2	Benzo(g,h,i)perylene	10			50	50	50

[1] Sources of water for drinking, culinary or food processing purposes - aquatic life protection: 5 ug/l; primary contact recreation: 5 ug/l

[2] Sources of water for drinking, culinary or food processing purposes - aquatic life protection: 0.45 ug/l; primary contact recreation: 0.45 ug/l

[3] Sources of water for drinking, culinary or food processing purposes - aquatic life protection: 0.4 ug/l; primary contact recreation: 0.4 ug/l

* Maximum Contaminant Level - "maximum permissible level of a contaminant in water which is delivered to the free flowing outlet of the ultimate user of a public water system."

** Maximum Contaminant Level Goal - "nonenforceable health goal."

FEDERAL AND STATE WATER STANDARDS

TCL INORGANICS

CAS Number	Analyte	Contract Detection Limit [ug/l]	[A] EPA 40CFR141 MCL* [ug/l]	[E] EPA 40CFR143 SMCL** [ug/l]	[B] 10 NYCRR Subpart 5.1 MCL* [ug/l]	[C] 6 NYCRR 702 Human [ug/l]	[C] 6 NYCRR 702 Aquatic [ug/l]	[C] 6 NYCRR 702 PCR*** [ug/l]	[D] 6 NYCRR 703 Standard [ug/l]
7429-90-5	Aluminum	200							
7440-36-0	Antimony	60					100	100	
7440-38-2	Arsenic	10	50		50	50	190	190	25
7440-39-3	Barium	200	1000		1000	1000			1000
7440-41-7	Beryllium	5					1100[2]	1100[2]	
7440-43-9	Cadmium	5	10		10	10	0.9[3]	0.9[3]	10
7440-70-2	Calcium	5000							
7440-47-3	Chromium	10	50		50	50	163[3]	163[3]	50
7440-48-4	Cobalt	50					5	5	
7440-50-8	Copper	25		1000	1000	200	9.2[3]	9.2[3]	200(4)
7439-89-6	Iron	100		300	300[1]	300	300	300	300[1]
7439-92-1	Lead	5	50		50	50	2.2[3]	2.2[3]	25
7439-95-4	Magnesium	5000				35000			
7439-96-5	Manganese	15		50	300[1]	300			300[1]
7439-97-6	Mercury	0.2	2		2	2			2
7440-02-0	Nickel	40					76.8[3]	76.8[3]	
7440-09-7	Potassium	5000							
7782-49-2	Selenium	5	10		10	10	1	1	10
7440-22-4	Silver	10	50		50	50	0.1	0.1	50
7440-23-5	Sodium	5000							
7440-28-0	Thallium	10					8	8	
7440-62-2	Vanadium	50					14	14	
7440-66-6	Zinc	20		5000	5000	300	30	30	300(4)
	Cyanide	10				100	5.2	5.2	

[1] If both are present, the total of both concentrations may not exceed 500 ug/l.

[2] For water with hardness greater than 75 ppm. Standard is 11 ug/l for water with hardness less than or equal to 75 ppm.

[3] For water with hardness of 75 ppm. See 6 NYCRR 702 for determination of standard for other hardnesses.

(4) 10 NYCRR 170 standard

* Maximum Contaminant Level - "maximum permissible level of a contaminant in water which is delivered to the free flowing outlet of the ultimate user of a public water system."

** Secondary Maximum Contaminant Level - same definition as MCL except "not Federally enforceable but intended as guidelines for the States."

*** Primary contact recreation and any other uses except as a source of water supply for drinking, culinary or food processing purposes.

FEDERAL AND STATE WATER STANDARDS

TCL PESTICIDES AND PCB's		Contract Detection Limit	[A] EPA 40CFR141	[B] 10 NYCRR Subpart 5.1	[C] 6 NYCRR 702	[C] 6 NYCRR 702	[C] 6 NYCRR 702	[D] 6 NYCRR 703
CAS Number	Compound	[ug/l]	MCL* [ug/l]	MCL* [ug/l]	Human [ug/l]	Aquatic [ug/l]	PCR** [ug/l]	Standard [ug/l]
319-84-6	alpha-BHC	0.05			50	0.01	0.01	ND[2]
319-85-7	beta-BHC	0.05			50	0.01	0.01	ND[2]
319-86-8	delta-BHC	0.05			50	0.01	0.01	ND[2]
58-89-9	gamma-BHC (Lindane)	0.05	4	4	50	0.01	0.01	ND[2]
76-44-8	Heptachlor	0.05			0.009	0.001	0.001	ND[2]
309-00-2	Aldrin	0.05			0.001[1]	0.001[1]	0.001[1]	ND[2]
1024-57-3	Heptachlor epoxide	0.05			0.009	0.001	0.001	ND[2]
959-98-8	Endosulphan I	0.05			50	50	50	
60-57-1	Dieldrin	0.10			0.001[1]	0.001[1]	0.001[1]	ND[2]
72-55-9	4,4'-DDE	0.10			0.01	0.001	0.001	ND[2]
72-20-8	Endrin	0.10	0.2	0.2	0.2	0.002	0.002	ND[2]
33213-65-9	Endosulphan II	0.10			50	50	50	
72-54-8	4,4'-DDD	0.10			0.01	0.001	0.001	
1031-07-8	Endosulphan sulfate	0.10			50	50	50	
50-29-3	4,4'-DDT	0.10			0.01	0.001	0.001	ND[2]
53494-70-5	Endrin ketone	0.10			50	50	50	
72-43-5	Methoxychlor	0.5	100	50	35	0.03	0.03	35
5103-71-9	alpha-Chlordane	0.5			50	50	50	
5103-74-2	gamma-Chlordane	0.5			50	50	50	
8001-35-2	Toxaphene	1.0		5	50	50	50	ND[2]
12674-11-2	AROCLOR-1016	0.5			0.01	0.001	0.001	0.1
11104-28-2	AROCLOR-1221	0.5			0.01	0.001	0.001	0.1
11141-16-5	AROCLOR-1232	0.5			0.01	0.001	0.001	0.1
53469-21-9	AROCLOR-1242	0.5			0.01	0.001	0.001	0.1
12672-29-6	AROCLOR-1248	0.5			0.01	0.001	0.001	0.1
11097-69-1	AROCLOR-1254	1.0			0.01	0.001	0.001	0.1
11096-82-5	AROCLOR-1260	1.0			0.01	0.001	0.001	0.1

[1] 0.001 ug/l for the total of these two compounds.

[2] Not detectable by tests or analytical determinations referenced in 6 NYCRR 703.4.

* Maximum Contaminant Level - "maximum permissible level of a contaminant in water which is delivered to the free flowing outlet of the ultimate user of a public water system."

** Primary contact recreation and any other uses except as a source of water supply for drinking, culinary or food processing purposes.

TCL PESTICIDES AND PCB's

CAS Number	Compound	Contract Detection Limit [mg/kg]	[G] 6 NYCRR Part 360 4.4 MC* [mg/kg]
319-84-6	alpha-BHC	0.008	
319-85-7	beta-BHC	0.008	
319-86-8	delta-BHC	0.008	
58-89-9	gamma-BHC (Lindane)	0.008	
76-44-8	Heptachlor	0.008	
309-00-2	Aldrin	0.008	
1024-57-3	Heptachlor epoxide	0.008	
959-98-8	Endosulphan I	0.008	
60-57-1	Dieldrin	0.016	
72-55-9	4,4'-DDE	0.016	
72-20-8	Endrin	0.016	
33213-65-9	Endosulphan II	0.016	
72-54-8	4,4'-DDD	0.016	
1031-07-8	Endosulphan sulfate	0.016	
50-29-3	4,4'-DDT	0.016	
53494-70-5	Endrin ketone	0.016	
72-43-5	Methoxychlor	0.08	
5103-71-9	alpha-Chlordane	0.08	
5103-74-2	gamma-Chlordane	0.08	
8001-35-2	Toxaphene	0.16	
12674-11-2	AROCLOR-1016	0.08	10[1]
11104-28-2	AROCLOR-1221	0.08	10[1]
11141-16-5	AROCLOR-1232	0.08	10[1]
53469-21-9	AROCLOR-1242	0.08	10[1]
12672-29-6	AROCLOR-1248	0.08	10[1]
11097-69-1	AROCLOR-1254	0.16	10[1]
11096-82-5	AROCLOR-1260	0.16	10[1]

[1] 10 mg/kg for "Total PCBs"

* "Maximum Concentration, ppm, dry weight basis."

TCL INORGANICS

CAS Number	Analyte	[F] Common Range in Soil [mg/kg]	[G] 6 NYCRR Part 360 4.4 MC* [mg/kg]
7429-90-5	Aluminum		
7440-36-0	Antimony	2 - 10	
7440-38-2	Arsenic	1 - 50	
7440-39-3	Barium	100 - 3000	
7440-41-7	Beryllium	0.1 - 40	
7440-43-9	Cadmium	0.01 - 0.7	25
7440-70-2	Calcium	700 - 36000[1]	
7440-47-3	Chromium	1 - 1000	1000
7440-48-4	Cobalt	1 - 40	
7440-50-8	Copper	2 - 100	1000
7439-89-6	Iron	5000 - 50000[1]	
7439-92-1	Lead	2 - 200	1000
7439-95-4	Magnesium	1200 - 15000[1]	
7439-96-5	Manganese	200 - 10000[1]	
7439-97-6	Mercury	0.01 - 0.3	10
7440-02-0	Nickel	5 - 500	200
7440-09-7	Potassium	1700 - 33000[1]	
7782-49-2	Selenium	0.1 - 2	
7440-22-4	Silver	0.01 - 5	
7440-23-5	Sodium		
7440-28-0	Thallium		
7440-62-2	Vanadium	20 - 500	
7440-66-6	Zinc	10 - 300	2500
	Cyanide		

[1] Source: "The Nature and Properties of Soils," Buckman, H., Brady, N., Macmillan Co., New York, New York, 1969.

* "Maximum Concentration, ppm, dry weight basis."

APPENDIX H

Names and Addresses of Subcontractors

NAMES AND ADDRESSES OF SUBCONTRACTORS USED IN PHASE II INVESTIGATION

Roux Associates, Inc.
775 Park Avenue, Suite 255
Huntington, New York 11743

Marine Pollution Control
P.O. Box 610
460 Edwards Avenue
Calverton, New York 11933

H2M Labs, Inc.
575 Broad Hollow Road
Melville, New York 11747

Storch Associates
30 Jericho Executive Plaza
Jericho, New York 11755

Empire Soil Investigations, Inc.
140 Telegraph Road
P.O. Box 297
Middleport, New York 14105

APPENDIX I

Surveyor's Sketch and Elevation Data

STORCH ENGINEERS
STORCH ASSOCIATES
30 Jericho Turnpike
JERICHO, NEW YORK 11753

(516) 338-4500

LETTER OF TRANSMITTAL

DATE	JOB NO.
MAY 29, 91	8339

ATTENTION MR ERIC ARNESON

RE ① STAR SAND AND GRAVEL
② SMITHTOWN LANDFILL

TO MR ERIC ARNESON Roux ASSOCIATES
775 PARK AVE.
HUNTINGTON N.Y. 11743

WE ARE SENDING YOU ☐ Attached ☐ Under separate cover via _____ the following ~~items:~~

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
2			SKETCH OF ① SMITHTOWN LANDFILL
			② STAR SAND AND GRAVEL

THESE ARE TRANSMITTED as checked below:

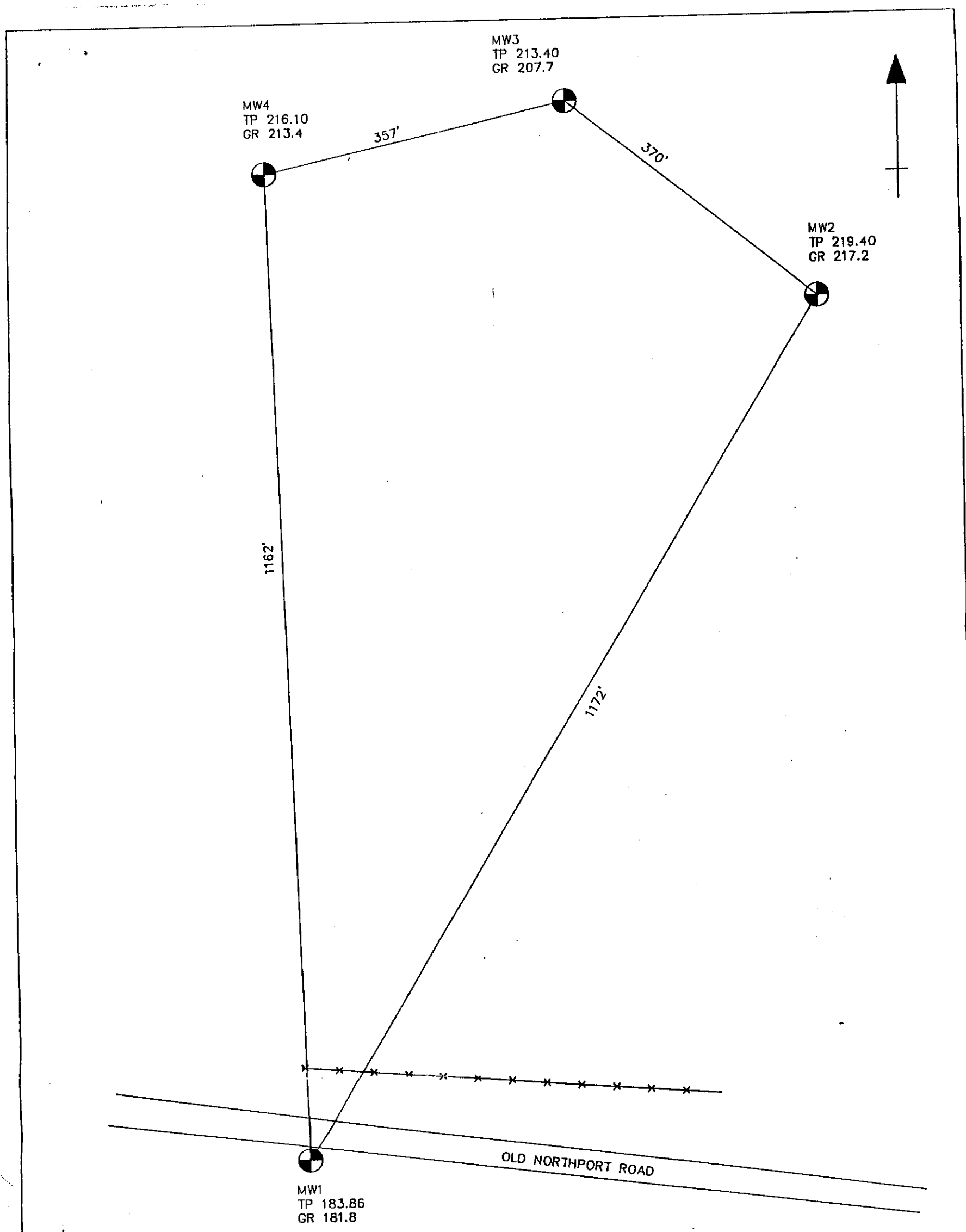
☐ For approval ☐ Approved as submitted ☐ Resubmit_____copies for approval
☐ For your use ☐ Approved as noted ☐ Submit_____copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return_____corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ 19_____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO _____

SIGNED: _____

If enclosures are not as noted, kindly notify us at once.



NOTES: 1. ALL ELEVATIONS ARE IN ARBITRARY SYSTEM.

2. DATE OF SURVEY : APRIL 15, 1991

SMITHTOWN LANDFILL

APPENDIX J

NYSDEC Division of Hazardous Waste Remediation
Inactive Hazardous Waste Disposal Report

DIVISION OF HAZARDOUS WASTE REMEDIATION
INACTIVE HAZARDOUS WASTE DISPOSAL REPORT

CLASSIFICATION CODE: 2a REGION: 1 SITE CODE: 152044
EPA ID: NYD980763759

NAME OF SITE : Smithtown Sanitary Landfill
STREET ADDRESS: Old Northport Road
TOWN/CITY: Kings Park COUNTY: Suffolk ZIP: 11725

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

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: Neil and Alexander Izzo
CURRENT OWNER ADDRESS.: 106 Fourth Street Glen Cove, NY 11542
OWNER(S) DURING USE...: Neil and Alexander Izzo
OPERATOR DURING USE...: Town of Smithtown
OPERATOR ADDRESS.....: 99 West Main Street, Smithtown, NY
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From To Present

SITE DESCRIPTION: This is an inactive municipal landfill which was in operation from March 10, 1970 to July, 1979. The site had a methane collection system which is now dismantaled. A methane problem currently Exists at the site.
A phase I report was completed.
A phase II report is near completion

HAZARDOUS WASTE DISPOSED: TYPE	Confirmed-	Suspected-X QUANTITY (units)

ANALYTICAL DATA AVAILABLE:
Air-X Surface Water- Groundwater--X Soil- Sediment-

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

LEGAL ACTION:

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

REMEDIAL ACTION:

Proposed- Under design- In Progress-- Completed-
NATURE OF ACTION:

GEOTECHNICAL INFORMATION:
SOIL TYPE:
GROUNDWATER DEPTH:

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Elevated levels of methane Exist at the site.

ASSESSMENT OF HEALTH PROBLEMS:

APPENDIX K

EPA Potential Hazardous Waste Site,
Site Inspection Report Form 2070-13

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

EPA

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

II. SITE NAME AND LOCATION

01 SITE NAME	02 STREET, ROUTE NO. OR SPECIFIC LOCATION IDENTIFIER
Smithtown Landfill	Old Northport 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 40° 52' 17.0" | LONGITUDE 73° 15' 39.0"

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

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
05 25 91 (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 Roux Associates, (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
Eric Arnesen	Staff Hydrogeologist	Roux	(516 6737200
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO
Eric Jorgensen	Staff Geologist	Roux	(516 6737200
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Alexander Izzo	owner	106 Fourth Street Glen Cove, NY 11542	(516 6712144
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	12:15am	Sunny and Warm 70's

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
Eric Arnesen		Roux	(516)-6737200	10 02 91 (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			Only Sanitary and
SOL	SOLVENTS			Household wastes are
PSD	PESTICIDES			Know to have been
OCC	OTHER ORGANIC CHEMICALS			deposited at the site
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 documented or				
	analytical evidence				
	to support that				
	hazardous waste has				
	deposited at the site.				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

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

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

NYSDEC file, SCDHS files.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D908762611

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE 1990) — [ ] POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED 51,310 — 04 NARRATIVE DESCRIPTION

Samples Taken from on site wells have shown detections of Chlorobenzene at 14ppb and 1, 4-Dichlorobenzene at 12ppb. Benzene and Naphthalene were detected below NYCRR standards.

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

No direct route from site to surface water

01 [X] C CONTAMINATION OF AIR — 02 [X] OBSERVED (DATE 1990) — [ ] POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED — 04 NARRATIVE DESCRIPTION

There is a problem with methane at the site. The methane collection system is dismantled and methane wells were installed by the town of Smithtown to monitor the problem

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

Local fire marshal has determined that a threat of fire or explosion exists due to high methane at the site.

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

None reported

01 [X] F CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE 1990) — [ ] POTENTIAL — [X] ALLEGED
03 AREA POTENTIALLY AFFECTED 22 (acres) — 04 NARRATIVE DESCRIPTION

A Soil Gas survey conducted at the site has shown small concentrations of 1,1, 1-Trichloroethane and terachloroethylene

01 [ ] G DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE 1990) — [ ] POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED 51,310 — 04 NARRATIVE DESCRIPTION

Limited to population served by aquifer of concern within a three mile radius

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

None Reported

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

High levels of methane detected at the site.

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
04 NARRATIVE DESCRIPTION
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

None Reported

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

None Reported

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

None Reported

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES
(Spills / Runoff / Standing liquids / Leaking drums)
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 51,310
04 NARRATIVE DESCRIPTION
The Landfill is unlined.

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

Buildings next to site have been impacted at methane from the Site.

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

None Reported

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

The landfill is partially fenced. Refuse from people dumped at site such as abandoned cars.

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

Unknown

III. TOTAL POPULATION POTENTIALLY AFFECTED: 51,310

IV. COMMENTS

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

Site Inspection, town of Smithtown code enforcment bureau, phase II report.

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

06 AREA OF SITE

22.0 (Acres)

07 COMMENTS

The town of Smithtown used the site as a municipal landfill for household and sanitary wastes. The property was leased from the 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 liner at the landfill
3 to 6 feet of cover over landfill.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☒ NO

02 COMMENTS

Fence partically surrounds site.

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

Site inspection, NYSDEC Files.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	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 51,310

03 DISTANCE TO NEAREST DRINKING WATER WELL 0.1 (mi)

04 DEPTH TO GROUNDWATER 78 (ft)

05 DIRECTION OF GROUNDWATER FLOW NE

06 DEPTH TO AQUIFER OF CONCERN 78 (ft)

07 POTENTIAL YIELD OF AQUIFER ______ (gpd)

08 SOLE SOURCE AQUIFER ☒ YES ☐ NO

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and buildings)

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

10 RECHARGE AREA

☒ YES ☐ NO

COMMENTS Site charges local Aquifers which eventually enters Long Island Sound.

11 DISCHARGE AREA

☐ 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
Nissequoque River	☐	2.5 (mi)
Willow Pond	☐	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 7,947 NO. OF PERSONS	C 51,310 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)

Area contains both commercial and residential population arouns 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	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^{-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)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
15 (in)	2.8 (in)	1-2 %	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	AGRICULTURAL LANDS: 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 in north central Long Island at 150 feet above mean sea level. Regional slope is 89° to the east. Well drained sandy soils exist at the site.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling results.)

Soil survey of suffolk county, site inspection, phase II report

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	6	H2M Laboratories, Melville, NY	02/91
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL	4	Geologically analized samples	
SOIL			
VEGETATION			
OTHER Soil gas	16	Layne geoscience, Sinking Springs, PA	07/90

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Air	OVA measurments peaked meter occasionally due to methane
pH, COND	During ground water sampling

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☐ GROUND ☒ AERIAL

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

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Roux Associates, Inc.

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

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

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	08 NAME	09 D+B NUMBER
Alexander Izzo			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
106 Fourth street			
05 CITY / 06 STATE / 07 ZIP CODE		12 CITY / 13 STATE / 14 ZIP CODE	
Glen Cove, NY 11542			
01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
Neal Izzo			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
P.O. Box 345 Forest Pond Road			
05 CITY / 06 STATE / 07 ZIP CODE		12 CITY / 13 STATE / 14 ZIP CODE	
Glen Head, NY 11545			
01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
05 CITY / 06 STATE / 07 ZIP CODE		12 CITY / 13 STATE / 14 ZIP CODE	
01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
05 CITY / 06 STATE / 07 ZIP CODE		12 CITY / 13 STATE / 14 ZIP CODE	

PARENT COMPANY (If applicable)

III. PREVIOUS OWNER(S) (List most recent first) — **IV. REALTY OWNER(S)** (If applicable; list most recent first)

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	
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)

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
No current operator	

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

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
Town of Smithtown	

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

05 CITY	06 STATE	07 ZIP CODE
Smithtown	NY	11754

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
9	Izzo Brothers

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)

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	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, sampling results)

Site Inspection

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

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: NY | 02 SITE NUMBER: D980762611

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 _____ — 03 AGENCY _____
04 DESCRIPTION
Methane collection system was in operation but is now shut down.

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 _____ — 03 AGENCY _____
04 DESCRIPTION
Not applicable

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

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

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)

NYSDEC Files

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980762611

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☐ NO

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

In September 1980 NYSDEC Initiated a legal case against the Town of Smithown 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)